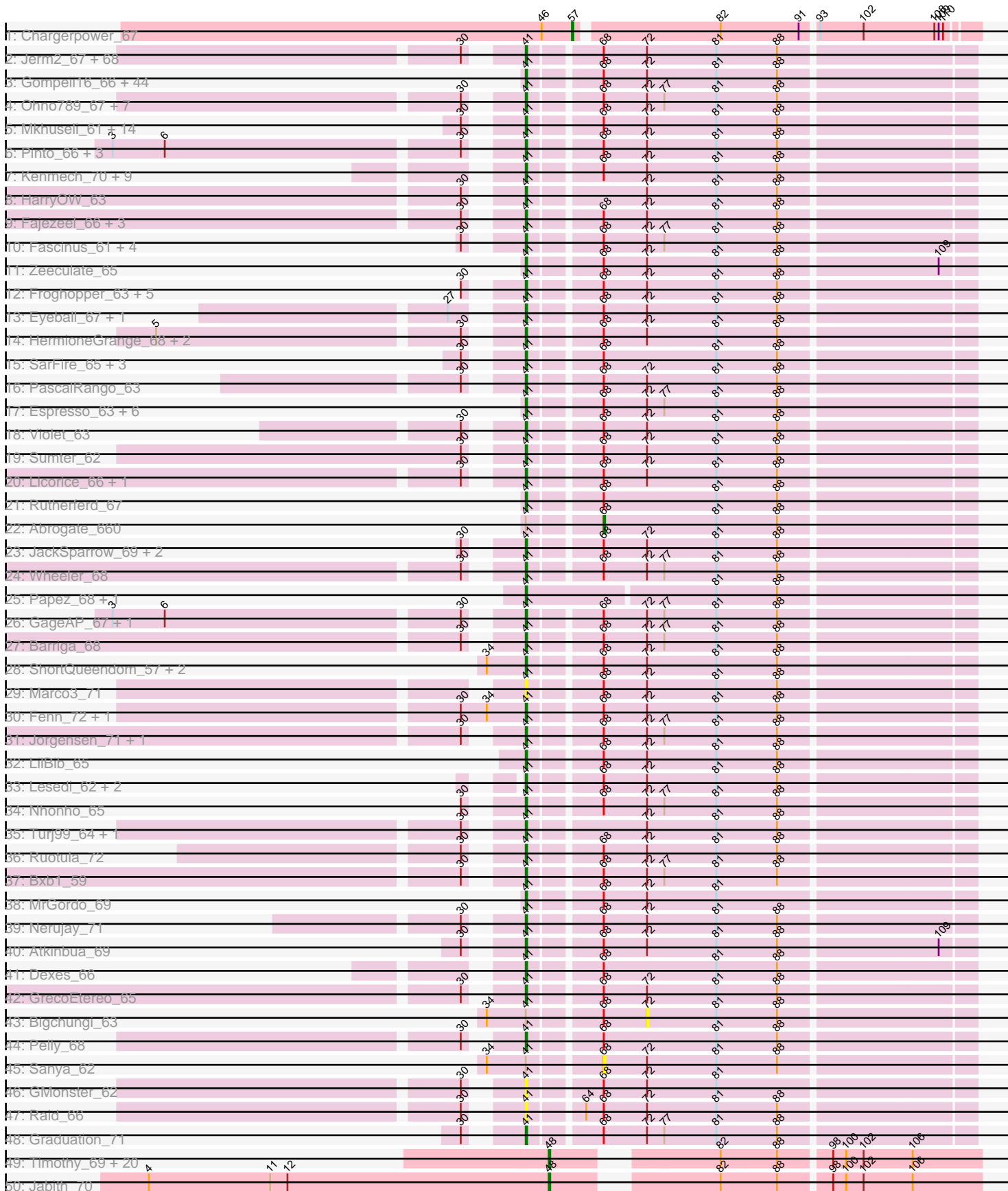
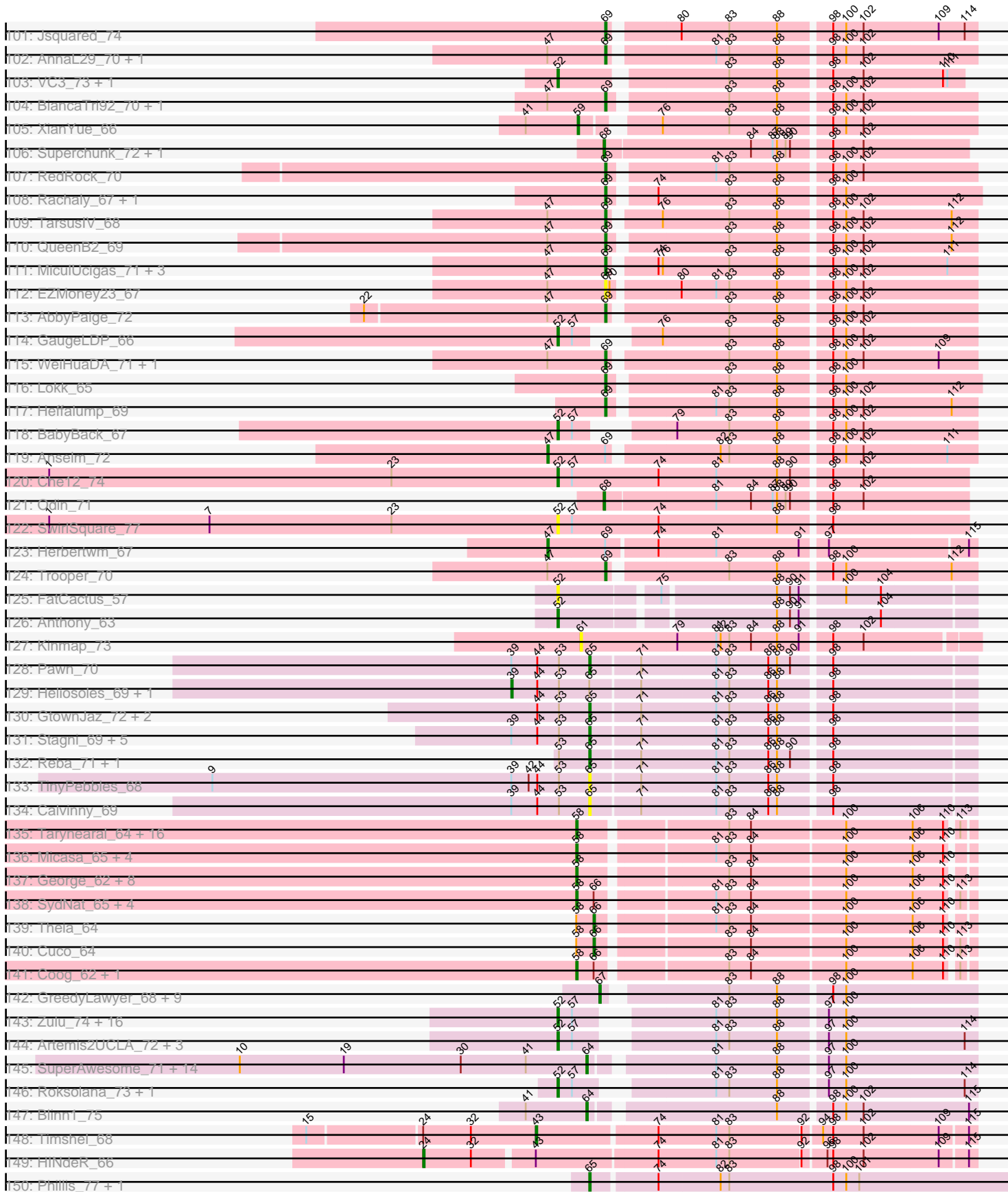


Pham 224146

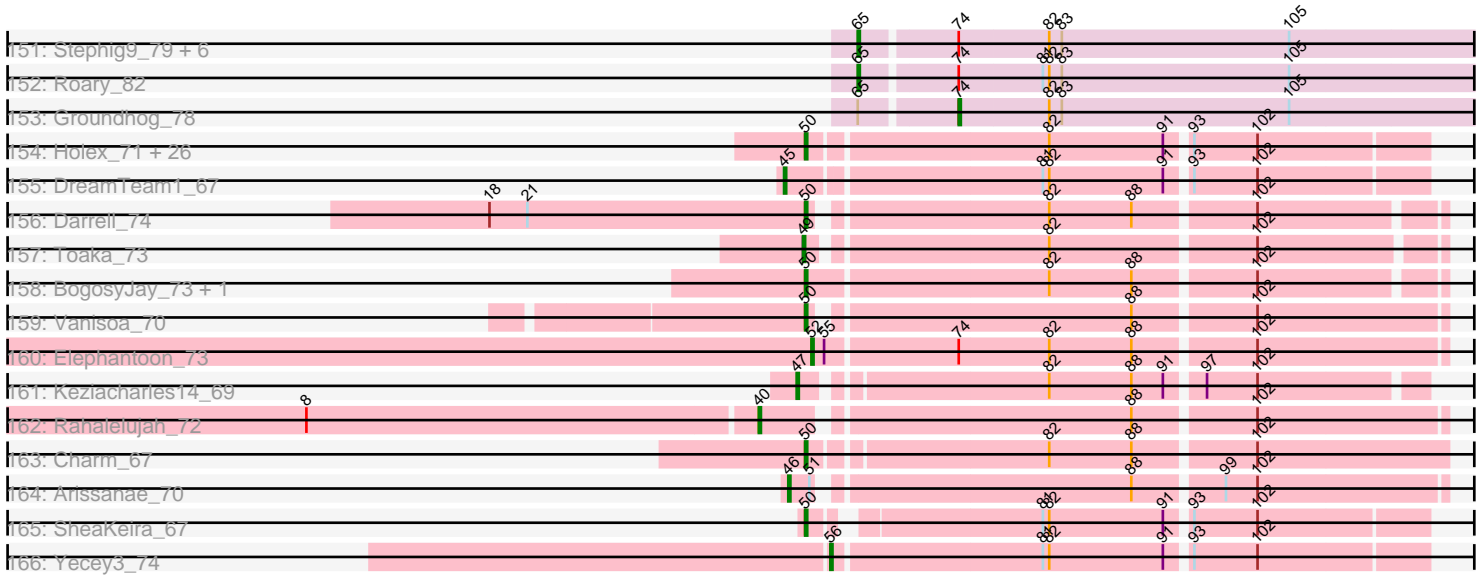




Pham 224146



Pham 224146



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 224146 Report

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

Pham number 224146 has 568 members, 65 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_67
- Track 2 : Jerm2\_67, Homines\_57, Swole\_67, Petp2012\_69, Dynamix\_67, StrongArm\_64, Briton15\_70, MaryBeth\_63, Lopton\_66, SwissCheese\_69, Corvo\_66, HanShotFirst\_67, Arcanine\_68, Tote\_62, DrFeelGood\_64, TwoPeat\_67, DreamCatcher\_68, Rufus\_68, Gwendoluna\_70, PSullivan\_64, NEHalo\_63, Marcell\_62, Chanagan\_59, PinkPlastic\_65, Pita2\_67, Moose\_67, Mryolo\_64, Ringer\_69, Kugel\_70, MetalQZJ\_62, ProMouse\_67, ConceptII\_70, Zephyr\_67, DD5\_66, Sorpresa\_64, JuliaChild\_67, Burton\_67, Hope4ever\_67, Lockley\_65, Sibs6\_68, Slagathor\_68, Blue\_66, Anglerfish\_66, Sandaddy\_63, Forsytheast\_67, RidgeCB\_66, BluSpix\_64, Pippin\_65, McGuire\_66, Rohr\_67, Ichabod\_70, BeesKnees\_68, Arlo\_64, IgnatiusPatJac\_66, Molly\_67, Killigrew\_64, U2\_62, Museum\_68, Rajelicia\_66, PattyP\_68, Bexan\_63, Euphoria\_65, Bob3\_67, TheloniousMonk\_70, QTRLifeCrisis\_67, Ciao\_63, Magnito\_67, Rubeus\_65, BaconJack\_71
- Track 3 : Gompeii16\_66, Peterson\_69, Bircsak\_66, Target\_69, Sunshine924\_71, STLscum\_75, A6\_58, Alsfro\_72, Paraselene\_67, Pepe\_64, Dulcie\_66, PacerPaul\_66, Rhynn\_62, Sagefire\_67, Smairt\_68, Hami1\_61, Agaliana\_61, Perseus\_64, Aeneas\_69, ILeeKay\_68, EnzoK\_65, Smeagol\_68, Doom\_63, Squee\_69, BigPaolini\_62, BillKnuckles\_63, Switzer\_67, Manatee\_66, Scowl\_67, Carlyle\_67, Makemake\_72, Adahisdi\_65, Tasp14\_69, Big3\_66, SkiPole\_74, BK1\_58, PhrostyMug\_66, Francis47\_65, Zeuska\_71, Marsha\_66, Paphu\_65, KBG\_67, Mule\_63, Traft412\_69, Lamina13\_69
- Track 4 : Ohno789\_67, SpikeBT\_64, BPBiabs31\_69, Bruns\_68, Applejack\_66, Ashballer\_69, Kanely\_67, Altman\_68
- Track 5 : Mkhusei\_61, Monet\_68, Iqorha\_61, Wilkins\_64, Topgun\_63, JC27\_70, Beatrix\_65, Fushigi\_61, Oogway\_64, Marge\_62, Inyanga\_61, Edtherson\_64, Magnar\_65, Norz\_65, LunarLander\_67
- Track 6 : Pinto\_66, StewieG\_60, Kykar\_67, Petruccio\_68
- Track 7 : Kenmech\_70, Levia\_60, BarrowTuph\_66, PhineBark\_64, Abbyshoes\_68, Dussy\_67, Marchy\_59, Teodoridan\_65, Payneful\_63, Ajay\_65
- Track 8 : HarryOW\_63
- Track 9 : Fajezeel\_66, Acme\_67, Watermelon\_65, Greg\_66
- Track 10 : Fascinus\_61, Maroc7\_65, Solon\_64, Phlippers\_61, Bigfoot\_59
- Track 11 : Zeeculate\_65
- Track 12 : Froghopper\_63, Dreamboat\_68, Bethlehem\_67, PherrisBueller\_67, Jasper\_67, Pari\_70
- Track 13 : Eyeball\_67, Bones\_64

- Track 14 : HermioneGrange\_68, MPlant7149\_66, BigMau\_68
- Track 15 : SarFire\_65, Gyzlar\_61, Thor\_65, KyMonks1A\_70
- Track 16 : PascalRango\_63
- Track 17 : Espresso\_63, Gandalf20\_68, Tripl3t\_70, Niza\_68, Michley\_70, Parliament\_67, Cueylyss\_65
- Track 18 : Violet\_63
- Track 19 : Sumter\_62
- Track 20 : Licorice\_66, Buttons\_62
- Track 21 : Rutherferd\_67
- Track 22 : Abrogate\_660
- Track 23 : JackSparrow\_69, CactusRose\_67, Crispicious1\_63
- Track 24 : Wheeler\_68
- Track 25 : Papez\_68, Alvin\_65
- Track 26 : GageAP\_67, AFIS\_62
- Track 27 : Barriga\_68
- Track 28 : ShortQueendom\_57, McSinger\_62, Snazzy\_63
- Track 29 : Marco3\_71
- Track 30 : Fenn\_72, Naira\_71
- Track 31 : Jorgensen\_71, Treddle\_66
- Track 32 : LilBib\_65
- Track 33 : Lesedi\_62, KSSJEB\_65, Trouble\_66
- Track 34 : Nhonho\_65
- Track 35 : Turj99\_64, Hermia\_63
- Track 36 : Ruotula\_72
- Track 37 : Bxb1\_59
- Track 38 : MrGordo\_69
- Track 39 : Nerujay\_71
- Track 40 : Atkinbua\_69
- Track 41 : Dexes\_66
- Track 42 : GrecoEtereo\_65
- Track 43 : Bigchungu\_63
- Track 44 : Pelly\_68
- Track 45 : Sanya\_62
- Track 46 : GMonster\_62
- Track 47 : Raid\_66
- Track 48 : Graduation\_71
- Track 49 : Timothy\_69, Bachome\_71, Aneem\_70, Ebony\_69, Salz\_68, Hutc2\_68, Flaverint\_70, Bowtie\_70, Orange\_68, Sham4\_69, Mabel\_69, Lucivia\_70, Snape\_69, Munch\_69, Gilberta\_70, Et2Brutus\_68, MaCh\_69, Fibonacci\_69, Bud\_68, Mulciber\_68, Petersenfast\_67
- Track 50 : Jabith\_70
- Track 51 : Refuge\_68
- Track 52 : Zimmer\_68
- Track 53 : Pharaoh\_67
- Track 54 : DARTHPhader\_68
- Track 55 : Steamy\_66
- Track 56 : Phlei\_58
- Track 57 : Luchador\_73
- Track 58 : Jeeves\_74
- Track 59 : SororFago\_72
- Track 60 : Gail\_72
- Track 61 : Sunhee\_72

- Track 62 : DekHockey33\_81, Switzerland\_79, Anaysia\_80, Boohoo\_80, LastResort\_78, Rosalind\_78, Battleship\_82, ReMo\_78, MinecraftSteve\_80, KatherineG\_80, Looper\_79, Nebulosus\_77, ShayRa\_80
- Track 63 : Oofda\_80, Remus\_81, Strosahl\_81, Soups\_80, Warrior24\_82, Waits\_80
- Track 64 : Epsocamisio\_76, JSwag\_79
- Track 65 : Nedarya\_76
- Track 66 : Anon\_77
- Track 67 : PainterBoy\_74
- Track 68 : Lucyedi\_75, EagleEye\_76
- Track 69 : 40AC\_70
- Track 70 : MyraDee\_69
- Track 71 : AN9\_74, ANI8\_74
- Track 72 : Journey13\_62
- Track 73 : Agape74\_72, Dignity\_72, LilTurb\_71, Turbido\_71, Buggy\_72, Jerm\_72, Leviathan\_72, Smeagan\_73, Whabigail7\_71
- Track 74 : Retro23\_71, SnapTap\_70, Crucio\_71, QueenBeesly\_71, Georgie2\_72, FiringLine\_71, Power\_70, SemperFi\_71, SweetiePie\_70
- Track 75 : Centaur\_71, WideWale\_71, Terrific\_71, Gratitude\_68, Equemioh13\_70, Drake55\_72, Baehexic\_69, Piro94\_70, HarryHoudini\_71, Updawg\_71
- Track 76 : Leogania\_70, LionsBait\_71
- Track 77 : Quokka\_72, TipsytheTRex\_70, MajorMajor\_72, Bradman\_73
- Track 78 : Ph8s\_74, Adzzy\_74
- Track 79 : 20ES\_72, First\_0071, LadyBird\_74, CRB1\_72
- Track 80 : Changeling\_69
- Track 81 : L5\_68
- Track 82 : Kerberos\_74, Tomathan\_74, D32\_73, StarStuff\_74, Duplo\_74, DBQu4n\_74, D29\_68, Pomar16\_73, Travvers\_73, Naji\_74
- Track 83 : Tristan\_66, Landor\_69
- Track 84 : BobSwaget\_64
- Track 85 : VA6\_70, AN3\_72, Deloris\_70, BengiVuitton\_70
- Track 86 : ArcherNM\_64
- Track 87 : Dalmatian\_71, DudeLittle\_69
- Track 88 : NothingSpecial\_67
- Track 89 : Benvolio\_68, Echild\_71
- Track 90 : Fameo\_70
- Track 91 : KingCyrus\_71, ChipMunk\_72, EvilGenius\_71
- Track 92 : Larenn\_68, Malec\_69
- Track 93 : Pukovnik\_67
- Track 94 : Serenity\_74
- Track 95 : Colin\_69
- Track 96 : NicoleTera\_68
- Track 97 : IronMan\_68, Phaded\_66, Jaan\_69
- Track 98 : MissWhite\_70
- Track 99 : Trixie\_69
- Track 100 : JoshKayV\_71
- Track 101 : Jsquared\_74
- Track 102 : AnnaL29\_70, Loser\_72
- Track 103 : VC3\_73, C3\_67
- Track 104 : BiancaTri92\_70, Acolyte\_62
- Track 105 : XianYue\_66
- Track 106 : Superchunk\_72, Caraxes\_73
- Track 107 : RedRock\_70
- Track 108 : Rachaly\_67, Miko\_65

- Track 109 : TarsusIV\_68
- Track 110 : QueenB2\_69
- Track 111 : MiculUcigas\_71, Flare16\_71, NaSiaTalie\_71, Sknot\_71
- Track 112 : EZMoney23\_67
- Track 113 : AbbyPaige\_72
- Track 114 : GaugeLDP\_66
- Track 115 : WeiHuaDA\_71, Kalpine\_70
- Track 116 : Lokk\_65
- Track 117 : Heffalump\_69
- Track 118 : BabyBack\_67
- Track 119 : Anselm\_72
- Track 120 : Che12\_74
- Track 121 : Odin\_71
- Track 122 : SwirlSquare\_77
- Track 123 : Herbertwm\_67
- Track 124 : Trooper\_70
- Track 125 : FatCactus\_57
- Track 126 : Anthony\_63
- Track 127 : Kinmap\_73
- Track 128 : Pawn\_70
- Track 129 : Heliosoles\_69, PurpleHaze\_71
- Track 130 : GtownJaz\_72, Grif\_70, LarryKay\_72
- Track 131 : Stagni\_69, Bxz2\_67, Iowa\_69, Bigflo\_69, HashRod\_73, Phoebe\_73
- Track 132 : Reba\_71, Phranny\_72
- Track 133 : TinyPebbles\_68
- Track 134 : Calvinny\_69
- Track 135 : Tarynearal\_64, Tiger\_65, Benedict\_69, AgentM\_65, Jabiru\_67, Phlorence\_64, Jovo\_66, PickleBack\_66, ElTiger69\_71, UnionJack\_69, Lev2\_66, Aragog\_65, ForGetIt\_66, Naca\_68, Discoknowium\_63, Conspiracy\_66, Airmid\_68
- Track 136 : Micasa\_65, Bonamassa\_65, Twigg\_62, Dublin\_65, MarysWell\_65
- Track 137 : George\_62, LittleCherry\_64, Swirley\_65, Scorpia\_69, Chadwick\_69, PetterN\_73, Prinash11\_63, HuhtaEnerson15\_63, Milcery\_65
- Track 138 : SydNat\_65, Bluefalcon\_61, Ghouboy\_65, Archetta\_63, Zolita\_64
- Track 139 : Theia\_64
- Track 140 : Cuco\_64
- Track 141 : Coog\_62, Midas2\_62
- Track 142 : GreedyLawyer\_68, VohminGhazi\_71, Kazan\_72, Candra\_69, EricB\_70, Kipper29\_71, Chartreuse\_68, DaVinci\_69, Hoot\_66, SmellyB\_71
- Track 143 : Zulu\_74, Helmet\_74, Indra\_76, Garak\_74, Temprado\_74, Zaka\_73, Jeffabunny\_73, Wiks\_72, Lilbunny\_72, Hammer\_73, Yokurt\_72, Blue7\_74, BlessJoy\_72, Rifter\_73, Tucker\_73, WunderPhul\_73, ToneTone\_70
- Track 144 : Artemis2UCLA\_72, Hexamo\_72, CloudWang3\_73, Koko\_74
- Track 145 : SuperAwesome\_71, JewelBug\_71, Gladiator\_69, Neeharika16\_70, Polyphemos\_71, Priamo\_73, Pmask\_70, Isiphiwo\_69, BABullseye\_64, Newrala\_71, Cookiedough\_71, Dorothea\_71, Jordennis\_70, McFly\_71, SuperCallie99\_68
- Track 146 : Roksolana\_73, Gruunaga\_72
- Track 147 : Blinn1\_75
- Track 148 : Timshel\_68
- Track 149 : HINdeR\_66
- Track 150 : Phillis\_77, NearlyHeadless\_81
- Track 151 : Stephig9\_79, Dixon\_79, Danforth\_81, Smeadley\_80, Astro\_80, Expelliarmus\_77, Saintus\_76
- Track 152 : Roary\_82



- Track 153 : Groundhog\_78
- Track 154 : Halex\_71, Fayely\_71, Myxus\_73, Priya\_71, Jiawan\_70, Catalina\_75, Aliter\_74, Lilleskat\_70, Phonnegut\_73, Conquerage\_71, Alma\_71, HortumSL17\_74, PackMan\_72, Spouty\_71, Pioneer\_73, EmyBug\_70, Tubs\_73, Qobbit\_71, Phaeder\_73, RyeScarlet\_74, Sachima\_69, ExplosioNervosa\_71, Scherzo\_72, Beemo\_73, Ugenie5\_68, Hanray\_71, Eidsmoe\_71
- Track 155 : DreamTeam1\_67
- Track 156 : Darrell\_74
- Track 157 : Toaka\_73
- Track 158 : BogosyJay\_73, Maminiaina\_73
- Track 159 : Vanisoa\_70
- Track 160 : Elephantoon\_73
- Track 161 : Keziacharles14\_69
- Track 162 : Rahalelujah\_72
- Track 163 : Charm\_67
- Track 164 : Arissanae\_70
- Track 165 : SheaKeira\_67
- Track 166 : Yecey3\_74

