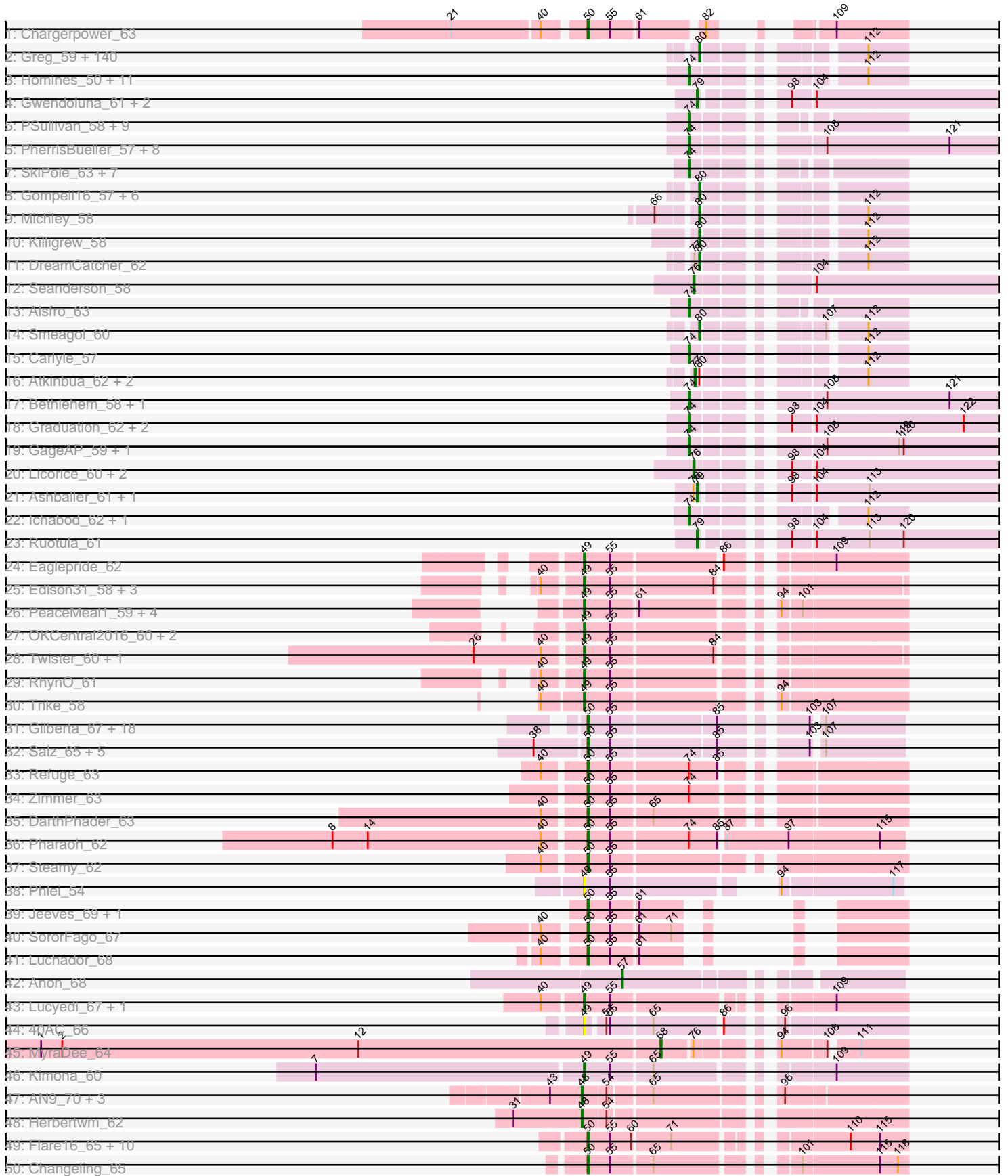
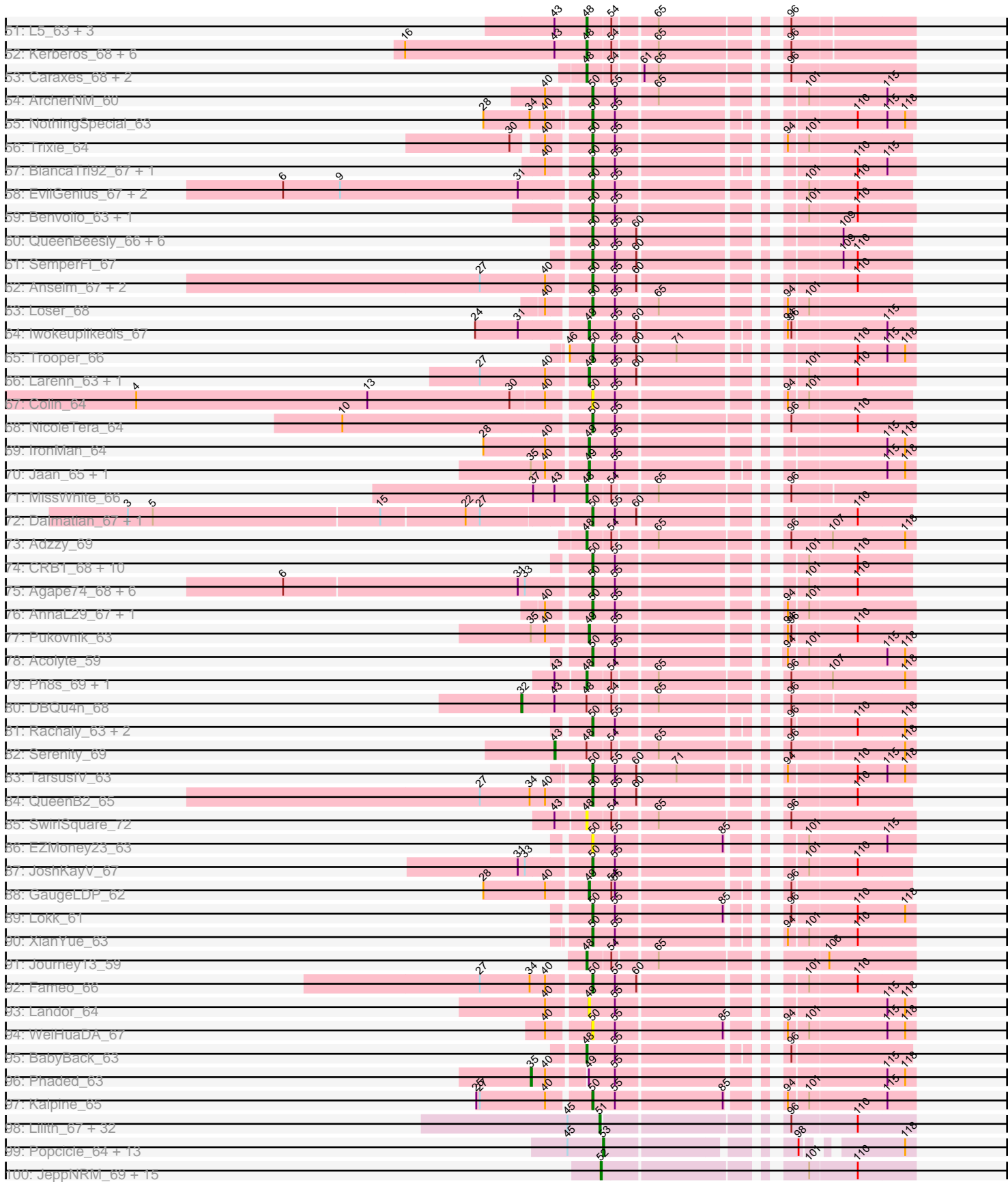


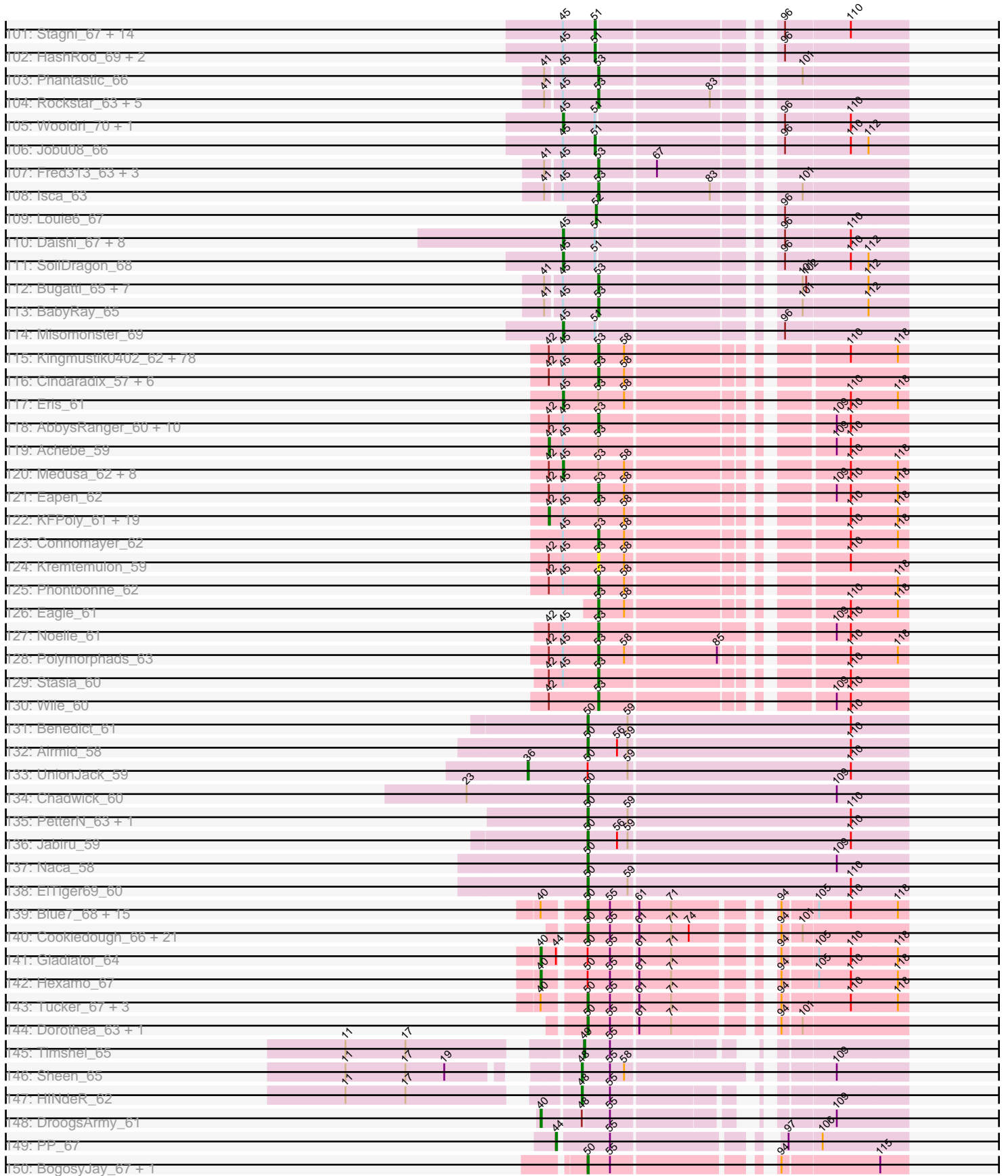
Pham 169558



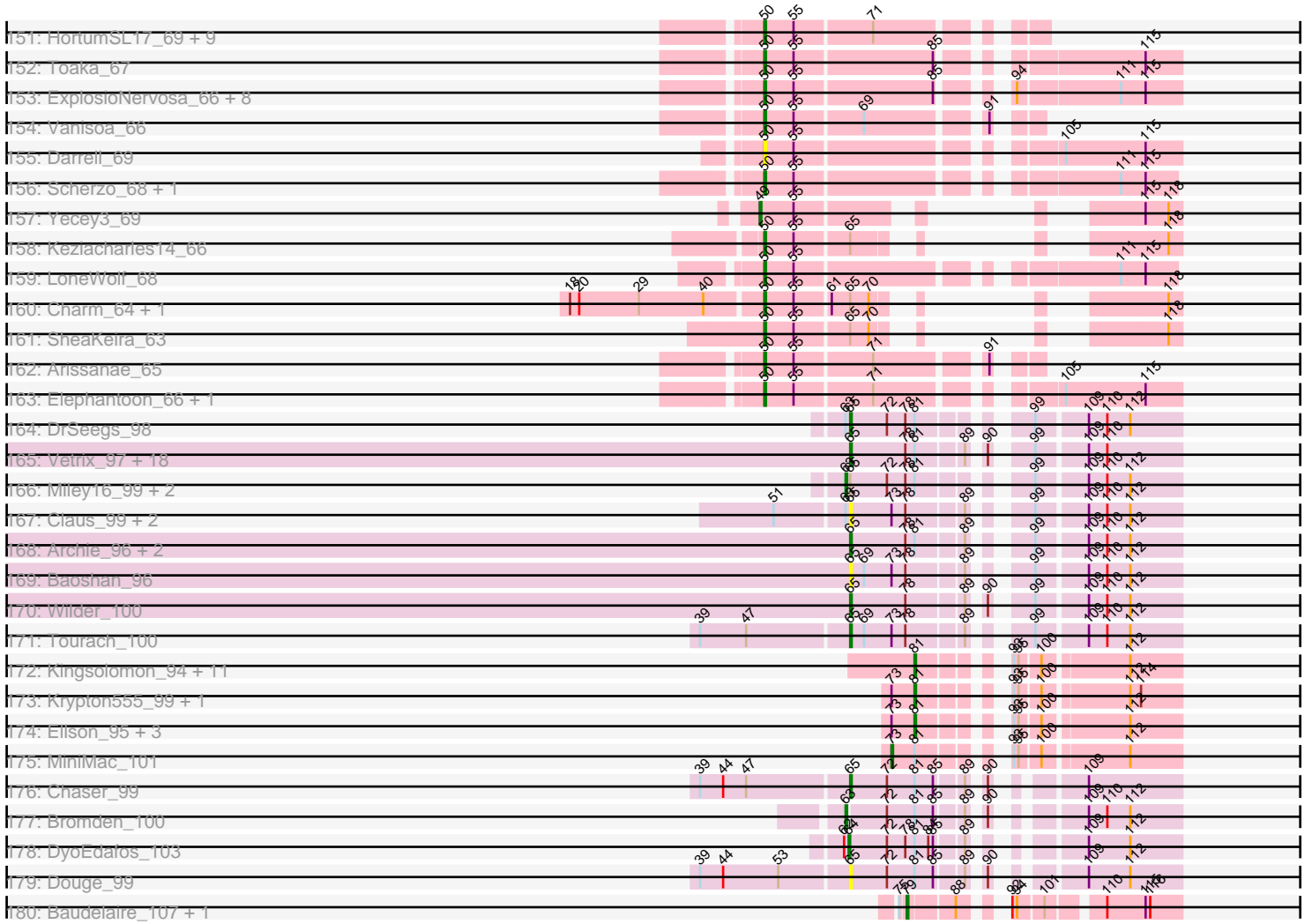
Pham 169558



Pham 169558



Pham 169558



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 169558 Report

This analysis was run 07/09/24 on database version 566.

Pham number 169558 has 790 members, 52 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_63
- Track 2 : Greg\_59, Jerm2\_59, Espresso\_57, MrGordo\_58, Monet\_61, Peterson\_62, Buttons\_56, Sagefire\_60, Kenmech\_63, Jorgensen\_59, Wheeler\_58, Solon\_56, Violet\_56, CactusRose\_56, Marcell\_55, Oogway\_57, Dexes\_58, Tripl3t\_60, Marge\_57, Hami1\_50, PinkPlastic\_58, Sumter\_54, Snazzy\_57, Magnito\_57, Briton15\_62, Francis47\_57, A6\_52, ConceptII\_61, Bruns\_57, Wilkins\_57, Tasp14\_61, Naira\_61, Seabiscuit\_62, Gandalf20\_61, Marsha\_57, Agaliana\_53, Topgun\_57, Arcanine\_60, Dussy\_60, StewieG\_55, Kugel\_58, Gyzlar\_54, Smairt\_61, Abbyshoes\_61, JackSparrow\_61, BigPaolini\_57, Blue\_57, HarryOW\_57, Lesedi\_54, Papez\_61, Zephyr\_59, Chanagan\_54, TheloniousMonk\_59, Burton\_58, Payneful\_56, PacerPaul\_58, HanShotFirst\_59, Pippin\_59, MPlant7149\_57, Ajay\_59, Abrogate\_570, Target\_59, Crispicous1\_55, DrFeelGood\_56, Bxb1\_53, Edtherson\_57, Adahisdi\_58, Zeuska\_57, HermioneGrange\_59, Aeneas\_61, ILeeKay\_61, Marchy\_51, ShortQueendom\_51, PattyP\_60, Kykar\_58, Niza\_60, Fushigi\_55, NEHalo\_56, Hermia\_58, Magnar\_56, Watermelon\_59, Hope4ever\_60, GrecoEtereo\_58, Perseus\_58, RidgeCB\_58, Rutherford\_59, Sanya\_54, Museum\_59, Sibs6\_60, Rufus\_59, BPBiebs31\_60, Slagathor\_60, McGuire\_60, IgnatiusPatJac\_58, Arlo\_56, Bob3\_57, Petruchio\_57, Applejack\_53, Treddle\_59, Mule\_56, Ringer\_58, Rajelicia\_59, BaconJack\_63, Ciao\_57, Maroc7\_56, PhrostyMug\_58, Nhonho\_57, AFIS\_55, Paphu\_57, BeesKnees\_61, Forsytheast\_57, Swole\_58, KBG\_59, Nerujay\_60, JuliaChild\_59, Fajezeel\_59, Fascinus\_54, BigMau\_60, Fenn\_61, Zeeculate\_56, Kanely\_60, Big3\_57, BK1\_52, Rohr\_59, Eyeball\_59, Trouble\_60, Altman\_61, Squee\_59, Lopton\_58, Molly\_59, SwissCheese\_59, Moose\_57, Petp2012\_59, Tote\_54, BluSpix\_56, Bigfoot\_52, PascalRango\_58, Rhynn\_56, TwoPeat\_60, Acme\_59, Lamina13\_60
- Track 3 : Homines\_50, SarFire\_55, Makemake\_59, Sorpresa\_54, Sandaddy\_55, LilBib\_58, DD5\_57, Lockley\_56, KyMonks1A\_61, KSSJEB\_58, Turj99\_56, Thor\_55
- Track 4 : Gwendoluna\_61, Pelly\_58, Dulcie\_58
- Track 5 : PSullivan\_58, Manatee\_59, Pita2\_61, Scowl\_59, Anglerfish\_59, Euphoria\_56, Froghopper\_55, Sunshine924\_60, Paraselene\_56, QTRlifeCrisis\_58
- Track 6 : PherrisBueller\_57, Norz\_59, Beatrix\_58, Dreamboat\_59, Bexan\_56, StrongArm\_57, Jasper\_59, Ohno789\_59, Doom\_56
- Track 7 : SkiPole\_63, Dynamix\_60, MaryBeth\_57, MetalQZJ\_56, Corvo\_59, Switzer\_59, STLscum\_61, Pepe\_55
- Track 8 : Gompeii16\_57, Barriga\_59, Bircsak\_57, Alvin\_57, Mryolo\_55, Teodoridan\_56, Parliament\_58
- Track 9 : Michley\_58

- Track 10 : Killigrew\_58
- Track 11 : DreamCatcher\_62
- Track 12 : Seanderson\_58
- Track 13 : Alsfro\_63
- Track 14 : Smeagol\_60
- Track 15 : Carlyle\_57
- Track 16 : Atkinbua\_62, Rubeus\_58, Pinto\_59
- Track 17 : Bethlehem\_58, Pari\_61
- Track 18 : Graduation\_62, Bones\_58, Cueylyss\_59
- Track 19 : GageAP\_59, SpikeBT\_57
- Track 20 : Licorice\_60, BillKnuckles\_56, Traft412\_61
- Track 21 : Ashballer\_61, JC27\_61
- Track 22 : Ichabod\_62, U2\_57
- Track 23 : Ruotula\_61
- Track 24 : Eaglepride\_62
- Track 25 : Edison31\_58, Kristoff\_61, Rebeuca\_62, Topanga\_58
- Track 26 : PeaceMeal1\_59, Severus\_59, Drake94\_59, KittenMittens\_58, Poompha\_59
- Track 27 : OKCentral2016\_60, Chupacabra\_60, Goose\_62
- Track 28 : Twister\_60, WalterMcMickey\_60
- Track 29 : RhynO\_61
- Track 30 : Trike\_58
- Track 31 : Gilberta\_67, Timothy\_66, Bud\_65, Aneem\_67, Ebony\_66, Flaverint\_67, Hutc2\_65, Orange\_65, Mabel\_66, Sham4\_66, Insomnia\_67, Lucivia\_67, Snape\_66, Munch\_66, Bowtie\_67, Et2Brutus\_65, Fibonacci\_66, Mulciber\_65, Petersenfast\_64
- Track 32 : Salz\_65, Bachome\_68, Jabith\_67, TinyTimmy\_64, Joselito\_67, MaCh\_66
- Track 33 : Refuge\_63
- Track 34 : Zimmer\_63
- Track 35 : DARTHPhader\_63
- Track 36 : Pharaoh\_62
- Track 37 : Steamy\_62
- Track 38 : Phlei\_54
- Track 39 : Jeeves\_69, Gail\_67
- Track 40 : SororFago\_67
- Track 41 : Luchador\_68
- Track 42 : Anon\_68
- Track 43 : Lucyedi\_67, EagleEye\_68
- Track 44 : 40AC\_66
- Track 45 : MyraDee\_64
- Track 46 : Kimona\_60
- Track 47 : AN9\_70, VC3\_69, ANI8\_70, C3\_63
- Track 48 : Herbertwm\_62
- Track 49 : Flare16\_65, HarryHoudini\_66, Equemioh13\_65, Baehexic\_64, Drake55\_67, Centaur\_66, Piro94\_65, Updawg\_66, MiculUcigas\_65, WideWale\_66, NaSiaTalie\_65
- Track 50 : Changeling\_65
- Track 51 : L5\_63, TopsytheTRex\_65, Koduck\_67, Jsquared\_69
- Track 52 : Kerberos\_68, Tomathan\_68, D32\_67, StarStuff\_68, Duplo\_68, Pomar16\_67, Naji\_68
- Track 53 : Caraxes\_68, Superchunk\_67, Odin\_66
- Track 54 : ArcherNM\_60
- Track 55 : NothingSpecial\_63
- Track 56 : Trixie\_64

- Track 57 : BiancaTri92\_67, Leogania\_67
- Track 58 : EvilGenius\_67, KingCyrus\_67, ChipMunk\_68
- Track 59 : Benvolio\_63, Echid\_66
- Track 60 : QueenBeesly\_66, Georgie2\_67, SnapTap\_66, Crucio\_66, SweetiePie\_66, Power\_65, FiringLine\_66
- Track 61 : SemperFi\_67
- Track 62 : Anselm\_67, Retro23\_67, Heffalump\_65
- Track 63 : Loser\_68
- Track 64 : Iwokeuplikedis\_67
- Track 65 : Trooper\_66
- Track 66 : Larenn\_63, Malec\_64
- Track 67 : Colin\_64
- Track 68 : NicoleTera\_64
- Track 69 : IronMan\_64
- Track 70 : Jaan\_65, Bactobuster\_62
- Track 71 : MissWhite\_66
- Track 72 : Dalmatian\_67, DudeLittle\_65
- Track 73 : Adzzy\_69
- Track 74 : CRB1\_68, LadyBird\_70, AN3\_68, Buggy\_68, Leviathan\_68, VA6\_66, 20ES\_68, Deloris\_66, First\_0067, BengiVuitton\_66, Dignity\_68
- Track 75 : Agape74\_68, AbbyPaige\_68, Jerm\_68, Whabigail7\_67, Smeagan\_69, Turbido\_67, LilTurb\_67
- Track 76 : AnnaL29\_67, RedRock\_67
- Track 77 : Pukovnik\_63
- Track 78 : Acolyte\_59
- Track 79 : Ph8s\_69, Che12\_69
- Track 80 : DBQu4n\_68
- Track 81 : Rachaly\_63, Miko\_61, BobSwaget\_60
- Track 82 : Serenity\_69
- Track 83 : TarsusIV\_63
- Track 84 : QueenB2\_65
- Track 85 : SwirlSquare\_72
- Track 86 : EZMoney23\_63
- Track 87 : JoshKayV\_67
- Track 88 : GaugeLDP\_62
- Track 89 : Lokk\_61
- Track 90 : XianYue\_63
- Track 91 : Journey13\_59
- Track 92 : Fameo\_66
- Track 93 : Landor\_64
- Track 94 : WeiHuaDA\_67
- Track 95 : BabyBack\_63
- Track 96 : Phaded\_63
- Track 97 : Kalpine\_65
- Track 98 : Lilith\_67, Vix\_66, P28Green\_69, MoneyMay\_67, Malinsilva\_70, Phoxy\_68, LBerry\_69, Spike509\_68, Snickers\_66, Mainiac\_68, Grub\_68, Cullens\_68, Beauxregard13\_67, Sabia\_68, Penny1\_68, GtownJaz\_68, Watson\_67, Dieselweasel\_69, EpicPhail\_69, Marie\_66, MarQuardt\_68, JHC117\_66, Tiffany\_67, JenCasNa\_69, Grif\_68, Microwolf\_66, Taurus\_69, Sabinator\_66, Fernando\_68, LarryKay\_68, PotatoSplit\_69, Grum1\_67, LugYA\_71
- Track 99 : Popcicle\_64, QuinnKiro\_63, Veracruz\_62, Caviar\_64, Panamaxus\_62, Lambert1\_64, Margo\_64, Todacoro\_64, Hookmount\_64, Noella\_64, Pocahontas\_64, Texage\_62, Norbert\_61, ResDef\_63

- Track 100 : JeppNRM\_69, Pawn\_68, Heliosoles\_67, Manu\_68, ACFishhook\_66, Gemma\_67, Kalnoky\_69, HaveUMetTed\_69, OlanP\_67, Groupthink\_69, Reba\_68, Marius\_69, PhishRPhriends\_66, Kalb97\_69, PurpleHaze\_68, Phranny\_69
- Track 101 : Stagni\_67, GingkoMaracino\_68, Ollie\_68, Methuselah\_63, AgronaGT15\_67, Rummer\_67, MuchMore\_71, Bxz2\_63, Aglet\_69, Soshari\_70, MadMarie\_68, Zetzy\_67, StepMih\_67, AugsMagnumOpus\_71, Farber\_68
- Track 102 : HashRod\_69, KADY\_67, BuzzBuzz\_64
- Track 103 : Phantastic\_66
- Track 104 : Rockstar\_63, MK4\_65, MA5\_65, B1\_57, JF4\_63, JF2\_63
- Track 105 : Wooldri\_70, Anubis\_71
- Track 106 : Jobu08\_66
- Track 107 : Fred313\_63, Heathen\_65, HelDan\_64, Scout\_64
- Track 108 : Isca\_63
- Track 109 : Louie6\_67
- Track 110 : Daishi\_67, PGHhamlin\_70, BreSam8\_68, Pembroke\_68, DaHudson\_67, Phoebe\_69, Hercules11\_68, Colbster\_66, SoYo\_67
- Track 111 : SoilDragon\_68
- Track 112 : Bugatti\_65, Idleandcovert\_65, SaturnRing\_65, Pistachio\_65, Puppy\_65, TNguyen7\_66, BlueBird\_67, Giroux\_64
- Track 113 : BabyRay\_65
- Track 114 : Misomonster\_69
- Track 115 : Kingmustik0402\_62, LochMonster\_63, BellusTerra\_63, SheldonCooper\_62, Burger\_60, Eros\_62, Romney\_61, MeeZee\_61, Obama12\_63, Peaches\_60, Deano\_60, Alberto7\_63, Kyee\_62, ChampagnePapi\_64, LHTSCC\_64, Scamp\_62, ICleared\_61, LittleB\_62, Druantia\_61, Ulysses\_61, Chaph\_62, TygerBlood\_62, Citius\_62, Arturo\_60, Caelakin\_61, Lunsford\_63, Spino\_61, Kamy\_61, Cerulean\_63, OKaNui\_62, Pipcraft\_59, PeterPeter\_62, Mazhar510\_62, Happiness\_61, TroyPia\_63, Taquarus\_61, Commander\_61, Bartimeaus\_62, Lorenzo\_62, Wizard007\_61, YoSam321\_62, Eurydice\_63, Holli\_61, Relief\_61, Albee\_62, Maxo\_63, Wilbur\_62, Skipitt\_61, LeoAvram\_61, Blackmoor\_61, TiroTheta9\_61, NorthStar\_60, Nebs\_63, Melvin\_64, Sparxx\_63, Ohfah\_63, BangNhom\_61, Phelipe\_63, Broseidon\_62, Koreni\_61, Gadost\_62, NotAPhaseMom\_61, CentreCat\_62, Annyong\_61, Jaykayelowell\_59, Baby16\_62, Tinybot\_61, Morrow\_63, DirtyDunning\_61, Houdini22\_61, Iceman\_62, Pumbaa\_62, Roosevelt\_60, JetBlade\_62, LappelDuVide\_59, Ruin\_62, Florean\_62, Nemo27\_61, Dhanush\_62
- Track 116 : Cindaradix\_57, Stink\_59, Mundrea\_60, AvatarAhPeg\_59, Cintron\_62, Miramae\_59, Shygu2\_60
- Track 117 : Eris\_61
- Track 118 : AbbysRanger\_60, Katalie136\_60, Badger\_59, PetiteSangsue\_60, Bumblebee11\_59, Xena\_59, Morpher26\_60, Cici\_60, Datway\_60, Backyardigan\_58, Perplexer\_60
- Track 119 : Achebe\_59
- Track 120 : Medusa\_62, LittleGuy\_62, Sabertooth\_62, Flux\_62, Maverick\_61, Shaka\_60, Cocoaberry\_62, Avle17\_62, Nyxis\_61
- Track 121 : Eapen\_62
- Track 122 : KFPoly\_61, Palestino\_61, Camperdownii\_60, Phighter1804\_62, Kratark\_61, Funston\_61, HamSlice\_59, JoongJeon\_61, Millski\_61, Wander\_62, Clarenza\_61, Phacado\_62, Thanksgivukkah\_61, Lemur\_62, Iracema64\_63, Bruiser\_61, BubbleTrouble\_61, TinaFeyge\_60, Abdiel\_62, Bombshell\_62
- Track 123 : Connomayer\_62
- Track 124 : Kremtemulon\_59
- Track 125 : Phontbonne\_62



- Track 126 : Eagle\_61
- Track 127 : Noelle\_61
- Track 128 : Polymorphads\_63
- Track 129 : Stasia\_60
- Track 130 : Wile\_60
- Track 131 : Benedict\_61
- Track 132 : Airmid\_58
- Track 133 : UnionJack\_59
- Track 134 : Chadwick\_60
- Track 135 : PetterN\_63, Scorpio\_62
- Track 136 : Jabiru\_59
- Track 137 : Naca\_58
- Track 138 : EITiger69\_60
- Track 139 : Blue7\_68, Jeffabunny\_67, Artemis2UCLA\_67, WunderPhul\_67, CloudWang3\_68, Indra\_70, Wiks\_66, Helmet\_68, Rifter\_67, Lilbunny\_64, Zaka\_67, Koko\_69, Yokurt\_66, Garak\_68, Zulu\_68, ToneTone\_64
- Track 140 : Cookiedough\_66, Priamo\_68, GreedyLawyer\_63, SuperAwesome\_66, JewelBug\_66, Chartreuse\_63, VohminGhazi\_66, Neeharika16\_65, Blinn1\_69, Candra\_64, Pmask\_65, BABullseye\_59, Isiphiwo\_64, Newrala\_66, Hoot\_61, EricB\_65, DaVinci\_64, McFly\_66, SmellyB\_66, Kazan\_67, SuperCallie99\_63, Kipper29\_66
- Track 141 : Gladiator\_64
- Track 142 : Hexamo\_67
- Track 143 : Tucker\_67, Gruunaga\_67, Hammer\_67, Roksolana\_68
- Track 144 : Dorothea\_63, Jordennis\_65
- Track 145 : Timshel\_65
- Track 146 : Sheen\_65
- Track 147 : HINdeR\_62
- Track 148 : DroogsArmy\_61
- Track 149 : PP\_67
- Track 150 : BogosyJay\_67, Maminiaina\_67
- Track 151 : HortumSL17\_69, Tubs\_68, Beemo\_69, Catalina\_70, PackMan\_67, Myxus\_68, Aliter\_69, Pioneer\_69, Phonnegut\_69, Phaeder\_68
- Track 152 : Toaka\_67
- Track 153 : ExplosioNervosa\_66, Spouty\_63, Priya\_66, EmyBug\_65, Alma\_66, Eidsmoe\_66, Fayely\_66, Qobbit\_66, Conquerage\_66
- Track 154 : Vanisoa\_66
- Track 155 : Darrell\_69
- Track 156 : Scherzo\_68, Ugenie5\_64
- Track 157 : Yecey3\_69
- Track 158 : Keziacharles14\_66
- Track 159 : LoneWolf\_68
- Track 160 : Charm\_64, DreamTeam1\_64
- Track 161 : SheaKeira\_63
- Track 162 : Arissanae\_65
- Track 163 : Elephantoon\_66, Rahalelujah\_66
- Track 164 : DrSeegs\_98
- Track 165 : Vetrrix\_97, GuuelaD\_96, Netyap\_98, MkaliMitinis3\_101, Lewan\_100, BobsGarage\_98, LilDestine\_97, Faith1\_99, Itos\_99, Loadrie\_98, BigCheese\_99, Kahlid\_98, Nicholasp3\_99, Finemlucis\_100, Rumpelstiltskin\_95, Wigglewiggle\_99, Zakai\_100, Gabriela\_99, Gardann\_99
- Track 166 : Miley16\_99, Breezona\_99, Winky\_99
- Track 167 : Claus\_99, ZhongYanYuan\_96, Hafay\_100

