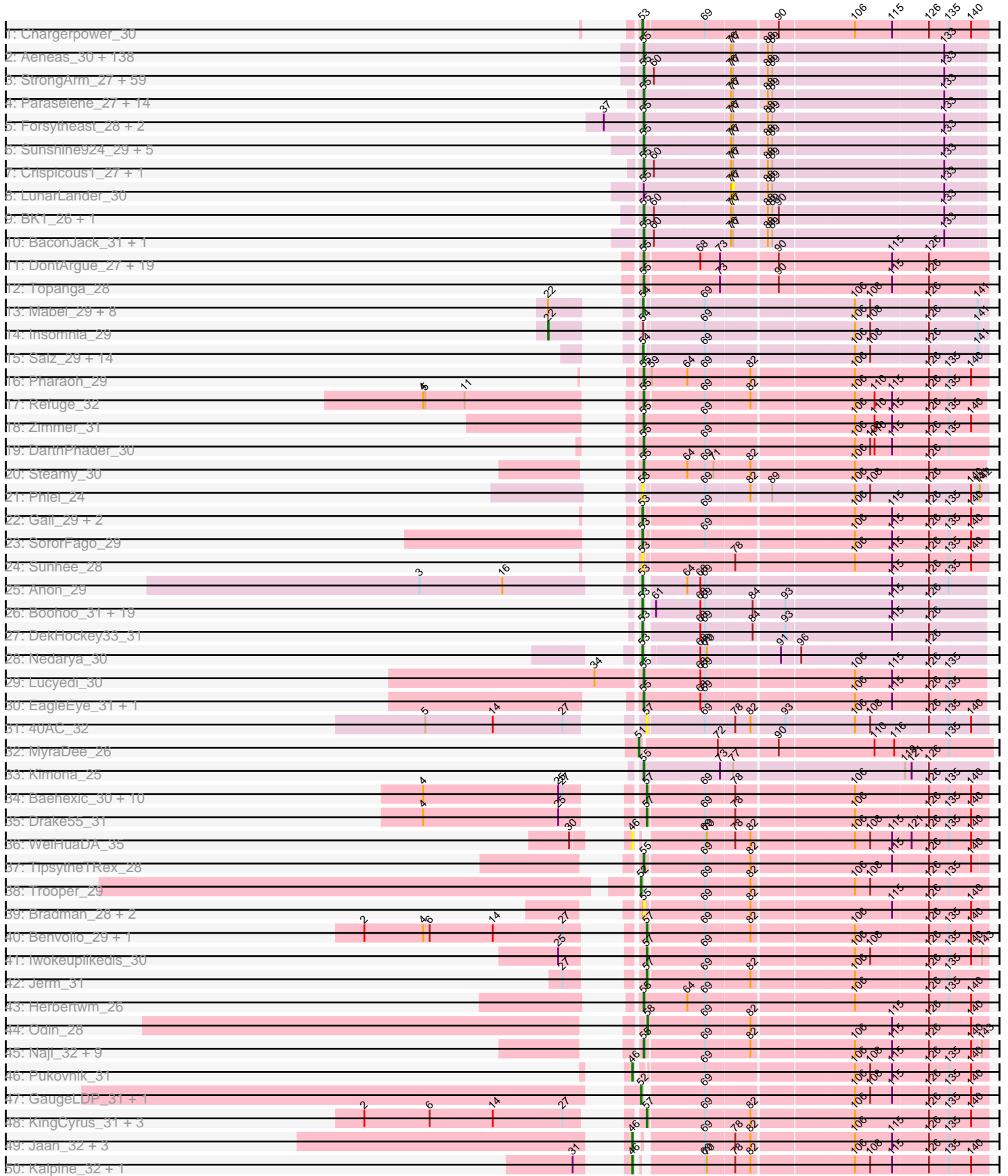
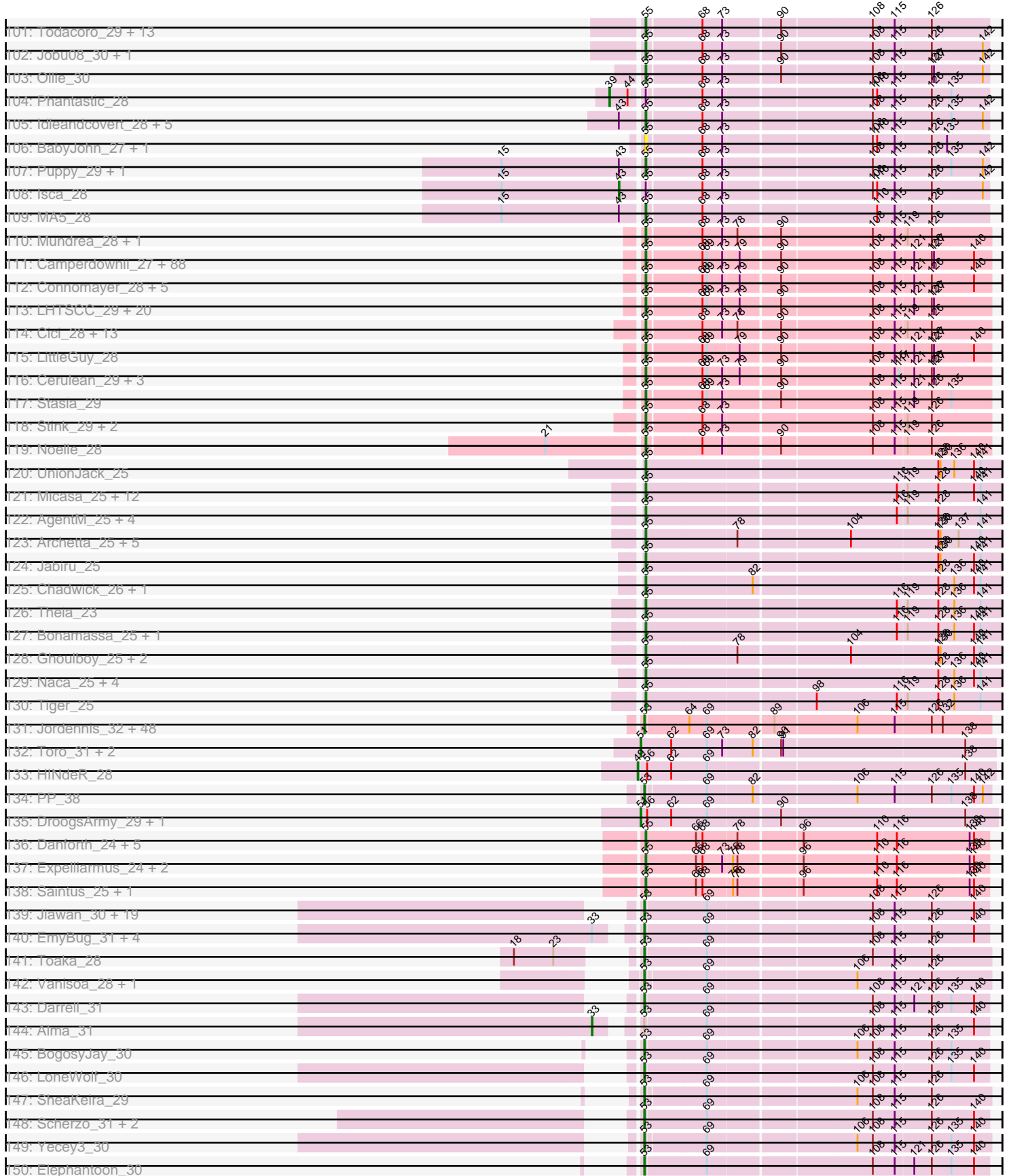


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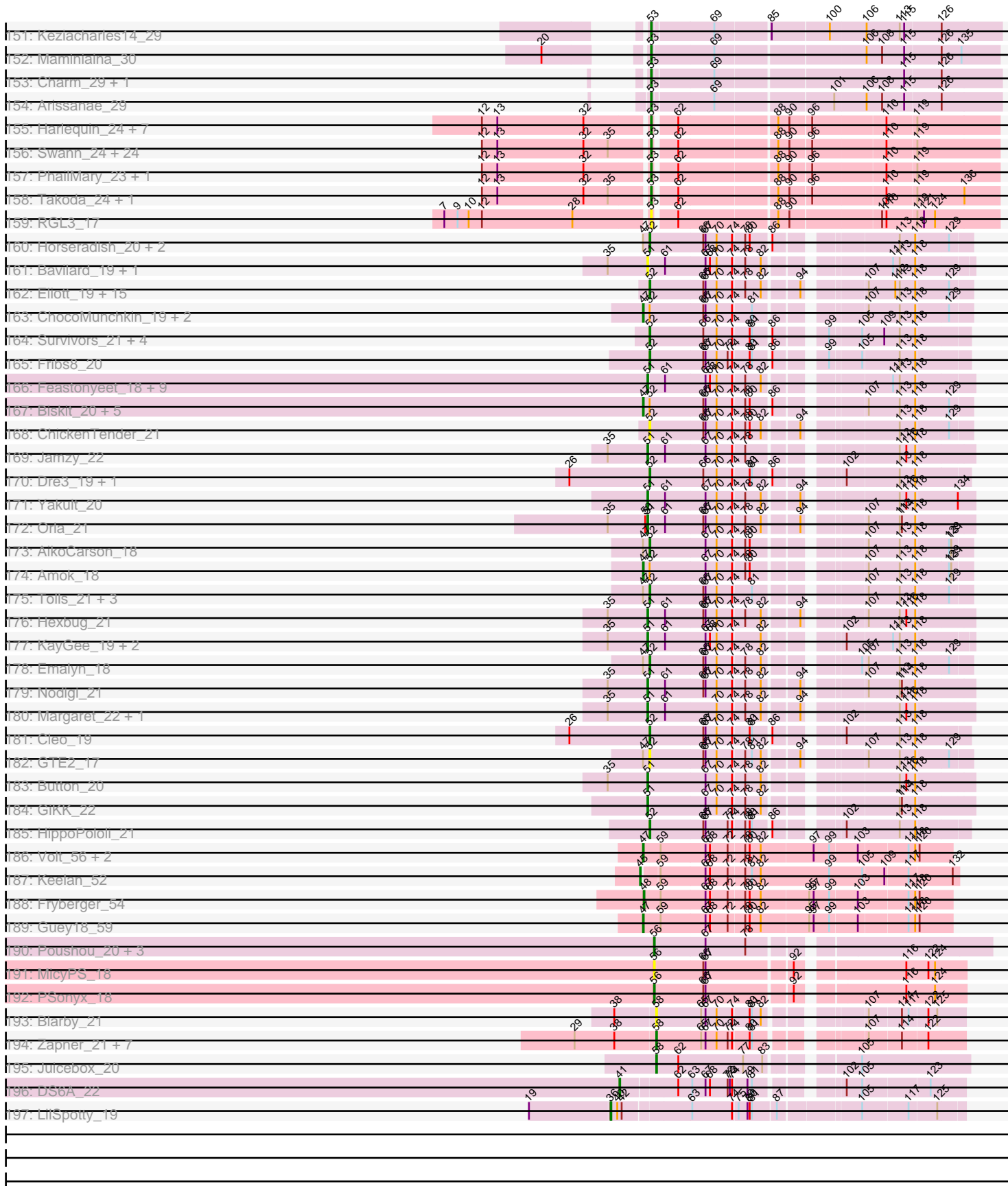




Pham 222727



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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 222727 Report

This analysis was run 03/28/25 on database version 593.

Pham number 222727 has 991 members, 110 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_30
- Track 2 : Aeneas\_30, Corvo\_29, Eyeball\_28, HermioneGrange\_28, GageAP\_30, Sumter\_27, Naira\_29, Jerm2\_29, Alsfro\_32, ShortQueendom\_27, Pippin\_30, SarFire\_28, Bob3\_27, Espresso\_28, Museum\_30, Oogway\_27, Gandalf20\_29, MPlant7149\_27, Dulcie\_27, DreamCatcher\_31, Ohno789\_28, Rubeus\_29, JC27\_30, MrGordo\_28, Pinto\_31, Fascinus\_27, CactusRose\_27, Bigfoot\_27, NEHalo\_28, Marcell\_28, Petp2012\_30, Fajezeel\_30, MetalQZJ\_28, Briton15\_30, Mule\_28, Agaliana\_29, Beatrix\_28, Gompeii16\_28, Ringer\_28, StewieG\_27, Pepe\_29, Chanagan\_27, Greg\_30, MaryBeth\_28, Arcanine\_29, EnzoK\_28, Bigchungji\_28, Seanderson\_29, HanShotFirst\_28, ProMouse\_27, DD5\_29, Burton\_29, Bones\_28, Adahisdi\_29, Bircsak\_28, Lockley\_28, Doom\_29, Abbysshoes\_29, JackSparrow\_29, Abrogate\_290, Dussy\_29, Licorice\_30, Bethlehem\_28, Smairt\_29, Altman\_30, Ajay\_29, BigPaolini\_29, Edtherson\_29, BillKnuckles\_29, Papez\_30, Marsha\_28, Norz\_30, BeesKnees\_29, Sibs6\_30, SpikeBT\_30, BigMau\_30, Froghopper\_29, Peterson\_31, Acme\_30, Marge\_29, Big3\_28, Makemake\_28, Kenmech\_31, Barriga\_28, Gyzlar\_30, PattyP\_30, U2\_28, Pelly\_29, Maroc7\_27, Dexes\_29, Magnar\_28, Phlippers\_27, Bxb1\_26, McSinger\_29, Wilkins\_28, Fushigi\_29, Fenn\_29, Rajelicia\_28, Squee\_29, Pari\_29, Homines\_28, PhrostyMug\_28, Kugel\_29, AFIS\_28, Arlo\_27, Jorgensen\_28, Zephyr\_28, Euphoria\_28, Michley\_28, Scowl\_29, Rhynn\_28, Sorpresa\_28, Sandaddy\_27, Wheeler\_28, Thor\_28, Carlyle\_30, Watermelon\_30, Atkinbua\_30, Monet\_30, HarryOW\_29, Rohr\_29, Graduation\_30, Smeagol\_30, Marco3\_28, Tripl3t\_29, Traft412\_30, Topgun\_28, Raid\_29, Sagefire\_29, SkiPole\_30, Cueyllyss\_28, Mkhuseli\_29, Ciao\_28, Kanely\_29, Target\_31, Sanya\_27, TheloniousMonk\_30, GMonster\_27, Treddle\_30
- Track 3 : StrongArm\_27, Bexan\_27, PhineBark\_28, KSSJEB\_28, Applejack\_28, Marchy\_27, Magnito\_27, Seabiscuit\_30, Rutherford\_30, Iqorha\_27, Buttons\_30, QTRLifeCrisis\_28, Levia\_27, BarrowTuph\_27, ConceptII\_30, GrecoEtereo\_30, PinkPlastic\_27, Mryolo\_27, Nerujay\_29, Zeuska\_29, PherrisBueller\_29, Inyanga\_27, Petruccio\_29, Bruns\_27, Violet\_27, Teodoridan\_26, Payneful\_28, Rufus\_29, Nhonho\_28, Dreamboat\_29, Switzer\_29, Blue\_28, Paphu\_27, Turj99\_27, STLscum\_29, Dynamix\_29, Francis47\_28, Hope4ever\_28, Lamina13\_28, KBG\_29, Ruotula\_27, Solon\_28, Anglerfish\_29, LilBib\_29, Lesedi\_27, ILeeKay\_30, Trouble\_29, Snazzy\_27, Hami1\_30, Manatee\_29, RidgeCB\_28, Parliament\_27, Jasper\_29, Ichabod\_29, McGuire\_29, PacerPaul\_28, Tasp14\_29, KyMonks1A\_30, Hermia\_31, Killigrew\_26
- Track 4 : Paraselene\_27, TwoPeat\_29, BPBiabs31\_29, Alvin\_29, Pita2\_30, Lopton\_29, DrFeelGood\_27, PSullivan\_30, Gwendoluna\_30, Tote\_30, JuliaChild\_30,

Slagathor\_29, Molly\_29, Swole\_30, Zeeculate\_28

- Track 5 : Forsytheast\_28, Moose\_28, SwissCheese\_30
- Track 6 : Sunshine924\_29, PascalRango\_29, Perseus\_30, IgnatiusPatJac\_28, BluSpix\_29, Kykar\_28
- Track 7 : Crispicous1\_27, Niza\_30
- Track 8 : LunarLander\_30
- Track 9 : BK1\_26, A6\_26
- Track 10 : BaconJack\_31, Ashballer\_30
- Track 11 : DontArgue\_27, Goose\_28, Eaglepride\_29, RhynO\_29, Edison31\_28, Poompha\_27, KittenMittens\_27, PeaceMeal1\_27, WalterMcMickey\_28, Drake94\_27, OKCentral2016\_28, Kristoff\_29, Shapes\_32, Trike\_26, Chupacabra\_28, Rowdy\_32, Twister\_28, Severus\_27, Rebeuca\_29, DustyMartin\_32
- Track 12 : Topanga\_28
- Track 13 : Mabel\_29, Aneem\_29, Flaverint\_29, Joselito\_29, TinyTimmy\_29, Bowtie\_29, Munch\_29, Gilberta\_29, MaCh\_29
- Track 14 : Insomnia\_29
- Track 15 : Salz\_29, Hutc2\_29, Orange\_29, Bachome\_29, Lucivia\_29, Ebony\_29, Sham4\_29, Jabith\_29, Et2Brutus\_28, Fibonacci\_29, Bud\_29, Mulciber\_29, Snape\_29, Timothy\_29, Petersenfast\_28
- Track 16 : Pharaoh\_29
- Track 17 : Refuge\_32
- Track 18 : Zimmer\_31
- Track 19 : DARTHPhader\_30
- Track 20 : Steamy\_30
- Track 21 : Phlei\_24
- Track 22 : Gail\_29, Jeeves\_29, Luchador\_31
- Track 23 : SororFago\_29
- Track 24 : Sunhee\_28
- Track 25 : Anon\_29
- Track 26 : Boohoo\_31, Strosahl\_31, Oofda\_32, MinecraftSteve\_32, Remus\_31, Rosalind\_31, Battleship\_32, JSwag\_31, ShayRa\_32, Warrior24\_32, Looper\_32, Soups\_31, Waits\_31, KatherineG\_31, Nebulosus\_31, Anaysia\_31, ReMo\_31, LastResort\_31, Switzerland\_31, Epsocamisio\_31
- Track 27 : DekHockey33\_31
- Track 28 : Nedarya\_30
- Track 29 : Lucyedi\_30
- Track 30 : EagleEye\_31, PainterBoy\_30
- Track 31 : 40AC\_32
- Track 32 : MyraDee\_26
- Track 33 : Kimona\_25
- Track 34 : Baehexic\_30, NaSiaTalie\_29, Centaur\_31, Flare16\_29, Gratitude\_30, WideWale\_31, Piro94\_30, Updawg\_31, Sknot\_30, Equemioh13\_31, MiculUcigas\_29
- Track 35 : Drake55\_31
- Track 36 : WeiHuaDA\_35
- Track 37 : TipsytheTRex\_28
- Track 38 : Trooper\_29
- Track 39 : Bradman\_28, MajorMajor\_28, Quokka\_27
- Track 40 : Benvolio\_29, Echild\_29
- Track 41 : Iwokeuplikedis\_30
- Track 42 : Jerm\_31
- Track 43 : Herbertwm\_26
- Track 44 : Odin\_28

- Track 45 : Naji\_32, Kerberos\_32, D32\_32, StarStuff\_32, Tomathan\_32, DBQu4n\_32, Duplo\_32, Pomar16\_32, D29\_29, Travvers\_32
- Track 46 : Pukovnik\_31
- Track 47 : GaugeLDP\_31, BabyBack\_31
- Track 48 : KingCyrus\_31, JoshKayV\_31, EvilGenius\_31, ChipMunk\_31
- Track 49 : Jaan\_32, Bactobuster\_30, Phaded\_32, Landor\_30
- Track 50 : Kalpine\_32, Colin\_33
- Track 51 : Leogania\_31
- Track 52 : Adzzy\_30, Ph8s\_30
- Track 53 : BobSwaget\_32, Lokk\_32
- Track 54 : Retro23\_29, Dalmatian\_29, Anselm\_29, DudeLittle\_29
- Track 55 : L5\_29
- Track 56 : MissWhite\_29
- Track 57 : SweetiePie\_29, SnapTap\_29
- Track 58 : Trixie\_32
- Track 59 : Changeling\_31, ArcherNM\_31
- Track 60 : Loser\_32, RedRock\_32
- Track 61 : Malec\_30
- Track 62 : Heffalump\_31, Georgie2\_30, FiringLine\_29, QueenBeesly\_29, QueenB2\_29, SemperFi\_31, Power\_29, Crucio\_29
- Track 63 : VC3\_32, ANI8\_32, AN3\_29, C3\_27, AN9\_32, VA6\_29
- Track 64 : Agape74\_31, Turbido\_31, Whabigail7\_31, Dignity\_31, AbbyPaige\_31, Buggy\_31, Leviathan\_31, Smeagan\_31
- Track 65 : Terrific\_33
- Track 66 : XianYue\_29
- Track 67 : Superchunk\_28
- Track 68 : Koduck\_29
- Track 69 : EZMoney23\_33
- Track 70 : Serenity\_28
- Track 71 : TarsusIV\_29
- Track 72 : IronMan\_31
- Track 73 : CRB1\_29, 20ES\_29
- Track 74 : NothingSpecial\_31
- Track 75 : Fameo\_29
- Track 76 : Acolyte\_29
- Track 77 : BiancaTri92\_31
- Track 78 : NicoleTera\_33
- Track 79 : Deloris\_30, BengiVuitton\_30
- Track 80 : Larenn\_30
- Track 81 : LadyBird\_29
- Track 82 : LionsBait\_30
- Track 83 : SwirlSquare\_31
- Track 84 : HarryHoudini\_31
- Track 85 : LilTurb\_31
- Track 86 : Miko\_32
- Track 87 : Jsquared\_28
- Track 88 : Journey13\_27
- Track 89 : Caraxes\_28
- Track 90 : Tristan\_30
- Track 91 : Rachaly\_32
- Track 92 : Che12\_31
- Track 93 : AnnaL29\_32
- Track 94 : First\_0029

- Track 95 : Anthony\_28
- Track 96 : FatCactus\_27
- Track 97 : Kinmap\_30
- Track 98 : Hercules11\_30, LBerry\_30, Phranny\_31, Phoxy\_30, Sabinator\_30, TinyPebbles\_30, PotatoSplit\_31, AugsMagnumOpus\_32, PurpleHaze\_30, KADY\_31, ACFishhook\_30, JeppNRM\_31, Pawn\_30, Watson\_30, Mainiac\_30, Cullens\_30, JHC117\_30, Penny1\_30, Gemma\_30, Stagni\_30, LugYA\_32, Sabia\_30, Lilith\_30, AgronaGT15\_30, Dieselweasel\_30, Malinsilva\_32, Spike509\_30, Manu\_31, SoYo\_30, Phoebe\_30, Grub\_30, HaveUMetTed\_31, Methuselah\_29, Beauxregard13\_30, Louie6\_30, Bxz2\_29, Groupthink\_31, PGHhamlin\_32, MadMarie\_30, StepMih\_30, Misomonster\_32, EpicPhail\_30, Farber\_30, Calvinny\_31, Grif\_30, Zetzy\_29, Aglet\_30, Tiffany\_30, BreSam8\_30, MarQuardt\_30, Reba\_31, GingkoMaracino\_30, Microwolf\_30, Bigflo\_30, Wooldri\_32, Vix\_30, Fernando\_30, Kalb97\_31, BuzzBuzz\_29, MuchMore\_32, Marie\_30, GtownJaz\_30, LarryKay\_30, Colbster\_30, Snickers\_30, DaHudson\_30, Anubis\_32, Pembroke\_30, Lowa\_30, Daishi\_29, P28Green\_30, Soshari\_32, Heliosoles\_30, Rummer\_30, JenCasNa\_30, OlanP\_30, Marius\_31, MoneyMay\_30, Kalnoky\_31, Taurus\_30, PhishRPhriends\_29, HashRod\_31
- Track 99 : Grum1\_30
- Track 100 : Fred313\_28, JF2\_28, B1\_26, Heathen\_28, HelDan\_28, Kachowdy\_28, MK4\_28, Marchesa\_28, BabyRay\_28, Scout\_28, JF4\_28, Rockstar\_28, DropBear\_28
- Track 101 : Todacoro\_29, QuinnKiro\_28, Veracruz\_28, Lambert1\_29, Norbert\_28, Caviar\_29, Margo\_29, Panamaxus\_28, Pocahontas\_29, Noella\_29, ResDef\_29, Hookmount\_29, Popcicle\_29, Texage\_28
- Track 102 : Jobu08\_30, SoilDragon\_30
- Track 103 : Ollie\_30
- Track 104 : Phantastic\_28
- Track 105 : Idleandcovert\_28, Giroux\_28, SaturnRing\_28, BlueBird\_29, Bugatti\_28, Pistachio\_29
- Track 106 : BabyJohn\_27, Chiqui\_27
- Track 107 : Puppy\_29, TNguyen7\_28
- Track 108 : Isca\_28
- Track 109 : MA5\_28
- Track 110 : Mundrea\_28, Cindaradix\_27
- Track 111 : Camperdownii\_27, JetBlade\_28, KFPoly\_28, Phighter1804\_28, Nemo27\_28, Dhanush\_28, Caelakin\_28, Alberto7\_29, Druantia\_28, Holli\_28, Citius\_28, Lunsford\_29, Skipitt\_28, Kingmustik0402\_28, Medusa\_28, Albee\_28, Funston\_28, Romney\_28, Scamp\_28, Eros\_28, Burger\_27, Florean\_28, Taquarus\_28, Kyee\_28, ChampagnePapi\_29, Maverick\_28, Bartimeaus\_28, Wilbur\_28, Arturo\_27, Ulysses\_27, Chaph\_28, Flux\_28, Phontbonne\_28, Phacado\_28, LittleB\_28, Sabertooth\_28, Shaka\_28, Mayonnaise\_28, OKaNui\_29, Millski\_27, Cintron\_28, SenorClean\_27, TiroTheta9\_28, Broseidon\_28, Phelipe\_28, YoSam321\_28, Wizard007\_28, NotAPhaseMom\_28, Relief\_28, CentreCat\_28, Thanksgivukkah\_28, Kratark\_28, Melvin\_28, Tinybot\_27, LappelDuVide\_28, Lemur\_28, Eris\_27, Blackmoor\_28, Houdini22\_28, Wander\_28, Clarenza\_28, DirtyDunning\_28, JoongJeon\_28, HamSlice\_27, Jaykayelowell\_28, Huxley\_28, Bruiser\_27, Roosevelt\_28, Ruin\_28, Koreni\_27, Cocoaberry\_28, Gadost\_28, Mazhar510\_28, Pipcraft\_28, Bombshell\_28, Sparxx\_28, Baby16\_28, Rosa24\_27, LochMonster\_28, Kremtemulon\_28, PeterPeter\_28, Annyong\_28, Iracema64\_29, Iceman\_29, Koan\_27, NorthStar\_28, TinaFeyge\_28, Avle17\_28, Eapen\_28
- Track 112 : Connomayer\_28, TygerBlood\_28, TroyPia\_28, Spino\_28, Peaches\_28, Deano\_28



- Track 113 : LHTSCC\_29, LeoAvram\_28, ICleared\_28, MeeZee\_28, Polymorphads\_28, Obama12\_29, Eagle\_27, BubbleTrouble\_28, Ohfah\_28, Abdiel\_27, Lorenzo\_28, Palestino\_27, Maxo\_28, Morrow\_28, Nyxis\_28, Pumbaa\_28, Nebs\_28, Commander\_28, Kampy\_28, Eurydice\_28, BellusTerra\_28
- Track 114 : Cici\_28, Badger\_28, Bumblebee11\_28, Datway\_28, Morpher26\_28, Backyardigan\_28, Achebe\_27, PetiteSangsue\_28, Wile\_28, Katalie136\_28, Shygu2\_28, Xena\_28, Perplexer\_28, AbbysRanger\_28
- Track 115 : LittleGuy\_28
- Track 116 : Cerulean\_29, Happiness\_28, SheldonCooper\_29, BangNhom\_28
- Track 117 : Stasia\_29
- Track 118 : Stink\_29, AvatarAhPeg\_29, Miramae\_28
- Track 119 : Noelle\_28
- Track 120 : UnionJack\_25
- Track 121 : Micasa\_25, Milcery\_25, George\_24, LittleCherry\_25, Swirley\_25, Twigg\_25, Dublin\_24, Midas2\_25, Tarynearal\_24, Prinasha11\_26, Cuco\_25, MarysWell\_24, Coog\_25
- Track 122 : AgentM\_25, Lev2\_25, Phlorence\_25, Aragog\_25, Discoknowium\_25
- Track 123 : Archetta\_25, Bluefalcon\_24, PickleBack\_25, ForGetIt\_25, Jovo\_25, Conspiracy\_25
- Track 124 : Jabiru\_25
- Track 125 : Chadwick\_26, PetterN\_26
- Track 126 : Theia\_23
- Track 127 : Bonamassa\_25, HuhtaEnerson15\_25
- Track 128 : Ghoulboy\_25, Zolita\_24, SydNat\_25
- Track 129 : Naca\_25, ElTiger69\_25, Scorpia\_26, Benedict\_25, Airmid\_25
- Track 130 : Tiger\_25
- Track 131 : Jordennis\_32, Helmet\_33, SuperAwesome\_32, Indra\_32, Hexamo\_32, JewelBug\_32, CloudWang3\_32, Gladiator\_32, Polyphemus\_31, Jeffabunny\_32, Temprado\_33, Blue7\_32, Neeharika16\_32, Wiks\_32, BlessJoy\_32, Garak\_33, Rifter\_32, Tucker\_32, Hammer\_32, Kazan\_32, VohminGhazi\_32, Lilbunny\_32, Koko\_32, Candra\_32, EricB\_32, GreedyLawyer\_32, Zaka\_32, McFly\_32, Isiphiwo\_32, SmellyB\_32, BABullseye\_32, Yokurt\_32, Pmask\_32, Gruunaga\_32, Kipper29\_32, Chartreuse\_32, Roksolana\_32, DaVinci\_32, Blinn1\_32, Cookiedough\_32, Dorothea\_32, ToneTone\_30, Artemis2UCLA\_32, WunderPhul\_32, Hoot\_32, Zulu\_32, SuperCallie99\_32, Priamo\_32, Newrala\_32
- Track 132 : Toro\_31, Sheen\_30, FlyCatcher\_32
- Track 133 : HINdeR\_28
- Track 134 : PP\_38
- Track 135 : DroogsArmy\_29, Timshel\_29
- Track 136 : Danforth\_24, Dixon\_25, Phillis\_25, Stephig9\_25, Roary\_25, Astro\_25
- Track 137 : Expelliarmus\_24, Smeadley\_25, Groundhog\_24
- Track 138 : Saintus\_25, NearlyHeadless\_25
- Track 139 : Jiawan\_30, Aliter\_31, Pioneer\_31, Lilleskat\_29, Fayely\_31, Myxus\_31, Phonnegut\_31, EdogawaKiddo\_29, HortumSL17\_31, Catalina\_32, Hanray\_30, Qobbit\_31, Phaeder\_31, Onglai\_30, RyeScarlet\_32, Tubs\_31, PackMan\_31, Halex\_30, Sachima\_29, Beemo\_31
- Track 140 : EmyBug\_31, Eidsmoe\_31, Spouty\_31, Priya\_31, ExplosioNervosa\_31
- Track 141 : Toaka\_28
- Track 142 : Vanisoa\_28, Rahalelujah\_28
- Track 143 : Darrell\_31
- Track 144 : Alma\_31
- Track 145 : BogosyJay\_30
- Track 146 : LoneWolf\_30

- Track 147 : SheaKeira\_29
- Track 148 : Scherzo\_31, Conquerage\_31, Ugenie5\_28
- Track 149 : Yecey3\_30
- Track 150 : Elephantoan\_30
- Track 151 : Keziacharles14\_29
- Track 152 : Maminiaina\_30
- Track 153 : Charm\_29, DreamTeam1\_29
- Track 154 : Arissanae\_29
- Track 155 : Harlequin\_24, Rasputin\_24, Bonanza\_24, Yogi\_24, Bryce\_24, Yoncess\_24, Alpacados\_23, BobbyDazzler\_24
- Track 156 : Swann\_24, Dinger\_24, Lillie\_24, CosmicSans\_24, Alatin\_24, Espica\_24, Phrankenstien\_24, Krishelle\_24, Gollum\_24, Hiro\_24, Erik\_24, Nancinator\_24, RexFury\_24, RER2\_17, StCroix\_24, Bradshaw\_24, Rhodalysa\_24, Partridge\_24, Shuman\_24, TWAMP\_24, Naiad\_24, Belenaria\_24, UhSalsa\_24, AppleCloud\_22, Natosaleda\_24
- Track 157 : PhailMary\_23, Jester\_24
- Track 158 : Takoda\_24, AngryOrchard\_23
- Track 159 : RGL3\_17
- Track 160 : Horseradish\_20, SweatNTears\_21, Yummy\_20
- Track 161 : Bavidard\_19, Yucky\_21
- Track 162 : Elliott\_19, Typhonomachy\_20, GoldHunter\_20, Burnsey\_19, Agatha\_19, Cozz\_19, Starburst\_20, PsychoKiller\_19, Nina\_20, Socotra\_20, Quasar\_19, Carsonalex\_20, Axym\_19, RedBaron\_20, MunkgeeRoachy\_19, Sopespian\_19
- Track 163 : ChocoMunchkin\_19, CanesSauce\_19, AndPeggy\_18
- Track 164 : Survivors\_21, MaVan\_21, Zareef\_23, Azira\_21, Nibbles\_21
- Track 165 : Fribs8\_20
- Track 166 : Feastonyeet\_18, Vine\_20, CherryonLim\_20, SummitAcademy\_18, Mayweather\_20, PotPie\_19, SheckWes\_18, MAnor\_19, BigChungus\_18, Pons\_19
- Track 167 : Biskit\_20, SketchMex\_18, MScarn\_21, Troje\_19, Blondies\_19, Buttrmilkdreams\_19
- Track 168 : ChickenTender\_21
- Track 169 : Jamzy\_22
- Track 170 : Dre3\_19, Gibbous\_19
- Track 171 : Yakult\_20
- Track 172 : Orla\_21
- Track 173 : AikoCarson\_18
- Track 174 : Amok\_18
- Track 175 : Tolls\_21, SteamedHams\_21, Yarn\_18, BillDoor\_21
- Track 176 : Hexbug\_21
- Track 177 : KayGee\_19, Elinal\_20, Lauer\_18
- Track 178 : Emalyn\_18
- Track 179 : Nodigi\_21
- Track 180 : Margaret\_22, RanchParmCat\_22
- Track 181 : Cleo\_19
- Track 182 : GTE2\_17
- Track 183 : Button\_20
- Track 184 : GiKK\_22
- Track 185 : HippoPololi\_21
- Track 186 : Volt\_56, Ziko\_57, Ronaldo\_57
- Track 187 : Keelan\_52
- Track 188 : Fryberger\_54
- Track 189 : Guey18\_59
- Track 190 : Poushou\_20, Arianna\_20, TouchMeNot\_20, Colleen\_20

- Track 191 : MicyPS\_18
- Track 192 : PSonyx\_18
- Track 193 : Blarby\_21
- Track 194 : Zapner\_21, Avani\_20, Soul22\_20, Demsculpinboyz\_20, Che9d\_20, SilverChicken\_20, Jabbawokkie\_22, Yoshi\_20
- Track 195 : Juicebox\_20
- Track 196 : DS6A\_22
- Track 197 : LilSpotty\_19

***Summary of Final Annotations (See graph section above for start numbers):***

The start number called the most often in the published annotations is 55, it was called in 554 of the 881 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_26, ACFishhook\_30, AFIS\_28, AN3\_29, AN9\_32, ANI8\_32, AbbysRanger\_28, Abbyshoes\_29, Abdiel\_27, Abrogate\_290, Achebe\_27, Acme\_30, Adahisdi\_29, Aeneas\_30, Agaliana\_29, AgentM\_25, Aglet\_30, AgronaGT15\_30, Airmid\_25, Ajay\_29, Albee\_28, Alberto7\_29, Alsfro\_32, Altman\_30, Alvin\_29, Anglerfish\_29, Annyong\_28, Anthony\_28, Anubis\_32, Applejack\_28, Aragog\_25, Arcanine\_29, Archetta\_25, Arlo\_27, Arturo\_27, Ashballer\_30, Astro\_25, Atkinbua\_30, AugsMagnumOpus\_32, AvatarAhPeg\_29, Avle17\_28, B1\_26, BK1\_26, BPBiebs31\_29, Baby16\_28, BabyJohn\_27, BabyRay\_28, Backyardigan\_28, BaconJack\_31, Badger\_28, BangNhom\_28, Barriga\_28, BarrowTuph\_27, Bartimeaus\_28, Beatrix\_28, Beauxregard13\_30, BeesKnees\_29, BellusTerra\_28, Benedict\_25, Bethlehem\_28, Bexan\_27, Big3\_28, BigMau\_30, BigPaolini\_29, Bigchungu\_28, Bigflo\_30, Bigfoot\_27, BillKnuckles\_29, Bircsak\_28, Blackmoor\_28, BluSpix\_29, BlueBird\_29, Blue\_28, Bluefalcon\_24, Bob3\_27, Bombshell\_28, Bonamassa\_25, Bones\_28, Bradman\_28, BreSam8\_30, Briton15\_30, Broseidon\_28, Bruiser\_27, Bruns\_27, BubbleTrouble\_28, Bugatti\_28, Bumblebee11\_28, Burger\_27, Burton\_29, Buttons\_30, BuzzBuzz\_29, Bxb1\_26, Bxz2\_29, C3\_27, CactusRose\_27, Caelakin\_28, Calvinny\_31, Camperdownii\_27, Carlyle\_30, Caviar\_29, CentreCat\_28, Cerulean\_29, Chadwick\_26, ChampagnePapi\_29, Chanagan\_27, Chaph\_28, Chiqui\_27, Chupacabra\_28, Ciao\_28, Cici\_28, Cindaradix\_27, Cintron\_28, Citius\_28, Clarenza\_28, Cocoaberry\_28, Colbster\_30, Commander\_28, Conceptll\_30, Connomayer\_28, Conspiracy\_25, Coog\_25, Corvo\_29, Crispicous1\_27, Cuco\_25, Cueyllyss\_28, Cullens\_30, D29\_29, D32\_32, DBQu4n\_32, DD5\_29, DaHudson\_30, Daishi\_29, Danforth\_24, DarthPhader\_30, Datway\_28, Deano\_28, Dexes\_29, Dhanush\_28, Dieselweasel\_30, DirtyDunning\_28, Discoknowium\_25, Dixon\_25, DontArgue\_27, Doom\_29, DrFeelGood\_27, Drake94\_27, DreamCatcher\_31, Dreamboat\_29, DropBear\_28, Druantia\_28, Dublin\_24, Dulcie\_27, Duplo\_32, Dussy\_29, DustyMartin\_32, Dynamix\_29, EagleEye\_31, Eagle\_27, Eaglepride\_29, Eapen\_28, Edison31\_28, Edtherson\_29, ElTiger69\_25, EnzoK\_28, EpicPhail\_30, Eris\_27, Eros\_28, Espresso\_28, Euphoria\_28, Eurydice\_28, Expelliarmus\_24, Eyeball\_28, Fajezeel\_30, Farber\_30, Fascinus\_27, FatCactus\_27, Fenn\_29, Fernando\_30, Floean\_28, Flux\_28, ForGetIt\_25, Forsytheast\_28, Francis47\_28, Fred313\_28, FrogHopper\_29, Funston\_28, Fushigi\_29, GMonster\_27, Gadost\_28, GageAP\_30, Gandalf20\_29, Gemma\_30, George\_24, Ghoulyboy\_25, GingkoMaracino\_30, Giroux\_28, Gompeii16\_28, Goose\_28, Graduation\_30, GrecoEtereo\_30, Greg\_30, Grif\_30, Groundhog\_24, Groupthink\_31, Grub\_30,

Grum1\_30, GtownJaz\_30, Gwendoluna\_30, Gyzlar\_30, HamSlice\_27, Hami1\_30, HanShotFirst\_28, Happiness\_28, HarryOW\_29, HashRod\_31, HaveUMetTed\_31, Heathen\_28, HelDan\_28, Heliosoles\_30, Herbertwm\_26, Hercules11\_30, Hermia\_31, HermioneGrange\_28, Holli\_28, Homines\_28, Hookmount\_29, Hope4ever\_28, Houdini22\_28, HuhtaEnerson15\_25, Huxley\_28, ICleared\_28, ILeeKay\_30, Iceman\_29, Ichabod\_29, Idleandcovert\_28, IgnatiusPatJac\_28, Inyanga\_27, Iqorha\_27, Iracema64\_29, JC27\_30, JF2\_28, JF4\_28, JHC117\_30, Jabiru\_25, JackSparrow\_29, Jasper\_29, Jaykayelowell\_28, JenCasNa\_30, JeppNRM\_31, Jerm2\_29, JetBlade\_28, Jobu08\_30, JoongJeon\_28, Jorgensen\_28, Journey13\_27, Jovo\_25, Jsquared\_28, JuliaChild\_30, KADY\_31, KBG\_29, KFPoly\_28, KSSJEB\_28, Kachowdy\_28, Kalb97\_31, Kalnoky\_31, Kamy\_28, Kanely\_29, Katalie136\_28, Kenmech\_31, Kerberos\_32, Killigrew\_26, Kimona\_25, Kingmustik0402\_28, KittenMittens\_27, Koan\_27, Koduck\_29, Koreni\_27, Kratark\_28, Kremtemulon\_28, Kristoff\_29, Kugel\_29, KyMonks1A\_30, Kye\_28, Kykar\_28, L5\_29, LBerry\_30, LHTSCC\_29, Lambert1\_29, Lamina13\_28, LappelDuVide\_28, LarryKay\_30, Lemur\_28, LeoAvram\_28, Lesedi\_27, Lev2\_25, Levia\_27, Licorice\_30, LilBib\_29, Lilith\_30, LittleB\_28, LittleCherry\_25, LittleGuy\_28, LochMonster\_28, Lockley\_28, Lopton\_29, Lorenzo\_28, Louie6\_30, Iowa\_30, Lucyedi\_30, LugYA\_32, Lunsford\_29, MA5\_28, MK4\_28, MPlant7149\_27, MadMarie\_30, Magnar\_28, Magnito\_27, Mainiac\_30, MajorMajor\_28, Makemake\_28, Malinsilva\_32, Manatee\_29, Manu\_31, MarQuardt\_30, Marcell\_28, Marchesa\_28, Marchy\_27, Marco3\_28, Marge\_29, Margo\_29, Marie\_30, Marius\_31, Maroc7\_27, Marsha\_28, MaryBeth\_28, MarysWell\_24, Maverick\_28, Maxo\_28, Mayonnaise\_28, Mazhar510\_28, McGuire\_29, McSinger\_29, Medusa\_28, MeeZee\_28, Melvin\_28, MetalQZJ\_28, Methuselah\_29, Micasa\_25, Michley\_28, Microwolf\_30, Midas2\_25, Milcery\_25, Millski\_27, Miramae\_28, Misomonster\_32, MissWhite\_29, Mkhuseleli\_29, Molly\_29, Monet\_30, MoneyMay\_30, Moose\_28, Morpher26\_28, Morrow\_28, MrGordo\_28, Mryolo\_27, MuchMore\_32, Mule\_28, Mundrea\_28, Museum\_30, NEHalo\_28, Naca\_25, Naira\_29, Naji\_32, NearlyHeadless\_25, Nebs\_28, Nemo27\_28, Nerujay\_29, Nhonho\_28, Niza\_30, Noella\_29, Noelle\_28, Norbert\_28, NorthStar\_28, Norz\_30, NotAPhaseMom\_28, Nyxis\_28, OKCentral2016\_28, OKaNui\_29, Obama12\_29, Ohfah\_28, Ohno789\_28, OlanP\_30, Ollie\_30, Oogway\_27, P28Green\_30, PGHhamlin\_32, PSullivan\_30, PacerPaul\_28, PainterBoy\_30, Palestino\_27, Panamaxus\_28, Papez\_30, Paphu\_27, Paraselene\_27, Pari\_29, Parliament\_27, PascalRango\_29, PattyP\_30, Pawn\_30, Payneful\_28, PeaceMeal1\_27, Peaches\_28, Pelly\_29, Pembroke\_30, Penny1\_30, Pepe\_29, Perplexer\_28, Perseus\_30, PeterPeter\_28, Peterson\_31, PetiteSangsue\_28, Petp2012\_30, Petruccio\_29, PetterN\_26, Phacado\_28, Pharaoh\_29, Felipe\_28, PherrisBueller\_29, Phighter1804\_28, Phillis\_25, PhineBark\_28, PhishRPhriends\_29, Phlippers\_27, Phlorence\_25, Phoebe\_30, Phontbonne\_28, Phoxy\_30, Phranny\_31, PhrostyMug\_28, PickleBack\_25, PinkPlastic\_27, Pinto\_31, Pipcraft\_28, Pippin\_30, Pistachio\_29, Pita2\_30, Pocahontas\_29, Polymorphads\_28, Pomar16\_32, Poompha\_27, Popcicle\_29, PotatoSplit\_31, Prinasse11\_26, ProMouse\_27, Pumbaa\_28, Puppy\_29, PurpleHaze\_30, QTRLifeCrisis\_28, QuinnKiro\_28, Quokka\_27, Raid\_29, Rajelicia\_28, Reba\_31, Rebeuca\_29, Refuge\_32, Relief\_28, ResDef\_29, RhynO\_29, Rhynn\_28, RidgeCB\_28, Ringer\_28, Roary\_25, Rockstar\_28, Rohr\_29, Romney\_28, Roosevelt\_28, Rosa24\_27, Rowdy\_32, Rubeus\_29, Rufus\_29, Ruin\_28, Rummer\_30, Ruotula\_27, Rutherford\_30, STLscum\_29, Sabertooth\_28, Sabia\_30, Sabinator\_30, Sagefire\_29, Saintus\_25, Sandaddy\_27, Sanya\_27, SarFire\_28, SaturnRing\_28, Scamp\_28, Scorpio\_26, Scout\_28, Scowl\_29, Seabiscuit\_30, Seanderson\_29, SeniorClean\_27, Severus\_27, Shaka\_28, Shapes\_32, SheldonCooper\_29, ShortQueendom\_27, Shygu2\_28, Sibs6\_30, SkiPole\_30, Skipitt\_28, Slagathor\_29, Smairt\_29, Smeadley\_25,

