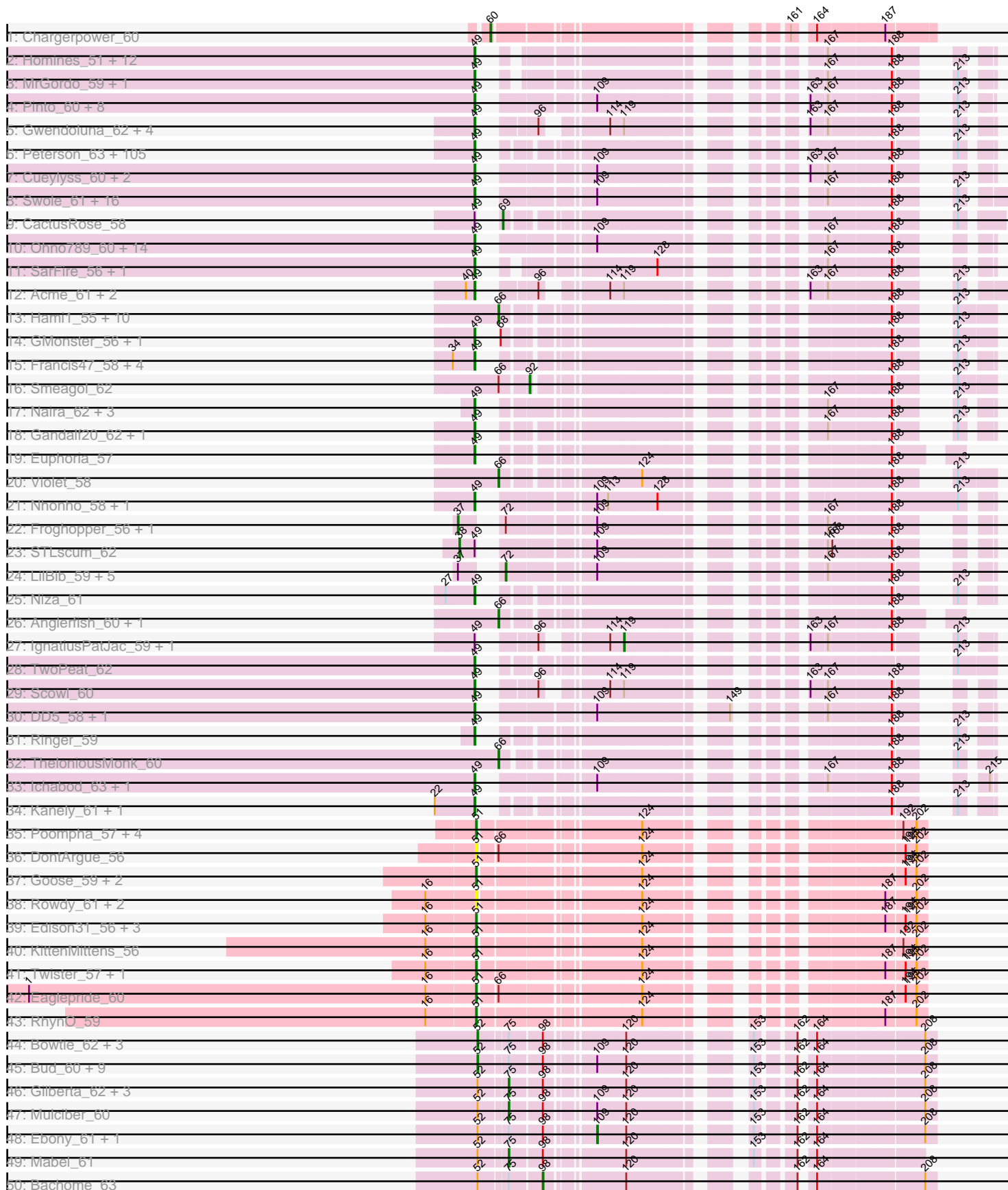
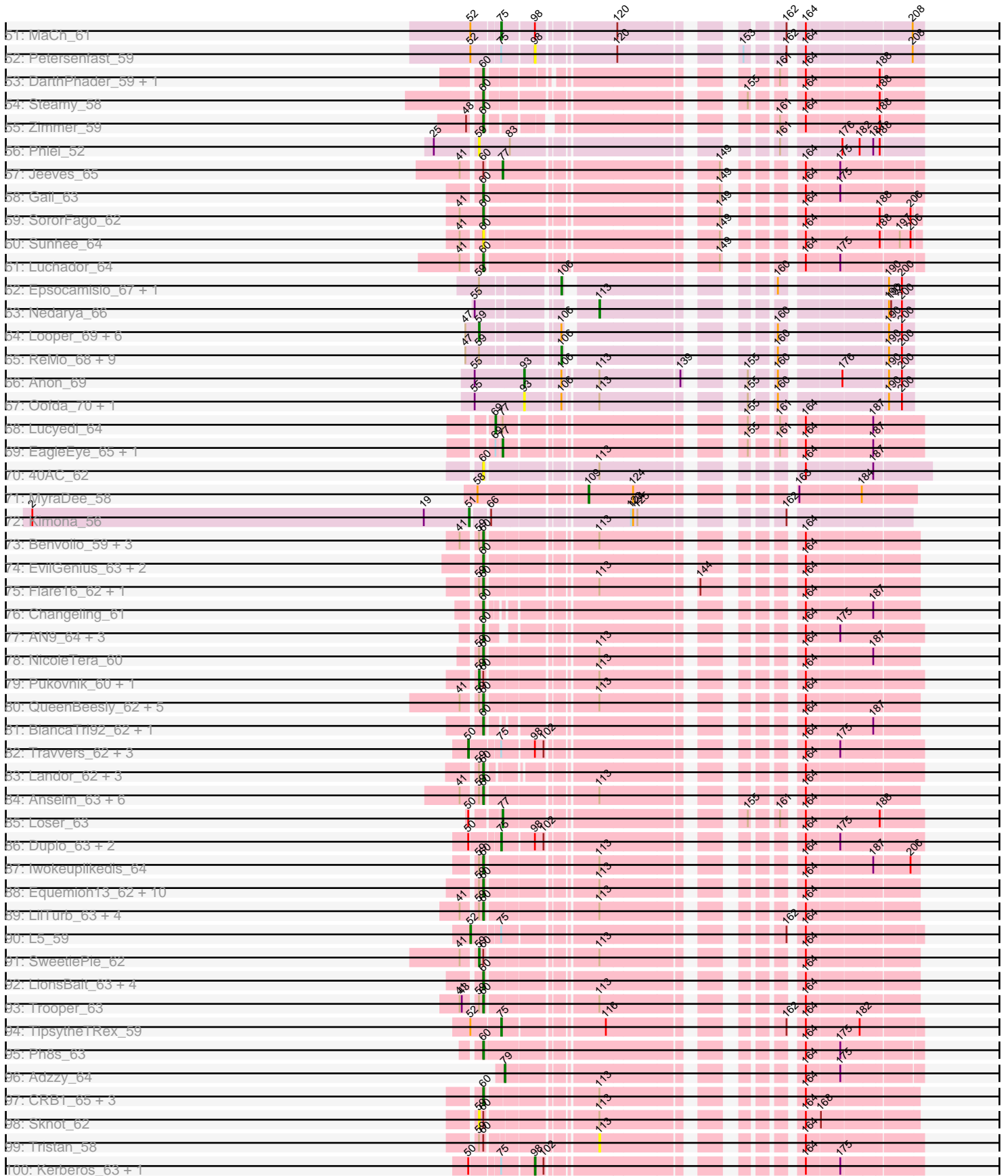


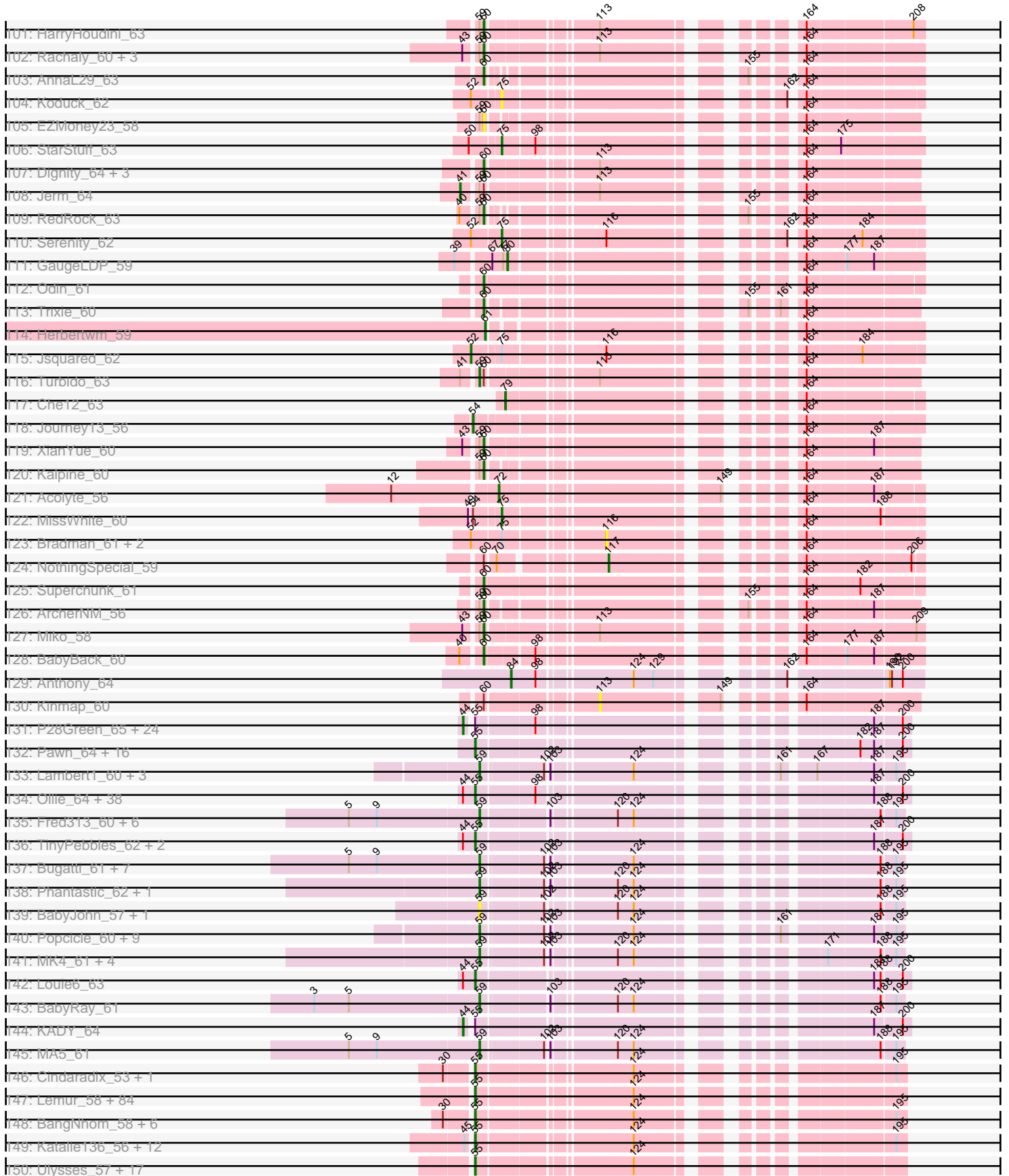
Pham 215640



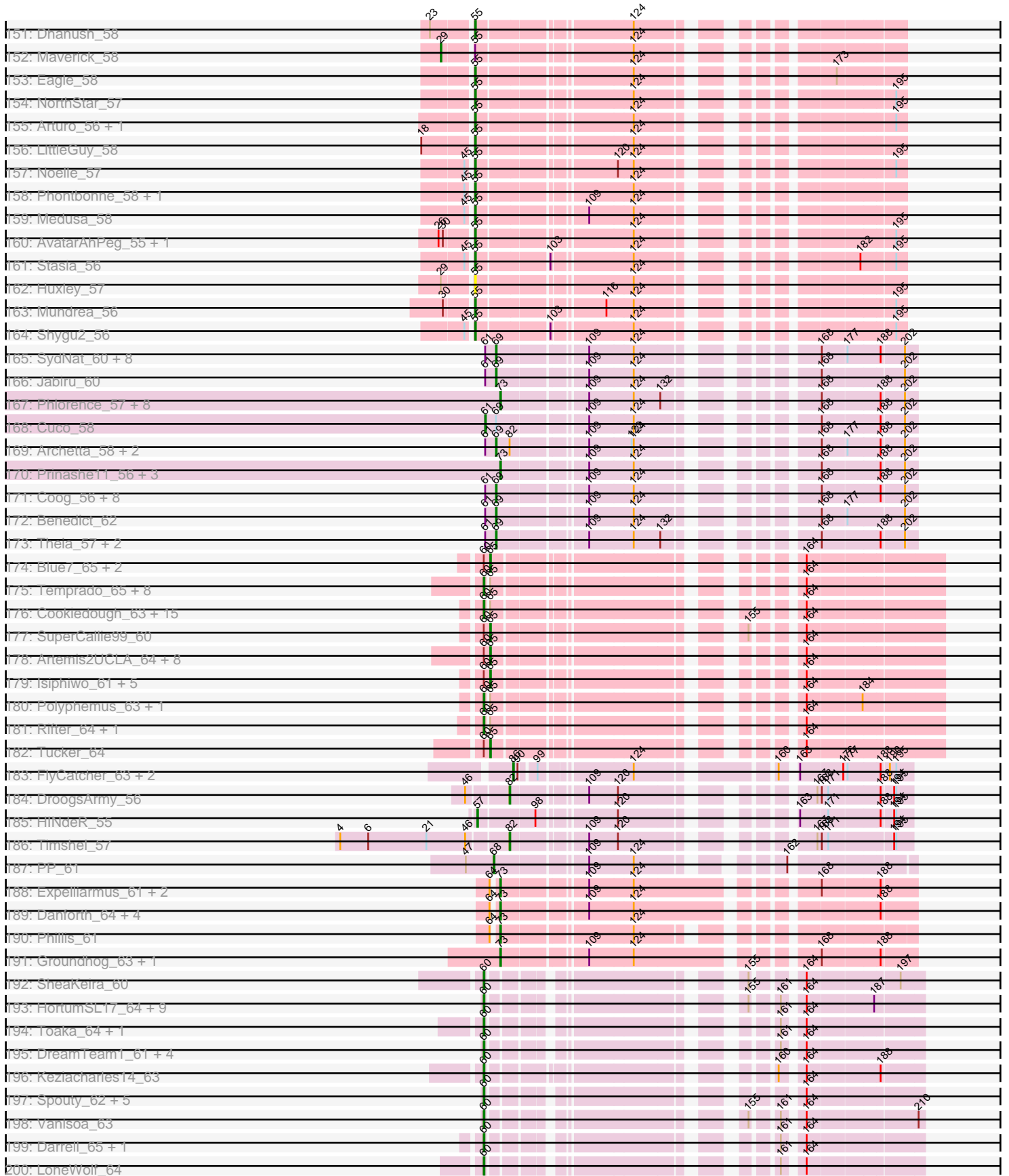
# Pham 215640



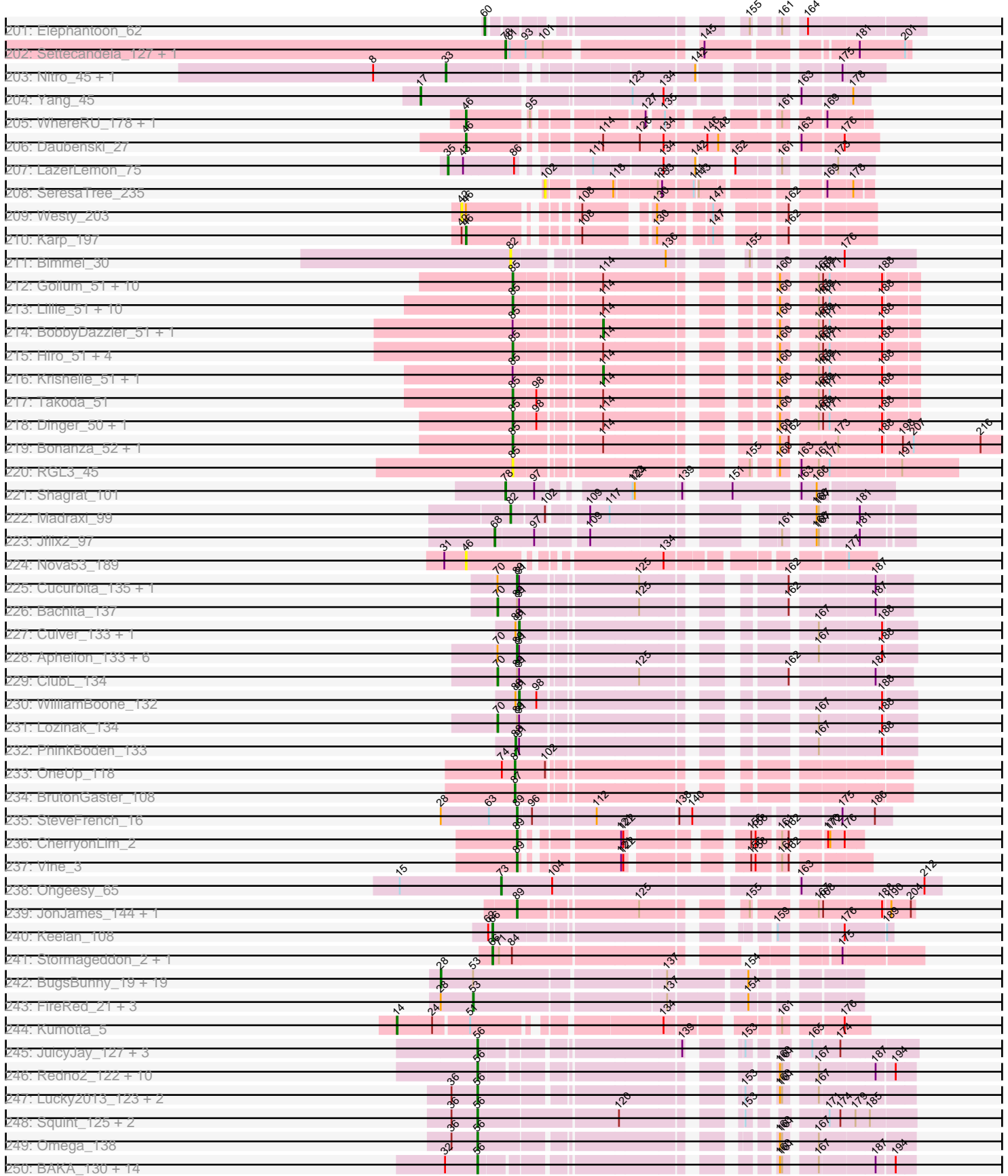
Pham 215640



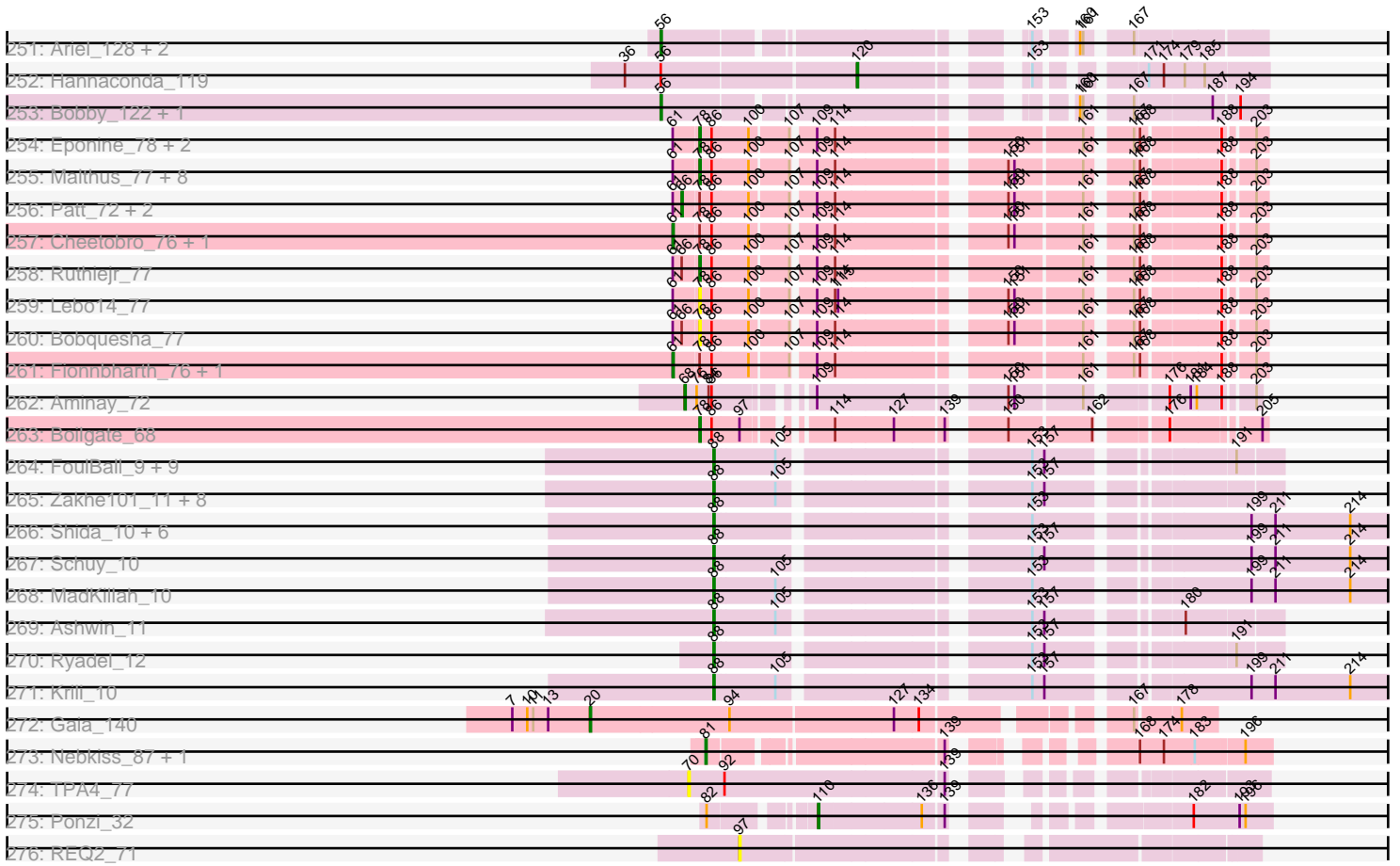
Pham 215640



Pham 215640



Pham 215640



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 215640 Report

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

Pham number 215640 has 1048 members, 99 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_60
- Track 2 : Homines\_51, MaryBeth\_58, SkiPole\_64, Corvo\_60, MetalQZJ\_57, ProMouse\_59, Carlyle\_59, Paraselene\_57, Dynamix\_61, Doom\_58, Raid\_59, Switzer\_60, Marco3\_62
- Track 3 : MrGordo\_59, Big3\_58
- Track 4 : Pinto\_60, DreamCatcher\_63, Rufus\_61, Atkinbua\_63, RidgeCB\_59, Sanya\_56, Rubeus\_59, Lopton\_59, BPBiabs31\_61
- Track 5 : Gwendoluna\_62, Mryolo\_56, Gyzlar\_55, BluSpix\_57, Michley\_62
- Track 6 : Peterson\_63, Kykar\_60, Buttons\_57, Sagefire\_62, Kenmech\_64, Wheeler\_59, Watermelon\_60, Oogway\_59, Solon\_57, Tripl3t\_62, Marge\_58, Phlippers\_57, Museum\_61, Sumter\_55, Magnito\_59, Eyeball\_61, Target\_61, Briton15\_64, Ruotula\_62, Gompeii16\_59, A6\_53, SwissCheese\_60, Mkhusei\_57, Payneful\_59, ConceptII\_62, Bruns\_58, Tasp14\_63, Bircsak\_59, HanShotFirst\_61, Dulcie\_61, StewieG\_56, Licorice\_61, Kugel\_59, McSinger\_58, JackSparrow\_62, Abbysshoes\_62, Rajelicia\_61, Seabiscuit\_63, Bigchungu\_59, Bigfoot\_53, BigPaolini\_58, Dussy\_61, Lesedi\_55, HarryOW\_59, BK1\_53, Parliament\_61, Levia\_55, Chanagan\_55, Perseus\_60, DrFeelGood\_57, Edtherson\_59, Zeuska\_59, Adahisdi\_60, Marchy\_54, Aeneas\_63, Marcell\_56, Nerujay\_62, PattyP\_62, Abrogate\_590, Dexes\_59, Ashballer\_62, Fushigi\_56, Hermia\_59, Magnar\_57, Burton\_60, Hope4ever\_61, Crispicous1\_57, Killigrew\_59, Sibs6\_62, Ajay\_60, Petruccio\_58, Applejack\_56, Moose\_58, Pippin\_60, Snazzy\_58, Forsytheast\_58, BaconJack\_65, Ciao\_58, McGuire\_61, Iqorha\_55, Bxb1\_54, Paphu\_59, EnzoK\_58, JC27\_62, BillKnuckles\_57, Marsha\_59, BarrowTuph\_59, Fascinus\_55, Mule\_58, Smairt\_63, Pelly\_60, ShortQueendom\_53, Inyanga\_55, PhrostyMug\_60, Trouble\_61, Zeeculate\_57, Jorgensen\_60, Blue\_58, Traft412\_62, Seanderson\_59, PhineBark\_59, Zephyr\_61, BeesKnees\_62, Norz\_61, Lamina13\_63, LunarLander\_63
- Track 7 : Cueyliss\_60, Bones\_59, Graduation\_63
- Track 8 : Swole\_61, Petp2012\_61, HermioneGrange\_61, Tote\_56, Jerm2\_61, PascalRango\_59, PinkPlastic\_60, MPlant7149\_59, NEHalo\_57, JuliaChild\_61, Bob3\_59, Molly\_62, Arlo\_58, Rohr\_61, AFIS\_56, Makemake\_61, BigMau\_62
- Track 9 : CactusRose\_58
- Track 10 : Ohno789\_60, PSullivan\_59, Sorpresa\_57, Beatrix\_59, PherrisBueller\_58, Dreamboat\_60, Pita2\_62, Sandaddy\_56, GageAP\_60, Bethlehem\_59, Bexan\_57, Jasper\_60, Pari\_62, StrongArm\_58, SpikeBT\_58
- Track 11 : SarFire\_56, Thor\_56
- Track 12 : Acme\_61, Fajezeel\_60, Greg\_60

- Track 13 : Hami1\_55, Monet\_63, Topgun\_58, Arcanine\_62, Rutherford\_62, Wilkins\_58, Rhynn\_58, Slagathor\_62, KBG\_60, ILeeKay\_62, Treddle\_61
- Track 14 : GMonster\_56, GrecoEtereo\_59
- Track 15 : Francis47\_58, Agaliana\_55, Papez\_62, PacerPaul\_59, Maroc7\_57
- Track 16 : Smeagol\_62
- Track 17 : Naira\_62, Alvin\_58, Fenn\_62, Squee\_60
- Track 18 : Gandalf20\_62, Espresso\_58
- Track 19 : Euphoria\_57
- Track 20 : Violet\_58
- Track 21 : Nhonho\_58, Barriga\_61
- Track 22 : Froghopper\_56, Alsfro\_64
- Track 23 : STLscum\_62
- Track 24 : LilBib\_59, Sunshine924\_61, KyMonks1A\_62, Turj99\_57, QTRlifeCrisis\_59, KSSJEB\_59
- Track 25 : Niza\_61
- Track 26 : Anglerfish\_60, Manatee\_60
- Track 27 : IgnatiusPatJac\_59, Teodoridan\_57
- Track 28 : TwoPeat\_62
- Track 29 : Scowl\_60
- Track 30 : DD5\_58, Lockley\_57
- Track 31 : Ringer\_59
- Track 32 : TheloniousMonk\_60
- Track 33 : Ichabod\_63, U2\_58
- Track 34 : Kanely\_61, Altman\_62
- Track 35 : Poompha\_57, PeaceMeal1\_57, Severus\_57, Drake94\_57, Trike\_56
- Track 36 : DontArgue\_56
- Track 37 : Goose\_59, OKCentral2016\_58, Chupacabra\_57
- Track 38 : Rowdy\_61, DustyMartin\_61, Shapes\_61
- Track 39 : Edison31\_56, Topanga\_56, Kristoff\_58, Rebeuca\_59
- Track 40 : KittenMittens\_56
- Track 41 : Twister\_57, WalterMcMickey\_57
- Track 42 : Eaglepride\_60
- Track 43 : RhynO\_59
- Track 44 : Bowtie\_62, Timothy\_61, Flaverint\_62, Lucivia\_62
- Track 45 : Bud\_60, Hutc2\_60, Aneem\_62, Jabith\_62, Et2Brutus\_60, TinyTimmy\_61, Joselito\_62, Insomnia\_62, Munch\_61, Fibonacci\_61
- Track 46 : Gilberta\_62, Snape\_61, Orange\_60, Sham4\_61
- Track 47 : Mulciber\_60
- Track 48 : Ebony\_61, Salz\_60
- Track 49 : Mabel\_61
- Track 50 : Bachome\_63
- Track 51 : MaCh\_61
- Track 52 : Petersenfast\_59
- Track 53 : DarthPhader\_59, Refuge\_59
- Track 54 : Steamy\_58
- Track 55 : Zimmer\_59
- Track 56 : Phlei\_52
- Track 57 : Jeeves\_65
- Track 58 : Gail\_63
- Track 59 : SororFago\_62
- Track 60 : Sunhee\_64
- Track 61 : Luchador\_64
- Track 62 : Epsocamisio\_67, Nebulosus\_68



- Track 63 : Nedarya\_66
- Track 64 : Looper\_69, Boohoo\_70, Rosalind\_68, DekHockey33\_71, KatherineG\_70, Soups\_70, Waits\_70
- Track 65 : ReMo\_68, Anaysia\_70, Remus\_70, LastResort\_68, Battleship\_72, MinecraftSteve\_70, JSwag\_69, ShayRa\_70, Switzerland\_69, Strosahl\_70
- Track 66 : Anon\_69
- Track 67 : Oofda\_70, Warrior24\_72
- Track 68 : Lucyedi\_64
- Track 69 : EagleEye\_65, PainterBoy\_64
- Track 70 : 40AC\_62
- Track 71 : MyraDee\_58
- Track 72 : Kimona\_56
- Track 73 : Benvolio\_59, Power\_61, JoshKayV\_64, Echild\_62
- Track 74 : EvilGenius\_63, KingCyrus\_63, ChipMunk\_64
- Track 75 : Flare16\_62, NaSiaTalie\_62
- Track 76 : Changeling\_61
- Track 77 : AN9\_64, ANI8\_64, C3\_58, VC3\_64
- Track 78 : NicoleTera\_60
- Track 79 : Pukovnik\_60, Terrific\_63
- Track 80 : QueenBeesly\_62, SemperFi\_63, Georgie2\_63, SnapTap\_62, Crucio\_62, FiringLine\_62
- Track 81 : BiancaTri92\_62, Leogania\_62
- Track 82 : Travvers\_62, DBQu4n\_63, D29\_59, Pomar16\_62
- Track 83 : Landor\_62, IronMan\_61, Phaded\_61, Bactobuster\_60
- Track 84 : Anselm\_63, Heffalump\_61, Dalmatian\_63, DudeLittle\_61, Fameo\_62, Retro23\_63, QueenB2\_61
- Track 85 : Loser\_63
- Track 86 : Duplo\_63, Naji\_63, D32\_62
- Track 87 : Iwokeuplikedis\_64
- Track 88 : Equemioh13\_62, Centaur\_63, Gratitude\_60, Larenn\_60, Baehexic\_61, Malec\_61, Piro94\_62, Updawg\_63, Jaan\_62, MiculUcigas\_62, WideWale\_63
- Track 89 : LilTurb\_63, AbbyPaige\_64, Agape74\_64, Bugsy\_64, Drake55\_64
- Track 90 : L5\_59
- Track 91 : SweetiePie\_62
- Track 92 : LionsBait\_63, AN3\_65, BengiVuitton\_63, Deloris\_63, VA6\_63
- Track 93 : Trooper\_63
- Track 94 : TipsytheTRex\_59
- Track 95 : Ph8s\_63
- Track 96 : Adzzy\_64
- Track 97 : CRB1\_65, LadyBird\_67, 20ES\_65, First\_0064
- Track 98 : Sknot\_62
- Track 99 : Tristan\_58
- Track 100 : Kerberos\_63, Tomathan\_63
- Track 101 : HarryHoudini\_63
- Track 102 : Rachaly\_60, BobSwaget\_57, TarsusIV\_59, Loka\_58
- Track 103 : AnnaL29\_63
- Track 104 : Koduck\_62
- Track 105 : EZMoney23\_58
- Track 106 : StarStuff\_63
- Track 107 : Dignity\_64, Leviathan\_64, Smeagan\_65, Whabigail7\_63
- Track 108 : Jerm\_64
- Track 109 : RedRock\_63
- Track 110 : Serenity\_62

- Track 111 : GaugeLDP\_59
- Track 112 : Odin\_61
- Track 113 : Trixie\_60
- Track 114 : Herbertwm\_59
- Track 115 : Jsquared\_62
- Track 116 : Turbido\_63
- Track 117 : Che12\_63
- Track 118 : Journey13\_56
- Track 119 : XianYue\_60
- Track 120 : Kalpine\_60
- Track 121 : Acolyte\_56
- Track 122 : MissWhite\_60
- Track 123 : Bradman\_61, Quokka\_60, MajorMajor\_61
- Track 124 : NothingSpecial\_59
- Track 125 : Superchunk\_61
- Track 126 : ArcherNM\_56
- Track 127 : Miko\_58
- Track 128 : BabyBack\_60
- Track 129 : Anthony\_64
- Track 130 : Kinmap\_60
- Track 131 : P28Green\_65, Jobu08\_62, Stagni\_64, Malinsilva\_66, LBerry\_65, Rummer\_63, Grub\_64, Sabia\_64, Lilith\_64, Bigflo\_63, Methuselah\_59, Marie\_62, Anubis\_67, Pembroke\_64, SoYo\_64, Snickers\_63, Microwolf\_62, Lova\_63, PotatoSplit\_65, Tiffany\_63, DaHudson\_63, MadMarie\_64, JenCasNa\_65, Taurus\_65, Grum1\_64
- Track 132 : Pawn\_64, Heliosoles\_63, JeppNRM\_65, ACFishhook\_62, Groupthink\_65, Manu\_64, Kalb97\_65, Gemma\_63, Kalnoky\_65, PhishRPhriends\_62, HaveUMetTed\_65, OlanP\_63, Calvinny\_63, Marius\_65, PurpleHaze\_64, Reba\_64, Phranny\_65
- Track 133 : Lambert1\_60, Caviar\_60, Panamaxus\_58, Margo\_60
- Track 134 : Ollie\_64, MoneyMay\_63, HashRod\_65, MuchMore\_67, AgronaGT15\_63, Phoxy\_64, Wooldri\_66, Bxz2\_59, Spike509\_64, GtownJaz\_64, Cullens\_64, Beauxregard13\_64, SoilDragon\_64, Vix\_62, LugYA\_67, Penny1\_65, Hercules11\_64, PGHhamlin\_66, EpicPhail\_65, Dieselweasel\_65, MarQuardt\_64, Aglet\_65, Mainiac\_64, Watson\_63, Soshari\_66, StepMih\_63, GinkgoMaracino\_64, Farber\_64, Zetzy\_63, Phoebe\_65, JHC117\_62, Daishi\_63, Grif\_64, Sabinator\_63, Fernando\_64, Colbster\_63, LarryKay\_64, AugsMagnumOpus\_67, BreSam8\_64
- Track 135 : Fred313\_60, Marchesa\_60, Kachowdy\_60, HelDan\_61, Scout\_61, Heathen\_61, DropBear\_60
- Track 136 : TinyPebbles\_62, BuzzBuzz\_61, Misomonster\_65
- Track 137 : Bugatti\_61, Giroux\_61, Idleandcovert\_61, TNguyen7\_62, Puppy\_62, Pistachio\_62, BlueBird\_63, SaturnRing\_61
- Track 138 : Phantastic\_62, Rockstar\_59
- Track 139 : BabyJohn\_57, Chiqui\_57
- Track 140 : Popcicle\_60, Noella\_60, ResDef\_60, Hookmount\_60, Veracruz\_59, Norbert\_58, Todacoro\_60, Texage\_59, Pocahontas\_60, QuinnKiro\_59
- Track 141 : MK4\_61, JF4\_59, B1\_54, JF2\_59, Isca\_60
- Track 142 : Louie6\_63
- Track 143 : BabyRay\_61
- Track 144 : KADY\_64
- Track 145 : MA5\_61
- Track 146 : Cindaradix\_53, Miramae\_55

- Track 147 : Lemur\_58, Nyxis\_58, Morrow\_59, SeniorClean\_55, Chaph\_58, JetBlade\_58, Mayonnaise\_57, TroyPia\_59, LittleB\_58, Phacado\_58, CentreCat\_58, Wizard007\_58, BubbleTrouble\_57, Skipitt\_57, Kremtemulon\_58, Roosevelt\_57, Florean\_58, Commander\_58, MeeZee\_58, Camperdownii\_56, Taquarus\_58, Connomayer\_58, Eros\_58, Pipcraft\_56, Blackmoor\_58, Koan\_55, Peaches\_57, Deano\_57, Shaka\_57, Citius\_58, Eapen\_58, Annyong\_58, Palestino\_57, LappelDuVide\_58, Funston\_57, OKaNui\_58, Wilbur\_58, JoongJeon\_57, Mazhar510\_58, TygerBlood\_58, Koreni\_57, Millski\_57, Gadost\_58, Avle17\_58, Caelakin\_58, Sabertooth\_58, Melvin\_60, Broseidon\_58, Lunsford\_59, Bartimeaus\_58, Bruiser\_57, Burger\_56, NotAPhaseMom\_58, Albee\_58, Houdini22\_58, Maxo\_59, Romney\_57, Sparxx\_59, Lorenzo\_58, Pumbaa\_58, TiroTheta9\_58, YoSam321\_58, Kingmustik0402\_58, Jaykayelowell\_56, Relief\_57, TinaFeyge\_57, Wander\_58, Clarenza\_57, PeterPeter\_58, Nemo27\_58, Polymorphads\_59, Bombshell\_58, Ruin\_58, Alberto7\_59, KFPoly\_57, Flux\_58, Thanksgivukkah\_57, Baby16\_58, Druantia\_58, Scamp\_58, Holli\_57, HamSlice\_56, Cocoaberry\_58, Kye\_58, Kamy\_57
- Track 148 : BangNhom\_58, ChampagnePapi\_60, Obama12\_59, Cerulean\_59, Happiness\_57, LHTSCC\_60, SheldonCooper\_59
- Track 149 : Katalie136\_56, Badger\_55, Bumblebee11\_55, Cici\_56, Xena\_55, Datway\_56, PetiteSangsue\_56, Perplexer\_56, Wile\_56, Achebe\_55, Morpher26\_56, Backyardigan\_54, AbbysRanger\_56
- Track 150 : Ulysses\_57, Phighter1804\_58, Iceman\_58, DirtyDunning\_57, Eurydice\_59, LeoAvram\_57, Spino\_57, Rosa24\_56, BellusTerra\_59, Ohfah\_59, Nebs\_59, Iracema64\_59, Cintron\_57, LochMonster\_59, ICleared\_58, Phelipe\_59, Tinybot\_57, Abdiel\_58
- Track 151 : Dhanush\_58
- Track 152 : Maverick\_58
- Track 153 : Eagle\_58
- Track 154 : NorthStar\_57
- Track 155 : Arturo\_56, Kratark\_57
- Track 156 : LittleGuy\_58
- Track 157 : Noelle\_57
- Track 158 : Phontbonne\_58, Eris\_57
- Track 159 : Medusa\_58
- Track 160 : AvatarAhPeg\_55, Stink\_55
- Track 161 : Stasia\_56
- Track 162 : Huxley\_57
- Track 163 : Mundrea\_56
- Track 164 : Shygu2\_56
- Track 165 : SydNat\_60, PetterN\_64, Scorpia\_63, Chadwick\_61, Ghouboy\_60, Airmid\_59, Zolita\_59, Naca\_59, EITiger69\_61
- Track 166 : Jabiru\_60
- Track 167 : Phlorence\_57, ForGetIt\_59, Jovo\_59, AgentM\_58, PickleBack\_59, Tiger\_58, Aragog\_58, Conspiracy\_59, Lev2\_59
- Track 168 : Cuco\_58
- Track 169 : Archetta\_58, Bluefalcon\_56, Discoknowium\_57
- Track 170 : Prinash11\_56, HuhtaEnerson15\_57, Bonamassa\_56, Tarynearal\_55
- Track 171 : Coog\_56, UnionJack\_60, George\_55, MarysWell\_58, Midas2\_56, Twigg\_56, Swirley\_59, Milcery\_57, LittleCherry\_57
- Track 172 : Benedict\_62
- Track 173 : Theia\_57, Dublin\_58, Micasa\_58
- Track 174 : Blue7\_65, Hammer\_64, Roksolana\_65

- Track 175 : Temprado\_65, Jeffabunny\_64, ToneTone\_61, Hexamo\_64, Gladiator\_61, Yokurt\_63, Helmet\_65, Indra\_67, Garak\_65
- Track 176 : Cookiedough\_63, Blinn1\_66, Priamo\_65, Kipper29\_63, JewelBug\_63, VohminGhazi\_63, DaVinci\_61, BABullseye\_56, Jordennis\_62, Candra\_61, Pmask\_62, EricB\_62, Neeharika16\_62, Newrala\_63, GreedyLawyer\_61, Kazan\_64
- Track 177 : SuperCallie99\_60
- Track 178 : Artemis2UCLA\_64, WunderPhul\_64, CloudWang3\_65, Wiks\_63, Lilbunny\_63, Zaka\_64, Koko\_66, BlessJoy\_63, Zulu\_65
- Track 179 : Isiphiwo\_61, SuperAwesome\_63, Chartreuse\_60, Hoot\_58, SmellyB\_63, McFly\_63
- Track 180 : Polyphemus\_63, Dorothea\_63
- Track 181 : Rifter\_64, Gruunaga\_64
- Track 182 : Tucker\_64
- Track 183 : FlyCatcher\_63, Toro\_61, Sheen\_60
- Track 184 : DroogsArmy\_56
- Track 185 : HINdeR\_55
- Track 186 : Timshel\_57
- Track 187 : PP\_61
- Track 188 : Expelliarmus\_61, Dixon\_63, Smeadley\_64
- Track 189 : Danforth\_64, Stephig9\_63, Saintus\_59, Roary\_65, NearlyHeadless\_64
- Track 190 : Phillis\_61
- Track 191 : Groundhog\_63, Astro\_64
- Track 192 : SheaKeira\_60
- Track 193 : HortumSL17\_64, Tubs\_63, Beemo\_64, Alma\_62, Aliter\_64, Myxus\_63, Ugenie5\_60, Phonnegut\_64, Phaeder\_63, Scherzo\_64
- Track 194 : Toaka\_64, Rahalelujah\_63
- Track 195 : DreamTeam1\_61, Arissanae\_62, Charm\_61, BogosyJay\_62, Maminiaina\_62
- Track 196 : Keziacharles14\_63
- Track 197 : Spouty\_62, Priya\_62, EmyBug\_61, Eidsmoe\_62, Fayely\_62, Conquerage\_62
- Track 198 : Vanisoa\_63
- Track 199 : Darrell\_65, Yecey3\_64
- Track 200 : LoneWolf\_64
- Track 201 : Elephantoon\_62
- Track 202 : Settecandela\_127, Phrappuccino\_127
- Track 203 : Nitro\_45, Community\_49
- Track 204 : Yang\_45
- Track 205 : WhereRU\_178, Persimmon\_179
- Track 206 : Daubenski\_27
- Track 207 : LazerLemon\_75
- Track 208 : SeresaTree\_235
- Track 209 : Westy\_203
- Track 210 : Karp\_197
- Track 211 : Bimmel\_30
- Track 212 : Gollum\_51, Belenaria\_51, RexFury\_50, Shuman\_51, Nancinator\_51, UhSalsa\_51, Natosaleda\_50, Espica\_51, Phrankenstein\_51, AppleCloud\_48, PhailMary\_50
- Track 213 : Lillie\_51, StCroix\_50, Rhodalysa\_51, Bradshaw\_51, Swann\_51, TWAMP\_51, CosmicSans\_51, Naiad\_50, Alatin\_50, Rasputin\_51, Erik\_51
- Track 214 : BobbyDazzler\_51, Yoncess\_50
- Track 215 : Hiro\_51, Jester\_50, Harlequin\_50, Bryce\_50, Alpacados\_50
- Track 216 : Krishelle\_51, RER2\_44

- Track 217 : Takoda\_51
- Track 218 : Dinger\_50, Partridge\_50
- Track 219 : Bonanza\_52, Yogi\_51
- Track 220 : RGL3\_45
- Track 221 : Shagrat\_101
- Track 222 : Madraxi\_99
- Track 223 : Jflix2\_97
- Track 224 : Nova53\_189
- Track 225 : Cucurbita\_135, Engineer\_136
- Track 226 : Bachita\_137
- Track 227 : Culver\_133, Norvs\_132
- Track 228 : Aphelion\_133, Abscondus\_133, Smoothie\_135, Geeche\_132, Toniann\_134, Miskis\_133, Dusty\_130
- Track 229 : ClubL\_134
- Track 230 : WilliamBoone\_132
- Track 231 : Lozinak\_134
- Track 232 : PhinkBoden\_133
- Track 233 : OneUp\_118
- Track 234 : BrutonGaster\_108
- Track 235 : SteveFrench\_16
- Track 236 : CherryonLim\_2
- Track 237 : Vine\_3
- Track 238 : Ohgeesy\_65
- Track 239 : JonJames\_144, Yvonnetastic\_141
- Track 240 : Keelan\_108
- Track 241 : Stormageddon\_2, RedWattleHog\_2
- Track 242 : BugsBunny\_19, YassJohnny\_22, Teaspoon\_22, Murica\_20, Bruin\_21, Bask21\_21, Harella\_20, Emmina\_22, HufflyPuff\_20, Phaux\_20, BigBubba\_22, Policronamos\_21, Nala\_21, Pumpkin\_23, xkcd\_22, Hopey\_23, Stank\_24, Tuco\_22, 244\_23, Manda\_22
- Track 243 : FireRed\_21, Porky\_21, PhatBacter\_21, Palpatine\_21
- Track 244 : Kumotta\_5
- Track 245 : JuicyJay\_127, NihilNomen\_132, Bombitas\_118, Beem\_132
- Track 246 : Redno2\_122, Kalah2\_121, DmpstrDiver\_130, Pound\_119, Constella\_120, Yeet\_122, Bagrid\_130, Ejimix\_124, Halley\_132, Thibault\_112, Dallas\_131
- Track 247 : Lucky2013\_123, LittleE\_131, Porcelain\_126
- Track 248 : Squint\_125, KashFlow\_124, MiaZeal\_127
- Track 249 : Omega\_138
- Track 250 : BAKA\_130, Hughesyang\_130, HokkenD\_120, Duke13\_125, Schatzie\_126, Odette\_132, ThreeRngTarjay\_126, Minerva\_129, Dove\_116, Klein\_127, Wanda\_129, Phoebus\_131, EricMillard\_122, Zelink\_125, Optimus\_121
- Track 251 : Ariel\_128, Courthouse\_123, Superphikiman\_125
- Track 252 : Hannaconda\_119
- Track 253 : Bobby\_122, Marleymoo\_115
- Track 254 : Eponine\_78, Taquito\_75, Wintermute\_76
- Track 255 : Malthus\_77, Chancellor\_76, JF1\_76, SamScheppers\_75, Slarp\_76, Y2\_73, Juliette\_78, Y10\_73, Kraw\_77
- Track 256 : Patt\_72, MissDaisy\_73, Reptar3000\_73
- Track 257 : Cheetobro\_76, OmniCritical\_76
- Track 258 : Ruthiejr\_77
- Track 259 : Lebo14\_77
- Track 260 : Bobquesha\_77