- Track 168 : Archie\_96, Bazzle\_96, Crossroads\_99
- Track 169 : Baoshan\_96
- Track 170 : Wilder\_100
- Track 171 : Tourach\_100
- Track 172 : Kingsolomon\_94, Jubie\_95, Nicholas\_94, Finnry\_96, Lumos\_96, Snenia\_95, Jobypre\_97, MsGreen\_96, Samty\_95, Bellis\_94, Moostard\_93, Clautastrophe\_94
- Track 173 : Krypton555\_99, Whirlwind\_98
- Track 174 : Ellson\_95, MiniLon\_101, DuncansLeg\_97, Lolly9\_96
- Track 175 : MiniMac\_101
- Track 176 : Chaser\_99
- Track 177 : Bromden\_100
- Track 178 : DyoEdafos\_103
- Track 179 : Douge\_99
- Track 180 : Baudelaire\_107, Aegeus\_107

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

The start number called the most often in the published annotations is 50, it was called in 177 of the 738 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_68, AN3\_68, AbbyPaige\_68, Acolyte\_59, Agape74\_68, Airmid\_58, Aliter\_69, Alma\_66, Aneem\_67, AnnaL29\_67, Anselm\_67, ArcherNM\_60, Arissanae\_65, Artemis2UCLA\_67, BABullseye\_59, Bachome\_68, Baehexic\_64, Beemo\_69, Benedict\_61, BengiVuitton\_66, Benvolio\_63, BiancaTri92\_67, Blinn1\_69, Blue7\_68, BobSwaget\_60, BogosyJay\_67, Bowtie\_67, Bud\_65, Buggy\_68, CRB1\_68, Candra\_64, Catalina\_70, Centaur\_66, Chadwick\_60, Changeling\_65, Chargerpower\_63, Charm\_64, Chartreuse\_63, ChipMunk\_68, CloudWang3\_68, Colin\_64, Conquerage\_66, Cookiedough\_66, Crucio\_66, DaVinci\_64, Dalmatian\_67, Darrell\_69, DARTHPhader\_63, Deloris\_66, Dignity\_68, Dorothea\_63, Drake55\_67, DreamTeam1\_64, DudeLittle\_65, EZMoney23\_63, Ebony\_66, Echild\_66, Eidsmoe\_66, Et2Brutus\_65, EvilGenius\_67, ExplosioNervosa\_66, Fameo\_66, Fayely\_66, Fibonacci\_66, FiringLine\_66, First\_0067, Flare16\_65, Flaverint\_67, Gail\_67, Garak\_68, Georgie2\_67, Gilberta\_67, GreedyLawyer\_63, Gruunaga\_67, Hammer\_67, HarryHoudini\_66, Heffalump\_65, Helmet\_68, Hoot\_61, HortumSL17\_69, Hutc2\_65, Indra\_70, Insomnia\_67, Isiphiwo\_64, Jabiru\_59, Jabith\_67, Jeeves\_69, Jeffabunny\_67, Jerm\_68, JewelBug\_66, Jordennis\_65, Joselito\_67, JoshKayV\_67, Kalpine\_65, Kazan\_67, Keziacharles14\_66, KingCyrus\_67, Kipper29\_66, Koko\_69, LadyBird\_70, Leogania\_67, Leviathan\_68, LilTurb\_67, Lilbunny\_64, Lokk\_61, LoneWolf\_68, Loser\_68, Luchador\_68, Lucivia\_67, MaCh\_66, Mabel\_66, Maminiaina\_67, McFly\_66, MiculUcigas\_65, Miko\_61, Mulciber\_65, Munch\_66, Myxus\_68, NaSiaTalie\_65, Naca\_58, Neeharika16\_65, Newrala\_66, NicoleTera\_64, NothingSpecial\_63, Orange\_65, PackMan\_67, Petersenfast\_64, PetterN\_63, Phaeder\_68, Pharaoh\_62, Phonnegut\_69, Pioneer\_69, Piro94\_65, Pmask\_65, Power\_65, Priamo\_68, Priya\_66, Qobbit\_66, QueenB2\_65, QueenBeesly\_66, Rachaly\_63, Rahalelujah\_66, RedRock\_67, Refuge\_63, Retro23\_67, Rifter\_67, Roksolana\_68, Salz\_65, Scherzo\_68, Scorpia\_62, SemperFi\_67, Sham4\_66, SheaKeira\_63, Smeagan\_69,

SmellyB\_66, SnapTap\_66, Snape\_66, SororFago\_67, Spouty\_63, Steamy\_62, SuperAwesome\_66, SuperCallie99\_63, SweetiePie\_66, TarsusIV\_63, Timothy\_66, TinyTimmy\_64, Toaka\_67, ToneTone\_64, Trixie\_64, Trooper\_66, Tubs\_68, Tucker\_67, Turbido\_67, Ugenie5\_64, Updawg\_66, VA6\_66, Vanisoa\_66, VohminGhazi\_66, WeiHuaDA\_67, Whabigail7\_67, WideWale\_66, Wiks\_66, WunderPhul\_67, XianYue\_63, Yokurt\_66, Zaka\_67, Zimmer\_63, Zulu\_68,

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

- Gladiator\_64, Hexamo\_67, UnionJack\_59,

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

- 40AC\_66, A6\_52, ACFishhook\_66, AFIS\_55, AN9\_70, ANI8\_70, AbbysRanger\_60, Abbysshoes\_61, Abdiel\_62, Abrogate\_570, Achebe\_59, Acme\_59, Adahisdi\_58, Adzzy\_69, Aegeus\_107, Aeneas\_61, Agaliana\_53, Aglet\_69, AgronaGT15\_67, Ajay\_59, Albee\_62, Alberto7\_63, Alsfro\_63, Altman\_61, Alvin\_57, Anglerfish\_59, Annyong\_61, Anon\_68, Anubis\_71, Applejack\_53, Arcanine\_60, Archie\_96, Arlo\_56, Arturo\_60, Ashballer\_61, Atkinbua\_62, AugsMagnumOpus\_71, AvatarAhPeg\_59, Avle17\_62, B1\_57, BK1\_52, BPBiebs31\_60, Baby16\_62, BabyBack\_63, BabyRay\_65, Backyardigan\_58, BaconJack\_63, Bactobuster\_62, Badger\_59, BangNhom\_61, Baoshan\_96, Barriga\_59, Bartimeaus\_62, Baudelaire\_107, Bazzle\_96, Beatrix\_58, Beauxregard13\_67, BeesKnees\_61, Bellis\_94, BellusTerra\_63, Bethlehem\_58, Bexan\_56, Big3\_57, BigCheese\_99, BigMau\_60, BigPaolini\_57, Bigfoot\_52, BillKnuckles\_56, Bircsak\_57, Blackmoor\_61, BluSpix\_56, BlueBird\_67, Blue\_57, Bob3\_57, BobsGarage\_98, Bombshell\_62, Bones\_58, BreSam8\_68, Breezona\_99, Briton15\_62, Bromden\_100, Broseidon\_62, Bruiser\_61, Brunns\_57, BubbleTrouble\_61, Bugatti\_65, Bumblebee11\_59, Burger\_60, Burton\_58, Buttons\_56, BuzzBuzz\_64, Bxb1\_53, Bxz2\_63, C3\_63, CactusRose\_56, Caelakin\_61, Camperdownii\_60, Caraxes\_68, Carlyle\_57, Caviar\_64, CentreCat\_62, Cerulean\_63, ChampagnePapi\_64, Chanagan\_54, Chaph\_62, Chaser\_99, Che12\_69, Chupacabra\_60, Ciao\_57, Cici\_60, Cindaradix\_57, Cintron\_62, Citius\_62, Clarenza\_61, Claus\_99, Clautastrophe\_94, Cocoaberry\_62, Colbster\_66, Commander\_61, ConceptII\_61, Connomayer\_62, Corvo\_59, Crispicous1\_55, Crossroads\_99, Cueylyss\_59, Cullens\_68, D32\_67, DBQu4n\_68, DD5\_57, DaHudson\_67, Daishi\_67, Datway\_60, Deano\_60, Dexes\_58, Dhanush\_62, Dieselweasel\_69, DirtyDunning\_61, Doom\_56, Douge\_99, DrFeelGood\_56, DrSeegs\_98, Drake94\_59, DreamCatcher\_62, Dreamboat\_59, DroogsArmy\_61, Druantia\_61, Dulcie\_58, DuncansLeg\_97, Duplo\_68, Dussy\_60, Dynamix\_60, DyoEdafos\_103, EagleEye\_68, Eagle\_61, Eaglepride\_62, Eapen\_62, Edison31\_58, Edtherson\_57, Ellson\_95, EpicPhail\_69, Eris\_61, Eros\_62, Espresso\_57, Euphoria\_56, Eurydice\_63, Eyeball\_59, Faith1\_99, Fajezeel\_59, Farber\_68, Fascinus\_54, Fenn\_61, Fernando\_68, Finemlucis\_100, Finnry\_96, Florean\_62, Flux\_62, Forsytheast\_57, Francis47\_57, Fred313\_63, Froghopper\_55, Funston\_61, Fushigi\_55, Gabriela\_99, Gadost\_62, GageAP\_59, Gandalf20\_61, Gardann\_99, GaugeLDP\_62, Gemma\_67, GingkoMaracino\_68, Giroux\_64, Gompeii16\_57, Goose\_62, Graduation\_62, GrecoEtereo\_58, Greg\_59, Grif\_68, Groupthink\_69, Grub\_68, Grum1\_67, GtownJaz\_68, GuuelaD\_96, Gwendoluna\_61, Gyzlar\_54, HINdeR\_62, Hafay\_100, HamSlice\_59, Hami1\_50, HanShotFirst\_59, Happiness\_61, HarryOW\_57, HashRod\_69, HaveUMetTed\_69, Heathen\_65, HelDan\_64, Heliosoles\_67, Herbertwm\_62, Hercules11\_68, Hermia\_58, HermioneGrange\_59, Holli\_61, Homines\_50, Hookmount\_64, Hope4ever\_60, Houdini22\_61, ICleared\_61, ILeeKay\_61, Iceman\_62, Ichabod\_62, Idleandcovert\_65, IgnatiusPatJac\_58, Iracema64\_63, IronMan\_64, Isca\_63, Itos\_99, Iwokeuplikedis\_67, JC27\_61, JF2\_63, JF4\_63, JHC117\_66, Jaan\_65, JackSparrow\_61, Jasper\_59, Jaykayelowell\_59,

JenCasNa\_69, JeppNRM\_69, Jerm2\_59, JetBlade\_62, Jobu08\_66, Jobypre\_97, JoongJeon\_61, Jorgensen\_59, Journey13\_59, Jsquared\_69, Jubie\_95, JuliaChild\_59, KADY\_67, KBG\_59, KFPoly\_61, KSSJEB\_58, Kahlid\_98, Kalb97\_69, Kalnok\_69, Kamy\_61, Kanely\_60, Katalie136\_60, Kenmech\_63, Kerberos\_68, Killigrew\_58, Kimona\_60, Kingmustik0402\_62, Kingsolomon\_94, KittenMittens\_58, Koduck\_67, Koreni\_61, Kratark\_61, Kremtemulon\_59, Kristoff\_61, Krypton555\_99, Kugel\_58, KyMonks1A\_61, Kyee\_62, Kykar\_58, L5\_63, LBerry\_69, LHTSCC\_64, Lambert1\_64, Lamina13\_60, Landor\_64, LappelDuVide\_59, Larenn\_63, LarryKay\_68, Lemur\_62, LeoAvram\_61, Lesedi\_54, Lewan\_100, Licorice\_60, LilBib\_58, LilDestine\_97, Lilith\_67, LittleB\_62, LittleGuy\_62, Loadrie\_98, LochMonster\_63, Lockley\_56, Lolly9\_96, Lopton\_58, Lorenzo\_62, Louie6\_67, Lucyedi\_67, LugYA\_71, Lumos\_96, Lunsford\_63, MA5\_65, MK4\_65, MPlant7149\_57, MadMarie\_68, Magnar\_56, Magnito\_57, Mainiac\_68, Makemake\_59, Malec\_64, Malinsilva\_70, Manatee\_59, Manu\_68, MarQuardt\_68, Marcell\_55, Marchy\_51, Marge\_57, Margo\_64, Marie\_66, Marius\_69, Maroc7\_56, Marsha\_57, MaryBeth\_57, Maverick\_61, Maxo\_63, Mazhar510\_62, McGuire\_60, Medusa\_62, MeeZee\_61, Melvin\_64, MetalQZJ\_56, Methuselah\_63, Michley\_58, Microwolf\_66, Miley16\_99, Millski\_61, MiniLon\_101, MiniMac\_101, Miramae\_59, Misomonster\_69, MissWhite\_66, MkaliMitinis3\_101, Molly\_59, Monet\_61, MoneyMay\_67, Moose\_57, Moostard\_93, Morpher26\_60, Morrow\_63, MrGordo\_58, Mryolo\_55, MsGreen\_96, MuchMore\_71, Mule\_56, Mundrea\_60, Museum\_59, MyraDee\_64, NEHalo\_56, Naira\_61, Naji\_68, Nebs\_63, Nemo27\_61, Nerujay\_60, Netyap\_98, Nhonho\_57, Nicholas\_94, Nicholasp3\_99, Niza\_60, Noella\_64, Noelle\_61, Norbert\_61, NorthStar\_60, Norz\_59, NotAPhaseMom\_61, Nyxis\_61, OKCentral2016\_60, OKaNui\_62, Obama12\_63, Odin\_66, Ohfah\_63, Ohno789\_59, OlanP\_67, Ollie\_68, Oogway\_57, P28Green\_69, PGHhamlin\_70, PP\_67, PSullivan\_58, PacerPaul\_58, Palestino\_61, Panamaxus\_62, Papez\_61, Paphu\_57, Paraselene\_56, Pari\_61, Parliament\_58, PascalRango\_58, PattyP\_60, Pawn\_68, Payneful\_56, PeaceMeal1\_59, Peaches\_60, Pelly\_58, Pembroke\_68, Penny1\_68, Pepe\_55, Perplexer\_60, Perseus\_58, PeterPeter\_62, Peterson\_62, PetiteSangsue\_60, Petp2012\_59, Petruccio\_57, Ph8s\_69, Phacado\_62, Phaded\_63, Phantastic\_66, Felipe\_63, PherrisBueller\_57, Phighter1804\_62, PhishRPhriends\_66, Phlei\_54, Phoebe\_69, Phontbonne\_62, Phoxy\_68, Phranny\_69, PhrostyMug\_58, PinkPlastic\_58, Pinto\_59, Pipcraft\_59, Pippin\_59, Pistachio\_65, Pita2\_61, Pocahontas\_64, Polymorphads\_63, Pomar16\_67, Poompha\_59, Popcicle\_64, PotatoSplit\_69, Pukovnik\_63, Pumbaa\_62, Puppy\_65, PurpleHaze\_68, QTRLifeCrisis\_58, QuinnKiro\_63, Rajelicia\_59, Reba\_68, Rebeuca\_62, Relief\_61, ResDef\_63, RhynO\_61, Rhynn\_56, RidgeCB\_58, Ringer\_58, Rockstar\_63, Rohr\_59, Romney\_61, Roosevelt\_60, Rubeus\_58, Rufus\_59, Ruin\_62, Rummer\_67, Rumpelstiltskin\_95, Ruotula\_61, Rutherford\_59, STLscum\_61, Sabertooth\_62, Sabia\_68, Sabinator\_66, Sagefire\_60, Samty\_95, Sandaddy\_55, Sanya\_54, SarFire\_55, SaturnRing\_65, Scamp\_62, Scout\_64, Scowl\_59, Seabiscuit\_62, Seanderson\_58, Serenity\_69, Severus\_59, Shaka\_60, Sheen\_65, SheldonCooper\_62, ShortQueendom\_51, Shygu2\_60, Sibs6\_60, SkiPole\_63, Skipitt\_61, Slagathor\_60, Smairt\_61, Smeagol\_60, Snazzy\_57, Snenia\_95, Snickers\_66, SoYo\_67, SoilDragon\_68, Solon\_56, Sorpresa\_54, Soshari\_70, Sparxx\_63, Spike509\_68, SpikeBT\_57, Spino\_61, Squee\_59, Stagni\_67, StarStuff\_68, Stasia\_60, StepMih\_67, StewieG\_55, Stink\_59, StrongArm\_57, Sumter\_54, Sunshine924\_60, Superchunk\_67, SwirlSquare\_72, SwissCheese\_59, Switzer\_59, Swole\_58, TNguyen7\_66, Taquarus\_61, Target\_59, Tasp14\_61, Taurus\_69, Teodoridan\_56, Texage\_62, Thanksgivukkah\_61, TheloniousMonk\_59, Thor\_55, Tiffany\_67, Timshel\_65, TinaFeyge\_60, Tinybot\_61, TopsytheTRex\_65, TiroTheta9\_61, Todacoro\_64, Tomathan\_68, Topanga\_58, Topgun\_57, Tote\_54,

Tourach\_100, Traft412\_61, Treddle\_59, Trike\_58, Tripl3t\_60, Trouble\_60, TroyPia\_63, Turj99\_56, Twister\_60, TwoPeat\_60, TygerBlood\_62, U2\_57, Ulysses\_61, VC3\_69, Veracruz\_62, Vetrix\_97, Violet\_56, Vix\_66, WalterMcMickey\_60, Wander\_62, Watermelon\_59, Watson\_67, Wheeler\_58, Whirlwind\_98, Wigglewobble\_99, Wilbur\_62, Wilder\_100, Wile\_60, Wilkins\_57, Winky\_99, Wizard007\_61, Wooldri\_70, Xena\_59, Yecey3\_69, YoSam321\_62, Zakai\_100, Zeeculate\_56, Zephyr\_59, Zetzy\_67, Zeuska\_57, ZhongYanYuan\_96,

### Summary by start number:

#### Start 32:

- Found in 1 of 790 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DBQu4n\_68 (A2),

#### Start 35:

- Found in 4 of 790 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Phaded\_63 (A2),

#### Start 36:

- Found in 1 of 790 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: UnionJack\_59 (A5),

#### Start 40:

- Found in 67 of 790 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 3 of 738
- Called 4.5% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_61 (A7), Gladiator\_64 (A6), Hexamo\_67 (A6),

#### Start 42:

- Found in 134 of 790 ( 17.0% ) of genes in pham
- Manual Annotations of this start: 21 of 738
- Called 15.7% of time when present
- Phage (with cluster) where this start called: Abdiel\_62 (A4), Achebe\_59 (A4), Bombshell\_62 (A4), Bruiser\_61 (A4), BubbleTrouble\_61 (A4), Camperdownii\_60 (A4), Clarenza\_61 (A4), Funston\_61 (A4), HamSlice\_59 (A4), Iracema64\_63 (A4), JoongJeon\_61 (A4), KFPoly\_61 (A4), Kratark\_61 (A4), Lemur\_62 (A4), Millski\_61 (A4), Palestino\_61 (A4), Phacado\_62 (A4), Phighter1804\_62 (A4), Thanksgivukkah\_61 (A4), TinaFeyge\_60 (A4), Wander\_62 (A4),

#### Start 43:

- Found in 21 of 790 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Serenity\_69 (A2),

#### Start 44:

- Found in 4 of 790 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 25.0% of time when present
- Phage (with cluster) where this start called: PP\_67 (A7),

#### Start 45:

- Found in 235 of 790 ( 29.7% ) of genes in pham
- Manual Annotations of this start: 23 of 738
- Called 9.8% of time when present
- Phage (with cluster) where this start called: Anubis\_71 (A3), Avle17\_62 (A4), BreSam8\_68 (A3), Cocoaberry\_62 (A4), Colbster\_66 (A3), DaHudson\_67 (A3), Daishi\_67 (A3), Eris\_61 (A4), Flux\_62 (A4), Hercules11\_68 (A3), LittleGuy\_62 (A4), Maverick\_61 (A4), Medusa\_62 (A4), Misomonster\_69 (A3), Nyxis\_61 (A4), PGHhamlin\_70 (A3), Pembroke\_68 (A3), Phoebe\_69 (A3), Sabertooth\_62 (A4), Shaka\_60 (A4), SoYo\_67 (A3), SoilDragon\_68 (A3), Woodri\_70 (A3),

#### Start 48:

- Found in 31 of 790 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 25 of 738
- Called 90.3% of time when present
- Phage (with cluster) where this start called: AN9\_70 (A2), ANI8\_70 (A2), Adzzy\_69 (A2), BabyBack\_63 (A2), C3\_63 (A2), Caraxes\_68 (A2), Che12\_69 (A2), D32\_67 (A2), Duplo\_68 (A2), HINdeR\_62 (A7), Herbertwm\_62 (A2), Journey13\_59 (A2), Jsquared\_69 (A2), Kerberos\_68 (A2), Koduck\_67 (A2), L5\_63 (A2), MissWhite\_66 (A2), Naji\_68 (A2), Odin\_66 (A2), Ph8s\_69 (A2), Pomar16\_67 (A2), Sheen\_65 (A7), StarStuff\_68 (A2), Superchunk\_67 (A2), SwirlSquare\_72 (A2), TopsytheTRex\_65 (A2), Tomathan\_68 (A2), VC3\_69 (A2),

#### Start 49:

- Found in 34 of 790 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 30 of 738
- Called 97.1% of time when present
- Phage (with cluster) where this start called: 40AC\_66 (A17), Bactobuster\_62 (A2), Chupacabra\_60 (A10), Drake94\_59 (A10), EagleEye\_68 (A16), Eaglepride\_62 (A10), Edison31\_58 (A10), GaugeLDP\_62 (A2), Goose\_62 (A10), IronMan\_64 (A2), Iwokeuplikedis\_67 (A2), Jaan\_65 (A2), Kimona\_60 (A19), KittenMittens\_58 (A10), Kristoff\_61 (A10), Landor\_64 (A2), Larenn\_63 (A2), Lucyedi\_67 (A16), Malec\_64 (A2), OKCentral2016\_60 (A10), PeaceMeal1\_59 (A10), Phlei\_54 (A13), Poompha\_59 (A10), Pukovnik\_63 (A2), Rebeuca\_62 (A10), RhynO\_61 (A10), Severus\_59 (A10), Timshel\_65 (A7), Topanga\_58 (A10), Trike\_58 (A10), Twister\_60 (A10), WalterMcMickey\_60 (A10), Yecy3\_69 (A9),

#### Start 50:

- Found in 196 of 790 ( 24.8% ) of genes in pham
- Manual Annotations of this start: 177 of 738
- Called 98.5% of time when present
- Phage (with cluster) where this start called: 20ES\_68 (A2), AN3\_68 (A2), AbbyPaige\_68 (A2), Acolyte\_59 (A2), Agape74\_68 (A2), Airmid\_58 (A5), Aliter\_69 (A9), Alma\_66 (A9), Aneem\_67 (A11), AnnaL29\_67 (A2), Anselm\_67 (A2), ArcherNM\_60 (A2), Arissanae\_65 (A9), Artemis2UCLA\_67 (A6), BABullseye\_59 (A6), Bachome\_68 (A11), Baehexic\_64 (A2), Beemo\_69 (A9), Benedict\_61 (A5), BengiVuitton\_66 (A2), Benvolio\_63 (A2), BiancaTri92\_67 (A2), Blinn1\_69 (A6), Blue7\_68 (A6), BobSwaget\_60 (A2), BogosyJay\_67 (A9), Bowtie\_67 (A11), Bud\_65

(A11), Bugsy\_68 (A2), CRB1\_68 (A2), Candra\_64 (A6), Catalina\_70 (A9), Centaur\_66 (A2), Chadwick\_60 (A5), Changeling\_65 (A2), Chargerpower\_63 (A), Charm\_64 (A9), Chartreuse\_63 (A6), ChipMunk\_68 (A2), CloudWang3\_68 (A6), Colin\_64 (A2), Conquerage\_66 (A9), Cookiedough\_66 (A6), Crucio\_66 (A2), DaVinci\_64 (A6), Dalmatian\_67 (A2), Darrell\_69 (A9), DarthPhader\_63 (A12), Deloris\_66 (A2), Dignity\_68 (A2), Dorothea\_63 (A6), Drake55\_67 (A2), DreamTeam1\_64 (A9), DudeLittle\_65 (A2), EZMoney23\_63 (A2), Ebony\_66 (A11), Echild\_66 (A2), Eidsmoe\_66 (A9), EITiger69\_60 (A5), Elephantoon\_66 (A9), EmyBug\_65 (A9), Equemioh13\_65 (A2), EricB\_65 (A6), Et2Brutus\_65 (A11), EvilGenius\_67 (A2), ExplosioNervosa\_66 (A9), Fameo\_66 (A2), Fayely\_66 (A9), Fibonacci\_66 (A11), FiringLine\_66 (A2), First\_0067 (A2), Flare16\_65 (A2), Flaverint\_67 (A11), Gail\_67 (A14), Garak\_68 (A6), Georgie2\_67 (A2), Gilberta\_67 (A11), GreedyLawyer\_63 (A6), Gruunaga\_67 (A6), Hammer\_67 (A6), HarryHoudini\_66 (A2), Heffalump\_65 (A2), Helmet\_68 (A6), Hoot\_61 (A6), HortumSL17\_69 (A9), Hutc2\_65 (A11), Indra\_70 (A6), Insomnia\_67 (A11), Isiphiwo\_64 (A6), Jabiru\_59 (A5), Jabith\_67 (A11), Jeeves\_69 (A14), Jeffabunny\_67 (A6), Jerm\_68 (A2), JewelBug\_66 (A6), Jordennis\_65 (A6), Joselito\_67 (A11), JoshKayV\_67 (A2), Kalpine\_65 (A2), Kazan\_67 (A6), Keziacharles14\_66 (A9), KingCyrus\_67 (A2), Kipper29\_66 (A6), Koko\_69 (A6), LadyBird\_70 (A2), Leogania\_67 (A2), Leviathan\_68 (A2), LilTurb\_67 (A2), Lilbunny\_64 (A6), Lokk\_61 (A2), LoneWolf\_68 (A9), Loser\_68 (A2), Luchador\_68 (A14), Lucivia\_67 (A11), MaCh\_66 (A11), Mabel\_66 (A11), Maminiaina\_67 (A9), McFly\_66 (A6), MiculUcigas\_65 (A2), Miko\_61 (A2), Mulciber\_65 (A11), Munch\_66 (A11), Myxus\_68 (A9), NaSiaTalie\_65 (A2), Naca\_58 (A5), Neeharika16\_65 (A6), Newrala\_66 (A6), NicoleTera\_64 (A2), NothingSpecial\_63 (A2), Orange\_65 (A11), PackMan\_67 (A9), Petersenfast\_64 (A11), PetterN\_63 (A5), Phaeder\_68 (A9), Pharaoh\_62 (A12), Phonnegut\_69 (A9), Pioneer\_69 (A9), Piro94\_65 (A2), Pmask\_65 (A6), Power\_65 (A2), Priamo\_68 (A6), Priya\_66 (A9), Qobbit\_66 (A9), QueenB2\_65 (A2), QueenBeesly\_66 (A2), Rachaly\_63 (A2), Rahalelujah\_66 (A9), RedRock\_67 (A2), Refuge\_63 (A12), Retro23\_67 (A2), Rifter\_67 (A6), Roksolana\_68 (A6), Salz\_65 (A11), Scherzo\_68 (A9), Scorpia\_62 (A5), SemperFi\_67 (A2), Sham4\_66 (A11), SheaKeira\_63 (A9), Smeagan\_69 (A2), SmellyB\_66 (A6), SnapTap\_66 (A2), Snape\_66 (A11), SororFago\_67 (A14), Spouty\_63 (A9), Steamy\_62 (A12), SuperAwesome\_66 (A6), SuperCallie99\_63 (A6), SweetiePie\_66 (A2), TarsusIV\_63 (A2), Timothy\_66 (A11), TinyTimmy\_64 (A11), Toaka\_67 (A9), ToneTone\_64 (A6), Trixie\_64 (A2), Trooper\_66 (A2), Tubs\_68 (A9), Tucker\_67 (A6), Turbido\_67 (A2), Ugenie5\_64 (A9), Updawg\_66 (A2), VA6\_66 (A2), Vanisoa\_66 (A9), VohminGhazi\_66 (A6), WeiHuaDA\_67 (A2), Whabigail7\_67 (A2), WideWale\_66 (A2), Wiks\_66 (A6), WunderPhul\_67 (A6), XianYue\_63 (A2), Yokurt\_66 (A6), Zaka\_67 (A6), Zimmer\_63 (A12), Zulu\_68 (A6),

Start 51:

- Found in 68 of 790 ( 8.6% ) of genes in pham
- Manual Annotations of this start: 51 of 738
- Called 76.5% of time when present
- Phage (with cluster) where this start called: Aglet\_69 (A3), AgronaGT15\_67 (A3), AugsMagnumOpus\_71 (A3), Beauxregard13\_67 (A3), BuzzBuzz\_64 (A3), Bxz2\_63 (A3), Cullens\_68 (A3), Dieselweasel\_69 (A3), EpicPhail\_69 (A3), Farber\_68 (A3), Fernando\_68 (A3), GingkoMaracino\_68 (A3), Grif\_68 (A3), Grub\_68 (A3), Grum1\_67 (A3), GtownJaz\_68 (A3), HashRod\_69 (A3), JHC117\_66 (A3), JenCasNa\_69 (A3), Jobu08\_66 (A3), KADY\_67 (A3), LBerry\_69 (A3), LarryKay\_68 (A3), Lilith\_67 (A3), LugYA\_71 (A3), MadMarie\_68 (A3), Mainiac\_68 (A3), Malinsilva\_70 (A3), MarQuardt\_68 (A3), Marie\_66 (A3), Methuselah\_63 (A3), Microwolf\_66 (A3),

MoneyMay\_67 (A3), MuchMore\_71 (A3), Ollie\_68 (A3), P28Green\_69 (A3), Penny1\_68 (A3), Phoxy\_68 (A3), PotatoSplit\_69 (A3), Rummer\_67 (A3), Sabia\_68 (A3), Sabinator\_66 (A3), Snickers\_66 (A3), Soshari\_70 (A3), Spike509\_68 (A3), Stagni\_67 (A3), StepMih\_67 (A3), Taurus\_69 (A3), Tiffany\_67 (A3), Vix\_66 (A3), Watson\_67 (A3), Zetzy\_67 (A3),

Start 52:

- Found in 17 of 790 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 16 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook\_66 (A3), Gemma\_67 (A3), Groupthink\_69 (A3), HaveUMetTed\_69 (A3), Heliosoles\_67 (A3), JeppNRM\_69 (A3), Kalb97\_69 (A3), Kainoky\_69 (A3), Louie6\_67 (A3), Manu\_68 (A3), Marius\_69 (A3), OlanP\_67 (A3), Pawn\_68 (A3), PhishRPhriends\_66 (A3), Phranny\_69 (A3), PurpleHaze\_68 (A3), Reba\_68 (A3),

Start 53:

- Found in 173 of 790 ( 21.9% ) of genes in pham
- Manual Annotations of this start: 135 of 738
- Called 81.5% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_60 (A4), Albee\_62 (A4), Alberto7\_63 (A4), Annyong\_61 (A4), Arturo\_60 (A4), AvatarAhPeg\_59 (A4), B1\_57 (A3), Baby16\_62 (A4), BabyRay\_65 (A3), Backyardigan\_58 (A4), Badger\_59 (A4), BangNhom\_61 (A4), Bartimeaus\_62 (A4), BellusTerra\_63 (A4), Blackmoor\_61 (A4), BlueBird\_67 (A3), Broseidon\_62 (A4), Bugatti\_65 (A3), Bumblebee11\_59 (A4), Burger\_60 (A4), Caelakin\_61 (A4), Caviar\_64 (A3), CentreCat\_62 (A4), Cerulean\_63 (A4), ChampagnePapi\_64 (A4), Chaph\_62 (A4), Cici\_60 (A4), Cindaradix\_57 (A4), Cintron\_62 (A4), Citius\_62 (A4), Commander\_61 (A4), Connomayer\_62 (A4), Datway\_60 (A4), Deano\_60 (A4), Dhanush\_62 (A4), DirtyDunning\_61 (A4), Druantia\_61 (A4), Eagle\_61 (A4), Eapen\_62 (A4), Eros\_62 (A4), Eurydice\_63 (A4), Florean\_62 (A4), Fred313\_63 (A3), Gadost\_62 (A4), Giroux\_64 (A3), Happiness\_61 (A4), Heathen\_65 (A3), HeiDan\_64 (A3), Holli\_61 (A4), Hookmount\_64 (A3), Houdini22\_61 (A4), ICleared\_61 (A4), Iceman\_62 (A4), Idleandcovert\_65 (A3), Isca\_63 (A3), JF2\_63 (A3), JF4\_63 (A3), Jaykayelowell\_59 (A4), JetBlade\_62 (A4), Kamy\_61 (A4), Katalie136\_60 (A4), Kingmustik0402\_62 (A4), Koreni\_61 (A4), Kremtemulon\_59 (A4), Kyee\_62 (A4), LHTSCC\_64 (A4), Lambert1\_64 (A3), LappelDuVide\_59 (A4), LeoAvram\_61 (A4), LittleB\_62 (A4), LochMonster\_63 (A4), Lorenzo\_62 (A4), Lunsford\_63 (A4), MA5\_65 (A3), MK4\_65 (A3), Margo\_64 (A3), Maxo\_63 (A4), Mazhar510\_62 (A4), MeeZee\_61 (A4), Melvin\_64 (A4), Miramae\_59 (A4), Morpher26\_60 (A4), Morrow\_63 (A4), Mundrea\_60 (A4), Nebs\_63 (A4), Nemo27\_61 (A4), Noella\_64 (A3), Noelle\_61 (A4), Norbert\_61 (A3), NorthStar\_60 (A4), NotAPhaseMom\_61 (A4), OKaNui\_62 (A4), Obama12\_63 (A4), Ohfah\_63 (A4), Panamaxus\_62 (A3), Peaches\_60 (A4), Perplexer\_60 (A4), PeterPeter\_62 (A4), PetiteSangsue\_60 (A4), Phantastic\_66 (A3), Phelipe\_63 (A4), Phontbonne\_62 (A4), Pipcraft\_59 (A4), Pistachio\_65 (A3), Pocahontas\_64 (A3), Polymorphads\_63 (A4), Popcicle\_64 (A3), Pumbaa\_62 (A4), Puppy\_65 (A3), QuinnKiro\_63 (A3), Relief\_61 (A4), ResDef\_63 (A3), Rockstar\_63 (A3), Romney\_61 (A4), Roosevelt\_60 (A4), Ruin\_62 (A4), SaturnRing\_65 (A3), Scamp\_62 (A4), Scout\_64 (A3), SheldonCooper\_62 (A4), Shygu2\_60 (A4), Skipitt\_61 (A4), Sparxx\_63 (A4), Spino\_61 (A4), Stasia\_60 (A4), Stink\_59 (A4), TNguyen7\_66 (A3), Taquarus\_61 (A4), Texage\_62 (A3), Tinybot\_61 (A4), TiroTheta9\_61 (A4), Todacoro\_64 (A3), TroyPia\_63 (A4), TygerBlood\_62 (A4), Ulysses\_61 (A4), Veracruz\_62 (A3), Wilbur\_62 (A4), Wile\_60 (A4), Wizard007\_61 (A4), Xena\_59 (A4), YoSam321\_62