Smeagol\_30, Snazzy\_27, Snickers\_30, SoYo\_30, SoilDragon\_30, Solon\_28, Sorpresa\_28, Soshari\_32, Sparxx\_28, Spike509\_30, SpikeBT\_30, Spino\_28, Squee\_29, Stagni\_30, StarStuff\_32, Stasia\_29, Steamy\_30, StepMih\_30, Stephig9\_25, StewieG\_27, Stink\_29, StrongArm\_27, Sumter\_27, Sunshine924\_29, SwirlSquare\_31, Swirley\_25, SwissCheese\_30, Switzer\_29, Swole\_30, SydNat\_25, TNguyen7\_28, Taquarus\_28, Target\_31, Tarynearal\_24, Tasp14\_29, Taurus\_30, Teodoridan\_26, Texage\_28, Thanksgivukkah\_28, Theia\_23, TheloniousMonk\_30, Thor\_28, Tiffany\_30, Tiger\_25, TinaFeyge\_28, TinyPebbles\_30, Tinybot\_27, TipsytheTRex\_28, TiroTheta9\_28, Todacoro\_29, Tomathan\_32, Topanga\_28, Topgun\_28, Tote\_30, Traft412\_30, Travvers\_32, Treddle\_30, Trike\_26, Tripl3t\_29, Trouble\_29, TroyPia\_28, Turj99\_27, Twigg\_25, Twister\_28, TwoPeat\_29, TygerBlood\_28, U2\_28, Ulysses\_27, UnionJack\_25, VA6\_29, VC3\_32, Veracruz\_28, Violet\_27, Vix\_30, WalterMcMickey\_28, Wander\_28, Watermelon\_30, Watson\_30, Wheeler\_28, Wilbur\_28, Wile\_28, Wilkins\_28, Wizard007\_28, Wooldri\_32, Xena\_28, YoSam321\_28, Zeeculate\_28, Zephyr\_28, Zetzy\_29, Zeuska\_29, Zimmer\_31, Zolita\_24,

Genes that have the "Most Annotated" start but do not call it:

- Isca\_28, LunarLander\_30, Phantastic\_28, Serenity\_28,

Genes that do not have the "Most Annotated" start:

- 20ES\_29, 40AC\_32, AbbyPaige\_31, Acolyte\_29, Adzzy\_30, Agape74\_31, Agatha\_19, AikoCarson\_18, Alatin\_24, Aliter\_31, Alma\_31, Alpacados\_23, Amok\_18, Anaysia\_31, AndPeggy\_18, Aneem\_29, AngryOrchard\_23, AnnaL29\_32, Anon\_29, Anselm\_29, AppleCloud\_22, ArcherNM\_31, Arianna\_20, Arissanae\_29, Artemis2UCLA\_32, Avani\_20, Axym\_19, Azira\_21, BABullseye\_32, BabyBack\_31, Bachome\_29, Bactobuster\_30, Baehexic\_30, Battleship\_32, Bavailard\_19, Beemo\_31, Belenaria\_24, BengiVuitton\_30, Benvolio\_29, BiancaTri92\_31, BigChungus\_18, BillDoor\_21, Biskit\_20, Blarby\_21, BlessJoy\_32, Blinn1\_32, Blondies\_19, Blue7\_32, BobSwaget\_32, BobbyDazzler\_24, BogosyJay\_30, Bonanza\_24, Boohoo\_31, Bowtie\_29, Bradshaw\_24, Bryce\_24, Bud\_29, Buggy\_31, Burnsey\_19, Button\_20, Buttrmilkdreams\_19, CRB1\_29, Candra\_32, CanesSauce\_19, Caraxes\_28, Carsonalex\_20, Catalina\_32, Centaur\_31, Changeling\_31, Chargerpower\_30, Charm\_29, Chartreuse\_32, Che12\_31, Che9d\_20, CherryonLim\_20, ChickenTender\_21, ChipMunk\_31, ChocoMunchkin\_19, Cleo\_19, CloudWang3\_32, Colin\_33, Colleen\_20, Conquerage\_31, Cookiedough\_32, CosmicSans\_24, Cozz\_19, Crucio\_29, DS6A\_22, DaVinci\_32, Dalmatian\_29, Darrell\_31, DekHockey33\_31, Deloris\_30, Demsculpinboyz\_20, Dignity\_31, Dinger\_24, Dorothea\_32, Drake55\_31, Dre3\_19, DreamTeam1\_29, DroogsArmy\_29, DudeLittle\_29, EZMoney23\_33, Ebony\_29, Echild\_29, EdogawaKiddo\_29, Eidsmoe\_31, Elephantoon\_30, Elinal\_20, Elliott\_19, Emalyn\_18, EmyBug\_31, Epsocamisio\_31, Equemioh13\_31, EricB\_32, Erik\_24, Espica\_24, Et2Brutus\_28, EvilGenius\_31, ExplosioNervosa\_31, Fameo\_29, Fayely\_31, Feastonyeet\_18, Fibonacci\_29, FiringLine\_29, First\_0029, Flare16\_29, Flaverint\_29, FlyCatcher\_32, Fribs8\_20, Fryberger\_54, GTE2\_17, Gail\_29, Garak\_33, GaugeLDP\_31, Georgie2\_30, GiKK\_22, Gibbous\_19, Gilberta\_29, Gladiator\_32, GoldHunter\_20, Gollum\_24, Gratitude\_30, GreedyLawyer\_32, Gruunaga\_32, Guey18\_59, HINdeR\_28, Hammer\_32, Hanray\_30, Harlequin\_24, HarryHoudini\_31, Heffalump\_31, Helmet\_33, Hexamo\_32, Hexbug\_21, HippoPololi\_21, Hiro\_24, Horex\_30, Hoot\_32, Horseradish\_20, HortumSL17\_31, Hutc2\_29, Indra\_32, Insomnia\_29, IronMan\_31, Isiphiwo\_32, Iwokeuplikedis\_30, JSwag\_31, Jaan\_32, Jabbawokkie\_22, Jabith\_29, Jamzy\_22, Jeeves\_29, Jeffabunny\_32, Jerm\_31, Jester\_24, JewelBug\_32, Jiawan\_30, Jordennis\_32, Joselito\_29, JoshKayV\_31, Juicebox\_20, Kalpine\_32, KatherineG\_31, KayGee\_19,

Kazan\_32, Keelan\_52, Keziacharles14\_29, KingCyrus\_31, Kinmap\_30, Kipper29\_32, Koko\_32, Krishelle\_24, LadyBird\_29, Landor\_30, Larenn\_30, LastResort\_31, Lauer\_18, Leogania\_31, Leviathan\_31, LilSpotty\_19, LilTurb\_31, Lilbunny\_32, Lilleskat\_29, Lillie\_24, LionsBait\_30, Lokk\_32, LoneWolf\_30, Looper\_32, Loser\_32, Luchador\_31, Lucivia\_29, MAnor\_19, MScarn\_21, MaCh\_29, MaVan\_21, Mabel\_29, Malec\_30, Maminiaina\_30, Margaret\_22, Mayweather\_20, McFly\_32, MiculUcigas\_29, MicyPS\_18, Miko\_32, MinecraftSteve\_32, Mulciber\_29, Munch\_29, MunkgeeRoachy\_19, MyraDee\_26, Myxus\_31, NaSiaTalie\_29, Naiad\_24, Nancinator\_24, Natosaleda\_24, Nebulosus\_31, Nedarya\_30, Neeharika16\_32, Newrala\_32, Nibbles\_21, NicoleTera\_33, Nina\_20, Nodigi\_21, NothingSpecial\_31, Odin\_28, Onglai\_30, Oofda\_32, Orange\_29, Orla\_21, PP\_38, PSonyx\_18, PackMan\_31, Partridge\_24, Petersenfast\_28, Ph8s\_30, Phaded\_32, Phaeder\_31, PhailMary\_23, Phlei\_24, Phonnegut\_31, Phrankenstein\_24, Pioneer\_31, Piro94\_30, Pmask\_32, Polyphemus\_31, Pons\_19, PotPie\_19, Poushou\_20, Power\_29, Priamo\_32, Priya\_31, PsychoKiller\_19, Pukovnik\_31, Qobbit\_31, Quasar\_19, QueenB2\_29, QueenBeesly\_29, RER2\_17, RGL3\_17, Rachaly\_32, Rahalelujah\_28, RanchParmCat\_22, Rasputin\_24, ReMo\_31, RedBaron\_20, RedRock\_32, Remus\_31, Retro23\_29, RexFury\_24, Rhodalysa\_24, Rifter\_32, Roksolana\_32, Ronaldo\_57, Rosalind\_31, RyeScarlet\_32, Sachima\_29, Salz\_29, Scherzo\_31, SemperFi\_31, Sham4\_29, ShayRa\_32, SheaKeira\_29, SheckWes\_18, Sheen\_30, Shuman\_24, SilverChicken\_20, SketchMex\_18, Sknot\_30, Smeagan\_31, SmellyB\_32, SnapTap\_29, Snape\_29, Socotra\_20, Sopespian\_19, SororFago\_29, Soul22\_20, Soups\_31, Spouty\_31, StCroix\_24, Starburst\_20, SteamedHams\_21, Strosahl\_31, SummitAcademy\_18, Sunhee\_28, SuperAwesome\_32, SuperCallie99\_32, Superchunk\_28, Survivors\_21, Swann\_24, SweatNTears\_21, SweetiePie\_29, Switzerland\_31, TWAMP\_24, Takoda\_24, TarsusIV\_29, Temprado\_33, Terrific\_33, Timothy\_29, Timshel\_29, TinyTimmy\_29, Toaka\_28, Tolls\_21, ToneTone\_30, Toro\_31, TouchMeNot\_20, Tristan\_30, Trixie\_32, Troje\_19, Trooper\_29, Tubs\_31, Tucker\_32, Turbido\_31, Typhonomachy\_20, Ugenie5\_28, UhSalsa\_24, Updawg\_31, Vanisoa\_28, Vine\_20, VohminGhazi\_32, Volt\_56, Waits\_31, Warrior24\_32, WeiHuaDA\_35, Whabigail7\_31, WideWale\_31, Wiks\_32, WunderPhul\_32, XianYue\_29, Yakult\_20, Yarn\_18, Yecey3\_30, Yogi\_24, Yokurt\_32, Yoncess\_24, Yoshi\_20, Yucky\_21, Yummy\_20, Zaka\_32, Zapner\_21, Zareef\_23, Ziko\_57, Zulu\_32,

### Summary by start number:

#### Start 22:

- Found in 10 of 991 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Insomnia\_29 (A11),

#### Start 27:

- Found in 42 of 991 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 2.4% of time when present
- Phage (with cluster) where this start called: Serenity\_28 (A2),

#### Start 33:

- Found in 6 of 991 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 16.7% of time when present

- Phage (with cluster) where this start called: Alma\_31 (A9),

Start 36:

- Found in 1 of 991 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty\_19 (singleton),

Start 39:

- Found in 1 of 991 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phantastic\_28 (A3),

Start 41:

- Found in 1 of 991 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DS6A\_22 (singleton),

Start 43:

- Found in 23 of 991 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 4.3% of time when present
- Phage (with cluster) where this start called: Isca\_28 (A3),

Start 45:

- Found in 1 of 991 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keelan\_52 (DP),

Start 46:

- Found in 17 of 991 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 15 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnnaL29\_32 (A2), ArcherNM\_31 (A2), Bactobuster\_30 (A2), BiancaTri92\_31 (A2), Changeling\_31 (A2), Colin\_33 (A2), IronMan\_31 (A2), Jaan\_32 (A2), Kalpine\_32 (A2), Landor\_30 (A2), Leogania\_31 (A2), Loser\_32 (A2), Phaded\_32 (A2), Pukovnik\_31 (A2), RedRock\_32 (A2), Trixie\_32 (A2), WeiHuaDA\_35 (A2),

Start 47:

- Found in 24 of 991 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 11 of 881
- Called 58.3% of time when present
- Phage (with cluster) where this start called: Amok\_18 (CT), AndPeggy\_18 (CT), Biskit\_20 (CT), Blondies\_19 (CT), Buttrmlkdreams\_19 (CT), CanesSauce\_19 (CT), ChocoMunchkin\_19 (CT), Guey18\_59 (DP), MScarn\_21 (CT), Ronaldo\_57 (DP), SketchMex\_18 (CT), Troje\_19 (CT), Volt\_56 (DP), Ziko\_57 (DP),

Start 48:

- Found in 1 of 991 ( 0.1% ) of genes in pham

- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_54 (DP),

#### Start 49:

- Found in 1 of 991 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HINdeR\_28 (A7),

#### Start 51:

- Found in 30 of 991 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 26 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bavidard\_19 (CT), BigChungus\_18 (CT), Button\_20 (CT), CherryonLim\_20 (CT), DroogsArmy\_29 (A7), Elinal\_20 (CT), Feastonyeet\_18 (CT), FlyCatcher\_32 (A7), GiKK\_22 (CT), Hexbug\_21 (CT), Jamzy\_22 (CT), KayGee\_19 (CT), Lauer\_18 (CT), MAnor\_19 (CT), Margaret\_22 (CT), Mayweather\_20 (CT), MyraDee\_26 (A18), Nodigi\_21 (CT), Orla\_21 (CT), Pons\_19 (CT), PotPie\_19 (CT), RanchParmCat\_22 (CT), SheckWes\_18 (CT), Sheen\_30 (A7), SummitAcademy\_18 (CT), Timshel\_29 (A7), Toro\_31 (A7), Vine\_20 (CT), Yakult\_20 (CT), Yucky\_21 (CT),

#### Start 52:

- Found in 57 of 991 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 33 of 881
- Called 82.5% of time when present
- Phage (with cluster) where this start called: Agatha\_19 (CT), AikoCarson\_18 (CT), Axym\_19 (CT), Azira\_21 (CT), BabyBack\_31 (A2), BillDoor\_21 (CT), BobSwaget\_32 (A2), Burnsey\_19 (CT), Carsonalex\_20 (CT), ChickenTender\_21 (CT), Cleo\_19 (CT), Cozz\_19 (CT), Dre3\_19 (CT), EZMoney23\_33 (A2), Elliott\_19 (CT), Emalyn\_18 (CT), Fribs8\_20 (CT), GTE2\_17 (CT), GaugeLDP\_31 (A2), Gibbous\_19 (CT), GoldHunter\_20 (CT), HippoPololi\_21 (CT), Horseradish\_20 (CT), Lokk\_32 (A2), MaVan\_21 (CT), Miko\_32 (A2), MunkgeeRoachy\_19 (CT), Nibbles\_21 (CT), Nina\_20 (CT), NothingSpecial\_31 (A2), PsychoKiller\_19 (CT), Quasar\_19 (CT), Rachaly\_32 (A2), RedBaron\_20 (CT), Socotra\_20 (CT), Sopespian\_19 (CT), Starburst\_20 (CT), SteamedHams\_21 (CT), Survivors\_21 (CT), SweatNTears\_21 (CT), Tolls\_21 (CT), Tristan\_30 (A2), Trooper\_29 (A2), Typhonmarchy\_20 (CT), Yarn\_18 (CT), Yummy\_20 (CT), Zareef\_23 (CT),

#### Start 53:

- Found in 163 of 991 ( 16.4% ) of genes in pham
- Manual Annotations of this start: 140 of 881
- Called 99.4% of time when present
- Phage (with cluster) where this start called: Acolyte\_29 (A2), Alatin\_24 (CA), Aliter\_31 (A9), Alpacados\_23 (CA), Anaysia\_31 (A15), AngryOrchard\_23 (CA), Anon\_29 (A15), AppleCloud\_22 (CA), Arissanee\_29 (A9), Artemis2UCLA\_32 (A6), BABullseye\_32 (A6), Battleship\_32 (A15), Beemo\_31 (A9), Belenaria\_24 (CA), BlessJoy\_32 (A6), Blinn1\_32 (A6), Blue7\_32 (A6), BobbyDazzler\_24 (CA), BogosyJay\_30 (A9), Bonanza\_24 (CA), Boohoo\_31 (A15), Bradshaw\_24 (CA), Bryce\_24 (CA), Candra\_32 (A6), Catalina\_32 (A9), Chargerpower\_30 (A), Charm\_29 (A9), Chartreuse\_32 (A6), CloudWang3\_32 (A6), Conquerage\_31 (A9), Cookiedough\_32 (A6), CosmicSans\_24 (CA), DaVinci\_32 (A6), Darrell\_31 (A9),



DekHockey33\_31 (A15), Dinger\_24 (CA), Dorothea\_32 (A6), DreamTeam1\_29 (A9), EdogawaKiddo\_29 (A9), Eidsmoe\_31 (A9), Elephantoon\_30 (A9), EmyBug\_31 (A9), Epsocamisio\_31 (A15), EricB\_32 (A6), Erik\_24 (CA), Espica\_24 (CA), ExplosioNervosa\_31 (A9), Fayely\_31 (A9), Gail\_29 (A14), Garak\_33 (A6), Gladiator\_32 (A6), Gollum\_24 (CA), GreedyLawyer\_32 (A6), Gruunaga\_32 (A6), Hammer\_32 (A6), Hanray\_30 (A9), Harlequin\_24 (CA), Helmet\_33 (A6), Hexamo\_32 (A6), Hiro\_24 (CA), Horex\_30 (A9), Hoot\_32 (A6), HortumSL17\_31 (A9), Indra\_32 (A6), Isiphiwo\_32 (A6), JSwag\_31 (A15), Jeeves\_29 (A14), Jeffabunny\_32 (A6), Jester\_24 (CA), JewelBug\_32 (A6), Jiawan\_30 (A9), Jordennis\_32 (A6), KatherineG\_31 (A15), Kazan\_32 (A6), Keziacharles14\_29 (A9), Kinmap\_30 (A21), Kipper29\_32 (A6), Koko\_32 (A6), Krishelle\_24 (CA), LastResort\_31 (A15), Lilbunny\_32 (A6), Lilleskat\_29 (A9), Lillie\_24 (CA), LoneWolf\_30 (A9), Looper\_32 (A15), Luchador\_31 (A14), Maminiaina\_30 (A9), McFly\_32 (A6), MinecraftSteve\_32 (A15), Myxus\_31 (A9), Naiad\_24 (CA), Nancinator\_24 (CA), Natosaleda\_24 (CA), Nebulosus\_31 (A15), Nedarya\_30 (A15), Neeharika16\_32 (A6), Newrala\_32 (A6), Onglai\_30 (A9), Oofda\_32 (A15), PP\_38 (A7), PackMan\_31 (A9), Partridge\_24 (CA), Phaeder\_31 (A9), PhailMary\_23 (CA), Phlei\_24 (A13), Phonnegut\_31 (A9), Phrankenstien\_24 (CA), Pioneer\_31 (A9), Pmask\_32 (A6), Polyphemus\_31 (A6), Priamo\_32 (A6), Priya\_31 (A9), Qobbit\_31 (A9), RER2\_17 (CA), RGL3\_17 (CA), Rahalelujah\_28 (A9), Rasputin\_24 (CA), ReMo\_31 (A15), Remus\_31 (A15), RexFury\_24 (CA), Rhodalysa\_24 (CA), Rifter\_32 (A6), Roksolana\_32 (A6), Rosalind\_31 (A15), RyeScarlet\_32 (A9), Sachima\_29 (A9), Scherzo\_31 (A9), ShayRa\_32 (A15), SheaKeira\_29 (A9), Shuman\_24 (CA), SmellyB\_32 (A6), SororFago\_29 (A14), Soups\_31 (A15), Spouty\_31 (A9), StCroix\_24 (CA), Strosahl\_31 (A15), Sunhee\_28 (A14), SuperAwesome\_32 (A6), SuperCallie99\_32 (A6), Swann\_24 (CA), Switzerland\_31 (A15), TWAMP\_24 (CA), Takoda\_24 (CA), Temprado\_33 (A6), Toaka\_28 (A9), ToneTone\_30 (A6), Tubs\_31 (A9), Tucker\_32 (A6), Ugenie5\_28 (A9), UhSalsa\_24 (CA), Vanisoa\_28 (A9), VohminGhazi\_32 (A6), Waits\_31 (A15), Warrior24\_32 (A15), Wiks\_32 (A6), WunderPhul\_32 (A6), Yecey3\_30 (A9), Yogi\_24 (CA), Yokurt\_32 (A6), Yoncess\_24 (CA), Zaka\_32 (A6), Zulu\_32 (A6),

#### Start 54:

- Found in 25 of 991 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 23 of 881
- Called 96.0% of time when present
- Phage (with cluster) where this start called: Aneem\_29 (A11), Bachome\_29 (A11), Bowtie\_29 (A11), Bud\_29 (A11), Ebony\_29 (A11), Et2Brutus\_28 (A11), Fibonacci\_29 (A11), Flaverint\_29 (A11), Gilberta\_29 (A11), Hutc2\_29 (A11), Jabith\_29 (A11), Joselito\_29 (A11), Lucivia\_29 (A11), MaCh\_29 (A11), Mabel\_29 (A11), Mulciber\_29 (A11), Munch\_29 (A11), Orange\_29 (A11), Petersenfast\_28 (A11), Salz\_29 (A11), Sham4\_29 (A11), Snape\_29 (A11), Timothy\_29 (A11), TinyTimmy\_29 (A11),

#### Start 55:

- Found in 609 of 991 ( 61.5% ) of genes in pham
- Manual Annotations of this start: 554 of 881
- Called 99.3% of time when present
- Phage (with cluster) where this start called: A6\_26 (A1), ACFishhook\_30 (A3), AFIS\_28 (A1), AN3\_29 (A2), AN9\_32 (A2), ANI8\_32 (A2), AbbysRanger\_28 (A4), Abbyshoes\_29 (A1), Abdiel\_27 (A4), Abrogate\_290 (A1), Achebe\_27 (A4), Acme\_30 (A1), Adahisdi\_29 (A1), Aeneas\_30 (A1), Agaliana\_29 (A1), AgentM\_25 (A5), Aglet\_30 (A3), AgronaGT15\_30 (A3), Airmid\_25 (A5), Ajay\_29 (A1), Albee\_28 (A4), Alberto7\_29 (A4), Alsfro\_32 (A1), Altman\_30 (A1), Alvin\_29 (A1), Anglerfish\_29 (A1),

Annyong\_28 (A4), Anthony\_28 (A20), Anubis\_32 (A3), Applejack\_28 (A1), Aragog\_25 (A5), Arcanine\_29 (A1), Archetta\_25 (A5), Arlo\_27 (A1), Arturo\_27 (A4), Ashballer\_30 (A1), Astro\_25 (A8), Atkinbua\_30 (A1), AugsMagnumOpus\_32 (A3), AvatarAhPeg\_29 (A4), Avle17\_28 (A4), B1\_26 (A3), BK1\_26 (A1), BPBiebs31\_29 (A1), Baby16\_28 (A4), BabyJohn\_27 (A3), BabyRay\_28 (A3), Backyardigan\_28 (A4), BaconJack\_31 (A1), Badger\_28 (A4), BangNhom\_28 (A4), Barriga\_28 (A1), BarrowTuph\_27 (A1), Bartimeaus\_28 (A4), Beatrix\_28 (A1), Beauxregard13\_30 (A3), BeesKnees\_29 (A1), BellusTerra\_28 (A4), Benedict\_25 (A5), Bethlehem\_28 (A1), Bexan\_27 (A1), Big3\_28 (A1), BigMau\_30 (A1), BigPaolini\_29 (A1), Bigchung\_28 (A1), Bigflo\_30 (A3), Bigfoot\_27 (A1), BillKnuckles\_29 (A1), Bircsak\_28 (A1), Blackmoor\_28 (A4), BluSpix\_29 (A1), BlueBird\_29 (A3), Blue\_28 (A1), Bluefalcon\_24 (A5), Bob3\_27 (A1), Bombshell\_28 (A4), Bonamassa\_25 (A5), Bones\_28 (A1), Bradman\_28 (A2), BreSam8\_30 (A3), Briton15\_30 (A1), Broseidon\_28 (A4), Bruiser\_27 (A4), Bruns\_27 (A1), BubbleTrouble\_28 (A4), Bugatti\_28 (A3), Bumblebee11\_28 (A4), Burger\_27 (A4), Burton\_29 (A1), Buttons\_30 (A1), BuzzBuzz\_29 (A3), Bxb1\_26 (A1), Bxz2\_29 (A3), C3\_27 (A2), CactusRose\_27 (A1), Caelakin\_28 (A4), Calvinny\_31 (A3), Camperdownii\_27 (A4), Carlyle\_30 (A1), Caviar\_29 (A3), CentreCat\_28 (A4), Cerulean\_29 (A4), Chadwick\_26 (A5), ChampagnePapi\_29 (A4), Chanagan\_27 (A1), Chaph\_28 (A4), Chiqui\_27 (A3), Chupacabra\_28 (A10), Ciao\_28 (A1), Cici\_28 (A4), Cindaradix\_27 (A4), Cintron\_28 (A4), Citius\_28 (A4), Clarenza\_28 (A4), Cocoaberry\_28 (A4), Colbster\_30 (A3), Commander\_28 (A4), ConceptII\_30 (A1), Connomayer\_28 (A4), Conspiracy\_25 (A5), Coog\_25 (A5), Corvo\_29 (A1), Crispicous1\_27 (A1), Cuco\_25 (A5), Cueylyss\_28 (A1), Cullens\_30 (A3), D29\_29 (A2), D32\_32 (A2), DBQu4n\_32 (A2), DD5\_29 (A1), DaHudson\_30 (A3), Daishi\_29 (A3), Danforth\_24 (A8), DarthPhader\_30 (A12), Datway\_28 (A4), Deano\_28 (A4), Dexes\_29 (A1), Dhanush\_28 (A4), Dieselweasel\_30 (A3), DirtyDunning\_28 (A4), Discoknowium\_25 (A5), Dixon\_25 (A8), DontArgue\_27 (A10), Doom\_29 (A1), DrFeelGood\_27 (A1), Drake94\_27 (A10), DreamCatcher\_31 (A1), Dreamboat\_29 (A1), DropBear\_28 (A3), Druantia\_28 (A4), Dublin\_24 (A5), Dulcie\_27 (A1), Duplo\_32 (A2), Dussy\_29 (A1), DustyMartin\_32 (A10), Dynamix\_29 (A1), EagleEye\_31 (A16), Eagle\_27 (A4), Eaglepride\_29 (A10), Eapen\_28 (A4), Edison31\_28 (A10), Edtherson\_29 (A1), ElTiger69\_25 (A5), EnzoK\_28 (A1), EpicPhail\_30 (A3), Eris\_27 (A4), Eros\_28 (A4), Espresso\_28 (A1), Euphoria\_28 (A1), Eurydice\_28 (A4), Expelliarmus\_24 (A8), Eyeball\_28 (A1), Fajezeel\_30 (A1), Farber\_30 (A3), Fascinus\_27 (A1), FatCactus\_27 (A20), Fenn\_29 (A1), Fernando\_30 (A3), Florean\_28 (A4), Flux\_28 (A4), ForGetIt\_25 (A5), Forsytheast\_28 (A1), Francis47\_28 (A1), Fred313\_28 (A3), FrogHopper\_29 (A1), Funston\_28 (A4), Fushigi\_29 (A1), GMonster\_27 (A1), Gadost\_28 (A4), GageAP\_30 (A1), Gandalf20\_29 (A1), Gemma\_30 (A3), George\_24 (A5), Ghoulyboy\_25 (A5), GingkoMaracino\_30 (A3), Giroux\_28 (A3), Gompeii16\_28 (A1), Goose\_28 (A10), Graduation\_30 (A1), GrecoEtereo\_30 (A1), Greg\_30 (A1), Grif\_30 (A3), Groundhog\_24 (A8), Groupthink\_31 (A3), Grub\_30 (A3), Grum1\_30 (A3), GtownJaz\_30 (A3), Gwendoluna\_30 (A1), Gyzlar\_30 (A1), HamSlice\_27 (A4), Hami1\_30 (A1), HanShotFirst\_28 (A1), Happiness\_28 (A4), HarryOW\_29 (A1), HashRod\_31 (A3), HaveUMetTed\_31 (A3), Heathen\_28 (A3), HelDan\_28 (A3), Heliosoles\_30 (A3), Herbertwm\_26 (A2), Hercules11\_30 (A3), Hermia\_31 (A1), HermioneGrange\_28 (A1), Holli\_28 (A4), Homines\_28 (A1), Hookmount\_29 (A3), Hope4ever\_28 (A1), Houdini22\_28 (A4), HuhtaEnerson15\_25 (A5), Huxley\_28 (A4), ICleared\_28 (A4), ILeeKay\_30 (A1), Iceman\_29 (A4), Ichabod\_29 (A1), Idleandcovert\_28 (A3), IgnatiusPatJac\_28 (A1), Inyanga\_27 (A1), Iqorha\_27 (A1), Iracema64\_29 (A4), JC27\_30 (A1), JF2\_28 (A3), JF4\_28 (A3), JHC117\_30 (A3), Jabiru\_25 (A5), JackSparrow\_29 (A1), Jasper\_29 (A1), Jaykayelowell\_28 (A4), JenCasNa\_30 (A3), JeppNRM\_31 (A3), Jerm2\_29 (A1), JetBlade\_28 (A4), Jobu08\_30 (A3),

JoongJeon\_28 (A4), Jorgensen\_28 (A1), Journey13\_27 (A2), Jovo\_25 (A5), Jsquared\_28 (A2), JuliaChild\_30 (A1), KADY\_31 (A3), KBG\_29 (A1), KFPoly\_28 (A4), KSSJEB\_28 (A1), Kachowdy\_28 (A3), Kalb97\_31 (A3), Kalnoky\_31 (A3), Kamy\_28 (A4), Kanely\_29 (A1), Katalie136\_28 (A4), Kenmech\_31 (A1), Kerberos\_32 (A2), Killigrew\_26 (A1), Kimona\_25 (A19), Kingmustik0402\_28 (A4), KittenMittens\_27 (A10), Koan\_27 (A4), Koduck\_29 (A2), Koreni\_27 (A4), Kratark\_28 (A4), Kremtemulon\_28 (A4), Kristoff\_29 (A10), Kugel\_29 (A1), KyMonks1A\_30 (A1), Kyee\_28 (A4), Kykar\_28 (A1), L5\_29 (A2), LBerry\_30 (A3), LHTSCC\_29 (A4), Lambert1\_29 (A3), Lamina13\_28 (A1), LappelDuVide\_28 (A4), LarryKay\_30 (A3), Lemur\_28 (A4), LeoAvram\_28 (A4), Lesedi\_27 (A1), Lev2\_25 (A5), Levia\_27 (A1), Licorice\_30 (A1), LilBib\_29 (A1), Lilith\_30 (A3), LittleB\_28 (A4), LittleCherry\_25 (A5), LittleGuy\_28 (A4), LochMonster\_28 (A4), Lockley\_28 (A1), Lopton\_29 (A1), Lorenzo\_28 (A4), Louie6\_30 (A3), Iowa\_30 (A3), Lucyedi\_30 (A16), LugYA\_32 (A3), Lunsford\_29 (A4), MA5\_28 (A3), MK4\_28 (A3), MPlant7149\_27 (A1), MadMarie\_30 (A3), Magnar\_28 (A1), Magnito\_27 (A1), Mainiac\_30 (A3), MajorMajor\_28 (A2), Makemake\_28 (A1), Malinsilva\_32 (A3), Manatee\_29 (A1), Manu\_31 (A3), MarQuardt\_30 (A3), Marcell\_28 (A1), Marchesa\_28 (A3), Marchy\_27 (A1), Marco3\_28 (A1), Marge\_29 (A1), Margo\_29 (A3), Marie\_30 (A3), Marius\_31 (A3), Maroc7\_27 (A1), Marsha\_28 (A1), MaryBeth\_28 (A1), MarysWell\_24 (A5), Maverick\_28 (A4), Maxo\_28 (A4), Mayonnaise\_28 (A4), Mazhar510\_28 (A4), McGuire\_29 (A1), McSinger\_29 (A1), Medusa\_28 (A4), MeeZee\_28 (A4), Melvin\_28 (A4), MetalQZJ\_28 (A1), Methuselah\_29 (A3), Micasa\_25 (A5), Michley\_28 (A1), Microwolf\_30 (A3), Midas2\_25 (A5), Milcery\_25 (A5), Millski\_27 (A4), Miramae\_28 (A4), Misomonster\_32 (A3), MissWhite\_29 (A2), Mkhuseleli\_29 (A1), Molly\_29 (A1), Monet\_30 (A1), MoneyMay\_30 (A3), Moose\_28 (A1), Morpher26\_28 (A4), Morrow\_28 (A4), MrGordo\_28 (A1), Mryolo\_27 (A1), MuchMore\_32 (A3), Mule\_28 (A1), Mundrea\_28 (A4), Museum\_30 (A1), NEHalo\_28 (A1), Naca\_25 (A5), Naira\_29 (A1), Naji\_32 (A2), NearlyHeadless\_25 (A8), Nebs\_28 (A4), Nemo27\_28 (A4), Nerujay\_29 (A1), Nhonho\_28 (A1), Niza\_30 (A1), Noella\_29 (A3), Noelle\_28 (A4), Norbert\_28 (A3), NorthStar\_28 (A4), Norz\_30 (A1), NotAPhaseMom\_28 (A4), Nyxis\_28 (A4), OKCentral2016\_28 (A10), OKaNui\_29 (A4), Obama12\_29 (A4), Ohfah\_28 (A4), Ohno789\_28 (A1), OlanP\_30 (A3), Ollie\_30 (A3), Oogway\_27 (A1), P28Green\_30 (A3), PGHhamlin\_32 (A3), PSullivan\_30 (A1), PacerPaul\_28 (A1), PainterBoy\_30 (A16), Palestino\_27 (A4), Panamaxus\_28 (A3), Papez\_30 (A1), Paphu\_27 (A1), Paraselene\_27 (A1), Pari\_29 (A1), Parliament\_27 (A1), PascalRango\_29 (A1), PattyP\_30 (A1), Pawn\_30 (A3), Payneful\_28 (A1), PeaceMeal1\_27 (A10), Peaches\_28 (A4), Pelly\_29 (A1), Pembroke\_30 (A3), Penny1\_30 (A3), Pepe\_29 (A1), Perplexer\_28 (A4), Perseus\_30 (A1), PeterPeter\_28 (A4), Peterson\_31 (A1), PetiteSangsue\_28 (A4), Petp2012\_30 (A1), Petruchio\_29 (A1), PetterN\_26 (A5), Phacado\_28 (A4), Pharaoh\_29 (A12), Felipe\_28 (A4), PherrisBueller\_29 (A1), Phighter1804\_28 (A4), Phillis\_25 (A8), PhineBark\_28 (A1), PhishRPhriends\_29 (A3), Philipppers\_27 (A1), Phlorence\_25 (A5), Phoebe\_30 (A3), Phontbonne\_28 (A4), Phoxy\_30 (A3), Phranny\_31 (A3), PhrostyMug\_28 (A1), PickleBack\_25 (A5), PinkPlastic\_27 (A1), Pinto\_31 (A1), Pipcraft\_28 (A4), Pippin\_30 (A1), Pistachio\_29 (A3), Pita2\_30 (A1), Pocahontas\_29 (A3), Polymorphads\_28 (A4), Pomar16\_32 (A2), Poompha\_27 (A10), Popcicle\_29 (A3), PotatoSplit\_31 (A3), Prinashe11\_26 (A5), ProMouse\_27 (A1), Pumbaa\_28 (A4), Puppy\_29 (A3), PurpleHaze\_30 (A3), QTRLifeCrisis\_28 (A1), QuinnKiro\_28 (A3), Quokka\_27 (A2), Raid\_29 (A1), Rajelicia\_28 (A1), Reba\_31 (A3), Rebeuca\_29 (A10), Refuge\_32 (A12), Relief\_28 (A4), ResDef\_29 (A3), RhynO\_29 (A10), Rhynn\_28 (A1), RidgeCB\_28 (A1), Ringer\_28 (A1), Roary\_25 (A8), Rockstar\_28 (A3), Rohr\_29 (A1), Romney\_28 (A4), Roosevelt\_28 (A4), Rosa24\_27 (A4), Rowdy\_32 (A10), Rubeus\_29 (A1), Rufus\_29 (A1), Ruin\_28 (A4), Rummer\_30 (A3), Ruotula\_27 (A1), Rutherford\_30 (A1),

STLscum\_29 (A1), Sabertooth\_28 (A4), Sabia\_30 (A3), Sabinator\_30 (A3), Sagefire\_29 (A1), Saintus\_25 (A8), Sandaddy\_27 (A1), Sanya\_27 (A1), SarFire\_28 (A1), SaturnRing\_28 (A3), Scamp\_28 (A4), Scorpia\_26 (A5), Scout\_28 (A3), Scowl\_29 (A1), Seabiscuit\_30 (A1), Seanderson\_29 (A1), SenorClean\_27 (A4), Severus\_27 (A10), Shaka\_28 (A4), Shapes\_32 (A10), SheldonCooper\_29 (A4), ShortQueendom\_27 (A1), Shygu2\_28 (A4), Sibs6\_30 (A1), SkiPole\_30 (A1), Skipitt\_28 (A4), Slagathor\_29 (A1), Smairt\_29 (A1), Smeadley\_25 (A8), Smeagol\_30 (A1), Snazzy\_27 (A1), Snickers\_30 (A3), SoYo\_30 (A3), SoilDragon\_30 (A3), Solon\_28 (A1), Sorpresa\_28 (A1), Soshari\_32 (A3), Sparxx\_28 (A4), Spike509\_30 (A3), SpikeBT\_30 (A1), Spino\_28 (A4), Squee\_29 (A1), Stagni\_30 (A3), StarStuff\_32 (A2), Stasia\_29 (A4), Steamy\_30 (A12), StepMih\_30 (A3), StepHig9\_25 (A8), StewieG\_27 (A1), Stink\_29 (A4), StrongArm\_27 (A1), Sumter\_27 (A1), Sunshine924\_29 (A1), SwirlSquare\_31 (A2), Swirley\_25 (A5), SwissCheese\_30 (A1), Switzer\_29 (A1), Swole\_30 (A1), SydNat\_25 (A5), TNguyen7\_28 (A3), Taquarus\_28 (A4), Target\_31 (A1), Tarynearl\_24 (A5), Tasp14\_29 (A1), Taurus\_30 (A3), Teodoridan\_26 (A1), Texage\_28 (A3), Thanksgivukkah\_28 (A4), Theia\_23 (A5), TheloniousMonk\_30 (A1), Thor\_28 (A1), Tiffany\_30 (A3), Tiger\_25 (A5), TinaFeyge\_28 (A4), TinyPebbles\_30 (A3), Tinybot\_27 (A4), TopsytheTRex\_28 (A2), TiroTheta9\_28 (A4), Todacoro\_29 (A3), Tomathan\_32 (A2), Topanga\_28 (A10), Topgun\_28 (A1), Tote\_30 (A1), Traft412\_30 (A1), Travvers\_32 (A2), Treddle\_30 (A1), Trike\_26 (A10), Trip13t\_29 (A1), Trouble\_29 (A1), TroyPia\_28 (A4), Turj99\_27 (A1), Twigg\_25 (A5), Twister\_28 (A10), TwoPeat\_29 (A1), TygerBlood\_28 (A4), U2\_28 (A1), Ulysses\_27 (A4), UnionJack\_25 (A5), VA6\_29 (A2), VC3\_32 (A2), Veracruz\_28 (A3), Violet\_27 (A1), Vix\_30 (A3), WalterMcMickey\_28 (A10), Wander\_28 (A4), Watermelon\_30 (A1), Watson\_30 (A3), Wheeler\_28 (A1), Wilbur\_28 (A4), Wile\_28 (A4), Wilkins\_28 (A1), Wizard007\_28 (A4), Wooldri\_32 (A3), Xena\_28 (A4), YoSam321\_28 (A4), Zeeculate\_28 (A1), Zephyr\_28 (A1), Zetzy\_29 (A3), Zeuska\_29 (A1), Zimmer\_31 (A12), Zolita\_24 (A5),

#### Start 56:

- Found in 9 of 991 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 5 of 881
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Arianna\_20 (EO), Colleen\_20 (EO), MicyPS\_18 (EQ), PSonyx\_18 (EQ), Poushou\_20 (EO), TouchMeNot\_20 (EO),

#### Start 57:

- Found in 59 of 991 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 51 of 881
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 20ES\_29 (A2), 40AC\_32 (A17), AbbyPaige\_31 (A2), Agape74\_31 (A2), Anselm\_29 (A2), Baehexic\_30 (A2), BengiVuitton\_30 (A2), Benvolio\_29 (A2), Buggy\_31 (A2), CRB1\_29 (A2), Centaur\_31 (A2), ChipMunk\_31 (A2), Crucio\_29 (A2), Dalmatian\_29 (A2), Deloris\_30 (A2), Dignity\_31 (A2), Drake55\_31 (A2), DudeLittle\_29 (A2), Echild\_29 (A2), Equemioh13\_31 (A2), EvilGenius\_31 (A2), Fameo\_29 (A2), FiringLine\_29 (A2), First\_0029 (A2), Flare16\_29 (A2), Georgie2\_30 (A2), Gratitude\_30 (A2), HarryHoudini\_31 (A2), Heffalump\_31 (A2), Iwokeuplikedis\_30 (A2), Jerm\_31 (A2), JoshKayV\_31 (A2), KingCyrus\_31 (A2), LadyBird\_29 (A2), Larenn\_30 (A2), Leviathan\_31 (A2), LilTurb\_31 (A2), LionsBait\_30 (A2), Malec\_30 (A2), MiculUcigas\_29 (A2), NaSiaTalie\_29 (A2), NicoleTera\_33 (A2), Piro94\_30 (A2), Power\_29 (A2), QueenB2\_29 (A2), QueenBeesly\_29 (A2), Retro23\_29 (A2), SemperFi\_31 (A2), Sknot\_30 (A2), Smeagan\_31 (A2), SnapTap\_29 (A2),

SweetiePie\_29 (A2), TarsusIV\_29 (A2), Terrific\_33 (A2), Turbido\_31 (A2), Updawg\_31 (A2), Whabigail7\_31 (A2), WideWale\_31 (A2), XianYue\_29 (A2),

Start 58:

- Found in 16 of 991 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 13 of 881
- Called 93.8% of time when present
- Phage (with cluster) where this start called: Adzzy\_30 (A2), Avani\_20 (F2), Blarby\_21 (F), Che12\_31 (A2), Che9d\_20 (F2), Demsculpinboyz\_20 (F2), Jabbawokkie\_22 (F2), Juicebox\_20 (singleton), Odin\_28 (A2), Ph8s\_30 (A2), SilverChicken\_20 (F2), Soul22\_20 (F2), Superchunk\_28 (A2), Yoshi\_20 (F2), Zapner\_21 (F2),

Start 69:

- Found in 404 of 991 ( 40.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.2% of time when present
- Phage (with cluster) where this start called: Caraxes\_28 (A2),

Start 77:

- Found in 232 of 991 ( 23.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.4% of time when present
- Phage (with cluster) where this start called: LunarLander\_30 (A1),

### **Summary by clusters:**

There are 30 clusters represented in this pham: singleton, DP, A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, A, EO, F, CA, EQ, CT, A20, A21, F2,

Info for manual annotations of cluster A:

- Start number 53 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 55 was manually annotated 209 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 55 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 22 was manually annotated 1 time for cluster A11.
- Start number 54 was manually annotated 23 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 55 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 53 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 53 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 55 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 51 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 55 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 27 was manually annotated 1 time for cluster A2.
- Start number 46 was manually annotated 15 times for cluster A2.
- Start number 52 was manually annotated 8 times for cluster A2.
- Start number 53 was manually annotated 1 time for cluster A2.
- Start number 55 was manually annotated 21 times for cluster A2.
- Start number 57 was manually annotated 51 times for cluster A2.
- Start number 58 was manually annotated 5 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 55 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 39 was manually annotated 1 time for cluster A3.
- Start number 43 was manually annotated 1 time for cluster A3.
- Start number 55 was manually annotated 111 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 55 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 55 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 53 was manually annotated 42 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 49 was manually annotated 1 time for cluster A7.
- Start number 51 was manually annotated 3 times for cluster A7.
- Start number 53 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 55 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 33 was manually annotated 1 time for cluster A9.
- Start number 53 was manually annotated 34 times for cluster A9.