- Track 261 : Fionnbharth\_76, Mitti\_76
- Track 262 : Aminay\_72
- Track 263 : Boilgate\_68
- Track 264 : FoulBall\_9, JangDynasty\_9, Idergollasper\_9, SchoolBus\_9, Zebo\_9, Familton\_10, KingPhillip3\_9, TelAviv\_9, Blessica\_9, Catdawg\_9
- Track 265 : Zakhe101\_11, Winget\_10, Vagabond\_10, Corndog\_11, Wildflower\_10, Firecracker\_10, YungJamal\_11, Bora\_10, Smooch\_11
- Track 266 : Shida\_10, Wogge42\_10, Alkhayr\_10, Murai\_10, Mori\_10, Vorrps\_10, NiebruSaylor\_10
- Track 267 : Schuy\_10
- Track 268 : MadKillah\_10
- Track 269 : Ashwin\_11
- Track 270 : Ryadel\_12
- Track 271 : Krili\_10
- Track 272 : Gaia\_140
- Track 273 : Nebkiss\_87, Gaia\_88
- Track 274 : TPA4\_77
- Track 275 : Ponzi\_32
- Track 276 : REQ2\_71

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

The start number called the most often in the published annotations is 55, it was called in 194 of the 949 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ACFishhook\_62, AbbysRanger\_56, Abdiel\_58, Achebe\_55, Aglet\_65, AgronaGT15\_63, Albee\_58, Alberto7\_59, Annyong\_58, Arturo\_56, AugsMagnumOpus\_67, AvatarAhPeg\_55, Avle17\_58, Baby16\_58, Backyardigan\_54, Badger\_55, BangNhom\_58, Bartimeaus\_58, Beauxregard13\_64, BellusTerra\_59, Blackmoor\_58, Bombshell\_58, BreSam8\_64, Broseidon\_58, Bruiser\_57, BubbleTrouble\_57, Bumblebee11\_55, Burger\_56, BuzzBuzz\_61, Bxz2\_59, Caelakin\_58, Calvinny\_63, Camperdownii\_56, CentreCat\_58, Cerulean\_59, ChampagnePapi\_60, Chaph\_58, Cici\_56, Cindaradix\_53, Cintron\_57, Citius\_58, Clarenza\_57, Cocoaberry\_58, Colbster\_63, Commander\_58, Connomayer\_58, Cullens\_64, Daishi\_63, Datway\_56, Deano\_57, Dhanush\_58, Dieselweasel\_65, DirtyDunning\_57, Druantia\_58, Eagle\_58, Eapen\_58, EpicPhail\_65, Eris\_57, Eros\_58, Eurydice\_59, Farber\_64, Fernando\_64, Florean\_58, Flux\_58, Funston\_57, Gadost\_58, Gemma\_63, GingkoMaracino\_64, Grif\_64, Groupthink\_65, GtownJaz\_64, HamSlice\_56, Happiness\_57, HashRod\_65, HaveUMetTed\_65, Heliosoles\_63, Hercules11\_64, Holli\_57, Houdini22\_58, Huxley\_57, ICleared\_58, Iceman\_58, Iracema64\_59, JHC117\_62, Jaykayelowell\_56, JeppNRM\_65, JetBlade\_58, JoongJeon\_57, KFPoly\_57, Kalb97\_65, Kalnoky\_65, Kampy\_57, Katalie136\_56, Kingmustik0402\_58, Koan\_55, Koreni\_57, Kratark\_57, Kremtemulon\_58, Kyee\_58, LHTSCC\_60, LappelDuVide\_58, LarryKay\_64, Lemur\_58, LeoAvram\_57, LittleB\_58, LittleGuy\_58, LochMonster\_59, Lorenzo\_58, Louie6\_63, LugYA\_67, Lunsford\_59, Mainiac\_64, Manu\_64, MarQuardt\_64, Marius\_65, Maxo\_59, Mayonnaise\_57, Mazhar510\_58, Medusa\_58, MeeZee\_58, Melvin\_60, Millski\_57, Miramae\_55, Misomonster\_65, MoneyMay\_63, Morpher26\_56, Morrow\_59, MuchMore\_67, Mundrea\_56, Nebs\_59, Nemo27\_58, Noelle\_57,

NorthStar\_57, NotAPhaseMom\_58, Nyxis\_58, OKaNui\_58, Obama12\_59, Ohfah\_59, OlanP\_63, Ollie\_64, PGHhamlin\_66, Palestino\_57, Pawn\_64, Peaches\_57, Penny1\_65, Perplexer\_56, PeterPeter\_58, PetiteSangsue\_56, Phacado\_58, Phelipe\_59, Phighter1804\_58, PhishRPhriends\_62, Phoebe\_65, Phontbonne\_58, Phoxy\_64, Phranny\_65, Pipcraft\_56, Polymorphads\_59, Pumbaa\_58, PurpleHaze\_64, Reba\_64, Relief\_57, Romney\_57, Roosevelt\_57, Rosa24\_56, Ruin\_58, Sabertooth\_58, Sabinator\_63, Scamp\_58, SeniorClean\_55, Shaka\_57, SheldonCooper\_59, Shygu2\_56, Skipitt\_57, SoilDragon\_64, Soshari\_66, Sparxx\_59, Spike509\_64, Spino\_57, Stasia\_56, StepMih\_63, Stink\_55, Taquarus\_58, Thanksgivukkah\_57, TinaFeyge\_57, TinyPebbles\_62, Tinybot\_57, TiroTheta9\_58, TroyPia\_59, TygerBlood\_58, Ulysses\_57, Vix\_62, Wander\_58, Watson\_63, Wilbur\_58, Wile\_56, Wizard007\_58, Wooldri\_66, Xena\_55, YoSam321\_58, Zetzy\_63,

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

- Anon\_69, Anubis\_67, Bigflo\_63, DaHudson\_63, Grub\_64, Grum1\_64, JenCasNa\_65, Jobu08\_62, KADY\_64, LBerry\_65, Lilith\_64, Lowa\_63, MadMarie\_64, Malinsilva\_66, Marie\_62, Maverick\_58, Methuselah\_59, Microwolf\_62, Nedarya\_66, Oofda\_70, P28Green\_65, Pembroke\_64, PotatoSplit\_65, Rummer\_63, Sabia\_64, Snickers\_63, SoYo\_64, Stagni\_64, Taurus\_65, Tiffany\_63, Warrior24\_72,

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

- 20ES\_65, 244\_23, 40AC\_62, A6\_53, AFIS\_56, AN3\_65, AN9\_64, ANI8\_64, AbbyPaige\_64, Abbysshoes\_62, Abrogate\_590, Abscondus\_133, Acme\_61, Acolyte\_56, Adahisdi\_60, Adzzy\_64, Aeneas\_63, Agaliana\_55, Agape74\_64, AgentM\_58, Airmid\_59, Ajay\_60, Alatin\_50, Aliter\_64, Alkhayr\_10, Alma\_62, Alpacados\_50, Alsfro\_64, Altman\_62, Alvin\_58, Aminay\_72, Anaysia\_70, Aneem\_62, Anglerfish\_60, AnnaL29\_63, Anselm\_63, Anthony\_64, Aphelion\_133, AppleCloud\_48, Applejack\_56, Aragog\_58, Arcanine\_62, ArcherNM\_56, Archetta\_58, Ariel\_128, Arissanae\_62, Arlo\_58, Artemis2UCLA\_64, Ashballer\_62, Ashwin\_11, Astro\_64, Atkinbua\_63, B1\_54, BABullseye\_56, BAKA\_130, BK1\_53, BPBiabs31\_61, BabyBack\_60, BabyJohn\_57, BabyRay\_61, Bachita\_137, Bachome\_63, BaconJack\_65, Bactobuster\_60, Baehexic\_61, Bagrid\_130, Barriga\_61, BarrowTuph\_59, Bask21\_21, Battleship\_72, Beatrix\_59, Beem\_132, Beemo\_64, BeesKnees\_62, Belenaria\_51, Benedict\_62, BengiVuitton\_63, Benvolio\_59, Bethlehem\_59, Bexan\_57, BiancaTri92\_62, Big3\_58, BigBubba\_22, BigMau\_62, BigPaolini\_58, Bigchungji\_59, Bigfoot\_53, BillKnuckles\_57, Bimmel\_30, Bircsak\_59, BlessJoy\_63, Blessica\_9, Blinn1\_66, BluSpix\_57, Blue7\_65, BlueBird\_63, Blue\_58, Bluefalcon\_56, Bob3\_59, BobSwaget\_57, BobbyDazzler\_51, Bobby\_122, Bobquesha\_77, BogosyJay\_62, Boilgate\_68, Bombitas\_118, Bonamassa\_56, Bonanza\_52, Bones\_59, Boohoo\_70, Bora\_10, Bowtie\_62, Bradman\_61, Bradshaw\_51, Briton15\_64, Bruin\_21, Brunns\_58, BrutonGaster\_108, Bryce\_50, Bud\_60, Bugatti\_61, BugsBunny\_19, Buggy\_64, Burton\_60, Buttons\_57, Bxb1\_54, C3\_58, CRB1\_65, CactusRose\_58, Candra\_61, Carlyle\_59, Catdawg\_9, Caviar\_60, Centaur\_63, Chadwick\_61, Chanagan\_55, Chancellor\_76, Changeling\_61, Chargerpower\_60, Charm\_61, Chartreuse\_60, Che12\_63, Cheetobro\_76, CherryonLim\_2, ChipMunk\_64, Chiqui\_57, Chupacabra\_57, Ciao\_58, CloudWang3\_65, ClubL\_134, Community\_49, ConceptII\_62, Conquerage\_62, Conspiracy\_59, Constella\_120, Coog\_56, Cookiedough\_63, Corndog\_11, Corvo\_60, CosmicSans\_51, Courthouse\_123, Crispicous1\_57, Crucio\_62, Cuco\_58, Cucurbita\_135, Cueyllyss\_60, Culver\_133, D29\_59, D32\_62, DBQu4n\_63, DD5\_58, DaVinci\_61, Dallas\_131, Dalmatian\_63, Danforth\_64, Darrell\_65, DARTHPhader\_59, Daubenski\_27, DekHockey33\_71, Deloris\_63, Dexes\_59, Dignity\_64, Dinger\_50, Discoknowium\_57, Dixon\_63, DmpstrDiver\_130, DontArgue\_56, Doom\_58,

Dorothea\_63, Dove\_116, DrFeelGood\_57, Drake55\_64, Drake94\_57, DreamCatcher\_63, DreamTeam1\_61, Dreamboat\_60, DroogsArmy\_56, DropBear\_60, Dublin\_58, DudeLittle\_61, Duke13\_125, Dulcie\_61, Duplo\_63, Dussy\_61, DustyMartin\_61, Dusty\_130, Dynamix\_61, EZMoney23\_58, EagleEye\_65, Eaglepride\_60, Ebony\_61, Echild\_62, Edison31\_56, Edtherson\_59, Eidsmoe\_62, Ejimix\_124, EITiger69\_61, Elephantoon\_62, Emmina\_22, EmyBug\_61, Engineer\_136, EnzoK\_58, Eponine\_78, Epsocamisio\_67, Equemioh13\_62, EricB\_62, EricMillard\_122, Erik\_51, Espica\_51, Espresso\_58, Et2Brutus\_60, Euphoria\_57, EvilGenius\_63, Expelliarmus\_61, Eyeball\_61, Fajezeel\_60, Fameo\_62, Familton\_10, Fascinus\_55, Fayely\_62, Fenn\_62, Fibonacci\_61, Fionnbharth\_76, FireRed\_21, Firecracker\_10, FiringLine\_62, First\_0064, Flare16\_62, Flaverint\_62, FlyCatcher\_63, ForGetIt\_59, Forsytheast\_58, FoulBall\_9, Francis47\_58, Fred313\_60, Froghopper\_56, Fushigi\_56, GMonster\_56, GageAP\_60, Gaia\_140, Gaia\_88, Gail\_63, Gandalf20\_62, Garak\_65, GaugeLDP\_59, Geeche\_132, George\_55, Georgie2\_63, Ghoulyboy\_60, Gilberta\_62, Giroux\_61, Gladiator\_61, Gollum\_51, Gompeii16\_59, Goose\_59, Graduation\_63, Gratitude\_60, GrecoEtereo\_59, GreedyLawyer\_61, Greg\_60, Groundhog\_63, Gruunaga\_64, Gwendoluna\_62, Gyzlar\_55, HINdeR\_55, Halley\_132, Hami1\_55, Hammer\_64, HanShotFirst\_61, Hannaconda\_119, Harella\_20, Harlequin\_50, HarryHoudini\_63, HarryOW\_59, Heathen\_61, Heffalump\_61, HelDan\_61, Helmet\_65, Herbertwm\_59, Hermia\_59, HermioneGrange\_61, Hexamo\_64, Hiro\_51, HokkenD\_120, Homines\_51, Hookmount\_60, Hoot\_58, Hope4ever\_61, Hopey\_23, HortumSL17\_64, HufflyPuff\_20, Hughesyang\_130, HuhtaEnerson15\_57, Hutc2\_60, ILeeKay\_62, Ichabod\_63, Idergollasper\_9, Idleandcovert\_61, IgnatiusPatJac\_59, Indra\_67, Insomnia\_62, Inyanga\_55, Iqorha\_55, IronMan\_61, Isca\_60, Isiphiwo\_61, Iwokeuplikedis\_64, JC27\_62, JF1\_76, JF2\_59, JF4\_59, JSwag\_69, Jaan\_62, Jabiru\_60, Jabith\_62, JackSparrow\_62, JangDynasty\_9, Jasper\_60, Jeeves\_65, Jeffabunny\_64, Jerm2\_61, Jerm\_64, Jester\_50, JewelBug\_63, Jflix2\_97, JonJames\_144, Jordennis\_62, Jorgensen\_60, Joselito\_62, JoshKayV\_64, Journey13\_56, Jovo\_59, Jsquared\_62, JuicyJay\_127, JuliaChild\_61, Juliette\_78, KBG\_60, KSSJEB\_59, Kachowdy\_60, Kalah2\_121, Kalpine\_60, Kanely\_61, Karp\_197, KashFlow\_124, KatherineG\_70, Kazan\_64, Keelan\_108, Kenmech\_64, Kerberos\_63, Keziacharles14\_63, Killigrew\_59, Kimona\_56, KingCyrus\_63, KingPhillip3\_9, Kinmap\_60, Kipper29\_63, KittenMittens\_56, Klein\_127, Koduck\_62, Koko\_66, Kraw\_77, Krili\_10, Krishelle\_51, Kristoff\_58, Kugel\_59, Kumotta\_5, KyMonks1A\_62, Kykar\_60, L5\_59, LadyBird\_67, Lambert1\_60, Lamina13\_63, Landor\_62, Larenn\_60, LastResort\_68, LazerLemon\_75, Lebo14\_77, Leogania\_62, Lesedi\_55, Lev2\_59, Levia\_55, Leviathan\_64, Licorice\_61, LilBib\_59, LiITurb\_63, Lilbunny\_63, Lillie\_51, LionsBait\_63, LittleCherry\_57, LittleE\_131, Lockley\_57, Loka\_58, LoneWolf\_64, Looper\_69, Lopton\_59, Loser\_63, Lozinak\_134, Luchador\_64, Lucivia\_62, Lucky2013\_123, Lucyedi\_64, LunarLander\_63, MA5\_61, MK4\_61, MPlant7149\_59, MaCh\_61, Mabel\_61, MadKillah\_10, Madraxi\_99, Magnar\_57, Magnito\_59, MajorMajor\_61, Makemake\_61, Malec\_61, Malthus\_77, Maminiaina\_62, Manatee\_60, Manda\_22, Marcell\_56, Marchesa\_60, Marchy\_54, Marco3\_62, Marge\_58, Margo\_60, Marleymoo\_115, Maroc7\_57, Marsha\_59, MaryBeth\_58, MarysWell\_58, McFly\_63, McGuire\_61, McSinger\_58, MetalQZJ\_57, MiaZeal\_127, Micasa\_58, Michley\_62, MiculUcigas\_62, Midas2\_56, Miko\_58, Milcery\_57, MinecraftSteve\_70, Minerva\_129, Miskis\_133, MissDaisy\_73, MissWhite\_60, Mitti\_76, Mkhuseleli\_57, Molly\_62, Monet\_63, Moose\_58, Mori\_10, MrGordo\_59, Mryolo\_56, Mulciber\_60, Mule\_58, Munch\_61, Murai\_10, Murica\_20, Museum\_61, MyraDee\_58, Myxus\_63, NEHalo\_57, NaSiaTalie\_62, Naca\_59, Naiad\_50, Naira\_62, Naji\_63, Nala\_21, Nancinator\_51, Natosaleda\_50, NearlyHeadless\_64, Nebkiss\_87, Nebulosus\_68, Neeharika16\_62, Nerujay\_62, Newrala\_63, Nhonho\_58,



NicoleTera\_60, NiebruSaylor\_10, NihilNomen\_132, Nitro\_45, Niza\_61, Noella\_60, Norbert\_58, Norvs\_132, Norz\_61, NothingSpecial\_59, Nova53\_189, OKCentral2016\_58, Odette\_132, Odin\_61, Ohgeesy\_65, Ohno789\_60, Omega\_138, OmniCritical\_76, OneUp\_118, Oogway\_59, Optimus\_121, Orange\_60, PP\_61, PSullivan\_59, PacerPaul\_59, PainterBoy\_64, Palpatine\_21, Panamaxus\_58, Papez\_62, Paphu\_59, Paraselene\_57, Pari\_62, Parliament\_61, Partridge\_50, PascalRango\_59, Patt\_72, PattyP\_62, Payneful\_59, PeaceMeal1\_57, Pelly\_60, Perseus\_60, Persimmon\_179, Petersenfast\_59, Peterson\_63, Petp2012\_61, Petruccio\_58, PetterN\_64, Ph8s\_63, Phaded\_61, Phaeder\_63, PhailMary\_50, Phantastic\_62, PhatBacter\_21, Phaux\_20, PherrisBueller\_58, Phillis\_61, PhineBark\_59, PhinkBoden\_133, Phlei\_52, Phlippers\_57, Phlorence\_57, Phoebus\_131, Phonnegut\_64, Phrankenstein\_51, Phrappuccino\_127, PhrostyMug\_60, PickleBack\_59, PinkPlastic\_60, Pinto\_60, Pippin\_60, Piro94\_62, Pistachio\_62, Pita2\_62, Pmask\_62, Pocahontas\_60, Policronamos\_21, Polyphemus\_63, Pomar16\_62, Ponzi\_32, Poompha\_57, Popcicle\_60, Porcelain\_126, Porky\_21, Pound\_119, Power\_61, Priamo\_65, Prinashe11\_56, Priya\_62, ProMouse\_59, Pukovnik\_60, Pumpkin\_23, Puppy\_62, QTRlifeCrisis\_59, QueenB2\_61, QueenBeesly\_62, QuinnKiro\_59, Quokka\_60, REQ2\_71, RER2\_44, RGL3\_45, Rachaly\_60, Rahalelujah\_63, Raid\_59, Rajelicia\_61, Rasputin\_51, ReMo\_68, Rebeuca\_59, RedRock\_63, RedWattleHog\_2, Redno2\_122, Refuge\_59, Remus\_70, Reptar3000\_73, ResDef\_60, Retro23\_63, RexFury\_50, Rhodalysa\_51, RhynO\_59, Rhynn\_58, RidgeCB\_59, Rifter\_64, Ringer\_59, Roary\_65, Rockstar\_59, Rohr\_61, Roksolana\_65, Rosalind\_68, Rowdy\_61, Rubeus\_59, Rufus\_61, Ruotula\_62, Rutherferd\_62, Ruthiejr\_77, Ryadel\_12, STLscum\_62, Sagefire\_62, Saintus\_59, Salz\_60, SamScheppers\_75, Sandaddy\_56, Sanya\_56, SarFire\_56, SaturnRing\_61, Schatzie\_126, Scherzo\_64, SchoolBus\_9, Schuy\_10, Scorpia\_63, Scout\_61, Scowl\_60, Seabiscuit\_63, Seanderson\_59, SemperFi\_63, Serenity\_62, SeresaTree\_235, Settecandela\_127, Severus\_57, Shagrat\_101, Sham4\_61, Shapes\_61, ShayRa\_70, SheaKeira\_60, Sheen\_60, Shida\_10, ShortQueendom\_53, Shuman\_51, Sibs6\_62, SkiPole\_64, Sknot\_62, Slagathor\_62, Slarp\_76, Smairt\_63, Smeadley\_64, Smeagan\_65, Smeagol\_62, SmellyB\_63, Smooch\_11, Smoothie\_135, SnapTap\_62, Snape\_61, Snazzy\_58, Solon\_57, SororFago\_62, Sorpresa\_57, Soups\_70, SpikeBT\_58, Spouty\_62, Squee\_60, Squint\_125, StCroix\_50, Stank\_24, StarStuff\_63, Steamy\_58, Stephig9\_63, SteveFrench\_16, StewieG\_56, Stormageddon\_2, StrongArm\_58, Strosahl\_70, Sumter\_55, Sunhee\_64, Sunshine924\_61, SuperAwesome\_63, SuperCallie99\_60, Superchunk\_61, Superphikiman\_125, Swann\_51, SweetiePie\_62, Swirley\_59, SwissCheese\_60, Switzer\_60, Switzerland\_69, Swole\_61, SydNat\_60, TNguyen7\_62, TPA4\_77, TWAMP\_51, Takoda\_51, Taquito\_75, Target\_61, TarsusIV\_59, Tarynearal\_55, Tasp14\_63, Teaspoon\_22, TelAviv\_9, Temprado\_65, Teodoridan\_57, Terrific\_63, Texage\_59, Theia\_57, TheloniousMonk\_60, Thibault\_112, Thor\_56, ThreeRngTarjay\_126, Tiger\_58, Timothy\_61, Timshel\_57, TinyTimmy\_61, TipsytheTRex\_59, Toaka\_64, Todacoro\_60, Tomathan\_63, ToneTone\_61, Toniann\_134, Topanga\_56, Topgun\_58, Toro\_61, Tote\_56, Traft412\_62, Travvers\_62, Treddle\_61, Trike\_56, Trip13t\_62, Tristan\_58, Trixie\_60, Trooper\_63, Trouble\_61, Tubs\_63, Tucker\_64, Tuco\_22, Turbido\_63, Turj99\_57, Twigg\_56, Twister\_57, TwoPeat\_62, U2\_58, Ugenie5\_60, UhSalsa\_51, UnionJack\_60, Updawg\_63, VA6\_63, VC3\_64, Vagabond\_10, Vanisoa\_63, Veracruz\_59, Vine\_3, Violet\_58, VohminGhazi\_63, Vorrps\_10, Waits\_70, WalterMcMickey\_57, Wanda\_129, Watermelon\_60, Westy\_203, Whabigail7\_63, Wheeler\_59, WhereRU\_178, WideWale\_63, Wiks\_63, Wildflower\_10, Wilkins\_58, WilliamBoone\_132, Winget\_10, Wintermute\_76, Wogge42\_10, WunderPhul\_64, XianYue\_60, Y10\_73, Y2\_73, Yang\_45, YassJohnny\_22, Yecy3\_64, Yeet\_122,

Yogi\_51, Yokurt\_63, Yoncess\_50, YungJamal\_11, Yvonnetastic\_141, Zaka\_64, Zakhe101\_11, Zebo\_9, Zeeculate\_57, Zelink\_125, Zephyr\_61, Zeuska\_59, Zimmer\_59, Zolita\_59, Zulu\_65, xkcd\_22,

### Summary by start number:

#### Start 14:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumotta\_5 (FB),

#### Start 17:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yang\_45 (AZ1),

#### Start 20:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_140 (X),

#### Start 28:

- Found in 25 of 1048 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 19 of 949
- Called 80.0% of time when present
- Phage (with cluster) where this start called: 244\_23 (E), Bask21\_21 (E), BigBubba\_22 (E), Bruin\_21 (E), BugsBunny\_19 (E), Emmina\_22 (E), Harella\_20 (E), Hopey\_23 (E), HufflyPuff\_20 (E), Manda\_22 (E), Murica\_20 (E), Nala\_21 (E), Phaux\_20 (E), Policronamos\_21 (E), Pumpkin\_23 (E), Stank\_24 (E), Teaspoon\_22 (E), Tuco\_22 (E), YassJohnny\_22 (E), xkcd\_22 (E),

#### Start 29:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Maverick\_58 (A4),

#### Start 33:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Community\_49 (AZ1), Nitro\_45 (AZ1),

#### Start 35:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LazerLemon\_75 (BH),

#### Start 37:

- Found in 8 of 1048 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 949
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Alsfro\_64 (A1), Froghopper\_56 (A1),

#### Start 38:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: STLscum\_62 (A1),

#### Start 41:

- Found in 30 of 1048 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 3.3% of time when present
- Phage (with cluster) where this start called: Jerm\_64 (A2),

#### Start 42:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Westy\_203 (BK1),

#### Start 44:

- Found in 69 of 1048 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 23 of 949
- Called 37.7% of time when present
- Phage (with cluster) where this start called: Anubis\_67 (A3), Bigflo\_63 (A3), DaHudson\_63 (A3), Grub\_64 (A3), Grum1\_64 (A3), JenCasNa\_65 (A3), Jobu08\_62 (A3), KADY\_64 (A3), LBerry\_65 (A3), Lilith\_64 (A3), Lowa\_63 (A3), MadMarie\_64 (A3), Malinsilva\_66 (A3), Marie\_62 (A3), Methuselah\_59 (A3), Microwolf\_62 (A3), P28Green\_65 (A3), Pembroke\_64 (A3), PotatoSplit\_65 (A3), Rummer\_63 (A3), Sabia\_64 (A3), Snickers\_63 (A3), SoYo\_64 (A3), Stagni\_64 (A3), Taurus\_65 (A3), Tiffany\_63 (A3),

#### Start 46:

- Found in 8 of 1048 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 4 of 949
- Called 62.5% of time when present
- Phage (with cluster) where this start called: Daubenski\_27 (BE1), Karp\_197 (BK1), Nova53\_189 (CG), Persimmon\_179 (BE1), WhereRU\_178 (BE1),

#### Start 49:

- Found in 206 of 1048 ( 19.7% ) of genes in pham
- Manual Annotations of this start: 181 of 949
- Called 97.6% of time when present
- Phage (with cluster) where this start called: A6\_53 (A1), AFIS\_56 (A1), Abbyshoes\_62 (A1), Abrogate\_590 (A1), Acme\_61 (A1), Adahisdi\_60 (A1), Aeneas\_63 (A1), Agaliana\_55 (A1), Ajay\_60 (A1), Altman\_62 (A1), Alvin\_58 (A1), Applejack\_56 (A1), Arlo\_58 (A1), Ashballer\_62 (A1), Atkinbua\_63 (A1), BK1\_53 (A1), BPBiabs31\_61 (A1), BaconJack\_65 (A1), Barriga\_61 (A1), BarrowTuph\_59 (A1), Beatrix\_59 (A1), BeesKnees\_62 (A1), Bethlehem\_59 (A1), Bexan\_57 (A1), Big3\_58 (A1), BigMau\_62 (A1), BigPaolini\_58 (A1), Bigchungji\_59 (A1), Bigfoot\_53 (A1),

BillKnuckles\_57 (A1), Bircsak\_59 (A1), BluSpix\_57 (A1), Blue\_58 (A1), Bob3\_59 (A1), Bones\_59 (A1), Briton15\_64 (A1), Bruns\_58 (A1), Burton\_60 (A1), Buttons\_57 (A1), Bxb1\_54 (A1), Carlyle\_59 (A1), Chanagan\_55 (A1), Ciao\_58 (A1), ConceptII\_62 (A1), Corvo\_60 (A1), Crispicous1\_57 (A1), Cueyllyss\_60 (A1), DD5\_58 (A1), Dexes\_59 (A1), Doom\_58 (A1), DrFeelGood\_57 (A1), DreamCatcher\_63 (A1), Dreamboat\_60 (A1), Dulcie\_61 (A1), Dussy\_61 (A1), Dynamix\_61 (A1), Edtherson\_59 (A1), EnzoK\_58 (A1), Espresso\_58 (A1), Euphoria\_57 (A1), Eyeball\_61 (A1), Fajezeel\_60 (A1), Fascinus\_55 (A1), Fenn\_62 (A1), Forsytheast\_58 (A1), Francis47\_58 (A1), Fushigi\_56 (A1), GMonster\_56 (A1), GageAP\_60 (A1), Gandalf20\_62 (A1), Gompeii16\_59 (A1), Graduation\_63 (A1), GrecoEtereo\_59 (A1), Greg\_60 (A1), Gwendoluna\_62 (A1), Gyzlar\_55 (A1), HanShotFirst\_61 (A1), HarryOW\_59 (A1), Hermia\_59 (A1), HermioneGrange\_61 (A1), Homines\_51 (A1), Hope4ever\_61 (A1), Ichabod\_63 (A1), Inyanga\_55 (A1), Iqorha\_55 (A1), JC27\_62 (A1), JackSparrow\_62 (A1), Jasper\_60 (A1), Jerm2\_61 (A1), Jorgensen\_60 (A1), JuliaChild\_61 (A1), Kanely\_61 (A1), Kenmech\_64 (A1), Killigrew\_59 (A1), Kugel\_59 (A1), Kykar\_60 (A1), Lamina13\_63 (A1), Lesedi\_55 (A1), Levia\_55 (A1), Licorice\_61 (A1), Lockley\_57 (A1), Lopton\_59 (A1), LunarLander\_63 (A1), MPlant7149\_59 (A1), Magnar\_57 (A1), Magnito\_59 (A1), Makemake\_61 (A1), Marcell\_56 (A1), Marchy\_54 (A1), Marco3\_62 (A1), Marge\_58 (A1), Maroc7\_57 (A1), Marsha\_59 (A1), MaryBeth\_58 (A1), McGuire\_61 (A1), McSinger\_58 (A1), MetalQZJ\_57 (A1), Michley\_62 (A1), Mkhusei\_57 (A1), Molly\_62 (A1), Moose\_58 (A1), MrGordo\_59 (A1), Mryolo\_56 (A1), Mule\_58 (A1), Museum\_61 (A1), NEHalo\_57 (A1), Naira\_62 (A1), Nerujay\_62 (A1), Nhonho\_58 (A1), Niza\_61 (A1), Norz\_61 (A1), Ohno789\_60 (A1), Oogway\_59 (A1), PSullivan\_59 (A1), PacerPaul\_59 (A1), Papez\_62 (A1), Paphu\_59 (A1), Paraselene\_57 (A1), Pari\_62 (A1), Parliament\_61 (A1), PascalRango\_59 (A1), PattyP\_62 (A1), Payneful\_59 (A1), Pelly\_60 (A1), Perseus\_60 (A1), Peterson\_63 (A1), Petp2012\_61 (A1), Petruccio\_58 (A1), PherrisBueller\_58 (A1), PhineBark\_59 (A1), Phlippers\_57 (A1), PhrostyMug\_60 (A1), PinkPlastic\_60 (A1), Pinto\_60 (A1), Pippin\_60 (A1), Pita2\_62 (A1), ProMouse\_59 (A1), Raid\_59 (A1), Rajelicia\_61 (A1), RidgeCB\_59 (A1), Ringer\_59 (A1), Rohr\_61 (A1), Rubeus\_59 (A1), Rufus\_61 (A1), Ruotula\_62 (A1), Sagefire\_62 (A1), Sandaddy\_56 (A1), Sanya\_56 (A1), SarFire\_56 (A1), Scowl\_60 (A1), Seabiscuit\_63 (A1), Seanderson\_59 (A1), ShortQueendom\_53 (A1), Sibs6\_62 (A1), SkiPole\_64 (A1), Smairt\_63 (A1), Snazzy\_58 (A1), Solon\_57 (A1), Sorpresa\_57 (A1), SpikeBT\_58 (A1), Squee\_60 (A1), StewieG\_56 (A1), StrongArm\_58 (A1), Sumter\_55 (A1), SwissCheese\_60 (A1), Switzer\_60 (A1), Swole\_61 (A1), Target\_61 (A1), Tasp14\_63 (A1), Thor\_56 (A1), Tote\_56 (A1), Traft412\_62 (A1), Trip13t\_62 (A1), Trouble\_61 (A1), TwoPeat\_62 (A1), U2\_58 (A1), Watermelon\_60 (A1), Wheeler\_59 (A1), Zeeculate\_57 (A1), Zephyr\_61 (A1), Zeuska\_59 (A1),

#### Start 50:

- Found in 11 of 1048 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 36.4% of time when present
- Phage (with cluster) where this start called: D29\_59 (A2), DBQu4n\_63 (A2), Pomar16\_62 (A2), Travvers\_62 (A2),

#### Start 51:

- Found in 23 of 1048 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 18 of 949
- Called 95.7% of time when present
- Phage (with cluster) where this start called: Chupacabra\_57 (A10), DontArgue\_56 (A10), Drake94\_57 (A10), DustyMartin\_61 (A10), Eaglepride\_60 (A10), Edison31\_56

(A10), Goose\_59 (A10), Kimona\_56 (A19), KittenMittens\_56 (A10), Kristoff\_58 (A10), OKCentral2016\_58 (A10), PeaceMeal1\_57 (A10), Poompha\_57 (A10), Rebeuca\_59 (A10), RhynO\_59 (A10), Rowdy\_61 (A10), Severus\_57 (A10), Shapes\_61 (A10), Topanga\_56 (A10), Trike\_56 (A10), Twister\_57 (A10), WalterMcMickey\_57 (A10),

Start 52:

- Found in 33 of 1048 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 16 of 949
- Called 48.5% of time when present
- Phage (with cluster) where this start called: Aneem\_62 (A11), Bowtie\_62 (A11), Bud\_60 (A11), Et2Brutus\_60 (A11), Fibonacci\_61 (A11), Flaverint\_62 (A11), Hutc2\_60 (A11), Insomnia\_62 (A11), Jabith\_62 (A11), Joselito\_62 (A11), Jsquared\_62 (A2), L5\_59 (A2), Lucivia\_62 (A11), Munch\_61 (A11), Timothy\_61 (A11), TinyTimmy\_61 (A11),

Start 53:

- Found in 24 of 1048 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 4 of 949
- Called 16.7% of time when present
- Phage (with cluster) where this start called: FireRed\_21 (E), Palpatine\_21 (E), PhatBacter\_21 (E), Porky\_21 (E),

Start 54:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Journey13\_56 (A2),

Start 55:

- Found in 232 of 1048 ( 22.1% ) of genes in pham
- Manual Annotations of this start: 194 of 949
- Called 86.6% of time when present
- Phage (with cluster) where this start called: ACFishhook\_62 (A3), AbbysRanger\_56 (A4), Abdiel\_58 (A4), Achebe\_55 (A4), Aglet\_65 (A3), AgronaGT15\_63 (A3), Albee\_58 (A4), Alberto7\_59 (A4), Annyong\_58 (A4), Arturo\_56 (A4), AugsMagnumOpus\_67 (A3), AvatarAhPeg\_55 (A4), Avle17\_58 (A4), Baby16\_58 (A4), Backyardigan\_54 (A4), Badger\_55 (A4), BangNhom\_58 (A4), Bartimeaus\_58 (A4), Beauxregard13\_64 (A3), BellusTerra\_59 (A4), Blackmoor\_58 (A4), Bombshell\_58 (A4), BreSam8\_64 (A3), Broseidon\_58 (A4), Bruiser\_57 (A4), BubbleTrouble\_57 (A4), Bumblebee11\_55 (A4), Burger\_56 (A4), BuzzBuzz\_61 (A3), Bxz2\_59 (A3), Caelakin\_58 (A4), Calvinny\_63 (A3), Camperdownii\_56 (A4), CentreCat\_58 (A4), Cerulean\_59 (A4), ChampagnePapi\_60 (A4), Chaph\_58 (A4), Cici\_56 (A4), Cindaradix\_53 (A4), Cintron\_57 (A4), Citius\_58 (A4), Clarenza\_57 (A4), Cocoaberry\_58 (A4), Colbster\_63 (A3), Commander\_58 (A4), Connomayer\_58 (A4), Cullens\_64 (A3), Daishi\_63 (A3), Datway\_56 (A4), Deano\_57 (A4), Dhanush\_58 (A4), Dieselweasel\_65 (A3), DirtyDunning\_57 (A4), Druantia\_58 (A4), Eagle\_58 (A4), Eapen\_58 (A4), EpicPhail\_65 (A3), Eris\_57 (A4), Eros\_58 (A4), Eurydice\_59 (A4), Farber\_64 (A3), Fernando\_64 (A3), Florean\_58 (A4), Flux\_58 (A4), Funston\_57 (A4), Gadost\_58 (A4), Gemma\_63 (A3), GingkoMaracino\_64 (A3), Grif\_64 (A3), Groupthink\_65 (A3), GtownJaz\_64 (A3), HamSlice\_56 (A4), Happiness\_57 (A4), HashRod\_65 (A3), HaveUMetTed\_65 (A3), Heliosoles\_63 (A3), Hercules11\_64 (A3), Holli\_57 (A4), Houdini22\_58 (A4), Huxley\_57 (A4), ICleared\_58 (A4), Iceman\_58 (A4), Iracema64\_59 (A4), JHC117\_62 (A3), Jaykayelowell\_56 (A4), JeppNRM\_65

(A3), JetBlade\_58 (A4), JoongJeon\_57 (A4), KFPoly\_57 (A4), Kalb97\_65 (A3), Kalnok\_65 (A3), Kampy\_57 (A4), Katalie136\_56 (A4), Kingmustik0402\_58 (A4), Koan\_55 (A4), Koreni\_57 (A4), Kratark\_57 (A4), Kremtemulon\_58 (A4), Kyee\_58 (A4), LHTSCC\_60 (A4), LappelDuVide\_58 (A4), LarryKay\_64 (A3), Lemur\_58 (A4), LeoAvram\_57 (A4), LittleB\_58 (A4), LittleGuy\_58 (A4), LochMonster\_59 (A4), Lorenzo\_58 (A4), Louie6\_63 (A3), LugYA\_67 (A3), Lunsford\_59 (A4), Mainiac\_64 (A3), Manu\_64 (A3), MarQuardt\_64 (A3), Marius\_65 (A3), Maxo\_59 (A4), Mayonnaise\_57 (A4), Mazhar510\_58 (A4), Medusa\_58 (A4), MeeZee\_58 (A4), Melvin\_60 (A4), Millski\_57 (A4), Miramae\_55 (A4), Misomonster\_65 (A3), MoneyMay\_63 (A3), Morpher26\_56 (A4), Morrow\_59 (A4), MuchMore\_67 (A3), Mundrea\_56 (A4), Nebs\_59 (A4), Nemo27\_58 (A4), Noelle\_57 (A4), NorthStar\_57 (A4), NotAPhaseMom\_58 (A4), Nyxis\_58 (A4), OKaNui\_58 (A4), Obama12\_59 (A4), Ohfah\_59 (A4), OlanP\_63 (A3), Ollie\_64 (A3), PGHhamlin\_66 (A3), Palestino\_57 (A4), Pawn\_64 (A3), Peaches\_57 (A4), Penny1\_65 (A3), Perplexer\_56 (A4), PeterPeter\_58 (A4), PetiteSangsue\_56 (A4), Phacado\_58 (A4), Felipe\_59 (A4), Phighter1804\_58 (A4), PhishRPhriends\_62 (A3), Phoebe\_65 (A3), Phontbonne\_58 (A4), Phoxy\_64 (A3), Phranny\_65 (A3), Pipcraft\_56 (A4), Polymorphads\_59 (A4), Pumbaa\_58 (A4), PurpleHaze\_64 (A3), Reba\_64 (A3), Relief\_57 (A4), Romney\_57 (A4), Roosevelt\_57 (A4), Rosa24\_56 (A4), Ruin\_58 (A4), Sabertooth\_58 (A4), Sabinator\_63 (A3), Scamp\_58 (A4), SenorClean\_55 (A4), Shaka\_57 (A4), SheldonCooper\_59 (A4), Shygu2\_56 (A4), Skipitt\_57 (A4), SoilDragon\_64 (A3), Soshari\_66 (A3), Sparxx\_59 (A4), Spike509\_64 (A3), Spino\_57 (A4), Stasia\_56 (A4), StepMih\_63 (A3), Stink\_55 (A4), Taquarus\_58 (A4), Thanksgivukkah\_57 (A4), TinaFeyge\_57 (A4), TinyPebbles\_62 (A3), Tinybot\_57 (A4), TiroTheta9\_58 (A4), TroyPia\_59 (A4), TygerBlood\_58 (A4), Ulysses\_57 (A4), Vix\_62 (A3), Wander\_58 (A4), Watson\_63 (A3), Wilbur\_58 (A4), Wile\_56 (A4), Wizard007\_58 (A4), Wooldri\_66 (A3), Xena\_55 (A4), YoSam321\_58 (A4), Zetzy\_63 (A3),

#### Start 56:

- Found in 43 of 1048 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 39 of 949
- Called 97.7% of time when present
- Phage (with cluster) where this start called: Ariel\_128 (J), BAKA\_130 (J), Bagrid\_130 (J), Beem\_132 (J), Bobby\_122 (J), Bombitas\_118 (J), Constella\_120 (J), Courthouse\_123 (J), Dallas\_131 (J), DmpstrDiver\_130 (J), Dove\_116 (J), Duke13\_125 (J), Ejimix\_124 (J), EricMillard\_122 (J), Halley\_132 (J), HokkenD\_120 (J), Hughesyang\_130 (J), JuicyJay\_127 (J), Kalah2\_121 (J), KashFlow\_124 (J), Klein\_127 (J), LittleE\_131 (J), Lucky2013\_123 (J), Marleymoo\_115 (J), MiaZeal\_127 (J), Minerva\_129 (J), NihilNomen\_132 (J), Odette\_132 (J), Omega\_138 (J), Optimus\_121 (J), Phoebus\_131 (J), Porcelain\_126 (J), Pound\_119 (J), Redno2\_122 (J), Schatzie\_126 (J), Squint\_125 (J), Superphikiman\_125 (J), Thibault\_112 (J), ThreeRngTarjay\_126 (J), Wanda\_129 (J), Yeet\_122 (J), Zelink\_125 (J),

#### Start 57:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: HINdeR\_55 (A7),

#### Start 59:

- Found in 120 of 1048 ( 11.5% ) of genes in pham
- Manual Annotations of this start: 42 of 949
- Called 44.2% of time when present

- Phage (with cluster) where this start called: B1\_54 (A3), BabyJohn\_57 (A3), BabyRay\_61 (A3), BlueBird\_63 (A3), Boohoo\_70 (A15), Bugatti\_61 (A3), Caviar\_60 (A3), Chiqui\_57 (A3), DekHockey33\_71 (A15), DropBear\_60 (A3), Fred313\_60 (A3), Giroux\_61 (A3), Heathen\_61 (A3), HelDan\_61 (A3), Hookmount\_60 (A3), Idleandcovert\_61 (A3), Isca\_60 (A3), JF2\_59 (A3), JF4\_59 (A3), Kachowdy\_60 (A3), KatherineG\_70 (A15), Lambert1\_60 (A3), Looper\_69 (A15), MA5\_61 (A3), MK4\_61 (A3), Marchesa\_60 (A3), Margo\_60 (A3), Noella\_60 (A3), Norbert\_58 (A3), Panamaxus\_58 (A3), Phantastic\_62 (A3), Phlei\_52 (A13), Pistachio\_62 (A3), Pocahontas\_60 (A3), Poppicle\_60 (A3), Pukovnik\_60 (A2), Puppy\_62 (A3), QuinnKiro\_59 (A3), ResDef\_60 (A3), Rockstar\_59 (A3), Rosalind\_68 (A15), SaturnRing\_61 (A3), Scout\_61 (A3), Sknot\_62 (A2), Soups\_70 (A15), SweetiePie\_62 (A2), TNguyen7\_62 (A3), Terrific\_63 (A2), Texage\_59 (A3), Todacoro\_60 (A3), Turbido\_63 (A2), Veracruz\_59 (A3), Waits\_70 (A15),

Start 60:

- Found in 181 of 1048 ( 17.3% ) of genes in pham
- Manual Annotations of this start: 138 of 949
- Called 83.4% of time when present
- Phage (with cluster) where this start called: 20ES\_65 (A2), 40AC\_62 (A17), AN3\_65 (A2), AN9\_64 (A2), ANI8\_64 (A2), AbbyPaige\_64 (A2), Agape74\_64 (A2), Aliter\_64 (A9), Alma\_62 (A9), AnnaL29\_63 (A2), Anselm\_63 (A2), ArcherNM\_56 (A2), Arissanae\_62 (A9), BABullseye\_56 (A6), BabyBack\_60 (A2), Bactobuster\_60 (A2), Baehexic\_61 (A2), Beemo\_64 (A9), BengiVuitton\_63 (A2), Benvolio\_59 (A2), BiancaTri92\_62 (A2), Blinn1\_66 (A6), BobSwaget\_57 (A2), BogosyJay\_62 (A9), Buggy\_64 (A2), C3\_58 (A2), CRB1\_65 (A2), Candra\_61 (A6), Centaur\_63 (A2), Changeling\_61 (A2), Chargerpower\_60 (A), Charm\_61 (A9), ChipMunk\_64 (A2), Conquerage\_62 (A9), Cookiedough\_63 (A6), Crucio\_62 (A2), DaVinci\_61 (A6), Dalmatian\_63 (A2), Darrell\_65 (A9), DARTHPhader\_59 (A12), Deloris\_63 (A2), Dignity\_64 (A2), Dorothea\_63 (A6), Drake55\_64 (A2), DreamTeam1\_61 (A9), DudeLittle\_61 (A2), EZMoney23\_58 (A2), Echild\_62 (A2), Eidsmoe\_62 (A9), Elephantoon\_62 (A9), EmyBug\_61 (A9), Equemioh13\_62 (A2), EricB\_62 (A6), EvilGenius\_63 (A2), Fameo\_62 (A2), Fayely\_62 (A9), FiringLine\_62 (A2), First\_0064 (A2), Flare16\_62 (A2), Gail\_63 (A14), Garak\_65 (A6), Georgie2\_63 (A2), Gladiator\_61 (A6), Gratitude\_60 (A2), GreedyLawyer\_61 (A6), Gruunaga\_64 (A6), HarryHoudini\_63 (A2), Heffalump\_61 (A2), Helmet\_65 (A6), Hexamo\_64 (A6), HortumSL17\_64 (A9), Indra\_67 (A6), IronMan\_61 (A2), Iwokeuplikedis\_64 (A2), Jaan\_62 (A2), Jeffabunny\_64 (A6), JewelBug\_63 (A6), Jordennis\_62 (A6), JoshKayV\_64 (A2), Kalpine\_60 (A2), Kazan\_64 (A6), Keziacharles14\_63 (A9), KingCyrus\_63 (A2), Kipper29\_63 (A6), LadyBird\_67 (A2), Landor\_62 (A2), Larenn\_60 (A2), Leogania\_62 (A2), Leviathan\_64 (A2), LilTurb\_63 (A2), LionsBait\_63 (A2), Lokk\_58 (A2), LoneWolf\_64 (A9), Luchador\_64 (A14), Malec\_61 (A2), Maminina\_62 (A9), MiculUcigas\_62 (A2), Miko\_58 (A2), Myxus\_63 (A9), NaSiaTalie\_62 (A2), Neeharika16\_62 (A6), Newrala\_63 (A6), NicoleTera\_60 (A2), Odin\_61 (A2), Ph8s\_63 (A2), Phaded\_61 (A2), Phaeder\_63 (A9), Phonnegut\_64 (A9), Piro94\_62 (A2), Pmask\_62 (A6), Polyphemus\_63 (A6), Power\_61 (A2), Priamo\_65 (A6), Priya\_62 (A9), QueenB2\_61 (A2), QueenBeesly\_62 (A2), Rachaly\_60 (A2), Rahalelujah\_63 (A9), RedRock\_63 (A2), Refuge\_59 (A12), Retro23\_63 (A2), Rifter\_64 (A6), Scherzo\_64 (A9), SemperFi\_63 (A2), SheaKeira\_60 (A9), Smeagan\_65 (A2), SnapTap\_62 (A2), SororFago\_62 (A14), Spouty\_62 (A9), Steamy\_58 (A12), Sunhee\_64 (A14), Superchunk\_61 (A2), TarsusIV\_59 (A2), Temprado\_65 (A6), Toaka\_64 (A9), ToneTone\_61 (A6), Trixie\_60 (A2), Trooper\_63 (A2), Tubs\_63 (A9), Ugenie5\_60 (A9), Updawg\_63 (A2), VA6\_63 (A2), VC3\_64 (A2), Vanisoa\_63 (A9), VohminGhazi\_63 (A6), Whabigail7\_63 (A2), WideWale\_63 (A2), XianYue\_60 (A2),