(A4),

Start 57:

- Found in 1 of 790 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anon\_68 (A15),

Start 63:

- Found in 8 of 790 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 4 of 738
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Breezona\_99 (L2), Bromden\_100 (L4), Miley16\_99 (L2), Winky\_99 (L2),

Start 64:

- Found in 1 of 790 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DyoEdafos\_103 (L4),

Start 65:

- Found in 70 of 790 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 26 of 738
- Called 44.3% of time when present
- Phage (with cluster) where this start called: Archie\_96 (L2), Baoshan\_96 (L2), Bazzle\_96 (L2), BigCheese\_99 (L2), BobsGarage\_98 (L2), Chaser\_99 (L4), Claus\_99 (L2), Crossroads\_99 (L2), Douge\_99 (L4), DrSeegs\_98 (L2), Faith1\_99 (L2), Finemlucis\_100 (L2), Gabriela\_99 (L2), Gardann\_99 (L2), GuuelaD\_96 (L2), Hafay\_100 (L2), Itos\_99 (L2), Kahlid\_98 (L2), Lewan\_100 (L2), LilDestine\_97 (L2), Loadrie\_98 (L2), MkaliMitinis3\_101 (L2), Netyap\_98 (L2), Nicholasp3\_99 (L2), Rumpelstiltskin\_95 (L2), Tourach\_100 (L2), Vetrix\_97 (L2), Wigglewiggles\_99 (L2), Wilder\_100 (L2), Zakai\_100 (L2), ZhongYanYuan\_96 (L2),

Start 68:

- Found in 1 of 790 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MyraDee\_64 (A18),

Start 73:

- Found in 12 of 790 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 738
- Called 8.3% of time when present
- Phage (with cluster) where this start called: MiniMac\_101 (L3),

Start 74:

- Found in 75 of 790 ( 9.5% ) of genes in pham
- Manual Annotations of this start: 48 of 738
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Alsfro\_63 (A1), Anglerfish\_59 (A1), Beatrix\_58 (A1), Bethlehem\_58 (A1), Bexan\_56 (A1), Bones\_58 (A1), Carlyle\_57 (A1), Corvo\_59 (A1), Cueylyss\_59 (A1), DD5\_57 (A1), Doom\_56 (A1),

Dreamboat\_59 (A1), Dynamix\_60 (A1), Euphoria\_56 (A1), Froghopper\_55 (A1), GageAP\_59 (A1), Graduation\_62 (A1), Homines\_50 (A1), Ichabod\_62 (A1), Jasper\_59 (A1), KSSJEB\_58 (A1), KyMonks1A\_61 (A1), LilBib\_58 (A1), Lockley\_56 (A1), Makemake\_59 (A1), Manatee\_59 (A1), MaryBeth\_57 (A1), MetalQZJ\_56 (A1), Norz\_59 (A1), Ohno789\_59 (A1), PSullivan\_58 (A1), Paraselene\_56 (A1), Pari\_61 (A1), Pepe\_55 (A1), PherrisBueller\_57 (A1), Pita2\_61 (A1), QTRlifeCrisis\_58 (A1), STLscum\_61 (A1), Sandaddy\_55 (A1), SarFire\_55 (A1), Scowl\_59 (A1), SkiPole\_63 (A1), Sorpresa\_54 (A1), SpikeBT\_57 (A1), StrongArm\_57 (A1), Sunshine924\_60 (A1), Switzer\_59 (A1), Thor\_55 (A1), Turj99\_56 (A1), U2\_57 (A1),

#### Start 76:

- Found in 7 of 790 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 738
- Called 57.1% of time when present
- Phage (with cluster) where this start called: BillKnuckles\_56 (A1), Licorice\_60 (A1), Seanderson\_58 (A1), Traft412\_61 (A1),

#### Start 77:

- Found in 4 of 790 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 738
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Atkinbua\_62 (A1), Pinto\_59 (A1), Rubeus\_58 (A1),

#### Start 79:

- Found in 8 of 790 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 6 of 738
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aegeus\_107 (L5), Ashballer\_61 (A1), Baudelaire\_107 (L5), Dulcie\_58 (A1), Gwendoluna\_61 (A1), JC27\_61 (A1), Pelly\_58 (A1), Ruotula\_61 (A1),

#### Start 80:

- Found in 155 of 790 ( 19.6% ) of genes in pham
- Manual Annotations of this start: 142 of 738
- Called 98.1% of time when present
- Phage (with cluster) where this start called: A6\_52 (A1), AFIS\_55 (A1), Abbyshoes\_61 (A1), Abrogate\_570 (A1), Acme\_59 (A1), Adahisdi\_58 (A1), Aeneas\_61 (A1), Agaliana\_53 (A1), Ajay\_59 (A1), Altman\_61 (A1), Alvin\_57 (A1), Applejack\_53 (A1), Arcanine\_60 (A1), Arlo\_56 (A1), BK1\_52 (A1), BPBiabs31\_60 (A1), BaconJack\_63 (A1), Barriga\_59 (A1), BeesKnees\_61 (A1), Big3\_57 (A1), BigMau\_60 (A1), BigPaolini\_57 (A1), Bigfoot\_52 (A1), Bircsak\_57 (A1), BluSpix\_56 (A1), Blue\_57 (A1), Bob3\_57 (A1), Briton15\_62 (A1), Bruns\_57 (A1), Burton\_58 (A1), Buttons\_56 (A1), Bxb1\_53 (A1), CactusRose\_56 (A1), Chanagan\_54 (A1), Ciao\_57 (A1), Conceptll\_61 (A1), Crispicous1\_55 (A1), Dexes\_58 (A1), DrFeelGood\_56 (A1), DreamCatcher\_62 (A1), Dussy\_60 (A1), Edtherson\_57 (A1), Espresso\_57 (A1), Eyeball\_59 (A1), Fajezeel\_59 (A1), Fascinus\_54 (A1), Fenn\_61 (A1), Forsytheast\_57 (A1), Francis47\_57 (A1), Fushigi\_55 (A1), Gandalf20\_61 (A1), Gompeii16\_57 (A1), GrecoEtereo\_58 (A1), Greg\_59 (A1), Gyzlar\_54 (A1), Hami1\_50 (A1), HanShotFirst\_59 (A1), HarryOW\_57 (A1), Hermia\_58 (A1), HermioneGrange\_59 (A1), Hope4ever\_60 (A1), ILeeKay\_61 (A1), IgnatiusPatJac\_58 (A1), JackSparrow\_61 (A1), Jerm2\_59 (A1), Jorgensen\_59 (A1), JuliaChild\_59 (A1), KBG\_59 (A1), Kanely\_60 (A1), Kenmech\_63 (A1), Killigrew\_58 (A1), Kugel\_58 (A1),

Kykar\_58 (A1), Lamina13\_60 (A1), Lesedi\_54 (A1), Lopton\_58 (A1), MPlant7149\_57 (A1), Magnar\_56 (A1), Magnito\_57 (A1), Marcell\_55 (A1), Marchy\_51 (A1), Marge\_57 (A1), Maroc7\_56 (A1), Marsha\_57 (A1), McGuire\_60 (A1), Michley\_58 (A1), Molly\_59 (A1), Monet\_61 (A1), Moose\_57 (A1), MrGordo\_58 (A1), Mryolo\_55 (A1), Mule\_56 (A1), Museum\_59 (A1), NEHalo\_56 (A1), Naira\_61 (A1), Nerujay\_60 (A1), Nhonho\_57 (A1), Niza\_60 (A1), Oogway\_57 (A1), PacerPaul\_58 (A1), Papez\_61 (A1), Paphu\_57 (A1), Parliament\_58 (A1), PascalRango\_58 (A1), PattyP\_60 (A1), Payneful\_56 (A1), Perseus\_58 (A1), Peterson\_62 (A1), Petp2012\_59 (A1), Petruccio\_57 (A1), PhrostyMug\_58 (A1), PinkPlastic\_58 (A1), Pippin\_59 (A1), Rajelicia\_59 (A1), Rhynn\_56 (A1), RidgeCB\_58 (A1), Ringer\_58 (A1), Rohr\_59 (A1), Rufus\_59 (A1), Rutherferd\_59 (A1), Sagefire\_60 (A1), Sanya\_54 (A1), Seabiscuit\_62 (A1), ShortQueendom\_51 (A1), Sibs6\_60 (A1), Slagathor\_60 (A1), Smairt\_61 (A1), Smeagol\_60 (A1), Snazzy\_57 (A1), Solon\_56 (A1), Squee\_59 (A1), StewieG\_55 (A1), Sumter\_54 (A1), SwissCheese\_59 (A1), Swole\_58 (A1), Target\_59 (A1), Tasp14\_61 (A1), Teodoridan\_56 (A1), TheloniousMonk\_59 (A1), Topgun\_57 (A1), Tote\_54 (A1), Treddle\_59 (A1), Trip13t\_60 (A1), Trouble\_60 (A1), TwoPeat\_60 (A1), Violet\_56 (A1), Watermelon\_59 (A1), Wheeler\_58 (A1), Wilkins\_57 (A1), Zeeculate\_56 (A1), Zephyr\_59 (A1), Zeuska\_57 (A1),

Start 81:

- Found in 49 of 790 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 15 of 738
- Called 36.7% of time when present
- Phage (with cluster) where this start called: Bellis\_94 (L3), Clautastrophe\_94 (L3), DuncansLeg\_97 (L3), Ellson\_95 (L3), Finnry\_96 (L3), Jobypre\_97 (L3), Jubie\_95 (L3), Kingsolomon\_94 (L3), Krypton555\_99 (L3), Lolly9\_96 (L3), Lumos\_96 (L3), MiniLon\_101 (L3), Moostard\_93 (L3), MsGreen\_96 (L3), Nicholas\_94 (L3), Samty\_95 (L3), Snenia\_95 (L3), Whirlwind\_98 (L3),

### Summary by clusters:

There are 23 clusters represented in this pham: A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A, L4, L5, L2, L3,

Info for manual annotations of cluster A:

- Start number 50 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 74 was manually annotated 48 times for cluster A1.
- Start number 76 was manually annotated 4 times for cluster A1.
- Start number 77 was manually annotated 3 times for cluster A1.
- Start number 79 was manually annotated 4 times for cluster A1.
- Start number 80 was manually annotated 142 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 49 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 50 was manually annotated 23 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 50 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 50 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 57 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 49 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 68 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 49 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 32 was manually annotated 1 time for cluster A2.
- Start number 35 was manually annotated 1 time for cluster A2.
- Start number 43 was manually annotated 1 time for cluster A2.
- Start number 48 was manually annotated 23 times for cluster A2.
- Start number 49 was manually annotated 8 times for cluster A2.
- Start number 50 was manually annotated 66 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 45 was manually annotated 13 times for cluster A3.
- Start number 51 was manually annotated 51 times for cluster A3.
- Start number 52 was manually annotated 16 times for cluster A3.
- Start number 53 was manually annotated 31 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 42 was manually annotated 21 times for cluster A4.
- Start number 45 was manually annotated 10 times for cluster A4.
- Start number 53 was manually annotated 104 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 36 was manually annotated 1 time for cluster A5.
- Start number 50 was manually annotated 8 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 40 was manually annotated 2 times for cluster A6.
- Start number 50 was manually annotated 38 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 40 was manually annotated 1 time for cluster A7.
- Start number 44 was manually annotated 1 time for cluster A7.
- Start number 48 was manually annotated 2 times for cluster A7.
- Start number 49 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A9:

- Start number 49 was manually annotated 1 time for cluster A9.
- Start number 50 was manually annotated 32 times for cluster A9.

Info for manual annotations of cluster L2:

- Start number 63 was manually annotated 3 times for cluster L2.
- Start number 65 was manually annotated 25 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 73 was manually annotated 1 time for cluster L3.
- Start number 81 was manually annotated 15 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 63 was manually annotated 1 time for cluster L4.
- Start number 64 was manually annotated 1 time for cluster L4.
- Start number 65 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster L5:

- Start number 79 was manually annotated 2 times for cluster L5.

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

Gene: 20ES\_68 Start: 41417, Stop: 41187, Start Num: 50

Candidate Starts for 20ES\_68:

(Start: 50 @41417 has 177 MA's), (55, 41399), (101, 41270), (110, 41231),

Gene: 40AC\_66 Start: 42289, Stop: 42059, Start Num: 49

Candidate Starts for 40AC\_66:

(Start: 49 @42289 has 30 MA's), (54, 42277), (55, 42274), (Start: 65 @42241 has 26 MA's), (86, 42187), (96, 42157),

Gene: A6\_52 Start: 38092, Stop: 37958, Start Num: 80

Candidate Starts for A6\_52:

(Start: 80 @38092 has 142 MA's), (112, 37990),

Gene: ACFishhook\_66 Start: 41128, Stop: 40898, Start Num: 52

Candidate Starts for ACFishhook\_66:

(Start: 52 @41128 has 16 MA's), (101, 40984), (110, 40945),

Gene: AFIS\_55 Start: 38799, Stop: 38665, Start Num: 80

Candidate Starts for AFIS\_55:

(Start: 80 @38799 has 142 MA's), (112, 38697),

Gene: AN3\_68 Start: 40132, Stop: 39902, Start Num: 50

Candidate Starts for AN3\_68:

(Start: 50 @40132 has 177 MA's), (55, 40114), (101, 39985), (110, 39946),

Gene: AN9\_70 Start: 41277, Stop: 41041, Start Num: 48

Candidate Starts for AN9\_70:

(Start: 43 @41304 has 1 MA's), (Start: 48 @41277 has 25 MA's), (54, 41259), (Start: 65 @41226 has 26 MA's), (96, 41139),

Gene: ANI8\_70 Start: 41277, Stop: 41041, Start Num: 48

Candidate Starts for ANI8\_70:

(Start: 43 @41304 has 1 MA's), (Start: 48 @41277 has 25 MA's), (54, 41259), (Start: 65 @41226 has 26 MA's), (96, 41139),

Gene: AbbyPaige\_68 Start: 41661, Stop: 41431, Start Num: 50

Candidate Starts for AbbyPaige\_68:

(6, 41910), (31, 41715), (33, 41709), (Start: 50 @41661 has 177 MA's), (55, 41643), (101, 41514), (110, 41475),

Gene: AbbysRanger\_60 Start: 40318, Stop: 40094, Start Num: 53

Candidate Starts for AbbysRanger\_60:

(Start: 42 @40360 has 21 MA's), (Start: 45 @40348 has 23 MA's), (Start: 53 @40318 has 135 MA's), (109, 40153), (110, 40141),

Gene: Abbysshoes\_61 Start: 40860, Stop: 40726, Start Num: 80

Candidate Starts for Abbysshoes\_61:

(Start: 80 @40860 has 142 MA's), (112, 40758),

Gene: Abdiel\_62 Start: 40510, Stop: 40244, Start Num: 42

Candidate Starts for Abdiel\_62:

(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's), (58, 40447), (110, 40291), (118, 40252),

Gene: Abrogate\_570 Start: 40665, Stop: 40531, Start Num: 80

Candidate Starts for Abrogate\_570:

(Start: 80 @40665 has 142 MA's), (112, 40563),

Gene: Achebe\_59 Start: 40343, Stop: 40077, Start Num: 42

Candidate Starts for Achebe\_59:

(Start: 42 @40343 has 21 MA's), (Start: 45 @40331 has 23 MA's), (Start: 53 @40301 has 135 MA's), (109, 40136), (110, 40124),

Gene: Acme\_59 Start: 39262, Stop: 39128, Start Num: 80

Candidate Starts for Acme\_59:

(Start: 80 @39262 has 142 MA's), (112, 39160),

Gene: Acolyte\_59 Start: 40074, Stop: 39841, Start Num: 50

Candidate Starts for Acolyte\_59:

(Start: 50 @40074 has 177 MA's), (55, 40056), (94, 39942), (101, 39927), (115, 39864), (118, 39849),

Gene: Adahisdi\_58 Start: 40395, Stop: 40261, Start Num: 80

Candidate Starts for Adahisdi\_58:

(Start: 80 @40395 has 142 MA's), (112, 40293),

Gene: Adzzy\_69 Start: 39937, Stop: 39698, Start Num: 48

Candidate Starts for Adzzy\_69:

(Start: 48 @39937 has 25 MA's), (54, 39919), (Start: 65 @39886 has 26 MA's), (96, 39799), (107, 39766), (118, 39706),

Gene: Aegeus\_107 Start: 62949, Stop: 63086, Start Num: 79

Candidate Starts for Aegeus\_107:

(75, 62946), (Start: 79 @62949 has 6 MA's), (88, 62976), (92, 62991), (94, 62994), (101, 63009), (110, 63039), (115, 63063), (116, 63066),

Gene: Aeneas\_61 Start: 41102, Stop: 40968, Start Num: 80

Candidate Starts for Aeneas\_61:

(Start: 80 @41102 has 142 MA's), (112, 41000),

Gene: Agaliana\_53 Start: 37073, Stop: 36939, Start Num: 80

Candidate Starts for Agaliana\_53:

(Start: 80 @37073 has 142 MA's), (112, 36971),

Gene: Agape74\_68 Start: 41655, Stop: 41425, Start Num: 50

Candidate Starts for Agape74\_68:

(6, 41904), (31, 41709), (33, 41703), (Start: 50 @41655 has 177 MA's), (55, 41637), (101, 41508), (110, 41469),

Gene: Aglet\_69 Start: 41171, Stop: 40941, Start Num: 51

Candidate Starts for Aglet\_69:

(Start: 45 @41198 has 23 MA's), (Start: 51 @41171 has 51 MA's), (96, 41042), (110, 40988),

Gene: AgronaGT15\_67 Start: 41019, Stop: 40789, Start Num: 51

Candidate Starts for AgronaGT15\_67:

(Start: 45 @41046 has 23 MA's), (Start: 51 @41019 has 51 MA's), (96, 40890), (110, 40836),

Gene: Airmid\_58 Start: 39243, Stop: 38977, Start Num: 50

Candidate Starts for Airmid\_58:

(Start: 50 @39243 has 177 MA's), (56, 39219), (59, 39210), (110, 39024),

Gene: Ajay\_59 Start: 40476, Stop: 40342, Start Num: 80

Candidate Starts for Ajay\_59:

(Start: 80 @40476 has 142 MA's), (112, 40374),

Gene: Albee\_62 Start: 40464, Stop: 40240, Start Num: 53

Candidate Starts for Albee\_62:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Alberto7\_63 Start: 40801, Stop: 40577, Start Num: 53

Candidate Starts for Alberto7\_63:

(Start: 42 @40843 has 21 MA's), (Start: 45 @40831 has 23 MA's), (Start: 53 @40801 has 135 MA's), (58, 40780), (110, 40624), (118, 40585),

Gene: Aliter\_69 Start: 40655, Stop: 40506, Start Num: 50

Candidate Starts for Aliter\_69:

(Start: 50 @40655 has 177 MA's), (55, 40637), (71, 40589),

Gene: Alma\_66 Start: 40634, Stop: 40401, Start Num: 50

Candidate Starts for Alma\_66:

(Start: 50 @40634 has 177 MA's), (55, 40616), (85, 40529), (94, 40502), (111, 40439), (115, 40424),

Gene: Alsfro\_63 Start: 40052, Stop: 39909, Start Num: 74

Candidate Starts for Alsfro\_63:

(Start: 74 @40052 has 48 MA's),

Gene: Altman\_61 Start: 40582, Stop: 40448, Start Num: 80

Candidate Starts for Altman\_61:

(Start: 80 @40582 has 142 MA's), (112, 40480),

Gene: Alvin\_57 Start: 39789, Stop: 39655, Start Num: 80

Candidate Starts for Alvin\_57:

(Start: 80 @39789 has 142 MA's),

Gene: Aneem\_67 Start: 40626, Stop: 40393, Start Num: 50

Candidate Starts for Aneem\_67:

(Start: 50 @40626 has 177 MA's), (55, 40608), (85, 40524), (103, 40464), (107, 40458),

Gene: Anglerfish\_59 Start: 40711, Stop: 40568, Start Num: 74

Candidate Starts for Anglerfish\_59:

(Start: 74 @40711 has 48 MA's),

Gene: AnnaL29\_67 Start: 42021, Stop: 41788, Start Num: 50

Candidate Starts for AnnaL29\_67:

(Start: 40 @42051 has 3 MA's), (Start: 50 @42021 has 177 MA's), (55, 42003), (94, 41889), (101, 41874),

Gene: Annyong\_61 Start: 40509, Stop: 40285, Start Num: 53

Candidate Starts for Annyong\_61:

(Start: 42 @40551 has 21 MA's), (Start: 45 @40539 has 23 MA's), (Start: 53 @40509 has 135 MA's), (58, 40488), (110, 40332), (118, 40293),

Gene: Anon\_68 Start: 39528, Stop: 39328, Start Num: 57

Candidate Starts for Anon\_68:

(Start: 57 @39528 has 1 MA's),

Gene: Anselm\_67 Start: 41559, Stop: 41329, Start Num: 50

Candidate Starts for Anselm\_67:

(27, 41646), (Start: 40 @41592 has 3 MA's), (Start: 50 @41559 has 177 MA's), (55, 41541), (60, 41523), (110, 41373),

Gene: Anubis\_71 Start: 41084, Stop: 40827, Start Num: 45

Candidate Starts for Anubis\_71:

(Start: 45 @41084 has 23 MA's), (Start: 51 @41057 has 51 MA's), (96, 40928), (110, 40874),

Gene: Applejack\_53 Start: 36632, Stop: 36498, Start Num: 80

Candidate Starts for Applejack\_53:

(Start: 80 @36632 has 142 MA's), (112, 36530),

Gene: Arcanine\_60 Start: 40322, Stop: 40188, Start Num: 80

Candidate Starts for Arcanine\_60:

(Start: 80 @40322 has 142 MA's), (112, 40220),

Gene: ArcherNM\_60 Start: 40803, Stop: 40570, Start Num: 50

Candidate Starts for ArcherNM\_60:

(Start: 40 @40833 has 3 MA's), (Start: 50 @40803 has 177 MA's), (55, 40785), (Start: 65 @40752 has 26 MA's), (101, 40656), (115, 40593),

Gene: Archie\_96 Start: 60983, Stop: 61165, Start Num: 65

Candidate Starts for Archie\_96:



(Start: 65 @60983 has 26 MA's), (78, 61019), (Start: 81 @61025 has 15 MA's), (89, 61052), (99, 61076), (109, 61106), (110, 61118), (112, 61133),

Gene: Arissanae\_65 Start: 40920, Stop: 40774, Start Num: 50

Candidate Starts for Arissanae\_65:

(Start: 50 @40920 has 177 MA's), (55, 40902), (71, 40854), (91, 40794),

Gene: Arlo\_56 Start: 38792, Stop: 38658, Start Num: 80

Candidate Starts for Arlo\_56:

(Start: 80 @38792 has 142 MA's), (112, 38690),

Gene: Artemis2UCLA\_67 Start: 39185, Stop: 38952, Start Num: 50

Candidate Starts for Artemis2UCLA\_67:

(Start: 40 @39215 has 3 MA's), (Start: 50 @39185 has 177 MA's), (55, 39167), (61, 39146), (71, 39119), (94, 39053), (105, 39026), (110, 38999), (118, 38960),

Gene: Arturo\_60 Start: 40579, Stop: 40355, Start Num: 53

Candidate Starts for Arturo\_60:

(Start: 42 @40621 has 21 MA's), (Start: 45 @40609 has 23 MA's), (Start: 53 @40579 has 135 MA's), (58, 40558), (110, 40402), (118, 40363),

Gene: Ashballer\_61 Start: 40810, Stop: 40559, Start Num: 79

Candidate Starts for Ashballer\_61:

(Start: 76 @40813 has 4 MA's), (Start: 79 @40810 has 6 MA's), (98, 40759), (104, 40741), (113, 40696),

Gene: Atkinbua\_62 Start: 40268, Stop: 40131, Start Num: 77

Candidate Starts for Atkinbua\_62:

(Start: 77 @40268 has 3 MA's), (Start: 80 @40265 has 142 MA's), (112, 40163),

Gene: AugsMagnumOpus\_71 Start: 41162, Stop: 40932, Start Num: 51

Candidate Starts for AugsMagnumOpus\_71:

(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: AvatarAhPeg\_59 Start: 40091, Stop: 39867, Start Num: 53

Candidate Starts for AvatarAhPeg\_59:

(Start: 42 @40133 has 21 MA's), (Start: 45 @40121 has 23 MA's), (Start: 53 @40091 has 135 MA's), (58, 40070),

Gene: Avle17\_62 Start: 40491, Stop: 40237, Start Num: 45

Candidate Starts for Avle17\_62:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: B1\_57 Start: 39044, Stop: 38814, Start Num: 53

Candidate Starts for B1\_57:

(41, 39086), (Start: 45 @39074 has 23 MA's), (Start: 53 @39044 has 135 MA's), (83, 38954),

Gene: BABullseye\_59 Start: 36740, Stop: 36507, Start Num: 50

Candidate Starts for BABullseye\_59:

(Start: 50 @36740 has 177 MA's), (55, 36722), (61, 36701), (71, 36674), (Start: 74 @36659 has 48 MA's), (94, 36608), (101, 36593),

Gene: BK1\_52 Start: 38092, Stop: 37958, Start Num: 80  
Candidate Starts for BK1\_52:  
(Start: 80 @38092 has 142 MA's), (112, 37990),

Gene: BPBiibs31\_60 Start: 40754, Stop: 40620, Start Num: 80  
Candidate Starts for BPBiibs31\_60:  
(Start: 80 @40754 has 142 MA's), (112, 40652),

Gene: Baby16\_62 Start: 40475, Stop: 40251, Start Num: 53  
Candidate Starts for Baby16\_62:  
(Start: 42 @40517 has 21 MA's), (Start: 45 @40505 has 23 MA's), (Start: 53 @40475 has 135 MA's),  
(58, 40454), (110, 40298), (118, 40259),

Gene: BabyBack\_63 Start: 41397, Stop: 41167, Start Num: 48  
Candidate Starts for BabyBack\_63:  
(Start: 48 @41397 has 25 MA's), (55, 41376), (96, 41262),

Gene: BabyRay\_65 Start: 40849, Stop: 40619, Start Num: 53  
Candidate Starts for BabyRay\_65:  
(41, 40891), (Start: 45 @40879 has 23 MA's), (Start: 53 @40849 has 135 MA's), (101, 40705), (112,  
40651),

Gene: Bachome\_68 Start: 40606, Stop: 40373, Start Num: 50  
Candidate Starts for Bachome\_68:  
(38, 40648), (Start: 50 @40606 has 177 MA's), (55, 40588), (85, 40504), (103, 40444), (107, 40438),

Gene: Backyardigan\_58 Start: 40334, Stop: 40110, Start Num: 53  
Candidate Starts for Backyardigan\_58:  
(Start: 42 @40376 has 21 MA's), (Start: 45 @40364 has 23 MA's), (Start: 53 @40334 has 135 MA's),  
(109, 40169), (110, 40157),

Gene: BaconJack\_63 Start: 41853, Stop: 41719, Start Num: 80  
Candidate Starts for BaconJack\_63:  
(Start: 80 @41853 has 142 MA's), (112, 41751),

Gene: Bactobuster\_62 Start: 41701, Stop: 41465, Start Num: 49  
Candidate Starts for Bactobuster\_62:  
(Start: 35 @41740 has 1 MA's), (Start: 40 @41728 has 3 MA's), (Start: 49 @41701 has 30 MA's), (55,  
41680), (115, 41488), (118, 41473),

Gene: Badger\_59 Start: 40302, Stop: 40078, Start Num: 53  
Candidate Starts for Badger\_59:  
(Start: 42 @40344 has 21 MA's), (Start: 45 @40332 has 23 MA's), (Start: 53 @40302 has 135 MA's),  
(109, 40137), (110, 40125),

Gene: Baehexic\_64 Start: 40861, Stop: 40631, Start Num: 50  
Candidate Starts for Baehexic\_64:  
(Start: 50 @40861 has 177 MA's), (55, 40843), (60, 40825), (71, 40795), (110, 40678), (115, 40654),

Gene: BangNhom\_61 Start: 40867, Stop: 40643, Start Num: 53  
Candidate Starts for BangNhom\_61:  
(Start: 42 @40909 has 21 MA's), (Start: 45 @40897 has 23 MA's), (Start: 53 @40867 has 135 MA's),  
(58, 40846), (110, 40690), (118, 40651),

Gene: Baoshan\_96 Start: 61599, Stop: 61781, Start Num: 65

Candidate Starts for Baoshan\_96:

(Start: 65 @61599 has 26 MA's), (69, 61608), (Start: 73 @61626 has 1 MA's), (78, 61635), (89, 61668), (99, 61692), (109, 61722), (110, 61734), (112, 61749),

Gene: Barriga\_59 Start: 38979, Stop: 38845, Start Num: 80

Candidate Starts for Barriga\_59:

(Start: 80 @38979 has 142 MA's),

Gene: Bartimeaus\_62 Start: 40466, Stop: 40242, Start Num: 53

Candidate Starts for Bartimeaus\_62:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Baudelaire\_107 Start: 62949, Stop: 63086, Start Num: 79

Candidate Starts for Baudelaire\_107:

(75, 62946), (Start: 79 @62949 has 6 MA's), (88, 62976), (92, 62991), (94, 62994), (101, 63009), (110, 63039), (115, 63063), (116, 63066),

Gene: Bazzle\_96 Start: 61539, Stop: 61721, Start Num: 65

Candidate Starts for Bazzle\_96:

(Start: 65 @61539 has 26 MA's), (78, 61575), (Start: 81 @61581 has 15 MA's), (89, 61608), (99, 61632), (109, 61662), (110, 61674), (112, 61689),

Gene: Beatrix\_58 Start: 40913, Stop: 40653, Start Num: 74

Candidate Starts for Beatrix\_58:

(Start: 74 @40913 has 48 MA's), (108, 40826), (121, 40724),

Gene: Beauxregard13\_67 Start: 41174, Stop: 40944, Start Num: 51

Candidate Starts for Beauxregard13\_67:

(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: Beemo\_69 Start: 40825, Stop: 40676, Start Num: 50

Candidate Starts for Beemo\_69:

(Start: 50 @40825 has 177 MA's), (55, 40807), (71, 40759),

Gene: BeesKnees\_61 Start: 39847, Stop: 39713, Start Num: 80

Candidate Starts for BeesKnees\_61:

(Start: 80 @39847 has 142 MA's), (112, 39745),

Gene: Bellis\_94 Start: 61101, Stop: 61235, Start Num: 81

Candidate Starts for Bellis\_94:

(Start: 81 @61101 has 15 MA's), (93, 61137), (95, 61140), (100, 61152), (112, 61203),

Gene: BellusTerra\_63 Start: 40468, Stop: 40244, Start Num: 53

Candidate Starts for BellusTerra\_63:

(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's), (58, 40447), (110, 40291), (118, 40252),

Gene: Benedict\_61 Start: 39533, Stop: 39267, Start Num: 50

Candidate Starts for Benedict\_61:

(Start: 50 @39533 has 177 MA's), (59, 39500), (110, 39314),

Gene: BengiVuitton\_66 Start: 41394, Stop: 41164, Start Num: 50  
Candidate Starts for BengiVuitton\_66:  
(Start: 50 @41394 has 177 MA's), (55, 41376), (101, 41247), (110, 41208),

Gene: Benvolio\_63 Start: 40669, Stop: 40436, Start Num: 50  
Candidate Starts for Benvolio\_63:  
(Start: 50 @40669 has 177 MA's), (55, 40651), (101, 40522), (110, 40483),

Gene: Bethlehem\_58 Start: 41462, Stop: 41202, Start Num: 74  
Candidate Starts for Bethlehem\_58:  
(Start: 74 @41462 has 48 MA's), (108, 41375), (121, 41273),

Gene: Bexan\_56 Start: 40692, Stop: 40432, Start Num: 74  
Candidate Starts for Bexan\_56:  
(Start: 74 @40692 has 48 MA's), (108, 40605), (121, 40503),

Gene: BiancaTri92\_67 Start: 41939, Stop: 41709, Start Num: 50  
Candidate Starts for BiancaTri92\_67:  
(Start: 40 @41969 has 3 MA's), (Start: 50 @41939 has 177 MA's), (55, 41921), (110, 41756), (115, 41732),

Gene: Big3\_57 Start: 40553, Stop: 40419, Start Num: 80  
Candidate Starts for Big3\_57:  
(Start: 80 @40553 has 142 MA's), (112, 40451),

Gene: BigCheese\_99 Start: 61757, Stop: 61939, Start Num: 65  
Candidate Starts for BigCheese\_99:  
(Start: 65 @61757 has 26 MA's), (78, 61793), (Start: 81 @61799 has 15 MA's), (89, 61826), (90, 61832), (99, 61850), (109, 61880), (110, 61892),

Gene: BigMau\_60 Start: 39207, Stop: 39073, Start Num: 80  
Candidate Starts for BigMau\_60:  
(Start: 80 @39207 has 142 MA's), (112, 39105),

Gene: BigPaolini\_57 Start: 38390, Stop: 38256, Start Num: 80  
Candidate Starts for BigPaolini\_57:  
(Start: 80 @38390 has 142 MA's), (112, 38288),

Gene: Bigfoot\_52 Start: 39345, Stop: 39211, Start Num: 80  
Candidate Starts for Bigfoot\_52:  
(Start: 80 @39345 has 142 MA's), (112, 39243),

Gene: BillKnuckles\_56 Start: 41364, Stop: 41107, Start Num: 76  
Candidate Starts for BillKnuckles\_56:  
(Start: 76 @41364 has 4 MA's), (98, 41307), (104, 41289),

