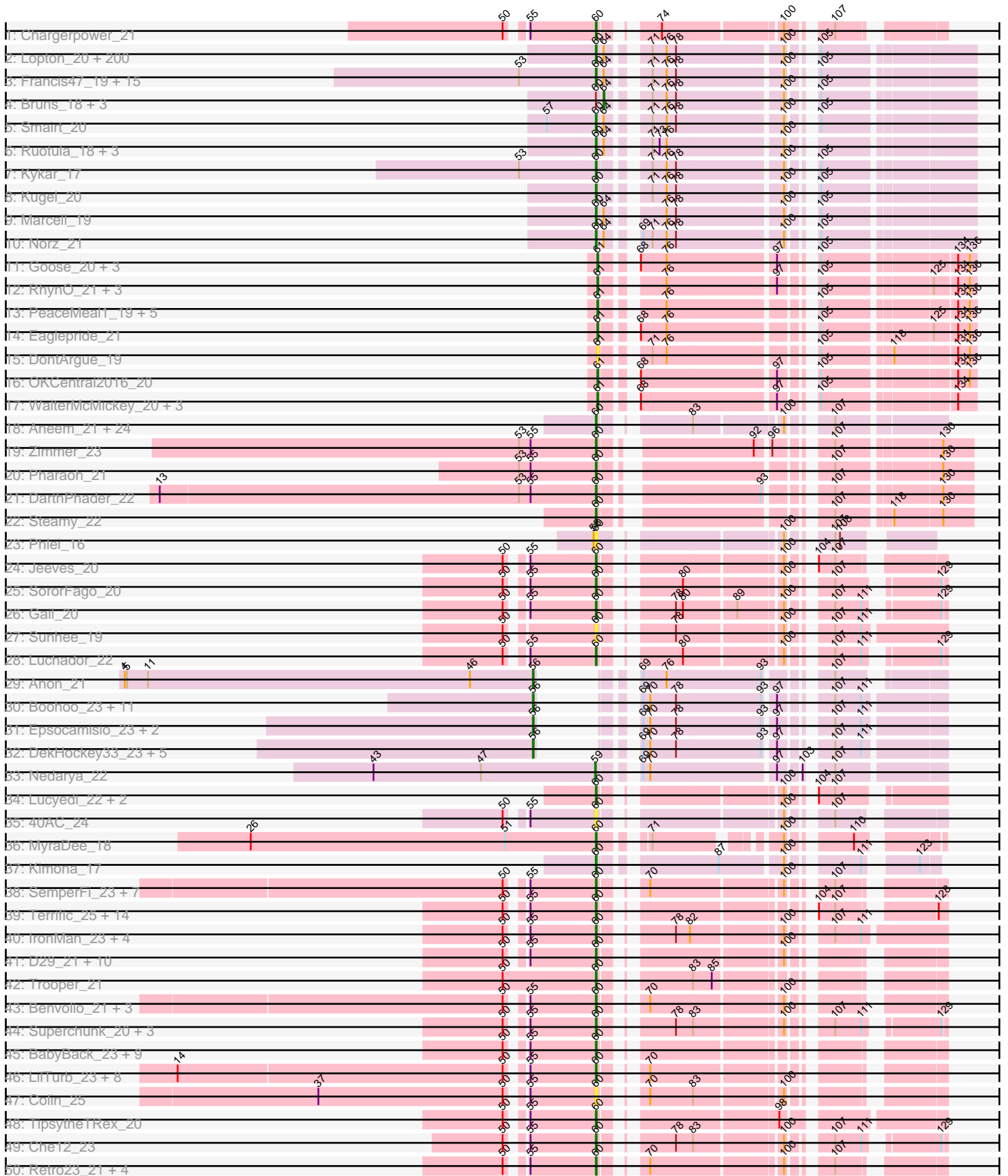
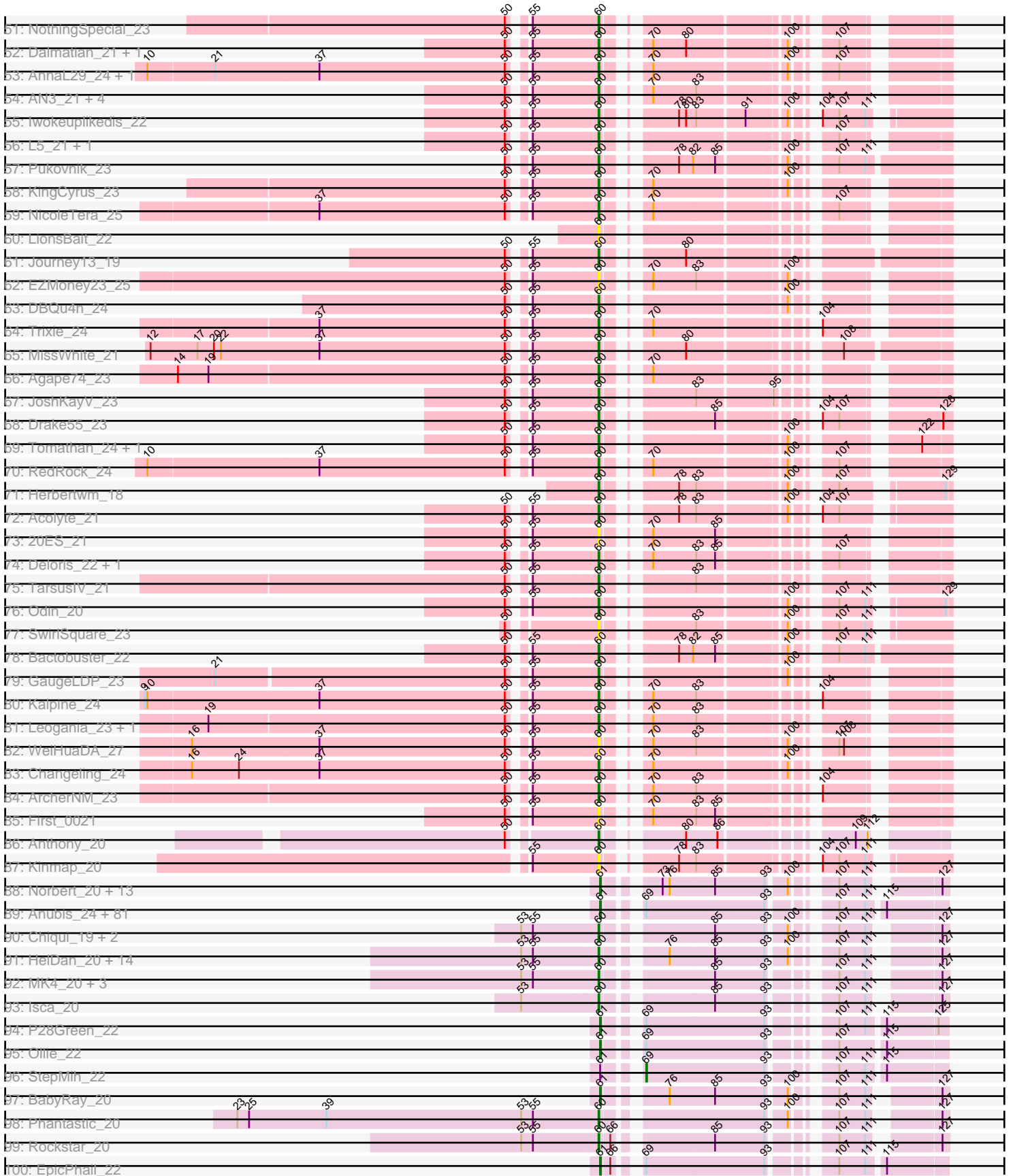


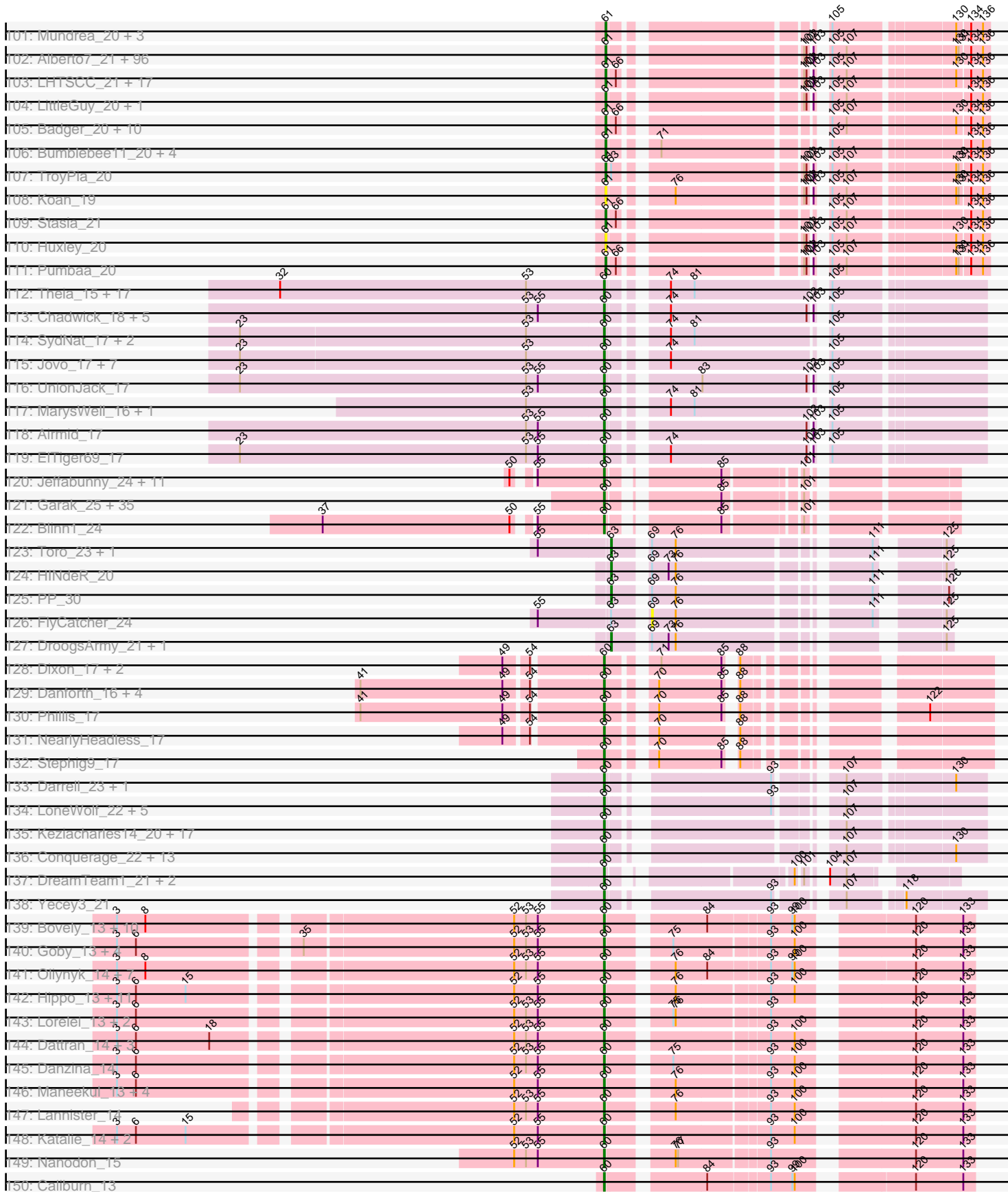
Pham 215642



Pham 215642

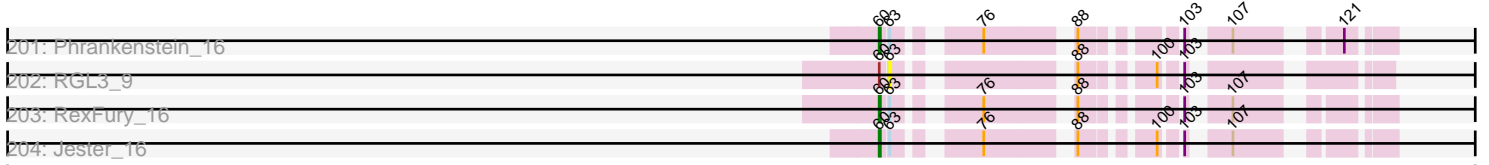


Pham 215642





Pham 215642



Z01: Phrankenstern\_16

Z02: RGL3\_9

Z03: RexFury\_16

Z04: Jester\_16

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 215642 Report

This analysis was run 02/22/25 on database version 588.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 215642 has 1008 members, 96 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_21
- Track 2 : Lopton\_20, Parliament\_18, Paraselene\_18, Zephyr\_19, Squee\_20, Hope4ever\_19, Euphoria\_19, Bigfoot\_18, BeesKnees\_20, Michley\_19, Sorpresa\_19, Marsha\_19, Thor\_19, Fushigi\_20, Cueyllyss\_19, Gandalf20\_20, Mryolo\_18, BillKnuckles\_20, Arcanine\_20, Monet\_21, Peterson\_22, MetalQZJ\_19, Corvo\_19, StrongArm\_18, Graduation\_21, Licorice\_21, Rohr\_20, Dussy\_20, MaryBeth\_19, McSinger\_20, Solon\_19, Bigchunggi\_19, Blue\_19, Sumter\_18, Petp2012\_21, Snazzy\_17, Magnito\_18, Target\_21, A6\_17, Abbyshoes\_20, GMonster\_18, Briton15\_21, MPlant7149\_18, Acme\_21, Makemake\_19, Barriga\_19, Zeuska\_20, HermioneGrange\_19, AFIS\_19, GageAP\_21, Kenmech\_22, Naira\_20, Wilkins\_19, Jerm2\_20, Aeneas\_21, ILeeKay\_21, Teodoridan\_17, PattyP\_21, Alvin\_20, TheloniousMonk\_21, Dynamix\_20, Seanderson\_20, Adahisdi\_20, Marco3\_19, Beatrix\_18, Agaliana\_19, NEHalo\_19, Gyzlar\_21, DD5\_20, Burton\_20, Magnar\_19, DreamCatcher\_22, Rutherferd\_21, Rufus\_20, Payneful\_19, Abrogate\_200, Papez\_21, Dreamboat\_20, Fajezeel\_21, Crispicous1\_18, Bethlehem\_19, Tripl3t\_20, Switzer\_20, Chanagan\_18, Topgun\_19, PascalRango\_18, Edtherson\_20, BigPaolini\_20, Petruccio\_19, Hami1\_21, Eyeball\_19, HanShotFirst\_19, Seabiscuit\_21, Perseus\_20, Sandaddy\_18, Doom\_20, Carlyle\_21, Froghopper\_20, CactusRose\_18, SpikeBT\_21, BigMau\_21, DrFeelGood\_18, BaconJack\_21, Watermelon\_21, Moose\_18, Mule\_19, STLscum\_20, Bones\_19, Marge\_20, PhrostyMug\_19, Rajelicia\_19, Ringer\_19, Marchy\_18, Nhonho\_19, Ciao\_19, Lockley\_19, Maroc7\_18, Greg\_21, ShortQueendom\_18, Tasp14\_20, Ichabod\_20, KSSJEB\_19, Molly\_20, Inyanga\_18, Buttons\_20, EnzoK\_19, Pari\_20, Hermia\_21, BK1\_17, Violet\_18, Atkinbua\_20, Niza\_21, RidgeCB\_19, Dexes\_20, Sanya\_18, JackSparrow\_20, Treddle\_21, Sibs6\_21, Nerujay\_20, Zeeculate\_18, Slagathor\_20, Big3\_19, Manatee\_20, Anglerfish\_20, LilBib\_20, Museum\_21, Bexan\_18, IgnatiusPatJac\_18, McGuire\_20, Ashballer\_18, Altman\_21, Pippin\_21, Bob3\_18, Arlo\_18, PhineBark\_19, Smeagol\_21, Ajay\_19, ConceptII\_20, Scowl\_20, Turj99\_18, Applejack\_19, U2\_19, StewieG\_18, TwoPeat\_20, Espresso\_19, Sunshine924\_18, Lamina13\_19, Dulcie\_18, Bxb1\_17, Iqorha\_18, Jasper\_20, QTRlifeCrisis\_19, HarryOW\_20, SwissCheese\_19, JC27\_21, MrGordo\_19, Homines\_19, Trouble\_19, Pinto\_21, Raid\_20, SarFire\_19, Forsytheast\_18, Sagefire\_20, Wheeler\_19, Fascinus\_18, Jorgensen\_19, Rubeus\_20, KyMonks1A\_21, BarrowTuph\_18,

Pelly\_20, BluSpix\_19, Paphu\_18, Mkhuseleli\_20, Oogway\_18, Kanely\_20, GrecoEtereo\_20, PinkPlastic\_18, Ohno789\_19, Phlippers\_18, Fenn\_20, KBG\_20

- Track 3 : Francis47\_19, Bircsak\_19, Gompeii16\_19, PacerPaul\_19, SkiPole\_21, Pita2\_21, Pepe\_20, Alsfro\_23, PherrisBueller\_20, PSullivan\_21, BPBiels31\_20, Tote\_21, JuliaChild\_21, Swole\_21, Killigrew\_17, ProMouse\_18
- Track 4 : Bruns\_18, Lesedi\_18, Levia\_18, LunarLander\_19
- Track 5 : Smairt\_20
- Track 6 : Ruotula\_18, Rhynn\_19, Traft412\_21, Gwendoluna\_21
- Track 7 : Kykar\_17
- Track 8 : Kugel\_20
- Track 9 : Marcell\_19
- Track 10 : Norz\_21
- Track 11 : Goose\_20, Kristoff\_21, Chupacabra\_20, Rebeuca\_21
- Track 12 : RhynO\_21, Rowdy\_23, DustyMartin\_23, Shapes\_23
- Track 13 : PeaceMeal1\_19, Trike\_18, Severus\_19, Drake94\_19, KittenMittens\_19, Poompha\_19
- Track 14 : Eaglepride\_21
- Track 15 : DontArgue\_19
- Track 16 : OKCentral2016\_20
- Track 17 : WalterMcMickey\_20, Twister\_20, Topanga\_20, Edison31\_20
- Track 18 : Aneem\_21, Flaverint\_21, Salz\_21, Hutc2\_21, Bachome\_21, Et2Brutus\_20, Orange\_21, Ebony\_21, Sham4\_21, TinyTimmy\_21, Insomnia\_21, Gilberta\_21, Jabith\_21, Joselito\_21, Bowtie\_21, Petersenfast\_20, Mabel\_21, Fibonacci\_21, Bud\_21, Mulciber\_21, Snape\_21, Munch\_21, Lucivia\_21, Timothy\_21, MaCh\_21
- Track 19 : Zimmer\_23
- Track 20 : Pharaoh\_21
- Track 21 : DarthPhader\_22
- Track 22 : Steamy\_22
- Track 23 : Phlei\_16
- Track 24 : Jeeves\_20
- Track 25 : SororFago\_20
- Track 26 : Gail\_20
- Track 27 : Sunhee\_19
- Track 28 : Luchador\_22
- Track 29 : Anon\_21
- Track 30 : Boohoo\_23, Strosahl\_23, Oofda\_24, MinecraftSteve\_24, Remus\_23, Rosalind\_23, Battleship\_24, Waits\_23, Switzerland\_23, LastResort\_23, Warrior24\_24, Anaysia\_23
- Track 31 : Epsocamisio\_23, ReMo\_23, Nebulosus\_23
- Track 32 : DekHockey33\_23, Looper\_24, JSwag\_23, Soups\_23, KatherineG\_23, ShayRa\_24
- Track 33 : Nedarya\_22
- Track 34 : Lucyedi\_22, EagleEye\_23, PainterBoy\_22
- Track 35 : 40AC\_24
- Track 36 : MyraDee\_18
- Track 37 : Kimona\_17
- Track 38 : SemperFi\_23, FiringLine\_21, QueenBeesly\_21, Georgie2\_22, SnapTap\_21, SweetiePie\_21, Crucio\_21, Power\_21
- Track 39 : Terrific\_25, Equemioh13\_23, NaSiaTalie\_21, Flare16\_21, Malec\_22, Baehexic\_22, Gratitude\_22, Sknot\_22, Updawg\_23, Piro94\_22, Larenn\_22, HarryHoudini\_23, MiculUcigas\_21, Centaur\_23, WideWale\_23
- Track 40 : IronMan\_23, Landor\_22, Phaded\_24, Tristan\_22, Jaan\_24

- Track 41 : D29\_21, ANI8\_24, StarStuff\_24, Duplo\_24, Kerberos\_24, D32\_24, AN9\_24, Naji\_24, C3\_19, Travvers\_24, VC3\_24
- Track 42 : Trooper\_21
- Track 43 : Benvolio\_21, Echild\_21, EvilGenius\_23, ChipMunk\_23
- Track 44 : Superchunk\_20, Caraxes\_20, Adzzy\_22, Ph8s\_22
- Track 45 : BabyBack\_23, Bradman\_20, BobSwaget\_24, Quokka\_19, Miko\_24, Serenity\_20, Rachaly\_24, Lokk\_24, MajorMajor\_20, Jsquared\_20
- Track 46 : LilTurb\_23, Dignity\_23, Buggy\_23, Jerm\_23, Whabigail7\_23, AbbyPaige\_23, Leviathan\_23, Smeagan\_23, Turbido\_23
- Track 47 : Colin\_25
- Track 48 : TopsytheTRex\_20
- Track 49 : Che12\_23
- Track 50 : Retro23\_21, QueenB2\_21, Anselm\_21, Fameo\_21, Heffalump\_23
- Track 51 : NothingSpecial\_23
- Track 52 : Dalmatian\_21, DudeLittle\_21
- Track 53 : AnnaL29\_24, Loser\_24
- Track 54 : AN3\_21, XianYue\_21, CRB1\_21, LadyBird\_21, VA6\_21
- Track 55 : Iwokeuplikedis\_22
- Track 56 : L5\_21, Koduck\_21
- Track 57 : Pukovnik\_23
- Track 58 : KingCyrus\_23
- Track 59 : NicoleTera\_25
- Track 60 : LionsBait\_22
- Track 61 : Journey13\_19
- Track 62 : EZMoney23\_25
- Track 63 : DBQu4n\_24
- Track 64 : Trixie\_24
- Track 65 : MissWhite\_21
- Track 66 : Agape74\_23
- Track 67 : JoshKayV\_23
- Track 68 : Drake55\_23
- Track 69 : Tomathan\_24, Pomar16\_24
- Track 70 : RedRock\_24
- Track 71 : Herbertwm\_18
- Track 72 : Acolyte\_21
- Track 73 : 20ES\_21
- Track 74 : Deloris\_22, BengiVuitton\_22
- Track 75 : TarsusIV\_21
- Track 76 : Odin\_20
- Track 77 : SwirlSquare\_23
- Track 78 : Bactobuster\_22
- Track 79 : GaugeLDP\_23
- Track 80 : Kalpine\_24
- Track 81 : Leogania\_23, BiancaTri92\_23
- Track 82 : WeiHuaDA\_27
- Track 83 : Changeling\_24
- Track 84 : ArcherNM\_23
- Track 85 : First\_0021
- Track 86 : Anthony\_20
- Track 87 : Kinmap\_20
- Track 88 : Norbert\_20, Veracruz\_20, Noella\_21, ResDef\_21, Panamaxus\_20, Caviar\_21, Pocahontas\_21, Popcicle\_21, Todacoro\_21, Hookmount\_21, Texage\_20, Margo\_21, Lambert1\_21, QuinnKiro\_20



- Track 89 : Anubis\_24, Rummer\_22, PGHhamlin\_24, Phranny\_23, JenCasNa\_22, PotatoSplit\_23, AugsMagnumOpus\_24, KADY\_23, Louie6\_22, Lowa\_22, JeppNRM\_23, SoilDragon\_22, DaHudson\_22, Spike509\_22, Pawn\_22, Misomonster\_24, Heliosoles\_22, Hercules11\_22, Bigflo\_22, Stagni\_22, LugYA\_24, Cullens\_22, SoYo\_22, Grub\_22, LarryKay\_22, Methuselah\_21, PhishRPhriends\_21, MarQuardt\_22, Calvinny\_23, Sabinator\_22, Malinsilva\_24, Taurus\_22, Beauxregard13\_22, Aglet\_22, Manu\_23, Wooldri\_24, Farber\_22, HaveUMetTed\_23, ACFishhook\_22, Microwolf\_22, OlanP\_22, AgronaGT15\_22, MoneyMay\_22, Zetzy\_21, Groupthink\_23, BreSam8\_22, Kalnoky\_23, BuzzBuzz\_21, Colbster\_22, GtownJaz\_22, Lilith\_22, Daishi\_21, Grum1\_22, LBerry\_22, JHC117\_22, Kalb97\_23, Vix\_22, MuchMore\_24, Tiffany\_22, Dieselweasel\_22, Grif\_22, Reba\_23, Marius\_23, PurpleHaze\_22, Penny1\_22, Bxz2\_21, MadMarie\_22, Mainiac\_22, Pembroke\_22, Phoxy\_22, Marie\_22, Gemma\_22, Watson\_22, Soshari\_24, Fernando\_22, TinyPebbles\_22, Jobu08\_22, Sabia\_22, GingkoMaracino\_22, Phoebe\_22, Snickers\_22, HashRod\_23
- Track 90 : Chiqui\_19, BabyJohn\_19, MA5\_20
- Track 91 : HelDan\_20, Kachowdy\_20, Bugatti\_20, Idleandcovert\_20, Giroux\_20, Marchesa\_20, Pistachio\_21, Heathen\_20, Fred313\_20, TNguyen7\_20, Puppy\_21, BlueBird\_21, Scout\_20, SaturnRing\_20, DropBear\_20
- Track 92 : MK4\_20, B1\_18, JF4\_20, JF2\_20
- Track 93 : Isca\_20
- Track 94 : P28Green\_22
- Track 95 : Ollie\_22
- Track 96 : StepMih\_22
- Track 97 : BabyRay\_20
- Track 98 : Phantastic\_20
- Track 99 : Rockstar\_20
- Track 100 : EpicPhail\_22
- Track 101 : Mundrea\_20, Shygu2\_20, Cici\_20, AbbysRanger\_20
- Track 102 : Alberto7\_21, JetBlade\_20, TinaFeyge\_20, Connomayer\_20, KFPoly\_20, LeoAvram\_20, Florean\_20, Nemo27\_20, ICleared\_20, Dhanush\_20, Caelakin\_20, LittleB\_20, Druantia\_20, Holli\_20, Citius\_20, Eagle\_19, Broseidon\_20, Lunsford\_21, Skipitt\_20, Kingmustik0402\_20, Medusa\_20, Kampy\_20, Funston\_20, Romney\_20, SenorClean\_19, Happiness\_20, Eros\_20, Lorenzo\_20, Palestino\_20, Kyee\_20, Scamp\_20, Bartimeaus\_20, Wilbur\_20, Eurydice\_20, Chaph\_20, Albee\_20, TygerBlood\_20, Flux\_20, Houdini22\_20, Maverick\_20, Phacado\_20, HamSlice\_19, Ohfah\_20, Melvin\_20, Mazhar510\_20, Abdiel\_20, Millski\_20, Cintron\_20, Gadost\_20, YoSam321\_20, Sabertooth\_20, Phelipe\_20, Polymorphads\_20, Taquarus\_20, Wizard007\_20, NotAPhaseMom\_20, Relief\_20, Nebs\_20, CentreCat\_20, MeeZee\_20, LappelDuVide\_20, Lemur\_20, Blackmoor\_20, Maxo\_20, Koreni\_19, Eris\_20, Morrow\_20, Wander\_20, Mayonnaise\_20, Clarenza\_20, Nyxis\_20, BubbleTrouble\_20, Jaykayelowell\_20, Spino\_20, Bruiser\_20, JoongJeon\_20, NorthStar\_20, Ruin\_20, OKaNui\_21, Cocoaberry\_20, Peaches\_20, Pipcraft\_20, Roosevelt\_20, Bombshell\_20, Sparxx\_20, Commander\_20, Baby16\_20, TiroTheta9\_20, Kremtemulon\_20, BellusTerra\_20, PeterPeter\_20, Iceman\_21, Annyong\_20, Burger\_19, Eapen\_20, Deano\_20, Avle17\_20
- Track 103 : LHTSCC\_21, Phighter1804\_20, Cerulean\_21, Rosa24\_19, ChampagnePapi\_21, SheldonCooper\_21, Shaka\_20, Thanksgivukkah\_20, Kratark\_20, DirtyDunning\_20, Tinybot\_19, Camperdownii\_19, LochMonster\_20, Arturo\_19, Obama12\_21, Iracema64\_21, Ulysses\_19, BangNhom\_20
- Track 104 : LittleGuy\_20, Phontbonne\_20
- Track 105 : Badger\_20, Achebe\_20, Wile\_20, Stink\_21, Miramae\_20, Xena\_20, Datway\_20, Noelle\_20, Cindaradix\_19, AvatarAhPeg\_21, Backyardigan\_20

- Track 106 : Bumblebee11\_20, PetiteSangsue\_20, Katalie136\_20, Morpher26\_20, Perplexer\_20
- Track 107 : TroyPia\_20
- Track 108 : Koan\_19
- Track 109 : Stasia\_21
- Track 110 : Huxley\_20
- Track 111 : Pumbaa\_20
- Track 112 : Theia\_15, ForGetIt\_17, Cuco\_17, Tarynearal\_16, Twigg\_17, HuhtaEnerson15\_17, Milcery\_17, Prinasha11\_18, Swirley\_17, Coog\_17, Midas2\_17, Tiger\_17, Discoknowium\_17, LittleCherry\_17, George\_16, Bonamassa\_17, Micasa\_17, Conspiracy\_17
- Track 113 : Chadwick\_18, PetterN\_18, Benedict\_17, Jabiru\_17, Scorpia\_18, Naca\_17
- Track 114 : SydNat\_17, Ghoulboy\_17, Zolita\_16
- Track 115 : Jovo\_17, Archetta\_17, Phlorence\_17, Aragog\_17, PickleBack\_17, Lev2\_17, Bluefalcon\_16, AgentM\_17
- Track 116 : UnionJack\_17
- Track 117 : MarysWell\_16, Dublin\_16
- Track 118 : Airmid\_17
- Track 119 : EITiger69\_17
- Track 120 : Jeffabunny\_24, Indra\_24, Gladiator\_24, Blue7\_24, Rifter\_24, Tucker\_24, Hammer\_24, Koko\_24, Hexamo\_24, Gruunaga\_24, Roksolana\_24, Artemis2UCLA\_24
- Track 121 : Garak\_25, Helmet\_25, JewelBug\_24, CloudWang3\_24, Polyphemos\_23, McFly\_24, GreedyLawyer\_24, SmellyB\_24, SuperCallie99\_24, BlessJoy\_24, Neeharika16\_24, Cookiedough\_24, Wiks\_24, Kazan\_24, Isiphiwo\_24, VohminGhazi\_24, Candra\_24, EricB\_24, Pmask\_24, ToneTone\_22, SuperAwesome\_24, Zaka\_24, Lilbunny\_24, BABullseye\_24, Yokurt\_24, Newrala\_24, Chartreuse\_24, Kipper29\_24, Hoot\_24, DaVinci\_24, Temprado\_25, Dorothea\_24, Jordennis\_24, Zulu\_24, Priamo\_24, WunderPhul\_24
- Track 122 : Blinn1\_24
- Track 123 : Toro\_23, Sheen\_22
- Track 124 : HINdeR\_20
- Track 125 : PP\_30
- Track 126 : FlyCatcher\_24
- Track 127 : DroogsArmy\_21, Timshel\_21
- Track 128 : Dixon\_17, Saintus\_17, Roary\_17
- Track 129 : Danforth\_16, Smeadley\_17, Expelliarmus\_16, Groundhog\_16, Astro\_17
- Track 130 : Phillis\_17
- Track 131 : NearlyHeadless\_17
- Track 132 : Stephig9\_17
- Track 133 : Darrell\_23, Refuge\_24
- Track 134 : LoneWolf\_22, Arissanae\_20, Rahalelujah\_20, Vanisoa\_20, Elephantoon\_22, Toaka\_20
- Track 135 : Keziacharles14\_20, Jiawan\_21, Beemo\_22, ExplosioNervosa\_22, RyeScarlet\_23, Hanray\_21, Ugenie5\_19, Pioneer\_22, BogosyJay\_22, Onglai\_21, Lilleskat\_20, Scherzo\_22, EdogawaKiddo\_20, Qobbit\_22, Maminiaina\_22, Phonnegut\_22, Sachima\_20, Halex\_21
- Track 136 : Conquerage\_22, Spouty\_22, Catalina\_22, EmyBug\_22, Aliter\_22, Tubs\_22, Priya\_22, Alma\_22, PackMan\_22, Eidsmoe\_22, Phaeder\_22, Fayely\_22, Myxus\_22, HortumSL17\_22
- Track 137 : DreamTeam1\_21, SheaKeira\_21, Charm\_21
- Track 138 : Yecey3\_21

- Track 139 : Bovely\_13, Nerdos\_13, Leviticus\_13, Unstoppable\_13, SunsetPointe\_13, Esperer\_13, Indigo\_13, Legacy\_13, Hydra\_15, Phettuccine\_13, Aaronocolus\_13
- Track 140 : Goby\_13, Sujidade\_14, Godpower\_14, Toma\_13, Lika\_13
- Track 141 : Oliynyk\_14, Rusticus\_14, Ozzie\_13, BeardedLady\_14, Jash\_14, Eddasa\_14, EnochSoames\_14, BryanRecycles\_14
- Track 142 : Hippo\_13, Snorlax\_13, SarahRose\_13, Triste\_13, Dwayne\_13, Whatever\_13, Emaanora\_15, BarryBee\_15, Asten\_13, Werner\_13, OzzyJ\_14, TajePhighter\_14
- Track 143 : Lorelei\_13, Nabi\_13, Rana\_13
- Track 144 : Dattran\_14, Celeste\_13, Brataylor\_14, Zemlya\_14
- Track 145 : Danzina\_14
- Track 146 : Maneekul\_13, Chucky\_13, TuanPN\_13, Ejemplo\_13, Yasdnil\_13
- Track 147 : Lannister\_14
- Track 148 : Katalie\_14, RedBear\_15, South40\_14
- Track 149 : Nanodon\_15
- Track 150 : Caliburn\_13
- Track 151 : Izzy\_14
- Track 152 : TrvxScott\_12, Thestral\_14
- Track 153 : Triumph\_15, Axiom\_14
- Track 154 : Paolo\_15
- Track 155 : Omar\_14
- Track 156 : Issmi\_14
- Track 157 : Amethyst\_13
- Track 158 : Jevington\_15
- Track 159 : BartholomewSD\_15, Alvy\_15
- Track 160 : SqueakyClean\_14, GirlDinner\_13
- Track 161 : Marav\_16
- Track 162 : Daudau\_13
- Track 163 : Zainub\_15
- Track 164 : Bowden\_14
- Track 165 : Superstar\_16
- Track 166 : Loofah\_14
- Track 167 : Janus\_14
- Track 168 : Haizum\_13
- Track 169 : Hank144\_14
- Track 170 : Paedore\_13
- Track 171 : R4\_13, ELB20\_12
- Track 172 : Andris\_13
- Track 173 : Pablito\_13
- Track 174 : Puginator\_15
- Track 175 : Tefunt\_13
- Track 176 : Nishikigoi\_13
- Track 177 : Animus\_14
- Track 178 : Caelum\_14
- Track 179 : Diane\_13
- Track 180 : TinaBelcher\_13
- Track 181 : Vanseggelen\_17
- Track 182 : Conan\_14, Provolone\_14, Pavo\_14
- Track 183 : Kaine\_13, Dexers\_12, Alsaber\_14
- Track 184 : phiCAM\_14
- Track 185 : Amela\_13
- Track 186 : Saftant\_13

- Track 187 : Celery\_16
- Track 188 : Speedwell\_18
- Track 189 : ElGato\_14
- Track 190 : Verse\_13
- Track 191 : Yosif\_14
- Track 192 : Verabelle\_14
- Track 193 : phiHau3\_15, GreenWeasel\_15
- Track 194 : BroPlease\_14
- Track 195 : VieEnRose\_13
- Track 196 : Celia\_13, Urza\_13, Itza\_13
- Track 197 : Krishelle\_16, Hiro\_16, PhailMary\_15, AppleCloud\_14
- Track 198 : Dinger\_16, Yoncess\_16, AngryOrchard\_15, Takoda\_16, BobbyDazzler\_16, Partridge\_16, Bryce\_16, Rasputin\_16, Shuman\_16
- Track 199 : UhSalsa\_16, Gollum\_16, RER2\_9, Naiad\_16, Belenaria\_16, Espica\_16, CosmicSans\_16, TWAMP\_16, Swann\_16, Alatin\_16, StCroix\_16, Bradshaw\_16, Lillie\_16, Natosaleda\_16, Rhodalysa\_16, Erik\_16, Nancinator\_16
- Track 200 : Alpacados\_15, Harlequin\_16, Bonanza\_16, Yogi\_16
- Track 201 : Phrankenstein\_16
- Track 202 : RGL3\_9
- Track 203 : RexFury\_16
- Track 204 : Jester\_16

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

The start number called the most often in the published annotations is 60, it was called in 586 of the 912 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_21, 40AC\_24, A6\_17, AFIS\_19, AN3\_21, AN9\_24, ANI8\_24, Aaronocolus\_13, AbbyPaige\_23, Abbyshoes\_20, Abrogate\_200, Acme\_21, Acolyte\_21, Adahisdi\_20, Adzzy\_22, Aeneas\_21, Agaliana\_19, Agape74\_23, AgentM\_17, Airmid\_17, Ajay\_19, Alatin\_16, Aliter\_22, Alma\_22, Alpacados\_15, Alsfro\_23, Altman\_21, Alvin\_20, Aneem\_21, Anglerfish\_20, AngryOrchard\_15, AnnaL29\_24, Anselm\_21, Anthony\_20, AppleCloud\_14, Applejack\_19, Aragog\_17, Arcanine\_20, ArcherNM\_23, Archetta\_17, Arissanae\_20, Arlo\_18, Artemis2UCLA\_24, Ashballer\_18, Asten\_13, Astro\_17, Atkinbua\_20, B1\_18, BABullseye\_24, BK1\_17, BPBiebs31\_20, BabyBack\_23, BabyJohn\_19, Bachome\_21, BaconJack\_21, Bactobuster\_22, Baehexic\_22, Barriga\_19, BarrowTuph\_18, BarryBee\_15, BeardedLady\_14, Beatrix\_18, Beemo\_22, BeesKnees\_20, Belenaria\_16, Benedict\_17, BengiVuitton\_22, Benvolio\_21, Bethlehem\_19, Bexan\_18, BiancaTri92\_23, Big3\_19, BigMau\_21, BigPaolini\_20, Bigchungu\_19, Bigfoot\_18, BillKnuckles\_20, Bircsak\_19, BlessJoy\_24, Blinn1\_24, BluSpix\_19, Blue7\_24, BlueBird\_21, Blue\_19, Bluefalcon\_16, Bob3\_18, BobSwaget\_24, BobbyDazzler\_16, BogosyJay\_22, Bonamassa\_17, Bonanza\_16, Bones\_19, Bovely\_13, Bowtie\_21, Bradman\_20, Bradshaw\_16, Brataylor\_14, Briton15\_21, BryanRecycles\_14, Bryce\_16, Bud\_21, Bugatti\_20, Bugsy\_23, Burton\_20, Buttons\_20, Bxb1\_17, C3\_19, CRB1\_21, CactusRose\_18, Caliburn\_13, Candra\_24, Caraxes\_20, Carlyle\_21, Catalina\_22, Celeste\_13, Celia\_13, Centaur\_23, Chadwick\_18, Chanagan\_18, Changeling\_24, Chargerpower\_21, Charm\_21, Chartreuse\_24, Che12\_23, ChipMunk\_23, Chiqui\_19, Chucky\_13,

Ciao\_19, CloudWang3\_24, Colin\_25, ConceptII\_20, Conquerage\_22, Conspiracy\_17, Coog\_17, Cookiedough\_24, Corvo\_19, CosmicSans\_16, Crispicious1\_18, Crucio\_21, Cuco\_17, Cueyllyss\_19, D29\_21, D32\_24, DBQu4n\_24, DD5\_20, DaVinci\_24, Dalmatian\_21, Danforth\_16, Danzina\_14, Darrell\_23, DarthPhader\_22, Dattran\_14, Deloris\_22, Dexes\_20, Dignity\_23, Dinger\_16, Discoknowium\_17, Dixon\_17, Doom\_20, Dorothea\_24, DrFeelGood\_18, Drake55\_23, DreamCatcher\_22, DreamTeam1\_21, Dreamboat\_20, DropBear\_20, Dublin\_16, DudeLittle\_21, Dulcie\_18, Duplo\_24, Dussy\_20, Dwayne\_13, Dynamix\_20, EZMoney23\_25, EagleEye\_23, Ebony\_21, Echild\_21, Eddasa\_14, EdogawaKiddo\_20, Edtherson\_20, Eidsmoe\_22, Ejemplo\_13, ElTiger69\_17, Elephantoon\_22, Emaanora\_15, EmyBug\_22, EnochSoames\_14, EnzoK\_19, Equemioh13\_23, EricB\_24, Erik\_16, Esperer\_13, Espica\_16, Espresso\_19, Et2Brutus\_20, Euphoria\_19, EvilGenius\_23, Expelliarmus\_16, ExplosioNervosa\_22, Eyeball\_19, Fajezeel\_21, Fameo\_21, Fascinus\_18, Fayely\_22, Fenn\_20, Fibonacci\_21, FiringLine\_21, First\_0021, Flare16\_21, Flaverint\_21, ForGetIt\_17, Forsytheast\_18, Francis47\_19, Fred313\_20, Froghopper\_20, Fushigi\_20, GMonster\_18, GageAP\_21, Gail\_20, Gandalf20\_20, Garak\_25, GaugeLDP\_23, George\_16, Georgie2\_22, Ghoulyboy\_17, Gilberta\_21, Giroux\_20, Gladiator\_24, Goby\_13, Godpower\_14, Gollum\_16, Gompeii16\_19, Graduation\_21, Gratitude\_22, GrecoEtereo\_20, GreedyLawyer\_24, Greg\_21, Groundhog\_16, Gruunaga\_24, Gwendoluna\_21, Gyzlar\_21, Hami1\_21, Hammer\_24, HanShotFirst\_19, Hanray\_21, Harlequin\_16, HarryHoudini\_23, HarryOW\_20, Heathen\_20, Heffalump\_23, HelDan\_20, Helmet\_25, Herbertwm\_18, Hermia\_21, HermioneGrange\_19, Hexamo\_24, Hippo\_13, Hiro\_16, Horex\_21, Homines\_19, Hoot\_24, Hope4ever\_19, HortumSL17\_22, HuhtaEnerson15\_17, Hutc2\_21, Hydra\_15, ILeeKay\_21, Ichabod\_20, Idleandcovert\_20, IgnatiusPatJac\_18, Indigo\_13, Indra\_24, Insomnia\_21, Inyanga\_18, Iqorha\_18, IronMan\_23, Isca\_20, Isiphiwo\_24, Itza\_13, Iwokeuplikedis\_22, JC27\_21, JF2\_20, JF4\_20, Jaan\_24, Jabiru\_17, Jabith\_21, JackSparrow\_20, Jash\_14, Jasper\_20, Jeeves\_20, Jeffabunny\_24, Jerm2\_20, Jerm\_23, Jester\_16, JewelBug\_24, Jiawan\_21, Jordennis\_24, Jorgensen\_19, Joselito\_21, JoshKayV\_23, Journey13\_19, Jovo\_17, Jsquared\_20, JuliaChild\_21, KBG\_20, KSSJEB\_19, Kachowdy\_20, Kalpine\_24, Kanely\_20, Katalie\_14, Kazan\_24, Kenmech\_22, Kerberos\_24, Keziacharles14\_20, Killigrew\_17, Kimona\_17, KingCyrus\_23, Kinmap\_20, Kipper29\_24, Koduck\_21, Koko\_24, Krishelle\_16, Kugel\_20, KyMonks1A\_21, Kykar\_17, L5\_21, LadyBird\_21, Lamina13\_19, Landor\_22, Lannister\_14, Larenn\_22, Legacy\_13, Leogania\_23, Lev2\_17, Leviathan\_23, Leviticus\_13, Licorice\_21, Lika\_13, LilBib\_20, LiITurb\_23, Lilbunny\_24, Lilleskat\_20, Lillie\_16, LionsBait\_22, LittleCherry\_17, Lockley\_19, Lokk\_24, LoneWolf\_22, Lopton\_20, Lorelei\_13, Loser\_24, Luchador\_22, Lucivia\_21, Lucyedi\_22, MA5\_20, MK4\_20, MPlant7149\_18, MaCh\_21, Mabel\_21, Magnar\_19, Magnito\_18, MajorMajor\_20, Makemake\_19, Malec\_22, Maminiaina\_22, Manatee\_20, Maneekul\_13, Marcell\_19, Marchesa\_20, Marchy\_18, Marco3\_19, Marge\_20, Maroc7\_18, Marsha\_19, MaryBeth\_19, MarysWell\_16, McFly\_24, McGuire\_20, McSinger\_20, MetalQZJ\_19, Micasa\_17, Michley\_19, MiculUcigas\_21, Midas2\_17, Miko\_24, Milcery\_17, MissWhite\_21, Mkhuseleli\_20, Molly\_20, Monet\_21, Moose\_18, MrGordo\_19, Mryolo\_18, Mulciber\_21, Mule\_19, Munch\_21, Museum\_21, MyraDee\_18, Myxus\_22, NEHalo\_19, NaSiaTalie\_21, Nabi\_13, Naca\_17, Naiad\_16, Naira\_20, Naji\_24, Nancinator\_16, Nanodon\_15, Natosaleda\_16, NearlyHeadless\_17, Neeharika16\_24, Nerdos\_13, Nerujay\_20, Newrala\_24, Nhonho\_19, NicoleTera\_25, Niza\_21, Norz\_21, NothingSpecial\_23, Odin\_20, Ohno789\_19, Oliynyk\_14, Onglai\_21, Oogway\_18, Orange\_21, Ozzie\_13, OzzyJ\_14, PSullivan\_21, PacerPaul\_19, PackMan\_22, PainterBoy\_22, Papez\_21, Paphu\_18, Paraselene\_18, Pari\_20, Parliament\_18, Partridge\_16, PascalRango\_18, PattyP\_21, Payneful\_19, Pelly\_20, Pepe\_20, Perseus\_20, Petersenfast\_20, Peterson\_22,