Yecey3\_64 (A9), Yokurt\_63 (A6), Zimmer\_59 (A12),

Start 61:

- Found in 50 of 1048 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 6 of 949
- Called 12.0% of time when present
- Phage (with cluster) where this start called: Cheetobro\_76 (K4), Cuco\_58 (A5), Fionnbharth\_76 (K4), Herbertwm\_59 (A2), Mitti\_76 (K4), OmniCritical\_76 (K4),

Start 65:

- Found in 49 of 1048 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 18 of 949
- Called 40.8% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_64 (A6), BlessJoy\_63 (A6), Blue7\_65 (A6), Chartreuse\_60 (A6), CloudWang3\_65 (A6), Hammer\_64 (A6), Hoot\_58 (A6), Isiphiwo\_61 (A6), Koko\_66 (A6), Lilbunny\_63 (A6), McFly\_63 (A6), Roksolana\_65 (A6), SmellyB\_63 (A6), SuperAwesome\_63 (A6), SuperCallie99\_60 (A6), Tucker\_64 (A6), Wiks\_63 (A6), WunderPhul\_64 (A6), Zaka\_64 (A6), Zulu\_65 (A6),

Start 66:

- Found in 27 of 1048 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 21 of 949
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Anglerfish\_60 (A1), Arcanine\_62 (A1), Hami1\_55 (A1), ILeeKay\_62 (A1), KBG\_60 (A1), Keelan\_108 (DP), Manatee\_60 (A1), MissDaisy\_73 (K4), Monet\_63 (A1), Patt\_72 (K4), RedWattleHog\_2 (DX), Reptar3000\_73 (K4), Rhynn\_58 (A1), Rutherferd\_62 (A1), Slagathor\_62 (A1), Stormageddon\_2 (DX), TheloniousMonk\_60 (A1), Topgun\_58 (A1), Treddle\_61 (A1), Violet\_58 (A1), Wilkins\_58 (A1),

Start 68:

- Found in 5 of 1048 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Aminay\_72 (K7), JfliX2\_97 (CF), PP\_61 (A7),

Start 69:

- Found in 31 of 1048 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 27 of 949
- Called 90.3% of time when present
- Phage (with cluster) where this start called: Airmid\_59 (A5), Archetta\_58 (A5), Benedict\_62 (A5), Bluefalcon\_56 (A5), CactusRose\_58 (A1), Chadwick\_61 (A5), Coog\_56 (A5), Discoknowium\_57 (A5), Dublin\_58 (A5), EITiger69\_61 (A5), George\_55 (A5), Ghoulyboy\_60 (A5), Jabiru\_60 (A5), LittleCherry\_57 (A5), Lucyedi\_64 (A16), MarysWell\_58 (A5), Micasa\_58 (A5), Midas2\_56 (A5), Milcery\_57 (A5), Naca\_59 (A5), PetterN\_64 (A5), ScorpiA\_63 (A5), Swirley\_59 (A5), SydNat\_60 (A5), Theia\_57 (A5), Twigg\_56 (A5), UnionJack\_60 (A5), Zolita\_59 (A5),

Start 70:

- Found in 14 of 1048 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 3 of 949



- Called 28.6% of time when present
- Phage (with cluster) where this start called: Bachita\_137 (CQ1), ClubL\_134 (CQ1), Lozinak\_134 (CQ1), TPA4\_77 (singleton),

#### Start 72:

- Found in 9 of 1048 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 7 of 949
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Acolyte\_56 (A2), KSSJEB\_59 (A1), KyMonks1A\_62 (A1), LilBib\_59 (A1), QTRlifeCrisis\_59 (A1), Sunshine924\_61 (A1), Turj99\_57 (A1),

#### Start 73:

- Found in 25 of 1048 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 24 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AgentM\_58 (A5), Aragog\_58 (A5), Astro\_64 (A8), Bonamassa\_56 (A5), Conspiracy\_59 (A5), Danforth\_64 (A8), Dixon\_63 (A8), Expelliarmus\_61 (A8), ForGetIt\_59 (A5), Groundhog\_63 (A8), HuhtaEnerson15\_57 (A5), Jovo\_59 (A5), Lev2\_59 (A5), NearlyHeadless\_64 (A8), Ohgeesy\_65 (CZ), Phillis\_61 (A8), Phlorence\_57 (A5), PickleBack\_59 (A5), Prinash11\_56 (A5), Roary\_65 (A8), Saintus\_59 (A8), Smeadley\_64 (A8), Stephig9\_63 (A8), Tarynearal\_55 (A5), Tiger\_58 (A5),

#### Start 75:

- Found in 44 of 1048 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 14 of 949
- Called 34.1% of time when present
- Phage (with cluster) where this start called: D32\_62 (A2), Duplo\_63 (A2), Gilberta\_62 (A11), Koduck\_62 (A2), MaCh\_61 (A11), Mabel\_61 (A11), MissWhite\_60 (A2), Mulciber\_60 (A11), Naji\_63 (A2), Orange\_60 (A11), Serenity\_62 (A2), Sham4\_61 (A11), Snape\_61 (A11), StarStuff\_63 (A2), TipsytheTRex\_59 (A2),

#### Start 77:

- Found in 6 of 1048 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 4 of 949
- Called 66.7% of time when present
- Phage (with cluster) where this start called: EagleEye\_65 (A16), Jeeves\_65 (A14), Loser\_63 (A2), PainterBoy\_64 (A16),

#### Start 78:

- Found in 26 of 1048 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 16 of 949
- Called 73.1% of time when present
- Phage (with cluster) where this start called: Bobquesha\_77 (K4), Boilgate\_68 (K8), Chancellor\_76 (K4), Eponine\_78 (K4), JF1\_76 (K4), Juliette\_78 (K4), Kraw\_77 (K4), Lebo14\_77 (K4), Malthus\_77 (K4), Phrappuccino\_127 (AA), Ruthiejr\_77 (K4), SamScheppers\_75 (K4), Settecandela\_127 (AA), Shagrat\_101 (CF), Slarp\_76 (K4), Taquito\_75 (K4), Wintermute\_76 (K4), Y10\_73 (K4), Y2\_73 (K4),

#### Start 79:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 949

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adzzy\_64 (A2), Che12\_63 (A2),

#### Start 80:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GaugeLDP\_59 (A2),

#### Start 81:

- Found in 4 of 1048 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gaia\_88 (X), Nebkiss\_87 (X),

#### Start 82:

- Found in 8 of 1048 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bimmel\_30 (BT), DroogsArmy\_56 (A7), Madraxi\_99 (CF), Timshel\_57 (A7),

#### Start 84:

- Found in 4 of 1048 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Anthony\_64 (A20),

#### Start 85:

- Found in 37 of 1048 ( 3.5% ) of genes in pham
- Manual Annotations of this start: 32 of 949
- Called 89.2% of time when present
- Phage (with cluster) where this start called: Alatin\_50 (CA), Alpacados\_50 (CA), AppleCloud\_48 (CA), Belenaria\_51 (CA), Bonanza\_52 (CA), Bradshaw\_51 (CA), Bryce\_50 (CA), CosmicSans\_51 (CA), Dinger\_50 (CA), Erik\_51 (CA), Espica\_51 (CA), Gollum\_51 (CA), Harlequin\_50 (CA), Hiro\_51 (CA), Jester\_50 (CA), Lillie\_51 (CA), Naiad\_50 (CA), Nancinator\_51 (CA), Natosaleda\_50 (CA), Partridge\_50 (CA), PhailMary\_50 (CA), Phrankenstien\_51 (CA), RGL3\_45 (CA), Rasputin\_51 (CA), RexFury\_50 (CA), Rhodalysa\_51 (CA), Shuman\_51 (CA), StCroix\_50 (CA), Swann\_51 (CA), TWAMP\_51 (CA), Takoda\_51 (CA), UhSalsa\_51 (CA), Yogi\_51 (CA),

#### Start 86:

- Found in 28 of 1048 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 10.7% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_63 (A7), Sheen\_60 (A7), Toro\_61 (A7),

#### Start 87:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 2 of 949
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BrutonGaster\_108 (CQ2), OneUp\_118 (CQ2),

#### Start 88:

- Found in 35 of 1048 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 28 of 949
- Called 91.4% of time when present
- Phage (with cluster) where this start called: Alkhayr\_10 (O), Ashwin\_11 (O), Blessica\_9 (O), Bora\_10 (O), Catdawg\_9 (O), Corndog\_11 (O), Familton\_10 (O), Firecracker\_10 (O), FoulBall\_9 (O), Idergollasper\_9 (O), JangDynasty\_9 (O), KingPhillip3\_9 (O), Krili\_10 (O), MadKillah\_10 (O), Mori\_10 (O), Murai\_10 (O), NiebruSaylor\_10 (O), PhinkBoden\_133 (CQ1), Ryadel\_12 (O), SchoolBus\_9 (O), Schuy\_10 (O), Shida\_10 (O), Smooch\_11 (O), TelAviv\_9 (O), Vagabond\_10 (O), Vorrrps\_10 (O), Wildflower\_10 (O), Winget\_10 (O), Wogge42\_10 (O), YungJamal\_11 (O), Zakhe101\_11 (O), Zebo\_9 (O),

#### Start 89:

- Found in 17 of 1048 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 10 of 949
- Called 82.4% of time when present
- Phage (with cluster) where this start called: Abscondus\_133 (CQ1), Aphelion\_133 (CQ1), CherryonLim\_2 (CT), Cucurbita\_135 (CQ1), Dusty\_130 (CQ1), Engineer\_136 (CQ1), Geeche\_132 (CQ1), JonJames\_144 (DD), Miskis\_133 (CQ1), Smoothie\_135 (CQ1), SteveFrench\_16 (CS2), Toniann\_134 (CQ1), Vine\_3 (CT), Yvonnetastic\_141 (DD),

#### Start 91:

- Found in 16 of 1048 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 18.8% of time when present
- Phage (with cluster) where this start called: Culver\_133 (CQ1), Norvs\_132 (CQ1), WilliamBoone\_132 (CQ1),

#### Start 92:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Smeagol\_62 (A1),

#### Start 93:

- Found in 5 of 1048 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Anon\_69 (A15), Oofda\_70 (A15), Warrior24\_72 (A15),

#### Start 97:

- Found in 4 of 1048 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: REQ2\_71 (singleton),

#### Start 98:

- Found in 106 of 1048 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 3.8% of time when present
- Phage (with cluster) where this start called: Bachome\_63 (A11), Kerberos\_63 (A2), Petersenfast\_59 (A11), Tomathan\_63 (A2),

#### Start 102:

- Found in 44 of 1048 ( 4.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.3% of time when present
- Phage (with cluster) where this start called: SeresaTree\_235 (BK1),

#### Start 106:

- Found in 22 of 1048 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 12 of 949
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Anaysia\_70 (A15), Battleship\_72 (A15), Epsocamisio\_67 (A15), JSwag\_69 (A15), LastResort\_68 (A15), MinecraftSteve\_70 (A15), Nebulosus\_68 (A15), ReMo\_68 (A15), Remus\_70 (A15), ShayRa\_70 (A15), Strosahl\_70 (A15), Switzerland\_69 (A15),

#### Start 109:

- Found in 152 of 1048 ( 14.5% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Ebony\_61 (A11), MyraDee\_58 (A18), Salz\_60 (A11),

#### Start 110:

- Found in 1 of 1048 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ponzi\_32 (singleton),

#### Start 113:

- Found in 67 of 1048 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Kinmap\_60 (A21), Nedarya\_66 (A15), Tristan\_58 (A2),

#### Start 114:

- Found in 71 of 1048 ( 6.8% ) of genes in pham
- Manual Annotations of this start: 3 of 949
- Called 5.6% of time when present
- Phage (with cluster) where this start called: BobbyDazzler\_51 (CA), Krishelle\_51 (CA), RER2\_44 (CA), Yoncess\_50 (CA),

#### Start 116:

- Found in 7 of 1048 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 42.9% of time when present

- Phage (with cluster) where this start called: Bradman\_61 (A2), MajorMajor\_61 (A2), Quokka\_60 (A2),

Start 117:

- Found in 2 of 1048 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 50.0% of time when present
- Phage (with cluster) where this start called: NothingSpecial\_59 (A2),

Start 119:

- Found in 11 of 1048 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 18.2% of time when present
- Phage (with cluster) where this start called: IgnatiusPatJac\_59 (A1), Teodoridan\_57 (A1),

Start 120:

- Found in 51 of 1048 ( 4.9% ) of genes in pham
- Manual Annotations of this start: 1 of 949
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Hannaconda\_119 (J),

### Summary by clusters:

There are 48 clusters represented in this pham: A, singleton, DD, BH, BT, FB, K7, DX, K4, K8, DP, A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, CQ1, CS2, AA, E, CA, J, CG, CF, O, CZ, BK1, CQ2, X, CT, A20, A21, AZ1, BE1,

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 37 was manually annotated 2 times for cluster A1.
- Start number 38 was manually annotated 1 time for cluster A1.
- Start number 49 was manually annotated 181 times for cluster A1.
- Start number 66 was manually annotated 15 times for cluster A1.
- Start number 69 was manually annotated 1 time for cluster A1.
- Start number 72 was manually annotated 6 times for cluster A1.
- Start number 92 was manually annotated 1 time for cluster A1.
- Start number 119 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A10:

- Start number 51 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 52 was manually annotated 14 times for cluster A11.
- Start number 75 was manually annotated 7 times for cluster A11.
- Start number 98 was manually annotated 1 time for cluster A11.
- Start number 109 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 60 was manually annotated 4 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 60 was manually annotated 3 times for cluster A14.
- Start number 77 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A15:

- Start number 59 was manually annotated 7 times for cluster A15.
- Start number 93 was manually annotated 1 time for cluster A15.
- Start number 106 was manually annotated 12 times for cluster A15.
- Start number 113 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 69 was manually annotated 1 time for cluster A16.
- Start number 77 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 109 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 51 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 41 was manually annotated 1 time for cluster A2.
- Start number 50 was manually annotated 3 times for cluster A2.
- Start number 52 was manually annotated 2 times for cluster A2.
- Start number 54 was manually annotated 1 time for cluster A2.
- Start number 59 was manually annotated 3 times for cluster A2.
- Start number 60 was manually annotated 76 times for cluster A2.
- Start number 61 was manually annotated 1 time for cluster A2.
- Start number 72 was manually annotated 1 time for cluster A2.
- Start number 75 was manually annotated 7 times for cluster A2.
- Start number 77 was manually annotated 1 time for cluster A2.
- Start number 79 was manually annotated 2 times for cluster A2.
- Start number 80 was manually annotated 1 time for cluster A2.
- Start number 98 was manually annotated 2 times for cluster A2.
- Start number 117 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 84 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 44 was manually annotated 23 times for cluster A3.
- Start number 55 was manually annotated 58 times for cluster A3.
- Start number 59 was manually annotated 32 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 29 was manually annotated 1 time for cluster A4.
- Start number 55 was manually annotated 136 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 61 was manually annotated 1 time for cluster A5.
- Start number 69 was manually annotated 25 times for cluster A5.
- Start number 73 was manually annotated 12 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 60 was manually annotated 24 times for cluster A6.
- Start number 65 was manually annotated 18 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 57 was manually annotated 1 time for cluster A7.
- Start number 68 was manually annotated 1 time for cluster A7.
- Start number 82 was manually annotated 2 times for cluster A7.
- Start number 86 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 73 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 60 was manually annotated 30 times for cluster A9.

Info for manual annotations of cluster AA:

- Start number 78 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AZ1:

- Start number 17 was manually annotated 1 time for cluster AZ1.
- Start number 33 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster BE1:

- Start number 46 was manually annotated 3 times for cluster BE1.

Info for manual annotations of cluster BH:

- Start number 35 was manually annotated 1 time for cluster BH.

Info for manual annotations of cluster BK1:

- Start number 46 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster CA:

- Start number 85 was manually annotated 32 times for cluster CA.
- Start number 114 was manually annotated 3 times for cluster CA.

Info for manual annotations of cluster CF:

- Start number 68 was manually annotated 1 time for cluster CF.
- Start number 78 was manually annotated 1 time for cluster CF.
- Start number 82 was manually annotated 1 time for cluster CF.

Info for manual annotations of cluster CQ1:

- Start number 70 was manually annotated 3 times for cluster CQ1.
- Start number 88 was manually annotated 1 time for cluster CQ1.
- Start number 89 was manually annotated 5 times for cluster CQ1.
- Start number 91 was manually annotated 3 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 87 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster CS2:

- Start number 89 was manually annotated 1 time for cluster CS2.

Info for manual annotations of cluster CT:

- Start number 89 was manually annotated 2 times for cluster CT.

Info for manual annotations of cluster CZ:

- Start number 73 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster DD:

- Start number 89 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DP:

- Start number 66 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster DX:

- Start number 66 was manually annotated 2 times for cluster DX.

Info for manual annotations of cluster E:

- Start number 28 was manually annotated 19 times for cluster E.
- Start number 53 was manually annotated 4 times for cluster E.

Info for manual annotations of cluster FB:

- Start number 14 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster J:

- Start number 56 was manually annotated 39 times for cluster J.
- Start number 120 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K4:

- Start number 61 was manually annotated 4 times for cluster K4.
- Start number 66 was manually annotated 3 times for cluster K4.
- Start number 78 was manually annotated 12 times for cluster K4.

Info for manual annotations of cluster K7:

- Start number 68 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 78 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster O:

- Start number 88 was manually annotated 27 times for cluster O.

Info for manual annotations of cluster X:

- Start number 20 was manually annotated 1 time for cluster X.
- Start number 81 was manually annotated 2 times for cluster X.

***Gene Information:***



Gene: 20ES\_65 Start: 40275, Stop: 39802, Start Num: 60  
Candidate Starts for 20ES\_65:  
(Start: 60 @40275 has 138 MA's), (Start: 113 @40146 has 1 MA's), (164, 39945),

Gene: 244\_23 Start: 13095, Stop: 13610, Start Num: 28  
Candidate Starts for 244\_23:  
(Start: 28 @13095 has 19 MA's), (Start: 53 @13140 has 4 MA's), (137, 13392), (154, 13488),

Gene: 40AC\_62 Start: 41010, Stop: 40516, Start Num: 60  
Candidate Starts for 40AC\_62:  
(Start: 60 @41010 has 138 MA's), (Start: 113 @40878 has 1 MA's), (164, 40677), (187, 40590),

Gene: A6\_53 Start: 38565, Stop: 38089, Start Num: 49  
Candidate Starts for A6\_53:  
(Start: 49 @38565 has 181 MA's), (188, 38160), (213, 38121),

Gene: ACFishhook\_62 Start: 39579, Stop: 39103, Start Num: 55  
Candidate Starts for ACFishhook\_62:  
(Start: 55 @39579 has 194 MA's), (182, 39165), (187, 39147), (200, 39114),

Gene: AFIS\_56 Start: 39287, Stop: 38796, Start Num: 49  
Candidate Starts for AFIS\_56:  
(Start: 49 @39287 has 181 MA's), (Start: 109 @39173 has 3 MA's), (167, 38945), (188, 38867), (213, 38828),

Gene: AN3\_65 Start: 38990, Stop: 38517, Start Num: 60  
Candidate Starts for AN3\_65:  
(Start: 60 @38990 has 138 MA's), (164, 38660),

Gene: AN9\_64 Start: 40015, Stop: 39551, Start Num: 60  
Candidate Starts for AN9\_64:  
(Start: 60 @40015 has 138 MA's), (164, 39700), (175, 39655),

Gene: ANI8\_64 Start: 40015, Stop: 39551, Start Num: 60  
Candidate Starts for ANI8\_64:  
(Start: 60 @40015 has 138 MA's), (164, 39700), (175, 39655),

Gene: AbbyPaige\_64 Start: 40244, Stop: 39771, Start Num: 60  
Candidate Starts for AbbyPaige\_64:  
(Start: 41 @40268 has 1 MA's), (Start: 59 @40250 has 42 MA's), (Start: 60 @40244 has 138 MA's),  
(Start: 113 @40115 has 1 MA's), (164, 39914),

Gene: AbbysRanger\_56 Start: 38817, Stop: 38347, Start Num: 55  
Candidate Starts for AbbysRanger\_56:  
(45, 38823), (Start: 55 @38817 has 194 MA's), (124, 38628), (195, 38361),

Gene: Abbysshoes\_62 Start: 41333, Stop: 40857, Start Num: 49  
Candidate Starts for Abbysshoes\_62:  
(Start: 49 @41333 has 181 MA's), (188, 40928), (213, 40889),

Gene: Abdiel\_58 Start: 38979, Stop: 38509, Start Num: 55  
Candidate Starts for Abdiel\_58:  
(Start: 55 @38979 has 194 MA's), (124, 38790),

Gene: Abrogate\_590 Start: 42339, Stop: 41845, Start Num: 49

Candidate Starts for Abrogate\_590:

(Start: 49 @42339 has 181 MA's), (188, 41934), (213, 41895),

Gene: Abscondus\_133 Start: 73681, Stop: 74124, Start Num: 89

Candidate Starts for Abscondus\_133:

(Start: 70 @73654 has 3 MA's), (Start: 89 @73681 has 10 MA's), (Start: 91 @73684 has 3 MA's), (167, 74002), (188, 74080),

Gene: Achebe\_55 Start: 38800, Stop: 38330, Start Num: 55

Candidate Starts for Achebe\_55:

(45, 38806), (Start: 55 @38800 has 194 MA's), (124, 38611), (195, 38344),

Gene: Acme\_61 Start: 40894, Stop: 40409, Start Num: 49

Candidate Starts for Acme\_61:

(40, 40906), (Start: 49 @40894 has 181 MA's), (96, 40846), (Start: 114 @40786 has 3 MA's), (Start: 119 @40768 has 1 MA's), (163, 40597), (167, 40576), (188, 40498), (213, 40459),

Gene: Acolyte\_56 Start: 38910, Stop: 38446, Start Num: 72

Candidate Starts for Acolyte\_56:

(12, 39048), (Start: 72 @38910 has 7 MA's), (149, 38655), (164, 38592), (187, 38505),

Gene: Adahisdi\_60 Start: 41973, Stop: 41479, Start Num: 49

Candidate Starts for Adahisdi\_60:

(Start: 49 @41973 has 181 MA's), (188, 41568), (213, 41529),

Gene: Adzzy\_64 Start: 38861, Stop: 38406, Start Num: 79

Candidate Starts for Adzzy\_64:

(Start: 79 @38861 has 2 MA's), (164, 38552), (175, 38507),

Gene: Aeneas\_63 Start: 42758, Stop: 42216, Start Num: 49

Candidate Starts for Aeneas\_63:

(Start: 49 @42758 has 181 MA's), (188, 42353), (213, 42266),

Gene: Agaliana\_55 Start: 37546, Stop: 37070, Start Num: 49

Candidate Starts for Agaliana\_55:

(34, 37576), (Start: 49 @37546 has 181 MA's), (188, 37141), (213, 37102),

Gene: Agape74\_64 Start: 40238, Stop: 39765, Start Num: 60

Candidate Starts for Agape74\_64:

(Start: 41 @40262 has 1 MA's), (Start: 59 @40244 has 42 MA's), (Start: 60 @40238 has 138 MA's), (Start: 113 @40109 has 1 MA's), (164, 39908),

Gene: AgentM\_58 Start: 39657, Stop: 39199, Start Num: 73

Candidate Starts for AgentM\_58:

(Start: 73 @39657 has 24 MA's), (Start: 109 @39555 has 3 MA's), (124, 39495), (132, 39459), (168, 39318), (188, 39243), (202, 39213),

Gene: Aglet\_65 Start: 39622, Stop: 39146, Start Num: 55

Candidate Starts for Aglet\_65:

(Start: 44 @39628 has 23 MA's), (Start: 55 @39622 has 194 MA's), (Start: 98 @39547 has 3 MA's), (187, 39190), (200, 39157),

Gene: AgronaGT15\_63 Start: 39470, Stop: 38994, Start Num: 55  
Candidate Starts for AgronaGT15\_63:  
(Start: 44 @39476 has 23 MA's), (Start: 55 @39470 has 194 MA's), (Start: 98 @39395 has 3 MA's),  
(187, 39038), (200, 39005),

Gene: Airmid\_59 Start: 39805, Stop: 39341, Start Num: 69  
Candidate Starts for Airmid\_59:  
(Start: 61 @39820 has 6 MA's), (Start: 69 @39805 has 27 MA's), (Start: 109 @39697 has 3 MA's),  
(124, 39637), (168, 39460), (177, 39427), (188, 39385), (202, 39355),

Gene: Ajay\_60 Start: 40949, Stop: 40473, Start Num: 49  
Candidate Starts for Ajay\_60:  
(Start: 49 @40949 has 181 MA's), (188, 40544), (213, 40505),

Gene: Alatin\_50 Start: 36875, Stop: 36435, Start Num: 85  
Candidate Starts for Alatin\_50:  
(Start: 85 @36875 has 32 MA's), (Start: 114 @36773 has 3 MA's), (160, 36596), (167, 36557), (168,  
36554), (171, 36545), (188, 36479),

Gene: Albee\_58 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Albee\_58:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Alberto7\_59 Start: 39315, Stop: 38845, Start Num: 55  
Candidate Starts for Alberto7\_59:  
(Start: 55 @39315 has 194 MA's), (124, 39126),

Gene: Aliter\_64 Start: 39965, Stop: 39501, Start Num: 60  
Candidate Starts for Aliter\_64:  
(Start: 60 @39965 has 138 MA's), (155, 39698), (161, 39671), (164, 39650), (187, 39563),

Gene: Alkhayr\_10 Start: 3488, Stop: 2868, Start Num: 88  
Candidate Starts for Alkhayr\_10:  
(Start: 88 @3488 has 28 MA's), (153, 3215), (199, 3026), (211, 3002), (214, 2927),

Gene: Alma\_62 Start: 39997, Stop: 39533, Start Num: 60  
Candidate Starts for Alma\_62:  
(Start: 60 @39997 has 138 MA's), (155, 39730), (161, 39703), (164, 39682), (187, 39595),

Gene: Alpacados\_50 Start: 36768, Stop: 36328, Start Num: 85  
Candidate Starts for Alpacados\_50:  
(Start: 85 @36768 has 32 MA's), (Start: 114 @36666 has 3 MA's), (160, 36489), (167, 36450), (168,  
36447), (171, 36438), (188, 36372),

Gene: Alsfro\_64 Start: 40578, Stop: 40075, Start Num: 37  
Candidate Starts for Alsfro\_64:  
(Start: 37 @40578 has 2 MA's), (Start: 72 @40554 has 7 MA's), (Start: 109 @40449 has 3 MA's), (167,  
40221), (188, 40143),

Gene: Altman\_62 Start: 41055, Stop: 40579, Start Num: 49  
Candidate Starts for Altman\_62:  
(22, 41109), (Start: 49 @41055 has 181 MA's), (188, 40650), (213, 40611),

Gene: Alvin\_58 Start: 40262, Stop: 39786, Start Num: 49  
Candidate Starts for Alvin\_58:  
(Start: 49 @40262 has 181 MA's), (167, 39935), (188, 39857), (213, 39818),

Gene: Aminay\_72 Start: 47263, Stop: 47727, Start Num: 68  
Candidate Starts for Aminay\_72:  
(Start: 68 @47263 has 3 MA's), (76, 47275), (Start: 84 @47287 has 1 MA's), (Start: 86 @47290 has 1 MA's), (Start: 109 @47359 has 3 MA's), (150, 47521), (151, 47527), (161, 47590), (176, 47653), (181, 47671), (184, 47677), (188, 47698), (203, 47722),

Gene: Anaysia\_70 Start: 39921, Stop: 39553, Start Num: 106  
Candidate Starts for Anaysia\_70:  
(47, 40029), (Start: 59 @40011 has 42 MA's), (Start: 106 @39921 has 12 MA's), (160, 39711), (190, 39585), (200, 39567),

Gene: Aneem\_62 Start: 39371, Stop: 38874, Start Num: 52  
Candidate Starts for Aneem\_62:  
(Start: 52 @39371 has 16 MA's), (Start: 75 @39335 has 14 MA's), (Start: 98 @39293 has 3 MA's), (Start: 109 @39239 has 3 MA's), (Start: 120 @39200 has 1 MA's), (153, 39077), (162, 39035), (164, 39023), (208, 38888),

Gene: Anglerfish\_60 Start: 41203, Stop: 40730, Start Num: 66  
Candidate Starts for Anglerfish\_60:  
(Start: 66 @41203 has 21 MA's), (188, 40798),

Gene: AnnaL29\_63 Start: 40449, Stop: 39985, Start Num: 60  
Candidate Starts for AnnaL29\_63:  
(Start: 60 @40449 has 138 MA's), (155, 40182), (164, 40134),

Gene: Annyong\_58 Start: 39023, Stop: 38553, Start Num: 55  
Candidate Starts for Annyong\_58:  
(Start: 55 @39023 has 194 MA's), (124, 38834),

Gene: Anon\_69 Start: 39947, Stop: 39528, Start Num: 93  
Candidate Starts for Anon\_69:  
(Start: 55 @40010 has 194 MA's), (Start: 93 @39947 has 1 MA's), (Start: 106 @39905 has 12 MA's), (Start: 113 @39863 has 1 MA's), (139, 39758), (155, 39710), (160, 39686), (176, 39614), (190, 39560), (200, 39542),

Gene: Anselm\_63 Start: 40154, Stop: 39681, Start Num: 60  
Candidate Starts for Anselm\_63:  
(Start: 41 @40178 has 1 MA's), (Start: 59 @40160 has 42 MA's), (Start: 60 @40154 has 138 MA's), (Start: 113 @40025 has 1 MA's), (164, 39824),

Gene: Anthony\_64 Start: 40512, Stop: 40060, Start Num: 84  
Candidate Starts for Anthony\_64:  
(Start: 84 @40512 has 1 MA's), (Start: 98 @40479 has 3 MA's), (124, 40365), (129, 40338), (162, 40221), (190, 40107), (192, 40104), (200, 40089),

Gene: Anubis\_67 Start: 39514, Stop: 39032, Start Num: 44  
Candidate Starts for Anubis\_67:

(Start: 44 @39514 has 23 MA's), (Start: 55 @39508 has 194 MA's), (Start: 98 @39433 has 3 MA's), (187, 39076), (200, 39043),

Gene: Aphelion\_133 Start: 74553, Stop: 74996, Start Num: 89

Candidate Starts for Aphelion\_133:

(Start: 70 @74526 has 3 MA's), (Start: 89 @74553 has 10 MA's), (Start: 91 @74556 has 3 MA's), (167, 74874), (188, 74952),

Gene: AppleCloud\_48 Start: 36593, Stop: 36153, Start Num: 85

Candidate Starts for AppleCloud\_48:

(Start: 85 @36593 has 32 MA's), (Start: 114 @36491 has 3 MA's), (160, 36314), (167, 36275), (168, 36272), (171, 36263), (188, 36197),

Gene: Applejack\_56 Start: 38708, Stop: 38214, Start Num: 49

Candidate Starts for Applejack\_56:

(Start: 49 @38708 has 181 MA's), (188, 38303), (213, 38264),

Gene: Aragog\_58 Start: 39677, Stop: 39219, Start Num: 73

Candidate Starts for Aragog\_58:

(Start: 73 @39677 has 24 MA's), (Start: 109 @39575 has 3 MA's), (124, 39515), (132, 39479), (168, 39338), (188, 39263), (202, 39233),

Gene: Arcanine\_62 Start: 41927, Stop: 41433, Start Num: 66

Candidate Starts for Arcanine\_62:

(Start: 66 @41927 has 21 MA's), (188, 41522), (213, 41483),

Gene: ArcherNM\_56 Start: 39476, Stop: 39009, Start Num: 60

Candidate Starts for ArcherNM\_56:

(Start: 59 @39482 has 42 MA's), (Start: 60 @39476 has 138 MA's), (155, 39200), (164, 39152), (187, 39065),

Gene: Archetta\_58 Start: 40093, Stop: 39629, Start Num: 69

Candidate Starts for Archetta\_58:

(Start: 61 @40108 has 6 MA's), (Start: 69 @40093 has 27 MA's), (Start: 82 @40075 has 3 MA's), (Start: 109 @39985 has 3 MA's), (123, 39928), (124, 39925), (168, 39748), (177, 39715), (188, 39673), (202, 39643),

Gene: Ariel\_128 Start: 67671, Stop: 68153, Start Num: 56

Candidate Starts for Ariel\_128:

(Start: 56 @67671 has 39 MA's), (153, 67965), (160, 67995), (161, 67998), (167, 68034),

Gene: Arissanae\_62 Start: 40531, Stop: 40067, Start Num: 60

Candidate Starts for Arissanae\_62:

(Start: 60 @40531 has 138 MA's), (161, 40237), (164, 40216),

Gene: Arlo\_58 Start: 40325, Stop: 39816, Start Num: 49

Candidate Starts for Arlo\_58:

(Start: 49 @40325 has 181 MA's), (Start: 109 @40211 has 3 MA's), (167, 39983), (188, 39905), (213, 39866),

Gene: Artemis2UCLA\_64 Start: 38697, Stop: 38197, Start Num: 65

Candidate Starts for Artemis2UCLA\_64:

(Start: 60 @38700 has 138 MA's), (Start: 65 @38697 has 18 MA's), (164, 38373),

Gene: Arturo\_56 Start: 39090, Stop: 38620, Start Num: 55  
Candidate Starts for Arturo\_56:  
(Start: 55 @39090 has 194 MA's), (124, 38901), (195, 38634),

Gene: Ashballer\_62 Start: 41283, Stop: 40810, Start Num: 49  
Candidate Starts for Ashballer\_62:  
(Start: 49 @41283 has 181 MA's), (188, 40878), (213, 40839),

Gene: Ashwin\_11 Start: 3811, Stop: 3326, Start Num: 88  
Candidate Starts for Ashwin\_11:  
(Start: 88 @3811 has 28 MA's), (105, 3751), (153, 3538), (157, 3526), (180, 3415),

Gene: Astro\_64 Start: 39492, Stop: 39004, Start Num: 73  
Candidate Starts for Astro\_64:  
(Start: 73 @39492 has 24 MA's), (Start: 109 @39390 has 3 MA's), (124, 39330), (168, 39126), (188, 39051),

Gene: Atkinbua\_63 Start: 40753, Stop: 40265, Start Num: 49  
Candidate Starts for Atkinbua\_63:  
(Start: 49 @40753 has 181 MA's), (Start: 109 @40639 has 3 MA's), (163, 40432), (167, 40411), (188, 40333), (213, 40294),

Gene: AugsMagnumOpus\_67 Start: 39613, Stop: 39137, Start Num: 55  
Candidate Starts for AugsMagnumOpus\_67:  
(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: AvatarAhPeg\_55 Start: 38602, Stop: 38132, Start Num: 55  
Candidate Starts for AvatarAhPeg\_55:  
(26, 38641), (30, 38635), (Start: 55 @38602 has 194 MA's), (124, 38413), (195, 38146),

Gene: Avle17\_58 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for Avle17\_58:  
(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: B1\_54 Start: 37539, Stop: 37081, Start Num: 59  
Candidate Starts for B1\_54:  
(Start: 59 @37539 has 42 MA's), (102, 37461), (103, 37458), (Start: 120 @37380 has 1 MA's), (124, 37359), (171, 37176), (188, 37110), (195, 37092),

Gene: BABullseye\_56 Start: 36255, Stop: 35752, Start Num: 60  
Candidate Starts for BABullseye\_56:  
(Start: 60 @36255 has 138 MA's), (Start: 65 @36252 has 18 MA's), (164, 35928),

Gene: BAKA\_130 Start: 70647, Stop: 71123, Start Num: 56  
Candidate Starts for BAKA\_130:  
(32, 70602), (Start: 56 @70647 has 39 MA's), (160, 70965), (161, 70968), (167, 71004), (187, 71076), (194, 71097),

Gene: BK1\_53 Start: 38565, Stop: 38089, Start Num: 49  
Candidate Starts for BK1\_53:  
(Start: 49 @38565 has 181 MA's), (188, 38160), (213, 38121),

Gene: BPBiabs31\_61 Start: 41242, Stop: 40751, Start Num: 49  
Candidate Starts for BPBiabs31\_61:  
(Start: 49 @41242 has 181 MA's), (Start: 109 @41128 has 3 MA's), (163, 40921), (167, 40900), (188, 40822), (213, 40783),

Gene: Baby16\_58 Start: 38989, Stop: 38519, Start Num: 55  
Candidate Starts for Baby16\_58:  
(Start: 55 @38989 has 194 MA's), (124, 38800),

Gene: BabyBack\_60 Start: 40246, Stop: 39767, Start Num: 60  
Candidate Starts for BabyBack\_60:  
(40, 40270), (Start: 60 @40246 has 138 MA's), (Start: 98 @40186 has 3 MA's), (164, 39916), (177, 39865), (187, 39829),

Gene: BabyJohn\_57 Start: 39357, Stop: 38899, Start Num: 59  
Candidate Starts for BabyJohn\_57:  
(Start: 59 @39357 has 42 MA's), (102, 39279), (Start: 120 @39198 has 1 MA's), (124, 39177), (188, 38928), (195, 38910),

Gene: BabyRay\_61 Start: 39335, Stop: 38877, Start Num: 59  
Candidate Starts for BabyRay\_61:  
(3, 39545), (5, 39497), (Start: 59 @39335 has 42 MA's), (103, 39254), (Start: 120 @39176 has 1 MA's), (124, 39155), (188, 38906), (195, 38888),

Gene: Bachita\_137 Start: 74674, Stop: 75138, Start Num: 70  
Candidate Starts for Bachita\_137:  
(Start: 70 @74674 has 3 MA's), (Start: 89 @74701 has 10 MA's), (Start: 91 @74704 has 3 MA's), (125, 74848), (162, 74995), (187, 75094),

Gene: Bachome\_63 Start: 39273, Stop: 38854, Start Num: 98  
Candidate Starts for Bachome\_63:  
(Start: 52 @39351 has 16 MA's), (Start: 75 @39315 has 14 MA's), (Start: 98 @39273 has 3 MA's), (Start: 120 @39180 has 1 MA's), (162, 39015), (164, 39003), (208, 38868),

Gene: Backyardigan\_54 Start: 38833, Stop: 38363, Start Num: 55  
Candidate Starts for Backyardigan\_54:  
(45, 38839), (Start: 55 @38833 has 194 MA's), (124, 38644), (195, 38377),

Gene: BaconJack\_65 Start: 43677, Stop: 43183, Start Num: 49  
Candidate Starts for BaconJack\_65:  
(Start: 49 @43677 has 181 MA's), (188, 43272), (213, 43233),

Gene: Bactobuster\_60 Start: 40544, Stop: 40080, Start Num: 60  
Candidate Starts for Bactobuster\_60:  
(Start: 59 @40550 has 42 MA's), (Start: 60 @40544 has 138 MA's), (164, 40229),

Gene: Badger\_55 Start: 38801, Stop: 38331, Start Num: 55  
Candidate Starts for Badger\_55:  
(45, 38807), (Start: 55 @38801 has 194 MA's), (124, 38612), (195, 38345),

Gene: Baehexic\_61 Start: 39719, Stop: 39246, Start Num: 60  
Candidate Starts for Baehexic\_61:

(Start: 59 @39725 has 42 MA's), (Start: 60 @39719 has 138 MA's), (Start: 113 @39590 has 1 MA's), (164, 39389),

Gene: Bagrid\_130 Start: 70725, Stop: 71201, Start Num: 56

Candidate Starts for Bagrid\_130:

(Start: 56 @70725 has 39 MA's), (160, 71043), (161, 71046), (167, 71082), (187, 71154), (194, 71175),

Gene: BangNhom\_58 Start: 39381, Stop: 38911, Start Num: 55

Candidate Starts for BangNhom\_58:

(30, 39414), (Start: 55 @39381 has 194 MA's), (124, 39192), (195, 38925),

Gene: Barriga\_61 Start: 39467, Stop: 38976, Start Num: 49

Candidate Starts for Barriga\_61:

(Start: 49 @39467 has 181 MA's), (Start: 109 @39353 has 3 MA's), (Start: 113 @39338 has 1 MA's), (128, 39272), (188, 39047), (213, 39008),

Gene: BarrowTuph\_59 Start: 40380, Stop: 39904, Start Num: 49

Candidate Starts for BarrowTuph\_59:

(Start: 49 @40380 has 181 MA's), (188, 39975), (213, 39936),

Gene: Bartimeaus\_58 Start: 38980, Stop: 38510, Start Num: 55

Candidate Starts for Bartimeaus\_58:

(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Bask21\_21 Start: 12000, Stop: 12515, Start Num: 28

Candidate Starts for Bask21\_21:

(Start: 28 @12000 has 19 MA's), (Start: 53 @12045 has 4 MA's), (137, 12297), (154, 12393),

Gene: Battleship\_72 Start: 40127, Stop: 39759, Start Num: 106

Candidate Starts for Battleship\_72:

(47, 40235), (Start: 59 @40217 has 42 MA's), (Start: 106 @40127 has 12 MA's), (160, 39917), (190, 39791), (200, 39773),

Gene: Beatrix\_59 Start: 41420, Stop: 40932, Start Num: 49

Candidate Starts for Beatrix\_59:

(Start: 49 @41420 has 181 MA's), (Start: 109 @41306 has 3 MA's), (167, 41078), (188, 41000),

Gene: Beauxregard13\_64 Start: 39625, Stop: 39149, Start Num: 55

Candidate Starts for Beauxregard13\_64:

(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's), (187, 39193), (200, 39160),

Gene: Beem\_132 Start: 72197, Stop: 72676, Start Num: 56

Candidate Starts for Beem\_132:

(Start: 56 @72197 has 39 MA's), (139, 72440), (153, 72482), (165, 72539), (174, 72575),

Gene: Beemo\_64 Start: 40135, Stop: 39671, Start Num: 60

Candidate Starts for Beemo\_64:

(Start: 60 @40135 has 138 MA's), (155, 39868), (161, 39841), (164, 39820), (187, 39733),

Gene: BeesKnees\_62 Start: 40320, Stop: 39844, Start Num: 49

Candidate Starts for BeesKnees\_62:

(Start: 49 @40320 has 181 MA's), (188, 39915), (213, 39876),



Gene: Belenaria\_51 Start: 36741, Stop: 36301, Start Num: 85

Candidate Starts for Belenaria\_51:

(Start: 85 @36741 has 32 MA's), (Start: 114 @36639 has 3 MA's), (160, 36462), (167, 36423), (168, 36420), (171, 36411), (188, 36345),

Gene: BellusTerra\_59 Start: 38979, Stop: 38509, Start Num: 55

Candidate Starts for BellusTerra\_59:

(Start: 55 @38979 has 194 MA's), (124, 38790),

Gene: Benedict\_62 Start: 40094, Stop: 39630, Start Num: 69

Candidate Starts for Benedict\_62:

(Start: 61 @40109 has 6 MA's), (Start: 69 @40094 has 27 MA's), (Start: 109 @39986 has 3 MA's), (124, 39926), (168, 39749), (177, 39716), (202, 39644),

Gene: BengiVuitton\_63 Start: 40246, Stop: 39773, Start Num: 60

Candidate Starts for BengiVuitton\_63:

(Start: 60 @40246 has 138 MA's), (164, 39916),

Gene: Benvolio\_59 Start: 39261, Stop: 38788, Start Num: 60

Candidate Starts for Benvolio\_59:

(Start: 41 @39285 has 1 MA's), (Start: 59 @39267 has 42 MA's), (Start: 60 @39261 has 138 MA's), (Start: 113 @39132 has 1 MA's), (164, 38931),

Gene: Bethlehem\_59 Start: 41973, Stop: 41485, Start Num: 49

Candidate Starts for Bethlehem\_59:

(Start: 49 @41973 has 181 MA's), (Start: 109 @41859 has 3 MA's), (167, 41631), (188, 41553),

Gene: Bexan\_57 Start: 41199, Stop: 40711, Start Num: 49

Candidate Starts for Bexan\_57:

(Start: 49 @41199 has 181 MA's), (Start: 109 @41085 has 3 MA's), (167, 40857), (188, 40779),

Gene: BiancaTri92\_62 Start: 40305, Stop: 39844, Start Num: 60

Candidate Starts for BiancaTri92\_62:

(Start: 60 @40305 has 138 MA's), (164, 39987), (187, 39900),

Gene: Big3\_58 Start: 41020, Stop: 40550, Start Num: 49

Candidate Starts for Big3\_58:

(Start: 49 @41020 has 181 MA's), (167, 40699), (188, 40621), (213, 40582),

Gene: BigBubba\_22 Start: 12584, Stop: 13099, Start Num: 28

Candidate Starts for BigBubba\_22:

(Start: 28 @12584 has 19 MA's), (Start: 53 @12629 has 4 MA's), (137, 12881), (154, 12977),

Gene: BigMau\_62 Start: 41034, Stop: 40525, Start Num: 49

Candidate Starts for BigMau\_62:

(Start: 49 @41034 has 181 MA's), (Start: 109 @40920 has 3 MA's), (167, 40692), (188, 40614), (213, 40575),

Gene: BigPaolini\_58 Start: 38863, Stop: 38387, Start Num: 49

Candidate Starts for BigPaolini\_58:

(Start: 49 @38863 has 181 MA's), (188, 38458), (213, 38419),

Gene: Bigchungj\_59 Start: 40655, Stop: 40161, Start Num: 49  
Candidate Starts for Bigchungj\_59:  
(Start: 49 @40655 has 181 MA's), (188, 40250), (213, 40211),

Gene: Bigflo\_63 Start: 39627, Stop: 39145, Start Num: 44  
Candidate Starts for Bigflo\_63:  
(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's),  
(187, 39189), (200, 39156),

Gene: Bigfoot\_53 Start: 39818, Stop: 39342, Start Num: 49  
Candidate Starts for Bigfoot\_53:  
(Start: 49 @39818 has 181 MA's), (188, 39413), (213, 39374),

Gene: BillKnuckles\_57 Start: 41852, Stop: 41361, Start Num: 49  
Candidate Starts for BillKnuckles\_57:  
(Start: 49 @41852 has 181 MA's), (188, 41447), (213, 41408),

Gene: Bimmel\_30 Start: 19820, Stop: 19383, Start Num: 82  
Candidate Starts for Bimmel\_30:  
(Start: 82 @19820 has 3 MA's), (136, 19634), (155, 19574), (176, 19475),

Gene: Bircsak\_59 Start: 42473, Stop: 41979, Start Num: 49  
Candidate Starts for Bircsak\_59:  
(Start: 49 @42473 has 181 MA's), (188, 42068), (213, 42029),

Gene: Blackmoor\_58 Start: 38980, Stop: 38510, Start Num: 55  
Candidate Starts for Blackmoor\_58:  
(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: BlessJoy\_63 Start: 39123, Stop: 38623, Start Num: 65  
Candidate Starts for BlessJoy\_63:  
(Start: 60 @39126 has 138 MA's), (Start: 65 @39123 has 18 MA's), (164, 38799),

Gene: Blessica\_9 Start: 3100, Stop: 2615, Start Num: 88  
Candidate Starts for Blessica\_9:  
(Start: 88 @3100 has 28 MA's), (105, 3040), (153, 2827), (157, 2815), (191, 2656),

Gene: Blinn1\_66 Start: 38784, Stop: 38281, Start Num: 60  
Candidate Starts for Blinn1\_66:  
(Start: 60 @38784 has 138 MA's), (Start: 65 @38781 has 18 MA's), (164, 38457),

Gene: BluSpix\_57 Start: 36303, Stop: 35836, Start Num: 49  
Candidate Starts for BluSpix\_57:  
(Start: 49 @36303 has 181 MA's), (96, 36255), (Start: 114 @36195 has 3 MA's), (Start: 119 @36177  
has 1 MA's), (163, 36006), (167, 35985), (188, 35907), (213, 35868),

Gene: Blue\_58 Start: 40895, Stop: 40419, Start Num: 49  
Candidate Starts for Blue\_58:  
(Start: 49 @40895 has 181 MA's), (188, 40490), (213, 40451),