Gene: Bircsak\_57 Start: 40580, Stop: 40446, Start Num: 80  
Candidate Starts for Bircsak\_57:  
(Start: 80 @40580 has 142 MA's),

Gene: Blackmoor\_61 Start: 40466, Stop: 40242, Start Num: 53  
Candidate Starts for Blackmoor\_61:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Blinn1\_69 Start: 39269, Stop: 39036, Start Num: 50

Candidate Starts for Blinn1\_69:

(Start: 50 @39269 has 177 MA's), (55, 39251), (61, 39230), (71, 39203), (Start: 74 @39188 has 48 MA's), (94, 39137), (101, 39122),

Gene: BluSpix\_56 Start: 35839, Stop: 35705, Start Num: 80

Candidate Starts for BluSpix\_56:

(Start: 80 @35839 has 142 MA's), (112, 35737),

Gene: Blue\_57 Start: 40422, Stop: 40288, Start Num: 80

Candidate Starts for Blue\_57:

(Start: 80 @40422 has 142 MA's), (112, 40320),

Gene: Blue7\_68 Start: 39279, Stop: 39046, Start Num: 50

Candidate Starts for Blue7\_68:

(Start: 40 @39309 has 3 MA's), (Start: 50 @39279 has 177 MA's), (55, 39261), (61, 39240), (71, 39213), (94, 39147), (105, 39120), (110, 39093), (118, 39054),

Gene: BlueBird\_67 Start: 40896, Stop: 40666, Start Num: 53

Candidate Starts for BlueBird\_67:

(41, 40938), (Start: 45 @40926 has 23 MA's), (Start: 53 @40896 has 135 MA's), (101, 40752), (102, 40749), (112, 40698),

Gene: Bob3\_57 Start: 38473, Stop: 38339, Start Num: 80

Candidate Starts for Bob3\_57:

(Start: 80 @38473 has 142 MA's), (112, 38371),

Gene: BobSwaget\_60 Start: 39664, Stop: 39434, Start Num: 50

Candidate Starts for BobSwaget\_60:

(Start: 50 @39664 has 177 MA's), (55, 39646), (96, 39532), (110, 39481), (118, 39442),

Gene: BobsGarage\_98 Start: 61757, Stop: 61939, Start Num: 65

Candidate Starts for BobsGarage\_98:

(Start: 65 @61757 has 26 MA's), (78, 61793), (Start: 81 @61799 has 15 MA's), (89, 61826), (90, 61832), (99, 61850), (109, 61880), (110, 61892),

Gene: BogosyJay\_67 Start: 40706, Stop: 40473, Start Num: 50

Candidate Starts for BogosyJay\_67:

(Start: 50 @40706 has 177 MA's), (55, 40688), (94, 40574), (115, 40496),

Gene: Bombshell\_62 Start: 40503, Stop: 40237, Start Num: 42

Candidate Starts for Bombshell\_62:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Bones\_58 Start: 41008, Stop: 40748, Start Num: 74

Candidate Starts for Bones\_58:

(Start: 74 @41008 has 48 MA's), (98, 40948), (104, 40930), (122, 40807),

Gene: Bowtie\_67 Start: 40633, Stop: 40400, Start Num: 50

Candidate Starts for Bowtie\_67:

(Start: 50 @40633 has 177 MA's), (55, 40615), (85, 40531), (103, 40471), (107, 40465),

Gene: BreSam8\_68 Start: 41191, Stop: 40934, Start Num: 45

Candidate Starts for BreSam8\_68:

(Start: 45 @41191 has 23 MA's), (Start: 51 @41164 has 51 MA's), (96, 41035), (110, 40981),

Gene: Breezona\_99 Start: 61842, Stop: 62027, Start Num: 63

Candidate Starts for Breezona\_99:

(Start: 63 @61842 has 4 MA's), (Start: 65 @61845 has 26 MA's), (72, 61869), (78, 61881), (Start: 81 @61887 has 15 MA's), (99, 61938), (109, 61968), (110, 61980), (112, 61995),

Gene: Briton15\_62 Start: 40265, Stop: 40131, Start Num: 80

Candidate Starts for Briton15\_62:

(Start: 80 @40265 has 142 MA's), (112, 40163),

Gene: Bromden\_100 Start: 62267, Stop: 62440, Start Num: 63

Candidate Starts for Bromden\_100:

(Start: 63 @62267 has 4 MA's), (72, 62291), (Start: 81 @62309 has 15 MA's), (85, 62321), (89, 62336), (90, 62342), (109, 62381), (110, 62393), (112, 62408),

Gene: Broseidon\_62 Start: 40466, Stop: 40242, Start Num: 53

Candidate Starts for Broseidon\_62:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Bruiser\_61 Start: 40506, Stop: 40240, Start Num: 42

Candidate Starts for Bruiser\_61:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Bruns\_57 Start: 38964, Stop: 38830, Start Num: 80

Candidate Starts for Bruns\_57:

(Start: 80 @38964 has 142 MA's), (112, 38862),

Gene: BubbleTrouble\_61 Start: 40506, Stop: 40240, Start Num: 42

Candidate Starts for BubbleTrouble\_61:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Bud\_65 Start: 40180, Stop: 39947, Start Num: 50

Candidate Starts for Bud\_65:

(Start: 50 @40180 has 177 MA's), (55, 40162), (85, 40078), (103, 40018), (107, 40012),

Gene: Bugatti\_65 Start: 40896, Stop: 40666, Start Num: 53

Candidate Starts for Bugatti\_65:

(41, 40938), (Start: 45 @40926 has 23 MA's), (Start: 53 @40896 has 135 MA's), (101, 40752), (102, 40749), (112, 40698),

Gene: Buggy\_68 Start: 41712, Stop: 41482, Start Num: 50

Candidate Starts for Buggy\_68:

(Start: 50 @41712 has 177 MA's), (55, 41694), (101, 41565), (110, 41526),

Gene: Bumblebee11\_59 Start: 40304, Stop: 40080, Start Num: 53  
Candidate Starts for Bumblebee11\_59:  
(Start: 42 @40346 has 21 MA's), (Start: 45 @40334 has 23 MA's), (Start: 53 @40304 has 135 MA's),  
(109, 40139), (110, 40127),

Gene: Burger\_60 Start: 40464, Stop: 40240, Start Num: 53  
Candidate Starts for Burger\_60:  
(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's),  
(58, 40443), (110, 40287), (118, 40248),

Gene: Burton\_58 Start: 40146, Stop: 40012, Start Num: 80  
Candidate Starts for Burton\_58:  
(Start: 80 @40146 has 142 MA's), (112, 40044),

Gene: Buttons\_56 Start: 37913, Stop: 37779, Start Num: 80  
Candidate Starts for Buttons\_56:  
(Start: 80 @37913 has 142 MA's), (112, 37811),

Gene: BuzzBuzz\_64 Start: 41198, Stop: 40968, Start Num: 51  
Candidate Starts for BuzzBuzz\_64:  
(Start: 45 @41225 has 23 MA's), (Start: 51 @41198 has 51 MA's), (96, 41069),

Gene: Bxb1\_53 Start: 38664, Stop: 38530, Start Num: 80  
Candidate Starts for Bxb1\_53:  
(Start: 80 @38664 has 142 MA's), (112, 38562),

Gene: Bxz2\_63 Start: 41205, Stop: 40975, Start Num: 51  
Candidate Starts for Bxz2\_63:  
(Start: 45 @41232 has 23 MA's), (Start: 51 @41205 has 51 MA's), (96, 41076), (110, 41022),

Gene: C3\_63 Start: 41277, Stop: 41041, Start Num: 48  
Candidate Starts for C3\_63:  
(Start: 43 @41304 has 1 MA's), (Start: 48 @41277 has 25 MA's), (54, 41259), (Start: 65 @41226 has  
26 MA's), (96, 41139),

Gene: CRB1\_68 Start: 41940, Stop: 41710, Start Num: 50  
Candidate Starts for CRB1\_68:  
(Start: 50 @41940 has 177 MA's), (55, 41922), (101, 41793), (110, 41754),

Gene: CactusRose\_56 Start: 39341, Stop: 39207, Start Num: 80  
Candidate Starts for CactusRose\_56:  
(Start: 80 @39341 has 142 MA's), (112, 39239),

Gene: Caelakin\_61 Start: 40464, Stop: 40240, Start Num: 53  
Candidate Starts for Caelakin\_61:  
(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's),  
(58, 40443), (110, 40287), (118, 40248),

Gene: Camperdownii\_60 Start: 40180, Stop: 39914, Start Num: 42  
Candidate Starts for Camperdownii\_60:  
(Start: 42 @40180 has 21 MA's), (Start: 45 @40168 has 23 MA's), (Start: 53 @40138 has 135 MA's),  
(58, 40117), (110, 39961), (118, 39922),

Gene: Candra\_64 Start: 39104, Stop: 38871, Start Num: 50  
Candidate Starts for Candra\_64:  
(Start: 50 @39104 has 177 MA's), (55, 39086), (61, 39065), (71, 39038), (Start: 74 @39023 has 48 MA's), (94, 38972), (101, 38957),

Gene: Caraxes\_68 Start: 39685, Stop: 39446, Start Num: 48  
Candidate Starts for Caraxes\_68:  
(Start: 48 @39685 has 25 MA's), (54, 39667), (61, 39646), (Start: 65 @39634 has 26 MA's), (96, 39547),

Gene: Carlyle\_57 Start: 37358, Stop: 37215, Start Num: 74  
Candidate Starts for Carlyle\_57:  
(Start: 74 @37358 has 48 MA's), (112, 37247),

Gene: Catalina\_70 Start: 40728, Stop: 40579, Start Num: 50  
Candidate Starts for Catalina\_70:  
(Start: 50 @40728 has 177 MA's), (55, 40710), (71, 40662),

Gene: Caviar\_64 Start: 40846, Stop: 40643, Start Num: 53  
Candidate Starts for Caviar\_64:  
(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Centaur\_66 Start: 41075, Stop: 40845, Start Num: 50  
Candidate Starts for Centaur\_66:  
(Start: 50 @41075 has 177 MA's), (55, 41057), (60, 41039), (71, 41009), (110, 40892), (115, 40868),

Gene: CentreCat\_62 Start: 40467, Stop: 40243, Start Num: 53  
Candidate Starts for CentreCat\_62:  
(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Cerulean\_63 Start: 40868, Stop: 40644, Start Num: 53  
Candidate Starts for Cerulean\_63:  
(Start: 42 @40910 has 21 MA's), (Start: 45 @40898 has 23 MA's), (Start: 53 @40868 has 135 MA's), (58, 40847), (110, 40691), (118, 40652),

Gene: Chadwick\_60 Start: 39218, Stop: 38952, Start Num: 50  
Candidate Starts for Chadwick\_60:  
(23, 39320), (Start: 50 @39218 has 177 MA's), (109, 39011),

Gene: ChampagnePapi\_64 Start: 40867, Stop: 40643, Start Num: 53  
Candidate Starts for ChampagnePapi\_64:  
(Start: 42 @40909 has 21 MA's), (Start: 45 @40897 has 23 MA's), (Start: 53 @40867 has 135 MA's), (58, 40846), (110, 40690), (118, 40651),

Gene: Chanagan\_54 Start: 37998, Stop: 37864, Start Num: 80  
Candidate Starts for Chanagan\_54:  
(Start: 80 @37998 has 142 MA's), (112, 37896),

Gene: Changeling\_65 Start: 41651, Stop: 41418, Start Num: 50  
Candidate Starts for Changeling\_65:  
(Start: 50 @41651 has 177 MA's), (55, 41633), (Start: 65 @41600 has 26 MA's), (101, 41504), (115, 41441), (118, 41426),



Gene: Chaph\_62 Start: 40475, Stop: 40251, Start Num: 53

Candidate Starts for Chaph\_62:

(Start: 42 @40517 has 21 MA's), (Start: 45 @40505 has 23 MA's), (Start: 53 @40475 has 135 MA's), (58, 40454), (110, 40298), (118, 40259),

Gene: Chargerpower\_63 Start: 38909, Stop: 38718, Start Num: 50

Candidate Starts for Chargerpower\_63:

(21, 39011), (Start: 40 @38939 has 3 MA's), (Start: 50 @38909 has 177 MA's), (55, 38891), (61, 38870), (82, 38822), (109, 38777),

Gene: Charm\_64 Start: 40061, Stop: 39918, Start Num: 50

Candidate Starts for Charm\_64:

(18, 40181), (20, 40175), (29, 40136), (Start: 40 @40094 has 3 MA's), (Start: 50 @40061 has 177 MA's), (55, 40043), (61, 40022), (Start: 65 @40010 has 26 MA's), (70, 39998), (118, 39926),

Gene: Chartreuse\_63 Start: 38455, Stop: 38222, Start Num: 50

Candidate Starts for Chartreuse\_63:

(Start: 50 @38455 has 177 MA's), (55, 38437), (61, 38416), (71, 38389), (Start: 74 @38374 has 48 MA's), (94, 38323), (101, 38308),

Gene: Chaser\_99 Start: 60883, Stop: 61056, Start Num: 65

Candidate Starts for Chaser\_99:

(39, 60790), (Start: 44 @60805 has 1 MA's), (47, 60820), (Start: 65 @60883 has 26 MA's), (72, 60907), (Start: 81 @60925 has 15 MA's), (85, 60937), (89, 60952), (90, 60958), (109, 60997),

Gene: Che12\_69 Start: 39901, Stop: 39662, Start Num: 48

Candidate Starts for Che12\_69:

(Start: 43 @39925 has 1 MA's), (Start: 48 @39901 has 25 MA's), (54, 39883), (Start: 65 @39850 has 26 MA's), (96, 39763), (107, 39730), (118, 39670),

Gene: ChipMunk\_68 Start: 42936, Stop: 42706, Start Num: 50

Candidate Starts for ChipMunk\_68:

(6, 43188), (9, 43140), (31, 42990), (Start: 50 @42936 has 177 MA's), (55, 42918), (101, 42789), (110, 42750),

Gene: Chupacabra\_60 Start: 40090, Stop: 39857, Start Num: 49

Candidate Starts for Chupacabra\_60:

(Start: 49 @40090 has 30 MA's), (55, 40069),

Gene: Ciao\_57 Start: 39371, Stop: 39237, Start Num: 80

Candidate Starts for Ciao\_57:

(Start: 80 @39371 has 142 MA's), (112, 39269),

Gene: Cici\_60 Start: 40319, Stop: 40095, Start Num: 53

Candidate Starts for Cici\_60:

(Start: 42 @40361 has 21 MA's), (Start: 45 @40349 has 23 MA's), (Start: 53 @40319 has 135 MA's), (109, 40154), (110, 40142),

Gene: Cindaradix\_57 Start: 39937, Stop: 39713, Start Num: 53

Candidate Starts for Cindaradix\_57:

(Start: 42 @39979 has 21 MA's), (Start: 45 @39967 has 23 MA's), (Start: 53 @39937 has 135 MA's), (58, 39916),

Gene: Cintron\_62 Start: 40587, Stop: 40363, Start Num: 53

Candidate Starts for Cintron\_62:

(Start: 42 @40629 has 21 MA's), (Start: 45 @40617 has 23 MA's), (Start: 53 @40587 has 135 MA's), (58, 40566),

Gene: Citius\_62 Start: 40485, Stop: 40261, Start Num: 53

Candidate Starts for Citius\_62:

(Start: 42 @40527 has 21 MA's), (Start: 45 @40515 has 23 MA's), (Start: 53 @40485 has 135 MA's), (58, 40464), (110, 40308), (118, 40269),

Gene: Clarenza\_61 Start: 40503, Stop: 40237, Start Num: 42

Candidate Starts for Clarenza\_61:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Claus\_99 Start: 61500, Stop: 61682, Start Num: 65

Candidate Starts for Claus\_99:

(Start: 51 @61455 has 51 MA's), (Start: 63 @61497 has 4 MA's), (Start: 65 @61500 has 26 MA's), (Start: 73 @61527 has 1 MA's), (78, 61536), (89, 61569), (99, 61593), (109, 61623), (110, 61635), (112, 61650),

Gene: Clautastrophe\_94 Start: 61096, Stop: 61230, Start Num: 81

Candidate Starts for Clautastrophe\_94:

(Start: 81 @61096 has 15 MA's), (93, 61132), (95, 61135), (100, 61147), (112, 61198),

Gene: CloudWang3\_68 Start: 39697, Stop: 39464, Start Num: 50

Candidate Starts for CloudWang3\_68:

(Start: 40 @39727 has 3 MA's), (Start: 50 @39697 has 177 MA's), (55, 39679), (61, 39658), (71, 39631), (94, 39565), (105, 39538), (110, 39511), (118, 39472),

Gene: Cocoaberry\_62 Start: 40498, Stop: 40244, Start Num: 45

Candidate Starts for Cocoaberry\_62:

(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's), (58, 40447), (110, 40291), (118, 40252),

Gene: Colbster\_66 Start: 41201, Stop: 40944, Start Num: 45

Candidate Starts for Colbster\_66:

(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: Colin\_64 Start: 41389, Stop: 41159, Start Num: 50

Candidate Starts for Colin\_64:

(4, 41761), (13, 41566), (30, 41446), (Start: 40 @41419 has 3 MA's), (Start: 50 @41389 has 177 MA's), (55, 41371), (94, 41257), (101, 41242),

Gene: Commander\_61 Start: 40463, Stop: 40239, Start Num: 53

Candidate Starts for Commander\_61:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: ConceptII\_61 Start: 41437, Stop: 41303, Start Num: 80

Candidate Starts for ConceptII\_61:

(Start: 80 @41437 has 142 MA's), (112, 41335),

Gene: Connomayer\_62 Start: 40464, Stop: 40240, Start Num: 53  
Candidate Starts for Connomayer\_62:  
(Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Conquerage\_66 Start: 40403, Stop: 40170, Start Num: 50  
Candidate Starts for Conquerage\_66:  
(Start: 50 @40403 has 177 MA's), (55, 40385), (85, 40298), (94, 40271), (111, 40208), (115, 40193),

Gene: Cookiedough\_66 Start: 39083, Stop: 38850, Start Num: 50  
Candidate Starts for Cookiedough\_66:  
(Start: 50 @39083 has 177 MA's), (55, 39065), (61, 39044), (71, 39017), (Start: 74 @39002 has 48 MA's), (94, 38951), (101, 38936),

Gene: Corvo\_59 Start: 40902, Stop: 40759, Start Num: 74  
Candidate Starts for Corvo\_59:  
(Start: 74 @40902 has 48 MA's),

Gene: Crispicous1\_55 Start: 38394, Stop: 38260, Start Num: 80  
Candidate Starts for Crispicous1\_55:  
(Start: 80 @38394 has 142 MA's), (112, 38292),

Gene: Crossroads\_99 Start: 61475, Stop: 61657, Start Num: 65  
Candidate Starts for Crossroads\_99:  
(Start: 65 @61475 has 26 MA's), (78, 61511), (Start: 81 @61517 has 15 MA's), (89, 61544), (99, 61568), (109, 61598), (110, 61610), (112, 61625),

Gene: Crucio\_66 Start: 41335, Stop: 41105, Start Num: 50  
Candidate Starts for Crucio\_66:  
(Start: 50 @41335 has 177 MA's), (55, 41317), (60, 41299), (109, 41161),

Gene: Cueylyss\_59 Start: 41208, Stop: 40948, Start Num: 74  
Candidate Starts for Cueylyss\_59:  
(Start: 74 @41208 has 48 MA's), (98, 41148), (104, 41130), (122, 41007),

Gene: Cullens\_68 Start: 41170, Stop: 40940, Start Num: 51  
Candidate Starts for Cullens\_68:  
(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: D32\_67 Start: 41301, Stop: 41065, Start Num: 48  
Candidate Starts for D32\_67:  
(16, 41454), (Start: 43 @41328 has 1 MA's), (Start: 48 @41301 has 25 MA's), (54, 41283), (Start: 65 @41250 has 26 MA's), (96, 41163),

Gene: DBQu4n\_68 Start: 41336, Stop: 41046, Start Num: 32  
Candidate Starts for DBQu4n\_68:  
(Start: 32 @41336 has 1 MA's), (Start: 43 @41309 has 1 MA's), (Start: 48 @41282 has 25 MA's), (54, 41264), (Start: 65 @41231 has 26 MA's), (96, 41144),

Gene: DD5\_57 Start: 40238, Stop: 40095, Start Num: 74  
Candidate Starts for DD5\_57:  
(Start: 74 @40238 has 48 MA's), (112, 40127),

Gene: DaHudson\_67 Start: 41190, Stop: 40933, Start Num: 45

Candidate Starts for DaHudson\_67:

(Start: 45 @41190 has 23 MA's), (Start: 51 @41163 has 51 MA's), (96, 41034), (110, 40980),

Gene: DaVinci\_64 Start: 38509, Stop: 38276, Start Num: 50

Candidate Starts for DaVinci\_64:

(Start: 50 @38509 has 177 MA's), (55, 38491), (61, 38470), (71, 38443), (Start: 74 @38428 has 48 MA's), (94, 38377), (101, 38362),

Gene: Daishi\_67 Start: 40066, Stop: 39809, Start Num: 45

Candidate Starts for Daishi\_67:

(Start: 45 @40066 has 23 MA's), (Start: 51 @40039 has 51 MA's), (96, 39910), (110, 39856),

Gene: Dalmatian\_67 Start: 41532, Stop: 41302, Start Num: 50

Candidate Starts for Dalmatian\_67:

(3, 41907), (5, 41886), (15, 41697), (22, 41628), (27, 41616), (Start: 50 @41532 has 177 MA's), (55, 41514), (60, 41496), (110, 41346),

Gene: Darrell\_69 Start: 41231, Stop: 40998, Start Num: 50

Candidate Starts for Darrell\_69:

(Start: 50 @41231 has 177 MA's), (55, 41213), (105, 41072), (115, 41021),

Gene: DARTHPhader\_63 Start: 41641, Stop: 41408, Start Num: 50

Candidate Starts for DARTHPhader\_63:

(Start: 40 @41671 has 3 MA's), (Start: 50 @41641 has 177 MA's), (55, 41623), (Start: 65 @41590 has 26 MA's),

Gene: Datway\_60 Start: 40290, Stop: 40066, Start Num: 53

Candidate Starts for Datway\_60:

(Start: 42 @40332 has 21 MA's), (Start: 45 @40320 has 23 MA's), (Start: 53 @40290 has 135 MA's), (109, 40125), (110, 40113),

Gene: Deano\_60 Start: 40472, Stop: 40248, Start Num: 53

Candidate Starts for Deano\_60:

(Start: 42 @40514 has 21 MA's), (Start: 45 @40502 has 23 MA's), (Start: 53 @40472 has 135 MA's), (58, 40451), (110, 40295), (118, 40256),

Gene: Deloris\_66 Start: 41090, Stop: 40860, Start Num: 50

Candidate Starts for Deloris\_66:

(Start: 50 @41090 has 177 MA's), (55, 41072), (101, 40943), (110, 40904),

Gene: Dexes\_58 Start: 40275, Stop: 40141, Start Num: 80

Candidate Starts for Dexes\_58:

(Start: 80 @40275 has 142 MA's), (112, 40173),

Gene: Dhanush\_62 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Dhanush\_62:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Dieselweasel\_69 Start: 41173, Stop: 40943, Start Num: 51

Candidate Starts for Dieselweasel\_69:

(Start: 45 @41200 has 23 MA's), (Start: 51 @41173 has 51 MA's), (96, 41044), (110, 40990),

Gene: Dignity\_68 Start: 41750, Stop: 41520, Start Num: 50

Candidate Starts for Dignity\_68:

(Start: 50 @41750 has 177 MA's), (55, 41732), (101, 41603), (110, 41564),

Gene: DirtyDunning\_61 Start: 40479, Stop: 40255, Start Num: 53

Candidate Starts for DirtyDunning\_61:

(Start: 42 @40521 has 21 MA's), (Start: 45 @40509 has 23 MA's), (Start: 53 @40479 has 135 MA's), (58, 40458), (110, 40302), (118, 40263),

Gene: Doom\_56 Start: 39819, Stop: 39559, Start Num: 74

Candidate Starts for Doom\_56:

(Start: 74 @39819 has 48 MA's), (108, 39732), (121, 39630),

Gene: Dorothea\_63 Start: 39081, Stop: 38848, Start Num: 50

Candidate Starts for Dorothea\_63:

(Start: 50 @39081 has 177 MA's), (55, 39063), (61, 39042), (71, 39015), (94, 38949), (101, 38934),

Gene: Douge\_99 Start: 60951, Stop: 61124, Start Num: 65

Candidate Starts for Douge\_99:

(39, 60858), (Start: 44 @60873 has 1 MA's), (Start: 53 @60909 has 135 MA's), (Start: 65 @60951 has 26 MA's), (72, 60975), (Start: 81 @60993 has 15 MA's), (85, 61005), (89, 61020), (90, 61026), (109, 61065), (112, 61092),

Gene: DrFeelGood\_56 Start: 39234, Stop: 39100, Start Num: 80

Candidate Starts for DrFeelGood\_56:

(Start: 80 @39234 has 142 MA's), (112, 39132),

Gene: DrSeegs\_98 Start: 61845, Stop: 62027, Start Num: 65

Candidate Starts for DrSeegs\_98:

(Start: 63 @61842 has 4 MA's), (Start: 65 @61845 has 26 MA's), (72, 61869), (78, 61881), (Start: 81 @61887 has 15 MA's), (99, 61938), (109, 61968), (110, 61980), (112, 61995),

Gene: Drake55\_67 Start: 41178, Stop: 40948, Start Num: 50

Candidate Starts for Drake55\_67:

(Start: 50 @41178 has 177 MA's), (55, 41160), (60, 41142), (71, 41112), (110, 40995), (115, 40971),

Gene: Drake94\_59 Start: 39177, Stop: 38941, Start Num: 49

Candidate Starts for Drake94\_59:

(Start: 49 @39177 has 30 MA's), (55, 39156), (61, 39135), (94, 39042), (101, 39027),

Gene: DreamCatcher\_62 Start: 40897, Stop: 40763, Start Num: 80

Candidate Starts for DreamCatcher\_62:

(Start: 77 @40900 has 3 MA's), (Start: 80 @40897 has 142 MA's), (112, 40795),

Gene: DreamTeam1\_64 Start: 39893, Stop: 39750, Start Num: 50

Candidate Starts for DreamTeam1\_64:

(18, 40013), (20, 40007), (29, 39968), (Start: 40 @39926 has 3 MA's), (Start: 50 @39893 has 177 MA's), (55, 39875), (61, 39854), (Start: 65 @39842 has 26 MA's), (70, 39830), (118, 39758),

Gene: Dreamboat\_59 Start: 39108, Stop: 38848, Start Num: 74

Candidate Starts for Dreamboat\_59:

(Start: 74 @39108 has 48 MA's), (108, 39021), (121, 38919),

Gene: DroogsArmy\_61 Start: 43358, Stop: 43107, Start Num: 40

Candidate Starts for DroogsArmy\_61:

(Start: 40 @43358 has 3 MA's), (Start: 48 @43328 has 25 MA's), (55, 43307), (109, 43166),

Gene: Druantia\_61 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Druantia\_61:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: DudeLittle\_65 Start: 41298, Stop: 41068, Start Num: 50

Candidate Starts for DudeLittle\_65:

(3, 41673), (5, 41652), (15, 41463), (22, 41394), (27, 41382), (Start: 50 @41298 has 177 MA's), (55, 41280), (60, 41262), (110, 41112),

Gene: Dulcie\_58 Start: 39702, Stop: 39451, Start Num: 79

Candidate Starts for Dulcie\_58:

(Start: 79 @39702 has 6 MA's), (98, 39651), (104, 39633),

Gene: DuncansLeg\_97 Start: 61287, Stop: 61421, Start Num: 81

Candidate Starts for DuncansLeg\_97:

(Start: 73 @61272 has 1 MA's), (Start: 81 @61287 has 15 MA's), (93, 61323), (95, 61326), (100, 61338), (112, 61389),

Gene: Duplo\_68 Start: 41338, Stop: 41102, Start Num: 48

Candidate Starts for Duplo\_68:

(16, 41491), (Start: 43 @41365 has 1 MA's), (Start: 48 @41338 has 25 MA's), (54, 41320), (Start: 65 @41287 has 26 MA's), (96, 41200),

Gene: Dussy\_60 Start: 40880, Stop: 40746, Start Num: 80

Candidate Starts for Dussy\_60:

(Start: 80 @40880 has 142 MA's), (112, 40778),

Gene: Dynamix\_60 Start: 39645, Stop: 39502, Start Num: 74

Candidate Starts for Dynamix\_60:

(Start: 74 @39645 has 48 MA's),

Gene: DyoEdafos\_103 Start: 61511, Stop: 61684, Start Num: 64

Candidate Starts for DyoEdafos\_103:

(62, 61508), (Start: 64 @61511 has 1 MA's), (72, 61535), (78, 61547), (Start: 81 @61553 has 15 MA's), (84, 61562), (85, 61565), (89, 61580), (109, 61625), (112, 61652),

Gene: EZMoney23\_63 Start: 41001, Stop: 40768, Start Num: 50

Candidate Starts for EZMoney23\_63:

(Start: 50 @41001 has 177 MA's), (55, 40983), (85, 40896), (101, 40854), (115, 40791),

Gene: Eagle\_61 Start: 40489, Stop: 40265, Start Num: 53

Candidate Starts for Eagle\_61:

(Start: 53 @40489 has 135 MA's), (58, 40468), (110, 40312), (118, 40273),

Gene: EagleEye\_68 Start: 40411, Stop: 40178, Start Num: 49

Candidate Starts for EagleEye\_68:

(Start: 40 @40438 has 3 MA's), (Start: 49 @40411 has 30 MA's), (55, 40390), (109, 40237),

Gene: Eaglepride\_62 Start: 40120, Stop: 39884, Start Num: 49

Candidate Starts for Eaglepride\_62:

(Start: 49 @40120 has 30 MA's), (55, 40099), (86, 40012), (109, 39943),

Gene: Eapen\_62 Start: 40459, Stop: 40235, Start Num: 53

Candidate Starts for Eapen\_62:

(Start: 42 @40501 has 21 MA's), (Start: 45 @40489 has 23 MA's), (Start: 53 @40459 has 135 MA's), (58, 40438), (109, 40294), (110, 40282), (118, 40243),

Gene: Ebony\_66 Start: 40197, Stop: 39964, Start Num: 50

Candidate Starts for Ebony\_66:

(Start: 50 @40197 has 177 MA's), (55, 40179), (85, 40095), (103, 40035), (107, 40029),

Gene: Echild\_66 Start: 40693, Stop: 40460, Start Num: 50

Candidate Starts for Echild\_66:

(Start: 50 @40693 has 177 MA's), (55, 40675), (101, 40546), (110, 40507),

Gene: Edison31\_58 Start: 39960, Stop: 39727, Start Num: 49

Candidate Starts for Edison31\_58:

(Start: 40 @39987 has 3 MA's), (Start: 49 @39960 has 30 MA's), (55, 39939), (84, 39855),

Gene: Edtherson\_57 Start: 39654, Stop: 39520, Start Num: 80

Candidate Starts for Edtherson\_57:

(Start: 80 @39654 has 142 MA's), (112, 39552),

Gene: Eidsmoe\_66 Start: 40395, Stop: 40162, Start Num: 50

Candidate Starts for Eidsmoe\_66:

(Start: 50 @40395 has 177 MA's), (55, 40377), (85, 40290), (94, 40263), (111, 40200), (115, 40185),

Gene: EITiger69\_60 Start: 39467, Stop: 39201, Start Num: 50

Candidate Starts for EITiger69\_60:

(Start: 50 @39467 has 177 MA's), (59, 39434), (110, 39248),

Gene: Elephantoon\_66 Start: 40030, Stop: 39797, Start Num: 50

Candidate Starts for Elephantoon\_66:

(Start: 50 @40030 has 177 MA's), (55, 40012), (71, 39964), (105, 39871), (115, 39820),

Gene: Ellson\_95 Start: 61602, Stop: 61736, Start Num: 81

Candidate Starts for Ellson\_95:

(Start: 73 @61587 has 1 MA's), (Start: 81 @61602 has 15 MA's), (93, 61638), (95, 61641), (100, 61653), (112, 61704),

Gene: EmyBug\_65 Start: 40397, Stop: 40164, Start Num: 50

Candidate Starts for EmyBug\_65:

(Start: 50 @40397 has 177 MA's), (55, 40379), (85, 40292), (94, 40265), (111, 40202), (115, 40187),

Gene: EpicPhail\_69 Start: 41174, Stop: 40944, Start Num: 51

Candidate Starts for EpicPhail\_69:

(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: Equemioh13\_65 Start: 40980, Stop: 40750, Start Num: 50

Candidate Starts for Equemioh13\_65:

(Start: 50 @40980 has 177 MA's), (55, 40962), (60, 40944), (71, 40914), (110, 40797), (115, 40773),

Gene: EricB\_65 Start: 39061, Stop: 38828, Start Num: 50

Candidate Starts for EricB\_65:

(Start: 50 @39061 has 177 MA's), (55, 39043), (61, 39022), (71, 38995), (Start: 74 @38980 has 48 MA's), (94, 38929), (101, 38914),

Gene: Eris\_61 Start: 40509, Stop: 40255, Start Num: 45

Candidate Starts for Eris\_61:

(Start: 45 @40509 has 23 MA's), (Start: 53 @40479 has 135 MA's), (58, 40458), (110, 40302), (118, 40263),

Gene: Eros\_62 Start: 40466, Stop: 40242, Start Num: 53

Candidate Starts for Eros\_62:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Espresso\_57 Start: 40290, Stop: 40156, Start Num: 80

Candidate Starts for Espresso\_57:

(Start: 80 @40290 has 142 MA's), (112, 40188),

Gene: Et2Brutus\_65 Start: 40160, Stop: 39927, Start Num: 50

Candidate Starts for Et2Brutus\_65:

(Start: 50 @40160 has 177 MA's), (55, 40142), (85, 40058), (103, 39998), (107, 39992),

Gene: Euphoria\_56 Start: 39547, Stop: 39404, Start Num: 74

Candidate Starts for Euphoria\_56:

(Start: 74 @39547 has 48 MA's),

Gene: Eurydice\_63 Start: 40464, Stop: 40240, Start Num: 53

Candidate Starts for Eurydice\_63:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: EvilGenius\_67 Start: 42937, Stop: 42707, Start Num: 50

Candidate Starts for EvilGenius\_67:

(6, 43189), (9, 43141), (31, 42991), (Start: 50 @42937 has 177 MA's), (55, 42919), (101, 42790), (110, 42751),

Gene: ExplosioNervosa\_66 Start: 40463, Stop: 40230, Start Num: 50

Candidate Starts for ExplosioNervosa\_66:

(Start: 50 @40463 has 177 MA's), (55, 40445), (85, 40358), (94, 40331), (111, 40268), (115, 40253),

Gene: Eyeball\_59 Start: 39749, Stop: 39615, Start Num: 80

Candidate Starts for Eyeball\_59:

(Start: 80 @39749 has 142 MA's), (112, 39647),

Gene: Faith1\_99 Start: 61400, Stop: 61582, Start Num: 65

Candidate Starts for Faith1\_99:

(Start: 65 @61400 has 26 MA's), (78, 61436), (Start: 81 @61442 has 15 MA's), (89, 61469), (90, 61475), (99, 61493), (109, 61523), (110, 61535),



Gene: Fajezeel\_59 Start: 39720, Stop: 39586, Start Num: 80  
Candidate Starts for Fajezeel\_59:  
(Start: 80 @39720 has 142 MA's), (112, 39618),

Gene: Fameo\_66 Start: 41657, Stop: 41427, Start Num: 50  
Candidate Starts for Fameo\_66:  
(27, 41744), (34, 41702), (Start: 40 @41690 has 3 MA's), (Start: 50 @41657 has 177 MA's), (55, 41639), (60, 41621), (101, 41510), (110, 41471),

Gene: Farber\_68 Start: 41160, Stop: 40930, Start Num: 51  
Candidate Starts for Farber\_68:  
(Start: 45 @41187 has 23 MA's), (Start: 51 @41160 has 51 MA's), (96, 41031), (110, 40977),

Gene: Fascinus\_54 Start: 39859, Stop: 39725, Start Num: 80  
Candidate Starts for Fascinus\_54:  
(Start: 80 @39859 has 142 MA's), (112, 39757),

Gene: Fayely\_66 Start: 40364, Stop: 40131, Start Num: 50  
Candidate Starts for Fayely\_66:  
(Start: 50 @40364 has 177 MA's), (55, 40346), (85, 40259), (94, 40232), (111, 40169), (115, 40154),

Gene: Fenn\_61 Start: 41648, Stop: 41514, Start Num: 80  
Candidate Starts for Fenn\_61:  
(Start: 80 @41648 has 142 MA's), (112, 41546),

Gene: Fernando\_68 Start: 41170, Stop: 40940, Start Num: 51  
Candidate Starts for Fernando\_68:  
(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: Fibonacci\_66 Start: 40166, Stop: 39933, Start Num: 50  
Candidate Starts for Fibonacci\_66:  
(Start: 50 @40166 has 177 MA's), (55, 40148), (85, 40064), (103, 40004), (107, 39998),

Gene: Finemlucis\_100 Start: 62460, Stop: 62642, Start Num: 65  
Candidate Starts for Finemlucis\_100:  
(Start: 65 @62460 has 26 MA's), (78, 62496), (Start: 81 @62502 has 15 MA's), (89, 62529), (90, 62535), (99, 62553), (109, 62583), (110, 62595),

Gene: Finnry\_96 Start: 61449, Stop: 61583, Start Num: 81  
Candidate Starts for Finnry\_96:  
(Start: 81 @61449 has 15 MA's), (93, 61485), (95, 61488), (100, 61500), (112, 61551),

Gene: FiringLine\_66 Start: 41316, Stop: 41086, Start Num: 50  
Candidate Starts for FiringLine\_66:  
(Start: 50 @41316 has 177 MA's), (55, 41298), (60, 41280), (109, 41142),

Gene: First\_0067 Start: 41317, Stop: 41087, Start Num: 50  
Candidate Starts for First\_0067:  
(Start: 50 @41317 has 177 MA's), (55, 41299), (101, 41170), (110, 41131),

Gene: Flare16\_65 Start: 40736, Stop: 40506, Start Num: 50  
Candidate Starts for Flare16\_65:  
(Start: 50 @40736 has 177 MA's), (55, 40718), (60, 40700), (71, 40670), (110, 40553), (115, 40529),

Gene: Flaverint\_67 Start: 40624, Stop: 40391, Start Num: 50

Candidate Starts for Flaverint\_67:

(Start: 50 @40624 has 177 MA's), (55, 40606), (85, 40522), (103, 40462), (107, 40456),

Gene: Florean\_62 Start: 40463, Stop: 40239, Start Num: 53

Candidate Starts for Florean\_62:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: Flux\_62 Start: 40493, Stop: 40239, Start Num: 45

Candidate Starts for Flux\_62:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: Forsytheast\_57 Start: 39132, Stop: 38998, Start Num: 80

Candidate Starts for Forsytheast\_57:

(Start: 80 @39132 has 142 MA's), (112, 39030),

Gene: Francis47\_57 Start: 40917, Stop: 40783, Start Num: 80

Candidate Starts for Francis47\_57:

(Start: 80 @40917 has 142 MA's), (112, 40815),

Gene: Fred313\_63 Start: 40492, Stop: 40262, Start Num: 53

Candidate Starts for Fred313\_63:

(41, 40534), (Start: 45 @40522 has 23 MA's), (Start: 53 @40492 has 135 MA's), (67, 40447),

Gene: Froghopper\_55 Start: 38579, Stop: 38436, Start Num: 74

Candidate Starts for Froghopper\_55:

(Start: 74 @38579 has 48 MA's),

Gene: Funston\_61 Start: 40506, Stop: 40240, Start Num: 42

Candidate Starts for Funston\_61:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Fushigi\_55 Start: 38393, Stop: 38259, Start Num: 80

Candidate Starts for Fushigi\_55:

(Start: 80 @38393 has 142 MA's), (112, 38291),

Gene: Gabriela\_99 Start: 60746, Stop: 60928, Start Num: 65

Candidate Starts for Gabriela\_99:

(Start: 65 @60746 has 26 MA's), (78, 60782), (Start: 81 @60788 has 15 MA's), (89, 60815), (90, 60821), (99, 60839), (109, 60869), (110, 60881),

Gene: Gadost\_62 Start: 40468, Stop: 40244, Start Num: 53

Candidate Starts for Gadost\_62:

(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's), (58, 40447), (110, 40291), (118, 40252),

Gene: GageAP\_59 Start: 40447, Stop: 40187, Start Num: 74

Candidate Starts for GageAP\_59:

(Start: 74 @40447 has 48 MA's), (108, 40360), (119, 40300), (120, 40297),

Gene: Gail\_67 Start: 41407, Stop: 41258, Start Num: 50

Candidate Starts for Gail\_67:

(Start: 50 @41407 has 177 MA's), (55, 41389), (61, 41368),

Gene: Gandalf20\_61 Start: 41575, Stop: 41441, Start Num: 80

Candidate Starts for Gandalf20\_61:

(Start: 80 @41575 has 142 MA's), (112, 41473),

Gene: Garak\_68 Start: 39552, Stop: 39319, Start Num: 50

Candidate Starts for Garak\_68:

(Start: 40 @39582 has 3 MA's), (Start: 50 @39552 has 177 MA's), (55, 39534), (61, 39513), (71, 39486), (94, 39420), (105, 39393), (110, 39366), (118, 39327),

Gene: Gardann\_99 Start: 61193, Stop: 61375, Start Num: 65

Candidate Starts for Gardann\_99:

(Start: 65 @61193 has 26 MA's), (78, 61229), (Start: 81 @61235 has 15 MA's), (89, 61262), (90, 61268), (99, 61286), (109, 61316), (110, 61328),

Gene: GaugeLDP\_62 Start: 40923, Stop: 40693, Start Num: 49

Candidate Starts for GaugeLDP\_62:

(28, 41004), (Start: 40 @40953 has 3 MA's), (Start: 49 @40923 has 30 MA's), (54, 40905), (55, 40902), (96, 40788),

Gene: Gemma\_67 Start: 41052, Stop: 40822, Start Num: 52

Candidate Starts for Gemma\_67:

(Start: 52 @41052 has 16 MA's), (101, 40908), (110, 40869),

Gene: Georgie2\_67 Start: 41361, Stop: 41131, Start Num: 50

Candidate Starts for Georgie2\_67:

(Start: 50 @41361 has 177 MA's), (55, 41343), (60, 41325), (109, 41187),

Gene: Gilberta\_67 Start: 40617, Stop: 40384, Start Num: 50

Candidate Starts for Gilberta\_67:

(Start: 50 @40617 has 177 MA's), (55, 40599), (85, 40515), (103, 40455), (107, 40449),

Gene: GingkoMaracino\_68 Start: 41056, Stop: 40826, Start Num: 51

Candidate Starts for GingkoMaracino\_68:

(Start: 45 @41083 has 23 MA's), (Start: 51 @41056 has 51 MA's), (96, 40927), (110, 40873),

Gene: Giroux\_64 Start: 40895, Stop: 40665, Start Num: 53

Candidate Starts for Giroux\_64:

(41, 40937), (Start: 45 @40925 has 23 MA's), (Start: 53 @40895 has 135 MA's), (101, 40751), (102, 40748), (112, 40697),

Gene: Gladiator\_64 Start: 38807, Stop: 38544, Start Num: 40

Candidate Starts for Gladiator\_64:

(Start: 40 @38807 has 3 MA's), (Start: 44 @38795 has 1 MA's), (Start: 50 @38777 has 177 MA's), (55, 38759), (61, 38738), (71, 38711), (94, 38645), (105, 38618), (110, 38591), (118, 38552),

Gene: Gompeii16\_57 Start: 40581, Stop: 40447, Start Num: 80

Candidate Starts for Gompeii16\_57:

(Start: 80 @40581 has 142 MA's),

Gene: Goose\_62 Start: 39906, Stop: 39673, Start Num: 49

Candidate Starts for Goose\_62:

(Start: 49 @39906 has 30 MA's), (55, 39885),

Gene: Graduation\_62 Start: 41280, Stop: 41020, Start Num: 74

Candidate Starts for Graduation\_62:

(Start: 74 @41280 has 48 MA's), (98, 41220), (104, 41202), (122, 41079),

Gene: GrecoEtereo\_58 Start: 39479, Stop: 39345, Start Num: 80

Candidate Starts for GrecoEtereo\_58:

(Start: 80 @39479 has 142 MA's), (112, 39377),

Gene: GreedyLawyer\_63 Start: 39068, Stop: 38835, Start Num: 50

Candidate Starts for GreedyLawyer\_63:

(Start: 50 @39068 has 177 MA's), (55, 39050), (61, 39029), (71, 39002), (Start: 74 @38987 has 48 MA's), (94, 38936), (101, 38921),

Gene: Greg\_59 Start: 39720, Stop: 39586, Start Num: 80

Candidate Starts for Greg\_59:

(Start: 80 @39720 has 142 MA's), (112, 39618),

Gene: Grif\_68 Start: 41245, Stop: 41015, Start Num: 51

Candidate Starts for Grif\_68:

(Start: 45 @41272 has 23 MA's), (Start: 51 @41245 has 51 MA's), (96, 41116), (110, 41062),

Gene: Groupthink\_69 Start: 41056, Stop: 40826, Start Num: 52

Candidate Starts for Groupthink\_69:

(Start: 52 @41056 has 16 MA's), (101, 40912), (110, 40873),

Gene: Grub\_68 Start: 41162, Stop: 40932, Start Num: 51

Candidate Starts for Grub\_68:

(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: Grum1\_67 Start: 41170, Stop: 40940, Start Num: 51

Candidate Starts for Grum1\_67:

(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: Gruunaga\_67 Start: 39476, Stop: 39243, Start Num: 50

Candidate Starts for Gruunaga\_67:

(Start: 40 @39506 has 3 MA's), (Start: 50 @39476 has 177 MA's), (55, 39458), (61, 39437), (71, 39410), (94, 39344), (110, 39290), (118, 39251),

Gene: GtownJaz\_68 Start: 41172, Stop: 40942, Start Num: 51

Candidate Starts for GtownJaz\_68:

(Start: 45 @41199 has 23 MA's), (Start: 51 @41172 has 51 MA's), (96, 41043), (110, 40989),

Gene: GuuelaD\_96 Start: 61359, Stop: 61541, Start Num: 65

Candidate Starts for GuuelaD\_96:

(Start: 65 @61359 has 26 MA's), (78, 61395), (Start: 81 @61401 has 15 MA's), (89, 61428), (90, 61434), (99, 61452), (109, 61482), (110, 61494),

Gene: Gwendoluna\_61 Start: 41840, Stop: 41589, Start Num: 79

Candidate Starts for Gwendoluna\_61:  
(Start: 79 @41840 has 6 MA's), (98, 41789), (104, 41771),

Gene: Gyzlar\_54 Start: 37793, Stop: 37659, Start Num: 80  
Candidate Starts for Gyzlar\_54:  
(Start: 80 @37793 has 142 MA's), (112, 37691),

Gene: HINdeR\_62 Start: 43023, Stop: 42802, Start Num: 48  
Candidate Starts for HINdeR\_62:  
(11, 43197), (17, 43146), (Start: 48 @43023 has 25 MA's), (55, 43002),

Gene: Hafay\_100 Start: 61495, Stop: 61677, Start Num: 65  
Candidate Starts for Hafay\_100:  
(Start: 51 @61450 has 51 MA's), (Start: 63 @61492 has 4 MA's), (Start: 65 @61495 has 26 MA's),  
(Start: 73 @61522 has 1 MA's), (78, 61531), (89, 61564), (99, 61588), (109, 61618), (110, 61630),  
(112, 61645),

Gene: HamSlice\_59 Start: 40504, Stop: 40238, Start Num: 42  
Candidate Starts for HamSlice\_59:  
(Start: 42 @40504 has 21 MA's), (Start: 45 @40492 has 23 MA's), (Start: 53 @40462 has 135 MA's),  
(58, 40441), (110, 40285), (118, 40246),

Gene: Hami1\_50 Start: 34833, Stop: 34699, Start Num: 80  
Candidate Starts for Hami1\_50:  
(Start: 80 @34833 has 142 MA's), (112, 34731),

Gene: Hammer\_67 Start: 39083, Stop: 38850, Start Num: 50  
Candidate Starts for Hammer\_67:  
(Start: 40 @39113 has 3 MA's), (Start: 50 @39083 has 177 MA's), (55, 39065), (61, 39044), (71,  
39017), (94, 38951), (110, 38897), (118, 38858),

Gene: HanShotFirst\_59 Start: 40295, Stop: 40161, Start Num: 80  
Candidate Starts for HanShotFirst\_59:  
(Start: 80 @40295 has 142 MA's), (112, 40193),

Gene: Happiness\_61 Start: 40450, Stop: 40226, Start Num: 53  
Candidate Starts for Happiness\_61:  
(Start: 42 @40492 has 21 MA's), (Start: 45 @40480 has 23 MA's), (Start: 53 @40450 has 135 MA's),  
(58, 40429), (110, 40273), (118, 40234),

Gene: HarryHoudini\_66 Start: 41179, Stop: 40949, Start Num: 50  
Candidate Starts for HarryHoudini\_66:  
(Start: 50 @41179 has 177 MA's), (55, 41161), (60, 41143), (71, 41113), (110, 40996), (115, 40972),

Gene: HarryOW\_57 Start: 38977, Stop: 38843, Start Num: 80  
Candidate Starts for HarryOW\_57:  
(Start: 80 @38977 has 142 MA's), (112, 38875),

Gene: HashRod\_69 Start: 41198, Stop: 40968, Start Num: 51  
Candidate Starts for HashRod\_69:  
(Start: 45 @41225 has 23 MA's), (Start: 51 @41198 has 51 MA's), (96, 41069),

Gene: HaveUMetTed\_69 Start: 41041, Stop: 40811, Start Num: 52

Candidate Starts for HaveUMetTed\_69:

(Start: 52 @41041 has 16 MA's), (101, 40897), (110, 40858),

Gene: Heathen\_65 Start: 40587, Stop: 40357, Start Num: 53

Candidate Starts for Heathen\_65:

(41, 40629), (Start: 45 @40617 has 23 MA's), (Start: 53 @40587 has 135 MA's), (67, 40542),

Gene: Heffalump\_65 Start: 42125, Stop: 41895, Start Num: 50

Candidate Starts for Heffalump\_65:

(27, 42212), (Start: 40 @42158 has 3 MA's), (Start: 50 @42125 has 177 MA's), (55, 42107), (60, 42089), (110, 41939),

Gene: HelDan\_64 Start: 40803, Stop: 40573, Start Num: 53

Candidate Starts for HelDan\_64:

(41, 40845), (Start: 45 @40833 has 23 MA's), (Start: 53 @40803 has 135 MA's), (67, 40758),

Gene: Heliosoles\_67 Start: 41059, Stop: 40829, Start Num: 52

Candidate Starts for Heliosoles\_67:

(Start: 52 @41059 has 16 MA's), (101, 40915), (110, 40876),

Gene: Helmet\_68 Start: 39552, Stop: 39319, Start Num: 50

Candidate Starts for Helmet\_68:

(Start: 40 @39582 has 3 MA's), (Start: 50 @39552 has 177 MA's), (55, 39534), (61, 39513), (71, 39486), (94, 39420), (105, 39393), (110, 39366), (118, 39327),

Gene: Herbertwm\_62 Start: 40747, Stop: 40508, Start Num: 48

Candidate Starts for Herbertwm\_62:

(31, 40801), (Start: 48 @40747 has 25 MA's), (54, 40729),

Gene: Hercules11\_68 Start: 41206, Stop: 40949, Start Num: 45

Candidate Starts for Hercules11\_68:

(Start: 45 @41206 has 23 MA's), (Start: 51 @41179 has 51 MA's), (96, 41050), (110, 40996),

Gene: Hermia\_58 Start: 40152, Stop: 40018, Start Num: 80

Candidate Starts for Hermia\_58:

(Start: 80 @40152 has 142 MA's), (112, 40050),

Gene: HermioneGrange\_59 Start: 39701, Stop: 39567, Start Num: 80

Candidate Starts for HermioneGrange\_59:

(Start: 80 @39701 has 142 MA's), (112, 39599),

Gene: Hexamo\_67 Start: 39212, Stop: 38949, Start Num: 40

Candidate Starts for Hexamo\_67:

(Start: 40 @39212 has 3 MA's), (Start: 50 @39182 has 177 MA's), (55, 39164), (61, 39143), (71, 39116), (94, 39050), (105, 39023), (110, 38996), (118, 38957),

Gene: Holli\_61 Start: 40254, Stop: 40030, Start Num: 53

Candidate Starts for Holli\_61:

(Start: 42 @40296 has 21 MA's), (Start: 45 @40284 has 23 MA's), (Start: 53 @40254 has 135 MA's), (58, 40233), (110, 40077), (118, 40038),

Gene: Homines\_50 Start: 35670, Stop: 35527, Start Num: 74

Candidate Starts for Homines\_50:

(Start: 74 @35670 has 48 MA's), (112, 35559),

Gene: Hookmount\_64 Start: 40847, Stop: 40644, Start Num: 53

Candidate Starts for Hookmount\_64:

(Start: 45 @40877 has 23 MA's), (Start: 53 @40847 has 135 MA's), (98, 40718), (118, 40652),

Gene: Hoot\_61 Start: 36919, Stop: 36686, Start Num: 50

Candidate Starts for Hoot\_61:

(Start: 50 @36919 has 177 MA's), (55, 36901), (61, 36880), (71, 36853), (Start: 74 @36838 has 48 MA's), (94, 36787), (101, 36772),

Gene: Hope4ever\_60 Start: 40461, Stop: 40327, Start Num: 80

Candidate Starts for Hope4ever\_60:

(Start: 80 @40461 has 142 MA's), (112, 40359),

Gene: HortumSL17\_69 Start: 40727, Stop: 40578, Start Num: 50

Candidate Starts for HortumSL17\_69:

(Start: 50 @40727 has 177 MA's), (55, 40709), (71, 40661),

Gene: Houdini22\_61 Start: 40468, Stop: 40244, Start Num: 53

Candidate Starts for Houdini22\_61:

(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's), (58, 40447), (110, 40291), (118, 40252),

Gene: Hutc2\_65 Start: 40166, Stop: 39933, Start Num: 50

Candidate Starts for Hutc2\_65:

(Start: 50 @40166 has 177 MA's), (55, 40148), (85, 40064), (103, 40004), (107, 39998),

Gene: ICleared\_61 Start: 40496, Stop: 40272, Start Num: 53

Candidate Starts for ICleared\_61:

(Start: 42 @40538 has 21 MA's), (Start: 45 @40526 has 23 MA's), (Start: 53 @40496 has 135 MA's), (58, 40475), (110, 40319), (118, 40280),

Gene: ILeeKay\_61 Start: 40319, Stop: 40185, Start Num: 80

Candidate Starts for ILeeKay\_61:

(Start: 80 @40319 has 142 MA's), (112, 40217),

Gene: Iceman\_62 Start: 40753, Stop: 40529, Start Num: 53

Candidate Starts for Iceman\_62:

(Start: 42 @40795 has 21 MA's), (Start: 45 @40783 has 23 MA's), (Start: 53 @40753 has 135 MA's), (58, 40732), (110, 40576), (118, 40537),

Gene: Ichabod\_62 Start: 41147, Stop: 41004, Start Num: 74

Candidate Starts for Ichabod\_62:

(Start: 74 @41147 has 48 MA's), (112, 41036),

Gene: Idleandcovert\_65 Start: 40896, Stop: 40666, Start Num: 53

Candidate Starts for Idleandcovert\_65:

(41, 40938), (Start: 45 @40926 has 23 MA's), (Start: 53 @40896 has 135 MA's), (101, 40752), (102, 40749), (112, 40698),

Gene: IgnatiusPatJac\_58 Start: 39784, Stop: 39650, Start Num: 80

Candidate Starts for IgnatiusPatJac\_58:

(Start: 80 @39784 has 142 MA's), (112, 39682),

Gene: Indra\_70 Start: 39553, Stop: 39320, Start Num: 50

Candidate Starts for Indra\_70:

(Start: 40 @39583 has 3 MA's), (Start: 50 @39553 has 177 MA's), (55, 39535), (61, 39514), (71, 39487), (94, 39421), (105, 39394), (110, 39367), (118, 39328),

Gene: Insomnia\_67 Start: 40605, Stop: 40372, Start Num: 50

Candidate Starts for Insomnia\_67:

(Start: 50 @40605 has 177 MA's), (55, 40587), (85, 40503), (103, 40443), (107, 40437),

Gene: Iracema64\_63 Start: 40773, Stop: 40507, Start Num: 42

Candidate Starts for Iracema64\_63:

(Start: 42 @40773 has 21 MA's), (Start: 45 @40761 has 23 MA's), (Start: 53 @40731 has 135 MA's), (58, 40710), (110, 40554), (118, 40515),

Gene: IronMan\_64 Start: 41884, Stop: 41648, Start Num: 49

Candidate Starts for IronMan\_64:

(28, 41962), (Start: 40 @41911 has 3 MA's), (Start: 49 @41884 has 30 MA's), (55, 41863), (115, 41671), (118, 41656),

Gene: Isca\_63 Start: 40349, Stop: 40119, Start Num: 53

Candidate Starts for Isca\_63:

(41, 40391), (Start: 45 @40379 has 23 MA's), (Start: 53 @40349 has 135 MA's), (83, 40259), (101, 40205),

Gene: Isiphiwo\_64 Start: 38635, Stop: 38402, Start Num: 50

Candidate Starts for Isiphiwo\_64:

(Start: 50 @38635 has 177 MA's), (55, 38617), (61, 38596), (71, 38569), (Start: 74 @38554 has 48 MA's), (94, 38503), (101, 38488),

Gene: Itos\_99 Start: 60306, Stop: 60488, Start Num: 65

Candidate Starts for Itos\_99:

(Start: 65 @60306 has 26 MA's), (78, 60342), (Start: 81 @60348 has 15 MA's), (89, 60375), (90, 60381), (99, 60399), (109, 60429), (110, 60441),

Gene: Iwokeuplikedis\_67 Start: 40902, Stop: 40669, Start Num: 49

Candidate Starts for Iwokeuplikedis\_67:

(24, 40989), (31, 40953), (Start: 49 @40902 has 30 MA's), (55, 40881), (60, 40863), (94, 40770), (96, 40767), (115, 40692),

Gene: JC27\_61 Start: 40499, Stop: 40248, Start Num: 79

Candidate Starts for JC27\_61:

(Start: 76 @40502 has 4 MA's), (Start: 79 @40499 has 6 MA's), (98, 40448), (104, 40430), (113, 40385),

Gene: JF2\_63 Start: 39044, Stop: 38814, Start Num: 53

Candidate Starts for JF2\_63:

(41, 39086), (Start: 45 @39074 has 23 MA's), (Start: 53 @39044 has 135 MA's), (83, 38954),

Gene: JF4\_63 Start: 39044, Stop: 38814, Start Num: 53

Candidate Starts for JF4\_63:

(41, 39086), (Start: 45 @39074 has 23 MA's), (Start: 53 @39044 has 135 MA's), (83, 38954),



Gene: JHC117\_66 Start: 41169, Stop: 40939, Start Num: 51

Candidate Starts for JHC117\_66:

(Start: 45 @41196 has 23 MA's), (Start: 51 @41169 has 51 MA's), (96, 41040), (110, 40986),

Gene: Jaan\_65 Start: 42053, Stop: 41820, Start Num: 49

Candidate Starts for Jaan\_65:

(Start: 35 @42092 has 1 MA's), (Start: 40 @42080 has 3 MA's), (Start: 49 @42053 has 30 MA's), (55, 42032), (115, 41843), (118, 41828),

Gene: Jabiru\_59 Start: 39387, Stop: 39121, Start Num: 50

Candidate Starts for Jabiru\_59:

(Start: 50 @39387 has 177 MA's), (56, 39363), (59, 39354), (110, 39168),

Gene: Jabith\_67 Start: 40606, Stop: 40373, Start Num: 50

Candidate Starts for Jabith\_67:

(38, 40648), (Start: 50 @40606 has 177 MA's), (55, 40588), (85, 40504), (103, 40444), (107, 40438),

Gene: JackSparrow\_61 Start: 40371, Stop: 40237, Start Num: 80

Candidate Starts for JackSparrow\_61:

(Start: 80 @40371 has 142 MA's), (112, 40269),

Gene: Jasper\_59 Start: 38994, Stop: 38734, Start Num: 74

Candidate Starts for Jasper\_59:

(Start: 74 @38994 has 48 MA's), (108, 38907), (121, 38805),

Gene: Jaykayelowell\_59 Start: 40457, Stop: 40233, Start Num: 53

Candidate Starts for Jaykayelowell\_59:

(Start: 42 @40499 has 21 MA's), (Start: 45 @40487 has 23 MA's), (Start: 53 @40457 has 135 MA's), (58, 40436), (110, 40280), (118, 40241),

Gene: Jeeves\_69 Start: 40401, Stop: 40252, Start Num: 50

Candidate Starts for Jeeves\_69:

(Start: 50 @40401 has 177 MA's), (55, 40383), (61, 40362),

Gene: Jeffabunny\_67 Start: 39179, Stop: 38946, Start Num: 50

Candidate Starts for Jeffabunny\_67:

(Start: 40 @39209 has 3 MA's), (Start: 50 @39179 has 177 MA's), (55, 39161), (61, 39140), (71, 39113), (94, 39047), (105, 39020), (110, 38993), (118, 38954),

Gene: JenCasNa\_69 Start: 41170, Stop: 40940, Start Num: 51

Candidate Starts for JenCasNa\_69:

(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: JeppNRM\_69 Start: 41057, Stop: 40827, Start Num: 52

Candidate Starts for JeppNRM\_69:

(Start: 52 @41057 has 16 MA's), (101, 40913), (110, 40874),

Gene: Jerm\_68 Start: 41727, Stop: 41497, Start Num: 50

Candidate Starts for Jerm\_68:

(6, 41976), (31, 41781), (33, 41775), (Start: 50 @41727 has 177 MA's), (55, 41709), (101, 41580), (110, 41541),

Gene: Jerm2\_59 Start: 39956, Stop: 39822, Start Num: 80

Candidate Starts for Jerm2\_59:

(Start: 80 @39956 has 142 MA's), (112, 39854),

Gene: JetBlade\_62 Start: 40458, Stop: 40234, Start Num: 53

Candidate Starts for JetBlade\_62:

(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's), (58, 40437), (110, 40281), (118, 40242),

Gene: JewelBug\_66 Start: 39340, Stop: 39107, Start Num: 50

Candidate Starts for JewelBug\_66:

(Start: 50 @39340 has 177 MA's), (55, 39322), (61, 39301), (71, 39274), (Start: 74 @39259 has 48 MA's), (94, 39208), (101, 39193),

Gene: Jobu08\_66 Start: 41002, Stop: 40772, Start Num: 51

Candidate Starts for Jobu08\_66:

(Start: 45 @41029 has 23 MA's), (Start: 51 @41002 has 51 MA's), (96, 40873), (110, 40819), (112, 40804),

Gene: Jobypre\_97 Start: 61096, Stop: 61230, Start Num: 81

Candidate Starts for Jobypre\_97:

(Start: 81 @61096 has 15 MA's), (93, 61132), (95, 61135), (100, 61147), (112, 61198),

Gene: JoongJeon\_61 Start: 40503, Stop: 40237, Start Num: 42

Candidate Starts for JoongJeon\_61:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Jordennis\_65 Start: 38821, Stop: 38588, Start Num: 50

Candidate Starts for Jordennis\_65:

(Start: 50 @38821 has 177 MA's), (55, 38803), (61, 38782), (71, 38755), (94, 38689), (101, 38674),

Gene: Jorgensen\_59 Start: 39780, Stop: 39646, Start Num: 80

Candidate Starts for Jorgensen\_59:

(Start: 80 @39780 has 142 MA's), (112, 39678),

Gene: Joselito\_67 Start: 40626, Stop: 40393, Start Num: 50

Candidate Starts for Joselito\_67:

(38, 40668), (Start: 50 @40626 has 177 MA's), (55, 40608), (85, 40524), (103, 40464), (107, 40458),

Gene: JoshKayV\_67 Start: 41782, Stop: 41552, Start Num: 50

Candidate Starts for JoshKayV\_67:

(31, 41836), (33, 41830), (Start: 50 @41782 has 177 MA's), (55, 41764), (101, 41635), (110, 41596),

Gene: Journey13\_59 Start: 38823, Stop: 38584, Start Num: 48

Candidate Starts for Journey13\_59:

(Start: 48 @38823 has 25 MA's), (54, 38805), (Start: 65 @38772 has 26 MA's), (106, 38655),

Gene: Jsquared\_69 Start: 40546, Stop: 40310, Start Num: 48

Candidate Starts for Jsquared\_69:

(Start: 43 @40573 has 1 MA's), (Start: 48 @40546 has 25 MA's), (54, 40528), (Start: 65 @40495 has 26 MA's), (96, 40408),

Gene: Jubie\_95 Start: 61231, Stop: 61365, Start Num: 81  
Candidate Starts for Jubie\_95:  
(Start: 81 @61231 has 15 MA's), (93, 61267), (95, 61270), (100, 61282), (112, 61333),

Gene: JuliaChild\_59 Start: 39638, Stop: 39504, Start Num: 80  
Candidate Starts for JuliaChild\_59:  
(Start: 80 @39638 has 142 MA's), (112, 39536),

Gene: KADY\_67 Start: 41198, Stop: 40968, Start Num: 51  
Candidate Starts for KADY\_67:  
(Start: 45 @41225 has 23 MA's), (Start: 51 @41198 has 51 MA's), (96, 41069),

Gene: KBG\_59 Start: 41762, Stop: 41628, Start Num: 80  
Candidate Starts for KBG\_59:  
(Start: 80 @41762 has 142 MA's), (112, 41660),

Gene: KFPoly\_61 Start: 40500, Stop: 40234, Start Num: 42  
Candidate Starts for KFPoly\_61:  
(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's),  
(58, 40437), (110, 40281), (118, 40242),

Gene: KSSJEB\_58 Start: 39422, Stop: 39279, Start Num: 74  
Candidate Starts for KSSJEB\_58:  
(Start: 74 @39422 has 48 MA's), (112, 39311),

Gene: Kahlid\_98 Start: 61111, Stop: 61293, Start Num: 65  
Candidate Starts for Kahlid\_98:  
(Start: 65 @61111 has 26 MA's), (78, 61147), (Start: 81 @61153 has 15 MA's), (89, 61180), (90,  
61186), (99, 61204), (109, 61234), (110, 61246),

Gene: Kalb97\_69 Start: 41055, Stop: 40825, Start Num: 52  
Candidate Starts for Kalb97\_69:  
(Start: 52 @41055 has 16 MA's), (101, 40911), (110, 40872),

Gene: Kalnoky\_69 Start: 41053, Stop: 40823, Start Num: 52  
Candidate Starts for Kalnoky\_69:  
(Start: 52 @41053 has 16 MA's), (101, 40909), (110, 40870),

Gene: Kalpine\_65 Start: 41568, Stop: 41335, Start Num: 50  
Candidate Starts for Kalpine\_65:  
(25, 41655), (27, 41652), (Start: 40 @41598 has 3 MA's), (Start: 50 @41568 has 177 MA's), (55,  
41550), (85, 41463), (94, 41436), (101, 41421), (115, 41358),

Gene: Kampy\_61 Start: 40466, Stop: 40242, Start Num: 53  
Candidate Starts for Kampy\_61:  
(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's),  
(58, 40445), (110, 40289), (118, 40250),

Gene: Kanely\_60 Start: 40359, Stop: 40225, Start Num: 80  
Candidate Starts for Kanely\_60:  
(Start: 80 @40359 has 142 MA's), (112, 40257),

Gene: Katalie136\_60 Start: 40304, Stop: 40080, Start Num: 53

Candidate Starts for Katalie136\_60:

(Start: 42 @40346 has 21 MA's), (Start: 45 @40334 has 23 MA's), (Start: 53 @40304 has 135 MA's), (109, 40139), (110, 40127),

Gene: Kazan\_67 Start: 39074, Stop: 38841, Start Num: 50

Candidate Starts for Kazan\_67:

(Start: 50 @39074 has 177 MA's), (55, 39056), (61, 39035), (71, 39008), (Start: 74 @38993 has 48 MA's), (94, 38942), (101, 38927),

Gene: Kenmech\_63 Start: 42006, Stop: 41872, Start Num: 80

Candidate Starts for Kenmech\_63:

(Start: 80 @42006 has 142 MA's), (112, 41904),

Gene: Kerberos\_68 Start: 41300, Stop: 41064, Start Num: 48

Candidate Starts for Kerberos\_68:

(16, 41453), (Start: 43 @41327 has 1 MA's), (Start: 48 @41300 has 25 MA's), (54, 41282), (Start: 65 @41249 has 26 MA's), (96, 41162),

Gene: Keziacharles14\_66 Start: 41498, Stop: 41355, Start Num: 50

Candidate Starts for Keziacharles14\_66:

(Start: 50 @41498 has 177 MA's), (55, 41480), (Start: 65 @41447 has 26 MA's), (118, 41363),

Gene: Killigrew\_58 Start: 40539, Stop: 40405, Start Num: 80

Candidate Starts for Killigrew\_58:

(Start: 80 @40539 has 142 MA's), (112, 40437),

Gene: Kimona\_60 Start: 39068, Stop: 38832, Start Num: 49

Candidate Starts for Kimona\_60:

(7, 39287), (Start: 49 @39068 has 30 MA's), (55, 39047), (Start: 65 @39014 has 26 MA's), (109, 38891),

Gene: KingCyrus\_67 Start: 42932, Stop: 42702, Start Num: 50

Candidate Starts for KingCyrus\_67:

(6, 43184), (9, 43136), (31, 42986), (Start: 50 @42932 has 177 MA's), (55, 42914), (101, 42785), (110, 42746),

Gene: Kingmustik0402\_62 Start: 40453, Stop: 40229, Start Num: 53

Candidate Starts for Kingmustik0402\_62:

(Start: 42 @40495 has 21 MA's), (Start: 45 @40483 has 23 MA's), (Start: 53 @40453 has 135 MA's), (58, 40432), (110, 40276), (118, 40237),

Gene: Kingsolomon\_94 Start: 61205, Stop: 61339, Start Num: 81

Candidate Starts for Kingsolomon\_94:

(Start: 81 @61205 has 15 MA's), (93, 61241), (95, 61244), (100, 61256), (112, 61307),

Gene: Kipper29\_66 Start: 39087, Stop: 38854, Start Num: 50

Candidate Starts for Kipper29\_66:

(Start: 50 @39087 has 177 MA's), (55, 39069), (61, 39048), (71, 39021), (Start: 74 @39006 has 48 MA's), (94, 38955), (101, 38940),

Gene: KittenMittens\_58 Start: 39185, Stop: 38949, Start Num: 49

Candidate Starts for KittenMittens\_58:

(Start: 49 @39185 has 30 MA's), (55, 39164), (61, 39143), (94, 39050), (101, 39035),

Gene: Koduck\_67 Start: 40131, Stop: 39895, Start Num: 48

Candidate Starts for Koduck\_67:

(Start: 43 @40158 has 1 MA's), (Start: 48 @40131 has 25 MA's), (54, 40113), (Start: 65 @40080 has 26 MA's), (96, 39993),

Gene: Koko\_69 Start: 40037, Stop: 39804, Start Num: 50

Candidate Starts for Koko\_69:

(Start: 40 @40067 has 3 MA's), (Start: 50 @40037 has 177 MA's), (55, 40019), (61, 39998), (71, 39971), (94, 39905), (105, 39878), (110, 39851), (118, 39812),

Gene: Koreni\_61 Start: 40145, Stop: 39921, Start Num: 53

Candidate Starts for Koreni\_61:

(Start: 42 @40187 has 21 MA's), (Start: 45 @40175 has 23 MA's), (Start: 53 @40145 has 135 MA's), (58, 40124), (110, 39968), (118, 39929),

Gene: Kratark\_61 Start: 40504, Stop: 40238, Start Num: 42

Candidate Starts for Kratark\_61:

(Start: 42 @40504 has 21 MA's), (Start: 45 @40492 has 23 MA's), (Start: 53 @40462 has 135 MA's), (58, 40441), (110, 40285), (118, 40246),

Gene: Kremtemulon\_59 Start: 40570, Stop: 40346, Start Num: 53

Candidate Starts for Kremtemulon\_59:

(Start: 42 @40612 has 21 MA's), (Start: 45 @40600 has 23 MA's), (Start: 53 @40570 has 135 MA's), (58, 40549), (110, 40393),

Gene: Kristoff\_61 Start: 40482, Stop: 40249, Start Num: 49

Candidate Starts for Kristoff\_61:

(Start: 40 @40509 has 3 MA's), (Start: 49 @40482 has 30 MA's), (55, 40461), (84, 40377),

Gene: Krypton555\_99 Start: 61780, Stop: 61914, Start Num: 81

Candidate Starts for Krypton555\_99:

(Start: 73 @61765 has 1 MA's), (Start: 81 @61780 has 15 MA's), (93, 61816), (95, 61819), (100, 61831), (112, 61882), (114, 61888),

Gene: Kugel\_58 Start: 40607, Stop: 40473, Start Num: 80

Candidate Starts for Kugel\_58:

(Start: 80 @40607 has 142 MA's), (112, 40505),

Gene: KyMonks1A\_61 Start: 40000, Stop: 39857, Start Num: 74

Candidate Starts for KyMonks1A\_61:

(Start: 74 @40000 has 48 MA's), (112, 39889),

Gene: Kyee\_62 Start: 40462, Stop: 40238, Start Num: 53

Candidate Starts for Kyee\_62:

(Start: 42 @40504 has 21 MA's), (Start: 45 @40492 has 23 MA's), (Start: 53 @40462 has 135 MA's), (58, 40441), (110, 40285), (118, 40246),

Gene: Kykar\_58 Start: 39437, Stop: 39303, Start Num: 80

Candidate Starts for Kykar\_58:

(Start: 80 @39437 has 142 MA's), (112, 39335),

Gene: L5\_63 Start: 40284, Stop: 40048, Start Num: 48

Candidate Starts for L5\_63:

(Start: 43 @40311 has 1 MA's), (Start: 48 @40284 has 25 MA's), (54, 40266), (Start: 65 @40233 has 26 MA's), (96, 40146),

Gene: LBerry\_69 Start: 41174, Stop: 40944, Start Num: 51

Candidate Starts for LBerry\_69:

(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: LHTSCC\_64 Start: 40867, Stop: 40643, Start Num: 53

Candidate Starts for LHTSCC\_64:

(Start: 42 @40909 has 21 MA's), (Start: 45 @40897 has 23 MA's), (Start: 53 @40867 has 135 MA's), (58, 40846), (110, 40690), (118, 40651),

Gene: LadyBird\_70 Start: 42006, Stop: 41776, Start Num: 50

Candidate Starts for LadyBird\_70:

(Start: 50 @42006 has 177 MA's), (55, 41988), (101, 41859), (110, 41820),

Gene: Lambert1\_64 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for Lambert1\_64:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Lamina13\_60 Start: 39739, Stop: 39605, Start Num: 80

Candidate Starts for Lamina13\_60:

(Start: 80 @39739 has 142 MA's), (112, 39637),

Gene: Landor\_64 Start: 41962, Stop: 41726, Start Num: 49

Candidate Starts for Landor\_64:

(Start: 40 @41989 has 3 MA's), (Start: 49 @41962 has 30 MA's), (55, 41941), (115, 41749), (118, 41734),

Gene: LappelDuVide\_59 Start: 40463, Stop: 40239, Start Num: 53

Candidate Starts for LappelDuVide\_59:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: Larenn\_63 Start: 41019, Stop: 40783, Start Num: 49

Candidate Starts for Larenn\_63:

(27, 41103), (Start: 40 @41049 has 3 MA's), (Start: 49 @41019 has 30 MA's), (55, 40998), (60, 40980), (101, 40869), (110, 40830),

Gene: LarryKay\_68 Start: 41200, Stop: 40970, Start Num: 51

Candidate Starts for LarryKay\_68:

(Start: 45 @41227 has 23 MA's), (Start: 51 @41200 has 51 MA's), (96, 41071), (110, 41017),

Gene: Lemur\_62 Start: 40503, Stop: 40237, Start Num: 42

Candidate Starts for Lemur\_62:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: LeoAvram\_61 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for LeoAvram\_61:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Leogania\_67 Start: 42317, Stop: 42087, Start Num: 50  
Candidate Starts for Leogania\_67:  
(Start: 40 @42347 has 3 MA's), (Start: 50 @42317 has 177 MA's), (55, 42299), (110, 42134), (115, 42110),

Gene: Lesedi\_54 Start: 38344, Stop: 38210, Start Num: 80  
Candidate Starts for Lesedi\_54:  
(Start: 80 @38344 has 142 MA's), (112, 38242),

Gene: Leviathan\_68 Start: 41799, Stop: 41569, Start Num: 50  
Candidate Starts for Leviathan\_68:  
(Start: 50 @41799 has 177 MA's), (55, 41781), (101, 41652), (110, 41613),

Gene: Lewan\_100 Start: 61399, Stop: 61581, Start Num: 65  
Candidate Starts for Lewan\_100:  
(Start: 65 @61399 has 26 MA's), (78, 61435), (Start: 81 @61441 has 15 MA's), (89, 61468), (90, 61474), (99, 61492), (109, 61522), (110, 61534),

Gene: Licorice\_60 Start: 41831, Stop: 41574, Start Num: 76  
Candidate Starts for Licorice\_60:  
(Start: 76 @41831 has 4 MA's), (98, 41774), (104, 41756),

Gene: LilBib\_58 Start: 41131, Stop: 40988, Start Num: 74  
Candidate Starts for LilBib\_58:  
(Start: 74 @41131 has 48 MA's), (112, 41020),

Gene: LilDestine\_97 Start: 61070, Stop: 61252, Start Num: 65  
Candidate Starts for LilDestine\_97:  
(Start: 65 @61070 has 26 MA's), (78, 61106), (Start: 81 @61112 has 15 MA's), (89, 61139), (90, 61145), (99, 61163), (109, 61193), (110, 61205),

Gene: LilTurb\_67 Start: 41609, Stop: 41379, Start Num: 50  
Candidate Starts for LilTurb\_67:  
(6, 41858), (31, 41663), (33, 41657), (Start: 50 @41609 has 177 MA's), (55, 41591), (101, 41462), (110, 41423),

Gene: Lilbunny\_64 Start: 39183, Stop: 38950, Start Num: 50  
Candidate Starts for Lilbunny\_64:  
(Start: 40 @39213 has 3 MA's), (Start: 50 @39183 has 177 MA's), (55, 39165), (61, 39144), (71, 39117), (94, 39051), (105, 39024), (110, 38997), (118, 38958),

Gene: Lilit\_67 Start: 41163, Stop: 40933, Start Num: 51  
Candidate Starts for Lilit\_67:  
(Start: 45 @41190 has 23 MA's), (Start: 51 @41163 has 51 MA's), (96, 41034), (110, 40980),

Gene: LittleB\_62 Start: 40465, Stop: 40241, Start Num: 53  
Candidate Starts for LittleB\_62:  
(Start: 42 @40507 has 21 MA's), (Start: 45 @40495 has 23 MA's), (Start: 53 @40465 has 135 MA's), (58, 40444), (110, 40288), (118, 40249),

Gene: LittleGuy\_62 Start: 40390, Stop: 40136, Start Num: 45  
Candidate Starts for LittleGuy\_62:

(Start: 42 @40402 has 21 MA's), (Start: 45 @40390 has 23 MA's), (Start: 53 @40360 has 135 MA's), (58, 40339), (110, 40183), (118, 40144),

Gene: Loadrie\_98 Start: 61561, Stop: 61743, Start Num: 65

Candidate Starts for Loadrie\_98:

(Start: 65 @61561 has 26 MA's), (78, 61597), (Start: 81 @61603 has 15 MA's), (89, 61630), (90, 61636), (99, 61654), (109, 61684), (110, 61696),

Gene: LochMonster\_63 Start: 40703, Stop: 40479, Start Num: 53

Candidate Starts for LochMonster\_63:

(Start: 42 @40745 has 21 MA's), (Start: 45 @40733 has 23 MA's), (Start: 53 @40703 has 135 MA's), (58, 40682), (110, 40526), (118, 40487),

Gene: Lockley\_56 Start: 39400, Stop: 39257, Start Num: 74

Candidate Starts for Lockley\_56:

(Start: 74 @39400 has 48 MA's), (112, 39289),

Gene: Lokk\_61 Start: 40288, Stop: 40058, Start Num: 50

Candidate Starts for Lokk\_61:

(Start: 50 @40288 has 177 MA's), (55, 40270), (85, 40183), (96, 40156), (110, 40105), (118, 40066),

Gene: Lolly9\_96 Start: 61453, Stop: 61587, Start Num: 81

Candidate Starts for Lolly9\_96:

(Start: 73 @61438 has 1 MA's), (Start: 81 @61453 has 15 MA's), (93, 61489), (95, 61492), (100, 61504), (112, 61555),

Gene: LoneWolf\_68 Start: 40713, Stop: 40483, Start Num: 50

Candidate Starts for LoneWolf\_68:

(Start: 50 @40713 has 177 MA's), (55, 40695), (111, 40518), (115, 40503),

Gene: Lopton\_58 Start: 41812, Stop: 41678, Start Num: 80

Candidate Starts for Lopton\_58:

(Start: 80 @41812 has 142 MA's), (112, 41710),

Gene: Lorenzo\_62 Start: 40464, Stop: 40240, Start Num: 53

Candidate Starts for Lorenzo\_62:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Loser\_68 Start: 41965, Stop: 41732, Start Num: 50

Candidate Starts for Loser\_68:

(Start: 40 @41995 has 3 MA's), (Start: 50 @41965 has 177 MA's), (55, 41947), (Start: 65 @41914 has 26 MA's), (94, 41833), (101, 41818),

Gene: Louie6\_67 Start: 41199, Stop: 40969, Start Num: 52

Candidate Starts for Louie6\_67:

(Start: 52 @41199 has 16 MA's), (96, 41070),

Gene: Luchador\_68 Start: 41978, Stop: 41829, Start Num: 50

Candidate Starts for Luchador\_68:

(Start: 40 @42008 has 3 MA's), (Start: 50 @41978 has 177 MA's), (55, 41960), (61, 41939),

Gene: Lucivia\_67 Start: 40675, Stop: 40442, Start Num: 50



Candidate Starts for Lucivia\_67:

(Start: 50 @40675 has 177 MA's), (55, 40657), (85, 40573), (103, 40513), (107, 40507),

Gene: Lucyedi\_67 Start: 40607, Stop: 40374, Start Num: 49

Candidate Starts for Lucyedi\_67:

(Start: 40 @40634 has 3 MA's), (Start: 49 @40607 has 30 MA's), (55, 40586), (109, 40433),

Gene: LugYA\_71 Start: 41171, Stop: 40941, Start Num: 51

Candidate Starts for LugYA\_71:

(Start: 45 @41198 has 23 MA's), (Start: 51 @41171 has 51 MA's), (96, 41042), (110, 40988),

Gene: Lumos\_96 Start: 61093, Stop: 61227, Start Num: 81

Candidate Starts for Lumos\_96:

(Start: 81 @61093 has 15 MA's), (93, 61129), (95, 61132), (100, 61144), (112, 61195),

Gene: Lunsford\_63 Start: 40458, Stop: 40234, Start Num: 53

Candidate Starts for Lunsford\_63:

(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's), (58, 40437), (110, 40281), (118, 40242),

Gene: MA5\_65 Start: 40253, Stop: 40023, Start Num: 53

Candidate Starts for MA5\_65:

(41, 40295), (Start: 45 @40283 has 23 MA's), (Start: 53 @40253 has 135 MA's), (83, 40163),

Gene: MK4\_65 Start: 40328, Stop: 40098, Start Num: 53

Candidate Starts for MK4\_65:

(41, 40370), (Start: 45 @40358 has 23 MA's), (Start: 53 @40328 has 135 MA's), (83, 40238),

Gene: MPlant7149\_57 Start: 38517, Stop: 38383, Start Num: 80

Candidate Starts for MPlant7149\_57:

(Start: 80 @38517 has 142 MA's), (112, 38415),

Gene: MaCh\_66 Start: 40605, Stop: 40372, Start Num: 50

Candidate Starts for MaCh\_66:

(38, 40647), (Start: 50 @40605 has 177 MA's), (55, 40587), (85, 40503), (103, 40443), (107, 40437),

Gene: Mabel\_66 Start: 40622, Stop: 40389, Start Num: 50

Candidate Starts for Mabel\_66:

(Start: 50 @40622 has 177 MA's), (55, 40604), (85, 40520), (103, 40460), (107, 40454),

Gene: MadMarie\_68 Start: 41172, Stop: 40942, Start Num: 51

Candidate Starts for MadMarie\_68:

(Start: 45 @41199 has 23 MA's), (Start: 51 @41172 has 51 MA's), (96, 41043), (110, 40989),

Gene: Magnar\_56 Start: 39959, Stop: 39825, Start Num: 80

Candidate Starts for Magnar\_56:

(Start: 80 @39959 has 142 MA's), (112, 39857),

Gene: Magnito\_57 Start: 39684, Stop: 39550, Start Num: 80

Candidate Starts for Magnito\_57:

(Start: 80 @39684 has 142 MA's), (112, 39582),

Gene: Mainiac\_68 Start: 41164, Stop: 40934, Start Num: 51

Candidate Starts for Mainiac\_68:

(Start: 45 @41191 has 23 MA's), (Start: 51 @41164 has 51 MA's), (96, 41035), (110, 40981),

Gene: Makemake\_59 Start: 40359, Stop: 40216, Start Num: 74

Candidate Starts for Makemake\_59:

(Start: 74 @40359 has 48 MA's), (112, 40248),

Gene: Malec\_64 Start: 41586, Stop: 41350, Start Num: 49

Candidate Starts for Malec\_64:

(27, 41670), (Start: 40 @41616 has 3 MA's), (Start: 49 @41586 has 30 MA's), (55, 41565), (60, 41547), (101, 41436), (110, 41397),

Gene: Malinsilva\_70 Start: 41162, Stop: 40932, Start Num: 51

Candidate Starts for Malinsilva\_70:

(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: Maminiaina\_67 Start: 40688, Stop: 40455, Start Num: 50

Candidate Starts for Maminiaina\_67:

(Start: 50 @40688 has 177 MA's), (55, 40670), (94, 40556), (115, 40478),

Gene: Manatee\_59 Start: 40057, Stop: 39914, Start Num: 74

Candidate Starts for Manatee\_59:

(Start: 74 @40057 has 48 MA's),

Gene: Manu\_68 Start: 41056, Stop: 40826, Start Num: 52

Candidate Starts for Manu\_68:

(Start: 52 @41056 has 16 MA's), (101, 40912), (110, 40873),

Gene: MarQuardt\_68 Start: 41172, Stop: 40942, Start Num: 51

Candidate Starts for MarQuardt\_68:

(Start: 45 @41199 has 23 MA's), (Start: 51 @41172 has 51 MA's), (96, 41043), (110, 40989),

Gene: Marcell\_55 Start: 38966, Stop: 38832, Start Num: 80

Candidate Starts for Marcell\_55:

(Start: 80 @38966 has 142 MA's), (112, 38864),

Gene: Marchy\_51 Start: 37054, Stop: 36920, Start Num: 80

Candidate Starts for Marchy\_51:

(Start: 80 @37054 has 142 MA's), (112, 36952),

Gene: Marge\_57 Start: 39855, Stop: 39721, Start Num: 80

Candidate Starts for Marge\_57:

(Start: 80 @39855 has 142 MA's), (112, 39753),

Gene: Margo\_64 Start: 40872, Stop: 40669, Start Num: 53

Candidate Starts for Margo\_64:

(Start: 45 @40902 has 23 MA's), (Start: 53 @40872 has 135 MA's), (98, 40743), (118, 40677),

Gene: Marie\_66 Start: 41170, Stop: 40940, Start Num: 51

Candidate Starts for Marie\_66:

(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: Marius\_69 Start: 41053, Stop: 40823, Start Num: 52

Candidate Starts for Marius\_69:  
(Start: 52 @41053 has 16 MA's), (101, 40909), (110, 40870),

Gene: Maroc7\_56 Start: 40254, Stop: 40120, Start Num: 80  
Candidate Starts for Maroc7\_56:  
(Start: 80 @40254 has 142 MA's), (112, 40152),

Gene: Marsha\_57 Start: 40396, Stop: 40262, Start Num: 80  
Candidate Starts for Marsha\_57:  
(Start: 80 @40396 has 142 MA's), (112, 40294),

Gene: MaryBeth\_57 Start: 40279, Stop: 40136, Start Num: 74  
Candidate Starts for MaryBeth\_57:  
(Start: 74 @40279 has 48 MA's),

Gene: Maverick\_61 Start: 40494, Stop: 40240, Start Num: 45  
Candidate Starts for Maverick\_61:  
(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's),  
(58, 40443), (110, 40287), (118, 40248),

Gene: Maxo\_63 Start: 40466, Stop: 40242, Start Num: 53  
Candidate Starts for Maxo\_63:  
(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's),  
(58, 40445), (110, 40289), (118, 40250),

Gene: Mazhar510\_62 Start: 40465, Stop: 40241, Start Num: 53  
Candidate Starts for Mazhar510\_62:  
(Start: 42 @40507 has 21 MA's), (Start: 45 @40495 has 23 MA's), (Start: 53 @40465 has 135 MA's),  
(58, 40444), (110, 40288), (118, 40249),

Gene: McFly\_66 Start: 39068, Stop: 38835, Start Num: 50  
Candidate Starts for McFly\_66:  
(Start: 50 @39068 has 177 MA's), (55, 39050), (61, 39029), (71, 39002), (Start: 74 @38987 has 48  
MA's), (94, 38936), (101, 38921),

Gene: McGuire\_60 Start: 39619, Stop: 39485, Start Num: 80  
Candidate Starts for McGuire\_60:  
(Start: 80 @39619 has 142 MA's), (112, 39517),

Gene: Medusa\_62 Start: 40508, Stop: 40254, Start Num: 45  
Candidate Starts for Medusa\_62:  
(Start: 42 @40520 has 21 MA's), (Start: 45 @40508 has 23 MA's), (Start: 53 @40478 has 135 MA's),  
(58, 40457), (110, 40301), (118, 40262),

Gene: MeeZee\_61 Start: 40461, Stop: 40237, Start Num: 53  
Candidate Starts for MeeZee\_61:  
(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's),  
(58, 40440), (110, 40284), (118, 40245),

Gene: Melvin\_64 Start: 40459, Stop: 40235, Start Num: 53  
Candidate Starts for Melvin\_64:  
(Start: 42 @40501 has 21 MA's), (Start: 45 @40489 has 23 MA's), (Start: 53 @40459 has 135 MA's),  
(58, 40438), (110, 40282), (118, 40243),

Gene: MetalQZJ\_56 Start: 40279, Stop: 40136, Start Num: 74

Candidate Starts for MetalQZJ\_56:

(Start: 74 @40279 has 48 MA's),

Gene: Methuselah\_63 Start: 41194, Stop: 40964, Start Num: 51

Candidate Starts for Methuselah\_63:

(Start: 45 @41221 has 23 MA's), (Start: 51 @41194 has 51 MA's), (96, 41065), (110, 41011),

Gene: Michley\_58 Start: 39990, Stop: 39856, Start Num: 80

Candidate Starts for Michley\_58:

(66, 40020), (Start: 80 @39990 has 142 MA's), (112, 39888),

Gene: Microwolf\_66 Start: 41186, Stop: 40956, Start Num: 51

Candidate Starts for Microwolf\_66:

(Start: 45 @41213 has 23 MA's), (Start: 51 @41186 has 51 MA's), (96, 41057), (110, 41003),

Gene: MiculUcigas\_65 Start: 40639, Stop: 40409, Start Num: 50

Candidate Starts for MiculUcigas\_65:

(Start: 50 @40639 has 177 MA's), (55, 40621), (60, 40603), (71, 40573), (110, 40456), (115, 40432),

Gene: Miko\_61 Start: 41066, Stop: 40836, Start Num: 50

Candidate Starts for Miko\_61:

(Start: 50 @41066 has 177 MA's), (55, 41048), (96, 40934), (110, 40883), (118, 40844),

Gene: Miley16\_99 Start: 61842, Stop: 62027, Start Num: 63

Candidate Starts for Miley16\_99:

(Start: 63 @61842 has 4 MA's), (Start: 65 @61845 has 26 MA's), (72, 61869), (78, 61881), (Start: 81 @61887 has 15 MA's), (99, 61938), (109, 61968), (110, 61980), (112, 61995),

Gene: Millski\_61 Start: 40507, Stop: 40241, Start Num: 42

Candidate Starts for Millski\_61:

(Start: 42 @40507 has 21 MA's), (Start: 45 @40495 has 23 MA's), (Start: 53 @40465 has 135 MA's), (58, 40444), (110, 40288), (118, 40249),

Gene: MiniLon\_101 Start: 61454, Stop: 61588, Start Num: 81

Candidate Starts for MiniLon\_101:

(Start: 73 @61439 has 1 MA's), (Start: 81 @61454 has 15 MA's), (93, 61490), (95, 61493), (100, 61505), (112, 61556),

Gene: MiniMac\_101 Start: 61434, Stop: 61583, Start Num: 73

Candidate Starts for MiniMac\_101:

(Start: 73 @61434 has 1 MA's), (Start: 81 @61449 has 15 MA's), (93, 61485), (95, 61488), (100, 61500), (112, 61551),

Gene: Miramae\_59 Start: 39753, Stop: 39529, Start Num: 53

Candidate Starts for Miramae\_59:

(Start: 42 @39795 has 21 MA's), (Start: 45 @39783 has 23 MA's), (Start: 53 @39753 has 135 MA's), (58, 39732),

Gene: Misomonster\_69 Start: 41224, Stop: 40967, Start Num: 45

Candidate Starts for Misomonster\_69:

(Start: 45 @41224 has 23 MA's), (Start: 51 @41197 has 51 MA's), (96, 41068),

Gene: MissWhite\_66 Start: 40337, Stop: 40101, Start Num: 48

Candidate Starts for MissWhite\_66:

(37, 40382), (Start: 43 @40364 has 1 MA's), (Start: 48 @40337 has 25 MA's), (54, 40319), (Start: 65 @40286 has 26 MA's), (96, 40199),

Gene: MkaliMitinis3\_101 Start: 61525, Stop: 61707, Start Num: 65

Candidate Starts for MkaliMitinis3\_101:

(Start: 65 @61525 has 26 MA's), (78, 61561), (Start: 81 @61567 has 15 MA's), (89, 61594), (90, 61600), (99, 61618), (109, 61648), (110, 61660),

Gene: Molly\_59 Start: 38935, Stop: 38801, Start Num: 80

Candidate Starts for Molly\_59:

(Start: 80 @38935 has 142 MA's), (112, 38833),

Gene: Monet\_61 Start: 41021, Stop: 40887, Start Num: 80

Candidate Starts for Monet\_61:

(Start: 80 @41021 has 142 MA's), (112, 40919),

Gene: MoneyMay\_67 Start: 41170, Stop: 40940, Start Num: 51

Candidate Starts for MoneyMay\_67:

(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: Moose\_57 Start: 39132, Stop: 38998, Start Num: 80

Candidate Starts for Moose\_57:

(Start: 80 @39132 has 142 MA's), (112, 39030),

Gene: Moostard\_93 Start: 61200, Stop: 61334, Start Num: 81

Candidate Starts for Moostard\_93:

(Start: 81 @61200 has 15 MA's), (93, 61236), (95, 61239), (100, 61251), (112, 61302),

Gene: Morpher26\_60 Start: 40325, Stop: 40101, Start Num: 53

Candidate Starts for Morpher26\_60:

(Start: 42 @40367 has 21 MA's), (Start: 45 @40355 has 23 MA's), (Start: 53 @40325 has 135 MA's), (109, 40160), (110, 40148),

Gene: Morrow\_63 Start: 40470, Stop: 40246, Start Num: 53

Candidate Starts for Morrow\_63:

(Start: 42 @40512 has 21 MA's), (Start: 45 @40500 has 23 MA's), (Start: 53 @40470 has 135 MA's), (58, 40449), (110, 40293), (118, 40254),

Gene: MrGordo\_58 Start: 39793, Stop: 39659, Start Num: 80

Candidate Starts for MrGordo\_58:

(Start: 80 @39793 has 142 MA's), (112, 39691),

Gene: Mryolo\_55 Start: 39838, Stop: 39704, Start Num: 80

Candidate Starts for Mryolo\_55:

(Start: 80 @39838 has 142 MA's),

Gene: MsGreen\_96 Start: 61095, Stop: 61229, Start Num: 81

Candidate Starts for MsGreen\_96:

(Start: 81 @61095 has 15 MA's), (93, 61131), (95, 61134), (100, 61146), (112, 61197),

Gene: MuchMore\_71 Start: 41162, Stop: 40932, Start Num: 51  
Candidate Starts for MuchMore\_71:  
(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: Mulciber\_65 Start: 40163, Stop: 39930, Start Num: 50  
Candidate Starts for Mulciber\_65:  
(Start: 50 @40163 has 177 MA's), (55, 40145), (85, 40061), (103, 40001), (107, 39995),

Gene: Mule\_56 Start: 38388, Stop: 38254, Start Num: 80  
Candidate Starts for Mule\_56:  
(Start: 80 @38388 has 142 MA's), (112, 38286),

Gene: Munch\_66 Start: 40626, Stop: 40393, Start Num: 50  
Candidate Starts for Munch\_66:  
(Start: 50 @40626 has 177 MA's), (55, 40608), (85, 40524), (103, 40464), (107, 40458),

Gene: Mundrea\_60 Start: 40317, Stop: 40093, Start Num: 53  
Candidate Starts for Mundrea\_60:  
(Start: 42 @40359 has 21 MA's), (Start: 45 @40347 has 23 MA's), (Start: 53 @40317 has 135 MA's),  
(58, 40296),

Gene: Museum\_59 Start: 40085, Stop: 39951, Start Num: 80  
Candidate Starts for Museum\_59:  
(Start: 80 @40085 has 142 MA's), (112, 39983),

Gene: MyraDee\_64 Start: 37954, Stop: 37787, Start Num: 68  
Candidate Starts for MyraDee\_64:  
(1, 38476), (2, 38458), (12, 38206), (Start: 68 @37954 has 1 MA's), (Start: 76 @37930 has 4 MA's),  
(94, 37882), (108, 37846), (111, 37825),

Gene: Myxus\_68 Start: 40727, Stop: 40578, Start Num: 50  
Candidate Starts for Myxus\_68:  
(Start: 50 @40727 has 177 MA's), (55, 40709), (71, 40661),

Gene: NEHalo\_56 Start: 39867, Stop: 39733, Start Num: 80  
Candidate Starts for NEHalo\_56:  
(Start: 80 @39867 has 142 MA's), (112, 39765),

Gene: NaSiaTalie\_65 Start: 40733, Stop: 40503, Start Num: 50  
Candidate Starts for NaSiaTalie\_65:  
(Start: 50 @40733 has 177 MA's), (55, 40715), (60, 40697), (71, 40667), (110, 40550), (115, 40526),

Gene: Naca\_58 Start: 39771, Stop: 39505, Start Num: 50  
Candidate Starts for Naca\_58:  
(Start: 50 @39771 has 177 MA's), (109, 39564),

Gene: Naira\_61 Start: 41695, Stop: 41561, Start Num: 80  
Candidate Starts for Naira\_61:  
(Start: 80 @41695 has 142 MA's), (112, 41593),

Gene: Naji\_68 Start: 41301, Stop: 41065, Start Num: 48  
Candidate Starts for Naji\_68:

(16, 41454), (Start: 43 @41328 has 1 MA's), (Start: 48 @41301 has 25 MA's), (54, 41283), (Start: 65 @41250 has 26 MA's), (96, 41163),

Gene: Nebs\_63 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Nebs\_63:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Neeharika16\_65 Start: 38528, Stop: 38295, Start Num: 50

Candidate Starts for Neeharika16\_65:

(Start: 50 @38528 has 177 MA's), (55, 38510), (61, 38489), (71, 38462), (Start: 74 @38447 has 48 MA's), (94, 38396), (101, 38381),

Gene: Nemo27\_61 Start: 40463, Stop: 40239, Start Num: 53

Candidate Starts for Nemo27\_61:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: Nerujay\_60 Start: 40434, Stop: 40300, Start Num: 80

Candidate Starts for Nerujay\_60:

(Start: 80 @40434 has 142 MA's), (112, 40332),

Gene: Netyap\_98 Start: 61401, Stop: 61583, Start Num: 65

Candidate Starts for Netyap\_98:

(Start: 65 @61401 has 26 MA's), (78, 61437), (Start: 81 @61443 has 15 MA's), (89, 61470), (90, 61476), (99, 61494), (109, 61524), (110, 61536),

Gene: Newrala\_66 Start: 39070, Stop: 38837, Start Num: 50

Candidate Starts for Newrala\_66:

(Start: 50 @39070 has 177 MA's), (55, 39052), (61, 39031), (71, 39004), (Start: 74 @38989 has 48 MA's), (94, 38938), (101, 38923),

Gene: Nhonho\_57 Start: 40780, Stop: 40646, Start Num: 80

Candidate Starts for Nhonho\_57:

(Start: 80 @40780 has 142 MA's), (112, 40678),

Gene: Nicholas\_94 Start: 61205, Stop: 61339, Start Num: 81

Candidate Starts for Nicholas\_94:

(Start: 81 @61205 has 15 MA's), (93, 61241), (95, 61244), (100, 61256), (112, 61307),

Gene: Nicholasp3\_99 Start: 61193, Stop: 61375, Start Num: 65

Candidate Starts for Nicholasp3\_99:

(Start: 65 @61193 has 26 MA's), (78, 61229), (Start: 81 @61235 has 15 MA's), (89, 61262), (90, 61268), (99, 61286), (109, 61316), (110, 61328),

Gene: NicoleTera\_64 Start: 41319, Stop: 41080, Start Num: 50

Candidate Starts for NicoleTera\_64:

(10, 41517), (Start: 50 @41319 has 177 MA's), (55, 41301), (96, 41181), (110, 41127),

Gene: Niza\_60 Start: 41442, Stop: 41308, Start Num: 80

Candidate Starts for Niza\_60:

(Start: 80 @41442 has 142 MA's), (112, 41340),

Gene: Noella\_64 Start: 40847, Stop: 40644, Start Num: 53  
Candidate Starts for Noella\_64:  
(Start: 45 @40877 has 23 MA's), (Start: 53 @40847 has 135 MA's), (98, 40718), (118, 40652),

Gene: Noelle\_61 Start: 40629, Stop: 40402, Start Num: 53  
Candidate Starts for Noelle\_61:  
(Start: 42 @40671 has 21 MA's), (Start: 45 @40659 has 23 MA's), (Start: 53 @40629 has 135 MA's),  
(109, 40461), (110, 40449),

Gene: Norbert\_61 Start: 40846, Stop: 40643, Start Num: 53  
Candidate Starts for Norbert\_61:  
(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: NorthStar\_60 Start: 40464, Stop: 40240, Start Num: 53  
Candidate Starts for NorthStar\_60:  
(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's),  
(58, 40443), (110, 40287), (118, 40248),

Gene: Norz\_59 Start: 41380, Stop: 41120, Start Num: 74  
Candidate Starts for Norz\_59:  
(Start: 74 @41380 has 48 MA's), (108, 41293), (121, 41191),

Gene: NotAPhaseMom\_61 Start: 40468, Stop: 40244, Start Num: 53  
Candidate Starts for NotAPhaseMom\_61:  
(Start: 42 @40510 has 21 MA's), (Start: 45 @40498 has 23 MA's), (Start: 53 @40468 has 135 MA's),  
(58, 40447), (110, 40291), (118, 40252),

Gene: NothingSpecial\_63 Start: 41525, Stop: 41295, Start Num: 50  
Candidate Starts for NothingSpecial\_63:  
(28, 41606), (34, 41567), (Start: 40 @41555 has 3 MA's), (Start: 50 @41525 has 177 MA's), (55,  
41507), (110, 41342), (115, 41318), (118, 41303),

Gene: Nyxis\_61 Start: 40384, Stop: 40130, Start Num: 45  
Candidate Starts for Nyxis\_61:  
(Start: 42 @40396 has 21 MA's), (Start: 45 @40384 has 23 MA's), (Start: 53 @40354 has 135 MA's),  
(58, 40333), (110, 40177), (118, 40138),

Gene: OKCentral2016\_60 Start: 39649, Stop: 39413, Start Num: 49  
Candidate Starts for OKCentral2016\_60:  
(Start: 49 @39649 has 30 MA's), (55, 39628),

Gene: OKaNui\_62 Start: 40514, Stop: 40290, Start Num: 53  
Candidate Starts for OKaNui\_62:  
(Start: 42 @40556 has 21 MA's), (Start: 45 @40544 has 23 MA's), (Start: 53 @40514 has 135 MA's),  
(58, 40493), (110, 40337), (118, 40298),

Gene: Obama12\_63 Start: 40851, Stop: 40627, Start Num: 53  
Candidate Starts for Obama12\_63:  
(Start: 42 @40893 has 21 MA's), (Start: 45 @40881 has 23 MA's), (Start: 53 @40851 has 135 MA's),  
(58, 40830), (110, 40674), (118, 40635),

Gene: Odin\_66 Start: 40072, Stop: 39833, Start Num: 48  
Candidate Starts for Odin\_66:



(Start: 48 @40072 has 25 MA's), (54, 40054), (61, 40033), (Start: 65 @40021 has 26 MA's), (96, 39934),

Gene: Ohfah\_63 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Ohfah\_63:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Ohno789\_59 Start: 40571, Stop: 40311, Start Num: 74

Candidate Starts for Ohno789\_59:

(Start: 74 @40571 has 48 MA's), (108, 40484), (121, 40382),

Gene: OlanP\_67 Start: 41229, Stop: 40999, Start Num: 52

Candidate Starts for OlanP\_67:

(Start: 52 @41229 has 16 MA's), (101, 41085), (110, 41046),

Gene: Ollie\_68 Start: 41041, Stop: 40811, Start Num: 51

Candidate Starts for Ollie\_68:

(Start: 45 @41068 has 23 MA's), (Start: 51 @41041 has 51 MA's), (96, 40912), (110, 40858),

Gene: Oogway\_57 Start: 39790, Stop: 39656, Start Num: 80

Candidate Starts for Oogway\_57:

(Start: 80 @39790 has 142 MA's), (112, 39688),

Gene: Orange\_65 Start: 40175, Stop: 39942, Start Num: 50

Candidate Starts for Orange\_65:

(Start: 50 @40175 has 177 MA's), (55, 40157), (85, 40073), (103, 40013), (107, 40007),

Gene: P28Green\_69 Start: 41173, Stop: 40943, Start Num: 51

Candidate Starts for P28Green\_69:

(Start: 45 @41200 has 23 MA's), (Start: 51 @41173 has 51 MA's), (96, 41044), (110, 40990),

Gene: PGHhamlin\_70 Start: 41189, Stop: 40932, Start Num: 45

Candidate Starts for PGHhamlin\_70:

(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: PP\_67 Start: 45562, Stop: 45308, Start Num: 44

Candidate Starts for PP\_67:

(Start: 44 @45562 has 1 MA's), (55, 45523), (97, 45406), (106, 45379),

Gene: PSullivan\_58 Start: 38828, Stop: 38685, Start Num: 74

Candidate Starts for PSullivan\_58:

(Start: 74 @38828 has 48 MA's),

Gene: PacerPaul\_58 Start: 40284, Stop: 40150, Start Num: 80

Candidate Starts for PacerPaul\_58:

(Start: 80 @40284 has 142 MA's), (112, 40182),

Gene: PackMan\_67 Start: 40602, Stop: 40453, Start Num: 50

Candidate Starts for PackMan\_67:

(Start: 50 @40602 has 177 MA's), (55, 40584), (71, 40536),

Gene: Palestino\_61 Start: 40506, Stop: 40240, Start Num: 42

Candidate Starts for Palestino\_61:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's),  
(58, 40443), (110, 40287), (118, 40248),

Gene: Panamaxus\_62 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for Panamaxus\_62:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Papez\_61 Start: 41812, Stop: 41678, Start Num: 80

Candidate Starts for Papez\_61:

(Start: 80 @41812 has 142 MA's), (112, 41710),

Gene: Paphu\_57 Start: 39421, Stop: 39287, Start Num: 80

Candidate Starts for Paphu\_57:

(Start: 80 @39421 has 142 MA's), (112, 39319),

Gene: Paraselene\_56 Start: 40336, Stop: 40193, Start Num: 74

Candidate Starts for Paraselene\_56:

(Start: 74 @40336 has 48 MA's),

Gene: Pari\_61 Start: 39772, Stop: 39512, Start Num: 74

Candidate Starts for Pari\_61:

(Start: 74 @39772 has 48 MA's), (108, 39685), (121, 39583),

Gene: Parliament\_58 Start: 40049, Stop: 39915, Start Num: 80

Candidate Starts for Parliament\_58:

(Start: 80 @40049 has 142 MA's),

Gene: PascalRango\_58 Start: 40088, Stop: 39954, Start Num: 80

Candidate Starts for PascalRango\_58:

(Start: 80 @40088 has 142 MA's), (112, 39986),

Gene: PattyP\_60 Start: 40478, Stop: 40344, Start Num: 80

Candidate Starts for PattyP\_60:

(Start: 80 @40478 has 142 MA's), (112, 40376),

Gene: Pawn\_68 Start: 41060, Stop: 40830, Start Num: 52

Candidate Starts for Pawn\_68:

(Start: 52 @41060 has 16 MA's), (101, 40916), (110, 40877),

Gene: Payneful\_56 Start: 39771, Stop: 39637, Start Num: 80

Candidate Starts for Payneful\_56:

(Start: 80 @39771 has 142 MA's), (112, 39669),

Gene: PeaceMeal1\_59 Start: 39186, Stop: 38950, Start Num: 49

Candidate Starts for PeaceMeal1\_59:

(Start: 49 @39186 has 30 MA's), (55, 39165), (61, 39144), (94, 39051), (101, 39036),

Gene: Peaches\_60 Start: 40463, Stop: 40239, Start Num: 53

Candidate Starts for Peaches\_60:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's),  
(58, 40442), (110, 40286), (118, 40247),

Gene: Pelly\_58 Start: 39989, Stop: 39738, Start Num: 79  
Candidate Starts for Pelly\_58:  
(Start: 79 @39989 has 6 MA's), (98, 39938), (104, 39920),

Gene: Pembroke\_68 Start: 41198, Stop: 40941, Start Num: 45  
Candidate Starts for Pembroke\_68:  
(Start: 45 @41198 has 23 MA's), (Start: 51 @41171 has 51 MA's), (96, 41042), (110, 40988),

Gene: Penny1\_68 Start: 41174, Stop: 40944, Start Num: 51  
Candidate Starts for Penny1\_68:  
(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: Pepe\_55 Start: 38549, Stop: 38406, Start Num: 74  
Candidate Starts for Pepe\_55:  
(Start: 74 @38549 has 48 MA's),

Gene: Perplexer\_60 Start: 40301, Stop: 40077, Start Num: 53  
Candidate Starts for Perplexer\_60:  
(Start: 42 @40343 has 21 MA's), (Start: 45 @40331 has 23 MA's), (Start: 53 @40301 has 135 MA's),  
(109, 40136), (110, 40124),

Gene: Perseus\_58 Start: 40793, Stop: 40659, Start Num: 80  
Candidate Starts for Perseus\_58:  
(Start: 80 @40793 has 142 MA's), (112, 40691),

Gene: PeterPeter\_62 Start: 40461, Stop: 40237, Start Num: 53  
Candidate Starts for PeterPeter\_62:  
(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's),  
(58, 40440), (110, 40284), (118, 40245),

Gene: Petersenfast\_64 Start: 40174, Stop: 39941, Start Num: 50  
Candidate Starts for Petersenfast\_64:  
(Start: 50 @40174 has 177 MA's), (55, 40156), (85, 40072), (103, 40012), (107, 40006),

Gene: Peterson\_62 Start: 42031, Stop: 41897, Start Num: 80  
Candidate Starts for Peterson\_62:  
(Start: 80 @42031 has 142 MA's), (112, 41929),

Gene: PetiteSangsue\_60 Start: 40304, Stop: 40080, Start Num: 53  
Candidate Starts for PetiteSangsue\_60:  
(Start: 42 @40346 has 21 MA's), (Start: 45 @40334 has 23 MA's), (Start: 53 @40304 has 135 MA's),  
(109, 40139), (110, 40127),

Gene: Petp2012\_59 Start: 40827, Stop: 40693, Start Num: 80  
Candidate Starts for Petp2012\_59:  
(Start: 80 @40827 has 142 MA's), (112, 40725),

Gene: Petruccio\_57 Start: 39237, Stop: 39103, Start Num: 80  
Candidate Starts for Petruccio\_57:  
(Start: 80 @39237 has 142 MA's), (112, 39135),

Gene: PetterN\_63 Start: 39541, Stop: 39275, Start Num: 50  
Candidate Starts for PetterN\_63:

(Start: 50 @39541 has 177 MA's), (59, 39508), (110, 39322),

Gene: Ph8s\_69 Start: 40234, Stop: 39995, Start Num: 48

Candidate Starts for Ph8s\_69:

(Start: 43 @40258 has 1 MA's), (Start: 48 @40234 has 25 MA's), (54, 40216), (Start: 65 @40183 has 26 MA's), (96, 40096), (107, 40063), (118, 40003),

Gene: Phacado\_62 Start: 40505, Stop: 40239, Start Num: 42

Candidate Starts for Phacado\_62:

(Start: 42 @40505 has 21 MA's), (Start: 45 @40493 has 23 MA's), (Start: 53 @40463 has 135 MA's), (58, 40442), (110, 40286), (118, 40247),

Gene: Phaded\_63 Start: 41980, Stop: 41705, Start Num: 35

Candidate Starts for Phaded\_63:

(Start: 35 @41980 has 1 MA's), (Start: 40 @41968 has 3 MA's), (Start: 49 @41941 has 30 MA's), (55, 41920), (115, 41728), (118, 41713),

Gene: Phaeder\_68 Start: 40602, Stop: 40453, Start Num: 50

Candidate Starts for Phaeder\_68:

(Start: 50 @40602 has 177 MA's), (55, 40584), (71, 40536),

Gene: Phantastic\_66 Start: 40511, Stop: 40281, Start Num: 53

Candidate Starts for Phantastic\_66:

(41, 40553), (Start: 45 @40541 has 23 MA's), (Start: 53 @40511 has 135 MA's), (101, 40367),

Gene: Pharaoh\_62 Start: 40656, Stop: 40402, Start Num: 50

Candidate Starts for Pharaoh\_62:

(8, 40863), (14, 40833), (Start: 40 @40686 has 3 MA's), (Start: 50 @40656 has 177 MA's), (55, 40638), (Start: 74 @40575 has 48 MA's), (85, 40551), (87, 40548), (97, 40497), (115, 40422),

Gene: Phelipe\_63 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Phelipe\_63:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: PherrisBueller\_57 Start: 38645, Stop: 38385, Start Num: 74

Candidate Starts for PherrisBueller\_57:

(Start: 74 @38645 has 48 MA's), (108, 38558), (121, 38456),

Gene: Phighter1804\_62 Start: 40570, Stop: 40304, Start Num: 42

Candidate Starts for Phighter1804\_62:

(Start: 42 @40570 has 21 MA's), (Start: 45 @40558 has 23 MA's), (Start: 53 @40528 has 135 MA's), (58, 40507), (110, 40351), (118, 40312),

Gene: PhishRPhriends\_66 Start: 40237, Stop: 40007, Start Num: 52

Candidate Starts for PhishRPhriends\_66:

(Start: 52 @40237 has 16 MA's), (101, 40093), (110, 40054),

Gene: Phlei\_54 Start: 40345, Stop: 40127, Start Num: 49

Candidate Starts for Phlei\_54:

(Start: 49 @40345 has 30 MA's), (55, 40324), (94, 40225), (117, 40135),

Gene: Phoebe\_69 Start: 41190, Stop: 40933, Start Num: 45

Candidate Starts for Phoebe\_69:

(Start: 45 @41190 has 23 MA's), (Start: 51 @41163 has 51 MA's), (96, 41034), (110, 40980),

Gene: Phonnegut\_69 Start: 40824, Stop: 40675, Start Num: 50

Candidate Starts for Phonnegut\_69:

(Start: 50 @40824 has 177 MA's), (55, 40806), (71, 40758),

Gene: Phontbonne\_62 Start: 40370, Stop: 40146, Start Num: 53

Candidate Starts for Phontbonne\_62:

(Start: 42 @40412 has 21 MA's), (Start: 45 @40400 has 23 MA's), (Start: 53 @40370 has 135 MA's), (58, 40349), (118, 40154),

Gene: Phoxy\_68 Start: 41195, Stop: 40965, Start Num: 51

Candidate Starts for Phoxy\_68:

(Start: 45 @41222 has 23 MA's), (Start: 51 @41195 has 51 MA's), (96, 41066), (110, 41012),

Gene: Phranny\_69 Start: 41042, Stop: 40812, Start Num: 52

Candidate Starts for Phranny\_69:

(Start: 52 @41042 has 16 MA's), (101, 40898), (110, 40859),

Gene: PhrostyMug\_58 Start: 40562, Stop: 40428, Start Num: 80

Candidate Starts for PhrostyMug\_58:

(Start: 80 @40562 has 142 MA's), (112, 40460),

Gene: PinkPlastic\_58 Start: 39549, Stop: 39415, Start Num: 80

Candidate Starts for PinkPlastic\_58:

(Start: 80 @39549 has 142 MA's), (112, 39447),

Gene: Pinto\_59 Start: 40150, Stop: 40013, Start Num: 77

Candidate Starts for Pinto\_59:

(Start: 77 @40150 has 3 MA's), (Start: 80 @40147 has 142 MA's), (112, 40045),

Gene: Pioneer\_69 Start: 40824, Stop: 40675, Start Num: 50

Candidate Starts for Pioneer\_69:

(Start: 50 @40824 has 177 MA's), (55, 40806), (71, 40758),

Gene: Pipcraft\_59 Start: 40464, Stop: 40240, Start Num: 53

Candidate Starts for Pipcraft\_59:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: Pippin\_59 Start: 39764, Stop: 39630, Start Num: 80

Candidate Starts for Pippin\_59:

(Start: 80 @39764 has 142 MA's), (112, 39662),

Gene: Piro94\_65 Start: 41086, Stop: 40856, Start Num: 50

Candidate Starts for Piro94\_65:

(Start: 50 @41086 has 177 MA's), (55, 41068), (60, 41050), (71, 41020), (110, 40903), (115, 40879),

Gene: Pistachio\_65 Start: 40443, Stop: 40213, Start Num: 53

Candidate Starts for Pistachio\_65:

(41, 40485), (Start: 45 @40473 has 23 MA's), (Start: 53 @40443 has 135 MA's), (101, 40299), (102, 40296), (112, 40245),

Gene: Pita2\_61 Start: 40325, Stop: 40182, Start Num: 74

Candidate Starts for Pita2\_61:

(Start: 74 @40325 has 48 MA's),

Gene: Pmask\_65 Start: 39071, Stop: 38838, Start Num: 50

Candidate Starts for Pmask\_65:

(Start: 50 @39071 has 177 MA's), (55, 39053), (61, 39032), (71, 39005), (Start: 74 @38990 has 48 MA's), (94, 38939), (101, 38924),

Gene: Pocahontas\_64 Start: 40843, Stop: 40640, Start Num: 53

Candidate Starts for Pocahontas\_64:

(Start: 45 @40873 has 23 MA's), (Start: 53 @40843 has 135 MA's), (98, 40714), (118, 40648),

Gene: Polymorphads\_63 Start: 40457, Stop: 40233, Start Num: 53

Candidate Starts for Polymorphads\_63:

(Start: 42 @40499 has 21 MA's), (Start: 45 @40487 has 23 MA's), (Start: 53 @40457 has 135 MA's), (58, 40436), (85, 40361), (110, 40280), (118, 40241),

Gene: Pomar16\_67 Start: 41341, Stop: 41105, Start Num: 48

Candidate Starts for Pomar16\_67:

(16, 41494), (Start: 43 @41368 has 1 MA's), (Start: 48 @41341 has 25 MA's), (54, 41323), (Start: 65 @41290 has 26 MA's), (96, 41203),

Gene: Poompha\_59 Start: 39184, Stop: 38948, Start Num: 49

Candidate Starts for Poompha\_59:

(Start: 49 @39184 has 30 MA's), (55, 39163), (61, 39142), (94, 39049), (101, 39034),

Gene: Popcicle\_64 Start: 40843, Stop: 40640, Start Num: 53

Candidate Starts for Popcicle\_64:

(Start: 45 @40873 has 23 MA's), (Start: 53 @40843 has 135 MA's), (98, 40714), (118, 40648),

Gene: PotatoSplit\_69 Start: 41174, Stop: 40944, Start Num: 51

Candidate Starts for PotatoSplit\_69:

(Start: 45 @41201 has 23 MA's), (Start: 51 @41174 has 51 MA's), (96, 41045), (110, 40991),

Gene: Power\_65 Start: 41360, Stop: 41130, Start Num: 50

Candidate Starts for Power\_65:

(Start: 50 @41360 has 177 MA's), (55, 41342), (60, 41324), (109, 41186),

Gene: Priamo\_68 Start: 38887, Stop: 38654, Start Num: 50

Candidate Starts for Priamo\_68:

(Start: 50 @38887 has 177 MA's), (55, 38869), (61, 38848), (71, 38821), (Start: 74 @38806 has 48 MA's), (94, 38755), (101, 38740),

Gene: Priya\_66 Start: 40398, Stop: 40165, Start Num: 50

Candidate Starts for Priya\_66:

(Start: 50 @40398 has 177 MA's), (55, 40380), (85, 40293), (94, 40266), (111, 40203), (115, 40188),

Gene: Pukovnik\_63 Start: 41608, Stop: 41375, Start Num: 49

Candidate Starts for Pukovnik\_63:

(Start: 35 @41647 has 1 MA's), (Start: 40 @41635 has 3 MA's), (Start: 49 @41608 has 30 MA's), (55, 41587), (94, 41473), (96, 41470), (110, 41419),

Gene: Pumbaa\_62 Start: 40409, Stop: 40185, Start Num: 53

Candidate Starts for Pumbaa\_62:

(Start: 42 @40451 has 21 MA's), (Start: 45 @40439 has 23 MA's), (Start: 53 @40409 has 135 MA's), (58, 40388), (110, 40232), (118, 40193),

Gene: Puppy\_65 Start: 40515, Stop: 40285, Start Num: 53

Candidate Starts for Puppy\_65:

(41, 40557), (Start: 45 @40545 has 23 MA's), (Start: 53 @40515 has 135 MA's), (101, 40371), (102, 40368), (112, 40317),

Gene: PurpleHaze\_68 Start: 41055, Stop: 40825, Start Num: 52

Candidate Starts for PurpleHaze\_68:

(Start: 52 @41055 has 16 MA's), (101, 40911), (110, 40872),

Gene: QTRlifeCrisis\_58 Start: 40342, Stop: 40199, Start Num: 74

Candidate Starts for QTRlifeCrisis\_58:

(Start: 74 @40342 has 48 MA's),

Gene: Qobbit\_66 Start: 40360, Stop: 40127, Start Num: 50

Candidate Starts for Qobbit\_66:

(Start: 50 @40360 has 177 MA's), (55, 40342), (85, 40255), (94, 40228), (111, 40165), (115, 40150),

Gene: QueenB2\_65 Start: 41338, Stop: 41108, Start Num: 50

Candidate Starts for QueenB2\_65:

(27, 41425), (34, 41383), (Start: 40 @41371 has 3 MA's), (Start: 50 @41338 has 177 MA's), (55, 41320), (60, 41302), (110, 41152),

Gene: QueenBeesly\_66 Start: 41316, Stop: 41086, Start Num: 50

Candidate Starts for QueenBeesly\_66:

(Start: 50 @41316 has 177 MA's), (55, 41298), (60, 41280), (109, 41142),

Gene: QuinnKiro\_63 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for QuinnKiro\_63:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Rachaly\_63 Start: 41211, Stop: 40981, Start Num: 50

Candidate Starts for Rachaly\_63:

(Start: 50 @41211 has 177 MA's), (55, 41193), (96, 41079), (110, 41028), (118, 40989),

Gene: Rahalelujah\_66 Start: 40152, Stop: 39919, Start Num: 50

Candidate Starts for Rahalelujah\_66:

(Start: 50 @40152 has 177 MA's), (55, 40134), (71, 40086), (105, 39993), (115, 39942),

Gene: Rajelicia\_59 Start: 40856, Stop: 40722, Start Num: 80

Candidate Starts for Rajelicia\_59:

(Start: 80 @40856 has 142 MA's), (112, 40754),

Gene: Reba\_68 Start: 40715, Stop: 40485, Start Num: 52

Candidate Starts for Reba\_68:

(Start: 52 @40715 has 16 MA's), (101, 40571), (110, 40532),

Gene: Rebeuca\_62 Start: 40483, Stop: 40250, Start Num: 49

Candidate Starts for Rebeuca\_62:

(Start: 40 @40510 has 3 MA's), (Start: 49 @40483 has 30 MA's), (55, 40462), (84, 40378),

Gene: RedRock\_67 Start: 42256, Stop: 42023, Start Num: 50

Candidate Starts for RedRock\_67:

(Start: 40 @42286 has 3 MA's), (Start: 50 @42256 has 177 MA's), (55, 42238), (94, 42124), (101, 42109),

Gene: Refuge\_63 Start: 41665, Stop: 41432, Start Num: 50

Candidate Starts for Refuge\_63:

(Start: 40 @41695 has 3 MA's), (Start: 50 @41665 has 177 MA's), (55, 41647), (Start: 74 @41584 has 48 MA's), (85, 41560),

Gene: Relief\_61 Start: 40461, Stop: 40237, Start Num: 53

Candidate Starts for Relief\_61:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: ResDef\_63 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for ResDef\_63:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Retro23\_67 Start: 41552, Stop: 41322, Start Num: 50

Candidate Starts for Retro23\_67:

(27, 41639), (Start: 40 @41585 has 3 MA's), (Start: 50 @41552 has 177 MA's), (55, 41534), (60, 41516), (110, 41366),

Gene: RhynO\_61 Start: 40124, Stop: 39888, Start Num: 49

Candidate Starts for RhynO\_61:

(Start: 40 @40151 has 3 MA's), (Start: 49 @40124 has 30 MA's), (55, 40103),

Gene: Rhynn\_56 Start: 38880, Stop: 38746, Start Num: 80

Candidate Starts for Rhynn\_56:

(Start: 80 @38880 has 142 MA's), (112, 38778),

Gene: RidgeCB\_58 Start: 40123, Stop: 39989, Start Num: 80

Candidate Starts for RidgeCB\_58:

(Start: 80 @40123 has 142 MA's), (112, 40021),

Gene: Rifter\_67 Start: 38679, Stop: 38446, Start Num: 50

Candidate Starts for Rifter\_67:

(Start: 40 @38709 has 3 MA's), (Start: 50 @38679 has 177 MA's), (55, 38661), (61, 38640), (71, 38613), (94, 38547), (105, 38520), (110, 38493), (118, 38454),

Gene: Ringer\_58 Start: 41030, Stop: 40896, Start Num: 80

Candidate Starts for Ringer\_58:

(Start: 80 @41030 has 142 MA's), (112, 40928),

Gene: Rockstar\_63 Start: 40337, Stop: 40107, Start Num: 53

Candidate Starts for Rockstar\_63:

(41, 40379), (Start: 45 @40367 has 23 MA's), (Start: 53 @40337 has 135 MA's), (83, 40247),

Gene: Rohr\_59 Start: 40002, Stop: 39868, Start Num: 80



Candidate Starts for Rohr\_59:  
(Start: 80 @40002 has 142 MA's), (112, 39900),

Gene: Roksolana\_68 Start: 39513, Stop: 39280, Start Num: 50  
Candidate Starts for Roksolana\_68:  
(Start: 40 @39543 has 3 MA's), (Start: 50 @39513 has 177 MA's), (55, 39495), (61, 39474), (71, 39447), (94, 39381), (110, 39327), (118, 39288),

Gene: Romney\_61 Start: 40461, Stop: 40237, Start Num: 53  
Candidate Starts for Romney\_61:  
(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Roosevelt\_60 Start: 40466, Stop: 40242, Start Num: 53  
Candidate Starts for Roosevelt\_60:  
(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Rubeus\_58 Start: 37943, Stop: 37806, Start Num: 77  
Candidate Starts for Rubeus\_58:  
(Start: 77 @37943 has 3 MA's), (Start: 80 @37940 has 142 MA's), (112, 37838),

Gene: Rufus\_59 Start: 39468, Stop: 39334, Start Num: 80  
Candidate Starts for Rufus\_59:  
(Start: 80 @39468 has 142 MA's), (112, 39366),

Gene: Ruin\_62 Start: 40457, Stop: 40233, Start Num: 53  
Candidate Starts for Ruin\_62:  
(Start: 42 @40499 has 21 MA's), (Start: 45 @40487 has 23 MA's), (Start: 53 @40457 has 135 MA's), (58, 40436), (110, 40280), (118, 40241),

Gene: Rummer\_67 Start: 41198, Stop: 40968, Start Num: 51  
Candidate Starts for Rummer\_67:  
(Start: 45 @41225 has 23 MA's), (Start: 51 @41198 has 51 MA's), (96, 41069), (110, 41015),

Gene: Rumpelstiltskin\_95 Start: 60986, Stop: 61168, Start Num: 65  
Candidate Starts for Rumpelstiltskin\_95:  
(Start: 65 @60986 has 26 MA's), (78, 61022), (Start: 81 @61028 has 15 MA's), (89, 61055), (90, 61061), (99, 61079), (109, 61109), (110, 61121),

Gene: Ruotula\_61 Start: 42152, Stop: 41901, Start Num: 79  
Candidate Starts for Ruotula\_61:  
(Start: 79 @42152 has 6 MA's), (98, 42101), (104, 42083), (113, 42038), (120, 42011),

Gene: Rutherferd\_59 Start: 40099, Stop: 39965, Start Num: 80  
Candidate Starts for Rutherferd\_59:  
(Start: 80 @40099 has 142 MA's), (112, 39997),

Gene: STLscum\_61 Start: 40923, Stop: 40780, Start Num: 74  
Candidate Starts for STLscum\_61:  
(Start: 74 @40923 has 48 MA's),

Gene: Sabertooth\_62 Start: 40496, Stop: 40242, Start Num: 45

Candidate Starts for Sabertooth\_62:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Sabia\_68 Start: 41179, Stop: 40949, Start Num: 51

Candidate Starts for Sabia\_68:

(Start: 45 @41206 has 23 MA's), (Start: 51 @41179 has 51 MA's), (96, 41050), (110, 40996),

Gene: Sabinator\_66 Start: 41169, Stop: 40939, Start Num: 51

Candidate Starts for Sabinator\_66:

(Start: 45 @41196 has 23 MA's), (Start: 51 @41169 has 51 MA's), (96, 41040), (110, 40986),

Gene: Sagefire\_60 Start: 40676, Stop: 40542, Start Num: 80

Candidate Starts for Sagefire\_60:

(Start: 80 @40676 has 142 MA's), (112, 40574),

Gene: Salz\_65 Start: 40073, Stop: 39840, Start Num: 50

Candidate Starts for Salz\_65:

(38, 40115), (Start: 50 @40073 has 177 MA's), (55, 40055), (85, 39971), (103, 39911), (107, 39905),

Gene: Samty\_95 Start: 61193, Stop: 61327, Start Num: 81

Candidate Starts for Samty\_95:

(Start: 81 @61193 has 15 MA's), (93, 61229), (95, 61232), (100, 61244), (112, 61295),

Gene: Sandaddy\_55 Start: 39509, Stop: 39366, Start Num: 74

Candidate Starts for Sandaddy\_55:

(Start: 74 @39509 has 48 MA's), (112, 39398),

Gene: Sanya\_54 Start: 39790, Stop: 39656, Start Num: 80

Candidate Starts for Sanya\_54:

(Start: 80 @39790 has 142 MA's), (112, 39688),

Gene: SarFire\_55 Start: 39071, Stop: 38928, Start Num: 74

Candidate Starts for SarFire\_55:

(Start: 74 @39071 has 48 MA's), (112, 38960),

Gene: SaturnRing\_65 Start: 40896, Stop: 40666, Start Num: 53

Candidate Starts for SaturnRing\_65:

(41, 40938), (Start: 45 @40926 has 23 MA's), (Start: 53 @40896 has 135 MA's), (101, 40752), (102, 40749), (112, 40698),

Gene: Scamp\_62 Start: 40466, Stop: 40242, Start Num: 53

Candidate Starts for Scamp\_62:

(Start: 42 @40508 has 21 MA's), (Start: 45 @40496 has 23 MA's), (Start: 53 @40466 has 135 MA's), (58, 40445), (110, 40289), (118, 40250),

Gene: Scherzo\_68 Start: 41043, Stop: 40813, Start Num: 50

Candidate Starts for Scherzo\_68:

(Start: 50 @41043 has 177 MA's), (55, 41025), (111, 40848), (115, 40833),

Gene: Scorpia\_62 Start: 39600, Stop: 39334, Start Num: 50

Candidate Starts for Scorpia\_62:

(Start: 50 @39600 has 177 MA's), (59, 39567), (110, 39381),

Gene: Scout\_64 Start: 40050, Stop: 39820, Start Num: 53  
Candidate Starts for Scout\_64:  
(41, 40092), (Start: 45 @40080 has 23 MA's), (Start: 53 @40050 has 135 MA's), (67, 40005),

Gene: Scowl\_59 Start: 39900, Stop: 39757, Start Num: 74  
Candidate Starts for Scowl\_59:  
(Start: 74 @39900 has 48 MA's),

Gene: Seabiscuit\_62 Start: 39881, Stop: 39747, Start Num: 80  
Candidate Starts for Seabiscuit\_62:  
(Start: 80 @39881 has 142 MA's), (112, 39779),

Gene: Seanderson\_58 Start: 41329, Stop: 41072, Start Num: 76  
Candidate Starts for Seanderson\_58:  
(Start: 76 @41329 has 4 MA's), (104, 41254),

Gene: SemperFi\_67 Start: 41584, Stop: 41354, Start Num: 50  
Candidate Starts for SemperFi\_67:  
(Start: 50 @41584 has 177 MA's), (55, 41566), (60, 41548), (109, 41410), (110, 41398),

Gene: Serenity\_69 Start: 40640, Stop: 40377, Start Num: 43  
Candidate Starts for Serenity\_69:  
(Start: 43 @40640 has 1 MA's), (Start: 48 @40613 has 25 MA's), (54, 40595), (Start: 65 @40562 has 26 MA's), (96, 40475), (118, 40385),

Gene: Severus\_59 Start: 39184, Stop: 38948, Start Num: 49  
Candidate Starts for Severus\_59:  
(Start: 49 @39184 has 30 MA's), (55, 39163), (61, 39142), (94, 39049), (101, 39034),

Gene: Shaka\_60 Start: 40491, Stop: 40237, Start Num: 45  
Candidate Starts for Shaka\_60:  
(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Sham4\_66 Start: 40173, Stop: 39940, Start Num: 50  
Candidate Starts for Sham4\_66:  
(Start: 50 @40173 has 177 MA's), (55, 40155), (85, 40071), (103, 40011), (107, 40005),

Gene: SheaKeira\_63 Start: 39912, Stop: 39769, Start Num: 50  
Candidate Starts for SheaKeira\_63:  
(Start: 50 @39912 has 177 MA's), (55, 39894), (Start: 65 @39861 has 26 MA's), (70, 39849), (118, 39777),

Gene: Sheen\_65 Start: 43903, Stop: 43661, Start Num: 48  
Candidate Starts for Sheen\_65:  
(11, 44068), (17, 44017), (19, 43984), (Start: 48 @43903 has 25 MA's), (55, 43882), (58, 43870), (109, 43720),