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

The start number called the most often in the published annotations is 41, it was called in 206 of the 503 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A6\_58, AFIS\_62, Abbyshoes\_68, Acme\_67, Adahisdi\_65, Aeneas\_69, Agaliana\_61, Ajay\_65, Alsfro\_72, Altman\_68, Alvin\_65, Anglerfish\_66, Applejack\_66, Arcanine\_68, Arlo\_64, Ashballer\_69, Atkinbua\_69, BK1\_58, BPBiebs31\_69, BaconJack\_71, Barriga\_68, BarrowTuph\_66, Beatrix\_65, BeesKnees\_68, Bethlehem\_67, Bexan\_63, Big3\_66, BigMau\_68, BigPaolini\_62, Bigfoot\_59, BillKnuckles\_63, Bircsak\_66, BluSpix\_64, Blue\_66, Bob3\_67, Bones\_64, Briton15\_70, Bruns\_68, Burton\_67, Buttons\_62, Bxb1\_59, CactusRose\_67, Carlyle\_67, Chanagan\_59, Ciao\_63, Conceptll\_70, Corvo\_66, Crispicous1\_63, Cueylyss\_65, DD5\_66, Dexes\_66, Doom\_63, DrFeelGood\_64, DreamCatcher\_68, Dreamboat\_68, Dulcie\_66, Dussy\_67, Dynamix\_67, Edtherson\_64, EnzoK\_65, Espresso\_63, Euphoria\_65, Eyeball\_67, Fajezeel\_66, Fascinus\_61, Fenn\_72, Forsytheast\_67, Francis47\_65, Froghopper\_63, Fushigi\_61, GMonster\_62, GageAP\_67, Gandalf20\_68, Gompeii16\_66, Graduation\_71, GrecoEtereo\_65, Greg\_66, Gwendoluna\_70, Gyzlar\_61, Hami1\_61, HanShotFirst\_67, HarryOW\_63, Hermia\_63, HermioneGrange\_68, Homines\_57, Hope4ever\_67, ILeeKay\_68, Ichabod\_70, IgnatiusPatJac\_66, Inyanga\_61, Iqorha\_61, JC27\_70, JackSparrow\_69, Jasper\_67, Jerm2\_67, Jorgensen\_71, JuliaChild\_67, KBG\_67, KSSJEB\_65, Kanely\_67, Kenmech\_70, Killigrew\_64, Kugel\_70, KyMonks1A\_70, Kykar\_67, Lamina13\_69, Lesedi\_62, Levia\_60, Licorice\_66, LilBib\_65, Lockley\_65, Lopton\_66, LunarLander\_67, MPlant7149\_66, Magnar\_65, Magnito\_67, Makemake\_72, Manatee\_66, Marcell\_62, Marchy\_59, Marco3\_71, Marge\_62, Maroc7\_65, Marsha\_66, MaryBeth\_63, McGuire\_66, McSinger\_62, MetalQZJ\_62, Michley\_70, Mkhuseleli\_61, Molly\_67, Monet\_68, Moose\_67, MrGordo\_69, Mryolo\_64, Mule\_63, Museum\_68, NEHalo\_63, Naira\_71, Nerujay\_71, Nhonho\_65, Niza\_68, Norz\_65, Ohno789\_67, Oogway\_64, PSullivan\_64, PacerPaul\_66, Papez\_68, Paphu\_65,

Paraselene\_67, Pari\_70, Parliament\_67, PascalRango\_63, PattyP\_68, Payneful\_63, Pelly\_68, Pepe\_64, Perseus\_64, Peterson\_69, Petp2012\_69, Petruchio\_68, PherrisBueller\_67, PhineBark\_64, Phlippers\_61, PhrostyMug\_66, PinkPlastic\_65, Pinto\_66, Pippin\_65, Pita2\_67, ProMouse\_67, QTRlifeCrisis\_67, Raid\_66, Rajelicia\_66, Rhynn\_62, RidgeCB\_66, Ringer\_69, Rohr\_67, Rubeus\_65, Rufus\_68, Ruotula\_72, Rutherford\_67, STLscum\_75, Sagefire\_67, Sandaddy\_63, SarFire\_65, Scowl\_67, ShortQueendom\_57, Sibs6\_68, SkiPole\_74, Slagathor\_68, Smairt\_68, Smeagol\_68, Snazzy\_63, Solon\_64, Sorpresa\_64, SpikeBT\_64, Squee\_69, StewieG\_60, StrongArm\_64, Sumter\_62, Sunshine924\_71, SwissCheese\_69, Switzer\_67, Swole\_67, Target\_69, Tasp14\_69, Teodoridan\_65, TheloniousMonk\_70, Thor\_65, Topgun\_63, Tote\_62, Traft412\_69, Treddle\_66, Tripl3t\_70, Trouble\_66, Turj99\_64, TwoPeat\_67, U2\_62, Violet\_63, Watermelon\_65, Wheeler\_68, Wilkins\_64, Zeeculate\_65, Zephyr\_67, Zeuska\_71,

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

- Abrogate\_660, BABullseye\_64, Bigchungu\_63, Blinn1\_75, Cookiedough\_71, Dorothea\_71, Gladiator\_69, Isiphiwo\_69, JewelBug\_71, Jordennis\_70, McFly\_71, Neeharika16\_70, Newrala\_71, Pmask\_70, Polyphemus\_71, Priamo\_73, Sanya\_62, SuperAwesome\_71, SuperCallie99\_68, XianYue\_66,

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

- 20ES\_72, 40AC\_70, AN3\_72, AN9\_74, ANI8\_74, AbbyPaige\_72, Acolyte\_62, Adzzy\_74, Agape74\_72, AgentM\_65, Airmid\_68, Aliter\_74, Alma\_71, Anaysia\_80, Aneem\_70, AnnaL29\_70, Anon\_77, Anselm\_72, Anthony\_63, Aragog\_65, ArcherNM\_64, Archetta\_63, Arissanae\_70, Artemis2UCLA\_72, Astro\_80, BabyBack\_67, Bachome\_71, Baehexic\_69, Battleship\_82, Beemo\_73, Benedict\_69, BengiVuitton\_70, Benvolio\_68, BiancaTri92\_70, Bigflo\_69, BlessJoy\_72, Blue7\_74, Bluefalcon\_61, BobSwaget\_64, BogosyJay\_73, Bonamassa\_65, Boohoo\_80, Bowtie\_70, Bradman\_73, Bud\_68, Buggy\_72, Bxz2\_67, C3\_67, CRB1\_72, Calvinny\_69, Candra\_69, Caraxes\_73, Catalina\_75, Centaur\_71, Chadwick\_69, Changeling\_69, Chargerpower\_67, Charm\_67, Chartreuse\_68, Che12\_74, ChipMunk\_72, CloudWang3\_73, Colin\_69, Conquerage\_71, Conspiracy\_66, Coog\_62, Crucio\_71, Cuco\_64, D29\_68, D32\_73, DBQu4n\_74, DaVinci\_69, Dalmatian\_71, Danforth\_81, Darrell\_74, DARTHPhader\_68, DekHockey33\_81, Deloris\_70, Dignity\_72, Discoknowium\_63, Dixon\_79, Drake55\_72, DreamTeam1\_67, Dublin\_65, DudeLittle\_69, Duplo\_74, EZMoney23\_67, EagleEye\_76, Ebony\_69, Echild\_71, Eidsmoe\_71, EITiger69\_71, Elephantoon\_73, EmyBug\_70, Epsocamisio\_76, Equemioh13\_70, EricB\_70, Et2Brutus\_68, EvilGenius\_71, Expelliarmus\_77, ExplosioNervosa\_71, Fameo\_70, FatCactus\_57, Fayely\_71, Fibonacci\_69, FiringLine\_71, First\_0071, Flare16\_71, Flaverint\_70, ForGetIt\_66, Gail\_72, Garak\_74, GaugeLDP\_66, George\_62, Georgie2\_72, Ghoulboy\_65, Gilberta\_70, Gratitude\_68, GreedyLawyer\_68, Grif\_70, Groundhog\_78, Gruunaga\_72, GtownJaz\_72, HINdeR\_66, Hammer\_73, Hanray\_71, HarryHoudini\_71, HashRod\_73, Heffalump\_69, Heliosoles\_69, Helmet\_74, Herbertwm\_67, Hexamo\_72, Horex\_71, Hoot\_66, HortumSL17\_74, HuhtaEnerson15\_63, Hutc2\_68, Indra\_76, IronMan\_68, JSwag\_79, Jaan\_69, Jabiru\_67, Jabith\_70, Jeeves\_74, Jeffabunny\_73, Jerm\_72, Jiawan\_70, JoshKayV\_71, Journey13\_62, Jovo\_66, Jsquared\_74, Kalpine\_70, KatherineG\_80, Kazan\_72, Kerberos\_74, Keziacharles14\_69, KingCyrus\_71, Kinmap\_73, Kipper29\_71, Koko\_74, L5\_68, LadyBird\_74, Landor\_69, Larenn\_68, LarryKay\_72, LastResort\_78, Leogania\_70, Lev2\_66, Leviathan\_72, LilTurb\_71, Lilbunny\_72, Lilleskat\_70, LionsBait\_71, LittleCherry\_64, Lokk\_65, Looper\_79, Loser\_72, Lowa\_69, Luchador\_73, Lucivia\_70, Lucyedi\_75, MaCh\_69, Mabel\_69,

MajorMajor\_72, Malec\_69, Maminaiaina\_73, MarysWell\_65, Micasa\_65, MiculUcigas\_71, Midas2\_62, Miko\_65, Milcery\_65, MinecraftSteve\_80, MissWhite\_70, Mulciber\_68, Munch\_69, MyraDee\_69, Myxus\_73, NaSiaTalie\_71, Naca\_68, Naji\_74, NearlyHeadless\_81, Nebulosus\_77, Nedarya\_76, NicoleTera\_68, NothingSpecial\_67, Odin\_71, Oofda\_80, Orange\_68, PackMan\_72, PainterBoy\_74, Pawn\_70, Petersenfast\_67, PetterN\_73, Ph8s\_74, Phaded\_66, Phaeder\_73, Pharaoh\_67, Phillis\_77, Phlei\_58, Phlorence\_64, Phoebe\_73, Phonnegut\_73, Phranny\_72, PickleBack\_66, Pioneer\_73, Piro94\_70, Pomar16\_73, Power\_70, Prinash11\_63, Priya\_71, Pukovnik\_67, PurpleHaze\_71, Qobbit\_71, QueenB2\_69, QueenBeesly\_71, Quokka\_72, Rachaly\_67, Rahalelujah\_72, ReMo\_78, Reba\_71, RedRock\_70, Refuge\_68, Remus\_81, Retro23\_71, Rifter\_73, Roary\_82, Roksolana\_73, Rosalind\_78, RyeScarlet\_74, Sachima\_69, Saintus\_76, Salz\_68, Scherzo\_72, Scorpia\_69, SemperFi\_71, Serenity\_74, Sham4\_69, ShayRa\_80, SheaKeira\_67, Sknot\_71, Smeadley\_80, Smeagan\_73, SmellyB\_71, SnapTap\_70, Snape\_69, SororFago\_72, Soups\_80, Spouty\_71, Stagni\_69, StarStuff\_74, Steamy\_66, Stephig9\_79, Strosahl\_81, Sunhee\_72, Superchunk\_72, SweetiePie\_70, SwirlSquare\_77, Swirley\_65, Switzerland\_79, SydNat\_65, TarsusIV\_68, Tarynearal\_64, Temprado\_74, Terrific\_71, Theia\_64, Tiger\_65, Timothy\_69, Timshel\_68, TinyPebbles\_68, TipsytheTRex\_70, Toaka\_73, Tomathan\_74, ToneTone\_70, Travvers\_73, Tristan\_66, Trixie\_69, Trooper\_70, Tubs\_73, Tucker\_73, Turbido\_71, Twigg\_62, Ugenie5\_68, UnionJack\_69, Updawg\_71, VA6\_70, VC3\_73, Vanisoa\_70, VohminGhazi\_71, Waits\_80, Warrior24\_82, WeiHuaDA\_71, Whabigail7\_71, WideWale\_71, Wiks\_72, WunderPhul\_73, Yecey3\_74, Yokurt\_72, Zaka\_73, Zimmer\_68, Zolita\_64, Zulu\_74,

### Summary by start number:

#### Start 24:

- Found in 2 of 568 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 50.0% of time when present
- Phage (with cluster) where this start called: HINdeR\_66 (A7),

#### Start 35:

- Found in 3 of 568 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 33.3% of time when present
- Phage (with cluster) where this start called: PainterBoy\_74 (A16),

#### Start 37:

- Found in 4 of 568 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Steamy\_66 (A12),

#### Start 38:

- Found in 3 of 568 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DarthPhader\_68 (A12), Refuge\_68 (A12), Zimmer\_68 (A12),

#### Start 39:

- Found in 11 of 568 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 503
- Called 18.2% of time when present
- Phage (with cluster) where this start called: Heliosoles\_69 (A3), PurpleHaze\_71 (A3),

#### Start 40:

- Found in 2 of 568 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Rahalelujah\_72 (A9),

#### Start 41:

- Found in 245 of 568 ( 43.1% ) of genes in pham
- Manual Annotations of this start: 206 of 503
- Called 91.8% of time when present
- Phage (with cluster) where this start called: A6\_58 (A1), AFIS\_62 (A1), Abbysshoes\_68 (A1), Acme\_67 (A1), Adahisdi\_65 (A1), Aeneas\_69 (A1), Agaliana\_61 (A1), Ajay\_65 (A1), Alsfro\_72 (A1), Altman\_68 (A1), Alvin\_65 (A1), Anglerfish\_66 (A1), Applejack\_66 (A1), Arcanine\_68 (A1), Arlo\_64 (A1), Ashballer\_69 (A1), Atkinbua\_69 (A1), BK1\_58 (A1), BPBiebs31\_69 (A1), BaconJack\_71 (A1), Barriga\_68 (A1), BarrowTuph\_66 (A1), Beatrix\_65 (A1), BeesKnees\_68 (A1), Bethlehem\_67 (A1), Bexan\_63 (A1), Big3\_66 (A1), BigMau\_68 (A1), BigPaolini\_62 (A1), Bigfoot\_59 (A1), BillKnuckles\_63 (A1), Bircsak\_66 (A1), BluSpix\_64 (A1), Blue\_66 (A1), Bob3\_67 (A1), Bones\_64 (A1), Briton15\_70 (A1), Bruns\_68 (A1), Burton\_67 (A1), Buttons\_62 (A1), Bxb1\_59 (A1), CactusRose\_67 (A1), Carlyle\_67 (A1), Chanagan\_59 (A1), Ciao\_63 (A1), ConceptII\_70 (A1), Corvo\_66 (A1), Crispicous1\_63 (A1), Cueyliss\_65 (A1), DD5\_66 (A1), Dexes\_66 (A1), Doom\_63 (A1), DrFeelGood\_64 (A1), DreamCatcher\_68 (A1), Dreamboat\_68 (A1), Dulcie\_66 (A1), Dussy\_67 (A1), Dynamix\_67 (A1), Edtherson\_64 (A1), EnzoK\_65 (A1), Espresso\_63 (A1), Euphoria\_65 (A1), Eyeball\_67 (A1), Fajezeel\_66 (A1), Fascinus\_61 (A1), Fenn\_72 (A1), Forsytheast\_67 (A1), Francis47\_65 (A1), Froghopper\_63 (A1), Fushigi\_61 (A1), GMonster\_62 (A1), GageAP\_67 (A1), Gandalf20\_68 (A1), Gompeii16\_66 (A1), Graduation\_71 (A1), GrecoEtereo\_65 (A1), Greg\_66 (A1), Gwendoluna\_70 (A1), Gyzlar\_61 (A1), Hami1\_61 (A1), HanShotFirst\_67 (A1), HarryOW\_63 (A1), Hermia\_63 (A1), HermioneGrange\_68 (A1), Homines\_57 (A1), Hope4ever\_67 (A1), ILeeKay\_68 (A1), Ichabod\_70 (A1), IgnatiusPatJac\_66 (A1), Inyanga\_61 (A1), Iqorha\_61 (A1), JC27\_70 (A1), JackSparrow\_69 (A1), Jasper\_67 (A1), Jerm2\_67 (A1), Jorgensen\_71 (A1), JuliaChild\_67 (A1), KBG\_67 (A1), KSSJEB\_65 (A1), Kanely\_67 (A1), Kenmech\_70 (A1), Killigrew\_64 (A1), Kugel\_70 (A1), KyMonks1A\_70 (A1), Kykar\_67 (A1), Lamina13\_69 (A1), Lesedi\_62 (A1), Levia\_60 (A1), Licorice\_66 (A1), LilBib\_65 (A1), Lockley\_65 (A1), Lopton\_66 (A1), LunarLander\_67 (A1), MPlant7149\_66 (A1), Magnar\_65 (A1), Magnito\_67 (A1), Makemake\_72 (A1), Manatee\_66 (A1), Marcell\_62 (A1), Marchy\_59 (A1), Marco3\_71 (A1), Marge\_62 (A1), Maroc7\_65 (A1), Marsha\_66 (A1), MaryBeth\_63 (A1), McGuire\_66 (A1), McSinger\_62 (A1), MetalQZJ\_62 (A1), Michley\_70 (A1), Mkhusei\_61 (A1), Molly\_67 (A1), Monet\_68 (A1), Moose\_67 (A1), MrGordo\_69 (A1), Mryolo\_64 (A1), Mule\_63 (A1), Museum\_68 (A1), NEHalo\_63 (A1), Naira\_71 (A1), Nerujay\_71 (A1), Nhonho\_65 (A1), Niza\_68 (A1), Norz\_65 (A1), Ohno789\_67 (A1), Oogway\_64 (A1), PSullivan\_64 (A1), PacerPaul\_66 (A1), Papez\_68 (A1), Paphu\_65 (A1), Paraselene\_67 (A1), Pari\_70 (A1), Parliament\_67 (A1), PascalRango\_63 (A1), PattyP\_68 (A1), Payneful\_63 (A1), Pelly\_68 (A1), Pepe\_64 (A1), Perseus\_64 (A1), Peterson\_69 (A1), Petp2012\_69 (A1), Petruccio\_68 (A1), PherrisBueller\_67 (A1),

PhineBark\_64 (A1), Phlippers\_61 (A1), PhrostyMug\_66 (A1), PinkPlastic\_65 (A1), Pinto\_66 (A1), Pippin\_65 (A1), Pita2\_67 (A1), ProMouse\_67 (A1), QTRlifeCrisis\_67 (A1), Raid\_66 (A1), Rajelicia\_66 (A1), Rhynn\_62 (A1), RidgeCB\_66 (A1), Ringer\_69 (A1), Rohr\_67 (A1), Rubeus\_65 (A1), Rufus\_68 (A1), Ruotula\_72 (A1), Rutherford\_67 (A1), STLscum\_75 (A1), Sagefire\_67 (A1), Sandaddy\_63 (A1), SarFire\_65 (A1), Scowl\_67 (A1), ShortQueendom\_57 (A1), Sibs6\_68 (A1), SkiPole\_74 (A1), Slagathor\_68 (A1), Smairt\_68 (A1), Smeagol\_68 (A1), Snazzy\_63 (A1), Solon\_64 (A1), Sorpresa\_64 (A1), SpikeBT\_64 (A1), Squee\_69 (A1), StewieG\_60 (A1), StrongArm\_64 (A1), Sumter\_62 (A1), Sunshine924\_71 (A1), SwissCheese\_69 (A1), Switzer\_67 (A1), Swole\_67 (A1), Target\_69 (A1), Tasp14\_69 (A1), Teodoridan\_65 (A1), TheloniousMonk\_70 (A1), Thor\_65 (A1), Topgun\_63 (A1), Tote\_62 (A1), Traft412\_69 (A1), Treddle\_66 (A1), Tripl3t\_70 (A1), Trouble\_66 (A1), Turj99\_64 (A1), TwoPeat\_67 (A1), U2\_62 (A1), Violet\_63 (A1), Watermelon\_65 (A1), Wheeler\_68 (A1), Wilkins\_64 (A1), Zeeculate\_65 (A1), Zephyr\_67 (A1), Zeuska\_71 (A1),

#### Start 43:

- Found in 2 of 568 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Timshel\_68 (A7),

#### Start 45:

- Found in 1 of 568 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DreamTeam1\_67 (A9),

#### Start 46:

- Found in 7 of 568 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Arissanæ\_70 (A9),

#### Start 47:

- Found in 58 of 568 ( 10.2% ) of genes in pham
- Manual Annotations of this start: 8 of 503
- Called 13.8% of time when present
- Phage (with cluster) where this start called: Anselm\_72 (A2), Dalmatian\_71 (A2), DudeLittle\_69 (A2), Herbertwm\_67 (A2), Keziacharles14\_69 (A9), NicoleTera\_68 (A2), NothingSpecial\_67 (A2), Serenity\_74 (A2),

#### Start 48:

- Found in 22 of 568 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 21 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem\_70 (A11), Bachome\_71 (A11), Bowtie\_70 (A11), Bud\_68 (A11), Ebony\_69 (A11), Et2Brutus\_68 (A11), Fibonacci\_69 (A11), Flaverint\_70 (A11), Gilberta\_70 (A11), Hutc2\_68 (A11), Jabith\_70 (A11), Lucivia\_70 (A11), MaCh\_69 (A11), Mabel\_69 (A11), Mulciber\_68 (A11), Munch\_69 (A11), Orange\_68 (A11), Petersenfast\_67 (A11), Salz\_68 (A11), Sham4\_69 (A11), Snape\_69 (A11), Timothy\_69 (A11),

#### Start 49:

- Found in 1 of 568 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toaka\_73 (A9),

#### Start 50:

- Found in 34 of 568 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 28 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aliter\_74 (A9), Alma\_71 (A9), Beemo\_73 (A9), BogosyJay\_73 (A9), Catalina\_75 (A9), Charm\_67 (A9), Conquerage\_71 (A9), Darrell\_74 (A9), Eidsmoe\_71 (A9), EmyBug\_70 (A9), ExplosioNervosa\_71 (A9), Fayely\_71 (A9), Hanray\_71 (A9), Holec\_71 (A9), HortumSL17\_74 (A9), Jiawan\_70 (A9), Lilleskat\_70 (A9), Maminiaina\_73 (A9), MyraDee\_69 (A18), Myxus\_73 (A9), PackMan\_72 (A9), Phaeder\_73 (A9), Phonnegut\_73 (A9), Pioneer\_73 (A9), Priya\_71 (A9), Qobbit\_71 (A9), RyeScarlet\_74 (A9), Sachima\_69 (A9), Scherzo\_72 (A9), SheaKeira\_67 (A9), Spouty\_71 (A9), Tubs\_73 (A9), Ugenie5\_68 (A9), Vanisoa\_70 (A9),

#### Start 52:

- Found in 72 of 568 ( 12.7% ) of genes in pham
- Manual Annotations of this start: 61 of 503
- Called 98.6% of time when present
- Phage (with cluster) where this start called: AN9\_74 (A2), ANI8\_74 (A2), Adzzy\_74 (A2), Anaysia\_80 (A15), Anon\_77 (A15), Anthony\_63 (A20), Artemis2UCLA\_72 (A6), BabyBack\_67 (A2), Battleship\_82 (A15), BlessJoy\_72 (A6), Blue7\_74 (A6), Boohoo\_80 (A15), C3\_67 (A2), Che12\_74 (A2), CloudWang3\_73 (A6), D29\_68 (A2), D32\_73 (A2), DBQu4n\_74 (A2), DekHockey33\_81 (A15), Duplo\_74 (A2), Elephantoon\_73 (A9), Epsocamisio\_76 (A15), FatCactus\_57 (A20), Garak\_74 (A6), GaugeLDP\_66 (A2), Gruunaga\_72 (A6), Hammer\_73 (A6), Helmet\_74 (A6), Hexamo\_72 (A6), Indra\_76 (A6), JSwag\_79 (A15), Jeffabunny\_73 (A6), KatherineG\_80 (A15), Kerberos\_74 (A2), Koko\_74 (A6), LastResort\_78 (A15), Lilbunny\_72 (A6), Looper\_79 (A15), MinecraftSteve\_80 (A15), MissWhite\_70 (A2), Naji\_74 (A2), Nebulosus\_77 (A15), Nedarya\_76 (A15), Oofda\_80 (A15), Ph8s\_74 (A2), Phlei\_58 (A13), Pomar16\_73 (A2), ReMo\_78 (A15), Remus\_81 (A15), Rifter\_73 (A6), Roksolana\_73 (A6), Rosalind\_78 (A15), ShayRa\_80 (A15), Soups\_80 (A15), StarStuff\_74 (A2), Strosahl\_81 (A15), SwirlSquare\_77 (A2), Switzerland\_79 (A15), Temprado\_74 (A6), Tomathan\_74 (A2), ToneTone\_70 (A6), Travvers\_73 (A2), Tucker\_73 (A6), VC3\_73 (A2), Waits\_80 (A15), Warrior24\_82 (A15), Wiks\_72 (A6), WunderPhul\_73 (A6), Yokurt\_72 (A6), Zaka\_73 (A6), Zulu\_74 (A6),