Gene: Blue7\_65 Start: 38791, Stop: 38291, Start Num: 65  
Candidate Starts for Blue7\_65:  
(Start: 60 @38794 has 138 MA's), (Start: 65 @38791 has 18 MA's), (164, 38467),

Gene: BlueBird\_63 Start: 39379, Stop: 38921, Start Num: 59

Candidate Starts for BlueBird\_63:

(5, 39541), (9, 39502), (Start: 59 @39379 has 42 MA's), (102, 39301), (103, 39298), (124, 39199), (188, 38950), (195, 38932),

Gene: Bluefalcon\_56 Start: 40113, Stop: 39649, Start Num: 69

Candidate Starts for Bluefalcon\_56:

(Start: 61 @40128 has 6 MA's), (Start: 69 @40113 has 27 MA's), (Start: 82 @40095 has 3 MA's), (Start: 109 @40005 has 3 MA's), (123, 39948), (124, 39945), (168, 39768), (177, 39735), (188, 39693), (202, 39663),

Gene: Bob3\_59 Start: 40291, Stop: 39782, Start Num: 49

Candidate Starts for Bob3\_59:

(Start: 49 @40291 has 181 MA's), (Start: 109 @40177 has 3 MA's), (167, 39949), (188, 39871), (213, 39832),

Gene: BobSwaget\_57 Start: 38507, Stop: 38028, Start Num: 60

Candidate Starts for BobSwaget\_57:

(43, 38528), (Start: 59 @38513 has 42 MA's), (Start: 60 @38507 has 138 MA's), (Start: 113 @38378 has 1 MA's), (164, 38177),

Gene: Bobby\_122 Start: 72295, Stop: 72777, Start Num: 56

Candidate Starts for Bobby\_122:

(Start: 56 @72295 has 39 MA's), (160, 72619), (161, 72622), (167, 72658), (187, 72730), (194, 72751),

Gene: BobbyDazzler\_51 Start: 36743, Stop: 36405, Start Num: 114

Candidate Starts for BobbyDazzler\_51:

(Start: 85 @36845 has 32 MA's), (Start: 114 @36743 has 3 MA's), (160, 36566), (167, 36527), (168, 36524), (171, 36515), (188, 36449),

Gene: Bobquesha\_77 Start: 47262, Stop: 47738, Start Num: 78

Candidate Starts for Bobquesha\_77:

(Start: 61 @47238 has 6 MA's), (Start: 66 @47247 has 21 MA's), (Start: 78 @47262 has 16 MA's), (Start: 86 @47274 has 1 MA's), (100, 47310), (107, 47346), (Start: 109 @47364 has 3 MA's), (Start: 114 @47382 has 3 MA's), (150, 47526), (151, 47532), (161, 47595), (167, 47631), (168, 47634), (188, 47703), (203, 47727),

Gene: BogosyJay\_62 Start: 39932, Stop: 39468, Start Num: 60

Candidate Starts for BogosyJay\_62:

(Start: 60 @39932 has 138 MA's), (161, 39638), (164, 39617),

Gene: Boilgate\_68 Start: 50932, Stop: 51387, Start Num: 78

Candidate Starts for Boilgate\_68:

(Start: 78 @50932 has 16 MA's), (Start: 86 @50944 has 1 MA's), (97, 50971), (Start: 114 @51031 has 3 MA's), (127, 51088), (139, 51133), (150, 51175), (162, 51253), (176, 51307), (205, 51382),

Gene: Bombitas\_118 Start: 69608, Stop: 70087, Start Num: 56

Candidate Starts for Bombitas\_118:

(Start: 56 @69608 has 39 MA's), (139, 69851), (153, 69893), (165, 69950), (174, 69986),

Gene: Bombshell\_58 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for Bombshell\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Bonamassa\_56 Start: 39499, Stop: 39041, Start Num: 73

Candidate Starts for Bonamassa\_56:

(Start: 73 @39499 has 24 MA's), (Start: 109 @39397 has 3 MA's), (124, 39337), (168, 39160), (188, 39085), (202, 39055),

Gene: Bonanza\_52 Start: 37150, Stop: 36578, Start Num: 85

Candidate Starts for Bonanza\_52:

(Start: 85 @37150 has 32 MA's), (Start: 114 @37048 has 3 MA's), (160, 36871), (162, 36859), (173, 36808), (188, 36754), (198, 36730), (207, 36715), (216, 36622),

Gene: Bones\_59 Start: 41515, Stop: 41027, Start Num: 49

Candidate Starts for Bones\_59:

(Start: 49 @41515 has 181 MA's), (Start: 109 @41401 has 3 MA's), (163, 41194), (167, 41173), (188, 41095),

Gene: Boohoo\_70 Start: 40011, Stop: 39553, Start Num: 59

Candidate Starts for Boohoo\_70:

(47, 40029), (Start: 59 @40011 has 42 MA's), (Start: 106 @39921 has 12 MA's), (160, 39711), (190, 39585), (200, 39567),

Gene: Bora\_10 Start: 3501, Stop: 3016, Start Num: 88

Candidate Starts for Bora\_10:

(Start: 88 @3501 has 28 MA's), (105, 3441), (153, 3228), (157, 3216),

Gene: Bowtie\_62 Start: 39378, Stop: 38881, Start Num: 52

Candidate Starts for Bowtie\_62:

(Start: 52 @39378 has 16 MA's), (Start: 75 @39342 has 14 MA's), (Start: 98 @39300 has 3 MA's), (Start: 120 @39207 has 1 MA's), (153, 39084), (162, 39042), (164, 39030), (208, 38895),

Gene: Bradman\_61 Start: 38947, Stop: 38609, Start Num: 116

Candidate Starts for Bradman\_61:

(Start: 52 @39106 has 16 MA's), (Start: 75 @39067 has 14 MA's), (116, 38947), (164, 38755),

Gene: Bradshaw\_51 Start: 36808, Stop: 36368, Start Num: 85

Candidate Starts for Bradshaw\_51:

(Start: 85 @36808 has 32 MA's), (Start: 114 @36706 has 3 MA's), (160, 36529), (167, 36490), (168, 36487), (171, 36478), (188, 36412),

Gene: BreSam8\_64 Start: 39615, Stop: 39139, Start Num: 55

Candidate Starts for BreSam8\_64:

(Start: 44 @39621 has 23 MA's), (Start: 55 @39615 has 194 MA's), (Start: 98 @39540 has 3 MA's), (187, 39183), (200, 39150),

Gene: Briton15\_64 Start: 42512, Stop: 42018, Start Num: 49

Candidate Starts for Briton15\_64:

(Start: 49 @42512 has 181 MA's), (188, 42107), (213, 42068),

Gene: Broseidon\_58 Start: 38980, Stop: 38510, Start Num: 55

Candidate Starts for Broseidon\_58:

(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Bruin\_21 Start: 12841, Stop: 13356, Start Num: 28  
Candidate Starts for Bruin\_21:  
(Start: 28 @12841 has 19 MA's), (Start: 53 @12886 has 4 MA's), (137, 13138), (154, 13234),

Gene: Bruiser\_57 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Bruiser\_57:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Bruns\_58 Start: 39437, Stop: 38961, Start Num: 49  
Candidate Starts for Bruns\_58:  
(Start: 49 @39437 has 181 MA's), (188, 39032), (213, 38993),

Gene: BrutonGaster\_108 Start: 68282, Stop: 68719, Start Num: 87  
Candidate Starts for BrutonGaster\_108:  
(Start: 87 @68282 has 2 MA's),

Gene: Bryce\_50 Start: 36553, Stop: 36113, Start Num: 85  
Candidate Starts for Bryce\_50:  
(Start: 85 @36553 has 32 MA's), (Start: 114 @36451 has 3 MA's), (160, 36274), (167, 36235), (168, 36232), (171, 36223), (188, 36157),

Gene: BubbleTrouble\_57 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for BubbleTrouble\_57:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Bud\_60 Start: 38925, Stop: 38428, Start Num: 52  
Candidate Starts for Bud\_60:  
(Start: 52 @38925 has 16 MA's), (Start: 75 @38889 has 14 MA's), (Start: 98 @38847 has 3 MA's),  
(Start: 109 @38793 has 3 MA's), (Start: 120 @38754 has 1 MA's), (153, 38631), (162, 38589), (164, 38577), (208, 38442),

Gene: Bugatti\_61 Start: 39379, Stop: 38921, Start Num: 59  
Candidate Starts for Bugatti\_61:  
(5, 39541), (9, 39502), (Start: 59 @39379 has 42 MA's), (102, 39301), (103, 39298), (124, 39199),  
(188, 38950), (195, 38932),

Gene: BugsBunny\_19 Start: 12407, Stop: 12922, Start Num: 28  
Candidate Starts for BugsBunny\_19:  
(Start: 28 @12407 has 19 MA's), (Start: 53 @12452 has 4 MA's), (137, 12704), (154, 12800),

Gene: Buggy\_64 Start: 40295, Stop: 39822, Start Num: 60  
Candidate Starts for Buggy\_64:  
(Start: 41 @40319 has 1 MA's), (Start: 59 @40301 has 42 MA's), (Start: 60 @40295 has 138 MA's),  
(Start: 113 @40166 has 1 MA's), (164, 39965),

Gene: Bumblebee11\_55 Start: 38803, Stop: 38333, Start Num: 55  
Candidate Starts for Bumblebee11\_55:  
(45, 38809), (Start: 55 @38803 has 194 MA's), (124, 38614), (195, 38347),

Gene: Burger\_56 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Burger\_56:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Burton\_60 Start: 42081, Stop: 41587, Start Num: 49  
Candidate Starts for Burton\_60:  
(Start: 49 @42081 has 181 MA's), (188, 41676), (213, 41637),

Gene: Buttons\_57 Start: 38386, Stop: 37910, Start Num: 49  
Candidate Starts for Buttons\_57:  
(Start: 49 @38386 has 181 MA's), (188, 37981), (213, 37942),

Gene: BuzzBuzz\_61 Start: 39649, Stop: 39173, Start Num: 55  
Candidate Starts for BuzzBuzz\_61:  
(Start: 44 @39655 has 23 MA's), (Start: 55 @39649 has 194 MA's), (187, 39217), (200, 39184),

Gene: Bxb1\_54 Start: 39137, Stop: 38661, Start Num: 49  
Candidate Starts for Bxb1\_54:  
(Start: 49 @39137 has 181 MA's), (188, 38732), (213, 38693),

Gene: Bxz2\_59 Start: 39656, Stop: 39180, Start Num: 55  
Candidate Starts for Bxz2\_59:  
(Start: 44 @39662 has 23 MA's), (Start: 55 @39656 has 194 MA's), (Start: 98 @39581 has 3 MA's),  
(187, 39224), (200, 39191),

Gene: C3\_58 Start: 40015, Stop: 39551, Start Num: 60  
Candidate Starts for C3\_58:  
(Start: 60 @40015 has 138 MA's), (164, 39700), (175, 39655),

Gene: CRB1\_65 Start: 40792, Stop: 40319, Start Num: 60  
Candidate Starts for CRB1\_65:  
(Start: 60 @40792 has 138 MA's), (Start: 113 @40663 has 1 MA's), (164, 40462),

Gene: CactusRose\_58 Start: 40570, Stop: 40085, Start Num: 69  
Candidate Starts for CactusRose\_58:  
(Start: 49 @40576 has 181 MA's), (Start: 69 @40570 has 27 MA's), (188, 40171), (213, 40132),

Gene: Caelakin\_58 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Caelakin\_58:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Calvinny\_63 Start: 39507, Stop: 39031, Start Num: 55  
Candidate Starts for Calvinny\_63:  
(Start: 55 @39507 has 194 MA's), (182, 39093), (187, 39075), (200, 39042),

Gene: Camperdownii\_56 Start: 38652, Stop: 38182, Start Num: 55  
Candidate Starts for Camperdownii\_56:  
(Start: 55 @38652 has 194 MA's), (124, 38463),

Gene: Candra\_61 Start: 38619, Stop: 38116, Start Num: 60  
Candidate Starts for Candra\_61:  
(Start: 60 @38619 has 138 MA's), (Start: 65 @38616 has 18 MA's), (164, 38292),

Gene: Carlyle\_59 Start: 39172, Stop: 38705, Start Num: 49  
Candidate Starts for Carlyle\_59:  
(Start: 49 @39172 has 181 MA's), (167, 38851), (188, 38773),

Gene: Catdawg\_9 Start: 3150, Stop: 2665, Start Num: 88  
Candidate Starts for Catdawg\_9:  
(Start: 88 @3150 has 28 MA's), (105, 3090), (153, 2877), (157, 2865), (191, 2706),

Gene: Caviar\_60 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for Caviar\_60:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (167, 38987),  
(187, 38915), (195, 38891),

Gene: Centaur\_63 Start: 39933, Stop: 39460, Start Num: 60  
Candidate Starts for Centaur\_63:  
(Start: 59 @39939 has 42 MA's), (Start: 60 @39933 has 138 MA's), (Start: 113 @39804 has 1 MA's),  
(164, 39603),

Gene: CentreCat\_58 Start: 38981, Stop: 38511, Start Num: 55  
Candidate Starts for CentreCat\_58:  
(Start: 55 @38981 has 194 MA's), (124, 38792),

Gene: Cerulean\_59 Start: 39382, Stop: 38912, Start Num: 55  
Candidate Starts for Cerulean\_59:  
(30, 39415), (Start: 55 @39382 has 194 MA's), (124, 39193), (195, 38926),

Gene: Chadwick\_61 Start: 39781, Stop: 39317, Start Num: 69  
Candidate Starts for Chadwick\_61:  
(Start: 61 @39796 has 6 MA's), (Start: 69 @39781 has 27 MA's), (Start: 109 @39673 has 3 MA's),  
(124, 39613), (168, 39436), (177, 39403), (188, 39361), (202, 39331),

Gene: ChampagnePapi\_60 Start: 39381, Stop: 38911, Start Num: 55  
Candidate Starts for ChampagnePapi\_60:  
(30, 39414), (Start: 55 @39381 has 194 MA's), (124, 39192), (195, 38925),

Gene: Chanagan\_55 Start: 38471, Stop: 37995, Start Num: 49  
Candidate Starts for Chanagan\_55:  
(Start: 49 @38471 has 181 MA's), (188, 38066), (213, 38027),

Gene: Chancellor\_76 Start: 48376, Stop: 48852, Start Num: 78  
Candidate Starts for Chancellor\_76:  
(Start: 61 @48352 has 6 MA's), (Start: 78 @48376 has 16 MA's), (Start: 86 @48388 has 1 MA's), (100,  
48424), (107, 48460), (Start: 109 @48478 has 3 MA's), (Start: 114 @48496 has 3 MA's), (150, 48640),  
(151, 48646), (161, 48709), (167, 48745), (168, 48748), (188, 48817), (203, 48841),

Gene: Changeling\_61 Start: 40336, Stop: 39878, Start Num: 60  
Candidate Starts for Changeling\_61:  
(Start: 60 @40336 has 138 MA's), (164, 40021), (187, 39934),

Gene: Chaph\_58 Start: 38989, Stop: 38519, Start Num: 55  
Candidate Starts for Chaph\_58:  
(Start: 55 @38989 has 194 MA's), (124, 38800),

Gene: Chargerpower\_60 Start: 38484, Stop: 38008, Start Num: 60  
Candidate Starts for Chargerpower\_60:  
(Start: 60 @38484 has 138 MA's), (161, 38175), (164, 38154), (187, 38067),

Gene: Charm\_61 Start: 39663, Stop: 39199, Start Num: 60  
Candidate Starts for Charm\_61:  
(Start: 60 @39663 has 138 MA's), (161, 39369), (164, 39348),

Gene: Chartreuse\_60 Start: 37967, Stop: 37467, Start Num: 65  
Candidate Starts for Chartreuse\_60:  
(Start: 60 @37970 has 138 MA's), (Start: 65 @37967 has 18 MA's), (164, 37643),

Gene: Che12\_63 Start: 38822, Stop: 38367, Start Num: 79  
Candidate Starts for Che12\_63:  
(Start: 79 @38822 has 2 MA's), (164, 38513),

Gene: Cheetobro\_76 Start: 48349, Stop: 48849, Start Num: 61  
Candidate Starts for Cheetobro\_76:  
(Start: 61 @48349 has 6 MA's), (Start: 78 @48373 has 16 MA's), (Start: 86 @48385 has 1 MA's), (100, 48421), (107, 48457), (Start: 109 @48475 has 3 MA's), (Start: 114 @48493 has 3 MA's), (150, 48637), (151, 48643), (161, 48706), (167, 48742), (168, 48745), (188, 48814), (203, 48838),

Gene: CherryonLim\_2 Start: 640, Stop: 990, Start Num: 89  
Candidate Starts for CherryonLim\_2:  
(Start: 89 @640 has 10 MA's), (121, 748), (122, 751), (156, 874), (158, 880), (161, 907), (162, 916), (170, 949), (172, 952), (176, 970),

Gene: ChipMunk\_64 Start: 41504, Stop: 41031, Start Num: 60  
Candidate Starts for ChipMunk\_64:  
(Start: 60 @41504 has 138 MA's), (164, 41174),

Gene: Chiqui\_57 Start: 39366, Stop: 38908, Start Num: 59  
Candidate Starts for Chiqui\_57:  
(Start: 59 @39366 has 42 MA's), (102, 39288), (Start: 120 @39207 has 1 MA's), (124, 39186), (188, 38937), (195, 38919),

Gene: Chupacabra\_57 Start: 38882, Stop: 38397, Start Num: 51  
Candidate Starts for Chupacabra\_57:  
(Start: 51 @38882 has 18 MA's), (124, 38690), (194, 38426), (195, 38423), (202, 38411),

Gene: Ciao\_58 Start: 39844, Stop: 39368, Start Num: 49  
Candidate Starts for Ciao\_58:  
(Start: 49 @39844 has 181 MA's), (188, 39439), (213, 39400),

Gene: Cici\_56 Start: 38818, Stop: 38348, Start Num: 55  
Candidate Starts for Cici\_56:  
(45, 38824), (Start: 55 @38818 has 194 MA's), (124, 38629), (195, 38362),

Gene: Cindaradix\_53 Start: 38448, Stop: 37978, Start Num: 55  
Candidate Starts for Cindaradix\_53:  
(30, 38481), (Start: 55 @38448 has 194 MA's), (124, 38259), (195, 37992),

Gene: Cintron\_57 Start: 38955, Stop: 38485, Start Num: 55  
Candidate Starts for Cintron\_57:  
(Start: 55 @38955 has 194 MA's), (124, 38766),

Gene: Citius\_58 Start: 38999, Stop: 38529, Start Num: 55



Candidate Starts for Citius\_58:  
(Start: 55 @38999 has 194 MA's), (124, 38810),

Gene: Clarenza\_57 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for Clarenza\_57:  
(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: CloudWang3\_65 Start: 39209, Stop: 38709, Start Num: 65  
Candidate Starts for CloudWang3\_65:  
(Start: 60 @39212 has 138 MA's), (Start: 65 @39209 has 18 MA's), (164, 38885),

Gene: ClubL\_134 Start: 73245, Stop: 73709, Start Num: 70  
Candidate Starts for ClubL\_134:  
(Start: 70 @73245 has 3 MA's), (Start: 89 @73272 has 10 MA's), (Start: 91 @73275 has 3 MA's), (125, 73419), (162, 73566), (187, 73665),

Gene: Cocoaberry\_58 Start: 38982, Stop: 38512, Start Num: 55  
Candidate Starts for Cocoaberry\_58:  
(Start: 55 @38982 has 194 MA's), (124, 38793),

Gene: Colbster\_63 Start: 39625, Stop: 39149, Start Num: 55  
Candidate Starts for Colbster\_63:  
(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's), (187, 39193), (200, 39160),

Gene: Commander\_58 Start: 38977, Stop: 38507, Start Num: 55  
Candidate Starts for Commander\_58:  
(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Community\_49 Start: 35475, Stop: 35966, Start Num: 33  
Candidate Starts for Community\_49:  
(8, 35376), (Start: 33 @35475 has 1 MA's), (142, 35763), (175, 35910),

Gene: ConceptII\_62 Start: 41910, Stop: 41434, Start Num: 49  
Candidate Starts for ConceptII\_62:  
(Start: 49 @41910 has 181 MA's), (188, 41505), (213, 41466),

Gene: Connomayer\_58 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Connomayer\_58:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Conquerage\_62 Start: 39766, Stop: 39302, Start Num: 60  
Candidate Starts for Conquerage\_62:  
(Start: 60 @39766 has 138 MA's), (164, 39451),

Gene: Conspiracy\_59 Start: 39899, Stop: 39441, Start Num: 73  
Candidate Starts for Conspiracy\_59:  
(Start: 73 @39899 has 24 MA's), (Start: 109 @39797 has 3 MA's), (124, 39737), (132, 39701), (168, 39560), (188, 39485), (202, 39455),

Gene: Constella\_120 Start: 67734, Stop: 68210, Start Num: 56  
Candidate Starts for Constella\_120:  
(Start: 56 @67734 has 39 MA's), (160, 68052), (161, 68055), (167, 68091), (187, 68163), (194, 68184),

Gene: Coog\_56 Start: 39869, Stop: 39405, Start Num: 69

Candidate Starts for Coog\_56:

(Start: 61 @39884 has 6 MA's), (Start: 69 @39869 has 27 MA's), (Start: 109 @39761 has 3 MA's), (124, 39701), (168, 39524), (188, 39449), (202, 39419),

Gene: Cookiedough\_63 Start: 38598, Stop: 38095, Start Num: 60

Candidate Starts for Cookiedough\_63:

(Start: 60 @38598 has 138 MA's), (Start: 65 @38595 has 18 MA's), (164, 38271),

Gene: Corndog\_11 Start: 3793, Stop: 3308, Start Num: 88

Candidate Starts for Corndog\_11:

(Start: 88 @3793 has 28 MA's), (105, 3733), (153, 3520), (157, 3508),

Gene: Corvo\_60 Start: 41389, Stop: 40922, Start Num: 49

Candidate Starts for Corvo\_60:

(Start: 49 @41389 has 181 MA's), (167, 41068), (188, 40990),

Gene: CosmicSans\_51 Start: 36799, Stop: 36359, Start Num: 85

Candidate Starts for CosmicSans\_51:

(Start: 85 @36799 has 32 MA's), (Start: 114 @36697 has 3 MA's), (160, 36520), (167, 36481), (168, 36478), (171, 36469), (188, 36403),

Gene: Courthouse\_123 Start: 67271, Stop: 67753, Start Num: 56

Candidate Starts for Courthouse\_123:

(Start: 56 @67271 has 39 MA's), (153, 67565), (160, 67595), (161, 67598), (167, 67634),

Gene: Crispicous1\_57 Start: 39629, Stop: 39138, Start Num: 49

Candidate Starts for Crispicous1\_57:

(Start: 49 @39629 has 181 MA's), (188, 39224), (213, 39185),

Gene: Crucio\_62 Start: 39921, Stop: 39448, Start Num: 60

Candidate Starts for Crucio\_62:

(Start: 41 @39945 has 1 MA's), (Start: 59 @39927 has 42 MA's), (Start: 60 @39921 has 138 MA's), (Start: 113 @39792 has 1 MA's), (164, 39591),

Gene: Cuco\_58 Start: 39744, Stop: 39265, Start Num: 61

Candidate Starts for Cuco\_58:

(Start: 61 @39744 has 6 MA's), (Start: 69 @39729 has 27 MA's), (Start: 109 @39621 has 3 MA's), (124, 39561), (168, 39384), (188, 39309), (202, 39279),

Gene: Cucurbita\_135 Start: 75014, Stop: 75451, Start Num: 89

Candidate Starts for Cucurbita\_135:

(Start: 70 @74987 has 3 MA's), (Start: 89 @75014 has 10 MA's), (Start: 91 @75017 has 3 MA's), (125, 75161), (162, 75308), (187, 75407),

Gene: Cueyllyss\_60 Start: 41715, Stop: 41227, Start Num: 49

Candidate Starts for Cueyllyss\_60:

(Start: 49 @41715 has 181 MA's), (Start: 109 @41601 has 3 MA's), (163, 41394), (167, 41373), (188, 41295),

Gene: Cullens\_64 Start: 39621, Stop: 39145, Start Num: 55

Candidate Starts for Cullens\_64:

(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's),  
(187, 39189), (200, 39156),

Gene: Culver\_133 Start: 73010, Stop: 73450, Start Num: 91

Candidate Starts for Culver\_133:

(Start: 88 @73007 has 28 MA's), (Start: 91 @73010 has 3 MA's), (167, 73328), (188, 73406),

Gene: D29\_59 Start: 39612, Stop: 39115, Start Num: 50

Candidate Starts for D29\_59:

(Start: 50 @39612 has 3 MA's), (Start: 75 @39576 has 14 MA's), (Start: 98 @39534 has 3 MA's), (102,  
39522), (164, 39264), (175, 39219),

Gene: D32\_62 Start: 39576, Stop: 39115, Start Num: 75

Candidate Starts for D32\_62:

(Start: 50 @39612 has 3 MA's), (Start: 75 @39576 has 14 MA's), (Start: 98 @39534 has 3 MA's), (102,  
39522), (164, 39264), (175, 39219),

Gene: DBQu4n\_63 Start: 39593, Stop: 39096, Start Num: 50

Candidate Starts for DBQu4n\_63:

(Start: 50 @39593 has 3 MA's), (Start: 75 @39557 has 14 MA's), (Start: 98 @39515 has 3 MA's), (102,  
39503), (164, 39245), (175, 39200),

Gene: DD5\_58 Start: 40745, Stop: 40257, Start Num: 49

Candidate Starts for DD5\_58:

(Start: 49 @40745 has 181 MA's), (Start: 109 @40631 has 3 MA's), (149, 40478), (167, 40403), (188,  
40325),

Gene: DaHudson\_63 Start: 39620, Stop: 39138, Start Num: 44

Candidate Starts for DaHudson\_63:

(Start: 44 @39620 has 23 MA's), (Start: 55 @39614 has 194 MA's), (Start: 98 @39539 has 3 MA's),  
(187, 39182), (200, 39149),

Gene: DaVinci\_61 Start: 38024, Stop: 37521, Start Num: 60

Candidate Starts for DaVinci\_61:

(Start: 60 @38024 has 138 MA's), (Start: 65 @38021 has 18 MA's), (164, 37697),

Gene: Daishi\_63 Start: 38490, Stop: 38014, Start Num: 55

Candidate Starts for Daishi\_63:

(Start: 44 @38496 has 23 MA's), (Start: 55 @38490 has 194 MA's), (Start: 98 @38415 has 3 MA's),  
(187, 38058), (200, 38025),

Gene: Dallas\_131 Start: 71712, Stop: 72188, Start Num: 56

Candidate Starts for Dallas\_131:

(Start: 56 @71712 has 39 MA's), (160, 72030), (161, 72033), (167, 72069), (187, 72141), (194, 72162),

Gene: Dalmatian\_63 Start: 40127, Stop: 39654, Start Num: 60

Candidate Starts for Dalmatian\_63:

(Start: 41 @40151 has 1 MA's), (Start: 59 @40133 has 42 MA's), (Start: 60 @40127 has 138 MA's),  
(Start: 113 @39998 has 1 MA's), (164, 39797),

Gene: Danforth\_64 Start: 39555, Stop: 39067, Start Num: 73

Candidate Starts for Danforth\_64:

(64, 39561), (Start: 73 @39555 has 24 MA's), (Start: 109 @39453 has 3 MA's), (124, 39393), (188, 39114),

Gene: Darrell\_65 Start: 40606, Stop: 40142, Start Num: 60  
Candidate Starts for Darrell\_65:  
(Start: 60 @40606 has 138 MA's), (161, 40312), (164, 40291),

Gene: DarthPhader\_59 Start: 40882, Stop: 40415, Start Num: 60  
Candidate Starts for DarthPhader\_59:  
(Start: 60 @40882 has 138 MA's), (161, 40585), (164, 40564), (188, 40471),

Gene: Datway\_56 Start: 38789, Stop: 38319, Start Num: 55  
Candidate Starts for Datway\_56:  
(45, 38795), (Start: 55 @38789 has 194 MA's), (124, 38600), (195, 38333),

Gene: Daubenski\_27 Start: 12504, Stop: 12022, Start Num: 46  
Candidate Starts for Daubenski\_27:  
(Start: 46 @12504 has 4 MA's), (Start: 114 @12348 has 3 MA's), (126, 12300), (134, 12270), (146, 12216), (148, 12201), (163, 12120), (176, 12066),

Gene: Deano\_57 Start: 38986, Stop: 38516, Start Num: 55  
Candidate Starts for Deano\_57:  
(Start: 55 @38986 has 194 MA's), (124, 38797),

Gene: DekHockey33\_71 Start: 40303, Stop: 39845, Start Num: 59  
Candidate Starts for DekHockey33\_71:  
(47, 40321), (Start: 59 @40303 has 42 MA's), (Start: 106 @40213 has 12 MA's), (160, 40003), (190, 39877), (200, 39859),

Gene: Deloris\_63 Start: 39942, Stop: 39469, Start Num: 60  
Candidate Starts for Deloris\_63:  
(Start: 60 @39942 has 138 MA's), (164, 39612),

Gene: Dexes\_59 Start: 40748, Stop: 40272, Start Num: 49  
Candidate Starts for Dexes\_59:  
(Start: 49 @40748 has 181 MA's), (188, 40343), (213, 40304),

Gene: Dhanush\_58 Start: 38981, Stop: 38511, Start Num: 55  
Candidate Starts for Dhanush\_58:  
(23, 39032), (Start: 55 @38981 has 194 MA's), (124, 38792),

Gene: Dieselweasel\_65 Start: 39624, Stop: 39148, Start Num: 55  
Candidate Starts for Dieselweasel\_65:  
(Start: 44 @39630 has 23 MA's), (Start: 55 @39624 has 194 MA's), (Start: 98 @39549 has 3 MA's), (187, 39192), (200, 39159),

Gene: Dignity\_64 Start: 40318, Stop: 39845, Start Num: 60  
Candidate Starts for Dignity\_64:  
(Start: 60 @40318 has 138 MA's), (Start: 113 @40189 has 1 MA's), (164, 39988),

Gene: Dinger\_50 Start: 36941, Stop: 36501, Start Num: 85  
Candidate Starts for Dinger\_50:

(Start: 85 @36941 has 32 MA's), (Start: 98 @36911 has 3 MA's), (Start: 114 @36839 has 3 MA's), (160, 36662), (167, 36623), (168, 36620), (171, 36611), (188, 36545),

Gene: DirtyDunning\_57 Start: 38990, Stop: 38520, Start Num: 55

Candidate Starts for DirtyDunning\_57:

(Start: 55 @38990 has 194 MA's), (124, 38801),

Gene: Discoknowium\_57 Start: 39572, Stop: 39108, Start Num: 69

Candidate Starts for Discoknowium\_57:

(Start: 61 @39587 has 6 MA's), (Start: 69 @39572 has 27 MA's), (Start: 82 @39554 has 3 MA's), (Start: 109 @39464 has 3 MA's), (123, 39407), (124, 39404), (168, 39227), (177, 39194), (188, 39152), (202, 39122),

Gene: Dixon\_63 Start: 39075, Stop: 38587, Start Num: 73

Candidate Starts for Dixon\_63:

(64, 39081), (Start: 73 @39075 has 24 MA's), (Start: 109 @38973 has 3 MA's), (124, 38913), (168, 38709), (188, 38634),

Gene: DmpstrDiver\_130 Start: 71014, Stop: 71490, Start Num: 56

Candidate Starts for DmpstrDiver\_130:

(Start: 56 @71014 has 39 MA's), (160, 71332), (161, 71335), (167, 71371), (187, 71443), (194, 71464),

Gene: DontArgue\_56 Start: 38068, Stop: 37583, Start Num: 51

Candidate Starts for DontArgue\_56:

(Start: 51 @38068 has 18 MA's), (Start: 66 @38047 has 21 MA's), (124, 37876), (194, 37612), (195, 37609), (202, 37597),

Gene: Doom\_58 Start: 41322, Stop: 40855, Start Num: 49

Candidate Starts for Doom\_58:

(Start: 49 @41322 has 181 MA's), (167, 41001), (188, 40923),

Gene: Dorothea\_63 Start: 38596, Stop: 38093, Start Num: 60

Candidate Starts for Dorothea\_63:

(Start: 60 @38596 has 138 MA's), (Start: 65 @38593 has 18 MA's), (164, 38269), (184, 38197),

Gene: Dove\_116 Start: 66658, Stop: 67134, Start Num: 56

Candidate Starts for Dove\_116:

(32, 66613), (Start: 56 @66658 has 39 MA's), (160, 66976), (161, 66979), (167, 67015), (187, 67087), (194, 67108),

Gene: DrFeelGood\_57 Start: 39707, Stop: 39231, Start Num: 49

Candidate Starts for DrFeelGood\_57:

(Start: 49 @39707 has 181 MA's), (188, 39302), (213, 39263),

Gene: Drake55\_64 Start: 40018, Stop: 39545, Start Num: 60

Candidate Starts for Drake55\_64:

(Start: 41 @40042 has 1 MA's), (Start: 59 @40024 has 42 MA's), (Start: 60 @40018 has 138 MA's), (Start: 113 @39889 has 1 MA's), (164, 39688),

Gene: Drake94\_57 Start: 38129, Stop: 37644, Start Num: 51

Candidate Starts for Drake94\_57:

(Start: 51 @38129 has 18 MA's), (124, 37937), (192, 37676), (202, 37658),

Gene: DreamCatcher\_63 Start: 41385, Stop: 40897, Start Num: 49  
Candidate Starts for DreamCatcher\_63:  
(Start: 49 @41385 has 181 MA's), (Start: 109 @41271 has 3 MA's), (163, 41064), (167, 41043), (188, 40965), (213, 40926),

Gene: DreamTeam1\_61 Start: 39495, Stop: 39031, Start Num: 60  
Candidate Starts for DreamTeam1\_61:  
(Start: 60 @39495 has 138 MA's), (161, 39201), (164, 39180),

Gene: Dreamboat\_60 Start: 39615, Stop: 39127, Start Num: 49  
Candidate Starts for Dreamboat\_60:  
(Start: 49 @39615 has 181 MA's), (Start: 109 @39501 has 3 MA's), (167, 39273), (188, 39195),

Gene: DroogsArmy\_56 Start: 41388, Stop: 40951, Start Num: 82  
Candidate Starts for DroogsArmy\_56:  
(Start: 46 @41439 has 4 MA's), (Start: 82 @41388 has 3 MA's), (Start: 109 @41301 has 3 MA's),  
(Start: 120 @41262 has 1 MA's), (167, 41070), (168, 41067), (171, 41058), (188, 40992), (194, 40977),  
(195, 40974),

Gene: DropBear\_60 Start: 39284, Stop: 38823, Start Num: 59  
Candidate Starts for DropBear\_60:  
(5, 39446), (9, 39407), (Start: 59 @39284 has 42 MA's), (103, 39200), (Start: 120 @39122 has 1 MA's),  
(124, 39101), (188, 38852), (195, 38834),

Gene: Druantia\_58 Start: 38981, Stop: 38511, Start Num: 55  
Candidate Starts for Druantia\_58:  
(Start: 55 @38981 has 194 MA's), (124, 38792),

Gene: Dublin\_58 Start: 39805, Stop: 39341, Start Num: 69  
Candidate Starts for Dublin\_58:  
(Start: 61 @39820 has 6 MA's), (Start: 69 @39805 has 27 MA's), (Start: 109 @39697 has 3 MA's),  
(124, 39637), (132, 39601), (168, 39460), (188, 39385), (202, 39355),

Gene: DudeLittle\_61 Start: 39893, Stop: 39420, Start Num: 60  
Candidate Starts for DudeLittle\_61:  
(Start: 41 @39917 has 1 MA's), (Start: 59 @39899 has 42 MA's), (Start: 60 @39893 has 138 MA's),  
(Start: 113 @39764 has 1 MA's), (164, 39563),

Gene: Duke13\_125 Start: 68315, Stop: 68791, Start Num: 56  
Candidate Starts for Duke13\_125:  
(32, 68270), (Start: 56 @68315 has 39 MA's), (160, 68633), (161, 68636), (167, 68672), (187, 68744),  
(194, 68765),

Gene: Dulcie\_61 Start: 42341, Stop: 41865, Start Num: 49  
Candidate Starts for Dulcie\_61:  
(Start: 49 @42341 has 181 MA's), (188, 41936), (213, 41897),

Gene: Duplo\_63 Start: 39613, Stop: 39152, Start Num: 75  
Candidate Starts for Duplo\_63:  
(Start: 50 @39649 has 3 MA's), (Start: 75 @39613 has 14 MA's), (Start: 98 @39571 has 3 MA's), (102, 39559), (164, 39301), (175, 39256),

Gene: Dussy\_61 Start: 41353, Stop: 40877, Start Num: 49

Candidate Starts for Dussy\_61:  
(Start: 49 @41353 has 181 MA's), (188, 40948), (213, 40909),

Gene: DustyMartin\_61 Start: 38987, Stop: 38502, Start Num: 51  
Candidate Starts for DustyMartin\_61:  
(16, 39053), (Start: 51 @38987 has 18 MA's), (124, 38795), (187, 38552), (202, 38516),

Gene: Dusty\_130 Start: 73243, Stop: 73686, Start Num: 89  
Candidate Starts for Dusty\_130:  
(Start: 70 @73216 has 3 MA's), (Start: 89 @73243 has 10 MA's), (Start: 91 @73246 has 3 MA's), (167, 73564), (188, 73642),

Gene: Dynamix\_61 Start: 40132, Stop: 39665, Start Num: 49  
Candidate Starts for Dynamix\_61:  
(Start: 49 @40132 has 181 MA's), (167, 39811), (188, 39733),

Gene: EZMoney23\_58 Start: 39411, Stop: 38947, Start Num: 60  
Candidate Starts for EZMoney23\_58:  
(Start: 59 @39417 has 42 MA's), (Start: 60 @39411 has 138 MA's), (164, 39090),

Gene: Eagle\_58 Start: 39003, Stop: 38533, Start Num: 55  
Candidate Starts for Eagle\_58:  
(Start: 55 @39003 has 194 MA's), (124, 38814), (173, 38619),

Gene: EagleEye\_65 Start: 39846, Stop: 39388, Start Num: 77  
Candidate Starts for EagleEye\_65:  
(Start: 69 @39852 has 27 MA's), (Start: 77 @39846 has 4 MA's), (155, 39585), (161, 39558), (164, 39537), (187, 39450),

Gene: Eaglepride\_60 Start: 39072, Stop: 38587, Start Num: 51  
Candidate Starts for Eaglepride\_60:  
(1, 39684), (16, 39138), (Start: 51 @39072 has 18 MA's), (Start: 66 @39051 has 21 MA's), (124, 38880), (194, 38616), (195, 38613), (202, 38601),

Gene: Eapen\_58 Start: 38973, Stop: 38503, Start Num: 55  
Candidate Starts for Eapen\_58:  
(Start: 55 @38973 has 194 MA's), (124, 38784),

Gene: Ebony\_61 Start: 38810, Stop: 38445, Start Num: 109  
Candidate Starts for Ebony\_61:  
(Start: 52 @38942 has 16 MA's), (Start: 75 @38906 has 14 MA's), (Start: 98 @38864 has 3 MA's), (Start: 109 @38810 has 3 MA's), (Start: 120 @38771 has 1 MA's), (153, 38648), (162, 38606), (164, 38594), (208, 38459),

Gene: Echild\_62 Start: 39285, Stop: 38812, Start Num: 60  
Candidate Starts for Echild\_62:  
(Start: 41 @39309 has 1 MA's), (Start: 59 @39291 has 42 MA's), (Start: 60 @39285 has 138 MA's), (Start: 113 @39156 has 1 MA's), (164, 38955),

Gene: Edison31\_56 Start: 38915, Stop: 38430, Start Num: 51  
Candidate Starts for Edison31\_56:  
(16, 38981), (Start: 51 @38915 has 18 MA's), (124, 38723), (187, 38480), (194, 38459), (195, 38456), (202, 38444),

Gene: Edtherson\_59 Start: 41316, Stop: 40822, Start Num: 49  
Candidate Starts for Edtherson\_59:

(Start: 49 @41316 has 181 MA's), (188, 40911), (213, 40872),

Gene: Eidsmoe\_62 Start: 39758, Stop: 39294, Start Num: 60

Candidate Starts for Eidsmoe\_62:

(Start: 60 @39758 has 138 MA's), (164, 39443),

Gene: Ejimix\_124 Start: 71780, Stop: 72256, Start Num: 56

Candidate Starts for Ejimix\_124:

(Start: 56 @71780 has 39 MA's), (160, 72098), (161, 72101), (167, 72137), (187, 72209), (194, 72230),

Gene: EITiger69\_61 Start: 40029, Stop: 39565, Start Num: 69

Candidate Starts for EITiger69\_61:

(Start: 61 @40044 has 6 MA's), (Start: 69 @40029 has 27 MA's), (Start: 109 @39921 has 3 MA's),  
(124, 39861), (168, 39684), (177, 39651), (188, 39609), (202, 39579),

Gene: Elephantoon\_62 Start: 39345, Stop: 38881, Start Num: 60

Candidate Starts for Elephantoon\_62:

(Start: 60 @39345 has 138 MA's), (155, 39078), (161, 39051), (164, 39030),

Gene: Emmina\_22 Start: 12652, Stop: 13167, Start Num: 28

Candidate Starts for Emmina\_22:

(Start: 28 @12652 has 19 MA's), (Start: 53 @12697 has 4 MA's), (137, 12949), (154, 13045),

Gene: EmyBug\_61 Start: 39760, Stop: 39296, Start Num: 60

Candidate Starts for EmyBug\_61:

(Start: 60 @39760 has 138 MA's), (164, 39445),

Gene: Engineer\_136 Start: 74674, Stop: 75111, Start Num: 89

Candidate Starts for Engineer\_136:

(Start: 70 @74647 has 3 MA's), (Start: 89 @74674 has 10 MA's), (Start: 91 @74677 has 3 MA's), (125,  
74821), (162, 74968), (187, 75067),

Gene: EnzoK\_58 Start: 38007, Stop: 37483, Start Num: 49

Candidate Starts for EnzoK\_58:

(Start: 49 @38007 has 181 MA's), (188, 37602), (213, 37515),

Gene: EpicPhail\_65 Start: 39625, Stop: 39149, Start Num: 55

Candidate Starts for EpicPhail\_65:

(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's),  
(187, 39193), (200, 39160),

Gene: Eponine\_78 Start: 49220, Stop: 49696, Start Num: 78

Candidate Starts for Eponine\_78:

(Start: 61 @49196 has 6 MA's), (Start: 78 @49220 has 16 MA's), (Start: 86 @49232 has 1 MA's), (100,  
49268), (107, 49304), (Start: 109 @49322 has 3 MA's), (Start: 114 @49340 has 3 MA's), (161, 49553),  
(167, 49589), (168, 49592), (188, 49661), (203, 49685),

Gene: Epsocamisio\_67 Start: 39456, Stop: 39088, Start Num: 106

Candidate Starts for Epsocamisio\_67:



(Start: 59 @39546 has 42 MA's), (Start: 106 @39456 has 12 MA's), (160, 39246), (190, 39120), (200, 39102),

Gene: Equemioh13\_62 Start: 39838, Stop: 39365, Start Num: 60

Candidate Starts for Equemioh13\_62:

(Start: 59 @39844 has 42 MA's), (Start: 60 @39838 has 138 MA's), (Start: 113 @39709 has 1 MA's), (164, 39508),

Gene: EricB\_62 Start: 38576, Stop: 38073, Start Num: 60

Candidate Starts for EricB\_62:

(Start: 60 @38576 has 138 MA's), (Start: 65 @38573 has 18 MA's), (164, 38249),

Gene: EricMillard\_122 Start: 70284, Stop: 70760, Start Num: 56

Candidate Starts for EricMillard\_122:

(32, 70239), (Start: 56 @70284 has 39 MA's), (160, 70602), (161, 70605), (167, 70641), (187, 70713), (194, 70734),

Gene: Erik\_51 Start: 36731, Stop: 36291, Start Num: 85

Candidate Starts for Erik\_51:

(Start: 85 @36731 has 32 MA's), (Start: 114 @36629 has 3 MA's), (160, 36452), (167, 36413), (168, 36410), (171, 36401), (188, 36335),

Gene: Eris\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Eris\_57:

(45, 38984), (Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Eros\_58 Start: 38980, Stop: 38510, Start Num: 55

Candidate Starts for Eros\_58:

(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Espica\_51 Start: 36741, Stop: 36301, Start Num: 85

Candidate Starts for Espica\_51:

(Start: 85 @36741 has 32 MA's), (Start: 114 @36639 has 3 MA's), (160, 36462), (167, 36423), (168, 36420), (171, 36411), (188, 36345),

Gene: Espresso\_58 Start: 40763, Stop: 40287, Start Num: 49

Candidate Starts for Espresso\_58:

(Start: 49 @40763 has 181 MA's), (167, 40436), (188, 40358), (213, 40319),

Gene: Et2Brutus\_60 Start: 38905, Stop: 38408, Start Num: 52

Candidate Starts for Et2Brutus\_60:

(Start: 52 @38905 has 16 MA's), (Start: 75 @38869 has 14 MA's), (Start: 98 @38827 has 3 MA's), (Start: 109 @38773 has 3 MA's), (Start: 120 @38734 has 1 MA's), (153, 38611), (162, 38569), (164, 38557), (208, 38422),

Gene: Euphoria\_57 Start: 40039, Stop: 39566, Start Num: 49

Candidate Starts for Euphoria\_57:

(Start: 49 @40039 has 181 MA's), (188, 39634),

Gene: Eurydice\_59 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for Eurydice\_59:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: EvilGenius\_63 Start: 41505, Stop: 41032, Start Num: 60  
Candidate Starts for EvilGenius\_63:  
(Start: 60 @41505 has 138 MA's), (164, 41175),

Gene: Expelliarmus\_61 Start: 39279, Stop: 38791, Start Num: 73  
Candidate Starts for Expelliarmus\_61:  
(64, 39285), (Start: 73 @39279 has 24 MA's), (Start: 109 @39177 has 3 MA's), (124, 39117), (168, 38913), (188, 38838),

Gene: Eyeball\_61 Start: 41486, Stop: 40992, Start Num: 49  
Candidate Starts for Eyeball\_61:  
(Start: 49 @41486 has 181 MA's), (188, 41081), (213, 41042),

Gene: Fajezeel\_60 Start: 40184, Stop: 39717, Start Num: 49  
Candidate Starts for Fajezeel\_60:  
(40, 40196), (Start: 49 @40184 has 181 MA's), (96, 40136), (Start: 114 @40076 has 3 MA's), (Start: 119 @40058 has 1 MA's), (163, 39887), (167, 39866), (188, 39788), (213, 39749),

Gene: Fameo\_62 Start: 40252, Stop: 39779, Start Num: 60  
Candidate Starts for Fameo\_62:  
(Start: 41 @40276 has 1 MA's), (Start: 59 @40258 has 42 MA's), (Start: 60 @40252 has 138 MA's), (Start: 113 @40123 has 1 MA's), (164, 39922),

Gene: Familton\_10 Start: 3151, Stop: 2666, Start Num: 88  
Candidate Starts for Familton\_10:  
(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Farber\_64 Start: 39611, Stop: 39135, Start Num: 55  
Candidate Starts for Farber\_64:  
(Start: 44 @39617 has 23 MA's), (Start: 55 @39611 has 194 MA's), (Start: 98 @39536 has 3 MA's), (187, 39179), (200, 39146),

Gene: Fascinus\_55 Start: 40332, Stop: 39856, Start Num: 49  
Candidate Starts for Fascinus\_55:  
(Start: 49 @40332 has 181 MA's), (188, 39927), (213, 39888),

Gene: Fayely\_62 Start: 39727, Stop: 39263, Start Num: 60  
Candidate Starts for Fayely\_62:  
(Start: 60 @39727 has 138 MA's), (164, 39412),

Gene: Fenn\_62 Start: 42121, Stop: 41645, Start Num: 49  
Candidate Starts for Fenn\_62:  
(Start: 49 @42121 has 181 MA's), (167, 41794), (188, 41716), (213, 41677),

Gene: Fernando\_64 Start: 39621, Stop: 39145, Start Num: 55  
Candidate Starts for Fernando\_64:  
(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's), (187, 39189), (200, 39156),