Petp2012\_21, Petruchio\_19, PetterN\_18, Ph8s\_22, Phaded\_24, Phaeder\_22, PhailMary\_15, Phantastic\_20, Pharaoh\_21, PherrisBueller\_20, Phettuccine\_13, Phillis\_17, PhineBark\_19, Phlei\_16, Phlippers\_18, Phlorence\_17, Phonnegut\_22, Phrankenstien\_16, PhrostyMug\_19, PickleBack\_17, PinkPlastic\_18, Pinto\_21, Pioneer\_22, Pippin\_21, Piro94\_22, Pistachio\_21, Pita2\_21, Pmask\_24, Polyphemos\_23, Pomar16\_24, Power\_21, Priamo\_24, Prinash11\_18, Priya\_22, ProMouse\_18, Pukovnik\_23, Puppy\_21, QTRlifeCrisis\_19, Qobbit\_22, QueenB2\_21, QueenBeesly\_21, Quokka\_19, RER2\_9, Rachaly\_24, Rahalelujah\_20, Raid\_20, Rajelicia\_19, Rana\_13, Rasputin\_16, RedBear\_15, RedRock\_24, Refuge\_24, Retro23\_21, RexFury\_16, Rhodalysa\_16, Rhynn\_19, RidgeCB\_19, Rifter\_24, Ringer\_19, Roary\_17, Rockstar\_20, Rohr\_20, Roksolana\_24, Rubeus\_20, Rufus\_20, Ruotula\_18, Rusticus\_14, Rutherferd\_21, RyeScarlet\_23, STLscum\_20, Sachima\_20, Sagefire\_20, Saintus\_17, Salz\_21, Sandaddy\_18, Sanya\_18, SarFire\_19, SarahRose\_13, SaturnRing\_20, Scherzo\_22, Scorpio\_18, Scout\_20, Scowl\_20, Seabiscuit\_21, Seanderson\_20, SemperFi\_23, Serenity\_20, Sham4\_21, SheaKeira\_21, ShortQueendom\_18, Shuman\_16, Sibs6\_21, SkiPole\_21, Sknot\_22, Slagathor\_20, Smairt\_20, Smeadley\_17, Smeagan\_23, Smeagol\_21, SmellyB\_24, SnapTap\_21, Snape\_21, Snazzy\_17, Snorlax\_13, Solon\_19, SororFago\_20, Sorpresa\_19, South40\_14, SpikeBT\_21, Spouty\_22, Squee\_20, StCroix\_16, StarStuff\_24, Steamy\_22, Stephig9\_17, StewieG\_18, StrongArm\_18, Sujidade\_14, Sumter\_18, Sunhee\_19, SunsetPointe\_13, Sunshine924\_18, SuperAwesome\_24, SuperCallie99\_24, Superchunk\_20, Swann\_16, SweetiePie\_21, SwirlSquare\_23, Swirley\_17, SwissCheese\_19, Switzer\_20, Swole\_21, SydNat\_17, TNguyen7\_20, TWAMP\_16, TagePhighter\_14, Takoda\_16, Target\_21, TarsusIV\_21, Tarynearl\_16, Tasp14\_20, Temprado\_25, Teodoridan\_17, Terrific\_25, Theia\_15, TheloniousMonk\_21, Thor\_19, Tiger\_17, Timothy\_21, TinyTimmy\_21, TipsytheTRex\_20, Toaka\_20, Toma\_13, Tomathan\_24, ToneTone\_22, Topgun\_19, Tote\_21, Traft412\_21, Travvers\_24, Treddle\_21, Tripl3t\_20, Tristan\_22, Triste\_13, Trixie\_24, Trooper\_21, Trouble\_19, TuanPN\_13, Tubs\_22, Tucker\_24, Turbido\_23, Turj99\_18, Twigg\_17, TwoPeat\_20, U2\_19, Ugenie5\_19, UhSalsa\_16, UnionJack\_17, Unstoppable\_13, Updawg\_23, Urza\_13, VA6\_21, VC3\_24, Vanisoa\_20, VieEnRose\_13, Violet\_18, VohminGhazi\_24, Watermelon\_21, WeiHuaDA\_27, Werner\_13, Whabigail7\_23, Whatever\_13, Wheeler\_19, WideWale\_23, Wiks\_24, Wilkins\_19, WunderPhul\_24, XianYue\_21, Yasdn13\_13, Yecey3\_21, Yogi\_16, Yokurt\_24, Yoncess\_16, Zaka\_24, Zeeculate\_18, Zemlya\_14, Zephyr\_19, Zeuska\_20, Zimmer\_23, Zolita\_16, Zulu\_24,

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

- Bruns\_18, Izzy\_14, Lesedi\_18, Levia\_18, LunarLander\_19, RGL3\_9,

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

- ACFishhook\_22, AbbysRanger\_20, Abdiel\_20, Achebe\_20, Aglet\_22, AgronaGT15\_22, Albee\_20, Alberto7\_21, Alsaber\_14, Alvy\_15, Amela\_13, Amethyst\_13, Anaysia\_23, Andris\_13, Animus\_14, Annyong\_20, Anon\_21, Anubis\_24, Arturo\_19, AugsMagnumOpus\_24, AvatarAhPeg\_21, Avle17\_20, Axiom\_14, Baby16\_20, BabyRay\_20, Backyardigan\_20, Badger\_20, BangNhom\_20, BartholomewSD\_15, Bartimeaus\_20, Battleship\_24, Beauxregard13\_22, BellusTerra\_20, Bigflo\_22, Blackmoor\_20, Bombshell\_20, Boohoo\_23, Bowden\_14, BreSam8\_22, BroPlease\_14, Broseidon\_20, Bruiser\_20, BubbleTrouble\_20, Bumblebee11\_20, Burger\_19, BuzzBuzz\_21, Bxz2\_21, Caelakin\_20, Caelum\_14, Calvinny\_23, Camperdownii\_19, Caviar\_21, Celery\_16, CentreCat\_20, Cerulean\_21, ChampagnePapi\_21, Chaph\_20, Chupacabra\_20, Cici\_20, Cindaradix\_19, Cintron\_20, Citius\_20, Clarenza\_20, Cocoaberry\_20, Colbster\_22, Commander\_20,

Conan\_14, Connomayer\_20, Cullens\_22, DaHudson\_22, Daishi\_21, Datway\_20, Daudau\_13, Deano\_20, DekHockey33\_23, Dexers\_12, Dhanush\_20, Diane\_13, Dieselweasel\_22, DirtyDunning\_20, DontArgue\_19, Drake94\_19, DroogsArmy\_21, Druantia\_20, DustyMartin\_23, ELB20\_12, Eagle\_19, Eaglepride\_21, Eapen\_20, Edison31\_20, ElGato\_14, EpicPhail\_22, Epsocamisio\_23, Eris\_20, Eros\_20, Eurydice\_20, Farber\_22, Fernando\_22, Florean\_20, Flux\_20, FlyCatcher\_24, Funston\_20, Gadost\_20, Gemma\_22, GingkoMaracino\_22, GirlDinner\_13, Goose\_20, GreenWeasel\_15, Grif\_22, Groupthink\_23, Grub\_22, Grum1\_22, GtownJaz\_22, HINdeR\_20, Haizum\_13, HamSlice\_19, Hank144\_14, Happiness\_20, HashRod\_23, HaveUMetTed\_23, Heliosoles\_22, Hercules11\_22, Holli\_20, Hookmount\_21, Houdini22\_20, Huxley\_20, ICleared\_20, Iceman\_21, Iracema64\_21, Issmi\_14, JHC117\_22, JSwag\_23, Janus\_14, Jaykayelowell\_20, JenCasNa\_22, JeppNRM\_23, JetBlade\_20, Jevington\_15, Jobu08\_22, JoongJeon\_20, KADY\_23, KFPoly\_20, Kaine\_13, Kalb97\_23, Kalnoky\_23, Kampy\_20, Katalie136\_20, KatherineG\_23, Kingmustik0402\_20, KittenMittens\_19, Koan\_19, Koreni\_19, Kratak\_20, Kremtemulon\_20, Kristoff\_21, Kyee\_20, LBerry\_22, LHTSCC\_21, Lambert1\_21, LappelDuVide\_20, LarryKay\_22, LastResort\_23, Lemur\_20, LeoAvram\_20, Lilith\_22, LittleB\_20, LittleGuy\_20, LochMonster\_20, Loofah\_14, Looper\_24, Lorenzo\_20, Louie6\_22, Iowa\_22, LugYA\_24, Lunsford\_21, MadMarie\_22, Mainiac\_22, Malinsilva\_24, Manu\_23, MarQuardt\_22, Marav\_16, Margo\_21, Marie\_22, Marius\_23, Maverick\_20, Maxo\_20, Mayonnaise\_20, Mazhar510\_20, Medusa\_20, MeeZee\_20, Melvin\_20, Methuselah\_21, Microwolf\_22, Millski\_20, MinecraftSteve\_24, Miramae\_20, Misomonster\_24, MoneyMay\_22, Morpher26\_20, Morrow\_20, MuchMore\_24, Mundrea\_20, Nebs\_20, Nebulosus\_23, Nedarya\_22, Nemo27\_20, Nishikigoi\_13, Noella\_21, Noelle\_20, Norbert\_20, NorthStar\_20, NotAPhaseMom\_20, Nyxis\_20, OKCentral2016\_20, OKaNui\_21, Obama12\_21, Ohfah\_20, OlanP\_22, Ollie\_22, Omar\_14, Oofda\_24, P28Green\_22, PGHhamlin\_24, PP\_30, Pablito\_13, Paedore\_13, Palestino\_20, Panamaxus\_20, Paolo\_15, Pavo\_14, Pawn\_22, PeaceMeal1\_19, Peaches\_20, Pembroke\_22, Penny1\_22, Perplexer\_20, PeterPeter\_20, PetiteSangsue\_20, Phacado\_20, Felipe\_20, Phighter1804\_20, PhishRPhriends\_21, Phoebe\_22, Phontbonne\_20, Phoxy\_22, Phranny\_23, Pipcraft\_20, Pocahontas\_21, Polymorphads\_20, Poompha\_19, Popcicle\_21, PotatoSplit\_23, Provolone\_14, Puginator\_15, Pumbaa\_20, PurpleHaze\_22, QuinnKiro\_20, R4\_13, ReMo\_23, Reba\_23, Rebeuca\_21, Relief\_20, Remus\_23, ResDef\_21, RhynO\_21, Romney\_20, Roosevelt\_20, Rosa24\_19, Rosalind\_23, Rowdy\_23, Ruin\_20, Rummer\_22, Sabertooth\_20, Sabia\_22, Sabinator\_22, Saftant\_13, Scamp\_20, SeniorClean\_19, Severus\_19, Shaka\_20, Shapes\_23, ShayRa\_24, Sheen\_22, SheldonCooper\_21, Shygu2\_20, Skipitt\_20, Snickers\_22, SoYo\_22, SoilDragon\_22, Soshari\_24, Soups\_23, Sparxx\_20, Speedwell\_18, Spike509\_22, Spino\_20, SqueakyClean\_14, Stagni\_22, Stasia\_21, StepMih\_22, Stink\_21, Strosahl\_23, Superstar\_16, Switzerland\_23, Taquarus\_20, Taurus\_22, Tefunt\_13, Texage\_20, Thanksgivukkah\_20, Thestral\_14, Tiffany\_22, Timshel\_21, TinaBelcher\_13, TinaFeyge\_20, TinyPebbles\_22, Tinybot\_19, TiroTheta9\_20, Todacoro\_21, Topanga\_20, Toro\_23, Trike\_18, Triumph\_15, TroyPia\_20, TrvxScott\_12, Twister\_20, TygerBlood\_20, Ulysses\_19, Vanseggelen\_17, Verabelle\_14, Veracruz\_20, Verse\_13, Vix\_22, Waits\_23, WalterMcMickey\_20, Wander\_20, Warrior24\_24, Watson\_22, Wilbur\_20, Wile\_20, Wizard007\_20, Wooldri\_24, Xena\_20, YoSam321\_20, Yosif\_14, Zainub\_15, Zetzy\_21, phiCAM\_14, phiHau3\_15,

### Summary by start number:

Start 56:

- Found in 22 of 1008 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 20 of 912
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia\_23 (A15), Anon\_21 (A15), Battleship\_24 (A15), Boohoo\_23 (A15), DekHockey33\_23 (A15), Epsocamisio\_23 (A15), JSwag\_23 (A15), KatherineG\_23 (A15), LastResort\_23 (A15), Looper\_24 (A15), MinecraftSteve\_24 (A15), Nebulosus\_23 (A15), Oofda\_24 (A15), ReMo\_23 (A15), Remus\_23 (A15), Rosalind\_23 (A15), ShayRa\_24 (A15), Soups\_23 (A15), Strosahl\_23 (A15), Switzerland\_23 (A15), Waits\_23 (A15), Warrior24\_24 (A15),

#### Start 58:

- Found in 16 of 1008 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 5 of 912
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Amela\_13 (BD3), BroPlease\_14 (BD4), GreenWeasel\_15 (BD4), Paolo\_15 (BD2), phiCAM\_14 (BD3), phiHau3\_15 (BD4),

#### Start 59:

- Found in 1 of 1008 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 912
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nedarya\_22 (A15),

#### Start 60:

- Found in 661 of 1008 ( 65.6% ) of genes in pham
- Manual Annotations of this start: 586 of 912
- Called 99.1% of time when present
- Phage (with cluster) where this start called: 20ES\_21 (A2), 40AC\_24 (A17), A6\_17 (A1), AFIS\_19 (A1), AN3\_21 (A2), AN9\_24 (A2), ANI8\_24 (A2), Aaronocolus\_13 (BD1), AbbyPaige\_23 (A2), Abbyshoes\_20 (A1), Abrogate\_200 (A1), Acme\_21 (A1), Acolyte\_21 (A2), Adahisdi\_20 (A1), Adzzy\_22 (A2), Aeneas\_21 (A1), Agaliana\_19 (A1), Agape74\_23 (A2), AgentM\_17 (A5), Airmid\_17 (A5), Ajay\_19 (A1), Alatin\_16 (CA), Aliter\_22 (A9), Alma\_22 (A9), Alpacados\_15 (CA), Alsfro\_23 (A1), Altman\_21 (A1), Alvin\_20 (A1), Aneem\_21 (A11), Anglerfish\_20 (A1), AngryOrchard\_15 (CA), AnnaL29\_24 (A2), Anselm\_21 (A2), Anthony\_20 (A20), AppleCloud\_14 (CA), Applejack\_19 (A1), Aragog\_17 (A5), Arcanine\_20 (A1), ArcherNM\_23 (A2), Archetta\_17 (A5), Arissanae\_20 (A9), Arlo\_18 (A1), Artemis2UCLA\_24 (A6), Ashballer\_18 (A1), Asten\_13 (BD1), Astro\_17 (A8), Atkinbua\_20 (A1), B1\_18 (A3), BABullseye\_24 (A6), BK1\_17 (A1), BPBiebs31\_20 (A1), BabyBack\_23 (A2), BabyJohn\_19 (A3), Bachome\_21 (A11), BaconJack\_21 (A1), Bactobuster\_22 (A2), Baehexic\_22 (A2), Barriga\_19 (A1), BarrowTuph\_18 (A1), BarryBee\_15 (BD1), BeardedLady\_14 (BD1), Beatrix\_18 (A1), Beemo\_22 (A9), BeesKnees\_20 (A1), Belenaria\_16 (CA), Benedict\_17 (A5), BengiVuitton\_22 (A2), Benvolio\_21 (A2), Bethlehem\_19 (A1), Bexan\_18 (A1), BiancaTri92\_23 (A2), Big3\_19 (A1), BigMau\_21 (A1), BigPaolini\_20 (A1), Bigchungu\_19 (A1), Bigfoot\_18 (A1), BillKnuckles\_20 (A1), Bircsak\_19 (A1), BlessJoy\_24 (A6), Blinn1\_24 (A6), BluSpix\_19 (A1), Blue7\_24 (A6), BlueBird\_21 (A3), Blue\_19 (A1), Bluefalcon\_16 (A5), Bob3\_18 (A1), BobSwaget\_24 (A2), BobbyDazzler\_16 (CA), BogosyJay\_22 (A9), Bonamassa\_17 (A5), Bonanza\_16 (CA), Bones\_19 (A1), Bovely\_13 (BD1), Bowtie\_21 (A11), Bradman\_20 (A2), Bradshaw\_16 (CA), Brataylor\_14 (BD1), Briton15\_21 (A1), BryanRecycles\_14 (BD1), Bryce\_16 (CA), Bud\_21 (A11), Bugatti\_20 (A3), Buggy\_23 (A2), Burton\_20 (A1), Buttons\_20 (A1), Bxb1\_17 (A1), C3\_19 (A2), CRB1\_21 (A2), CactusRose\_18 (A1), Caliburn\_13 (BD1), Candra\_24 (A6), Caraxes\_20 (A2), Carlyle\_21 (A1), Catalina\_22



(A9), Celeste\_13 (BD1), Celia\_13 (BD6), Centaur\_23 (A2), Chadwick\_18 (A5), Chanagan\_18 (A1), Changeling\_24 (A2), Chargerpower\_21 (A), Charm\_21 (A9), Chartreuse\_24 (A6), Che12\_23 (A2), ChipMunk\_23 (A2), Chiqui\_19 (A3), Chucky\_13 (BD1), Ciao\_19 (A1), CloudWang3\_24 (A6), Colin\_25 (A2), Conceptll\_20 (A1), Conquerage\_22 (A9), Conspiracy\_17 (A5), Coog\_17 (A5), Cookiedough\_24 (A6), Corvo\_19 (A1), CosmicSans\_16 (CA), Crispicous1\_18 (A1), Crucio\_21 (A2), Cuco\_17 (A5), Cueylyss\_19 (A1), D29\_21 (A2), D32\_24 (A2), DBQu4n\_24 (A2), DD5\_20 (A1), DaVinci\_24 (A6), Dalmatian\_21 (A2), Danforth\_16 (A8), Danzina\_14 (BD1), Darrell\_23 (A9), DarthPhader\_22 (A12), Dattran\_14 (BD1), Deloris\_22 (A2), Dexes\_20 (A1), Dignity\_23 (A2), Dinger\_16 (CA), Discoknowium\_17 (A5), Dixon\_17 (A8), Doom\_20 (A1), Dorothea\_24 (A6), DrFeelGood\_18 (A1), Drake55\_23 (A2), DreamCatcher\_22 (A1), DreamTeam1\_21 (A9), Dreamboat\_20 (A1), DropBear\_20 (A3), Dublin\_16 (A5), DudeLittle\_21 (A2), Dulcie\_18 (A1), Duplo\_24 (A2), Dussy\_20 (A1), Dwayne\_13 (BD1), Dynamix\_20 (A1), EZMoney23\_25 (A2), EagleEye\_23 (A16), Ebony\_21 (A11), Echild\_21 (A2), Eddasa\_14 (BD1), EdogawaKiddo\_20 (A9), Edtherson\_20 (A1), Eidsmoe\_22 (A9), Ejemplo\_13 (BD1), ElTiger69\_17 (A5), Elephantoon\_22 (A9), Emaanora\_15 (BD1), EmyBug\_22 (A9), EnochSoames\_14 (BD1), EnzoK\_19 (A1), Equemioh13\_23 (A2), EricB\_24 (A6), Erik\_16 (CA), Esperer\_13 (BD1), Espica\_16 (CA), Espresso\_19 (A1), Et2Brutus\_20 (A11), Euphoria\_19 (A1), EvilGenius\_23 (A2), Expelliarmus\_16 (A8), ExplosioNervosa\_22 (A9), Eyeball\_19 (A1), Fajezeel\_21 (A1), Fameo\_21 (A2), Fascinus\_18 (A1), Fayely\_22 (A9), Fenn\_20 (A1), Fibonacci\_21 (A11), FiringLine\_21 (A2), First\_0021 (A2), Flare16\_21 (A2), Flaverint\_21 (A11), ForGetIt\_17 (A5), Forsytheast\_18 (A1), Francis47\_19 (A1), Fred313\_20 (A3), Froghopper\_20 (A1), Fushigi\_20 (A1), GMonster\_18 (A1), GageAP\_21 (A1), Gail\_20 (A14), Gandalf20\_20 (A1), Garak\_25 (A6), GaugeLDP\_23 (A2), George\_16 (A5), Georgie2\_22 (A2), Ghoulboy\_17 (A5), Gilberta\_21 (A11), Giroux\_20 (A3), Gladiator\_24 (A6), Goby\_13 (BD1), Godpower\_14 (BD1), Gollum\_16 (CA), Gompeii16\_19 (A1), Graduation\_21 (A1), Gratitude\_22 (A2), GrecoEtereo\_20 (A1), GreedyLawyer\_24 (A6), Greg\_21 (A1), Groundhog\_16 (A8), Gruunaga\_24 (A6), Gwendoluna\_21 (A1), Gyzlar\_21 (A1), Hami1\_21 (A1), Hammer\_24 (A6), HanShotFirst\_19 (A1), Hanray\_21 (A9), Harlequin\_16 (CA), HarryHoudini\_23 (A2), HarryOW\_20 (A1), Heathen\_20 (A3), Heffalump\_23 (A2), HelDan\_20 (A3), Helmet\_25 (A6), Herbertwm\_18 (A2), Hermia\_21 (A1), HermioneGrange\_19 (A1), Hexamo\_24 (A6), Hippo\_13 (BD1), Hiro\_16 (CA), Horex\_21 (A9), Homines\_19 (A1), Hoot\_24 (A6), Hope4ever\_19 (A1), HortumSL17\_22 (A9), HuhtaEnerson15\_17 (A5), Hutc2\_21 (A11), Hydra\_15 (BD1), ILeeKay\_21 (A1), Ichabod\_20 (A1), Idleandcovert\_20 (A3), IgnatiusPatJac\_18 (A1), Indigo\_13 (BD1), Indra\_24 (A6), Insomnia\_21 (A11), Inyanga\_18 (A1), Iqorha\_18 (A1), IronMan\_23 (A2), Isca\_20 (A3), Isiphiwo\_24 (A6), Itza\_13 (BD6), Iwokeuplikedis\_22 (A2), JC27\_21 (A1), JF2\_20 (A3), JF4\_20 (A3), Jaan\_24 (A2), Jabiru\_17 (A5), Jabith\_21 (A11), JackSparrow\_20 (A1), Jash\_14 (BD1), Jasper\_20 (A1), Jeeves\_20 (A14), Jeffabunny\_24 (A6), Jerm2\_20 (A1), Jerm\_23 (A2), Jester\_16 (CA), JewelBug\_24 (A6), Jiawan\_21 (A9), Jordennis\_24 (A6), Jorgensen\_19 (A1), Joselito\_21 (A11), JoshKayV\_23 (A2), Journey13\_19 (A2), Jovo\_17 (A5), Jsquared\_20 (A2), JuliaChild\_21 (A1), KBG\_20 (A1), KSSJEB\_19 (A1), Kachowdy\_20 (A3), Kalpine\_24 (A2), Kanely\_20 (A1), Katalie\_14 (BD1), Kazan\_24 (A6), Kenmech\_22 (A1), Kerberos\_24 (A2), Keziacharles14\_20 (A9), Killigrew\_17 (A1), Kimona\_17 (A19), KingCyrus\_23 (A2), Kinmap\_20 (A21), Kipper29\_24 (A6), Koduck\_21 (A2), Koko\_24 (A6), Krishelle\_16 (CA), Kugel\_20 (A1), KyMonks1A\_21 (A1), Kykar\_17 (A1), L5\_21 (A2), LadyBird\_21 (A2), Lamina13\_19 (A1), Landor\_22 (A2), Lannister\_14 (BD1), Larenn\_22 (A2), Legacy\_13 (BD1), Leogania\_23 (A2), Lev2\_17 (A5), Leviathan\_23 (A2), Leviticus\_13 (BD1), Licorice\_21 (A1), Lika\_13 (BD1), LilBib\_20 (A1), LilTurb\_23 (A2), Lilbunny\_24 (A6), Lilleskat\_20 (A9), Lillie\_16

(CA), LionsBait\_22 (A2), LittleCherry\_17 (A5), Lockley\_19 (A1), Lokk\_24 (A2), LoneWolf\_22 (A9), Lopton\_20 (A1), Lorelei\_13 (BD1), Loser\_24 (A2), Luchador\_22 (A14), Lucivia\_21 (A11), Lucyedi\_22 (A16), MA5\_20 (A3), MK4\_20 (A3), MPlant7149\_18 (A1), MaCh\_21 (A11), Mabel\_21 (A11), Magnar\_19 (A1), Magnito\_18 (A1), MajorMajor\_20 (A2), Makemake\_19 (A1), Malec\_22 (A2), Maminaiaina\_22 (A9), Manatee\_20 (A1), Maneekul\_13 (BD1), Marcell\_19 (A1), Marchesa\_20 (A3), Marchy\_18 (A1), Marco3\_19 (A1), Marge\_20 (A1), Maroc7\_18 (A1), Marsha\_19 (A1), MaryBeth\_19 (A1), MarysWell\_16 (A5), McFly\_24 (A6), McGuire\_20 (A1), McSinger\_20 (A1), MetalQZJ\_19 (A1), Micasa\_17 (A5), Michley\_19 (A1), MiculUcigas\_21 (A2), Midas2\_17 (A5), Miko\_24 (A2), Milcery\_17 (A5), MissWhite\_21 (A2), Mkhuseleli\_20 (A1), Molly\_20 (A1), Monet\_21 (A1), Moose\_18 (A1), MrGordo\_19 (A1), Mryolo\_18 (A1), Mulciber\_21 (A11), Mule\_19 (A1), Munch\_21 (A11), Museum\_21 (A1), MyraDee\_18 (A18), Myxus\_22 (A9), NEHalo\_19 (A1), NaSiaTalie\_21 (A2), Nabi\_13 (BD1), Naca\_17 (A5), Naiad\_16 (CA), Naira\_20 (A1), Naji\_24 (A2), Nancinator\_16 (CA), Nanodon\_15 (BD1), Natosaleda\_16 (CA), NearlyHeadless\_17 (A8), Neeharika16\_24 (A6), Nerdos\_13 (BD1), Nerujay\_20 (A1), Newrala\_24 (A6), Nhonho\_19 (A1), NicoleTera\_25 (A2), Niza\_21 (A1), Norz\_21 (A1), NothingSpecial\_23 (A2), Odin\_20 (A2), Ohno789\_19 (A1), Oliynyk\_14 (BD1), Onglai\_21 (A9), Oogway\_18 (A1), Orange\_21 (A11), Ozzie\_13 (BD1), OzzyJ\_14 (BD1), PSullivan\_21 (A1), PacerPaul\_19 (A1), PackMan\_22 (A9), PainterBoy\_22 (A16), Papez\_21 (A1), Paphu\_18 (A1), Paraselene\_18 (A1), Pari\_20 (A1), Parliament\_18 (A1), Partridge\_16 (CA), PascalRango\_18 (A1), PattyP\_21 (A1), Payneful\_19 (A1), Pelly\_20 (A1), Pepe\_20 (A1), Perseus\_20 (A1), Petersenfast\_20 (A11), Peterson\_22 (A1), Petp2012\_21 (A1), Petruccio\_19 (A1), PetterN\_18 (A5), Ph8s\_22 (A2), Phaded\_24 (A2), Phaeder\_22 (A9), PhailMary\_15 (CA), Phantastic\_20 (A3), Pharaoh\_21 (A12), PherrisBueller\_20 (A1), Phettuccine\_13 (BD1), Phillis\_17 (A8), PhineBark\_19 (A1), Phlei\_16 (A13), Philipppers\_18 (A1), Phlorence\_17 (A5), Phonnegut\_22 (A9), Phrankenstein\_16 (CA), PhrostyMug\_19 (A1), PickleBack\_17 (A5), PinkPlastic\_18 (A1), Pinto\_21 (A1), Pioneer\_22 (A9), Pippin\_21 (A1), Piro94\_22 (A2), Pistachio\_21 (A3), Pita2\_21 (A1), Pmask\_24 (A6), Polyphemus\_23 (A6), Pomar16\_24 (A2), Power\_21 (A2), Priamo\_24 (A6), Prinash11\_18 (A5), Priya\_22 (A9), ProMouse\_18 (A1), Pukovnik\_23 (A2), Puppy\_21 (A3), QTRlifeCrisis\_19 (A1), Qobbit\_22 (A9), QueenB2\_21 (A2), QueenBeesly\_21 (A2), Quokka\_19 (A2), RER2\_9 (CA), Rachaly\_24 (A2), Rahalelujah\_20 (A9), Raid\_20 (A1), Rajelicia\_19 (A1), Rana\_13 (BD1), Rasputin\_16 (CA), RedBear\_15 (BD1), RedRock\_24 (A2), Refuge\_24 (A12), Retro23\_21 (A2), RexFury\_16 (CA), Rhodalysa\_16 (CA), Rhynn\_19 (A1), RidgeCB\_19 (A1), Rifter\_24 (A6), Ringer\_19 (A1), Roary\_17 (A8), Rockstar\_20 (A3), Rohr\_20 (A1), Roksolana\_24 (A6), Rubeus\_20 (A1), Rufus\_20 (A1), Ruotula\_18 (A1), Rusticus\_14 (BD1), Rutherford\_21 (A1), RyeScarlet\_23 (A9), STLscum\_20 (A1), Sachima\_20 (A9), Sagefire\_20 (A1), Saintus\_17 (A8), Salz\_21 (A11), Sandaddy\_18 (A1), Sanya\_18 (A1), SarFire\_19 (A1), SarahRose\_13 (BD1), SaturnRing\_20 (A3), Scherzo\_22 (A9), Scorpia\_18 (A5), Scout\_20 (A3), Scowl\_20 (A1), Seabiscuit\_21 (A1), Seanderson\_20 (A1), SemperFi\_23 (A2), Serenity\_20 (A2), Sham4\_21 (A11), SheaKeira\_21 (A9), ShortQueendom\_18 (A1), Shuman\_16 (CA), Sibs6\_21 (A1), SkiPole\_21 (A1), Sknot\_22 (A2), Slagathor\_20 (A1), Smairt\_20 (A1), Smeadley\_17 (A8), Smeagan\_23 (A2), Smeagol\_21 (A1), SmellyB\_24 (A6), SnapTap\_21 (A2), Snape\_21 (A11), Snazzy\_17 (A1), Snorlax\_13 (BD1), Solon\_19 (A1), SororFago\_20 (A14), Sorpresa\_19 (A1), South40\_14 (BD1), SpikeBT\_21 (A1), Spouty\_22 (A9), Squee\_20 (A1), StCroix\_16 (CA), StarStuff\_24 (A2), Steamy\_22 (A12), Stephig9\_17 (A8), StewieG\_18 (A1), StrongArm\_18 (A1), Sujidade\_14 (BD1), Sumter\_18 (A1), Sunhee\_19 (A14), SunsetPointe\_13 (BD1), Sunshine924\_18 (A1), SuperAwesome\_24 (A6), SuperCallie99\_24 (A6), Superchunk\_20 (A2), Swann\_16 (CA), SweetiePie\_21 (A2), SwirlSquare\_23 (A2), Swirley\_17 (A5), SwissCheese\_19

(A1), Switzer\_20 (A1), Swole\_21 (A1), SydNat\_17 (A5), TNguyen7\_20 (A3), TWAMP\_16 (CA), TAgePighter\_14 (BD1), Takoda\_16 (CA), Target\_21 (A1), TarsusIV\_21 (A2), Tarynearal\_16 (A5), Tasp14\_20 (A1), Temprado\_25 (A6), Teodoridan\_17 (A1), Terrific\_25 (A2), Theia\_15 (A5), TheloniousMonk\_21 (A1), Thor\_19 (A1), Tiger\_17 (A5), Timothy\_21 (A11), TinyTimmy\_21 (A11), TopsytheTRex\_20 (A2), Toaka\_20 (A9), Toma\_13 (BD1), Tomathan\_24 (A2), ToneTone\_22 (A6), Topgun\_19 (A1), Tote\_21 (A1), Traft412\_21 (A1), Travvers\_24 (A2), Treddle\_21 (A1), Tripl3t\_20 (A1), Tristan\_22 (A2), Triste\_13 (BD1), Trixie\_24 (A2), Trooper\_21 (A2), Trouble\_19 (A1), TuanPN\_13 (BD1), Tubs\_22 (A9), Tucker\_24 (A6), Turbido\_23 (A2), Turj99\_18 (A1), Twigg\_17 (A5), TwoPeat\_20 (A1), U2\_19 (A1), Ugenie5\_19 (A9), UhSalsa\_16 (CA), UnionJack\_17 (A5), Unstoppable\_13 (BD1), Updawg\_23 (A2), Urza\_13 (BD6), VA6\_21 (A2), VC3\_24 (A2), Vanisoa\_20 (A9), VieEnRose\_13 (BD6), Violet\_18 (A1), VohminGhazi\_24 (A6), Watermelon\_21 (A1), WeiHuaDA\_27 (A2), Werner\_13 (BD1), Whabigail7\_23 (A2), Whatever\_13 (BD1), Wheeler\_19 (A1), WideWale\_23 (A2), Wiks\_24 (A6), Wilkins\_19 (A1), WunderPhul\_24 (A6), XianYue\_21 (A2), Yasdniil\_13 (BD1), Yecey3\_21 (A9), Yogi\_16 (CA), Yokurt\_24 (A6), Yoncess\_16 (CA), Zaka\_24 (A6), Zeeculate\_18 (A1), Zemlya\_14 (BD1), Zephyr\_19 (A1), Zeuska\_20 (A1), Zimmer\_23 (A12), Zolita\_16 (A5), Zulu\_24 (A6),

Start 61:

- Found in 264 of 1008 ( 26.2% ) of genes in pham
- Manual Annotations of this start: 249 of 912
- Called 99.6% of time when present
- Phage (with cluster) where this start called: ACFishhook\_22 (A3), AbbysRanger\_20 (A4), Abdiel\_20 (A4), Achebe\_20 (A4), Aglet\_22 (A3), AgronaGT15\_22 (A3), Albee\_20 (A4), Alberto7\_21 (A4), Annyong\_20 (A4), Anubis\_24 (A3), Arturo\_19 (A4), AugsMagnumOpus\_24 (A3), AvatarAhPeg\_21 (A4), Avle17\_20 (A4), Baby16\_20 (A4), BabyRay\_20 (A3), Backyardigan\_20 (A4), Badger\_20 (A4), BangNhom\_20 (A4), Bartimeaus\_20 (A4), Beauxregard13\_22 (A3), BellusTerra\_20 (A4), Bigflo\_22 (A3), Blackmoor\_20 (A4), Bombshell\_20 (A4), BreSam8\_22 (A3), Broseidon\_20 (A4), Bruiser\_20 (A4), BubbleTrouble\_20 (A4), Bumblebee11\_20 (A4), Burger\_19 (A4), BuzzBuzz\_21 (A3), Bxz2\_21 (A3), Caelakin\_20 (A4), Calvinny\_23 (A3), Camperdownii\_19 (A4), Caviar\_21 (A3), CentreCat\_20 (A4), Cerulean\_21 (A4), ChampagnePapi\_21 (A4), Chaph\_20 (A4), Chupacabra\_20 (A10), Cici\_20 (A4), Cindaradix\_19 (A4), Cintron\_20 (A4), Citius\_20 (A4), Clarenza\_20 (A4), Cocoaberry\_20 (A4), Colbster\_22 (A3), Commander\_20 (A4), Connomayer\_20 (A4), Cullens\_22 (A3), DaHudson\_22 (A3), Daishi\_21 (A3), Datway\_20 (A4), Deano\_20 (A4), Dhanush\_20 (A4), Dieselweasel\_22 (A3), DirtyDunning\_20 (A4), DontArgue\_19 (A10), Drake94\_19 (A10), Druantia\_20 (A4), DustyMartin\_23 (A10), Eagle\_19 (A4), Eaglepride\_21 (A10), Eapen\_20 (A4), Edison31\_20 (A10), EpicPhail\_22 (A3), Eris\_20 (A4), Eros\_20 (A4), Eurydice\_20 (A4), Farber\_22 (A3), Fernando\_22 (A3), Florean\_20 (A4), Flux\_20 (A4), Funston\_20 (A4), Gadost\_20 (A4), Gemma\_22 (A3), GingkoMaracino\_22 (A3), Goose\_20 (A10), Grif\_22 (A3), Groupthink\_23 (A3), Grub\_22 (A3), Grum1\_22 (A3), GtownJaz\_22 (A3), HamSlice\_19 (A4), Happiness\_20 (A4), HashRod\_23 (A3), HaveUMetTed\_23 (A3), Heliosoles\_22 (A3), Hercules11\_22 (A3), Holli\_20 (A4), Hookmount\_21 (A3), Houdini22\_20 (A4), Huxley\_20 (A4), ICleared\_20 (A4), Iceman\_21 (A4), Iracema64\_21 (A4), JHC117\_22 (A3), Jaykayelowell\_20 (A4), JenCasNa\_22 (A3), JeppNRM\_23 (A3), JetBlade\_20 (A4), Jobu08\_22 (A3), JoongJeon\_20 (A4), KADY\_23 (A3), KFPoly\_20 (A4), Kalb97\_23 (A3), Kalnoky\_23 (A3), Kampy\_20 (A4), Katalie136\_20 (A4), Kingmustik0402\_20 (A4), KittenMittens\_19 (A10), Koan\_19 (A4), Koreni\_19 (A4), Kratark\_20 (A4), Kremtemulon\_20 (A4), Kristoff\_21 (A10), Kyee\_20 (A4), LBerry\_22 (A3), LHTSCC\_21

(A4), Lambert1\_21 (A3), LappelDuVide\_20 (A4), LarryKay\_22 (A3), Lemur\_20 (A4), LeoAvram\_20 (A4), Lilith\_22 (A3), LittleB\_20 (A4), LittleGuy\_20 (A4), LochMonster\_20 (A4), Lorenzo\_20 (A4), Louie6\_22 (A3), Iowa\_22 (A3), LugYA\_24 (A3), Lunsford\_21 (A4), MadMarie\_22 (A3), Mainiac\_22 (A3), Malinsilva\_24 (A3), Manu\_23 (A3), MarQuardt\_22 (A3), Margo\_21 (A3), Marie\_22 (A3), Marius\_23 (A3), Maverick\_20 (A4), Maxo\_20 (A4), Mayonnaise\_20 (A4), Mazhar510\_20 (A4), Medusa\_20 (A4), MeeZee\_20 (A4), Melvin\_20 (A4), Methuselah\_21 (A3), Microwolf\_22 (A3), Millski\_20 (A4), Miramae\_20 (A4), Misomonster\_24 (A3), MoneyMay\_22 (A3), Morpher26\_20 (A4), Morrow\_20 (A4), MuchMore\_24 (A3), Mundrea\_20 (A4), Nebs\_20 (A4), Nemo27\_20 (A4), Noella\_21 (A3), Noelle\_20 (A4), Norbert\_20 (A3), NorthStar\_20 (A4), NotAPhaseMom\_20 (A4), Nyxis\_20 (A4), OKCentral2016\_20 (A10), OKaNui\_21 (A4), Obama12\_21 (A4), Ohfah\_20 (A4), OlanP\_22 (A3), Ollie\_22 (A3), P28Green\_22 (A3), PGHhamlin\_24 (A3), Palestino\_20 (A4), Panamaxus\_20 (A3), Pawn\_22 (A3), PeaceMeal1\_19 (A10), Peaches\_20 (A4), Pembroke\_22 (A3), Penny1\_22 (A3), Perplexer\_20 (A4), PeterPeter\_20 (A4), PetiteSangsue\_20 (A4), Phacado\_20 (A4), Phelipe\_20 (A4), Phighter1804\_20 (A4), PhishRPhriends\_21 (A3), Phoebe\_22 (A3), Phontbonne\_20 (A4), Phoxy\_22 (A3), Phranny\_23 (A3), Pipcraft\_20 (A4), Pocahontas\_21 (A3), Polymorphads\_20 (A4), Poompha\_19 (A10), Popcicle\_21 (A3), PotatoSplit\_23 (A3), Pumbaa\_20 (A4), PurpleHaze\_22 (A3), QuinnKiro\_20 (A3), Reba\_23 (A3), Rebeuca\_21 (A10), Relief\_20 (A4), ResDef\_21 (A3), RhynO\_21 (A10), Romney\_20 (A4), Roosevelt\_20 (A4), Rosa24\_19 (A4), Rowdy\_23 (A10), Ruin\_20 (A4), Rummer\_22 (A3), Sabertooth\_20 (A4), Sabia\_22 (A3), Sabinator\_22 (A3), Scamp\_20 (A4), SenorClean\_19 (A4), Severus\_19 (A10), Shaka\_20 (A4), Shapes\_23 (A10), SheldonCooper\_21 (A4), Shygu2\_20 (A4), Skipitt\_20 (A4), Snickers\_22 (A3), SoYo\_22 (A3), SoilDragon\_22 (A3), Soshari\_24 (A3), Sparxx\_20 (A4), Spike509\_22 (A3), Spino\_20 (A4), Stagni\_22 (A3), Stasia\_21 (A4), Stink\_21 (A4), Taquarus\_20 (A4), Taurus\_22 (A3), Texage\_20 (A3), Thanksgivukkah\_20 (A4), Tiffany\_22 (A3), TinaFeyge\_20 (A4), TinyPebbles\_22 (A3), Tinybot\_19 (A4), TiroTheta9\_20 (A4), Todacoro\_21 (A3), Topanga\_20 (A10), Trike\_18 (A10), TroyPia\_20 (A4), Twister\_20 (A10), TygerBlood\_20 (A4), Ulysses\_19 (A4), Veracruz\_20 (A3), Vix\_22 (A3), WalterMcMickey\_20 (A10), Wander\_20 (A4), Watson\_22 (A3), Wilbur\_20 (A4), Wile\_20 (A4), Wizard007\_20 (A4), Wooldri\_24 (A3), Xena\_20 (A4), YoSam321\_20 (A4), Zetzy\_21 (A3),

Start 62:

- Found in 50 of 1008 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 41 of 912
- Called 92.0% of time when present
- Phage (with cluster) where this start called: Alsaber\_14 (BD3), Alvy\_15 (BD2), Amethyst\_13 (BD2), Andris\_13 (BD2), Animus\_14 (BD2), Axiom\_14 (BD2), BartholomewSD\_15 (BD2), Bowden\_14 (BD2), Caelum\_14 (BD2), Celery\_16 (BD3), Conan\_14 (BD3), Daudau\_13 (BD2), Dexers\_12 (BD3), Diane\_13 (BD2), ELB20\_12 (BD2), ElGato\_14 (BD3), GirlDinner\_13 (BD2), Haizum\_13 (BD2), Hank144\_14 (BD2), Issmi\_14 (BD2), Janus\_14 (BD2), Jevington\_15 (BD2), Kaine\_13 (BD3), Loofah\_14 (BD2), Marav\_16 (BD2), Nishikigoi\_13 (BD2), Omar\_14 (BD2), Pablito\_13 (BD2), Pavo\_14 (BD3), Provolone\_14 (BD3), Puginator\_15 (BD2), R4\_13 (BD2), Saftant\_13 (BD3), Speedwell\_18 (BD3), SqueakyClean\_14 (BD2), Superstar\_16 (BD2), Tefunt\_13 (BD2), Thestral\_14 (BD2), TinaBelcher\_13 (BD2), Triumph\_15 (BD2), TrvxScott\_12 (BD2), Vanseggelen\_17 (BD3), Verabelle\_14 (BD3), Verse\_13 (BD3), Yosif\_14 (BD3), Zainub\_15 (BD2),

Start 63:

- Found in 46 of 1008 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 5 of 912
- Called 15.2% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_21 (A7), HINdeR\_20 (A7), PP\_30 (A7), RGL3\_9 (CA), Sheen\_22 (A7), Timshel\_21 (A7), Toro\_23 (A7),

Start 64:

- Found in 228 of 1008 ( 22.6% ) of genes in pham
- Manual Annotations of this start: 2 of 912
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Bruns\_18 (A1), Lesedi\_18 (A1), Levia\_18 (A1), LunarLander\_19 (A1),

Start 69:

- Found in 135 of 1008 ( 13.4% ) of genes in pham
- Manual Annotations of this start: 1 of 912
- Called 1.5% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_24 (A7), StepMih\_22 (A3),

Start 76:

- Found in 370 of 1008 ( 36.7% ) of genes in pham
- Manual Annotations of this start: 2 of 912
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Izzy\_14 (BD1), Paedore\_13 (BD2),

### **Summary by clusters:**

There are 28 clusters represented in this pham: A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, BD4, A3, BD6, BD1, A4, BD3, A6, A9, A8, A2, A, A7, CA, BD2, A5, A20, A21,

Info for manual annotations of cluster A:

- Start number 60 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 60 was manually annotated 207 times for cluster A1.
- Start number 64 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 61 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 60 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 60 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 60 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 56 was manually annotated 20 times for cluster A15.