#### Start 54:

- Found in 3 of 568 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 503
- Called 66.7% of time when present
- Phage (with cluster) where this start called: EagleEye\_76 (A16), Lucyedi\_75 (A16),

#### Start 56:

- Found in 2 of 568 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Yecey3\_74 (A9),

Start 57:

- Found in 35 of 568 ( 6.2% ) of genes in pham
- Manual Annotations of this start: 4 of 503
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Chargerpower\_67 (A), Jeeves\_74 (A14), Luchador\_73 (A14), SororFago\_72 (A14), Sunhee\_72 (A14),

Start 58:

- Found in 42 of 568 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 37 of 503
- Called 92.9% of time when present
- Phage (with cluster) where this start called: AgentM\_65 (A5), Airmid\_68 (A5), Aragog\_65 (A5), Archetta\_63 (A5), Benedict\_69 (A5), Bluefalcon\_61 (A5), Bonamassa\_65 (A5), Chadwick\_69 (A5), Conspiracy\_66 (A5), Coog\_62 (A5), Discoknowium\_63 (A5), Dublin\_65 (A5), ElTiger69\_71 (A5), ForGetIt\_66 (A5), Gail\_72 (A14), George\_62 (A5), Ghouboy\_65 (A5), HuhtaEnerson15\_63 (A5), Jabiru\_67 (A5), Jovo\_66 (A5), Lev2\_66 (A5), LittleCherry\_64 (A5), MarysWell\_65 (A5), Micasa\_65 (A5), Midas2\_62 (A5), Milcery\_65 (A5), Naca\_68 (A5), PetterN\_73 (A5), Phlorence\_64 (A5), PickleBack\_66 (A5), Prinashe11\_63 (A5), Scorpia\_69 (A5), Swirley\_65 (A5), SydNat\_65 (A5), Tarynearal\_64 (A5), Tiger\_65 (A5), Twigg\_62 (A5), UnionJack\_69 (A5), Zolita\_64 (A5),

Start 59:

- Found in 3 of 568 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 33.3% of time when present
- Phage (with cluster) where this start called: XianYue\_66 (A2),

Start 61:

- Found in 1 of 568 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kinmap\_73 (A21),

Start 62:

- Found in 5 of 568 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Pharaoh\_67 (A12),

Start 64:

- Found in 25 of 568 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 21 of 503
- Called 96.0% of time when present
- Phage (with cluster) where this start called: BABullseye\_64 (A6), Blinn1\_75 (A6), Colin\_69 (A2), Cookiedough\_71 (A6), Dorothea\_71 (A6), Gladiator\_69 (A6), IronMan\_68 (A2), Isiphiwo\_69 (A6), Jaan\_69 (A2), JewelBug\_71 (A6), Jordennis\_70 (A6), Landor\_69 (A2), McFly\_71 (A6), Neeharika16\_70 (A6), Newrala\_71 (A6), Phaded\_66 (A2), Pmask\_70 (A6), Polyphemus\_71 (A6), Priamo\_73 (A6), Pukovnik\_67 (A2), SuperAwesome\_71 (A6), SuperCallie99\_68 (A6), Tristan\_66 (A2), Trixie\_69 (A2),

Start 65:

- Found in 27 of 568 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 20 of 503
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Astro\_80 (A8), Bigflo\_69 (A3), Bxz2\_67 (A3), Calvinny\_69 (A3), Danforth\_81 (A8), Dixon\_79 (A8), Expelliarmus\_77 (A8), Grif\_70 (A3), GtownJaz\_72 (A3), HashRod\_73 (A3), LarryKay\_72 (A3), Lowa\_69 (A3), NearlyHeadless\_81 (A8), Pawn\_70 (A3), Phillis\_77 (A8), Phoebe\_73 (A3), Phranny\_72 (A3), Reba\_71 (A3), Roary\_82 (A8), Saintus\_76 (A8), Smeadley\_80 (A8), Stagni\_69 (A3), Stephig9\_79 (A8), TinyPebbles\_68 (A3),

#### Start 66:

- Found in 9 of 568 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 503
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Cuco\_64 (A5), Theia\_64 (A5),

#### Start 67:

- Found in 10 of 568 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 8 of 503
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candra\_69 (A6), Chartreuse\_68 (A6), DaVinci\_69 (A6), EricB\_70 (A6), GreedyLawyer\_68 (A6), Hoot\_66 (A6), Kazan\_72 (A6), Kipper29\_71 (A6), SmellyB\_71 (A6), VohminGhazi\_71 (A6),

#### Start 68:

- Found in 226 of 568 ( 39.8% ) of genes in pham
- Manual Annotations of this start: 3 of 503
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Abrogate\_660 (A1), Caraxes\_73 (A2), Odin\_71 (A2), Sanya\_62 (A1), Superchunk\_72 (A2),

#### Start 69:

- Found in 86 of 568 ( 15.1% ) of genes in pham
- Manual Annotations of this start: 64 of 503
- Called 89.5% of time when present
- Phage (with cluster) where this start called: 20ES\_72 (A2), 40AC\_70 (A17), AN3\_72 (A2), AbbyPaige\_72 (A2), Acolyte\_62 (A2), Agape74\_72 (A2), AnnaL29\_70 (A2), ArcherNM\_64 (A2), Baehexic\_69 (A2), BengiVuitton\_70 (A2), Benvolio\_68 (A2), BiancaTri92\_70 (A2), BobSwaget\_64 (A2), Bradman\_73 (A2), Bugsy\_72 (A2), CRB1\_72 (A2), Centaur\_71 (A2), ChipMunk\_72 (A2), Crucio\_71 (A2), Deloris\_70 (A2), Dignity\_72 (A2), Drake55\_72 (A2), EZMoney23\_67 (A2), Echild\_71 (A2), Equemioh13\_70 (A2), EvilGenius\_71 (A2), Fameo\_70 (A2), FiringLine\_71 (A2), First\_0071 (A2), Flare16\_71 (A2), Georgie2\_72 (A2), Gratitude\_68 (A2), HarryHoudini\_71 (A2), Heffalump\_69 (A2), Jerm\_72 (A2), JoshKayV\_71 (A2), Journey13\_62 (A2), Jsquared\_74 (A2), Kalpine\_70 (A2), KingCyrus\_71 (A2), L5\_68 (A2), LadyBird\_74 (A2), Larenn\_68 (A2), Leogania\_70 (A2), Leviathan\_72 (A2), LilTurb\_71 (A2), LionsBait\_71 (A2), Lokk\_65 (A2), Loser\_72 (A2), MajorMajor\_72 (A2), Malec\_69 (A2), MiculUcigas\_71 (A2), Miko\_65 (A2), NaSiaTalie\_71 (A2), Piro94\_70 (A2), Power\_70 (A2), QueenB2\_69 (A2), QueenBeesly\_71 (A2), Quokka\_72 (A2), Rachaly\_67 (A2), RedRock\_70 (A2), Retro23\_71 (A2), SemperFi\_71 (A2), Sknot\_71 (A2), Smeagan\_73 (A2), SnapTap\_70 (A2), SweetiePie\_70 (A2), TarsusIV\_68 (A2), Terrific\_71 (A2), TipsytheTRex\_70 (A2), Trooper\_70 (A2), Turbido\_71 (A2), Updawg\_71 (A2), VA6\_70 (A2), WeiHuaDA\_71



(A2), Whabigail7\_71 (A2), WideWale\_71 (A2),

Start 70:

- Found in 2 of 568 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Changeling\_69 (A2),

Start 72:

- Found in 218 of 568 ( 38.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.5% of time when present
- Phage (with cluster) where this start called: Bigchunggi\_63 (A1),

Start 74:

- Found in 45 of 568 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 1 of 503
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Groundhog\_78 (A8),

### **Summary by clusters:**

There are 19 clusters represented in this pham: A15, A14, A17, A16, A11, A, A13, A12, A18, A21, A1, A20, A3, A2, A5, A7, A6, A9, A8,

Info for manual annotations of cluster A:

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

Info for manual annotations of cluster A1:

- Start number 41 was manually annotated 206 times for cluster A1.
- Start number 68 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:

- Start number 48 was manually annotated 21 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 37 was manually annotated 1 time for cluster A12.
- Start number 38 was manually annotated 3 times for cluster A12.
- Start number 62 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 57 was manually annotated 3 times for cluster A14.
- Start number 58 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A15:

- Start number 52 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 35 was manually annotated 1 time for cluster A16.
- Start number 54 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 50 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 47 was manually annotated 7 times for cluster A2.
- Start number 52 was manually annotated 19 times for cluster A2.
- Start number 59 was manually annotated 1 time for cluster A2.
- Start number 64 was manually annotated 6 times for cluster A2.
- Start number 68 was manually annotated 2 times for cluster A2.
- Start number 69 was manually annotated 64 times for cluster A2.
- Start number 70 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 52 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 39 was manually annotated 2 times for cluster A3.
- Start number 65 was manually annotated 10 times for cluster A3.

Info for manual annotations of cluster A5:

- Start number 58 was manually annotated 36 times for cluster A5.
- Start number 66 was manually annotated 2 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 52 was manually annotated 19 times for cluster A6.
- Start number 64 was manually annotated 15 times for cluster A6.
- Start number 67 was manually annotated 8 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 24 was manually annotated 1 time for cluster A7.
- Start number 43 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 65 was manually annotated 10 times for cluster A8.
- Start number 74 was manually annotated 1 time for cluster A8.

Info for manual annotations of cluster A9:

- Start number 40 was manually annotated 1 time for cluster A9.
- Start number 45 was manually annotated 1 time for cluster A9.
- Start number 46 was manually annotated 1 time for cluster A9.
- Start number 47 was manually annotated 1 time for cluster A9.
- Start number 49 was manually annotated 1 time for cluster A9.
- Start number 50 was manually annotated 27 times for cluster A9.
- Start number 52 was manually annotated 1 time for cluster A9.
- Start number 56 was manually annotated 1 time for cluster A9.

**Gene Information:**

Gene: 20ES\_72 Start: 43073, Stop: 42834, Start Num: 69

Candidate Starts for 20ES\_72:

(Start: 47 @43112 has 8 MA's), (Start: 69 @43073 has 64 MA's), (83, 42998), (88, 42965), (98, 42932), (100, 42923), (102, 42911), (111, 42854),

Gene: 40AC\_70 Start: 43765, Stop: 43523, Start Num: 69

Candidate Starts for 40AC\_70:

(Start: 69 @43765 has 64 MA's), (81, 43696), (83, 43687), (88, 43654), (98, 43621), (100, 43612), (102, 43600),

Gene: A6\_58 Start: 40313, Stop: 40020, Start Num: 41

Candidate Starts for A6\_58:

(Start: 41 @40313 has 206 MA's), (Start: 68 @40268 has 3 MA's), (72, 40238), (81, 40190), (88, 40148),

Gene: AFIS\_62 Start: 41768, Stop: 41475, Start Num: 41

Candidate Starts for AFIS\_62:

(3, 42026), (6, 41990), (30, 41795), (Start: 41 @41768 has 206 MA's), (Start: 68 @41723 has 3 MA's), (72, 41693), (77, 41681), (81, 41645), (88, 41603),

Gene: AN3\_72 Start: 41788, Stop: 41549, Start Num: 69

Candidate Starts for AN3\_72:

(Start: 47 @41827 has 8 MA's), (Start: 69 @41788 has 64 MA's), (Start: 74 @41761 has 1 MA's), (83, 41713), (88, 41680), (98, 41647), (100, 41638), (102, 41626), (111, 41569),

Gene: AN9\_74 Start: 43176, Stop: 42916, Start Num: 52

Candidate Starts for AN9\_74:

(Start: 52 @43176 has 61 MA's), (83, 43071), (88, 43038), (98, 43005), (102, 42984), (103, 42978), (110, 42930), (111, 42927),

Gene: ANI8\_74 Start: 43176, Stop: 42916, Start Num: 52

Candidate Starts for ANI8\_74:

(Start: 52 @43176 has 61 MA's), (83, 43071), (88, 43038), (98, 43005), (102, 42984), (103, 42978), (110, 42930), (111, 42927),

Gene: AbbyPaige\_72 Start: 43323, Stop: 43084, Start Num: 69

Candidate Starts for AbbyPaige\_72:

(22, 43485), (Start: 47 @43362 has 8 MA's), (Start: 69 @43323 has 64 MA's), (83, 43248), (88, 43215), (98, 43182), (100, 43173), (102, 43161),

Gene: Abbysshoes\_68 Start: 43272, Stop: 42979, Start Num: 41

Candidate Starts for Abbysshoes\_68:

(Start: 41 @43272 has 206 MA's), (Start: 68 @43227 has 3 MA's), (72, 43197), (81, 43149), (88, 43107),

Gene: Abrogate\_660 Start: 44316, Stop: 44068, Start Num: 68

Candidate Starts for Abrogate\_660:

(Start: 41 @44361 has 206 MA's), (Start: 68 @44316 has 3 MA's), (81, 44238), (88, 44196),

Gene: Acme\_67 Start: 42824, Stop: 42531, Start Num: 41

Candidate Starts for Acme\_67:

(30, 42851), (Start: 41 @42824 has 206 MA's), (Start: 68 @42779 has 3 MA's), (72, 42749), (81, 42701), (88, 42659),

Gene: Acolyte\_62 Start: 41272, Stop: 41048, Start Num: 69

Candidate Starts for Acolyte\_62:

(Start: 47 @41311 has 8 MA's), (Start: 69 @41272 has 64 MA's), (83, 41200), (88, 41167), (98, 41134), (100, 41125), (102, 41113),

Gene: Adahisdi\_65 Start: 43768, Stop: 43475, Start Num: 41

Candidate Starts for Adahisdi\_65:

(Start: 41 @43768 has 206 MA's), (Start: 68 @43723 has 3 MA's), (72, 43693), (81, 43645), (88, 43603),

Gene: Adzzy\_74 Start: 41977, Stop: 41702, Start Num: 52

Candidate Starts for Adzzy\_74:

(Start: 52 @41977 has 61 MA's), (Start: 57 @41968 has 4 MA's), (Start: 74 @41908 has 1 MA's), (81, 41869), (88, 41827), (90, 41818), (98, 41794), (102, 41773),

Gene: Aeneas\_69 Start: 44571, Stop: 44278, Start Num: 41

Candidate Starts for Aeneas\_69:

(Start: 41 @44571 has 206 MA's), (Start: 68 @44526 has 3 MA's), (72, 44496), (81, 44448), (88, 44406),

Gene: Agaliana\_61 Start: 39647, Stop: 39354, Start Num: 41

Candidate Starts for Agaliana\_61:

(Start: 41 @39647 has 206 MA's), (Start: 68 @39602 has 3 MA's), (72, 39572), (81, 39524), (88, 39482),

Gene: Agape74\_72 Start: 43317, Stop: 43078, Start Num: 69

Candidate Starts for Agape74\_72:

(Start: 47 @43356 has 8 MA's), (Start: 69 @43317 has 64 MA's), (83, 43242), (88, 43209), (98, 43176), (100, 43167), (102, 43155),

Gene: AgentM\_65 Start: 41621, Stop: 41370, Start Num: 58

Candidate Starts for AgentM\_65:

(Start: 58 @41621 has 37 MA's), (83, 41528), (84, 41513), (100, 41450), (106, 41405), (110, 41384), (113, 41378),

Gene: Airmid\_68 Start: 42454, Stop: 42200, Start Num: 58

Candidate Starts for Airmid\_68:

(Start: 58 @42454 has 37 MA's), (83, 42361), (84, 42346), (100, 42283), (106, 42238), (110, 42217), (113, 42211),

Gene: Ajay\_65 Start: 42714, Stop: 42421, Start Num: 41

Candidate Starts for Ajay\_65:

(Start: 41 @42714 has 206 MA's), (Start: 68 @42669 has 3 MA's), (72, 42639), (81, 42591), (88, 42549),

Gene: Aliter\_74 Start: 42621, Stop: 42343, Start Num: 50

Candidate Starts for Aliter\_74:

(Start: 50 @42621 has 28 MA's), (82, 42513), (91, 42459), (93, 42450), (102, 42420),

Gene: Alma\_71 Start: 42598, Stop: 42323, Start Num: 50

Candidate Starts for Alma\_71:

(Start: 50 @42598 has 28 MA's), (82, 42490), (91, 42436), (93, 42427), (102, 42397),

Gene: Alsfro\_72 Start: 43165, Stop: 42872, Start Num: 41

Candidate Starts for Alsfro\_72:

(Start: 41 @43165 has 206 MA's), (Start: 68 @43120 has 3 MA's), (72, 43090), (81, 43042), (88, 43000),

Gene: Altman\_68 Start: 42803, Stop: 42510, Start Num: 41

Candidate Starts for Altman\_68:

(30, 42830), (Start: 41 @42803 has 206 MA's), (Start: 68 @42758 has 3 MA's), (72, 42728), (77, 42716), (81, 42680), (88, 42638),

Gene: Alvin\_65 Start: 42599, Stop: 42303, Start Num: 41

Candidate Starts for Alvin\_65:

(Start: 41 @42599 has 206 MA's), (81, 42473), (88, 42431),

Gene: Anaysia\_80 Start: 43699, Stop: 43421, Start Num: 52

Candidate Starts for Anaysia\_80:

(26, 43759), (Start: 52 @43699 has 61 MA's), (78, 43621), (83, 43582), (88, 43549), (97, 43519), (98, 43516), (102, 43495), (106, 43462),

Gene: Aneem\_70 Start: 42035, Stop: 41769, Start Num: 48

Candidate Starts for Aneem\_70:

(Start: 48 @42035 has 21 MA's), (82, 41942), (88, 41903), (98, 41870), (100, 41861), (102, 41849), (106, 41816),

Gene: Anglerfish\_66 Start: 42975, Stop: 42682, Start Num: 41

Candidate Starts for Anglerfish\_66:

(30, 43002), (Start: 41 @42975 has 206 MA's), (Start: 68 @42930 has 3 MA's), (72, 42900), (81, 42852), (88, 42810),

Gene: AnnaL29\_70 Start: 43273, Stop: 43034, Start Num: 69

Candidate Starts for AnnaL29\_70:

(Start: 47 @43312 has 8 MA's), (Start: 69 @43273 has 64 MA's), (81, 43207), (83, 43198), (88, 43165), (98, 43132), (100, 43123), (102, 43111),

Gene: Anon\_77 Start: 43390, Stop: 43115, Start Num: 52

Candidate Starts for Anon\_77:

(Start: 52 @43390 has 61 MA's), (73, 43324), (83, 43273), (84, 43258), (90, 43231), (97, 43210), (98, 43207), (107, 43147),

Gene: Anselm\_72 Start: 43506, Stop: 43228, Start Num: 47

Candidate Starts for Anselm\_72:

(Start: 47 @43506 has 8 MA's), (Start: 69 @43467 has 64 MA's), (82, 43398), (83, 43392), (88, 43359), (98, 43326), (100, 43317), (102, 43305), (111, 43248),

Gene: Anthony\_63 Start: 40063, Stop: 39797, Start Num: 52

Candidate Starts for Anthony\_63:

(Start: 52 @40063 has 61 MA's), (88, 39925), (90, 39916), (91, 39910), (104, 39859),

Gene: Applejack\_66 Start: 41373, Stop: 41080, Start Num: 41

Candidate Starts for Applejack\_66:

(30, 41400), (Start: 41 @41373 has 206 MA's), (Start: 68 @41328 has 3 MA's), (72, 41298), (77, 41286), (81, 41250), (88, 41208),

Gene: Aragog\_65 Start: 41641, Stop: 41390, Start Num: 58

Candidate Starts for Aragog\_65:

(Start: 58 @41641 has 37 MA's), (83, 41548), (84, 41533), (100, 41470), (106, 41425), (110, 41404), (113, 41398),

Gene: Arcanine\_68 Start: 43699, Stop: 43406, Start Num: 41

Candidate Starts for Arcanine\_68:

(30, 43726), (Start: 41 @43699 has 206 MA's), (Start: 68 @43654 has 3 MA's), (72, 43624), (81, 43576), (88, 43534),

Gene: ArcherNM\_64 Start: 42544, Stop: 42302, Start Num: 69

Candidate Starts for ArcherNM\_64:

(29, 42646), (Start: 47 @42583 has 8 MA's), (Start: 69 @42544 has 64 MA's), (81, 42475), (83, 42466), (88, 42433), (98, 42400), (100, 42391), (102, 42379),

Gene: Archetta\_63 Start: 41587, Stop: 41336, Start Num: 58

Candidate Starts for Archetta\_63:

(Start: 58 @41587 has 37 MA's), (Start: 66 @41575 has 2 MA's), (81, 41503), (83, 41494), (84, 41479), (100, 41416), (106, 41371), (110, 41350), (113, 41344),

Gene: Arissanae\_70 Start: 42870, Stop: 42583, Start Num: 46

Candidate Starts for Arissanae\_70:

(Start: 46 @42870 has 1 MA's), (51, 42861), (88, 42723), (99, 42684), (102, 42669),

Gene: Arlo\_64 Start: 42290, Stop: 41997, Start Num: 41

Candidate Starts for Arlo\_64:

(30, 42317), (Start: 41 @42290 has 206 MA's), (Start: 68 @42245 has 3 MA's), (72, 42215), (81, 42167), (88, 42125),

Gene: Artemis2UCLA\_72 Start: 41385, Stop: 41128, Start Num: 52

Candidate Starts for Artemis2UCLA\_72:

(Start: 52 @41385 has 61 MA's), (Start: 57 @41376 has 4 MA's), (81, 41301), (83, 41292), (88, 41259), (97, 41229), (100, 41217), (114, 41136),

Gene: Ashballer\_69 Start: 43449, Stop: 43156, Start Num: 41

Candidate Starts for Ashballer\_69:

(30, 43476), (Start: 41 @43449 has 206 MA's), (Start: 68 @43404 has 3 MA's), (72, 43374), (77, 43362), (81, 43326), (88, 43284),

Gene: Astro\_80 Start: 44089, Stop: 43805, Start Num: 65

Candidate Starts for Astro\_80:

(Start: 65 @44089 has 20 MA's), (Start: 74 @44047 has 1 MA's), (82, 44005), (83, 43999), (105, 43891),

Gene: Atkinbua\_69 Start: 42674, Stop: 42381, Start Num: 41

Candidate Starts for Atkinbua\_69:

(30, 42701), (Start: 41 @42674 has 206 MA's), (Start: 68 @42629 has 3 MA's), (72, 42599), (81, 42551), (88, 42509), (109, 42404),

Gene: BABullseye\_64 Start: 38991, Stop: 38743, Start Num: 64

Candidate Starts for BABullseye\_64:

(10, 39231), (19, 39159), (30, 39078), (Start: 41 @39033 has 206 MA's), (Start: 64 @38991 has 21 MA's), (81, 38916), (88, 38874), (97, 38844), (100, 38832),

Gene: BK1\_58 Start: 40313, Stop: 40020, Start Num: 41

Candidate Starts for BK1\_58:

(Start: 41 @40313 has 206 MA's), (Start: 68 @40268 has 3 MA's), (72, 40238), (81, 40190), (88, 40148),

Gene: BPBiabs31\_69 Start: 43396, Stop: 43103, Start Num: 41

Candidate Starts for BPBiabs31\_69:

(30, 43423), (Start: 41 @43396 has 206 MA's), (Start: 68 @43351 has 3 MA's), (72, 43321), (77, 43309), (81, 43273), (88, 43231),

Gene: BabyBack\_67 Start: 43084, Stop: 42833, Start Num: 52

Candidate Starts for BabyBack\_67:

(Start: 52 @43084 has 61 MA's), (Start: 57 @43075 has 4 MA's), (79, 43033), (83, 42997), (88, 42964), (98, 42931), (100, 42922), (102, 42910),