Gene: Fibonacci\_61 Start: 38911, Stop: 38414, Start Num: 52  
Candidate Starts for Fibonacci\_61:  
(Start: 52 @38911 has 16 MA's), (Start: 75 @38875 has 14 MA's), (Start: 98 @38833 has 3 MA's), (Start: 109 @38779 has 3 MA's), (Start: 120 @38740 has 1 MA's), (153, 38617), (162, 38575), (164,

38563), (208, 38428),

Gene: Fionnbharth\_76 Start: 48594, Stop: 49094, Start Num: 61

Candidate Starts for Fionnbharth\_76:

(Start: 61 @48594 has 6 MA's), (Start: 78 @48618 has 16 MA's), (Start: 86 @48630 has 1 MA's), (100, 48666), (107, 48702), (Start: 109 @48720 has 3 MA's), (Start: 114 @48738 has 3 MA's), (161, 48951), (167, 48987), (168, 48990), (188, 49059), (203, 49083),

Gene: FireRed\_21 Start: 12888, Stop: 13358, Start Num: 53

Candidate Starts for FireRed\_21:

(Start: 28 @12843 has 19 MA's), (Start: 53 @12888 has 4 MA's), (137, 13140), (154, 13236),

Gene: Firecracker\_10 Start: 3502, Stop: 3017, Start Num: 88

Candidate Starts for Firecracker\_10:

(Start: 88 @3502 has 28 MA's), (105, 3442), (153, 3229), (157, 3217),

Gene: FiringLine\_62 Start: 39902, Stop: 39429, Start Num: 60

Candidate Starts for FiringLine\_62:

(Start: 41 @39926 has 1 MA's), (Start: 59 @39908 has 42 MA's), (Start: 60 @39902 has 138 MA's), (Start: 113 @39773 has 1 MA's), (164, 39572),

Gene: First\_0064 Start: 40175, Stop: 39702, Start Num: 60

Candidate Starts for First\_0064:

(Start: 60 @40175 has 138 MA's), (Start: 113 @40046 has 1 MA's), (164, 39845),

Gene: Flare16\_62 Start: 39594, Stop: 39121, Start Num: 60

Candidate Starts for Flare16\_62:

(Start: 59 @39600 has 42 MA's), (Start: 60 @39594 has 138 MA's), (Start: 113 @39465 has 1 MA's), (144, 39354), (164, 39264),

Gene: Flaverint\_62 Start: 39369, Stop: 38872, Start Num: 52

Candidate Starts for Flaverint\_62:

(Start: 52 @39369 has 16 MA's), (Start: 75 @39333 has 14 MA's), (Start: 98 @39291 has 3 MA's), (Start: 120 @39198 has 1 MA's), (153, 39075), (162, 39033), (164, 39021), (208, 38886),

Gene: Florean\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for Florean\_58:

(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Flux\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for Flux\_58:

(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: FlyCatcher\_63 Start: 42286, Stop: 41837, Start Num: 86

Candidate Starts for FlyCatcher\_63:

(Start: 86 @42286 has 1 MA's), (90, 42280), (99, 42262), (124, 42151), (160, 41995), (163, 41980), (176, 41923), (177, 41920), (188, 41878), (190, 41869), (195, 41860),

Gene: ForGetIt\_59 Start: 39924, Stop: 39466, Start Num: 73

Candidate Starts for ForGetIt\_59:

(Start: 73 @39924 has 24 MA's), (Start: 109 @39822 has 3 MA's), (124, 39762), (132, 39726), (168, 39585), (188, 39510), (202, 39480),

Gene: Forsytheast\_58 Start: 39605, Stop: 39129, Start Num: 49

Candidate Starts for Forsytheast\_58:

(Start: 49 @39605 has 181 MA's), (188, 39200), (213, 39161),

Gene: FoulBall\_9 Start: 3151, Stop: 2666, Start Num: 88

Candidate Starts for FoulBall\_9:

(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Francis47\_58 Start: 41390, Stop: 40914, Start Num: 49

Candidate Starts for Francis47\_58:

(34, 41420), (Start: 49 @41390 has 181 MA's), (188, 40985), (213, 40946),

Gene: Fred313\_60 Start: 38975, Stop: 38514, Start Num: 59

Candidate Starts for Fred313\_60:

(5, 39137), (9, 39098), (Start: 59 @38975 has 42 MA's), (103, 38891), (Start: 120 @38813 has 1 MA's), (124, 38792), (188, 38543), (195, 38525),

Gene: Froghopper\_56 Start: 39110, Stop: 38598, Start Num: 37

Candidate Starts for Froghopper\_56:

(Start: 37 @39110 has 2 MA's), (Start: 72 @39077 has 7 MA's), (Start: 109 @38972 has 3 MA's), (167, 38744), (188, 38666),

Gene: Funston\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Funston\_57:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Fushigi\_56 Start: 38866, Stop: 38390, Start Num: 49

Candidate Starts for Fushigi\_56:

(Start: 49 @38866 has 181 MA's), (188, 38461), (213, 38422),

Gene: GMonster\_56 Start: 40315, Stop: 39821, Start Num: 49

Candidate Starts for GMonster\_56:

(Start: 49 @40315 has 181 MA's), (Start: 68 @40312 has 3 MA's), (188, 39910), (213, 39871),

Gene: Gadost\_58 Start: 38982, Stop: 38512, Start Num: 55

Candidate Starts for Gadost\_58:

(Start: 55 @38982 has 194 MA's), (124, 38793),

Gene: GageAP\_60 Start: 40954, Stop: 40466, Start Num: 49

Candidate Starts for GageAP\_60:

(Start: 49 @40954 has 181 MA's), (Start: 109 @40840 has 3 MA's), (167, 40612), (188, 40534),

Gene: Gaia\_140 Start: 75742, Stop: 76296, Start Num: 20

Candidate Starts for Gaia\_140:

(7, 75664), (10, 75679), (11, 75685), (13, 75700), (Start: 20 @75742 has 1 MA's), (94, 75880), (127, 76036), (134, 76060), (167, 76222), (178, 76261),

Gene: Gaia\_88 Start: 51215, Stop: 51658, Start Num: 81

Candidate Starts for Gaia\_88:

(Start: 81 @51215 has 2 MA's), (139, 51422), (168, 51533), (174, 51557), (183, 51587), (196, 51632),

Gene: Gail\_63 Start: 40699, Stop: 40220, Start Num: 60

Candidate Starts for Gail\_63:

(Start: 60 @40699 has 138 MA's), (149, 40429), (164, 40366), (175, 40321),

Gene: Gandalf20\_62 Start: 42048, Stop: 41572, Start Num: 49

Candidate Starts for Gandalf20\_62:

(Start: 49 @42048 has 181 MA's), (167, 41721), (188, 41643), (213, 41604),

Gene: Garak\_65 Start: 39067, Stop: 38564, Start Num: 60

Candidate Starts for Garak\_65:

(Start: 60 @39067 has 138 MA's), (Start: 65 @39064 has 18 MA's), (164, 38740),

Gene: GaugeLDP\_59 Start: 39772, Stop: 39320, Start Num: 80

Candidate Starts for GaugeLDP\_59:

(39, 39835), (67, 39793), (Start: 77 @39778 has 4 MA's), (Start: 80 @39772 has 1 MA's), (164, 39469), (177, 39418), (187, 39382),

Gene: Geeche\_132 Start: 73466, Stop: 73909, Start Num: 89

Candidate Starts for Geeche\_132:

(Start: 70 @73439 has 3 MA's), (Start: 89 @73466 has 10 MA's), (Start: 91 @73469 has 3 MA's), (167, 73787), (188, 73865),

Gene: Gemma\_63 Start: 39503, Stop: 39027, Start Num: 55

Candidate Starts for Gemma\_63:

(Start: 55 @39503 has 194 MA's), (182, 39089), (187, 39071), (200, 39038),

Gene: George\_55 Start: 39399, Stop: 38935, Start Num: 69

Candidate Starts for George\_55:

(Start: 61 @39414 has 6 MA's), (Start: 69 @39399 has 27 MA's), (Start: 109 @39291 has 3 MA's), (124, 39231), (168, 39054), (188, 38979), (202, 38949),

Gene: Georgie2\_63 Start: 39947, Stop: 39474, Start Num: 60

Candidate Starts for Georgie2\_63:

(Start: 41 @39971 has 1 MA's), (Start: 59 @39953 has 42 MA's), (Start: 60 @39947 has 138 MA's), (Start: 113 @39818 has 1 MA's), (164, 39617),

Gene: Ghouboy\_60 Start: 40367, Stop: 39903, Start Num: 69

Candidate Starts for Ghouboy\_60:

(Start: 61 @40382 has 6 MA's), (Start: 69 @40367 has 27 MA's), (Start: 109 @40259 has 3 MA's), (124, 40199), (168, 40022), (177, 39989), (188, 39947), (202, 39917),

Gene: Gilberta\_62 Start: 39326, Stop: 38865, Start Num: 75

Candidate Starts for Gilberta\_62:

(Start: 52 @39362 has 16 MA's), (Start: 75 @39326 has 14 MA's), (Start: 98 @39284 has 3 MA's), (Start: 120 @39191 has 1 MA's), (153, 39068), (162, 39026), (164, 39014), (208, 38879),

Gene: GingkoMaracino\_64 Start: 39507, Stop: 39031, Start Num: 55

Candidate Starts for GingkoMaracino\_64:

(Start: 44 @39513 has 23 MA's), (Start: 55 @39507 has 194 MA's), (Start: 98 @39432 has 3 MA's), (187, 39075), (200, 39042),

Gene: Giroux\_61 Start: 39378, Stop: 38920, Start Num: 59

Candidate Starts for Giroux\_61:

(5, 39540), (9, 39501), (Start: 59 @39378 has 42 MA's), (102, 39300), (103, 39297), (124, 39198), (188, 38949), (195, 38931),

Gene: Gladiator\_61 Start: 38292, Stop: 37789, Start Num: 60

Candidate Starts for Gladiator\_61:

(Start: 60 @38292 has 138 MA's), (Start: 65 @38289 has 18 MA's), (164, 37965),

Gene: Gollum\_51 Start: 36797, Stop: 36357, Start Num: 85

Candidate Starts for Gollum\_51:

(Start: 85 @36797 has 32 MA's), (Start: 114 @36695 has 3 MA's), (160, 36518), (167, 36479), (168, 36476), (171, 36467), (188, 36401),

Gene: Gompeii16\_59 Start: 42474, Stop: 41980, Start Num: 49

Candidate Starts for Gompeii16\_59:

(Start: 49 @42474 has 181 MA's), (188, 42069), (213, 42030),

Gene: Goose\_59 Start: 38698, Stop: 38213, Start Num: 51

Candidate Starts for Goose\_59:

(Start: 51 @38698 has 18 MA's), (124, 38506), (194, 38242), (195, 38239), (202, 38227),

Gene: Graduation\_63 Start: 41787, Stop: 41299, Start Num: 49

Candidate Starts for Graduation\_63:

(Start: 49 @41787 has 181 MA's), (Start: 109 @41673 has 3 MA's), (163, 41466), (167, 41445), (188, 41367),

Gene: Gratitude\_60 Start: 39838, Stop: 39365, Start Num: 60

Candidate Starts for Gratitude\_60:

(Start: 59 @39844 has 42 MA's), (Start: 60 @39838 has 138 MA's), (Start: 113 @39709 has 1 MA's), (164, 39508),

Gene: GrecoEtereo\_59 Start: 39952, Stop: 39476, Start Num: 49

Candidate Starts for GrecoEtereo\_59:

(Start: 49 @39952 has 181 MA's), (Start: 68 @39949 has 3 MA's), (188, 39547), (213, 39508),

Gene: GreedyLawyer\_61 Start: 38583, Stop: 38080, Start Num: 60

Candidate Starts for GreedyLawyer\_61:

(Start: 60 @38583 has 138 MA's), (Start: 65 @38580 has 18 MA's), (164, 38256),

Gene: Greg\_60 Start: 40184, Stop: 39717, Start Num: 49

Candidate Starts for Greg\_60:

(40, 40196), (Start: 49 @40184 has 181 MA's), (96, 40136), (Start: 114 @40076 has 3 MA's), (Start: 119 @40058 has 1 MA's), (163, 39887), (167, 39866), (188, 39788), (213, 39749),

Gene: Grif\_64 Start: 39696, Stop: 39220, Start Num: 55

Candidate Starts for Grif\_64:

(Start: 44 @39702 has 23 MA's), (Start: 55 @39696 has 194 MA's), (Start: 98 @39621 has 3 MA's), (187, 39264), (200, 39231),

Gene: Groundhog\_63 Start: 39470, Stop: 38982, Start Num: 73

Candidate Starts for Groundhog\_63:

(Start: 73 @39470 has 24 MA's), (Start: 109 @39368 has 3 MA's), (124, 39308), (168, 39104), (188, 39029),

Gene: Groupthink\_65 Start: 39507, Stop: 39031, Start Num: 55

Candidate Starts for Groupthink\_65:

(Start: 55 @39507 has 194 MA's), (182, 39093), (187, 39075), (200, 39042),

Gene: Grub\_64 Start: 39619, Stop: 39137, Start Num: 44

Candidate Starts for Grub\_64:

(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: Grum1\_64 Start: 39627, Stop: 39145, Start Num: 44

Candidate Starts for Grum1\_64:

(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's), (187, 39189), (200, 39156),

Gene: Gruunaga\_64 Start: 38991, Stop: 38488, Start Num: 60

Candidate Starts for Gruunaga\_64:

(Start: 60 @38991 has 138 MA's), (Start: 65 @38988 has 18 MA's), (164, 38664),

Gene: GtownJaz\_64 Start: 39623, Stop: 39147, Start Num: 55

Candidate Starts for GtownJaz\_64:

(Start: 44 @39629 has 23 MA's), (Start: 55 @39623 has 194 MA's), (Start: 98 @39548 has 3 MA's), (187, 39191), (200, 39158),

Gene: Gwendoluna\_62 Start: 42304, Stop: 41837, Start Num: 49

Candidate Starts for Gwendoluna\_62:

(Start: 49 @42304 has 181 MA's), (96, 42256), (Start: 114 @42196 has 3 MA's), (Start: 119 @42178 has 1 MA's), (163, 42007), (167, 41986), (188, 41908), (213, 41869),

Gene: Gyzlar\_55 Start: 38257, Stop: 37790, Start Num: 49

Candidate Starts for Gyzlar\_55:

(Start: 49 @38257 has 181 MA's), (96, 38209), (Start: 114 @38149 has 3 MA's), (Start: 119 @38131 has 1 MA's), (163, 37960), (167, 37939), (188, 37861), (213, 37822),

Gene: HINdeR\_55 Start: 41083, Stop: 40607, Start Num: 57

Candidate Starts for HINdeR\_55:

(Start: 57 @41083 has 1 MA's), (Start: 98 @41011 has 3 MA's), (Start: 120 @40918 has 1 MA's), (163, 40750), (171, 40714), (188, 40648), (194, 40633), (195, 40630),

Gene: Halley\_132 Start: 72096, Stop: 72572, Start Num: 56

Candidate Starts for Halley\_132:

(Start: 56 @72096 has 39 MA's), (160, 72414), (161, 72417), (167, 72453), (187, 72525), (194, 72546),

Gene: HamSlice\_56 Start: 38976, Stop: 38506, Start Num: 55

Candidate Starts for HamSlice\_56:

(Start: 55 @38976 has 194 MA's), (124, 38787),

Gene: Hami1\_55 Start: 36576, Stop: 36082, Start Num: 66

Candidate Starts for Hami1\_55:

(Start: 66 @36576 has 21 MA's), (188, 36171), (213, 36132),

Gene: Hammer\_64 Start: 38595, Stop: 38095, Start Num: 65

Candidate Starts for Hammer\_64:

(Start: 60 @38598 has 138 MA's), (Start: 65 @38595 has 18 MA's), (164, 38271),

Gene: HanShotFirst\_61 Start: 42461, Stop: 41967, Start Num: 49

Candidate Starts for HanShotFirst\_61:  
(Start: 49 @42461 has 181 MA's), (188, 42056), (213, 42017),

Gene: Hannaconda\_119 Start: 67166, Stop: 67480, Start Num: 120  
Candidate Starts for Hannaconda\_119:  
(36, 66944), (Start: 56 @66980 has 39 MA's), (Start: 120 @67166 has 1 MA's), (153, 67289), (171, 67367), (174, 67382), (179, 67403), (185, 67421),

Gene: Happiness\_57 Start: 38964, Stop: 38494, Start Num: 55  
Candidate Starts for Happiness\_57:  
(30, 38997), (Start: 55 @38964 has 194 MA's), (124, 38775), (195, 38508),

Gene: Harella\_20 Start: 12950, Stop: 13465, Start Num: 28  
Candidate Starts for Harella\_20:  
(Start: 28 @12950 has 19 MA's), (Start: 53 @12995 has 4 MA's), (137, 13247), (154, 13343),

Gene: Harlequin\_50 Start: 36583, Stop: 36143, Start Num: 85  
Candidate Starts for Harlequin\_50:  
(Start: 85 @36583 has 32 MA's), (Start: 114 @36481 has 3 MA's), (160, 36304), (167, 36265), (168, 36262), (171, 36253), (188, 36187),

Gene: HarryHoudini\_63 Start: 40037, Stop: 39558, Start Num: 60  
Candidate Starts for HarryHoudini\_63:  
(Start: 59 @40043 has 42 MA's), (Start: 60 @40037 has 138 MA's), (Start: 113 @39908 has 1 MA's), (164, 39707), (208, 39572),

Gene: HarryOW\_59 Start: 40618, Stop: 40124, Start Num: 49  
Candidate Starts for HarryOW\_59:  
(Start: 49 @40618 has 181 MA's), (188, 40213), (213, 40174),

Gene: HashRod\_65 Start: 39649, Stop: 39173, Start Num: 55  
Candidate Starts for HashRod\_65:  
(Start: 44 @39655 has 23 MA's), (Start: 55 @39649 has 194 MA's), (Start: 98 @39574 has 3 MA's), (187, 39217), (200, 39184),

Gene: HaveUMetTed\_65 Start: 39492, Stop: 39016, Start Num: 55  
Candidate Starts for HaveUMetTed\_65:  
(Start: 55 @39492 has 194 MA's), (182, 39078), (187, 39060), (200, 39027),

Gene: Heathen\_61 Start: 39073, Stop: 38612, Start Num: 59  
Candidate Starts for Heathen\_61:  
(5, 39235), (9, 39196), (Start: 59 @39073 has 42 MA's), (103, 38989), (Start: 120 @38911 has 1 MA's), (124, 38890), (188, 38641), (195, 38623),

Gene: Heffalump\_61 Start: 40720, Stop: 40247, Start Num: 60  
Candidate Starts for Heffalump\_61:  
(Start: 41 @40744 has 1 MA's), (Start: 59 @40726 has 42 MA's), (Start: 60 @40720 has 138 MA's), (Start: 113 @40591 has 1 MA's), (164, 40390),

Gene: HelDan\_61 Start: 39289, Stop: 38828, Start Num: 59  
Candidate Starts for HelDan\_61:  
(5, 39451), (9, 39412), (Start: 59 @39289 has 42 MA's), (103, 39205), (Start: 120 @39127 has 1 MA's), (124, 39106), (188, 38857), (195, 38839),



Gene: Heliosoles\_63 Start: 39510, Stop: 39034, Start Num: 55  
Candidate Starts for Heliosoles\_63:  
(Start: 55 @39510 has 194 MA's), (182, 39096), (187, 39078), (200, 39045),

Gene: Helmet\_65 Start: 39067, Stop: 38564, Start Num: 60  
Candidate Starts for Helmet\_65:  
(Start: 60 @39067 has 138 MA's), (Start: 65 @39064 has 18 MA's), (164, 38740),

Gene: Herbertwm\_59 Start: 39513, Stop: 39046, Start Num: 61  
Candidate Starts for Herbertwm\_59:  
(Start: 61 @39513 has 6 MA's), (164, 39195),

Gene: Hercules11\_64 Start: 39630, Stop: 39154, Start Num: 55  
Candidate Starts for Hercules11\_64:  
(Start: 44 @39636 has 23 MA's), (Start: 55 @39630 has 194 MA's), (Start: 98 @39555 has 3 MA's),  
(187, 39198), (200, 39165),

Gene: Hermia\_59 Start: 40625, Stop: 40149, Start Num: 49  
Candidate Starts for Hermia\_59:  
(Start: 49 @40625 has 181 MA's), (188, 40220), (213, 40181),

Gene: HermioneGrange\_61 Start: 41528, Stop: 41019, Start Num: 49  
Candidate Starts for HermioneGrange\_61:  
(Start: 49 @41528 has 181 MA's), (Start: 109 @41414 has 3 MA's), (167, 41186), (188, 41108), (213,  
41069),

Gene: Hexamo\_64 Start: 38697, Stop: 38194, Start Num: 60  
Candidate Starts for Hexamo\_64:  
(Start: 60 @38697 has 138 MA's), (Start: 65 @38694 has 18 MA's), (164, 38370),

Gene: Hiro\_51 Start: 37059, Stop: 36619, Start Num: 85  
Candidate Starts for Hiro\_51:  
(Start: 85 @37059 has 32 MA's), (Start: 114 @36957 has 3 MA's), (160, 36780), (167, 36741), (168,  
36738), (171, 36729), (188, 36663),

Gene: HokkenD\_120 Start: 70459, Stop: 70935, Start Num: 56  
Candidate Starts for HokkenD\_120:  
(32, 70414), (Start: 56 @70459 has 39 MA's), (160, 70777), (161, 70780), (167, 70816), (187, 70888),  
(194, 70909),

Gene: Holli\_57 Start: 38768, Stop: 38298, Start Num: 55  
Candidate Starts for Holli\_57:  
(Start: 55 @38768 has 194 MA's), (124, 38579),

Gene: Homines\_51 Start: 36156, Stop: 35689, Start Num: 49  
Candidate Starts for Homines\_51:  
(Start: 49 @36156 has 181 MA's), (167, 35835), (188, 35757),

Gene: Hookmount\_60 Start: 39339, Stop: 38881, Start Num: 59  
Candidate Starts for Hookmount\_60:  
(Start: 59 @39339 has 42 MA's), (102, 39261), (103, 39258), (124, 39159), (161, 39024), (187, 38916),  
(195, 38892),

Gene: Hoot\_58 Start: 36431, Stop: 35931, Start Num: 65

Candidate Starts for Hoot\_58:

(Start: 60 @36434 has 138 MA's), (Start: 65 @36431 has 18 MA's), (164, 36107),

Gene: Hope4ever\_61 Start: 40934, Stop: 40458, Start Num: 49

Candidate Starts for Hope4ever\_61:

(Start: 49 @40934 has 181 MA's), (188, 40529), (213, 40490),

Gene: Hopecy\_23 Start: 13092, Stop: 13607, Start Num: 28

Candidate Starts for Hopecy\_23:

(Start: 28 @13092 has 19 MA's), (Start: 53 @13137 has 4 MA's), (137, 13389), (154, 13485),

Gene: HortumSL17\_64 Start: 40037, Stop: 39573, Start Num: 60

Candidate Starts for HortumSL17\_64:

(Start: 60 @40037 has 138 MA's), (155, 39770), (161, 39743), (164, 39722), (187, 39635),

Gene: Houdini22\_58 Start: 38982, Stop: 38512, Start Num: 55

Candidate Starts for Houdini22\_58:

(Start: 55 @38982 has 194 MA's), (124, 38793),

Gene: HufflyPuff\_20 Start: 12799, Stop: 13314, Start Num: 28

Candidate Starts for HufflyPuff\_20:

(Start: 28 @12799 has 19 MA's), (Start: 53 @12844 has 4 MA's), (137, 13096), (154, 13192),

Gene: Hughesyang\_130 Start: 71821, Stop: 72297, Start Num: 56

Candidate Starts for Hughesyang\_130:

(32, 71776), (Start: 56 @71821 has 39 MA's), (160, 72139), (161, 72142), (167, 72178), (187, 72250), (194, 72271),

Gene: HuhtaEnerson15\_57 Start: 39393, Stop: 38935, Start Num: 73

Candidate Starts for HuhtaEnerson15\_57:

(Start: 73 @39393 has 24 MA's), (Start: 109 @39291 has 3 MA's), (124, 39231), (168, 39054), (188, 38979), (202, 38949),

Gene: Hutc2\_60 Start: 38911, Stop: 38414, Start Num: 52

Candidate Starts for Hutc2\_60:

(Start: 52 @38911 has 16 MA's), (Start: 75 @38875 has 14 MA's), (Start: 98 @38833 has 3 MA's), (Start: 109 @38779 has 3 MA's), (Start: 120 @38740 has 1 MA's), (153, 38617), (162, 38575), (164, 38563), (208, 38428),

Gene: Huxley\_57 Start: 39039, Stop: 38569, Start Num: 55

Candidate Starts for Huxley\_57:

(Start: 29 @39075 has 1 MA's), (Start: 55 @39039 has 194 MA's), (124, 38850),

Gene: ICleared\_58 Start: 39007, Stop: 38537, Start Num: 55

Candidate Starts for ICleared\_58:

(Start: 55 @39007 has 194 MA's), (124, 38818),

Gene: ILeeKay\_62 Start: 40792, Stop: 40316, Start Num: 66

Candidate Starts for ILeeKay\_62:

(Start: 66 @40792 has 21 MA's), (188, 40387), (213, 40348),

Gene: Iceman\_58 Start: 39264, Stop: 38794, Start Num: 55

Candidate Starts for Iceman\_58:

(Start: 55 @39264 has 194 MA's), (124, 39075),

Gene: Ichabod\_63 Start: 41655, Stop: 41167, Start Num: 49

Candidate Starts for Ichabod\_63:

(Start: 49 @41655 has 181 MA's), (Start: 109 @41541 has 3 MA's), (167, 41313), (188, 41235), (215, 41172),

Gene: Idergollasper\_9 Start: 3151, Stop: 2666, Start Num: 88

Candidate Starts for Idergollasper\_9:

(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Idleandcovert\_61 Start: 39379, Stop: 38921, Start Num: 59

Candidate Starts for Idleandcovert\_61:

(5, 39541), (9, 39502), (Start: 59 @39379 has 42 MA's), (102, 39301), (103, 39298), (124, 39199), (188, 38950), (195, 38932),

Gene: IgnatiusPatJac\_59 Start: 40122, Stop: 39781, Start Num: 119

Candidate Starts for IgnatiusPatJac\_59:

(Start: 49 @40248 has 181 MA's), (96, 40200), (Start: 114 @40140 has 3 MA's), (Start: 119 @40122 has 1 MA's), (163, 39951), (167, 39930), (188, 39852), (213, 39813),

Gene: Indra\_67 Start: 39068, Stop: 38565, Start Num: 60

Candidate Starts for Indra\_67:

(Start: 60 @39068 has 138 MA's), (Start: 65 @39065 has 18 MA's), (164, 38741),

Gene: Insomnia\_62 Start: 39422, Stop: 38925, Start Num: 52

Candidate Starts for Insomnia\_62:

(Start: 52 @39422 has 16 MA's), (Start: 75 @39386 has 14 MA's), (Start: 98 @39344 has 3 MA's), (Start: 109 @39290 has 3 MA's), (Start: 120 @39251 has 1 MA's), (153, 39128), (162, 39086), (164, 39074), (208, 38939),

Gene: Inyanga\_55 Start: 40292, Stop: 39798, Start Num: 49

Candidate Starts for Inyanga\_55:

(Start: 49 @40292 has 181 MA's), (188, 39887), (213, 39848),

Gene: Iqorha\_55 Start: 40291, Stop: 39797, Start Num: 49

Candidate Starts for Iqorha\_55:

(Start: 49 @40291 has 181 MA's), (188, 39886), (213, 39847),

Gene: Iracema64\_59 Start: 39242, Stop: 38772, Start Num: 55

Candidate Starts for Iracema64\_59:

(Start: 55 @39242 has 194 MA's), (124, 39053),

Gene: IronMan\_61 Start: 40727, Stop: 40263, Start Num: 60

Candidate Starts for IronMan\_61:

(Start: 59 @40733 has 42 MA's), (Start: 60 @40727 has 138 MA's), (164, 40412),

Gene: Isca\_60 Start: 38838, Stop: 38380, Start Num: 59

Candidate Starts for Isca\_60:

(Start: 59 @38838 has 42 MA's), (102, 38760), (103, 38757), (Start: 120 @38679 has 1 MA's), (124, 38658), (171, 38475), (188, 38409), (195, 38391),

Gene: Isiphiwo\_61 Start: 38147, Stop: 37647, Start Num: 65

Candidate Starts for Isiphiwo\_61:

(Start: 60 @38150 has 138 MA's), (Start: 65 @38147 has 18 MA's), (164, 37823),

Gene: Iwokeuplikedis\_64 Start: 39742, Stop: 39266, Start Num: 60

Candidate Starts for Iwokeuplikedis\_64:

(Start: 59 @39748 has 42 MA's), (Start: 60 @39742 has 138 MA's), (Start: 113 @39610 has 1 MA's), (164, 39409), (187, 39322), (206, 39277),

Gene: JC27\_62 Start: 40972, Stop: 40499, Start Num: 49

Candidate Starts for JC27\_62:

(Start: 49 @40972 has 181 MA's), (188, 40567), (213, 40528),

Gene: JF1\_76 Start: 48583, Stop: 49059, Start Num: 78

Candidate Starts for JF1\_76:

(Start: 61 @48559 has 6 MA's), (Start: 78 @48583 has 16 MA's), (Start: 86 @48595 has 1 MA's), (100, 48631), (107, 48667), (Start: 109 @48685 has 3 MA's), (Start: 114 @48703 has 3 MA's), (150, 48847), (151, 48853), (161, 48916), (167, 48952), (168, 48955), (188, 49024), (203, 49048),

Gene: JF2\_59 Start: 37539, Stop: 37081, Start Num: 59

Candidate Starts for JF2\_59:

(Start: 59 @37539 has 42 MA's), (102, 37461), (103, 37458), (Start: 120 @37380 has 1 MA's), (124, 37359), (171, 37176), (188, 37110), (195, 37092),

Gene: JF4\_59 Start: 37539, Stop: 37081, Start Num: 59

Candidate Starts for JF4\_59:

(Start: 59 @37539 has 42 MA's), (102, 37461), (103, 37458), (Start: 120 @37380 has 1 MA's), (124, 37359), (171, 37176), (188, 37110), (195, 37092),

Gene: JHC117\_62 Start: 39620, Stop: 39144, Start Num: 55

Candidate Starts for JHC117\_62:

(Start: 44 @39626 has 23 MA's), (Start: 55 @39620 has 194 MA's), (Start: 98 @39545 has 3 MA's), (187, 39188), (200, 39155),

Gene: JSwag\_69 Start: 39645, Stop: 39277, Start Num: 106

Candidate Starts for JSwag\_69:

(47, 39753), (Start: 59 @39735 has 42 MA's), (Start: 106 @39645 has 12 MA's), (160, 39435), (190, 39309), (200, 39291),

Gene: Jaan\_62 Start: 40899, Stop: 40423, Start Num: 60

Candidate Starts for Jaan\_62:

(Start: 59 @40905 has 42 MA's), (Start: 60 @40899 has 138 MA's), (Start: 113 @40773 has 1 MA's), (164, 40572),

Gene: Jabiru\_60 Start: 39948, Stop: 39484, Start Num: 69

Candidate Starts for Jabiru\_60:

(Start: 61 @39963 has 6 MA's), (Start: 69 @39948 has 27 MA's), (Start: 109 @39840 has 3 MA's), (124, 39780), (168, 39603), (202, 39498),

Gene: Jabith\_62 Start: 39423, Stop: 38926, Start Num: 52

Candidate Starts for Jabith\_62:

(Start: 52 @39423 has 16 MA's), (Start: 75 @39387 has 14 MA's), (Start: 98 @39345 has 3 MA's), (Start: 109 @39291 has 3 MA's), (Start: 120 @39252 has 1 MA's), (153, 39129), (162, 39087), (164, 39075), (208, 38940),

Gene: JackSparrow\_62 Start: 40844, Stop: 40368, Start Num: 49

Candidate Starts for JackSparrow\_62:

(Start: 49 @40844 has 181 MA's), (188, 40439), (213, 40400),

Gene: JangDynasty\_9 Start: 3240, Stop: 2755, Start Num: 88

Candidate Starts for JangDynasty\_9:

(Start: 88 @3240 has 28 MA's), (105, 3180), (153, 2967), (157, 2955), (191, 2796),

Gene: Jasper\_60 Start: 39501, Stop: 39013, Start Num: 49

Candidate Starts for Jasper\_60:

(Start: 49 @39501 has 181 MA's), (Start: 109 @39387 has 3 MA's), (167, 39159), (188, 39081),

Gene: Jaykayelowell\_56 Start: 38971, Stop: 38501, Start Num: 55

Candidate Starts for Jaykayelowell\_56:

(Start: 55 @38971 has 194 MA's), (124, 38782),

Gene: Jeeves\_65 Start: 39660, Stop: 39199, Start Num: 77

Candidate Starts for Jeeves\_65:

(Start: 41 @39705 has 1 MA's), (Start: 60 @39681 has 138 MA's), (Start: 77 @39660 has 4 MA's), (149, 39408), (164, 39345), (175, 39300),

Gene: Jeffabunny\_64 Start: 38694, Stop: 38191, Start Num: 60

Candidate Starts for Jeffabunny\_64:

(Start: 60 @38694 has 138 MA's), (Start: 65 @38691 has 18 MA's), (164, 38367),

Gene: JenCasNa\_65 Start: 39627, Stop: 39145, Start Num: 44

Candidate Starts for JenCasNa\_65:

(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's), (187, 39189), (200, 39156),

Gene: JeppNRM\_65 Start: 39508, Stop: 39032, Start Num: 55

Candidate Starts for JeppNRM\_65:

(Start: 55 @39508 has 194 MA's), (182, 39094), (187, 39076), (200, 39043),

Gene: Jerm\_64 Start: 40334, Stop: 39837, Start Num: 41

Candidate Starts for Jerm\_64:

(Start: 41 @40334 has 1 MA's), (Start: 59 @40316 has 42 MA's), (Start: 60 @40310 has 138 MA's), (Start: 113 @40181 has 1 MA's), (164, 39980),

Gene: Jerm2\_61 Start: 41783, Stop: 41274, Start Num: 49

Candidate Starts for Jerm2\_61:

(Start: 49 @41783 has 181 MA's), (Start: 109 @41669 has 3 MA's), (167, 41441), (188, 41363), (213, 41324),

Gene: Jester\_50 Start: 36514, Stop: 36074, Start Num: 85

Candidate Starts for Jester\_50:

(Start: 85 @36514 has 32 MA's), (Start: 114 @36412 has 3 MA's), (160, 36235), (167, 36196), (168, 36193), (171, 36184), (188, 36118),

Gene: JetBlade\_58 Start: 38972, Stop: 38502, Start Num: 55

Candidate Starts for JetBlade\_58:

(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: JewelBug\_63 Start: 38855, Stop: 38352, Start Num: 60

Candidate Starts for JewelBug\_63:

(Start: 60 @38855 has 138 MA's), (Start: 65 @38852 has 18 MA's), (164, 38528),

Gene: Jflix2\_97 Start: 55540, Stop: 56004, Start Num: 68

Candidate Starts for Jflix2\_97:

(Start: 68 @55540 has 3 MA's), (97, 55591), (Start: 109 @55654 has 3 MA's), (161, 55858), (166, 55891), (167, 55894), (181, 55939),

Gene: Jobu08\_62 Start: 39459, Stop: 38977, Start Num: 44

Candidate Starts for Jobu08\_62:

(Start: 44 @39459 has 23 MA's), (Start: 55 @39453 has 194 MA's), (Start: 98 @39378 has 3 MA's), (187, 39021), (200, 38988),

Gene: JonJames\_144 Start: 81140, Stop: 81580, Start Num: 89

Candidate Starts for JonJames\_144:

(Start: 89 @81140 has 10 MA's), (125, 81287), (155, 81389), (167, 81461), (168, 81464), (188, 81539), (190, 81548), (204, 81575),

Gene: JoongJeon\_57 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for JoongJeon\_57:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Jordennis\_62 Start: 38336, Stop: 37833, Start Num: 60

Candidate Starts for Jordennis\_62:

(Start: 60 @38336 has 138 MA's), (Start: 65 @38333 has 18 MA's), (164, 38009),

Gene: Jorgensen\_60 Start: 40253, Stop: 39777, Start Num: 49

Candidate Starts for Jorgensen\_60:

(Start: 49 @40253 has 181 MA's), (188, 39848), (213, 39809),

Gene: Joselito\_62 Start: 39371, Stop: 38874, Start Num: 52

Candidate Starts for Joselito\_62:

(Start: 52 @39371 has 16 MA's), (Start: 75 @39335 has 14 MA's), (Start: 98 @39293 has 3 MA's), (Start: 109 @39239 has 3 MA's), (Start: 120 @39200 has 1 MA's), (153, 39077), (162, 39035), (164, 39023), (208, 38888),

Gene: JoshKayV\_64 Start: 40374, Stop: 39901, Start Num: 60

Candidate Starts for JoshKayV\_64:

(Start: 41 @40398 has 1 MA's), (Start: 59 @40380 has 42 MA's), (Start: 60 @40374 has 138 MA's), (Start: 113 @40245 has 1 MA's), (164, 40044),

Gene: Journey13\_56 Start: 38287, Stop: 37796, Start Num: 54

Candidate Starts for Journey13\_56:

(Start: 54 @38287 has 1 MA's), (164, 37945),

Gene: Jovo\_59 Start: 40180, Stop: 39722, Start Num: 73

Candidate Starts for Jovo\_59:

(Start: 73 @40180 has 24 MA's), (Start: 109 @40078 has 3 MA's), (124, 40018), (132, 39982), (168, 39841), (188, 39766), (202, 39736),

Gene: Jsquared\_62 Start: 39264, Stop: 38770, Start Num: 52

Candidate Starts for Jsquared\_62:

(Start: 52 @39264 has 16 MA's), (Start: 75 @39228 has 14 MA's), (116, 39108), (164, 38916), (184, 38844),

Gene: JuicyJay\_127 Start: 73333, Stop: 73812, Start Num: 56

Candidate Starts for JuicyJay\_127:

(Start: 56 @73333 has 39 MA's), (139, 73576), (153, 73618), (165, 73675), (174, 73711),

Gene: JuliaChild\_61 Start: 41268, Stop: 40759, Start Num: 49

Candidate Starts for JuliaChild\_61:

(Start: 49 @41268 has 181 MA's), (Start: 109 @41154 has 3 MA's), (167, 40926), (188, 40848), (213, 40809),

Gene: Juliette\_78 Start: 48681, Stop: 49157, Start Num: 78

Candidate Starts for Juliette\_78:

(Start: 61 @48657 has 6 MA's), (Start: 78 @48681 has 16 MA's), (Start: 86 @48693 has 1 MA's), (100, 48729), (107, 48765), (Start: 109 @48783 has 3 MA's), (Start: 114 @48801 has 3 MA's), (150, 48945), (151, 48951), (161, 49014), (167, 49050), (168, 49053), (188, 49122), (203, 49146),

Gene: KADY\_64 Start: 39655, Stop: 39173, Start Num: 44

Candidate Starts for KADY\_64:

(Start: 44 @39655 has 23 MA's), (Start: 55 @39649 has 194 MA's), (187, 39217), (200, 39184),

Gene: KBG\_60 Start: 42235, Stop: 41759, Start Num: 66

Candidate Starts for KBG\_60:

(Start: 66 @42235 has 21 MA's), (188, 41830), (213, 41791),

Gene: KFPoly\_57 Start: 38972, Stop: 38502, Start Num: 55

Candidate Starts for KFPoly\_57:

(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: KSSJEB\_59 Start: 39920, Stop: 39441, Start Num: 72

Candidate Starts for KSSJEB\_59:

(Start: 37 @39953 has 2 MA's), (Start: 72 @39920 has 7 MA's), (Start: 109 @39815 has 3 MA's), (167, 39587), (188, 39509),

Gene: Kachowdy\_60 Start: 39325, Stop: 38864, Start Num: 59

Candidate Starts for Kachowdy\_60:

(5, 39487), (9, 39448), (Start: 59 @39325 has 42 MA's), (103, 39241), (Start: 120 @39163 has 1 MA's), (124, 39142), (188, 38893), (195, 38875),

Gene: Kalah2\_121 Start: 70627, Stop: 71103, Start Num: 56

Candidate Starts for Kalah2\_121:

(Start: 56 @70627 has 39 MA's), (160, 70945), (161, 70948), (167, 70984), (187, 71056), (194, 71077),

Gene: Kalb97\_65 Start: 39506, Stop: 39030, Start Num: 55

Candidate Starts for Kalb97\_65:

(Start: 55 @39506 has 194 MA's), (182, 39092), (187, 39074), (200, 39041),

Gene: Kalnoky\_65 Start: 39504, Stop: 39028, Start Num: 55  
Candidate Starts for Kalnoky\_65:  
(Start: 55 @39504 has 194 MA's), (182, 39090), (187, 39072), (200, 39039),

Gene: Kalpine\_60 Start: 40011, Stop: 39547, Start Num: 60  
Candidate Starts for Kalpine\_60:  
(Start: 59 @40017 has 42 MA's), (Start: 60 @40011 has 138 MA's), (164, 39690),

Gene: Kampy\_57 Start: 38980, Stop: 38510, Start Num: 55  
Candidate Starts for Kampy\_57:  
(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Kanely\_61 Start: 40832, Stop: 40356, Start Num: 49  
Candidate Starts for Kanely\_61:  
(22, 40886), (Start: 49 @40832 has 181 MA's), (188, 40427), (213, 40388),

Gene: Karp\_197 Start: 102737, Stop: 102318, Start Num: 46  
Candidate Starts for Karp\_197:  
(42, 102743), (Start: 46 @102737 has 4 MA's), (108, 102620), (130, 102542), (147, 102488), (162, 102416),

Gene: KashFlow\_124 Start: 68762, Stop: 69262, Start Num: 56  
Candidate Starts for KashFlow\_124:  
(36, 68726), (Start: 56 @68762 has 39 MA's), (Start: 120 @68948 has 1 MA's), (153, 69071), (171, 69149), (174, 69164), (179, 69185), (185, 69203),

Gene: Katalie136\_56 Start: 38803, Stop: 38333, Start Num: 55  
Candidate Starts for Katalie136\_56:  
(45, 38809), (Start: 55 @38803 has 194 MA's), (124, 38614), (195, 38347),

Gene: KatherineG\_70 Start: 40208, Stop: 39750, Start Num: 59  
Candidate Starts for KatherineG\_70:  
(47, 40226), (Start: 59 @40208 has 42 MA's), (Start: 106 @40118 has 12 MA's), (160, 39908), (190, 39782), (200, 39764),

Gene: Kazan\_64 Start: 38589, Stop: 38086, Start Num: 60  
Candidate Starts for Kazan\_64:  
(Start: 60 @38589 has 138 MA's), (Start: 65 @38586 has 18 MA's), (164, 38262),

Gene: Keelan\_108 Start: 53763, Stop: 54188, Start Num: 66  
Candidate Starts for Keelan\_108:  
(62, 53757), (Start: 66 @53763 has 21 MA's), (159, 54063), (176, 54132), (189, 54180),

Gene: Kenmech\_64 Start: 42479, Stop: 42003, Start Num: 49  
Candidate Starts for Kenmech\_64:  
(Start: 49 @42479 has 181 MA's), (188, 42074), (213, 42035),

Gene: Kerberos\_63 Start: 39533, Stop: 39114, Start Num: 98  
Candidate Starts for Kerberos\_63:  
(Start: 50 @39611 has 3 MA's), (Start: 75 @39575 has 14 MA's), (Start: 98 @39533 has 3 MA's), (102, 39521), (164, 39263), (175, 39218),

Gene: Keziacharles14\_63 Start: 41109, Stop: 40636, Start Num: 60



Candidate Starts for Keziacharles14\_63:  
(Start: 60 @41109 has 138 MA's), (160, 40809), (164, 40785), (188, 40692),

Gene: Killigrew\_59 Start: 41027, Stop: 40536, Start Num: 49  
Candidate Starts for Killigrew\_59:  
(Start: 49 @41027 has 181 MA's), (188, 40622), (213, 40583),

Gene: Kimona\_56 Start: 37464, Stop: 36982, Start Num: 51  
Candidate Starts for Kimona\_56:  
(2, 38073), (19, 37527), (Start: 51 @37464 has 18 MA's), (Start: 66 @37443 has 21 MA's), (123, 37275), (124, 37272), (125, 37266), (162, 37128),

Gene: KingCyrus\_63 Start: 41500, Stop: 41027, Start Num: 60  
Candidate Starts for KingCyrus\_63:  
(Start: 60 @41500 has 138 MA's), (164, 41170),

Gene: KingPhillip3\_9 Start: 3151, Stop: 2666, Start Num: 88  
Candidate Starts for KingPhillip3\_9:  
(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Kingmustik0402\_58 Start: 38967, Stop: 38497, Start Num: 55  
Candidate Starts for Kingmustik0402\_58:  
(Start: 55 @38967 has 194 MA's), (124, 38778),

Gene: Kinmap\_60 Start: 38242, Stop: 37898, Start Num: 113  
Candidate Starts for Kinmap\_60:  
(Start: 60 @38374 has 138 MA's), (Start: 113 @38242 has 1 MA's), (149, 38104), (164, 38041),

Gene: Kipper29\_63 Start: 38602, Stop: 38099, Start Num: 60  
Candidate Starts for Kipper29\_63:  
(Start: 60 @38602 has 138 MA's), (Start: 65 @38599 has 18 MA's), (164, 38275),

Gene: KittenMittens\_56 Start: 38137, Stop: 37652, Start Num: 51  
Candidate Starts for KittenMittens\_56:  
(16, 38203), (Start: 51 @38137 has 18 MA's), (124, 37945), (192, 37684), (202, 37666),

Gene: Klein\_127 Start: 69017, Stop: 69493, Start Num: 56  
Candidate Starts for Klein\_127:  
(32, 68972), (Start: 56 @69017 has 39 MA's), (160, 69335), (161, 69338), (167, 69374), (187, 69446), (194, 69467),

Gene: Koan\_55 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Koan\_55:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Koduck\_62 Start: 39165, Stop: 38707, Start Num: 75  
Candidate Starts for Koduck\_62:  
(Start: 52 @39201 has 16 MA's), (Start: 75 @39165 has 14 MA's), (162, 38865), (164, 38853),

Gene: Koko\_66 Start: 39549, Stop: 39049, Start Num: 65  
Candidate Starts for Koko\_66:  
(Start: 60 @39552 has 138 MA's), (Start: 65 @39549 has 18 MA's), (164, 39225),

Gene: Koreni\_57 Start: 38659, Stop: 38189, Start Num: 55

Candidate Starts for Koreni\_57:

(Start: 55 @38659 has 194 MA's), (124, 38470),

Gene: Kratark\_57 Start: 38973, Stop: 38503, Start Num: 55

Candidate Starts for Kratark\_57:

(Start: 55 @38973 has 194 MA's), (124, 38784), (195, 38517),

Gene: Kraw\_77 Start: 48369, Stop: 48845, Start Num: 78

Candidate Starts for Kraw\_77:

(Start: 61 @48345 has 6 MA's), (Start: 78 @48369 has 16 MA's), (Start: 86 @48381 has 1 MA's), (100, 48417), (107, 48453), (Start: 109 @48471 has 3 MA's), (Start: 114 @48489 has 3 MA's), (150, 48633), (151, 48639), (161, 48702), (167, 48738), (168, 48741), (188, 48810), (203, 48834),

Gene: Kremtemulon\_58 Start: 38926, Stop: 38456, Start Num: 55

Candidate Starts for Kremtemulon\_58:

(Start: 55 @38926 has 194 MA's), (124, 38737),

Gene: Krili\_10 Start: 3334, Stop: 2714, Start Num: 88

Candidate Starts for Krili\_10:

(Start: 88 @3334 has 28 MA's), (105, 3274), (153, 3061), (157, 3049), (199, 2872), (211, 2848), (214, 2773),

Gene: Krishelle\_51 Start: 37066, Stop: 36728, Start Num: 114

Candidate Starts for Krishelle\_51:

(Start: 85 @37168 has 32 MA's), (Start: 114 @37066 has 3 MA's), (160, 36889), (167, 36850), (168, 36847), (171, 36838), (188, 36772),