Info for manual annotations of cluster CA:

- Start number 53 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster CT:

- Start number 47 was manually annotated 7 times for cluster CT.
- Start number 51 was manually annotated 22 times for cluster CT.
- Start number 52 was manually annotated 25 times for cluster CT.

Info for manual annotations of cluster DP:

- Start number 45 was manually annotated 1 time for cluster DP.
- Start number 47 was manually annotated 4 times for cluster DP.
- Start number 48 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster EO:

- Start number 56 was manually annotated 4 times for cluster EO.

Info for manual annotations of cluster EQ:

- Start number 56 was manually annotated 1 time for cluster EQ.

Info for manual annotations of cluster F2:

- Start number 58 was manually annotated 7 times for cluster F2.

### **Gene Information:**

Gene: 20ES\_29 Start: 22015, Stop: 22458, Start Num: 57

Candidate Starts for 20ES\_29:

(4, 21784), (11, 21841), (14, 21880), (25, 21970), (Start: 27 @21976 has 1 MA's), (Start: 57 @22015 has 51 MA's), (69, 22090), (82, 22150), (106, 22282), (108, 22303), (126, 22381), (135, 22408), (140, 22438), (143, 22450),

Gene: 40AC\_32 Start: 24208, Stop: 24654, Start Num: 57

Candidate Starts for 40AC\_32:

(5, 23980), (14, 24073), (Start: 27 @24169 has 1 MA's), (Start: 57 @24208 has 51 MA's), (69, 24283), (78, 24322), (82, 24343), (93, 24385), (106, 24475), (108, 24496), (126, 24574), (135, 24601), (140, 24631),

Gene: A6\_26 Start: 22501, Stop: 22947, Start Num: 55

Candidate Starts for A6\_26:

(Start: 55 @22501 has 554 MA's), (60, 22513), (76, 22615), (77, 22618), (88, 22660), (89, 22666), (90, 22675), (133, 22894),

Gene: ACFishhook\_30 Start: 22360, Stop: 22803, Start Num: 55

Candidate Starts for ACFishhook\_30:

(Start: 55 @22360 has 554 MA's), (68, 22429), (73, 22456), (90, 22528), (108, 22648), (115, 22678), (126, 22726), (142, 22795),

Gene: AFIS\_28 Start: 23044, Stop: 23490, Start Num: 55

Candidate Starts for AFIS\_28:

(Start: 55 @23044 has 554 MA's), (76, 23158), (77, 23161), (88, 23203), (89, 23209), (133, 23437),

Gene: AN3\_29 Start: 22012, Stop: 22455, Start Num: 55

Candidate Starts for AN3\_29:

(Start: 55 @22012 has 554 MA's), (69, 22087), (82, 22147), (106, 22279), (115, 22330), (126, 22378),

Gene: AN9\_32 Start: 22000, Stop: 22443, Start Num: 55

Candidate Starts for AN9\_32:

(Start: 55 @22000 has 554 MA's), (69, 22075), (82, 22135), (106, 22267), (115, 22318), (126, 22366),

Gene: ANI8\_32 Start: 22000, Stop: 22443, Start Num: 55

Candidate Starts for ANI8\_32:

(Start: 55 @22000 has 554 MA's), (69, 22075), (82, 22135), (106, 22267), (115, 22318), (126, 22366),

Gene: AbbyPaige\_31 Start: 22486, Stop: 22932, Start Num: 57

Candidate Starts for AbbyPaige\_31:

(2, 22174), (6, 22264), (Start: 27 @22447 has 1 MA's), (Start: 57 @22486 has 51 MA's), (69, 22561), (82, 22621), (106, 22753), (126, 22852), (135, 22879),

Gene: AbbysRanger\_28 Start: 21662, Stop: 22108, Start Num: 55

Candidate Starts for AbbysRanger\_28:

(Start: 55 @21662 has 554 MA's), (68, 21731), (73, 21758), (78, 21776), (90, 21830), (108, 21950), (115, 21980), (119, 21995), (126, 22028),

Gene: Abbysshoes\_29 Start: 23159, Stop: 23605, Start Num: 55

Candidate Starts for Abbysshoes\_29:

(Start: 55 @23159 has 554 MA's), (76, 23273), (77, 23276), (88, 23318), (89, 23324), (133, 23552),

Gene: Abdiel\_27 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Abdiel\_27:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Abrogate\_290 Start: 23719, Stop: 24165, Start Num: 55

Candidate Starts for Abrogate\_290:

(Start: 55 @23719 has 554 MA's), (76, 23833), (77, 23836), (88, 23878), (89, 23884), (133, 24112),

Gene: Achebe\_27 Start: 21645, Stop: 22091, Start Num: 55

Candidate Starts for Achebe\_27:

(Start: 55 @21645 has 554 MA's), (68, 21714), (73, 21741), (78, 21759), (90, 21813), (108, 21933), (115, 21963), (119, 21978), (126, 22011),

Gene: Acme\_30 Start: 23260, Stop: 23706, Start Num: 55

Candidate Starts for Acme\_30:

(Start: 55 @23260 has 554 MA's), (76, 23374), (77, 23377), (88, 23419), (89, 23425), (133, 23653),

Gene: Acolyte\_29 Start: 22551, Stop: 23000, Start Num: 53

Candidate Starts for Acolyte\_29:

(Start: 53 @22551 has 140 MA's), (69, 22629), (82, 22689), (106, 22821), (108, 22842), (115, 22872), (126, 22920), (135, 22947),

Gene: Adahisdi\_29 Start: 23167, Stop: 23613, Start Num: 55

Candidate Starts for Adahisdi\_29:

(Start: 55 @23167 has 554 MA's), (76, 23281), (77, 23284), (88, 23326), (89, 23332), (133, 23560),

Gene: Adzzy\_30 Start: 20730, Stop: 21179, Start Num: 58

Candidate Starts for Adzzy\_30:



(Start: 58 @20730 has 13 MA's), (69, 20808), (82, 20868), (106, 21000), (108, 21021), (110, 21027), (126, 21099), (140, 21156),

Gene: Aeneas\_30 Start: 23296, Stop: 23742, Start Num: 55

Candidate Starts for Aeneas\_30:

(Start: 55 @23296 has 554 MA's), (76, 23410), (77, 23413), (88, 23455), (89, 23461), (133, 23689),

Gene: Agaliana\_29 Start: 23240, Stop: 23686, Start Num: 55

Candidate Starts for Agaliana\_29:

(Start: 55 @23240 has 554 MA's), (76, 23354), (77, 23357), (88, 23399), (89, 23405), (133, 23633),

Gene: Agape74\_31 Start: 22462, Stop: 22908, Start Num: 57

Candidate Starts for Agape74\_31:

(2, 22150), (6, 22240), (Start: 27 @22423 has 1 MA's), (Start: 57 @22462 has 51 MA's), (69, 22537), (82, 22597), (106, 22729), (126, 22828), (135, 22855),

Gene: Agatha\_19 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Agatha\_19:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: AgentM\_25 Start: 21547, Stop: 22011, Start Num: 55

Candidate Starts for AgentM\_25:

(Start: 55 @21547 has 554 MA's), (116, 21871), (119, 21883), (128, 21925), (141, 21982),

Gene: Aglet\_30 Start: 22199, Stop: 22642, Start Num: 55

Candidate Starts for Aglet\_30:

(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517), (126, 22565), (142, 22634),

Gene: AgronaGT15\_30 Start: 22106, Stop: 22549, Start Num: 55

Candidate Starts for AgronaGT15\_30:

(Start: 55 @22106 has 554 MA's), (68, 22175), (73, 22202), (90, 22274), (108, 22394), (115, 22424), (126, 22472), (142, 22541),

Gene: AikoCarson\_18 Start: 16751, Stop: 17140, Start Num: 52

Candidate Starts for AikoCarson\_18:

(Start: 47 @16742 has 11 MA's), (Start: 52 @16751 has 33 MA's), (67, 16826), (70, 16841), (74, 16862), (78, 16877), (80, 16883), (107, 17006), (113, 17048), (118, 17069), (129, 17111), (131, 17114),

Gene: Airmid\_25 Start: 20788, Stop: 21252, Start Num: 55

Candidate Starts for Airmid\_25:

(Start: 55 @20788 has 554 MA's), (128, 21166), (136, 21187), (140, 21214), (141, 21223),

Gene: Ajay\_29 Start: 23472, Stop: 23918, Start Num: 55

Candidate Starts for Ajay\_29:

(Start: 55 @23472 has 554 MA's), (76, 23586), (77, 23589), (88, 23631), (89, 23637), (133, 23865),

Gene: Alatin\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Alatin\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Albee\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Albee\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Alberto7\_29 Start: 21929, Stop: 22375, Start Num: 55

Candidate Starts for Alberto7\_29:

(Start: 55 @21929 has 554 MA's), (68, 21998), (69, 22004), (73, 22025), (79, 22046), (90, 22097), (108, 22217), (115, 22247), (121, 22271), (126, 22295), (127, 22298), (140, 22352),

Gene: Aliter\_31 Start: 23485, Stop: 23934, Start Num: 53

Candidate Starts for Aliter\_31:

(Start: 53 @23485 has 140 MA's), (69, 23566), (108, 23779), (115, 23809), (126, 23857), (140, 23914),

Gene: Alma\_31 Start: 23561, Stop: 24049, Start Num: 33

Candidate Starts for Alma\_31:

(Start: 33 @23561 has 1 MA's), (Start: 53 @23600 has 140 MA's), (69, 23681), (108, 23894), (115, 23924), (126, 23972), (140, 24029),

Gene: Alpacados\_23 Start: 17924, Stop: 18364, Start Num: 53

Candidate Starts for Alpacados\_23:

(12, 17705), (13, 17726), (32, 17843), (Start: 53 @17924 has 140 MA's), (62, 17951), (88, 18077), (90, 18092), (96, 18119), (110, 18215), (119, 18254),

Gene: Alsfro\_32 Start: 23705, Stop: 24151, Start Num: 55

Candidate Starts for Alsfro\_32:

(Start: 55 @23705 has 554 MA's), (76, 23819), (77, 23822), (88, 23864), (89, 23870), (133, 24098),

Gene: Altman\_30 Start: 23763, Stop: 24209, Start Num: 55

Candidate Starts for Altman\_30:

(Start: 55 @23763 has 554 MA's), (76, 23877), (77, 23880), (88, 23922), (89, 23928), (133, 24156),

Gene: Alvin\_29 Start: 23532, Stop: 23978, Start Num: 55

Candidate Starts for Alvin\_29:

(Start: 55 @23532 has 554 MA's), (76, 23646), (77, 23649), (88, 23691), (89, 23697), (133, 23925),

Gene: Amok\_18 Start: 16739, Stop: 17137, Start Num: 47

Candidate Starts for Amok\_18:

(Start: 47 @16739 has 11 MA's), (Start: 52 @16748 has 33 MA's), (67, 16823), (70, 16838), (74, 16859), (78, 16874), (80, 16880), (107, 17003), (113, 17045), (118, 17066), (129, 17108), (131, 17111),

Gene: Anaysia\_31 Start: 20968, Stop: 21411, Start Num: 53

Candidate Starts for Anaysia\_31:

(Start: 53 @20968 has 140 MA's), (61, 20977), (68, 21037), (69, 21043), (84, 21106), (93, 21145), (115, 21286), (126, 21334),

Gene: AndPeggy\_18 Start: 17105, Stop: 17503, Start Num: 47

Candidate Starts for AndPeggy\_18:

(Start: 47 @17105 has 11 MA's), (Start: 52 @17114 has 33 MA's), (66, 17186), (67, 17189), (70, 17204), (74, 17225), (81, 17249), (107, 17369), (113, 17411), (118, 17432), (129, 17474),

Gene: Aneem\_29 Start: 22633, Stop: 23076, Start Num: 54

Candidate Starts for Aneem\_29:

(Start: 22 @22570 has 1 MA's), (Start: 54 @22633 has 23 MA's), (69, 22708), (106, 22900), (108, 22921), (126, 22999), (141, 23065),

Gene: Anglerfish\_29 Start: 23676, Stop: 24122, Start Num: 55

Candidate Starts for Anglerfish\_29:

(Start: 55 @23676 has 554 MA's), (60, 23688), (76, 23790), (77, 23793), (88, 23835), (89, 23841), (133, 24069),

Gene: AngryOrchard\_23 Start: 17907, Stop: 18347, Start Num: 53

Candidate Starts for AngryOrchard\_23:

(12, 17688), (13, 17709), (32, 17826), (35, 17859), (Start: 53 @17907 has 140 MA's), (62, 17934), (88, 18060), (90, 18075), (96, 18102), (110, 18198), (119, 18237), (136, 18300),

Gene: AnnaL29\_32 Start: 23808, Stop: 24260, Start Num: 46

Candidate Starts for AnnaL29\_32:

(31, 23784), (Start: 46 @23808 has 15 MA's), (69, 23889), (82, 23949), (89, 23973), (106, 24081), (108, 24102), (115, 24132), (126, 24180), (135, 24207), (140, 24237),

Gene: Annyong\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for Annyong\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: Anon\_29 Start: 21532, Stop: 21975, Start Num: 53

Candidate Starts for Anon\_29:

(3, 21292), (16, 21406), (Start: 53 @21532 has 140 MA's), (64, 21583), (68, 21601), (69, 21607), (115, 21850), (126, 21898), (135, 21925),

Gene: Anselm\_29 Start: 22142, Stop: 22588, Start Num: 57

Candidate Starts for Anselm\_29:

(Start: 57 @22142 has 51 MA's), (69, 22217), (79, 22259), (82, 22277), (106, 22409), (126, 22508), (135, 22535), (140, 22565),

Gene: Anthony\_28 Start: 20492, Stop: 20938, Start Num: 55

Candidate Starts for Anthony\_28:

(Start: 55 @20492 has 554 MA's), (69, 20570), (106, 20762), (126, 20861), (135, 20888), (140, 20918), (141, 20927),

Gene: Anubis\_32 Start: 22084, Stop: 22527, Start Num: 55

Candidate Starts for Anubis\_32:

(Start: 55 @22084 has 554 MA's), (68, 22153), (73, 22180), (90, 22252), (108, 22372), (115, 22402), (126, 22450), (142, 22519),

Gene: AppleCloud\_22 Start: 17953, Stop: 18393, Start Num: 53

Candidate Starts for AppleCloud\_22:

(12, 17734), (13, 17755), (32, 17872), (35, 17905), (Start: 53 @17953 has 140 MA's), (62, 17980), (88, 18106), (90, 18121), (96, 18148), (110, 18244), (119, 18283),

Gene: Applejack\_28 Start: 22937, Stop: 23383, Start Num: 55

Candidate Starts for Applejack\_28:

(Start: 55 @22937 has 554 MA's), (60, 22949), (76, 23051), (77, 23054), (88, 23096), (89, 23102), (133, 23330),

Gene: Aragog\_25 Start: 21577, Stop: 22041, Start Num: 55

Candidate Starts for Aragog\_25:

(Start: 55 @21577 has 554 MA's), (116, 21901), (119, 21913), (128, 21955), (141, 22012),

Gene: Arcanine\_29 Start: 22690, Stop: 23136, Start Num: 55

Candidate Starts for Arcanine\_29:

(Start: 55 @22690 has 554 MA's), (76, 22804), (77, 22807), (88, 22849), (89, 22855), (133, 23083),

Gene: ArcherNM\_31 Start: 23752, Stop: 24204, Start Num: 46

Candidate Starts for ArcherNM\_31:

(4, 23524), (5, 23527), (17, 23635), (25, 23710), (Start: 27 @23716 has 1 MA's), (Start: 46 @23752 has 15 MA's), (69, 23833), (106, 24025), (108, 24046), (115, 24076), (126, 24124), (135, 24151), (140, 24181),

Gene: Archetta\_25 Start: 21370, Stop: 21834, Start Num: 55

Candidate Starts for Archetta\_25:

(Start: 55 @21370 has 554 MA's), (78, 21487), (104, 21631), (128, 21748), (130, 21751), (137, 21775), (141, 21805),

Gene: Arianna\_20 Start: 19090, Stop: 19509, Start Num: 56

Candidate Starts for Arianna\_20:

(Start: 56 @19090 has 5 MA's), (67, 19159), (78, 19213),

Gene: Arissanae\_29 Start: 21618, Stop: 22067, Start Num: 53

Candidate Starts for Arissanae\_29:

(Start: 53 @21618 has 140 MA's), (69, 21696), (101, 21846), (106, 21888), (108, 21909), (115, 21939), (126, 21987),

Gene: Arlo\_27 Start: 22566, Stop: 23012, Start Num: 55

Candidate Starts for Arlo\_27:

(Start: 55 @22566 has 554 MA's), (76, 22680), (77, 22683), (88, 22725), (89, 22731), (133, 22959),

Gene: Artemis2UCLA\_32 Start: 21661, Stop: 22113, Start Num: 53

Candidate Starts for Artemis2UCLA\_32:

(Start: 53 @21661 has 140 MA's), (64, 21718), (69, 21742), (89, 21826), (106, 21934), (115, 21985), (126, 22033), (132, 22048),

Gene: Arturo\_27 Start: 21739, Stop: 22185, Start Num: 55

Candidate Starts for Arturo\_27:

(Start: 55 @21739 has 554 MA's), (68, 21808), (69, 21814), (73, 21835), (79, 21856), (90, 21907), (108, 22027), (115, 22057), (121, 22081), (126, 22105), (127, 22108), (140, 22162),

Gene: Ashballer\_30 Start: 23690, Stop: 24136, Start Num: 55

Candidate Starts for Ashballer\_30:

(Start: 55 @23690 has 554 MA's), (60, 23702), (76, 23804), (77, 23807), (88, 23849), (89, 23855), (133, 24083),

Gene: Astro\_25 Start: 20465, Stop: 20911, Start Num: 55

Candidate Starts for Astro\_25:

(Start: 55 @20465 has 554 MA's), (66, 20528), (68, 20537), (78, 20582), (96, 20663), (110, 20762), (116, 20786), (139, 20885), (140, 20891),

Gene: Atkinbua\_30 Start: 23390, Stop: 23836, Start Num: 55

Candidate Starts for Atkinbua\_30:

(Start: 55 @23390 has 554 MA's), (76, 23504), (77, 23507), (88, 23549), (89, 23555), (133, 23783),

Gene: AugsMagnumOpus\_32 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for AugsMagnumOpus\_32:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: Avani\_20 Start: 15408, Stop: 15773, Start Num: 58

Candidate Starts for Avani\_20:

(29, 15300), (38, 15354), (Start: 58 @15408 has 13 MA's), (65, 15468), (67, 15474), (70, 15489), (72, 15504), (74, 15510), (80, 15531), (81, 15534), (107, 15651), (114, 15693), (122, 15726),

Gene: AvatarAhPeg\_29 Start: 21927, Stop: 22373, Start Num: 55

Candidate Starts for AvatarAhPeg\_29:

(Start: 55 @21927 has 554 MA's), (68, 21996), (73, 22023), (108, 22215), (115, 22245), (119, 22260), (126, 22293),

Gene: Avle17\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Avle17\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Axym\_19 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Axym\_19:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: Azira\_21 Start: 18423, Stop: 18809, Start Num: 52

Candidate Starts for Azira\_21:

(Start: 52 @18423 has 33 MA's), (66, 18495), (70, 18513), (74, 18534), (80, 18555), (81, 18558), (86, 18579), (99, 18633), (105, 18672), (109, 18699), (113, 18720), (118, 18741),

Gene: B1\_26 Start: 21448, Stop: 21891, Start Num: 55

Candidate Starts for B1\_26:

(15, 21262), (Start: 43 @21421 has 1 MA's), (Start: 55 @21448 has 554 MA's), (68, 21517), (73, 21544), (108, 21736), (110, 21742), (115, 21766), (126, 21814), (142, 21883),

Gene: BABullseye\_32 Start: 21837, Stop: 22289, Start Num: 53

Candidate Starts for BABullseye\_32:

(Start: 53 @21837 has 140 MA's), (64, 21894), (69, 21918), (89, 22002), (106, 22110), (115, 22161), (126, 22209), (132, 22224),

Gene: BK1\_26 Start: 22501, Stop: 22947, Start Num: 55

Candidate Starts for BK1\_26:

(Start: 55 @22501 has 554 MA's), (60, 22513), (76, 22615), (77, 22618), (88, 22660), (89, 22666), (90, 22675), (133, 22894),

Gene: BPBiabs31\_29 Start: 23261, Stop: 23707, Start Num: 55

Candidate Starts for BPBiebs31\_29:

(Start: 55 @23261 has 554 MA's), (76, 23375), (77, 23378), (88, 23420), (89, 23426), (133, 23654),

Gene: Baby16\_28 Start: 21636, Stop: 22082, Start Num: 55

Candidate Starts for Baby16\_28:

(Start: 55 @21636 has 554 MA's), (68, 21705), (69, 21711), (73, 21732), (79, 21753), (90, 21804), (108, 21924), (115, 21954), (121, 21978), (126, 22002), (127, 22005), (140, 22059),

Gene: BabyBack\_31 Start: 23581, Stop: 24027, Start Num: 52

Candidate Starts for BabyBack\_31:

(Start: 52 @23581 has 33 MA's), (69, 23656), (106, 23848), (108, 23869), (115, 23899), (126, 23947), (135, 23974), (140, 24004),

Gene: BabyJohn\_27 Start: 22033, Stop: 22476, Start Num: 55

Candidate Starts for BabyJohn\_27:

(Start: 55 @22033 has 554 MA's), (68, 22102), (73, 22129), (108, 22321), (110, 22327), (115, 22351), (126, 22399), (133, 22420),

Gene: BabyRay\_28 Start: 22008, Stop: 22451, Start Num: 55

Candidate Starts for BabyRay\_28:

(15, 21822), (Start: 43 @21981 has 1 MA's), (Start: 55 @22008 has 554 MA's), (68, 22077), (73, 22104), (108, 22296), (110, 22302), (115, 22326), (126, 22374), (142, 22443),

Gene: Bachome\_29 Start: 22624, Stop: 23067, Start Num: 54

Candidate Starts for Bachome\_29:

(Start: 54 @22624 has 23 MA's), (69, 22699), (106, 22891), (108, 22912), (126, 22990), (141, 23056),

Gene: Backyardigan\_28 Start: 21657, Stop: 22103, Start Num: 55

Candidate Starts for Backyardigan\_28:

(Start: 55 @21657 has 554 MA's), (68, 21726), (73, 21753), (78, 21771), (90, 21825), (108, 21945), (115, 21975), (119, 21990), (126, 22023),

Gene: BaconJack\_31 Start: 23459, Stop: 23905, Start Num: 55

Candidate Starts for BaconJack\_31:

(Start: 55 @23459 has 554 MA's), (60, 23471), (76, 23573), (77, 23576), (88, 23618), (89, 23624), (133, 23852),

Gene: Bactobuster\_30 Start: 23571, Stop: 24017, Start Num: 46

Candidate Starts for Bactobuster\_30:

(Start: 46 @23571 has 15 MA's), (69, 23646), (78, 23685), (82, 23706), (106, 23838), (115, 23889), (126, 23937), (135, 23964),

Gene: Badger\_28 Start: 21646, Stop: 22092, Start Num: 55

Candidate Starts for Badger\_28:

(Start: 55 @21646 has 554 MA's), (68, 21715), (73, 21742), (78, 21760), (90, 21814), (108, 21934), (115, 21964), (119, 21979), (126, 22012),

Gene: Baehexic\_30 Start: 22464, Stop: 22910, Start Num: 57

Candidate Starts for Baehexic\_30:

(4, 22233), (25, 22419), (Start: 27 @22425 has 1 MA's), (Start: 57 @22464 has 51 MA's), (69, 22539), (78, 22578), (106, 22731), (126, 22830), (135, 22857), (140, 22887),

Gene: BangNhom\_28 Start: 21941, Stop: 22387, Start Num: 55

Candidate Starts for BangNhom\_28:

(Start: 55 @21941 has 554 MA's), (68, 22010), (69, 22016), (73, 22037), (79, 22058), (90, 22109), (108, 22229), (115, 22259), (117, 22265), (121, 22283), (126, 22307), (127, 22310),

Gene: Barriga\_28 Start: 22792, Stop: 23238, Start Num: 55

Candidate Starts for Barriga\_28:

(Start: 55 @22792 has 554 MA's), (76, 22906), (77, 22909), (88, 22951), (89, 22957), (133, 23185),

Gene: BarrowTuph\_27 Start: 22813, Stop: 23259, Start Num: 55

Candidate Starts for BarrowTuph\_27:

(Start: 55 @22813 has 554 MA's), (60, 22825), (76, 22927), (77, 22930), (88, 22972), (89, 22978), (133, 23206),

Gene: Bartimeaus\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Bartimeaus\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Battleship\_32 Start: 21080, Stop: 21523, Start Num: 53

Candidate Starts for Battleship\_32:

(Start: 53 @21080 has 140 MA's), (61, 21089), (68, 21149), (69, 21155), (84, 21218), (93, 21257), (115, 21398), (126, 21446),

Gene: Bavilard\_19 Start: 17901, Stop: 18290, Start Num: 51

Candidate Starts for Bavilard\_19:

(35, 17847), (Start: 51 @17901 has 26 MA's), (61, 17922), (67, 17976), (68, 17982), (70, 17991), (74, 18012), (78, 18027), (82, 18048), (111, 18189), (113, 18198), (118, 18219),

Gene: Beatrix\_28 Start: 24374, Stop: 24820, Start Num: 55

Candidate Starts for Beatrix\_28:

(Start: 55 @24374 has 554 MA's), (76, 24488), (77, 24491), (88, 24533), (89, 24539), (133, 24767),

Gene: Beauxregard13\_30 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for Beauxregard13\_30:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: Beemo\_31 Start: 23591, Stop: 24040, Start Num: 53

Candidate Starts for Beemo\_31:

(Start: 53 @23591 has 140 MA's), (69, 23672), (108, 23885), (115, 23915), (126, 23963), (140, 24020),

Gene: BeesKnees\_29 Start: 22991, Stop: 23437, Start Num: 55

Candidate Starts for BeesKnees\_29:

(Start: 55 @22991 has 554 MA's), (76, 23105), (77, 23108), (88, 23150), (89, 23156), (133, 23384),

Gene: Belenaria\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Belenaria\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: BellusTerra\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for BellusTerra\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Benedict\_25 Start: 20791, Stop: 21255, Start Num: 55

Candidate Starts for Benedict\_25:

(Start: 55 @20791 has 554 MA's), (128, 21169), (136, 21190), (140, 21217), (141, 21226),

Gene: BengiVuitton\_30 Start: 22409, Stop: 22852, Start Num: 57

Candidate Starts for BengiVuitton\_30:

(2, 22097), (6, 22187), (14, 22274), (25, 22364), (Start: 27 @22370 has 1 MA's), (Start: 57 @22409 has 51 MA's), (69, 22484), (82, 22544), (106, 22676), (108, 22697), (126, 22775), (135, 22802), (140, 22832),

Gene: Benvolio\_29 Start: 22081, Stop: 22527, Start Num: 57

Candidate Starts for Benvolio\_29:

(2, 21769), (4, 21850), (6, 21859), (14, 21946), (Start: 27 @22042 has 1 MA's), (Start: 57 @22081 has 51 MA's), (69, 22156), (82, 22216), (106, 22348), (126, 22447), (135, 22474), (140, 22504),

Gene: Bethlehem\_28 Start: 24217, Stop: 24663, Start Num: 55

Candidate Starts for Bethlehem\_28:

(Start: 55 @24217 has 554 MA's), (76, 24331), (77, 24334), (88, 24376), (89, 24382), (133, 24610),

Gene: Bexan\_27 Start: 23941, Stop: 24387, Start Num: 55

Candidate Starts for Bexan\_27:

(Start: 55 @23941 has 554 MA's), (60, 23953), (76, 24055), (77, 24058), (88, 24100), (89, 24106), (133, 24334),

Gene: BiancaTri92\_31 Start: 23761, Stop: 24213, Start Num: 46

Candidate Starts for BiancaTri92\_31:

(Start: 46 @23761 has 15 MA's), (69, 23842), (106, 24034), (108, 24055), (115, 24085), (126, 24133), (135, 24160),

Gene: Big3\_28 Start: 23572, Stop: 24018, Start Num: 55

Candidate Starts for Big3\_28:

(Start: 55 @23572 has 554 MA's), (76, 23686), (77, 23689), (88, 23731), (89, 23737), (133, 23965),

Gene: BigChungus\_18 Start: 17156, Stop: 17548, Start Num: 51

Candidate Starts for BigChungus\_18:

(Start: 51 @17156 has 26 MA's), (61, 17177), (67, 17231), (68, 17237), (70, 17246), (74, 17267), (78, 17282), (82, 17303), (111, 17444), (113, 17453), (118, 17474),

Gene: BigMau\_30 Start: 23173, Stop: 23619, Start Num: 55

Candidate Starts for BigMau\_30:

(Start: 55 @23173 has 554 MA's), (76, 23287), (77, 23290), (88, 23332), (89, 23338), (133, 23566),

Gene: BigPaolini\_29 Start: 23570, Stop: 24016, Start Num: 55

Candidate Starts for BigPaolini\_29:

(Start: 55 @23570 has 554 MA's), (76, 23684), (77, 23687), (88, 23729), (89, 23735), (133, 23963),

Gene: Bigchungj\_28 Start: 22943, Stop: 23389, Start Num: 55

Candidate Starts for Bigchungj\_28:

(Start: 55 @22943 has 554 MA's), (76, 23057), (77, 23060), (88, 23102), (89, 23108), (133, 23336),



Gene: Bigflo\_30 Start: 22197, Stop: 22640, Start Num: 55  
Candidate Starts for Bigflo\_30:  
(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515),  
(126, 22563), (142, 22632),

Gene: Bigfoot\_27 Start: 22779, Stop: 23225, Start Num: 55  
Candidate Starts for Bigfoot\_27:  
(Start: 55 @22779 has 554 MA's), (76, 22893), (77, 22896), (88, 22938), (89, 22944), (133, 23172),

Gene: BillDoor\_21 Start: 17082, Stop: 17471, Start Num: 52  
Candidate Starts for BillDoor\_21:  
(Start: 47 @17073 has 11 MA's), (Start: 52 @17082 has 33 MA's), (66, 17154), (67, 17157), (70,  
17172), (74, 17193), (81, 17217), (107, 17337), (113, 17379), (118, 17400), (129, 17442),

Gene: BillKnuckles\_29 Start: 23657, Stop: 24103, Start Num: 55  
Candidate Starts for BillKnuckles\_29:  
(Start: 55 @23657 has 554 MA's), (76, 23771), (77, 23774), (88, 23816), (89, 23822), (133, 24050),

Gene: Bircsak\_28 Start: 23429, Stop: 23875, Start Num: 55  
Candidate Starts for Bircsak\_28:  
(Start: 55 @23429 has 554 MA's), (76, 23543), (77, 23546), (88, 23588), (89, 23594), (133, 23822),

Gene: Biskit\_20 Start: 17088, Stop: 17486, Start Num: 47  
Candidate Starts for Biskit\_20:  
(Start: 47 @17088 has 11 MA's), (Start: 52 @17097 has 33 MA's), (66, 17169), (67, 17172), (70,  
17187), (74, 17208), (78, 17223), (80, 17229), (86, 17253), (107, 17352), (113, 17394), (118, 17415),  
(129, 17457),

Gene: Blackmoor\_28 Start: 21627, Stop: 22073, Start Num: 55  
Candidate Starts for Blackmoor\_28:  
(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795),  
(108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Blarby\_21 Start: 15928, Stop: 16293, Start Num: 58  
Candidate Starts for Blarby\_21:  
(38, 15874), (Start: 58 @15928 has 13 MA's), (65, 15988), (67, 15994), (70, 16009), (74, 16030), (80,  
16051), (81, 16054), (82, 16066), (107, 16171), (114, 16213), (117, 16222), (122, 16246), (125,  
16258),

Gene: BlessJoy\_32 Start: 21759, Stop: 22211, Start Num: 53  
Candidate Starts for BlessJoy\_32:  
(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083),  
(126, 22131), (132, 22146),

Gene: Blinn1\_32 Start: 21830, Stop: 22282, Start Num: 53  
Candidate Starts for Blinn1\_32:  
(Start: 53 @21830 has 140 MA's), (64, 21887), (69, 21911), (89, 21995), (106, 22103), (115, 22154),  
(126, 22202), (132, 22217),

Gene: Blondies\_19 Start: 17071, Stop: 17469, Start Num: 47  
Candidate Starts for Blondies\_19:  
(Start: 47 @17071 has 11 MA's), (Start: 52 @17080 has 33 MA's), (66, 17152), (67, 17155), (70,  
17170), (74, 17191), (78, 17206), (80, 17212), (86, 17236), (107, 17335), (113, 17377), (118, 17398),

(129, 17440),

Gene: BluSpix\_29 Start: 23187, Stop: 23633, Start Num: 55

Candidate Starts for BluSpix\_29:

(Start: 55 @23187 has 554 MA's), (76, 23301), (77, 23304), (88, 23346), (89, 23352), (133, 23580),

Gene: Blue\_28 Start: 23425, Stop: 23871, Start Num: 55

Candidate Starts for Blue\_28:

(Start: 55 @23425 has 554 MA's), (60, 23437), (76, 23539), (77, 23542), (88, 23584), (89, 23590), (133, 23818),

Gene: Blue7\_32 Start: 21751, Stop: 22203, Start Num: 53

Candidate Starts for Blue7\_32:

(Start: 53 @21751 has 140 MA's), (64, 21808), (69, 21832), (89, 21916), (106, 22024), (115, 22075), (126, 22123), (132, 22138),

Gene: BlueBird\_29 Start: 21759, Stop: 22202, Start Num: 55

Candidate Starts for BlueBird\_29:

(Start: 43 @21732 has 1 MA's), (Start: 55 @21759 has 554 MA's), (68, 21828), (73, 21855), (108, 22047), (115, 22077), (126, 22125), (135, 22152), (142, 22194),

Gene: Bluefalcon\_24 Start: 21627, Stop: 22091, Start Num: 55

Candidate Starts for Bluefalcon\_24:

(Start: 55 @21627 has 554 MA's), (78, 21744), (104, 21888), (128, 22005), (130, 22008), (137, 22032), (141, 22062),

Gene: Bob3\_27 Start: 22513, Stop: 22959, Start Num: 55

Candidate Starts for Bob3\_27:

(Start: 55 @22513 has 554 MA's), (76, 22627), (77, 22630), (88, 22672), (89, 22678), (133, 22906),

Gene: BobSwaget\_32 Start: 23608, Stop: 24054, Start Num: 52

Candidate Starts for BobSwaget\_32:

(Start: 52 @23608 has 33 MA's), (69, 23683), (82, 23743), (106, 23875), (126, 23974), (135, 24001), (140, 24031),

Gene: BobbyDazzler\_24 Start: 18033, Stop: 18473, Start Num: 53

Candidate Starts for BobbyDazzler\_24:

(12, 17814), (13, 17835), (32, 17952), (Start: 53 @18033 has 140 MA's), (62, 18060), (88, 18186), (90, 18201), (96, 18228), (110, 18324), (119, 18363),

Gene: BogosyJay\_30 Start: 23118, Stop: 23567, Start Num: 53

Candidate Starts for BogosyJay\_30:

(Start: 53 @23118 has 140 MA's), (69, 23199), (106, 23391), (108, 23412), (115, 23442), (126, 23490), (135, 23517),

Gene: Bombshell\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Bombshell\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Bonamassa\_25 Start: 21468, Stop: 21932, Start Num: 55

Candidate Starts for Bonamassa\_25:

(Start: 55 @21468 has 554 MA's), (116, 21792), (119, 21804), (128, 21846), (136, 21867), (140, 21894), (141, 21903),

Gene: Bonanza\_24 Start: 17962, Stop: 18402, Start Num: 53

Candidate Starts for Bonanza\_24:

(12, 17743), (13, 17764), (32, 17881), (Start: 53 @17962 has 140 MA's), (62, 17989), (88, 18115), (90, 18130), (96, 18157), (110, 18253), (119, 18292),

Gene: Bones\_28 Start: 22879, Stop: 23325, Start Num: 55

Candidate Starts for Bones\_28:

(Start: 55 @22879 has 554 MA's), (76, 22993), (77, 22996), (88, 23038), (89, 23044), (133, 23272),

Gene: Boohoo\_31 Start: 20968, Stop: 21411, Start Num: 53

Candidate Starts for Boohoo\_31:

(Start: 53 @20968 has 140 MA's), (61, 20977), (68, 21037), (69, 21043), (84, 21106), (93, 21145), (115, 21286), (126, 21334),

Gene: Bowtie\_29 Start: 22633, Stop: 23076, Start Num: 54

Candidate Starts for Bowtie\_29:

(Start: 22 @22570 has 1 MA's), (Start: 54 @22633 has 23 MA's), (69, 22708), (106, 22900), (108, 22921), (126, 22999), (141, 23065),

Gene: Bradman\_28 Start: 20882, Stop: 21325, Start Num: 55

Candidate Starts for Bradman\_28:

(Start: 55 @20882 has 554 MA's), (69, 20957), (82, 21017), (115, 21200), (126, 21248), (140, 21305),

Gene: Bradshaw\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Bradshaw\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: BreSam8\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for BreSam8\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: Briton15\_30 Start: 23224, Stop: 23670, Start Num: 55

Candidate Starts for Briton15\_30:

(Start: 55 @23224 has 554 MA's), (76, 23338), (77, 23341), (88, 23383), (89, 23389), (133, 23617),

Gene: Broseidon\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Broseidon\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Bruiser\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Bruiser\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Bruns\_27 Start: 22854, Stop: 23300, Start Num: 55

Candidate Starts for Bruns\_27:

(Start: 55 @22854 has 554 MA's), (60, 22866), (76, 22968), (77, 22971), (88, 23013), (89, 23019), (133, 23247),

Gene: Bryce\_24 Start: 17962, Stop: 18402, Start Num: 53

Candidate Starts for Bryce\_24:

(12, 17743), (13, 17764), (32, 17881), (Start: 53 @17962 has 140 MA's), (62, 17989), (88, 18115), (90, 18130), (96, 18157), (110, 18253), (119, 18292),

Gene: BubbleTrouble\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for BubbleTrouble\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: Bud\_29 Start: 22639, Stop: 23082, Start Num: 54

Candidate Starts for Bud\_29:

(Start: 54 @22639 has 23 MA's), (69, 22714), (106, 22906), (108, 22927), (126, 23005), (141, 23071),

Gene: Bugatti\_28 Start: 21759, Stop: 22202, Start Num: 55

Candidate Starts for Bugatti\_28:

(Start: 43 @21732 has 1 MA's), (Start: 55 @21759 has 554 MA's), (68, 21828), (73, 21855), (108, 22047), (115, 22077), (126, 22125), (135, 22152), (142, 22194),

Gene: Buggy\_31 Start: 22485, Stop: 22931, Start Num: 57

Candidate Starts for Buggy\_31:

(2, 22173), (6, 22263), (Start: 27 @22446 has 1 MA's), (Start: 57 @22485 has 51 MA's), (69, 22560), (82, 22620), (106, 22752), (126, 22851), (135, 22878),

Gene: Bumblebee11\_28 Start: 21648, Stop: 22094, Start Num: 55

Candidate Starts for Bumblebee11\_28:

(Start: 55 @21648 has 554 MA's), (68, 21717), (73, 21744), (78, 21762), (90, 21816), (108, 21936), (115, 21966), (119, 21981), (126, 22014),

Gene: Burger\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Burger\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Burnsey\_19 Start: 17443, Stop: 17832, Start Num: 52

Candidate Starts for Burnsey\_19:

(Start: 52 @17443 has 33 MA's), (66, 17515), (67, 17518), (70, 17533), (74, 17554), (78, 17569), (82, 17590), (94, 17632), (107, 17698), (112, 17734), (113, 17740), (118, 17761), (129, 17803),

Gene: Burton\_29 Start: 23074, Stop: 23520, Start Num: 55

Candidate Starts for Burton\_29:

(Start: 55 @23074 has 554 MA's), (76, 23188), (77, 23191), (88, 23233), (89, 23239), (133, 23467),

Gene: Button\_20 Start: 16475, Stop: 16867, Start Num: 51

Candidate Starts for Button\_20:

(35, 16421), (Start: 51 @16475 has 26 MA's), (67, 16550), (70, 16565), (74, 16586), (78, 16601), (82, 16622), (113, 16772), (116, 16781), (118, 16793),

Gene: Buttons\_30 Start: 23915, Stop: 24361, Start Num: 55

Candidate Starts for Buttons\_30:

(Start: 55 @23915 has 554 MA's), (60, 23927), (76, 24029), (77, 24032), (88, 24074), (89, 24080), (133, 24308),

Gene: Buttrmlkdreams\_19 Start: 17070, Stop: 17468, Start Num: 47

Candidate Starts for Buttrmlkdreams\_19:

(Start: 47 @17070 has 11 MA's), (Start: 52 @17079 has 33 MA's), (66, 17151), (67, 17154), (70, 17169), (74, 17190), (78, 17205), (80, 17211), (86, 17235), (107, 17334), (113, 17376), (118, 17397), (129, 17439),

Gene: BuzzBuzz\_29 Start: 22282, Stop: 22725, Start Num: 55

Candidate Starts for BuzzBuzz\_29:

(Start: 55 @22282 has 554 MA's), (68, 22351), (73, 22378), (90, 22450), (108, 22570), (115, 22600), (126, 22648), (142, 22717),

Gene: Bxb1\_26 Start: 23025, Stop: 23471, Start Num: 55

Candidate Starts for Bxb1\_26:

(Start: 55 @23025 has 554 MA's), (76, 23139), (77, 23142), (88, 23184), (89, 23190), (133, 23418),

Gene: Bxz2\_29 Start: 22292, Stop: 22735, Start Num: 55

Candidate Starts for Bxz2\_29:

(Start: 55 @22292 has 554 MA's), (68, 22361), (73, 22388), (90, 22460), (108, 22580), (115, 22610), (126, 22658), (142, 22727),

Gene: C3\_27 Start: 22000, Stop: 22443, Start Num: 55

Candidate Starts for C3\_27:

(Start: 55 @22000 has 554 MA's), (69, 22075), (82, 22135), (106, 22267), (115, 22318), (126, 22366),

Gene: CRB1\_29 Start: 21972, Stop: 22415, Start Num: 57

Candidate Starts for CRB1\_29:

(4, 21741), (11, 21798), (14, 21837), (25, 21927), (Start: 27 @21933 has 1 MA's), (Start: 57 @21972 has 51 MA's), (69, 22047), (82, 22107), (106, 22239), (108, 22260), (126, 22338), (135, 22365), (140, 22395), (143, 22407),

Gene: CactusRose\_27 Start: 22874, Stop: 23320, Start Num: 55

Candidate Starts for CactusRose\_27:

(Start: 55 @22874 has 554 MA's), (76, 22988), (77, 22991), (88, 23033), (89, 23039), (133, 23267),

Gene: Caelakin\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Caelakin\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Calvinny\_31 Start: 22279, Stop: 22722, Start Num: 55

Candidate Starts for Calvinny\_31:

(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: Camperdownii\_27 Start: 21249, Stop: 21695, Start Num: 55

Candidate Starts for Camperdownii\_27:

(Start: 55 @21249 has 554 MA's), (68, 21318), (69, 21324), (73, 21345), (79, 21366), (90, 21417), (108, 21537), (115, 21567), (121, 21591), (126, 21615), (127, 21618), (140, 21672),

Gene: Candra\_32 Start: 21800, Stop: 22252, Start Num: 53

Candidate Starts for Candra\_32:

(Start: 53 @21800 has 140 MA's), (64, 21857), (69, 21881), (89, 21965), (106, 22073), (115, 22124), (126, 22172), (132, 22187),

Gene: CanesSauce\_19 Start: 17106, Stop: 17504, Start Num: 47

Candidate Starts for CanesSauce\_19:

(Start: 47 @17106 has 11 MA's), (Start: 52 @17115 has 33 MA's), (66, 17187), (67, 17190), (70, 17205), (74, 17226), (81, 17250), (107, 17370), (113, 17412), (118, 17433), (129, 17475),

Gene: Caraxes\_28 Start: 20724, Stop: 21095, Start Num: 69

Candidate Starts for Caraxes\_28:

(Start: 58 @20646 has 13 MA's), (69, 20724), (82, 20784), (106, 20916), (108, 20937), (110, 20943), (126, 21015), (140, 21072),

Gene: Carlyle\_30 Start: 23754, Stop: 24200, Start Num: 55

Candidate Starts for Carlyle\_30:

(Start: 55 @23754 has 554 MA's), (76, 23868), (77, 23871), (88, 23913), (89, 23919), (133, 24147),

Gene: Carsonalex\_20 Start: 17500, Stop: 17889, Start Num: 52

Candidate Starts for Carsonalex\_20:

(Start: 52 @17500 has 33 MA's), (66, 17572), (67, 17575), (70, 17590), (74, 17611), (78, 17626), (82, 17647), (94, 17689), (107, 17755), (112, 17791), (113, 17797), (118, 17818), (129, 17860),

Gene: Catalina\_32 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Catalina\_32:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Caviar\_29 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for Caviar\_29:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Centaur\_31 Start: 22442, Stop: 22888, Start Num: 57

Candidate Starts for Centaur\_31:

(4, 22211), (25, 22397), (Start: 27 @22403 has 1 MA's), (Start: 57 @22442 has 51 MA's), (69, 22517), (78, 22556), (106, 22709), (126, 22808), (135, 22835), (140, 22865),

Gene: CentreCat\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for CentreCat\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: Cerulean\_29 Start: 21942, Stop: 22388, Start Num: 55

Candidate Starts for Cerulean\_29:

(Start: 55 @21942 has 554 MA's), (68, 22011), (69, 22017), (73, 22038), (79, 22059), (90, 22110), (108, 22230), (115, 22260), (117, 22266), (121, 22284), (126, 22308), (127, 22311),

Gene: Chadwick\_26 Start: 20759, Stop: 21223, Start Num: 55

Candidate Starts for Chadwick\_26:

(Start: 55 @20759 has 554 MA's), (82, 20897), (128, 21137), (136, 21158), (140, 21185), (141, 21194),

Gene: ChampagnePapi\_29 Start: 21941, Stop: 22387, Start Num: 55

Candidate Starts for ChampagnePapi\_29:

(Start: 55 @21941 has 554 MA's), (68, 22010), (69, 22016), (73, 22037), (79, 22058), (90, 22109), (108, 22229), (115, 22259), (121, 22283), (126, 22307), (127, 22310), (140, 22364),

Gene: Chanagan\_27 Start: 22539, Stop: 22985, Start Num: 55

Candidate Starts for Chanagan\_27:

(Start: 55 @22539 has 554 MA's), (76, 22653), (77, 22656), (88, 22698), (89, 22704), (133, 22932),

Gene: Changeling\_31 Start: 23806, Stop: 24258, Start Num: 46

Candidate Starts for Changeling\_31:

(4, 23578), (5, 23581), (17, 23689), (25, 23764), (Start: 27 @23770 has 1 MA's), (Start: 46 @23806 has 15 MA's), (69, 23887), (106, 24079), (108, 24100), (115, 24130), (126, 24178), (135, 24205), (140, 24235),

Gene: Chaph\_28 Start: 21636, Stop: 22082, Start Num: 55

Candidate Starts for Chaph\_28:

(Start: 55 @21636 has 554 MA's), (68, 21705), (69, 21711), (73, 21732), (79, 21753), (90, 21804), (108, 21924), (115, 21954), (121, 21978), (126, 22002), (127, 22005), (140, 22059),

Gene: Chargerpower\_30 Start: 21298, Stop: 21747, Start Num: 53

Candidate Starts for Chargerpower\_30:

(Start: 53 @21298 has 140 MA's), (69, 21376), (90, 21469), (106, 21568), (115, 21619), (126, 21667), (135, 21694), (140, 21724),

Gene: Charm\_29 Start: 21506, Stop: 21955, Start Num: 53

Candidate Starts for Charm\_29:

(Start: 53 @21506 has 140 MA's), (69, 21584), (115, 21827), (126, 21875),

Gene: Chartreuse\_32 Start: 21711, Stop: 22163, Start Num: 53

Candidate Starts for Chartreuse\_32:

(Start: 53 @21711 has 140 MA's), (64, 21768), (69, 21792), (89, 21876), (106, 21984), (115, 22035), (126, 22083), (132, 22098),

Gene: Che12\_31 Start: 20899, Stop: 21348, Start Num: 58

Candidate Starts for Che12\_31:

(Start: 58 @20899 has 13 MA's), (69, 20977), (82, 21037), (108, 21190), (110, 21196), (126, 21268), (140, 21325),

Gene: Che9d\_20 Start: 15416, Stop: 15781, Start Num: 58

Candidate Starts for Che9d\_20:

(29, 15308), (38, 15362), (Start: 58 @15416 has 13 MA's), (65, 15476), (67, 15482), (70, 15497), (72, 15512), (74, 15518), (80, 15539), (81, 15542), (107, 15659), (114, 15701), (122, 15734),

Gene: CherryonLim\_20 Start: 17865, Stop: 18257, Start Num: 51

Candidate Starts for CherryonLim\_20:

(Start: 51 @17865 has 26 MA's), (61, 17886), (67, 17940), (68, 17946), (70, 17955), (74, 17976), (78, 17991), (82, 18012), (111, 18153), (113, 18162), (118, 18183),

Gene: ChickenTender\_21 Start: 17507, Stop: 17896, Start Num: 52

Candidate Starts for ChickenTender\_21:

(Start: 52 @17507 has 33 MA's), (66, 17579), (67, 17582), (70, 17597), (74, 17618), (78, 17633), (80, 17639), (82, 17654), (94, 17696), (113, 17804), (118, 17825), (129, 17867),

Gene: ChipMunk\_31 Start: 22389, Stop: 22835, Start Num: 57

Candidate Starts for ChipMunk\_31:

(2, 22077), (6, 22167), (14, 22254), (Start: 27 @22350 has 1 MA's), (Start: 57 @22389 has 51 MA's), (69, 22464), (82, 22524), (106, 22656), (126, 22755), (135, 22782), (140, 22812),

Gene: Chiqui\_27 Start: 22033, Stop: 22476, Start Num: 55

Candidate Starts for Chiqui\_27:

(Start: 55 @22033 has 554 MA's), (68, 22102), (73, 22129), (108, 22321), (110, 22327), (115, 22351), (126, 22399), (133, 22420),

Gene: ChocoMunchkin\_19 Start: 17106, Stop: 17504, Start Num: 47

Candidate Starts for ChocoMunchkin\_19:

(Start: 47 @17106 has 11 MA's), (Start: 52 @17115 has 33 MA's), (66, 17187), (67, 17190), (70, 17205), (74, 17226), (81, 17250), (107, 17370), (113, 17412), (118, 17433), (129, 17475),

Gene: Chupacabra\_28 Start: 21585, Stop: 22031, Start Num: 55

Candidate Starts for Chupacabra\_28:

(Start: 55 @21585 has 554 MA's), (68, 21654), (73, 21681), (90, 21753), (115, 21903), (126, 21951),

Gene: Ciao\_28 Start: 22882, Stop: 23328, Start Num: 55

Candidate Starts for Ciao\_28:

(Start: 55 @22882 has 554 MA's), (76, 22996), (77, 22999), (88, 23041), (89, 23047), (133, 23275),

Gene: Cici\_28 Start: 21642, Stop: 22088, Start Num: 55

Candidate Starts for Cici\_28:

(Start: 55 @21642 has 554 MA's), (68, 21711), (73, 21738), (78, 21756), (90, 21810), (108, 21930), (115, 21960), (119, 21975), (126, 22008),

Gene: Cindaradix\_27 Start: 21372, Stop: 21818, Start Num: 55

Candidate Starts for Cindaradix\_27:

(Start: 55 @21372 has 554 MA's), (68, 21441), (73, 21468), (78, 21486), (90, 21540), (108, 21660), (115, 21690), (119, 21705), (126, 21738),

Gene: Cintron\_28 Start: 21675, Stop: 22121, Start Num: 55

Candidate Starts for Cintron\_28:

(Start: 55 @21675 has 554 MA's), (68, 21744), (69, 21750), (73, 21771), (79, 21792), (90, 21843), (108, 21963), (115, 21993), (121, 22017), (126, 22041), (127, 22044), (140, 22098),

Gene: Citius\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Citius\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Clarenza\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Clarenza\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Cleo\_19 Start: 17736, Stop: 18122, Start Num: 52

Candidate Starts for Cleo\_19:

(26, 17628), (Start: 52 @17736 has 33 MA's), (66, 17808), (67, 17811), (70, 17826), (74, 17847), (80, 17868), (81, 17871), (86, 17892), (102, 17964), (113, 18033), (118, 18054),

Gene: CloudWang3\_32 Start: 21761, Stop: 22213, Start Num: 53



Candidate Starts for CloudWang3\_32:

(Start: 53 @21761 has 140 MA's), (64, 21818), (69, 21842), (89, 21926), (106, 22034), (115, 22085), (126, 22133), (132, 22148),

Gene: Cocoaberry\_28 Start: 21631, Stop: 22077, Start Num: 55

Candidate Starts for Cocoaberry\_28:

(Start: 55 @21631 has 554 MA's), (68, 21700), (69, 21706), (73, 21727), (79, 21748), (90, 21799), (108, 21919), (115, 21949), (121, 21973), (126, 21997), (127, 22000), (140, 22054),

Gene: Colbster\_30 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for Colbster\_30:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: Colin\_33 Start: 23682, Stop: 24128, Start Num: 46

Candidate Starts for Colin\_33:

(31, 23658), (Start: 46 @23682 has 15 MA's), (69, 23757), (70, 23760), (78, 23796), (82, 23817), (106, 23949), (108, 23970), (115, 24000), (126, 24048), (135, 24075), (140, 24105),

Gene: Colleen\_20 Start: 19090, Stop: 19509, Start Num: 56

Candidate Starts for Colleen\_20:

(Start: 56 @19090 has 5 MA's), (67, 19159), (78, 19213),

Gene: Commander\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Commander\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: ConceptII\_30 Start: 23896, Stop: 24342, Start Num: 55

Candidate Starts for ConceptII\_30:

(Start: 55 @23896 has 554 MA's), (60, 23908), (76, 24010), (77, 24013), (88, 24055), (89, 24061), (133, 24289),

Gene: Connomayer\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Connomayer\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (140, 22050),

Gene: Conquerage\_31 Start: 23587, Stop: 24036, Start Num: 53

Candidate Starts for Conquerage\_31:

(Start: 53 @23587 has 140 MA's), (69, 23668), (108, 23881), (115, 23911), (126, 23959), (140, 24016),

Gene: Conspiracy\_25 Start: 21377, Stop: 21841, Start Num: 55

Candidate Starts for Conspiracy\_25:

(Start: 55 @21377 has 554 MA's), (78, 21494), (104, 21638), (128, 21755), (130, 21758), (137, 21782), (141, 21812),

Gene: Coog\_25 Start: 21517, Stop: 21981, Start Num: 55

Candidate Starts for Coog\_25:

(Start: 55 @21517 has 554 MA's), (116, 21841), (119, 21853), (128, 21895), (140, 21943), (141, 21952),

Gene: Cookiedough\_32 Start: 21757, Stop: 22209, Start Num: 53

Candidate Starts for Cookie dough\_32:

(Start: 53 @21757 has 140 MA's), (64, 21814), (69, 21838), (89, 21922), (106, 22030), (115, 22081), (126, 22129), (132, 22144),

Gene: Corvo\_29 Start: 23891, Stop: 24337, Start Num: 55

Candidate Starts for Corvo\_29:

(Start: 55 @23891 has 554 MA's), (76, 24005), (77, 24008), (88, 24050), (89, 24056), (133, 24284),

Gene: CosmicSans\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for CosmicSans\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Cozz\_19 Start: 17443, Stop: 17832, Start Num: 52

Candidate Starts for Cozz\_19:

(Start: 52 @17443 has 33 MA's), (66, 17515), (67, 17518), (70, 17533), (74, 17554), (78, 17569), (82, 17590), (94, 17632), (107, 17698), (112, 17734), (113, 17740), (118, 17761), (129, 17803),

Gene: Crispicous1\_27 Start: 22468, Stop: 22914, Start Num: 55

Candidate Starts for Crispicous1\_27:

(Start: 55 @22468 has 554 MA's), (60, 22480), (76, 22582), (77, 22585), (88, 22627), (89, 22633), (133, 22861),

Gene: Crucio\_29 Start: 21907, Stop: 22353, Start Num: 57

Candidate Starts for Crucio\_29:

(Start: 57 @21907 has 51 MA's), (69, 21982), (82, 22042), (106, 22174), (126, 22273), (135, 22300), (140, 22330),

Gene: Cuco\_25 Start: 21467, Stop: 21931, Start Num: 55

Candidate Starts for Cuco\_25:

(Start: 55 @21467 has 554 MA's), (116, 21791), (119, 21803), (128, 21845), (140, 21893), (141, 21902),

Gene: Cueyllyss\_28 Start: 23112, Stop: 23558, Start Num: 55

Candidate Starts for Cueyllyss\_28:

(Start: 55 @23112 has 554 MA's), (76, 23226), (77, 23229), (88, 23271), (89, 23277), (133, 23505),

Gene: Cullens\_30 Start: 22197, Stop: 22640, Start Num: 55

Candidate Starts for Cullens\_30:

(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: D29\_29 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for D29\_29:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: D32\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for D32\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: DBQu4n\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for DBQu4n\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: DD5\_29 Start: 23658, Stop: 24104, Start Num: 55

Candidate Starts for DD5\_29:

(Start: 55 @23658 has 554 MA's), (76, 23772), (77, 23775), (88, 23817), (89, 23823), (133, 24051),

Gene: DS6A\_22 Start: 18715, Stop: 19122, Start Num: 41

Candidate Starts for DS6A\_22:

(Start: 41 @18715 has 1 MA's), (62, 18787), (63, 18805), (67, 18823), (68, 18829), (72, 18853), (73, 18856), (74, 18859), (79, 18877), (81, 18883), (102, 18973), (105, 18994), (123, 19078),

Gene: DaHudson\_30 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for DaHudson\_30:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: DaVinci\_32 Start: 21765, Stop: 22217, Start Num: 53

Candidate Starts for DaVinci\_32:

(Start: 53 @21765 has 140 MA's), (64, 21822), (69, 21846), (89, 21930), (106, 22038), (115, 22089), (126, 22137), (132, 22152),

Gene: Daishi\_29 Start: 21123, Stop: 21566, Start Num: 55

Candidate Starts for Daishi\_29:

(Start: 55 @21123 has 554 MA's), (68, 21192), (73, 21219), (90, 21291), (108, 21411), (115, 21441), (126, 21489), (142, 21558),

Gene: Dalmatian\_29 Start: 22114, Stop: 22560, Start Num: 57

Candidate Starts for Dalmatian\_29:

(Start: 57 @22114 has 51 MA's), (69, 22189), (79, 22231), (82, 22249), (106, 22381), (126, 22480), (135, 22507), (140, 22537),

Gene: Danforth\_24 Start: 20444, Stop: 20890, Start Num: 55

Candidate Starts for Danforth\_24:

(Start: 55 @20444 has 554 MA's), (66, 20507), (68, 20516), (78, 20561), (96, 20642), (110, 20741), (116, 20765), (139, 20864), (140, 20870),

Gene: Darrell\_31 Start: 23551, Stop: 24000, Start Num: 53

Candidate Starts for Darrell\_31:

(Start: 53 @23551 has 140 MA's), (69, 23632), (108, 23845), (115, 23875), (121, 23899), (126, 23923), (135, 23950), (140, 23980),

Gene: DARTHPhader\_30 Start: 23567, Stop: 24016, Start Num: 55

Candidate Starts for DARTHPhader\_30:

(Start: 55 @23567 has 554 MA's), (69, 23645), (106, 23837), (108, 23858), (110, 23864), (115, 23888), (126, 23936), (135, 23963),

Gene: Datway\_28 Start: 21657, Stop: 22103, Start Num: 55

Candidate Starts for Datway\_28:

(Start: 55 @21657 has 554 MA's), (68, 21726), (73, 21753), (78, 21771), (90, 21825), (108, 21945), (115, 21975), (119, 21990), (126, 22023),

Gene: Deano\_28 Start: 21635, Stop: 22081, Start Num: 55

Candidate Starts for Deano\_28:

(Start: 55 @21635 has 554 MA's), (68, 21704), (69, 21710), (73, 21731), (79, 21752), (90, 21803), (108, 21923), (115, 21953), (121, 21977), (126, 22001), (140, 22058),

Gene: DekHockey33\_31 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for DekHockey33\_31:

(Start: 53 @21087 has 140 MA's), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: Deloris\_30 Start: 22409, Stop: 22852, Start Num: 57

Candidate Starts for Deloris\_30:

(2, 22097), (6, 22187), (14, 22274), (25, 22364), (Start: 27 @22370 has 1 MA's), (Start: 57 @22409 has 51 MA's), (69, 22484), (82, 22544), (106, 22676), (108, 22697), (126, 22775), (135, 22802), (140, 22832),

Gene: Demsculpinboyz\_20 Start: 15401, Stop: 15766, Start Num: 58

Candidate Starts for Demsculpinboyz\_20:

(29, 15293), (38, 15347), (Start: 58 @15401 has 13 MA's), (65, 15461), (67, 15467), (70, 15482), (72, 15497), (74, 15503), (80, 15524), (81, 15527), (107, 15644), (114, 15686), (122, 15719),

Gene: Dexes\_29 Start: 23620, Stop: 24066, Start Num: 55

Candidate Starts for Dexes\_29:

(Start: 55 @23620 has 554 MA's), (76, 23734), (77, 23737), (88, 23779), (89, 23785), (133, 24013),

Gene: Dhanush\_28 Start: 21630, Stop: 22076, Start Num: 55

Candidate Starts for Dhanush\_28:

(Start: 55 @21630 has 554 MA's), (68, 21699), (69, 21705), (73, 21726), (79, 21747), (90, 21798), (108, 21918), (115, 21948), (121, 21972), (126, 21996), (127, 21999), (140, 22053),

Gene: Dieselweasel\_30 Start: 22199, Stop: 22642, Start Num: 55

Candidate Starts for Dieselweasel\_30:

(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517), (126, 22565), (142, 22634),

Gene: Dignity\_31 Start: 22430, Stop: 22876, Start Num: 57

Candidate Starts for Dignity\_31:

(2, 22118), (6, 22208), (Start: 27 @22391 has 1 MA's), (Start: 57 @22430 has 51 MA's), (69, 22505), (82, 22565), (106, 22697), (126, 22796), (135, 22823),

Gene: Dinger\_24 Start: 17958, Stop: 18398, Start Num: 53

Candidate Starts for Dinger\_24:

(12, 17739), (13, 17760), (32, 17877), (35, 17910), (Start: 53 @17958 has 140 MA's), (62, 17985), (88, 18111), (90, 18126), (96, 18153), (110, 18249), (119, 18288),

Gene: DirtyDunning\_28 Start: 21623, Stop: 22069, Start Num: 55

Candidate Starts for DirtyDunning\_28:

(Start: 55 @21623 has 554 MA's), (68, 21692), (69, 21698), (73, 21719), (79, 21740), (90, 21791), (108, 21911), (115, 21941), (121, 21965), (126, 21989), (127, 21992), (140, 22046),

Gene: Discoknowium\_25 Start: 21586, Stop: 22050, Start Num: 55

Candidate Starts for Discoknowium\_25:

(Start: 55 @21586 has 554 MA's), (116, 21910), (119, 21922), (128, 21964), (141, 22021),

Gene: Dixon\_25 Start: 20463, Stop: 20909, Start Num: 55

Candidate Starts for Dixon\_25:

(Start: 55 @20463 has 554 MA's), (66, 20526), (68, 20535), (78, 20580), (96, 20661), (110, 20760), (116, 20784), (139, 20883), (140, 20889),

Gene: DontArgue\_27 Start: 19945, Stop: 20391, Start Num: 55

Candidate Starts for DontArgue\_27:

(Start: 55 @19945 has 554 MA's), (68, 20014), (73, 20041), (90, 20113), (115, 20263), (126, 20311),

Gene: Doom\_29 Start: 23728, Stop: 24174, Start Num: 55

Candidate Starts for Doom\_29:

(Start: 55 @23728 has 554 MA's), (76, 23842), (77, 23845), (88, 23887), (89, 23893), (133, 24121),

Gene: Dorothea\_32 Start: 21765, Stop: 22217, Start Num: 53

Candidate Starts for Dorothea\_32:

(Start: 53 @21765 has 140 MA's), (64, 21822), (69, 21846), (89, 21930), (106, 22038), (115, 22089), (126, 22137), (132, 22152),

Gene: DrFeelGood\_27 Start: 23331, Stop: 23777, Start Num: 55

Candidate Starts for DrFeelGood\_27:

(Start: 55 @23331 has 554 MA's), (76, 23445), (77, 23448), (88, 23490), (89, 23496), (133, 23724),

Gene: Drake55\_31 Start: 22459, Stop: 22905, Start Num: 57

Candidate Starts for Drake55\_31:

(4, 22228), (25, 22414), (Start: 57 @22459 has 51 MA's), (69, 22534), (78, 22573), (106, 22726), (126, 22825), (135, 22852), (140, 22882),

Gene: Drake94\_27 Start: 19681, Stop: 20127, Start Num: 55

Candidate Starts for Drake94\_27:

(Start: 55 @19681 has 554 MA's), (68, 19750), (73, 19777), (90, 19849), (115, 19999), (126, 20047),

Gene: Dre3\_19 Start: 17683, Stop: 18069, Start Num: 52

Candidate Starts for Dre3\_19:

(26, 17575), (Start: 52 @17683 has 33 MA's), (66, 17755), (70, 17773), (74, 17794), (80, 17815), (81, 17818), (86, 17839), (102, 17911), (113, 17980), (118, 18001),

Gene: DreamCatcher\_31 Start: 24345, Stop: 24791, Start Num: 55

Candidate Starts for DreamCatcher\_31:

(Start: 55 @24345 has 554 MA's), (76, 24459), (77, 24462), (88, 24504), (89, 24510), (133, 24738),

Gene: DreamTeam1\_29 Start: 21505, Stop: 21954, Start Num: 53

Candidate Starts for DreamTeam1\_29:

(Start: 53 @21505 has 140 MA's), (69, 21583), (115, 21826), (126, 21874),

Gene: Dreamboat\_29 Start: 22897, Stop: 23343, Start Num: 55

Candidate Starts for Dreamboat\_29:

(Start: 55 @22897 has 554 MA's), (60, 22909), (76, 23011), (77, 23014), (88, 23056), (89, 23062), (133, 23290),

Gene: DroogsArmy\_29 Start: 24438, Stop: 24908, Start Num: 51

Candidate Starts for DroogsArmy\_29:

(Start: 51 @24438 has 26 MA's), (Start: 56 @24447 has 5 MA's), (62, 24480), (69, 24528), (90, 24621), (138, 24864),

Gene: DropBear\_28 Start: 21823, Stop: 22266, Start Num: 55

Candidate Starts for DropBear\_28:

(15, 21637), (Start: 43 @21796 has 1 MA's), (Start: 55 @21823 has 554 MA's), (68, 21892), (73, 21919), (108, 22111), (110, 22117), (115, 22141), (126, 22189), (142, 22258),

Gene: Druantia\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for Druantia\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: Dublin\_24 Start: 21436, Stop: 21900, Start Num: 55

Candidate Starts for Dublin\_24:

(Start: 55 @21436 has 554 MA's), (116, 21760), (119, 21772), (128, 21814), (140, 21862), (141, 21871),

Gene: DudeLittle\_29 Start: 22116, Stop: 22562, Start Num: 57

Candidate Starts for DudeLittle\_29:

(Start: 57 @22116 has 51 MA's), (69, 22191), (79, 22233), (82, 22251), (106, 22383), (126, 22482), (135, 22509), (140, 22539),

Gene: Dulcie\_27 Start: 22594, Stop: 23040, Start Num: 55

Candidate Starts for Dulcie\_27:

(Start: 55 @22594 has 554 MA's), (76, 22708), (77, 22711), (88, 22753), (89, 22759), (133, 22987),

Gene: Duplo\_32 Start: 21894, Stop: 22337, Start Num: 55

Candidate Starts for Duplo\_32:

(Start: 55 @21894 has 554 MA's), (69, 21969), (82, 22029), (106, 22161), (115, 22212), (126, 22260), (140, 22317), (143, 22329),

Gene: Dussy\_29 Start: 23159, Stop: 23605, Start Num: 55

Candidate Starts for Dussy\_29:

(Start: 55 @23159 has 554 MA's), (76, 23273), (77, 23276), (88, 23318), (89, 23324), (133, 23552),

Gene: DustyMartin\_32 Start: 21655, Stop: 22101, Start Num: 55

Candidate Starts for DustyMartin\_32:

(Start: 55 @21655 has 554 MA's), (68, 21724), (73, 21751), (90, 21823), (115, 21973), (126, 22021),

Gene: Dynamix\_29 Start: 22976, Stop: 23422, Start Num: 55

Candidate Starts for Dynamix\_29:

(Start: 55 @22976 has 554 MA's), (60, 22988), (76, 23090), (77, 23093), (88, 23135), (89, 23141), (133, 23369),

Gene: EZMoney23\_33 Start: 23996, Stop: 24445, Start Num: 52

Candidate Starts for EZMoney23\_33:

(29, 23963), (Start: 52 @23996 has 33 MA's), (69, 24074), (106, 24266), (108, 24287), (115, 24317), (126, 24365), (135, 24392), (140, 24422),

Gene: Eagle\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Eagle\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: EagleEye\_31 Start: 22746, Stop: 23192, Start Num: 55

Candidate Starts for EagleEye\_31:

(Start: 55 @22746 has 554 MA's), (68, 22818), (69, 22824), (106, 23016), (115, 23067), (126, 23115), (135, 23142),

Gene: Eaglepride\_29 Start: 21607, Stop: 22053, Start Num: 55

Candidate Starts for Eaglepride\_29:

(Start: 55 @21607 has 554 MA's), (68, 21676), (73, 21703), (90, 21775), (115, 21925), (126, 21973),

Gene: Eapen\_28 Start: 21626, Stop: 22072, Start Num: 55

Candidate Starts for Eapen\_28:

(Start: 55 @21626 has 554 MA's), (68, 21695), (69, 21701), (73, 21722), (79, 21743), (90, 21794), (108, 21914), (115, 21944), (121, 21968), (126, 21992), (127, 21995), (140, 22049),

Gene: Ebony\_29 Start: 22676, Stop: 23119, Start Num: 54

Candidate Starts for Ebony\_29:

(Start: 54 @22676 has 23 MA's), (69, 22751), (106, 22943), (108, 22964), (126, 23042), (141, 23108),

Gene: Echild\_29 Start: 22081, Stop: 22527, Start Num: 57

Candidate Starts for Echild\_29:

(2, 21769), (4, 21850), (6, 21859), (14, 21946), (Start: 27 @22042 has 1 MA's), (Start: 57 @22081 has 51 MA's), (69, 22156), (82, 22216), (106, 22348), (126, 22447), (135, 22474), (140, 22504),

Gene: Edison31\_28 Start: 21622, Stop: 22068, Start Num: 55

Candidate Starts for Edison31\_28:

(Start: 55 @21622 has 554 MA's), (68, 21691), (73, 21718), (90, 21790), (115, 21940), (126, 21988),

Gene: EdogawaKiddo\_29 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for EdogawaKiddo\_29:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Edtherson\_29 Start: 23723, Stop: 24169, Start Num: 55

Candidate Starts for Edtherson\_29:

(Start: 55 @23723 has 554 MA's), (76, 23837), (77, 23840), (88, 23882), (89, 23888), (133, 24116),

Gene: Eidsmoe\_31 Start: 23623, Stop: 24072, Start Num: 53

Candidate Starts for Eidsmoe\_31:

(Start: 33 @23584 has 1 MA's), (Start: 53 @23623 has 140 MA's), (69, 23704), (108, 23917), (115, 23947), (126, 23995), (140, 24052),

Gene: EITiger69\_25 Start: 20789, Stop: 21253, Start Num: 55

Candidate Starts for EITiger69\_25:

(Start: 55 @20789 has 554 MA's), (128, 21167), (136, 21188), (140, 21215), (141, 21224),

Gene: Elephantoon\_30 Start: 22996, Stop: 23445, Start Num: 53

Candidate Starts for Elephantoon\_30:

(Start: 53 @22996 has 140 MA's), (69, 23077), (108, 23290), (115, 23320), (121, 23344), (126, 23368), (135, 23395), (140, 23425),

Gene: Elinal\_20 Start: 17112, Stop: 17501, Start Num: 51

Candidate Starts for Elinal\_20:

(35, 17058), (Start: 51 @17112 has 26 MA's), (61, 17133), (67, 17187), (68, 17193), (70, 17202), (74, 17223), (82, 17259), (102, 17340), (111, 17400), (113, 17409), (118, 17430),

Gene: Elliott\_19 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Elliott\_19:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: Emalyn\_18 Start: 16747, Stop: 17136, Start Num: 52

Candidate Starts for Emalyn\_18:

(Start: 47 @16738 has 11 MA's), (Start: 52 @16747 has 33 MA's), (66, 16819), (67, 16822), (70, 16837), (74, 16858), (78, 16873), (82, 16894), (105, 16996), (107, 17002), (113, 17044), (118, 17065), (129, 17107),

Gene: EmyBug\_31 Start: 23623, Stop: 24072, Start Num: 53

Candidate Starts for EmyBug\_31:

(Start: 33 @23584 has 1 MA's), (Start: 53 @23623 has 140 MA's), (69, 23704), (108, 23917), (115, 23947), (126, 23995), (140, 24052),

Gene: EnzoK\_28 Start: 23148, Stop: 23594, Start Num: 55

Candidate Starts for EnzoK\_28:

(Start: 55 @23148 has 554 MA's), (76, 23262), (77, 23265), (88, 23307), (89, 23313), (133, 23541),

Gene: EpicPhail\_30 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for EpicPhail\_30:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: Epsocamisio\_31 Start: 20965, Stop: 21408, Start Num: 53

Candidate Starts for Epsocamisio\_31:

(Start: 53 @20965 has 140 MA's), (61, 20974), (68, 21034), (69, 21040), (84, 21103), (93, 21142), (115, 21283), (126, 21331),

Gene: Equemioh13\_31 Start: 22445, Stop: 22891, Start Num: 57

Candidate Starts for Equemioh13\_31:

(4, 22214), (25, 22400), (Start: 27 @22406 has 1 MA's), (Start: 57 @22445 has 51 MA's), (69, 22520), (78, 22559), (106, 22712), (126, 22811), (135, 22838), (140, 22868),

Gene: EricB\_32 Start: 21757, Stop: 22209, Start Num: 53

Candidate Starts for EricB\_32:

(Start: 53 @21757 has 140 MA's), (64, 21814), (69, 21838), (89, 21922), (106, 22030), (115, 22081), (126, 22129), (132, 22144),

Gene: Erik\_24 Start: 17987, Stop: 18427, Start Num: 53

Candidate Starts for Erik\_24:

(12, 17768), (13, 17789), (32, 17906), (35, 17939), (Start: 53 @17987 has 140 MA's), (62, 18014), (88, 18140), (90, 18155), (96, 18182), (110, 18278), (119, 18317),

Gene: Eris\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Eris\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),



Gene: Eros\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Eros\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Espica\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Espica\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Espresso\_28 Start: 23040, Stop: 23486, Start Num: 55

Candidate Starts for Espresso\_28:

(Start: 55 @23040 has 554 MA's), (76, 23154), (77, 23157), (88, 23199), (89, 23205), (133, 23433),

Gene: Et2Brutus\_28 Start: 22636, Stop: 23079, Start Num: 54

Candidate Starts for Et2Brutus\_28:

(Start: 54 @22636 has 23 MA's), (69, 22711), (106, 22903), (108, 22924), (126, 23002), (141, 23068),

Gene: Euphoria\_28 Start: 22930, Stop: 23376, Start Num: 55

Candidate Starts for Euphoria\_28:

(Start: 55 @22930 has 554 MA's), (76, 23044), (77, 23047), (88, 23089), (89, 23095), (133, 23323),

Gene: Eurydice\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Eurydice\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: EvilGenius\_31 Start: 22398, Stop: 22844, Start Num: 57

Candidate Starts for EvilGenius\_31:

(2, 22086), (6, 22176), (14, 22263), (Start: 27 @22359 has 1 MA's), (Start: 57 @22398 has 51 MA's), (69, 22473), (82, 22533), (106, 22665), (126, 22764), (135, 22791), (140, 22821),

Gene: Expelliarmus\_24 Start: 20430, Stop: 20876, Start Num: 55

Candidate Starts for Expelliarmus\_24:

(Start: 55 @20430 has 554 MA's), (66, 20493), (68, 20502), (73, 20529), (76, 20541), (78, 20547), (96, 20628), (110, 20727), (116, 20751), (139, 20850), (140, 20856),

Gene: ExplosioNervosa\_31 Start: 23626, Stop: 24075, Start Num: 53

Candidate Starts for ExplosioNervosa\_31:

(Start: 33 @23587 has 1 MA's), (Start: 53 @23626 has 140 MA's), (69, 23707), (108, 23920), (115, 23950), (126, 23998), (140, 24055),

Gene: Eyeball\_28 Start: 22735, Stop: 23181, Start Num: 55

Candidate Starts for Eyeball\_28:

(Start: 55 @22735 has 554 MA's), (76, 22849), (77, 22852), (88, 22894), (89, 22900), (133, 23128),

Gene: Fajezeel\_30 Start: 23245, Stop: 23691, Start Num: 55

Candidate Starts for Fajezeel\_30:

(Start: 55 @23245 has 554 MA's), (76, 23359), (77, 23362), (88, 23404), (89, 23410), (133, 23638),

Gene: Fameo\_29 Start: 22085, Stop: 22531, Start Num: 57

Candidate Starts for Fameo\_29:

(Start: 57 @22085 has 51 MA's), (69, 22160), (82, 22220), (106, 22352), (126, 22451), (135, 22478), (140, 22508),

Gene: Farber\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for Farber\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: Fascinus\_27 Start: 22799, Stop: 23245, Start Num: 55

Candidate Starts for Fascinus\_27:

(Start: 55 @22799 has 554 MA's), (76, 22913), (77, 22916), (88, 22958), (89, 22964), (133, 23192),

Gene: FatCactus\_27 Start: 20425, Stop: 20871, Start Num: 55

Candidate Starts for FatCactus\_27:

(1, 19648), (Start: 55 @20425 has 554 MA's), (69, 20503), (115, 20746), (126, 20794), (140, 20851), (141, 20860),

Gene: Fayely\_31 Start: 23590, Stop: 24039, Start Num: 53

Candidate Starts for Fayely\_31:

(Start: 53 @23590 has 140 MA's), (69, 23671), (108, 23884), (115, 23914), (126, 23962), (140, 24019),

Gene: Feastonyeet\_18 Start: 17156, Stop: 17548, Start Num: 51

Candidate Starts for Feastonyeet\_18:

(Start: 51 @17156 has 26 MA's), (61, 17177), (67, 17231), (68, 17237), (70, 17246), (74, 17267), (78, 17282), (82, 17303), (111, 17444), (113, 17453), (118, 17474),

Gene: Fenn\_29 Start: 24610, Stop: 25056, Start Num: 55

Candidate Starts for Fenn\_29:

(Start: 55 @24610 has 554 MA's), (76, 24724), (77, 24727), (88, 24769), (89, 24775), (133, 25003),

Gene: Fernando\_30 Start: 22197, Stop: 22640, Start Num: 55

Candidate Starts for Fernando\_30:

(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: Fibonacci\_29 Start: 22630, Stop: 23073, Start Num: 54

Candidate Starts for Fibonacci\_29:

(Start: 54 @22630 has 23 MA's), (69, 22705), (106, 22897), (108, 22918), (126, 22996), (141, 23062),

Gene: FiringLine\_29 Start: 21907, Stop: 22353, Start Num: 57

Candidate Starts for FiringLine\_29:

(Start: 57 @21907 has 51 MA's), (69, 21982), (82, 22042), (106, 22174), (126, 22273), (135, 22300), (140, 22330),

Gene: First\_0029 Start: 22076, Stop: 22519, Start Num: 57

Candidate Starts for First\_0029:

(Start: 57 @22076 has 51 MA's), (69, 22151), (82, 22211), (106, 22343), (108, 22364), (126, 22442), (135, 22469), (140, 22499), (143, 22511),

Gene: Flare16\_29 Start: 22003, Stop: 22449, Start Num: 57

Candidate Starts for Flare16\_29:

(4, 21772), (25, 21958), (Start: 27 @21964 has 1 MA's), (Start: 57 @22003 has 51 MA's), (69, 22078), (78, 22117), (106, 22270), (126, 22369), (135, 22396), (140, 22426),

Gene: Flaverint\_29 Start: 22627, Stop: 23070, Start Num: 54

Candidate Starts for Flaverint\_29:

(Start: 22 @22564 has 1 MA's), (Start: 54 @22627 has 23 MA's), (69, 22702), (106, 22894), (108, 22915), (126, 22993), (141, 23059),

Gene: Florean\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Florean\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Flux\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Flux\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: FlyCatcher\_32 Start: 24743, Stop: 25210, Start Num: 51

Candidate Starts for FlyCatcher\_32:

(Start: 51 @24743 has 26 MA's), (62, 24785), (69, 24833), (73, 24854), (82, 24893), (90, 24926), (91, 24929), (138, 25169),

Gene: ForGetIt\_25 Start: 21402, Stop: 21866, Start Num: 55

Candidate Starts for ForGetIt\_25:

(Start: 55 @21402 has 554 MA's), (78, 21519), (104, 21663), (128, 21780), (130, 21783), (137, 21807), (141, 21837),

Gene: Forsytheast\_28 Start: 23169, Stop: 23615, Start Num: 55

Candidate Starts for Forsytheast\_28:

(37, 23121), (Start: 55 @23169 has 554 MA's), (76, 23283), (77, 23286), (88, 23328), (89, 23334), (133, 23562),

Gene: Francis47\_28 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for Francis47\_28:

(Start: 55 @23482 has 554 MA's), (60, 23494), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: Fred313\_28 Start: 21508, Stop: 21951, Start Num: 55

Candidate Starts for Fred313\_28:

(15, 21322), (Start: 43 @21481 has 1 MA's), (Start: 55 @21508 has 554 MA's), (68, 21577), (73, 21604), (108, 21796), (110, 21802), (115, 21826), (126, 21874), (142, 21943),

Gene: Fribs8\_20 Start: 18267, Stop: 18653, Start Num: 52

Candidate Starts for Fribs8\_20:

(Start: 52 @18267 has 33 MA's), (66, 18339), (67, 18342), (70, 18357), (72, 18372), (74, 18378), (80, 18399), (81, 18402), (86, 18423), (99, 18477), (105, 18516), (113, 18564), (118, 18585),

Gene: Froghopper\_29 Start: 22897, Stop: 23343, Start Num: 55

Candidate Starts for Froghopper\_29:

(Start: 55 @22897 has 554 MA's), (76, 23011), (77, 23014), (88, 23056), (89, 23062), (133, 23290),

Gene: Fryberger\_54 Start: 29656, Stop: 30054, Start Num: 48

Candidate Starts for Fryberger\_54:

(Start: 48 @29656 has 1 MA's), (59, 29677), (67, 29737), (68, 29743), (72, 29767), (78, 29788), (80, 29794), (82, 29809), (95, 29872), (97, 29878), (99, 29899), (103, 29935), (117, 29998), (118, 30007), (120, 30010),

Gene: Funston\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Funston\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Fushigi\_29 Start: 23354, Stop: 23800, Start Num: 55

Candidate Starts for Fushigi\_29:

(Start: 55 @23354 has 554 MA's), (76, 23468), (77, 23471), (88, 23513), (89, 23519), (133, 23747),

Gene: GMonster\_27 Start: 22314, Stop: 22760, Start Num: 55

Candidate Starts for GMonster\_27:

(Start: 55 @22314 has 554 MA's), (76, 22428), (77, 22431), (88, 22473), (89, 22479), (133, 22707),

Gene: GTE2\_17 Start: 16788, Stop: 17177, Start Num: 52

Candidate Starts for GTE2\_17:

(Start: 47 @16779 has 11 MA's), (Start: 52 @16788 has 33 MA's), (66, 16860), (67, 16863), (70, 16878), (74, 16899), (78, 16914), (81, 16923), (82, 16935), (94, 16977), (107, 17043), (113, 17085), (118, 17106), (129, 17148),

Gene: Gadost\_28 Start: 21631, Stop: 22077, Start Num: 55

Candidate Starts for Gadost\_28:

(Start: 55 @21631 has 554 MA's), (68, 21700), (69, 21706), (73, 21727), (79, 21748), (90, 21799), (108, 21919), (115, 21949), (121, 21973), (126, 21997), (127, 22000), (140, 22054),

Gene: GageAP\_30 Start: 23668, Stop: 24114, Start Num: 55

Candidate Starts for GageAP\_30:

(Start: 55 @23668 has 554 MA's), (76, 23782), (77, 23785), (88, 23827), (89, 23833), (133, 24061),

Gene: Gail\_29 Start: 21220, Stop: 21669, Start Num: 53

Candidate Starts for Gail\_29:

(Start: 53 @21220 has 140 MA's), (69, 21298), (106, 21490), (115, 21541), (126, 21589), (135, 21616), (140, 21646),

Gene: Gandalf20\_29 Start: 23773, Stop: 24219, Start Num: 55

Candidate Starts for Gandalf20\_29:

(Start: 55 @23773 has 554 MA's), (76, 23887), (77, 23890), (88, 23932), (89, 23938), (133, 24166),

Gene: Garak\_33 Start: 21765, Stop: 22217, Start Num: 53

Candidate Starts for Garak\_33:

(Start: 53 @21765 has 140 MA's), (64, 21822), (69, 21846), (89, 21930), (106, 22038), (115, 22089), (126, 22137), (132, 22152),

Gene: GaugeLDP\_31 Start: 23256, Stop: 23702, Start Num: 52

Candidate Starts for GaugeLDP\_31:

(Start: 52 @23256 has 33 MA's), (69, 23331), (106, 23523), (108, 23544), (115, 23574), (126, 23622), (135, 23649), (140, 23679),

Gene: Gemma\_30 Start: 22275, Stop: 22718, Start Num: 55

Candidate Starts for Gemma\_30:

(Start: 55 @22275 has 554 MA's), (68, 22344), (73, 22371), (90, 22443), (108, 22563), (115, 22593), (126, 22641), (142, 22710),

Gene: George\_24 Start: 21468, Stop: 21932, Start Num: 55

Candidate Starts for George\_24:

(Start: 55 @21468 has 554 MA's), (116, 21792), (119, 21804), (128, 21846), (140, 21894), (141, 21903),

Gene: Georgie2\_30 Start: 21898, Stop: 22344, Start Num: 57

Candidate Starts for Georgie2\_30:

(Start: 57 @21898 has 51 MA's), (69, 21973), (82, 22033), (106, 22165), (126, 22264), (135, 22291), (140, 22321),

Gene: Ghoulboy\_25 Start: 21717, Stop: 22181, Start Num: 55

Candidate Starts for Ghoulboy\_25:

(Start: 55 @21717 has 554 MA's), (78, 21834), (104, 21978), (128, 22095), (130, 22098), (140, 22143), (141, 22152),

Gene: GiKK\_22 Start: 16778, Stop: 17170, Start Num: 51

Candidate Starts for GiKK\_22:

(Start: 51 @16778 has 26 MA's), (67, 16853), (70, 16868), (74, 16889), (78, 16904), (82, 16925), (113, 17075), (114, 17078), (118, 17096),

Gene: Gibbous\_19 Start: 17683, Stop: 18069, Start Num: 52

Candidate Starts for Gibbous\_19:

(26, 17575), (Start: 52 @17683 has 33 MA's), (66, 17755), (70, 17773), (74, 17794), (80, 17815), (81, 17818), (86, 17839), (102, 17911), (113, 17980), (118, 18001),

Gene: Gilberta\_29 Start: 22624, Stop: 23067, Start Num: 54

Candidate Starts for Gilberta\_29:

(Start: 22 @22561 has 1 MA's), (Start: 54 @22624 has 23 MA's), (69, 22699), (106, 22891), (108, 22912), (126, 22990), (141, 23056),

Gene: GingkoMaracino\_30 Start: 22084, Stop: 22527, Start Num: 55

Candidate Starts for GingkoMaracino\_30:

(Start: 55 @22084 has 554 MA's), (68, 22153), (73, 22180), (90, 22252), (108, 22372), (115, 22402), (126, 22450), (142, 22519),

Gene: Giroux\_28 Start: 21759, Stop: 22202, Start Num: 55

Candidate Starts for Giroux\_28:

(Start: 43 @21732 has 1 MA's), (Start: 55 @21759 has 554 MA's), (68, 21828), (73, 21855), (108, 22047), (115, 22077), (126, 22125), (135, 22152), (142, 22194),

Gene: Gladiator\_32 Start: 21751, Stop: 22203, Start Num: 53

Candidate Starts for Gladiator\_32:

(Start: 53 @21751 has 140 MA's), (64, 21808), (69, 21832), (89, 21916), (106, 22024), (115, 22075), (126, 22123), (132, 22138),

Gene: GoldHunter\_20 Start: 17443, Stop: 17832, Start Num: 52

Candidate Starts for GoldHunter\_20:

(Start: 52 @17443 has 33 MA's), (66, 17515), (67, 17518), (70, 17533), (74, 17554), (78, 17569), (82, 17590), (94, 17632), (107, 17698), (112, 17734), (113, 17740), (118, 17761), (129, 17803),

Gene: Gollum\_24 Start: 17988, Stop: 18428, Start Num: 53  
Candidate Starts for Gollum\_24:  
(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Gompeii16\_28 Start: 23430, Stop: 23876, Start Num: 55  
Candidate Starts for Gompeii16\_28:  
(Start: 55 @23430 has 554 MA's), (76, 23544), (77, 23547), (88, 23589), (89, 23595), (133, 23823),

Gene: Goose\_28 Start: 21586, Stop: 22032, Start Num: 55  
Candidate Starts for Goose\_28:  
(Start: 55 @21586 has 554 MA's), (68, 21655), (73, 21682), (90, 21754), (115, 21904), (126, 21952),

Gene: Graduation\_30 Start: 23699, Stop: 24145, Start Num: 55  
Candidate Starts for Graduation\_30:  
(Start: 55 @23699 has 554 MA's), (76, 23813), (77, 23816), (88, 23858), (89, 23864), (133, 24092),

Gene: Gratitude\_30 Start: 22445, Stop: 22891, Start Num: 57  
Candidate Starts for Gratitude\_30:  
(4, 22214), (25, 22400), (Start: 27 @22406 has 1 MA's), (Start: 57 @22445 has 51 MA's), (69, 22520), (78, 22559), (106, 22712), (126, 22811), (135, 22838), (140, 22868),

Gene: GrecoEtereo\_30 Start: 23739, Stop: 24185, Start Num: 55  
Candidate Starts for GrecoEtereo\_30:  
(Start: 55 @23739 has 554 MA's), (60, 23751), (76, 23853), (77, 23856), (88, 23898), (89, 23904), (133, 24132),

Gene: GreedyLawyer\_32 Start: 21764, Stop: 22216, Start Num: 53  
Candidate Starts for GreedyLawyer\_32:  
(Start: 53 @21764 has 140 MA's), (64, 21821), (69, 21845), (89, 21929), (106, 22037), (115, 22088), (126, 22136), (132, 22151),

Gene: Greg\_30 Start: 23245, Stop: 23691, Start Num: 55  
Candidate Starts for Greg\_30:  
(Start: 55 @23245 has 554 MA's), (76, 23359), (77, 23362), (88, 23404), (89, 23410), (133, 23638),

Gene: Grif\_30 Start: 22281, Stop: 22724, Start Num: 55  
Candidate Starts for Grif\_30:  
(Start: 55 @22281 has 554 MA's), (68, 22350), (73, 22377), (90, 22449), (108, 22569), (115, 22599), (126, 22647), (142, 22716),

Gene: Groundhog\_24 Start: 20431, Stop: 20877, Start Num: 55  
Candidate Starts for Groundhog\_24:  
(Start: 55 @20431 has 554 MA's), (66, 20494), (68, 20503), (73, 20530), (76, 20542), (78, 20548), (96, 20629), (110, 20728), (116, 20752), (139, 20851), (140, 20857),

Gene: Groupthink\_31 Start: 22279, Stop: 22722, Start Num: 55  
Candidate Starts for Groupthink\_31:  
(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: Grub\_30 Start: 22190, Stop: 22633, Start Num: 55  
Candidate Starts for Grub\_30:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: Grum1\_30 Start: 22194, Stop: 22637, Start Num: 55

Candidate Starts for Grum1\_30:

(Start: 55 @22194 has 554 MA's), (68, 22263), (73, 22290), (90, 22362), (108, 22482), (115, 22512), (126, 22560),

Gene: Gruunaga\_32 Start: 21751, Stop: 22203, Start Num: 53

Candidate Starts for Gruunaga\_32:

(Start: 53 @21751 has 140 MA's), (64, 21808), (69, 21832), (89, 21916), (106, 22024), (115, 22075), (126, 22123), (132, 22138),

Gene: GtownJaz\_30 Start: 22199, Stop: 22642, Start Num: 55

Candidate Starts for GtownJaz\_30:

(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517), (126, 22565), (142, 22634),

Gene: Guey18\_59 Start: 30848, Stop: 31246, Start Num: 47

Candidate Starts for Guey18\_59:

(Start: 47 @30848 has 11 MA's), (59, 30869), (67, 30929), (68, 30935), (72, 30959), (78, 30980), (80, 30986), (82, 31001), (95, 31064), (97, 31070), (99, 31091), (103, 31127), (117, 31190), (118, 31199), (120, 31202),

Gene: Gwendoluna\_30 Start: 24887, Stop: 25333, Start Num: 55

Candidate Starts for Gwendoluna\_30:

(Start: 55 @24887 has 554 MA's), (76, 25001), (77, 25004), (88, 25046), (89, 25052), (133, 25280),

Gene: Gyzlar\_30 Start: 24193, Stop: 24639, Start Num: 55

Candidate Starts for Gyzlar\_30:

(Start: 55 @24193 has 554 MA's), (76, 24307), (77, 24310), (88, 24352), (89, 24358), (133, 24586),

Gene: HINdeR\_28 Start: 24539, Stop: 25006, Start Num: 49

Candidate Starts for HINdeR\_28:

(Start: 49 @24539 has 1 MA's), (Start: 56 @24548 has 5 MA's), (62, 24581), (69, 24629), (138, 24965),

Gene: HamSlice\_27 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for HamSlice\_27:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994), (140, 22048),

Gene: Hami1\_30 Start: 23339, Stop: 23785, Start Num: 55

Candidate Starts for Hami1\_30:

(Start: 55 @23339 has 554 MA's), (60, 23351), (76, 23453), (77, 23456), (88, 23498), (89, 23504), (133, 23732),

Gene: Hammer\_32 Start: 21766, Stop: 22218, Start Num: 53

Candidate Starts for Hammer\_32:

(Start: 53 @21766 has 140 MA's), (64, 21823), (69, 21847), (89, 21931), (106, 22039), (115, 22090), (126, 22138), (132, 22153),

Gene: HanShotFirst\_28 Start: 22873, Stop: 23319, Start Num: 55

Candidate Starts for HanShotFirst\_28:

(Start: 55 @22873 has 554 MA's), (76, 22987), (77, 22990), (88, 23032), (89, 23038), (133, 23266),

Gene: Hanray\_30 Start: 23561, Stop: 24010, Start Num: 53

Candidate Starts for Hanray\_30:

(Start: 53 @23561 has 140 MA's), (69, 23642), (108, 23855), (115, 23885), (126, 23933), (140, 23990),

Gene: Happiness\_28 Start: 21633, Stop: 22079, Start Num: 55

Candidate Starts for Happiness\_28:

(Start: 55 @21633 has 554 MA's), (68, 21702), (69, 21708), (73, 21729), (79, 21750), (90, 21801), (108, 21921), (115, 21951), (117, 21957), (121, 21975), (126, 21999), (127, 22002),

Gene: Harlequin\_24 Start: 17938, Stop: 18378, Start Num: 53

Candidate Starts for Harlequin\_24:

(12, 17719), (13, 17740), (32, 17857), (Start: 53 @17938 has 140 MA's), (62, 17965), (88, 18091), (90, 18106), (96, 18133), (110, 18229), (119, 18268),

Gene: HarryHoudini\_31 Start: 22462, Stop: 22908, Start Num: 57

Candidate Starts for HarryHoudini\_31:

(25, 22417), (Start: 57 @22462 has 51 MA's), (69, 22537), (78, 22576), (106, 22729), (126, 22828), (135, 22855),

Gene: HarryOW\_29 Start: 23327, Stop: 23773, Start Num: 55

Candidate Starts for HarryOW\_29:

(Start: 55 @23327 has 554 MA's), (76, 23441), (77, 23444), (88, 23486), (89, 23492), (133, 23720),

Gene: HashRod\_31 Start: 22285, Stop: 22728, Start Num: 55

Candidate Starts for HashRod\_31:

(Start: 55 @22285 has 554 MA's), (68, 22354), (73, 22381), (90, 22453), (108, 22573), (115, 22603), (126, 22651), (142, 22720),

Gene: HaveUMetTed\_31 Start: 22272, Stop: 22715, Start Num: 55

Candidate Starts for HaveUMetTed\_31:

(Start: 55 @22272 has 554 MA's), (68, 22341), (73, 22368), (90, 22440), (108, 22560), (115, 22590), (126, 22638), (142, 22707),

Gene: Heathen\_28 Start: 21564, Stop: 22007, Start Num: 55

Candidate Starts for Heathen\_28:

(15, 21378), (Start: 43 @21537 has 1 MA's), (Start: 55 @21564 has 554 MA's), (68, 21633), (73, 21660), (108, 21852), (110, 21858), (115, 21882), (126, 21930), (142, 21999),

Gene: Heffalump\_31 Start: 23827, Stop: 24273, Start Num: 57

Candidate Starts for Heffalump\_31:

(Start: 57 @23827 has 51 MA's), (69, 23902), (82, 23962), (106, 24094), (126, 24193), (135, 24220), (140, 24250),

Gene: HelDan\_28 Start: 21816, Stop: 22259, Start Num: 55

Candidate Starts for HelDan\_28:

(15, 21630), (Start: 43 @21789 has 1 MA's), (Start: 55 @21816 has 554 MA's), (68, 21885), (73, 21912), (108, 22104), (110, 22110), (115, 22134), (126, 22182), (142, 22251),

Gene: Heliosoles\_30 Start: 22279, Stop: 22722, Start Num: 55

Candidate Starts for Heliosoles\_30:



(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: Helmet\_33 Start: 21765, Stop: 22217, Start Num: 53

Candidate Starts for Helmet\_33:

(Start: 53 @21765 has 140 MA's), (64, 21822), (69, 21846), (89, 21930), (106, 22038), (115, 22089), (126, 22137), (132, 22152),

Gene: Herbertwm\_26 Start: 20602, Stop: 21051, Start Num: 55

Candidate Starts for Herbertwm\_26:

(Start: 55 @20602 has 554 MA's), (64, 20656), (69, 20680), (106, 20872), (126, 20971), (135, 20998), (140, 21028),

Gene: Hercules11\_30 Start: 22205, Stop: 22648, Start Num: 55

Candidate Starts for Hercules11\_30:

(Start: 55 @22205 has 554 MA's), (68, 22274), (73, 22301), (90, 22373), (108, 22493), (115, 22523), (126, 22571), (142, 22640),

Gene: Hermia\_31 Start: 24455, Stop: 24901, Start Num: 55

Candidate Starts for Hermia\_31:

(Start: 55 @24455 has 554 MA's), (60, 24467), (76, 24569), (77, 24572), (88, 24614), (89, 24620), (133, 24848),

Gene: HermioneGrange\_28 Start: 22901, Stop: 23347, Start Num: 55

Candidate Starts for HermioneGrange\_28:

(Start: 55 @22901 has 554 MA's), (76, 23015), (77, 23018), (88, 23060), (89, 23066), (133, 23294),

Gene: Hexamo\_32 Start: 21733, Stop: 22185, Start Num: 53

Candidate Starts for Hexamo\_32:

(Start: 53 @21733 has 140 MA's), (64, 21790), (69, 21814), (89, 21898), (106, 22006), (115, 22057), (126, 22105), (132, 22120),

Gene: Hexbug\_21 Start: 17464, Stop: 17856, Start Num: 51

Candidate Starts for Hexbug\_21:

(35, 17410), (Start: 51 @17464 has 26 MA's), (61, 17485), (66, 17536), (67, 17539), (70, 17554), (74, 17575), (78, 17590), (82, 17611), (94, 17653), (107, 17719), (113, 17761), (116, 17770), (118, 17782),

Gene: HippoPololi\_21 Start: 18335, Stop: 18721, Start Num: 52

Candidate Starts for HippoPololi\_21:

(Start: 52 @18335 has 33 MA's), (66, 18407), (67, 18410), (72, 18440), (74, 18446), (78, 18461), (80, 18467), (81, 18470), (86, 18491), (102, 18563), (113, 18632), (118, 18653),

Gene: Hiro\_24 Start: 18244, Stop: 18684, Start Num: 53

Candidate Starts for Hiro\_24:

(12, 18025), (13, 18046), (32, 18163), (35, 18196), (Start: 53 @18244 has 140 MA's), (62, 18271), (88, 18397), (90, 18412), (96, 18439), (110, 18535), (119, 18574),

Gene: Horex\_30 Start: 23561, Stop: 24010, Start Num: 53

Candidate Starts for Horex\_30:

(Start: 53 @23561 has 140 MA's), (69, 23642), (108, 23855), (115, 23885), (126, 23933), (140, 23990),

Gene: Holli\_28 Start: 21417, Stop: 21863, Start Num: 55

Candidate Starts for Holli\_28:

(Start: 55 @21417 has 554 MA's), (68, 21486), (69, 21492), (73, 21513), (79, 21534), (90, 21585), (108, 21705), (115, 21735), (121, 21759), (126, 21783), (127, 21786), (140, 21840),

Gene: Homines\_28 Start: 23226, Stop: 23672, Start Num: 55

Candidate Starts for Homines\_28:

(Start: 55 @23226 has 554 MA's), (76, 23340), (77, 23343), (88, 23385), (89, 23391), (133, 23619),

Gene: Hookmount\_29 Start: 22278, Stop: 22721, Start Num: 55

Candidate Starts for Hookmount\_29:

(Start: 55 @22278 has 554 MA's), (68, 22347), (73, 22374), (90, 22446), (108, 22566), (115, 22596), (126, 22644),

Gene: Hoot\_32 Start: 21743, Stop: 22195, Start Num: 53

Candidate Starts for Hoot\_32:

(Start: 53 @21743 has 140 MA's), (64, 21800), (69, 21824), (89, 21908), (106, 22016), (115, 22067), (126, 22115), (132, 22130),

Gene: Hope4ever\_28 Start: 23342, Stop: 23788, Start Num: 55

Candidate Starts for Hope4ever\_28:

(Start: 55 @23342 has 554 MA's), (60, 23354), (76, 23456), (77, 23459), (88, 23501), (89, 23507), (133, 23735),

Gene: Horseradish\_20 Start: 16993, Stop: 17382, Start Num: 52

Candidate Starts for Horseradish\_20:

(Start: 47 @16984 has 11 MA's), (Start: 52 @16993 has 33 MA's), (66, 17065), (67, 17068), (70, 17083), (74, 17104), (78, 17119), (80, 17125), (86, 17149), (113, 17290), (118, 17311), (129, 17353),

Gene: HortumSL17\_31 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for HortumSL17\_31:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Houdini22\_28 Start: 21631, Stop: 22077, Start Num: 55

Candidate Starts for Houdini22\_28:

(Start: 55 @21631 has 554 MA's), (68, 21700), (69, 21706), (73, 21727), (79, 21748), (90, 21799), (108, 21919), (115, 21949), (121, 21973), (126, 21997), (127, 22000), (140, 22054),

Gene: HuhtaEnerson15\_25 Start: 21468, Stop: 21932, Start Num: 55

Candidate Starts for HuhtaEnerson15\_25:

(Start: 55 @21468 has 554 MA's), (116, 21792), (119, 21804), (128, 21846), (136, 21867), (140, 21894), (141, 21903),

Gene: Hutc2\_29 Start: 22630, Stop: 23073, Start Num: 54

Candidate Starts for Hutc2\_29:

(Start: 54 @22630 has 23 MA's), (69, 22705), (106, 22897), (108, 22918), (126, 22996), (141, 23062),

Gene: Huxley\_28 Start: 21691, Stop: 22137, Start Num: 55

Candidate Starts for Huxley\_28:

(Start: 55 @21691 has 554 MA's), (68, 21760), (69, 21766), (73, 21787), (79, 21808), (90, 21859), (108, 21979), (115, 22009), (121, 22033), (126, 22057), (127, 22060), (140, 22114),

Gene: ICleared\_28 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for ICleared\_28:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994),

Gene: ILeeKay\_30 Start: 23106, Stop: 23552, Start Num: 55

Candidate Starts for ILeeKay\_30:

(Start: 55 @23106 has 554 MA's), (60, 23118), (76, 23220), (77, 23223), (88, 23265), (89, 23271), (133, 23499),

Gene: Iceman\_29 Start: 21916, Stop: 22362, Start Num: 55

Candidate Starts for Iceman\_29:

(Start: 55 @21916 has 554 MA's), (68, 21985), (69, 21991), (73, 22012), (79, 22033), (90, 22084), (108, 22204), (115, 22234), (121, 22258), (126, 22282), (127, 22285), (140, 22339),

Gene: Ichabod\_29 Start: 23130, Stop: 23576, Start Num: 55

Candidate Starts for Ichabod\_29:

(Start: 55 @23130 has 554 MA's), (60, 23142), (76, 23244), (77, 23247), (88, 23289), (89, 23295), (133, 23523),

Gene: Idleandcovert\_28 Start: 21759, Stop: 22202, Start Num: 55

Candidate Starts for Idleandcovert\_28:

(Start: 43 @21732 has 1 MA's), (Start: 55 @21759 has 554 MA's), (68, 21828), (73, 21855), (108, 22047), (115, 22077), (126, 22125), (135, 22152), (142, 22194),

Gene: IgnatiusPatJac\_28 Start: 23188, Stop: 23634, Start Num: 55

Candidate Starts for IgnatiusPatJac\_28:

(Start: 55 @23188 has 554 MA's), (76, 23302), (77, 23305), (88, 23347), (89, 23353), (133, 23581),

Gene: Indra\_32 Start: 21766, Stop: 22218, Start Num: 53

Candidate Starts for Indra\_32:

(Start: 53 @21766 has 140 MA's), (64, 21823), (69, 21847), (89, 21931), (106, 22039), (115, 22090), (126, 22138), (132, 22153),

Gene: Insomnia\_29 Start: 22622, Stop: 23128, Start Num: 22

Candidate Starts for Insomnia\_29:

(Start: 22 @22622 has 1 MA's), (Start: 54 @22685 has 23 MA's), (69, 22760), (106, 22952), (108, 22973), (126, 23051), (141, 23117),

Gene: Inyanga\_27 Start: 22709, Stop: 23155, Start Num: 55

Candidate Starts for Inyanga\_27:

(Start: 55 @22709 has 554 MA's), (60, 22721), (76, 22823), (77, 22826), (88, 22868), (89, 22874), (133, 23102),

Gene: Iqorha\_27 Start: 22708, Stop: 23154, Start Num: 55

Candidate Starts for Iqorha\_27:

(Start: 55 @22708 has 554 MA's), (60, 22720), (76, 22822), (77, 22825), (88, 22867), (89, 22873), (133, 23101),

Gene: Iracema64\_29 Start: 21938, Stop: 22384, Start Num: 55

Candidate Starts for Iracema64\_29:

(Start: 55 @21938 has 554 MA's), (68, 22007), (69, 22013), (73, 22034), (79, 22055), (90, 22106), (108, 22226), (115, 22256), (121, 22280), (126, 22304), (127, 22307), (140, 22361),

Gene: IronMan\_31 Start: 23534, Stop: 23980, Start Num: 46

Candidate Starts for IronMan\_31:

(Start: 46 @23534 has 15 MA's), (69, 23609), (78, 23648), (82, 23669), (106, 23801), (115, 23852), (126, 23900), (135, 23927), (140, 23957),

Gene: Isca\_28 Start: 21670, Stop: 22140, Start Num: 43

Candidate Starts for Isca\_28:

(15, 21511), (Start: 43 @21670 has 1 MA's), (Start: 55 @21697 has 554 MA's), (68, 21766), (73, 21793), (108, 21985), (110, 21991), (115, 22015), (126, 22063), (142, 22132),

Gene: Isiphiwo\_32 Start: 21835, Stop: 22287, Start Num: 53

Candidate Starts for Isiphiwo\_32:

(Start: 53 @21835 has 140 MA's), (64, 21892), (69, 21916), (89, 22000), (106, 22108), (115, 22159), (126, 22207), (132, 22222),

Gene: Iwokeuplikedis\_30 Start: 21724, Stop: 22167, Start Num: 57

Candidate Starts for Iwokeuplikedis\_30:

(25, 21679), (Start: 57 @21724 has 51 MA's), (69, 21799), (106, 21991), (108, 22012), (126, 22090), (135, 22117), (140, 22147), (143, 22159),

Gene: JC27\_30 Start: 23842, Stop: 24288, Start Num: 55

Candidate Starts for JC27\_30:

(Start: 55 @23842 has 554 MA's), (76, 23956), (77, 23959), (88, 24001), (89, 24007), (133, 24235),

Gene: JF2\_28 Start: 21448, Stop: 21891, Start Num: 55

Candidate Starts for JF2\_28:

(15, 21262), (Start: 43 @21421 has 1 MA's), (Start: 55 @21448 has 554 MA's), (68, 21517), (73, 21544), (108, 21736), (110, 21742), (115, 21766), (126, 21814), (142, 21883),

Gene: JF4\_28 Start: 21448, Stop: 21891, Start Num: 55

Candidate Starts for JF4\_28:

(15, 21262), (Start: 43 @21421 has 1 MA's), (Start: 55 @21448 has 554 MA's), (68, 21517), (73, 21544), (108, 21736), (110, 21742), (115, 21766), (126, 21814), (142, 21883),

Gene: JHC117\_30 Start: 22196, Stop: 22639, Start Num: 55

Candidate Starts for JHC117\_30:

(Start: 55 @22196 has 554 MA's), (68, 22265), (73, 22292), (90, 22364), (108, 22484), (115, 22514), (126, 22562), (142, 22631),

Gene: JSwag\_31 Start: 20951, Stop: 21394, Start Num: 53

Candidate Starts for JSwag\_31:

(Start: 53 @20951 has 140 MA's), (61, 20960), (68, 21020), (69, 21026), (84, 21089), (93, 21128), (115, 21269), (126, 21317),

Gene: Jaan\_32 Start: 23923, Stop: 24369, Start Num: 46

Candidate Starts for Jaan\_32:

(Start: 46 @23923 has 15 MA's), (69, 23998), (78, 24037), (82, 24058), (106, 24190), (115, 24241), (126, 24289), (135, 24316),

Gene: Jabbawokkie\_22 Start: 15931, Stop: 16296, Start Num: 58

Candidate Starts for Jabbawokkie\_22:

(29, 15823), (38, 15877), (Start: 58 @15931 has 13 MA's), (65, 15991), (67, 15997), (70, 16012), (72, 16027), (74, 16033), (80, 16054), (81, 16057), (107, 16174), (114, 16216), (122, 16249),

Gene: Jabiru\_25 Start: 20839, Stop: 21303, Start Num: 55  
Candidate Starts for Jabiru\_25:  
(Start: 55 @20839 has 554 MA's), (128, 21217), (130, 21220), (140, 21265), (141, 21274),

Gene: Jabith\_29 Start: 22685, Stop: 23128, Start Num: 54  
Candidate Starts for Jabith\_29:  
(Start: 54 @22685 has 23 MA's), (69, 22760), (106, 22952), (108, 22973), (126, 23051), (141, 23117),

Gene: JackSparrow\_29 Start: 23304, Stop: 23750, Start Num: 55  
Candidate Starts for JackSparrow\_29:  
(Start: 55 @23304 has 554 MA's), (76, 23418), (77, 23421), (88, 23463), (89, 23469), (133, 23697),

Gene: Jamzy\_22 Start: 16788, Stop: 17180, Start Num: 51  
Candidate Starts for Jamzy\_22:  
(35, 16734), (Start: 51 @16788 has 26 MA's), (61, 16809), (67, 16863), (70, 16878), (74, 16899), (78, 16914), (113, 17085), (116, 17094), (118, 17106),

Gene: Jasper\_29 Start: 22783, Stop: 23229, Start Num: 55  
Candidate Starts for Jasper\_29:  
(Start: 55 @22783 has 554 MA's), (60, 22795), (76, 22897), (77, 22900), (88, 22942), (89, 22948), (133, 23176),

Gene: Jaykayelowell\_28 Start: 21623, Stop: 22069, Start Num: 55  
Candidate Starts for Jaykayelowell\_28:  
(Start: 55 @21623 has 554 MA's), (68, 21692), (69, 21698), (73, 21719), (79, 21740), (90, 21791), (108, 21911), (115, 21941), (121, 21965), (126, 21989), (127, 21992), (140, 22046),

Gene: Jeeves\_29 Start: 21242, Stop: 21691, Start Num: 53  
Candidate Starts for Jeeves\_29:  
(Start: 53 @21242 has 140 MA's), (69, 21320), (106, 21512), (115, 21563), (126, 21611), (135, 21638), (140, 21668),

Gene: Jeffabunny\_32 Start: 21785, Stop: 22237, Start Num: 53  
Candidate Starts for Jeffabunny\_32:  
(Start: 53 @21785 has 140 MA's), (64, 21842), (69, 21866), (89, 21950), (106, 22058), (115, 22109), (126, 22157), (132, 22172),

Gene: JenCasNa\_30 Start: 22197, Stop: 22640, Start Num: 55  
Candidate Starts for JenCasNa\_30:  
(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: JeppNRM\_31 Start: 22277, Stop: 22720, Start Num: 55  
Candidate Starts for JeppNRM\_31:  
(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643), (142, 22712),

Gene: Jerm\_31 Start: 22422, Stop: 22868, Start Num: 57  
Candidate Starts for Jerm\_31:  
(Start: 27 @22383 has 1 MA's), (Start: 57 @22422 has 51 MA's), (69, 22497), (82, 22557), (106, 22689), (126, 22788), (135, 22815),

Gene: Jerm2\_29 Start: 23173, Stop: 23619, Start Num: 55

Candidate Starts for Jerm2\_29:

(Start: 55 @23173 has 554 MA's), (76, 23287), (77, 23290), (88, 23332), (89, 23338), (133, 23566),

Gene: Jester\_24 Start: 17932, Stop: 18372, Start Num: 53

Candidate Starts for Jester\_24:

(12, 17713), (13, 17734), (32, 17851), (Start: 53 @17932 has 140 MA's), (62, 17959), (88, 18085), (90, 18100), (96, 18127), (110, 18223), (119, 18262),

Gene: JetBlade\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for JetBlade\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: JewelBug\_32 Start: 21769, Stop: 22221, Start Num: 53

Candidate Starts for JewelBug\_32:

(Start: 53 @21769 has 140 MA's), (64, 21826), (69, 21850), (89, 21934), (106, 22042), (115, 22093), (126, 22141), (132, 22156),

Gene: Jiawan\_30 Start: 23593, Stop: 24042, Start Num: 53

Candidate Starts for Jiawan\_30:

(Start: 53 @23593 has 140 MA's), (69, 23674), (108, 23887), (115, 23917), (126, 23965), (140, 24022),

Gene: Jobu08\_30 Start: 22270, Stop: 22713, Start Num: 55

Candidate Starts for Jobu08\_30:

(Start: 55 @22270 has 554 MA's), (68, 22339), (73, 22366), (90, 22438), (108, 22558), (115, 22588), (126, 22636), (142, 22705),

Gene: JoongJeon\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for JoongJeon\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Jordennis\_32 Start: 21754, Stop: 22206, Start Num: 53

Candidate Starts for Jordennis\_32:

(Start: 53 @21754 has 140 MA's), (64, 21811), (69, 21835), (89, 21919), (106, 22027), (115, 22078), (126, 22126), (132, 22141),

Gene: Jorgensen\_28 Start: 22837, Stop: 23283, Start Num: 55

Candidate Starts for Jorgensen\_28:

(Start: 55 @22837 has 554 MA's), (76, 22951), (77, 22954), (88, 22996), (89, 23002), (133, 23230),

Gene: Joselito\_29 Start: 22633, Stop: 23076, Start Num: 54

Candidate Starts for Joselito\_29:

(Start: 22 @22570 has 1 MA's), (Start: 54 @22633 has 23 MA's), (69, 22708), (106, 22900), (108, 22921), (126, 22999), (141, 23065),

Gene: JoshKayV\_31 Start: 22392, Stop: 22838, Start Num: 57

Candidate Starts for JoshKayV\_31:

(2, 22080), (6, 22170), (14, 22257), (Start: 27 @22353 has 1 MA's), (Start: 57 @22392 has 51 MA's), (69, 22467), (82, 22527), (106, 22659), (126, 22758), (135, 22785), (140, 22815),

Gene: Journey13\_27 Start: 21141, Stop: 21584, Start Num: 55

Candidate Starts for Journey13\_27:

(Start: 55 @21141 has 554 MA's), (82, 21276), (106, 21408), (115, 21459), (126, 21507), (140, 21564),

Gene: Jovo\_25 Start: 21658, Stop: 22122, Start Num: 55

Candidate Starts for Jovo\_25:

(Start: 55 @21658 has 554 MA's), (78, 21775), (104, 21919), (128, 22036), (130, 22039), (137, 22063), (141, 22093),

Gene: Jsquared\_28 Start: 20955, Stop: 21398, Start Num: 55

Candidate Starts for Jsquared\_28:

(Start: 27 @20913 has 1 MA's), (Start: 55 @20955 has 554 MA's), (69, 21030), (78, 21069), (82, 21090), (106, 21222), (115, 21273), (126, 21321), (140, 21378),

Gene: Juicebox\_20 Start: 19400, Stop: 19786, Start Num: 58

Candidate Starts for Juicebox\_20:

(Start: 58 @19400 has 13 MA's), (62, 19430), (77, 19517), (83, 19541), (105, 19640),

Gene: JuliaChild\_30 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for JuliaChild\_30:

(Start: 55 @23482 has 554 MA's), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: KADY\_31 Start: 22282, Stop: 22725, Start Num: 55

Candidate Starts for KADY\_31:

(Start: 55 @22282 has 554 MA's), (68, 22351), (73, 22378), (90, 22450), (108, 22570), (115, 22600), (126, 22648), (142, 22717),

Gene: KBG\_29 Start: 23836, Stop: 24282, Start Num: 55

Candidate Starts for KBG\_29:

(Start: 55 @23836 has 554 MA's), (60, 23848), (76, 23950), (77, 23953), (88, 23995), (89, 24001), (133, 24229),

Gene: KFPoly\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for KFPoly\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: KSSJEB\_28 Start: 22730, Stop: 23176, Start Num: 55

Candidate Starts for KSSJEB\_28:

(Start: 55 @22730 has 554 MA's), (60, 22742), (76, 22844), (77, 22847), (88, 22889), (89, 22895), (133, 23123),

Gene: Kachowdy\_28 Start: 21816, Stop: 22259, Start Num: 55

Candidate Starts for Kachowdy\_28:

(15, 21630), (Start: 43 @21789 has 1 MA's), (Start: 55 @21816 has 554 MA's), (68, 21885), (73, 21912), (108, 22104), (110, 22110), (115, 22134), (126, 22182), (142, 22251),

Gene: Kalb97\_31 Start: 22278, Stop: 22721, Start Num: 55

Candidate Starts for Kalb97\_31:

(Start: 55 @22278 has 554 MA's), (68, 22347), (73, 22374), (90, 22446), (108, 22566), (115, 22596), (126, 22644), (142, 22713),

Gene: Kalnoky\_31 Start: 22279, Stop: 22722, Start Num: 55

Candidate Starts for Kalnoky\_31:

(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: Kalpine\_32 Start: 23773, Stop: 24219, Start Num: 46

Candidate Starts for Kalpine\_32:

(31, 23749), (Start: 46 @23773 has 15 MA's), (69, 23848), (70, 23851), (78, 23887), (82, 23908), (106, 24040), (108, 24061), (115, 24091), (126, 24139), (135, 24166), (140, 24196),

Gene: Kampy\_28 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for Kampy\_28:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994),

Gene: Kanely\_29 Start: 23540, Stop: 23986, Start Num: 55

Candidate Starts for Kanely\_29:

(Start: 55 @23540 has 554 MA's), (76, 23654), (77, 23657), (88, 23699), (89, 23705), (133, 23933),

Gene: Katalie136\_28 Start: 21648, Stop: 22094, Start Num: 55

Candidate Starts for Katalie136\_28:

(Start: 55 @21648 has 554 MA's), (68, 21717), (73, 21744), (78, 21762), (90, 21816), (108, 21936), (115, 21966), (119, 21981), (126, 22014),

Gene: KatherineG\_31 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for KatherineG\_31:

(Start: 53 @21087 has 140 MA's), (61, 21096), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: KayGee\_19 Start: 17112, Stop: 17501, Start Num: 51

Candidate Starts for KayGee\_19:

(35, 17058), (Start: 51 @17112 has 26 MA's), (61, 17133), (67, 17187), (68, 17193), (70, 17202), (74, 17223), (82, 17259), (102, 17340), (111, 17400), (113, 17409), (118, 17430),

Gene: Kazan\_32 Start: 21770, Stop: 22222, Start Num: 53

Candidate Starts for Kazan\_32:

(Start: 53 @21770 has 140 MA's), (64, 21827), (69, 21851), (89, 21935), (106, 22043), (115, 22094), (126, 22142), (132, 22157),

Gene: Keelan\_52 Start: 29645, Stop: 30055, Start Num: 45

Candidate Starts for Keelan\_52:

(Start: 45 @29645 has 1 MA's), (59, 29663), (67, 29723), (68, 29729), (72, 29753), (78, 29774), (81, 29783), (82, 29795), (99, 29888), (105, 29933), (109, 29960), (117, 29990), (132, 30047),

Gene: Kenmech\_31 Start: 24246, Stop: 24692, Start Num: 55

Candidate Starts for Kenmech\_31:

(Start: 55 @24246 has 554 MA's), (76, 24360), (77, 24363), (88, 24405), (89, 24411), (133, 24639),

Gene: Kerberos\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for Kerberos\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: Keziacharles14\_29 Start: 21647, Stop: 22096, Start Num: 53

Candidate Starts for Keziacharles14\_29:



(Start: 53 @21647 has 140 MA's), (69, 21725), (85, 21794), (100, 21869), (106, 21917), (113, 21962), (115, 21968), (126, 22016),

Gene: Killigrew\_26 Start: 22452, Stop: 22898, Start Num: 55

Candidate Starts for Killigrew\_26:

(Start: 55 @22452 has 554 MA's), (60, 22464), (76, 22566), (77, 22569), (88, 22611), (89, 22617), (133, 22845),

Gene: Kimona\_25 Start: 19711, Stop: 20160, Start Num: 55

Candidate Starts for Kimona\_25:

(Start: 55 @19711 has 554 MA's), (73, 19810), (77, 19825), (119, 20047), (121, 20056), (126, 20080),

Gene: KingCyrus\_31 Start: 22389, Stop: 22835, Start Num: 57

Candidate Starts for KingCyrus\_31:

(2, 22077), (6, 22167), (14, 22254), (Start: 27 @22350 has 1 MA's), (Start: 57 @22389 has 51 MA's), (69, 22464), (82, 22524), (106, 22656), (126, 22755), (135, 22782), (140, 22812),

Gene: Kingmustik0402\_28 Start: 21619, Stop: 22065, Start Num: 55

Candidate Starts for Kingmustik0402\_28:

(Start: 55 @21619 has 554 MA's), (68, 21688), (69, 21694), (73, 21715), (79, 21736), (90, 21787), (108, 21907), (115, 21937), (121, 21961), (126, 21985), (127, 21988), (140, 22042),

Gene: Kinmap\_30 Start: 21589, Stop: 22038, Start Num: 53

Candidate Starts for Kinmap\_30:

(Start: 53 @21589 has 140 MA's), (106, 21859), (115, 21910), (126, 21958), (135, 21985), (140, 22015),

Gene: Kipper29\_32 Start: 21764, Stop: 22216, Start Num: 53

Candidate Starts for Kipper29\_32:

(Start: 53 @21764 has 140 MA's), (64, 21821), (69, 21845), (89, 21929), (106, 22037), (115, 22088), (126, 22136), (132, 22151),

Gene: KittenMittens\_27 Start: 19689, Stop: 20135, Start Num: 55

Candidate Starts for KittenMittens\_27:

(Start: 55 @19689 has 554 MA's), (68, 19758), (73, 19785), (90, 19857), (115, 20007), (126, 20055),

Gene: Koan\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Koan\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Koduck\_29 Start: 21194, Stop: 21637, Start Num: 55

Candidate Starts for Koduck\_29:

(Start: 55 @21194 has 554 MA's), (64, 21245), (69, 21269), (82, 21329), (115, 21512), (126, 21560), (143, 21629),

Gene: Koko\_32 Start: 22102, Stop: 22554, Start Num: 53

Candidate Starts for Koko\_32:

(Start: 53 @22102 has 140 MA's), (64, 22159), (69, 22183), (89, 22267), (106, 22375), (115, 22426), (126, 22474), (132, 22489),

Gene: Koreni\_27 Start: 21273, Stop: 21719, Start Num: 55

Candidate Starts for Koreni\_27:

(Start: 55 @21273 has 554 MA's), (68, 21342), (69, 21348), (73, 21369), (79, 21390), (90, 21441), (108, 21561), (115, 21591), (121, 21615), (126, 21639), (127, 21642), (140, 21696),

Gene: Kratak\_28 Start: 21622, Stop: 22068, Start Num: 55

Candidate Starts for Kratak\_28:

(Start: 55 @21622 has 554 MA's), (68, 21691), (69, 21697), (73, 21718), (79, 21739), (90, 21790), (108, 21910), (115, 21940), (121, 21964), (126, 21988), (127, 21991), (140, 22045),

Gene: Kremtemulon\_28 Start: 21675, Stop: 22121, Start Num: 55

Candidate Starts for Kremtemulon\_28:

(Start: 55 @21675 has 554 MA's), (68, 21744), (69, 21750), (73, 21771), (79, 21792), (90, 21843), (108, 21963), (115, 21993), (121, 22017), (126, 22041), (127, 22044), (140, 22098),

Gene: Krishelle\_24 Start: 18259, Stop: 18699, Start Num: 53

Candidate Starts for Krishelle\_24:

(12, 18040), (13, 18061), (32, 18178), (35, 18211), (Start: 53 @18259 has 140 MA's), (62, 18286), (88, 18412), (90, 18427), (96, 18454), (110, 18550), (119, 18589),

Gene: Kristoff\_29 Start: 21786, Stop: 22232, Start Num: 55

Candidate Starts for Kristoff\_29:

(Start: 55 @21786 has 554 MA's), (68, 21855), (73, 21882), (90, 21954), (115, 22104), (126, 22152),

Gene: Kugel\_29 Start: 23113, Stop: 23559, Start Num: 55

Candidate Starts for Kugel\_29:

(Start: 55 @23113 has 554 MA's), (76, 23227), (77, 23230), (88, 23272), (89, 23278), (133, 23506),

Gene: KyMonks1A\_30 Start: 23279, Stop: 23725, Start Num: 55

Candidate Starts for KyMonks1A\_30:

(Start: 55 @23279 has 554 MA's), (60, 23291), (76, 23393), (77, 23396), (88, 23438), (89, 23444), (133, 23672),

Gene: Kyee\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for Kyee\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: Kykar\_28 Start: 22901, Stop: 23347, Start Num: 55

Candidate Starts for Kykar\_28:

(Start: 55 @22901 has 554 MA's), (76, 23015), (77, 23018), (88, 23060), (89, 23066), (133, 23294),

Gene: L5\_29 Start: 21148, Stop: 21591, Start Num: 55

Candidate Starts for L5\_29:

(Start: 55 @21148 has 554 MA's), (64, 21199), (69, 21223), (82, 21283), (115, 21466), (126, 21514), (143, 21583),

Gene: LBerry\_30 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for LBerry\_30:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: LHTSCC\_29 Start: 21941, Stop: 22387, Start Num: 55

Candidate Starts for LHTSCC\_29:

(Start: 55 @21941 has 554 MA's), (68, 22010), (69, 22016), (73, 22037), (79, 22058), (90, 22109), (108, 22229), (115, 22259), (121, 22283), (126, 22307), (127, 22310),

Gene: LadyBird\_29 Start: 21960, Stop: 22406, Start Num: 57

Candidate Starts for LadyBird\_29:

(4, 21729), (11, 21786), (14, 21825), (25, 21915), (Start: 27 @21921 has 1 MA's), (Start: 57 @21960 has 51 MA's), (69, 22035), (82, 22095), (106, 22227), (108, 22248), (126, 22326), (135, 22353), (140, 22383),

Gene: Lambert1\_29 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for Lambert1\_29:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Lamina13\_28 Start: 22550, Stop: 22996, Start Num: 55

Candidate Starts for Lamina13\_28:

(Start: 55 @22550 has 554 MA's), (60, 22562), (76, 22664), (77, 22667), (88, 22709), (89, 22715), (133, 22943),

Gene: Landor\_30 Start: 23575, Stop: 24021, Start Num: 46

Candidate Starts for Landor\_30:

(Start: 46 @23575 has 15 MA's), (69, 23650), (78, 23689), (82, 23710), (106, 23842), (115, 23893), (126, 23941), (135, 23968),

Gene: LappelDuVide\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for LappelDuVide\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Larenn\_30 Start: 22257, Stop: 22703, Start Num: 57

Candidate Starts for Larenn\_30:

(14, 22122), (25, 22212), (Start: 27 @22218 has 1 MA's), (Start: 57 @22257 has 51 MA's), (69, 22332), (78, 22371), (106, 22524), (126, 22623), (135, 22650), (140, 22680),

Gene: LarryKay\_30 Start: 22284, Stop: 22727, Start Num: 55

Candidate Starts for LarryKay\_30:

(Start: 55 @22284 has 554 MA's), (68, 22353), (73, 22380), (90, 22452), (108, 22572), (115, 22602), (126, 22650), (142, 22719),

Gene: LastResort\_31 Start: 20968, Stop: 21411, Start Num: 53

Candidate Starts for LastResort\_31:

(Start: 53 @20968 has 140 MA's), (61, 20977), (68, 21037), (69, 21043), (84, 21106), (93, 21145), (115, 21286), (126, 21334),

Gene: Lauer\_18 Start: 17161, Stop: 17550, Start Num: 51

Candidate Starts for Lauer\_18:

(35, 17107), (Start: 51 @17161 has 26 MA's), (61, 17182), (67, 17236), (68, 17242), (70, 17251), (74, 17272), (82, 17308), (102, 17389), (111, 17449), (113, 17458), (118, 17479),

Gene: Lemur\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Lemur\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: LeoAvram\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for LeoAvram\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Leogania\_31 Start: 24117, Stop: 24569, Start Num: 46

Candidate Starts for Leogania\_31:

(Start: 46 @24117 has 15 MA's), (69, 24198), (106, 24390), (108, 24411), (115, 24441), (126, 24489), (135, 24516),

Gene: Lesedi\_27 Start: 22708, Stop: 23154, Start Num: 55

Candidate Starts for Lesedi\_27:

(Start: 55 @22708 has 554 MA's), (60, 22720), (76, 22822), (77, 22825), (88, 22867), (89, 22873), (133, 23101),

Gene: Lev2\_25 Start: 21290, Stop: 21754, Start Num: 55

Candidate Starts for Lev2\_25:

(Start: 55 @21290 has 554 MA's), (116, 21614), (119, 21626), (128, 21668), (141, 21725),

Gene: Levia\_27 Start: 23697, Stop: 24143, Start Num: 55

Candidate Starts for Levia\_27:

(Start: 55 @23697 has 554 MA's), (60, 23709), (76, 23811), (77, 23814), (88, 23856), (89, 23862), (133, 24090),

Gene: Leviathan\_31 Start: 22478, Stop: 22924, Start Num: 57

Candidate Starts for Leviathan\_31:

(2, 22166), (6, 22256), (Start: 27 @22439 has 1 MA's), (Start: 57 @22478 has 51 MA's), (69, 22553), (82, 22613), (106, 22745), (126, 22844), (135, 22871),

Gene: Licorice\_30 Start: 23937, Stop: 24383, Start Num: 55

Candidate Starts for Licorice\_30:

(Start: 55 @23937 has 554 MA's), (76, 24051), (77, 24054), (88, 24096), (89, 24102), (133, 24330),

Gene: LilBib\_29 Start: 24150, Stop: 24596, Start Num: 55

Candidate Starts for LilBib\_29:

(Start: 55 @24150 has 554 MA's), (60, 24162), (76, 24264), (77, 24267), (88, 24309), (89, 24315), (133, 24543),

Gene: LilSpotty\_19 Start: 16427, Stop: 16867, Start Num: 36

Candidate Starts for LilSpotty\_19:

(19, 16319), (Start: 36 @16427 has 1 MA's), (40, 16436), (42, 16442), (63, 16529), (74, 16583), (75, 16589), (79, 16601), (80, 16604), (81, 16607), (87, 16637), (105, 16739), (117, 16799), (125, 16835),

Gene: LilTurb\_31 Start: 22481, Stop: 22927, Start Num: 57

Candidate Starts for LilTurb\_31:

(2, 22169), (6, 22259), (17, 22361), (Start: 27 @22442 has 1 MA's), (Start: 57 @22481 has 51 MA's), (69, 22556), (82, 22616), (106, 22748), (126, 22847), (135, 22874),

Gene: Lilbunny\_32 Start: 21759, Stop: 22211, Start Num: 53

Candidate Starts for Lilbunny\_32:

(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083), (126, 22131), (132, 22146),

Gene: Lilith\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for Lilith\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: Lilleskat\_29 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Lilleskat\_29:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Lillie\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Lillie\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: LionsBait\_30 Start: 23750, Stop: 24193, Start Num: 57

Candidate Starts for LionsBait\_30:

(Start: 57 @23750 has 51 MA's), (69, 23825), (82, 23885), (106, 24017), (108, 24038), (115, 24068), (126, 24116), (135, 24143), (140, 24173), (143, 24185),

Gene: LittleB\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for LittleB\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: LittleCherry\_25 Start: 21469, Stop: 21933, Start Num: 55

Candidate Starts for LittleCherry\_25:

(Start: 55 @21469 has 554 MA's), (116, 21793), (119, 21805), (128, 21847), (140, 21895), (141, 21904),

Gene: LittleGuy\_28 Start: 21570, Stop: 22016, Start Num: 55

Candidate Starts for LittleGuy\_28:

(Start: 55 @21570 has 554 MA's), (68, 21639), (69, 21645), (79, 21687), (90, 21738), (108, 21858), (115, 21888), (121, 21912), (126, 21936), (127, 21939), (140, 21993),

Gene: LochMonster\_28 Start: 21602, Stop: 22048, Start Num: 55

Candidate Starts for LochMonster\_28:

(Start: 55 @21602 has 554 MA's), (68, 21671), (69, 21677), (73, 21698), (79, 21719), (90, 21770), (108, 21890), (115, 21920), (121, 21944), (126, 21968), (127, 21971), (140, 22025),

Gene: Lockley\_28 Start: 22891, Stop: 23337, Start Num: 55

Candidate Starts for Lockley\_28:

(Start: 55 @22891 has 554 MA's), (76, 23005), (77, 23008), (88, 23050), (89, 23056), (133, 23284),

Gene: Lokk\_32 Start: 23627, Stop: 24073, Start Num: 52

Candidate Starts for Lokk\_32:

(Start: 52 @23627 has 33 MA's), (69, 23702), (82, 23762), (106, 23894), (126, 23993), (135, 24020), (140, 24050),

Gene: LoneWolf\_30 Start: 23150, Stop: 23599, Start Num: 53

Candidate Starts for LoneWolf\_30:

(Start: 53 @23150 has 140 MA's), (69, 23231), (108, 23444), (115, 23474), (126, 23522), (135, 23549), (140, 23579),

Gene: Looper\_32 Start: 20965, Stop: 21408, Start Num: 53

Candidate Starts for Looper\_32:

(Start: 53 @20965 has 140 MA's), (61, 20974), (68, 21034), (69, 21040), (84, 21103), (93, 21142), (115, 21283), (126, 21331),

Gene: Lopton\_29 Start: 24352, Stop: 24798, Start Num: 55

Candidate Starts for Lopton\_29:

(Start: 55 @24352 has 554 MA's), (76, 24466), (77, 24469), (88, 24511), (89, 24517), (133, 24745),

Gene: Lorenzo\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Lorenzo\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: Loser\_32 Start: 23730, Stop: 24179, Start Num: 46

Candidate Starts for Loser\_32:

(Start: 46 @23730 has 15 MA's), (69, 23811), (82, 23871), (89, 23895), (106, 24003), (108, 24024), (115, 24054), (126, 24102), (135, 24129), (140, 24159),

Gene: Louie6\_30 Start: 22285, Stop: 22728, Start Num: 55

Candidate Starts for Louie6\_30:

(Start: 55 @22285 has 554 MA's), (68, 22354), (73, 22381), (90, 22453), (108, 22573), (115, 22603), (126, 22651), (142, 22720),

Gene: Lowa\_30 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for Lowa\_30:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: Luchador\_31 Start: 22469, Stop: 22918, Start Num: 53

Candidate Starts for Luchador\_31:

(Start: 53 @22469 has 140 MA's), (69, 22547), (106, 22739), (115, 22790), (126, 22838), (135, 22865), (140, 22895),

Gene: Lucivia\_29 Start: 22682, Stop: 23125, Start Num: 54

Candidate Starts for Lucivia\_29:

(Start: 54 @22682 has 23 MA's), (69, 22757), (106, 22949), (108, 22970), (126, 23048), (141, 23114),

Gene: Lucyedi\_30 Start: 22746, Stop: 23192, Start Num: 55

Candidate Starts for Lucyedi\_30:

(34, 22686), (Start: 55 @22746 has 554 MA's), (68, 22818), (69, 22824), (106, 23016), (115, 23067), (126, 23115), (135, 23142),

Gene: LugYA\_32 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for LugYA\_32:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: LunarLander\_30 Start: 23217, Stop: 23546, Start Num: 77

Candidate Starts for LunarLander\_30:

(Start: 55 @23100 has 554 MA's), (76, 23214), (77, 23217), (88, 23259), (89, 23265), (133, 23493),

Gene: Lunsford\_29 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Lunsford\_29:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: MA5\_28 Start: 21379, Stop: 21822, Start Num: 55

Candidate Starts for MA5\_28:

(15, 21193), (Start: 43 @21352 has 1 MA's), (Start: 55 @21379 has 554 MA's), (68, 21448), (73, 21475), (110, 21673), (115, 21697), (126, 21745),

Gene: MAnor\_19 Start: 17120, Stop: 17512, Start Num: 51

Candidate Starts for MAnor\_19:

(Start: 51 @17120 has 26 MA's), (61, 17141), (67, 17195), (68, 17201), (70, 17210), (74, 17231), (78, 17246), (82, 17267), (111, 17408), (113, 17417), (118, 17438),

Gene: MK4\_28 Start: 21682, Stop: 22125, Start Num: 55

Candidate Starts for MK4\_28:

(15, 21496), (Start: 43 @21655 has 1 MA's), (Start: 55 @21682 has 554 MA's), (68, 21751), (73, 21778), (108, 21970), (110, 21976), (115, 22000), (126, 22048), (142, 22117),

Gene: MPlant7149\_27 Start: 22527, Stop: 22973, Start Num: 55

Candidate Starts for MPlant7149\_27:

(Start: 55 @22527 has 554 MA's), (76, 22641), (77, 22644), (88, 22686), (89, 22692), (133, 22920),

Gene: MScarn\_21 Start: 17073, Stop: 17471, Start Num: 47

Candidate Starts for MScarn\_21:

(Start: 47 @17073 has 11 MA's), (Start: 52 @17082 has 33 MA's), (66, 17154), (67, 17157), (70, 17172), (74, 17193), (78, 17208), (80, 17214), (86, 17238), (107, 17337), (113, 17379), (118, 17400), (129, 17442),

Gene: MaCh\_29 Start: 22624, Stop: 23067, Start Num: 54

Candidate Starts for MaCh\_29:

(Start: 22 @22561 has 1 MA's), (Start: 54 @22624 has 23 MA's), (69, 22699), (106, 22891), (108, 22912), (126, 22990), (141, 23056),

Gene: MaVan\_21 Start: 18423, Stop: 18809, Start Num: 52

Candidate Starts for MaVan\_21:

(Start: 52 @18423 has 33 MA's), (66, 18495), (70, 18513), (74, 18534), (80, 18555), (81, 18558), (86, 18579), (99, 18633), (105, 18672), (109, 18699), (113, 18720), (118, 18741),

Gene: Mabel\_29 Start: 22685, Stop: 23128, Start Num: 54

Candidate Starts for Mabel\_29:

(Start: 22 @22622 has 1 MA's), (Start: 54 @22685 has 23 MA's), (69, 22760), (106, 22952), (108, 22973), (126, 23051), (141, 23117),

Gene: MadMarie\_30 Start: 22200, Stop: 22643, Start Num: 55

Candidate Starts for MadMarie\_30:

(Start: 55 @22200 has 554 MA's), (68, 22269), (73, 22296), (90, 22368), (108, 22488), (115, 22518), (126, 22566), (142, 22635),

Gene: Magnar\_28 Start: 22677, Stop: 23123, Start Num: 55

Candidate Starts for Magnar\_28:

(Start: 55 @22677 has 554 MA's), (76, 22791), (77, 22794), (88, 22836), (89, 22842), (133, 23070),

Gene: Magnito\_27 Start: 22429, Stop: 22875, Start Num: 55

Candidate Starts for Magnito\_27:

(Start: 55 @22429 has 554 MA's), (60, 22441), (76, 22543), (77, 22546), (88, 22588), (89, 22594), (133, 22822),

Gene: Mainiac\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for Mainiac\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: MajorMajor\_28 Start: 20882, Stop: 21325, Start Num: 55

Candidate Starts for MajorMajor\_28:

(Start: 55 @20882 has 554 MA's), (69, 20957), (82, 21017), (115, 21200), (126, 21248), (140, 21305),

Gene: Makemake\_28 Start: 24145, Stop: 24591, Start Num: 55

Candidate Starts for Makemake\_28:

(Start: 55 @24145 has 554 MA's), (76, 24259), (77, 24262), (88, 24304), (89, 24310), (133, 24538),

Gene: Malec\_30 Start: 22262, Stop: 22708, Start Num: 57

Candidate Starts for Malec\_30:

(8, 22058), (14, 22127), (25, 22217), (Start: 27 @22223 has 1 MA's), (Start: 57 @22262 has 51 MA's), (69, 22337), (78, 22376), (106, 22529), (126, 22628), (135, 22655), (140, 22685),

Gene: Malinsilva\_32 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for Malinsilva\_32:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: Maminiaina\_30 Start: 23100, Stop: 23549, Start Num: 53

Candidate Starts for Maminiaina\_30:

(20, 23019), (Start: 53 @23100 has 140 MA's), (69, 23181), (106, 23373), (108, 23394), (115, 23424), (126, 23472), (135, 23499),

Gene: Manatee\_29 Start: 22675, Stop: 23121, Start Num: 55

Candidate Starts for Manatee\_29:

(Start: 55 @22675 has 554 MA's), (60, 22687), (76, 22789), (77, 22792), (88, 22834), (89, 22840), (133, 23068),

Gene: Manu\_31 Start: 22279, Stop: 22722, Start Num: 55

Candidate Starts for Manu\_31:

(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: MarQuardt\_30 Start: 22199, Stop: 22642, Start Num: 55

Candidate Starts for MarQuardt\_30:

(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517), (126, 22565), (142, 22634),

Gene: Marcell\_28 Start: 23165, Stop: 23611, Start Num: 55

Candidate Starts for Marcell\_28:

(Start: 55 @23165 has 554 MA's), (76, 23279), (77, 23282), (88, 23324), (89, 23330), (133, 23558),



Gene: Marchesa\_28 Start: 21814, Stop: 22257, Start Num: 55

Candidate Starts for Marchesa\_28:

(15, 21628), (Start: 43 @21787 has 1 MA's), (Start: 55 @21814 has 554 MA's), (68, 21883), (73, 21910), (108, 22102), (110, 22108), (115, 22132), (126, 22180), (142, 22249),

Gene: Marchy\_27 Start: 22470, Stop: 22916, Start Num: 55

Candidate Starts for Marchy\_27:

(Start: 55 @22470 has 554 MA's), (60, 22482), (76, 22584), (77, 22587), (88, 22629), (89, 22635), (133, 22863),

Gene: Marco3\_28 Start: 23065, Stop: 23511, Start Num: 55

Candidate Starts for Marco3\_28:

(Start: 55 @23065 has 554 MA's), (76, 23179), (77, 23182), (88, 23224), (89, 23230), (133, 23458),

Gene: Margaret\_22 Start: 17157, Stop: 17549, Start Num: 51

Candidate Starts for Margaret\_22:

(35, 17103), (Start: 51 @17157 has 26 MA's), (61, 17178), (70, 17247), (74, 17268), (78, 17283), (82, 17304), (94, 17346), (113, 17454), (116, 17463), (118, 17475),

Gene: Marge\_29 Start: 23565, Stop: 24011, Start Num: 55

Candidate Starts for Marge\_29:

(Start: 55 @23565 has 554 MA's), (76, 23679), (77, 23682), (88, 23724), (89, 23730), (133, 23958),

Gene: Margo\_29 Start: 22303, Stop: 22746, Start Num: 55

Candidate Starts for Margo\_29:

(Start: 55 @22303 has 554 MA's), (68, 22372), (73, 22399), (90, 22471), (108, 22591), (115, 22621), (126, 22669),

Gene: Marie\_30 Start: 22197, Stop: 22640, Start Num: 55

Candidate Starts for Marie\_30:

(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: Marius\_31 Start: 22279, Stop: 22722, Start Num: 55

Candidate Starts for Marius\_31:

(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597), (126, 22645), (142, 22714),

Gene: Maroc7\_27 Start: 22669, Stop: 23115, Start Num: 55

Candidate Starts for Maroc7\_27:

(Start: 55 @22669 has 554 MA's), (76, 22783), (77, 22786), (88, 22828), (89, 22834), (133, 23062),

Gene: Marsha\_28 Start: 23791, Stop: 24237, Start Num: 55

Candidate Starts for Marsha\_28:

(Start: 55 @23791 has 554 MA's), (76, 23905), (77, 23908), (88, 23950), (89, 23956), (133, 24184),

Gene: MaryBeth\_28 Start: 23097, Stop: 23543, Start Num: 55

Candidate Starts for MaryBeth\_28:

(Start: 55 @23097 has 554 MA's), (76, 23211), (77, 23214), (88, 23256), (89, 23262), (133, 23490),

Gene: MarysWell\_24 Start: 21517, Stop: 21981, Start Num: 55

Candidate Starts for MarysWell\_24:

(Start: 55 @21517 has 554 MA's), (116, 21841), (119, 21853), (128, 21895), (140, 21943), (141, 21952),

Gene: Maverick\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Maverick\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Maxo\_28 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for Maxo\_28:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994),

Gene: Mayonnaise\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Mayonnaise\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Mayweather\_20 Start: 17735, Stop: 18127, Start Num: 51

Candidate Starts for Mayweather\_20:

(Start: 51 @17735 has 26 MA's), (61, 17756), (67, 17810), (68, 17816), (70, 17825), (74, 17846), (78, 17861), (82, 17882), (111, 18023), (113, 18032), (118, 18053),

Gene: Mazhar510\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for Mazhar510\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: McFly\_32 Start: 21764, Stop: 22216, Start Num: 53

Candidate Starts for McFly\_32:

(Start: 53 @21764 has 140 MA's), (64, 21821), (69, 21845), (89, 21929), (106, 22037), (115, 22088), (126, 22136), (132, 22151),

Gene: McGuire\_29 Start: 22967, Stop: 23413, Start Num: 55

Candidate Starts for McGuire\_29:

(Start: 55 @22967 has 554 MA's), (60, 22979), (76, 23081), (77, 23084), (88, 23126), (89, 23132), (133, 23360),

Gene: McSinger\_29 Start: 23359, Stop: 23805, Start Num: 55

Candidate Starts for McSinger\_29:

(Start: 55 @23359 has 554 MA's), (76, 23473), (77, 23476), (88, 23518), (89, 23524), (133, 23752),

Gene: Medusa\_28 Start: 21628, Stop: 22074, Start Num: 55

Candidate Starts for Medusa\_28:

(Start: 55 @21628 has 554 MA's), (68, 21697), (69, 21703), (73, 21724), (79, 21745), (90, 21796), (108, 21916), (115, 21946), (121, 21970), (126, 21994), (127, 21997), (140, 22051),

Gene: MeeZee\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for MeeZee\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: Melvin\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Melvin\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: MetalQZJ\_28 Start: 23097, Stop: 23543, Start Num: 55

Candidate Starts for MetalQZJ\_28:

(Start: 55 @23097 has 554 MA's), (76, 23211), (77, 23214), (88, 23256), (89, 23262), (133, 23490),

Gene: Methuselah\_29 Start: 22281, Stop: 22724, Start Num: 55

Candidate Starts for Methuselah\_29:

(Start: 55 @22281 has 554 MA's), (68, 22350), (73, 22377), (90, 22449), (108, 22569), (115, 22599), (126, 22647), (142, 22716),

Gene: Micasa\_25 Start: 21443, Stop: 21907, Start Num: 55

Candidate Starts for Micasa\_25:

(Start: 55 @21443 has 554 MA's), (116, 21767), (119, 21779), (128, 21821), (140, 21869), (141, 21878),

Gene: Michley\_28 Start: 22842, Stop: 23288, Start Num: 55

Candidate Starts for Michley\_28:

(Start: 55 @22842 has 554 MA's), (76, 22956), (77, 22959), (88, 23001), (89, 23007), (133, 23235),

Gene: Microwolf\_30 Start: 22199, Stop: 22642, Start Num: 55

Candidate Starts for Microwolf\_30:

(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517), (126, 22565), (142, 22634),

Gene: MiculUcigas\_29 Start: 22002, Stop: 22448, Start Num: 57

Candidate Starts for MiculUcigas\_29:

(4, 21771), (25, 21957), (Start: 27 @21963 has 1 MA's), (Start: 57 @22002 has 51 MA's), (69, 22077), (78, 22116), (106, 22269), (126, 22368), (135, 22395), (140, 22425),

Gene: MicyPS\_18 Start: 19058, Stop: 19444, Start Num: 56

Candidate Starts for MicyPS\_18:

(Start: 56 @19058 has 5 MA's), (66, 19124), (67, 19127), (92, 19235), (116, 19364), (122, 19394), (124, 19403),

Gene: Midas2\_25 Start: 21517, Stop: 21981, Start Num: 55

Candidate Starts for Midas2\_25:

(Start: 55 @21517 has 554 MA's), (116, 21841), (119, 21853), (128, 21895), (140, 21943), (141, 21952),

Gene: Miko\_32 Start: 23595, Stop: 24041, Start Num: 52

Candidate Starts for Miko\_32:

(Start: 52 @23595 has 33 MA's), (69, 23670), (82, 23730), (106, 23862), (108, 23883), (115, 23913), (126, 23961), (135, 23988), (140, 24018),

Gene: Milcery\_25 Start: 21473, Stop: 21937, Start Num: 55

Candidate Starts for Milcery\_25:

(Start: 55 @21473 has 554 MA's), (116, 21797), (119, 21809), (128, 21851), (140, 21899), (141, 21908),

Gene: Millski\_27 Start: 21630, Stop: 22076, Start Num: 55

Candidate Starts for Millski\_27:

(Start: 55 @21630 has 554 MA's), (68, 21699), (69, 21705), (73, 21726), (79, 21747), (90, 21798), (108, 21918), (115, 21948), (121, 21972), (126, 21996), (127, 21999), (140, 22053),

Gene: MinecraftSteve\_32 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for MinecraftSteve\_32:

(Start: 53 @21087 has 140 MA's), (61, 21096), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: Miramae\_28 Start: 21591, Stop: 22037, Start Num: 55

Candidate Starts for Miramae\_28:

(Start: 55 @21591 has 554 MA's), (68, 21660), (73, 21687), (108, 21879), (115, 21909), (119, 21924), (126, 21957),

Gene: Misomonster\_32 Start: 22281, Stop: 22724, Start Num: 55

Candidate Starts for Misomonster\_32:

(Start: 55 @22281 has 554 MA's), (68, 22350), (73, 22377), (90, 22449), (108, 22569), (115, 22599), (126, 22647), (142, 22716),

Gene: MissWhite\_29 Start: 21089, Stop: 21532, Start Num: 55

Candidate Starts for MissWhite\_29:

(Start: 55 @21089 has 554 MA's), (106, 21356), (115, 21407), (126, 21455), (140, 21512),

Gene: Mkhuseleli\_29 Start: 22992, Stop: 23438, Start Num: 55

Candidate Starts for Mkhuseleli\_29:

(Start: 55 @22992 has 554 MA's), (76, 23106), (77, 23109), (88, 23151), (89, 23157), (133, 23385),

Gene: Molly\_29 Start: 22765, Stop: 23211, Start Num: 55

Candidate Starts for Molly\_29:

(Start: 55 @22765 has 554 MA's), (76, 22879), (77, 22882), (88, 22924), (89, 22930), (133, 23158),

Gene: Monet\_30 Start: 24193, Stop: 24639, Start Num: 55

Candidate Starts for Monet\_30:

(Start: 55 @24193 has 554 MA's), (76, 24307), (77, 24310), (88, 24352), (89, 24358), (133, 24586),

Gene: MoneyMay\_30 Start: 22197, Stop: 22640, Start Num: 55

Candidate Starts for MoneyMay\_30:

(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: Moose\_28 Start: 23169, Stop: 23615, Start Num: 55

Candidate Starts for Moose\_28:

(37, 23121), (Start: 55 @23169 has 554 MA's), (76, 23283), (77, 23286), (88, 23328), (89, 23334), (133, 23562),

Gene: Morpher26\_28 Start: 21648, Stop: 22094, Start Num: 55

Candidate Starts for Morpher26\_28:

(Start: 55 @21648 has 554 MA's), (68, 21717), (73, 21744), (78, 21762), (90, 21816), (108, 21936), (115, 21966), (119, 21981), (126, 22014),

Gene: Morrow\_28 Start: 21630, Stop: 22076, Start Num: 55

Candidate Starts for Morrow\_28:

(Start: 55 @21630 has 554 MA's), (68, 21699), (69, 21705), (73, 21726), (79, 21747), (90, 21798), (108, 21918), (115, 21948), (121, 21972), (126, 21996), (127, 21999),

Gene: MrGordo\_28 Start: 22657, Stop: 23103, Start Num: 55

Candidate Starts for MrGordo\_28:

(Start: 55 @22657 has 554 MA's), (76, 22771), (77, 22774), (88, 22816), (89, 22822), (133, 23050),

Gene: Mryolo\_27 Start: 22694, Stop: 23140, Start Num: 55

Candidate Starts for Mryolo\_27:

(Start: 55 @22694 has 554 MA's), (60, 22706), (76, 22808), (77, 22811), (88, 22853), (89, 22859), (133, 23087),

Gene: MuchMore\_32 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for MuchMore\_32:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: Mulciber\_29 Start: 22627, Stop: 23070, Start Num: 54

Candidate Starts for Mulciber\_29:

(Start: 54 @22627 has 23 MA's), (69, 22702), (106, 22894), (108, 22915), (126, 22993), (141, 23059),

Gene: Mule\_28 Start: 23003, Stop: 23449, Start Num: 55

Candidate Starts for Mule\_28:

(Start: 55 @23003 has 554 MA's), (76, 23117), (77, 23120), (88, 23162), (89, 23168), (133, 23396),

Gene: Munch\_29 Start: 22633, Stop: 23076, Start Num: 54

Candidate Starts for Munch\_29:

(Start: 22 @22570 has 1 MA's), (Start: 54 @22633 has 23 MA's), (69, 22708), (106, 22900), (108, 22921), (126, 22999), (141, 23065),

Gene: Mundrea\_28 Start: 21612, Stop: 22058, Start Num: 55

Candidate Starts for Mundrea\_28:

(Start: 55 @21612 has 554 MA's), (68, 21681), (73, 21708), (78, 21726), (90, 21780), (108, 21900), (115, 21930), (119, 21945), (126, 21978),

Gene: MunkgeeRoachy\_19 Start: 17490, Stop: 17879, Start Num: 52

Candidate Starts for MunkgeeRoachy\_19:

(Start: 52 @17490 has 33 MA's), (66, 17562), (67, 17565), (70, 17580), (74, 17601), (78, 17616), (82, 17637), (94, 17679), (107, 17745), (112, 17781), (113, 17787), (118, 17808), (129, 17850),

Gene: Museum\_30 Start: 23013, Stop: 23459, Start Num: 55

Candidate Starts for Museum\_30:

(Start: 55 @23013 has 554 MA's), (76, 23127), (77, 23130), (88, 23172), (89, 23178), (133, 23406),

Gene: MyraDee\_26 Start: 19887, Stop: 20348, Start Num: 51

Candidate Starts for MyraDee\_26:

(Start: 51 @19887 has 26 MA's), (72, 19989), (90, 20064), (110, 20190), (116, 20217), (135, 20289),

Gene: Myxus\_31 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Myxus\_31:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: NEHalo\_28 Start: 22751, Stop: 23197, Start Num: 55

Candidate Starts for NEHalo\_28:

(Start: 55 @22751 has 554 MA's), (76, 22865), (77, 22868), (88, 22910), (89, 22916), (133, 23144),

Gene: NaSiaTalie\_29 Start: 22000, Stop: 22446, Start Num: 57

Candidate Starts for NaSiaTalie\_29:

(4, 21769), (25, 21955), (Start: 27 @21961 has 1 MA's), (Start: 57 @22000 has 51 MA's), (69, 22075), (78, 22114), (106, 22267), (126, 22366), (135, 22393), (140, 22423),

Gene: Naca\_25 Start: 21325, Stop: 21789, Start Num: 55

Candidate Starts for Naca\_25:

(Start: 55 @21325 has 554 MA's), (128, 21703), (136, 21724), (140, 21751), (141, 21760),

Gene: Naiad\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Naiad\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Naira\_29 Start: 24610, Stop: 25056, Start Num: 55

Candidate Starts for Naira\_29:

(Start: 55 @24610 has 554 MA's), (76, 24724), (77, 24727), (88, 24769), (89, 24775), (133, 25003),

Gene: Naji\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for Naji\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: Nancinator\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Nancinator\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Natosaleda\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Natosaleda\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: NearlyHeadless\_25 Start: 20480, Stop: 20926, Start Num: 55

Candidate Starts for NearlyHeadless\_25:

(Start: 55 @20480 has 554 MA's), (66, 20543), (68, 20552), (76, 20591), (78, 20597), (96, 20678), (110, 20777), (116, 20801), (139, 20900), (140, 20906),

Gene: Nebs\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Nebs\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Nebulosus\_31 Start: 20965, Stop: 21408, Start Num: 53

Candidate Starts for Nebulosus\_31:

(Start: 53 @20965 has 140 MA's), (61, 20974), (68, 21034), (69, 21040), (84, 21103), (93, 21142), (115, 21283), (126, 21331),

Gene: Nedarya\_30 Start: 21584, Stop: 22024, Start Num: 53

Candidate Starts for Nedarya\_30:

(Start: 53 @21584 has 140 MA's), (68, 21650), (69, 21656), (70, 21659), (91, 21752), (96, 21776), (126, 21947),

Gene: Neeharika16\_32 Start: 21757, Stop: 22209, Start Num: 53

Candidate Starts for Neeharika16\_32:

(Start: 53 @21757 has 140 MA's), (64, 21814), (69, 21838), (89, 21922), (106, 22030), (115, 22081), (126, 22129), (132, 22144),

Gene: Nemo27\_28 Start: 21626, Stop: 22072, Start Num: 55

Candidate Starts for Nemo27\_28:

(Start: 55 @21626 has 554 MA's), (68, 21695), (69, 21701), (73, 21722), (79, 21743), (90, 21794), (108, 21914), (115, 21944), (121, 21968), (126, 21992), (127, 21995), (140, 22049),

Gene: Nerujay\_29 Start: 23419, Stop: 23865, Start Num: 55

Candidate Starts for Nerujay\_29:

(Start: 55 @23419 has 554 MA's), (60, 23431), (76, 23533), (77, 23536), (88, 23578), (89, 23584), (133, 23812),

Gene: Newrala\_32 Start: 21757, Stop: 22209, Start Num: 53

Candidate Starts for Newrala\_32:

(Start: 53 @21757 has 140 MA's), (64, 21814), (69, 21838), (89, 21922), (106, 22030), (115, 22081), (126, 22129), (132, 22144),

Gene: Nhonho\_28 Start: 23170, Stop: 23616, Start Num: 55

Candidate Starts for Nhonho\_28:

(Start: 55 @23170 has 554 MA's), (60, 23182), (76, 23284), (77, 23287), (88, 23329), (89, 23335), (133, 23563),

Gene: Nibbles\_21 Start: 18423, Stop: 18809, Start Num: 52

Candidate Starts for Nibbles\_21:

(Start: 52 @18423 has 33 MA's), (66, 18495), (70, 18513), (74, 18534), (80, 18555), (81, 18558), (86, 18579), (99, 18633), (105, 18672), (109, 18699), (113, 18720), (118, 18741),

Gene: NicoleTera\_33 Start: 23863, Stop: 24309, Start Num: 57

Candidate Starts for NicoleTera\_33:

(24, 23812), (Start: 57 @23863 has 51 MA's), (69, 23938), (78, 23977), (82, 23998), (106, 24130), (108, 24151), (115, 24181), (126, 24229), (135, 24256), (140, 24286),

Gene: Nina\_20 Start: 18484, Stop: 18873, Start Num: 52

Candidate Starts for Nina\_20:

(Start: 52 @18484 has 33 MA's), (66, 18556), (67, 18559), (70, 18574), (74, 18595), (78, 18610), (82, 18631), (94, 18673), (107, 18739), (112, 18775), (113, 18781), (118, 18802), (129, 18844),

Gene: Niza\_30 Start: 24047, Stop: 24493, Start Num: 55

Candidate Starts for Niza\_30:

(Start: 55 @24047 has 554 MA's), (60, 24059), (76, 24161), (77, 24164), (88, 24206), (89, 24212), (133, 24440),

Gene: Nodigi\_21 Start: 17443, Stop: 17835, Start Num: 51

Candidate Starts for Nodigi\_21:

(35, 17389), (Start: 51 @17443 has 26 MA's), (61, 17464), (66, 17515), (67, 17518), (70, 17533), (74, 17554), (78, 17569), (82, 17590), (94, 17632), (107, 17698), (113, 17740), (114, 17743), (118, 17761),

Gene: Noella\_29 Start: 22278, Stop: 22721, Start Num: 55  
Candidate Starts for Noella\_29:  
(Start: 55 @22278 has 554 MA's), (68, 22347), (73, 22374), (90, 22446), (108, 22566), (115, 22596),  
(126, 22644),

Gene: Noelle\_28 Start: 21705, Stop: 22151, Start Num: 55  
Candidate Starts for Noelle\_28:  
(21, 21576), (Start: 55 @21705 has 554 MA's), (68, 21774), (73, 21801), (90, 21873), (108, 21993),  
(115, 22023), (119, 22038), (126, 22071),

Gene: Norbert\_28 Start: 22277, Stop: 22720, Start Num: 55  
Candidate Starts for Norbert\_28:  
(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595),  
(126, 22643),

Gene: NorthStar\_28 Start: 21627, Stop: 22073, Start Num: 55  
Candidate Starts for NorthStar\_28:  
(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795),  
(108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Norz\_30 Start: 23826, Stop: 24272, Start Num: 55  
Candidate Starts for Norz\_30:  
(Start: 55 @23826 has 554 MA's), (76, 23940), (77, 23943), (88, 23985), (89, 23991), (133, 24219),

Gene: NotAPhaseMom\_28 Start: 21631, Stop: 22077, Start Num: 55  
Candidate Starts for NotAPhaseMom\_28:  
(Start: 55 @21631 has 554 MA's), (68, 21700), (69, 21706), (73, 21727), (79, 21748), (90, 21799),  
(108, 21919), (115, 21949), (121, 21973), (126, 21997), (127, 22000), (140, 22054),

Gene: NothingSpecial\_31 Start: 23999, Stop: 24445, Start Num: 52  
Candidate Starts for NothingSpecial\_31:  
(Start: 52 @23999 has 33 MA's), (69, 24074), (82, 24134), (106, 24266), (108, 24287), (115, 24317),  
(126, 24365), (135, 24392), (140, 24422),

Gene: Nyxis\_28 Start: 21570, Stop: 22016, Start Num: 55  
Candidate Starts for Nyxis\_28:  
(Start: 55 @21570 has 554 MA's), (68, 21639), (69, 21645), (73, 21666), (79, 21687), (90, 21738),  
(108, 21858), (115, 21888), (121, 21912), (126, 21936), (127, 21939),

Gene: OKCentral2016\_28 Start: 21292, Stop: 21738, Start Num: 55  
Candidate Starts for OKCentral2016\_28:  
(Start: 55 @21292 has 554 MA's), (68, 21361), (73, 21388), (90, 21460), (115, 21610), (126, 21658),

Gene: OKaNui\_29 Start: 21680, Stop: 22126, Start Num: 55  
Candidate Starts for OKaNui\_29:  
(Start: 55 @21680 has 554 MA's), (68, 21749), (69, 21755), (73, 21776), (79, 21797), (90, 21848),  
(108, 21968), (115, 21998), (121, 22022), (126, 22046), (127, 22049), (140, 22103),

Gene: Obama12\_29 Start: 21943, Stop: 22389, Start Num: 55  
Candidate Starts for Obama12\_29:  
(Start: 55 @21943 has 554 MA's), (68, 22012), (69, 22018), (73, 22039), (79, 22060), (90, 22111),  
(108, 22231), (115, 22261), (121, 22285), (126, 22309), (127, 22312),



Gene: Odin\_28 Start: 20772, Stop: 21221, Start Num: 58  
Candidate Starts for Odin\_28:  
(Start: 58 @20772 has 13 MA's), (69, 20850), (82, 20910), (115, 21093), (126, 21141), (140, 21198),

Gene: Ohfah\_28 Start: 21624, Stop: 22070, Start Num: 55  
Candidate Starts for Ohfah\_28:  
(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792),  
(108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Ohno789\_28 Start: 22812, Stop: 23258, Start Num: 55  
Candidate Starts for Ohno789\_28:  
(Start: 55 @22812 has 554 MA's), (76, 22926), (77, 22929), (88, 22971), (89, 22977), (133, 23205),

Gene: OlanP\_30 Start: 22459, Stop: 22902, Start Num: 55  
Candidate Starts for OlanP\_30:  
(Start: 55 @22459 has 554 MA's), (68, 22528), (73, 22555), (90, 22627), (108, 22747), (115, 22777),  
(126, 22825), (142, 22894),

Gene: Ollie\_30 Start: 22068, Stop: 22511, Start Num: 55  
Candidate Starts for Ollie\_30:  
(Start: 55 @22068 has 554 MA's), (68, 22137), (73, 22164), (90, 22236), (108, 22356), (115, 22386),  
(126, 22434), (127, 22437), (142, 22503),

Gene: Onglai\_30 Start: 21891, Stop: 22340, Start Num: 53  
Candidate Starts for Onglai\_30:  
(Start: 53 @21891 has 140 MA's), (69, 21972), (108, 22185), (115, 22215), (126, 22263), (140, 22320),

Gene: Oofda\_32 Start: 20939, Stop: 21382, Start Num: 53  
Candidate Starts for Oofda\_32:  
(Start: 53 @20939 has 140 MA's), (61, 20948), (68, 21008), (69, 21014), (84, 21077), (93, 21116),  
(115, 21257), (126, 21305),

Gene: Oogway\_27 Start: 22934, Stop: 23380, Start Num: 55  
Candidate Starts for Oogway\_27:  
(Start: 55 @22934 has 554 MA's), (76, 23048), (77, 23051), (88, 23093), (89, 23099), (133, 23327),

Gene: Orange\_29 Start: 22633, Stop: 23076, Start Num: 54  
Candidate Starts for Orange\_29:  
(Start: 54 @22633 has 23 MA's), (69, 22708), (106, 22900), (108, 22921), (126, 22999), (141, 23065),

Gene: Orla\_21 Start: 17447, Stop: 17839, Start Num: 51  
Candidate Starts for Orla\_21:  
(35, 17393), (50, 17444), (Start: 51 @17447 has 26 MA's), (61, 17468), (66, 17519), (67, 17522), (70,  
17537), (74, 17558), (78, 17573), (82, 17594), (94, 17636), (107, 17702), (113, 17744), (114, 17747),  
(118, 17765),

Gene: P28Green\_30 Start: 22199, Stop: 22642, Start Num: 55  
Candidate Starts for P28Green\_30:  
(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517),  
(126, 22565), (142, 22634),

Gene: PGHhamlin\_32 Start: 22190, Stop: 22633, Start Num: 55  
Candidate Starts for PGHhamlin\_32:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: PP\_38 Start: 27632, Stop: 28081, Start Num: 53

Candidate Starts for PP\_38:

(Start: 53 @27632 has 140 MA's), (69, 27710), (82, 27770), (106, 27902), (115, 27953), (126, 28001), (135, 28028), (140, 28058), (142, 28070),

Gene: PSonyx\_18 Start: 19173, Stop: 19559, Start Num: 56

Candidate Starts for PSonyx\_18:

(Start: 56 @19173 has 5 MA's), (66, 19239), (67, 19242), (92, 19350), (116, 19479), (124, 19518),

Gene: PSullivan\_30 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for PSullivan\_30:

(Start: 55 @23482 has 554 MA's), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: PacerPaul\_28 Start: 23213, Stop: 23659, Start Num: 55

Candidate Starts for PacerPaul\_28:

(Start: 55 @23213 has 554 MA's), (60, 23225), (76, 23327), (77, 23330), (88, 23372), (89, 23378), (133, 23606),

Gene: PackMan\_31 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for PackMan\_31:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: PainterBoy\_30 Start: 22683, Stop: 23129, Start Num: 55

Candidate Starts for PainterBoy\_30:

(Start: 55 @22683 has 554 MA's), (68, 22755), (69, 22761), (106, 22953), (115, 23004), (126, 23052), (135, 23079),

Gene: Palestino\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Palestino\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996),

Gene: Panamaxus\_28 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for Panamaxus\_28:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Papez\_30 Start: 24650, Stop: 25096, Start Num: 55

Candidate Starts for Papez\_30:

(Start: 55 @24650 has 554 MA's), (76, 24764), (77, 24767), (88, 24809), (89, 24815), (133, 25043),

Gene: Paphu\_27 Start: 22726, Stop: 23172, Start Num: 55

Candidate Starts for Paphu\_27:

(Start: 55 @22726 has 554 MA's), (60, 22738), (76, 22840), (77, 22843), (88, 22885), (89, 22891), (133, 23119),

Gene: Paraselene\_27 Start: 23154, Stop: 23600, Start Num: 55

Candidate Starts for Paraselene\_27:

(Start: 55 @23154 has 554 MA's), (76, 23268), (77, 23271), (88, 23313), (89, 23319), (133, 23547),

Gene: Pari\_29 Start: 22686, Stop: 23132, Start Num: 55  
Candidate Starts for Pari\_29:  
(Start: 55 @22686 has 554 MA's), (76, 22800), (77, 22803), (88, 22845), (89, 22851), (133, 23079),

Gene: Parliament\_27 Start: 23021, Stop: 23467, Start Num: 55  
Candidate Starts for Parliament\_27:  
(Start: 55 @23021 has 554 MA's), (60, 23033), (76, 23135), (77, 23138), (88, 23180), (89, 23186),  
(133, 23414),

Gene: Partridge\_24 Start: 18021, Stop: 18461, Start Num: 53  
Candidate Starts for Partridge\_24:  
(12, 17802), (13, 17823), (32, 17940), (35, 17973), (Start: 53 @18021 has 140 MA's), (62, 18048), (88,  
18174), (90, 18189), (96, 18216), (110, 18312), (119, 18351),

Gene: PascalRango\_29 Start: 22989, Stop: 23435, Start Num: 55  
Candidate Starts for PascalRango\_29:  
(Start: 55 @22989 has 554 MA's), (76, 23103), (77, 23106), (88, 23148), (89, 23154), (133, 23382),

Gene: PattyP\_30 Start: 23222, Stop: 23668, Start Num: 55  
Candidate Starts for PattyP\_30:  
(Start: 55 @23222 has 554 MA's), (76, 23336), (77, 23339), (88, 23381), (89, 23387), (133, 23615),

Gene: Pawn\_30 Start: 22279, Stop: 22722, Start Num: 55  
Candidate Starts for Pawn\_30:  
(Start: 55 @22279 has 554 MA's), (68, 22348), (73, 22375), (90, 22447), (108, 22567), (115, 22597),  
(126, 22645), (142, 22714),

Gene: Payneful\_28 Start: 22470, Stop: 22916, Start Num: 55  
Candidate Starts for Payneful\_28:  
(Start: 55 @22470 has 554 MA's), (60, 22482), (76, 22584), (77, 22587), (88, 22629), (89, 22635),  
(133, 22863),