Gene: SheldonCooper\_62 Start: 40868, Stop: 40644, Start Num: 53  
Candidate Starts for SheldonCooper\_62:  
(Start: 42 @40910 has 21 MA's), (Start: 45 @40898 has 23 MA's), (Start: 53 @40868 has 135 MA's), (58, 40847), (110, 40691), (118, 40652),

Gene: ShortQueendom\_51 Start: 36829, Stop: 36695, Start Num: 80  
Candidate Starts for ShortQueendom\_51:  
(Start: 80 @36829 has 142 MA's), (112, 36727),

Gene: Shygu2\_60 Start: 40355, Stop: 40131, Start Num: 53  
Candidate Starts for Shygu2\_60:  
(Start: 42 @40397 has 21 MA's), (Start: 45 @40385 has 23 MA's), (Start: 53 @40355 has 135 MA's),  
(58, 40334),

Gene: Sibs6\_60 Start: 38579, Stop: 38445, Start Num: 80  
Candidate Starts for Sibs6\_60:  
(Start: 80 @38579 has 142 MA's), (112, 38477),

Gene: SkiPole\_63 Start: 40593, Stop: 40450, Start Num: 74  
Candidate Starts for SkiPole\_63:  
(Start: 74 @40593 has 48 MA's),

Gene: Skipitt\_61 Start: 40458, Stop: 40234, Start Num: 53  
Candidate Starts for Skipitt\_61:  
(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's),  
(58, 40437), (110, 40281), (118, 40242),

Gene: Slagathor\_60 Start: 40909, Stop: 40775, Start Num: 80  
Candidate Starts for Slagathor\_60:  
(Start: 80 @40909 has 142 MA's), (112, 40807),

Gene: Smairt\_61 Start: 41555, Stop: 41421, Start Num: 80  
Candidate Starts for Smairt\_61:  
(Start: 80 @41555 has 142 MA's), (112, 41453),

Gene: Smeagan\_69 Start: 41886, Stop: 41656, Start Num: 50  
Candidate Starts for Smeagan\_69:  
(6, 42135), (31, 41940), (33, 41934), (Start: 50 @41886 has 177 MA's), (55, 41868), (101, 41739),  
(110, 41700),

Gene: Smeagol\_60 Start: 41059, Stop: 40925, Start Num: 80  
Candidate Starts for Smeagol\_60:  
(Start: 80 @41059 has 142 MA's), (107, 40984), (112, 40957),

Gene: SmellyB\_66 Start: 39068, Stop: 38835, Start Num: 50  
Candidate Starts for SmellyB\_66:  
(Start: 50 @39068 has 177 MA's), (55, 39050), (61, 39029), (71, 39002), (Start: 74 @38987 has 48  
MA's), (94, 38936), (101, 38921),

Gene: SnapTap\_66 Start: 41395, Stop: 41165, Start Num: 50  
Candidate Starts for SnapTap\_66:  
(Start: 50 @41395 has 177 MA's), (55, 41377), (60, 41359), (109, 41221),

Gene: Snape\_66 Start: 40165, Stop: 39932, Start Num: 50  
Candidate Starts for Snape\_66:  
(Start: 50 @40165 has 177 MA's), (55, 40147), (85, 40063), (103, 40003), (107, 39997),

Gene: Snazzy\_57 Start: 39444, Stop: 39310, Start Num: 80

Candidate Starts for Snazzy\_57:

(Start: 80 @39444 has 142 MA's), (112, 39342),

Gene: Snenia\_95 Start: 61097, Stop: 61231, Start Num: 81

Candidate Starts for Snenia\_95:

(Start: 81 @61097 has 15 MA's), (93, 61133), (95, 61136), (100, 61148), (112, 61199),

Gene: Snickers\_66 Start: 41144, Stop: 40914, Start Num: 51

Candidate Starts for Snickers\_66:

(Start: 45 @41171 has 23 MA's), (Start: 51 @41144 has 51 MA's), (96, 41015), (110, 40961),

Gene: SoYo\_67 Start: 41109, Stop: 40852, Start Num: 45

Candidate Starts for SoYo\_67:

(Start: 45 @41109 has 23 MA's), (Start: 51 @41082 has 51 MA's), (96, 40953), (110, 40899),

Gene: SoilDragon\_68 Start: 40645, Stop: 40388, Start Num: 45

Candidate Starts for SoilDragon\_68:

(Start: 45 @40645 has 23 MA's), (Start: 51 @40618 has 51 MA's), (96, 40489), (110, 40435), (112, 40420),

Gene: Solon\_56 Start: 39316, Stop: 39182, Start Num: 80

Candidate Starts for Solon\_56:

(Start: 80 @39316 has 142 MA's), (112, 39214),

Gene: SororFago\_67 Start: 41621, Stop: 41472, Start Num: 50

Candidate Starts for SororFago\_67:

(Start: 40 @41651 has 3 MA's), (Start: 50 @41621 has 177 MA's), (55, 41603), (61, 41582), (71, 41555),

Gene: Sorpresa\_54 Start: 39511, Stop: 39368, Start Num: 74

Candidate Starts for Sorpresa\_54:

(Start: 74 @39511 has 48 MA's), (112, 39400),

Gene: Soshari\_70 Start: 41194, Stop: 40964, Start Num: 51

Candidate Starts for Soshari\_70:

(Start: 45 @41221 has 23 MA's), (Start: 51 @41194 has 51 MA's), (96, 41065), (110, 41011),

Gene: Sparxx\_63 Start: 40459, Stop: 40235, Start Num: 53

Candidate Starts for Sparxx\_63:

(Start: 42 @40501 has 21 MA's), (Start: 45 @40489 has 23 MA's), (Start: 53 @40459 has 135 MA's), (58, 40438), (110, 40282), (118, 40243),

Gene: Spike509\_68 Start: 41195, Stop: 40965, Start Num: 51

Candidate Starts for Spike509\_68:

(Start: 45 @41222 has 23 MA's), (Start: 51 @41195 has 51 MA's), (96, 41066), (110, 41012),

Gene: SpikeBT\_57 Start: 39705, Stop: 39445, Start Num: 74

Candidate Starts for SpikeBT\_57:

(Start: 74 @39705 has 48 MA's), (108, 39618), (119, 39558), (120, 39555),

Gene: Spino\_61 Start: 40467, Stop: 40243, Start Num: 53

Candidate Starts for Spino\_61:

(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Spouty\_63 Start: 40397, Stop: 40164, Start Num: 50

Candidate Starts for Spouty\_63:

(Start: 50 @40397 has 177 MA's), (55, 40379), (85, 40292), (94, 40265), (111, 40202), (115, 40187),

Gene: Squee\_59 Start: 40162, Stop: 40028, Start Num: 80

Candidate Starts for Squee\_59:

(Start: 80 @40162 has 142 MA's), (112, 40060),

Gene: Stagni\_67 Start: 41173, Stop: 40943, Start Num: 51

Candidate Starts for Stagni\_67:

(Start: 45 @41200 has 23 MA's), (Start: 51 @41173 has 51 MA's), (96, 41044), (110, 40990),

Gene: StarStuff\_68 Start: 41303, Stop: 41067, Start Num: 48

Candidate Starts for StarStuff\_68:

(16, 41456), (Start: 43 @41330 has 1 MA's), (Start: 48 @41303 has 25 MA's), (54, 41285), (Start: 65 @41252 has 26 MA's), (96, 41165),

Gene: Stasia\_60 Start: 40232, Stop: 40008, Start Num: 53

Candidate Starts for Stasia\_60:

(Start: 42 @40274 has 21 MA's), (Start: 45 @40262 has 23 MA's), (Start: 53 @40232 has 135 MA's), (110, 40055),

Gene: Steamy\_62 Start: 40151, Stop: 39912, Start Num: 50

Candidate Starts for Steamy\_62:

(Start: 40 @40181 has 3 MA's), (Start: 50 @40151 has 177 MA's), (55, 40133),

Gene: StepMih\_67 Start: 41164, Stop: 40934, Start Num: 51

Candidate Starts for StepMih\_67:

(Start: 45 @41191 has 23 MA's), (Start: 51 @41164 has 51 MA's), (96, 41035), (110, 40981),

Gene: StewieG\_55 Start: 36836, Stop: 36702, Start Num: 80

Candidate Starts for StewieG\_55:

(Start: 80 @36836 has 142 MA's), (112, 36734),

Gene: Stink\_59 Start: 40033, Stop: 39809, Start Num: 53

Candidate Starts for Stink\_59:

(Start: 42 @40075 has 21 MA's), (Start: 45 @40063 has 23 MA's), (Start: 53 @40033 has 135 MA's), (58, 40012),

Gene: StrongArm\_57 Start: 40820, Stop: 40560, Start Num: 74

Candidate Starts for StrongArm\_57:

(Start: 74 @40820 has 48 MA's), (108, 40733), (121, 40631),

Gene: Sumter\_54 Start: 40052, Stop: 39918, Start Num: 80

Candidate Starts for Sumter\_54:

(Start: 80 @40052 has 142 MA's), (112, 39950),

Gene: Sunshine924\_60 Start: 39199, Stop: 39056, Start Num: 74

Candidate Starts for Sunshine924\_60:

(Start: 74 @39199 has 48 MA's),

Gene: SuperAwesome\_66 Start: 39073, Stop: 38840, Start Num: 50  
Candidate Starts for SuperAwesome\_66:  
(Start: 50 @39073 has 177 MA's), (55, 39055), (61, 39034), (71, 39007), (Start: 74 @38992 has 48 MA's), (94, 38941), (101, 38926),

Gene: SuperCallie99\_63 Start: 38955, Stop: 38722, Start Num: 50  
Candidate Starts for SuperCallie99\_63:  
(Start: 50 @38955 has 177 MA's), (55, 38937), (61, 38916), (71, 38889), (Start: 74 @38874 has 48 MA's), (94, 38823), (101, 38808),

Gene: Superchunk\_67 Start: 39685, Stop: 39446, Start Num: 48  
Candidate Starts for Superchunk\_67:  
(Start: 48 @39685 has 25 MA's), (54, 39667), (61, 39646), (Start: 65 @39634 has 26 MA's), (96, 39547),

Gene: SweetiePie\_66 Start: 41527, Stop: 41297, Start Num: 50  
Candidate Starts for SweetiePie\_66:  
(Start: 50 @41527 has 177 MA's), (55, 41509), (60, 41491), (109, 41353),

Gene: SwirlSquare\_72 Start: 40512, Stop: 40273, Start Num: 48  
Candidate Starts for SwirlSquare\_72:  
(Start: 43 @40536 has 1 MA's), (Start: 48 @40512 has 25 MA's), (54, 40494), (Start: 65 @40461 has 26 MA's), (96, 40374),

Gene: SwissCheese\_59 Start: 39632, Stop: 39498, Start Num: 80  
Candidate Starts for SwissCheese\_59:  
(Start: 80 @39632 has 142 MA's), (112, 39530),

Gene: Switzer\_59 Start: 41665, Stop: 41522, Start Num: 74  
Candidate Starts for Switzer\_59:  
(Start: 74 @41665 has 48 MA's),

Gene: Swole\_58 Start: 39113, Stop: 38979, Start Num: 80  
Candidate Starts for Swole\_58:  
(Start: 80 @39113 has 142 MA's), (112, 39011),

Gene: TNguyen7\_66 Start: 40862, Stop: 40632, Start Num: 53  
Candidate Starts for TNguyen7\_66:  
(41, 40904), (Start: 45 @40892 has 23 MA's), (Start: 53 @40862 has 135 MA's), (101, 40718), (102, 40715), (112, 40664),

Gene: Taquarus\_61 Start: 40467, Stop: 40243, Start Num: 53  
Candidate Starts for Taquarus\_61:  
(Start: 42 @40509 has 21 MA's), (Start: 45 @40497 has 23 MA's), (Start: 53 @40467 has 135 MA's), (58, 40446), (110, 40290), (118, 40251),

Gene: Target\_59 Start: 38402, Stop: 38268, Start Num: 80  
Candidate Starts for Target\_59:  
(Start: 80 @38402 has 142 MA's), (112, 38300),

Gene: TarsusIV\_63 Start: 40986, Stop: 40756, Start Num: 50  
Candidate Starts for TarsusIV\_63:

(Start: 50 @40986 has 177 MA's), (55, 40968), (60, 40950), (71, 40920), (94, 40857), (110, 40803), (115, 40779), (118, 40764),

Gene: Tasp14\_61 Start: 40363, Stop: 40229, Start Num: 80

Candidate Starts for Tasp14\_61:

(Start: 80 @40363 has 142 MA's), (112, 40261),

Gene: Taurus\_69 Start: 41170, Stop: 40940, Start Num: 51

Candidate Starts for Taurus\_69:

(Start: 45 @41197 has 23 MA's), (Start: 51 @41170 has 51 MA's), (96, 41041), (110, 40987),

Gene: Teodoridan\_56 Start: 39136, Stop: 39002, Start Num: 80

Candidate Starts for Teodoridan\_56:

(Start: 80 @39136 has 142 MA's),

Gene: Texage\_62 Start: 40847, Stop: 40644, Start Num: 53

Candidate Starts for Texage\_62:

(Start: 45 @40877 has 23 MA's), (Start: 53 @40847 has 135 MA's), (98, 40718), (118, 40652),

Gene: Thanksgivukkah\_61 Start: 40504, Stop: 40238, Start Num: 42

Candidate Starts for Thanksgivukkah\_61:

(Start: 42 @40504 has 21 MA's), (Start: 45 @40492 has 23 MA's), (Start: 53 @40462 has 135 MA's), (58, 40441), (110, 40285), (118, 40246),

Gene: TheloniousMonk\_59 Start: 41765, Stop: 41631, Start Num: 80

Candidate Starts for TheloniousMonk\_59:

(Start: 80 @41765 has 142 MA's), (112, 41663),

Gene: Thor\_55 Start: 38429, Stop: 38286, Start Num: 74

Candidate Starts for Thor\_55:

(Start: 74 @38429 has 48 MA's), (112, 38318),

Gene: Tiffany\_67 Start: 41056, Stop: 40826, Start Num: 51

Candidate Starts for Tiffany\_67:

(Start: 45 @41083 has 23 MA's), (Start: 51 @41056 has 51 MA's), (96, 40927), (110, 40873),

Gene: Timothy\_66 Start: 40142, Stop: 39909, Start Num: 50

Candidate Starts for Timothy\_66:

(Start: 50 @40142 has 177 MA's), (55, 40124), (85, 40040), (103, 39980), (107, 39974),

Gene: Timshel\_65 Start: 43612, Stop: 43391, Start Num: 49

Candidate Starts for Timshel\_65:

(11, 43789), (17, 43738), (Start: 49 @43612 has 30 MA's), (55, 43591),

Gene: TinaFeyge\_60 Start: 40501, Stop: 40235, Start Num: 42

Candidate Starts for TinaFeyge\_60:

(Start: 42 @40501 has 21 MA's), (Start: 45 @40489 has 23 MA's), (Start: 53 @40459 has 135 MA's), (58, 40438), (110, 40282), (118, 40243),

Gene: TinyTimmy\_64 Start: 40119, Stop: 39886, Start Num: 50

Candidate Starts for TinyTimmy\_64:

(38, 40161), (Start: 50 @40119 has 177 MA's), (55, 40101), (85, 40017), (103, 39957), (107, 39951),



Gene: Tinybot\_61 Start: 40494, Stop: 40270, Start Num: 53

Candidate Starts for Tinybot\_61:

(Start: 42 @40536 has 21 MA's), (Start: 45 @40524 has 23 MA's), (Start: 53 @40494 has 135 MA's), (58, 40473), (110, 40317), (118, 40278),

Gene: TopsytheTRex\_65 Start: 40588, Stop: 40352, Start Num: 48

Candidate Starts for TopsytheTRex\_65:

(Start: 43 @40615 has 1 MA's), (Start: 48 @40588 has 25 MA's), (54, 40570), (Start: 65 @40537 has 26 MA's), (96, 40450),

Gene: TiroTheta9\_61 Start: 40458, Stop: 40234, Start Num: 53

Candidate Starts for TiroTheta9\_61:

(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's), (58, 40437), (110, 40281), (118, 40242),

Gene: Toaka\_67 Start: 40624, Stop: 40391, Start Num: 50

Candidate Starts for Toaka\_67:

(Start: 50 @40624 has 177 MA's), (55, 40606), (85, 40519), (115, 40414),

Gene: Todacoro\_64 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for Todacoro\_64:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Tomathan\_68 Start: 41350, Stop: 41114, Start Num: 48

Candidate Starts for Tomathan\_68:

(16, 41503), (Start: 43 @41377 has 1 MA's), (Start: 48 @41350 has 25 MA's), (54, 41332), (Start: 65 @41299 has 26 MA's), (96, 41212),

Gene: ToneTone\_64 Start: 39112, Stop: 38879, Start Num: 50

Candidate Starts for ToneTone\_64:

(Start: 40 @39142 has 3 MA's), (Start: 50 @39112 has 177 MA's), (55, 39094), (61, 39073), (71, 39046), (94, 38980), (105, 38953), (110, 38926), (118, 38887),

Gene: Topanga\_58 Start: 39963, Stop: 39730, Start Num: 49

Candidate Starts for Topanga\_58:

(Start: 40 @39990 has 3 MA's), (Start: 49 @39963 has 30 MA's), (55, 39942), (84, 39858),

Gene: Topgun\_57 Start: 39202, Stop: 39068, Start Num: 80

Candidate Starts for Topgun\_57:

(Start: 80 @39202 has 142 MA's), (112, 39100),

Gene: Tote\_54 Start: 36380, Stop: 36246, Start Num: 80

Candidate Starts for Tote\_54:

(Start: 80 @36380 has 142 MA's), (112, 36278),

Gene: Tourach\_100 Start: 62232, Stop: 62414, Start Num: 65

Candidate Starts for Tourach\_100:

(39, 62139), (47, 62169), (Start: 65 @62232 has 26 MA's), (69, 62241), (Start: 73 @62259 has 1 MA's), (78, 62268), (89, 62301), (99, 62325), (109, 62355), (110, 62367), (112, 62382),

Gene: Traft412\_61 Start: 40928, Stop: 40671, Start Num: 76

Candidate Starts for Traft412\_61:

(Start: 76 @40928 has 4 MA's), (98, 40871), (104, 40853),

Gene: Treddle\_59 Start: 40533, Stop: 40399, Start Num: 80

Candidate Starts for Treddle\_59:

(Start: 80 @40533 has 142 MA's), (112, 40431),

Gene: Trike\_58 Start: 39190, Stop: 38954, Start Num: 49

Candidate Starts for Trike\_58:

(Start: 40 @39220 has 3 MA's), (Start: 49 @39190 has 30 MA's), (55, 39169), (94, 39055),

Gene: Tripl3t\_60 Start: 41504, Stop: 41370, Start Num: 80

Candidate Starts for Tripl3t\_60:

(Start: 80 @41504 has 142 MA's), (112, 41402),

Gene: Trixie\_64 Start: 41204, Stop: 40974, Start Num: 50

Candidate Starts for Trixie\_64:

(30, 41255), (Start: 40 @41234 has 3 MA's), (Start: 50 @41204 has 177 MA's), (55, 41186), (94, 41072), (101, 41057),

Gene: Trooper\_66 Start: 41462, Stop: 41232, Start Num: 50

Candidate Starts for Trooper\_66:

(46, 41480), (Start: 50 @41462 has 177 MA's), (55, 41444), (60, 41426), (71, 41396), (110, 41279), (115, 41255), (118, 41240),

Gene: Trouble\_60 Start: 40856, Stop: 40722, Start Num: 80

Candidate Starts for Trouble\_60:

(Start: 80 @40856 has 142 MA's), (112, 40754),

Gene: TroyPia\_63 Start: 40462, Stop: 40238, Start Num: 53

Candidate Starts for TroyPia\_63:

(Start: 42 @40504 has 21 MA's), (Start: 45 @40492 has 23 MA's), (Start: 53 @40462 has 135 MA's), (58, 40441), (110, 40285), (118, 40246),

Gene: Tubs\_68 Start: 40602, Stop: 40453, Start Num: 50

Candidate Starts for Tubs\_68:

(Start: 50 @40602 has 177 MA's), (55, 40584), (71, 40536),

Gene: Tucker\_67 Start: 39281, Stop: 39048, Start Num: 50

Candidate Starts for Tucker\_67:

(Start: 40 @39311 has 3 MA's), (Start: 50 @39281 has 177 MA's), (55, 39263), (61, 39242), (71, 39215), (94, 39149), (110, 39095), (118, 39056),

Gene: Turbido\_67 Start: 41605, Stop: 41375, Start Num: 50

Candidate Starts for Turbido\_67:

(6, 41854), (31, 41659), (33, 41653), (Start: 50 @41605 has 177 MA's), (55, 41587), (101, 41458), (110, 41419),

Gene: Turj99\_56 Start: 40896, Stop: 40753, Start Num: 74

Candidate Starts for Turj99\_56:

(Start: 74 @40896 has 48 MA's), (112, 40785),

Gene: Twister\_60 Start: 40044, Stop: 39811, Start Num: 49

Candidate Starts for Twister\_60:

(26, 40128), (Start: 40 @40071 has 3 MA's), (Start: 49 @40044 has 30 MA's), (55, 40023), (84, 39939),

Gene: TwoPeat\_60 Start: 39599, Stop: 39465, Start Num: 80

Candidate Starts for TwoPeat\_60:

(Start: 80 @39599 has 142 MA's), (112, 39497),

Gene: TygerBlood\_62 Start: 40464, Stop: 40240, Start Num: 53

Candidate Starts for TygerBlood\_62:

(Start: 42 @40506 has 21 MA's), (Start: 45 @40494 has 23 MA's), (Start: 53 @40464 has 135 MA's), (58, 40443), (110, 40287), (118, 40248),

Gene: U2\_57 Start: 40613, Stop: 40470, Start Num: 74

Candidate Starts for U2\_57:

(Start: 74 @40613 has 48 MA's), (112, 40502),

Gene: Ugenie5\_64 Start: 41042, Stop: 40812, Start Num: 50

Candidate Starts for Ugenie5\_64:

(Start: 50 @41042 has 177 MA's), (55, 41024), (111, 40847), (115, 40832),

Gene: Ulysses\_61 Start: 40144, Stop: 39920, Start Num: 53

Candidate Starts for Ulysses\_61:

(Start: 42 @40186 has 21 MA's), (Start: 45 @40174 has 23 MA's), (Start: 53 @40144 has 135 MA's), (58, 40123), (110, 39967), (118, 39928),

Gene: UnionJack\_59 Start: 39159, Stop: 38842, Start Num: 36

Candidate Starts for UnionJack\_59:

(Start: 36 @39159 has 1 MA's), (Start: 50 @39108 has 177 MA's), (59, 39075), (110, 38889),

Gene: Updawg\_66 Start: 40980, Stop: 40750, Start Num: 50

Candidate Starts for Updawg\_66:

(Start: 50 @40980 has 177 MA's), (55, 40962), (60, 40944), (71, 40914), (110, 40797), (115, 40773),

Gene: VA6\_66 Start: 41310, Stop: 41080, Start Num: 50

Candidate Starts for VA6\_66:

(Start: 50 @41310 has 177 MA's), (55, 41292), (101, 41163), (110, 41124),

Gene: VC3\_69 Start: 41277, Stop: 41041, Start Num: 48

Candidate Starts for VC3\_69:

(Start: 43 @41304 has 1 MA's), (Start: 48 @41277 has 25 MA's), (54, 41259), (Start: 65 @41226 has 26 MA's), (96, 41139),

Gene: Vanisoa\_66 Start: 41485, Stop: 41339, Start Num: 50

Candidate Starts for Vanisoa\_66:

(Start: 50 @41485 has 177 MA's), (55, 41467), (69, 41425), (91, 41359),

Gene: Veracruz\_62 Start: 40846, Stop: 40643, Start Num: 53

Candidate Starts for Veracruz\_62:

(Start: 45 @40876 has 23 MA's), (Start: 53 @40846 has 135 MA's), (98, 40717), (118, 40651),

Gene: Vetric\_97 Start: 61015, Stop: 61197, Start Num: 65

Candidate Starts for Vetric\_97:

(Start: 65 @61015 has 26 MA's), (78, 61051), (Start: 81 @61057 has 15 MA's), (89, 61084), (90, 61090), (99, 61108), (109, 61138), (110, 61150),

Gene: Violet\_56 Start: 40459, Stop: 40325, Start Num: 80

Candidate Starts for Violet\_56:

(Start: 80 @40459 has 142 MA's), (112, 40357),

Gene: Vix\_66 Start: 41253, Stop: 41023, Start Num: 51

Candidate Starts for Vix\_66:

(Start: 45 @41280 has 23 MA's), (Start: 51 @41253 has 51 MA's), (96, 41124), (110, 41070),

Gene: VohminGhazi\_66 Start: 39069, Stop: 38836, Start Num: 50

Candidate Starts for VohminGhazi\_66:

(Start: 50 @39069 has 177 MA's), (55, 39051), (61, 39030), (71, 39003), (Start: 74 @38988 has 48 MA's), (94, 38937), (101, 38922),

Gene: WalterMcMickey\_60 Start: 40044, Stop: 39811, Start Num: 49

Candidate Starts for WalterMcMickey\_60:

(26, 40128), (Start: 40 @40071 has 3 MA's), (Start: 49 @40044 has 30 MA's), (55, 40023), (84, 39939),

Gene: Wander\_62 Start: 40503, Stop: 40237, Start Num: 42

Candidate Starts for Wander\_62:

(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Watermelon\_59 Start: 39819, Stop: 39685, Start Num: 80

Candidate Starts for Watermelon\_59:

(Start: 80 @39819 has 142 MA's), (112, 39717),

Gene: Watson\_67 Start: 41162, Stop: 40932, Start Num: 51

Candidate Starts for Watson\_67:

(Start: 45 @41189 has 23 MA's), (Start: 51 @41162 has 51 MA's), (96, 41033), (110, 40979),

Gene: WeiHuaDA\_67 Start: 42183, Stop: 41950, Start Num: 50

Candidate Starts for WeiHuaDA\_67:

(Start: 40 @42213 has 3 MA's), (Start: 50 @42183 has 177 MA's), (55, 42165), (85, 42078), (94, 42051), (101, 42036), (115, 41973), (118, 41958),

Gene: Whabigail7\_67 Start: 41605, Stop: 41375, Start Num: 50

Candidate Starts for Whabigail7\_67:

(6, 41854), (31, 41659), (33, 41653), (Start: 50 @41605 has 177 MA's), (55, 41587), (101, 41458), (110, 41419),

Gene: Wheeler\_58 Start: 39624, Stop: 39490, Start Num: 80

Candidate Starts for Wheeler\_58:

(Start: 80 @39624 has 142 MA's), (112, 39522),

Gene: Whirlwind\_98 Start: 61608, Stop: 61742, Start Num: 81

Candidate Starts for Whirlwind\_98:

(Start: 73 @61593 has 1 MA's), (Start: 81 @61608 has 15 MA's), (93, 61644), (95, 61647), (100, 61659), (112, 61710), (114, 61716),

Gene: WideWale\_66 Start: 40980, Stop: 40750, Start Num: 50  
Candidate Starts for WideWale\_66:  
(Start: 50 @40980 has 177 MA's), (55, 40962), (60, 40944), (71, 40914), (110, 40797), (115, 40773),

Gene: Wigglewigggle\_99 Start: 61323, Stop: 61505, Start Num: 65  
Candidate Starts for Wigglewigggle\_99:  
(Start: 65 @61323 has 26 MA's), (78, 61359), (Start: 81 @61365 has 15 MA's), (89, 61392), (90, 61398), (99, 61416), (109, 61446), (110, 61458),

Gene: Wiks\_66 Start: 39183, Stop: 38950, Start Num: 50  
Candidate Starts for Wiks\_66:  
(Start: 40 @39213 has 3 MA's), (Start: 50 @39183 has 177 MA's), (55, 39165), (61, 39144), (71, 39117), (94, 39051), (105, 39024), (110, 38997), (118, 38958),

Gene: Wilbur\_62 Start: 40461, Stop: 40237, Start Num: 53  
Candidate Starts for Wilbur\_62:  
(Start: 42 @40503 has 21 MA's), (Start: 45 @40491 has 23 MA's), (Start: 53 @40461 has 135 MA's), (58, 40440), (110, 40284), (118, 40245),

Gene: Wilder\_100 Start: 61159, Stop: 61341, Start Num: 65  
Candidate Starts for Wilder\_100:  
(Start: 65 @61159 has 26 MA's), (78, 61195), (89, 61228), (90, 61234), (99, 61252), (109, 61282), (110, 61294), (112, 61309),

Gene: Wile\_60 Start: 40335, Stop: 40111, Start Num: 53  
Candidate Starts for Wile\_60:  
(Start: 42 @40377 has 21 MA's), (Start: 53 @40335 has 135 MA's), (109, 40170), (110, 40158),

Gene: Wilkins\_57 Start: 39132, Stop: 38998, Start Num: 80  
Candidate Starts for Wilkins\_57:  
(Start: 80 @39132 has 142 MA's), (112, 39030),

Gene: Winky\_99 Start: 61842, Stop: 62027, Start Num: 63  
Candidate Starts for Winky\_99:  
(Start: 63 @61842 has 4 MA's), (Start: 65 @61845 has 26 MA's), (72, 61869), (78, 61881), (Start: 81 @61887 has 15 MA's), (99, 61938), (109, 61968), (110, 61980), (112, 61995),

Gene: Wizard007\_61 Start: 40469, Stop: 40245, Start Num: 53  
Candidate Starts for Wizard007\_61:  
(Start: 42 @40511 has 21 MA's), (Start: 45 @40499 has 23 MA's), (Start: 53 @40469 has 135 MA's), (58, 40448), (110, 40292), (118, 40253),

Gene: Wooldri\_70 Start: 41109, Stop: 40852, Start Num: 45  
Candidate Starts for Wooldri\_70:  
(Start: 45 @41109 has 23 MA's), (Start: 51 @41082 has 51 MA's), (96, 40953), (110, 40899),

Gene: WunderPhul\_67 Start: 39181, Stop: 38948, Start Num: 50  
Candidate Starts for WunderPhul\_67:  
(Start: 40 @39211 has 3 MA's), (Start: 50 @39181 has 177 MA's), (55, 39163), (61, 39142), (71, 39115), (94, 39049), (105, 39022), (110, 38995), (118, 38956),

Gene: Xena\_59 Start: 40301, Stop: 40077, Start Num: 53  
Candidate Starts for Xena\_59:

(Start: 42 @40343 has 21 MA's), (Start: 45 @40331 has 23 MA's), (Start: 53 @40301 has 135 MA's), (109, 40136), (110, 40124),

Gene: XianYue\_63 Start: 40566, Stop: 40336, Start Num: 50

Candidate Starts for XianYue\_63:

(Start: 50 @40566 has 177 MA's), (55, 40548), (94, 40437), (101, 40422), (110, 40383),

Gene: Yecey3\_69 Start: 40709, Stop: 40557, Start Num: 49

Candidate Starts for Yecey3\_69:

(Start: 49 @40709 has 30 MA's), (55, 40688), (115, 40580), (118, 40565),

Gene: YoSam321\_62 Start: 40458, Stop: 40234, Start Num: 53

Candidate Starts for YoSam321\_62:

(Start: 42 @40500 has 21 MA's), (Start: 45 @40488 has 23 MA's), (Start: 53 @40458 has 135 MA's), (58, 40437), (110, 40281), (118, 40242),

Gene: Yokurt\_66 Start: 39183, Stop: 38950, Start Num: 50

Candidate Starts for Yokurt\_66:

(Start: 40 @39213 has 3 MA's), (Start: 50 @39183 has 177 MA's), (55, 39165), (61, 39144), (71, 39117), (94, 39051), (105, 39024), (110, 38997), (118, 38958),

Gene: Zaka\_67 Start: 39183, Stop: 38950, Start Num: 50

Candidate Starts for Zaka\_67:

(Start: 40 @39213 has 3 MA's), (Start: 50 @39183 has 177 MA's), (55, 39165), (61, 39144), (71, 39117), (94, 39051), (105, 39024), (110, 38997), (118, 38958),

Gene: Zakai\_100 Start: 61802, Stop: 61984, Start Num: 65

Candidate Starts for Zakai\_100:

(Start: 65 @61802 has 26 MA's), (78, 61838), (Start: 81 @61844 has 15 MA's), (89, 61871), (90, 61877), (99, 61895), (109, 61925), (110, 61937),

Gene: Zeeculate\_56 Start: 40569, Stop: 40435, Start Num: 80

Candidate Starts for Zeeculate\_56:

(Start: 80 @40569 has 142 MA's), (112, 40467),

Gene: Zephyr\_59 Start: 39575, Stop: 39441, Start Num: 80

Candidate Starts for Zephyr\_59:

(Start: 80 @39575 has 142 MA's), (112, 39473),

Gene: Zetzy\_67 Start: 40733, Stop: 40503, Start Num: 51

Candidate Starts for Zetzy\_67:

(Start: 45 @40760 has 23 MA's), (Start: 51 @40733 has 51 MA's), (96, 40604), (110, 40550),

Gene: Zeuska\_57 Start: 40195, Stop: 40061, Start Num: 80

Candidate Starts for Zeuska\_57:

(Start: 80 @40195 has 142 MA's), (112, 40093),

Gene: ZhongYanYuan\_96 Start: 61296, Stop: 61478, Start Num: 65

Candidate Starts for ZhongYanYuan\_96:

(Start: 51 @61251 has 51 MA's), (Start: 63 @61293 has 4 MA's), (Start: 65 @61296 has 26 MA's), (Start: 73 @61323 has 1 MA's), (78, 61332), (89, 61365), (99, 61389), (109, 61419), (110, 61431), (112, 61446),

Gene: Zimmer\_63 Start: 41380, Stop: 41147, Start Num: 50

Candidate Starts for Zimmer\_63:

(Start: 50 @41380 has 177 MA's), (55, 41362), (Start: 74 @41299 has 48 MA's),

Gene: Zulu\_68 Start: 39561, Stop: 39328, Start Num: 50

Candidate Starts for Zulu\_68:

(Start: 40 @39591 has 3 MA's), (Start: 50 @39561 has 177 MA's), (55, 39543), (61, 39522), (71, 39495), (94, 39429), (105, 39402), (110, 39375), (118, 39336),