Gene: Kristoff\_58 Start: 39273, Stop: 38788, Start Num: 51

Candidate Starts for Kristoff\_58:

(16, 39339), (Start: 51 @39273 has 18 MA's), (124, 39081), (187, 38838), (194, 38817), (195, 38814), (202, 38802),

Gene: Kugel\_59 Start: 41080, Stop: 40604, Start Num: 49

Candidate Starts for Kugel\_59:

(Start: 49 @41080 has 181 MA's), (188, 40675), (213, 40636),

Gene: Kumotta\_5 Start: 4506, Stop: 5042, Start Num: 14

Candidate Starts for Kumotta\_5:

(Start: 14 @4506 has 1 MA's), (24, 4554), (Start: 51 @4599 has 18 MA's), (134, 4821), (161, 4944), (176, 5010),

Gene: KyMonks1A\_62 Start: 40498, Stop: 40019, Start Num: 72

Candidate Starts for KyMonks1A\_62:

(Start: 37 @40531 has 2 MA's), (Start: 72 @40498 has 7 MA's), (Start: 109 @40393 has 3 MA's), (167, 40165), (188, 40087),

Gene: Kyee\_58 Start: 38976, Stop: 38506, Start Num: 55

Candidate Starts for Kyee\_58:

(Start: 55 @38976 has 194 MA's), (124, 38787),

Gene: Kykar\_60 Start: 41045, Stop: 40566, Start Num: 49

Candidate Starts for Kykar\_60:

(Start: 49 @41045 has 181 MA's), (188, 40640), (213, 40601),

Gene: L5\_59 Start: 39288, Stop: 38794, Start Num: 52

Candidate Starts for L5\_59:

(Start: 52 @39288 has 16 MA's), (Start: 75 @39252 has 14 MA's), (162, 38952), (164, 38940),

Gene: LBerry\_65 Start: 39631, Stop: 39149, Start Num: 44

Candidate Starts for LBerry\_65:

(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's), (187, 39193), (200, 39160),

Gene: LHTSCC\_60 Start: 39381, Stop: 38911, Start Num: 55

Candidate Starts for LHTSCC\_60:

(30, 39414), (Start: 55 @39381 has 194 MA's), (124, 39192), (195, 38925),

Gene: LadyBird\_67 Start: 40754, Stop: 40281, Start Num: 60

Candidate Starts for LadyBird\_67:

(Start: 60 @40754 has 138 MA's), (Start: 113 @40625 has 1 MA's), (164, 40424),

Gene: Lambert1\_60 Start: 39338, Stop: 38880, Start Num: 59

Candidate Starts for Lambert1\_60:

(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (167, 38987), (187, 38915), (195, 38891),

Gene: Lamina13\_63 Start: 41833, Stop: 41354, Start Num: 49

Candidate Starts for Lamina13\_63:

(Start: 49 @41833 has 181 MA's), (188, 41428), (213, 41389),

Gene: Landor\_62 Start: 40805, Stop: 40341, Start Num: 60

Candidate Starts for Landor\_62:

(Start: 59 @40811 has 42 MA's), (Start: 60 @40805 has 138 MA's), (164, 40490),

Gene: LappelDuVide\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for LappelDuVide\_58:

(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Larenn\_60 Start: 39871, Stop: 39398, Start Num: 60

Candidate Starts for Larenn\_60:

(Start: 59 @39877 has 42 MA's), (Start: 60 @39871 has 138 MA's), (Start: 113 @39742 has 1 MA's), (164, 39541),

Gene: LarryKay\_64 Start: 39651, Stop: 39175, Start Num: 55

Candidate Starts for LarryKay\_64:

(Start: 44 @39657 has 23 MA's), (Start: 55 @39651 has 194 MA's), (Start: 98 @39576 has 3 MA's), (187, 39219), (200, 39186),

Gene: LastResort\_68 Start: 39697, Stop: 39329, Start Num: 106

Candidate Starts for LastResort\_68:

(47, 39805), (Start: 59 @39787 has 42 MA's), (Start: 106 @39697 has 12 MA's), (160, 39487), (190, 39361), (200, 39343),

Gene: LazerLemon\_75 Start: 51475, Stop: 51948, Start Num: 35

Candidate Starts for LazerLemon\_75:

(Start: 35 @51475 has 1 MA's), (43, 51496), (Start: 86 @51565 has 1 MA's), (111, 51634), (134, 51721), (142, 51760), (152, 51793), (161, 51844), (173, 51901),

Gene: Lebo14\_77 Start: 48714, Stop: 49190, Start Num: 78

Candidate Starts for Lebo14\_77:

(Start: 61 @48690 has 6 MA's), (Start: 78 @48714 has 16 MA's), (Start: 86 @48726 has 1 MA's), (100, 48762), (107, 48798), (Start: 109 @48816 has 3 MA's), (Start: 114 @48834 has 3 MA's), (115, 48837), (150, 48978), (151, 48984), (161, 49047), (167, 49083), (168, 49086), (188, 49155), (203, 49179),

Gene: Lemur\_58 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for Lemur\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: LeoAvram\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for LeoAvram\_57:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Leogania\_62 Start: 40683, Stop: 40222, Start Num: 60

Candidate Starts for Leogania\_62:

(Start: 60 @40683 has 138 MA's), (164, 40365), (187, 40278),

Gene: Lesedi\_55 Start: 38817, Stop: 38341, Start Num: 49

Candidate Starts for Lesedi\_55:

(Start: 49 @38817 has 181 MA's), (188, 38412), (213, 38373),

Gene: Lev2\_59 Start: 39812, Stop: 39354, Start Num: 73

Candidate Starts for Lev2\_59:

(Start: 73 @39812 has 24 MA's), (Start: 109 @39710 has 3 MA's), (124, 39650), (132, 39614), (168, 39473), (188, 39398), (202, 39368),

Gene: Levia\_55 Start: 39931, Stop: 39455, Start Num: 49

Candidate Starts for Levia\_55:

(Start: 49 @39931 has 181 MA's), (188, 39526), (213, 39487),

Gene: Leviathan\_64 Start: 40367, Stop: 39894, Start Num: 60

Candidate Starts for Leviathan\_64:

(Start: 60 @40367 has 138 MA's), (Start: 113 @40238 has 1 MA's), (164, 40037),

Gene: Licorice\_61 Start: 42319, Stop: 41828, Start Num: 49

Candidate Starts for Licorice\_61:

(Start: 49 @42319 has 181 MA's), (188, 41914), (213, 41875),

Gene: LilBib\_59 Start: 41629, Stop: 41150, Start Num: 72

Candidate Starts for LilBib\_59:

(Start: 37 @41662 has 2 MA's), (Start: 72 @41629 has 7 MA's), (Start: 109 @41524 has 3 MA's), (167, 41296), (188, 41218),

Gene: LilTurb\_63 Start: 40192, Stop: 39719, Start Num: 60

Candidate Starts for LilTurb\_63:

(Start: 41 @40216 has 1 MA's), (Start: 59 @40198 has 42 MA's), (Start: 60 @40192 has 138 MA's), (Start: 113 @40063 has 1 MA's), (164, 39862),

Gene: Lilbunny\_63 Start: 38695, Stop: 38195, Start Num: 65

Candidate Starts for Lilbunny\_63:

(Start: 60 @38698 has 138 MA's), (Start: 65 @38695 has 18 MA's), (164, 38371),

Gene: Lilith\_64 Start: 39620, Stop: 39138, Start Num: 44

Candidate Starts for Lilith\_64:

(Start: 44 @39620 has 23 MA's), (Start: 55 @39614 has 194 MA's), (Start: 98 @39539 has 3 MA's), (187, 39182), (200, 39149),

Gene: Lillie\_51 Start: 36799, Stop: 36359, Start Num: 85

Candidate Starts for Lillie\_51:

(Start: 85 @36799 has 32 MA's), (Start: 114 @36697 has 3 MA's), (160, 36520), (167, 36481), (168, 36478), (171, 36469), (188, 36403),

Gene: LionsBait\_63 Start: 41346, Stop: 40873, Start Num: 60

Candidate Starts for LionsBait\_63:

(Start: 60 @41346 has 138 MA's), (164, 41016),

Gene: LittleB\_58 Start: 38979, Stop: 38509, Start Num: 55

Candidate Starts for LittleB\_58:

(Start: 55 @38979 has 194 MA's), (124, 38790),

Gene: LittleCherry\_57 Start: 39419, Stop: 38955, Start Num: 69

Candidate Starts for LittleCherry\_57:

(Start: 61 @39434 has 6 MA's), (Start: 69 @39419 has 27 MA's), (Start: 109 @39311 has 3 MA's), (124, 39251), (168, 39074), (188, 38999), (202, 38969),

Gene: LittleE\_131 Start: 70513, Stop: 70995, Start Num: 56

Candidate Starts for LittleE\_131:

(36, 70477), (Start: 56 @70513 has 39 MA's), (153, 70807), (160, 70837), (161, 70840), (167, 70876),

Gene: LittleGuy\_58 Start: 38874, Stop: 38404, Start Num: 55

Candidate Starts for LittleGuy\_58:

(18, 38937), (Start: 55 @38874 has 194 MA's), (124, 38685),

Gene: LochMonster\_59 Start: 39214, Stop: 38744, Start Num: 55

Candidate Starts for LochMonster\_59:

(Start: 55 @39214 has 194 MA's), (124, 39025),

Gene: Lockley\_57 Start: 39907, Stop: 39419, Start Num: 49

Candidate Starts for Lockley\_57:

(Start: 49 @39907 has 181 MA's), (Start: 109 @39793 has 3 MA's), (149, 39640), (167, 39565), (188, 39487),

Gene: Lokk\_58 Start: 39131, Stop: 38652, Start Num: 60

Candidate Starts for Lokk\_58:

(43, 39152), (Start: 59 @39137 has 42 MA's), (Start: 60 @39131 has 138 MA's), (Start: 113 @39002 has 1 MA's), (164, 38801),

Gene: LoneWolf\_64 Start: 40067, Stop: 39603, Start Num: 60

Candidate Starts for LoneWolf\_64:

(Start: 60 @40067 has 138 MA's), (161, 39773), (164, 39752),

Gene: Looper\_69 Start: 39699, Stop: 39241, Start Num: 59

Candidate Starts for Looper\_69:

(47, 39717), (Start: 59 @39699 has 42 MA's), (Start: 106 @39609 has 12 MA's), (160, 39399), (190, 39273), (200, 39255),

Gene: Lopton\_59 Start: 42300, Stop: 41809, Start Num: 49

Candidate Starts for Lopton\_59:

(Start: 49 @42300 has 181 MA's), (Start: 109 @42186 has 3 MA's), (163, 41979), (167, 41958), (188, 41880), (213, 41841),

Gene: Lorenzo\_58 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Lorenzo\_58:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Loser\_63 Start: 40393, Stop: 39932, Start Num: 77

Candidate Starts for Loser\_63:

(Start: 50 @40420 has 3 MA's), (Start: 77 @40393 has 4 MA's), (155, 40129), (161, 40102), (164, 40081), (188, 39988),

Gene: Louie6\_63 Start: 39650, Stop: 39174, Start Num: 55

Candidate Starts for Louie6\_63:

(Start: 44 @39656 has 23 MA's), (Start: 55 @39650 has 194 MA's), (187, 39218), (188, 39212), (200, 39185),

Gene: Lowa\_63 Start: 39619, Stop: 39137, Start Num: 44

Candidate Starts for Lowa\_63:

(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: Lozinak\_134 Start: 74307, Stop: 74777, Start Num: 70

Candidate Starts for Lozinak\_134:

(Start: 70 @74307 has 3 MA's), (Start: 89 @74334 has 10 MA's), (Start: 91 @74337 has 3 MA's), (167, 74655), (188, 74733),

Gene: Luchador\_64 Start: 41264, Stop: 40782, Start Num: 60

Candidate Starts for Luchador\_64:

(Start: 41 @41288 has 1 MA's), (Start: 60 @41264 has 138 MA's), (149, 40991), (164, 40928), (175, 40883),

Gene: Lucivia\_62 Start: 39420, Stop: 38923, Start Num: 52

Candidate Starts for Lucivia\_62:

(Start: 52 @39420 has 16 MA's), (Start: 75 @39384 has 14 MA's), (Start: 98 @39342 has 3 MA's), (Start: 120 @39249 has 1 MA's), (153, 39126), (162, 39084), (164, 39072), (208, 38937),

Gene: Lucky2013\_123 Start: 67390, Stop: 67872, Start Num: 56

Candidate Starts for Lucky2013\_123:

(36, 67354), (Start: 56 @67390 has 39 MA's), (153, 67684), (160, 67714), (161, 67717), (167, 67753),

Gene: Lucyedi\_64 Start: 40048, Stop: 39584, Start Num: 69

Candidate Starts for Lucyedi\_64:

(Start: 69 @40048 has 27 MA's), (Start: 77 @40042 has 4 MA's), (155, 39781), (161, 39754), (164, 39733), (187, 39646),

Gene: LugYA\_67 Start: 39622, Stop: 39146, Start Num: 55

Candidate Starts for LugYA\_67:

(Start: 44 @39628 has 23 MA's), (Start: 55 @39622 has 194 MA's), (Start: 98 @39547 has 3 MA's), (187, 39190), (200, 39157),

Gene: LunarLander\_63 Start: 41498, Stop: 41004, Start Num: 49

Candidate Starts for LunarLander\_63:

(Start: 49 @41498 has 181 MA's), (188, 41093), (213, 41054),

Gene: Lunsford\_59 Start: 38972, Stop: 38502, Start Num: 55

Candidate Starts for Lunsford\_59:

(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: MA5\_61 Start: 38739, Stop: 38281, Start Num: 59

Candidate Starts for MA5\_61:

(5, 38901), (9, 38862), (Start: 59 @38739 has 42 MA's), (102, 38661), (103, 38658), (Start: 120 @38580 has 1 MA's), (124, 38559), (188, 38310), (195, 38292),

Gene: MK4\_61 Start: 38823, Stop: 38365, Start Num: 59

Candidate Starts for MK4\_61:

(Start: 59 @38823 has 42 MA's), (102, 38745), (103, 38742), (Start: 120 @38664 has 1 MA's), (124, 38643), (171, 38460), (188, 38394), (195, 38376),

Gene: MPlant7149\_59 Start: 39416, Stop: 38907, Start Num: 49

Candidate Starts for MPlant7149\_59:

(Start: 49 @39416 has 181 MA's), (Start: 109 @39302 has 3 MA's), (167, 39074), (188, 38996), (213, 38957),

Gene: MaCh\_61 Start: 39314, Stop: 38853, Start Num: 75

Candidate Starts for MaCh\_61:

(Start: 52 @39350 has 16 MA's), (Start: 75 @39314 has 14 MA's), (Start: 98 @39272 has 3 MA's), (Start: 120 @39179 has 1 MA's), (162, 39014), (164, 39002), (208, 38867),

Gene: Mabel\_61 Start: 39331, Stop: 38885, Start Num: 75

Candidate Starts for Mabel\_61:

(Start: 52 @39367 has 16 MA's), (Start: 75 @39331 has 14 MA's), (Start: 98 @39289 has 3 MA's), (Start: 120 @39196 has 1 MA's), (153, 39073), (162, 39031), (164, 39019),

Gene: MadKillah\_10 Start: 3349, Stop: 2729, Start Num: 88

Candidate Starts for MadKillah\_10:

(Start: 88 @3349 has 28 MA's), (105, 3289), (153, 3076), (199, 2887), (211, 2863), (214, 2788),

Gene: MadMarie\_64 Start: 39629, Stop: 39147, Start Num: 44

Candidate Starts for MadMarie\_64:

(Start: 44 @39629 has 23 MA's), (Start: 55 @39623 has 194 MA's), (Start: 98 @39548 has 3 MA's), (187, 39191), (200, 39158),

Gene: Madraxi\_99 Start: 57728, Stop: 58162, Start Num: 82

Candidate Starts for Madraxi\_99:

(Start: 82 @57728 has 3 MA's), (102, 57770), (Start: 109 @57812 has 3 MA's), (Start: 117 @57839 has 1 MA's), (166, 58049), (167, 58052), (181, 58097),

Gene: Magnar\_57 Start: 40432, Stop: 39956, Start Num: 49

Candidate Starts for Magnar\_57:

(Start: 49 @40432 has 181 MA's), (188, 40027), (213, 39988),

Gene: Magnito\_59 Start: 40568, Stop: 40074, Start Num: 49

Candidate Starts for Magnito\_59:

(Start: 49 @40568 has 181 MA's), (188, 40163), (213, 40124),

Gene: Mainiac\_64 Start: 39615, Stop: 39139, Start Num: 55

Candidate Starts for Mainiac\_64:

(Start: 44 @39621 has 23 MA's), (Start: 55 @39615 has 194 MA's), (Start: 98 @39540 has 3 MA's),  
(187, 39183), (200, 39150),

Gene: MajorMajor\_61 Start: 38947, Stop: 38609, Start Num: 116

Candidate Starts for MajorMajor\_61:

(Start: 52 @39106 has 16 MA's), (Start: 75 @39067 has 14 MA's), (116, 38947), (164, 38755),

Gene: Makemake\_61 Start: 41889, Stop: 41380, Start Num: 49

Candidate Starts for Makemake\_61:

(Start: 49 @41889 has 181 MA's), (Start: 109 @41775 has 3 MA's), (167, 41547), (188, 41469), (213,  
41430),

Gene: Malec\_61 Start: 40438, Stop: 39965, Start Num: 60

Candidate Starts for Malec\_61:

(Start: 59 @40444 has 42 MA's), (Start: 60 @40438 has 138 MA's), (Start: 113 @40309 has 1 MA's),  
(164, 40108),

Gene: Malinsilva\_66 Start: 39619, Stop: 39137, Start Num: 44

Candidate Starts for Malinsilva\_66:

(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's),  
(187, 39181), (200, 39148),

Gene: Malthus\_77 Start: 48369, Stop: 48845, Start Num: 78

Candidate Starts for Malthus\_77:

(Start: 61 @48345 has 6 MA's), (Start: 78 @48369 has 16 MA's), (Start: 86 @48381 has 1 MA's), (100,  
48417), (107, 48453), (Start: 109 @48471 has 3 MA's), (Start: 114 @48489 has 3 MA's), (150, 48633),  
(151, 48639), (161, 48702), (167, 48738), (168, 48741), (188, 48810), (203, 48834),

Gene: Maminiaina\_62 Start: 39914, Stop: 39450, Start Num: 60

Candidate Starts for Maminiaina\_62:

(Start: 60 @39914 has 138 MA's), (161, 39620), (164, 39599),

Gene: Manatee\_60 Start: 40549, Stop: 40076, Start Num: 66

Candidate Starts for Manatee\_60:

(Start: 66 @40549 has 21 MA's), (188, 40144),

Gene: Manda\_22 Start: 13303, Stop: 13818, Start Num: 28

Candidate Starts for Manda\_22:

(Start: 28 @13303 has 19 MA's), (Start: 53 @13348 has 4 MA's), (137, 13600), (154, 13696),

Gene: Manu\_64 Start: 39507, Stop: 39031, Start Num: 55

Candidate Starts for Manu\_64:

(Start: 55 @39507 has 194 MA's), (182, 39093), (187, 39075), (200, 39042),

Gene: MarQuardt\_64 Start: 39623, Stop: 39147, Start Num: 55



Candidate Starts for MarQuardt\_64:

(Start: 44 @39629 has 23 MA's), (Start: 55 @39623 has 194 MA's), (Start: 98 @39548 has 3 MA's),  
(187, 39191), (200, 39158),

Gene: Marcell\_56 Start: 39439, Stop: 38963, Start Num: 49

Candidate Starts for Marcell\_56:

(Start: 49 @39439 has 181 MA's), (188, 39034), (213, 38995),

Gene: Marchesa\_60 Start: 39275, Stop: 38814, Start Num: 59

Candidate Starts for Marchesa\_60:

(5, 39437), (9, 39398), (Start: 59 @39275 has 42 MA's), (103, 39191), (Start: 120 @39113 has 1 MA's),  
(124, 39092), (188, 38843), (195, 38825),

Gene: Marchy\_54 Start: 37527, Stop: 37051, Start Num: 49

Candidate Starts for Marchy\_54:

(Start: 49 @37527 has 181 MA's), (188, 37122), (213, 37083),

Gene: Marco3\_62 Start: 42224, Stop: 41757, Start Num: 49

Candidate Starts for Marco3\_62:

(Start: 49 @42224 has 181 MA's), (167, 41903), (188, 41825),

Gene: Marge\_58 Start: 40328, Stop: 39852, Start Num: 49

Candidate Starts for Marge\_58:

(Start: 49 @40328 has 181 MA's), (188, 39923), (213, 39884),

Gene: Margo\_60 Start: 39364, Stop: 38906, Start Num: 59

Candidate Starts for Margo\_60:

(Start: 59 @39364 has 42 MA's), (102, 39286), (103, 39283), (124, 39184), (161, 39049), (167, 39013),  
(187, 38941), (195, 38917),

Gene: Marie\_62 Start: 39627, Stop: 39145, Start Num: 44

Candidate Starts for Marie\_62:

(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's),  
(187, 39189), (200, 39156),

Gene: Marius\_65 Start: 39504, Stop: 39028, Start Num: 55

Candidate Starts for Marius\_65:

(Start: 55 @39504 has 194 MA's), (182, 39090), (187, 39072), (200, 39039),

Gene: Marleymoo\_115 Start: 68041, Stop: 68523, Start Num: 56

Candidate Starts for Marleymoo\_115:

(Start: 56 @68041 has 39 MA's), (160, 68365), (161, 68368), (167, 68404), (187, 68476), (194, 68497),

Gene: Maroc7\_57 Start: 40727, Stop: 40251, Start Num: 49

Candidate Starts for Maroc7\_57:

(34, 40757), (Start: 49 @40727 has 181 MA's), (188, 40322), (213, 40283),

Gene: Marsha\_59 Start: 41914, Stop: 41420, Start Num: 49

Candidate Starts for Marsha\_59:

(Start: 49 @41914 has 181 MA's), (188, 41509), (213, 41470),

Gene: MaryBeth\_58 Start: 40766, Stop: 40299, Start Num: 49

Candidate Starts for MaryBeth\_58:

(Start: 49 @40766 has 181 MA's), (167, 40445), (188, 40367),

Gene: MarysWell\_58 Start: 40048, Stop: 39584, Start Num: 69

Candidate Starts for MarysWell\_58:

(Start: 61 @40063 has 6 MA's), (Start: 69 @40048 has 27 MA's), (Start: 109 @39940 has 3 MA's),  
(124, 39880), (168, 39703), (188, 39628), (202, 39598),

Gene: Maverick\_58 Start: 39014, Stop: 38508, Start Num: 29

Candidate Starts for Maverick\_58:

(Start: 29 @39014 has 1 MA's), (Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Maxo\_59 Start: 38980, Stop: 38510, Start Num: 55

Candidate Starts for Maxo\_59:

(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Mayonnaise\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Mayonnaise\_57:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Mazhar510\_58 Start: 38979, Stop: 38509, Start Num: 55

Candidate Starts for Mazhar510\_58:

(Start: 55 @38979 has 194 MA's), (124, 38790),

Gene: McFly\_63 Start: 38580, Stop: 38080, Start Num: 65

Candidate Starts for McFly\_63:

(Start: 60 @38583 has 138 MA's), (Start: 65 @38580 has 18 MA's), (164, 38256),

Gene: McGuire\_61 Start: 40092, Stop: 39616, Start Num: 49

Candidate Starts for McGuire\_61:

(Start: 49 @40092 has 181 MA's), (188, 39687), (213, 39648),

Gene: McSinger\_58 Start: 40062, Stop: 39586, Start Num: 49

Candidate Starts for McSinger\_58:

(Start: 49 @40062 has 181 MA's), (188, 39657), (213, 39618),

Gene: Medusa\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for Medusa\_58:

(45, 38983), (Start: 55 @38977 has 194 MA's), (Start: 109 @38848 has 3 MA's), (124, 38788),

Gene: MeeZee\_58 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for MeeZee\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Melvin\_60 Start: 38973, Stop: 38503, Start Num: 55

Candidate Starts for Melvin\_60:

(Start: 55 @38973 has 194 MA's), (124, 38784),

Gene: MetalQZJ\_57 Start: 40766, Stop: 40299, Start Num: 49

Candidate Starts for MetalQZJ\_57:

(Start: 49 @40766 has 181 MA's), (167, 40445), (188, 40367),

Gene: Methuselah\_59 Start: 39651, Stop: 39169, Start Num: 44

Candidate Starts for Methuselah\_59:

(Start: 44 @39651 has 23 MA's), (Start: 55 @39645 has 194 MA's), (Start: 98 @39570 has 3 MA's), (187, 39213), (200, 39180),

Gene: MiaZeal\_127 Start: 67986, Stop: 68486, Start Num: 56

Candidate Starts for MiaZeal\_127:

(36, 67950), (Start: 56 @67986 has 39 MA's), (Start: 120 @68172 has 1 MA's), (153, 68295), (171, 68373), (174, 68388), (179, 68409), (185, 68427),

Gene: Micasa\_58 Start: 39770, Stop: 39306, Start Num: 69

Candidate Starts for Micasa\_58:

(Start: 61 @39785 has 6 MA's), (Start: 69 @39770 has 27 MA's), (Start: 109 @39662 has 3 MA's), (124, 39602), (132, 39566), (168, 39425), (188, 39350), (202, 39320),

Gene: Michley\_62 Start: 41020, Stop: 40535, Start Num: 49

Candidate Starts for Michley\_62:

(Start: 49 @41020 has 181 MA's), (96, 40972), (Start: 114 @40912 has 3 MA's), (Start: 119 @40894 has 1 MA's), (163, 40723), (167, 40702), (188, 40624), (213, 40585),

Gene: Microwolf\_62 Start: 39643, Stop: 39161, Start Num: 44

Candidate Starts for Microwolf\_62:

(Start: 44 @39643 has 23 MA's), (Start: 55 @39637 has 194 MA's), (Start: 98 @39562 has 3 MA's), (187, 39205), (200, 39172),

Gene: MiculUcigas\_62 Start: 39497, Stop: 39024, Start Num: 60

Candidate Starts for MiculUcigas\_62:

(Start: 59 @39503 has 42 MA's), (Start: 60 @39497 has 138 MA's), (Start: 113 @39368 has 1 MA's), (164, 39167),

Gene: Midas2\_56 Start: 39869, Stop: 39405, Start Num: 69

Candidate Starts for Midas2\_56:

(Start: 61 @39884 has 6 MA's), (Start: 69 @39869 has 27 MA's), (Start: 109 @39761 has 3 MA's), (124, 39701), (168, 39524), (188, 39449), (202, 39419),

Gene: Miko\_58 Start: 39909, Stop: 39430, Start Num: 60

Candidate Starts for Miko\_58:

(43, 39930), (Start: 59 @39915 has 42 MA's), (Start: 60 @39909 has 138 MA's), (Start: 113 @39780 has 1 MA's), (164, 39579), (209, 39441),

Gene: Milcery\_57 Start: 39367, Stop: 38903, Start Num: 69

Candidate Starts for Milcery\_57:

(Start: 61 @39382 has 6 MA's), (Start: 69 @39367 has 27 MA's), (Start: 109 @39259 has 3 MA's), (124, 39199), (168, 39022), (188, 38947), (202, 38917),

Gene: Millski\_57 Start: 38979, Stop: 38509, Start Num: 55

Candidate Starts for Millski\_57:

(Start: 55 @38979 has 194 MA's), (124, 38790),

Gene: MinecraftSteve\_70 Start: 39933, Stop: 39565, Start Num: 106

Candidate Starts for MinecraftSteve\_70:

(47, 40041), (Start: 59 @40023 has 42 MA's), (Start: 106 @39933 has 12 MA's), (160, 39723), (190, 39597), (200, 39579),

Gene: Minerva\_129 Start: 70422, Stop: 70898, Start Num: 56

Candidate Starts for Minerva\_129:

(32, 70377), (Start: 56 @70422 has 39 MA's), (160, 70740), (161, 70743), (167, 70779), (187, 70851), (194, 70872),

Gene: Miramae\_55 Start: 38264, Stop: 37794, Start Num: 55

Candidate Starts for Miramae\_55:

(30, 38297), (Start: 55 @38264 has 194 MA's), (124, 38075), (195, 37808),

Gene: Miskis\_133 Start: 73766, Stop: 74209, Start Num: 89

Candidate Starts for Miskis\_133:

(Start: 70 @73739 has 3 MA's), (Start: 89 @73766 has 10 MA's), (Start: 91 @73769 has 3 MA's), (167, 74087), (188, 74165),

Gene: Misomonster\_65 Start: 39648, Stop: 39172, Start Num: 55

Candidate Starts for Misomonster\_65:

(Start: 44 @39654 has 23 MA's), (Start: 55 @39648 has 194 MA's), (187, 39216), (200, 39183),

Gene: MissDaisy\_73 Start: 47265, Stop: 47756, Start Num: 66

Candidate Starts for MissDaisy\_73:

(Start: 61 @47256 has 6 MA's), (Start: 66 @47265 has 21 MA's), (Start: 78 @47280 has 16 MA's), (Start: 86 @47292 has 1 MA's), (100, 47328), (107, 47364), (Start: 109 @47382 has 3 MA's), (Start: 114 @47400 has 3 MA's), (150, 47544), (151, 47550), (161, 47613), (167, 47649), (168, 47652), (188, 47721), (203, 47745),

Gene: MissWhite\_60 Start: 38373, Stop: 37915, Start Num: 75

Candidate Starts for MissWhite\_60:

(Start: 49 @38409 has 181 MA's), (Start: 54 @38406 has 1 MA's), (Start: 75 @38373 has 14 MA's), (164, 38061), (188, 37968),

Gene: Mitti\_76 Start: 48500, Stop: 49000, Start Num: 61

Candidate Starts for Mitti\_76:

(Start: 61 @48500 has 6 MA's), (Start: 78 @48524 has 16 MA's), (Start: 86 @48536 has 1 MA's), (100, 48572), (107, 48608), (Start: 109 @48626 has 3 MA's), (Start: 114 @48644 has 3 MA's), (161, 48857), (167, 48893), (168, 48896), (188, 48965), (203, 48989),

Gene: Mkhuseleli\_57 Start: 39190, Stop: 38714, Start Num: 49

Candidate Starts for Mkhuseleli\_57:

(Start: 49 @39190 has 181 MA's), (188, 38785), (213, 38746),

Gene: Molly\_62 Start: 41197, Stop: 40688, Start Num: 49

Candidate Starts for Molly\_62:

(Start: 49 @41197 has 181 MA's), (Start: 109 @41083 has 3 MA's), (167, 40855), (188, 40777), (213, 40738),

Gene: Monet\_63 Start: 42683, Stop: 42189, Start Num: 66

Candidate Starts for Monet\_63:

(Start: 66 @42683 has 21 MA's), (188, 42278), (213, 42239),

Gene: MoneyMay\_63 Start: 39621, Stop: 39145, Start Num: 55

Candidate Starts for MoneyMay\_63:

(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's), (187, 39189), (200, 39156),

Gene: Moose\_58 Start: 39605, Stop: 39129, Start Num: 49  
Candidate Starts for Moose\_58:  
(Start: 49 @39605 has 181 MA's), (188, 39200), (213, 39161),

Gene: Mori\_10 Start: 3349, Stop: 2729, Start Num: 88  
Candidate Starts for Mori\_10:  
(Start: 88 @3349 has 28 MA's), (153, 3076), (199, 2887), (211, 2863), (214, 2788),

Gene: Morpher26\_56 Start: 38824, Stop: 38354, Start Num: 55  
Candidate Starts for Morpher26\_56:  
(45, 38830), (Start: 55 @38824 has 194 MA's), (124, 38635), (195, 38368),

Gene: Morrow\_59 Start: 38984, Stop: 38514, Start Num: 55  
Candidate Starts for Morrow\_59:  
(Start: 55 @38984 has 194 MA's), (124, 38795),

Gene: MrGordo\_59 Start: 40260, Stop: 39790, Start Num: 49  
Candidate Starts for MrGordo\_59:  
(Start: 49 @40260 has 181 MA's), (167, 39939), (188, 39861), (213, 39822),

Gene: Mryolo\_56 Start: 40302, Stop: 39835, Start Num: 49  
Candidate Starts for Mryolo\_56:  
(Start: 49 @40302 has 181 MA's), (96, 40254), (Start: 114 @40194 has 3 MA's), (Start: 119 @40176 has 1 MA's), (163, 40005), (167, 39984), (188, 39906), (213, 39867),

Gene: MuchMore\_67 Start: 39613, Stop: 39137, Start Num: 55  
Candidate Starts for MuchMore\_67:  
(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: Mulciber\_60 Start: 38872, Stop: 38411, Start Num: 75  
Candidate Starts for Mulciber\_60:  
(Start: 52 @38908 has 16 MA's), (Start: 75 @38872 has 14 MA's), (Start: 98 @38830 has 3 MA's), (Start: 109 @38776 has 3 MA's), (Start: 120 @38737 has 1 MA's), (153, 38614), (162, 38572), (164, 38560), (208, 38425),

Gene: Mule\_58 Start: 40131, Stop: 39637, Start Num: 49  
Candidate Starts for Mule\_58:  
(Start: 49 @40131 has 181 MA's), (188, 39726), (213, 39687),

Gene: Munch\_61 Start: 39371, Stop: 38874, Start Num: 52  
Candidate Starts for Munch\_61:  
(Start: 52 @39371 has 16 MA's), (Start: 75 @39335 has 14 MA's), (Start: 98 @39293 has 3 MA's), (Start: 109 @39239 has 3 MA's), (Start: 120 @39200 has 1 MA's), (153, 39077), (162, 39035), (164, 39023), (208, 38888),

Gene: Mundrea\_56 Start: 38816, Stop: 38346, Start Num: 55  
Candidate Starts for Mundrea\_56:  
(30, 38849), (Start: 55 @38816 has 194 MA's), (116, 38663), (124, 38627), (195, 38360),

Gene: Murai\_10 Start: 3349, Stop: 2729, Start Num: 88  
Candidate Starts for Murai\_10:  
(Start: 88 @3349 has 28 MA's), (153, 3076), (199, 2887), (211, 2863), (214, 2788),

Gene: Murica\_20 Start: 12799, Stop: 13314, Start Num: 28  
Candidate Starts for Murica\_20:  
(Start: 28 @12799 has 19 MA's), (Start: 53 @12844 has 4 MA's), (137, 13096), (154, 13192),

Gene: Museum\_61 Start: 41999, Stop: 41505, Start Num: 49  
Candidate Starts for Museum\_61:  
(Start: 49 @41999 has 181 MA's), (188, 41594), (213, 41555),

Gene: MyraDee\_58 Start: 36584, Stop: 36225, Start Num: 109  
Candidate Starts for MyraDee\_58:  
(58, 36716), (Start: 109 @36584 has 3 MA's), (124, 36524), (163, 36374), (184, 36293),

Gene: Myxus\_63 Start: 40037, Stop: 39573, Start Num: 60  
Candidate Starts for Myxus\_63:  
(Start: 60 @40037 has 138 MA's), (155, 39770), (161, 39743), (164, 39722), (187, 39635),

Gene: NEHalo\_57 Start: 40355, Stop: 39864, Start Num: 49  
Candidate Starts for NEHalo\_57:  
(Start: 49 @40355 has 181 MA's), (Start: 109 @40241 has 3 MA's), (167, 40013), (188, 39935), (213, 39896),

Gene: NaSiaTalie\_62 Start: 39591, Stop: 39118, Start Num: 60  
Candidate Starts for NaSiaTalie\_62:  
(Start: 59 @39597 has 42 MA's), (Start: 60 @39591 has 138 MA's), (Start: 113 @39462 has 1 MA's), (144, 39351), (164, 39261),

Gene: Naca\_59 Start: 40333, Stop: 39869, Start Num: 69  
Candidate Starts for Naca\_59:  
(Start: 61 @40348 has 6 MA's), (Start: 69 @40333 has 27 MA's), (Start: 109 @40225 has 3 MA's), (124, 40165), (168, 39988), (177, 39955), (188, 39913), (202, 39883),

Gene: Naiad\_50 Start: 36821, Stop: 36381, Start Num: 85  
Candidate Starts for Naiad\_50:  
(Start: 85 @36821 has 32 MA's), (Start: 114 @36719 has 3 MA's), (160, 36542), (167, 36503), (168, 36500), (171, 36491), (188, 36425),

Gene: Naira\_62 Start: 42177, Stop: 41692, Start Num: 49  
Candidate Starts for Naira\_62:  
(Start: 49 @42177 has 181 MA's), (167, 41841), (188, 41763), (213, 41724),

Gene: Naji\_63 Start: 39576, Stop: 39115, Start Num: 75  
Candidate Starts for Naji\_63:  
(Start: 50 @39612 has 3 MA's), (Start: 75 @39576 has 14 MA's), (Start: 98 @39534 has 3 MA's), (102, 39522), (164, 39264), (175, 39219),

Gene: Nala\_21 Start: 12841, Stop: 13356, Start Num: 28  
Candidate Starts for Nala\_21:  
(Start: 28 @12841 has 19 MA's), (Start: 53 @12886 has 4 MA's), (137, 13138), (154, 13234),

Gene: Nancinator\_51 Start: 36741, Stop: 36301, Start Num: 85  
Candidate Starts for Nancinator\_51:

(Start: 85 @36741 has 32 MA's), (Start: 114 @36639 has 3 MA's), (160, 36462), (167, 36423), (168, 36420), (171, 36411), (188, 36345),

Gene: Natosaleda\_50 Start: 36740, Stop: 36300, Start Num: 85

Candidate Starts for Natosaleda\_50:

(Start: 85 @36740 has 32 MA's), (Start: 114 @36638 has 3 MA's), (160, 36461), (167, 36422), (168, 36419), (171, 36410), (188, 36344),

Gene: NearlyHeadless\_64 Start: 39321, Stop: 38833, Start Num: 73

Candidate Starts for NearlyHeadless\_64:

(64, 39327), (Start: 73 @39321 has 24 MA's), (Start: 109 @39219 has 3 MA's), (124, 39159), (188, 38880),

Gene: Nebkiss\_87 Start: 49827, Stop: 50270, Start Num: 81

Candidate Starts for Nebkiss\_87:

(Start: 81 @49827 has 2 MA's), (139, 50034), (168, 50145), (174, 50169), (183, 50199), (196, 50244),

Gene: Nebs\_59 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Nebs\_59:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Nebulosus\_68 Start: 39693, Stop: 39325, Start Num: 106

Candidate Starts for Nebulosus\_68:

(Start: 59 @39783 has 42 MA's), (Start: 106 @39693 has 12 MA's), (160, 39483), (190, 39357), (200, 39339),

Gene: Nedarya\_66 Start: 39619, Stop: 39284, Start Num: 113

Candidate Starts for Nedarya\_66:

(Start: 55 @39748 has 194 MA's), (Start: 113 @39619 has 1 MA's), (190, 39316), (192, 39313), (200, 39298),

Gene: Neeharika16\_62 Start: 38043, Stop: 37540, Start Num: 60

Candidate Starts for Neeharika16\_62:

(Start: 60 @38043 has 138 MA's), (Start: 65 @38040 has 18 MA's), (164, 37716),

Gene: Nemo27\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for Nemo27\_58:

(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Nerujay\_62 Start: 42048, Stop: 41554, Start Num: 49

Candidate Starts for Nerujay\_62:

(Start: 49 @42048 has 181 MA's), (188, 41643), (213, 41604),

Gene: Newrala\_63 Start: 38585, Stop: 38082, Start Num: 60

Candidate Starts for Newrala\_63:

(Start: 60 @38585 has 138 MA's), (Start: 65 @38582 has 18 MA's), (164, 38258),

Gene: Nhonho\_58 Start: 41316, Stop: 40777, Start Num: 49

Candidate Starts for Nhonho\_58:

(Start: 49 @41316 has 181 MA's), (Start: 109 @41202 has 3 MA's), (Start: 113 @41187 has 1 MA's), (128, 41121), (188, 40896), (213, 40809),

Gene: NicoleTera\_60 Start: 39899, Stop: 39426, Start Num: 60

Candidate Starts for NicoleTera\_60:

(Start: 59 @39905 has 42 MA's), (Start: 60 @39899 has 138 MA's), (Start: 113 @39770 has 1 MA's), (164, 39569), (187, 39482),

Gene: NiebruSaylor\_10 Start: 3349, Stop: 2729, Start Num: 88

Candidate Starts for NiebruSaylor\_10:

(Start: 88 @3349 has 28 MA's), (153, 3076), (199, 2887), (211, 2863), (214, 2788),

Gene: NihilNomen\_132 Start: 71278, Stop: 71757, Start Num: 56

Candidate Starts for NihilNomen\_132:

(Start: 56 @71278 has 39 MA's), (139, 71521), (153, 71563), (165, 71620), (174, 71656),

Gene: Nitro\_45 Start: 34067, Stop: 34558, Start Num: 33

Candidate Starts for Nitro\_45:

(8, 33968), (Start: 33 @34067 has 1 MA's), (142, 34355), (175, 34502),

Gene: Niza\_61 Start: 41915, Stop: 41439, Start Num: 49

Candidate Starts for Niza\_61:

(27, 41954), (Start: 49 @41915 has 181 MA's), (188, 41510), (213, 41471),

Gene: Noella\_60 Start: 39339, Stop: 38881, Start Num: 59

Candidate Starts for Noella\_60:

(Start: 59 @39339 has 42 MA's), (102, 39261), (103, 39258), (124, 39159), (161, 39024), (187, 38916), (195, 38892),

Gene: Noelle\_57 Start: 39125, Stop: 38655, Start Num: 55

Candidate Starts for Noelle\_57:

(45, 39131), (Start: 55 @39125 has 194 MA's), (Start: 120 @38957 has 1 MA's), (124, 38936), (195, 38669),

Gene: Norbert\_58 Start: 39338, Stop: 38880, Start Num: 59

Candidate Starts for Norbert\_58:

(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (187, 38915), (195, 38891),

Gene: NorthStar\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for NorthStar\_57:

(Start: 55 @38978 has 194 MA's), (124, 38789), (195, 38522),

Gene: Norvs\_132 Start: 73732, Stop: 74172, Start Num: 91

Candidate Starts for Norvs\_132:

(Start: 88 @73729 has 28 MA's), (Start: 91 @73732 has 3 MA's), (167, 74050), (188, 74128),

Gene: Norz\_61 Start: 43144, Stop: 42650, Start Num: 49

Candidate Starts for Norz\_61:

(Start: 49 @43144 has 181 MA's), (188, 42739), (213, 42700),

Gene: NotAPhaseMom\_58 Start: 38982, Stop: 38512, Start Num: 55

Candidate Starts for NotAPhaseMom\_58:

(Start: 55 @38982 has 194 MA's), (124, 38793),

Gene: NothingSpecial\_59 Start: 39991, Stop: 39656, Start Num: 117

Candidate Starts for NothingSpecial\_59:



(Start: 60 @40126 has 138 MA's), (Start: 70 @40114 has 3 MA's), (Start: 117 @39991 has 1 MA's),  
(164, 39802), (206, 39670),

Gene: Nova53\_189 Start: 99250, Stop: 99705, Start Num: 46  
Candidate Starts for Nova53\_189:  
(31, 99220), (Start: 46 @99250 has 4 MA's), (134, 99475), (177, 99667),

Gene: Nyxis\_58 Start: 38868, Stop: 38398, Start Num: 55  
Candidate Starts for Nyxis\_58:  
(Start: 55 @38868 has 194 MA's), (124, 38679),

Gene: OKCentral2016\_58 Start: 38601, Stop: 38116, Start Num: 51  
Candidate Starts for OKCentral2016\_58:  
(Start: 51 @38601 has 18 MA's), (124, 38409), (194, 38145), (195, 38142), (202, 38130),

Gene: OKaNui\_58 Start: 39028, Stop: 38558, Start Num: 55  
Candidate Starts for OKaNui\_58:  
(Start: 55 @39028 has 194 MA's), (124, 38839),

Gene: Obama12\_59 Start: 39365, Stop: 38895, Start Num: 55  
Candidate Starts for Obama12\_59:  
(30, 39398), (Start: 55 @39365 has 194 MA's), (124, 39176), (195, 38909),

Gene: Odette\_132 Start: 72376, Stop: 72852, Start Num: 56  
Candidate Starts for Odette\_132:  
(32, 72331), (Start: 56 @72376 has 39 MA's), (160, 72694), (161, 72697), (167, 72733), (187, 72805),  
(194, 72826),

Gene: Odin\_61 Start: 38966, Stop: 38484, Start Num: 60  
Candidate Starts for Odin\_61:  
(Start: 60 @38966 has 138 MA's), (164, 38630),

Gene: Ohfah\_59 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Ohfah\_59:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Ohgeesy\_65 Start: 44524, Stop: 45075, Start Num: 73  
Candidate Starts for Ohgeesy\_65:  
(15, 44383), (Start: 73 @44524 has 24 MA's), (104, 44593), (163, 44890), (212, 45052),

Gene: Ohno789\_60 Start: 41078, Stop: 40590, Start Num: 49  
Candidate Starts for Ohno789\_60:  
(Start: 49 @41078 has 181 MA's), (Start: 109 @40964 has 3 MA's), (167, 40736), (188, 40658),

Gene: OlanP\_63 Start: 39680, Stop: 39204, Start Num: 55  
Candidate Starts for OlanP\_63:  
(Start: 55 @39680 has 194 MA's), (182, 39266), (187, 39248), (200, 39215),

Gene: Ollie\_64 Start: 39492, Stop: 39016, Start Num: 55  
Candidate Starts for Ollie\_64:  
(Start: 44 @39498 has 23 MA's), (Start: 55 @39492 has 194 MA's), (Start: 98 @39417 has 3 MA's),  
(187, 39060), (200, 39027),

Gene: Omega\_138 Start: 72194, Stop: 72676, Start Num: 56

Candidate Starts for Omega\_138:

(36, 72158), (Start: 56 @72194 has 39 MA's), (160, 72518), (161, 72521), (167, 72557),

Gene: OmniCritical\_76 Start: 48433, Stop: 48933, Start Num: 61

Candidate Starts for OmniCritical\_76:

(Start: 61 @48433 has 6 MA's), (Start: 78 @48457 has 16 MA's), (Start: 86 @48469 has 1 MA's), (100, 48505), (107, 48541), (Start: 109 @48559 has 3 MA's), (Start: 114 @48577 has 3 MA's), (150, 48721), (151, 48727), (161, 48790), (167, 48826), (168, 48829), (188, 48898), (203, 48922),

Gene: OneUp\_118 Start: 72254, Stop: 72691, Start Num: 87

Candidate Starts for OneUp\_118:

(74, 72236), (Start: 87 @72254 has 2 MA's), (102, 72293),

Gene: Oofda\_70 Start: 39947, Stop: 39528, Start Num: 93

Candidate Starts for Oofda\_70:

(Start: 55 @40010 has 194 MA's), (Start: 93 @39947 has 1 MA's), (Start: 106 @39905 has 12 MA's), (Start: 113 @39863 has 1 MA's), (155, 39710), (160, 39686), (190, 39560), (200, 39542),

Gene: Oogway\_59 Start: 41560, Stop: 41066, Start Num: 49

Candidate Starts for Oogway\_59:

(Start: 49 @41560 has 181 MA's), (188, 41155), (213, 41116),

Gene: Optimus\_121 Start: 68818, Stop: 69294, Start Num: 56

Candidate Starts for Optimus\_121:

(32, 68773), (Start: 56 @68818 has 39 MA's), (160, 69136), (161, 69139), (167, 69175), (187, 69247), (194, 69268),

Gene: Orange\_60 Start: 38884, Stop: 38423, Start Num: 75

Candidate Starts for Orange\_60:

(Start: 52 @38920 has 16 MA's), (Start: 75 @38884 has 14 MA's), (Start: 98 @38842 has 3 MA's), (Start: 120 @38749 has 1 MA's), (153, 38626), (162, 38584), (164, 38572), (208, 38437),

Gene: P28Green\_65 Start: 39630, Stop: 39148, Start Num: 44

Candidate Starts for P28Green\_65:

(Start: 44 @39630 has 23 MA's), (Start: 55 @39624 has 194 MA's), (Start: 98 @39549 has 3 MA's), (187, 39192), (200, 39159),