- Start number 59 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 60 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 60 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 60 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 60 was manually annotated 102 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 60 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 60 was manually annotated 17 times for cluster A3.
- Start number 61 was manually annotated 95 times for cluster A3.
- Start number 69 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A4:

- Start number 61 was manually annotated 137 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 60 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 60 was manually annotated 42 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 63 was manually annotated 5 times for cluster A7.

Info for manual annotations of cluster A8:

- Start number 60 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 60 was manually annotated 35 times for cluster A9.

Info for manual annotations of cluster BD1:

- Start number 60 was manually annotated 54 times for cluster BD1.
- Start number 76 was manually annotated 1 time for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 58 was manually annotated 1 time for cluster BD2.
- Start number 62 was manually annotated 30 times for cluster BD2.
- Start number 76 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 58 was manually annotated 1 time for cluster BD3.

- Start number 62 was manually annotated 11 times for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 58 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 60 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster CA:

- Start number 60 was manually annotated 36 times for cluster CA.

### ***Gene Information:***

Gene: 20ES\_21 Start: 14319, Stop: 14654, Start Num: 60

Candidate Starts for 20ES\_21:

(50, 14223), (55, 14238), (Start: 60 @14319 has 586 MA's), (70, 14349), (85, 14427),

Gene: 40AC\_24 Start: 16345, Stop: 16680, Start Num: 60

Candidate Starts for 40AC\_24:

(50, 16249), (55, 16264), (Start: 60 @16345 has 586 MA's), (100, 16531), (107, 16567),

Gene: A6\_17 Start: 13293, Stop: 13688, Start Num: 60

Candidate Starts for A6\_17:

(Start: 60 @13293 has 586 MA's), (Start: 64 @13299 has 2 MA's), (71, 13332), (Start: 76 @13350 has 2 MA's), (78, 13362), (100, 13491), (105, 13509),

Gene: ACFishhook\_22 Start: 13820, Stop: 14179, Start Num: 61

Candidate Starts for ACFishhook\_22:

(Start: 61 @13820 has 249 MA's), (Start: 69 @13847 has 1 MA's), (93, 13997), (107, 14054), (111, 14087), (115, 14105),

Gene: AFIS\_19 Start: 13631, Stop: 14026, Start Num: 60

Candidate Starts for AFIS\_19:

(Start: 60 @13631 has 586 MA's), (Start: 64 @13637 has 2 MA's), (71, 13670), (Start: 76 @13688 has 2 MA's), (78, 13700), (100, 13829), (105, 13847),

Gene: AN3\_21 Start: 14309, Stop: 14644, Start Num: 60

Candidate Starts for AN3\_21:

(50, 14213), (55, 14228), (Start: 60 @14309 has 586 MA's), (70, 14339), (83, 14393),

Gene: AN9\_24 Start: 14296, Stop: 14631, Start Num: 60

Candidate Starts for AN9\_24:

(50, 14200), (55, 14215), (Start: 60 @14296 has 586 MA's), (100, 14482),

Gene: ANI8\_24 Start: 14296, Stop: 14631, Start Num: 60

Candidate Starts for ANI8\_24:

(50, 14200), (55, 14215), (Start: 60 @14296 has 586 MA's), (100, 14482),

Gene: Aaronocolus\_13 Start: 9179, Stop: 9577, Start Num: 60

Candidate Starts for Aaronocolus\_13:

(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: AbbyPaige\_23 Start: 14772, Stop: 15107, Start Num: 60

Candidate Starts for AbbyPaige\_23:

(14, 14262), (50, 14676), (55, 14691), (Start: 60 @14772 has 586 MA's), (70, 14802),

Gene: AbbysRanger\_20 Start: 13595, Stop: 13987, Start Num: 61

Candidate Starts for AbbysRanger\_20:

(Start: 61 @13595 has 249 MA's), (105, 13811), (130, 13949), (134, 13964), (136, 13979),

Gene: Abbysshoes\_20 Start: 14017, Stop: 14412, Start Num: 60

Candidate Starts for Abbysshoes\_20:

(Start: 60 @14017 has 586 MA's), (Start: 64 @14023 has 2 MA's), (71, 14056), (Start: 76 @14074 has 2 MA's), (78, 14086), (100, 14215), (105, 14233),

Gene: Abdiel\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Abdiel\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Abrogate\_200 Start: 14389, Stop: 14784, Start Num: 60

Candidate Starts for Abrogate\_200:

(Start: 60 @14389 has 586 MA's), (Start: 64 @14395 has 2 MA's), (71, 14428), (Start: 76 @14446 has 2 MA's), (78, 14458), (100, 14587), (105, 14605),

Gene: Achebe\_20 Start: 13574, Stop: 13966, Start Num: 61

Candidate Starts for Achebe\_20:

(Start: 61 @13574 has 249 MA's), (66, 13583), (105, 13790), (107, 13808), (130, 13928), (134, 13943), (136, 13958),

Gene: Acme\_21 Start: 14067, Stop: 14462, Start Num: 60

Candidate Starts for Acme\_21:

(Start: 60 @14067 has 586 MA's), (Start: 64 @14073 has 2 MA's), (71, 14106), (Start: 76 @14124 has 2 MA's), (78, 14136), (100, 14265), (105, 14283),

Gene: Acolyte\_21 Start: 14440, Stop: 14778, Start Num: 60

Candidate Starts for Acolyte\_21:

(50, 14344), (55, 14359), (Start: 60 @14440 has 586 MA's), (78, 14503), (83, 14524), (100, 14626), (104, 14641), (107, 14662),

Gene: Adahisdi\_20 Start: 13949, Stop: 14344, Start Num: 60

Candidate Starts for Adahisdi\_20:

(Start: 60 @13949 has 586 MA's), (Start: 64 @13955 has 2 MA's), (71, 13988), (Start: 76 @14006 has 2 MA's), (78, 14018), (100, 14147), (105, 14165),

Gene: Adzzy\_22 Start: 13055, Stop: 13390, Start Num: 60

Candidate Starts for Adzzy\_22:

(50, 12959), (55, 12974), (Start: 60 @13055 has 586 MA's), (78, 13118), (83, 13139), (100, 13241), (107, 13277), (111, 13310), (129, 13385),

Gene: Aeneas\_21 Start: 14057, Stop: 14452, Start Num: 60

Candidate Starts for Aeneas\_21:



(Start: 60 @14057 has 586 MA's), (Start: 64 @14063 has 2 MA's), (71, 14096), (Start: 76 @14114 has 2 MA's), (78, 14126), (100, 14255), (105, 14273),

Gene: Agaliana\_19 Start: 14009, Stop: 14404, Start Num: 60

Candidate Starts for Agaliana\_19:

(Start: 60 @14009 has 586 MA's), (Start: 64 @14015 has 2 MA's), (71, 14048), (Start: 76 @14066 has 2 MA's), (78, 14078), (100, 14207), (105, 14225),

Gene: Agape74\_23 Start: 14772, Stop: 15107, Start Num: 60

Candidate Starts for Agape74\_23:

(14, 14262), (19, 14301), (50, 14676), (55, 14691), (Start: 60 @14772 has 586 MA's), (70, 14802),

Gene: AgentM\_17 Start: 12748, Stop: 13161, Start Num: 60

Candidate Starts for AgentM\_17:

(23, 12292), (53, 12652), (Start: 60 @12748 has 586 MA's), (74, 12802), (105, 12982),

Gene: Aglet\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for Aglet\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: AgronaGT15\_22 Start: 13573, Stop: 13932, Start Num: 61

Candidate Starts for AgronaGT15\_22:

(Start: 61 @13573 has 249 MA's), (Start: 69 @13600 has 1 MA's), (93, 13750), (107, 13807), (111, 13840), (115, 13858),

Gene: Airmid\_17 Start: 12511, Stop: 12924, Start Num: 60

Candidate Starts for Airmid\_17:

(53, 12415), (55, 12430), (Start: 60 @12511 has 586 MA's), (102, 12736), (103, 12739), (105, 12745),

Gene: Ajay\_19 Start: 13781, Stop: 14176, Start Num: 60

Candidate Starts for Ajay\_19:

(Start: 60 @13781 has 586 MA's), (Start: 64 @13787 has 2 MA's), (71, 13820), (Start: 76 @13838 has 2 MA's), (78, 13850), (100, 13979), (105, 13997),

Gene: Alatin\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Alatin\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Albee\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Albee\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Alberto7\_21 Start: 13871, Stop: 14263, Start Num: 61

Candidate Starts for Alberto7\_21:

(Start: 61 @13871 has 249 MA's), (101, 14075), (102, 14078), (103, 14081), (105, 14087), (107, 14105), (130, 14225), (131, 14228), (134, 14240), (136, 14255),

Gene: Aliter\_22 Start: 15004, Stop: 15393, Start Num: 60

Candidate Starts for Aliter\_22:

(Start: 60 @15004 has 586 MA's), (107, 15235), (130, 15355),

Gene: Alma\_22 Start: 15083, Stop: 15472, Start Num: 60  
Candidate Starts for Alma\_22:  
(Start: 60 @15083 has 586 MA's), (107, 15314), (130, 15434),

Gene: Alpacados\_15 Start: 9579, Stop: 9890, Start Num: 60  
Candidate Starts for Alpacados\_15:  
(Start: 60 @9579 has 586 MA's), (Start: 63 @9585 has 5 MA's), (Start: 76 @9639 has 2 MA's), (88, 9702), (103, 9762), (106, 9771),

Gene: Alsaber\_14 Start: 9250, Stop: 9636, Start Num: 62  
Candidate Starts for Alsaber\_14:  
(55, 9163), (Start: 58 @9244 has 5 MA's), (Start: 62 @9250 has 41 MA's), (84, 9355), (120, 9562), (133, 9622),

Gene: Alsfro\_23 Start: 14501, Stop: 14896, Start Num: 60  
Candidate Starts for Alsfro\_23:  
(53, 14405), (Start: 60 @14501 has 586 MA's), (Start: 64 @14507 has 2 MA's), (71, 14540), (Start: 76 @14558 has 2 MA's), (78, 14570), (100, 14699), (105, 14717),

Gene: Altman\_21 Start: 14546, Stop: 14941, Start Num: 60  
Candidate Starts for Altman\_21:  
(Start: 60 @14546 has 586 MA's), (Start: 64 @14552 has 2 MA's), (71, 14585), (Start: 76 @14603 has 2 MA's), (78, 14615), (100, 14744), (105, 14762),

Gene: Alvin\_20 Start: 14267, Stop: 14662, Start Num: 60  
Candidate Starts for Alvin\_20:  
(Start: 60 @14267 has 586 MA's), (Start: 64 @14273 has 2 MA's), (71, 14306), (Start: 76 @14324 has 2 MA's), (78, 14336), (100, 14465), (105, 14483),

Gene: Alvy\_15 Start: 9132, Stop: 9584, Start Num: 62  
Candidate Starts for Alvy\_15:  
(38, 8775), (Start: 62 @9132 has 41 MA's), (Start: 69 @9168 has 1 MA's), (Start: 76 @9198 has 2 MA's), (93, 9294), (99, 9321), (119, 9453),

Gene: Amela\_13 Start: 9353, Stop: 9742, Start Num: 58  
Candidate Starts for Amela\_13:  
(34, 8981), (40, 9014), (55, 9272), (Start: 58 @9353 has 5 MA's), (Start: 62 @9359 has 41 MA's), (77, 9428), (116, 9644), (133, 9728),

Gene: Amethyst\_13 Start: 8945, Stop: 9406, Start Num: 62  
Candidate Starts for Amethyst\_13:  
(33, 8552), (45, 8723), (52, 8828), (55, 8858), (Start: 62 @8945 has 41 MA's), (Start: 69 @8981 has 1 MA's), (Start: 76 @9011 has 2 MA's), (84, 9050), (113, 9227), (116, 9251), (120, 9275),

Gene: Anaysia\_23 Start: 13416, Stop: 13784, Start Num: 56  
Candidate Starts for Anaysia\_23:  
(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Andris\_13 Start: 9002, Stop: 9391, Start Num: 62  
Candidate Starts for Andris\_13:

(39, 8651), (45, 8780), (52, 8885), (55, 8915), (Start: 62 @9002 has 41 MA's), (83, 9110), (94, 9176), (99, 9200), (100, 9203), (120, 9317), (133, 9377),

Gene: Aneem\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Aneem\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Anglerfish\_20 Start: 14929, Stop: 15324, Start Num: 60

Candidate Starts for Anglerfish\_20:

(Start: 60 @14929 has 586 MA's), (Start: 64 @14935 has 2 MA's), (71, 14968), (Start: 76 @14986 has 2 MA's), (78, 14998), (100, 15127), (105, 15145),

Gene: AngryOrchard\_15 Start: 9562, Stop: 9873, Start Num: 60

Candidate Starts for AngryOrchard\_15:

(Start: 60 @9562 has 586 MA's), (Start: 63 @9568 has 5 MA's), (Start: 76 @9622 has 2 MA's), (88, 9685), (103, 9745), (106, 9754),

Gene: Animus\_14 Start: 9373, Stop: 9744, Start Num: 62

Candidate Starts for Animus\_14:

(22, 8911), (27, 8947), (39, 9022), (40, 9025), (55, 9286), (Start: 62 @9373 has 41 MA's), (67, 9388), (99, 9547), (100, 9550), (116, 9646), (120, 9670), (133, 9730),

Gene: AnnaL29\_24 Start: 16167, Stop: 16502, Start Num: 60

Candidate Starts for AnnaL29\_24:

(10, 15618), (21, 15702), (37, 15834), (50, 16071), (55, 16086), (Start: 60 @16167 has 586 MA's), (70, 16197), (100, 16353), (107, 16389),

Gene: Annyong\_20 Start: 13570, Stop: 13962, Start Num: 61

Candidate Starts for Annyong\_20:

(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: Anon\_21 Start: 13745, Stop: 14095, Start Num: 56

Candidate Starts for Anon\_21:

(4, 13220), (5, 13223), (11, 13250), (46, 13664), (Start: 56 @13745 has 20 MA's), (Start: 69 @13775 has 1 MA's), (Start: 76 @13805 has 2 MA's), (93, 13925), (107, 13982),

Gene: Anselm\_21 Start: 14416, Stop: 14751, Start Num: 60

Candidate Starts for Anselm\_21:

(50, 14320), (55, 14335), (Start: 60 @14416 has 586 MA's), (70, 14446), (100, 14602), (107, 14638),

Gene: Anthony\_20 Start: 12465, Stop: 12797, Start Num: 60

Candidate Starts for Anthony\_20:

(50, 12369), (Start: 60 @12465 has 586 MA's), (80, 12537), (86, 12576), (109, 12708), (112, 12720),

Gene: Anubis\_24 Start: 13551, Stop: 13910, Start Num: 61

Candidate Starts for Anubis\_24:

(Start: 61 @13551 has 249 MA's), (Start: 69 @13578 has 1 MA's), (93, 13728), (107, 13785), (111, 13818), (115, 13836),

Gene: AppleCloud\_14 Start: 9302, Stop: 9613, Start Num: 60

Candidate Starts for AppleCloud\_14:

(Start: 60 @9302 has 586 MA's), (Start: 63 @9308 has 5 MA's), (88, 9425), (100, 9473), (103, 9485), (107, 9509),

Gene: Applejack\_19 Start: 13706, Stop: 14101, Start Num: 60

Candidate Starts for Applejack\_19:

(Start: 60 @13706 has 586 MA's), (Start: 64 @13712 has 2 MA's), (71, 13745), (Start: 76 @13763 has 2 MA's), (78, 13775), (100, 13904), (105, 13922),

Gene: Aragog\_17 Start: 12778, Stop: 13191, Start Num: 60

Candidate Starts for Aragog\_17:

(23, 12322), (53, 12682), (Start: 60 @12778 has 586 MA's), (74, 12832), (105, 13012),

Gene: Arcanine\_20 Start: 13948, Stop: 14343, Start Num: 60

Candidate Starts for Arcanine\_20:

(Start: 60 @13948 has 586 MA's), (Start: 64 @13954 has 2 MA's), (71, 13987), (Start: 76 @14005 has 2 MA's), (78, 14017), (100, 14146), (105, 14164),

Gene: ArcherNM\_23 Start: 16110, Stop: 16445, Start Num: 60

Candidate Starts for ArcherNM\_23:

(50, 16014), (55, 16029), (Start: 60 @16110 has 586 MA's), (70, 16140), (83, 16194), (104, 16311),

Gene: Archetta\_17 Start: 12491, Stop: 12904, Start Num: 60

Candidate Starts for Archetta\_17:

(23, 12035), (53, 12395), (Start: 60 @12491 has 586 MA's), (74, 12545), (105, 12725),

Gene: Arissanae\_20 Start: 13176, Stop: 13565, Start Num: 60

Candidate Starts for Arissanae\_20:

(Start: 60 @13176 has 586 MA's), (93, 13347), (107, 13407),

Gene: Arlo\_18 Start: 13327, Stop: 13722, Start Num: 60

Candidate Starts for Arlo\_18:

(Start: 60 @13327 has 586 MA's), (Start: 64 @13333 has 2 MA's), (71, 13366), (Start: 76 @13384 has 2 MA's), (78, 13396), (100, 13525), (105, 13543),

Gene: Artemis2UCLA\_24 Start: 14295, Stop: 14648, Start Num: 60

Candidate Starts for Artemis2UCLA\_24:

(50, 14199), (55, 14214), (Start: 60 @14295 has 586 MA's), (85, 14403), (101, 14487),

Gene: Arturo\_19 Start: 13680, Stop: 14072, Start Num: 61

Candidate Starts for Arturo\_19:

(Start: 61 @13680 has 249 MA's), (66, 13689), (101, 13884), (102, 13887), (103, 13890), (105, 13896), (107, 13914), (130, 14034), (134, 14049), (136, 14064),

Gene: Ashballer\_18 Start: 13710, Stop: 14105, Start Num: 60

Candidate Starts for Ashballer\_18:

(Start: 60 @13710 has 586 MA's), (Start: 64 @13716 has 2 MA's), (71, 13749), (Start: 76 @13767 has 2 MA's), (78, 13779), (100, 13908), (105, 13926),

Gene: Asten\_13 Start: 9138, Stop: 9533, Start Num: 60

Candidate Starts for Asten\_13:

(3, 8559), (6, 8583), (15, 8646), (52, 9024), (55, 9054), (Start: 60 @9138 has 586 MA's), (Start: 76 @9204 has 2 MA's), (93, 9312), (100, 9342), (120, 9462), (133, 9519),

Gene: Astro\_17 Start: 12253, Stop: 12621, Start Num: 60

Candidate Starts for Astro\_17:

(41, 11965), (49, 12145), (54, 12172), (Start: 60 @12253 has 586 MA's), (70, 12295), (85, 12373), (88, 12379),

Gene: Atkinbua\_20 Start: 13681, Stop: 14076, Start Num: 60

Candidate Starts for Atkinbua\_20:

(Start: 60 @13681 has 586 MA's), (Start: 64 @13687 has 2 MA's), (71, 13720), (Start: 76 @13738 has 2 MA's), (78, 13750), (100, 13879), (105, 13897),

Gene: AugsMagnumOpus\_24 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for AugsMagnumOpus\_24:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: AvatarAhPeg\_21 Start: 13859, Stop: 14251, Start Num: 61

Candidate Starts for AvatarAhPeg\_21:

(Start: 61 @13859 has 249 MA's), (66, 13868), (105, 14075), (107, 14093), (130, 14213), (134, 14228), (136, 14243),

Gene: Avle17\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Avle17\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Axiom\_14 Start: 9034, Stop: 9429, Start Num: 62

Candidate Starts for Axiom\_14:

(39, 8683), (55, 8947), (Start: 62 @9034 has 41 MA's), (Start: 76 @9109 has 2 MA's), (78, 9121), (90, 9181), (94, 9208), (99, 9232), (100, 9235), (120, 9355), (133, 9415),

Gene: B1\_18 Start: 12860, Stop: 13201, Start Num: 60

Candidate Starts for B1\_18:

(53, 12764), (55, 12779), (Start: 60 @12860 has 586 MA's), (85, 12974), (93, 13037), (107, 13094), (111, 13127), (127, 13193),

Gene: BABullseye\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for BABullseye\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: BK1\_17 Start: 13293, Stop: 13688, Start Num: 60

Candidate Starts for BK1\_17:

(Start: 60 @13293 has 586 MA's), (Start: 64 @13299 has 2 MA's), (71, 13332), (Start: 76 @13350 has 2 MA's), (78, 13362), (100, 13491), (105, 13509),

Gene: BPBiabs31\_20 Start: 13973, Stop: 14368, Start Num: 60

Candidate Starts for BPBiabs31\_20:

(53, 13877), (Start: 60 @13973 has 586 MA's), (Start: 64 @13979 has 2 MA's), (71, 14012), (Start: 76 @14030 has 2 MA's), (78, 14042), (100, 14171), (105, 14189),

Gene: Baby16\_20 Start: 13578, Stop: 13970, Start Num: 61

Candidate Starts for Baby16\_20:

(Start: 61 @13578 has 249 MA's), (101, 13782), (102, 13785), (103, 13788), (105, 13794), (107, 13812), (130, 13932), (131, 13935), (134, 13947), (136, 13962),

Gene: BabyBack\_23 Start: 15949, Stop: 16284, Start Num: 60

Candidate Starts for BabyBack\_23:

(50, 15853), (55, 15868), (Start: 60 @15949 has 586 MA's),

Gene: BabyJohn\_19 Start: 13447, Stop: 13788, Start Num: 60

Candidate Starts for BabyJohn\_19:

(53, 13351), (55, 13366), (Start: 60 @13447 has 586 MA's), (85, 13561), (93, 13624), (100, 13645), (107, 13681), (111, 13714), (127, 13780),

Gene: BabyRay\_20 Start: 13453, Stop: 13794, Start Num: 61

Candidate Starts for BabyRay\_20:

(Start: 61 @13453 has 249 MA's), (Start: 76 @13510 has 2 MA's), (85, 13567), (93, 13630), (100, 13651), (107, 13687), (111, 13720), (127, 13786),

Gene: Bachome\_21 Start: 14834, Stop: 15184, Start Num: 60

Candidate Starts for Bachome\_21:

(Start: 60 @14834 has 586 MA's), (83, 14918), (100, 15020), (107, 15056),

Gene: Backyardigan\_20 Start: 13586, Stop: 13978, Start Num: 61

Candidate Starts for Backyardigan\_20:

(Start: 61 @13586 has 249 MA's), (66, 13595), (105, 13802), (107, 13820), (130, 13940), (134, 13955), (136, 13970),

Gene: BaconJack\_21 Start: 14048, Stop: 14443, Start Num: 60

Candidate Starts for BaconJack\_21:

(Start: 60 @14048 has 586 MA's), (Start: 64 @14054 has 2 MA's), (71, 14087), (Start: 76 @14105 has 2 MA's), (78, 14117), (100, 14246), (105, 14264),

Gene: Bactobuster\_22 Start: 16041, Stop: 16397, Start Num: 60

Candidate Starts for Bactobuster\_22:

(50, 15945), (55, 15960), (Start: 60 @16041 has 586 MA's), (78, 16104), (82, 16122), (85, 16149), (100, 16227), (107, 16263), (111, 16296),

Gene: Badger\_20 Start: 13575, Stop: 13967, Start Num: 61

Candidate Starts for Badger\_20:

(Start: 61 @13575 has 249 MA's), (66, 13584), (105, 13791), (107, 13809), (130, 13929), (134, 13944), (136, 13959),

Gene: Baehexic\_22 Start: 14819, Stop: 15154, Start Num: 60

Candidate Starts for Baehexic\_22:

(50, 14723), (55, 14738), (Start: 60 @14819 has 586 MA's), (104, 15020), (107, 15041), (128, 15143),

Gene: BangNhom\_20 Start: 13881, Stop: 14273, Start Num: 61

Candidate Starts for BangNhom\_20:

(Start: 61 @13881 has 249 MA's), (66, 13890), (101, 14085), (102, 14088), (103, 14091), (105, 14097), (107, 14115), (130, 14235), (134, 14250), (136, 14265),

Gene: Barriga\_19 Start: 13576, Stop: 13971, Start Num: 60

Candidate Starts for Barriga\_19:

(Start: 60 @13576 has 586 MA's), (Start: 64 @13582 has 2 MA's), (71, 13615), (Start: 76 @13633 has 2 MA's), (78, 13645), (100, 13774), (105, 13792),

Gene: BarrowTuph\_18 Start: 13621, Stop: 14016, Start Num: 60  
Candidate Starts for BarrowTuph\_18:  
(Start: 60 @13621 has 586 MA's), (Start: 64 @13627 has 2 MA's), (71, 13660), (Start: 76 @13678 has 2 MA's), (78, 13690), (100, 13819), (105, 13837),

Gene: BarryBee\_15 Start: 9145, Stop: 9540, Start Num: 60  
Candidate Starts for BarryBee\_15:  
(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: BartholomewSD\_15 Start: 9132, Stop: 9584, Start Num: 62  
Candidate Starts for BartholomewSD\_15:  
(38, 8775), (Start: 62 @9132 has 41 MA's), (Start: 69 @9168 has 1 MA's), (Start: 76 @9198 has 2 MA's), (93, 9294), (99, 9321), (119, 9453),

Gene: Bartimeaus\_20 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for Bartimeaus\_20:  
(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Battleship\_24 Start: 13531, Stop: 13899, Start Num: 56  
Candidate Starts for Battleship\_24:  
(Start: 56 @13531 has 20 MA's), (Start: 69 @13561 has 1 MA's), (70, 13570), (78, 13603), (93, 13711), (97, 13723), (107, 13768), (111, 13801),

Gene: BeardedLady\_14 Start: 9426, Stop: 9824, Start Num: 60  
Candidate Starts for BeardedLady\_14:  
(3, 8847), (8, 8883), (52, 9312), (53, 9327), (55, 9342), (Start: 60 @9426 has 586 MA's), (Start: 76 @9492 has 2 MA's), (84, 9531), (93, 9603), (99, 9630), (100, 9633), (120, 9750), (133, 9810),

Gene: Beatrix\_18 Start: 14425, Stop: 14820, Start Num: 60  
Candidate Starts for Beatrix\_18:  
(Start: 60 @14425 has 586 MA's), (Start: 64 @14431 has 2 MA's), (71, 14464), (Start: 76 @14482 has 2 MA's), (78, 14494), (100, 14623), (105, 14641),

Gene: Beauxregard13\_22 Start: 13665, Stop: 14024, Start Num: 61  
Candidate Starts for Beauxregard13\_22:  
(Start: 61 @13665 has 249 MA's), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: Beemo\_22 Start: 15110, Stop: 15499, Start Num: 60  
Candidate Starts for Beemo\_22:  
(Start: 60 @15110 has 586 MA's), (107, 15341),

Gene: BeesKnees\_20 Start: 13766, Stop: 14161, Start Num: 60  
Candidate Starts for BeesKnees\_20:  
(Start: 60 @13766 has 586 MA's), (Start: 64 @13772 has 2 MA's), (71, 13805), (Start: 76 @13823 has 2 MA's), (78, 13835), (100, 13964), (105, 13982),

Gene: Belenaria\_16 Start: 9649, Stop: 9960, Start Num: 60  
Candidate Starts for Belenaria\_16:  
(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: BellusTerra\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for BellusTerra\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Benedict\_17 Start: 12513, Stop: 12926, Start Num: 60

Candidate Starts for Benedict\_17:

(53, 12417), (55, 12432), (Start: 60 @12513 has 586 MA's), (74, 12567), (102, 12738), (103, 12741), (105, 12747),

Gene: BengiVuitton\_22 Start: 14732, Stop: 15067, Start Num: 60

Candidate Starts for BengiVuitton\_22:

(50, 14636), (55, 14651), (Start: 60 @14732 has 586 MA's), (70, 14762), (83, 14816), (85, 14840), (107, 14954),

Gene: Benvolio\_21 Start: 14406, Stop: 14741, Start Num: 60

Candidate Starts for Benvolio\_21:

(50, 14310), (55, 14325), (Start: 60 @14406 has 586 MA's), (70, 14436), (100, 14592),

Gene: Bethlehem\_19 Start: 15003, Stop: 15398, Start Num: 60

Candidate Starts for Bethlehem\_19:

(Start: 60 @15003 has 586 MA's), (Start: 64 @15009 has 2 MA's), (71, 15042), (Start: 76 @15060 has 2 MA's), (78, 15072), (100, 15201), (105, 15219),

Gene: Bexan\_18 Start: 14711, Stop: 15106, Start Num: 60

Candidate Starts for Bexan\_18:

(Start: 60 @14711 has 586 MA's), (Start: 64 @14717 has 2 MA's), (71, 14750), (Start: 76 @14768 has 2 MA's), (78, 14780), (100, 14909), (105, 14927),

Gene: BiancaTri92\_23 Start: 16094, Stop: 16429, Start Num: 60

Candidate Starts for BiancaTri92\_23:

(19, 15623), (50, 15998), (55, 16013), (Start: 60 @16094 has 586 MA's), (70, 16124), (83, 16178),

Gene: Big3\_19 Start: 14357, Stop: 14752, Start Num: 60

Candidate Starts for Big3\_19:

(Start: 60 @14357 has 586 MA's), (Start: 64 @14363 has 2 MA's), (71, 14396), (Start: 76 @14414 has 2 MA's), (78, 14426), (100, 14555), (105, 14573),

Gene: BigMau\_21 Start: 13934, Stop: 14329, Start Num: 60

Candidate Starts for BigMau\_21:

(Start: 60 @13934 has 586 MA's), (Start: 64 @13940 has 2 MA's), (71, 13973), (Start: 76 @13991 has 2 MA's), (78, 14003), (100, 14132), (105, 14150),

Gene: BigPaolini\_20 Start: 14360, Stop: 14755, Start Num: 60

Candidate Starts for BigPaolini\_20:

(Start: 60 @14360 has 586 MA's), (Start: 64 @14366 has 2 MA's), (71, 14399), (Start: 76 @14417 has 2 MA's), (78, 14429), (100, 14558), (105, 14576),

Gene: Bigchungji\_19 Start: 13734, Stop: 14129, Start Num: 60

Candidate Starts for Bigchungji\_19:

(Start: 60 @13734 has 586 MA's), (Start: 64 @13740 has 2 MA's), (71, 13773), (Start: 76 @13791 has 2 MA's), (78, 13803), (100, 13932), (105, 13950),



Gene: Bigflo\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Bigflo\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Bigfoot\_18 Start: 13462, Stop: 13857, Start Num: 60

Candidate Starts for Bigfoot\_18:

(Start: 60 @13462 has 586 MA's), (Start: 64 @13468 has 2 MA's), (71, 13501), (Start: 76 @13519 has 2 MA's), (78, 13531), (100, 13660), (105, 13678),

Gene: BillKnuckles\_20 Start: 14426, Stop: 14821, Start Num: 60

Candidate Starts for BillKnuckles\_20:

(Start: 60 @14426 has 586 MA's), (Start: 64 @14432 has 2 MA's), (71, 14465), (Start: 76 @14483 has 2 MA's), (78, 14495), (100, 14624), (105, 14642),

Gene: Bircsak\_19 Start: 14220, Stop: 14615, Start Num: 60

Candidate Starts for Bircsak\_19:

(53, 14124), (Start: 60 @14220 has 586 MA's), (Start: 64 @14226 has 2 MA's), (71, 14259), (Start: 76 @14277 has 2 MA's), (78, 14289), (100, 14418), (105, 14436),

Gene: Blackmoor\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Blackmoor\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: BlessJoy\_24 Start: 14393, Stop: 14746, Start Num: 60

Candidate Starts for BlessJoy\_24:

(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Blinn1\_24 Start: 14450, Stop: 14803, Start Num: 60

Candidate Starts for Blinn1\_24:

(37, 14117), (50, 14354), (55, 14369), (Start: 60 @14450 has 586 MA's), (85, 14558), (101, 14642),

Gene: BluSpix\_19 Start: 13722, Stop: 14117, Start Num: 60

Candidate Starts for BluSpix\_19:

(Start: 60 @13722 has 586 MA's), (Start: 64 @13728 has 2 MA's), (71, 13761), (Start: 76 @13779 has 2 MA's), (78, 13791), (100, 13920), (105, 13938),

Gene: Blue\_19 Start: 13825, Stop: 14220, Start Num: 60

Candidate Starts for Blue\_19:

(Start: 60 @13825 has 586 MA's), (Start: 64 @13831 has 2 MA's), (71, 13864), (Start: 76 @13882 has 2 MA's), (78, 13894), (100, 14023), (105, 14041),

Gene: Blue7\_24 Start: 14385, Stop: 14738, Start Num: 60

Candidate Starts for Blue7\_24:

(50, 14289), (55, 14304), (Start: 60 @14385 has 586 MA's), (85, 14493), (101, 14577),

Gene: BlueBird\_21 Start: 13207, Stop: 13548, Start Num: 60

Candidate Starts for BlueBird\_21:

(53, 13111), (55, 13126), (Start: 60 @13207 has 586 MA's), (Start: 76 @13264 has 2 MA's), (85, 13321), (93, 13384), (100, 13405), (107, 13441), (111, 13474), (127, 13540),

Gene: Bluefalcon\_16 Start: 12748, Stop: 13161, Start Num: 60  
Candidate Starts for Bluefalcon\_16:  
(23, 12292), (53, 12652), (Start: 60 @12748 has 586 MA's), (74, 12802), (105, 12982),

Gene: Bob3\_18 Start: 13274, Stop: 13669, Start Num: 60  
Candidate Starts for Bob3\_18:  
(Start: 60 @13274 has 586 MA's), (Start: 64 @13280 has 2 MA's), (71, 13313), (Start: 76 @13331 has 2 MA's), (78, 13343), (100, 13472), (105, 13490),

Gene: BobSwaget\_24 Start: 15969, Stop: 16304, Start Num: 60  
Candidate Starts for BobSwaget\_24:  
(50, 15873), (55, 15888), (Start: 60 @15969 has 586 MA's),

Gene: BobbyDazzler\_16 Start: 9688, Stop: 9999, Start Num: 60  
Candidate Starts for BobbyDazzler\_16:  
(Start: 60 @9688 has 586 MA's), (Start: 63 @9694 has 5 MA's), (Start: 76 @9748 has 2 MA's), (88, 9811), (103, 9871), (106, 9880),

Gene: BogosyJay\_22 Start: 14830, Stop: 15219, Start Num: 60  
Candidate Starts for BogosyJay\_22:  
(Start: 60 @14830 has 586 MA's), (107, 15061),

Gene: Bombshell\_20 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for Bombshell\_20:  
(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Bonamassa\_17 Start: 12673, Stop: 13086, Start Num: 60  
Candidate Starts for Bonamassa\_17:  
(32, 12265), (53, 12577), (Start: 60 @12673 has 586 MA's), (74, 12727), (81, 12757), (105, 12907),

Gene: Bonanza\_16 Start: 9617, Stop: 9928, Start Num: 60  
Candidate Starts for Bonanza\_16:  
(Start: 60 @9617 has 586 MA's), (Start: 63 @9623 has 5 MA's), (Start: 76 @9677 has 2 MA's), (88, 9740), (103, 9800), (106, 9809),

Gene: Bones\_19 Start: 13463, Stop: 13858, Start Num: 60  
Candidate Starts for Bones\_19:  
(Start: 60 @13463 has 586 MA's), (Start: 64 @13469 has 2 MA's), (71, 13502), (Start: 76 @13520 has 2 MA's), (78, 13532), (100, 13661), (105, 13679),

Gene: Boohoo\_23 Start: 13416, Stop: 13784, Start Num: 56  
Candidate Starts for Boohoo\_23:  
(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Bovely\_13 Start: 9185, Stop: 9583, Start Num: 60  
Candidate Starts for Bovely\_13:  
(3, 8606), (8, 8642), (52, 9071), (53, 9086), (55, 9101), (Start: 60 @9185 has 586 MA's), (84, 9290), (93, 9362), (99, 9389), (100, 9392), (120, 9509), (133, 9569),

Gene: Bowden\_14 Start: 9046, Stop: 9501, Start Num: 62  
Candidate Starts for Bowden\_14:

(7, 8470), (38, 8689), (52, 8929), (Start: 62 @9046 has 41 MA's), (Start: 76 @9115 has 2 MA's), (93, 9211), (99, 9238), (119, 9370),

Gene: Bowtie\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Bowtie\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Bradman\_20 Start: 13229, Stop: 13564, Start Num: 60

Candidate Starts for Bradman\_20:

(50, 13133), (55, 13148), (Start: 60 @13229 has 586 MA's),

Gene: Bradshaw\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Bradshaw\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Brataylor\_14 Start: 9148, Stop: 9546, Start Num: 60

Candidate Starts for Brataylor\_14:

(3, 8569), (6, 8593), (18, 8686), (52, 9034), (53, 9049), (55, 9064), (Start: 60 @9148 has 586 MA's), (93, 9322), (100, 9352), (120, 9472), (133, 9532),

Gene: BreSam8\_22 Start: 13658, Stop: 14017, Start Num: 61

Candidate Starts for BreSam8\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Briton15\_21 Start: 14023, Stop: 14418, Start Num: 60

Candidate Starts for Briton15\_21:

(Start: 60 @14023 has 586 MA's), (Start: 64 @14029 has 2 MA's), (71, 14062), (Start: 76 @14080 has 2 MA's), (78, 14092), (100, 14221), (105, 14239),

Gene: BroPlease\_14 Start: 9249, Stop: 9743, Start Num: 58

Candidate Starts for BroPlease\_14:

(1, 8541), (2, 8565), (38, 8898), (45, 9033), (52, 9138), (55, 9168), (Start: 58 @9249 has 5 MA's), (79, 9357), (111, 9552), (135, 9684), (137, 9696),

Gene: Broseidon\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Broseidon\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Bruiser\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Bruiser\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Bruns\_18 Start: 13652, Stop: 14041, Start Num: 64

Candidate Starts for Bruns\_18:

(Start: 60 @13646 has 586 MA's), (Start: 64 @13652 has 2 MA's), (71, 13685), (Start: 76 @13703 has 2 MA's), (78, 13715), (100, 13844), (105, 13862),

Gene: BryanRecycles\_14 Start: 9342, Stop: 9740, Start Num: 60

Candidate Starts for BryanRecycles\_14:

(3, 8763), (8, 8799), (52, 9228), (53, 9243), (55, 9258), (Start: 60 @9342 has 586 MA's), (Start: 76 @9408 has 2 MA's), (84, 9447), (93, 9519), (99, 9546), (100, 9549), (120, 9666), (133, 9726),

Gene: Bryce\_16 Start: 9617, Stop: 9928, Start Num: 60

Candidate Starts for Bryce\_16:

(Start: 60 @9617 has 586 MA's), (Start: 63 @9623 has 5 MA's), (Start: 76 @9677 has 2 MA's), (88, 9740), (103, 9800), (106, 9809),

Gene: BubbleTrouble\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for BubbleTrouble\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Bud\_21 Start: 14843, Stop: 15193, Start Num: 60

Candidate Starts for Bud\_21:

(Start: 60 @14843 has 586 MA's), (83, 14927), (100, 15029), (107, 15065),

Gene: Bugatti\_20 Start: 13207, Stop: 13548, Start Num: 60

Candidate Starts for Bugatti\_20:

(53, 13111), (55, 13126), (Start: 60 @13207 has 586 MA's), (Start: 76 @13264 has 2 MA's), (85, 13321), (93, 13384), (100, 13405), (107, 13441), (111, 13474), (127, 13540),

Gene: Buggy\_23 Start: 14771, Stop: 15106, Start Num: 60

Candidate Starts for Buggy\_23:

(14, 14261), (50, 14675), (55, 14690), (Start: 60 @14771 has 586 MA's), (70, 14801),

Gene: Bumblebee11\_20 Start: 13577, Stop: 13969, Start Num: 61

Candidate Starts for Bumblebee11\_20:

(Start: 61 @13577 has 249 MA's), (71, 13616), (105, 13793), (134, 13946), (136, 13961),

Gene: Burger\_19 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Burger\_19:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Burton\_20 Start: 13844, Stop: 14239, Start Num: 60

Candidate Starts for Burton\_20:

(Start: 60 @13844 has 586 MA's), (Start: 64 @13850 has 2 MA's), (71, 13883), (Start: 76 @13901 has 2 MA's), (78, 13913), (100, 14042), (105, 14060),