Gene: Bachome\_71 Start: 42031, Stop: 41765, Start Num: 48

Candidate Starts for Bachome\_71:

(Start: 48 @42031 has 21 MA's), (82, 41938), (88, 41899), (98, 41866), (100, 41857), (102, 41845), (106, 41812),

Gene: BaconJack\_71 Start: 45661, Stop: 45368, Start Num: 41

Candidate Starts for BaconJack\_71:

(30, 45688), (Start: 41 @45661 has 206 MA's), (Start: 68 @45616 has 3 MA's), (72, 45586), (81, 45538), (88, 45496),

Gene: Baehexic\_69 Start: 42795, Stop: 42556, Start Num: 69

Candidate Starts for Baehexic\_69:

(Start: 69 @42795 has 64 MA's), (Start: 74 @42768 has 1 MA's), (76, 42765), (83, 42720), (88, 42687), (98, 42654), (100, 42645), (102, 42633),

Gene: Barriga\_68 Start: 41452, Stop: 41159, Start Num: 41

Candidate Starts for Barriga\_68:

(30, 41479), (Start: 41 @41452 has 206 MA's), (Start: 68 @41407 has 3 MA's), (72, 41377), (77, 41365), (81, 41329), (88, 41287),

Gene: BarrowTuph\_66 Start: 42484, Stop: 42191, Start Num: 41

Candidate Starts for BarrowTuph\_66:

(Start: 41 @42484 has 206 MA's), (Start: 68 @42439 has 3 MA's), (72, 42409), (81, 42361), (88, 42319),

Gene: Battleship\_82 Start: 43572, Stop: 43294, Start Num: 52

Candidate Starts for Battleship\_82:

(26, 43632), (Start: 52 @43572 has 61 MA's), (78, 43494), (83, 43455), (88, 43422), (97, 43392), (98, 43389), (102, 43368), (106, 43335),

Gene: Beatrix\_65 Start: 43536, Stop: 43243, Start Num: 41

Candidate Starts for Beatrix\_65:

(30, 43563), (Start: 41 @43536 has 206 MA's), (Start: 68 @43491 has 3 MA's), (72, 43461), (81, 43413), (88, 43371),

Gene: Beemo\_73 Start: 42639, Stop: 42361, Start Num: 50

Candidate Starts for Beemo\_73:

(Start: 50 @42639 has 28 MA's), (82, 42531), (91, 42477), (93, 42468), (102, 42438),

Gene: BeesKnees\_68 Start: 42003, Stop: 41710, Start Num: 41

Candidate Starts for BeesKnees\_68:

(30, 42030), (Start: 41 @42003 has 206 MA's), (Start: 68 @41958 has 3 MA's), (72, 41928), (81, 41880), (88, 41838),

Gene: Benedict\_69 Start: 42186, Stop: 41932, Start Num: 58

Candidate Starts for Benedict\_69:

(Start: 58 @42186 has 37 MA's), (83, 42093), (84, 42078), (100, 42015), (106, 41970), (110, 41949), (113, 41943),

Gene: BengiVuitton\_70 Start: 43050, Stop: 42811, Start Num: 69

Candidate Starts for BengiVuitton\_70:

(Start: 47 @43089 has 8 MA's), (Start: 69 @43050 has 64 MA's), (Start: 74 @43023 has 1 MA's), (83, 42975), (88, 42942), (98, 42909), (100, 42900), (102, 42888), (111, 42831),

Gene: Benvolio\_68 Start: 42707, Stop: 42468, Start Num: 69

Candidate Starts for Benvolio\_68:

(Start: 47 @42746 has 8 MA's), (Start: 69 @42707 has 64 MA's), (81, 42641), (83, 42632), (88, 42599), (98, 42566), (100, 42557), (102, 42545),

Gene: Bethlehem\_67 Start: 44314, Stop: 44021, Start Num: 41

Candidate Starts for Bethlehem\_67:

(30, 44341), (Start: 41 @44314 has 206 MA's), (Start: 68 @44269 has 3 MA's), (72, 44239), (81, 44191), (88, 44149),

Gene: Bexan\_63 Start: 43315, Stop: 43022, Start Num: 41

Candidate Starts for Bexan\_63:

(30, 43342), (Start: 41 @43315 has 206 MA's), (Start: 68 @43270 has 3 MA's), (72, 43240), (81, 43192), (88, 43150),

Gene: BiancaTri92\_70 Start: 43252, Stop: 43013, Start Num: 69

Candidate Starts for BiancaTri92\_70:

(Start: 47 @43291 has 8 MA's), (Start: 69 @43252 has 64 MA's), (83, 43177), (88, 43144), (98, 43111), (100, 43102), (102, 43090),

Gene: Big3\_66 Start: 43783, Stop: 43490, Start Num: 41

Candidate Starts for Big3\_66:

(Start: 41 @43783 has 206 MA's), (Start: 68 @43738 has 3 MA's), (72, 43708), (81, 43660), (88, 43618),

Gene: BigMau\_68 Start: 43204, Stop: 42911, Start Num: 41

Candidate Starts for BigMau\_68:

(5, 43432), (30, 43231), (Start: 41 @43204 has 206 MA's), (Start: 68 @43159 has 3 MA's), (72, 43129), (81, 43081), (88, 43039),

Gene: BigPaolini\_62 Start: 40440, Stop: 40147, Start Num: 41

Candidate Starts for BigPaolini\_62:

(Start: 41 @40440 has 206 MA's), (Start: 68 @40395 has 3 MA's), (72, 40365), (81, 40317), (88, 40275),

Gene: Bigchungji\_63 Start: 42157, Stop: 41939, Start Num: 72

Candidate Starts for Bigchungji\_63:



(34, 42259), (Start: 41 @42232 has 206 MA's), (Start: 68 @42187 has 3 MA's), (72, 42157), (81, 42109), (88, 42067),

Gene: Bigflo\_69 Start: 42387, Stop: 42133, Start Num: 65

Candidate Starts for Bigflo\_69:

(Start: 39 @42441 has 2 MA's), (44, 42423), (53, 42408), (Start: 65 @42387 has 20 MA's), (71, 42354), (81, 42303), (83, 42294), (86, 42267), (88, 42261), (98, 42228),

Gene: Bigfoot\_59 Start: 41835, Stop: 41542, Start Num: 41

Candidate Starts for Bigfoot\_59:

(30, 41862), (Start: 41 @41835 has 206 MA's), (Start: 68 @41790 has 3 MA's), (72, 41760), (77, 41748), (81, 41712), (88, 41670),

Gene: BillKnuckles\_63 Start: 43835, Stop: 43542, Start Num: 41

Candidate Starts for BillKnuckles\_63:

(Start: 41 @43835 has 206 MA's), (Start: 68 @43790 has 3 MA's), (72, 43760), (81, 43712), (88, 43670),

Gene: Bircsak\_66 Start: 44564, Stop: 44271, Start Num: 41

Candidate Starts for Bircsak\_66:

(Start: 41 @44564 has 206 MA's), (Start: 68 @44519 has 3 MA's), (72, 44489), (81, 44441), (88, 44399),

Gene: BlessJoy\_72 Start: 41907, Stop: 41650, Start Num: 52

Candidate Starts for BlessJoy\_72:

(Start: 52 @41907 has 61 MA's), (Start: 57 @41898 has 4 MA's), (81, 41823), (83, 41814), (88, 41781), (97, 41751), (100, 41739),

Gene: Blinn1\_75 Start: 41595, Stop: 41347, Start Num: 64

Candidate Starts for Blinn1\_75:

(Start: 41 @41637 has 206 MA's), (Start: 64 @41595 has 21 MA's), (88, 41478), (98, 41445), (100, 41436), (102, 41424), (115, 41352),

Gene: BluSpix\_64 Start: 38419, Stop: 38126, Start Num: 41

Candidate Starts for BluSpix\_64:

(30, 38446), (Start: 41 @38419 has 206 MA's), (Start: 68 @38374 has 3 MA's), (72, 38344), (81, 38296), (88, 38254),

Gene: Blue\_66 Start: 43535, Stop: 43242, Start Num: 41

Candidate Starts for Blue\_66:

(30, 43562), (Start: 41 @43535 has 206 MA's), (Start: 68 @43490 has 3 MA's), (72, 43460), (81, 43412), (88, 43370),

Gene: Blue7\_74 Start: 41605, Stop: 41348, Start Num: 52

Candidate Starts for Blue7\_74:

(Start: 52 @41605 has 61 MA's), (Start: 57 @41596 has 4 MA's), (81, 41521), (83, 41512), (88, 41479), (97, 41449), (100, 41437),

Gene: Bluefalcon\_61 Start: 41607, Stop: 41356, Start Num: 58

Candidate Starts for Bluefalcon\_61:

(Start: 58 @41607 has 37 MA's), (Start: 66 @41595 has 2 MA's), (81, 41523), (83, 41514), (84, 41499), (100, 41436), (106, 41391), (110, 41370), (113, 41364),

Gene: Bob3\_67 Start: 42474, Stop: 42181, Start Num: 41

Candidate Starts for Bob3\_67:

(30, 42501), (Start: 41 @42474 has 206 MA's), (Start: 68 @42429 has 3 MA's), (72, 42399), (81, 42351), (88, 42309),

Gene: BobSwaget\_64 Start: 41129, Stop: 40887, Start Num: 69

Candidate Starts for BobSwaget\_64:

(Start: 47 @41168 has 8 MA's), (Start: 69 @41129 has 64 MA's), (83, 41054), (88, 41021), (98, 40988), (100, 40979),

Gene: BogosyJay\_73 Start: 42852, Stop: 42568, Start Num: 50

Candidate Starts for BogosyJay\_73:

(Start: 50 @42852 has 28 MA's), (82, 42741), (88, 42702), (102, 42648),

Gene: Bonamassa\_65 Start: 41816, Stop: 41565, Start Num: 58

Candidate Starts for Bonamassa\_65:

(Start: 58 @41816 has 37 MA's), (81, 41732), (83, 41723), (84, 41708), (100, 41645), (106, 41600), (110, 41579),

Gene: Bones\_64 Start: 43490, Stop: 43197, Start Num: 41

Candidate Starts for Bones\_64:

(27, 43526), (Start: 41 @43490 has 206 MA's), (Start: 68 @43445 has 3 MA's), (72, 43415), (81, 43367), (88, 43325),

Gene: Boohoo\_80 Start: 43699, Stop: 43421, Start Num: 52

Candidate Starts for Boohoo\_80:

(26, 43759), (Start: 52 @43699 has 61 MA's), (78, 43621), (83, 43582), (88, 43549), (97, 43519), (98, 43516), (102, 43495), (106, 43462),

Gene: Bowtie\_70 Start: 42042, Stop: 41776, Start Num: 48

Candidate Starts for Bowtie\_70:

(Start: 48 @42042 has 21 MA's), (82, 41949), (88, 41910), (98, 41877), (100, 41868), (102, 41856), (106, 41823),

Gene: Bradman\_73 Start: 42401, Stop: 42162, Start Num: 69

Candidate Starts for Bradman\_73:

(Start: 69 @42401 has 64 MA's), (80, 42359), (83, 42326), (86, 42299), (88, 42293), (98, 42260), (100, 42251), (102, 42239), (109, 42188), (114, 42170),

Gene: Briton15\_70 Start: 44278, Stop: 43985, Start Num: 41

Candidate Starts for Briton15\_70:

(30, 44305), (Start: 41 @44278 has 206 MA's), (Start: 68 @44233 has 3 MA's), (72, 44203), (81, 44155), (88, 44113),

Gene: Bruns\_68 Start: 42415, Stop: 42122, Start Num: 41

Candidate Starts for Bruns\_68:

(30, 42442), (Start: 41 @42415 has 206 MA's), (Start: 68 @42370 has 3 MA's), (72, 42340), (77, 42328), (81, 42292), (88, 42250),

Gene: Bud\_68 Start: 41589, Stop: 41323, Start Num: 48

Candidate Starts for Bud\_68:

(Start: 48 @41589 has 21 MA's), (82, 41496), (88, 41457), (98, 41424), (100, 41415), (102, 41403), (106, 41370),

Gene: Buggy\_72 Start: 43370, Stop: 43131, Start Num: 69

Candidate Starts for Buggy\_72:

(Start: 47 @43409 has 8 MA's), (Start: 69 @43370 has 64 MA's), (83, 43295), (88, 43262), (98, 43229), (100, 43220), (102, 43208),

Gene: Burton\_67 Start: 44237, Stop: 43944, Start Num: 41

Candidate Starts for Burton\_67:

(30, 44264), (Start: 41 @44237 has 206 MA's), (Start: 68 @44192 has 3 MA's), (72, 44162), (81, 44114), (88, 44072),

Gene: Buttons\_62 Start: 39954, Stop: 39661, Start Num: 41

Candidate Starts for Buttons\_62:

(30, 39981), (Start: 41 @39954 has 206 MA's), (Start: 68 @39909 has 3 MA's), (72, 39879), (81, 39831), (88, 39789),

Gene: Bxb1\_59 Start: 41067, Stop: 40774, Start Num: 41

Candidate Starts for Bxb1\_59:

(30, 41094), (Start: 41 @41067 has 206 MA's), (Start: 68 @41022 has 3 MA's), (72, 40992), (77, 40980), (81, 40944), (88, 40902),

Gene: Bxz2\_67 Start: 42422, Stop: 42168, Start Num: 65

Candidate Starts for Bxz2\_67:

(Start: 39 @42476 has 2 MA's), (44, 42458), (53, 42443), (Start: 65 @42422 has 20 MA's), (71, 42389), (81, 42338), (83, 42329), (86, 42302), (88, 42296), (98, 42263),

Gene: C3\_67 Start: 43176, Stop: 42916, Start Num: 52

Candidate Starts for C3\_67:

(Start: 52 @43176 has 61 MA's), (83, 43071), (88, 43038), (98, 43005), (102, 42984), (110, 42930), (111, 42927),

Gene: CRB1\_72 Start: 43596, Stop: 43357, Start Num: 69

Candidate Starts for CRB1\_72:

(Start: 47 @43635 has 8 MA's), (Start: 69 @43596 has 64 MA's), (83, 43521), (88, 43488), (98, 43455), (100, 43446), (102, 43434), (111, 43377),

Gene: CactusRose\_67 Start: 42855, Stop: 42562, Start Num: 41

Candidate Starts for CactusRose\_67:

(30, 42882), (Start: 41 @42855 has 206 MA's), (Start: 68 @42810 has 3 MA's), (72, 42780), (81, 42732), (88, 42690),

Gene: Calvinny\_69 Start: 42204, Stop: 41950, Start Num: 65

Candidate Starts for Calvinny\_69:

(Start: 39 @42258 has 2 MA's), (44, 42240), (53, 42225), (Start: 65 @42204 has 20 MA's), (71, 42171), (81, 42120), (83, 42111), (86, 42084), (88, 42078), (98, 42045),

Gene: Candra\_69 Start: 41351, Stop: 41112, Start Num: 67

Candidate Starts for Candra\_69:

(Start: 67 @41351 has 8 MA's), (83, 41276), (88, 41243), (98, 41210), (100, 41201),

Gene: Caraxes\_73 Start: 41714, Stop: 41472, Start Num: 68

Candidate Starts for Caraxes\_73:

(Start: 68 @41714 has 3 MA's), (84, 41615), (87, 41600), (88, 41597), (89, 41591), (90, 41588), (98, 41564), (102, 41543),

Gene: Carlyle\_67 Start: 41641, Stop: 41348, Start Num: 41

Candidate Starts for Carlyle\_67:

(Start: 41 @41641 has 206 MA's), (Start: 68 @41596 has 3 MA's), (72, 41566), (81, 41518), (88, 41476),

Gene: Catalina\_75 Start: 42695, Stop: 42417, Start Num: 50

Candidate Starts for Catalina\_75:

(Start: 50 @42695 has 28 MA's), (82, 42587), (91, 42533), (93, 42524), (102, 42494),

Gene: Centaur\_71 Start: 43010, Stop: 42771, Start Num: 69

Candidate Starts for Centaur\_71:

(Start: 69 @43010 has 64 MA's), (Start: 74 @42983 has 1 MA's), (76, 42980), (83, 42935), (88, 42902), (98, 42869), (100, 42860), (102, 42848),

Gene: Chadwick\_69 Start: 41930, Stop: 41679, Start Num: 58

Candidate Starts for Chadwick\_69:

(Start: 58 @41930 has 37 MA's), (83, 41837), (84, 41822), (100, 41759), (106, 41714), (110, 41693),

Gene: Chanagan\_59 Start: 40048, Stop: 39755, Start Num: 41

Candidate Starts for Chanagan\_59:

(30, 40075), (Start: 41 @40048 has 206 MA's), (Start: 68 @40003 has 3 MA's), (72, 39973), (81, 39925), (88, 39883),

Gene: Changeling\_69 Start: 43249, Stop: 43010, Start Num: 70

Candidate Starts for Changeling\_69:

(Start: 47 @43291 has 8 MA's), (Start: 69 @43252 has 64 MA's), (Start: 70 @43249 has 1 MA's), (80, 43207), (81, 43183), (83, 43174), (88, 43141), (98, 43108), (100, 43099), (102, 43087),

Gene: Chargerpower\_67 Start: 40705, Stop: 40445, Start Num: 57

Candidate Starts for Chargerpower\_67:

(Start: 46 @40726 has 1 MA's), (Start: 57 @40705 has 4 MA's), (82, 40612), (91, 40558), (93, 40549), (102, 40519), (108, 40471), (109, 40468), (110, 40465),

Gene: Charm\_67 Start: 41703, Stop: 41416, Start Num: 50

Candidate Starts for Charm\_67:

(Start: 50 @41703 has 28 MA's), (82, 41598), (88, 41559), (102, 41505),

Gene: Chartreuse\_68 Start: 40662, Stop: 40423, Start Num: 67

Candidate Starts for Chartreuse\_68:

(Start: 67 @40662 has 8 MA's), (83, 40587), (88, 40554), (98, 40521), (100, 40512),

Gene: Che12\_74 Start: 41861, Stop: 41586, Start Num: 52

Candidate Starts for Che12\_74:

(1, 42212), (23, 41975), (Start: 52 @41861 has 61 MA's), (Start: 57 @41852 has 4 MA's), (Start: 74 @41792 has 1 MA's), (81, 41753), (88, 41711), (90, 41702), (98, 41678), (102, 41657),

Gene: ChipMunk\_72 Start: 44601, Stop: 44362, Start Num: 69

Candidate Starts for ChipMunk\_72:

(Start: 69 @44601 has 64 MA's), (83, 44526), (88, 44493), (98, 44460), (100, 44451), (102, 44439),

Gene: Ciao\_63 Start: 41412, Stop: 41119, Start Num: 41

Candidate Starts for Ciao\_63:

(30, 41439), (Start: 41 @41412 has 206 MA's), (Start: 68 @41367 has 3 MA's), (72, 41337), (81, 41289), (88, 41247),

Gene: CloudWang3\_73 Start: 41897, Stop: 41640, Start Num: 52

Candidate Starts for CloudWang3\_73:

(Start: 52 @41897 has 61 MA's), (Start: 57 @41888 has 4 MA's), (81, 41813), (83, 41804), (88, 41771), (97, 41741), (100, 41729), (114, 41648),

Gene: Colin\_69 Start: 43242, Stop: 42997, Start Num: 64

Candidate Starts for Colin\_69:

(Start: 59 @43248 has 1 MA's), (Start: 64 @43242 has 21 MA's), (83, 43161), (88, 43128), (98, 43095), (100, 43086), (102, 43074), (109, 43023),

Gene: Conceptll\_70 Start: 44031, Stop: 43738, Start Num: 41

Candidate Starts for Conceptll\_70:

(30, 44058), (Start: 41 @44031 has 206 MA's), (Start: 68 @43986 has 3 MA's), (72, 43956), (81, 43908), (88, 43866),

Gene: Conquerage\_71 Start: 42370, Stop: 42092, Start Num: 50

Candidate Starts for Conquerage\_71:

(Start: 50 @42370 has 28 MA's), (82, 42262), (91, 42208), (93, 42199), (102, 42169),

Gene: Conspiracy\_66 Start: 41863, Stop: 41612, Start Num: 58

Candidate Starts for Conspiracy\_66:

(Start: 58 @41863 has 37 MA's), (83, 41770), (84, 41755), (100, 41692), (106, 41647), (110, 41626), (113, 41620),

Gene: Coog\_62 Start: 41634, Stop: 41383, Start Num: 58

Candidate Starts for Coog\_62:

(Start: 58 @41634 has 37 MA's), (Start: 66 @41622 has 2 MA's), (83, 41541), (84, 41526), (100, 41463), (106, 41418), (110, 41397), (113, 41391),

Gene: Cookiedough\_71 Start: 41299, Stop: 41051, Start Num: 64

Candidate Starts for Cookiedough\_71:

(10, 41539), (19, 41467), (30, 41386), (Start: 41 @41341 has 206 MA's), (Start: 64 @41299 has 21 MA's), (81, 41224), (88, 41182), (97, 41152), (100, 41140),

Gene: Corvo\_66 Start: 43343, Stop: 43050, Start Num: 41

Candidate Starts for Corvo\_66:

(30, 43370), (Start: 41 @43343 has 206 MA's), (Start: 68 @43298 has 3 MA's), (72, 43268), (81, 43220), (88, 43178),

Gene: Crispicous1\_63 Start: 41754, Stop: 41461, Start Num: 41

Candidate Starts for Crispicous1\_63:

(30, 41781), (Start: 41 @41754 has 206 MA's), (Start: 68 @41709 has 3 MA's), (72, 41679), (81, 41631), (88, 41589),

Gene: Crucio\_71 Start: 43367, Stop: 43128, Start Num: 69

Candidate Starts for Crucio\_71:

(Start: 47 @43406 has 8 MA's), (Start: 69 @43367 has 64 MA's), (83, 43292), (88, 43259), (98, 43226), (100, 43217), (102, 43205), (111, 43148),

Gene: Cuco\_64 Start: 41482, Stop: 41243, Start Num: 66

Candidate Starts for Cuco\_64:

(Start: 58 @41494 has 37 MA's), (Start: 66 @41482 has 2 MA's), (83, 41401), (84, 41386), (100, 41323), (106, 41278), (110, 41257), (113, 41251),

Gene: Cueyllyss\_65 Start: 43690, Stop: 43397, Start Num: 41

Candidate Starts for Cueyllyss\_65:

(Start: 41 @43690 has 206 MA's), (Start: 68 @43645 has 3 MA's), (72, 43615), (77, 43603), (81, 43567), (88, 43525),

Gene: D29\_68 Start: 43721, Stop: 43488, Start Num: 52

Candidate Starts for D29\_68:

(Start: 52 @43721 has 61 MA's), (83, 43643), (88, 43610), (98, 43577), (102, 43556), (110, 43502),

Gene: D32\_73 Start: 43721, Stop: 43488, Start Num: 52

Candidate Starts for D32\_73:

(Start: 52 @43721 has 61 MA's), (83, 43643), (88, 43610), (98, 43577), (102, 43556), (110, 43502),

Gene: DBQu4n\_74 Start: 43701, Stop: 43468, Start Num: 52

Candidate Starts for DBQu4n\_74:

(Start: 52 @43701 has 61 MA's), (83, 43623), (88, 43590), (98, 43557), (102, 43536), (110, 43482),

Gene: DD5\_66 Start: 43578, Stop: 43285, Start Num: 41

Candidate Starts for DD5\_66:

(30, 43605), (Start: 41 @43578 has 206 MA's), (Start: 68 @43533 has 3 MA's), (72, 43503), (81, 43455), (88, 43413),

Gene: DaVinci\_69 Start: 40716, Stop: 40477, Start Num: 67

Candidate Starts for DaVinci\_69:

(Start: 67 @40716 has 8 MA's), (83, 40641), (88, 40608), (98, 40575), (100, 40566),

Gene: Dalmatian\_71 Start: 43225, Stop: 42947, Start Num: 47

Candidate Starts for Dalmatian\_71:

(Start: 47 @43225 has 8 MA's), (Start: 69 @43186 has 64 MA's), (83, 43111), (88, 43078), (98, 43045), (100, 43036), (102, 43024), (111, 42967),

Gene: Danforth\_81 Start: 44166, Stop: 43882, Start Num: 65

Candidate Starts for Danforth\_81:

(Start: 65 @44166 has 20 MA's), (Start: 74 @44124 has 1 MA's), (82, 44082), (83, 44076), (105, 43968),

Gene: Darrell\_74 Start: 43196, Stop: 42921, Start Num: 50

Candidate Starts for Darrell\_74:

(18, 43346), (21, 43328), (Start: 50 @43196 has 28 MA's), (82, 43094), (88, 43055), (102, 43001),