Gene: PGHhamlin\_66 Start: 39613, Stop: 39137, Start Num: 55

Candidate Starts for PGHhamlin\_66:

(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: PP\_61 Start: 43275, Stop: 42814, Start Num: 68

Candidate Starts for PP\_61:

(47, 43314), (Start: 68 @43275 has 3 MA's), (Start: 109 @43164 has 3 MA's), (124, 43104), (162, 42960),

Gene: PSullivan\_59 Start: 39335, Stop: 38847, Start Num: 49

Candidate Starts for PSullivan\_59:

(Start: 49 @39335 has 181 MA's), (Start: 109 @39221 has 3 MA's), (167, 38993), (188, 38915),

Gene: PacerPaul\_59 Start: 40757, Stop: 40281, Start Num: 49

Candidate Starts for PacerPaul\_59:  
(34, 40787), (Start: 49 @40757 has 181 MA's), (188, 40352), (213, 40313),

Gene: PainterBoy\_64 Start: 40001, Stop: 39543, Start Num: 77  
Candidate Starts for PainterBoy\_64:  
(Start: 69 @40007 has 27 MA's), (Start: 77 @40001 has 4 MA's), (155, 39740), (161, 39713), (164, 39692), (187, 39605),

Gene: Palestino\_57 Start: 38978, Stop: 38508, Start Num: 55  
Candidate Starts for Palestino\_57:  
(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Palpatine\_21 Start: 12883, Stop: 13353, Start Num: 53  
Candidate Starts for Palpatine\_21:  
(Start: 28 @12838 has 19 MA's), (Start: 53 @12883 has 4 MA's), (137, 13135), (154, 13231),

Gene: Panamaxus\_58 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for Panamaxus\_58:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (167, 38987), (187, 38915), (195, 38891),

Gene: Papez\_62 Start: 42285, Stop: 41809, Start Num: 49  
Candidate Starts for Papez\_62:  
(34, 42315), (Start: 49 @42285 has 181 MA's), (188, 41880), (213, 41841),

Gene: Paphu\_59 Start: 41191, Stop: 40712, Start Num: 49  
Candidate Starts for Paphu\_59:  
(Start: 49 @41191 has 181 MA's), (188, 40786), (213, 40747),

Gene: Paraselene\_57 Start: 40822, Stop: 40355, Start Num: 49  
Candidate Starts for Paraselene\_57:  
(Start: 49 @40822 has 181 MA's), (167, 40501), (188, 40423),

Gene: Pari\_62 Start: 40283, Stop: 39795, Start Num: 49  
Candidate Starts for Pari\_62:  
(Start: 49 @40283 has 181 MA's), (Start: 109 @40169 has 3 MA's), (167, 39941), (188, 39863),

Gene: Parliament\_61 Start: 42983, Stop: 42507, Start Num: 49  
Candidate Starts for Parliament\_61:  
(Start: 49 @42983 has 181 MA's), (188, 42578), (213, 42539),

Gene: Partridge\_50 Start: 37097, Stop: 36657, Start Num: 85  
Candidate Starts for Partridge\_50:  
(Start: 85 @37097 has 32 MA's), (Start: 98 @37067 has 3 MA's), (Start: 114 @36995 has 3 MA's), (160, 36818), (167, 36779), (168, 36776), (171, 36767), (188, 36701),

Gene: PascalRango\_59 Start: 40576, Stop: 40085, Start Num: 49  
Candidate Starts for PascalRango\_59:  
(Start: 49 @40576 has 181 MA's), (Start: 109 @40462 has 3 MA's), (167, 40234), (188, 40156), (213, 40117),

Gene: Patt\_72 Start: 46986, Stop: 47477, Start Num: 66  
Candidate Starts for Patt\_72:

(Start: 61 @46977 has 6 MA's), (Start: 66 @46986 has 21 MA's), (Start: 78 @47001 has 16 MA's), (Start: 86 @47013 has 1 MA's), (100, 47049), (107, 47085), (Start: 109 @47103 has 3 MA's), (Start: 114 @47121 has 3 MA's), (150, 47265), (151, 47271), (161, 47334), (167, 47370), (168, 47373), (188, 47442), (203, 47466),

Gene: PattyP\_62 Start: 41975, Stop: 41481, Start Num: 49  
Candidate Starts for PattyP\_62:  
(Start: 49 @41975 has 181 MA's), (188, 41570), (213, 41531),

Gene: Pawn\_64 Start: 39511, Stop: 39035, Start Num: 55  
Candidate Starts for Pawn\_64:  
(Start: 55 @39511 has 194 MA's), (182, 39097), (187, 39079), (200, 39046),

Gene: Payneful\_59 Start: 40244, Stop: 39768, Start Num: 49  
Candidate Starts for Payneful\_59:  
(Start: 49 @40244 has 181 MA's), (188, 39839), (213, 39800),

Gene: PeaceMeal1\_57 Start: 38138, Stop: 37653, Start Num: 51  
Candidate Starts for PeaceMeal1\_57:  
(Start: 51 @38138 has 18 MA's), (124, 37946), (192, 37685), (202, 37667),

Gene: Peaches\_57 Start: 38977, Stop: 38507, Start Num: 55  
Candidate Starts for Peaches\_57:  
(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Pelly\_60 Start: 41987, Stop: 41493, Start Num: 49  
Candidate Starts for Pelly\_60:  
(Start: 49 @41987 has 181 MA's), (188, 41582), (213, 41543),

Gene: Pembroke\_64 Start: 39628, Stop: 39146, Start Num: 44  
Candidate Starts for Pembroke\_64:  
(Start: 44 @39628 has 23 MA's), (Start: 55 @39622 has 194 MA's), (Start: 98 @39547 has 3 MA's), (187, 39190), (200, 39157),

Gene: Penny1\_65 Start: 39625, Stop: 39149, Start Num: 55  
Candidate Starts for Penny1\_65:  
(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's), (187, 39193), (200, 39160),

Gene: Perplexer\_56 Start: 38800, Stop: 38330, Start Num: 55  
Candidate Starts for Perplexer\_56:  
(45, 38806), (Start: 55 @38800 has 194 MA's), (124, 38611), (195, 38344),

Gene: Perseus\_60 Start: 42536, Stop: 42042, Start Num: 49  
Candidate Starts for Perseus\_60:  
(Start: 49 @42536 has 181 MA's), (188, 42131), (213, 42092),

Gene: Persimmon\_179 Start: 94749, Stop: 95180, Start Num: 46  
Candidate Starts for Persimmon\_179:  
(Start: 46 @94749 has 4 MA's), (95, 94827), (127, 94953), (135, 94971), (161, 95082), (169, 95124),

Gene: PeterPeter\_58 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for PeterPeter\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Petersenfast\_59 Start: 38841, Stop: 38422, Start Num: 98

Candidate Starts for Petersenfast\_59:

(Start: 52 @38919 has 16 MA's), (Start: 75 @38883 has 14 MA's), (Start: 98 @38841 has 3 MA's),  
(Start: 120 @38748 has 1 MA's), (153, 38625), (162, 38583), (164, 38571), (208, 38436),

Gene: Peterson\_63 Start: 42504, Stop: 42028, Start Num: 49

Candidate Starts for Peterson\_63:

(Start: 49 @42504 has 181 MA's), (188, 42099), (213, 42060),

Gene: PetiteSangsue\_56 Start: 38803, Stop: 38333, Start Num: 55

Candidate Starts for PetiteSangsue\_56:

(45, 38809), (Start: 55 @38803 has 194 MA's), (124, 38614), (195, 38347),

Gene: Petp2012\_61 Start: 42483, Stop: 41974, Start Num: 49

Candidate Starts for Petp2012\_61:

(Start: 49 @42483 has 181 MA's), (Start: 109 @42369 has 3 MA's), (167, 42141), (188, 42063), (213,  
42024),

Gene: Petruccio\_58 Start: 39710, Stop: 39234, Start Num: 49

Candidate Starts for Petruccio\_58:

(Start: 49 @39710 has 181 MA's), (188, 39305), (213, 39266),

Gene: PetterN\_64 Start: 40079, Stop: 39615, Start Num: 69

Candidate Starts for PetterN\_64:

(Start: 61 @40094 has 6 MA's), (Start: 69 @40079 has 27 MA's), (Start: 109 @39971 has 3 MA's),  
(124, 39911), (168, 39734), (177, 39701), (188, 39659), (202, 39629),

Gene: Ph8s\_63 Start: 39149, Stop: 38667, Start Num: 60

Candidate Starts for Ph8s\_63:

(Start: 60 @39149 has 138 MA's), (164, 38813), (175, 38768),

Gene: Phacado\_58 Start: 38977, Stop: 38507, Start Num: 55

Candidate Starts for Phacado\_58:

(Start: 55 @38977 has 194 MA's), (124, 38788),

Gene: Phaded\_61 Start: 40784, Stop: 40320, Start Num: 60

Candidate Starts for Phaded\_61:

(Start: 59 @40790 has 42 MA's), (Start: 60 @40784 has 138 MA's), (164, 40469),

Gene: Phaeder\_63 Start: 39912, Stop: 39448, Start Num: 60

Candidate Starts for Phaeder\_63:

(Start: 60 @39912 has 138 MA's), (155, 39645), (161, 39618), (164, 39597), (187, 39510),

Gene: PhailMary\_50 Start: 37121, Stop: 36681, Start Num: 85

Candidate Starts for PhailMary\_50:

(Start: 85 @37121 has 32 MA's), (Start: 114 @37019 has 3 MA's), (160, 36842), (167, 36803), (168,  
36800), (171, 36791), (188, 36725),

Gene: Phantastic\_62 Start: 39000, Stop: 38542, Start Num: 59

Candidate Starts for Phantastic\_62:

(Start: 59 @39000 has 42 MA's), (102, 38922), (103, 38919), (Start: 120 @38841 has 1 MA's), (124, 38820), (188, 38571), (195, 38553),

Gene: PhatBacter\_21 Start: 12888, Stop: 13358, Start Num: 53

Candidate Starts for PhatBacter\_21:

(Start: 28 @12843 has 19 MA's), (Start: 53 @12888 has 4 MA's), (137, 13140), (154, 13236),

Gene: Phaux\_20 Start: 12841, Stop: 13356, Start Num: 28

Candidate Starts for Phaux\_20:

(Start: 28 @12841 has 19 MA's), (Start: 53 @12886 has 4 MA's), (137, 13138), (154, 13234),

Gene: Phelipe\_59 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Phelipe\_59:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: PherrisBueller\_58 Start: 39152, Stop: 38664, Start Num: 49

Candidate Starts for PherrisBueller\_58:

(Start: 49 @39152 has 181 MA's), (Start: 109 @39038 has 3 MA's), (167, 38810), (188, 38732),

Gene: Phighter1804\_58 Start: 39039, Stop: 38569, Start Num: 55

Candidate Starts for Phighter1804\_58:

(Start: 55 @39039 has 194 MA's), (124, 38850),

Gene: Phillis\_61 Start: 38769, Stop: 38311, Start Num: 73

Candidate Starts for Phillis\_61:

(64, 38775), (Start: 73 @38769 has 24 MA's), (124, 38607),

Gene: PhineBark\_59 Start: 40949, Stop: 40473, Start Num: 49

Candidate Starts for PhineBark\_59:

(Start: 49 @40949 has 181 MA's), (188, 40544), (213, 40505),

Gene: PhinkBoden\_133 Start: 74594, Stop: 75037, Start Num: 88

Candidate Starts for PhinkBoden\_133:

(Start: 88 @74594 has 28 MA's), (Start: 91 @74597 has 3 MA's), (167, 74915), (188, 74993),

Gene: PhishRPhriends\_62 Start: 38688, Stop: 38212, Start Num: 55

Candidate Starts for PhishRPhriends\_62:

(Start: 55 @38688 has 194 MA's), (182, 38274), (187, 38256), (200, 38223),

Gene: Phlei\_52 Start: 39642, Stop: 39148, Start Num: 59

Candidate Starts for Phlei\_52:

(25, 39696), (Start: 59 @39642 has 42 MA's), (83, 39600), (161, 39318), (176, 39249), (182, 39228), (187, 39210), (188, 39204),

Gene: Phlippers\_57 Start: 41064, Stop: 40588, Start Num: 49

Candidate Starts for Phlippers\_57:

(Start: 49 @41064 has 181 MA's), (188, 40659), (213, 40620),

Gene: Phlorence\_57 Start: 39557, Stop: 39099, Start Num: 73

Candidate Starts for Phlorence\_57:

(Start: 73 @39557 has 24 MA's), (Start: 109 @39455 has 3 MA's), (124, 39395), (132, 39359), (168, 39218), (188, 39143), (202, 39113),

Gene: Phoebe\_65 Start: 39614, Stop: 39138, Start Num: 55

Candidate Starts for Phoebe\_65:

(Start: 44 @39620 has 23 MA's), (Start: 55 @39614 has 194 MA's), (Start: 98 @39539 has 3 MA's), (187, 39182), (200, 39149),

Gene: Phoebus\_131 Start: 73175, Stop: 73651, Start Num: 56

Candidate Starts for Phoebus\_131:

(32, 73130), (Start: 56 @73175 has 39 MA's), (160, 73493), (161, 73496), (167, 73532), (187, 73604), (194, 73625),

Gene: Phonnegut\_64 Start: 40134, Stop: 39670, Start Num: 60

Candidate Starts for Phonnegut\_64:

(Start: 60 @40134 has 138 MA's), (155, 39867), (161, 39840), (164, 39819), (187, 39732),

Gene: Phontbonne\_58 Start: 38869, Stop: 38399, Start Num: 55

Candidate Starts for Phontbonne\_58:

(45, 38875), (Start: 55 @38869 has 194 MA's), (124, 38680),

Gene: Phoxy\_64 Start: 39646, Stop: 39170, Start Num: 55

Candidate Starts for Phoxy\_64:

(Start: 44 @39652 has 23 MA's), (Start: 55 @39646 has 194 MA's), (Start: 98 @39571 has 3 MA's), (187, 39214), (200, 39181),

Gene: Phrankenstein\_51 Start: 36745, Stop: 36305, Start Num: 85

Candidate Starts for Phrankenstein\_51:

(Start: 85 @36745 has 32 MA's), (Start: 114 @36643 has 3 MA's), (160, 36466), (167, 36427), (168, 36424), (171, 36415), (188, 36349),

Gene: Phranny\_65 Start: 39493, Stop: 39017, Start Num: 55

Candidate Starts for Phranny\_65:

(Start: 55 @39493 has 194 MA's), (182, 39079), (187, 39061), (200, 39028),

Gene: Phrappuccino\_127 Start: 92973, Stop: 93443, Start Num: 78

Candidate Starts for Phrappuccino\_127:

(Start: 78 @92973 has 16 MA's), (Start: 81 @92979 has 2 MA's), (Start: 93 @93000 has 1 MA's), (101, 93024), (145, 93201), (181, 93378), (201, 93438),

Gene: PhrostyMug\_60 Start: 42305, Stop: 41811, Start Num: 49

Candidate Starts for PhrostyMug\_60:

(Start: 49 @42305 has 181 MA's), (188, 41900), (213, 41861),

Gene: PickleBack\_59 Start: 39734, Stop: 39276, Start Num: 73

Candidate Starts for PickleBack\_59:

(Start: 73 @39734 has 24 MA's), (Start: 109 @39632 has 3 MA's), (124, 39572), (132, 39536), (168, 39395), (188, 39320), (202, 39290),

Gene: PinkPlastic\_60 Start: 40448, Stop: 39939, Start Num: 49

Candidate Starts for PinkPlastic\_60:

(Start: 49 @40448 has 181 MA's), (Start: 109 @40334 has 3 MA's), (167, 40106), (188, 40028), (213, 39989),

Gene: Pinto\_60 Start: 40635, Stop: 40147, Start Num: 49

Candidate Starts for Pinto\_60:

(Start: 49 @40635 has 181 MA's), (Start: 109 @40521 has 3 MA's), (163, 40314), (167, 40293), (188, 40215), (213, 40176),

Gene: Pipcraft\_56 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Pipcraft\_56:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Pippin\_60 Start: 40237, Stop: 39761, Start Num: 49

Candidate Starts for Pippin\_60:

(Start: 49 @40237 has 181 MA's), (188, 39832), (213, 39793),

Gene: Piro94\_62 Start: 39944, Stop: 39471, Start Num: 60

Candidate Starts for Piro94\_62:

(Start: 59 @39950 has 42 MA's), (Start: 60 @39944 has 138 MA's), (Start: 113 @39815 has 1 MA's), (164, 39614),

Gene: Pistachio\_62 Start: 38926, Stop: 38468, Start Num: 59

Candidate Starts for Pistachio\_62:

(5, 39088), (9, 39049), (Start: 59 @38926 has 42 MA's), (102, 38848), (103, 38845), (124, 38746), (188, 38497), (195, 38479),

Gene: Pita2\_62 Start: 40832, Stop: 40344, Start Num: 49

Candidate Starts for Pita2\_62:

(Start: 49 @40832 has 181 MA's), (Start: 109 @40718 has 3 MA's), (167, 40490), (188, 40412),

Gene: Pmask\_62 Start: 38586, Stop: 38083, Start Num: 60

Candidate Starts for Pmask\_62:

(Start: 60 @38586 has 138 MA's), (Start: 65 @38583 has 18 MA's), (164, 38259),

Gene: Pocahontas\_60 Start: 39335, Stop: 38877, Start Num: 59

Candidate Starts for Pocahontas\_60:

(Start: 59 @39335 has 42 MA's), (102, 39257), (103, 39254), (124, 39155), (161, 39020), (187, 38912), (195, 38888),

Gene: Policronamos\_21 Start: 12843, Stop: 13358, Start Num: 28

Candidate Starts for Policronamos\_21:

(Start: 28 @12843 has 19 MA's), (Start: 53 @12888 has 4 MA's), (137, 13140), (154, 13236),

Gene: Polymorphads\_59 Start: 38971, Stop: 38501, Start Num: 55

Candidate Starts for Polymorphads\_59:

(Start: 55 @38971 has 194 MA's), (124, 38782),

Gene: Polyphemus\_63 Start: 38971, Stop: 38468, Start Num: 60

Candidate Starts for Polyphemus\_63:

(Start: 60 @38971 has 138 MA's), (Start: 65 @38968 has 18 MA's), (164, 38644), (184, 38572),

Gene: Pomar16\_62 Start: 39652, Stop: 39155, Start Num: 50

Candidate Starts for Pomar16\_62:

(Start: 50 @39652 has 3 MA's), (Start: 75 @39616 has 14 MA's), (Start: 98 @39574 has 3 MA's), (102, 39562), (164, 39304), (175, 39259),

Gene: Ponzi\_32 Start: 17880, Stop: 17527, Start Num: 110

Candidate Starts for Ponzi\_32:



(Start: 82 @17964 has 3 MA's), (Start: 110 @17880 has 1 MA's), (136, 17781), (139, 17763), (182, 17604), (193, 17559), (196, 17553),

Gene: Poompha\_57 Start: 38136, Stop: 37651, Start Num: 51

Candidate Starts for Poompha\_57:

(Start: 51 @38136 has 18 MA's), (124, 37944), (192, 37683), (202, 37665),

Gene: Popcicle\_60 Start: 39335, Stop: 38877, Start Num: 59

Candidate Starts for Popcicle\_60:

(Start: 59 @39335 has 42 MA's), (102, 39257), (103, 39254), (124, 39155), (161, 39020), (187, 38912), (195, 38888),

Gene: Porcelain\_126 Start: 68336, Stop: 68818, Start Num: 56

Candidate Starts for Porcelain\_126:

(36, 68300), (Start: 56 @68336 has 39 MA's), (153, 68630), (160, 68660), (161, 68663), (167, 68699),

Gene: Porky\_21 Start: 12697, Stop: 13167, Start Num: 53

Candidate Starts for Porky\_21:

(Start: 28 @12652 has 19 MA's), (Start: 53 @12697 has 4 MA's), (137, 12949), (154, 13045),

Gene: PotatoSplit\_65 Start: 39631, Stop: 39149, Start Num: 44

Candidate Starts for PotatoSplit\_65:

(Start: 44 @39631 has 23 MA's), (Start: 55 @39625 has 194 MA's), (Start: 98 @39550 has 3 MA's), (187, 39193), (200, 39160),

Gene: Pound\_119 Start: 69558, Stop: 70034, Start Num: 56

Candidate Starts for Pound\_119:

(Start: 56 @69558 has 39 MA's), (160, 69876), (161, 69879), (167, 69915), (187, 69987), (194, 70008),

Gene: Power\_61 Start: 39955, Stop: 39482, Start Num: 60

Candidate Starts for Power\_61:

(Start: 41 @39979 has 1 MA's), (Start: 59 @39961 has 42 MA's), (Start: 60 @39955 has 138 MA's), (Start: 113 @39826 has 1 MA's), (164, 39625),

Gene: Priamo\_65 Start: 38402, Stop: 37899, Start Num: 60

Candidate Starts for Priamo\_65:

(Start: 60 @38402 has 138 MA's), (Start: 65 @38399 has 18 MA's), (164, 38075),

Gene: Prinashe11\_56 Start: 39272, Stop: 38814, Start Num: 73

Candidate Starts for Prinashe11\_56:

(Start: 73 @39272 has 24 MA's), (Start: 109 @39170 has 3 MA's), (124, 39110), (168, 38933), (188, 38858), (202, 38828),

Gene: Priya\_62 Start: 39761, Stop: 39297, Start Num: 60

Candidate Starts for Priya\_62:

(Start: 60 @39761 has 138 MA's), (164, 39446),

Gene: ProMouse\_59 Start: 40585, Stop: 40118, Start Num: 49

Candidate Starts for ProMouse\_59:

(Start: 49 @40585 has 181 MA's), (167, 40264), (188, 40186),

Gene: Pukovnik\_60 Start: 40454, Stop: 39969, Start Num: 59

Candidate Starts for Pukovnik\_60:

(Start: 59 @40454 has 42 MA's), (Start: 60 @40448 has 138 MA's), (Start: 113 @40319 has 1 MA's), (164, 40118),

Gene: Pumbaa\_58 Start: 38923, Stop: 38453, Start Num: 55  
Candidate Starts for Pumbaa\_58:  
(Start: 55 @38923 has 194 MA's), (124, 38734),

Gene: Pumpkin\_23 Start: 12895, Stop: 13410, Start Num: 28  
Candidate Starts for Pumpkin\_23:  
(Start: 28 @12895 has 19 MA's), (Start: 53 @12940 has 4 MA's), (137, 13192), (154, 13288),

Gene: Puppy\_62 Start: 38998, Stop: 38540, Start Num: 59  
Candidate Starts for Puppy\_62:  
(5, 39160), (9, 39121), (Start: 59 @38998 has 42 MA's), (102, 38920), (103, 38917), (124, 38818), (188, 38569), (195, 38551),

Gene: PurpleHaze\_64 Start: 39506, Stop: 39030, Start Num: 55  
Candidate Starts for PurpleHaze\_64:  
(Start: 55 @39506 has 194 MA's), (182, 39092), (187, 39074), (200, 39041),

Gene: QTRlifeCrisis\_59 Start: 40840, Stop: 40361, Start Num: 72  
Candidate Starts for QTRlifeCrisis\_59:  
(Start: 37 @40873 has 2 MA's), (Start: 72 @40840 has 7 MA's), (Start: 109 @40735 has 3 MA's), (167, 40507), (188, 40429),

Gene: QueenB2\_61 Start: 39933, Stop: 39460, Start Num: 60  
Candidate Starts for QueenB2\_61:  
(Start: 41 @39957 has 1 MA's), (Start: 59 @39939 has 42 MA's), (Start: 60 @39933 has 138 MA's), (Start: 113 @39804 has 1 MA's), (164, 39603),

Gene: QueenBeesly\_62 Start: 39902, Stop: 39429, Start Num: 60  
Candidate Starts for QueenBeesly\_62:  
(Start: 41 @39926 has 1 MA's), (Start: 59 @39908 has 42 MA's), (Start: 60 @39902 has 138 MA's), (Start: 113 @39773 has 1 MA's), (164, 39572),

Gene: QuinnKiro\_59 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for QuinnKiro\_59:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (187, 38915), (195, 38891),

Gene: Quokka\_60 Start: 38947, Stop: 38609, Start Num: 116  
Candidate Starts for Quokka\_60:  
(Start: 52 @39106 has 16 MA's), (Start: 75 @39067 has 14 MA's), (116, 38947), (164, 38755),

Gene: REQ2\_71 Start: 43984, Stop: 44421, Start Num: 97  
Candidate Starts for REQ2\_71:  
(97, 43984),

Gene: RER2\_44 Start: 33569, Stop: 33231, Start Num: 114  
Candidate Starts for RER2\_44:  
(Start: 85 @33671 has 32 MA's), (Start: 114 @33569 has 3 MA's), (160, 33392), (167, 33353), (168, 33350), (171, 33341), (188, 33275),

Gene: RGL3\_45 Start: 34664, Stop: 34167, Start Num: 85  
Candidate Starts for RGL3\_45:  
(Start: 85 @34664 has 32 MA's), (155, 34409), (160, 34385), (163, 34370), (167, 34346), (171, 34334),  
(197, 34244),

Gene: Rachaly\_60 Start: 40054, Stop: 39575, Start Num: 60  
Candidate Starts for Rachaly\_60:  
(43, 40075), (Start: 59 @40060 has 42 MA's), (Start: 60 @40054 has 138 MA's), (Start: 113 @39925  
has 1 MA's), (164, 39724),

Gene: Rahalelujah\_63 Start: 39667, Stop: 39203, Start Num: 60  
Candidate Starts for Rahalelujah\_63:  
(Start: 60 @39667 has 138 MA's), (161, 39373), (164, 39352),

Gene: Raid\_59 Start: 40757, Stop: 40290, Start Num: 49  
Candidate Starts for Raid\_59:  
(Start: 49 @40757 has 181 MA's), (167, 40436), (188, 40358),

Gene: Rajelicia\_61 Start: 42461, Stop: 41967, Start Num: 49  
Candidate Starts for Rajelicia\_61:  
(Start: 49 @42461 has 181 MA's), (188, 42056), (213, 42017),

Gene: Rasputin\_51 Start: 36769, Stop: 36329, Start Num: 85  
Candidate Starts for Rasputin\_51:  
(Start: 85 @36769 has 32 MA's), (Start: 114 @36667 has 3 MA's), (160, 36490), (167, 36451), (168,  
36448), (171, 36439), (188, 36373),

Gene: ReMo\_68 Start: 39694, Stop: 39326, Start Num: 106  
Candidate Starts for ReMo\_68:  
(47, 39802), (Start: 59 @39784 has 42 MA's), (Start: 106 @39694 has 12 MA's), (160, 39484), (190,  
39358), (200, 39340),

Gene: Reba\_64 Start: 39166, Stop: 38690, Start Num: 55  
Candidate Starts for Reba\_64:  
(Start: 55 @39166 has 194 MA's), (182, 38752), (187, 38734), (200, 38701),

Gene: Rebeuca\_59 Start: 39274, Stop: 38789, Start Num: 51  
Candidate Starts for Rebeuca\_59:  
(16, 39340), (Start: 51 @39274 has 18 MA's), (124, 39082), (187, 38839), (194, 38818), (195, 38815),  
(202, 38803),

Gene: RedRock\_63 Start: 40708, Stop: 40244, Start Num: 60  
Candidate Starts for RedRock\_63:  
(40, 40732), (Start: 59 @40714 has 42 MA's), (Start: 60 @40708 has 138 MA's), (155, 40441), (164,  
40393),

Gene: RedWattleHog\_2 Start: 2195, Stop: 2695, Start Num: 66  
Candidate Starts for RedWattleHog\_2:  
(Start: 66 @2195 has 21 MA's), (71, 2204), (Start: 84 @2222 has 1 MA's), (175, 2591),

Gene: Redno2\_122 Start: 68608, Stop: 69084, Start Num: 56  
Candidate Starts for Redno2\_122:  
(Start: 56 @68608 has 39 MA's), (160, 68926), (161, 68929), (167, 68965), (187, 69037), (194, 69058),

Gene: Refuge\_59 Start: 40894, Stop: 40418, Start Num: 60  
Candidate Starts for Refuge\_59:  
(Start: 60 @40894 has 138 MA's), (161, 40588), (164, 40567), (188, 40474),

Gene: Relief\_57 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for Relief\_57:  
(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Remus\_70 Start: 39685, Stop: 39317, Start Num: 106  
Candidate Starts for Remus\_70:  
(47, 39793), (Start: 59 @39775 has 42 MA's), (Start: 106 @39685 has 12 MA's), (160, 39475), (190, 39349), (200, 39331),

Gene: Reptar3000\_73 Start: 46975, Stop: 47466, Start Num: 66  
Candidate Starts for Reptar3000\_73:  
(Start: 61 @46966 has 6 MA's), (Start: 66 @46975 has 21 MA's), (Start: 78 @46990 has 16 MA's),  
(Start: 86 @47002 has 1 MA's), (100, 47038), (107, 47074), (Start: 109 @47092 has 3 MA's), (Start:  
114 @47110 has 3 MA's), (150, 47254), (151, 47260), (161, 47323), (167, 47359), (168, 47362), (188,  
47431), (203, 47455),

Gene: ResDef\_60 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for ResDef\_60:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (187, 38915),  
(195, 38891),

Gene: Retro23\_63 Start: 40147, Stop: 39674, Start Num: 60  
Candidate Starts for Retro23\_63:  
(Start: 41 @40171 has 1 MA's), (Start: 59 @40153 has 42 MA's), (Start: 60 @40147 has 138 MA's),  
(Start: 113 @40018 has 1 MA's), (164, 39817),

Gene: RexFury\_50 Start: 36830, Stop: 36390, Start Num: 85  
Candidate Starts for RexFury\_50:  
(Start: 85 @36830 has 32 MA's), (Start: 114 @36728 has 3 MA's), (160, 36551), (167, 36512), (168,  
36509), (171, 36500), (188, 36434),

Gene: Rhodalysa\_51 Start: 36799, Stop: 36359, Start Num: 85  
Candidate Starts for Rhodalysa\_51:  
(Start: 85 @36799 has 32 MA's), (Start: 114 @36697 has 3 MA's), (160, 36520), (167, 36481), (168,  
36478), (171, 36469), (188, 36403),

Gene: RhynO\_59 Start: 39076, Stop: 38591, Start Num: 51  
Candidate Starts for RhynO\_59:  
(16, 39142), (Start: 51 @39076 has 18 MA's), (124, 38884), (187, 38641), (202, 38605),

Gene: Rhynn\_58 Start: 40371, Stop: 39877, Start Num: 66  
Candidate Starts for Rhynn\_58:  
(Start: 66 @40371 has 21 MA's), (188, 39966), (213, 39927),

Gene: RidgeCB\_59 Start: 40611, Stop: 40120, Start Num: 49  
Candidate Starts for RidgeCB\_59:  
(Start: 49 @40611 has 181 MA's), (Start: 109 @40497 has 3 MA's), (163, 40290), (167, 40269), (188,  
40191), (213, 40152),

Gene: Rifter\_64 Start: 38194, Stop: 37691, Start Num: 60  
Candidate Starts for Rifter\_64:  
(Start: 60 @38194 has 138 MA's), (Start: 65 @38191 has 18 MA's), (164, 37867),

Gene: Ringer\_59 Start: 41503, Stop: 41027, Start Num: 49  
Candidate Starts for Ringer\_59:  
(Start: 49 @41503 has 181 MA's), (188, 41098), (213, 41059),

Gene: Roary\_65 Start: 39540, Stop: 39052, Start Num: 73  
Candidate Starts for Roary\_65:  
(64, 39546), (Start: 73 @39540 has 24 MA's), (Start: 109 @39438 has 3 MA's), (124, 39378), (188, 39099),

Gene: Rockstar\_59 Start: 38832, Stop: 38374, Start Num: 59  
Candidate Starts for Rockstar\_59:  
(Start: 59 @38832 has 42 MA's), (102, 38754), (103, 38751), (Start: 120 @38673 has 1 MA's), (124, 38652), (188, 38403), (195, 38385),

Gene: Rohr\_61 Start: 41829, Stop: 41320, Start Num: 49  
Candidate Starts for Rohr\_61:  
(Start: 49 @41829 has 181 MA's), (Start: 109 @41715 has 3 MA's), (167, 41487), (188, 41409), (213, 41370),

Gene: Roksolana\_65 Start: 39025, Stop: 38525, Start Num: 65  
Candidate Starts for Roksolana\_65:  
(Start: 60 @39028 has 138 MA's), (Start: 65 @39025 has 18 MA's), (164, 38701),

Gene: Romney\_57 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for Romney\_57:  
(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Roosevelt\_57 Start: 38980, Stop: 38510, Start Num: 55  
Candidate Starts for Roosevelt\_57:  
(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Rosa24\_56 Start: 39006, Stop: 38536, Start Num: 55  
Candidate Starts for Rosa24\_56:  
(Start: 55 @39006 has 194 MA's), (124, 38817),

Gene: Rosalind\_68 Start: 39942, Stop: 39484, Start Num: 59  
Candidate Starts for Rosalind\_68:  
(47, 39960), (Start: 59 @39942 has 42 MA's), (Start: 106 @39852 has 12 MA's), (160, 39642), (190, 39516), (200, 39498),

Gene: Rowdy\_61 Start: 38987, Stop: 38502, Start Num: 51  
Candidate Starts for Rowdy\_61:  
(16, 39053), (Start: 51 @38987 has 18 MA's), (124, 38795), (187, 38552), (202, 38516),

Gene: Rubeus\_59 Start: 38428, Stop: 37940, Start Num: 49  
Candidate Starts for Rubeus\_59:  
(Start: 49 @38428 has 181 MA's), (Start: 109 @38314 has 3 MA's), (163, 38107), (167, 38086), (188, 38008), (213, 37969),

Gene: Rufus\_61 Start: 41112, Stop: 40603, Start Num: 49

Candidate Starts for Rufus\_61:

(Start: 49 @41112 has 181 MA's), (Start: 109 @40998 has 3 MA's), (163, 40791), (167, 40770), (188, 40692), (213, 40653),

Gene: Ruin\_58 Start: 38971, Stop: 38501, Start Num: 55

Candidate Starts for Ruin\_58:

(Start: 55 @38971 has 194 MA's), (124, 38782),

Gene: Rummer\_63 Start: 39655, Stop: 39173, Start Num: 44

Candidate Starts for Rummer\_63:

(Start: 44 @39655 has 23 MA's), (Start: 55 @39649 has 194 MA's), (Start: 98 @39574 has 3 MA's), (187, 39217), (200, 39184),

Gene: Ruotula\_62 Start: 42625, Stop: 42149, Start Num: 49

Candidate Starts for Ruotula\_62:

(Start: 49 @42625 has 181 MA's), (188, 42220), (213, 42181),

Gene: Rutherferd\_62 Start: 42187, Stop: 41699, Start Num: 66

Candidate Starts for Rutherferd\_62:

(Start: 66 @42187 has 21 MA's), (188, 41788), (213, 41749),

Gene: Ruthiejr\_77 Start: 48468, Stop: 48944, Start Num: 78

Candidate Starts for Ruthiejr\_77:

(Start: 61 @48444 has 6 MA's), (Start: 66 @48453 has 21 MA's), (Start: 78 @48468 has 16 MA's), (Start: 86 @48480 has 1 MA's), (100, 48516), (107, 48552), (Start: 109 @48570 has 3 MA's), (Start: 114 @48588 has 3 MA's), (161, 48801), (167, 48837), (168, 48840), (188, 48909), (203, 48933),

Gene: Ryadel\_12 Start: 3926, Stop: 3441, Start Num: 88

Candidate Starts for Ryadel\_12:

(Start: 88 @3926 has 28 MA's), (153, 3653), (157, 3641), (191, 3482),

Gene: STLscum\_62 Start: 41452, Stop: 40943, Start Num: 38

Candidate Starts for STLscum\_62:

(Start: 38 @41452 has 1 MA's), (Start: 49 @41431 has 181 MA's), (Start: 109 @41317 has 3 MA's), (167, 41089), (168, 41086), (188, 41011),

Gene: Sabertooth\_58 Start: 38980, Stop: 38510, Start Num: 55

Candidate Starts for Sabertooth\_58:

(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Sabia\_64 Start: 39636, Stop: 39154, Start Num: 44

Candidate Starts for Sabia\_64:

(Start: 44 @39636 has 23 MA's), (Start: 55 @39630 has 194 MA's), (Start: 98 @39555 has 3 MA's), (187, 39198), (200, 39165),

Gene: Sabinator\_63 Start: 39620, Stop: 39144, Start Num: 55

Candidate Starts for Sabinator\_63:

(Start: 44 @39626 has 23 MA's), (Start: 55 @39620 has 194 MA's), (Start: 98 @39545 has 3 MA's), (187, 39188), (200, 39155),

Gene: Sagefire\_62 Start: 42491, Stop: 41997, Start Num: 49

Candidate Starts for Sagefire\_62:  
(Start: 49 @42491 has 181 MA's), (188, 42086), (213, 42047),

Gene: Saintus\_59 Start: 36205, Stop: 35717, Start Num: 73  
Candidate Starts for Saintus\_59:  
(64, 36211), (Start: 73 @36205 has 24 MA's), (Start: 109 @36103 has 3 MA's), (124, 36043), (188, 35764),

Gene: Salz\_60 Start: 38758, Stop: 38393, Start Num: 109  
Candidate Starts for Salz\_60:  
(Start: 52 @38890 has 16 MA's), (Start: 75 @38854 has 14 MA's), (Start: 98 @38812 has 3 MA's),  
(Start: 109 @38758 has 3 MA's), (Start: 120 @38719 has 1 MA's), (153, 38596), (162, 38554), (164, 38542), (208, 38407),

Gene: SamScheppers\_75 Start: 48848, Stop: 49324, Start Num: 78  
Candidate Starts for SamScheppers\_75:  
(Start: 61 @48824 has 6 MA's), (Start: 78 @48848 has 16 MA's), (Start: 86 @48860 has 1 MA's), (100, 48896), (107, 48932), (Start: 109 @48950 has 3 MA's), (Start: 114 @48968 has 3 MA's), (150, 49112), (151, 49118), (161, 49181), (167, 49217), (168, 49220), (188, 49289), (203, 49313),

Gene: Sandaddy\_56 Start: 40016, Stop: 39528, Start Num: 49  
Candidate Starts for Sandaddy\_56:  
(Start: 49 @40016 has 181 MA's), (Start: 109 @39902 has 3 MA's), (167, 39674), (188, 39596),

Gene: Sanya\_56 Start: 41671, Stop: 41162, Start Num: 49  
Candidate Starts for Sanya\_56:  
(Start: 49 @41671 has 181 MA's), (Start: 109 @41557 has 3 MA's), (163, 41350), (167, 41329), (188, 41251), (213, 41212),

Gene: SarFire\_56 Start: 39557, Stop: 39090, Start Num: 49  
Candidate Starts for SarFire\_56:  
(Start: 49 @39557 has 181 MA's), (128, 39383), (167, 39236), (188, 39158),

Gene: SaturnRing\_61 Start: 39379, Stop: 38921, Start Num: 59  
Candidate Starts for SaturnRing\_61:  
(5, 39541), (9, 39502), (Start: 59 @39379 has 42 MA's), (102, 39301), (103, 39298), (124, 39199), (188, 38950), (195, 38932),

Gene: Scamp\_58 Start: 38980, Stop: 38510, Start Num: 55  
Candidate Starts for Scamp\_58:  
(Start: 55 @38980 has 194 MA's), (124, 38791),

Gene: Schatzie\_126 Start: 71271, Stop: 71747, Start Num: 56  
Candidate Starts for Schatzie\_126:  
(32, 71226), (Start: 56 @71271 has 39 MA's), (160, 71589), (161, 71592), (167, 71628), (187, 71700), (194, 71721),

Gene: Scherzo\_64 Start: 40323, Stop: 39859, Start Num: 60  
Candidate Starts for Scherzo\_64:  
(Start: 60 @40323 has 138 MA's), (155, 40056), (161, 40029), (164, 40008), (187, 39921),

Gene: SchoolBus\_9 Start: 3151, Stop: 2666, Start Num: 88  
Candidate Starts for SchoolBus\_9:

(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Schuy\_10 Start: 3349, Stop: 2729, Start Num: 88

Candidate Starts for Schuy\_10:

(Start: 88 @3349 has 28 MA's), (153, 3076), (157, 3064), (199, 2887), (211, 2863), (214, 2788),

Gene: Scorpia\_63 Start: 40138, Stop: 39674, Start Num: 69

Candidate Starts for Scorpia\_63:

(Start: 61 @40153 has 6 MA's), (Start: 69 @40138 has 27 MA's), (Start: 109 @40030 has 3 MA's), (124, 39970), (168, 39793), (177, 39760), (188, 39718), (202, 39688),

Gene: Scout\_61 Start: 38536, Stop: 38075, Start Num: 59

Candidate Starts for Scout\_61:

(5, 38698), (9, 38659), (Start: 59 @38536 has 42 MA's), (103, 38452), (Start: 120 @38374 has 1 MA's), (124, 38353), (188, 38104), (195, 38086),

Gene: Scowl\_60 Start: 40383, Stop: 39919, Start Num: 49

Candidate Starts for Scowl\_60:

(Start: 49 @40383 has 181 MA's), (96, 40335), (Start: 114 @40275 has 3 MA's), (Start: 119 @40257 has 1 MA's), (163, 40086), (167, 40065), (188, 39987),

Gene: Seabiscuit\_63 Start: 40354, Stop: 39878, Start Num: 49

Candidate Starts for Seabiscuit\_63:

(Start: 49 @40354 has 181 MA's), (188, 39949), (213, 39910),

Gene: Seanderson\_59 Start: 41817, Stop: 41326, Start Num: 49

Candidate Starts for Seanderson\_59:

(Start: 49 @41817 has 181 MA's), (188, 41412), (213, 41373),

Gene: SemperFi\_63 Start: 40170, Stop: 39697, Start Num: 60

Candidate Starts for SemperFi\_63:

(Start: 41 @40194 has 1 MA's), (Start: 59 @40176 has 42 MA's), (Start: 60 @40170 has 138 MA's), (Start: 113 @40041 has 1 MA's), (164, 39840),

Gene: SenorClean\_55 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for SenorClean\_55:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Serenity\_62 Start: 39280, Stop: 38822, Start Num: 75

Candidate Starts for Serenity\_62:

(Start: 52 @39319 has 16 MA's), (Start: 75 @39280 has 14 MA's), (116, 39160), (162, 38980), (164, 38968), (184, 38896),

Gene: SeresaTree\_235 Start: 114238, Stop: 114606, Start Num: 102

Candidate Starts for SeresaTree\_235:

(102, 114238), (118, 114316), (131, 114370), (133, 114376), (141, 114415), (143, 114418), (169, 114550), (178, 114583),

Gene: Settecandela\_127 Start: 92973, Stop: 93443, Start Num: 78

Candidate Starts for Settecandela\_127:

(Start: 78 @92973 has 16 MA's), (Start: 81 @92979 has 2 MA's), (Start: 93 @93000 has 1 MA's), (101, 93024), (145, 93201), (181, 93378), (201, 93438),



Gene: Severus\_57 Start: 38136, Stop: 37651, Start Num: 51  
Candidate Starts for Severus\_57:  
(Start: 51 @38136 has 18 MA's), (124, 37944), (192, 37683), (202, 37665),

Gene: Shagrat\_101 Start: 53858, Stop: 54307, Start Num: 78  
Candidate Starts for Shagrat\_101:  
(Start: 78 @53858 has 16 MA's), (97, 53897), (123, 53996), (124, 53999), (139, 54059), (151, 54107),  
(163, 54188), (166, 54209),

Gene: Shaka\_57 Start: 38975, Stop: 38505, Start Num: 55  
Candidate Starts for Shaka\_57:  
(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Sham4\_61 Start: 38882, Stop: 38421, Start Num: 75  
Candidate Starts for Sham4\_61:  
(Start: 52 @38918 has 16 MA's), (Start: 75 @38882 has 14 MA's), (Start: 98 @38840 has 3 MA's),  
(Start: 120 @38747 has 1 MA's), (153, 38624), (162, 38582), (164, 38570), (208, 38435),

Gene: Shapes\_61 Start: 38987, Stop: 38502, Start Num: 51  
Candidate Starts for Shapes\_61:  
(16, 39053), (Start: 51 @38987 has 18 MA's), (124, 38795), (187, 38552), (202, 38516),

Gene: ShayRa\_70 Start: 39881, Stop: 39513, Start Num: 106  
Candidate Starts for ShayRa\_70:  
(47, 39989), (Start: 59 @39971 has 42 MA's), (Start: 106 @39881 has 12 MA's), (160, 39671), (190,  
39545), (200, 39527),

Gene: SheaKeira\_60 Start: 39511, Stop: 39047, Start Num: 60  
Candidate Starts for SheaKeira\_60:  
(Start: 60 @39511 has 138 MA's), (155, 39244), (164, 39196), (197, 39079),

Gene: Sheen\_60 Start: 42174, Stop: 41725, Start Num: 86  
Candidate Starts for Sheen\_60:  
(Start: 86 @42174 has 1 MA's), (90, 42168), (99, 42150), (124, 42039), (160, 41883), (163, 41868),  
(176, 41811), (177, 41808), (188, 41766), (190, 41757), (195, 41748),

Gene: SheldonCooper\_59 Start: 39382, Stop: 38912, Start Num: 55  
Candidate Starts for SheldonCooper\_59:  
(30, 39415), (Start: 55 @39382 has 194 MA's), (124, 39193), (195, 38926),

Gene: Shida\_10 Start: 3398, Stop: 2778, Start Num: 88  
Candidate Starts for Shida\_10:  
(Start: 88 @3398 has 28 MA's), (153, 3125), (199, 2936), (211, 2912), (214, 2837),

Gene: ShortQueendom\_53 Start: 38461, Stop: 37967, Start Num: 49  
Candidate Starts for ShortQueendom\_53:  
(Start: 49 @38461 has 181 MA's), (188, 38056), (213, 38017),

Gene: Shuman\_51 Start: 36753, Stop: 36313, Start Num: 85  
Candidate Starts for Shuman\_51:  
(Start: 85 @36753 has 32 MA's), (Start: 114 @36651 has 3 MA's), (160, 36474), (167, 36435), (168,  
36432), (171, 36423), (188, 36357),

Gene: Shygu2\_56 Start: 38854, Stop: 38384, Start Num: 55  
Candidate Starts for Shygu2\_56:  
(45, 38860), (Start: 55 @38854 has 194 MA's), (103, 38764), (124, 38665), (195, 38398),

Gene: Sibs6\_62 Start: 39463, Stop: 38969, Start Num: 49  
Candidate Starts for Sibs6\_62:  
(Start: 49 @39463 has 181 MA's), (188, 39058), (213, 39019),

Gene: SkiPole\_64 Start: 41080, Stop: 40613, Start Num: 49  
Candidate Starts for SkiPole\_64:  
(Start: 49 @41080 has 181 MA's), (167, 40759), (188, 40681),

Gene: Skipitt\_57 Start: 38972, Stop: 38502, Start Num: 55  
Candidate Starts for Skipitt\_57:  
(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: Sknot\_62 Start: 39600, Stop: 39121, Start Num: 59  
Candidate Starts for Sknot\_62:  
(Start: 59 @39600 has 42 MA's), (Start: 60 @39594 has 138 MA's), (Start: 113 @39465 has 1 MA's),  
(164, 39264), (168, 39246),

Gene: Slagathor\_62 Start: 42823, Stop: 42329, Start Num: 66  
Candidate Starts for Slagathor\_62:  
(Start: 66 @42823 has 21 MA's), (188, 42418), (213, 42379),

Gene: Slarp\_76 Start: 48376, Stop: 48852, Start Num: 78  
Candidate Starts for Slarp\_76:  
(Start: 61 @48352 has 6 MA's), (Start: 78 @48376 has 16 MA's), (Start: 86 @48388 has 1 MA's), (100,  
48424), (107, 48460), (Start: 109 @48478 has 3 MA's), (Start: 114 @48496 has 3 MA's), (150, 48640),  
(151, 48646), (161, 48709), (167, 48745), (168, 48748), (188, 48817), (203, 48841),

Gene: Smairt\_63 Start: 43299, Stop: 42805, Start Num: 49  
Candidate Starts for Smairt\_63:  
(Start: 49 @43299 has 181 MA's), (188, 42894), (213, 42855),