Gene: Buttons\_20 Start: 14208, Stop: 14603, Start Num: 60

Candidate Starts for Buttons\_20:

(Start: 60 @14208 has 586 MA's), (Start: 64 @14214 has 2 MA's), (71, 14247), (Start: 76 @14265 has 2 MA's), (78, 14277), (100, 14406), (105, 14424),

Gene: BuzzBuzz\_21 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for BuzzBuzz\_21:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: Bxb1\_17 Start: 13795, Stop: 14190, Start Num: 60

Candidate Starts for Bxb1\_17:

(Start: 60 @13795 has 586 MA's), (Start: 64 @13801 has 2 MA's), (71, 13834), (Start: 76 @13852 has 2 MA's), (78, 13864), (100, 13993), (105, 14011),

Gene: Bxz2\_21 Start: 13759, Stop: 14118, Start Num: 61

Candidate Starts for Bxz2\_21:

(Start: 61 @13759 has 249 MA's), (Start: 69 @13786 has 1 MA's), (93, 13936), (107, 13993), (111, 14026), (115, 14044),

Gene: C3\_19 Start: 14296, Stop: 14631, Start Num: 60

Candidate Starts for C3\_19:

(50, 14200), (55, 14215), (Start: 60 @14296 has 586 MA's), (100, 14482),

Gene: CRB1\_21 Start: 14291, Stop: 14626, Start Num: 60

Candidate Starts for CRB1\_21:

(50, 14195), (55, 14210), (Start: 60 @14291 has 586 MA's), (70, 14321), (83, 14375),

Gene: CactusRose\_18 Start: 13461, Stop: 13856, Start Num: 60

Candidate Starts for CactusRose\_18:

(Start: 60 @13461 has 586 MA's), (Start: 64 @13467 has 2 MA's), (71, 13500), (Start: 76 @13518 has 2 MA's), (78, 13530), (100, 13659), (105, 13677),

Gene: Caelakin\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Caelakin\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Caelum\_14 Start: 8901, Stop: 9377, Start Num: 62

Candidate Starts for Caelum\_14:

(Start: 62 @8901 has 41 MA's), (Start: 69 @8937 has 1 MA's), (84, 9006), (114, 9186), (120, 9231),

Gene: Caliburn\_13 Start: 9159, Stop: 9557, Start Num: 60

Candidate Starts for Caliburn\_13:

(Start: 60 @9159 has 586 MA's), (84, 9264), (93, 9336), (99, 9363), (100, 9366), (120, 9483), (133, 9543),

Gene: Calvinny\_23 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Calvinny\_23:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Camperdownii\_19 Start: 13188, Stop: 13580, Start Num: 61

Candidate Starts for Camperdownii\_19:

(Start: 61 @13188 has 249 MA's), (66, 13197), (101, 13392), (102, 13395), (103, 13398), (105, 13404), (107, 13422), (130, 13542), (134, 13557), (136, 13572),

Gene: Candra\_24 Start: 14451, Stop: 14804, Start Num: 60

Candidate Starts for Candra\_24:

(Start: 60 @14451 has 586 MA's), (85, 14559), (101, 14643),

Gene: Caraxes\_20 Start: 12955, Stop: 13290, Start Num: 60

Candidate Starts for Caraxes\_20:

(50, 12859), (55, 12874), (Start: 60 @12955 has 586 MA's), (78, 13018), (83, 13039), (100, 13141), (107, 13177), (111, 13210), (129, 13285),

Gene: Carlyle\_21 Start: 14590, Stop: 14985, Start Num: 60

Candidate Starts for Carlyle\_21:

(Start: 60 @14590 has 586 MA's), (Start: 64 @14596 has 2 MA's), (71, 14629), (Start: 76 @14647 has 2 MA's), (78, 14659), (100, 14788), (105, 14806),

Gene: Catalina\_22 Start: 15077, Stop: 15466, Start Num: 60

Candidate Starts for Catalina\_22:

(Start: 60 @15077 has 586 MA's), (107, 15308), (130, 15428),

Gene: Caviar\_21 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for Caviar\_21:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Celery\_16 Start: 9208, Stop: 9591, Start Num: 62

Candidate Starts for Celery\_16:

(Start: 62 @9208 has 41 MA's), (84, 9313), (116, 9493), (117, 9502), (133, 9577),

Gene: Celeste\_13 Start: 9146, Stop: 9544, Start Num: 60

Candidate Starts for Celeste\_13:

(3, 8567), (6, 8591), (18, 8684), (52, 9032), (53, 9047), (55, 9062), (Start: 60 @9146 has 586 MA's), (93, 9320), (100, 9350), (120, 9470), (133, 9530),

Gene: Celia\_13 Start: 9481, Stop: 9861, Start Num: 60

Candidate Starts for Celia\_13:

(Start: 60 @9481 has 586 MA's), (72, 9535), (Start: 76 @9547 has 2 MA's), (120, 9790), (133, 9850),

Gene: Centaur\_23 Start: 14797, Stop: 15132, Start Num: 60

Candidate Starts for Centaur\_23:

(50, 14701), (55, 14716), (Start: 60 @14797 has 586 MA's), (104, 14998), (107, 15019), (128, 15121),

Gene: CentreCat\_20 Start: 13570, Stop: 13962, Start Num: 61

Candidate Starts for CentreCat\_20:

(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: Cerulean\_21 Start: 13882, Stop: 14274, Start Num: 61

Candidate Starts for Cerulean\_21:

(Start: 61 @13882 has 249 MA's), (66, 13891), (101, 14086), (102, 14089), (103, 14092), (105, 14098), (107, 14116), (130, 14236), (134, 14251), (136, 14266),

Gene: Chadwick\_18 Start: 12481, Stop: 12894, Start Num: 60

Candidate Starts for Chadwick\_18:

(53, 12385), (55, 12400), (Start: 60 @12481 has 586 MA's), (74, 12535), (102, 12706), (103, 12709), (105, 12715),

Gene: ChampagnePapi\_21 Start: 13881, Stop: 14273, Start Num: 61

Candidate Starts for ChampagnePapi\_21:

(Start: 61 @13881 has 249 MA's), (66, 13890), (101, 14085), (102, 14088), (103, 14091), (105, 14097), (107, 14115), (130, 14235), (134, 14250), (136, 14265),

Gene: Chanagan\_18 Start: 13300, Stop: 13695, Start Num: 60

Candidate Starts for Chanagan\_18:

(Start: 60 @13300 has 586 MA's), (Start: 64 @13306 has 2 MA's), (71, 13339), (Start: 76 @13357 has 2 MA's), (78, 13369), (100, 13498), (105, 13516),

Gene: Changeling\_24 Start: 16162, Stop: 16497, Start Num: 60

Candidate Starts for Changeling\_24:

(16, 15667), (24, 15727), (37, 15829), (50, 16066), (55, 16081), (Start: 60 @16162 has 586 MA's), (70, 16192), (100, 16348),

Gene: Chaph\_20 Start: 13578, Stop: 13970, Start Num: 61

Candidate Starts for Chaph\_20:

(Start: 61 @13578 has 249 MA's), (101, 13782), (102, 13785), (103, 13788), (105, 13794), (107, 13812), (130, 13932), (131, 13935), (134, 13947), (136, 13962),

Gene: Chargerpower\_21 Start: 13539, Stop: 13880, Start Num: 60

Candidate Starts for Chargerpower\_21:

(50, 13443), (55, 13458), (Start: 60 @13539 has 586 MA's), (74, 13584), (100, 13725), (107, 13767),

Gene: Charm\_21 Start: 13258, Stop: 13593, Start Num: 60

Candidate Starts for Charm\_21:

(Start: 60 @13258 has 586 MA's), (100, 13444), (101, 13450), (104, 13459), (107, 13480),

Gene: Chartreuse\_24 Start: 14364, Stop: 14717, Start Num: 60

Candidate Starts for Chartreuse\_24:

(Start: 60 @14364 has 586 MA's), (85, 14472), (101, 14556),

Gene: Che12\_23 Start: 13221, Stop: 13556, Start Num: 60

Candidate Starts for Che12\_23:

(50, 13125), (55, 13140), (Start: 60 @13221 has 586 MA's), (78, 13284), (83, 13305), (100, 13407), (107, 13443), (111, 13476), (129, 13551),

Gene: ChipMunk\_23 Start: 14704, Stop: 15039, Start Num: 60

Candidate Starts for ChipMunk\_23:

(50, 14608), (55, 14623), (Start: 60 @14704 has 586 MA's), (70, 14734), (100, 14890),

Gene: Chiqui\_19 Start: 13447, Stop: 13788, Start Num: 60

Candidate Starts for Chiqui\_19:

(53, 13351), (55, 13366), (Start: 60 @13447 has 586 MA's), (85, 13561), (93, 13624), (100, 13645), (107, 13681), (111, 13714), (127, 13780),

Gene: Chucky\_13 Start: 9146, Stop: 9541, Start Num: 60

Candidate Starts for Chucky\_13:

(3, 8567), (6, 8591), (52, 9032), (55, 9062), (Start: 60 @9146 has 586 MA's), (Start: 76 @9212 has 2 MA's), (93, 9320), (100, 9350), (120, 9470), (133, 9527),

Gene: Chupacabra\_20 Start: 13348, Stop: 13740, Start Num: 61

Candidate Starts for Chupacabra\_20:

(Start: 61 @13348 has 249 MA's), (68, 13372), (Start: 76 @13405 has 2 MA's), (97, 13537), (105, 13564), (134, 13717), (136, 13732),

Gene: Ciao\_19 Start: 13687, Stop: 14082, Start Num: 60

Candidate Starts for Ciao\_19:

(Start: 60 @13687 has 586 MA's), (Start: 64 @13693 has 2 MA's), (71, 13726), (Start: 76 @13744 has 2 MA's), (78, 13756), (100, 13885), (105, 13903),

Gene: Cici\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for Cici\_20:

(Start: 61 @13568 has 249 MA's), (105, 13784), (130, 13922), (134, 13937), (136, 13952),

Gene: Cindaradix\_19 Start: 13302, Stop: 13694, Start Num: 61

Candidate Starts for Cindaradix\_19:

(Start: 61 @13302 has 249 MA's), (66, 13311), (105, 13518), (107, 13536), (130, 13656), (134, 13671), (136, 13686),

Gene: Cintron\_20 Start: 13617, Stop: 14009, Start Num: 61

Candidate Starts for Cintron\_20:

(Start: 61 @13617 has 249 MA's), (101, 13821), (102, 13824), (103, 13827), (105, 13833), (107, 13851), (130, 13971), (131, 13974), (134, 13986), (136, 14001),

Gene: Citius\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Citius\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Clarenza\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Clarenza\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: CloudWang3\_24 Start: 14395, Stop: 14748, Start Num: 60

Candidate Starts for CloudWang3\_24:

(Start: 60 @14395 has 586 MA's), (85, 14503), (101, 14587),

Gene: Cocoaberry\_20 Start: 13573, Stop: 13965, Start Num: 61

Candidate Starts for Cocoaberry\_20:

(Start: 61 @13573 has 249 MA's), (101, 13777), (102, 13780), (103, 13783), (105, 13789), (107, 13807), (130, 13927), (131, 13930), (134, 13942), (136, 13957),

Gene: Colbster\_22 Start: 13665, Stop: 14024, Start Num: 61

Candidate Starts for Colbster\_22:

(Start: 61 @13665 has 249 MA's), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: Colin\_25 Start: 16001, Stop: 16336, Start Num: 60

Candidate Starts for Colin\_25:

(37, 15668), (50, 15905), (55, 15920), (Start: 60 @16001 has 586 MA's), (70, 16031), (83, 16085), (100, 16187),

Gene: Commander\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Commander\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Conan\_14 Start: 8960, Stop: 9343, Start Num: 62

Candidate Starts for Conan\_14:



(55, 8873), (Start: 58 @8954 has 5 MA's), (Start: 62 @8960 has 41 MA's), (84, 9065), (99, 9149), (116, 9245), (117, 9254), (133, 9329),

Gene: Conceptll\_20 Start: 14182, Stop: 14577, Start Num: 60

Candidate Starts for Conceptll\_20:

(Start: 60 @14182 has 586 MA's), (Start: 64 @14188 has 2 MA's), (71, 14221), (Start: 76 @14239 has 2 MA's), (78, 14251), (100, 14380), (105, 14398),

Gene: Connomayer\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Connomayer\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Conquerage\_22 Start: 15106, Stop: 15495, Start Num: 60

Candidate Starts for Conquerage\_22:

(Start: 60 @15106 has 586 MA's), (107, 15337), (130, 15457),

Gene: Conspiracy\_17 Start: 12497, Stop: 12910, Start Num: 60

Candidate Starts for Conspiracy\_17:

(32, 12089), (53, 12401), (Start: 60 @12497 has 586 MA's), (74, 12551), (81, 12581), (105, 12731),

Gene: Coog\_17 Start: 12641, Stop: 13054, Start Num: 60

Candidate Starts for Coog\_17:

(32, 12233), (53, 12545), (Start: 60 @12641 has 586 MA's), (74, 12695), (81, 12725), (105, 12875),

Gene: Cookiedough\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for Cookiedough\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Corvo\_19 Start: 14179, Stop: 14574, Start Num: 60

Candidate Starts for Corvo\_19:

(Start: 60 @14179 has 586 MA's), (Start: 64 @14185 has 2 MA's), (71, 14218), (Start: 76 @14236 has 2 MA's), (78, 14248), (100, 14377), (105, 14395),

Gene: CosmicSans\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for CosmicSans\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Crispicous1\_18 Start: 13171, Stop: 13566, Start Num: 60

Candidate Starts for Crispicous1\_18:

(Start: 60 @13171 has 586 MA's), (Start: 64 @13177 has 2 MA's), (71, 13210), (Start: 76 @13228 has 2 MA's), (78, 13240), (100, 13369), (105, 13387),

Gene: Crucio\_21 Start: 14251, Stop: 14586, Start Num: 60

Candidate Starts for Crucio\_21:

(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: Cuco\_17 Start: 12672, Stop: 13085, Start Num: 60

Candidate Starts for Cuco\_17:

(32, 12264), (53, 12576), (Start: 60 @12672 has 586 MA's), (74, 12726), (81, 12756), (105, 12906),

Gene: Cueyllyss\_19 Start: 13872, Stop: 14267, Start Num: 60

Candidate Starts for Cueylyss\_19:

(Start: 60 @13872 has 586 MA's), (Start: 64 @13878 has 2 MA's), (71, 13911), (Start: 76 @13929 has 2 MA's), (78, 13941), (100, 14070), (105, 14088),

Gene: Cullens\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Cullens\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: D29\_21 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for D29\_21:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: D32\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for D32\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: DBQu4n\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for DBQu4n\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: DD5\_20 Start: 14421, Stop: 14816, Start Num: 60

Candidate Starts for DD5\_20:

(Start: 60 @14421 has 586 MA's), (Start: 64 @14427 has 2 MA's), (71, 14460), (Start: 76 @14478 has 2 MA's), (78, 14490), (100, 14619), (105, 14637),

Gene: DaHudson\_22 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for DaHudson\_22:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: DaVinci\_24 Start: 14418, Stop: 14771, Start Num: 60

Candidate Starts for DaVinci\_24:

(Start: 60 @14418 has 586 MA's), (85, 14526), (101, 14610),

Gene: Daishi\_21 Start: 12590, Stop: 12949, Start Num: 61

Candidate Starts for Daishi\_21:

(Start: 61 @12590 has 249 MA's), (Start: 69 @12617 has 1 MA's), (93, 12767), (107, 12824), (111, 12857), (115, 12875),

Gene: Dalmatian\_21 Start: 14401, Stop: 14736, Start Num: 60

Candidate Starts for Dalmatian\_21:

(50, 14305), (55, 14320), (Start: 60 @14401 has 586 MA's), (70, 14431), (80, 14473), (100, 14587), (107, 14623),

Gene: Danforth\_16 Start: 12232, Stop: 12600, Start Num: 60

Candidate Starts for Danforth\_16:

(41, 11944), (49, 12124), (54, 12151), (Start: 60 @12232 has 586 MA's), (70, 12274), (85, 12352), (88, 12358),

Gene: Danzina\_14 Start: 9350, Stop: 9748, Start Num: 60

Candidate Starts for Danzina\_14:

(3, 8771), (6, 8795), (52, 9236), (53, 9251), (55, 9266), (Start: 60 @9350 has 586 MA's), (75, 9413), (93, 9524), (100, 9554), (120, 9674), (133, 9734),

Gene: Darrell\_23 Start: 15268, Stop: 15657, Start Num: 60

Candidate Starts for Darrell\_23:

(Start: 60 @15268 has 586 MA's), (93, 15439), (107, 15499), (130, 15619),

Gene: DARTHPhader\_22 Start: 15252, Stop: 15638, Start Num: 60

Candidate Starts for DARTHPhader\_22:

(13, 14697), (53, 15156), (55, 15171), (Start: 60 @15252 has 586 MA's), (93, 15423), (107, 15480), (130, 15600),

Gene: Dattran\_14 Start: 9145, Stop: 9543, Start Num: 60

Candidate Starts for Dattran\_14:

(3, 8566), (6, 8590), (18, 8683), (52, 9031), (53, 9046), (55, 9061), (Start: 60 @9145 has 586 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9529),

Gene: Datway\_20 Start: 13586, Stop: 13978, Start Num: 61

Candidate Starts for Datway\_20:

(Start: 61 @13586 has 249 MA's), (66, 13595), (105, 13802), (107, 13820), (130, 13940), (134, 13955), (136, 13970),

Gene: Daudau\_13 Start: 9036, Stop: 9488, Start Num: 62

Candidate Starts for Daudau\_13:

(38, 8679), (45, 8814), (52, 8919), (Start: 62 @9036 has 41 MA's), (Start: 69 @9072 has 1 MA's), (Start: 76 @9102 has 2 MA's), (93, 9198), (99, 9225), (100, 9228), (111, 9312), (120, 9366),

Gene: Deano\_20 Start: 13577, Stop: 13969, Start Num: 61

Candidate Starts for Deano\_20:

(Start: 61 @13577 has 249 MA's), (101, 13781), (102, 13784), (103, 13787), (105, 13793), (107, 13811), (130, 13931), (131, 13934), (134, 13946), (136, 13961),

Gene: DekHockey33\_23 Start: 13538, Stop: 13906, Start Num: 56

Candidate Starts for DekHockey33\_23:

(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: Deloris\_22 Start: 14732, Stop: 15067, Start Num: 60

Candidate Starts for Deloris\_22:

(50, 14636), (55, 14651), (Start: 60 @14732 has 586 MA's), (70, 14762), (83, 14816), (85, 14840), (107, 14954),

Gene: Dexers\_12 Start: 8953, Stop: 9339, Start Num: 62

Candidate Starts for Dexers\_12:

(55, 8866), (Start: 58 @8947 has 5 MA's), (Start: 62 @8953 has 41 MA's), (84, 9058), (120, 9265), (133, 9325),

Gene: Dexes\_20 Start: 14387, Stop: 14782, Start Num: 60

Candidate Starts for Dexes\_20:

(Start: 60 @14387 has 586 MA's), (Start: 64 @14393 has 2 MA's), (71, 14426), (Start: 76 @14444 has 2 MA's), (78, 14456), (100, 14585), (105, 14603),

Gene: Dhanush\_20 Start: 13572, Stop: 13964, Start Num: 61

Candidate Starts for Dhanush\_20:

(Start: 61 @13572 has 249 MA's), (101, 13776), (102, 13779), (103, 13782), (105, 13788), (107, 13806), (130, 13926), (131, 13929), (134, 13941), (136, 13956),

Gene: Diane\_13 Start: 8944, Stop: 9405, Start Num: 62

Candidate Starts for Diane\_13:

(52, 8827), (55, 8857), (Start: 62 @8944 has 41 MA's), (Start: 69 @8980 has 1 MA's), (Start: 76 @9010 has 2 MA's), (113, 9226), (116, 9250), (120, 9274),

Gene: Dieselweasel\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for Dieselweasel\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: Dignity\_23 Start: 14716, Stop: 15051, Start Num: 60

Candidate Starts for Dignity\_23:

(14, 14206), (50, 14620), (55, 14635), (Start: 60 @14716 has 586 MA's), (70, 14746),

Gene: Dinger\_16 Start: 9613, Stop: 9924, Start Num: 60

Candidate Starts for Dinger\_16:

(Start: 60 @9613 has 586 MA's), (Start: 63 @9619 has 5 MA's), (Start: 76 @9673 has 2 MA's), (88, 9736), (103, 9796), (106, 9805),

Gene: DirtyDunning\_20 Start: 13565, Stop: 13957, Start Num: 61

Candidate Starts for DirtyDunning\_20:

(Start: 61 @13565 has 249 MA's), (66, 13574), (101, 13769), (102, 13772), (103, 13775), (105, 13781), (107, 13799), (130, 13919), (134, 13934), (136, 13949),

Gene: Discoknowium\_17 Start: 12787, Stop: 13200, Start Num: 60

Candidate Starts for Discoknowium\_17:

(32, 12379), (53, 12691), (Start: 60 @12787 has 586 MA's), (74, 12841), (81, 12871), (105, 13021),

Gene: Dixon\_17 Start: 12251, Stop: 12619, Start Num: 60

Candidate Starts for Dixon\_17:

(49, 12143), (54, 12170), (Start: 60 @12251 has 586 MA's), (71, 12296), (85, 12371), (88, 12377),

Gene: DontArgue\_19 Start: 11606, Stop: 11998, Start Num: 61

Candidate Starts for DontArgue\_19:

(Start: 61 @11606 has 249 MA's), (71, 11645), (Start: 76 @11663 has 2 MA's), (105, 11822), (118, 11900), (134, 11975), (136, 11990),

Gene: Doom\_20 Start: 14445, Stop: 14840, Start Num: 60

Candidate Starts for Doom\_20:

(Start: 60 @14445 has 586 MA's), (Start: 64 @14451 has 2 MA's), (71, 14484), (Start: 76 @14502 has 2 MA's), (78, 14514), (100, 14643), (105, 14661),

Gene: Dorothea\_24 Start: 14419, Stop: 14772, Start Num: 60

Candidate Starts for Dorothea\_24:

(Start: 60 @14419 has 586 MA's), (85, 14527), (101, 14611),

Gene: DrFeelGood\_18 Start: 13797, Stop: 14192, Start Num: 60

Candidate Starts for DrFeelGood\_18:

(Start: 60 @13797 has 586 MA's), (Start: 64 @13803 has 2 MA's), (71, 13836), (Start: 76 @13854 has 2 MA's), (78, 13866), (100, 13995), (105, 14013),

Gene: Drake55\_23 Start: 14815, Stop: 15150, Start Num: 60

Candidate Starts for Drake55\_23:

(50, 14719), (55, 14734), (Start: 60 @14815 has 586 MA's), (85, 14923), (104, 15016), (107, 15037), (128, 15139),

Gene: Drake94\_19 Start: 11439, Stop: 11831, Start Num: 61

Candidate Starts for Drake94\_19:

(Start: 61 @11439 has 249 MA's), (Start: 76 @11496 has 2 MA's), (105, 11655), (134, 11808), (136, 11823),

Gene: DreamCatcher\_22 Start: 15154, Stop: 15549, Start Num: 60

Candidate Starts for DreamCatcher\_22:

(Start: 60 @15154 has 586 MA's), (Start: 64 @15160 has 2 MA's), (71, 15193), (Start: 76 @15211 has 2 MA's), (78, 15223), (100, 15352), (105, 15370),

Gene: DreamTeam1\_21 Start: 13258, Stop: 13593, Start Num: 60

Candidate Starts for DreamTeam1\_21:

(Start: 60 @13258 has 586 MA's), (100, 13444), (101, 13450), (104, 13459), (107, 13480),

Gene: Dreamboat\_20 Start: 13621, Stop: 14016, Start Num: 60

Candidate Starts for Dreamboat\_20:

(Start: 60 @13621 has 586 MA's), (Start: 64 @13627 has 2 MA's), (71, 13660), (Start: 76 @13678 has 2 MA's), (78, 13690), (100, 13819), (105, 13837),

Gene: DroogsArmy\_21 Start: 14957, Stop: 15301, Start Num: 63

Candidate Starts for DroogsArmy\_21:

(Start: 63 @14957 has 5 MA's), (Start: 69 @14990 has 1 MA's), (73, 15011), (Start: 76 @15020 has 2 MA's), (125, 15293),

Gene: DropBear\_20 Start: 13267, Stop: 13608, Start Num: 60

Candidate Starts for DropBear\_20:

(53, 13171), (55, 13186), (Start: 60 @13267 has 586 MA's), (Start: 76 @13324 has 2 MA's), (85, 13381), (93, 13444), (100, 13465), (107, 13501), (111, 13534), (127, 13600),

Gene: Druantia\_20 Start: 13570, Stop: 13962, Start Num: 61

Candidate Starts for Druantia\_20:

(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: Dublin\_16 Start: 12640, Stop: 13053, Start Num: 60

Candidate Starts for Dublin\_16:

(53, 12544), (Start: 60 @12640 has 586 MA's), (74, 12694), (81, 12724), (105, 12874),

Gene: DudeLittle\_21 Start: 14403, Stop: 14738, Start Num: 60

Candidate Starts for DudeLittle\_21:

(50, 14307), (55, 14322), (Start: 60 @14403 has 586 MA's), (70, 14433), (80, 14475), (100, 14589), (107, 14625),

Gene: Dulcie\_18 Start: 13363, Stop: 13758, Start Num: 60

Candidate Starts for Dulcie\_18:

(Start: 60 @13363 has 586 MA's), (Start: 64 @13369 has 2 MA's), (71, 13402), (Start: 76 @13420 has 2 MA's), (78, 13432), (100, 13561), (105, 13579),

Gene: Duplo\_24 Start: 14246, Stop: 14581, Start Num: 60

Candidate Starts for Duplo\_24:

(50, 14150), (55, 14165), (Start: 60 @14246 has 586 MA's), (100, 14432),

Gene: Dussy\_20 Start: 14017, Stop: 14412, Start Num: 60

Candidate Starts for Dussy\_20:

(Start: 60 @14017 has 586 MA's), (Start: 64 @14023 has 2 MA's), (71, 14056), (Start: 76 @14074 has 2 MA's), (78, 14086), (100, 14215), (105, 14233),

Gene: DustyMartin\_23 Start: 13418, Stop: 13810, Start Num: 61

Candidate Starts for DustyMartin\_23:

(Start: 61 @13418 has 249 MA's), (Start: 76 @13475 has 2 MA's), (97, 13607), (105, 13634), (125, 13760), (134, 13787), (136, 13802),

Gene: Dwayne\_13 Start: 9145, Stop: 9540, Start Num: 60

Candidate Starts for Dwayne\_13:

(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: Dynamix\_20 Start: 13773, Stop: 14168, Start Num: 60

Candidate Starts for Dynamix\_20:

(Start: 60 @13773 has 586 MA's), (Start: 64 @13779 has 2 MA's), (71, 13812), (Start: 76 @13830 has 2 MA's), (78, 13842), (100, 13971), (105, 13989),

Gene: ELB20\_12 Start: 9049, Stop: 9516, Start Num: 62

Candidate Starts for ELB20\_12:

(28, 8629), (37, 8689), (55, 8962), (Start: 62 @9049 has 41 MA's), (Start: 69 @9085 has 1 MA's), (93, 9211), (99, 9238), (120, 9394), (132, 9451),

Gene: EZMoney23\_25 Start: 16290, Stop: 16625, Start Num: 60

Candidate Starts for EZMoney23\_25:

(50, 16194), (55, 16209), (Start: 60 @16290 has 586 MA's), (70, 16320), (83, 16374), (100, 16476),

Gene: Eagle\_19 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Eagle\_19:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: EagleEye\_23 Start: 14531, Stop: 14869, Start Num: 60

Candidate Starts for EagleEye\_23:

(Start: 60 @14531 has 586 MA's), (100, 14717), (104, 14732), (107, 14753),

Gene: Eaglepride\_21 Start: 13358, Stop: 13750, Start Num: 61

Candidate Starts for Eaglepride\_21:

(Start: 61 @13358 has 249 MA's), (68, 13382), (Start: 76 @13415 has 2 MA's), (105, 13574), (125, 13700), (134, 13727), (136, 13742),

Gene: Eapen\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for Eapen\_20:

(Start: 61 @13568 has 249 MA's), (101, 13772), (102, 13775), (103, 13778), (105, 13784), (107, 13802), (130, 13922), (131, 13925), (134, 13937), (136, 13952),

Gene: Ebony\_21 Start: 14886, Stop: 15236, Start Num: 60

Candidate Starts for Ebony\_21:

(Start: 60 @14886 has 586 MA's), (83, 14970), (100, 15072), (107, 15108),

Gene: Echild\_21 Start: 14406, Stop: 14741, Start Num: 60

Candidate Starts for Echild\_21:

(50, 14310), (55, 14325), (Start: 60 @14406 has 586 MA's), (70, 14436), (100, 14592),

Gene: Eddasa\_14 Start: 9342, Stop: 9740, Start Num: 60

Candidate Starts for Eddasa\_14:

(3, 8763), (8, 8799), (52, 9228), (53, 9243), (55, 9258), (Start: 60 @9342 has 586 MA's), (Start: 76 @9408 has 2 MA's), (84, 9447), (93, 9519), (99, 9546), (100, 9549), (120, 9666), (133, 9726),

Gene: Edison31\_20 Start: 13382, Stop: 13774, Start Num: 61

Candidate Starts for Edison31\_20:

(Start: 61 @13382 has 249 MA's), (68, 13406), (97, 13571), (105, 13598), (134, 13751),

Gene: EdogawaKiddo\_20 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for EdogawaKiddo\_20:

(Start: 60 @15076 has 586 MA's), (107, 15307),

Gene: Edtherson\_20 Start: 14515, Stop: 14910, Start Num: 60

Candidate Starts for Edtherson\_20:

(Start: 60 @14515 has 586 MA's), (Start: 64 @14521 has 2 MA's), (71, 14554), (Start: 76 @14572 has 2 MA's), (78, 14584), (100, 14713), (105, 14731),

Gene: Eidsmoe\_22 Start: 15106, Stop: 15495, Start Num: 60

Candidate Starts for Eidsmoe\_22:

(Start: 60 @15106 has 586 MA's), (107, 15337), (130, 15457),

Gene: Ejemplo\_13 Start: 9148, Stop: 9543, Start Num: 60

Candidate Starts for Ejemplo\_13:

(3, 8569), (6, 8593), (52, 9034), (55, 9064), (Start: 60 @9148 has 586 MA's), (Start: 76 @9214 has 2 MA's), (93, 9322), (100, 9352), (120, 9472), (133, 9529),

Gene: ElGato\_14 Start: 8963, Stop: 9346, Start Num: 62

Candidate Starts for ElGato\_14:

(55, 8876), (Start: 58 @8957 has 5 MA's), (Start: 62 @8963 has 41 MA's), (84, 9068), (99, 9152), (116, 9248), (117, 9257), (133, 9332),

Gene: ElTiger69\_17 Start: 12511, Stop: 12924, Start Num: 60

Candidate Starts for ElTiger69\_17:

(23, 12052), (53, 12415), (55, 12430), (Start: 60 @12511 has 586 MA's), (74, 12565), (102, 12736), (103, 12739), (105, 12745),

Gene: Elephantoon\_22 Start: 14697, Stop: 15086, Start Num: 60

Candidate Starts for Elephantoon\_22:

(Start: 60 @14697 has 586 MA's), (93, 14868), (107, 14928),

Gene: Emaanora\_15 Start: 9145, Stop: 9540, Start Num: 60

Candidate Starts for Emaanora\_15:

(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: EmyBug\_22 Start: 15106, Stop: 15495, Start Num: 60

Candidate Starts for EmyBug\_22:

(Start: 60 @15106 has 586 MA's), (107, 15337), (130, 15457),

Gene: EnochSoames\_14 Start: 9338, Stop: 9736, Start Num: 60

Candidate Starts for EnochSoames\_14:

(3, 8759), (8, 8795), (52, 9224), (53, 9239), (55, 9254), (Start: 60 @9338 has 586 MA's), (Start: 76 @9404 has 2 MA's), (84, 9443), (93, 9515), (99, 9542), (100, 9545), (120, 9662), (133, 9722),

Gene: EnzoK\_19 Start: 13955, Stop: 14350, Start Num: 60

Candidate Starts for EnzoK\_19:

(Start: 60 @13955 has 586 MA's), (Start: 64 @13961 has 2 MA's), (71, 13994), (Start: 76 @14012 has 2 MA's), (78, 14024), (100, 14153), (105, 14171),

Gene: EpicPhail\_22 Start: 13665, Stop: 14024, Start Num: 61

Candidate Starts for EpicPhail\_22:

(Start: 61 @13665 has 249 MA's), (66, 13674), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: Epsocamisio\_23 Start: 13416, Stop: 13784, Start Num: 56

Candidate Starts for Epsocamisio\_23:

(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Equemioh13\_23 Start: 14800, Stop: 15135, Start Num: 60

Candidate Starts for Equemioh13\_23:

(50, 14704), (55, 14719), (Start: 60 @14800 has 586 MA's), (104, 15001), (107, 15022), (128, 15124),

Gene: EricB\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for EricB\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Erik\_16 Start: 9648, Stop: 9959, Start Num: 60

Candidate Starts for Erik\_16:

(Start: 60 @9648 has 586 MA's), (Start: 63 @9654 has 5 MA's), (Start: 76 @9708 has 2 MA's), (88, 9771), (103, 9831), (107, 9855), (121, 9924),

Gene: Eris\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Eris\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Eros\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Eros\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Esperer\_13 Start: 9179, Stop: 9577, Start Num: 60

Candidate Starts for Esperer\_13:



(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: Espica\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Espica\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Espresso\_19 Start: 13825, Stop: 14220, Start Num: 60

Candidate Starts for Espresso\_19:

(Start: 60 @13825 has 586 MA's), (Start: 64 @13831 has 2 MA's), (71, 13864), (Start: 76 @13882 has 2 MA's), (78, 13894), (100, 14023), (105, 14041),

Gene: Et2Brutus\_20 Start: 14840, Stop: 15190, Start Num: 60

Candidate Starts for Et2Brutus\_20:

(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: Euphoria\_19 Start: 13717, Stop: 14112, Start Num: 60

Candidate Starts for Euphoria\_19:

(Start: 60 @13717 has 586 MA's), (Start: 64 @13723 has 2 MA's), (71, 13756), (Start: 76 @13774 has 2 MA's), (78, 13786), (100, 13915), (105, 13933),

Gene: Eurydice\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Eurydice\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: EvilGenius\_23 Start: 14714, Stop: 15049, Start Num: 60

Candidate Starts for EvilGenius\_23:

(50, 14618), (55, 14633), (Start: 60 @14714 has 586 MA's), (70, 14744), (100, 14900),

Gene: Expelliarmus\_16 Start: 12218, Stop: 12586, Start Num: 60

Candidate Starts for Expelliarmus\_16:

(41, 11930), (49, 12110), (54, 12137), (Start: 60 @12218 has 586 MA's), (70, 12260), (85, 12338), (88, 12344),

Gene: ExplosioNervosa\_22 Start: 15109, Stop: 15498, Start Num: 60

Candidate Starts for ExplosioNervosa\_22:

(Start: 60 @15109 has 586 MA's), (107, 15340),

Gene: Eyeball\_19 Start: 13456, Stop: 13851, Start Num: 60

Candidate Starts for Eyeball\_19:

(Start: 60 @13456 has 586 MA's), (Start: 64 @13462 has 2 MA's), (71, 13495), (Start: 76 @13513 has 2 MA's), (78, 13525), (100, 13654), (105, 13672),

Gene: Fajezeel\_21 Start: 14036, Stop: 14431, Start Num: 60

Candidate Starts for Fajezeel\_21:

(Start: 60 @14036 has 586 MA's), (Start: 64 @14042 has 2 MA's), (71, 14075), (Start: 76 @14093 has 2 MA's), (78, 14105), (100, 14234), (105, 14252),

Gene: Fameo\_21 Start: 14329, Stop: 14664, Start Num: 60

Candidate Starts for Fameo\_21:

(50, 14233), (55, 14248), (Start: 60 @14329 has 586 MA's), (70, 14359), (100, 14515), (107, 14551),

Gene: Farber\_22 Start: 13658, Stop: 14017, Start Num: 61

Candidate Starts for Farber\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Fascinus\_18 Start: 13459, Stop: 13854, Start Num: 60

Candidate Starts for Fascinus\_18:

(Start: 60 @13459 has 586 MA's), (Start: 64 @13465 has 2 MA's), (71, 13498), (Start: 76 @13516 has 2 MA's), (78, 13528), (100, 13657), (105, 13675),

Gene: Fayely\_22 Start: 15109, Stop: 15498, Start Num: 60

Candidate Starts for Fayely\_22:

(Start: 60 @15109 has 586 MA's), (107, 15340), (130, 15460),

Gene: Fenn\_20 Start: 15264, Stop: 15659, Start Num: 60

Candidate Starts for Fenn\_20:

(Start: 60 @15264 has 586 MA's), (Start: 64 @15270 has 2 MA's), (71, 15303), (Start: 76 @15321 has 2 MA's), (78, 15333), (100, 15462), (105, 15480),

Gene: Fernando\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Fernando\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Fibonacci\_21 Start: 14840, Stop: 15190, Start Num: 60

Candidate Starts for Fibonacci\_21:

(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: FiringLine\_21 Start: 14251, Stop: 14586, Start Num: 60

Candidate Starts for FiringLine\_21:

(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: First\_0021 Start: 14319, Stop: 14654, Start Num: 60

Candidate Starts for First\_0021:

(50, 14223), (55, 14238), (Start: 60 @14319 has 586 MA's), (70, 14349), (83, 14403), (85, 14427),

Gene: Flare16\_21 Start: 14358, Stop: 14693, Start Num: 60

Candidate Starts for Flare16\_21:

(50, 14262), (55, 14277), (Start: 60 @14358 has 586 MA's), (104, 14559), (107, 14580), (128, 14682),

Gene: Flaverint\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Flaverint\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Florean\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Florean\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Flux\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Flux\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: FlyCatcher\_24 Start: 15278, Stop: 15589, Start Num: 69

Candidate Starts for FlyCatcher\_24:

(55, 15161), (Start: 63 @15245 has 5 MA's), (Start: 69 @15278 has 1 MA's), (Start: 76 @15308 has 2 MA's), (111, 15518), (125, 15581),

Gene: ForGetIt\_17 Start: 12523, Stop: 12936, Start Num: 60

Candidate Starts for ForGetIt\_17:

(32, 12115), (53, 12427), (Start: 60 @12523 has 586 MA's), (74, 12577), (81, 12607), (105, 12757),

Gene: Forsytheast\_18 Start: 13726, Stop: 14121, Start Num: 60

Candidate Starts for Forsytheast\_18:

(Start: 60 @13726 has 586 MA's), (Start: 64 @13732 has 2 MA's), (71, 13765), (Start: 76 @13783 has 2 MA's), (78, 13795), (100, 13924), (105, 13942),

Gene: Francis47\_19 Start: 14273, Stop: 14668, Start Num: 60

Candidate Starts for Francis47\_19:

(53, 14177), (Start: 60 @14273 has 586 MA's), (Start: 64 @14279 has 2 MA's), (71, 14312), (Start: 76 @14330 has 2 MA's), (78, 14342), (100, 14471), (105, 14489),

Gene: Fred313\_20 Start: 12925, Stop: 13266, Start Num: 60

Candidate Starts for Fred313\_20:

(53, 12829), (55, 12844), (Start: 60 @12925 has 586 MA's), (Start: 76 @12982 has 2 MA's), (85, 13039), (93, 13102), (100, 13123), (107, 13159), (111, 13192), (127, 13258),

Gene: Froghopper\_20 Start: 13689, Stop: 14084, Start Num: 60

Candidate Starts for Froghopper\_20:

(Start: 60 @13689 has 586 MA's), (Start: 64 @13695 has 2 MA's), (71, 13728), (Start: 76 @13746 has 2 MA's), (78, 13758), (100, 13887), (105, 13905),

Gene: Funston\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Funston\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Fushigi\_20 Start: 14136, Stop: 14531, Start Num: 60

Candidate Starts for Fushigi\_20:

(Start: 60 @14136 has 586 MA's), (Start: 64 @14142 has 2 MA's), (71, 14175), (Start: 76 @14193 has 2 MA's), (78, 14205), (100, 14334), (105, 14352),

Gene: GMonster\_18 Start: 13572, Stop: 13967, Start Num: 60

Candidate Starts for GMonster\_18:

(Start: 60 @13572 has 586 MA's), (Start: 64 @13578 has 2 MA's), (71, 13611), (Start: 76 @13629 has 2 MA's), (78, 13641), (100, 13770), (105, 13788),

Gene: Gadost\_20 Start: 13573, Stop: 13965, Start Num: 61

Candidate Starts for Gadost\_20:

(Start: 61 @13573 has 249 MA's), (101, 13777), (102, 13780), (103, 13783), (105, 13789), (107, 13807), (130, 13927), (131, 13930), (134, 13942), (136, 13957),

Gene: GageAP\_21 Start: 14453, Stop: 14848, Start Num: 60

Candidate Starts for GageAP\_21:

(Start: 60 @14453 has 586 MA's), (Start: 64 @14459 has 2 MA's), (71, 14492), (Start: 76 @14510 has 2 MA's), (78, 14522), (100, 14651), (105, 14669),

Gene: Gail\_20 Start: 13431, Stop: 13766, Start Num: 60

Candidate Starts for Gail\_20:

(50, 13335), (55, 13350), (Start: 60 @13431 has 586 MA's), (78, 13494), (80, 13503), (89, 13566), (100, 13617), (107, 13653), (111, 13686), (129, 13761),

Gene: Gandalf20\_20 Start: 14520, Stop: 14915, Start Num: 60

Candidate Starts for Gandalf20\_20:

(Start: 60 @14520 has 586 MA's), (Start: 64 @14526 has 2 MA's), (71, 14559), (Start: 76 @14577 has 2 MA's), (78, 14589), (100, 14718), (105, 14736),

Gene: Garak\_25 Start: 14413, Stop: 14766, Start Num: 60

Candidate Starts for Garak\_25:

(Start: 60 @14413 has 586 MA's), (85, 14521), (101, 14605),

Gene: GaugeLDP\_23 Start: 15622, Stop: 15957, Start Num: 60

Candidate Starts for GaugeLDP\_23:

(21, 15163), (50, 15526), (55, 15541), (Start: 60 @15622 has 586 MA's), (100, 15808),

Gene: Gemma\_22 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Gemma\_22:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: George\_16 Start: 12673, Stop: 13086, Start Num: 60

Candidate Starts for George\_16:

(32, 12265), (53, 12577), (Start: 60 @12673 has 586 MA's), (74, 12727), (81, 12757), (105, 12907),

Gene: Georgie2\_22 Start: 14252, Stop: 14587, Start Num: 60

Candidate Starts for Georgie2\_22:

(50, 14156), (55, 14171), (Start: 60 @14252 has 586 MA's), (70, 14282), (100, 14438), (107, 14474),

Gene: Ghouboy\_17 Start: 12747, Stop: 13160, Start Num: 60

Candidate Starts for Ghouboy\_17:

(23, 12291), (53, 12651), (Start: 60 @12747 has 586 MA's), (74, 12801), (81, 12831), (105, 12981),

Gene: Gilberta\_21 Start: 14834, Stop: 15184, Start Num: 60

Candidate Starts for Gilberta\_21:

(Start: 60 @14834 has 586 MA's), (83, 14918), (100, 15020), (107, 15056),

Gene: GingkoMaracino\_22 Start: 13551, Stop: 13910, Start Num: 61

Candidate Starts for GingkoMaracino\_22:

(Start: 61 @13551 has 249 MA's), (Start: 69 @13578 has 1 MA's), (93, 13728), (107, 13785), (111, 13818), (115, 13836),

Gene: GirlDinner\_13 Start: 9035, Stop: 9406, Start Num: 62

Candidate Starts for GirlDinner\_13:

(22, 8573), (27, 8609), (39, 8684), (40, 8687), (45, 8813), (55, 8948), (Start: 62 @9035 has 41 MA's), (67, 9050), (99, 9209), (100, 9212), (113, 9284), (116, 9308), (120, 9332), (133, 9392),

Gene: Giroux\_20 Start: 13207, Stop: 13548, Start Num: 60

Candidate Starts for Giroux\_20:

(53, 13111), (55, 13126), (Start: 60 @13207 has 586 MA's), (Start: 76 @13264 has 2 MA's), (85, 13321), (93, 13384), (100, 13405), (107, 13441), (111, 13474), (127, 13540),

Gene: Gladiator\_24 Start: 14385, Stop: 14738, Start Num: 60

Candidate Starts for Gladiator\_24:

(50, 14289), (55, 14304), (Start: 60 @14385 has 586 MA's), (85, 14493), (101, 14577),

Gene: Goby\_13 Start: 9148, Stop: 9546, Start Num: 60

Candidate Starts for Goby\_13:

(3, 8569), (6, 8593), (35, 8776), (52, 9034), (53, 9049), (55, 9064), (Start: 60 @9148 has 586 MA's), (75, 9211), (93, 9322), (100, 9352), (120, 9472), (133, 9532),

Gene: Godpower\_14 Start: 9163, Stop: 9561, Start Num: 60

Candidate Starts for Godpower\_14:

(3, 8584), (6, 8608), (35, 8791), (52, 9049), (53, 9064), (55, 9079), (Start: 60 @9163 has 586 MA's), (75, 9226), (93, 9337), (100, 9367), (120, 9487), (133, 9547),

Gene: Gollum\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Gollum\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Gompeii16\_19 Start: 14221, Stop: 14616, Start Num: 60

Candidate Starts for Gompeii16\_19:

(53, 14125), (Start: 60 @14221 has 586 MA's), (Start: 64 @14227 has 2 MA's), (71, 14260), (Start: 76 @14278 has 2 MA's), (78, 14290), (100, 14419), (105, 14437),

Gene: Goose\_20 Start: 13349, Stop: 13741, Start Num: 61

Candidate Starts for Goose\_20:

(Start: 61 @13349 has 249 MA's), (68, 13373), (Start: 76 @13406 has 2 MA's), (97, 13538), (105, 13565), (134, 13718), (136, 13733),

Gene: Graduation\_21 Start: 14486, Stop: 14881, Start Num: 60

Candidate Starts for Graduation\_21:

(Start: 60 @14486 has 586 MA's), (Start: 64 @14492 has 2 MA's), (71, 14525), (Start: 76 @14543 has 2 MA's), (78, 14555), (100, 14684), (105, 14702),

Gene: Gratitude\_22 Start: 14800, Stop: 15135, Start Num: 60

Candidate Starts for Gratitude\_22:

(50, 14704), (55, 14719), (Start: 60 @14800 has 586 MA's), (104, 15001), (107, 15022), (128, 15124),

Gene: GrecoEtereo\_20 Start: 14027, Stop: 14422, Start Num: 60

Candidate Starts for GrecoEtereo\_20:

(Start: 60 @14027 has 586 MA's), (Start: 64 @14033 has 2 MA's), (71, 14066), (Start: 76 @14084 has 2 MA's), (78, 14096), (100, 14225), (105, 14243),

Gene: GreedyLawyer\_24 Start: 14417, Stop: 14770, Start Num: 60

Candidate Starts for GreedyLawyer\_24:

(Start: 60 @14417 has 586 MA's), (85, 14525), (101, 14609),

Gene: GreenWeasel\_15 Start: 9258, Stop: 9752, Start Num: 58

Candidate Starts for GreenWeasel\_15:

(1, 8550), (38, 8907), (45, 9042), (52, 9147), (55, 9177), (Start: 58 @9258 has 5 MA's), (79, 9366), (111, 9561), (135, 9693), (137, 9705),

Gene: Greg\_21 Start: 14036, Stop: 14431, Start Num: 60

Candidate Starts for Greg\_21:

(Start: 60 @14036 has 586 MA's), (Start: 64 @14042 has 2 MA's), (71, 14075), (Start: 76 @14093 has 2 MA's), (78, 14105), (100, 14234), (105, 14252),

Gene: Grif\_22 Start: 13748, Stop: 14107, Start Num: 61

Candidate Starts for Grif\_22:

(Start: 61 @13748 has 249 MA's), (Start: 69 @13775 has 1 MA's), (93, 13925), (107, 13982), (111, 14015), (115, 14033),

Gene: Groundhog\_16 Start: 12219, Stop: 12587, Start Num: 60

Candidate Starts for Groundhog\_16:

(41, 11931), (49, 12111), (54, 12138), (Start: 60 @12219 has 586 MA's), (70, 12261), (85, 12339), (88, 12345),

Gene: Groupthink\_23 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Groupthink\_23:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Grub\_22 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for Grub\_22:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: Grum1\_22 Start: 13658, Stop: 14017, Start Num: 61

Candidate Starts for Grum1\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Gruunaga\_24 Start: 14385, Stop: 14738, Start Num: 60

Candidate Starts for Gruunaga\_24:

(50, 14289), (55, 14304), (Start: 60 @14385 has 586 MA's), (85, 14493), (101, 14577),

Gene: GtownJaz\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for GtownJaz\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: Gwendoluna\_21 Start: 15133, Stop: 15528, Start Num: 60

Candidate Starts for Gwendoluna\_21:

(Start: 60 @15133 has 586 MA's), (Start: 64 @15139 has 2 MA's), (71, 15172), (73, 15181), (Start: 76 @15190 has 2 MA's), (100, 15331),

Gene: Gyzlar\_21 Start: 14963, Stop: 15358, Start Num: 60

Candidate Starts for Gyzlar\_21:

(Start: 60 @14963 has 586 MA's), (Start: 64 @14969 has 2 MA's), (71, 15002), (Start: 76 @15020 has 2 MA's), (78, 15032), (100, 15161), (105, 15179),

Gene: HINdeR\_20 Start: 15065, Stop: 15409, Start Num: 63  
Candidate Starts for HINdeR\_20:  
(Start: 63 @15065 has 5 MA's), (Start: 69 @15098 has 1 MA's), (73, 15119), (Start: 76 @15128 has 2 MA's), (111, 15338), (125, 15401),

Gene: Haizum\_13 Start: 8974, Stop: 9435, Start Num: 62  
Candidate Starts for Haizum\_13:  
(45, 8752), (52, 8857), (55, 8887), (Start: 62 @8974 has 41 MA's), (Start: 69 @9010 has 1 MA's), (Start: 76 @9040 has 2 MA's), (113, 9256), (116, 9280), (120, 9304),

Gene: HamSlice\_19 Start: 13567, Stop: 13959, Start Num: 61  
Candidate Starts for HamSlice\_19:  
(Start: 61 @13567 has 249 MA's), (101, 13771), (102, 13774), (103, 13777), (105, 13783), (107, 13801), (130, 13921), (131, 13924), (134, 13936), (136, 13951),

Gene: Hami1\_21 Start: 14108, Stop: 14503, Start Num: 60  
Candidate Starts for Hami1\_21:  
(Start: 60 @14108 has 586 MA's), (Start: 64 @14114 has 2 MA's), (71, 14147), (Start: 76 @14165 has 2 MA's), (78, 14177), (100, 14306), (105, 14324),

Gene: Hammer\_24 Start: 14400, Stop: 14753, Start Num: 60  
Candidate Starts for Hammer\_24:  
(50, 14304), (55, 14319), (Start: 60 @14400 has 586 MA's), (85, 14508), (101, 14592),

Gene: HanShotFirst\_19 Start: 13642, Stop: 14037, Start Num: 60  
Candidate Starts for HanShotFirst\_19:  
(Start: 60 @13642 has 586 MA's), (Start: 64 @13648 has 2 MA's), (71, 13681), (Start: 76 @13699 has 2 MA's), (78, 13711), (100, 13840), (105, 13858),

Gene: Hank144\_14 Start: 9304, Stop: 9675, Start Num: 62  
Candidate Starts for Hank144\_14:  
(29, 8893), (39, 8953), (42, 9004), (55, 9217), (Start: 62 @9304 has 41 MA's), (71, 9337), (Start: 76 @9355 has 2 MA's), (99, 9478), (113, 9553), (116, 9577), (120, 9601), (133, 9661),

Gene: Hanray\_21 Start: 15080, Stop: 15469, Start Num: 60  
Candidate Starts for Hanray\_21:  
(Start: 60 @15080 has 586 MA's), (107, 15311),

Gene: Happiness\_20 Start: 13575, Stop: 13967, Start Num: 61  
Candidate Starts for Happiness\_20:  
(Start: 61 @13575 has 249 MA's), (101, 13779), (102, 13782), (103, 13785), (105, 13791), (107, 13809), (130, 13929), (131, 13932), (134, 13944), (136, 13959),

Gene: Harlequin\_16 Start: 9593, Stop: 9904, Start Num: 60  
Candidate Starts for Harlequin\_16:  
(Start: 60 @9593 has 586 MA's), (Start: 63 @9599 has 5 MA's), (Start: 76 @9653 has 2 MA's), (88, 9716), (103, 9776), (106, 9785),

Gene: HarryHoudini\_23 Start: 14815, Stop: 15150, Start Num: 60  
Candidate Starts for HarryHoudini\_23:  
(50, 14719), (55, 14734), (Start: 60 @14815 has 586 MA's), (104, 15016), (107, 15037), (128, 15139),

Gene: HarryOW\_20 Start: 14027, Stop: 14422, Start Num: 60

Candidate Starts for HarryOW\_20:

(Start: 60 @14027 has 586 MA's), (Start: 64 @14033 has 2 MA's), (71, 14066), (Start: 76 @14084 has 2 MA's), (78, 14096), (100, 14225), (105, 14243),

Gene: HashRod\_23 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for HashRod\_23:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: HaveUMetTed\_23 Start: 13733, Stop: 14092, Start Num: 61

Candidate Starts for HaveUMetTed\_23:

(Start: 61 @13733 has 249 MA's), (Start: 69 @13760 has 1 MA's), (93, 13910), (107, 13967), (111, 14000), (115, 14018),

Gene: Heathen\_20 Start: 13008, Stop: 13349, Start Num: 60

Candidate Starts for Heathen\_20:

(53, 12912), (55, 12927), (Start: 60 @13008 has 586 MA's), (Start: 76 @13065 has 2 MA's), (85, 13122), (93, 13185), (100, 13206), (107, 13242), (111, 13275), (127, 13341),

Gene: Heffalump\_23 Start: 16131, Stop: 16466, Start Num: 60

Candidate Starts for Heffalump\_23:

(50, 16035), (55, 16050), (Start: 60 @16131 has 586 MA's), (70, 16161), (100, 16317), (107, 16353),

Gene: HelDan\_20 Start: 13260, Stop: 13601, Start Num: 60

Candidate Starts for HelDan\_20:

(53, 13164), (55, 13179), (Start: 60 @13260 has 586 MA's), (Start: 76 @13317 has 2 MA's), (85, 13374), (93, 13437), (100, 13458), (107, 13494), (111, 13527), (127, 13593),

Gene: Heliosoles\_22 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Heliosoles\_22:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Helmet\_25 Start: 14413, Stop: 14766, Start Num: 60

Candidate Starts for Helmet\_25:

(Start: 60 @14413 has 586 MA's), (85, 14521), (101, 14605),

Gene: Herbertwm\_18 Start: 13015, Stop: 13350, Start Num: 60

Candidate Starts for Herbertwm\_18:

(Start: 60 @13015 has 586 MA's), (78, 13078), (83, 13099), (100, 13201), (107, 13237), (129, 13345),

Gene: Hercules11\_22 Start: 13672, Stop: 14031, Start Num: 61

Candidate Starts for Hercules11\_22:

(Start: 61 @13672 has 249 MA's), (Start: 69 @13699 has 1 MA's), (93, 13849), (107, 13906), (111, 13939), (115, 13957),

Gene: Hermia\_21 Start: 14750, Stop: 15145, Start Num: 60

Candidate Starts for Hermia\_21:

(Start: 60 @14750 has 586 MA's), (Start: 64 @14756 has 2 MA's), (71, 14789), (Start: 76 @14807 has 2 MA's), (78, 14819), (100, 14948), (105, 14966),

Gene: HermioneGrange\_19 Start: 13662, Stop: 14057, Start Num: 60

Candidate Starts for HermioneGrange\_19:



(Start: 60 @13662 has 586 MA's), (Start: 64 @13668 has 2 MA's), (71, 13701), (Start: 76 @13719 has 2 MA's), (78, 13731), (100, 13860), (105, 13878),

Gene: Hexamo\_24 Start: 14367, Stop: 14720, Start Num: 60

Candidate Starts for Hexamo\_24:

(50, 14271), (55, 14286), (Start: 60 @14367 has 586 MA's), (85, 14475), (101, 14559),

Gene: Hippo\_13 Start: 9145, Stop: 9540, Start Num: 60

Candidate Starts for Hippo\_13:

(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: Hiro\_16 Start: 9593, Stop: 9904, Start Num: 60

Candidate Starts for Hiro\_16:

(Start: 60 @9593 has 586 MA's), (Start: 63 @9599 has 5 MA's), (88, 9716), (100, 9764), (103, 9776), (107, 9800),

Gene: Horex\_21 Start: 15080, Stop: 15469, Start Num: 60

Candidate Starts for Horex\_21:

(Start: 60 @15080 has 586 MA's), (107, 15311),

Gene: Holli\_20 Start: 13359, Stop: 13751, Start Num: 61

Candidate Starts for Holli\_20:

(Start: 61 @13359 has 249 MA's), (101, 13563), (102, 13566), (103, 13569), (105, 13575), (107, 13593), (130, 13713), (131, 13716), (134, 13728), (136, 13743),

Gene: Homines\_19 Start: 13752, Stop: 14147, Start Num: 60

Candidate Starts for Homines\_19:

(Start: 60 @13752 has 586 MA's), (Start: 64 @13758 has 2 MA's), (71, 13791), (Start: 76 @13809 has 2 MA's), (78, 13821), (100, 13950), (105, 13968),

Gene: Hookmount\_21 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for Hookmount\_21:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Hoot\_24 Start: 14396, Stop: 14749, Start Num: 60

Candidate Starts for Hoot\_24:

(Start: 60 @14396 has 586 MA's), (85, 14504), (101, 14588),

Gene: Hope4ever\_19 Start: 14138, Stop: 14533, Start Num: 60

Candidate Starts for Hope4ever\_19:

(Start: 60 @14138 has 586 MA's), (Start: 64 @14144 has 2 MA's), (71, 14177), (Start: 76 @14195 has 2 MA's), (78, 14207), (100, 14336), (105, 14354),

Gene: HortumSL17\_22 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for HortumSL17\_22:

(Start: 60 @15076 has 586 MA's), (107, 15307), (130, 15427),

Gene: Houdini22\_20 Start: 13573, Stop: 13965, Start Num: 61

Candidate Starts for Houdini22\_20:

(Start: 61 @13573 has 249 MA's), (101, 13777), (102, 13780), (103, 13783), (105, 13789), (107, 13807), (130, 13927), (131, 13930), (134, 13942), (136, 13957),

Gene: HuhtaEnerson15\_17 Start: 12673, Stop: 13086, Start Num: 60  
Candidate Starts for HuhtaEnerson15\_17:  
(32, 12265), (53, 12577), (Start: 60 @12673 has 586 MA's), (74, 12727), (81, 12757), (105, 12907),

Gene: Hutc2\_21 Start: 14840, Stop: 15190, Start Num: 60  
Candidate Starts for Hutc2\_21:  
(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: Huxley\_20 Start: 13633, Stop: 14025, Start Num: 61  
Candidate Starts for Huxley\_20:  
(Start: 61 @13633 has 249 MA's), (101, 13837), (102, 13840), (103, 13843), (105, 13849), (107, 13867), (130, 13987), (134, 14002), (136, 14017),

Gene: Hydra\_15 Start: 9707, Stop: 10105, Start Num: 60  
Candidate Starts for Hydra\_15:  
(3, 9128), (8, 9164), (52, 9593), (53, 9608), (55, 9623), (Start: 60 @9707 has 586 MA's), (84, 9812), (93, 9884), (99, 9911), (100, 9914), (120, 10031), (133, 10091),

Gene: ICleared\_20 Start: 13567, Stop: 13959, Start Num: 61  
Candidate Starts for ICleared\_20:  
(Start: 61 @13567 has 249 MA's), (101, 13771), (102, 13774), (103, 13777), (105, 13783), (107, 13801), (130, 13921), (131, 13924), (134, 13936), (136, 13951),

Gene: ILeeKay\_21 Start: 13897, Stop: 14292, Start Num: 60  
Candidate Starts for ILeeKay\_21:  
(Start: 60 @13897 has 586 MA's), (Start: 64 @13903 has 2 MA's), (71, 13936), (Start: 76 @13954 has 2 MA's), (78, 13966), (100, 14095), (105, 14113),

Gene: Iceman\_21 Start: 13858, Stop: 14250, Start Num: 61  
Candidate Starts for Iceman\_21:  
(Start: 61 @13858 has 249 MA's), (101, 14062), (102, 14065), (103, 14068), (105, 14074), (107, 14092), (130, 14212), (131, 14215), (134, 14227), (136, 14242),

Gene: Ichabod\_20 Start: 13754, Stop: 14149, Start Num: 60  
Candidate Starts for Ichabod\_20:  
(Start: 60 @13754 has 586 MA's), (Start: 64 @13760 has 2 MA's), (71, 13793), (Start: 76 @13811 has 2 MA's), (78, 13823), (100, 13952), (105, 13970),

Gene: Idleandcovert\_20 Start: 13207, Stop: 13548, Start Num: 60  
Candidate Starts for Idleandcovert\_20:  
(53, 13111), (55, 13126), (Start: 60 @13207 has 586 MA's), (Start: 76 @13264 has 2 MA's), (85, 13321), (93, 13384), (100, 13405), (107, 13441), (111, 13474), (127, 13540),

Gene: IgnatiusPatJac\_18 Start: 13723, Stop: 14118, Start Num: 60  
Candidate Starts for IgnatiusPatJac\_18:  
(Start: 60 @13723 has 586 MA's), (Start: 64 @13729 has 2 MA's), (71, 13762), (Start: 76 @13780 has 2 MA's), (78, 13792), (100, 13921), (105, 13939),

Gene: Indigo\_13 Start: 9179, Stop: 9577, Start Num: 60  
Candidate Starts for Indigo\_13:  
(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: Indra\_24 Start: 14412, Stop: 14765, Start Num: 60

Candidate Starts for Indra\_24:

(50, 14316), (55, 14331), (Start: 60 @14412 has 586 MA's), (85, 14520), (101, 14604),

Gene: Insomnia\_21 Start: 14889, Stop: 15239, Start Num: 60

Candidate Starts for Insomnia\_21:

(Start: 60 @14889 has 586 MA's), (83, 14973), (100, 15075), (107, 15111),

Gene: Inyanga\_18 Start: 13500, Stop: 13895, Start Num: 60

Candidate Starts for Inyanga\_18:

(Start: 60 @13500 has 586 MA's), (Start: 64 @13506 has 2 MA's), (71, 13539), (Start: 76 @13557 has 2 MA's), (78, 13569), (100, 13698), (105, 13716),

Gene: Iqorha\_18 Start: 13499, Stop: 13894, Start Num: 60

Candidate Starts for Iqorha\_18:

(Start: 60 @13499 has 586 MA's), (Start: 64 @13505 has 2 MA's), (71, 13538), (Start: 76 @13556 has 2 MA's), (78, 13568), (100, 13697), (105, 13715),

Gene: Iracema64\_21 Start: 13881, Stop: 14273, Start Num: 61

Candidate Starts for Iracema64\_21:

(Start: 61 @13881 has 249 MA's), (66, 13890), (101, 14085), (102, 14088), (103, 14091), (105, 14097), (107, 14115), (130, 14235), (134, 14250), (136, 14265),

Gene: IronMan\_23 Start: 15997, Stop: 16353, Start Num: 60

Candidate Starts for IronMan\_23:

(50, 15901), (55, 15916), (Start: 60 @15997 has 586 MA's), (78, 16060), (82, 16078), (100, 16183), (107, 16219), (111, 16252),

Gene: Isca\_20 Start: 13095, Stop: 13436, Start Num: 60

Candidate Starts for Isca\_20:

(53, 12999), (Start: 60 @13095 has 586 MA's), (85, 13209), (93, 13272), (107, 13329), (111, 13362), (127, 13428),

Gene: Isiphiwo\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for Isiphiwo\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Issmi\_14 Start: 9254, Stop: 9706, Start Num: 62

Candidate Starts for Issmi\_14:

(45, 9032), (52, 9137), (55, 9167), (Start: 62 @9254 has 41 MA's), (Start: 69 @9290 has 1 MA's), (84, 9359), (86, 9380), (99, 9443), (107, 9497), (120, 9584),

Gene: Itza\_13 Start: 9404, Stop: 9784, Start Num: 60

Candidate Starts for Itza\_13:

(Start: 60 @9404 has 586 MA's), (72, 9458), (Start: 76 @9470 has 2 MA's), (120, 9713), (133, 9773),

Gene: Iwokeuplikedis\_22 Start: 14282, Stop: 14620, Start Num: 60

Candidate Starts for Iwokeuplikedis\_22:

(50, 14186), (55, 14201), (Start: 60 @14282 has 586 MA's), (78, 14345), (80, 14354), (83, 14366), (91, 14423), (100, 14468), (104, 14483), (107, 14504), (111, 14537),

Gene: Izzy\_14 Start: 9455, Stop: 9787, Start Num: 76

Candidate Starts for Izzy\_14:

(3, 8810), (8, 8846), (52, 9275), (53, 9290), (55, 9305), (Start: 60 @9389 has 586 MA's), (Start: 76 @9455 has 2 MA's), (84, 9494), (93, 9566), (99, 9593), (100, 9596), (120, 9713), (133, 9773),

Gene: JC27\_21 Start: 14633, Stop: 15028, Start Num: 60

Candidate Starts for JC27\_21:

(Start: 60 @14633 has 586 MA's), (Start: 64 @14639 has 2 MA's), (71, 14672), (Start: 76 @14690 has 2 MA's), (78, 14702), (100, 14831), (105, 14849),

Gene: JF2\_20 Start: 12860, Stop: 13201, Start Num: 60

Candidate Starts for JF2\_20:

(53, 12764), (55, 12779), (Start: 60 @12860 has 586 MA's), (85, 12974), (93, 13037), (107, 13094), (111, 13127), (127, 13193),

Gene: JF4\_20 Start: 12860, Stop: 13201, Start Num: 60

Candidate Starts for JF4\_20:

(53, 12764), (55, 12779), (Start: 60 @12860 has 586 MA's), (85, 12974), (93, 13037), (107, 13094), (111, 13127), (127, 13193),

Gene: JHC117\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for JHC117\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: JSwag\_23 Start: 13402, Stop: 13770, Start Num: 56

Candidate Starts for JSwag\_23:

(Start: 56 @13402 has 20 MA's), (Start: 69 @13432 has 1 MA's), (70, 13441), (78, 13474), (93, 13582), (97, 13594), (107, 13639), (111, 13672),

Gene: Jaan\_24 Start: 16395, Stop: 16751, Start Num: 60

Candidate Starts for Jaan\_24:

(50, 16299), (55, 16314), (Start: 60 @16395 has 586 MA's), (78, 16458), (82, 16476), (100, 16581), (107, 16617), (111, 16650),

Gene: Jabiru\_17 Start: 12562, Stop: 12975, Start Num: 60

Candidate Starts for Jabiru\_17:

(53, 12466), (55, 12481), (Start: 60 @12562 has 586 MA's), (74, 12616), (102, 12787), (103, 12790), (105, 12796),

Gene: Jabith\_21 Start: 14889, Stop: 15239, Start Num: 60

Candidate Starts for Jabith\_21:

(Start: 60 @14889 has 586 MA's), (83, 14973), (100, 15075), (107, 15111),

Gene: JackSparrow\_20 Start: 14064, Stop: 14459, Start Num: 60

Candidate Starts for JackSparrow\_20:

(Start: 60 @14064 has 586 MA's), (Start: 64 @14070 has 2 MA's), (71, 14103), (Start: 76 @14121 has 2 MA's), (78, 14133), (100, 14262), (105, 14280),

Gene: Janus\_14 Start: 9373, Stop: 9744, Start Num: 62

Candidate Starts for Janus\_14:

(22, 8911), (27, 8947), (39, 9022), (40, 9025), (55, 9286), (Start: 62 @9373 has 41 MA's), (67, 9388), (99, 9547), (100, 9550), (113, 9622), (116, 9646), (120, 9670), (133, 9730),

Gene: Jash\_14 Start: 9342, Stop: 9740, Start Num: 60

Candidate Starts for Jash\_14:

(3, 8763), (8, 8799), (52, 9228), (53, 9243), (55, 9258), (Start: 60 @9342 has 586 MA's), (Start: 76 @9408 has 2 MA's), (84, 9447), (93, 9519), (99, 9546), (100, 9549), (120, 9666), (133, 9726),

Gene: Jasper\_20 Start: 13565, Stop: 13960, Start Num: 60

Candidate Starts for Jasper\_20:

(Start: 60 @13565 has 586 MA's), (Start: 64 @13571 has 2 MA's), (71, 13604), (Start: 76 @13622 has 2 MA's), (78, 13634), (100, 13763), (105, 13781),

Gene: Jaykayelowell\_20 Start: 13565, Stop: 13957, Start Num: 61

Candidate Starts for Jaykayelowell\_20:

(Start: 61 @13565 has 249 MA's), (101, 13769), (102, 13772), (103, 13775), (105, 13781), (107, 13799), (130, 13919), (131, 13922), (134, 13934), (136, 13949),

Gene: Jeeves\_20 Start: 13462, Stop: 13797, Start Num: 60

Candidate Starts for Jeeves\_20:

(50, 13366), (55, 13381), (Start: 60 @13462 has 586 MA's), (100, 13648), (104, 13663), (107, 13684),

Gene: Jeffabunny\_24 Start: 14419, Stop: 14772, Start Num: 60

Candidate Starts for Jeffabunny\_24:

(50, 14323), (55, 14338), (Start: 60 @14419 has 586 MA's), (85, 14527), (101, 14611),

Gene: JenCasNa\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for JenCasNa\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: JeppNRM\_23 Start: 13737, Stop: 14096, Start Num: 61

Candidate Starts for JeppNRM\_23:

(Start: 61 @13737 has 249 MA's), (Start: 69 @13764 has 1 MA's), (93, 13914), (107, 13971), (111, 14004), (115, 14022),

Gene: Jerm\_23 Start: 14732, Stop: 15067, Start Num: 60

Candidate Starts for Jerm\_23:

(14, 14222), (50, 14636), (55, 14651), (Start: 60 @14732 has 586 MA's), (70, 14762),

Gene: Jerm2\_20 Start: 13934, Stop: 14329, Start Num: 60

Candidate Starts for Jerm2\_20:

(Start: 60 @13934 has 586 MA's), (Start: 64 @13940 has 2 MA's), (71, 13973), (Start: 76 @13991 has 2 MA's), (78, 14003), (100, 14132), (105, 14150),

Gene: Jester\_16 Start: 9593, Stop: 9904, Start Num: 60

Candidate Starts for Jester\_16:

(Start: 60 @9593 has 586 MA's), (Start: 63 @9599 has 5 MA's), (Start: 76 @9653 has 2 MA's), (88, 9716), (100, 9764), (103, 9776), (107, 9800),

Gene: JetBlade\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for JetBlade\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Jevington\_15 Start: 9556, Stop: 10032, Start Num: 62

Candidate Starts for Jevington\_15:

(36, 9193), (45, 9334), (Start: 62 @9556 has 41 MA's), (86, 9703), (93, 9739), (99, 9766), (120, 9916), (132, 9973),

Gene: JewelBug\_24 Start: 14420, Stop: 14773, Start Num: 60

Candidate Starts for JewelBug\_24:

(Start: 60 @14420 has 586 MA's), (85, 14528), (101, 14612),

Gene: Jiawan\_21 Start: 15112, Stop: 15501, Start Num: 60

Candidate Starts for Jiawan\_21:

(Start: 60 @15112 has 586 MA's), (107, 15343),

Gene: Jobu08\_22 Start: 13732, Stop: 14091, Start Num: 61

Candidate Starts for Jobu08\_22:

(Start: 61 @13732 has 249 MA's), (Start: 69 @13759 has 1 MA's), (93, 13909), (107, 13966), (111, 13999), (115, 14017),

Gene: JoongJeon\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for JoongJeon\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Jordennis\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for Jordennis\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Jorgensen\_19 Start: 13521, Stop: 13916, Start Num: 60

Candidate Starts for Jorgensen\_19:

(Start: 60 @13521 has 586 MA's), (Start: 64 @13527 has 2 MA's), (71, 13560), (Start: 76 @13578 has 2 MA's), (78, 13590), (100, 13719), (105, 13737),

Gene: Joselito\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Joselito\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: JoshKayV\_23 Start: 14730, Stop: 15065, Start Num: 60

Candidate Starts for JoshKayV\_23:

(50, 14634), (55, 14649), (Start: 60 @14730 has 586 MA's), (83, 14814), (95, 14904),

Gene: Journey13\_19 Start: 13442, Stop: 13795, Start Num: 60

Candidate Starts for Journey13\_19:

(50, 13346), (55, 13361), (Start: 60 @13442 has 586 MA's), (80, 13514),

Gene: Jovo\_17 Start: 12779, Stop: 13192, Start Num: 60

Candidate Starts for Jovo\_17:

(23, 12323), (53, 12683), (Start: 60 @12779 has 586 MA's), (74, 12833), (105, 13013),

Gene: Jsquared\_20 Start: 13146, Stop: 13481, Start Num: 60

Candidate Starts for Jsquared\_20:

(50, 13050), (55, 13065), (Start: 60 @13146 has 586 MA's),

Gene: JuliaChild\_21 Start: 14192, Stop: 14587, Start Num: 60

Candidate Starts for JuliaChild\_21:

(53, 14096), (Start: 60 @14192 has 586 MA's), (Start: 64 @14198 has 2 MA's), (71, 14231), (Start: 76 @14249 has 2 MA's), (78, 14261), (100, 14390), (105, 14408),

Gene: KADY\_23 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for KADY\_23:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: KBG\_20 Start: 14642, Stop: 15037, Start Num: 60

Candidate Starts for KBG\_20:

(Start: 60 @14642 has 586 MA's), (Start: 64 @14648 has 2 MA's), (71, 14681), (Start: 76 @14699 has 2 MA's), (78, 14711), (100, 14840), (105, 14858),

Gene: KFPoly\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for KFPoly\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: KSSJEB\_19 Start: 13539, Stop: 13934, Start Num: 60

Candidate Starts for KSSJEB\_19:

(Start: 60 @13539 has 586 MA's), (Start: 64 @13545 has 2 MA's), (71, 13578), (Start: 76 @13596 has 2 MA's), (78, 13608), (100, 13737), (105, 13755),

Gene: Kachowdy\_20 Start: 13260, Stop: 13601, Start Num: 60

Candidate Starts for Kachowdy\_20:

(53, 13164), (55, 13179), (Start: 60 @13260 has 586 MA's), (Start: 76 @13317 has 2 MA's), (85, 13374), (93, 13437), (100, 13458), (107, 13494), (111, 13527), (127, 13593),

Gene: Kaine\_13 Start: 8953, Stop: 9339, Start Num: 62

Candidate Starts for Kaine\_13:

(55, 8866), (Start: 58 @8947 has 5 MA's), (Start: 62 @8953 has 41 MA's), (84, 9058), (120, 9265), (133, 9325),

Gene: Kalb97\_23 Start: 13737, Stop: 14096, Start Num: 61

Candidate Starts for Kalb97\_23:

(Start: 61 @13737 has 249 MA's), (Start: 69 @13764 has 1 MA's), (93, 13914), (107, 13971), (111, 14004), (115, 14022),

Gene: Kalnoky\_23 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Kalnoky\_23:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Kalpine\_24 Start: 16095, Stop: 16430, Start Num: 60

Candidate Starts for Kalpine\_24:

(9, 15543), (10, 15546), (37, 15762), (50, 15999), (55, 16014), (Start: 60 @16095 has 586 MA's), (70, 16125), (83, 16179), (104, 16296),

Gene: Kampy\_20 Start: 13567, Stop: 13959, Start Num: 61

Candidate Starts for Kampy\_20:

(Start: 61 @13567 has 249 MA's), (101, 13771), (102, 13774), (103, 13777), (105, 13783), (107, 13801), (130, 13921), (131, 13924), (134, 13936), (136, 13951),

Gene: Kanely\_20 Start: 14301, Stop: 14696, Start Num: 60  
Candidate Starts for Kanely\_20:  
(Start: 60 @14301 has 586 MA's), (Start: 64 @14307 has 2 MA's), (71, 14340), (Start: 76 @14358 has 2 MA's), (78, 14370), (100, 14499), (105, 14517),

Gene: Katalie\_14 Start: 9418, Stop: 9816, Start Num: 60  
Candidate Starts for Katalie\_14:  
(3, 8839), (6, 8863), (15, 8926), (52, 9304), (55, 9334), (Start: 60 @9418 has 586 MA's), (93, 9592), (100, 9622), (120, 9742), (133, 9802),

Gene: Katalie136\_20 Start: 13577, Stop: 13969, Start Num: 61  
Candidate Starts for Katalie136\_20:  
(Start: 61 @13577 has 249 MA's), (71, 13616), (105, 13793), (134, 13946), (136, 13961),

Gene: KatherineG\_23 Start: 13538, Stop: 13906, Start Num: 56  
Candidate Starts for KatherineG\_23:  
(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: Kazan\_24 Start: 14423, Stop: 14776, Start Num: 60  
Candidate Starts for Kazan\_24:  
(Start: 60 @14423 has 586 MA's), (85, 14531), (101, 14615),

Gene: Kenmech\_22 Start: 15103, Stop: 15498, Start Num: 60  
Candidate Starts for Kenmech\_22:  
(Start: 60 @15103 has 586 MA's), (Start: 64 @15109 has 2 MA's), (71, 15142), (Start: 76 @15160 has 2 MA's), (78, 15172), (100, 15301), (105, 15319),

Gene: Kerberos\_24 Start: 14205, Stop: 14540, Start Num: 60  
Candidate Starts for Kerberos\_24:  
(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: Keziacharles14\_20 Start: 13208, Stop: 13597, Start Num: 60  
Candidate Starts for Keziacharles14\_20:  
(Start: 60 @13208 has 586 MA's), (107, 13439),

Gene: Killigrew\_17 Start: 13175, Stop: 13570, Start Num: 60  
Candidate Starts for Killigrew\_17:  
(53, 13079), (Start: 60 @13175 has 586 MA's), (Start: 64 @13181 has 2 MA's), (71, 13214), (Start: 76 @13232 has 2 MA's), (78, 13244), (100, 13373), (105, 13391),

Gene: Kimona\_17 Start: 11073, Stop: 11411, Start Num: 60  
Candidate Starts for Kimona\_17:  
(Start: 60 @11073 has 586 MA's), (87, 11196), (100, 11271), (111, 11340), (123, 11388),

Gene: KingCyrus\_23 Start: 14704, Stop: 15039, Start Num: 60  
Candidate Starts for KingCyrus\_23:  
(50, 14608), (55, 14623), (Start: 60 @14704 has 586 MA's), (70, 14734), (100, 14890),

Gene: Kingmustik0402\_20 Start: 13561, Stop: 13953, Start Num: 61  
Candidate Starts for Kingmustik0402\_20:  
(Start: 61 @13561 has 249 MA's), (101, 13765), (102, 13768), (103, 13771), (105, 13777), (107, 13795), (130, 13915), (131, 13918), (134, 13930), (136, 13945),



Gene: Kinmap\_20 Start: 14134, Stop: 14472, Start Num: 60  
Candidate Starts for Kinmap\_20:  
(55, 14053), (Start: 60 @14134 has 586 MA's), (78, 14197), (83, 14218), (104, 14335), (107, 14356),  
(111, 14389),

Gene: Kipper29\_24 Start: 14417, Stop: 14770, Start Num: 60  
Candidate Starts for Kipper29\_24:  
(Start: 60 @14417 has 586 MA's), (85, 14525), (101, 14609),

Gene: KittenMittens\_19 Start: 11447, Stop: 11839, Start Num: 61  
Candidate Starts for KittenMittens\_19:  
(Start: 61 @11447 has 249 MA's), (Start: 76 @11504 has 2 MA's), (105, 11663), (134, 11816), (136,  
11831),

Gene: Koan\_19 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for Koan\_19:  
(Start: 61 @13569 has 249 MA's), (Start: 76 @13626 has 2 MA's), (101, 13773), (102, 13776), (103,  
13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Koduck\_21 Start: 13484, Stop: 13819, Start Num: 60  
Candidate Starts for Koduck\_21:  
(50, 13388), (55, 13403), (Start: 60 @13484 has 586 MA's), (107, 13706),

Gene: Koko\_24 Start: 14411, Stop: 14764, Start Num: 60  
Candidate Starts for Koko\_24:  
(50, 14315), (55, 14330), (Start: 60 @14411 has 586 MA's), (85, 14519), (101, 14603),

Gene: Koreni\_19 Start: 13215, Stop: 13607, Start Num: 61  
Candidate Starts for Koreni\_19:  
(Start: 61 @13215 has 249 MA's), (101, 13419), (102, 13422), (103, 13425), (105, 13431), (107,  
13449), (130, 13569), (131, 13572), (134, 13584), (136, 13599),

Gene: Kratark\_20 Start: 13564, Stop: 13956, Start Num: 61  
Candidate Starts for Kratark\_20:  
(Start: 61 @13564 has 249 MA's), (66, 13573), (101, 13768), (102, 13771), (103, 13774), (105, 13780),  
(107, 13798), (130, 13918), (134, 13933), (136, 13948),

Gene: Kremtemulon\_20 Start: 13617, Stop: 14009, Start Num: 61  
Candidate Starts for Kremtemulon\_20:  
(Start: 61 @13617 has 249 MA's), (101, 13821), (102, 13824), (103, 13827), (105, 13833), (107,  
13851), (130, 13971), (131, 13974), (134, 13986), (136, 14001),

Gene: Krishelle\_16 Start: 9608, Stop: 9919, Start Num: 60  
Candidate Starts for Krishelle\_16:  
(Start: 60 @9608 has 586 MA's), (Start: 63 @9614 has 5 MA's), (88, 9731), (100, 9779), (103, 9791),  
(107, 9815),

Gene: Kristoff\_21 Start: 13530, Stop: 13922, Start Num: 61  
Candidate Starts for Kristoff\_21:  
(Start: 61 @13530 has 249 MA's), (68, 13554), (Start: 76 @13587 has 2 MA's), (97, 13719), (105,  
13746), (134, 13899), (136, 13914),

Gene: Kugel\_20 Start: 13813, Stop: 14208, Start Num: 60  
Candidate Starts for Kugel\_20:  
(Start: 60 @13813 has 586 MA's), (71, 13852), (Start: 76 @13870 has 2 MA's), (78, 13882), (100, 14011), (105, 14029),

Gene: KyMonks1A\_21 Start: 14040, Stop: 14435, Start Num: 60  
Candidate Starts for KyMonks1A\_21:  
(Start: 60 @14040 has 586 MA's), (Start: 64 @14046 has 2 MA's), (71, 14079), (Start: 76 @14097 has 2 MA's), (78, 14109), (100, 14238), (105, 14256),

Gene: Kye\_20 Start: 13570, Stop: 13962, Start Num: 61  
Candidate Starts for Kye\_20:  
(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: Kykar\_17 Start: 13310, Stop: 13705, Start Num: 60  
Candidate Starts for Kykar\_17:  
(53, 13214), (Start: 60 @13310 has 586 MA's), (71, 13349), (Start: 76 @13367 has 2 MA's), (78, 13379), (100, 13508), (105, 13526),

Gene: L5\_21 Start: 13495, Stop: 13830, Start Num: 60  
Candidate Starts for L5\_21:  
(50, 13399), (55, 13414), (Start: 60 @13495 has 586 MA's), (107, 13717),

Gene: LBerry\_22 Start: 13665, Stop: 14024, Start Num: 61  
Candidate Starts for LBerry\_22:  
(Start: 61 @13665 has 249 MA's), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: LHTSCC\_21 Start: 13881, Stop: 14273, Start Num: 61  
Candidate Starts for LHTSCC\_21:  
(Start: 61 @13881 has 249 MA's), (66, 13890), (101, 14085), (102, 14088), (103, 14091), (105, 14097), (107, 14115), (130, 14235), (134, 14250), (136, 14265),

Gene: LadyBird\_21 Start: 14274, Stop: 14609, Start Num: 60  
Candidate Starts for LadyBird\_21:  
(50, 14178), (55, 14193), (Start: 60 @14274 has 586 MA's), (70, 14304), (83, 14358),

Gene: Lambert1\_21 Start: 13747, Stop: 14088, Start Num: 61  
Candidate Starts for Lambert1\_21:  
(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Lamina13\_19 Start: 13316, Stop: 13711, Start Num: 60  
Candidate Starts for Lamina13\_19:  
(Start: 60 @13316 has 586 MA's), (Start: 64 @13322 has 2 MA's), (71, 13355), (Start: 76 @13373 has 2 MA's), (78, 13385), (100, 13514), (105, 13532),

Gene: Landor\_22 Start: 16047, Stop: 16403, Start Num: 60  
Candidate Starts for Landor\_22:  
(50, 15951), (55, 15966), (Start: 60 @16047 has 586 MA's), (78, 16110), (82, 16128), (100, 16233), (107, 16269), (111, 16302),

Gene: Lannister\_14 Start: 9166, Stop: 9564, Start Num: 60

Candidate Starts for Lannister\_14:

(52, 9052), (53, 9067), (55, 9082), (Start: 60 @9166 has 586 MA's), (Start: 76 @9232 has 2 MA's), (93, 9340), (100, 9370), (120, 9490), (133, 9550),

Gene: LappelDuVide\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for LappelDuVide\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Larenn\_22 Start: 14583, Stop: 14918, Start Num: 60

Candidate Starts for Larenn\_22:

(50, 14487), (55, 14502), (Start: 60 @14583 has 586 MA's), (104, 14784), (107, 14805), (128, 14907),

Gene: LarryKay\_22 Start: 13751, Stop: 14110, Start Num: 61

Candidate Starts for LarryKay\_22:

(Start: 61 @13751 has 249 MA's), (Start: 69 @13778 has 1 MA's), (93, 13928), (107, 13985), (111, 14018), (115, 14036),

Gene: LastResort\_23 Start: 13416, Stop: 13784, Start Num: 56

Candidate Starts for LastResort\_23:

(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Legacy\_13 Start: 9150, Stop: 9548, Start Num: 60

Candidate Starts for Legacy\_13:

(3, 8571), (8, 8607), (52, 9036), (53, 9051), (55, 9066), (Start: 60 @9150 has 586 MA's), (84, 9255), (93, 9327), (99, 9354), (100, 9357), (120, 9474), (133, 9534),

Gene: Lemur\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Lemur\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: LeoAvram\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for LeoAvram\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Leogania\_23 Start: 16451, Stop: 16786, Start Num: 60

Candidate Starts for Leogania\_23:

(19, 15980), (50, 16355), (55, 16370), (Start: 60 @16451 has 586 MA's), (70, 16481), (83, 16535),

Gene: Lesedi\_18 Start: 13483, Stop: 13872, Start Num: 64

Candidate Starts for Lesedi\_18:

(Start: 60 @13477 has 586 MA's), (Start: 64 @13483 has 2 MA's), (71, 13516), (Start: 76 @13534 has 2 MA's), (78, 13546), (100, 13675), (105, 13693),