Gene: DARTHPhader\_68 Start: 43667, Stop: 43356, Start Num: 38

Candidate Starts for DARTHPhader\_68:

(13, 43808), (Start: 37 @43670 has 1 MA's), (Start: 38 @43667 has 3 MA's), (Start: 62 @43619 has 1 MA's), (Start: 74 @43568 has 1 MA's), (81, 43529), (83, 43520), (88, 43487), (109, 43382),

Gene: DekHockey33\_81 Start: 43657, Stop: 43379, Start Num: 52

Candidate Starts for DekHockey33\_81:

(26, 43717), (Start: 52 @43657 has 61 MA's), (78, 43579), (83, 43540), (88, 43507), (97, 43477), (98, 43474), (102, 43453), (106, 43420),

Gene: Deloris\_70 Start: 42746, Stop: 42507, Start Num: 69

Candidate Starts for Deloris\_70:

(Start: 47 @42785 has 8 MA's), (Start: 69 @42746 has 64 MA's), (Start: 74 @42719 has 1 MA's), (83, 42671), (88, 42638), (98, 42605), (100, 42596), (102, 42584), (111, 42527),

Gene: Dexes\_66 Start: 43299, Stop: 43006, Start Num: 41

Candidate Starts for Dexes\_66:

(Start: 41 @43299 has 206 MA's), (Start: 68 @43254 has 3 MA's), (81, 43176), (88, 43134),

Gene: Dignity\_72 Start: 43408, Stop: 43169, Start Num: 69

Candidate Starts for Dignity\_72:

(Start: 47 @43447 has 8 MA's), (Start: 69 @43408 has 64 MA's), (83, 43333), (88, 43300), (98, 43267), (100, 43258), (102, 43246),

Gene: Discoknowium\_63 Start: 41380, Stop: 41129, Start Num: 58

Candidate Starts for Discoknowium\_63:

(Start: 58 @41380 has 37 MA's), (83, 41287), (84, 41272), (100, 41209), (106, 41164), (110, 41143), (113, 41137),

Gene: Dixon\_79 Start: 43648, Stop: 43364, Start Num: 65

Candidate Starts for Dixon\_79:

(Start: 65 @43648 has 20 MA's), (Start: 74 @43606 has 1 MA's), (82, 43564), (83, 43558), (105, 43450),

Gene: Doom\_63 Start: 42899, Stop: 42606, Start Num: 41

Candidate Starts for Doom\_63:

(Start: 41 @42899 has 206 MA's), (Start: 68 @42854 has 3 MA's), (72, 42824), (81, 42776), (88, 42734),

Gene: Dorothea\_71 Start: 41297, Stop: 41049, Start Num: 64

Candidate Starts for Dorothea\_71:

(10, 41537), (19, 41465), (30, 41384), (Start: 41 @41339 has 206 MA's), (Start: 64 @41297 has 21 MA's), (81, 41222), (88, 41180), (97, 41150), (100, 41138),

Gene: DrFeelGood\_64 Start: 41833, Stop: 41540, Start Num: 41

Candidate Starts for DrFeelGood\_64:

(30, 41860), (Start: 41 @41833 has 206 MA's), (Start: 68 @41788 has 3 MA's), (72, 41758), (81, 41710), (88, 41668),

Gene: Drake55\_72 Start: 43111, Stop: 42872, Start Num: 69

Candidate Starts for Drake55\_72:

(Start: 69 @43111 has 64 MA's), (Start: 74 @43084 has 1 MA's), (76, 43081), (83, 43036), (88, 43003), (98, 42970), (100, 42961), (102, 42949),

Gene: DreamCatcher\_68 Start: 42983, Stop: 42690, Start Num: 41

Candidate Starts for DreamCatcher\_68:

(30, 43010), (Start: 41 @42983 has 206 MA's), (Start: 68 @42938 has 3 MA's), (72, 42908), (81, 42860), (88, 42818),

Gene: DreamTeam1\_67 Start: 41535, Stop: 41248, Start Num: 45

Candidate Starts for DreamTeam1\_67:

(Start: 45 @41535 has 1 MA's), (81, 41421), (82, 41418), (91, 41364), (93, 41355), (102, 41325),

Gene: Dreamboat\_68 Start: 42073, Stop: 41780, Start Num: 41

Candidate Starts for Dreamboat\_68:

(30, 42100), (Start: 41 @42073 has 206 MA's), (Start: 68 @42028 has 3 MA's), (72, 41998), (81, 41950), (88, 41908),

Gene: Dublin\_65 Start: 41773, Stop: 41522, Start Num: 58

Candidate Starts for Dublin\_65:

(Start: 58 @41773 has 37 MA's), (81, 41689), (83, 41680), (84, 41665), (100, 41602), (106, 41557), (110, 41536),

Gene: DudeLittle\_69 Start: 42991, Stop: 42713, Start Num: 47

Candidate Starts for DudeLittle\_69:

(Start: 47 @42991 has 8 MA's), (Start: 69 @42952 has 64 MA's), (83, 42877), (88, 42844), (98, 42811), (100, 42802), (102, 42790), (111, 42733),

Gene: Dulcie\_66 Start: 44308, Stop: 44015, Start Num: 41

Candidate Starts for Dulcie\_66:

(Start: 41 @44308 has 206 MA's), (Start: 68 @44263 has 3 MA's), (72, 44233), (81, 44185), (88, 44143),

Gene: Duplo\_74 Start: 43758, Stop: 43525, Start Num: 52

Candidate Starts for Duplo\_74:

(Start: 52 @43758 has 61 MA's), (83, 43680), (88, 43647), (98, 43614), (102, 43593), (110, 43539),

Gene: Dussy\_67 Start: 43292, Stop: 42999, Start Num: 41

Candidate Starts for Dussy\_67:

(Start: 41 @43292 has 206 MA's), (Start: 68 @43247 has 3 MA's), (72, 43217), (81, 43169), (88, 43127),

Gene: Dynamix\_67 Start: 41907, Stop: 41614, Start Num: 41

Candidate Starts for Dynamix\_67:

(30, 41934), (Start: 41 @41907 has 206 MA's), (Start: 68 @41862 has 3 MA's), (72, 41832), (81, 41784), (88, 41742),

Gene: EZMoney23\_67 Start: 42794, Stop: 42552, Start Num: 69

Candidate Starts for EZMoney23\_67:

(Start: 47 @42833 has 8 MA's), (Start: 69 @42794 has 64 MA's), (Start: 70 @42791 has 1 MA's), (80, 42749), (81, 42725), (83, 42716), (88, 42683), (98, 42650), (100, 42641), (102, 42629),

Gene: EagleEye\_76 Start: 43298, Stop: 43038, Start Num: 54

Candidate Starts for EagleEye\_76:

(16, 43454), (28, 43364), (33, 43346), (Start: 35 @43340 has 1 MA's), (Start: 54 @43298 has 2 MA's), (87, 43160), (102, 43103),

Gene: Ebony\_69 Start: 41606, Stop: 41340, Start Num: 48

Candidate Starts for Ebony\_69:

(Start: 48 @41606 has 21 MA's), (82, 41513), (88, 41474), (98, 41441), (100, 41432), (102, 41420), (106, 41387),

Gene: Echild\_71 Start: 42731, Stop: 42492, Start Num: 69



Candidate Starts for Echild\_71:

(Start: 47 @42770 has 8 MA's), (Start: 69 @42731 has 64 MA's), (81, 42665), (83, 42656), (88, 42623), (98, 42590), (100, 42581), (102, 42569),

Gene: Edtherson\_64 Start: 42893, Stop: 42600, Start Num: 41

Candidate Starts for Edtherson\_64:

(30, 42920), (Start: 41 @42893 has 206 MA's), (Start: 68 @42848 has 3 MA's), (72, 42818), (81, 42770), (88, 42728),

Gene: Eidsmoe\_71 Start: 42362, Stop: 42084, Start Num: 50

Candidate Starts for Eidsmoe\_71:

(Start: 50 @42362 has 28 MA's), (82, 42254), (91, 42200), (93, 42191), (102, 42161),

Gene: EITiger69\_71 Start: 42857, Stop: 42603, Start Num: 58

Candidate Starts for EITiger69\_71:

(Start: 58 @42857 has 37 MA's), (83, 42764), (84, 42749), (100, 42686), (106, 42641), (110, 42620), (113, 42614),

Gene: Elephantoon\_73 Start: 42479, Stop: 42192, Start Num: 52

Candidate Starts for Elephantoon\_73:

(Start: 52 @42479 has 61 MA's), (55, 42473), (Start: 74 @42413 has 1 MA's), (82, 42371), (88, 42332), (102, 42278),

Gene: EmyBug\_70 Start: 42364, Stop: 42086, Start Num: 50

Candidate Starts for EmyBug\_70:

(Start: 50 @42364 has 28 MA's), (82, 42256), (91, 42202), (93, 42193), (102, 42163),

Gene: EnzoK\_65 Start: 40168, Stop: 39875, Start Num: 41

Candidate Starts for EnzoK\_65:

(Start: 41 @40168 has 206 MA's), (Start: 68 @40123 has 3 MA's), (72, 40093), (81, 40045), (88, 40003),

Gene: Epsocamisio\_76 Start: 42795, Stop: 42517, Start Num: 52

Candidate Starts for Epsocamisio\_76:

(Start: 52 @42795 has 61 MA's), (78, 42717), (83, 42678), (88, 42645), (97, 42615), (98, 42612), (102, 42591), (106, 42558),

Gene: Equemioh13\_70 Start: 42915, Stop: 42676, Start Num: 69

Candidate Starts for Equemioh13\_70:

(Start: 69 @42915 has 64 MA's), (Start: 74 @42888 has 1 MA's), (76, 42885), (83, 42840), (88, 42807), (98, 42774), (100, 42765), (102, 42753),

Gene: EricB\_70 Start: 41308, Stop: 41069, Start Num: 67

Candidate Starts for EricB\_70:

(Start: 67 @41308 has 8 MA's), (83, 41233), (88, 41200), (98, 41167), (100, 41158),

Gene: Espresso\_63 Start: 42517, Stop: 42224, Start Num: 41

Candidate Starts for Espresso\_63:

(Start: 41 @42517 has 206 MA's), (Start: 68 @42472 has 3 MA's), (72, 42442), (77, 42430), (81, 42394), (88, 42352),

Gene: Et2Brutus\_68 Start: 41569, Stop: 41303, Start Num: 48

Candidate Starts for Et2Brutus\_68:

(Start: 48 @41569 has 21 MA's), (82, 41476), (88, 41437), (98, 41404), (100, 41395), (102, 41383), (106, 41350),

Gene: Euphoria\_65 Start: 42359, Stop: 42066, Start Num: 41

Candidate Starts for Euphoria\_65:

(30, 42386), (Start: 41 @42359 has 206 MA's), (Start: 68 @42314 has 3 MA's), (72, 42284), (81, 42236), (88, 42194),

Gene: EvilGenius\_71 Start: 44602, Stop: 44363, Start Num: 69

Candidate Starts for EvilGenius\_71:

(Start: 69 @44602 has 64 MA's), (83, 44527), (88, 44494), (98, 44461), (100, 44452), (102, 44440),

Gene: Expelliarmus\_77 Start: 43862, Stop: 43578, Start Num: 65

Candidate Starts for Expelliarmus\_77:

(Start: 65 @43862 has 20 MA's), (Start: 74 @43820 has 1 MA's), (82, 43778), (83, 43772), (105, 43664),

Gene: ExplosioNervosa\_71 Start: 42430, Stop: 42152, Start Num: 50

Candidate Starts for ExplosioNervosa\_71:

(Start: 50 @42430 has 28 MA's), (82, 42322), (91, 42268), (93, 42259), (102, 42229),

Gene: Eyeball\_67 Start: 43398, Stop: 43105, Start Num: 41

Candidate Starts for Eyeball\_67:

(27, 43434), (Start: 41 @43398 has 206 MA's), (Start: 68 @43353 has 3 MA's), (72, 43323), (81, 43275), (88, 43233),

Gene: Fajezeel\_66 Start: 42114, Stop: 41821, Start Num: 41

Candidate Starts for Fajezeel\_66:

(30, 42141), (Start: 41 @42114 has 206 MA's), (Start: 68 @42069 has 3 MA's), (72, 42039), (81, 41991), (88, 41949),

Gene: Fameo\_70 Start: 43185, Stop: 42946, Start Num: 69

Candidate Starts for Fameo\_70:

(Start: 47 @43224 has 8 MA's), (Start: 69 @43185 has 64 MA's), (81, 43119), (83, 43110), (88, 43077), (98, 43044), (100, 43035), (102, 43023), (112, 42963),

Gene: Fascinus\_61 Start: 42349, Stop: 42056, Start Num: 41

Candidate Starts for Fascinus\_61:

(30, 42376), (Start: 41 @42349 has 206 MA's), (Start: 68 @42304 has 3 MA's), (72, 42274), (77, 42262), (81, 42226), (88, 42184),

Gene: FatCactus\_57 Start: 38993, Stop: 38727, Start Num: 52

Candidate Starts for FatCactus\_57:

(Start: 52 @38993 has 61 MA's), (75, 38930), (88, 38855), (90, 38846), (91, 38840), (100, 38813), (104, 38789),

Gene: Fayely\_71 Start: 42331, Stop: 42053, Start Num: 50

Candidate Starts for Fayely\_71:

(Start: 50 @42331 has 28 MA's), (82, 42223), (91, 42169), (93, 42160), (102, 42130),

Gene: Fenn\_72 Start: 44750, Stop: 44457, Start Num: 41

Candidate Starts for Fenn\_72:

(30, 44795), (34, 44777), (Start: 41 @44750 has 206 MA's), (Start: 68 @44705 has 3 MA's), (72, 44675), (81, 44627), (88, 44585),

Gene: Fibonacci\_69 Start: 41575, Stop: 41309, Start Num: 48

Candidate Starts for Fibonacci\_69:

(Start: 48 @41575 has 21 MA's), (82, 41482), (88, 41443), (98, 41410), (100, 41401), (102, 41389), (106, 41356),

Gene: FiringLine\_71 Start: 43349, Stop: 43110, Start Num: 69

Candidate Starts for FiringLine\_71:

(Start: 47 @43388 has 8 MA's), (Start: 69 @43349 has 64 MA's), (83, 43274), (88, 43241), (98, 43208), (100, 43199), (102, 43187), (111, 43130),

Gene: First\_0071 Start: 42973, Stop: 42734, Start Num: 69

Candidate Starts for First\_0071:

(Start: 47 @43012 has 8 MA's), (Start: 69 @42973 has 64 MA's), (83, 42898), (88, 42865), (98, 42832), (100, 42823), (102, 42811), (111, 42754),

Gene: Flare16\_71 Start: 43054, Stop: 42815, Start Num: 69

Candidate Starts for Flare16\_71:

(Start: 47 @43093 has 8 MA's), (Start: 69 @43054 has 64 MA's), (Start: 74 @43027 has 1 MA's), (76, 43024), (83, 42979), (88, 42946), (98, 42913), (100, 42904), (102, 42892), (111, 42835),

Gene: Flaverint\_70 Start: 42033, Stop: 41767, Start Num: 48

Candidate Starts for Flaverint\_70:

(Start: 48 @42033 has 21 MA's), (82, 41940), (88, 41901), (98, 41868), (100, 41859), (102, 41847), (106, 41814),

Gene: ForGetIt\_66 Start: 41888, Stop: 41637, Start Num: 58

Candidate Starts for ForGetIt\_66:

(Start: 58 @41888 has 37 MA's), (83, 41795), (84, 41780), (100, 41717), (106, 41672), (110, 41651), (113, 41645),

Gene: Forsytheast\_67 Start: 42412, Stop: 42119, Start Num: 41

Candidate Starts for Forsytheast\_67:

(30, 42439), (Start: 41 @42412 has 206 MA's), (Start: 68 @42367 has 3 MA's), (72, 42337), (81, 42289), (88, 42247),

Gene: Francis47\_65 Start: 43491, Stop: 43198, Start Num: 41

Candidate Starts for Francis47\_65:

(Start: 41 @43491 has 206 MA's), (Start: 68 @43446 has 3 MA's), (72, 43416), (81, 43368), (88, 43326),

Gene: Froghopper\_63 Start: 41471, Stop: 41178, Start Num: 41

Candidate Starts for Froghopper\_63:

(30, 41498), (Start: 41 @41471 has 206 MA's), (Start: 68 @41426 has 3 MA's), (72, 41396), (81, 41348), (88, 41306),

Gene: Fushigi\_61 Start: 40434, Stop: 40141, Start Num: 41

Candidate Starts for Fushigi\_61:

(30, 40461), (Start: 41 @40434 has 206 MA's), (Start: 68 @40389 has 3 MA's), (72, 40359), (81, 40311), (88, 40269),

Gene: GMonster\_62 Start: 42254, Stop: 41961, Start Num: 41

Candidate Starts for GMonster\_62:

(30, 42281), (Start: 41 @42254 has 206 MA's), (Start: 68 @42209 has 3 MA's), (72, 42179), (81, 42131),

Gene: GageAP\_67 Start: 43435, Stop: 43142, Start Num: 41

Candidate Starts for GageAP\_67:

(3, 43693), (6, 43657), (30, 43462), (Start: 41 @43435 has 206 MA's), (Start: 68 @43390 has 3 MA's), (72, 43360), (77, 43348), (81, 43312), (88, 43270),

Gene: Gail\_72 Start: 43458, Stop: 43192, Start Num: 58

Candidate Starts for Gail\_72:

(Start: 46 @43482 has 1 MA's), (Start: 57 @43461 has 4 MA's), (Start: 58 @43458 has 37 MA's), (82, 43362), (87, 43326), (88, 43323), (100, 43281), (102, 43269), (109, 43218),

Gene: Gandalf20\_68 Start: 43802, Stop: 43509, Start Num: 41

Candidate Starts for Gandalf20\_68:

(Start: 41 @43802 has 206 MA's), (Start: 68 @43757 has 3 MA's), (72, 43727), (77, 43715), (81, 43679), (88, 43637),

Gene: Garak\_74 Start: 41848, Stop: 41591, Start Num: 52

Candidate Starts for Garak\_74:

(Start: 52 @41848 has 61 MA's), (Start: 57 @41839 has 4 MA's), (81, 41764), (83, 41755), (88, 41722), (97, 41692), (100, 41680),

Gene: GaugeLDP\_66 Start: 42652, Stop: 42401, Start Num: 52

Candidate Starts for GaugeLDP\_66:

(Start: 52 @42652 has 61 MA's), (Start: 57 @42643 has 4 MA's), (76, 42610), (83, 42565), (88, 42532), (98, 42499), (100, 42490), (102, 42478),

Gene: George\_62 Start: 41560, Stop: 41309, Start Num: 58

Candidate Starts for George\_62:

(Start: 58 @41560 has 37 MA's), (83, 41467), (84, 41452), (100, 41389), (106, 41344), (110, 41323),

Gene: Georgie2\_72 Start: 43394, Stop: 43155, Start Num: 69

Candidate Starts for Georgie2\_72:

(Start: 47 @43433 has 8 MA's), (Start: 69 @43394 has 64 MA's), (83, 43319), (88, 43286), (98, 43253), (100, 43244), (102, 43232), (111, 43175),

Gene: Ghoulboy\_65 Start: 41861, Stop: 41610, Start Num: 58

Candidate Starts for Ghoulboy\_65:

(Start: 58 @41861 has 37 MA's), (Start: 66 @41849 has 2 MA's), (81, 41777), (83, 41768), (84, 41753), (100, 41690), (106, 41645), (110, 41624), (113, 41618),

Gene: Gilberta\_70 Start: 42026, Stop: 41760, Start Num: 48

Candidate Starts for Gilberta\_70:

(Start: 48 @42026 has 21 MA's), (82, 41933), (88, 41894), (98, 41861), (100, 41852), (102, 41840), (106, 41807),

Gene: Gladiator\_69 Start: 40925, Stop: 40677, Start Num: 64

Candidate Starts for Gladiator\_69:

(10, 41165), (19, 41093), (30, 41012), (Start: 41 @40967 has 206 MA's), (Start: 64 @40925 has 21 MA's), (81, 40850), (88, 40808), (97, 40778), (100, 40766),

Gene: Gompeii16\_66 Start: 44565, Stop: 44272, Start Num: 41

Candidate Starts for Gompeii16\_66:

(Start: 41 @44565 has 206 MA's), (Start: 68 @44520 has 3 MA's), (72, 44490), (81, 44442), (88, 44400),

Gene: Graduation\_71 Start: 44181, Stop: 43888, Start Num: 41

Candidate Starts for Graduation\_71:

(30, 44208), (Start: 41 @44181 has 206 MA's), (Start: 68 @44136 has 3 MA's), (72, 44106), (77, 44094), (81, 44058), (88, 44016),

Gene: Gratitude\_68 Start: 42915, Stop: 42676, Start Num: 69

Candidate Starts for Gratitude\_68:

(Start: 69 @42915 has 64 MA's), (Start: 74 @42888 has 1 MA's), (76, 42885), (83, 42840), (88, 42807), (98, 42774), (100, 42765), (102, 42753),

Gene: GrecoEtereo\_65 Start: 41688, Stop: 41395, Start Num: 41

Candidate Starts for GrecoEtereo\_65:

(30, 41715), (Start: 41 @41688 has 206 MA's), (Start: 68 @41643 has 3 MA's), (72, 41613), (81, 41565), (88, 41523),

Gene: GreedyLawyer\_68 Start: 41281, Stop: 41042, Start Num: 67

Candidate Starts for GreedyLawyer\_68:

(Start: 67 @41281 has 8 MA's), (83, 41206), (88, 41173), (98, 41140), (100, 41131),

Gene: Greg\_66 Start: 42114, Stop: 41821, Start Num: 41

Candidate Starts for Greg\_66:

(30, 42141), (Start: 41 @42114 has 206 MA's), (Start: 68 @42069 has 3 MA's), (72, 42039), (81, 41991), (88, 41949),

Gene: Grif\_70 Start: 42462, Stop: 42208, Start Num: 65

Candidate Starts for Grif\_70:

(44, 42498), (53, 42483), (Start: 65 @42462 has 20 MA's), (71, 42429), (81, 42378), (83, 42369), (86, 42342), (88, 42336), (98, 42303),

Gene: Groundhog\_78 Start: 43876, Stop: 43634, Start Num: 74

Candidate Starts for Groundhog\_78:

(Start: 65 @43918 has 20 MA's), (Start: 74 @43876 has 1 MA's), (82, 43834), (83, 43828), (105, 43720),

Gene: Gruunaga\_72 Start: 41706, Stop: 41449, Start Num: 52

Candidate Starts for Gruunaga\_72:

(Start: 52 @41706 has 61 MA's), (Start: 57 @41697 has 4 MA's), (81, 41622), (83, 41613), (88, 41580), (97, 41550), (100, 41538), (114, 41457),

Gene: GtownJaz\_72 Start: 42389, Stop: 42135, Start Num: 65

Candidate Starts for GtownJaz\_72:

(44, 42425), (53, 42410), (Start: 65 @42389 has 20 MA's), (71, 42356), (81, 42305), (83, 42296), (86, 42269), (88, 42263), (98, 42230),

Gene: Gwendoluna\_70 Start: 44629, Stop: 44336, Start Num: 41

Candidate Starts for Gwendoluna\_70:

(30, 44656), (Start: 41 @44629 has 206 MA's), (Start: 68 @44584 has 3 MA's), (72, 44554), (81, 44506), (88, 44464),

Gene: Gyzlar\_61 Start: 40384, Stop: 40091, Start Num: 41

Candidate Starts for Gyzlar\_61:

(30, 40411), (Start: 41 @40384 has 206 MA's), (Start: 68 @40339 has 3 MA's), (81, 40261), (88, 40219),

Gene: HINdeR\_66 Start: 44898, Stop: 44536, Start Num: 24

Candidate Starts for HINdeR\_66:

(Start: 24 @44898 has 1 MA's), (32, 44865), (Start: 43 @44826 has 1 MA's), (Start: 74 @44745 has 1 MA's), (81, 44706), (83, 44697), (92, 44649), (96, 44634), (98, 44631), (102, 44610), (109, 44559), (115, 44541),

Gene: Hami1\_61 Start: 38461, Stop: 38168, Start Num: 41

Candidate Starts for Hami1\_61:

(Start: 41 @38461 has 206 MA's), (Start: 68 @38416 has 3 MA's), (72, 38386), (81, 38338), (88, 38296),

Gene: Hammer\_73 Start: 41413, Stop: 41156, Start Num: 52

Candidate Starts for Hammer\_73:

(Start: 52 @41413 has 61 MA's), (Start: 57 @41404 has 4 MA's), (81, 41329), (83, 41320), (88, 41287), (97, 41257), (100, 41245),