Gene: Smeadley\_64 Start: 39401, Stop: 38913, Start Num: 73  
Candidate Starts for Smeadley\_64:  
(64, 39407), (Start: 73 @39401 has 24 MA's), (Start: 109 @39299 has 3 MA's), (124, 39239), (168,  
39035), (188, 38960),

Gene: Smeagan\_65 Start: 40454, Stop: 39981, Start Num: 60  
Candidate Starts for Smeagan\_65:  
(Start: 60 @40454 has 138 MA's), (Start: 113 @40325 has 1 MA's), (164, 40124),

Gene: Smeagol\_62 Start: 42613, Stop: 42152, Start Num: 92  
Candidate Starts for Smeagol\_62:  
(Start: 66 @42646 has 21 MA's), (Start: 92 @42613 has 1 MA's), (188, 42241), (213, 42202),

Gene: SmellyB\_63 Start: 38580, Stop: 38080, Start Num: 65  
Candidate Starts for SmellyB\_63:  
(Start: 60 @38583 has 138 MA's), (Start: 65 @38580 has 18 MA's), (164, 38256),

Gene: Smooch\_11 Start: 3755, Stop: 3270, Start Num: 88

Candidate Starts for Smooch\_11:

(Start: 88 @3755 has 28 MA's), (105, 3695), (153, 3482), (157, 3470),

Gene: Smoothie\_135 Start: 74334, Stop: 74777, Start Num: 89

Candidate Starts for Smoothie\_135:

(Start: 70 @74307 has 3 MA's), (Start: 89 @74334 has 10 MA's), (Start: 91 @74337 has 3 MA's), (167, 74655), (188, 74733),

Gene: SnapTap\_62 Start: 39981, Stop: 39508, Start Num: 60

Candidate Starts for SnapTap\_62:

(Start: 41 @40005 has 1 MA's), (Start: 59 @39987 has 42 MA's), (Start: 60 @39981 has 138 MA's), (Start: 113 @39852 has 1 MA's), (164, 39651),

Gene: Snape\_61 Start: 38874, Stop: 38413, Start Num: 75

Candidate Starts for Snape\_61:

(Start: 52 @38910 has 16 MA's), (Start: 75 @38874 has 14 MA's), (Start: 98 @38832 has 3 MA's), (Start: 120 @38739 has 1 MA's), (153, 38616), (162, 38574), (164, 38562), (208, 38427),

Gene: Snazzy\_58 Start: 39917, Stop: 39441, Start Num: 49

Candidate Starts for Snazzy\_58:

(Start: 49 @39917 has 181 MA's), (188, 39512), (213, 39473),

Gene: Snickers\_63 Start: 39601, Stop: 39119, Start Num: 44

Candidate Starts for Snickers\_63:

(Start: 44 @39601 has 23 MA's), (Start: 55 @39595 has 194 MA's), (Start: 98 @39520 has 3 MA's), (187, 39163), (200, 39130),

Gene: SoYo\_64 Start: 39539, Stop: 39057, Start Num: 44

Candidate Starts for SoYo\_64:

(Start: 44 @39539 has 23 MA's), (Start: 55 @39533 has 194 MA's), (Start: 98 @39458 has 3 MA's), (187, 39101), (200, 39068),

Gene: SoilDragon\_64 Start: 39069, Stop: 38593, Start Num: 55

Candidate Starts for SoilDragon\_64:

(Start: 44 @39075 has 23 MA's), (Start: 55 @39069 has 194 MA's), (Start: 98 @38994 has 3 MA's), (187, 38637), (200, 38604),

Gene: Solon\_57 Start: 39789, Stop: 39313, Start Num: 49

Candidate Starts for Solon\_57:

(Start: 49 @39789 has 181 MA's), (188, 39384), (213, 39345),

Gene: SororFago\_62 Start: 40593, Stop: 40114, Start Num: 60

Candidate Starts for SororFago\_62:

(Start: 41 @40626 has 1 MA's), (Start: 60 @40593 has 138 MA's), (149, 40320), (164, 40257), (188, 40164), (206, 40125),

Gene: Sorpresa\_57 Start: 40018, Stop: 39530, Start Num: 49

Candidate Starts for Sorpresa\_57:

(Start: 49 @40018 has 181 MA's), (Start: 109 @39904 has 3 MA's), (167, 39676), (188, 39598),

Gene: Soshari\_66 Start: 39645, Stop: 39169, Start Num: 55

Candidate Starts for Soshari\_66:

(Start: 44 @39651 has 23 MA's), (Start: 55 @39645 has 194 MA's), (Start: 98 @39570 has 3 MA's),  
(187, 39213), (200, 39180),

Gene: Soups\_70 Start: 40234, Stop: 39776, Start Num: 59

Candidate Starts for Soups\_70:

(47, 40252), (Start: 59 @40234 has 42 MA's), (Start: 106 @40144 has 12 MA's), (160, 39934), (190,  
39808), (200, 39790),

Gene: Sparxx\_59 Start: 38973, Stop: 38503, Start Num: 55

Candidate Starts for Sparxx\_59:

(Start: 55 @38973 has 194 MA's), (124, 38784),

Gene: Spike509\_64 Start: 39646, Stop: 39170, Start Num: 55

Candidate Starts for Spike509\_64:

(Start: 44 @39652 has 23 MA's), (Start: 55 @39646 has 194 MA's), (Start: 98 @39571 has 3 MA's),  
(187, 39214), (200, 39181),

Gene: SpikeBT\_58 Start: 40212, Stop: 39724, Start Num: 49

Candidate Starts for SpikeBT\_58:

(Start: 49 @40212 has 181 MA's), (Start: 109 @40098 has 3 MA's), (167, 39870), (188, 39792),

Gene: Spino\_57 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for Spino\_57:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: Spouty\_62 Start: 39760, Stop: 39296, Start Num: 60

Candidate Starts for Spouty\_62:

(Start: 60 @39760 has 138 MA's), (164, 39445),

Gene: Squee\_60 Start: 40635, Stop: 40159, Start Num: 49

Candidate Starts for Squee\_60:

(Start: 49 @40635 has 181 MA's), (167, 40308), (188, 40230), (213, 40191),

Gene: Squint\_125 Start: 68099, Stop: 68599, Start Num: 56

Candidate Starts for Squint\_125:

(36, 68063), (Start: 56 @68099 has 39 MA's), (Start: 120 @68285 has 1 MA's), (153, 68408), (171,  
68486), (174, 68501), (179, 68522), (185, 68540),

Gene: StCroix\_50 Start: 36821, Stop: 36381, Start Num: 85

Candidate Starts for StCroix\_50:

(Start: 85 @36821 has 32 MA's), (Start: 114 @36719 has 3 MA's), (160, 36542), (167, 36503), (168,  
36500), (171, 36491), (188, 36425),

Gene: Stagni\_64 Start: 39630, Stop: 39148, Start Num: 44

Candidate Starts for Stagni\_64:

(Start: 44 @39630 has 23 MA's), (Start: 55 @39624 has 194 MA's), (Start: 98 @39549 has 3 MA's),  
(187, 39192), (200, 39159),

Gene: Stank\_24 Start: 13327, Stop: 13842, Start Num: 28

Candidate Starts for Stank\_24:

(Start: 28 @13327 has 19 MA's), (Start: 53 @13372 has 4 MA's), (137, 13624), (154, 13720),

Gene: StarStuff\_63 Start: 39578, Stop: 39117, Start Num: 75

Candidate Starts for StarStuff\_63:

(Start: 50 @39614 has 3 MA's), (Start: 75 @39578 has 14 MA's), (Start: 98 @39536 has 3 MA's), (164, 39266), (175, 39221),

Gene: Stasia\_56 Start: 38728, Stop: 38258, Start Num: 55

Candidate Starts for Stasia\_56:

(45, 38734), (Start: 55 @38728 has 194 MA's), (103, 38638), (124, 38539), (182, 38314), (195, 38272),

Gene: Steamy\_58 Start: 39493, Stop: 39017, Start Num: 60

Candidate Starts for Steamy\_58:

(Start: 60 @39493 has 138 MA's), (155, 39214), (164, 39166), (188, 39073),

Gene: StepMih\_63 Start: 39615, Stop: 39139, Start Num: 55

Candidate Starts for StepMih\_63:

(Start: 44 @39621 has 23 MA's), (Start: 55 @39615 has 194 MA's), (Start: 98 @39540 has 3 MA's), (187, 39183), (200, 39150),

Gene: Stephig9\_63 Start: 39335, Stop: 38874, Start Num: 73

Candidate Starts for Stephig9\_63:

(64, 39341), (Start: 73 @39335 has 24 MA's), (Start: 109 @39233 has 3 MA's), (124, 39173), (188, 38921),

Gene: SteveFrench\_16 Start: 15937, Stop: 16392, Start Num: 89

Candidate Starts for SteveFrench\_16:

(Start: 28 @15832 has 19 MA's), (63, 15898), (Start: 89 @15937 has 10 MA's), (96, 15955), (112, 16036), (138, 16144), (140, 16162), (175, 16327), (186, 16369),

Gene: StewieG\_56 Start: 37309, Stop: 36833, Start Num: 49

Candidate Starts for StewieG\_56:

(Start: 49 @37309 has 181 MA's), (188, 36904), (213, 36865),

Gene: Stink\_55 Start: 38544, Stop: 38074, Start Num: 55

Candidate Starts for Stink\_55:

(26, 38583), (30, 38577), (Start: 55 @38544 has 194 MA's), (124, 38355), (195, 38088),

Gene: Stormageddon\_2 Start: 2195, Stop: 2695, Start Num: 66

Candidate Starts for Stormageddon\_2:

(Start: 66 @2195 has 21 MA's), (71, 2204), (Start: 84 @2222 has 1 MA's), (175, 2591),

Gene: StrongArm\_58 Start: 41327, Stop: 40839, Start Num: 49

Candidate Starts for StrongArm\_58:

(Start: 49 @41327 has 181 MA's), (Start: 109 @41213 has 3 MA's), (167, 40985), (188, 40907),

Gene: Strosahl\_70 Start: 39685, Stop: 39317, Start Num: 106

Candidate Starts for Strosahl\_70:

(47, 39793), (Start: 59 @39775 has 42 MA's), (Start: 106 @39685 has 12 MA's), (160, 39475), (190, 39349), (200, 39331),

Gene: Sumter\_55 Start: 40525, Stop: 40049, Start Num: 49

Candidate Starts for Sumter\_55:

(Start: 49 @40525 has 181 MA's), (188, 40120), (213, 40081),

Gene: Sunhee\_64 Start: 39155, Stop: 38679, Start Num: 60

Candidate Starts for Sunhee\_64:

(Start: 41 @39179 has 1 MA's), (Start: 60 @39155 has 138 MA's), (149, 38885), (164, 38822), (188, 38729), (197, 38705), (206, 38690),

Gene: Sunshine924\_61 Start: 39697, Stop: 39218, Start Num: 72

Candidate Starts for Sunshine924\_61:

(Start: 37 @39730 has 2 MA's), (Start: 72 @39697 has 7 MA's), (Start: 109 @39592 has 3 MA's), (167, 39364), (188, 39286),

Gene: SuperAwesome\_63 Start: 38585, Stop: 38085, Start Num: 65

Candidate Starts for SuperAwesome\_63:

(Start: 60 @38588 has 138 MA's), (Start: 65 @38585 has 18 MA's), (164, 38261),

Gene: SuperCallie99\_60 Start: 38467, Stop: 37967, Start Num: 65

Candidate Starts for SuperCallie99\_60:

(Start: 60 @38470 has 138 MA's), (Start: 65 @38467 has 18 MA's), (155, 38191), (164, 38143),

Gene: Superchunk\_61 Start: 38582, Stop: 38100, Start Num: 60

Candidate Starts for Superchunk\_61:

(Start: 60 @38582 has 138 MA's), (164, 38246), (182, 38177),

Gene: Superphikiman\_125 Start: 67553, Stop: 68035, Start Num: 56

Candidate Starts for Superphikiman\_125:

(Start: 56 @67553 has 39 MA's), (153, 67847), (160, 67877), (161, 67880), (167, 67916),

Gene: Swann\_51 Start: 36797, Stop: 36357, Start Num: 85

Candidate Starts for Swann\_51:

(Start: 85 @36797 has 32 MA's), (Start: 114 @36695 has 3 MA's), (160, 36518), (167, 36479), (168, 36476), (171, 36467), (188, 36401),

Gene: SweetiePie\_62 Start: 40119, Stop: 39640, Start Num: 59

Candidate Starts for SweetiePie\_62:

(Start: 41 @40137 has 1 MA's), (Start: 59 @40119 has 42 MA's), (Start: 60 @40113 has 138 MA's), (Start: 113 @39984 has 1 MA's), (164, 39783),

Gene: Swirley\_59 Start: 39758, Stop: 39294, Start Num: 69

Candidate Starts for Swirley\_59:

(Start: 61 @39773 has 6 MA's), (Start: 69 @39758 has 27 MA's), (Start: 109 @39650 has 3 MA's), (124, 39590), (168, 39413), (188, 39338), (202, 39308),

Gene: SwissCheese\_60 Start: 40105, Stop: 39629, Start Num: 49

Candidate Starts for SwissCheese\_60:

(Start: 49 @40105 has 181 MA's), (188, 39700), (213, 39661),

Gene: Switzer\_60 Start: 42152, Stop: 41685, Start Num: 49

Candidate Starts for Switzer\_60:

(Start: 49 @42152 has 181 MA's), (167, 41831), (188, 41753),

Gene: Switzerland\_69 Start: 40020, Stop: 39652, Start Num: 106

Candidate Starts for Switzerland\_69:

(47, 40128), (Start: 59 @40110 has 42 MA's), (Start: 106 @40020 has 12 MA's), (160, 39810), (190, 39684), (200, 39666),

Gene: Swole\_61 Start: 40742, Stop: 40233, Start Num: 49

Candidate Starts for Swole\_61:

(Start: 49 @40742 has 181 MA's), (Start: 109 @40628 has 3 MA's), (167, 40400), (188, 40322), (213, 40283),

Gene: SydNat\_60 Start: 40376, Stop: 39912, Start Num: 69

Candidate Starts for SydNat\_60:

(Start: 61 @40391 has 6 MA's), (Start: 69 @40376 has 27 MA's), (Start: 109 @40268 has 3 MA's), (124, 40208), (168, 40031), (177, 39998), (188, 39956), (202, 39926),

Gene: TNguyen7\_62 Start: 39345, Stop: 38887, Start Num: 59

Candidate Starts for TNguyen7\_62:

(5, 39507), (9, 39468), (Start: 59 @39345 has 42 MA's), (102, 39267), (103, 39264), (124, 39165), (188, 38916), (195, 38898),

Gene: TPA4\_77 Start: 51945, Stop: 52427, Start Num: 70

Candidate Starts for TPA4\_77:

(Start: 70 @51945 has 3 MA's), (Start: 92 @51981 has 1 MA's), (139, 52194),

Gene: TWAMP\_51 Start: 36799, Stop: 36359, Start Num: 85

Candidate Starts for TWAMP\_51:

(Start: 85 @36799 has 32 MA's), (Start: 114 @36697 has 3 MA's), (160, 36520), (167, 36481), (168, 36478), (171, 36469), (188, 36403),

Gene: Takoda\_51 Start: 36982, Stop: 36542, Start Num: 85

Candidate Starts for Takoda\_51:

(Start: 85 @36982 has 32 MA's), (Start: 98 @36952 has 3 MA's), (Start: 114 @36880 has 3 MA's), (160, 36703), (167, 36664), (168, 36661), (171, 36652), (188, 36586),

Gene: Taquarus\_58 Start: 38981, Stop: 38511, Start Num: 55

Candidate Starts for Taquarus\_58:

(Start: 55 @38981 has 194 MA's), (124, 38792),

Gene: Taquito\_75 Start: 48581, Stop: 49057, Start Num: 78

Candidate Starts for Taquito\_75:

(Start: 61 @48557 has 6 MA's), (Start: 78 @48581 has 16 MA's), (Start: 86 @48593 has 1 MA's), (100, 48629), (107, 48665), (Start: 109 @48683 has 3 MA's), (Start: 114 @48701 has 3 MA's), (161, 48914), (167, 48950), (168, 48953), (188, 49022), (203, 49046),

Gene: Target\_61 Start: 39917, Stop: 39420, Start Num: 49

Candidate Starts for Target\_61:

(Start: 49 @39917 has 181 MA's), (188, 39512), (213, 39473),

Gene: TarsusIV\_59 Start: 39575, Stop: 39102, Start Num: 60

Candidate Starts for TarsusIV\_59:

(43, 39596), (Start: 59 @39581 has 42 MA's), (Start: 60 @39575 has 138 MA's), (Start: 113 @39446 has 1 MA's), (164, 39245),

Gene: Tarynearal\_55 Start: 39197, Stop: 38739, Start Num: 73

Candidate Starts for Tarynearal\_55:

(Start: 73 @39197 has 24 MA's), (Start: 109 @39095 has 3 MA's), (124, 39035), (168, 38858), (188, 38783), (202, 38753),

Gene: Tasp14\_63 Start: 42472, Stop: 41978, Start Num: 49  
Candidate Starts for Tasp14\_63:  
(Start: 49 @42472 has 181 MA's), (188, 42067), (213, 42028),

Gene: Taurus\_65 Start: 39627, Stop: 39145, Start Num: 44  
Candidate Starts for Taurus\_65:  
(Start: 44 @39627 has 23 MA's), (Start: 55 @39621 has 194 MA's), (Start: 98 @39546 has 3 MA's),  
(187, 39189), (200, 39156),

Gene: Teaspoon\_22 Start: 12777, Stop: 13292, Start Num: 28  
Candidate Starts for Teaspoon\_22:  
(Start: 28 @12777 has 19 MA's), (Start: 53 @12822 has 4 MA's), (137, 13074), (154, 13170),

Gene: TelAviv\_9 Start: 3148, Stop: 2663, Start Num: 88  
Candidate Starts for TelAviv\_9:  
(Start: 88 @3148 has 28 MA's), (105, 3088), (153, 2875), (157, 2863), (191, 2704),

Gene: Temprado\_65 Start: 39067, Stop: 38564, Start Num: 60  
Candidate Starts for Temprado\_65:  
(Start: 60 @39067 has 138 MA's), (Start: 65 @39064 has 18 MA's), (164, 38740),

Gene: Teodoridan\_57 Start: 39474, Stop: 39133, Start Num: 119  
Candidate Starts for Teodoridan\_57:  
(Start: 49 @39600 has 181 MA's), (96, 39552), (Start: 114 @39492 has 3 MA's), (Start: 119 @39474  
has 1 MA's), (163, 39303), (167, 39282), (188, 39204), (213, 39165),

Gene: Terrific\_63 Start: 39954, Stop: 39475, Start Num: 59  
Candidate Starts for Terrific\_63:  
(Start: 59 @39954 has 42 MA's), (Start: 60 @39948 has 138 MA's), (Start: 113 @39819 has 1 MA's),  
(164, 39618),

Gene: Texage\_59 Start: 39339, Stop: 38881, Start Num: 59  
Candidate Starts for Texage\_59:  
(Start: 59 @39339 has 42 MA's), (102, 39261), (103, 39258), (124, 39159), (161, 39024), (187, 38916),  
(195, 38892),

Gene: Thanksgivukkah\_57 Start: 38976, Stop: 38506, Start Num: 55  
Candidate Starts for Thanksgivukkah\_57:  
(Start: 55 @38976 has 194 MA's), (124, 38787),

Gene: Theia\_57 Start: 40029, Stop: 39565, Start Num: 69  
Candidate Starts for Theia\_57:  
(Start: 61 @40044 has 6 MA's), (Start: 69 @40029 has 27 MA's), (Start: 109 @39921 has 3 MA's),  
(124, 39861), (132, 39825), (168, 39684), (188, 39609), (202, 39579),

Gene: TheloniousMonk\_60 Start: 42235, Stop: 41762, Start Num: 66  
Candidate Starts for TheloniousMonk\_60:  
(Start: 66 @42235 has 21 MA's), (188, 41833), (213, 41794),

Gene: Thibault\_112 Start: 65943, Stop: 66419, Start Num: 56  
Candidate Starts for Thibault\_112:  
(Start: 56 @65943 has 39 MA's), (160, 66261), (161, 66264), (167, 66300), (187, 66372), (194, 66393),



Gene: Thor\_56 Start: 38915, Stop: 38448, Start Num: 49  
Candidate Starts for Thor\_56:  
(Start: 49 @38915 has 181 MA's), (128, 38741), (167, 38594), (188, 38516),

Gene: ThreeRngTarjay\_126 Start: 71766, Stop: 72242, Start Num: 56  
Candidate Starts for ThreeRngTarjay\_126:  
(32, 71721), (Start: 56 @71766 has 39 MA's), (160, 72084), (161, 72087), (167, 72123), (187, 72195),  
(194, 72216),

Gene: Tiffany\_63 Start: 39513, Stop: 39031, Start Num: 44  
Candidate Starts for Tiffany\_63:  
(Start: 44 @39513 has 23 MA's), (Start: 55 @39507 has 194 MA's), (Start: 98 @39432 has 3 MA's),  
(187, 39075), (200, 39042),

Gene: Tiger\_58 Start: 39478, Stop: 39020, Start Num: 73  
Candidate Starts for Tiger\_58:  
(Start: 73 @39478 has 24 MA's), (Start: 109 @39376 has 3 MA's), (124, 39316), (132, 39280), (168,  
39139), (188, 39064), (202, 39034),

Gene: Timothy\_61 Start: 38887, Stop: 38390, Start Num: 52  
Candidate Starts for Timothy\_61:  
(Start: 52 @38887 has 16 MA's), (Start: 75 @38851 has 14 MA's), (Start: 98 @38809 has 3 MA's),  
(Start: 120 @38716 has 1 MA's), (153, 38593), (162, 38551), (164, 38539), (208, 38404),

Gene: Timshel\_57 Start: 41460, Stop: 41023, Start Num: 82  
Candidate Starts for Timshel\_57:  
(4, 41685), (6, 41646), (21, 41565), (Start: 46 @41511 has 4 MA's), (Start: 82 @41460 has 3 MA's),  
(Start: 109 @41373 has 3 MA's), (Start: 120 @41334 has 1 MA's), (167, 41142), (168, 41139), (171,  
41130), (194, 41049), (195, 41046),

Gene: TinaFeyge\_57 Start: 38973, Stop: 38503, Start Num: 55  
Candidate Starts for TinaFeyge\_57:  
(Start: 55 @38973 has 194 MA's), (124, 38784),

Gene: TinyPebbles\_62 Start: 39651, Stop: 39175, Start Num: 55  
Candidate Starts for TinyPebbles\_62:  
(Start: 44 @39657 has 23 MA's), (Start: 55 @39651 has 194 MA's), (187, 39219), (200, 39186),

Gene: TinyTimmy\_61 Start: 38936, Stop: 38439, Start Num: 52  
Candidate Starts for TinyTimmy\_61:  
(Start: 52 @38936 has 16 MA's), (Start: 75 @38900 has 14 MA's), (Start: 98 @38858 has 3 MA's),  
(Start: 109 @38804 has 3 MA's), (Start: 120 @38765 has 1 MA's), (153, 38642), (162, 38600), (164,  
38588), (208, 38453),

Gene: Tinybot\_57 Start: 39005, Stop: 38535, Start Num: 55  
Candidate Starts for Tinybot\_57:  
(Start: 55 @39005 has 194 MA's), (124, 38816),

Gene: TipsytheTRex\_59 Start: 39350, Stop: 38892, Start Num: 75  
Candidate Starts for TipsytheTRex\_59:  
(Start: 52 @39389 has 16 MA's), (Start: 75 @39350 has 14 MA's), (116, 39230), (162, 39050), (164,  
39038), (182, 38969),

Gene: TiroTheta9\_58 Start: 38972, Stop: 38502, Start Num: 55  
Candidate Starts for TiroTheta9\_58:  
(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: Toaka\_64 Start: 40139, Stop: 39675, Start Num: 60  
Candidate Starts for Toaka\_64:  
(Start: 60 @40139 has 138 MA's), (161, 39845), (164, 39824),

Gene: Todacoro\_60 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for Todacoro\_60:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (187, 38915),  
(195, 38891),

Gene: Tomathan\_63 Start: 39583, Stop: 39164, Start Num: 98  
Candidate Starts for Tomathan\_63:  
(Start: 50 @39661 has 3 MA's), (Start: 75 @39625 has 14 MA's), (Start: 98 @39583 has 3 MA's), (102,  
39571), (164, 39313), (175, 39268),

Gene: ToneTone\_61 Start: 38627, Stop: 38124, Start Num: 60  
Candidate Starts for ToneTone\_61:  
(Start: 60 @38627 has 138 MA's), (Start: 65 @38624 has 18 MA's), (164, 38300),

Gene: Toniann\_134 Start: 73864, Stop: 74307, Start Num: 89  
Candidate Starts for Toniann\_134:  
(Start: 70 @73837 has 3 MA's), (Start: 89 @73864 has 10 MA's), (Start: 91 @73867 has 3 MA's), (167,  
74185), (188, 74263),

Gene: Topanga\_56 Start: 38918, Stop: 38433, Start Num: 51  
Candidate Starts for Topanga\_56:  
(16, 38984), (Start: 51 @38918 has 18 MA's), (124, 38726), (187, 38483), (194, 38462), (195, 38459),  
(202, 38447),

Gene: Topgun\_58 Start: 39675, Stop: 39199, Start Num: 66  
Candidate Starts for Topgun\_58:  
(Start: 66 @39675 has 21 MA's), (188, 39270), (213, 39231),

Gene: Toro\_61 Start: 42286, Stop: 41837, Start Num: 86  
Candidate Starts for Toro\_61:  
(Start: 86 @42286 has 1 MA's), (90, 42280), (99, 42262), (124, 42151), (160, 41995), (163, 41980),  
(176, 41923), (177, 41920), (188, 41878), (190, 41869), (195, 41860),

Gene: Tote\_56 Start: 38009, Stop: 37500, Start Num: 49  
Candidate Starts for Tote\_56:  
(Start: 49 @38009 has 181 MA's), (Start: 109 @37895 has 3 MA's), (167, 37667), (188, 37589), (213,  
37550),

Gene: Traft412\_62 Start: 41416, Stop: 40925, Start Num: 49  
Candidate Starts for Traft412\_62:  
(Start: 49 @41416 has 181 MA's), (188, 41011), (213, 40972),

Gene: Travvers\_62 Start: 39611, Stop: 39114, Start Num: 50  
Candidate Starts for Travvers\_62:

(Start: 50 @39611 has 3 MA's), (Start: 75 @39575 has 14 MA's), (Start: 98 @39533 has 3 MA's), (102, 39521), (164, 39263), (175, 39218),

Gene: Treddle\_61 Start: 42195, Stop: 41701, Start Num: 66

Candidate Starts for Treddle\_61:

(Start: 66 @42195 has 21 MA's), (188, 41790), (213, 41751),

Gene: Trike\_56 Start: 38142, Stop: 37657, Start Num: 51

Candidate Starts for Trike\_56:

(Start: 51 @38142 has 18 MA's), (124, 37950), (192, 37689), (202, 37671),

Gene: Tripl3t\_62 Start: 43127, Stop: 42633, Start Num: 49

Candidate Starts for Tripl3t\_62:

(Start: 49 @43127 has 181 MA's), (188, 42722), (213, 42683),

Gene: Tristan\_58 Start: 40498, Stop: 40148, Start Num: 113

Candidate Starts for Tristan\_58:

(Start: 59 @40630 has 42 MA's), (Start: 60 @40624 has 138 MA's), (Start: 113 @40498 has 1 MA's), (164, 40297),

Gene: Trixie\_60 Start: 39882, Stop: 39415, Start Num: 60

Candidate Starts for Trixie\_60:

(Start: 60 @39882 has 138 MA's), (155, 39606), (161, 39579), (164, 39558),

Gene: Trooper\_63 Start: 40302, Stop: 39829, Start Num: 60

Candidate Starts for Trooper\_63:

(Start: 41 @40326 has 1 MA's), (43, 40323), (Start: 59 @40308 has 42 MA's), (Start: 60 @40302 has 138 MA's), (Start: 113 @40173 has 1 MA's), (164, 39972),

Gene: Trouble\_61 Start: 41329, Stop: 40853, Start Num: 49

Candidate Starts for Trouble\_61:

(Start: 49 @41329 has 181 MA's), (188, 40924), (213, 40885),

Gene: TroyPia\_59 Start: 38976, Stop: 38506, Start Num: 55

Candidate Starts for TroyPia\_59:

(Start: 55 @38976 has 194 MA's), (124, 38787),

Gene: Tubs\_63 Start: 39912, Stop: 39448, Start Num: 60

Candidate Starts for Tubs\_63:

(Start: 60 @39912 has 138 MA's), (155, 39645), (161, 39618), (164, 39597), (187, 39510),

Gene: Tucker\_64 Start: 38793, Stop: 38293, Start Num: 65

Candidate Starts for Tucker\_64:

(Start: 60 @38796 has 138 MA's), (Start: 65 @38793 has 18 MA's), (164, 38469),

Gene: Tuco\_22 Start: 13333, Stop: 13848, Start Num: 28

Candidate Starts for Tuco\_22:

(Start: 28 @13333 has 19 MA's), (Start: 53 @13378 has 4 MA's), (137, 13630), (154, 13726),

Gene: Turbido\_63 Start: 40194, Stop: 39715, Start Num: 59

Candidate Starts for Turbido\_63:

(Start: 41 @40212 has 1 MA's), (Start: 59 @40194 has 42 MA's), (Start: 60 @40188 has 138 MA's), (Start: 113 @40059 has 1 MA's), (164, 39858),

Gene: Turj99\_57 Start: 41394, Stop: 40915, Start Num: 72

Candidate Starts for Turj99\_57:

(Start: 37 @41427 has 2 MA's), (Start: 72 @41394 has 7 MA's), (Start: 109 @41289 has 3 MA's), (167, 41061), (188, 40983),

Gene: Twigg\_56 Start: 39406, Stop: 38942, Start Num: 69

Candidate Starts for Twigg\_56:

(Start: 61 @39421 has 6 MA's), (Start: 69 @39406 has 27 MA's), (Start: 109 @39298 has 3 MA's), (124, 39238), (168, 39061), (188, 38986), (202, 38956),

Gene: Twister\_57 Start: 38835, Stop: 38350, Start Num: 51

Candidate Starts for Twister\_57:

(16, 38901), (Start: 51 @38835 has 18 MA's), (124, 38643), (187, 38400), (194, 38379), (195, 38376), (202, 38364),

Gene: TwoPeat\_62 Start: 41579, Stop: 41085, Start Num: 49

Candidate Starts for TwoPeat\_62:

(Start: 49 @41579 has 181 MA's), (213, 41135),

Gene: TygerBlood\_58 Start: 38978, Stop: 38508, Start Num: 55

Candidate Starts for TygerBlood\_58:

(Start: 55 @38978 has 194 MA's), (124, 38789),

Gene: U2\_58 Start: 41121, Stop: 40633, Start Num: 49

Candidate Starts for U2\_58:

(Start: 49 @41121 has 181 MA's), (Start: 109 @41007 has 3 MA's), (167, 40779), (188, 40701), (215, 40638),

Gene: Ugenie5\_60 Start: 40322, Stop: 39858, Start Num: 60

Candidate Starts for Ugenie5\_60:

(Start: 60 @40322 has 138 MA's), (155, 40055), (161, 40028), (164, 40007), (187, 39920),

Gene: UhSalsa\_51 Start: 36741, Stop: 36301, Start Num: 85

Candidate Starts for UhSalsa\_51:

(Start: 85 @36741 has 32 MA's), (Start: 114 @36639 has 3 MA's), (160, 36462), (167, 36423), (168, 36420), (171, 36411), (188, 36345),

Gene: Ulysses\_57 Start: 38655, Stop: 38185, Start Num: 55

Candidate Starts for Ulysses\_57:

(Start: 55 @38655 has 194 MA's), (124, 38466),

Gene: UnionJack\_60 Start: 39620, Stop: 39156, Start Num: 69

Candidate Starts for UnionJack\_60:

(Start: 61 @39635 has 6 MA's), (Start: 69 @39620 has 27 MA's), (Start: 109 @39512 has 3 MA's), (124, 39452), (168, 39275), (188, 39200), (202, 39170),

Gene: Updawg\_63 Start: 39838, Stop: 39365, Start Num: 60

Candidate Starts for Updawg\_63:

(Start: 59 @39844 has 42 MA's), (Start: 60 @39838 has 138 MA's), (Start: 113 @39709 has 1 MA's), (164, 39508),

Gene: VA6\_63 Start: 40168, Stop: 39695, Start Num: 60

Candidate Starts for VA6\_63:  
(Start: 60 @40168 has 138 MA's), (164, 39838),

Gene: VC3\_64 Start: 40015, Stop: 39551, Start Num: 60  
Candidate Starts for VC3\_64:  
(Start: 60 @40015 has 138 MA's), (164, 39700), (175, 39655),

Gene: Vagabond\_10 Start: 3503, Stop: 3018, Start Num: 88  
Candidate Starts for Vagabond\_10:  
(Start: 88 @3503 has 28 MA's), (105, 3443), (153, 3230), (157, 3218),

Gene: Vanisoa\_63 Start: 41016, Stop: 40552, Start Num: 60  
Candidate Starts for Vanisoa\_63:  
(Start: 60 @41016 has 138 MA's), (155, 40749), (161, 40722), (164, 40701), (210, 40560),

Gene: Veracruz\_59 Start: 39338, Stop: 38880, Start Num: 59  
Candidate Starts for Veracruz\_59:  
(Start: 59 @39338 has 42 MA's), (102, 39260), (103, 39257), (124, 39158), (161, 39023), (187, 38915),  
(195, 38891),

Gene: Vine\_3 Start: 1265, Stop: 1630, Start Num: 89  
Candidate Starts for Vine\_3:  
(Start: 89 @1265 has 10 MA's), (121, 1373), (122, 1376), (156, 1499), (158, 1505), (161, 1532), (162,  
1541),

Gene: Violet\_58 Start: 42553, Stop: 42059, Start Num: 66  
Candidate Starts for Violet\_58:  
(Start: 66 @42553 has 21 MA's), (124, 42397), (188, 42148), (213, 42109),

Gene: Vix\_62 Start: 39704, Stop: 39228, Start Num: 55  
Candidate Starts for Vix\_62:  
(Start: 44 @39710 has 23 MA's), (Start: 55 @39704 has 194 MA's), (Start: 98 @39629 has 3 MA's),  
(187, 39272), (200, 39239),

Gene: VohminGhazi\_63 Start: 38584, Stop: 38081, Start Num: 60  
Candidate Starts for VohminGhazi\_63:  
(Start: 60 @38584 has 138 MA's), (Start: 65 @38581 has 18 MA's), (164, 38257),

Gene: Vorrrps\_10 Start: 3349, Stop: 2729, Start Num: 88  
Candidate Starts for Vorrrps\_10:  
(Start: 88 @3349 has 28 MA's), (153, 3076), (199, 2887), (211, 2863), (214, 2788),

Gene: Waits\_70 Start: 40007, Stop: 39549, Start Num: 59  
Candidate Starts for Waits\_70:  
(47, 40025), (Start: 59 @40007 has 42 MA's), (Start: 106 @39917 has 12 MA's), (160, 39707), (190,  
39581), (200, 39563),

Gene: WalterMcMickey\_57 Start: 38835, Stop: 38350, Start Num: 51  
Candidate Starts for WalterMcMickey\_57:  
(16, 38901), (Start: 51 @38835 has 18 MA's), (124, 38643), (187, 38400), (194, 38379), (195, 38376),  
(202, 38364),

Gene: Wanda\_129 Start: 68901, Stop: 69377, Start Num: 56

Candidate Starts for Wanda\_129:

(32, 68856), (Start: 56 @68901 has 39 MA's), (160, 69219), (161, 69222), (167, 69258), (187, 69330), (194, 69351),

Gene: Wander\_58 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for Wander\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Warrior24\_72 Start: 40402, Stop: 39983, Start Num: 93

Candidate Starts for Warrior24\_72:

(Start: 55 @40465 has 194 MA's), (Start: 93 @40402 has 1 MA's), (Start: 106 @40360 has 12 MA's), (Start: 113 @40318 has 1 MA's), (155, 40165), (160, 40141), (190, 40015), (200, 39997),

Gene: Watermelon\_60 Start: 40292, Stop: 39816, Start Num: 49

Candidate Starts for Watermelon\_60:

(Start: 49 @40292 has 181 MA's), (188, 39887), (213, 39848),

Gene: Watson\_63 Start: 39613, Stop: 39137, Start Num: 55

Candidate Starts for Watson\_63:

(Start: 44 @39619 has 23 MA's), (Start: 55 @39613 has 194 MA's), (Start: 98 @39538 has 3 MA's), (187, 39181), (200, 39148),

Gene: Westy\_203 Start: 103797, Stop: 103372, Start Num: 42

Candidate Starts for Westy\_203:

(42, 103797), (Start: 46 @103791 has 4 MA's), (108, 103674), (130, 103596), (147, 103542), (162, 103470),

Gene: Whabigail7\_63 Start: 40173, Stop: 39700, Start Num: 60

Candidate Starts for Whabigail7\_63:

(Start: 60 @40173 has 138 MA's), (Start: 113 @40044 has 1 MA's), (164, 39843),

Gene: Wheeler\_59 Start: 40097, Stop: 39621, Start Num: 49

Candidate Starts for Wheeler\_59:

(Start: 49 @40097 has 181 MA's), (188, 39692), (213, 39653),

Gene: WhereRU\_178 Start: 95501, Stop: 95932, Start Num: 46

Candidate Starts for WhereRU\_178:

(Start: 46 @95501 has 4 MA's), (95, 95579), (127, 95705), (135, 95723), (161, 95834), (169, 95876),

Gene: WideWale\_63 Start: 39838, Stop: 39365, Start Num: 60

Candidate Starts for WideWale\_63:

(Start: 59 @39844 has 42 MA's), (Start: 60 @39838 has 138 MA's), (Start: 113 @39709 has 1 MA's), (164, 39508),

Gene: Wiks\_63 Start: 38695, Stop: 38195, Start Num: 65

Candidate Starts for Wiks\_63:

(Start: 60 @38698 has 138 MA's), (Start: 65 @38695 has 18 MA's), (164, 38371),

Gene: Wilbur\_58 Start: 38975, Stop: 38505, Start Num: 55

Candidate Starts for Wilbur\_58:

(Start: 55 @38975 has 194 MA's), (124, 38786),

Gene: Wildflower\_10 Start: 3463, Stop: 2978, Start Num: 88

Candidate Starts for Wildflower\_10:

(Start: 88 @3463 has 28 MA's), (105, 3403), (153, 3190), (157, 3178),

Gene: Wile\_56 Start: 38834, Stop: 38364, Start Num: 55

Candidate Starts for Wile\_56:

(45, 38840), (Start: 55 @38834 has 194 MA's), (124, 38645), (195, 38378),

Gene: Wilkins\_58 Start: 39605, Stop: 39129, Start Num: 66

Candidate Starts for Wilkins\_58:

(Start: 66 @39605 has 21 MA's), (188, 39200), (213, 39161),

Gene: WilliamBoone\_132 Start: 71530, Stop: 71970, Start Num: 91

Candidate Starts for WilliamBoone\_132:

(Start: 88 @71527 has 28 MA's), (Start: 91 @71530 has 3 MA's), (Start: 98 @71554 has 3 MA's), (188, 71926),

Gene: Winget\_10 Start: 3502, Stop: 3017, Start Num: 88

Candidate Starts for Winget\_10:

(Start: 88 @3502 has 28 MA's), (105, 3442), (153, 3229), (157, 3217),

Gene: Wintermute\_76 Start: 48607, Stop: 49083, Start Num: 78

Candidate Starts for Wintermute\_76:

(Start: 61 @48583 has 6 MA's), (Start: 78 @48607 has 16 MA's), (Start: 86 @48619 has 1 MA's), (100, 48655), (107, 48691), (Start: 109 @48709 has 3 MA's), (Start: 114 @48727 has 3 MA's), (161, 48940), (167, 48976), (168, 48979), (188, 49048), (203, 49072),

Gene: Wizard007\_58 Start: 38983, Stop: 38513, Start Num: 55

Candidate Starts for Wizard007\_58:

(Start: 55 @38983 has 194 MA's), (124, 38794),

Gene: Wogge42\_10 Start: 3487, Stop: 2867, Start Num: 88

Candidate Starts for Wogge42\_10:

(Start: 88 @3487 has 28 MA's), (153, 3214), (199, 3025), (211, 3001), (214, 2926),

Gene: Wooldri\_66 Start: 39533, Stop: 39057, Start Num: 55

Candidate Starts for Wooldri\_66:

(Start: 44 @39539 has 23 MA's), (Start: 55 @39533 has 194 MA's), (Start: 98 @39458 has 3 MA's), (187, 39101), (200, 39068),

Gene: WunderPhul\_64 Start: 38693, Stop: 38193, Start Num: 65

Candidate Starts for WunderPhul\_64:

(Start: 60 @38696 has 138 MA's), (Start: 65 @38693 has 18 MA's), (164, 38369),

Gene: Xena\_55 Start: 38800, Stop: 38330, Start Num: 55

Candidate Starts for Xena\_55:

(45, 38806), (Start: 55 @38800 has 194 MA's), (124, 38611), (195, 38344),

Gene: XianYue\_60 Start: 39341, Stop: 38868, Start Num: 60

Candidate Starts for XianYue\_60:

(43, 39362), (Start: 59 @39347 has 42 MA's), (Start: 60 @39341 has 138 MA's), (164, 39011), (187, 38924),

Gene: Y10\_73 Start: 48583, Stop: 49059, Start Num: 78

Candidate Starts for Y10\_73:

(Start: 61 @48559 has 6 MA's), (Start: 78 @48583 has 16 MA's), (Start: 86 @48595 has 1 MA's), (100, 48631), (107, 48667), (Start: 109 @48685 has 3 MA's), (Start: 114 @48703 has 3 MA's), (150, 48847), (151, 48853), (161, 48916), (167, 48952), (168, 48955), (188, 49024), (203, 49048),

Gene: Y2\_73 Start: 48583, Stop: 49059, Start Num: 78

Candidate Starts for Y2\_73:

(Start: 61 @48559 has 6 MA's), (Start: 78 @48583 has 16 MA's), (Start: 86 @48595 has 1 MA's), (100, 48631), (107, 48667), (Start: 109 @48685 has 3 MA's), (Start: 114 @48703 has 3 MA's), (150, 48847), (151, 48853), (161, 48916), (167, 48952), (168, 48955), (188, 49024), (203, 49048),

Gene: Yang\_45 Start: 32671, Stop: 33198, Start Num: 17

Candidate Starts for Yang\_45:

(Start: 17 @32671 has 1 MA's), (123, 32941), (134, 32983), (163, 33112), (178, 33175),

Gene: YassJohnny\_22 Start: 13333, Stop: 13848, Start Num: 28

Candidate Starts for YassJohnny\_22:

(Start: 28 @13333 has 19 MA's), (Start: 53 @13378 has 4 MA's), (137, 13630), (154, 13726),

Gene: Yecey3\_64 Start: 39908, Stop: 39444, Start Num: 60

Candidate Starts for Yecey3\_64:

(Start: 60 @39908 has 138 MA's), (161, 39614), (164, 39593),

Gene: Yeet\_122 Start: 70488, Stop: 70964, Start Num: 56

Candidate Starts for Yeet\_122:

(Start: 56 @70488 has 39 MA's), (160, 70806), (161, 70809), (167, 70845), (187, 70917), (194, 70938),

Gene: YoSam321\_58 Start: 38972, Stop: 38502, Start Num: 55

Candidate Starts for YoSam321\_58:

(Start: 55 @38972 has 194 MA's), (124, 38783),

Gene: Yogi\_51 Start: 37150, Stop: 36578, Start Num: 85

Candidate Starts for Yogi\_51:

(Start: 85 @37150 has 32 MA's), (Start: 114 @37048 has 3 MA's), (160, 36871), (162, 36859), (173, 36808), (188, 36754), (198, 36730), (207, 36715), (216, 36622),

Gene: Yokurt\_63 Start: 38698, Stop: 38195, Start Num: 60

Candidate Starts for Yokurt\_63:

(Start: 60 @38698 has 138 MA's), (Start: 65 @38695 has 18 MA's), (164, 38371),

Gene: Yoncess\_50 Start: 36451, Stop: 36113, Start Num: 114

Candidate Starts for Yoncess\_50:

(Start: 85 @36553 has 32 MA's), (Start: 114 @36451 has 3 MA's), (160, 36274), (167, 36235), (168, 36232), (171, 36223), (188, 36157),

Gene: YungJamal\_11 Start: 3791, Stop: 3306, Start Num: 88

Candidate Starts for YungJamal\_11:

(Start: 88 @3791 has 28 MA's), (105, 3731), (153, 3518), (157, 3506),

Gene: Yvonnetastic\_141 Start: 77774, Stop: 78214, Start Num: 89

Candidate Starts for Yvonnetastic\_141:

(Start: 89 @77774 has 10 MA's), (125, 77921), (155, 78023), (167, 78095), (168, 78098), (188, 78173), (190, 78182), (204, 78209),



Gene: Zaka\_64 Start: 38695, Stop: 38195, Start Num: 65

Candidate Starts for Zaka\_64:

(Start: 60 @38698 has 138 MA's), (Start: 65 @38695 has 18 MA's), (164, 38371),

Gene: Zakhe101\_11 Start: 3815, Stop: 3330, Start Num: 88

Candidate Starts for Zakhe101\_11:

(Start: 88 @3815 has 28 MA's), (105, 3755), (153, 3542), (157, 3530),

Gene: Zebo\_9 Start: 3151, Stop: 2666, Start Num: 88

Candidate Starts for Zebo\_9:

(Start: 88 @3151 has 28 MA's), (105, 3091), (153, 2878), (157, 2866), (191, 2707),

Gene: Zeeculate\_57 Start: 41042, Stop: 40566, Start Num: 49

Candidate Starts for Zeeculate\_57:

(Start: 49 @41042 has 181 MA's), (188, 40637), (213, 40598),

Gene: Zelink\_125 Start: 71713, Stop: 72189, Start Num: 56

Candidate Starts for Zelink\_125:

(32, 71668), (Start: 56 @71713 has 39 MA's), (160, 72031), (161, 72034), (167, 72070), (187, 72142), (194, 72163),

Gene: Zephyr\_61 Start: 40459, Stop: 39965, Start Num: 49

Candidate Starts for Zephyr\_61:

(Start: 49 @40459 has 181 MA's), (188, 40054), (213, 40015),

Gene: Zetzy\_63 Start: 39184, Stop: 38708, Start Num: 55

Candidate Starts for Zetzy\_63:

(Start: 44 @39190 has 23 MA's), (Start: 55 @39184 has 194 MA's), (Start: 98 @39109 has 3 MA's), (187, 38752), (200, 38719),

Gene: Zeuska\_59 Start: 41773, Stop: 41279, Start Num: 49

Candidate Starts for Zeuska\_59:

(Start: 49 @41773 has 181 MA's), (188, 41368), (213, 41329),

Gene: Zimmer\_59 Start: 40719, Stop: 40255, Start Num: 60

Candidate Starts for Zimmer\_59:

(48, 40734), (Start: 60 @40719 has 138 MA's), (161, 40425), (164, 40404), (188, 40311),

Gene: Zolita\_59 Start: 40380, Stop: 39916, Start Num: 69

Candidate Starts for Zolita\_59:

(Start: 61 @40395 has 6 MA's), (Start: 69 @40380 has 27 MA's), (Start: 109 @40272 has 3 MA's), (124, 40212), (168, 40035), (177, 40002), (188, 39960), (202, 39930),

Gene: Zulu\_65 Start: 39073, Stop: 38573, Start Num: 65

Candidate Starts for Zulu\_65:

(Start: 60 @39076 has 138 MA's), (Start: 65 @39073 has 18 MA's), (164, 38749),

Gene: xkcd\_22 Start: 12993, Stop: 13508, Start Num: 28

Candidate Starts for xkcd\_22:

(Start: 28 @12993 has 19 MA's), (Start: 53 @13038 has 4 MA's), (137, 13290), (154, 13386),