Gene: PeaceMeal1\_27 Start: 19690, Stop: 20136, Start Num: 55  
Candidate Starts for PeaceMeal1\_27:  
(Start: 55 @19690 has 554 MA's), (68, 19759), (73, 19786), (90, 19858), (115, 20008), (126, 20056),

Gene: Peaches\_28 Start: 21626, Stop: 22072, Start Num: 55  
Candidate Starts for Peaches\_28:  
(Start: 55 @21626 has 554 MA's), (68, 21695), (69, 21701), (73, 21722), (79, 21743), (90, 21794),  
(108, 21914), (115, 21944), (121, 21968), (126, 21992), (140, 22049),

Gene: Pelly\_29 Start: 23641, Stop: 24087, Start Num: 55  
Candidate Starts for Pelly\_29:  
(Start: 55 @23641 has 554 MA's), (76, 23755), (77, 23758), (88, 23800), (89, 23806), (133, 24034),

Gene: Pembroke\_30 Start: 22199, Stop: 22642, Start Num: 55  
Candidate Starts for Pembroke\_30:  
(Start: 55 @22199 has 554 MA's), (68, 22268), (73, 22295), (90, 22367), (108, 22487), (115, 22517),  
(126, 22565), (142, 22634),

Gene: Penny1\_30 Start: 22198, Stop: 22641, Start Num: 55  
Candidate Starts for Penny1\_30:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: Pepe\_29 Start: 23823, Stop: 24269, Start Num: 55

Candidate Starts for Pepe\_29:

(Start: 55 @23823 has 554 MA's), (76, 23937), (77, 23940), (88, 23982), (89, 23988), (133, 24216),

Gene: Perplexer\_28 Start: 21645, Stop: 22091, Start Num: 55

Candidate Starts for Perplexer\_28:

(Start: 55 @21645 has 554 MA's), (68, 21714), (73, 21741), (78, 21759), (90, 21813), (108, 21933), (115, 21963), (119, 21978), (126, 22011),

Gene: Perseus\_30 Start: 23838, Stop: 24284, Start Num: 55

Candidate Starts for Perseus\_30:

(Start: 55 @23838 has 554 MA's), (76, 23952), (77, 23955), (88, 23997), (89, 24003), (133, 24231),

Gene: PeterPeter\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for PeterPeter\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Petersenfast\_28 Start: 22630, Stop: 23073, Start Num: 54

Candidate Starts for Petersenfast\_28:

(Start: 54 @22630 has 23 MA's), (69, 22705), (106, 22897), (108, 22918), (126, 22996), (141, 23062),

Gene: Peterson\_31 Start: 24851, Stop: 25297, Start Num: 55

Candidate Starts for Peterson\_31:

(Start: 55 @24851 has 554 MA's), (76, 24965), (77, 24968), (88, 25010), (89, 25016), (133, 25244),

Gene: PetiteSangsue\_28 Start: 21648, Stop: 22094, Start Num: 55

Candidate Starts for PetiteSangsue\_28:

(Start: 55 @21648 has 554 MA's), (68, 21717), (73, 21744), (78, 21762), (90, 21816), (108, 21936), (115, 21966), (119, 21981), (126, 22014),

Gene: Petp2012\_30 Start: 23893, Stop: 24339, Start Num: 55

Candidate Starts for Petp2012\_30:

(Start: 55 @23893 has 554 MA's), (76, 24007), (77, 24010), (88, 24052), (89, 24058), (133, 24286),

Gene: Petruchio\_29 Start: 23351, Stop: 23797, Start Num: 55

Candidate Starts for Petruchio\_29:

(Start: 55 @23351 has 554 MA's), (60, 23363), (76, 23465), (77, 23468), (88, 23510), (89, 23516), (133, 23744),

Gene: PetterN\_26 Start: 20759, Stop: 21223, Start Num: 55

Candidate Starts for PetterN\_26:

(Start: 55 @20759 has 554 MA's), (82, 20897), (128, 21137), (136, 21158), (140, 21185), (141, 21194),

Gene: Ph8s\_30 Start: 20730, Stop: 21179, Start Num: 58

Candidate Starts for Ph8s\_30:

(Start: 58 @20730 has 13 MA's), (69, 20808), (82, 20868), (106, 21000), (108, 21021), (110, 21027), (126, 21099), (140, 21156),

Gene: Phacado\_28 Start: 21626, Stop: 22072, Start Num: 55

Candidate Starts for Phacado\_28:

(Start: 55 @21626 has 554 MA's), (68, 21695), (69, 21701), (73, 21722), (79, 21743), (90, 21794), (108, 21914), (115, 21944), (121, 21968), (126, 21992), (127, 21995), (140, 22049),

Gene: Phaded\_32 Start: 23922, Stop: 24368, Start Num: 46

Candidate Starts for Phaded\_32:

(Start: 46 @23922 has 15 MA's), (69, 23997), (78, 24036), (82, 24057), (106, 24189), (115, 24240), (126, 24288), (135, 24315),

Gene: Phaeder\_31 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Phaeder\_31:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: PhailMary\_23 Start: 18310, Stop: 18750, Start Num: 53

Candidate Starts for PhailMary\_23:

(12, 18091), (13, 18112), (32, 18229), (Start: 53 @18310 has 140 MA's), (62, 18337), (88, 18463), (90, 18478), (96, 18505), (110, 18601), (119, 18640),

Gene: Phantastic\_28 Start: 21687, Stop: 22169, Start Num: 39

Candidate Starts for Phantastic\_28:

(Start: 39 @21687 has 1 MA's), (44, 21711), (Start: 55 @21726 has 554 MA's), (68, 21795), (73, 21822), (108, 22014), (110, 22020), (115, 22044), (126, 22092), (135, 22119),

Gene: Pharaoh\_29 Start: 23062, Stop: 23511, Start Num: 55

Candidate Starts for Pharaoh\_29:

(Start: 55 @23062 has 554 MA's), (59, 23068), (64, 23116), (69, 23140), (82, 23200), (106, 23332), (126, 23431), (135, 23458), (140, 23488),

Gene: Phelipe\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Phelipe\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: PherrisBueller\_29 Start: 22806, Stop: 23252, Start Num: 55

Candidate Starts for PherrisBueller\_29:

(Start: 55 @22806 has 554 MA's), (60, 22818), (76, 22920), (77, 22923), (88, 22965), (89, 22971), (133, 23199),

Gene: Phighter1804\_28 Start: 21605, Stop: 22051, Start Num: 55

Candidate Starts for Phighter1804\_28:

(Start: 55 @21605 has 554 MA's), (68, 21674), (69, 21680), (73, 21701), (79, 21722), (90, 21773), (108, 21893), (115, 21923), (121, 21947), (126, 21971), (127, 21974), (140, 22028),

Gene: Phillis\_25 Start: 20438, Stop: 20884, Start Num: 55

Candidate Starts for Phillis\_25:

(Start: 55 @20438 has 554 MA's), (66, 20501), (68, 20510), (78, 20555), (96, 20636), (110, 20735), (116, 20759), (139, 20858), (140, 20864),

Gene: PhineBark\_28 Start: 23697, Stop: 24143, Start Num: 55

Candidate Starts for PhineBark\_28:

(Start: 55 @23697 has 554 MA's), (60, 23709), (76, 23811), (77, 23814), (88, 23856), (89, 23862), (133, 24090),

Gene: PhishRPhriends\_29 Start: 21463, Stop: 21906, Start Num: 55  
Candidate Starts for PhishRPhriends\_29:  
(Start: 55 @21463 has 554 MA's), (68, 21532), (73, 21559), (90, 21631), (108, 21751), (115, 21781),  
(126, 21829), (142, 21898),

Gene: Phlei\_24 Start: 23555, Stop: 24004, Start Num: 53  
Candidate Starts for Phlei\_24:  
(Start: 53 @23555 has 140 MA's), (69, 23633), (82, 23693), (89, 23717), (106, 23825), (108, 23846),  
(126, 23924), (140, 23981), (141, 23990), (142, 23993),

Gene: Phlippers\_27 Start: 24022, Stop: 24468, Start Num: 55  
Candidate Starts for Phlippers\_27:  
(Start: 55 @24022 has 554 MA's), (76, 24136), (77, 24139), (88, 24181), (89, 24187), (133, 24415),

Gene: Phlorence\_25 Start: 21577, Stop: 22041, Start Num: 55  
Candidate Starts for Phlorence\_25:  
(Start: 55 @21577 has 554 MA's), (116, 21901), (119, 21913), (128, 21955), (141, 22012),

Gene: Phoebe\_30 Start: 22196, Stop: 22639, Start Num: 55  
Candidate Starts for Phoebe\_30:  
(Start: 55 @22196 has 554 MA's), (68, 22265), (73, 22292), (90, 22364), (108, 22484), (115, 22514),  
(126, 22562), (142, 22631),

Gene: Phonnegut\_31 Start: 23590, Stop: 24039, Start Num: 53  
Candidate Starts for Phonnegut\_31:  
(Start: 53 @23590 has 140 MA's), (69, 23671), (108, 23884), (115, 23914), (126, 23962), (140, 24019),

Gene: Phontbonne\_28 Start: 21571, Stop: 22017, Start Num: 55  
Candidate Starts for Phontbonne\_28:  
(Start: 55 @21571 has 554 MA's), (68, 21640), (69, 21646), (73, 21667), (79, 21688), (90, 21739),  
(108, 21859), (115, 21889), (121, 21913), (126, 21937), (127, 21940), (140, 21994),

Gene: Phoxy\_30 Start: 22282, Stop: 22725, Start Num: 55  
Candidate Starts for Phoxy\_30:  
(Start: 55 @22282 has 554 MA's), (68, 22351), (73, 22378), (90, 22450), (108, 22570), (115, 22600),  
(126, 22648), (142, 22717),

Gene: Phrankenstein\_24 Start: 17988, Stop: 18428, Start Num: 53  
Candidate Starts for Phrankenstein\_24:  
(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88,  
18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Phranny\_31 Start: 22271, Stop: 22714, Start Num: 55  
Candidate Starts for Phranny\_31:  
(Start: 55 @22271 has 554 MA's), (68, 22340), (73, 22367), (90, 22439), (108, 22559), (115, 22589),  
(126, 22637), (142, 22706),

Gene: PhrostyMug\_28 Start: 23000, Stop: 23446, Start Num: 55  
Candidate Starts for PhrostyMug\_28:  
(Start: 55 @23000 has 554 MA's), (76, 23114), (77, 23117), (88, 23159), (89, 23165), (133, 23393),

Gene: PickleBack\_25 Start: 21291, Stop: 21755, Start Num: 55  
Candidate Starts for PickleBack\_25:

(Start: 55 @21291 has 554 MA's), (78, 21408), (104, 21552), (128, 21669), (130, 21672), (137, 21696), (141, 21726),

Gene: PinkPlastic\_27 Start: 22740, Stop: 23186, Start Num: 55

Candidate Starts for PinkPlastic\_27:

(Start: 55 @22740 has 554 MA's), (60, 22752), (76, 22854), (77, 22857), (88, 22899), (89, 22905), (133, 23133),

Gene: Pinto\_31 Start: 23553, Stop: 23999, Start Num: 55

Candidate Starts for Pinto\_31:

(Start: 55 @23553 has 554 MA's), (76, 23667), (77, 23670), (88, 23712), (89, 23718), (133, 23946),

Gene: Pioneer\_31 Start: 23590, Stop: 24039, Start Num: 53

Candidate Starts for Pioneer\_31:

(Start: 53 @23590 has 140 MA's), (69, 23671), (108, 23884), (115, 23914), (126, 23962), (140, 24019),

Gene: Pipcraft\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Pipcraft\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Pippin\_30 Start: 23304, Stop: 23750, Start Num: 55

Candidate Starts for Pippin\_30:

(Start: 55 @23304 has 554 MA's), (76, 23418), (77, 23421), (88, 23463), (89, 23469), (133, 23697),

Gene: Piro94\_30 Start: 22461, Stop: 22907, Start Num: 57

Candidate Starts for Piro94\_30:

(4, 22230), (25, 22416), (Start: 27 @22422 has 1 MA's), (Start: 57 @22461 has 51 MA's), (69, 22536), (78, 22575), (106, 22728), (126, 22827), (135, 22854), (140, 22884),

Gene: Pistachio\_29 Start: 21306, Stop: 21749, Start Num: 55

Candidate Starts for Pistachio\_29:

(Start: 43 @21279 has 1 MA's), (Start: 55 @21306 has 554 MA's), (68, 21375), (73, 21402), (108, 21594), (115, 21624), (126, 21672), (135, 21699), (142, 21741),

Gene: Pita2\_30 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for Pita2\_30:

(Start: 55 @23482 has 554 MA's), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: Pmask\_32 Start: 21758, Stop: 22210, Start Num: 53

Candidate Starts for Pmask\_32:

(Start: 53 @21758 has 140 MA's), (64, 21815), (69, 21839), (89, 21923), (106, 22031), (115, 22082), (126, 22130), (132, 22145),

Gene: Pocahontas\_29 Start: 22274, Stop: 22717, Start Num: 55

Candidate Starts for Pocahontas\_29:

(Start: 55 @22274 has 554 MA's), (68, 22343), (73, 22370), (90, 22442), (108, 22562), (115, 22592), (126, 22640),

Gene: Polymorphads\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Polymorphads\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993),

Gene: Polyphemus\_31 Start: 21756, Stop: 22208, Start Num: 53

Candidate Starts for Polyphemus\_31:

(Start: 53 @21756 has 140 MA's), (64, 21813), (69, 21837), (89, 21921), (106, 22029), (115, 22080), (126, 22128), (132, 22143),

Gene: Pomar16\_32 Start: 21897, Stop: 22340, Start Num: 55

Candidate Starts for Pomar16\_32:

(Start: 55 @21897 has 554 MA's), (69, 21972), (82, 22032), (106, 22164), (115, 22215), (126, 22263), (140, 22320), (143, 22332),

Gene: Pons\_19 Start: 17110, Stop: 17502, Start Num: 51

Candidate Starts for Pons\_19:

(Start: 51 @17110 has 26 MA's), (61, 17131), (67, 17185), (68, 17191), (70, 17200), (74, 17221), (78, 17236), (82, 17257), (111, 17398), (113, 17407), (118, 17428),

Gene: Poompha\_27 Start: 19688, Stop: 20134, Start Num: 55

Candidate Starts for Poompha\_27:

(Start: 55 @19688 has 554 MA's), (68, 19757), (73, 19784), (90, 19856), (115, 20006), (126, 20054),

Gene: Popcicle\_29 Start: 22274, Stop: 22717, Start Num: 55

Candidate Starts for Popcicle\_29:

(Start: 55 @22274 has 554 MA's), (68, 22343), (73, 22370), (90, 22442), (108, 22562), (115, 22592), (126, 22640),

Gene: PotPie\_19 Start: 17975, Stop: 18367, Start Num: 51

Candidate Starts for PotPie\_19:

(Start: 51 @17975 has 26 MA's), (61, 17996), (67, 18050), (68, 18056), (70, 18065), (74, 18086), (78, 18101), (82, 18122), (111, 18263), (113, 18272), (118, 18293),

Gene: PotatoSplit\_31 Start: 22198, Stop: 22641, Start Num: 55

Candidate Starts for PotatoSplit\_31:

(Start: 55 @22198 has 554 MA's), (68, 22267), (73, 22294), (90, 22366), (108, 22486), (115, 22516), (126, 22564), (142, 22633),

Gene: Poushou\_20 Start: 19090, Stop: 19509, Start Num: 56

Candidate Starts for Poushou\_20:

(Start: 56 @19090 has 5 MA's), (67, 19159), (78, 19213),

Gene: Power\_29 Start: 21907, Stop: 22353, Start Num: 57

Candidate Starts for Power\_29:

(Start: 57 @21907 has 51 MA's), (69, 21982), (82, 22042), (106, 22174), (126, 22273), (135, 22300), (140, 22330),

Gene: Priamo\_32 Start: 21807, Stop: 22259, Start Num: 53

Candidate Starts for Priamo\_32:

(Start: 53 @21807 has 140 MA's), (64, 21864), (69, 21888), (89, 21972), (106, 22080), (115, 22131), (126, 22179), (132, 22194),

Gene: Prin Ashe11\_26 Start: 21436, Stop: 21900, Start Num: 55

Candidate Starts for Prin Ashe11\_26:

(Start: 55 @21436 has 554 MA's), (116, 21760), (119, 21772), (128, 21814), (140, 21862), (141, 21871),



Gene: Priya\_31 Start: 23624, Stop: 24073, Start Num: 53

Candidate Starts for Priya\_31:

(Start: 33 @23585 has 1 MA's), (Start: 53 @23624 has 140 MA's), (69, 23705), (108, 23918), (115, 23948), (126, 23996), (140, 24053),

Gene: ProMouse\_27 Start: 23445, Stop: 23891, Start Num: 55

Candidate Starts for ProMouse\_27:

(Start: 55 @23445 has 554 MA's), (76, 23559), (77, 23562), (88, 23604), (89, 23610), (133, 23838),

Gene: PsychoKiller\_19 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for PsychoKiller\_19:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: Pukovnik\_31 Start: 23478, Stop: 23930, Start Num: 46

Candidate Starts for Pukovnik\_31:

(Start: 46 @23478 has 15 MA's), (69, 23559), (106, 23751), (108, 23772), (115, 23802), (126, 23850), (135, 23877), (140, 23907),

Gene: Pumbaa\_28 Start: 21602, Stop: 22048, Start Num: 55

Candidate Starts for Pumbaa\_28:

(Start: 55 @21602 has 554 MA's), (68, 21671), (69, 21677), (73, 21698), (79, 21719), (90, 21770), (108, 21890), (115, 21920), (121, 21944), (126, 21968), (127, 21971),

Gene: Puppy\_29 Start: 21376, Stop: 21819, Start Num: 55

Candidate Starts for Puppy\_29:

(15, 21190), (Start: 43 @21349 has 1 MA's), (Start: 55 @21376 has 554 MA's), (68, 21445), (73, 21472), (108, 21664), (115, 21694), (126, 21742), (135, 21769), (142, 21811),

Gene: PurpleHaze\_30 Start: 22278, Stop: 22721, Start Num: 55

Candidate Starts for PurpleHaze\_30:

(Start: 55 @22278 has 554 MA's), (68, 22347), (73, 22374), (90, 22446), (108, 22566), (115, 22596), (126, 22644), (142, 22713),

Gene: QTRlifeCrisis\_28 Start: 23560, Stop: 24006, Start Num: 55

Candidate Starts for QTRlifeCrisis\_28:

(Start: 55 @23560 has 554 MA's), (60, 23572), (76, 23674), (77, 23677), (88, 23719), (89, 23725), (133, 23953),

Gene: Qobbit\_31 Start: 23587, Stop: 24036, Start Num: 53

Candidate Starts for Qobbit\_31:

(Start: 53 @23587 has 140 MA's), (69, 23668), (108, 23881), (115, 23911), (126, 23959), (140, 24016),

Gene: Quasar\_19 Start: 18051, Stop: 18440, Start Num: 52

Candidate Starts for Quasar\_19:

(Start: 52 @18051 has 33 MA's), (66, 18123), (67, 18126), (70, 18141), (74, 18162), (78, 18177), (82, 18198), (94, 18240), (107, 18306), (112, 18342), (113, 18348), (118, 18369), (129, 18411),

Gene: QueenB2\_29 Start: 22025, Stop: 22471, Start Num: 57

Candidate Starts for QueenB2\_29:

(Start: 57 @22025 has 51 MA's), (69, 22100), (82, 22160), (106, 22292), (126, 22391), (135, 22418), (140, 22448),

Gene: QueenBeesly\_29 Start: 21907, Stop: 22353, Start Num: 57  
Candidate Starts for QueenBeesly\_29:  
(Start: 57 @21907 has 51 MA's), (69, 21982), (82, 22042), (106, 22174), (126, 22273), (135, 22300),  
(140, 22330),

Gene: QuinnKiro\_28 Start: 22277, Stop: 22720, Start Num: 55  
Candidate Starts for QuinnKiro\_28:  
(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595),  
(126, 22643),

Gene: Quokka\_27 Start: 20882, Stop: 21325, Start Num: 55  
Candidate Starts for Quokka\_27:  
(Start: 55 @20882 has 554 MA's), (69, 20957), (82, 21017), (115, 21200), (126, 21248), (140, 21305),

Gene: RER2\_17 Start: 14860, Stop: 15300, Start Num: 53  
Candidate Starts for RER2\_17:  
(12, 14641), (13, 14662), (32, 14779), (35, 14812), (Start: 53 @14860 has 140 MA's), (62, 14887), (88,  
15013), (90, 15028), (96, 15055), (110, 15151), (119, 15190),

Gene: RGL3\_17 Start: 15019, Stop: 15459, Start Num: 53  
Candidate Starts for RGL3\_17:  
(7, 14749), (9, 14767), (10, 14782), (12, 14800), (28, 14923), (Start: 53 @15019 has 140 MA's), (62,  
15046), (88, 15172), (90, 15187), (108, 15304), (110, 15310), (119, 15349), (121, 15358), (124,  
15373),

Gene: Rachaly\_32 Start: 23623, Stop: 24069, Start Num: 52  
Candidate Starts for Rachaly\_32:  
(4, 23392), (14, 23488), (25, 23578), (Start: 27 @23584 has 1 MA's), (Start: 52 @23623 has 33 MA's),  
(69, 23698), (82, 23758), (106, 23890), (126, 23989), (135, 24016), (140, 24046),

Gene: Rahalelujah\_28 Start: 21416, Stop: 21865, Start Num: 53  
Candidate Starts for Rahalelujah\_28:  
(Start: 53 @21416 has 140 MA's), (69, 21494), (106, 21686), (115, 21737), (126, 21785),

Gene: Raid\_29 Start: 23009, Stop: 23455, Start Num: 55  
Candidate Starts for Raid\_29:  
(Start: 55 @23009 has 554 MA's), (76, 23123), (77, 23126), (88, 23168), (89, 23174), (133, 23402),

Gene: Rajelicia\_28 Start: 22719, Stop: 23165, Start Num: 55  
Candidate Starts for Rajelicia\_28:  
(Start: 55 @22719 has 554 MA's), (76, 22833), (77, 22836), (88, 22878), (89, 22884), (133, 23112),

Gene: RanchParmCat\_22 Start: 17157, Stop: 17549, Start Num: 51  
Candidate Starts for RanchParmCat\_22:  
(35, 17103), (Start: 51 @17157 has 26 MA's), (61, 17178), (70, 17247), (74, 17268), (78, 17283), (82,  
17304), (94, 17346), (113, 17454), (116, 17463), (118, 17475),

Gene: Rasputin\_24 Start: 17956, Stop: 18396, Start Num: 53  
Candidate Starts for Rasputin\_24:  
(12, 17737), (13, 17758), (32, 17875), (Start: 53 @17956 has 140 MA's), (62, 17983), (88, 18109), (90,  
18124), (96, 18151), (110, 18247), (119, 18286),

Gene: ReMo\_31 Start: 20965, Stop: 21408, Start Num: 53

Candidate Starts for ReMo\_31:

(Start: 53 @20965 has 140 MA's), (61, 20974), (68, 21034), (69, 21040), (84, 21103), (93, 21142), (115, 21283), (126, 21331),

Gene: Reba\_31 Start: 21944, Stop: 22387, Start Num: 55

Candidate Starts for Reba\_31:

(Start: 55 @21944 has 554 MA's), (68, 22013), (73, 22040), (90, 22112), (108, 22232), (115, 22262), (126, 22310), (142, 22379),

Gene: Rebeuca\_29 Start: 21787, Stop: 22233, Start Num: 55

Candidate Starts for Rebeuca\_29:

(Start: 55 @21787 has 554 MA's), (68, 21856), (73, 21883), (90, 21955), (115, 22105), (126, 22153),

Gene: RedBaron\_20 Start: 17486, Stop: 17875, Start Num: 52

Candidate Starts for RedBaron\_20:

(Start: 52 @17486 has 33 MA's), (66, 17558), (67, 17561), (70, 17576), (74, 17597), (78, 17612), (82, 17633), (94, 17675), (107, 17741), (112, 17777), (113, 17783), (118, 17804), (129, 17846),

Gene: RedRock\_32 Start: 23888, Stop: 24337, Start Num: 46

Candidate Starts for RedRock\_32:

(Start: 46 @23888 has 15 MA's), (69, 23969), (82, 24029), (89, 24053), (106, 24161), (108, 24182), (115, 24212), (126, 24260), (135, 24287), (140, 24317),

Gene: Refuge\_32 Start: 24901, Stop: 25344, Start Num: 55

Candidate Starts for Refuge\_32:

(4, 24670), (5, 24673), (11, 24727), (Start: 55 @24901 has 554 MA's), (69, 24976), (82, 25036), (106, 25168), (110, 25195), (115, 25219), (126, 25267), (135, 25294),

Gene: Relief\_28 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for Relief\_28:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994), (140, 22048),

Gene: Remus\_31 Start: 20929, Stop: 21372, Start Num: 53

Candidate Starts for Remus\_31:

(Start: 53 @20929 has 140 MA's), (61, 20938), (68, 20998), (69, 21004), (84, 21067), (93, 21106), (115, 21247), (126, 21295),

Gene: ResDef\_29 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for ResDef\_29:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Retro23\_29 Start: 22115, Stop: 22561, Start Num: 57

Candidate Starts for Retro23\_29:

(Start: 57 @22115 has 51 MA's), (69, 22190), (79, 22232), (82, 22250), (106, 22382), (126, 22481), (135, 22508), (140, 22538),

Gene: RexFury\_24 Start: 18019, Stop: 18459, Start Num: 53

Candidate Starts for RexFury\_24:

(12, 17800), (13, 17821), (32, 17938), (35, 17971), (Start: 53 @18019 has 140 MA's), (62, 18046), (88, 18172), (90, 18187), (96, 18214), (110, 18310), (119, 18349),

Gene: Rhodalysa\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Rhodalysa\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: RhynO\_29 Start: 21744, Stop: 22190, Start Num: 55

Candidate Starts for RhynO\_29:

(Start: 55 @21744 has 554 MA's), (68, 21813), (73, 21840), (90, 21912), (115, 22062), (126, 22110),

Gene: Rhynn\_28 Start: 23009, Stop: 23455, Start Num: 55

Candidate Starts for Rhynn\_28:

(Start: 55 @23009 has 554 MA's), (76, 23123), (77, 23126), (88, 23168), (89, 23174), (133, 23402),

Gene: RidgeCB\_28 Start: 22784, Stop: 23230, Start Num: 55

Candidate Starts for RidgeCB\_28:

(Start: 55 @22784 has 554 MA's), (60, 22796), (76, 22898), (77, 22901), (88, 22943), (89, 22949), (133, 23177),

Gene: Rifter\_32 Start: 21750, Stop: 22202, Start Num: 53

Candidate Starts for Rifter\_32:

(Start: 53 @21750 has 140 MA's), (64, 21807), (69, 21831), (89, 21915), (106, 22023), (115, 22074), (126, 22122), (132, 22137),

Gene: Ringer\_28 Start: 23661, Stop: 24107, Start Num: 55

Candidate Starts for Ringer\_28:

(Start: 55 @23661 has 554 MA's), (76, 23775), (77, 23778), (88, 23820), (89, 23826), (133, 24054),

Gene: Roary\_25 Start: 20429, Stop: 20875, Start Num: 55

Candidate Starts for Roary\_25:

(Start: 55 @20429 has 554 MA's), (66, 20492), (68, 20501), (78, 20546), (96, 20627), (110, 20726), (116, 20750), (139, 20849), (140, 20855),

Gene: Rockstar\_28 Start: 21690, Stop: 22133, Start Num: 55

Candidate Starts for Rockstar\_28:

(15, 21504), (Start: 43 @21663 has 1 MA's), (Start: 55 @21690 has 554 MA's), (68, 21759), (73, 21786), (108, 21978), (110, 21984), (115, 22008), (126, 22056), (142, 22125),

Gene: Rohr\_29 Start: 23206, Stop: 23652, Start Num: 55

Candidate Starts for Rohr\_29:

(Start: 55 @23206 has 554 MA's), (76, 23320), (77, 23323), (88, 23365), (89, 23371), (133, 23599),

Gene: Roksolana\_32 Start: 21778, Stop: 22230, Start Num: 53

Candidate Starts for Roksolana\_32:

(Start: 53 @21778 has 140 MA's), (64, 21835), (69, 21859), (89, 21943), (106, 22051), (115, 22102), (126, 22150), (132, 22165),

Gene: Romney\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Romney\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Ronaldo\_57 Start: 30613, Stop: 31011, Start Num: 47

Candidate Starts for Ronaldo\_57:

(Start: 47 @30613 has 11 MA's), (59, 30634), (67, 30694), (68, 30700), (72, 30724), (78, 30745), (80, 30751), (82, 30766), (97, 30835), (99, 30856), (103, 30892), (117, 30955), (118, 30964), (120, 30967),

Gene: Roosevelt\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Roosevelt\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Rosa24\_27 Start: 21602, Stop: 22048, Start Num: 55

Candidate Starts for Rosa24\_27:

(Start: 55 @21602 has 554 MA's), (68, 21671), (69, 21677), (73, 21698), (79, 21719), (90, 21770), (108, 21890), (115, 21920), (121, 21944), (126, 21968), (127, 21971), (140, 22025),

Gene: Rosalind\_31 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for Rosalind\_31:

(Start: 53 @21087 has 140 MA's), (61, 21096), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: Rowdy\_32 Start: 21655, Stop: 22101, Start Num: 55

Candidate Starts for Rowdy\_32:

(Start: 55 @21655 has 554 MA's), (68, 21724), (73, 21751), (90, 21823), (115, 21973), (126, 22021),

Gene: Rubeus\_29 Start: 23044, Stop: 23490, Start Num: 55

Candidate Starts for Rubeus\_29:

(Start: 55 @23044 has 554 MA's), (76, 23158), (77, 23161), (88, 23203), (89, 23209), (133, 23437),

Gene: Rufus\_29 Start: 23346, Stop: 23792, Start Num: 55

Candidate Starts for Rufus\_29:

(Start: 55 @23346 has 554 MA's), (60, 23358), (76, 23460), (77, 23463), (88, 23505), (89, 23511), (133, 23739),

Gene: Ruin\_28 Start: 21623, Stop: 22069, Start Num: 55

Candidate Starts for Ruin\_28:

(Start: 55 @21623 has 554 MA's), (68, 21692), (69, 21698), (73, 21719), (79, 21740), (90, 21791), (108, 21911), (115, 21941), (121, 21965), (126, 21989), (127, 21992), (140, 22046),

Gene: Rummer\_30 Start: 22282, Stop: 22725, Start Num: 55

Candidate Starts for Rummer\_30:

(Start: 55 @22282 has 554 MA's), (68, 22351), (73, 22378), (90, 22450), (108, 22570), (115, 22600), (126, 22648), (142, 22717),

Gene: Ruotula\_27 Start: 23550, Stop: 23996, Start Num: 55

Candidate Starts for Ruotula\_27:

(Start: 55 @23550 has 554 MA's), (60, 23562), (76, 23664), (77, 23667), (88, 23709), (89, 23715), (133, 23943),

Gene: Rutherferd\_30 Start: 23615, Stop: 24061, Start Num: 55

Candidate Starts for Rutherferd\_30:

(Start: 55 @23615 has 554 MA's), (60, 23627), (76, 23729), (77, 23732), (88, 23774), (89, 23780), (133, 24008),

Gene: RyeScarlet\_32 Start: 23561, Stop: 24010, Start Num: 53

Candidate Starts for RyeScarlet\_32:

(Start: 53 @23561 has 140 MA's), (69, 23642), (108, 23855), (115, 23885), (126, 23933), (140, 23990),

Gene: STLscum\_29 Start: 23753, Stop: 24199, Start Num: 55

Candidate Starts for STLscum\_29:

(Start: 55 @23753 has 554 MA's), (60, 23765), (76, 23867), (77, 23870), (88, 23912), (89, 23918), (133, 24146),

Gene: Sabertooth\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Sabertooth\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Sabia\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for Sabia\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: Sabinator\_30 Start: 22196, Stop: 22639, Start Num: 55

Candidate Starts for Sabinator\_30:

(Start: 55 @22196 has 554 MA's), (68, 22265), (73, 22292), (90, 22364), (108, 22484), (115, 22514), (126, 22562), (142, 22631),

Gene: Sachima\_29 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Sachima\_29:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Sagefire\_29 Start: 23786, Stop: 24232, Start Num: 55

Candidate Starts for Sagefire\_29:

(Start: 55 @23786 has 554 MA's), (76, 23900), (77, 23903), (88, 23945), (89, 23951), (133, 24179),

Gene: Saintus\_25 Start: 20444, Stop: 20890, Start Num: 55

Candidate Starts for Saintus\_25:

(Start: 55 @20444 has 554 MA's), (66, 20507), (68, 20516), (76, 20555), (78, 20561), (96, 20642), (110, 20741), (116, 20765), (139, 20864), (140, 20870),

Gene: Salz\_29 Start: 22624, Stop: 23067, Start Num: 54

Candidate Starts for Salz\_29:

(Start: 54 @22624 has 23 MA's), (69, 22699), (106, 22891), (108, 22912), (126, 22990), (141, 23056),

Gene: Sandaddy\_27 Start: 22899, Stop: 23345, Start Num: 55

Candidate Starts for Sandaddy\_27:

(Start: 55 @22899 has 554 MA's), (76, 23013), (77, 23016), (88, 23058), (89, 23064), (133, 23292),

Gene: Sanya\_27 Start: 23583, Stop: 24029, Start Num: 55

Candidate Starts for Sanya\_27:

(Start: 55 @23583 has 554 MA's), (76, 23697), (77, 23700), (88, 23742), (89, 23748), (133, 23976),

Gene: SarFire\_28 Start: 23061, Stop: 23507, Start Num: 55

Candidate Starts for SarFire\_28:

(Start: 55 @23061 has 554 MA's), (76, 23175), (77, 23178), (88, 23220), (89, 23226), (133, 23454),

Gene: SaturnRing\_28 Start: 21759, Stop: 22202, Start Num: 55

Candidate Starts for SaturnRing\_28:

(Start: 43 @21732 has 1 MA's), (Start: 55 @21759 has 554 MA's), (68, 21828), (73, 21855), (108, 22047), (115, 22077), (126, 22125), (135, 22152), (142, 22194),

Gene: Scamp\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Scamp\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Scherzo\_31 Start: 23590, Stop: 24039, Start Num: 53

Candidate Starts for Scherzo\_31:

(Start: 53 @23590 has 140 MA's), (69, 23671), (108, 23884), (115, 23914), (126, 23962), (140, 24019),

Gene: Scorpio\_26 Start: 20762, Stop: 21226, Start Num: 55

Candidate Starts for Scorpio\_26:

(Start: 55 @20762 has 554 MA's), (128, 21140), (136, 21161), (140, 21188), (141, 21197),

Gene: Scout\_28 Start: 21063, Stop: 21506, Start Num: 55

Candidate Starts for Scout\_28:

(15, 20877), (Start: 43 @21036 has 1 MA's), (Start: 55 @21063 has 554 MA's), (68, 21132), (73, 21159), (108, 21351), (110, 21357), (115, 21381), (126, 21429), (142, 21498),

Gene: Scowl\_29 Start: 23643, Stop: 24089, Start Num: 55

Candidate Starts for Scowl\_29:

(Start: 55 @23643 has 554 MA's), (76, 23757), (77, 23760), (88, 23802), (89, 23808), (133, 24036),

Gene: Seabiscuit\_30 Start: 22967, Stop: 23413, Start Num: 55

Candidate Starts for Seabiscuit\_30:

(Start: 55 @22967 has 554 MA's), (60, 22979), (76, 23081), (77, 23084), (88, 23126), (89, 23132), (133, 23360),

Gene: Seanderson\_29 Start: 23441, Stop: 23887, Start Num: 55

Candidate Starts for Seanderson\_29:

(Start: 55 @23441 has 554 MA's), (76, 23555), (77, 23558), (88, 23600), (89, 23606), (133, 23834),

Gene: SemperFi\_31 Start: 22324, Stop: 22770, Start Num: 57

Candidate Starts for SemperFi\_31:

(Start: 57 @22324 has 51 MA's), (69, 22399), (82, 22459), (106, 22591), (126, 22690), (135, 22717), (140, 22747),

Gene: SenorClean\_27 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for SenorClean\_27:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Serenity\_28 Start: 20965, Stop: 21450, Start Num: 27

Candidate Starts for Serenity\_28:

(Start: 27 @20965 has 1 MA's), (Start: 55 @21007 has 554 MA's), (69, 21082), (78, 21121), (82, 21142), (106, 21274), (115, 21325), (126, 21373), (140, 21430),

Gene: Severus\_27 Start: 19688, Stop: 20134, Start Num: 55

Candidate Starts for Severus\_27:

(Start: 55 @19688 has 554 MA's), (68, 19757), (73, 19784), (90, 19856), (115, 20006), (126, 20054),

Gene: Shaka\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Shaka\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Sham4\_29 Start: 22630, Stop: 23073, Start Num: 54

Candidate Starts for Sham4\_29:

(Start: 54 @22630 has 23 MA's), (69, 22705), (106, 22897), (108, 22918), (126, 22996), (141, 23062),

Gene: Shapes\_32 Start: 21655, Stop: 22101, Start Num: 55

Candidate Starts for Shapes\_32:

(Start: 55 @21655 has 554 MA's), (68, 21724), (73, 21751), (90, 21823), (115, 21973), (126, 22021),

Gene: ShayRa\_32 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for ShayRa\_32:

(Start: 53 @21087 has 140 MA's), (61, 21096), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: SheaKeira\_29 Start: 21534, Stop: 21983, Start Num: 53

Candidate Starts for SheaKeira\_29:

(Start: 53 @21534 has 140 MA's), (69, 21612), (106, 21804), (108, 21825), (115, 21855), (126, 21903),

Gene: SheckWes\_18 Start: 17110, Stop: 17502, Start Num: 51

Candidate Starts for SheckWes\_18:

(Start: 51 @17110 has 26 MA's), (61, 17131), (67, 17185), (68, 17191), (70, 17200), (74, 17221), (78, 17236), (82, 17257), (111, 17398), (113, 17407), (118, 17428),

Gene: Sheen\_30 Start: 24798, Stop: 25265, Start Num: 51

Candidate Starts for Sheen\_30:

(Start: 51 @24798 has 26 MA's), (62, 24840), (69, 24888), (73, 24909), (82, 24948), (90, 24981), (91, 24984), (138, 25224),

Gene: SheldonCooper\_29 Start: 21942, Stop: 22388, Start Num: 55

Candidate Starts for SheldonCooper\_29:

(Start: 55 @21942 has 554 MA's), (68, 22011), (69, 22017), (73, 22038), (79, 22059), (90, 22110), (108, 22230), (115, 22260), (117, 22266), (121, 22284), (126, 22308), (127, 22311),

Gene: ShortQueendom\_27 Start: 22881, Stop: 23327, Start Num: 55

Candidate Starts for ShortQueendom\_27:

(Start: 55 @22881 has 554 MA's), (76, 22995), (77, 22998), (88, 23040), (89, 23046), (133, 23274),

Gene: Shuman\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Shuman\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Shygu2\_28 Start: 21639, Stop: 22085, Start Num: 55

Candidate Starts for Shygu2\_28:

(Start: 55 @21639 has 554 MA's), (68, 21708), (73, 21735), (78, 21753), (90, 21807), (108, 21927), (115, 21957), (119, 21972), (126, 22005),

Gene: Sibs6\_30 Start: 23526, Stop: 23972, Start Num: 55



Candidate Starts for Sibs6\_30:

(Start: 55 @23526 has 554 MA's), (76, 23640), (77, 23643), (88, 23685), (89, 23691), (133, 23919),

Gene: SilverChicken\_20 Start: 15408, Stop: 15773, Start Num: 58

Candidate Starts for SilverChicken\_20:

(29, 15300), (38, 15354), (Start: 58 @15408 has 13 MA's), (65, 15468), (67, 15474), (70, 15489), (72, 15504), (74, 15510), (80, 15531), (81, 15534), (107, 15651), (114, 15693), (122, 15726),

Gene: SketchMex\_18 Start: 17088, Stop: 17486, Start Num: 47

Candidate Starts for SketchMex\_18:

(Start: 47 @17088 has 11 MA's), (Start: 52 @17097 has 33 MA's), (66, 17169), (67, 17172), (70, 17187), (74, 17208), (78, 17223), (80, 17229), (86, 17253), (107, 17352), (113, 17394), (118, 17415), (129, 17457),

Gene: SkiPole\_30 Start: 23265, Stop: 23711, Start Num: 55

Candidate Starts for SkiPole\_30:

(Start: 55 @23265 has 554 MA's), (76, 23379), (77, 23382), (88, 23424), (89, 23430), (133, 23658),

Gene: Skipitt\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for Skipitt\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Sknot\_30 Start: 22003, Stop: 22449, Start Num: 57

Candidate Starts for Sknot\_30:

(4, 21772), (25, 21958), (Start: 27 @21964 has 1 MA's), (Start: 57 @22003 has 51 MA's), (69, 22078), (78, 22117), (106, 22270), (126, 22369), (135, 22396), (140, 22426),

Gene: Slagathor\_29 Start: 22926, Stop: 23372, Start Num: 55

Candidate Starts for Slagathor\_29:

(Start: 55 @22926 has 554 MA's), (76, 23040), (77, 23043), (88, 23085), (89, 23091), (133, 23319),

Gene: Smairt\_29 Start: 23701, Stop: 24147, Start Num: 55

Candidate Starts for Smairt\_29:

(Start: 55 @23701 has 554 MA's), (76, 23815), (77, 23818), (88, 23860), (89, 23866), (133, 24094),

Gene: Smeadley\_25 Start: 20462, Stop: 20908, Start Num: 55

Candidate Starts for Smeadley\_25:

(Start: 55 @20462 has 554 MA's), (66, 20525), (68, 20534), (73, 20561), (76, 20573), (78, 20579), (96, 20660), (110, 20759), (116, 20783), (139, 20882), (140, 20888),

Gene: Smeagan\_31 Start: 22481, Stop: 22927, Start Num: 57

Candidate Starts for Smeagan\_31:

(2, 22169), (6, 22259), (Start: 27 @22442 has 1 MA's), (Start: 57 @22481 has 51 MA's), (69, 22556), (82, 22616), (106, 22748), (126, 22847), (135, 22874),

Gene: Smeagol\_30 Start: 24280, Stop: 24726, Start Num: 55

Candidate Starts for Smeagol\_30:

(Start: 55 @24280 has 554 MA's), (76, 24394), (77, 24397), (88, 24439), (89, 24445), (133, 24673),

Gene: SmellyB\_32 Start: 21764, Stop: 22216, Start Num: 53

Candidate Starts for SmellyB\_32:

(Start: 53 @21764 has 140 MA's), (64, 21821), (69, 21845), (89, 21929), (106, 22037), (115, 22088), (126, 22136), (132, 22151),

Gene: SnapTap\_29 Start: 21967, Stop: 22413, Start Num: 57

Candidate Starts for SnapTap\_29:

(Start: 57 @21967 has 51 MA's), (69, 22042), (106, 22234), (126, 22333), (135, 22360), (140, 22390),

Gene: Snape\_29 Start: 22630, Stop: 23073, Start Num: 54

Candidate Starts for Snape\_29:

(Start: 54 @22630 has 23 MA's), (69, 22705), (106, 22897), (108, 22918), (126, 22996), (141, 23062),

Gene: Snazzy\_27 Start: 22887, Stop: 23333, Start Num: 55

Candidate Starts for Snazzy\_27:

(Start: 55 @22887 has 554 MA's), (60, 22899), (76, 23001), (77, 23004), (88, 23046), (89, 23052), (133, 23280),

Gene: Snickers\_30 Start: 22172, Stop: 22615, Start Num: 55

Candidate Starts for Snickers\_30:

(Start: 55 @22172 has 554 MA's), (68, 22241), (73, 22268), (90, 22340), (108, 22460), (115, 22490), (126, 22538), (142, 22607),

Gene: SoYo\_30 Start: 22109, Stop: 22552, Start Num: 55

Candidate Starts for SoYo\_30:

(Start: 55 @22109 has 554 MA's), (68, 22178), (73, 22205), (90, 22277), (108, 22397), (115, 22427), (126, 22475), (142, 22544),

Gene: Socotra\_20 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Socotra\_20:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: SoilDragon\_30 Start: 21886, Stop: 22329, Start Num: 55

Candidate Starts for SoilDragon\_30:

(Start: 55 @21886 has 554 MA's), (68, 21955), (73, 21982), (90, 22054), (108, 22174), (115, 22204), (126, 22252), (142, 22321),

Gene: Solon\_28 Start: 23552, Stop: 23998, Start Num: 55

Candidate Starts for Solon\_28:

(Start: 55 @23552 has 554 MA's), (60, 23564), (76, 23666), (77, 23669), (88, 23711), (89, 23717), (133, 23945),

Gene: Sopespian\_19 Start: 17443, Stop: 17832, Start Num: 52

Candidate Starts for Sopespian\_19:

(Start: 52 @17443 has 33 MA's), (66, 17515), (67, 17518), (70, 17533), (74, 17554), (78, 17569), (82, 17590), (94, 17632), (107, 17698), (112, 17734), (113, 17740), (118, 17761), (129, 17803),

Gene: SororFago\_29 Start: 21258, Stop: 21707, Start Num: 53

Candidate Starts for SororFago\_29:

(Start: 53 @21258 has 140 MA's), (69, 21336), (106, 21528), (115, 21579), (126, 21627), (135, 21654), (140, 21684),

Gene: Sorpresa\_28 Start: 22899, Stop: 23345, Start Num: 55

Candidate Starts for Sorpresa\_28:

(Start: 55 @22899 has 554 MA's), (76, 23013), (77, 23016), (88, 23058), (89, 23064), (133, 23292),

Gene: Soshari\_32 Start: 22281, Stop: 22724, Start Num: 55

Candidate Starts for Soshari\_32:

(Start: 55 @22281 has 554 MA's), (68, 22350), (73, 22377), (90, 22449), (108, 22569), (115, 22599), (126, 22647), (142, 22716),

Gene: Soul22\_20 Start: 15406, Stop: 15771, Start Num: 58

Candidate Starts for Soul22\_20:

(29, 15298), (38, 15352), (Start: 58 @15406 has 13 MA's), (65, 15466), (67, 15472), (70, 15487), (72, 15502), (74, 15508), (80, 15529), (81, 15532), (107, 15649), (114, 15691), (122, 15724),

Gene: Soups\_31 Start: 21087, Stop: 21530, Start Num: 53

Candidate Starts for Soups\_31:

(Start: 53 @21087 has 140 MA's), (61, 21096), (68, 21156), (69, 21162), (84, 21225), (93, 21264), (115, 21405), (126, 21453),

Gene: Sparxx\_28 Start: 21625, Stop: 22071, Start Num: 55

Candidate Starts for Sparxx\_28:

(Start: 55 @21625 has 554 MA's), (68, 21694), (69, 21700), (73, 21721), (79, 21742), (90, 21793), (108, 21913), (115, 21943), (121, 21967), (126, 21991), (127, 21994), (140, 22048),

Gene: Spike509\_30 Start: 22282, Stop: 22725, Start Num: 55

Candidate Starts for Spike509\_30:

(Start: 55 @22282 has 554 MA's), (68, 22351), (73, 22378), (90, 22450), (108, 22570), (115, 22600), (126, 22648), (142, 22717),

Gene: SpikeBT\_30 Start: 23857, Stop: 24303, Start Num: 55

Candidate Starts for SpikeBT\_30:

(Start: 55 @23857 has 554 MA's), (76, 23971), (77, 23974), (88, 24016), (89, 24022), (133, 24250),

Gene: Spino\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Spino\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (140, 22050),

Gene: Spouty\_31 Start: 23623, Stop: 24072, Start Num: 53

Candidate Starts for Spouty\_31:

(Start: 33 @23584 has 1 MA's), (Start: 53 @23623 has 140 MA's), (69, 23704), (108, 23917), (115, 23947), (126, 23995), (140, 24052),

Gene: Squee\_29 Start: 23806, Stop: 24252, Start Num: 55

Candidate Starts for Squee\_29:

(Start: 55 @23806 has 554 MA's), (76, 23920), (77, 23923), (88, 23965), (89, 23971), (133, 24199),

Gene: StCroix\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for StCroix\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Stagni\_30 Start: 22200, Stop: 22643, Start Num: 55

Candidate Starts for Stagni\_30:

(Start: 55 @22200 has 554 MA's), (68, 22269), (73, 22296), (90, 22368), (108, 22488), (115, 22518), (126, 22566), (142, 22635),

Gene: StarStuff\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for StarStuff\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: Starburst\_20 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Starburst\_20:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: Stasia\_29 Start: 22068, Stop: 22514, Start Num: 55

Candidate Starts for Stasia\_29:

(Start: 55 @22068 has 554 MA's), (68, 22137), (69, 22143), (73, 22164), (90, 22236), (108, 22356), (115, 22386), (121, 22410), (126, 22434), (135, 22461),

Gene: SteamedHams\_21 Start: 17115, Stop: 17504, Start Num: 52

Candidate Starts for SteamedHams\_21:

(Start: 47 @17106 has 11 MA's), (Start: 52 @17115 has 33 MA's), (66, 17187), (67, 17190), (70, 17205), (74, 17226), (81, 17250), (107, 17370), (113, 17412), (118, 17433), (129, 17475),

Gene: Steamy\_30 Start: 23043, Stop: 23489, Start Num: 55

Candidate Starts for Steamy\_30:

(Start: 55 @23043 has 554 MA's), (64, 23097), (69, 23121), (71, 23133), (82, 23181), (106, 23313), (126, 23412),

Gene: StepMih\_30 Start: 22191, Stop: 22634, Start Num: 55

Candidate Starts for StepMih\_30:

(Start: 55 @22191 has 554 MA's), (68, 22260), (73, 22287), (90, 22359), (108, 22479), (115, 22509), (126, 22557), (142, 22626),

Gene: Stephig9\_25 Start: 20443, Stop: 20889, Start Num: 55

Candidate Starts for Stephig9\_25:

(Start: 55 @20443 has 554 MA's), (66, 20506), (68, 20515), (78, 20560), (96, 20641), (110, 20740), (116, 20764), (139, 20863), (140, 20869),

Gene: StewieG\_27 Start: 22742, Stop: 23188, Start Num: 55

Candidate Starts for StewieG\_27:

(Start: 55 @22742 has 554 MA's), (76, 22856), (77, 22859), (88, 22901), (89, 22907), (133, 23135),

Gene: Stink\_29 Start: 21928, Stop: 22374, Start Num: 55

Candidate Starts for Stink\_29:

(Start: 55 @21928 has 554 MA's), (68, 21997), (73, 22024), (108, 22216), (115, 22246), (119, 22261), (126, 22294),

Gene: StrongArm\_27 Start: 23941, Stop: 24387, Start Num: 55

Candidate Starts for StrongArm\_27:

(Start: 55 @23941 has 554 MA's), (60, 23953), (76, 24055), (77, 24058), (88, 24100), (89, 24106), (133, 24334),

Gene: Strosahl\_31 Start: 20929, Stop: 21372, Start Num: 53

Candidate Starts for Strosahl\_31:

(Start: 53 @20929 has 140 MA's), (61, 20938), (68, 20998), (69, 21004), (84, 21067), (93, 21106), (115, 21247), (126, 21295),

Gene: SummitAcademy\_18 Start: 17190, Stop: 17582, Start Num: 51

Candidate Starts for SummitAcademy\_18:

(Start: 51 @17190 has 26 MA's), (61, 17211), (67, 17265), (68, 17271), (70, 17280), (74, 17301), (78, 17316), (82, 17337), (111, 17478), (113, 17487), (118, 17508),

Gene: Sumter\_27 Start: 22490, Stop: 22936, Start Num: 55

Candidate Starts for Sumter\_27:

(Start: 55 @22490 has 554 MA's), (76, 22604), (77, 22607), (88, 22649), (89, 22655), (133, 22883),

Gene: Sunhee\_28 Start: 21262, Stop: 21711, Start Num: 53

Candidate Starts for Sunhee\_28:

(Start: 53 @21262 has 140 MA's), (78, 21379), (106, 21532), (115, 21583), (126, 21631), (135, 21658), (140, 21688),

Gene: Sunshine924\_29 Start: 22771, Stop: 23217, Start Num: 55

Candidate Starts for Sunshine924\_29:

(Start: 55 @22771 has 554 MA's), (76, 22885), (77, 22888), (88, 22930), (89, 22936), (133, 23164),

Gene: SuperAwesome\_32 Start: 21757, Stop: 22209, Start Num: 53

Candidate Starts for SuperAwesome\_32:

(Start: 53 @21757 has 140 MA's), (64, 21814), (69, 21838), (89, 21922), (106, 22030), (115, 22081), (126, 22129), (132, 22144),

Gene: SuperCallie99\_32 Start: 21756, Stop: 22208, Start Num: 53

Candidate Starts for SuperCallie99\_32:

(Start: 53 @21756 has 140 MA's), (64, 21813), (69, 21837), (89, 21921), (106, 22029), (115, 22080), (126, 22128), (132, 22143),

Gene: Superchunk\_28 Start: 20646, Stop: 21095, Start Num: 58

Candidate Starts for Superchunk\_28:

(Start: 58 @20646 has 13 MA's), (69, 20724), (82, 20784), (106, 20916), (108, 20937), (110, 20943), (126, 21015), (140, 21072),

Gene: Survivors\_21 Start: 18272, Stop: 18658, Start Num: 52

Candidate Starts for Survivors\_21:

(Start: 52 @18272 has 33 MA's), (66, 18344), (70, 18362), (74, 18383), (80, 18404), (81, 18407), (86, 18428), (99, 18482), (105, 18521), (109, 18548), (113, 18569), (118, 18590),

Gene: Swann\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for Swann\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: SweatNTears\_21 Start: 17608, Stop: 17997, Start Num: 52

Candidate Starts for SweatNTears\_21:

(Start: 47 @17599 has 11 MA's), (Start: 52 @17608 has 33 MA's), (66, 17680), (67, 17683), (70, 17698), (74, 17719), (78, 17734), (80, 17740), (86, 17764), (113, 17905), (118, 17926), (129, 17968),

Gene: SweetiePie\_29 Start: 21967, Stop: 22413, Start Num: 57

Candidate Starts for SweetiePie\_29:

(Start: 57 @21967 has 51 MA's), (69, 22042), (106, 22234), (126, 22333), (135, 22360), (140, 22390),

Gene: SwirlSquare\_31 Start: 20806, Stop: 21249, Start Num: 55

Candidate Starts for SwirlSquare\_31:

(Start: 55 @20806 has 554 MA's), (69, 20881), (82, 20941), (115, 21124), (126, 21172), (140, 21229),

Gene: Swirley\_25 Start: 21444, Stop: 21908, Start Num: 55

Candidate Starts for Swirley\_25:

(Start: 55 @21444 has 554 MA's), (116, 21768), (119, 21780), (128, 21822), (140, 21870), (141, 21879),

Gene: SwissCheese\_30 Start: 23669, Stop: 24115, Start Num: 55

Candidate Starts for SwissCheese\_30:

(37, 23621), (Start: 55 @23669 has 554 MA's), (76, 23783), (77, 23786), (88, 23828), (89, 23834), (133, 24062),

Gene: Switzer\_29 Start: 23073, Stop: 23519, Start Num: 55

Candidate Starts for Switzer\_29:

(Start: 55 @23073 has 554 MA's), (60, 23085), (76, 23187), (77, 23190), (88, 23232), (89, 23238), (133, 23466),

Gene: Switzerland\_31 Start: 21080, Stop: 21523, Start Num: 53

Candidate Starts for Switzerland\_31:

(Start: 53 @21080 has 140 MA's), (61, 21089), (68, 21149), (69, 21155), (84, 21218), (93, 21257), (115, 21398), (126, 21446),

Gene: Swole\_30 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for Swole\_30:

(Start: 55 @23482 has 554 MA's), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: SydNat\_25 Start: 21729, Stop: 22193, Start Num: 55

Candidate Starts for SydNat\_25:

(Start: 55 @21729 has 554 MA's), (78, 21846), (104, 21990), (128, 22107), (130, 22110), (140, 22155), (141, 22164),

Gene: TNguyen7\_28 Start: 21727, Stop: 22170, Start Num: 55

Candidate Starts for TNguyen7\_28:

(15, 21541), (Start: 43 @21700 has 1 MA's), (Start: 55 @21727 has 554 MA's), (68, 21796), (73, 21823), (108, 22015), (115, 22045), (126, 22093), (135, 22120), (142, 22162),

Gene: TWAMP\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for TWAMP\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Takoda\_24 Start: 17948, Stop: 18388, Start Num: 53

Candidate Starts for Takoda\_24:

(12, 17729), (13, 17750), (32, 17867), (35, 17900), (Start: 53 @17948 has 140 MA's), (62, 17975), (88, 18101), (90, 18116), (96, 18143), (110, 18239), (119, 18278), (136, 18341),

Gene: Taquarus\_28 Start: 21630, Stop: 22076, Start Num: 55

Candidate Starts for Taquarus\_28:

(Start: 55 @21630 has 554 MA's), (68, 21699), (69, 21705), (73, 21726), (79, 21747), (90, 21798), (108, 21918), (115, 21948), (121, 21972), (126, 21996), (127, 21999), (140, 22053),

Gene: Target\_31 Start: 24456, Stop: 24902, Start Num: 55

Candidate Starts for Target\_31:

(Start: 55 @24456 has 554 MA's), (76, 24570), (77, 24573), (88, 24615), (89, 24621), (133, 24849),

Gene: TarsusIV\_29 Start: 22058, Stop: 22504, Start Num: 57

Candidate Starts for TarsusIV\_29:

(Start: 57 @22058 has 51 MA's), (69, 22133), (79, 22175), (82, 22193), (106, 22325), (108, 22346), (126, 22424), (135, 22451), (140, 22481),

Gene: Tarynearal\_24 Start: 21466, Stop: 21930, Start Num: 55

Candidate Starts for Tarynearal\_24:

(Start: 55 @21466 has 554 MA's), (116, 21790), (119, 21802), (128, 21844), (140, 21892), (141, 21901),

Gene: Tasp14\_29 Start: 23186, Stop: 23632, Start Num: 55

Candidate Starts for Tasp14\_29:

(Start: 55 @23186 has 554 MA's), (60, 23198), (76, 23300), (77, 23303), (88, 23345), (89, 23351), (133, 23579),

Gene: Taurus\_30 Start: 22197, Stop: 22640, Start Num: 55

Candidate Starts for Taurus\_30:

(Start: 55 @22197 has 554 MA's), (68, 22266), (73, 22293), (90, 22365), (108, 22485), (115, 22515), (126, 22563), (142, 22632),

Gene: Temprado\_33 Start: 21765, Stop: 22217, Start Num: 53

Candidate Starts for Temprado\_33:

(Start: 53 @21765 has 140 MA's), (64, 21822), (69, 21846), (89, 21930), (106, 22038), (115, 22089), (126, 22137), (132, 22152),

Gene: Teodoridan\_26 Start: 22307, Stop: 22753, Start Num: 55

Candidate Starts for Teodoridan\_26:

(Start: 55 @22307 has 554 MA's), (60, 22319), (76, 22421), (77, 22424), (88, 22466), (89, 22472), (133, 22700),

Gene: Terrific\_33 Start: 22457, Stop: 22903, Start Num: 57

Candidate Starts for Terrific\_33:

(4, 22226), (25, 22412), (Start: 27 @22418 has 1 MA's), (Start: 57 @22457 has 51 MA's), (69, 22532), (78, 22571), (106, 22724), (108, 22745), (126, 22823), (135, 22850), (140, 22880),

Gene: Texage\_28 Start: 22278, Stop: 22721, Start Num: 55

Candidate Starts for Texage\_28:

(Start: 55 @22278 has 554 MA's), (68, 22347), (73, 22374), (90, 22446), (108, 22566), (115, 22596), (126, 22644),

Gene: Thanksgivukkah\_28 Start: 21631, Stop: 22077, Start Num: 55

Candidate Starts for Thanksgivukkah\_28:

(Start: 55 @21631 has 554 MA's), (68, 21700), (69, 21706), (73, 21727), (79, 21748), (90, 21799), (108, 21919), (115, 21949), (121, 21973), (126, 21997), (127, 22000), (140, 22054),

Gene: Theia\_23 Start: 21484, Stop: 21948, Start Num: 55

Candidate Starts for Theia\_23:

(Start: 55 @21484 has 554 MA's), (116, 21808), (119, 21820), (128, 21862), (136, 21883), (141, 21919),

Gene: TheloniousMonk\_30 Start: 24600, Stop: 25046, Start Num: 55

Candidate Starts for TheloniousMonk\_30:

(Start: 55 @24600 has 554 MA's), (76, 24714), (77, 24717), (88, 24759), (89, 24765), (133, 24993),

Gene: Thor\_28 Start: 23061, Stop: 23507, Start Num: 55

Candidate Starts for Thor\_28:

(Start: 55 @23061 has 554 MA's), (76, 23175), (77, 23178), (88, 23220), (89, 23226), (133, 23454),

Gene: Tiffany\_30 Start: 22092, Stop: 22535, Start Num: 55

Candidate Starts for Tiffany\_30:

(Start: 55 @22092 has 554 MA's), (68, 22161), (73, 22188), (90, 22260), (108, 22380), (115, 22410), (126, 22458), (142, 22527),

Gene: Tiger\_25 Start: 21368, Stop: 21832, Start Num: 55

Candidate Starts for Tiger\_25:

(Start: 55 @21368 has 554 MA's), (98, 21584), (116, 21692), (119, 21704), (128, 21746), (136, 21767), (141, 21803),

Gene: Timothy\_29 Start: 22627, Stop: 23070, Start Num: 54

Candidate Starts for Timothy\_29:

(Start: 54 @22627 has 23 MA's), (69, 22702), (106, 22894), (108, 22915), (126, 22993), (141, 23059),

Gene: Timshel\_29 Start: 24668, Stop: 25138, Start Num: 51

Candidate Starts for Timshel\_29:

(Start: 51 @24668 has 26 MA's), (Start: 56 @24677 has 5 MA's), (62, 24710), (69, 24758), (90, 24851), (138, 25094),

Gene: TinaFeyge\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for TinaFeyge\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: TinyPebbles\_30 Start: 22284, Stop: 22727, Start Num: 55

Candidate Starts for TinyPebbles\_30:

(Start: 55 @22284 has 554 MA's), (68, 22353), (73, 22380), (90, 22452), (108, 22572), (115, 22602), (126, 22650), (142, 22719),

Gene: TinyTimmy\_29 Start: 22670, Stop: 23113, Start Num: 54

Candidate Starts for TinyTimmy\_29:

(Start: 22 @22607 has 1 MA's), (Start: 54 @22670 has 23 MA's), (69, 22745), (106, 22937), (108, 22958), (126, 23036), (141, 23102),

Gene: Tinybot\_27 Start: 21607, Stop: 22053, Start Num: 55

Candidate Starts for Tinybot\_27:

(Start: 55 @21607 has 554 MA's), (68, 21676), (69, 21682), (73, 21703), (79, 21724), (90, 21775), (108, 21895), (115, 21925), (121, 21949), (126, 21973), (127, 21976), (140, 22030),

Gene: TipsytheTRex\_28 Start: 21114, Stop: 21557, Start Num: 55

Candidate Starts for TipsytheTRex\_28:



(Start: 55 @21114 has 554 MA's), (69, 21189), (82, 21249), (115, 21432), (126, 21480), (140, 21537),

Gene: TiroTheta9\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for TiroTheta9\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Toaka\_28 Start: 21715, Stop: 22167, Start Num: 53

Candidate Starts for Toaka\_28:

(18, 21607), (23, 21661), (Start: 53 @21715 has 140 MA's), (69, 21796), (108, 22009), (115, 22039), (126, 22087),

Gene: Todacoro\_29 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for Todacoro\_29:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Tolls\_21 Start: 17118, Stop: 17507, Start Num: 52

Candidate Starts for Tolls\_21:

(Start: 47 @17109 has 11 MA's), (Start: 52 @17118 has 33 MA's), (66, 17190), (67, 17193), (70, 17208), (74, 17229), (81, 17253), (107, 17373), (113, 17415), (118, 17436), (129, 17478),

Gene: Tomathan\_32 Start: 21856, Stop: 22299, Start Num: 55

Candidate Starts for Tomathan\_32:

(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222), (140, 22279), (143, 22291),

Gene: ToneTone\_30 Start: 21691, Stop: 22143, Start Num: 53

Candidate Starts for ToneTone\_30:

(Start: 53 @21691 has 140 MA's), (64, 21748), (69, 21772), (89, 21856), (106, 21964), (115, 22015), (126, 22063), (132, 22078),

Gene: Topanga\_28 Start: 21724, Stop: 22170, Start Num: 55

Candidate Starts for Topanga\_28:

(Start: 55 @21724 has 554 MA's), (73, 21820), (90, 21892), (115, 22042), (126, 22090),

Gene: Topgun\_28 Start: 22814, Stop: 23260, Start Num: 55

Candidate Starts for Topgun\_28:

(Start: 55 @22814 has 554 MA's), (76, 22928), (77, 22931), (88, 22973), (89, 22979), (133, 23207),

Gene: Toro\_31 Start: 24743, Stop: 25210, Start Num: 51

Candidate Starts for Toro\_31:

(Start: 51 @24743 has 26 MA's), (62, 24785), (69, 24833), (73, 24854), (82, 24893), (90, 24926), (91, 24929), (138, 25169),

Gene: Tote\_30 Start: 23482, Stop: 23928, Start Num: 55

Candidate Starts for Tote\_30:

(Start: 55 @23482 has 554 MA's), (76, 23596), (77, 23599), (88, 23641), (89, 23647), (133, 23875),

Gene: TouchMeNot\_20 Start: 19090, Stop: 19509, Start Num: 56

Candidate Starts for TouchMeNot\_20:

(Start: 56 @19090 has 5 MA's), (67, 19159), (78, 19213),

Gene: Traft412\_30 Start: 23904, Stop: 24350, Start Num: 55  
Candidate Starts for Traft412\_30:  
(Start: 55 @23904 has 554 MA's), (76, 24018), (77, 24021), (88, 24063), (89, 24069), (133, 24297),

Gene: Travvers\_32 Start: 21856, Stop: 22299, Start Num: 55  
Candidate Starts for Travvers\_32:  
(Start: 55 @21856 has 554 MA's), (69, 21931), (82, 21991), (106, 22123), (115, 22174), (126, 22222),  
(140, 22279), (143, 22291),

Gene: Treddle\_30 Start: 24194, Stop: 24640, Start Num: 55  
Candidate Starts for Treddle\_30:  
(Start: 55 @24194 has 554 MA's), (76, 24308), (77, 24311), (88, 24353), (89, 24359), (133, 24587),

Gene: Trike\_26 Start: 19696, Stop: 20142, Start Num: 55  
Candidate Starts for Trike\_26:  
(Start: 55 @19696 has 554 MA's), (68, 19765), (73, 19792), (90, 19864), (115, 20014), (126, 20062),

Gene: Tripl3t\_29 Start: 23813, Stop: 24259, Start Num: 55  
Candidate Starts for Tripl3t\_29:  
(Start: 55 @23813 has 554 MA's), (76, 23927), (77, 23930), (88, 23972), (89, 23978), (133, 24206),

Gene: Tristan\_30 Start: 23597, Stop: 24043, Start Num: 52  
Candidate Starts for Tristan\_30:  
(Start: 27 @23558 has 1 MA's), (Start: 52 @23597 has 33 MA's), (69, 23672), (78, 23711), (82, 23732),  
(106, 23864), (108, 23885), (115, 23915), (126, 23963), (135, 23990), (140, 24020),

Gene: Trixie\_32 Start: 23642, Stop: 24088, Start Num: 46  
Candidate Starts for Trixie\_32:  
(31, 23618), (Start: 46 @23642 has 15 MA's), (69, 23717), (70, 23720), (78, 23756), (82, 23777), (106,  
23909), (108, 23930), (115, 23960), (121, 23984), (126, 24008), (135, 24035), (140, 24065),

Gene: Troje\_19 Start: 17070, Stop: 17468, Start Num: 47  
Candidate Starts for Troje\_19:  
(Start: 47 @17070 has 11 MA's), (Start: 52 @17079 has 33 MA's), (66, 17151), (67, 17154), (70,  
17169), (74, 17190), (78, 17205), (80, 17211), (86, 17235), (107, 17334), (113, 17376), (118, 17397),  
(129, 17439),

Gene: Trooper\_29 Start: 21828, Stop: 22274, Start Num: 52  
Candidate Starts for Trooper\_29:  
(Start: 52 @21828 has 33 MA's), (69, 21903), (82, 21963), (106, 22095), (108, 22116), (126, 22194),  
(135, 22221),

Gene: Trouble\_29 Start: 23760, Stop: 24206, Start Num: 55  
Candidate Starts for Trouble\_29:  
(Start: 55 @23760 has 554 MA's), (60, 23772), (76, 23874), (77, 23877), (88, 23919), (89, 23925),  
(133, 24153),

Gene: TroyPia\_28 Start: 21627, Stop: 22073, Start Num: 55  
Candidate Starts for TroyPia\_28:  
(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795),  
(108, 21915), (115, 21945), (121, 21969), (126, 21993), (140, 22050),

Gene: Tubs\_31 Start: 23557, Stop: 24006, Start Num: 53

Candidate Starts for Tubs\_31:

(Start: 53 @23557 has 140 MA's), (69, 23638), (108, 23851), (115, 23881), (126, 23929), (140, 23986),

Gene: Tucker\_32 Start: 21777, Stop: 22229, Start Num: 53

Candidate Starts for Tucker\_32:

(Start: 53 @21777 has 140 MA's), (64, 21834), (69, 21858), (89, 21942), (106, 22050), (115, 22101), (126, 22149), (132, 22164),

Gene: Turbido\_31 Start: 22484, Stop: 22930, Start Num: 57

Candidate Starts for Turbido\_31:

(2, 22172), (6, 22262), (Start: 27 @22445 has 1 MA's), (Start: 57 @22484 has 51 MA's), (69, 22559), (82, 22619), (106, 22751), (126, 22850), (135, 22877),

Gene: Turj99\_27 Start: 22700, Stop: 23146, Start Num: 55

Candidate Starts for Turj99\_27:

(Start: 55 @22700 has 554 MA's), (60, 22712), (76, 22814), (77, 22817), (88, 22859), (89, 22865), (133, 23093),

Gene: Twigg\_25 Start: 21439, Stop: 21903, Start Num: 55

Candidate Starts for Twigg\_25:

(Start: 55 @21439 has 554 MA's), (116, 21763), (119, 21775), (128, 21817), (140, 21865), (141, 21874),

Gene: Twister\_28 Start: 21620, Stop: 22066, Start Num: 55

Candidate Starts for Twister\_28:

(Start: 55 @21620 has 554 MA's), (68, 21689), (73, 21716), (90, 21788), (115, 21938), (126, 21986),

Gene: TwoPeat\_29 Start: 23281, Stop: 23727, Start Num: 55

Candidate Starts for TwoPeat\_29:

(Start: 55 @23281 has 554 MA's), (76, 23395), (77, 23398), (88, 23440), (89, 23446), (133, 23674),

Gene: TygerBlood\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for TygerBlood\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (140, 22050),

Gene: Typhonomachy\_20 Start: 17442, Stop: 17831, Start Num: 52

Candidate Starts for Typhonomachy\_20:

(Start: 52 @17442 has 33 MA's), (66, 17514), (67, 17517), (70, 17532), (74, 17553), (78, 17568), (82, 17589), (94, 17631), (107, 17697), (112, 17733), (113, 17739), (118, 17760), (129, 17802),

Gene: U2\_28 Start: 23079, Stop: 23525, Start Num: 55

Candidate Starts for U2\_28:

(Start: 55 @23079 has 554 MA's), (76, 23193), (77, 23196), (88, 23238), (89, 23244), (133, 23472),

Gene: Ugenie5\_28 Start: 23590, Stop: 24039, Start Num: 53

Candidate Starts for Ugenie5\_28:

(Start: 53 @23590 has 140 MA's), (69, 23671), (108, 23884), (115, 23914), (126, 23962), (140, 24019),

Gene: UhSalsa\_24 Start: 17988, Stop: 18428, Start Num: 53

Candidate Starts for UhSalsa\_24:

(12, 17769), (13, 17790), (32, 17907), (35, 17940), (Start: 53 @17988 has 140 MA's), (62, 18015), (88, 18141), (90, 18156), (96, 18183), (110, 18279), (119, 18318),

Gene: Ulysses\_27 Start: 21348, Stop: 21794, Start Num: 55

Candidate Starts for Ulysses\_27:

(Start: 55 @21348 has 554 MA's), (68, 21417), (69, 21423), (73, 21444), (79, 21465), (90, 21516), (108, 21636), (115, 21666), (121, 21690), (126, 21714), (127, 21717), (140, 21771),

Gene: UnionJack\_25 Start: 20497, Stop: 20961, Start Num: 55

Candidate Starts for UnionJack\_25:

(Start: 55 @20497 has 554 MA's), (128, 20875), (130, 20878), (136, 20896), (140, 20923), (141, 20932),

Gene: Updawg\_31 Start: 22445, Stop: 22891, Start Num: 57

Candidate Starts for Updawg\_31:

(4, 22214), (25, 22400), (Start: 27 @22406 has 1 MA's), (Start: 57 @22445 has 51 MA's), (69, 22520), (78, 22559), (106, 22712), (126, 22811), (135, 22838), (140, 22868),

Gene: VA6\_29 Start: 22012, Stop: 22455, Start Num: 55

Candidate Starts for VA6\_29:

(Start: 55 @22012 has 554 MA's), (69, 22087), (82, 22147), (106, 22279), (115, 22330), (126, 22378),

Gene: VC3\_32 Start: 22000, Stop: 22443, Start Num: 55

Candidate Starts for VC3\_32:

(Start: 55 @22000 has 554 MA's), (69, 22075), (82, 22135), (106, 22267), (115, 22318), (126, 22366),

Gene: Vanisoa\_28 Start: 21416, Stop: 21865, Start Num: 53

Candidate Starts for Vanisoa\_28:

(Start: 53 @21416 has 140 MA's), (69, 21494), (106, 21686), (115, 21737), (126, 21785),

Gene: Veracruz\_28 Start: 22277, Stop: 22720, Start Num: 55

Candidate Starts for Veracruz\_28:

(Start: 55 @22277 has 554 MA's), (68, 22346), (73, 22373), (90, 22445), (108, 22565), (115, 22595), (126, 22643),

Gene: Vine\_20 Start: 18125, Stop: 18514, Start Num: 51

Candidate Starts for Vine\_20:

(Start: 51 @18125 has 26 MA's), (61, 18146), (67, 18200), (68, 18206), (70, 18215), (74, 18236), (78, 18251), (82, 18272), (111, 18413), (113, 18422), (118, 18443),

Gene: Violet\_27 Start: 23486, Stop: 23932, Start Num: 55

Candidate Starts for Violet\_27:

(Start: 55 @23486 has 554 MA's), (60, 23498), (76, 23600), (77, 23603), (88, 23645), (89, 23651), (133, 23879),

Gene: Vix\_30 Start: 22280, Stop: 22723, Start Num: 55

Candidate Starts for Vix\_30:

(Start: 55 @22280 has 554 MA's), (68, 22349), (73, 22376), (90, 22448), (108, 22568), (115, 22598), (126, 22646), (142, 22715),

Gene: VohminGhazi\_32 Start: 21764, Stop: 22216, Start Num: 53

Candidate Starts for VohminGhazi\_32:

(Start: 53 @21764 has 140 MA's), (64, 21821), (69, 21845), (89, 21929), (106, 22037), (115, 22088), (126, 22136), (132, 22151),

Gene: Volt\_56 Start: 30613, Stop: 31011, Start Num: 47

Candidate Starts for Volt\_56:

(Start: 47 @30613 has 11 MA's), (59, 30634), (67, 30694), (68, 30700), (72, 30724), (78, 30745), (80, 30751), (82, 30766), (97, 30835), (99, 30856), (103, 30892), (117, 30955), (118, 30964), (120, 30967),

Gene: Waits\_31 Start: 20935, Stop: 21378, Start Num: 53

Candidate Starts for Waits\_31:

(Start: 53 @20935 has 140 MA's), (61, 20944), (68, 21004), (69, 21010), (84, 21073), (93, 21112), (115, 21253), (126, 21301),

Gene: WalterMcMickey\_28 Start: 21620, Stop: 22066, Start Num: 55

Candidate Starts for WalterMcMickey\_28:

(Start: 55 @21620 has 554 MA's), (68, 21689), (73, 21716), (90, 21788), (115, 21938), (126, 21986),

Gene: Wander\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Wander\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Warrior24\_32 Start: 20939, Stop: 21382, Start Num: 53

Candidate Starts for Warrior24\_32:

(Start: 53 @20939 has 140 MA's), (61, 20948), (68, 21008), (69, 21014), (84, 21077), (93, 21116), (115, 21257), (126, 21305),

Gene: Watermelon\_30 Start: 23822, Stop: 24268, Start Num: 55

Candidate Starts for Watermelon\_30:

(Start: 55 @23822 has 554 MA's), (76, 23936), (77, 23939), (88, 23981), (89, 23987), (133, 24215),

Gene: Watson\_30 Start: 22190, Stop: 22633, Start Num: 55

Candidate Starts for Watson\_30:

(Start: 55 @22190 has 554 MA's), (68, 22259), (73, 22286), (90, 22358), (108, 22478), (115, 22508), (126, 22556), (142, 22625),

Gene: WeiHuaDA\_35 Start: 24313, Stop: 24759, Start Num: 46

Candidate Starts for WeiHuaDA\_35:

(30, 24289), (Start: 46 @24313 has 15 MA's), (69, 24388), (70, 24391), (78, 24427), (82, 24448), (106, 24580), (108, 24601), (115, 24631), (121, 24655), (126, 24679), (135, 24706), (140, 24736),

Gene: Whabigail7\_31 Start: 22472, Stop: 22918, Start Num: 57

Candidate Starts for Whabigail7\_31:

(2, 22160), (6, 22250), (Start: 27 @22433 has 1 MA's), (Start: 57 @22472 has 51 MA's), (69, 22547), (82, 22607), (106, 22739), (126, 22838), (135, 22865),

Gene: Wheeler\_28 Start: 23254, Stop: 23700, Start Num: 55

Candidate Starts for Wheeler\_28:

(Start: 55 @23254 has 554 MA's), (76, 23368), (77, 23371), (88, 23413), (89, 23419), (133, 23647),

Gene: WideWale\_31 Start: 22445, Stop: 22891, Start Num: 57

Candidate Starts for WideWale\_31:

(4, 22214), (25, 22400), (Start: 27 @22406 has 1 MA's), (Start: 57 @22445 has 51 MA's), (69, 22520), (78, 22559), (106, 22712), (126, 22811), (135, 22838), (140, 22868),

Gene: Wiks\_32 Start: 21759, Stop: 22211, Start Num: 53

Candidate Starts for Wiks\_32:

(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083), (126, 22131), (132, 22146),

Gene: Wilbur\_28 Start: 21627, Stop: 22073, Start Num: 55

Candidate Starts for Wilbur\_28:

(Start: 55 @21627 has 554 MA's), (68, 21696), (69, 21702), (73, 21723), (79, 21744), (90, 21795), (108, 21915), (115, 21945), (121, 21969), (126, 21993), (127, 21996), (140, 22050),

Gene: Wile\_28 Start: 21658, Stop: 22104, Start Num: 55

Candidate Starts for Wile\_28:

(Start: 55 @21658 has 554 MA's), (68, 21727), (73, 21754), (78, 21772), (90, 21826), (108, 21946), (115, 21976), (119, 21991), (126, 22024),

Gene: Wilkins\_28 Start: 22792, Stop: 23238, Start Num: 55

Candidate Starts for Wilkins\_28:

(Start: 55 @22792 has 554 MA's), (76, 22906), (77, 22909), (88, 22951), (89, 22957), (133, 23185),

Gene: Wizard007\_28 Start: 21629, Stop: 22075, Start Num: 55

Candidate Starts for Wizard007\_28:

(Start: 55 @21629 has 554 MA's), (68, 21698), (69, 21704), (73, 21725), (79, 21746), (90, 21797), (108, 21917), (115, 21947), (121, 21971), (126, 21995), (127, 21998), (140, 22052),

Gene: Wooldri\_32 Start: 22109, Stop: 22552, Start Num: 55

Candidate Starts for Wooldri\_32:

(Start: 55 @22109 has 554 MA's), (68, 22178), (73, 22205), (90, 22277), (108, 22397), (115, 22427), (126, 22475), (142, 22544),

Gene: WunderPhul\_32 Start: 21759, Stop: 22211, Start Num: 53

Candidate Starts for WunderPhul\_32:

(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083), (126, 22131), (132, 22146),

Gene: Xena\_28 Start: 21645, Stop: 22091, Start Num: 55

Candidate Starts for Xena\_28:

(Start: 55 @21645 has 554 MA's), (68, 21714), (73, 21741), (78, 21759), (90, 21813), (108, 21933), (115, 21963), (119, 21978), (126, 22011),

Gene: XianYue\_29 Start: 21926, Stop: 22372, Start Num: 57

Candidate Starts for XianYue\_29:

(Start: 57 @21926 has 51 MA's), (69, 22001), (78, 22040), (82, 22061), (106, 22193), (126, 22292), (135, 22319), (140, 22349),

Gene: Yakult\_20 Start: 17008, Stop: 17403, Start Num: 51

Candidate Starts for Yakult\_20:

(Start: 51 @17008 has 26 MA's), (61, 17029), (67, 17083), (70, 17098), (74, 17119), (78, 17134), (82, 17155), (94, 17197), (113, 17305), (116, 17314), (118, 17326), (134, 17380),

Gene: Yarn\_18 Start: 17108, Stop: 17497, Start Num: 52

Candidate Starts for Yarn\_18:

(Start: 47 @17099 has 11 MA's), (Start: 52 @17108 has 33 MA's), (66, 17180), (67, 17183), (70, 17198), (74, 17219), (81, 17243), (107, 17363), (113, 17405), (118, 17426), (129, 17468),

Gene: Yecey3\_30 Start: 21649, Stop: 22098, Start Num: 53

Candidate Starts for Yecey3\_30:

(Start: 53 @21649 has 140 MA's), (69, 21727), (106, 21919), (108, 21940), (115, 21970), (126, 22018), (135, 22045), (140, 22075),

Gene: YoSam321\_28 Start: 21624, Stop: 22070, Start Num: 55

Candidate Starts for YoSam321\_28:

(Start: 55 @21624 has 554 MA's), (68, 21693), (69, 21699), (73, 21720), (79, 21741), (90, 21792), (108, 21912), (115, 21942), (121, 21966), (126, 21990), (127, 21993), (140, 22047),

Gene: Yogi\_24 Start: 17962, Stop: 18402, Start Num: 53

Candidate Starts for Yogi\_24:

(12, 17743), (13, 17764), (32, 17881), (Start: 53 @17962 has 140 MA's), (62, 17989), (88, 18115), (90, 18130), (96, 18157), (110, 18253), (119, 18292),

Gene: Yokurt\_32 Start: 21759, Stop: 22211, Start Num: 53

Candidate Starts for Yokurt\_32:

(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083), (126, 22131), (132, 22146),

Gene: Yoncess\_24 Start: 17962, Stop: 18402, Start Num: 53

Candidate Starts for Yoncess\_24:

(12, 17743), (13, 17764), (32, 17881), (Start: 53 @17962 has 140 MA's), (62, 17989), (88, 18115), (90, 18130), (96, 18157), (110, 18253), (119, 18292),

Gene: Yoshi\_20 Start: 15407, Stop: 15772, Start Num: 58

Candidate Starts for Yoshi\_20:

(29, 15299), (38, 15353), (Start: 58 @15407 has 13 MA's), (65, 15467), (67, 15473), (70, 15488), (72, 15503), (74, 15509), (80, 15530), (81, 15533), (107, 15650), (114, 15692), (122, 15725),

Gene: Yucky\_21 Start: 17984, Stop: 18373, Start Num: 51

Candidate Starts for Yucky\_21:

(35, 17930), (Start: 51 @17984 has 26 MA's), (61, 18005), (67, 18059), (68, 18065), (70, 18074), (74, 18095), (78, 18110), (82, 18131), (111, 18272), (113, 18281), (118, 18302),

Gene: Yummy\_20 Start: 16993, Stop: 17382, Start Num: 52

Candidate Starts for Yummy\_20:

(Start: 47 @16984 has 11 MA's), (Start: 52 @16993 has 33 MA's), (66, 17065), (67, 17068), (70, 17083), (74, 17104), (78, 17119), (80, 17125), (86, 17149), (113, 17290), (118, 17311), (129, 17353),

Gene: Zaka\_32 Start: 21759, Stop: 22211, Start Num: 53

Candidate Starts for Zaka\_32:

(Start: 53 @21759 has 140 MA's), (64, 21816), (69, 21840), (89, 21924), (106, 22032), (115, 22083), (126, 22131), (132, 22146),

Gene: Zapner\_21 Start: 15932, Stop: 16297, Start Num: 58

Candidate Starts for Zapner\_21:

(29, 15824), (38, 15878), (Start: 58 @15932 has 13 MA's), (65, 15992), (67, 15998), (70, 16013), (72, 16028), (74, 16034), (80, 16055), (81, 16058), (107, 16175), (114, 16217), (122, 16250),

Gene: Zareef\_23 Start: 18424, Stop: 18810, Start Num: 52

Candidate Starts for Zareef\_23:

(Start: 52 @18424 has 33 MA's), (66, 18496), (70, 18514), (74, 18535), (80, 18556), (81, 18559), (86, 18580), (99, 18634), (105, 18673), (109, 18700), (113, 18721), (118, 18742),

Gene: Zeeculate\_28 Start: 23693, Stop: 24139, Start Num: 55

Candidate Starts for Zeeculate\_28:

(Start: 55 @23693 has 554 MA's), (76, 23807), (77, 23810), (88, 23852), (89, 23858), (133, 24086),

Gene: Zephyr\_28 Start: 23055, Stop: 23501, Start Num: 55

Candidate Starts for Zephyr\_28:

(Start: 55 @23055 has 554 MA's), (76, 23169), (77, 23172), (88, 23214), (89, 23220), (133, 23448),

Gene: Zetzy\_29 Start: 21732, Stop: 22175, Start Num: 55

Candidate Starts for Zetzy\_29:

(Start: 55 @21732 has 554 MA's), (68, 21801), (73, 21828), (90, 21900), (108, 22020), (115, 22050), (126, 22098), (142, 22167),

Gene: Zeuska\_29 Start: 23489, Stop: 23935, Start Num: 55

Candidate Starts for Zeuska\_29:

(Start: 55 @23489 has 554 MA's), (60, 23501), (76, 23603), (77, 23606), (88, 23648), (89, 23654), (133, 23882),

Gene: Ziko\_57 Start: 30553, Stop: 30951, Start Num: 47

Candidate Starts for Ziko\_57:

(Start: 47 @30553 has 11 MA's), (59, 30574), (67, 30634), (68, 30640), (72, 30664), (78, 30685), (80, 30691), (82, 30706), (97, 30775), (99, 30796), (103, 30832), (117, 30895), (118, 30904), (120, 30907),

Gene: Zimmer\_31 Start: 24171, Stop: 24620, Start Num: 55

Candidate Starts for Zimmer\_31:

(Start: 55 @24171 has 554 MA's), (69, 24249), (106, 24441), (110, 24468), (115, 24492), (126, 24540), (135, 24567), (140, 24597),

Gene: Zolita\_24 Start: 21730, Stop: 22194, Start Num: 55

Candidate Starts for Zolita\_24:

(Start: 55 @21730 has 554 MA's), (78, 21847), (104, 21991), (128, 22108), (130, 22111), (140, 22156), (141, 22165),

Gene: Zulu\_32 Start: 21758, Stop: 22210, Start Num: 53

Candidate Starts for Zulu\_32:

(Start: 53 @21758 has 140 MA's), (64, 21815), (69, 21839), (89, 21923), (106, 22031), (115, 22082), (126, 22130), (132, 22145),