Gene: Lev2\_17 Start: 12491, Stop: 12904, Start Num: 60

Candidate Starts for Lev2\_17:

(23, 12035), (53, 12395), (Start: 60 @12491 has 586 MA's), (74, 12545), (105, 12725),

Gene: Levia\_18 Start: 14509, Stop: 14898, Start Num: 64

Candidate Starts for Levia\_18:

(Start: 60 @14503 has 586 MA's), (Start: 64 @14509 has 2 MA's), (71, 14542), (Start: 76 @14560 has 2 MA's), (78, 14572), (100, 14701), (105, 14719),

Gene: Leviathan\_23 Start: 14764, Stop: 15099, Start Num: 60

Candidate Starts for Leviathan\_23:

(14, 14254), (50, 14668), (55, 14683), (Start: 60 @14764 has 586 MA's), (70, 14794),

Gene: Leviticus\_13 Start: 9179, Stop: 9577, Start Num: 60

Candidate Starts for Leviticus\_13:

(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: Licorice\_21 Start: 14629, Stop: 15024, Start Num: 60

Candidate Starts for Licorice\_21:

(Start: 60 @14629 has 586 MA's), (Start: 64 @14635 has 2 MA's), (71, 14668), (Start: 76 @14686 has 2 MA's), (78, 14698), (100, 14827), (105, 14845),

Gene: Lika\_13 Start: 9164, Stop: 9562, Start Num: 60

Candidate Starts for Lika\_13:

(3, 8585), (6, 8609), (35, 8792), (52, 9050), (53, 9065), (55, 9080), (Start: 60 @9164 has 586 MA's), (75, 9227), (93, 9338), (100, 9368), (120, 9488), (133, 9548),

Gene: LilBib\_20 Start: 14559, Stop: 14954, Start Num: 60

Candidate Starts for LilBib\_20:

(Start: 60 @14559 has 586 MA's), (Start: 64 @14565 has 2 MA's), (71, 14598), (Start: 76 @14616 has 2 MA's), (78, 14628), (100, 14757), (105, 14775),

Gene: LilTurb\_23 Start: 14791, Stop: 15126, Start Num: 60

Candidate Starts for LilTurb\_23:

(14, 14281), (50, 14695), (55, 14710), (Start: 60 @14791 has 586 MA's), (70, 14821),

Gene: Lilbunny\_24 Start: 14393, Stop: 14746, Start Num: 60

Candidate Starts for Lilbunny\_24:

(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Lilith\_22 Start: 13658, Stop: 14017, Start Num: 61

Candidate Starts for Lilith\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Lilleskat\_20 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for Lilleskat\_20:

(Start: 60 @15076 has 586 MA's), (107, 15307),

Gene: Lillie\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Lillie\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: LionsBait\_22 Start: 16065, Stop: 16400, Start Num: 60

Candidate Starts for LionsBait\_22:

(Start: 60 @16065 has 586 MA's),

Gene: LittleB\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for LittleB\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: LittleCherry\_17 Start: 12674, Stop: 13087, Start Num: 60

Candidate Starts for LittleCherry\_17:

(32, 12266), (53, 12578), (Start: 60 @12674 has 586 MA's), (74, 12728), (81, 12758), (105, 12908),

Gene: LittleGuy\_20 Start: 13512, Stop: 13904, Start Num: 61

Candidate Starts for LittleGuy\_20:

(Start: 61 @13512 has 249 MA's), (101, 13716), (102, 13719), (103, 13722), (105, 13728), (107, 13746), (134, 13881), (136, 13896),

Gene: LochMonster\_20 Start: 13544, Stop: 13936, Start Num: 61

Candidate Starts for LochMonster\_20:

(Start: 61 @13544 has 249 MA's), (66, 13553), (101, 13748), (102, 13751), (103, 13754), (105, 13760), (107, 13778), (130, 13898), (134, 13913), (136, 13928),

Gene: Lockley\_19 Start: 13654, Stop: 14049, Start Num: 60

Candidate Starts for Lockley\_19:

(Start: 60 @13654 has 586 MA's), (Start: 64 @13660 has 2 MA's), (71, 13693), (Start: 76 @13711 has 2 MA's), (78, 13723), (100, 13852), (105, 13870),

Gene: Lokk\_24 Start: 15989, Stop: 16324, Start Num: 60

Candidate Starts for Lokk\_24:

(50, 15893), (55, 15908), (Start: 60 @15989 has 586 MA's),

Gene: LoneWolf\_22 Start: 14885, Stop: 15274, Start Num: 60

Candidate Starts for LoneWolf\_22:

(Start: 60 @14885 has 586 MA's), (93, 15056), (107, 15116),

Gene: Loofah\_14 Start: 9086, Stop: 9547, Start Num: 62

Candidate Starts for Loofah\_14:

(45, 8864), (Start: 62 @9086 has 41 MA's), (Start: 69 @9122 has 1 MA's), (Start: 76 @9152 has 2 MA's), (93, 9248), (99, 9275), (120, 9425), (132, 9482),

Gene: Looper\_24 Start: 13416, Stop: 13784, Start Num: 56

Candidate Starts for Looper\_24:

(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Lopton\_20 Start: 15078, Stop: 15473, Start Num: 60

Candidate Starts for Lopton\_20:

(Start: 60 @15078 has 586 MA's), (Start: 64 @15084 has 2 MA's), (71, 15117), (Start: 76 @15135 has 2 MA's), (78, 15147), (100, 15276), (105, 15294),

Gene: Lorelei\_13 Start: 9136, Stop: 9534, Start Num: 60

Candidate Starts for Lorelei\_13:

(3, 8557), (6, 8581), (52, 9022), (53, 9037), (55, 9052), (Start: 60 @9136 has 586 MA's), (75, 9199), (Start: 76 @9202 has 2 MA's), (93, 9310), (120, 9460), (133, 9520),

Gene: Lorenzo\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Lorenzo\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Loser\_24 Start: 16091, Stop: 16426, Start Num: 60

Candidate Starts for Loser\_24:

(10, 15542), (21, 15626), (37, 15758), (50, 15995), (55, 16010), (Start: 60 @16091 has 586 MA's), (70, 16121), (100, 16277), (107, 16313),

Gene: Louie6\_22 Start: 13752, Stop: 14111, Start Num: 61

Candidate Starts for Louie6\_22:

(Start: 61 @13752 has 249 MA's), (Start: 69 @13779 has 1 MA's), (93, 13929), (107, 13986), (111, 14019), (115, 14037),

Gene: Lowa\_22 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for Lowa\_22:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: Luchador\_22 Start: 14658, Stop: 14993, Start Num: 60

Candidate Starts for Luchador\_22:

(50, 14562), (55, 14577), (Start: 60 @14658 has 586 MA's), (80, 14730), (100, 14844), (107, 14880), (111, 14913), (129, 14988),

Gene: Lucivia\_21 Start: 14886, Stop: 15236, Start Num: 60

Candidate Starts for Lucivia\_21:

(Start: 60 @14886 has 586 MA's), (83, 14970), (100, 15072), (107, 15108),

Gene: Lucyedi\_22 Start: 14468, Stop: 14806, Start Num: 60

Candidate Starts for Lucyedi\_22:

(Start: 60 @14468 has 586 MA's), (100, 14654), (104, 14669), (107, 14690),

Gene: LugYA\_24 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for LugYA\_24:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: LunarLander\_19 Start: 13439, Stop: 13828, Start Num: 64

Candidate Starts for LunarLander\_19:

(Start: 60 @13433 has 586 MA's), (Start: 64 @13439 has 2 MA's), (71, 13472), (Start: 76 @13490 has 2 MA's), (78, 13502), (100, 13631), (105, 13649),

Gene: Lunsford\_21 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Lunsford\_21:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: MA5\_20 Start: 12804, Stop: 13145, Start Num: 60

Candidate Starts for MA5\_20:

(53, 12708), (55, 12723), (Start: 60 @12804 has 586 MA's), (85, 12918), (93, 12981), (100, 13002), (107, 13038), (111, 13071), (127, 13137),

Gene: MK4\_20 Start: 13094, Stop: 13435, Start Num: 60

Candidate Starts for MK4\_20:

(53, 12998), (55, 13013), (Start: 60 @13094 has 586 MA's), (85, 13208), (93, 13271), (107, 13328), (111, 13361), (127, 13427),

Gene: MPlant7149\_18 Start: 13288, Stop: 13683, Start Num: 60

Candidate Starts for MPlant7149\_18:

(Start: 60 @13288 has 586 MA's), (Start: 64 @13294 has 2 MA's), (71, 13327), (Start: 76 @13345 has 2 MA's), (78, 13357), (100, 13486), (105, 13504),

Gene: MaCh\_21 Start: 14834, Stop: 15184, Start Num: 60

Candidate Starts for MaCh\_21:

(Start: 60 @14834 has 586 MA's), (83, 14918), (100, 15020), (107, 15056),

Gene: Mabel\_21 Start: 14901, Stop: 15251, Start Num: 60

Candidate Starts for Mabel\_21:

(Start: 60 @14901 has 586 MA's), (83, 14985), (100, 15087), (107, 15123),

Gene: MadMarie\_22 Start: 13667, Stop: 14026, Start Num: 61

Candidate Starts for MadMarie\_22:

(Start: 61 @13667 has 249 MA's), (Start: 69 @13694 has 1 MA's), (93, 13844), (107, 13901), (111, 13934), (115, 13952),

Gene: Magnar\_19 Start: 13435, Stop: 13830, Start Num: 60

Candidate Starts for Magnar\_19:

(Start: 60 @13435 has 586 MA's), (Start: 64 @13441 has 2 MA's), (71, 13474), (Start: 76 @13492 has 2 MA's), (78, 13504), (100, 13633), (105, 13651),

Gene: Magnito\_18 Start: 13199, Stop: 13594, Start Num: 60

Candidate Starts for Magnito\_18:

(Start: 60 @13199 has 586 MA's), (Start: 64 @13205 has 2 MA's), (71, 13238), (Start: 76 @13256 has 2 MA's), (78, 13268), (100, 13397), (105, 13415),

Gene: Mainiac\_22 Start: 13658, Stop: 14017, Start Num: 61

Candidate Starts for Mainiac\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: MajorMajor\_20 Start: 13229, Stop: 13564, Start Num: 60

Candidate Starts for MajorMajor\_20:

(50, 13133), (55, 13148), (Start: 60 @13229 has 586 MA's),

Gene: Makemake\_19 Start: 14928, Stop: 15323, Start Num: 60

Candidate Starts for Makemake\_19:

(Start: 60 @14928 has 586 MA's), (Start: 64 @14934 has 2 MA's), (71, 14967), (Start: 76 @14985 has 2 MA's), (78, 14997), (100, 15126), (105, 15144),

Gene: Malec\_22 Start: 14588, Stop: 14923, Start Num: 60

Candidate Starts for Malec\_22:

(50, 14492), (55, 14507), (Start: 60 @14588 has 586 MA's), (104, 14789), (107, 14810), (128, 14912),

Gene: Malinsilva\_24 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for Malinsilva\_24:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: Maminiaina\_22 Start: 14809, Stop: 15198, Start Num: 60

Candidate Starts for Maminiaina\_22:

(Start: 60 @14809 has 586 MA's), (107, 15040),

Gene: Manatee\_20 Start: 13950, Stop: 14345, Start Num: 60

Candidate Starts for Manatee\_20:

(Start: 60 @13950 has 586 MA's), (Start: 64 @13956 has 2 MA's), (71, 13989), (Start: 76 @14007 has 2 MA's), (78, 14019), (100, 14148), (105, 14166),

Gene: Maneekul\_13 Start: 9147, Stop: 9542, Start Num: 60

Candidate Starts for Maneekul\_13:

(3, 8568), (6, 8592), (52, 9033), (55, 9063), (Start: 60 @9147 has 586 MA's), (Start: 76 @9213 has 2 MA's), (93, 9321), (100, 9351), (120, 9471), (133, 9528),

Gene: Manu\_23 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Manu\_23:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: MarQuardt\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for MarQuardt\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: Marav\_16 Start: 9906, Stop: 10382, Start Num: 62

Candidate Starts for Marav\_16:

(45, 9684), (Start: 62 @9906 has 41 MA's), (86, 10053), (93, 10089), (99, 10116), (120, 10266), (132, 10323),

Gene: Marcell\_19 Start: 13948, Stop: 14343, Start Num: 60

Candidate Starts for Marcell\_19:

(Start: 60 @13948 has 586 MA's), (Start: 64 @13954 has 2 MA's), (Start: 76 @14005 has 2 MA's), (78, 14017), (100, 14146), (105, 14164),

Gene: Marchesa\_20 Start: 13258, Stop: 13599, Start Num: 60

Candidate Starts for Marchesa\_20:

(53, 13162), (55, 13177), (Start: 60 @13258 has 586 MA's), (Start: 76 @13315 has 2 MA's), (85, 13372), (93, 13435), (100, 13456), (107, 13492), (111, 13525), (127, 13591),

Gene: Marchy\_18 Start: 13278, Stop: 13673, Start Num: 60

Candidate Starts for Marchy\_18:

(Start: 60 @13278 has 586 MA's), (Start: 64 @13284 has 2 MA's), (71, 13317), (Start: 76 @13335 has 2 MA's), (78, 13347), (100, 13476), (105, 13494),

Gene: Marco3\_19 Start: 13923, Stop: 14318, Start Num: 60

Candidate Starts for Marco3\_19:

(Start: 60 @13923 has 586 MA's), (Start: 64 @13929 has 2 MA's), (71, 13962), (Start: 76 @13980 has 2 MA's), (78, 13992), (100, 14121), (105, 14139),

Gene: Marge\_20 Start: 14174, Stop: 14569, Start Num: 60



Candidate Starts for Marge\_20:

(Start: 60 @14174 has 586 MA's), (Start: 64 @14180 has 2 MA's), (71, 14213), (Start: 76 @14231 has 2 MA's), (78, 14243), (100, 14372), (105, 14390),

Gene: Margo\_21 Start: 13772, Stop: 14113, Start Num: 61

Candidate Starts for Margo\_21:

(Start: 61 @13772 has 249 MA's), (73, 13820), (Start: 76 @13829 has 2 MA's), (85, 13886), (93, 13949), (100, 13970), (107, 14006), (111, 14039), (127, 14105),

Gene: Marie\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Marie\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Marius\_23 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Marius\_23:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Maroc7\_18 Start: 13460, Stop: 13855, Start Num: 60

Candidate Starts for Maroc7\_18:

(Start: 60 @13460 has 586 MA's), (Start: 64 @13466 has 2 MA's), (71, 13499), (Start: 76 @13517 has 2 MA's), (78, 13529), (100, 13658), (105, 13676),

Gene: Marsha\_19 Start: 14216, Stop: 14611, Start Num: 60

Candidate Starts for Marsha\_19:

(Start: 60 @14216 has 586 MA's), (Start: 64 @14222 has 2 MA's), (71, 14255), (Start: 76 @14273 has 2 MA's), (78, 14285), (100, 14414), (105, 14432),

Gene: MaryBeth\_19 Start: 13882, Stop: 14277, Start Num: 60

Candidate Starts for MaryBeth\_19:

(Start: 60 @13882 has 586 MA's), (Start: 64 @13888 has 2 MA's), (71, 13921), (Start: 76 @13939 has 2 MA's), (78, 13951), (100, 14080), (105, 14098),

Gene: MarysWell\_16 Start: 12641, Stop: 13054, Start Num: 60

Candidate Starts for MarysWell\_16:

(53, 12545), (Start: 60 @12641 has 586 MA's), (74, 12695), (81, 12725), (105, 12875),

Gene: Maverick\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Maverick\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Maxo\_20 Start: 13567, Stop: 13959, Start Num: 61

Candidate Starts for Maxo\_20:

(Start: 61 @13567 has 249 MA's), (101, 13771), (102, 13774), (103, 13777), (105, 13783), (107, 13801), (130, 13921), (131, 13924), (134, 13936), (136, 13951),

Gene: Mayonnaise\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Mayonnaise\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Mazhar510\_20 Start: 13570, Stop: 13962, Start Num: 61

Candidate Starts for Mazhar510\_20:

(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: McFly\_24 Start: 14417, Stop: 14770, Start Num: 60

Candidate Starts for McFly\_24:

(Start: 60 @14417 has 586 MA's), (85, 14525), (101, 14609),

Gene: McGuire\_20 Start: 13769, Stop: 14164, Start Num: 60

Candidate Starts for McGuire\_20:

(Start: 60 @13769 has 586 MA's), (Start: 64 @13775 has 2 MA's), (71, 13808), (Start: 76 @13826 has 2 MA's), (78, 13838), (100, 13967), (105, 13985),

Gene: McSinger\_20 Start: 14143, Stop: 14538, Start Num: 60

Candidate Starts for McSinger\_20:

(Start: 60 @14143 has 586 MA's), (Start: 64 @14149 has 2 MA's), (71, 14182), (Start: 76 @14200 has 2 MA's), (78, 14212), (100, 14341), (105, 14359),

Gene: Medusa\_20 Start: 13570, Stop: 13962, Start Num: 61

Candidate Starts for Medusa\_20:

(Start: 61 @13570 has 249 MA's), (101, 13774), (102, 13777), (103, 13780), (105, 13786), (107, 13804), (130, 13924), (131, 13927), (134, 13939), (136, 13954),

Gene: MeeZee\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for MeeZee\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Melvin\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Melvin\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: MetalQZJ\_19 Start: 13882, Stop: 14277, Start Num: 60

Candidate Starts for MetalQZJ\_19:

(Start: 60 @13882 has 586 MA's), (Start: 64 @13888 has 2 MA's), (71, 13921), (Start: 76 @13939 has 2 MA's), (78, 13951), (100, 14080), (105, 14098),

Gene: Methuselah\_21 Start: 13748, Stop: 14107, Start Num: 61

Candidate Starts for Methuselah\_21:

(Start: 61 @13748 has 249 MA's), (Start: 69 @13775 has 1 MA's), (93, 13925), (107, 13982), (111, 14015), (115, 14033),

Gene: Micasa\_17 Start: 12642, Stop: 13055, Start Num: 60

Candidate Starts for Micasa\_17:

(32, 12234), (53, 12546), (Start: 60 @12642 has 586 MA's), (74, 12696), (81, 12726), (105, 12876),

Gene: Michley\_19 Start: 13629, Stop: 14024, Start Num: 60

Candidate Starts for Michley\_19:

(Start: 60 @13629 has 586 MA's), (Start: 64 @13635 has 2 MA's), (71, 13668), (Start: 76 @13686 has 2 MA's), (78, 13698), (100, 13827), (105, 13845),

Gene: Microwolf\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for Microwolf\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: MiculUcigas\_21 Start: 14358, Stop: 14693, Start Num: 60

Candidate Starts for MiculUcigas\_21:

(50, 14262), (55, 14277), (Start: 60 @14358 has 586 MA's), (104, 14559), (107, 14580), (128, 14682),

Gene: Midas2\_17 Start: 12641, Stop: 13054, Start Num: 60

Candidate Starts for Midas2\_17:

(32, 12233), (53, 12545), (Start: 60 @12641 has 586 MA's), (74, 12695), (81, 12725), (105, 12875),

Gene: Miko\_24 Start: 15958, Stop: 16293, Start Num: 60

Candidate Starts for Miko\_24:

(50, 15862), (55, 15877), (Start: 60 @15958 has 586 MA's),

Gene: Milcery\_17 Start: 12678, Stop: 13091, Start Num: 60

Candidate Starts for Milcery\_17:

(32, 12270), (53, 12582), (Start: 60 @12678 has 586 MA's), (74, 12732), (81, 12762), (105, 12912),

Gene: Millski\_20 Start: 13572, Stop: 13964, Start Num: 61

Candidate Starts for Millski\_20:

(Start: 61 @13572 has 249 MA's), (101, 13776), (102, 13779), (103, 13782), (105, 13788), (107, 13806), (130, 13926), (131, 13929), (134, 13941), (136, 13956),

Gene: MinecraftSteve\_24 Start: 13538, Stop: 13906, Start Num: 56

Candidate Starts for MinecraftSteve\_24:

(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: Miramae\_20 Start: 13523, Stop: 13915, Start Num: 61

Candidate Starts for Miramae\_20:

(Start: 61 @13523 has 249 MA's), (66, 13532), (105, 13739), (107, 13757), (130, 13877), (134, 13892), (136, 13907),

Gene: Misomonster\_24 Start: 13748, Stop: 14107, Start Num: 61

Candidate Starts for Misomonster\_24:

(Start: 61 @13748 has 249 MA's), (Start: 69 @13775 has 1 MA's), (93, 13925), (107, 13982), (111, 14015), (115, 14033),

Gene: MissWhite\_21 Start: 13390, Stop: 13743, Start Num: 60

Candidate Starts for MissWhite\_21:

(12, 12841), (17, 12901), (20, 12922), (22, 12931), (37, 13057), (50, 13294), (55, 13309), (Start: 60 @13390 has 586 MA's), (80, 13462), (108, 13618),

Gene: Mkhuseli\_20 Start: 13783, Stop: 14178, Start Num: 60

Candidate Starts for Mkhuseli\_20:

(Start: 60 @13783 has 586 MA's), (Start: 64 @13789 has 2 MA's), (71, 13822), (Start: 76 @13840 has 2 MA's), (78, 13852), (100, 13981), (105, 13999),

Gene: Molly\_20 Start: 13490, Stop: 13885, Start Num: 60

Candidate Starts for Molly\_20:

(Start: 60 @13490 has 586 MA's), (Start: 64 @13496 has 2 MA's), (71, 13529), (Start: 76 @13547 has 2 MA's), (78, 13559), (100, 13688), (105, 13706),

Gene: Monet\_21 Start: 14985, Stop: 15380, Start Num: 60

Candidate Starts for Monet\_21:

(Start: 60 @14985 has 586 MA's), (Start: 64 @14991 has 2 MA's), (71, 15024), (Start: 76 @15042 has 2 MA's), (78, 15054), (100, 15183), (105, 15201),

Gene: MoneyMay\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for MoneyMay\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Moose\_18 Start: 13726, Stop: 14121, Start Num: 60

Candidate Starts for Moose\_18:

(Start: 60 @13726 has 586 MA's), (Start: 64 @13732 has 2 MA's), (71, 13765), (Start: 76 @13783 has 2 MA's), (78, 13795), (100, 13924), (105, 13942),

Gene: Morpher26\_20 Start: 13577, Stop: 13969, Start Num: 61

Candidate Starts for Morpher26\_20:

(Start: 61 @13577 has 249 MA's), (71, 13616), (105, 13793), (134, 13946), (136, 13961),

Gene: Morrow\_20 Start: 13572, Stop: 13964, Start Num: 61

Candidate Starts for Morrow\_20:

(Start: 61 @13572 has 249 MA's), (101, 13776), (102, 13779), (103, 13782), (105, 13788), (107, 13806), (130, 13926), (131, 13929), (134, 13941), (136, 13956),

Gene: MrGordo\_19 Start: 13442, Stop: 13837, Start Num: 60

Candidate Starts for MrGordo\_19:

(Start: 60 @13442 has 586 MA's), (Start: 64 @13448 has 2 MA's), (71, 13481), (Start: 76 @13499 has 2 MA's), (78, 13511), (100, 13640), (105, 13658),

Gene: Mryolo\_18 Start: 13476, Stop: 13871, Start Num: 60

Candidate Starts for Mryolo\_18:

(Start: 60 @13476 has 586 MA's), (Start: 64 @13482 has 2 MA's), (71, 13515), (Start: 76 @13533 has 2 MA's), (78, 13545), (100, 13674), (105, 13692),

Gene: MuchMore\_24 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for MuchMore\_24:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: Mulciber\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Mulciber\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Mule\_19 Start: 13764, Stop: 14159, Start Num: 60

Candidate Starts for Mule\_19:

(Start: 60 @13764 has 586 MA's), (Start: 64 @13770 has 2 MA's), (71, 13803), (Start: 76 @13821 has 2 MA's), (78, 13833), (100, 13962), (105, 13980),

Gene: Munch\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Munch\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Mundrea\_20 Start: 13543, Stop: 13935, Start Num: 61

Candidate Starts for Mundrea\_20:

(Start: 61 @13543 has 249 MA's), (105, 13759), (130, 13897), (134, 13912), (136, 13927),

Gene: Museum\_21 Start: 13783, Stop: 14178, Start Num: 60

Candidate Starts for Museum\_21:

(Start: 60 @13783 has 586 MA's), (Start: 64 @13789 has 2 MA's), (71, 13822), (Start: 76 @13840 has 2 MA's), (78, 13852), (100, 13981), (105, 13999),

Gene: MyraDee\_18 Start: 11803, Stop: 12120, Start Num: 60

Candidate Starts for MyraDee\_18:

(26, 11362), (51, 11689), (Start: 60 @11803 has 586 MA's), (71, 11842), (100, 11971), (110, 12031),

Gene: Myxus\_22 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for Myxus\_22:

(Start: 60 @15076 has 586 MA's), (107, 15307), (130, 15427),

Gene: NEHalo\_19 Start: 13512, Stop: 13907, Start Num: 60

Candidate Starts for NEHalo\_19:

(Start: 60 @13512 has 586 MA's), (Start: 64 @13518 has 2 MA's), (71, 13551), (Start: 76 @13569 has 2 MA's), (78, 13581), (100, 13710), (105, 13728),

Gene: NaSiaTalie\_21 Start: 14355, Stop: 14690, Start Num: 60

Candidate Starts for NaSiaTalie\_21:

(50, 14259), (55, 14274), (Start: 60 @14355 has 586 MA's), (104, 14556), (107, 14577), (128, 14679),

Gene: Nabi\_13 Start: 9136, Stop: 9534, Start Num: 60

Candidate Starts for Nabi\_13:

(3, 8557), (6, 8581), (52, 9022), (53, 9037), (55, 9052), (Start: 60 @9136 has 586 MA's), (75, 9199), (Start: 76 @9202 has 2 MA's), (93, 9310), (120, 9460), (133, 9520),

Gene: Naca\_17 Start: 12595, Stop: 13008, Start Num: 60

Candidate Starts for Naca\_17:

(53, 12499), (55, 12514), (Start: 60 @12595 has 586 MA's), (74, 12649), (102, 12820), (103, 12823), (105, 12829),

Gene: Naiad\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Naiad\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Naira\_20 Start: 15264, Stop: 15659, Start Num: 60

Candidate Starts for Naira\_20:

(Start: 60 @15264 has 586 MA's), (Start: 64 @15270 has 2 MA's), (71, 15303), (Start: 76 @15321 has 2 MA's), (78, 15333), (100, 15462), (105, 15480),

Gene: Naji\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for Naji\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: Nancinator\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Nancinator\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Nanodon\_15 Start: 9338, Stop: 9736, Start Num: 60

Candidate Starts for Nanodon\_15:

(52, 9224), (53, 9239), (55, 9254), (Start: 60 @9338 has 586 MA's), (Start: 76 @9404 has 2 MA's), (77, 9407), (93, 9512), (120, 9662), (133, 9722),

Gene: Natosaleda\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Natosaleda\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: NearlyHeadless\_17 Start: 12268, Stop: 12636, Start Num: 60

Candidate Starts for NearlyHeadless\_17:

(49, 12160), (54, 12187), (Start: 60 @12268 has 586 MA's), (70, 12310), (88, 12394),

Gene: Nebs\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Nebs\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Nebulosus\_23 Start: 13416, Stop: 13784, Start Num: 56

Candidate Starts for Nebulosus\_23:

(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Nedarya\_22 Start: 14082, Stop: 14450, Start Num: 59

Candidate Starts for Nedarya\_22:

(43, 13800), (47, 13938), (Start: 59 @14082 has 1 MA's), (Start: 69 @14112 has 1 MA's), (70, 14121), (97, 14274), (103, 14295), (107, 14319),

Gene: Neeharika16\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for Neeharika16\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Nemo27\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for Nemo27\_20:

(Start: 61 @13568 has 249 MA's), (101, 13772), (102, 13775), (103, 13778), (105, 13784), (107, 13802), (130, 13922), (131, 13925), (134, 13937), (136, 13952),

Gene: Nerdos\_13 Start: 9179, Stop: 9577, Start Num: 60

Candidate Starts for Nerdos\_13:

(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: Nerujay\_20 Start: 14188, Stop: 14583, Start Num: 60

Candidate Starts for Nerujay\_20:

(Start: 60 @14188 has 586 MA's), (Start: 64 @14194 has 2 MA's), (71, 14227), (Start: 76 @14245 has 2 MA's), (78, 14257), (100, 14386), (105, 14404),

Gene: Newwrala\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for Newrala\_24:  
(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: Nhonho\_19 Start: 13941, Stop: 14336, Start Num: 60  
Candidate Starts for Nhonho\_19:  
(Start: 60 @13941 has 586 MA's), (Start: 64 @13947 has 2 MA's), (71, 13980), (Start: 76 @13998 has 2 MA's), (78, 14010), (100, 14139), (105, 14157),

Gene: NicoleTera\_25 Start: 16066, Stop: 16401, Start Num: 60  
Candidate Starts for NicoleTera\_25:  
(37, 15733), (50, 15970), (55, 15985), (Start: 60 @16066 has 586 MA's), (70, 16096), (107, 16288),

Gene: Nishikigoi\_13 Start: 8974, Stop: 9435, Start Num: 62  
Candidate Starts for Nishikigoi\_13:  
(45, 8752), (52, 8857), (Start: 62 @8974 has 41 MA's), (Start: 69 @9010 has 1 MA's), (Start: 76 @9040 has 2 MA's), (113, 9256), (116, 9280), (120, 9304),

Gene: Niza\_21 Start: 14799, Stop: 15194, Start Num: 60  
Candidate Starts for Niza\_21:  
(Start: 60 @14799 has 586 MA's), (Start: 64 @14805 has 2 MA's), (71, 14838), (Start: 76 @14856 has 2 MA's), (78, 14868), (100, 14997), (105, 15015),

Gene: Noella\_21 Start: 13747, Stop: 14088, Start Num: 61  
Candidate Starts for Noella\_21:  
(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Noelle\_20 Start: 13629, Stop: 14021, Start Num: 61  
Candidate Starts for Noelle\_20:  
(Start: 61 @13629 has 249 MA's), (66, 13638), (105, 13845), (107, 13863), (130, 13983), (134, 13998), (136, 14013),

Gene: Norbert\_20 Start: 13747, Stop: 14088, Start Num: 61  
Candidate Starts for Norbert\_20:  
(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: NorthStar\_20 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for NorthStar\_20:  
(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Norz\_21 Start: 14435, Stop: 14830, Start Num: 60  
Candidate Starts for Norz\_21:  
(Start: 60 @14435 has 586 MA's), (Start: 64 @14441 has 2 MA's), (Start: 69 @14462 has 1 MA's), (71, 14474), (Start: 76 @14492 has 2 MA's), (78, 14504), (100, 14633), (105, 14651),

Gene: NotAPhaseMom\_20 Start: 13573, Stop: 13965, Start Num: 61  
Candidate Starts for NotAPhaseMom\_20:  
(Start: 61 @13573 has 249 MA's), (101, 13777), (102, 13780), (103, 13783), (105, 13789), (107, 13807), (130, 13927), (131, 13930), (134, 13942), (136, 13957),

Gene: NothingSpecial\_23 Start: 16325, Stop: 16660, Start Num: 60

Candidate Starts for NothingSpecial\_23:  
(50, 16229), (55, 16244), (Start: 60 @16325 has 586 MA's),

Gene: Nyxis\_20 Start: 13512, Stop: 13904, Start Num: 61  
Candidate Starts for Nyxis\_20:  
(Start: 61 @13512 has 249 MA's), (101, 13716), (102, 13719), (103, 13722), (105, 13728), (107, 13746), (130, 13866), (131, 13869), (134, 13881), (136, 13896),

Gene: OKCentral2016\_20 Start: 13049, Stop: 13441, Start Num: 61  
Candidate Starts for OKCentral2016\_20:  
(Start: 61 @13049 has 249 MA's), (68, 13073), (97, 13238), (105, 13265), (134, 13418), (136, 13433),

Gene: OKaNui\_21 Start: 13622, Stop: 14014, Start Num: 61  
Candidate Starts for OKaNui\_21:  
(Start: 61 @13622 has 249 MA's), (101, 13826), (102, 13829), (103, 13832), (105, 13838), (107, 13856), (130, 13976), (131, 13979), (134, 13991), (136, 14006),

Gene: Obama12\_21 Start: 13883, Stop: 14275, Start Num: 61  
Candidate Starts for Obama12\_21:  
(Start: 61 @13883 has 249 MA's), (66, 13892), (101, 14087), (102, 14090), (103, 14093), (105, 14099), (107, 14117), (130, 14237), (134, 14252), (136, 14267),

Gene: Odin\_20 Start: 13097, Stop: 13432, Start Num: 60  
Candidate Starts for Odin\_20:  
(50, 13001), (55, 13016), (Start: 60 @13097 has 586 MA's), (100, 13283), (107, 13319), (111, 13352), (129, 13427),

Gene: Ohfah\_20 Start: 13566, Stop: 13958, Start Num: 61  
Candidate Starts for Ohfah\_20:  
(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Ohno789\_19 Start: 13582, Stop: 13977, Start Num: 60  
Candidate Starts for Ohno789\_19:  
(Start: 60 @13582 has 586 MA's), (Start: 64 @13588 has 2 MA's), (71, 13621), (Start: 76 @13639 has 2 MA's), (78, 13651), (100, 13780), (105, 13798),

Gene: OlanP\_22 Start: 13919, Stop: 14278, Start Num: 61  
Candidate Starts for OlanP\_22:  
(Start: 61 @13919 has 249 MA's), (Start: 69 @13946 has 1 MA's), (93, 14096), (107, 14153), (111, 14186), (115, 14204),

Gene: Oliynyk\_14 Start: 9342, Stop: 9740, Start Num: 60  
Candidate Starts for Oliynyk\_14:  
(3, 8763), (8, 8799), (52, 9228), (53, 9243), (55, 9258), (Start: 60 @9342 has 586 MA's), (Start: 76 @9408 has 2 MA's), (84, 9447), (93, 9519), (99, 9546), (100, 9549), (120, 9666), (133, 9726),

Gene: Ollie\_22 Start: 13536, Stop: 13895, Start Num: 61  
Candidate Starts for Ollie\_22:  
(Start: 61 @13536 has 249 MA's), (Start: 69 @13563 has 1 MA's), (93, 13713), (107, 13770), (115, 13821),

Gene: Omar\_14 Start: 9208, Stop: 9669, Start Num: 62



Candidate Starts for Omar\_14:

(30, 8782), (31, 8785), (39, 8857), (45, 8986), (52, 9091), (55, 9121), (Start: 62 @9208 has 41 MA's), (73, 9265), (Start: 76 @9274 has 2 MA's), (84, 9313), (99, 9397), (113, 9490), (120, 9538),

Gene: Onglai\_21 Start: 13410, Stop: 13799, Start Num: 60

Candidate Starts for Onglai\_21:

(Start: 60 @13410 has 586 MA's), (107, 13641),

Gene: Oofda\_24 Start: 13387, Stop: 13755, Start Num: 56

Candidate Starts for Oofda\_24:

(Start: 56 @13387 has 20 MA's), (Start: 69 @13417 has 1 MA's), (70, 13426), (78, 13459), (93, 13567), (97, 13579), (107, 13624), (111, 13657),

Gene: Oogway\_18 Start: 13694, Stop: 14089, Start Num: 60

Candidate Starts for Oogway\_18:

(Start: 60 @13694 has 586 MA's), (Start: 64 @13700 has 2 MA's), (71, 13733), (Start: 76 @13751 has 2 MA's), (78, 13763), (100, 13892), (105, 13910),

Gene: Orange\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Orange\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Ozzie\_13 Start: 9159, Stop: 9557, Start Num: 60

Candidate Starts for Ozzie\_13:

(3, 8580), (8, 8616), (52, 9045), (53, 9060), (55, 9075), (Start: 60 @9159 has 586 MA's), (Start: 76 @9225 has 2 MA's), (84, 9264), (93, 9336), (99, 9363), (100, 9366), (120, 9483), (133, 9543),

Gene: OzzyJ\_14 Start: 9139, Stop: 9534, Start Num: 60

Candidate Starts for OzzyJ\_14:

(3, 8560), (6, 8584), (15, 8647), (52, 9025), (55, 9055), (Start: 60 @9139 has 586 MA's), (Start: 76 @9205 has 2 MA's), (93, 9313), (100, 9343), (120, 9463), (133, 9520),

Gene: P28Green\_22 Start: 13664, Stop: 14023, Start Num: 61

Candidate Starts for P28Green\_22:

(Start: 61 @13664 has 249 MA's), (Start: 69 @13691 has 1 MA's), (93, 13841), (107, 13898), (111, 13931), (115, 13949), (125, 14012),

Gene: PGHhamlin\_24 Start: 13657, Stop: 14016, Start Num: 61

Candidate Starts for PGHhamlin\_24:

(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: PP\_30 Start: 19459, Stop: 19803, Start Num: 63

Candidate Starts for PP\_30:

(Start: 63 @19459 has 5 MA's), (Start: 69 @19492 has 1 MA's), (Start: 76 @19522 has 2 MA's), (111, 19732), (126, 19798),

Gene: PSullivan\_21 Start: 14192, Stop: 14587, Start Num: 60

Candidate Starts for PSullivan\_21:

(53, 14096), (Start: 60 @14192 has 586 MA's), (Start: 64 @14198 has 2 MA's), (71, 14231), (Start: 76 @14249 has 2 MA's), (78, 14261), (100, 14390), (105, 14408),

Gene: Pablito\_13 Start: 9034, Stop: 9405, Start Num: 62

Candidate Starts for Pablito\_13:

(55, 8947), (Start: 62 @9034 has 41 MA's), (65, 9043), (83, 9118), (99, 9208), (120, 9331), (133, 9391),

Gene: PacerPaul\_19 Start: 13959, Stop: 14354, Start Num: 60

Candidate Starts for PacerPaul\_19:

(53, 13863), (Start: 60 @13959 has 586 MA's), (Start: 64 @13965 has 2 MA's), (71, 13998), (Start: 76 @14016 has 2 MA's), (78, 14028), (100, 14157), (105, 14175),

Gene: PackMan\_22 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for PackMan\_22:

(Start: 60 @15076 has 586 MA's), (107, 15307), (130, 15427),

Gene: Paedore\_13 Start: 9152, Stop: 9547, Start Num: 76

Candidate Starts for Paedore\_13:

(Start: 62 @9086 has 41 MA's), (Start: 69 @9122 has 1 MA's), (Start: 76 @9152 has 2 MA's), (93, 9248), (99, 9275), (120, 9425), (132, 9482),

Gene: PainterBoy\_22 Start: 14468, Stop: 14806, Start Num: 60

Candidate Starts for PainterBoy\_22:

(Start: 60 @14468 has 586 MA's), (100, 14654), (104, 14669), (107, 14690),

Gene: Palestino\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Palestino\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Panamaxus\_20 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for Panamaxus\_20:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Paolo\_15 Start: 9577, Stop: 10047, Start Num: 58

Candidate Starts for Paolo\_15:

(38, 9226), (45, 9361), (Start: 58 @9577 has 5 MA's), (Start: 62 @9580 has 41 MA's), (Start: 69 @9637 has 1 MA's), (78, 9679), (86, 9727), (93, 9763), (99, 9790), (120, 9931), (132, 9988),

Gene: Papez\_21 Start: 15411, Stop: 15806, Start Num: 60

Candidate Starts for Papez\_21:

(Start: 60 @15411 has 586 MA's), (Start: 64 @15417 has 2 MA's), (71, 15450), (Start: 76 @15468 has 2 MA's), (78, 15480), (100, 15609), (105, 15627),

Gene: Paphu\_18 Start: 13148, Stop: 13543, Start Num: 60

Candidate Starts for Paphu\_18:

(Start: 60 @13148 has 586 MA's), (Start: 64 @13154 has 2 MA's), (71, 13187), (Start: 76 @13205 has 2 MA's), (78, 13217), (100, 13346), (105, 13364),

Gene: Paraselene\_18 Start: 13464, Stop: 13859, Start Num: 60

Candidate Starts for Paraselene\_18:

(Start: 60 @13464 has 586 MA's), (Start: 64 @13470 has 2 MA's), (71, 13503), (Start: 76 @13521 has 2 MA's), (78, 13533), (100, 13662), (105, 13680),

Gene: Pari\_20 Start: 13939, Stop: 14334, Start Num: 60

Candidate Starts for Pari\_20:

(Start: 60 @13939 has 586 MA's), (Start: 64 @13945 has 2 MA's), (71, 13978), (Start: 76 @13996 has 2 MA's), (78, 14008), (100, 14137), (105, 14155),

Gene: Parliament\_18 Start: 13828, Stop: 14223, Start Num: 60

Candidate Starts for Parliament\_18:

(Start: 60 @13828 has 586 MA's), (Start: 64 @13834 has 2 MA's), (71, 13867), (Start: 76 @13885 has 2 MA's), (78, 13897), (100, 14026), (105, 14044),

Gene: Partridge\_16 Start: 9676, Stop: 9987, Start Num: 60

Candidate Starts for Partridge\_16:

(Start: 60 @9676 has 586 MA's), (Start: 63 @9682 has 5 MA's), (Start: 76 @9736 has 2 MA's), (88, 9799), (103, 9859), (106, 9868),

Gene: PascalRango\_18 Start: 13383, Stop: 13778, Start Num: 60

Candidate Starts for PascalRango\_18:

(Start: 60 @13383 has 586 MA's), (Start: 64 @13389 has 2 MA's), (71, 13422), (Start: 76 @13440 has 2 MA's), (78, 13452), (100, 13581), (105, 13599),

Gene: PattyP\_21 Start: 13992, Stop: 14387, Start Num: 60

Candidate Starts for PattyP\_21:

(Start: 60 @13992 has 586 MA's), (Start: 64 @13998 has 2 MA's), (71, 14031), (Start: 76 @14049 has 2 MA's), (78, 14061), (100, 14190), (105, 14208),

Gene: Pavo\_14 Start: 9233, Stop: 9616, Start Num: 62

Candidate Starts for Pavo\_14:

(55, 9146), (Start: 58 @9227 has 5 MA's), (Start: 62 @9233 has 41 MA's), (84, 9338), (99, 9422), (116, 9518), (117, 9527), (133, 9602),

Gene: Pawn\_22 Start: 13739, Stop: 14098, Start Num: 61

Candidate Starts for Pawn\_22:

(Start: 61 @13739 has 249 MA's), (Start: 69 @13766 has 1 MA's), (93, 13916), (107, 13973), (111, 14006), (115, 14024),

Gene: Payneful\_19 Start: 13278, Stop: 13673, Start Num: 60

Candidate Starts for Payneful\_19:

(Start: 60 @13278 has 586 MA's), (Start: 64 @13284 has 2 MA's), (71, 13317), (Start: 76 @13335 has 2 MA's), (78, 13347), (100, 13476), (105, 13494),

Gene: PeaceMeal1\_19 Start: 11448, Stop: 11840, Start Num: 61

Candidate Starts for PeaceMeal1\_19:

(Start: 61 @11448 has 249 MA's), (Start: 76 @11505 has 2 MA's), (105, 11664), (134, 11817), (136, 11832),

Gene: Peaches\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for Peaches\_20:

(Start: 61 @13568 has 249 MA's), (101, 13772), (102, 13775), (103, 13778), (105, 13784), (107, 13802), (130, 13922), (131, 13925), (134, 13937), (136, 13952),

Gene: Pelly\_20 Start: 14228, Stop: 14623, Start Num: 60

Candidate Starts for Pelly\_20:

(Start: 60 @14228 has 586 MA's), (Start: 64 @14234 has 2 MA's), (71, 14267), (Start: 76 @14285 has 2 MA's), (78, 14297), (100, 14426), (105, 14444),

Gene: Pembroke\_22 Start: 13666, Stop: 14025, Start Num: 61

Candidate Starts for Pembroke\_22:

(Start: 61 @13666 has 249 MA's), (Start: 69 @13693 has 1 MA's), (93, 13843), (107, 13900), (111, 13933), (115, 13951),

Gene: Penny1\_22 Start: 13665, Stop: 14024, Start Num: 61

Candidate Starts for Penny1\_22:

(Start: 61 @13665 has 249 MA's), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: Pepe\_20 Start: 14183, Stop: 14578, Start Num: 60

Candidate Starts for Pepe\_20:

(53, 14087), (Start: 60 @14183 has 586 MA's), (Start: 64 @14189 has 2 MA's), (71, 14222), (Start: 76 @14240 has 2 MA's), (78, 14252), (100, 14381), (105, 14399),

Gene: Perplexer\_20 Start: 13571, Stop: 13963, Start Num: 61

Candidate Starts for Perplexer\_20:

(Start: 61 @13571 has 249 MA's), (71, 13610), (105, 13787), (134, 13940), (136, 13955),

Gene: Perseus\_20 Start: 13847, Stop: 14242, Start Num: 60

Candidate Starts for Perseus\_20:

(Start: 60 @13847 has 586 MA's), (Start: 64 @13853 has 2 MA's), (71, 13886), (Start: 76 @13904 has 2 MA's), (78, 13916), (100, 14045), (105, 14063),

Gene: PeterPeter\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for PeterPeter\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Petersenfast\_20 Start: 14840, Stop: 15190, Start Num: 60

Candidate Starts for Petersenfast\_20:

(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: Peterson\_22 Start: 15438, Stop: 15833, Start Num: 60

Candidate Starts for Peterson\_22:

(Start: 60 @15438 has 586 MA's), (Start: 64 @15444 has 2 MA's), (71, 15477), (Start: 76 @15495 has 2 MA's), (78, 15507), (100, 15636), (105, 15654),

Gene: PetiteSangsue\_20 Start: 13577, Stop: 13969, Start Num: 61

Candidate Starts for PetiteSangsue\_20:

(Start: 61 @13577 has 249 MA's), (71, 13616), (105, 13793), (134, 13946), (136, 13961),

Gene: Petp2012\_21 Start: 14660, Stop: 15055, Start Num: 60

Candidate Starts for Petp2012\_21:

(Start: 60 @14660 has 586 MA's), (Start: 64 @14666 has 2 MA's), (71, 14699), (Start: 76 @14717 has 2 MA's), (78, 14729), (100, 14858), (105, 14876),

Gene: Petruccio\_19 Start: 13689, Stop: 14084, Start Num: 60

Candidate Starts for Petruccio\_19:

(Start: 60 @13689 has 586 MA's), (Start: 64 @13695 has 2 MA's), (71, 13728), (Start: 76 @13746 has 2 MA's), (78, 13758), (100, 13887), (105, 13905),

Gene: PetteN\_18 Start: 12482, Stop: 12895, Start Num: 60

Candidate Starts for PetterN\_18:

(53, 12386), (55, 12401), (Start: 60 @12482 has 586 MA's), (74, 12536), (102, 12707), (103, 12710), (105, 12716),

Gene: Ph8s\_22 Start: 13056, Stop: 13391, Start Num: 60

Candidate Starts for Ph8s\_22:

(50, 12960), (55, 12975), (Start: 60 @13056 has 586 MA's), (78, 13119), (83, 13140), (100, 13242), (107, 13278), (111, 13311), (129, 13386),

Gene: Phacado\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for Phacado\_20:

(Start: 61 @13568 has 249 MA's), (101, 13772), (102, 13775), (103, 13778), (105, 13784), (107, 13802), (130, 13922), (131, 13925), (134, 13937), (136, 13952),

Gene: Phaded\_24 Start: 16394, Stop: 16750, Start Num: 60

Candidate Starts for Phaded\_24:

(50, 16298), (55, 16313), (Start: 60 @16394 has 586 MA's), (78, 16457), (82, 16475), (100, 16580), (107, 16616), (111, 16649),

Gene: Phaeder\_22 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for Phaeder\_22:

(Start: 60 @15076 has 586 MA's), (107, 15307), (130, 15427),

Gene: PhailMary\_15 Start: 9659, Stop: 9970, Start Num: 60

Candidate Starts for PhailMary\_15:

(Start: 60 @9659 has 586 MA's), (Start: 63 @9665 has 5 MA's), (88, 9782), (100, 9830), (103, 9842), (107, 9866),

Gene: Phantastic\_20 Start: 13173, Stop: 13514, Start Num: 60

Candidate Starts for Phantastic\_20:

(23, 12714), (25, 12729), (39, 12828), (53, 13077), (55, 13092), (Start: 60 @13173 has 586 MA's), (93, 13350), (100, 13371), (107, 13407), (111, 13440), (127, 13506),

Gene: Pharaoh\_21 Start: 14832, Stop: 15218, Start Num: 60

Candidate Starts for Pharaoh\_21:

(53, 14736), (55, 14751), (Start: 60 @14832 has 586 MA's), (107, 15060), (130, 15180),

Gene: Phelipe\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Phelipe\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: PherrisBueller\_20 Start: 13612, Stop: 14007, Start Num: 60

Candidate Starts for PherrisBueller\_20:

(53, 13516), (Start: 60 @13612 has 586 MA's), (Start: 64 @13618 has 2 MA's), (71, 13651), (Start: 76 @13669 has 2 MA's), (78, 13681), (100, 13810), (105, 13828),

Gene: Phettuccine\_13 Start: 9179, Stop: 9577, Start Num: 60

Candidate Starts for Phettuccine\_13:

(3, 8600), (8, 8636), (52, 9065), (53, 9080), (55, 9095), (Start: 60 @9179 has 586 MA's), (84, 9284), (93, 9356), (99, 9383), (100, 9386), (120, 9503), (133, 9563),

Gene: Phighter1804\_20 Start: 13547, Stop: 13939, Start Num: 61

Candidate Starts for Phighter1804\_20:

(Start: 61 @13547 has 249 MA's), (66, 13556), (101, 13751), (102, 13754), (103, 13757), (105, 13763), (107, 13781), (130, 13901), (134, 13916), (136, 13931),

Gene: Phillis\_17 Start: 12226, Stop: 12594, Start Num: 60

Candidate Starts for Phillis\_17:

(41, 11938), (49, 12118), (54, 12145), (Start: 60 @12226 has 586 MA's), (70, 12268), (85, 12346), (88, 12352), (122, 12517),

Gene: PhineBark\_19 Start: 14503, Stop: 14898, Start Num: 60

Candidate Starts for PhineBark\_19:

(Start: 60 @14503 has 586 MA's), (Start: 64 @14509 has 2 MA's), (71, 14542), (Start: 76 @14560 has 2 MA's), (78, 14572), (100, 14701), (105, 14719),

Gene: PhishRPhriends\_21 Start: 12924, Stop: 13283, Start Num: 61

Candidate Starts for PhishRPhriends\_21:

(Start: 61 @12924 has 249 MA's), (Start: 69 @12951 has 1 MA's), (93, 13101), (107, 13158), (111, 13191), (115, 13209),

Gene: Phlei\_16 Start: 14907, Stop: 15233, Start Num: 60

Candidate Starts for Phlei\_16:

(Start: 58 @14904 has 5 MA's), (Start: 60 @14907 has 586 MA's), (100, 15096), (107, 15132), (108, 15138),

Gene: Phlippers\_18 Start: 14683, Stop: 15078, Start Num: 60

Candidate Starts for Phlippers\_18:

(Start: 60 @14683 has 586 MA's), (Start: 64 @14689 has 2 MA's), (71, 14722), (Start: 76 @14740 has 2 MA's), (78, 14752), (100, 14881), (105, 14899),

Gene: Phlorence\_17 Start: 12778, Stop: 13191, Start Num: 60

Candidate Starts for Phlorence\_17:

(23, 12322), (53, 12682), (Start: 60 @12778 has 586 MA's), (74, 12832), (105, 13012),

Gene: Phoebe\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Phoebe\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Phonnegut\_22 Start: 15109, Stop: 15498, Start Num: 60

Candidate Starts for Phonnegut\_22:

(Start: 60 @15109 has 586 MA's), (107, 15340),

Gene: Phontbonne\_20 Start: 13513, Stop: 13905, Start Num: 61

Candidate Starts for Phontbonne\_20:

(Start: 61 @13513 has 249 MA's), (101, 13717), (102, 13720), (103, 13723), (105, 13729), (107, 13747), (134, 13882), (136, 13897),

Gene: Phoxy\_22 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for Phoxy\_22:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: Phrankenstein\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Phrankenstein\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Phranny\_23 Start: 13731, Stop: 14090, Start Num: 61

Candidate Starts for Phranny\_23:

(Start: 61 @13731 has 249 MA's), (Start: 69 @13758 has 1 MA's), (93, 13908), (107, 13965), (111, 13998), (115, 14016),

Gene: PhrostyMug\_19 Start: 13761, Stop: 14156, Start Num: 60

Candidate Starts for PhrostyMug\_19:

(Start: 60 @13761 has 586 MA's), (Start: 64 @13767 has 2 MA's), (71, 13800), (Start: 76 @13818 has 2 MA's), (78, 13830), (100, 13959), (105, 13977),

Gene: PickleBack\_17 Start: 12492, Stop: 12905, Start Num: 60

Candidate Starts for PickleBack\_17:

(23, 12036), (53, 12396), (Start: 60 @12492 has 586 MA's), (74, 12546), (105, 12726),

Gene: PinkPlastic\_18 Start: 13526, Stop: 13921, Start Num: 60

Candidate Starts for PinkPlastic\_18:

(Start: 60 @13526 has 586 MA's), (Start: 64 @13532 has 2 MA's), (71, 13565), (Start: 76 @13583 has 2 MA's), (78, 13595), (100, 13724), (105, 13742),

Gene: Pinto\_21 Start: 13843, Stop: 14238, Start Num: 60

Candidate Starts for Pinto\_21:

(Start: 60 @13843 has 586 MA's), (Start: 64 @13849 has 2 MA's), (71, 13882), (Start: 76 @13900 has 2 MA's), (78, 13912), (100, 14041), (105, 14059),

Gene: Pioneer\_22 Start: 15109, Stop: 15498, Start Num: 60

Candidate Starts for Pioneer\_22:

(Start: 60 @15109 has 586 MA's), (107, 15340),

Gene: Pipcraft\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Pipcraft\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Pippin\_21 Start: 14095, Stop: 14490, Start Num: 60

Candidate Starts for Pippin\_21:

(Start: 60 @14095 has 586 MA's), (Start: 64 @14101 has 2 MA's), (71, 14134), (Start: 76 @14152 has 2 MA's), (78, 14164), (100, 14293), (105, 14311),

Gene: Piro94\_22 Start: 14816, Stop: 15151, Start Num: 60

Candidate Starts for Piro94\_22:

(50, 14720), (55, 14735), (Start: 60 @14816 has 586 MA's), (104, 15017), (107, 15038), (128, 15140),

Gene: Pistachio\_21 Start: 12754, Stop: 13095, Start Num: 60

Candidate Starts for Pistachio\_21:

(53, 12658), (55, 12673), (Start: 60 @12754 has 586 MA's), (Start: 76 @12811 has 2 MA's), (85, 12868), (93, 12931), (100, 12952), (107, 12988), (111, 13021), (127, 13087),

Gene: Pita2\_21 Start: 14192, Stop: 14587, Start Num: 60

Candidate Starts for Pita2\_21:

(53, 14096), (Start: 60 @14192 has 586 MA's), (Start: 64 @14198 has 2 MA's), (71, 14231), (Start: 76 @14249 has 2 MA's), (78, 14261), (100, 14390), (105, 14408),

Gene: Pmask\_24 Start: 14409, Stop: 14762, Start Num: 60

Candidate Starts for Pmask\_24:

(Start: 60 @14409 has 586 MA's), (85, 14517), (101, 14601),

Gene: Pocahontas\_21 Start: 13744, Stop: 14085, Start Num: 61

Candidate Starts for Pocahontas\_21:

(Start: 61 @13744 has 249 MA's), (73, 13792), (Start: 76 @13801 has 2 MA's), (85, 13858), (93, 13921), (100, 13942), (107, 13978), (111, 14011), (127, 14077),

Gene: Polymorphads\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Polymorphads\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Polyphemus\_23 Start: 14410, Stop: 14763, Start Num: 60

Candidate Starts for Polyphemus\_23:

(Start: 60 @14410 has 586 MA's), (85, 14518), (101, 14602),

Gene: Pomar16\_24 Start: 14246, Stop: 14581, Start Num: 60

Candidate Starts for Pomar16\_24:

(50, 14150), (55, 14165), (Start: 60 @14246 has 586 MA's), (100, 14432), (122, 14546),

Gene: Poompha\_19 Start: 11446, Stop: 11838, Start Num: 61

Candidate Starts for Poompha\_19:

(Start: 61 @11446 has 249 MA's), (Start: 76 @11503 has 2 MA's), (105, 11662), (134, 11815), (136, 11830),

Gene: Popcicle\_21 Start: 13744, Stop: 14085, Start Num: 61

Candidate Starts for Popcicle\_21:

(Start: 61 @13744 has 249 MA's), (73, 13792), (Start: 76 @13801 has 2 MA's), (85, 13858), (93, 13921), (100, 13942), (107, 13978), (111, 14011), (127, 14077),

Gene: PotatoSplit\_23 Start: 13665, Stop: 14024, Start Num: 61

Candidate Starts for PotatoSplit\_23:

(Start: 61 @13665 has 249 MA's), (Start: 69 @13692 has 1 MA's), (93, 13842), (107, 13899), (111, 13932), (115, 13950),

Gene: Power\_21 Start: 14251, Stop: 14586, Start Num: 60

Candidate Starts for Power\_21:

(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: Priamo\_24 Start: 14436, Stop: 14789, Start Num: 60

Candidate Starts for Priamo\_24:

(Start: 60 @14436 has 586 MA's), (85, 14544), (101, 14628),

Gene: Prin Ashe11\_18 Start: 12641, Stop: 13054, Start Num: 60

Candidate Starts for Prin Ashe11\_18:

(32, 12233), (53, 12545), (Start: 60 @12641 has 586 MA's), (74, 12695), (81, 12725), (105, 12875),

Gene: Priya\_22 Start: 15107, Stop: 15496, Start Num: 60



Candidate Starts for Priya\_22:

(Start: 60 @15107 has 586 MA's), (107, 15338), (130, 15458),

Gene: ProMouse\_18 Start: 14168, Stop: 14563, Start Num: 60

Candidate Starts for ProMouse\_18:

(53, 14072), (Start: 60 @14168 has 586 MA's), (Start: 64 @14174 has 2 MA's), (71, 14207), (Start: 76 @14225 has 2 MA's), (78, 14237), (100, 14366), (105, 14384),

Gene: Provolone\_14 Start: 8963, Stop: 9346, Start Num: 62

Candidate Starts for Provolone\_14:

(55, 8876), (Start: 58 @8957 has 5 MA's), (Start: 62 @8963 has 41 MA's), (84, 9068), (99, 9152), (116, 9248), (117, 9257), (133, 9332),

Gene: Puginator\_15 Start: 9529, Stop: 10005, Start Num: 62

Candidate Starts for Puginator\_15:

(Start: 62 @9529 has 41 MA's), (Start: 69 @9586 has 1 MA's), (78, 9628), (86, 9676), (93, 9712), (99, 9739), (116, 9865), (120, 9889), (132, 9946),

Gene: Pukovnik\_23 Start: 15947, Stop: 16303, Start Num: 60

Candidate Starts for Pukovnik\_23:

(50, 15851), (55, 15866), (Start: 60 @15947 has 586 MA's), (78, 16010), (82, 16028), (85, 16055), (100, 16133), (107, 16169), (111, 16202),

Gene: Pumbaa\_20 Start: 13544, Stop: 13936, Start Num: 61

Candidate Starts for Pumbaa\_20:

(Start: 61 @13544 has 249 MA's), (66, 13553), (101, 13748), (102, 13751), (103, 13754), (105, 13760), (107, 13778), (130, 13898), (131, 13901), (134, 13913), (136, 13928),

Gene: Puppy\_21 Start: 12826, Stop: 13167, Start Num: 60

Candidate Starts for Puppy\_21:

(53, 12730), (55, 12745), (Start: 60 @12826 has 586 MA's), (Start: 76 @12883 has 2 MA's), (85, 12940), (93, 13003), (100, 13024), (107, 13060), (111, 13093), (127, 13159),

Gene: PurpleHaze\_22 Start: 13738, Stop: 14097, Start Num: 61

Candidate Starts for PurpleHaze\_22:

(Start: 61 @13738 has 249 MA's), (Start: 69 @13765 has 1 MA's), (93, 13915), (107, 13972), (111, 14005), (115, 14023),

Gene: QTRlifeCrisis\_19 Start: 14169, Stop: 14564, Start Num: 60

Candidate Starts for QTRlifeCrisis\_19:

(Start: 60 @14169 has 586 MA's), (Start: 64 @14175 has 2 MA's), (71, 14208), (Start: 76 @14226 has 2 MA's), (78, 14238), (100, 14367), (105, 14385),

Gene: Qobbit\_22 Start: 15106, Stop: 15495, Start Num: 60

Candidate Starts for Qobbit\_22:

(Start: 60 @15106 has 586 MA's), (107, 15337),

Gene: QueenB2\_21 Start: 14329, Stop: 14664, Start Num: 60

Candidate Starts for QueenB2\_21:

(50, 14233), (55, 14248), (Start: 60 @14329 has 586 MA's), (70, 14359), (100, 14515), (107, 14551),

Gene: QueenBeesly\_21 Start: 14251, Stop: 14586, Start Num: 60

Candidate Starts for QueenBeesly\_21:

(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: QuinnKiro\_20 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for QuinnKiro\_20:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Quokka\_19 Start: 13229, Stop: 13564, Start Num: 60

Candidate Starts for Quokka\_19:

(50, 13133), (55, 13148), (Start: 60 @13229 has 586 MA's),

Gene: R4\_13 Start: 9060, Stop: 9527, Start Num: 62

Candidate Starts for R4\_13:

(28, 8640), (37, 8700), (55, 8973), (Start: 62 @9060 has 41 MA's), (Start: 69 @9096 has 1 MA's), (93, 9222), (99, 9249), (120, 9405), (132, 9462),

Gene: RER2\_9 Start: 6521, Stop: 6832, Start Num: 60

Candidate Starts for RER2\_9:

(Start: 60 @6521 has 586 MA's), (Start: 63 @6527 has 5 MA's), (Start: 76 @6581 has 2 MA's), (88, 6644), (103, 6704), (107, 6728), (121, 6797),

Gene: RGL3\_9 Start: 6491, Stop: 6799, Start Num: 63

Candidate Starts for RGL3\_9:

(Start: 60 @6485 has 586 MA's), (Start: 63 @6491 has 5 MA's), (88, 6608), (100, 6656), (103, 6668),

Gene: Rachaly\_24 Start: 15986, Stop: 16321, Start Num: 60

Candidate Starts for Rachaly\_24:

(50, 15890), (55, 15905), (Start: 60 @15986 has 586 MA's),

Gene: Rahalelujah\_20 Start: 13146, Stop: 13535, Start Num: 60

Candidate Starts for Rahalelujah\_20:

(Start: 60 @13146 has 586 MA's), (93, 13317), (107, 13377),

Gene: Raid\_20 Start: 13453, Stop: 13848, Start Num: 60

Candidate Starts for Raid\_20:

(Start: 60 @13453 has 586 MA's), (Start: 64 @13459 has 2 MA's), (71, 13492), (Start: 76 @13510 has 2 MA's), (78, 13522), (100, 13651), (105, 13669),

Gene: Rajelicia\_19 Start: 13977, Stop: 14372, Start Num: 60

Candidate Starts for Rajelicia\_19:

(Start: 60 @13977 has 586 MA's), (Start: 64 @13983 has 2 MA's), (71, 14016), (Start: 76 @14034 has 2 MA's), (78, 14046), (100, 14175), (105, 14193),

Gene: Rana\_13 Start: 9136, Stop: 9534, Start Num: 60

Candidate Starts for Rana\_13:

(3, 8557), (6, 8581), (52, 9022), (53, 9037), (55, 9052), (Start: 60 @9136 has 586 MA's), (75, 9199), (Start: 76 @9202 has 2 MA's), (93, 9310), (120, 9460), (133, 9520),

Gene: Rasputin\_16 Start: 9617, Stop: 9928, Start Num: 60

Candidate Starts for Rasputin\_16:

(Start: 60 @9617 has 586 MA's), (Start: 63 @9623 has 5 MA's), (Start: 76 @9677 has 2 MA's), (88, 9740), (103, 9800), (106, 9809),

Gene: ReMo\_23 Start: 13416, Stop: 13784, Start Num: 56

Candidate Starts for ReMo\_23:

(Start: 56 @13416 has 20 MA's), (Start: 69 @13446 has 1 MA's), (70, 13455), (78, 13488), (93, 13596), (97, 13608), (107, 13653), (111, 13686),

Gene: Reba\_23 Start: 13404, Stop: 13763, Start Num: 61

Candidate Starts for Reba\_23:

(Start: 61 @13404 has 249 MA's), (Start: 69 @13431 has 1 MA's), (93, 13581), (107, 13638), (111, 13671), (115, 13689),

Gene: Rebeuca\_21 Start: 13531, Stop: 13923, Start Num: 61

Candidate Starts for Rebeuca\_21:

(Start: 61 @13531 has 249 MA's), (68, 13555), (Start: 76 @13588 has 2 MA's), (97, 13720), (105, 13747), (134, 13900), (136, 13915),

Gene: RedBear\_15 Start: 9418, Stop: 9816, Start Num: 60

Candidate Starts for RedBear\_15:

(3, 8839), (6, 8863), (15, 8926), (52, 9304), (55, 9334), (Start: 60 @9418 has 586 MA's), (93, 9592), (100, 9622), (120, 9742), (133, 9802),

Gene: RedRock\_24 Start: 16248, Stop: 16583, Start Num: 60

Candidate Starts for RedRock\_24:

(10, 15699), (37, 15915), (50, 16152), (55, 16167), (Start: 60 @16248 has 586 MA's), (70, 16278), (100, 16434), (107, 16470),

Gene: Refuge\_24 Start: 16634, Stop: 17020, Start Num: 60

Candidate Starts for Refuge\_24:

(Start: 60 @16634 has 586 MA's), (93, 16805), (107, 16862), (130, 16982),

Gene: Relief\_20 Start: 13567, Stop: 13959, Start Num: 61

Candidate Starts for Relief\_20:

(Start: 61 @13567 has 249 MA's), (101, 13771), (102, 13774), (103, 13777), (105, 13783), (107, 13801), (130, 13921), (131, 13924), (134, 13936), (136, 13951),

Gene: Remus\_23 Start: 13377, Stop: 13745, Start Num: 56

Candidate Starts for Remus\_23:

(Start: 56 @13377 has 20 MA's), (Start: 69 @13407 has 1 MA's), (70, 13416), (78, 13449), (93, 13557), (97, 13569), (107, 13614), (111, 13647),

Gene: ResDef\_21 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for ResDef\_21:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Retro23\_21 Start: 14402, Stop: 14737, Start Num: 60

Candidate Starts for Retro23\_21:

(50, 14306), (55, 14321), (Start: 60 @14402 has 586 MA's), (70, 14432), (100, 14588), (107, 14624),

Gene: RexFury\_16 Start: 9680, Stop: 9991, Start Num: 60

Candidate Starts for RexFury\_16:

(Start: 60 @9680 has 586 MA's), (Start: 63 @9686 has 5 MA's), (Start: 76 @9740 has 2 MA's), (88, 9803), (103, 9863), (107, 9887),

Gene: Rhodalysa\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Rhodalysa\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: RhynO\_21 Start: 13507, Stop: 13899, Start Num: 61

Candidate Starts for RhynO\_21:

(Start: 61 @13507 has 249 MA's), (Start: 76 @13564 has 2 MA's), (97, 13696), (105, 13723), (125, 13849), (134, 13876), (136, 13891),

Gene: Rhynn\_19 Start: 13770, Stop: 14165, Start Num: 60

Candidate Starts for Rhynn\_19:

(Start: 60 @13770 has 586 MA's), (Start: 64 @13776 has 2 MA's), (71, 13809), (73, 13818), (Start: 76 @13827 has 2 MA's), (100, 13968),

Gene: RidgeCB\_19 Start: 13544, Stop: 13939, Start Num: 60

Candidate Starts for RidgeCB\_19:

(Start: 60 @13544 has 586 MA's), (Start: 64 @13550 has 2 MA's), (71, 13583), (Start: 76 @13601 has 2 MA's), (78, 13613), (100, 13742), (105, 13760),

Gene: Riffer\_24 Start: 14384, Stop: 14737, Start Num: 60

Candidate Starts for Riffer\_24:

(50, 14288), (55, 14303), (Start: 60 @14384 has 586 MA's), (85, 14492), (101, 14576),

Gene: Ringer\_19 Start: 14028, Stop: 14423, Start Num: 60

Candidate Starts for Ringer\_19:

(Start: 60 @14028 has 586 MA's), (Start: 64 @14034 has 2 MA's), (71, 14067), (Start: 76 @14085 has 2 MA's), (78, 14097), (100, 14226), (105, 14244),

Gene: Roary\_17 Start: 12217, Stop: 12585, Start Num: 60

Candidate Starts for Roary\_17:

(49, 12109), (54, 12136), (Start: 60 @12217 has 586 MA's), (71, 12262), (85, 12337), (88, 12343),

Gene: Rockstar\_20 Start: 13100, Stop: 13441, Start Num: 60

Candidate Starts for Rockstar\_20:

(53, 13004), (55, 13019), (Start: 60 @13100 has 586 MA's), (66, 13109), (85, 13214), (93, 13277), (107, 13334), (111, 13367), (127, 13433),

Gene: Rohr\_20 Start: 13967, Stop: 14362, Start Num: 60

Candidate Starts for Rohr\_20:

(Start: 60 @13967 has 586 MA's), (Start: 64 @13973 has 2 MA's), (71, 14006), (Start: 76 @14024 has 2 MA's), (78, 14036), (100, 14165), (105, 14183),

Gene: Roksolana\_24 Start: 14412, Stop: 14765, Start Num: 60

Candidate Starts for Roksolana\_24:

(50, 14316), (55, 14331), (Start: 60 @14412 has 586 MA's), (85, 14520), (101, 14604),

Gene: Romney\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Romney\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Roosevelt\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Roosevelt\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Rosa24\_19 Start: 13542, Stop: 13934, Start Num: 61

Candidate Starts for Rosa24\_19:

(Start: 61 @13542 has 249 MA's), (66, 13551), (101, 13746), (102, 13749), (103, 13752), (105, 13758), (107, 13776), (130, 13896), (134, 13911), (136, 13926),

Gene: Rosalind\_23 Start: 13538, Stop: 13906, Start Num: 56

Candidate Starts for Rosalind\_23:

(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: Rowdy\_23 Start: 13418, Stop: 13810, Start Num: 61

Candidate Starts for Rowdy\_23:

(Start: 61 @13418 has 249 MA's), (Start: 76 @13475 has 2 MA's), (97, 13607), (105, 13634), (125, 13760), (134, 13787), (136, 13802),

Gene: Rubeus\_20 Start: 13802, Stop: 14197, Start Num: 60

Candidate Starts for Rubeus\_20:

(Start: 60 @13802 has 586 MA's), (Start: 64 @13808 has 2 MA's), (71, 13841), (Start: 76 @13859 has 2 MA's), (78, 13871), (100, 14000), (105, 14018),

Gene: Rufus\_20 Start: 14135, Stop: 14530, Start Num: 60

Candidate Starts for Rufus\_20:

(Start: 60 @14135 has 586 MA's), (Start: 64 @14141 has 2 MA's), (71, 14174), (Start: 76 @14192 has 2 MA's), (78, 14204), (100, 14333), (105, 14351),

Gene: Ruin\_20 Start: 13565, Stop: 13957, Start Num: 61

Candidate Starts for Ruin\_20:

(Start: 61 @13565 has 249 MA's), (101, 13769), (102, 13772), (103, 13775), (105, 13781), (107, 13799), (130, 13919), (131, 13922), (134, 13934), (136, 13949),

Gene: Rummer\_22 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for Rummer\_22:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: Ruotula\_18 Start: 13972, Stop: 14367, Start Num: 60

Candidate Starts for Ruotula\_18:

(Start: 60 @13972 has 586 MA's), (Start: 64 @13978 has 2 MA's), (71, 14011), (73, 14020), (Start: 76 @14029 has 2 MA's), (100, 14170),

Gene: Rusticus\_14 Start: 9342, Stop: 9740, Start Num: 60

Candidate Starts for Rusticus\_14:

(3, 8763), (8, 8799), (52, 9228), (53, 9243), (55, 9258), (Start: 60 @9342 has 586 MA's), (Start: 76 @9408 has 2 MA's), (84, 9447), (93, 9519), (99, 9546), (100, 9549), (120, 9666), (133, 9726),

Gene: Rutherferd\_21 Start: 14315, Stop: 14710, Start Num: 60

Candidate Starts for Rutherferd\_21:

(Start: 60 @14315 has 586 MA's), (Start: 64 @14321 has 2 MA's), (71, 14354), (Start: 76 @14372 has 2 MA's), (78, 14384), (100, 14513), (105, 14531),

Gene: RyeScarlet\_23 Start: 15080, Stop: 15469, Start Num: 60  
Candidate Starts for RyeScarlet\_23:  
(Start: 60 @15080 has 586 MA's), (107, 15311),

Gene: STLscum\_20 Start: 14178, Stop: 14573, Start Num: 60  
Candidate Starts for STLscum\_20:  
(Start: 60 @14178 has 586 MA's), (Start: 64 @14184 has 2 MA's), (71, 14217), (Start: 76 @14235 has 2 MA's), (78, 14247), (100, 14376), (105, 14394),

Gene: Sabertooth\_20 Start: 13566, Stop: 13958, Start Num: 61  
Candidate Starts for Sabertooth\_20:  
(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Sabia\_22 Start: 13658, Stop: 14017, Start Num: 61  
Candidate Starts for Sabia\_22:  
(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Sabinator\_22 Start: 13663, Stop: 14022, Start Num: 61  
Candidate Starts for Sabinator\_22:  
(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Sachima\_20 Start: 15076, Stop: 15465, Start Num: 60  
Candidate Starts for Sachima\_20:  
(Start: 60 @15076 has 586 MA's), (107, 15307),

Gene: Saftant\_13 Start: 9237, Stop: 9638, Start Num: 62  
Candidate Starts for Saftant\_13:  
(Start: 62 @9237 has 41 MA's), (72, 9291), (107, 9483), (120, 9567), (133, 9627),

Gene: Sagefire\_20 Start: 14575, Stop: 14970, Start Num: 60  
Candidate Starts for Sagefire\_20:  
(Start: 60 @14575 has 586 MA's), (Start: 64 @14581 has 2 MA's), (71, 14614), (Start: 76 @14632 has 2 MA's), (78, 14644), (100, 14773), (105, 14791),

Gene: Saintus\_17 Start: 12232, Stop: 12600, Start Num: 60  
Candidate Starts for Saintus\_17:  
(49, 12124), (54, 12151), (Start: 60 @12232 has 586 MA's), (71, 12277), (85, 12352), (88, 12358),

Gene: Salz\_21 Start: 14834, Stop: 15184, Start Num: 60  
Candidate Starts for Salz\_21:  
(Start: 60 @14834 has 586 MA's), (83, 14918), (100, 15020), (107, 15056),

Gene: Sandaddy\_18 Start: 13690, Stop: 14085, Start Num: 60  
Candidate Starts for Sandaddy\_18:  
(Start: 60 @13690 has 586 MA's), (Start: 64 @13696 has 2 MA's), (71, 13729), (Start: 76 @13747 has 2 MA's), (78, 13759), (100, 13888), (105, 13906),

Gene: Sanya\_18 Start: 14352, Stop: 14747, Start Num: 60  
Candidate Starts for Sanya\_18:

(Start: 60 @14352 has 586 MA's), (Start: 64 @14358 has 2 MA's), (71, 14391), (Start: 76 @14409 has 2 MA's), (78, 14421), (100, 14550), (105, 14568),

Gene: SarFire\_19 Start: 13844, Stop: 14239, Start Num: 60

Candidate Starts for SarFire\_19:

(Start: 60 @13844 has 586 MA's), (Start: 64 @13850 has 2 MA's), (71, 13883), (Start: 76 @13901 has 2 MA's), (78, 13913), (100, 14042), (105, 14060),

Gene: SarahRose\_13 Start: 9145, Stop: 9540, Start Num: 60

Candidate Starts for SarahRose\_13:

(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: SaturnRing\_20 Start: 13207, Stop: 13548, Start Num: 60

Candidate Starts for SaturnRing\_20:

(53, 13111), (55, 13126), (Start: 60 @13207 has 586 MA's), (Start: 76 @13264 has 2 MA's), (85, 13321), (93, 13384), (100, 13405), (107, 13441), (111, 13474), (127, 13540),

Gene: Scamp\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Scamp\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Scherzo\_22 Start: 15109, Stop: 15498, Start Num: 60

Candidate Starts for Scherzo\_22:

(Start: 60 @15109 has 586 MA's), (107, 15340),

Gene: Scorpio\_18 Start: 12483, Stop: 12896, Start Num: 60

Candidate Starts for Scorpio\_18:

(53, 12387), (55, 12402), (Start: 60 @12483 has 586 MA's), (74, 12537), (102, 12708), (103, 12711), (105, 12717),

Gene: Scout\_20 Start: 12507, Stop: 12848, Start Num: 60

Candidate Starts for Scout\_20:

(53, 12411), (55, 12426), (Start: 60 @12507 has 586 MA's), (Start: 76 @12564 has 2 MA's), (85, 12621), (93, 12684), (100, 12705), (107, 12741), (111, 12774), (127, 12840),

Gene: Scowl\_20 Start: 14241, Stop: 14636, Start Num: 60

Candidate Starts for Scowl\_20:

(Start: 60 @14241 has 586 MA's), (Start: 64 @14247 has 2 MA's), (71, 14280), (Start: 76 @14298 has 2 MA's), (78, 14310), (100, 14439), (105, 14457),

Gene: Seabiscuit\_21 Start: 13776, Stop: 14171, Start Num: 60

Candidate Starts for Seabiscuit\_21:

(Start: 60 @13776 has 586 MA's), (Start: 64 @13782 has 2 MA's), (71, 13815), (Start: 76 @13833 has 2 MA's), (78, 13845), (100, 13974), (105, 13992),

Gene: Seanderson\_20 Start: 14211, Stop: 14606, Start Num: 60

Candidate Starts for Seanderson\_20:

(Start: 60 @14211 has 586 MA's), (Start: 64 @14217 has 2 MA's), (71, 14250), (Start: 76 @14268 has 2 MA's), (78, 14280), (100, 14409), (105, 14427),

Gene: SemperFi\_23 Start: 14679, Stop: 15014, Start Num: 60

Candidate Starts for SemperFi\_23:

(50, 14583), (55, 14598), (Start: 60 @14679 has 586 MA's), (70, 14709), (100, 14865), (107, 14901),

Gene: SenorClean\_19 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for SenorClean\_19:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Serenity\_20 Start: 13229, Stop: 13564, Start Num: 60

Candidate Starts for Serenity\_20:

(50, 13133), (55, 13148), (Start: 60 @13229 has 586 MA's),

Gene: Severus\_19 Start: 11446, Stop: 11838, Start Num: 61

Candidate Starts for Severus\_19:

(Start: 61 @11446 has 249 MA's), (Start: 76 @11503 has 2 MA's), (105, 11662), (134, 11815), (136, 11830),

Gene: Shaka\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Shaka\_20:

(Start: 61 @13569 has 249 MA's), (66, 13578), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (134, 13938), (136, 13953),

Gene: Sham4\_21 Start: 14840, Stop: 15190, Start Num: 60

Candidate Starts for Sham4\_21:

(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: Shapes\_23 Start: 13418, Stop: 13810, Start Num: 61

Candidate Starts for Shapes\_23:

(Start: 61 @13418 has 249 MA's), (Start: 76 @13475 has 2 MA's), (97, 13607), (105, 13634), (125, 13760), (134, 13787), (136, 13802),

Gene: ShayRa\_24 Start: 13538, Stop: 13906, Start Num: 56

Candidate Starts for ShayRa\_24:

(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: SheaKeira\_21 Start: 13285, Stop: 13620, Start Num: 60

Candidate Starts for SheaKeira\_21:

(Start: 60 @13285 has 586 MA's), (100, 13471), (101, 13477), (104, 13486), (107, 13507),

Gene: Sheen\_22 Start: 15303, Stop: 15647, Start Num: 63

Candidate Starts for Sheen\_22:

(55, 15219), (Start: 63 @15303 has 5 MA's), (Start: 69 @15336 has 1 MA's), (Start: 76 @15366 has 2 MA's), (111, 15576), (125, 15639),

Gene: SheldonCooper\_21 Start: 13882, Stop: 14274, Start Num: 61

Candidate Starts for SheldonCooper\_21:

(Start: 61 @13882 has 249 MA's), (66, 13891), (101, 14086), (102, 14089), (103, 14092), (105, 14098), (107, 14116), (130, 14236), (134, 14251), (136, 14266),

Gene: ShortQueendom\_18 Start: 13650, Stop: 14045, Start Num: 60

Candidate Starts for ShortQueendom\_18:



(Start: 60 @13650 has 586 MA's), (Start: 64 @13656 has 2 MA's), (71, 13689), (Start: 76 @13707 has 2 MA's), (78, 13719), (100, 13848), (105, 13866),

Gene: Shuman\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Shuman\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (106, 9841),

Gene: Shygu2\_20 Start: 13572, Stop: 13964, Start Num: 61

Candidate Starts for Shygu2\_20:

(Start: 61 @13572 has 249 MA's), (105, 13788), (130, 13926), (134, 13941), (136, 13956),

Gene: Sibs6\_21 Start: 14287, Stop: 14682, Start Num: 60

Candidate Starts for Sibs6\_21:

(Start: 60 @14287 has 586 MA's), (Start: 64 @14293 has 2 MA's), (71, 14326), (Start: 76 @14344 has 2 MA's), (78, 14356), (100, 14485), (105, 14503),

Gene: SkiPole\_21 Start: 13864, Stop: 14259, Start Num: 60

Candidate Starts for SkiPole\_21:

(53, 13768), (Start: 60 @13864 has 586 MA's), (Start: 64 @13870 has 2 MA's), (71, 13903), (Start: 76 @13921 has 2 MA's), (78, 13933), (100, 14062), (105, 14080),

Gene: Skipitt\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Skipitt\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Sknot\_22 Start: 14358, Stop: 14693, Start Num: 60

Candidate Starts for Sknot\_22:

(50, 14262), (55, 14277), (Start: 60 @14358 has 586 MA's), (104, 14559), (107, 14580), (128, 14682),

Gene: Slagathor\_20 Start: 13639, Stop: 14034, Start Num: 60

Candidate Starts for Slagathor\_20:

(Start: 60 @13639 has 586 MA's), (Start: 64 @13645 has 2 MA's), (71, 13678), (Start: 76 @13696 has 2 MA's), (78, 13708), (100, 13837), (105, 13855),

Gene: Smairt\_20 Start: 14470, Stop: 14865, Start Num: 60

Candidate Starts for Smairt\_20:

(57, 14410), (Start: 60 @14470 has 586 MA's), (Start: 64 @14476 has 2 MA's), (71, 14509), (Start: 76 @14527 has 2 MA's), (78, 14539), (100, 14668), (105, 14686),

Gene: Smeadley\_17 Start: 12250, Stop: 12618, Start Num: 60

Candidate Starts for Smeadley\_17:

(41, 11962), (49, 12142), (54, 12169), (Start: 60 @12250 has 586 MA's), (70, 12292), (85, 12370), (88, 12376),

Gene: Smeagan\_23 Start: 14767, Stop: 15102, Start Num: 60

Candidate Starts for Smeagan\_23:

(14, 14257), (50, 14671), (55, 14686), (Start: 60 @14767 has 586 MA's), (70, 14797),

Gene: Smeagol\_21 Start: 15059, Stop: 15454, Start Num: 60

Candidate Starts for Smeagol\_21:

(Start: 60 @15059 has 586 MA's), (Start: 64 @15065 has 2 MA's), (71, 15098), (Start: 76 @15116 has 2 MA's), (78, 15128), (100, 15257), (105, 15275),

Gene: SmellyB\_24 Start: 14417, Stop: 14770, Start Num: 60  
Candidate Starts for SmellyB\_24:  
(Start: 60 @14417 has 586 MA's), (85, 14525), (101, 14609),

Gene: SnapTap\_21 Start: 14251, Stop: 14586, Start Num: 60  
Candidate Starts for SnapTap\_21:  
(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: Snape\_21 Start: 14840, Stop: 15190, Start Num: 60  
Candidate Starts for Snape\_21:  
(Start: 60 @14840 has 586 MA's), (83, 14924), (100, 15026), (107, 15062),

Gene: Snazzy\_17 Start: 13159, Stop: 13554, Start Num: 60  
Candidate Starts for Snazzy\_17:  
(Start: 60 @13159 has 586 MA's), (Start: 64 @13165 has 2 MA's), (71, 13198), (Start: 76 @13216 has 2 MA's), (78, 13228), (100, 13357), (105, 13375),

Gene: Snickers\_22 Start: 13639, Stop: 13998, Start Num: 61  
Candidate Starts for Snickers\_22:  
(Start: 61 @13639 has 249 MA's), (Start: 69 @13666 has 1 MA's), (93, 13816), (107, 13873), (111, 13906), (115, 13924),

Gene: Snorlax\_13 Start: 9145, Stop: 9540, Start Num: 60  
Candidate Starts for Snorlax\_13:  
(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: SoYo\_22 Start: 13576, Stop: 13935, Start Num: 61  
Candidate Starts for SoYo\_22:  
(Start: 61 @13576 has 249 MA's), (Start: 69 @13603 has 1 MA's), (93, 13753), (107, 13810), (111, 13843), (115, 13861),

Gene: SoilDragon\_22 Start: 13348, Stop: 13707, Start Num: 61  
Candidate Starts for SoilDragon\_22:  
(Start: 61 @13348 has 249 MA's), (Start: 69 @13375 has 1 MA's), (93, 13525), (107, 13582), (111, 13615), (115, 13633),

Gene: Solon\_19 Start: 14322, Stop: 14717, Start Num: 60  
Candidate Starts for Solon\_19:  
(Start: 60 @14322 has 586 MA's), (Start: 64 @14328 has 2 MA's), (71, 14361), (Start: 76 @14379 has 2 MA's), (78, 14391), (100, 14520), (105, 14538),

Gene: SororFago\_20 Start: 13452, Stop: 13787, Start Num: 60  
Candidate Starts for SororFago\_20:  
(50, 13356), (55, 13371), (Start: 60 @13452 has 586 MA's), (80, 13524), (100, 13638), (107, 13674), (129, 13782),

Gene: Sorpresa\_19 Start: 13690, Stop: 14085, Start Num: 60  
Candidate Starts for Sorpresa\_19:

(Start: 60 @13690 has 586 MA's), (Start: 64 @13696 has 2 MA's), (71, 13729), (Start: 76 @13747 has 2 MA's), (78, 13759), (100, 13888), (105, 13906),

Gene: Soshari\_24 Start: 13748, Stop: 14107, Start Num: 61

Candidate Starts for Soshari\_24:

(Start: 61 @13748 has 249 MA's), (Start: 69 @13775 has 1 MA's), (93, 13925), (107, 13982), (111, 14015), (115, 14033),

Gene: Soups\_23 Start: 13538, Stop: 13906, Start Num: 56

Candidate Starts for Soups\_23:

(Start: 56 @13538 has 20 MA's), (Start: 69 @13568 has 1 MA's), (70, 13577), (78, 13610), (93, 13718), (97, 13730), (107, 13775), (111, 13808),