Gene: HanShotFirst\_67 Start: 44227, Stop: 43934, Start Num: 41

Candidate Starts for HanShotFirst\_67:

(30, 44254), (Start: 41 @44227 has 206 MA's), (Start: 68 @44182 has 3 MA's), (72, 44152), (81, 44104), (88, 44062),

Gene: Hanray\_71 Start: 42693, Stop: 42415, Start Num: 50

Candidate Starts for Hanray\_71:

(Start: 50 @42693 has 28 MA's), (82, 42585), (91, 42531), (93, 42522), (102, 42492),

Gene: HarryHoudini\_71 Start: 43112, Stop: 42873, Start Num: 69

Candidate Starts for HarryHoudini\_71:

(Start: 69 @43112 has 64 MA's), (Start: 74 @43085 has 1 MA's), (76, 43082), (83, 43037), (88, 43004), (98, 42971), (100, 42962), (102, 42950),

Gene: HarryOW\_63 Start: 42195, Stop: 41902, Start Num: 41

Candidate Starts for HarryOW\_63:

(30, 42222), (Start: 41 @42195 has 206 MA's), (72, 42120), (81, 42072), (88, 42030),

Gene: HashRod\_73 Start: 42415, Stop: 42161, Start Num: 65

Candidate Starts for HashRod\_73:

(Start: 39 @42469 has 2 MA's), (44, 42451), (53, 42436), (Start: 65 @42415 has 20 MA's), (71, 42382), (81, 42331), (83, 42322), (86, 42295), (88, 42289), (98, 42256),

Gene: Heffalump\_69 Start: 43653, Stop: 43414, Start Num: 69

Candidate Starts for Heffalump\_69:

(Start: 69 @43653 has 64 MA's), (81, 43587), (83, 43578), (88, 43545), (98, 43512), (100, 43503), (102, 43491), (112, 43431),

Gene: Heliosoles\_69 Start: 42261, Stop: 41953, Start Num: 39

Candidate Starts for Heliosoles\_69:

(Start: 39 @42261 has 2 MA's), (44, 42243), (53, 42228), (Start: 65 @42207 has 20 MA's), (71, 42174), (81, 42123), (83, 42114), (86, 42087), (88, 42081), (98, 42048),

Gene: Helmet\_74 Start: 41848, Stop: 41591, Start Num: 52

Candidate Starts for Helmet\_74:

(Start: 52 @41848 has 61 MA's), (Start: 57 @41839 has 4 MA's), (81, 41764), (83, 41755), (88, 41722), (97, 41692), (100, 41680),

Gene: Herbertwm\_67 Start: 42568, Stop: 42287, Start Num: 47

Candidate Starts for Herbertwm\_67:

(Start: 47 @42568 has 8 MA's), (Start: 69 @42529 has 64 MA's), (Start: 74 @42496 has 1 MA's), (81, 42457), (91, 42400), (97, 42385), (115, 42292),

Gene: Hermia\_63 Start: 42193, Stop: 41900, Start Num: 41

Candidate Starts for Hermia\_63:

(30, 42220), (Start: 41 @42193 has 206 MA's), (72, 42118), (81, 42070), (88, 42028),

Gene: HermioneGrange\_68 Start: 43698, Stop: 43405, Start Num: 41

Candidate Starts for HermioneGrange\_68:

(5, 43926), (30, 43725), (Start: 41 @43698 has 206 MA's), (Start: 68 @43653 has 3 MA's), (72, 43623), (81, 43575), (88, 43533),

Gene: Hexamo\_72 Start: 41382, Stop: 41125, Start Num: 52

Candidate Starts for Hexamo\_72:

(Start: 52 @41382 has 61 MA's), (Start: 57 @41373 has 4 MA's), (81, 41298), (83, 41289), (88, 41256), (97, 41226), (100, 41214), (114, 41133),

Gene: Horex\_71 Start: 42709, Stop: 42431, Start Num: 50

Candidate Starts for Horex\_71:

(Start: 50 @42709 has 28 MA's), (82, 42601), (91, 42547), (93, 42538), (102, 42508),

Gene: Homines\_57 Start: 38523, Stop: 38230, Start Num: 41

Candidate Starts for Homines\_57:

(30, 38550), (Start: 41 @38523 has 206 MA's), (Start: 68 @38478 has 3 MA's), (72, 38448), (81, 38400), (88, 38358),

Gene: Hoot\_66 Start: 39166, Stop: 38927, Start Num: 67

Candidate Starts for Hoot\_66:

(Start: 67 @39166 has 8 MA's), (83, 39091), (88, 39058), (98, 39025), (100, 39016),

Gene: Hope4ever\_67 Start: 42682, Stop: 42389, Start Num: 41

Candidate Starts for Hope4ever\_67:

(30, 42709), (Start: 41 @42682 has 206 MA's), (Start: 68 @42637 has 3 MA's), (72, 42607), (81, 42559), (88, 42517),

Gene: HortumSL17\_74 Start: 42693, Stop: 42415, Start Num: 50

Candidate Starts for HortumSL17\_74:

(Start: 50 @42693 has 28 MA's), (82, 42585), (91, 42531), (93, 42522), (102, 42492),

Gene: HuhtaEnerson15\_63 Start: 41469, Stop: 41218, Start Num: 58

Candidate Starts for HuhtaEnerson15\_63:

(Start: 58 @41469 has 37 MA's), (83, 41376), (84, 41361), (100, 41298), (106, 41253), (110, 41232),

Gene: Hutc2\_68 Start: 41575, Stop: 41309, Start Num: 48  
Candidate Starts for Hutc2\_68:  
(Start: 48 @41575 has 21 MA's), (82, 41482), (88, 41443), (98, 41410), (100, 41401), (102, 41389),  
(106, 41356),

Gene: ILeeKay\_68 Start: 42579, Stop: 42286, Start Num: 41  
Candidate Starts for ILeeKay\_68:  
(Start: 41 @42579 has 206 MA's), (Start: 68 @42534 has 3 MA's), (72, 42504), (81, 42456), (88,  
42414),

Gene: Ichabod\_70 Start: 43792, Stop: 43499, Start Num: 41  
Candidate Starts for Ichabod\_70:  
(30, 43819), (Start: 41 @43792 has 206 MA's), (Start: 68 @43747 has 3 MA's), (72, 43717), (81,  
43669), (88, 43627),

Gene: IgnatiusPatJac\_66 Start: 42364, Stop: 42071, Start Num: 41  
Candidate Starts for IgnatiusPatJac\_66:  
(30, 42391), (Start: 41 @42364 has 206 MA's), (Start: 68 @42319 has 3 MA's), (72, 42289), (81,  
42241), (88, 42199),

Gene: Indra\_76 Start: 41849, Stop: 41592, Start Num: 52  
Candidate Starts for Indra\_76:  
(Start: 52 @41849 has 61 MA's), (Start: 57 @41840 has 4 MA's), (81, 41765), (83, 41756), (88, 41723),  
(97, 41693), (100, 41681),

Gene: Inyanga\_61 Start: 42487, Stop: 42194, Start Num: 41  
Candidate Starts for Inyanga\_61:  
(30, 42514), (Start: 41 @42487 has 206 MA's), (Start: 68 @42442 has 3 MA's), (72, 42412), (81,  
42364), (88, 42322),

Gene: Iqorha\_61 Start: 42486, Stop: 42193, Start Num: 41  
Candidate Starts for Iqorha\_61:  
(30, 42513), (Start: 41 @42486 has 206 MA's), (Start: 68 @42441 has 3 MA's), (72, 42411), (81,  
42363), (88, 42321),

Gene: IronMan\_68 Start: 43620, Stop: 43360, Start Num: 64  
Candidate Starts for IronMan\_68:  
(19, 43788), (30, 43707), (Start: 64 @43620 has 21 MA's), (83, 43524), (88, 43491), (98, 43458), (100,  
43449), (102, 43437),

Gene: Isiphiwo\_69 Start: 40857, Stop: 40609, Start Num: 64  
Candidate Starts for Isiphiwo\_69:  
(10, 41097), (19, 41025), (30, 40944), (Start: 41 @40899 has 206 MA's), (Start: 64 @40857 has 21  
MA's), (81, 40782), (88, 40740), (97, 40710), (100, 40698),

Gene: JC27\_70 Start: 43426, Stop: 43133, Start Num: 41  
Candidate Starts for JC27\_70:  
(30, 43453), (Start: 41 @43426 has 206 MA's), (Start: 68 @43381 has 3 MA's), (72, 43351), (81,  
43303), (88, 43261),

Gene: JSwag\_79 Start: 43080, Stop: 42802, Start Num: 52  
Candidate Starts for JSwag\_79:



(Start: 52 @43080 has 61 MA's), (78, 43002), (83, 42963), (88, 42930), (97, 42900), (98, 42897), (102, 42876), (106, 42843),

Gene: Jaan\_69 Start: 43788, Stop: 43528, Start Num: 64

Candidate Starts for Jaan\_69:

(19, 43956), (30, 43875), (Start: 64 @43788 has 21 MA's), (83, 43692), (88, 43659), (98, 43626), (100, 43617), (102, 43605),

Gene: Jabiru\_67 Start: 42041, Stop: 41787, Start Num: 58

Candidate Starts for Jabiru\_67:

(Start: 58 @42041 has 37 MA's), (83, 41948), (84, 41933), (100, 41870), (106, 41825), (110, 41804), (113, 41798),

Gene: Jabith\_70 Start: 42031, Stop: 41765, Start Num: 48

Candidate Starts for Jabith\_70:

(4, 42307), (11, 42223), (12, 42211), (Start: 48 @42031 has 21 MA's), (82, 41938), (88, 41899), (98, 41866), (100, 41857), (102, 41845), (106, 41812),

Gene: JackSparrow\_69 Start: 42909, Stop: 42616, Start Num: 41

Candidate Starts for JackSparrow\_69:

(30, 42936), (Start: 41 @42909 has 206 MA's), (Start: 68 @42864 has 3 MA's), (72, 42834), (81, 42786), (88, 42744),

Gene: Jasper\_67 Start: 41959, Stop: 41666, Start Num: 41

Candidate Starts for Jasper\_67:

(30, 41986), (Start: 41 @41959 has 206 MA's), (Start: 68 @41914 has 3 MA's), (72, 41884), (81, 41836), (88, 41794),

Gene: Jeeves\_74 Start: 42446, Stop: 42174, Start Num: 57

Candidate Starts for Jeeves\_74:

(Start: 46 @42467 has 1 MA's), (Start: 57 @42446 has 4 MA's), (63, 42437), (81, 42347), (82, 42344), (87, 42308), (88, 42305), (100, 42263), (102, 42251), (109, 42200),

Gene: Jeffabunny\_73 Start: 41475, Stop: 41218, Start Num: 52

Candidate Starts for Jeffabunny\_73:

(Start: 52 @41475 has 61 MA's), (Start: 57 @41466 has 4 MA's), (81, 41391), (83, 41382), (88, 41349), (97, 41319), (100, 41307),

Gene: Jerm\_72 Start: 43390, Stop: 43151, Start Num: 69

Candidate Starts for Jerm\_72:

(Start: 47 @43429 has 8 MA's), (Start: 69 @43390 has 64 MA's), (83, 43315), (88, 43282), (98, 43249), (100, 43240), (102, 43228),

Gene: Jerm2\_67 Start: 43768, Stop: 43475, Start Num: 41

Candidate Starts for Jerm2\_67:

(30, 43795), (Start: 41 @43768 has 206 MA's), (Start: 68 @43723 has 3 MA's), (72, 43693), (81, 43645), (88, 43603),

Gene: JewelBug\_71 Start: 41591, Stop: 41343, Start Num: 64

Candidate Starts for JewelBug\_71:

(10, 41831), (19, 41759), (30, 41678), (Start: 41 @41633 has 206 MA's), (Start: 64 @41591 has 21 MA's), (81, 41516), (88, 41474), (97, 41444), (100, 41432),

Gene: Jiawan\_70 Start: 42725, Stop: 42447, Start Num: 50  
Candidate Starts for Jiawan\_70:  
(Start: 50 @42725 has 28 MA's), (82, 42617), (91, 42563), (93, 42554), (102, 42524),

Gene: Jordennis\_70 Start: 41072, Stop: 40824, Start Num: 64  
Candidate Starts for Jordennis\_70:  
(10, 41312), (19, 41240), (30, 41159), (Start: 41 @41114 has 206 MA's), (Start: 64 @41072 has 21 MA's), (81, 40997), (88, 40955), (97, 40925), (100, 40913),

Gene: Jorgensen\_71 Start: 43337, Stop: 43044, Start Num: 41  
Candidate Starts for Jorgensen\_71:  
(30, 43364), (Start: 41 @43337 has 206 MA's), (Start: 68 @43292 has 3 MA's), (72, 43262), (77, 43250), (81, 43214), (88, 43172),

Gene: JoshKayV\_71 Start: 43441, Stop: 43202, Start Num: 69  
Candidate Starts for JoshKayV\_71:  
(Start: 47 @43480 has 8 MA's), (Start: 69 @43441 has 64 MA's), (83, 43366), (88, 43333), (98, 43300), (100, 43291), (102, 43279),

Gene: Journey13\_62 Start: 40039, Stop: 39803, Start Num: 69  
Candidate Starts for Journey13\_62:  
(Start: 40 @40096 has 1 MA's), (Start: 52 @40072 has 61 MA's), (Start: 69 @40039 has 64 MA's), (81, 39976), (83, 39967), (88, 39934), (98, 39901), (100, 39892), (102, 39880), (114, 39811),

Gene: Jovo\_66 Start: 42144, Stop: 41893, Start Num: 58  
Candidate Starts for Jovo\_66:  
(Start: 58 @42144 has 37 MA's), (83, 42051), (84, 42036), (100, 41973), (106, 41928), (110, 41907), (113, 41901),

Gene: Jsquared\_74 Start: 42531, Stop: 42292, Start Num: 69  
Candidate Starts for Jsquared\_74:  
(Start: 69 @42531 has 64 MA's), (80, 42489), (83, 42456), (88, 42423), (98, 42390), (100, 42381), (102, 42369), (109, 42318), (114, 42300),

Gene: JuliaChild\_67 Start: 43013, Stop: 42720, Start Num: 41  
Candidate Starts for JuliaChild\_67:  
(30, 43040), (Start: 41 @43013 has 206 MA's), (Start: 68 @42968 has 3 MA's), (72, 42938), (81, 42890), (88, 42848),

Gene: KBG\_67 Start: 44545, Stop: 44252, Start Num: 41  
Candidate Starts for KBG\_67:  
(Start: 41 @44545 has 206 MA's), (Start: 68 @44500 has 3 MA's), (72, 44470), (81, 44422), (88, 44380),

Gene: KSSJEB\_65 Start: 41821, Stop: 41528, Start Num: 41  
Candidate Starts for KSSJEB\_65:  
(Start: 41 @41821 has 206 MA's), (Start: 68 @41776 has 3 MA's), (72, 41746), (81, 41698), (88, 41656),

Gene: Kalpine\_70 Start: 43417, Stop: 43178, Start Num: 69  
Candidate Starts for Kalpine\_70:  
(Start: 47 @43456 has 8 MA's), (Start: 69 @43417 has 64 MA's), (83, 43342), (88, 43309), (98, 43276), (100, 43267), (102, 43255), (109, 43204),

Gene: Kanely\_67 Start: 42580, Stop: 42287, Start Num: 41

Candidate Starts for Kanely\_67:

(30, 42607), (Start: 41 @42580 has 206 MA's), (Start: 68 @42535 has 3 MA's), (72, 42505), (77, 42493), (81, 42457), (88, 42415),

Gene: KatherineG\_80 Start: 43544, Stop: 43266, Start Num: 52

Candidate Starts for KatherineG\_80:

(26, 43604), (Start: 52 @43544 has 61 MA's), (78, 43466), (83, 43427), (88, 43394), (97, 43364), (98, 43361), (102, 43340), (106, 43307),

Gene: Kazan\_72 Start: 41321, Stop: 41082, Start Num: 67

Candidate Starts for Kazan\_72:

(Start: 67 @41321 has 8 MA's), (83, 41246), (88, 41213), (98, 41180), (100, 41171),

Gene: Kenmech\_70 Start: 44418, Stop: 44125, Start Num: 41

Candidate Starts for Kenmech\_70:

(Start: 41 @44418 has 206 MA's), (Start: 68 @44373 has 3 MA's), (72, 44343), (81, 44295), (88, 44253),

Gene: Kerberos\_74 Start: 43720, Stop: 43487, Start Num: 52

Candidate Starts for Kerberos\_74:

(Start: 52 @43720 has 61 MA's), (83, 43642), (88, 43609), (98, 43576), (102, 43555), (110, 43501),

Gene: Keziacharles14\_69 Start: 43094, Stop: 42822, Start Num: 47

Candidate Starts for Keziacharles14\_69:

(Start: 47 @43094 has 8 MA's), (82, 42989), (88, 42950), (91, 42935), (97, 42920), (102, 42896),

Gene: Killigrew\_64 Start: 42625, Stop: 42332, Start Num: 41

Candidate Starts for Killigrew\_64:

(30, 42652), (Start: 41 @42625 has 206 MA's), (Start: 68 @42580 has 3 MA's), (72, 42550), (81, 42502), (88, 42460),

Gene: KingCyrus\_71 Start: 44597, Stop: 44358, Start Num: 69

Candidate Starts for KingCyrus\_71:

(Start: 69 @44597 has 64 MA's), (83, 44522), (88, 44489), (98, 44456), (100, 44447), (102, 44435),

Gene: Kinmap\_73 Start: 41794, Stop: 41531, Start Num: 61

Candidate Starts for Kinmap\_73:

(61, 41794), (79, 41728), (81, 41701), (82, 41698), (83, 41692), (84, 41677), (88, 41659), (91, 41644), (98, 41626), (102, 41605),

Gene: Kipper29\_71 Start: 41334, Stop: 41095, Start Num: 67

Candidate Starts for Kipper29\_71:

(Start: 67 @41334 has 8 MA's), (83, 41259), (88, 41226), (98, 41193), (100, 41184),

Gene: Koko\_74 Start: 42237, Stop: 41980, Start Num: 52

Candidate Starts for Koko\_74:

(Start: 52 @42237 has 61 MA's), (Start: 57 @42228 has 4 MA's), (81, 42153), (83, 42144), (88, 42111), (97, 42081), (100, 42069), (114, 41988),

Gene: Kugel\_70 Start: 44438, Stop: 44145, Start Num: 41

Candidate Starts for Kugel\_70:

(30, 44465), (Start: 41 @44438 has 206 MA's), (Start: 68 @44393 has 3 MA's), (72, 44363), (81, 44315), (88, 44273),

Gene: KyMonks1A\_70 Start: 42786, Stop: 42493, Start Num: 41

Candidate Starts for KyMonks1A\_70:

(30, 42813), (Start: 41 @42786 has 206 MA's), (Start: 68 @42741 has 3 MA's), (81, 42663), (88, 42621),

Gene: Kykar\_67 Start: 43161, Stop: 42868, Start Num: 41

Candidate Starts for Kykar\_67:

(3, 43419), (6, 43383), (30, 43188), (Start: 41 @43161 has 206 MA's), (Start: 68 @43116 has 3 MA's), (72, 43086), (81, 43038), (88, 42996),

Gene: L5\_68 Start: 42580, Stop: 42341, Start Num: 69

Candidate Starts for L5\_68:

(Start: 69 @42580 has 64 MA's), (83, 42505), (88, 42472), (98, 42439), (100, 42430), (102, 42418), (109, 42367), (114, 42349),

Gene: LadyBird\_74 Start: 43662, Stop: 43423, Start Num: 69

Candidate Starts for LadyBird\_74:

(Start: 47 @43701 has 8 MA's), (Start: 69 @43662 has 64 MA's), (83, 43587), (88, 43554), (98, 43521), (100, 43512), (102, 43500), (111, 43443),

Gene: Lamina13\_69 Start: 43778, Stop: 43485, Start Num: 41

Candidate Starts for Lamina13\_69:

(Start: 41 @43778 has 206 MA's), (Start: 68 @43733 has 3 MA's), (72, 43703), (81, 43655), (88, 43613),

Gene: Landor\_69 Start: 43695, Stop: 43435, Start Num: 64

Candidate Starts for Landor\_69:

(Start: 64 @43695 has 21 MA's), (83, 43599), (88, 43566), (98, 43533), (100, 43524), (102, 43512),

Gene: Larenn\_68 Start: 42943, Stop: 42704, Start Num: 69

Candidate Starts for Larenn\_68:

(Start: 69 @42943 has 64 MA's), (83, 42868), (88, 42835), (91, 42820), (98, 42802), (100, 42793), (102, 42781), (111, 42724),

Gene: LarryKay\_72 Start: 42417, Stop: 42163, Start Num: 65

Candidate Starts for LarryKay\_72:

(44, 42453), (53, 42438), (Start: 65 @42417 has 20 MA's), (71, 42384), (81, 42333), (83, 42324), (86, 42297), (88, 42291), (98, 42258),

Gene: LastResort\_78 Start: 43475, Stop: 43197, Start Num: 52

Candidate Starts for LastResort\_78:

(26, 43535), (Start: 52 @43475 has 61 MA's), (78, 43397), (83, 43358), (88, 43325), (97, 43295), (98, 43292), (102, 43271), (106, 43238),

Gene: Leogania\_70 Start: 43630, Stop: 43391, Start Num: 69

Candidate Starts for Leogania\_70:

(Start: 47 @43669 has 8 MA's), (Start: 69 @43630 has 64 MA's), (83, 43555), (88, 43522), (98, 43489), (100, 43480), (102, 43468),

Gene: Lesedi\_62 Start: 40853, Stop: 40560, Start Num: 41

Candidate Starts for Lesedi\_62:

(Start: 41 @40853 has 206 MA's), (Start: 68 @40808 has 3 MA's), (72, 40778), (81, 40730), (88, 40688),

Gene: Lev2\_66 Start: 41776, Stop: 41525, Start Num: 58

Candidate Starts for Lev2\_66:

(Start: 58 @41776 has 37 MA's), (83, 41683), (84, 41668), (100, 41605), (106, 41560), (110, 41539), (113, 41533),

Gene: Levia\_60 Start: 41770, Stop: 41477, Start Num: 41

Candidate Starts for Levia\_60:

(Start: 41 @41770 has 206 MA's), (Start: 68 @41725 has 3 MA's), (72, 41695), (81, 41647), (88, 41605),

Gene: Leviathan\_72 Start: 43457, Stop: 43218, Start Num: 69

Candidate Starts for Leviathan\_72:

(Start: 47 @43496 has 8 MA's), (Start: 69 @43457 has 64 MA's), (83, 43382), (88, 43349), (98, 43316), (100, 43307), (102, 43295),

Gene: Licorice\_66 Start: 43887, Stop: 43594, Start Num: 41

Candidate Starts for Licorice\_66:

(30, 43914), (Start: 41 @43887 has 206 MA's), (Start: 68 @43842 has 3 MA's), (72, 43812), (81, 43764), (88, 43722),

Gene: LilBib\_65 Start: 43871, Stop: 43578, Start Num: 41

Candidate Starts for LilBib\_65:

(Start: 41 @43871 has 206 MA's), (Start: 68 @43826 has 3 MA's), (72, 43796), (81, 43748), (88, 43706),

Gene: LilTurb\_71 Start: 43271, Stop: 43032, Start Num: 69

Candidate Starts for LilTurb\_71:

(Start: 47 @43310 has 8 MA's), (Start: 69 @43271 has 64 MA's), (83, 43196), (88, 43163), (98, 43130), (100, 43121), (102, 43109),

Gene: Lilbunny\_72 Start: 41479, Stop: 41222, Start Num: 52

Candidate Starts for Lilbunny\_72:

(Start: 52 @41479 has 61 MA's), (Start: 57 @41470 has 4 MA's), (81, 41395), (83, 41386), (88, 41353), (97, 41323), (100, 41311),

Gene: Lilleskat\_70 Start: 42650, Stop: 42372, Start Num: 50

Candidate Starts for Lilleskat\_70:

(Start: 50 @42650 has 28 MA's), (82, 42542), (91, 42488), (93, 42479), (102, 42449),

Gene: LionsBait\_71 Start: 44279, Stop: 44037, Start Num: 69

Candidate Starts for LionsBait\_71:

(Start: 47 @44318 has 8 MA's), (Start: 69 @44279 has 64 MA's), (83, 44204), (88, 44171), (98, 44138), (100, 44129), (102, 44117),

Gene: LittleCherry\_64 Start: 41339, Stop: 41088, Start Num: 58

Candidate Starts for LittleCherry\_64:

(Start: 58 @41339 has 37 MA's), (83, 41246), (84, 41231), (100, 41168), (106, 41123), (110, 41102),

Gene: Lockley\_65 Start: 42740, Stop: 42447, Start Num: 41

Candidate Starts for Lockley\_65:

(30, 42767), (Start: 41 @42740 has 206 MA's), (Start: 68 @42695 has 3 MA's), (72, 42665), (81, 42617), (88, 42575),

Gene: Lokk\_65 Start: 41753, Stop: 41511, Start Num: 69

Candidate Starts for Lokk\_65:

(Start: 69 @41753 has 64 MA's), (83, 41678), (88, 41645), (98, 41612), (100, 41603),

Gene: Looper\_79 Start: 43387, Stop: 43109, Start Num: 52

Candidate Starts for Looper\_79:

(26, 43447), (Start: 52 @43387 has 61 MA's), (78, 43309), (83, 43270), (88, 43237), (97, 43207), (98, 43204), (102, 43183), (106, 43150),

Gene: Lopton\_66 Start: 44440, Stop: 44147, Start Num: 41

Candidate Starts for Lopton\_66:

(30, 44467), (Start: 41 @44440 has 206 MA's), (Start: 68 @44395 has 3 MA's), (72, 44365), (81, 44317), (88, 44275),

Gene: Loser\_72 Start: 43514, Stop: 43275, Start Num: 69

Candidate Starts for Loser\_72:

(Start: 47 @43553 has 8 MA's), (Start: 69 @43514 has 64 MA's), (81, 43448), (83, 43439), (88, 43406), (98, 43373), (100, 43364), (102, 43352),

Gene: Lowa\_69 Start: 42379, Stop: 42125, Start Num: 65

Candidate Starts for Lowa\_69:

(Start: 39 @42433 has 2 MA's), (44, 42415), (53, 42400), (Start: 65 @42379 has 20 MA's), (71, 42346), (81, 42295), (83, 42286), (86, 42259), (88, 42253), (98, 42220),

Gene: Luchador\_73 Start: 43928, Stop: 43659, Start Num: 57

Candidate Starts for Luchador\_73:

(Start: 46 @43949 has 1 MA's), (Start: 57 @43928 has 4 MA's), (Start: 58 @43925 has 37 MA's), (82, 43829), (87, 43793), (88, 43790), (100, 43748), (102, 43736), (109, 43685),

Gene: Lucivia\_70 Start: 42084, Stop: 41818, Start Num: 48

Candidate Starts for Lucivia\_70:

(Start: 48 @42084 has 21 MA's), (82, 41991), (88, 41952), (98, 41919), (100, 41910), (102, 41898), (106, 41865),

Gene: Lucyedi\_75 Start: 43494, Stop: 43234, Start Num: 54

Candidate Starts for Lucyedi\_75:

(16, 43650), (28, 43560), (33, 43542), (Start: 35 @43536 has 1 MA's), (Start: 54 @43494 has 2 MA's), (87, 43356), (102, 43299),

Gene: LunarLander\_67 Start: 43066, Stop: 42773, Start Num: 41

Candidate Starts for LunarLander\_67:

(30, 43093), (Start: 41 @43066 has 206 MA's), (Start: 68 @43021 has 3 MA's), (72, 42991), (81, 42943), (88, 42901),

Gene: MPlant7149\_66 Start: 41586, Stop: 41293, Start Num: 41

Candidate Starts for MPlant7149\_66:

(5, 41814), (30, 41613), (Start: 41 @41586 has 206 MA's), (Start: 68 @41541 has 3 MA's), (72, 41511), (81, 41463), (88, 41421),

Gene: MaCh\_69 Start: 42030, Stop: 41764, Start Num: 48  
Candidate Starts for MaCh\_69:  
(Start: 48 @42030 has 21 MA's), (82, 41937), (88, 41898), (98, 41865), (100, 41856), (102, 41844),  
(106, 41811),

Gene: Mabel\_69 Start: 42031, Stop: 41765, Start Num: 48  
Candidate Starts for Mabel\_69:  
(Start: 48 @42031 has 21 MA's), (82, 41938), (88, 41899), (98, 41866), (100, 41857), (102, 41845),  
(106, 41812),

Gene: Magnar\_65 Start: 42659, Stop: 42366, Start Num: 41  
Candidate Starts for Magnar\_65:  
(30, 42686), (Start: 41 @42659 has 206 MA's), (Start: 68 @42614 has 3 MA's), (72, 42584), (81,  
42536), (88, 42494),

Gene: Magnito\_67 Start: 42855, Stop: 42562, Start Num: 41  
Candidate Starts for Magnito\_67:  
(30, 42882), (Start: 41 @42855 has 206 MA's), (Start: 68 @42810 has 3 MA's), (72, 42780), (81,  
42732), (88, 42690),

Gene: MajorMajor\_72 Start: 42401, Stop: 42162, Start Num: 69  
Candidate Starts for MajorMajor\_72:  
(Start: 69 @42401 has 64 MA's), (80, 42359), (83, 42326), (86, 42299), (88, 42293), (98, 42260), (100,  
42251), (102, 42239), (109, 42188), (114, 42170),

Gene: Makemake\_72 Start: 44876, Stop: 44583, Start Num: 41  
Candidate Starts for Makemake\_72:  
(Start: 41 @44876 has 206 MA's), (Start: 68 @44831 has 3 MA's), (72, 44801), (81, 44753), (88,  
44711),

Gene: Malec\_69 Start: 43510, Stop: 43271, Start Num: 69  
Candidate Starts for Malec\_69:  
(Start: 69 @43510 has 64 MA's), (83, 43435), (88, 43402), (91, 43387), (98, 43369), (100, 43360),  
(102, 43348), (111, 43291),

Gene: Maminiaina\_73 Start: 42834, Stop: 42550, Start Num: 50  
Candidate Starts for Maminiaina\_73:  
(Start: 50 @42834 has 28 MA's), (82, 42723), (88, 42684), (102, 42630),

Gene: Manatee\_66 Start: 42327, Stop: 42034, Start Num: 41  
Candidate Starts for Manatee\_66:  
(Start: 41 @42327 has 206 MA's), (Start: 68 @42282 has 3 MA's), (72, 42252), (81, 42204), (88,  
42162),

Gene: Marcell\_62 Start: 41366, Stop: 41073, Start Num: 41  
Candidate Starts for Marcell\_62:  
(30, 41393), (Start: 41 @41366 has 206 MA's), (Start: 68 @41321 has 3 MA's), (72, 41291), (81,  
41243), (88, 41201),

Gene: Marchy\_59 Start: 39104, Stop: 38811, Start Num: 41  
Candidate Starts for Marchy\_59:  
(Start: 41 @39104 has 206 MA's), (Start: 68 @39059 has 3 MA's), (72, 39029), (81, 38981), (88,  
38939),

Gene: Marco3\_71 Start: 45164, Stop: 44871, Start Num: 41

Candidate Starts for Marco3\_71:

(Start: 41 @45164 has 206 MA's), (Start: 68 @45119 has 3 MA's), (72, 45089), (81, 45041), (88, 44999),

Gene: Marge\_62 Start: 41896, Stop: 41603, Start Num: 41

Candidate Starts for Marge\_62:

(30, 41923), (Start: 41 @41896 has 206 MA's), (Start: 68 @41851 has 3 MA's), (72, 41821), (81, 41773), (88, 41731),

Gene: Maroc7\_65 Start: 43339, Stop: 43046, Start Num: 41

Candidate Starts for Maroc7\_65:

(30, 43366), (Start: 41 @43339 has 206 MA's), (Start: 68 @43294 has 3 MA's), (72, 43264), (77, 43252), (81, 43216), (88, 43174),

Gene: Marsha\_66 Start: 43889, Stop: 43596, Start Num: 41

Candidate Starts for Marsha\_66:

(Start: 41 @43889 has 206 MA's), (Start: 68 @43844 has 3 MA's), (72, 43814), (81, 43766), (88, 43724),

Gene: MaryBeth\_63 Start: 42720, Stop: 42427, Start Num: 41

Candidate Starts for MaryBeth\_63:

(30, 42747), (Start: 41 @42720 has 206 MA's), (Start: 68 @42675 has 3 MA's), (72, 42645), (81, 42597), (88, 42555),

Gene: MarysWell\_65 Start: 42016, Stop: 41765, Start Num: 58

Candidate Starts for MarysWell\_65:

(Start: 58 @42016 has 37 MA's), (81, 41932), (83, 41923), (84, 41908), (100, 41845), (106, 41800), (110, 41779),

Gene: McFly\_71 Start: 41284, Stop: 41036, Start Num: 64

Candidate Starts for McFly\_71:

(10, 41524), (19, 41452), (30, 41371), (Start: 41 @41326 has 206 MA's), (Start: 64 @41284 has 21 MA's), (81, 41209), (88, 41167), (97, 41137), (100, 41125),

Gene: McGuire\_66 Start: 41690, Stop: 41397, Start Num: 41

Candidate Starts for McGuire\_66:

(30, 41717), (Start: 41 @41690 has 206 MA's), (Start: 68 @41645 has 3 MA's), (72, 41615), (81, 41567), (88, 41525),

Gene: McSinger\_62 Start: 41639, Stop: 41346, Start Num: 41

Candidate Starts for McSinger\_62:

(34, 41666), (Start: 41 @41639 has 206 MA's), (Start: 68 @41594 has 3 MA's), (72, 41564), (81, 41516), (88, 41474),

Gene: MetalQZJ\_62 Start: 42720, Stop: 42427, Start Num: 41

Candidate Starts for MetalQZJ\_62:

(30, 42747), (Start: 41 @42720 has 206 MA's), (Start: 68 @42675 has 3 MA's), (72, 42645), (81, 42597), (88, 42555),

Gene: Micasa\_65 Start: 41738, Stop: 41487, Start Num: 58

Candidate Starts for Micasa\_65:



(Start: 58 @41738 has 37 MA's), (81, 41654), (83, 41645), (84, 41630), (100, 41567), (106, 41522), (110, 41501),

Gene: Michley\_70 Start: 43281, Stop: 42988, Start Num: 41

Candidate Starts for Michley\_70:

(Start: 41 @43281 has 206 MA's), (Start: 68 @43236 has 3 MA's), (72, 43206), (77, 43194), (81, 43158), (88, 43116),

Gene: MiculUcigas\_71 Start: 42957, Stop: 42718, Start Num: 69

Candidate Starts for MiculUcigas\_71:

(Start: 47 @42996 has 8 MA's), (Start: 69 @42957 has 64 MA's), (Start: 74 @42930 has 1 MA's), (76, 42927), (83, 42882), (88, 42849), (98, 42816), (100, 42807), (102, 42795), (111, 42738),

Gene: Midas2\_62 Start: 41634, Stop: 41383, Start Num: 58

Candidate Starts for Midas2\_62:

(Start: 58 @41634 has 37 MA's), (Start: 66 @41622 has 2 MA's), (83, 41541), (84, 41526), (100, 41463), (106, 41418), (110, 41397), (113, 41391),

Gene: Miko\_65 Start: 42531, Stop: 42289, Start Num: 69

Candidate Starts for Miko\_65:

(Start: 69 @42531 has 64 MA's), (Start: 74 @42504 has 1 MA's), (83, 42456), (88, 42423), (98, 42390), (100, 42381),

Gene: Milcery\_65 Start: 41528, Stop: 41277, Start Num: 58

Candidate Starts for Milcery\_65:

(Start: 58 @41528 has 37 MA's), (83, 41435), (84, 41420), (100, 41357), (106, 41312), (110, 41291),

Gene: MinecraftSteve\_80 Start: 43368, Stop: 43090, Start Num: 52

Candidate Starts for MinecraftSteve\_80:

(26, 43428), (Start: 52 @43368 has 61 MA's), (78, 43290), (83, 43251), (88, 43218), (97, 43188), (98, 43185), (102, 43164), (106, 43131),

Gene: MissWhite\_70 Start: 41650, Stop: 41378, Start Num: 52

Candidate Starts for MissWhite\_70:

(Start: 52 @41650 has 61 MA's), (Start: 69 @41617 has 64 MA's), (Start: 74 @41590 has 1 MA's), (81, 41551), (83, 41542), (88, 41509), (98, 41476), (100, 41467), (102, 41455), (105, 41440), (114, 41386),

Gene: Mkhuseli\_61 Start: 40758, Stop: 40465, Start Num: 41

Candidate Starts for Mkhuseli\_61:

(30, 40785), (Start: 41 @40758 has 206 MA's), (Start: 68 @40713 has 3 MA's), (72, 40683), (81, 40635), (88, 40593),

Gene: Molly\_67 Start: 42963, Stop: 42670, Start Num: 41

Candidate Starts for Molly\_67:

(30, 42990), (Start: 41 @42963 has 206 MA's), (Start: 68 @42918 has 3 MA's), (72, 42888), (81, 42840), (88, 42798),

Gene: Monet\_68 Start: 44284, Stop: 43991, Start Num: 41

Candidate Starts for Monet\_68:

(30, 44311), (Start: 41 @44284 has 206 MA's), (Start: 68 @44239 has 3 MA's), (72, 44209), (81, 44161), (88, 44119),

Gene: Moose\_67 Start: 42412, Stop: 42119, Start Num: 41

Candidate Starts for Moose\_67:

(30, 42439), (Start: 41 @42412 has 206 MA's), (Start: 68 @42367 has 3 MA's), (72, 42337), (81, 42289), (88, 42247),

Gene: MrGordo\_69 Start: 43202, Stop: 42909, Start Num: 41

Candidate Starts for MrGordo\_69:

(Start: 41 @43202 has 206 MA's), (Start: 68 @43157 has 3 MA's), (72, 43127), (81, 43079),

Gene: Mryolo\_64 Start: 42236, Stop: 41943, Start Num: 41

Candidate Starts for Mryolo\_64:

(30, 42263), (Start: 41 @42236 has 206 MA's), (Start: 68 @42191 has 3 MA's), (72, 42161), (81, 42113), (88, 42071),

Gene: Mulciber\_68 Start: 41572, Stop: 41306, Start Num: 48

Candidate Starts for Mulciber\_68:

(Start: 48 @41572 has 21 MA's), (82, 41479), (88, 41440), (98, 41407), (100, 41398), (102, 41386), (106, 41353),

Gene: Mule\_63 Start: 41944, Stop: 41651, Start Num: 41

Candidate Starts for Mule\_63:

(Start: 41 @41944 has 206 MA's), (Start: 68 @41899 has 3 MA's), (72, 41869), (81, 41821), (88, 41779),

Gene: Munch\_69 Start: 42035, Stop: 41769, Start Num: 48

Candidate Starts for Munch\_69:

(Start: 48 @42035 has 21 MA's), (82, 41942), (88, 41903), (98, 41870), (100, 41861), (102, 41849), (106, 41816),

Gene: Museum\_68 Start: 44182, Stop: 43889, Start Num: 41

Candidate Starts for Museum\_68:

(30, 44209), (Start: 41 @44182 has 206 MA's), (Start: 68 @44137 has 3 MA's), (72, 44107), (81, 44059), (88, 44017),

Gene: MyraDee\_69 Start: 40422, Stop: 40147, Start Num: 50

Candidate Starts for MyraDee\_69:

(Start: 50 @40422 has 28 MA's), (81, 40317), (82, 40314), (83, 40308), (97, 40245), (98, 40242), (100, 40233),

Gene: Myxus\_73 Start: 42693, Stop: 42415, Start Num: 50

Candidate Starts for Myxus\_73:

(Start: 50 @42693 has 28 MA's), (82, 42585), (91, 42531), (93, 42522), (102, 42492),

Gene: NEHalo\_63 Start: 42836, Stop: 42543, Start Num: 41

Candidate Starts for NEHalo\_63:

(30, 42863), (Start: 41 @42836 has 206 MA's), (Start: 68 @42791 has 3 MA's), (72, 42761), (81, 42713), (88, 42671),

Gene: NaSiaTalie\_71 Start: 43051, Stop: 42812, Start Num: 69

Candidate Starts for NaSiaTalie\_71:

(Start: 47 @43090 has 8 MA's), (Start: 69 @43051 has 64 MA's), (Start: 74 @43024 has 1 MA's), (76, 43021), (83, 42976), (88, 42943), (98, 42910), (100, 42901), (102, 42889), (111, 42832),

Gene: Naca\_68 Start: 42929, Stop: 42675, Start Num: 58

Candidate Starts for Naca\_68:

(Start: 58 @42929 has 37 MA's), (83, 42836), (84, 42821), (100, 42758), (106, 42713), (110, 42692), (113, 42686),

Gene: Naira\_71 Start: 44806, Stop: 44513, Start Num: 41

Candidate Starts for Naira\_71:

(30, 44851), (34, 44833), (Start: 41 @44806 has 206 MA's), (Start: 68 @44761 has 3 MA's), (72, 44731), (81, 44683), (88, 44641),

Gene: Naji\_74 Start: 43721, Stop: 43488, Start Num: 52

Candidate Starts for Naji\_74:

(Start: 52 @43721 has 61 MA's), (83, 43643), (88, 43610), (98, 43577), (102, 43556), (110, 43502),

Gene: NearlyHeadless\_81 Start: 43932, Stop: 43648, Start Num: 65

Candidate Starts for NearlyHeadless\_81:

(Start: 65 @43932 has 20 MA's), (Start: 74 @43890 has 1 MA's), (82, 43848), (83, 43842), (98, 43770), (100, 43761), (101, 43752),

Gene: Nebulosus\_77 Start: 43032, Stop: 42754, Start Num: 52

Candidate Starts for Nebulosus\_77:

(26, 43092), (Start: 52 @43032 has 61 MA's), (78, 42954), (83, 42915), (88, 42882), (97, 42852), (98, 42849), (102, 42828), (106, 42795),

Gene: Nedarya\_76 Start: 43628, Stop: 43350, Start Num: 52

Candidate Starts for Nedarya\_76:

(Start: 52 @43628 has 61 MA's), (78, 43550), (83, 43511), (88, 43478), (102, 43424), (106, 43391),

Gene: Neeharika16\_70 Start: 40751, Stop: 40503, Start Num: 64

Candidate Starts for Neeharika16\_70:

(10, 40991), (19, 40919), (30, 40838), (Start: 41 @40793 has 206 MA's), (Start: 64 @40751 has 21 MA's), (81, 40676), (88, 40634), (97, 40604), (100, 40592),

Gene: Nerujay\_71 Start: 44385, Stop: 44092, Start Num: 41

Candidate Starts for Nerujay\_71:

(30, 44412), (Start: 41 @44385 has 206 MA's), (Start: 68 @44340 has 3 MA's), (72, 44310), (81, 44262), (88, 44220),

Gene: Newrala\_71 Start: 41291, Stop: 41043, Start Num: 64

Candidate Starts for Newrala\_71:

(10, 41531), (19, 41459), (30, 41378), (Start: 41 @41333 has 206 MA's), (Start: 64 @41291 has 21 MA's), (81, 41216), (88, 41174), (97, 41144), (100, 41132),

Gene: Nhonho\_65 Start: 43327, Stop: 43034, Start Num: 41

Candidate Starts for Nhonho\_65:

(30, 43354), (Start: 41 @43327 has 206 MA's), (Start: 68 @43282 has 3 MA's), (72, 43252), (77, 43240), (81, 43204), (88, 43162),

Gene: NicoleTera\_68 Start: 43116, Stop: 42838, Start Num: 47

Candidate Starts for NicoleTera\_68:

(31, 43173), (Start: 47 @43116 has 8 MA's), (Start: 69 @43077 has 64 MA's), (83, 43002), (88, 42969), (98, 42936), (100, 42927), (102, 42915), (112, 42855),

Gene: Niza\_68 Start: 44472, Stop: 44179, Start Num: 41

Candidate Starts for Niza\_68:

(Start: 41 @44472 has 206 MA's), (Start: 68 @44427 has 3 MA's), (72, 44397), (77, 44385), (81, 44349), (88, 44307),

Gene: Norz\_65 Start: 44712, Stop: 44419, Start Num: 41

Candidate Starts for Norz\_65:

(30, 44739), (Start: 41 @44712 has 206 MA's), (Start: 68 @44667 has 3 MA's), (72, 44637), (81, 44589), (88, 44547),

Gene: NothingSpecial\_67 Start: 43318, Stop: 43031, Start Num: 47

Candidate Starts for NothingSpecial\_67:

(36, 43354), (Start: 47 @43318 has 8 MA's), (Start: 69 @43279 has 64 MA's), (81, 43204), (83, 43195), (88, 43162), (98, 43129), (100, 43120), (102, 43108),

Gene: Odin\_71 Start: 42102, Stop: 41860, Start Num: 68

Candidate Starts for Odin\_71:

(Start: 68 @42102 has 3 MA's), (81, 42027), (84, 42003), (87, 41988), (88, 41985), (89, 41979), (90, 41976), (98, 41952), (102, 41931),

Gene: Ohno789\_67 Start: 43300, Stop: 43007, Start Num: 41

Candidate Starts for Ohno789\_67:

(30, 43327), (Start: 41 @43300 has 206 MA's), (Start: 68 @43255 has 3 MA's), (72, 43225), (77, 43213), (81, 43177), (88, 43135),

Gene: Oofda\_80 Start: 43721, Stop: 43443, Start Num: 52

Candidate Starts for Oofda\_80:

(25, 43796), (Start: 52 @43721 has 61 MA's), (78, 43643), (83, 43604), (88, 43571), (97, 43541), (98, 43538), (102, 43517), (106, 43484),

Gene: Oogway\_64 Start: 43355, Stop: 43062, Start Num: 41

Candidate Starts for Oogway\_64:

(30, 43382), (Start: 41 @43355 has 206 MA's), (Start: 68 @43310 has 3 MA's), (72, 43280), (81, 43232), (88, 43190),

Gene: Orange\_68 Start: 41584, Stop: 41318, Start Num: 48

Candidate Starts for Orange\_68:

(Start: 48 @41584 has 21 MA's), (82, 41491), (88, 41452), (98, 41419), (100, 41410), (102, 41398), (106, 41365),

Gene: PSullivan\_64 Start: 41080, Stop: 40787, Start Num: 41

Candidate Starts for PSullivan\_64:

(30, 41107), (Start: 41 @41080 has 206 MA's), (Start: 68 @41035 has 3 MA's), (72, 41005), (81, 40957), (88, 40915),

Gene: PacerPaul\_66 Start: 42858, Stop: 42565, Start Num: 41

Candidate Starts for PacerPaul\_66:

(Start: 41 @42858 has 206 MA's), (Start: 68 @42813 has 3 MA's), (72, 42783), (81, 42735), (88, 42693),

Gene: PackMan\_72 Start: 42568, Stop: 42290, Start Num: 50

Candidate Starts for PackMan\_72:

(Start: 50 @42568 has 28 MA's), (82, 42460), (91, 42406), (93, 42397), (102, 42367),

Gene: PainterBoy\_74 Start: 43245, Stop: 42943, Start Num: 35

Candidate Starts for PainterBoy\_74:

(16, 43359), (28, 43269), (33, 43251), (Start: 35 @43245 has 1 MA's), (Start: 54 @43203 has 2 MA's), (87, 43065), (102, 43008),

Gene: Papez\_68 Start: 44027, Stop: 43731, Start Num: 41

Candidate Starts for Papez\_68:

(Start: 41 @44027 has 206 MA's), (81, 43901), (88, 43859),

Gene: Paphu\_65 Start: 43166, Stop: 42873, Start Num: 41

Candidate Starts for Paphu\_65:

(Start: 41 @43166 has 206 MA's), (Start: 68 @43121 has 3 MA's), (72, 43091), (81, 43043), (88, 43001),

Gene: Paraselene\_67 Start: 43668, Stop: 43375, Start Num: 41

Candidate Starts for Paraselene\_67:

(Start: 41 @43668 has 206 MA's), (Start: 68 @43623 has 3 MA's), (72, 43593), (81, 43545), (88, 43503),

Gene: Pari\_70 Start: 42376, Stop: 42083, Start Num: 41

Candidate Starts for Pari\_70:

(30, 42403), (Start: 41 @42376 has 206 MA's), (Start: 68 @42331 has 3 MA's), (72, 42301), (81, 42253), (88, 42211),

Gene: Parliament\_67 Start: 44958, Stop: 44665, Start Num: 41

Candidate Starts for Parliament\_67:

(Start: 41 @44958 has 206 MA's), (Start: 68 @44913 has 3 MA's), (72, 44883), (77, 44871), (81, 44835), (88, 44793),

Gene: PascalRango\_63 Start: 42153, Stop: 41860, Start Num: 41

Candidate Starts for PascalRango\_63:

(30, 42180), (Start: 41 @42153 has 206 MA's), (Start: 68 @42108 has 3 MA's), (72, 42078), (81, 42030), (88, 41988),