Gene: South40\_14 Start: 9418, Stop: 9816, Start Num: 60

Candidate Starts for South40\_14:

(3, 8839), (6, 8863), (15, 8926), (52, 9304), (55, 9334), (Start: 60 @9418 has 586 MA's), (93, 9592), (100, 9622), (120, 9742), (133, 9802),

Gene: Sparxx\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for Sparxx\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Speedwell\_18 Start: 10967, Stop: 11362, Start Num: 62

Candidate Starts for Speedwell\_18:

(Start: 62 @10967 has 41 MA's), (73, 11024), (99, 11171), (100, 11174), (107, 11207), (133, 11351),

Gene: Spike509\_22 Start: 13749, Stop: 14108, Start Num: 61

Candidate Starts for Spike509\_22:

(Start: 61 @13749 has 249 MA's), (Start: 69 @13776 has 1 MA's), (93, 13926), (107, 13983), (111, 14016), (115, 14034),

Gene: SpikeBT\_21 Start: 14626, Stop: 15021, Start Num: 60

Candidate Starts for SpikeBT\_21:

(Start: 60 @14626 has 586 MA's), (Start: 64 @14632 has 2 MA's), (71, 14665), (Start: 76 @14683 has 2 MA's), (78, 14695), (100, 14824), (105, 14842),

Gene: Spino\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for Spino\_20:

(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Spouty\_22 Start: 15106, Stop: 15495, Start Num: 60

Candidate Starts for Spouty\_22:

(Start: 60 @15106 has 586 MA's), (107, 15337), (130, 15457),

Gene: SqueakyClean\_14 Start: 9299, Stop: 9670, Start Num: 62

Candidate Starts for SqueakyClean\_14:

(22, 8837), (27, 8873), (39, 8948), (40, 8951), (45, 9077), (55, 9212), (Start: 62 @9299 has 41 MA's), (67, 9314), (99, 9473), (100, 9476), (113, 9548), (116, 9572), (120, 9596), (133, 9656),

Gene: Squee\_20 Start: 14460, Stop: 14855, Start Num: 60

Candidate Starts for Squee\_20:

(Start: 60 @14460 has 586 MA's), (Start: 64 @14466 has 2 MA's), (71, 14499), (Start: 76 @14517 has 2 MA's), (78, 14529), (100, 14658), (105, 14676),

Gene: StCroix\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for StCroix\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Stagni\_22 Start: 13667, Stop: 14026, Start Num: 61

Candidate Starts for Stagni\_22:

(Start: 61 @13667 has 249 MA's), (Start: 69 @13694 has 1 MA's), (93, 13844), (107, 13901), (111, 13934), (115, 13952),

Gene: StarStuff\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for StarStuff\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: Stasia\_21 Start: 14008, Stop: 14400, Start Num: 61

Candidate Starts for Stasia\_21:

(Start: 61 @14008 has 249 MA's), (66, 14017), (105, 14224), (107, 14242), (134, 14377), (136, 14392),

Gene: Steamy\_22 Start: 14864, Stop: 15250, Start Num: 60

Candidate Starts for Steamy\_22:

(Start: 60 @14864 has 586 MA's), (107, 15092), (118, 15152), (130, 15212),

Gene: StepMih\_22 Start: 13685, Stop: 14017, Start Num: 69

Candidate Starts for StepMih\_22:

(Start: 61 @13658 has 249 MA's), (Start: 69 @13685 has 1 MA's), (93, 13835), (107, 13892), (111, 13925), (115, 13943),

Gene: Stephig9\_17 Start: 12231, Stop: 12599, Start Num: 60

Candidate Starts for Stephig9\_17:

(Start: 60 @12231 has 586 MA's), (70, 12273), (85, 12351), (88, 12357),

Gene: StewieG\_18 Start: 13534, Stop: 13929, Start Num: 60

Candidate Starts for StewieG\_18:

(Start: 60 @13534 has 586 MA's), (Start: 64 @13540 has 2 MA's), (71, 13573), (Start: 76 @13591 has 2 MA's), (78, 13603), (100, 13732), (105, 13750),

Gene: Stink\_21 Start: 13860, Stop: 14252, Start Num: 61

Candidate Starts for Stink\_21:

(Start: 61 @13860 has 249 MA's), (66, 13869), (105, 14076), (107, 14094), (130, 14214), (134, 14229), (136, 14244),

Gene: StrongArm\_18 Start: 14711, Stop: 15106, Start Num: 60

Candidate Starts for StrongArm\_18:

(Start: 60 @14711 has 586 MA's), (Start: 64 @14717 has 2 MA's), (71, 14750), (Start: 76 @14768 has 2 MA's), (78, 14780), (100, 14909), (105, 14927),

Gene: Strosahl\_23 Start: 13377, Stop: 13745, Start Num: 56

Candidate Starts for Strosahl\_23:

(Start: 56 @13377 has 20 MA's), (Start: 69 @13407 has 1 MA's), (70, 13416), (78, 13449), (93, 13557), (97, 13569), (107, 13614), (111, 13647),

Gene: Sujidade\_14 Start: 9440, Stop: 9838, Start Num: 60

Candidate Starts for Sujidade\_14:

(3, 8861), (6, 8885), (35, 9068), (52, 9326), (53, 9341), (55, 9356), (Start: 60 @9440 has 586 MA's), (75, 9503), (93, 9614), (100, 9644), (120, 9764), (133, 9824),

Gene: Sumter\_18 Start: 13281, Stop: 13676, Start Num: 60

Candidate Starts for Sumter\_18:

(Start: 60 @13281 has 586 MA's), (Start: 64 @13287 has 2 MA's), (71, 13320), (Start: 76 @13338 has 2 MA's), (78, 13350), (100, 13479), (105, 13497),

Gene: Sunhee\_19 Start: 13486, Stop: 13842, Start Num: 60

Candidate Starts for Sunhee\_19:

(50, 13390), (Start: 60 @13486 has 586 MA's), (78, 13549), (100, 13672), (107, 13708), (111, 13741),

Gene: SunsetPointe\_13 Start: 9169, Stop: 9567, Start Num: 60

Candidate Starts for SunsetPointe\_13:

(3, 8590), (8, 8626), (52, 9055), (53, 9070), (55, 9085), (Start: 60 @9169 has 586 MA's), (84, 9274), (93, 9346), (99, 9373), (100, 9376), (120, 9493), (133, 9553),

Gene: Sunshine924\_18 Start: 13265, Stop: 13660, Start Num: 60

Candidate Starts for Sunshine924\_18:

(Start: 60 @13265 has 586 MA's), (Start: 64 @13271 has 2 MA's), (71, 13304), (Start: 76 @13322 has 2 MA's), (78, 13334), (100, 13463), (105, 13481),

Gene: SuperAwesome\_24 Start: 14408, Stop: 14761, Start Num: 60

Candidate Starts for SuperAwesome\_24:

(Start: 60 @14408 has 586 MA's), (85, 14516), (101, 14600),

Gene: SuperCallie99\_24 Start: 14407, Stop: 14760, Start Num: 60

Candidate Starts for SuperCallie99\_24:

(Start: 60 @14407 has 586 MA's), (85, 14515), (101, 14599),

Gene: Superchunk\_20 Start: 12955, Stop: 13290, Start Num: 60

Candidate Starts for Superchunk\_20:

(50, 12859), (55, 12874), (Start: 60 @12955 has 586 MA's), (78, 13018), (83, 13039), (100, 13141), (107, 13177), (111, 13210), (129, 13285),

Gene: Superstar\_16 Start: 10105, Stop: 10563, Start Num: 62

Candidate Starts for Superstar\_16:

(Start: 62 @10105 has 41 MA's), (Start: 69 @10141 has 1 MA's), (Start: 76 @10171 has 2 MA's), (114, 10390), (120, 10435),

Gene: Swann\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for Swann\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: SweetiePie\_21 Start: 14251, Stop: 14586, Start Num: 60

Candidate Starts for SweetiePie\_21:

(50, 14155), (55, 14170), (Start: 60 @14251 has 586 MA's), (70, 14281), (100, 14437), (107, 14473),

Gene: SwirlSquare\_23 Start: 13134, Stop: 13472, Start Num: 60

Candidate Starts for SwirlSquare\_23:

(50, 13038), (Start: 60 @13134 has 586 MA's), (83, 13218), (100, 13320), (107, 13356), (111, 13389),

Gene: Swirley\_17 Start: 12643, Stop: 13056, Start Num: 60

Candidate Starts for Swirley\_17:

(32, 12235), (53, 12547), (Start: 60 @12643 has 586 MA's), (74, 12697), (81, 12727), (105, 12877),

Gene: SwissCheese\_19 Start: 13726, Stop: 14121, Start Num: 60

Candidate Starts for SwissCheese\_19:

(Start: 60 @13726 has 586 MA's), (Start: 64 @13732 has 2 MA's), (71, 13765), (Start: 76 @13783 has 2 MA's), (78, 13795), (100, 13924), (105, 13942),

Gene: Switzer\_20 Start: 13882, Stop: 14277, Start Num: 60

Candidate Starts for Switzer\_20:

(Start: 60 @13882 has 586 MA's), (Start: 64 @13888 has 2 MA's), (71, 13921), (Start: 76 @13939 has 2 MA's), (78, 13951), (100, 14080), (105, 14098),

Gene: Switzerland\_23 Start: 13531, Stop: 13899, Start Num: 56

Candidate Starts for Switzerland\_23:

(Start: 56 @13531 has 20 MA's), (Start: 69 @13561 has 1 MA's), (70, 13570), (78, 13603), (93, 13711), (97, 13723), (107, 13768), (111, 13801),

Gene: Swole\_21 Start: 14192, Stop: 14587, Start Num: 60

Candidate Starts for Swole\_21:

(53, 14096), (Start: 60 @14192 has 586 MA's), (Start: 64 @14198 has 2 MA's), (71, 14231), (Start: 76 @14249 has 2 MA's), (78, 14261), (100, 14390), (105, 14408),

Gene: SydNat\_17 Start: 12747, Stop: 13160, Start Num: 60

Candidate Starts for SydNat\_17:

(23, 12291), (53, 12651), (Start: 60 @12747 has 586 MA's), (74, 12801), (81, 12831), (105, 12981),

Gene: TNguyen7\_20 Start: 13177, Stop: 13518, Start Num: 60

Candidate Starts for TNguyen7\_20:

(53, 13081), (55, 13096), (Start: 60 @13177 has 586 MA's), (Start: 76 @13234 has 2 MA's), (85, 13291), (93, 13354), (100, 13375), (107, 13411), (111, 13444), (127, 13510),

Gene: TWAMP\_16 Start: 9649, Stop: 9960, Start Num: 60

Candidate Starts for TWAMP\_16:

(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: TagePighther\_14 Start: 9145, Stop: 9540, Start Num: 60

Candidate Starts for TagePighther\_14:

(3, 8566), (6, 8590), (15, 8653), (52, 9031), (55, 9061), (Start: 60 @9145 has 586 MA's), (Start: 76 @9211 has 2 MA's), (93, 9319), (100, 9349), (120, 9469), (133, 9526),

Gene: Takoda\_16 Start: 9609, Stop: 9920, Start Num: 60

Candidate Starts for Takoda\_16:

(Start: 60 @9609 has 586 MA's), (Start: 63 @9615 has 5 MA's), (Start: 76 @9669 has 2 MA's), (88, 9732), (103, 9792), (106, 9801),

Gene: Taquarus\_20 Start: 13572, Stop: 13964, Start Num: 61

Candidate Starts for Taquarus\_20:

(Start: 61 @13572 has 249 MA's), (101, 13776), (102, 13779), (103, 13782), (105, 13788), (107, 13806), (130, 13926), (131, 13929), (134, 13941), (136, 13956),

Gene: Target\_21 Start: 14533, Stop: 14928, Start Num: 60

Candidate Starts for Target\_21:

(Start: 60 @14533 has 586 MA's), (Start: 64 @14539 has 2 MA's), (71, 14572), (Start: 76 @14590 has 2 MA's), (78, 14602), (100, 14731), (105, 14749),

Gene: TarsusIV\_21 Start: 14354, Stop: 14689, Start Num: 60

Candidate Starts for TarsusIV\_21:

(50, 14258), (55, 14273), (Start: 60 @14354 has 586 MA's), (83, 14438),

Gene: Tarynearal\_16 Start: 12670, Stop: 13083, Start Num: 60

Candidate Starts for Tarynearal\_16:

(32, 12262), (53, 12574), (Start: 60 @12670 has 586 MA's), (74, 12724), (81, 12754), (105, 12904),

Gene: Tasp14\_20 Start: 13971, Stop: 14366, Start Num: 60

Candidate Starts for Tasp14\_20:

(Start: 60 @13971 has 586 MA's), (Start: 64 @13977 has 2 MA's), (71, 14010), (Start: 76 @14028 has 2 MA's), (78, 14040), (100, 14169), (105, 14187),

Gene: Taurus\_22 Start: 13663, Stop: 14022, Start Num: 61

Candidate Starts for Taurus\_22:

(Start: 61 @13663 has 249 MA's), (Start: 69 @13690 has 1 MA's), (93, 13840), (107, 13897), (111, 13930), (115, 13948),

Gene: Tefunt\_13 Start: 8974, Stop: 9435, Start Num: 62

Candidate Starts for Tefunt\_13:

(52, 8857), (Start: 62 @8974 has 41 MA's), (Start: 69 @9010 has 1 MA's), (Start: 76 @9040 has 2 MA's), (113, 9256), (116, 9280), (120, 9304),

Gene: Temprado\_25 Start: 14413, Stop: 14766, Start Num: 60

Candidate Starts for Temprado\_25:

(Start: 60 @14413 has 586 MA's), (85, 14521), (101, 14605),

Gene: Teodoridan\_17 Start: 13098, Stop: 13493, Start Num: 60

Candidate Starts for Teodoridan\_17:

(Start: 60 @13098 has 586 MA's), (Start: 64 @13104 has 2 MA's), (71, 13137), (Start: 76 @13155 has 2 MA's), (78, 13167), (100, 13296), (105, 13314),

Gene: Terrific\_25 Start: 14812, Stop: 15147, Start Num: 60

Candidate Starts for Terrific\_25:

(50, 14716), (55, 14731), (Start: 60 @14812 has 586 MA's), (104, 15013), (107, 15034), (128, 15136),

Gene: Texage\_20 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for Texage\_20:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Thanksgivukkah\_20 Start: 13573, Stop: 13965, Start Num: 61

Candidate Starts for Thanksgivukkah\_20:

(Start: 61 @13573 has 249 MA's), (66, 13582), (101, 13777), (102, 13780), (103, 13783), (105, 13789), (107, 13807), (130, 13927), (134, 13942), (136, 13957),

Gene: Theia\_15 Start: 12609, Stop: 13022, Start Num: 60

Candidate Starts for Theia\_15:

(32, 12201), (53, 12513), (Start: 60 @12609 has 586 MA's), (74, 12663), (81, 12693), (105, 12843),

Gene: TheloniousMonk\_21 Start: 15006, Stop: 15401, Start Num: 60

Candidate Starts for TheloniousMonk\_21:

(Start: 60 @15006 has 586 MA's), (Start: 64 @15012 has 2 MA's), (71, 15045), (Start: 76 @15063 has 2 MA's), (78, 15075), (100, 15204), (105, 15222),

Gene: Thestral\_14 Start: 9049, Stop: 9504, Start Num: 62

Candidate Starts for Thestral\_14:

(38, 8692), (52, 8932), (Start: 62 @9049 has 41 MA's), (93, 9214), (99, 9241), (119, 9373),

Gene: Thor\_19 Start: 13844, Stop: 14239, Start Num: 60

Candidate Starts for Thor\_19:

(Start: 60 @13844 has 586 MA's), (Start: 64 @13850 has 2 MA's), (71, 13883), (Start: 76 @13901 has 2 MA's), (78, 13913), (100, 14042), (105, 14060),

Gene: Tiffany\_22 Start: 13559, Stop: 13918, Start Num: 61

Candidate Starts for Tiffany\_22:

(Start: 61 @13559 has 249 MA's), (Start: 69 @13586 has 1 MA's), (93, 13736), (107, 13793), (111, 13826), (115, 13844),

Gene: Tiger\_17 Start: 12496, Stop: 12909, Start Num: 60

Candidate Starts for Tiger\_17:

(32, 12088), (53, 12400), (Start: 60 @12496 has 586 MA's), (74, 12550), (81, 12580), (105, 12730),

Gene: Timothy\_21 Start: 14837, Stop: 15187, Start Num: 60

Candidate Starts for Timothy\_21:

(Start: 60 @14837 has 586 MA's), (83, 14921), (100, 15023), (107, 15059),

Gene: Timshel\_21 Start: 15196, Stop: 15540, Start Num: 63

Candidate Starts for Timshel\_21:

(Start: 63 @15196 has 5 MA's), (Start: 69 @15229 has 1 MA's), (73, 15250), (Start: 76 @15259 has 2 MA's), (125, 15532),

Gene: TinaBelcher\_13 Start: 8997, Stop: 9452, Start Num: 62

Candidate Starts for TinaBelcher\_13:

(38, 8640), (52, 8880), (Start: 62 @8997 has 41 MA's), (Start: 76 @9066 has 2 MA's), (93, 9162), (99, 9189), (119, 9321),

Gene: TinaFeyge\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for TinaFeyge\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: TinyPebbles\_22 Start: 13748, Stop: 14107, Start Num: 61

Candidate Starts for TinyPebbles\_22:

(Start: 61 @13748 has 249 MA's), (Start: 69 @13775 has 1 MA's), (93, 13925), (107, 13982), (111, 14015), (115, 14033),

Gene: TinyTimmy\_21 Start: 14880, Stop: 15230, Start Num: 60



Candidate Starts for TinyTimmy\_21:

(Start: 60 @14880 has 586 MA's), (83, 14964), (100, 15066), (107, 15102),

Gene: Tinybot\_19 Start: 13547, Stop: 13939, Start Num: 61

Candidate Starts for Tinybot\_19:

(Start: 61 @13547 has 249 MA's), (66, 13556), (101, 13751), (102, 13754), (103, 13757), (105, 13763), (107, 13781), (130, 13901), (134, 13916), (136, 13931),

Gene: TopsytheTRex\_20 Start: 13364, Stop: 13729, Start Num: 60

Candidate Starts for TopsytheTRex\_20:

(50, 13268), (55, 13283), (Start: 60 @13364 has 586 MA's), (98, 13550),

Gene: TiroTheta9\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for TiroTheta9\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Toaka\_20 Start: 13432, Stop: 13821, Start Num: 60

Candidate Starts for Toaka\_20:

(Start: 60 @13432 has 586 MA's), (93, 13603), (107, 13663),

Gene: Todacoro\_21 Start: 13747, Stop: 14088, Start Num: 61

Candidate Starts for Todacoro\_21:

(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Toma\_13 Start: 9148, Stop: 9546, Start Num: 60

Candidate Starts for Toma\_13:

(3, 8569), (6, 8593), (35, 8776), (52, 9034), (53, 9049), (55, 9064), (Start: 60 @9148 has 586 MA's), (75, 9211), (93, 9322), (100, 9352), (120, 9472), (133, 9532),

Gene: Tomathan\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for Tomathan\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391), (122, 14505),

Gene: ToneTone\_22 Start: 14325, Stop: 14678, Start Num: 60

Candidate Starts for ToneTone\_22:

(Start: 60 @14325 has 586 MA's), (85, 14433), (101, 14517),

Gene: Topanga\_20 Start: 13484, Stop: 13876, Start Num: 61

Candidate Starts for Topanga\_20:

(Start: 61 @13484 has 249 MA's), (68, 13508), (97, 13673), (105, 13700), (134, 13853),

Gene: Topgun\_19 Start: 13446, Stop: 13841, Start Num: 60

Candidate Starts for Topgun\_19:

(Start: 60 @13446 has 586 MA's), (Start: 64 @13452 has 2 MA's), (71, 13485), (Start: 76 @13503 has 2 MA's), (78, 13515), (100, 13644), (105, 13662),

Gene: Toro\_23 Start: 15245, Stop: 15589, Start Num: 63

Candidate Starts for Toro\_23:

(55, 15161), (Start: 63 @15245 has 5 MA's), (Start: 69 @15278 has 1 MA's), (Start: 76 @15308 has 2 MA's), (111, 15518), (125, 15581),

Gene: Tote\_21 Start: 14192, Stop: 14587, Start Num: 60

Candidate Starts for Tote\_21:

(53, 14096), (Start: 60 @14192 has 586 MA's), (Start: 64 @14198 has 2 MA's), (71, 14231), (Start: 76 @14249 has 2 MA's), (78, 14261), (100, 14390), (105, 14408),

Gene: Traft412\_21 Start: 14673, Stop: 15068, Start Num: 60

Candidate Starts for Traft412\_21:

(Start: 60 @14673 has 586 MA's), (Start: 64 @14679 has 2 MA's), (71, 14712), (73, 14721), (Start: 76 @14730 has 2 MA's), (100, 14871),

Gene: Travvers\_24 Start: 14205, Stop: 14540, Start Num: 60

Candidate Starts for Travvers\_24:

(50, 14109), (55, 14124), (Start: 60 @14205 has 586 MA's), (100, 14391),

Gene: Treddle\_21 Start: 14986, Stop: 15381, Start Num: 60

Candidate Starts for Treddle\_21:

(Start: 60 @14986 has 586 MA's), (Start: 64 @14992 has 2 MA's), (71, 15025), (Start: 76 @15043 has 2 MA's), (78, 15055), (100, 15184), (105, 15202),

Gene: Trike\_18 Start: 11454, Stop: 11846, Start Num: 61

Candidate Starts for Trike\_18:

(Start: 61 @11454 has 249 MA's), (Start: 76 @11511 has 2 MA's), (105, 11670), (134, 11823), (136, 11838),

Gene: Tripl3t\_20 Start: 14671, Stop: 15066, Start Num: 60

Candidate Starts for Tripl3t\_20:

(Start: 60 @14671 has 586 MA's), (Start: 64 @14677 has 2 MA's), (71, 14710), (Start: 76 @14728 has 2 MA's), (78, 14740), (100, 14869), (105, 14887),

Gene: Tristan\_22 Start: 16066, Stop: 16422, Start Num: 60

Candidate Starts for Tristan\_22:

(50, 15970), (55, 15985), (Start: 60 @16066 has 586 MA's), (78, 16129), (82, 16147), (100, 16252), (107, 16288), (111, 16321),

Gene: Triste\_13 Start: 9139, Stop: 9534, Start Num: 60

Candidate Starts for Triste\_13:

(3, 8560), (6, 8584), (15, 8647), (52, 9025), (55, 9055), (Start: 60 @9139 has 586 MA's), (Start: 76 @9205 has 2 MA's), (93, 9313), (100, 9343), (120, 9463), (133, 9520),

Gene: Triumph\_15 Start: 9064, Stop: 9459, Start Num: 62

Candidate Starts for Triumph\_15:

(39, 8713), (55, 8977), (Start: 62 @9064 has 41 MA's), (Start: 76 @9139 has 2 MA's), (78, 9151), (90, 9211), (94, 9238), (99, 9262), (100, 9265), (120, 9385), (133, 9445),

Gene: Trixie\_24 Start: 15964, Stop: 16299, Start Num: 60

Candidate Starts for Trixie\_24:

(37, 15631), (50, 15868), (55, 15883), (Start: 60 @15964 has 586 MA's), (70, 15994), (104, 16165),

Gene: Trooper\_21 Start: 14160, Stop: 14495, Start Num: 60

Candidate Starts for Trooper\_21:

(50, 14043), (Start: 60 @14160 has 586 MA's), (83, 14244), (85, 14268),

Gene: Trouble\_19 Start: 14032, Stop: 14427, Start Num: 60

Candidate Starts for Trouble\_19:

(Start: 60 @14032 has 586 MA's), (Start: 64 @14038 has 2 MA's), (71, 14071), (Start: 76 @14089 has 2 MA's), (78, 14101), (100, 14230), (105, 14248),

Gene: TroyPia\_20 Start: 13569, Stop: 13961, Start Num: 61

Candidate Starts for TroyPia\_20:

(Start: 61 @13569 has 249 MA's), (Start: 63 @13572 has 5 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: TrvxScott\_12 Start: 8998, Stop: 9453, Start Num: 62

Candidate Starts for TrvxScott\_12:

(38, 8641), (52, 8881), (Start: 62 @8998 has 41 MA's), (93, 9163), (99, 9190), (119, 9322),

Gene: TuanPN\_13 Start: 9148, Stop: 9543, Start Num: 60

Candidate Starts for TuanPN\_13:

(3, 8569), (6, 8593), (52, 9034), (55, 9064), (Start: 60 @9148 has 586 MA's), (Start: 76 @9214 has 2 MA's), (93, 9322), (100, 9352), (120, 9472), (133, 9529),

Gene: Tubs\_22 Start: 15076, Stop: 15465, Start Num: 60

Candidate Starts for Tubs\_22:

(Start: 60 @15076 has 586 MA's), (107, 15307), (130, 15427),

Gene: Tucker\_24 Start: 14411, Stop: 14764, Start Num: 60

Candidate Starts for Tucker\_24:

(50, 14315), (55, 14330), (Start: 60 @14411 has 586 MA's), (85, 14519), (101, 14603),

Gene: Turbido\_23 Start: 14794, Stop: 15129, Start Num: 60

Candidate Starts for Turbido\_23:

(14, 14284), (50, 14698), (55, 14713), (Start: 60 @14794 has 586 MA's), (70, 14824),

Gene: Turj99\_18 Start: 13470, Stop: 13865, Start Num: 60

Candidate Starts for Turj99\_18:

(Start: 60 @13470 has 586 MA's), (Start: 64 @13476 has 2 MA's), (71, 13509), (Start: 76 @13527 has 2 MA's), (78, 13539), (100, 13668), (105, 13686),

Gene: Twigg\_17 Start: 12642, Stop: 13055, Start Num: 60

Candidate Starts for Twigg\_17:

(32, 12234), (53, 12546), (Start: 60 @12642 has 586 MA's), (74, 12696), (81, 12726), (105, 12876),

Gene: Twister\_20 Start: 13383, Stop: 13775, Start Num: 61

Candidate Starts for Twister\_20:

(Start: 61 @13383 has 249 MA's), (68, 13407), (97, 13572), (105, 13599), (134, 13752),

Gene: TwoPeat\_20 Start: 13985, Stop: 14380, Start Num: 60

Candidate Starts for TwoPeat\_20:

(Start: 60 @13985 has 586 MA's), (Start: 64 @13991 has 2 MA's), (71, 14024), (Start: 76 @14042 has 2 MA's), (78, 14054), (100, 14183), (105, 14201),

Gene: TygerBlood\_20 Start: 13568, Stop: 13960, Start Num: 61

Candidate Starts for TygerBlood\_20:

(Start: 61 @13568 has 249 MA's), (101, 13772), (102, 13775), (103, 13778), (105, 13784), (107, 13802), (130, 13922), (131, 13925), (134, 13937), (136, 13952),

Gene: U2\_19 Start: 13888, Stop: 14283, Start Num: 60  
Candidate Starts for U2\_19:  
(Start: 60 @13888 has 586 MA's), (Start: 64 @13894 has 2 MA's), (71, 13927), (Start: 76 @13945 has 2 MA's), (78, 13957), (100, 14086), (105, 14104),

Gene: Ugenie5\_19 Start: 15109, Stop: 15498, Start Num: 60  
Candidate Starts for Ugenie5\_19:  
(Start: 60 @15109 has 586 MA's), (107, 15340),

Gene: UhSalsa\_16 Start: 9649, Stop: 9960, Start Num: 60  
Candidate Starts for UhSalsa\_16:  
(Start: 60 @9649 has 586 MA's), (Start: 63 @9655 has 5 MA's), (Start: 76 @9709 has 2 MA's), (88, 9772), (103, 9832), (107, 9856), (121, 9925),

Gene: Ulysses\_19 Start: 13290, Stop: 13682, Start Num: 61  
Candidate Starts for Ulysses\_19:  
(Start: 61 @13290 has 249 MA's), (66, 13299), (101, 13494), (102, 13497), (103, 13500), (105, 13506), (107, 13524), (130, 13644), (134, 13659), (136, 13674),

Gene: UnionJack\_17 Start: 12222, Stop: 12635, Start Num: 60  
Candidate Starts for UnionJack\_17:  
(23, 11763), (53, 12126), (55, 12141), (Start: 60 @12222 has 586 MA's), (83, 12315), (102, 12447), (103, 12450), (105, 12456),

Gene: Unstoppable\_13 Start: 9170, Stop: 9568, Start Num: 60  
Candidate Starts for Unstoppable\_13:  
(3, 8591), (8, 8627), (52, 9056), (53, 9071), (55, 9086), (Start: 60 @9170 has 586 MA's), (84, 9275), (93, 9347), (99, 9374), (100, 9377), (120, 9494), (133, 9554),

Gene: Updawg\_23 Start: 14800, Stop: 15135, Start Num: 60  
Candidate Starts for Updawg\_23:  
(50, 14704), (55, 14719), (Start: 60 @14800 has 586 MA's), (104, 15001), (107, 15022), (128, 15124),

Gene: Urza\_13 Start: 9416, Stop: 9796, Start Num: 60  
Candidate Starts for Urza\_13:  
(Start: 60 @9416 has 586 MA's), (72, 9470), (Start: 76 @9482 has 2 MA's), (120, 9725), (133, 9785),

Gene: VA6\_21 Start: 14309, Stop: 14644, Start Num: 60  
Candidate Starts for VA6\_21:  
(50, 14213), (55, 14228), (Start: 60 @14309 has 586 MA's), (70, 14339), (83, 14393),

Gene: VC3\_24 Start: 14296, Stop: 14631, Start Num: 60  
Candidate Starts for VC3\_24:  
(50, 14200), (55, 14215), (Start: 60 @14296 has 586 MA's), (100, 14482),

Gene: Vanisoa\_20 Start: 13164, Stop: 13553, Start Num: 60  
Candidate Starts for Vanisoa\_20:  
(Start: 60 @13164 has 586 MA's), (93, 13335), (107, 13395),

Gene: Vanseggelen\_17 Start: 8887, Stop: 9273, Start Num: 62  
Candidate Starts for Vanseggelen\_17:  
(Start: 62 @8887 has 41 MA's), (99, 9076), (116, 9175), (120, 9199), (133, 9259),

Gene: Verabelle\_14 Start: 9237, Stop: 9620, Start Num: 62  
Candidate Starts for Verabelle\_14:  
(44, 8991), (48, 9090), (Start: 62 @9237 has 41 MA's), (107, 9462), (116, 9525), (120, 9549), (133, 9609),

Gene: Veracruz\_20 Start: 13747, Stop: 14088, Start Num: 61  
Candidate Starts for Veracruz\_20:  
(Start: 61 @13747 has 249 MA's), (73, 13795), (Start: 76 @13804 has 2 MA's), (85, 13861), (93, 13924), (100, 13945), (107, 13981), (111, 14014), (127, 14080),

Gene: Verse\_13 Start: 9353, Stop: 9736, Start Num: 62  
Candidate Starts for Verse\_13:  
(34, 8975), (40, 9008), (55, 9266), (Start: 58 @9347 has 5 MA's), (Start: 62 @9353 has 41 MA's), (77, 9422), (116, 9638), (133, 9722),

Gene: VieEnRose\_13 Start: 9486, Stop: 9866, Start Num: 60  
Candidate Starts for VieEnRose\_13:  
(55, 9402), (Start: 60 @9486 has 586 MA's), (72, 9540), (Start: 76 @9552 has 2 MA's), (85, 9609), (120, 9795), (133, 9855),

Gene: Violet\_18 Start: 14277, Stop: 14672, Start Num: 60  
Candidate Starts for Violet\_18:  
(Start: 60 @14277 has 586 MA's), (Start: 64 @14283 has 2 MA's), (71, 14316), (Start: 76 @14334 has 2 MA's), (78, 14346), (100, 14475), (105, 14493),

Gene: Vix\_22 Start: 13747, Stop: 14106, Start Num: 61  
Candidate Starts for Vix\_22:  
(Start: 61 @13747 has 249 MA's), (Start: 69 @13774 has 1 MA's), (93, 13924), (107, 13981), (111, 14014), (115, 14032),

Gene: VohminGhazi\_24 Start: 14417, Stop: 14770, Start Num: 60  
Candidate Starts for VohminGhazi\_24:  
(Start: 60 @14417 has 586 MA's), (85, 14525), (101, 14609),

Gene: Waits\_23 Start: 13383, Stop: 13751, Start Num: 56  
Candidate Starts for Waits\_23:  
(Start: 56 @13383 has 20 MA's), (Start: 69 @13413 has 1 MA's), (70, 13422), (78, 13455), (93, 13563), (97, 13575), (107, 13620), (111, 13653),

Gene: WalterMcMickey\_20 Start: 13383, Stop: 13775, Start Num: 61  
Candidate Starts for WalterMcMickey\_20:  
(Start: 61 @13383 has 249 MA's), (68, 13407), (97, 13572), (105, 13599), (134, 13752),

Gene: Wander\_20 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for Wander\_20:  
(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Warrior24\_24 Start: 13387, Stop: 13755, Start Num: 56  
Candidate Starts for Warrior24\_24:  
(Start: 56 @13387 has 20 MA's), (Start: 69 @13417 has 1 MA's), (70, 13426), (78, 13459), (93, 13567), (97, 13579), (107, 13624), (111, 13657),

Gene: Watermelon\_21 Start: 14583, Stop: 14978, Start Num: 60  
Candidate Starts for Watermelon\_21:  
(Start: 60 @14583 has 586 MA's), (Start: 64 @14589 has 2 MA's), (71, 14622), (Start: 76 @14640 has 2 MA's), (78, 14652), (100, 14781), (105, 14799),

Gene: Watson\_22 Start: 13657, Stop: 14016, Start Num: 61  
Candidate Starts for Watson\_22:  
(Start: 61 @13657 has 249 MA's), (Start: 69 @13684 has 1 MA's), (93, 13834), (107, 13891), (111, 13924), (115, 13942),

Gene: WeiHuaDA\_27 Start: 16569, Stop: 16904, Start Num: 60  
Candidate Starts for WeiHuaDA\_27:  
(16, 16074), (37, 16236), (50, 16473), (55, 16488), (Start: 60 @16569 has 586 MA's), (70, 16599), (83, 16653), (100, 16755), (107, 16791), (108, 16797),

Gene: Werner\_13 Start: 9146, Stop: 9541, Start Num: 60  
Candidate Starts for Werner\_13:  
(3, 8567), (6, 8591), (15, 8654), (52, 9032), (55, 9062), (Start: 60 @9146 has 586 MA's), (Start: 76 @9212 has 2 MA's), (93, 9320), (100, 9350), (120, 9470), (133, 9527),

Gene: Whabigail7\_23 Start: 14782, Stop: 15117, Start Num: 60  
Candidate Starts for Whabigail7\_23:  
(14, 14272), (50, 14686), (55, 14701), (Start: 60 @14782 has 586 MA's), (70, 14812),

Gene: Whatever\_13 Start: 9146, Stop: 9541, Start Num: 60  
Candidate Starts for Whatever\_13:  
(3, 8567), (6, 8591), (15, 8654), (52, 9032), (55, 9062), (Start: 60 @9146 has 586 MA's), (Start: 76 @9212 has 2 MA's), (93, 9320), (100, 9350), (120, 9470), (133, 9527),

Gene: Wheeler\_19 Start: 14038, Stop: 14433, Start Num: 60  
Candidate Starts for Wheeler\_19:  
(Start: 60 @14038 has 586 MA's), (Start: 64 @14044 has 2 MA's), (71, 14077), (Start: 76 @14095 has 2 MA's), (78, 14107), (100, 14236), (105, 14254),

Gene: WideWale\_23 Start: 14800, Stop: 15135, Start Num: 60  
Candidate Starts for WideWale\_23:  
(50, 14704), (55, 14719), (Start: 60 @14800 has 586 MA's), (104, 15001), (107, 15022), (128, 15124),

Gene: Wiks\_24 Start: 14393, Stop: 14746, Start Num: 60  
Candidate Starts for Wiks\_24:  
(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Wilbur\_20 Start: 13569, Stop: 13961, Start Num: 61  
Candidate Starts for Wilbur\_20:  
(Start: 61 @13569 has 249 MA's), (101, 13773), (102, 13776), (103, 13779), (105, 13785), (107, 13803), (130, 13923), (131, 13926), (134, 13938), (136, 13953),

Gene: Wile\_20 Start: 13587, Stop: 13979, Start Num: 61  
Candidate Starts for Wile\_20:  
(Start: 61 @13587 has 249 MA's), (66, 13596), (105, 13803), (107, 13821), (130, 13941), (134, 13956), (136, 13971),

Gene: Wilkins\_19 Start: 13446, Stop: 13841, Start Num: 60

Candidate Starts for Wilkins\_19:

(Start: 60 @13446 has 586 MA's), (Start: 64 @13452 has 2 MA's), (71, 13485), (Start: 76 @13503 has 2 MA's), (78, 13515), (100, 13644), (105, 13662),

Gene: Wizard007\_20 Start: 13571, Stop: 13963, Start Num: 61

Candidate Starts for Wizard007\_20:

(Start: 61 @13571 has 249 MA's), (101, 13775), (102, 13778), (103, 13781), (105, 13787), (107, 13805), (130, 13925), (131, 13928), (134, 13940), (136, 13955),

Gene: Wooldri\_24 Start: 13576, Stop: 13935, Start Num: 61

Candidate Starts for Wooldri\_24:

(Start: 61 @13576 has 249 MA's), (Start: 69 @13603 has 1 MA's), (93, 13753), (107, 13810), (111, 13843), (115, 13861),

Gene: WunderPhul\_24 Start: 14393, Stop: 14746, Start Num: 60

Candidate Starts for WunderPhul\_24:

(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Xena\_20 Start: 13574, Stop: 13966, Start Num: 61

Candidate Starts for Xena\_20:

(Start: 61 @13574 has 249 MA's), (66, 13583), (105, 13790), (107, 13808), (130, 13928), (134, 13943), (136, 13958),

Gene: XianYue\_21 Start: 14273, Stop: 14608, Start Num: 60

Candidate Starts for XianYue\_21:

(50, 14177), (55, 14192), (Start: 60 @14273 has 586 MA's), (70, 14303), (83, 14357),

Gene: Yasdni1\_13 Start: 9144, Stop: 9539, Start Num: 60

Candidate Starts for Yasdni1\_13:

(3, 8565), (6, 8589), (52, 9030), (55, 9060), (Start: 60 @9144 has 586 MA's), (Start: 76 @9210 has 2 MA's), (93, 9318), (100, 9348), (120, 9468), (133, 9525),

Gene: Yecey3\_21 Start: 13200, Stop: 13589, Start Num: 60

Candidate Starts for Yecey3\_21:

(Start: 60 @13200 has 586 MA's), (93, 13371), (107, 13431), (118, 13491),

Gene: YoSam321\_20 Start: 13566, Stop: 13958, Start Num: 61

Candidate Starts for YoSam321\_20:

(Start: 61 @13566 has 249 MA's), (101, 13770), (102, 13773), (103, 13776), (105, 13782), (107, 13800), (130, 13920), (131, 13923), (134, 13935), (136, 13950),

Gene: Yogi\_16 Start: 9617, Stop: 9928, Start Num: 60

Candidate Starts for Yogi\_16:

(Start: 60 @9617 has 586 MA's), (Start: 63 @9623 has 5 MA's), (Start: 76 @9677 has 2 MA's), (88, 9740), (103, 9800), (106, 9809),

Gene: Yokurt\_24 Start: 14393, Stop: 14746, Start Num: 60

Candidate Starts for Yokurt\_24:

(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Yoncess\_16 Start: 9617, Stop: 9928, Start Num: 60

Candidate Starts for Yoncess\_16:

(Start: 60 @9617 has 586 MA's), (Start: 63 @9623 has 5 MA's), (Start: 76 @9677 has 2 MA's), (88, 9740), (103, 9800), (106, 9809),

Gene: Yosif\_14 Start: 9614, Stop: 10000, Start Num: 62

Candidate Starts for Yosif\_14:

(55, 9527), (Start: 62 @9614 has 41 MA's), (65, 9623), (84, 9719), (99, 9803), (107, 9839), (120, 9926), (133, 9986),

Gene: Zainub\_15 Start: 9538, Stop: 10005, Start Num: 62

Candidate Starts for Zainub\_15:

(38, 9184), (45, 9319), (Start: 58 @9535 has 5 MA's), (Start: 62 @9538 has 41 MA's), (Start: 69 @9595 has 1 MA's), (86, 9685), (93, 9721), (99, 9748), (120, 9889), (132, 9946),

Gene: Zaka\_24 Start: 14393, Stop: 14746, Start Num: 60

Candidate Starts for Zaka\_24:

(Start: 60 @14393 has 586 MA's), (85, 14501), (101, 14585),

Gene: Zeeculate\_18 Start: 13724, Stop: 14119, Start Num: 60

Candidate Starts for Zeeculate\_18:

(Start: 60 @13724 has 586 MA's), (Start: 64 @13730 has 2 MA's), (71, 13763), (Start: 76 @13781 has 2 MA's), (78, 13793), (100, 13922), (105, 13940),

Gene: Zemlya\_14 Start: 9156, Stop: 9554, Start Num: 60

Candidate Starts for Zemlya\_14:

(3, 8577), (6, 8601), (18, 8694), (52, 9042), (53, 9057), (55, 9072), (Start: 60 @9156 has 586 MA's), (93, 9330), (100, 9360), (120, 9480), (133, 9540),

Gene: Zephyr\_19 Start: 13816, Stop: 14211, Start Num: 60

Candidate Starts for Zephyr\_19:

(Start: 60 @13816 has 586 MA's), (Start: 64 @13822 has 2 MA's), (71, 13855), (Start: 76 @13873 has 2 MA's), (78, 13885), (100, 14014), (105, 14032),

Gene: Zetzy\_21 Start: 13197, Stop: 13556, Start Num: 61

Candidate Starts for Zetzy\_21:

(Start: 61 @13197 has 249 MA's), (Start: 69 @13224 has 1 MA's), (93, 13374), (107, 13431), (111, 13464), (115, 13482),

Gene: Zeuska\_20 Start: 14258, Stop: 14653, Start Num: 60

Candidate Starts for Zeuska\_20:

(Start: 60 @14258 has 586 MA's), (Start: 64 @14264 has 2 MA's), (71, 14297), (Start: 76 @14315 has 2 MA's), (78, 14327), (100, 14456), (105, 14474),

Gene: Zimmer\_23 Start: 15890, Stop: 16276, Start Num: 60

Candidate Starts for Zimmer\_23:

(53, 15794), (55, 15809), (Start: 60 @15890 has 586 MA's), (92, 16052), (96, 16067), (107, 16118), (130, 16238),

Gene: Zolita\_16 Start: 12748, Stop: 13161, Start Num: 60

Candidate Starts for Zolita\_16:

(23, 12292), (53, 12652), (Start: 60 @12748 has 586 MA's), (74, 12802), (81, 12832), (105, 12982),

Gene: Zulu\_24 Start: 14392, Stop: 14745, Start Num: 60

Candidate Starts for Zulu\_24:



(Start: 60 @14392 has 586 MA's), (85, 14500), (101, 14584),

Gene: phiCAM\_14 Start: 11010, Stop: 11402, Start Num: 58

Candidate Starts for phiCAM\_14:

(55, 10929), (Start: 58 @11010 has 5 MA's), (Start: 62 @11016 has 41 MA's), (77, 11085), (84, 11121),  
(120, 11328), (124, 11364), (133, 11388),

Gene: phiHau3\_15 Start: 9226, Stop: 9720, Start Num: 58

Candidate Starts for phiHau3\_15:

(1, 8518), (38, 8875), (45, 9010), (52, 9115), (55, 9145), (Start: 58 @9226 has 5 MA's), (79, 9334),  
(111, 9529), (135, 9661), (137, 9673),