Gene: PattyP\_68 Start: 43888, Stop: 43595, Start Num: 41

Candidate Starts for PattyP\_68:

(30, 43915), (Start: 41 @43888 has 206 MA's), (Start: 68 @43843 has 3 MA's), (72, 43813), (81, 43765), (88, 43723),

Gene: Pawn\_70 Start: 42208, Stop: 41954, Start Num: 65

Candidate Starts for Pawn\_70:

(Start: 39 @42262 has 2 MA's), (44, 42244), (53, 42229), (Start: 65 @42208 has 20 MA's), (71, 42175), (81, 42124), (83, 42115), (86, 42088), (88, 42082), (90, 42073), (98, 42049),

Gene: Payneful\_63 Start: 41821, Stop: 41528, Start Num: 41

Candidate Starts for Payneful\_63:

(Start: 41 @41821 has 206 MA's), (Start: 68 @41776 has 3 MA's), (72, 41746), (81, 41698), (88, 41656),

Gene: Pelly\_68 Start: 44825, Stop: 44532, Start Num: 41

Candidate Starts for Pelly\_68:

(30, 44852), (Start: 41 @44825 has 206 MA's), (Start: 68 @44780 has 3 MA's), (81, 44702), (88, 44660),

Gene: Pepe\_64 Start: 41654, Stop: 41361, Start Num: 41

Candidate Starts for Pepe\_64:

(Start: 41 @41654 has 206 MA's), (Start: 68 @41609 has 3 MA's), (72, 41579), (81, 41531), (88, 41489),

Gene: Perseus\_64 Start: 44104, Stop: 43811, Start Num: 41

Candidate Starts for Perseus\_64:

(Start: 41 @44104 has 206 MA's), (Start: 68 @44059 has 3 MA's), (72, 44029), (81, 43981), (88, 43939),

Gene: Petersenfast\_67 Start: 41583, Stop: 41317, Start Num: 48

Candidate Starts for Petersenfast\_67:

(Start: 48 @41583 has 21 MA's), (82, 41490), (88, 41451), (98, 41418), (100, 41409), (102, 41397), (106, 41364),

Gene: Peterson\_69 Start: 44970, Stop: 44677, Start Num: 41

Candidate Starts for Peterson\_69:

(Start: 41 @44970 has 206 MA's), (Start: 68 @44925 has 3 MA's), (72, 44895), (81, 44847), (88, 44805),

Gene: Petp2012\_69 Start: 44669, Stop: 44376, Start Num: 41

Candidate Starts for Petp2012\_69:

(30, 44696), (Start: 41 @44669 has 206 MA's), (Start: 68 @44624 has 3 MA's), (72, 44594), (81, 44546), (88, 44504),

Gene: Petruccio\_68 Start: 42490, Stop: 42197, Start Num: 41

Candidate Starts for Petruccio\_68:

(3, 42748), (6, 42712), (30, 42517), (Start: 41 @42490 has 206 MA's), (Start: 68 @42445 has 3 MA's), (72, 42415), (81, 42367), (88, 42325),

Gene: PetterN\_73 Start: 42716, Stop: 42465, Start Num: 58

Candidate Starts for PetterN\_73:

(Start: 58 @42716 has 37 MA's), (83, 42623), (84, 42608), (100, 42545), (106, 42500), (110, 42479),

Gene: Ph8s\_74 Start: 42194, Stop: 41919, Start Num: 52

Candidate Starts for Ph8s\_74:

(Start: 52 @42194 has 61 MA's), (Start: 57 @42185 has 4 MA's), (Start: 74 @42125 has 1 MA's), (81, 42086), (88, 42044), (90, 42035), (98, 42011), (102, 41990),

Gene: Phaded\_66 Start: 43672, Stop: 43412, Start Num: 64

Candidate Starts for Phaded\_66:

(19, 43840), (30, 43759), (Start: 64 @43672 has 21 MA's), (83, 43576), (88, 43543), (98, 43510), (100, 43501), (102, 43489),

Gene: Phaeder\_73 Start: 42568, Stop: 42290, Start Num: 50

Candidate Starts for Phaeder\_73:

(Start: 50 @42568 has 28 MA's), (82, 42460), (91, 42406), (93, 42397), (102, 42367),

Gene: Pharaoh\_67 Start: 42614, Stop: 42354, Start Num: 62

Candidate Starts for Pharaoh\_67:

(Start: 62 @42614 has 1 MA's), (82, 42521), (83, 42515), (88, 42482), (90, 42473),

Gene: PherrisBueller\_67 Start: 41610, Stop: 41317, Start Num: 41

Candidate Starts for PherrisBueller\_67:

(30, 41637), (Start: 41 @41610 has 206 MA's), (Start: 68 @41565 has 3 MA's), (72, 41535), (81, 41487), (88, 41445),

Gene: Phillis\_77 Start: 42884, Stop: 42600, Start Num: 65

Candidate Starts for Phillis\_77:

(Start: 65 @42884 has 20 MA's), (Start: 74 @42842 has 1 MA's), (82, 42800), (83, 42794), (98, 42722), (100, 42713), (101, 42704),

Gene: PhineBark\_64 Start: 42788, Stop: 42495, Start Num: 41

Candidate Starts for PhineBark\_64:

(Start: 41 @42788 has 206 MA's), (Start: 68 @42743 has 3 MA's), (72, 42713), (81, 42665), (88, 42623),

Gene: Phlei\_58 Start: 41698, Stop: 41450, Start Num: 52

Candidate Starts for Phlei\_58:

(Start: 52 @41698 has 61 MA's), (Start: 56 @41689 has 1 MA's), (60, 41683), (Start: 74 @41653 has 1 MA's), (80, 41638), (81, 41614), (83, 41605), (85, 41581), (88, 41572), (91, 41557), (98, 41539), (102, 41518),

Gene: Phlippers\_61 Start: 42632, Stop: 42339, Start Num: 41

Candidate Starts for Phlippers\_61:

(30, 42659), (Start: 41 @42632 has 206 MA's), (Start: 68 @42587 has 3 MA's), (72, 42557), (77, 42545), (81, 42509), (88, 42467),

Gene: Phlorence\_64 Start: 41521, Stop: 41270, Start Num: 58

Candidate Starts for Phlorence\_64:

(Start: 58 @41521 has 37 MA's), (83, 41428), (84, 41413), (100, 41350), (106, 41305), (110, 41284), (113, 41278),

Gene: Phoebe\_73 Start: 42380, Stop: 42126, Start Num: 65

Candidate Starts for Phoebe\_73:

(Start: 39 @42434 has 2 MA's), (44, 42416), (53, 42401), (Start: 65 @42380 has 20 MA's), (71, 42347), (81, 42296), (83, 42287), (86, 42260), (88, 42254), (98, 42221),

Gene: Phonnegut\_73 Start: 42638, Stop: 42360, Start Num: 50

Candidate Starts for Phonnegut\_73:

(Start: 50 @42638 has 28 MA's), (82, 42530), (91, 42476), (93, 42467), (102, 42437),

Gene: Phranny\_72 Start: 42190, Stop: 41936, Start Num: 65

Candidate Starts for Phranny\_72:

(53, 42211), (Start: 65 @42190 has 20 MA's), (71, 42157), (81, 42106), (83, 42097), (86, 42070), (88, 42064), (90, 42055), (98, 42031),

Gene: PhrostyMug\_66 Start: 44118, Stop: 43825, Start Num: 41

Candidate Starts for PhrostyMug\_66:

(Start: 41 @44118 has 206 MA's), (Start: 68 @44073 has 3 MA's), (72, 44043), (81, 43995), (88, 43953),

Gene: PickleBack\_66 Start: 41698, Stop: 41447, Start Num: 58

Candidate Starts for PickleBack\_66:

(Start: 58 @41698 has 37 MA's), (83, 41605), (84, 41590), (100, 41527), (106, 41482), (110, 41461), (113, 41455),

Gene: PinkPlastic\_65 Start: 42426, Stop: 42133, Start Num: 41

Candidate Starts for PinkPlastic\_65:

(30, 42453), (Start: 41 @42426 has 206 MA's), (Start: 68 @42381 has 3 MA's), (72, 42351), (81, 42303), (88, 42261),

Gene: Pinto\_66 Start: 42379, Stop: 42086, Start Num: 41

Candidate Starts for Pinto\_66:

(3, 42637), (6, 42601), (30, 42406), (Start: 41 @42379 has 206 MA's), (Start: 68 @42334 has 3 MA's), (72, 42304), (81, 42256), (88, 42214),

Gene: Pioneer\_73 Start: 42638, Stop: 42360, Start Num: 50

Candidate Starts for Pioneer\_73:

(Start: 50 @42638 has 28 MA's), (82, 42530), (91, 42476), (93, 42467), (102, 42437),

Gene: Pippin\_65 Start: 41805, Stop: 41512, Start Num: 41

Candidate Starts for Pippin\_65:

(30, 41832), (Start: 41 @41805 has 206 MA's), (Start: 68 @41760 has 3 MA's), (72, 41730), (81, 41682), (88, 41640),

Gene: Piro94\_70 Start: 43019, Stop: 42780, Start Num: 69

Candidate Starts for Piro94\_70:

(Start: 69 @43019 has 64 MA's), (Start: 74 @42992 has 1 MA's), (76, 42989), (83, 42944), (88, 42911), (98, 42878), (100, 42869), (102, 42857),

Gene: Pita2\_67 Start: 42577, Stop: 42284, Start Num: 41

Candidate Starts for Pita2\_67:

(30, 42604), (Start: 41 @42577 has 206 MA's), (Start: 68 @42532 has 3 MA's), (72, 42502), (81, 42454), (88, 42412),

Gene: Pmask\_70 Start: 41287, Stop: 41039, Start Num: 64

Candidate Starts for Pmask\_70:

(10, 41527), (19, 41455), (30, 41374), (Start: 41 @41329 has 206 MA's), (Start: 64 @41287 has 21 MA's), (81, 41212), (88, 41170), (97, 41140), (100, 41128),

Gene: Polyphemus\_71 Start: 41677, Stop: 41429, Start Num: 64

Candidate Starts for Polyphemus\_71:

(10, 41917), (19, 41845), (30, 41764), (Start: 41 @41719 has 206 MA's), (Start: 64 @41677 has 21 MA's), (81, 41602), (88, 41560), (97, 41530), (100, 41518),

Gene: Pomar16\_73 Start: 43761, Stop: 43528, Start Num: 52

Candidate Starts for Pomar16\_73:

(Start: 52 @43761 has 61 MA's), (83, 43683), (88, 43650), (98, 43617), (102, 43596), (110, 43542),

Gene: Power\_70 Start: 43392, Stop: 43153, Start Num: 69

Candidate Starts for Power\_70:

(Start: 47 @43431 has 8 MA's), (Start: 69 @43392 has 64 MA's), (83, 43317), (88, 43284), (98, 43251), (100, 43242), (102, 43230), (111, 43173),

Gene: Priamo\_73 Start: 41142, Stop: 40894, Start Num: 64

Candidate Starts for Priamo\_73:



(10, 41382), (19, 41310), (30, 41229), (Start: 41 @41184 has 206 MA's), (Start: 64 @41142 has 21 MA's), (81, 41067), (88, 41025), (97, 40995), (100, 40983),

Gene: Prinashe11\_63 Start: 41348, Stop: 41097, Start Num: 58

Candidate Starts for Prinashe11\_63:

(Start: 58 @41348 has 37 MA's), (83, 41255), (84, 41240), (100, 41177), (106, 41132), (110, 41111),

Gene: Priya\_71 Start: 42365, Stop: 42087, Start Num: 50

Candidate Starts for Priya\_71:

(Start: 50 @42365 has 28 MA's), (82, 42257), (91, 42203), (93, 42194), (102, 42164),

Gene: ProMouse\_67 Start: 43095, Stop: 42802, Start Num: 41

Candidate Starts for ProMouse\_67:

(30, 43122), (Start: 41 @43095 has 206 MA's), (Start: 68 @43050 has 3 MA's), (72, 43020), (81, 42972), (88, 42930),

Gene: Pukovnik\_67 Start: 43337, Stop: 43080, Start Num: 64

Candidate Starts for Pukovnik\_67:

(19, 43505), (Start: 64 @43337 has 21 MA's), (83, 43244), (88, 43211), (98, 43178), (100, 43169), (102, 43157),

Gene: PurpleHaze\_71 Start: 42257, Stop: 41949, Start Num: 39

Candidate Starts for PurpleHaze\_71:

(Start: 39 @42257 has 2 MA's), (44, 42239), (53, 42224), (Start: 65 @42203 has 20 MA's), (71, 42170), (81, 42119), (83, 42110), (86, 42083), (88, 42077), (98, 42044),

Gene: QTRlifeCrisis\_67 Start: 43106, Stop: 42813, Start Num: 41

Candidate Starts for QTRlifeCrisis\_67:

(30, 43133), (Start: 41 @43106 has 206 MA's), (Start: 68 @43061 has 3 MA's), (72, 43031), (81, 42983), (88, 42941),

Gene: Qobbit\_71 Start: 42327, Stop: 42049, Start Num: 50

Candidate Starts for Qobbit\_71:

(Start: 50 @42327 has 28 MA's), (82, 42219), (91, 42165), (93, 42156), (102, 42126),

Gene: QueenB2\_69 Start: 42866, Stop: 42627, Start Num: 69

Candidate Starts for QueenB2\_69:

(Start: 47 @42905 has 8 MA's), (Start: 69 @42866 has 64 MA's), (83, 42791), (88, 42758), (98, 42725), (100, 42716), (102, 42704), (112, 42644),

Gene: QueenBeesly\_71 Start: 43349, Stop: 43110, Start Num: 69

Candidate Starts for QueenBeesly\_71:

(Start: 47 @43388 has 8 MA's), (Start: 69 @43349 has 64 MA's), (83, 43274), (88, 43241), (98, 43208), (100, 43199), (102, 43187), (111, 43130),

Gene: Quokka\_72 Start: 42401, Stop: 42162, Start Num: 69

Candidate Starts for Quokka\_72:

(Start: 69 @42401 has 64 MA's), (80, 42359), (83, 42326), (86, 42299), (88, 42293), (98, 42260), (100, 42251), (102, 42239), (109, 42188), (114, 42170),

Gene: Rachaly\_67 Start: 42676, Stop: 42434, Start Num: 69

Candidate Starts for Rachaly\_67:

(Start: 69 @42676 has 64 MA's), (Start: 74 @42649 has 1 MA's), (83, 42601), (88, 42568), (98, 42535), (100, 42526),

Gene: Rahalelujah\_72 Start: 42339, Stop: 42037, Start Num: 40  
Candidate Starts for Rahalelujah\_72:  
(8, 42549), (Start: 40 @42339 has 1 MA's), (88, 42177), (102, 42123),

Gene: Raid\_66 Start: 42932, Stop: 42639, Start Num: 41  
Candidate Starts for Raid\_66:  
(30, 42959), (Start: 41 @42932 has 206 MA's), (Start: 64 @42899 has 21 MA's), (Start: 68 @42887 has 3 MA's), (72, 42857), (81, 42809), (88, 42767),

Gene: Rajelicia\_66 Start: 44209, Stop: 43916, Start Num: 41  
Candidate Starts for Rajelicia\_66:  
(30, 44236), (Start: 41 @44209 has 206 MA's), (Start: 68 @44164 has 3 MA's), (72, 44134), (81, 44086), (88, 44044),

Gene: ReMo\_78 Start: 43472, Stop: 43194, Start Num: 52  
Candidate Starts for ReMo\_78:  
(26, 43532), (Start: 52 @43472 has 61 MA's), (78, 43394), (83, 43355), (88, 43322), (97, 43292), (98, 43289), (102, 43268), (106, 43235),

Gene: Reba\_71 Start: 41863, Stop: 41609, Start Num: 65  
Candidate Starts for Reba\_71:  
(53, 41884), (Start: 65 @41863 has 20 MA's), (71, 41830), (81, 41779), (83, 41770), (86, 41743), (88, 41737), (90, 41728), (98, 41704),

Gene: RedRock\_70 Start: 43508, Stop: 43269, Start Num: 69  
Candidate Starts for RedRock\_70:  
(Start: 69 @43508 has 64 MA's), (81, 43442), (83, 43433), (88, 43400), (98, 43367), (100, 43358), (102, 43346),

Gene: Refuge\_68 Start: 43722, Stop: 43405, Start Num: 38  
Candidate Starts for Refuge\_68:  
(14, 43860), (20, 43821), (Start: 37 @43725 has 1 MA's), (Start: 38 @43722 has 3 MA's), (Start: 62 @43668 has 1 MA's), (Start: 74 @43617 has 1 MA's), (81, 43578), (83, 43569), (88, 43536),

Gene: Remus\_81 Start: 43800, Stop: 43522, Start Num: 52  
Candidate Starts for Remus\_81:  
(25, 43875), (Start: 52 @43800 has 61 MA's), (78, 43722), (83, 43683), (88, 43650), (97, 43620), (98, 43617), (102, 43596), (106, 43563),

Gene: Retro23\_71 Start: 43080, Stop: 42841, Start Num: 69  
Candidate Starts for Retro23\_71:  
(Start: 47 @43119 has 8 MA's), (Start: 69 @43080 has 64 MA's), (83, 43005), (88, 42972), (98, 42939), (100, 42930), (102, 42918), (111, 42861),

Gene: Rhynn\_62 Start: 42109, Stop: 41816, Start Num: 41  
Candidate Starts for Rhynn\_62:  
(Start: 41 @42109 has 206 MA's), (Start: 68 @42064 has 3 MA's), (72, 42034), (81, 41986), (88, 41944),

Gene: RidgeCB\_66 Start: 42526, Stop: 42233, Start Num: 41

Candidate Starts for RidgeCB\_66:

(30, 42553), (Start: 41 @42526 has 206 MA's), (Start: 68 @42481 has 3 MA's), (72, 42451), (81, 42403), (88, 42361),

Gene: Rifter\_73 Start: 41009, Stop: 40752, Start Num: 52

Candidate Starts for Rifter\_73:

(Start: 52 @41009 has 61 MA's), (Start: 57 @41000 has 4 MA's), (81, 40925), (83, 40916), (88, 40883), (97, 40853), (100, 40841),

Gene: Ringer\_69 Start: 44632, Stop: 44339, Start Num: 41

Candidate Starts for Ringer\_69:

(30, 44659), (Start: 41 @44632 has 206 MA's), (Start: 68 @44587 has 3 MA's), (72, 44557), (81, 44509), (88, 44467),

Gene: Roary\_82 Start: 44168, Stop: 43884, Start Num: 65

Candidate Starts for Roary\_82:

(Start: 65 @44168 has 20 MA's), (Start: 74 @44126 has 1 MA's), (81, 44087), (82, 44084), (83, 44078), (105, 43970),

Gene: Rohr\_67 Start: 43844, Stop: 43551, Start Num: 41

Candidate Starts for Rohr\_67:

(30, 43871), (Start: 41 @43844 has 206 MA's), (Start: 68 @43799 has 3 MA's), (72, 43769), (81, 43721), (88, 43679),

Gene: Roksolana\_73 Start: 41743, Stop: 41486, Start Num: 52

Candidate Starts for Roksolana\_73:

(Start: 52 @41743 has 61 MA's), (Start: 57 @41734 has 4 MA's), (81, 41659), (83, 41650), (88, 41617), (97, 41587), (100, 41575), (114, 41494),

Gene: Rosalind\_78 Start: 43296, Stop: 43018, Start Num: 52

Candidate Starts for Rosalind\_78:

(26, 43356), (Start: 52 @43296 has 61 MA's), (78, 43218), (83, 43179), (88, 43146), (97, 43116), (98, 43113), (102, 43092), (106, 43059),

Gene: Rubeus\_65 Start: 40346, Stop: 40053, Start Num: 41

Candidate Starts for Rubeus\_65:

(30, 40373), (Start: 41 @40346 has 206 MA's), (Start: 68 @40301 has 3 MA's), (72, 40271), (81, 40223), (88, 40181),

Gene: Rufus\_68 Start: 43030, Stop: 42737, Start Num: 41

Candidate Starts for Rufus\_68:

(30, 43057), (Start: 41 @43030 has 206 MA's), (Start: 68 @42985 has 3 MA's), (72, 42955), (81, 42907), (88, 42865),

Gene: Ruotula\_72 Start: 45133, Stop: 44840, Start Num: 41

Candidate Starts for Ruotula\_72:

(30, 45160), (Start: 41 @45133 has 206 MA's), (Start: 68 @45088 has 3 MA's), (72, 45058), (81, 45010), (88, 44968),

Gene: Rutherford\_67 Start: 43925, Stop: 43632, Start Num: 41

Candidate Starts for Rutherford\_67:

(Start: 41 @43925 has 206 MA's), (Start: 68 @43880 has 3 MA's), (81, 43802), (88, 43760),

Gene: RyeScarlet\_74 Start: 42613, Stop: 42335, Start Num: 50  
Candidate Starts for RyeScarlet\_74:  
(Start: 50 @42613 has 28 MA's), (82, 42505), (91, 42451), (93, 42442), (102, 42412),

Gene: STLscum\_75 Start: 44847, Stop: 44554, Start Num: 41  
Candidate Starts for STLscum\_75:  
(Start: 41 @44847 has 206 MA's), (Start: 68 @44802 has 3 MA's), (72, 44772), (81, 44724), (88, 44682),

Gene: Sachima\_69 Start: 42594, Stop: 42316, Start Num: 50  
Candidate Starts for Sachima\_69:  
(Start: 50 @42594 has 28 MA's), (82, 42486), (91, 42432), (93, 42423), (102, 42393),

Gene: Sagefire\_67 Start: 44059, Stop: 43766, Start Num: 41  
Candidate Starts for Sagefire\_67:  
(Start: 41 @44059 has 206 MA's), (Start: 68 @44014 has 3 MA's), (72, 43984), (81, 43936), (88, 43894),

Gene: Saintus\_76 Start: 40816, Stop: 40532, Start Num: 65  
Candidate Starts for Saintus\_76:  
(Start: 65 @40816 has 20 MA's), (Start: 74 @40774 has 1 MA's), (82, 40732), (83, 40726), (105, 40618),

Gene: Salz\_68 Start: 41498, Stop: 41232, Start Num: 48  
Candidate Starts for Salz\_68:  
(Start: 48 @41498 has 21 MA's), (82, 41405), (88, 41366), (98, 41333), (100, 41324), (102, 41312), (106, 41279),

Gene: Sandaddy\_63 Start: 42327, Stop: 42034, Start Num: 41  
Candidate Starts for Sandaddy\_63:  
(30, 42354), (Start: 41 @42327 has 206 MA's), (Start: 68 @42282 has 3 MA's), (72, 42252), (81, 42204), (88, 42162),

Gene: Sanya\_62 Start: 43541, Stop: 43293, Start Num: 68  
Candidate Starts for Sanya\_62:  
(34, 43613), (Start: 41 @43586 has 206 MA's), (Start: 68 @43541 has 3 MA's), (72, 43511), (81, 43463), (88, 43421),

Gene: SarFire\_65 Start: 42573, Stop: 42280, Start Num: 41  
Candidate Starts for SarFire\_65:  
(30, 42600), (Start: 41 @42573 has 206 MA's), (Start: 68 @42528 has 3 MA's), (81, 42450), (88, 42408),

Gene: Scherzo\_72 Start: 42857, Stop: 42579, Start Num: 50  
Candidate Starts for Scherzo\_72:  
(Start: 50 @42857 has 28 MA's), (82, 42749), (91, 42695), (93, 42686), (102, 42656),

Gene: Scorpia\_69 Start: 42287, Stop: 42036, Start Num: 58  
Candidate Starts for Scorpia\_69:  
(Start: 58 @42287 has 37 MA's), (83, 42194), (84, 42179), (100, 42116), (106, 42071), (110, 42050),

Gene: Scowl\_67 Start: 42499, Stop: 42206, Start Num: 41  
Candidate Starts for Scowl\_67:

(Start: 41 @42499 has 206 MA's), (Start: 68 @42454 has 3 MA's), (72, 42424), (81, 42376), (88, 42334),

Gene: SemperFi\_71 Start: 43237, Stop: 42998, Start Num: 69

Candidate Starts for SemperFi\_71:

(Start: 47 @43276 has 8 MA's), (Start: 69 @43237 has 64 MA's), (83, 43162), (88, 43129), (98, 43096), (100, 43087), (102, 43075), (111, 43018),

Gene: Serenity\_74 Start: 42637, Stop: 42359, Start Num: 47

Candidate Starts for Serenity\_74:

(Start: 47 @42637 has 8 MA's), (Start: 69 @42598 has 64 MA's), (80, 42556), (83, 42523), (88, 42490), (97, 42460), (98, 42457), (100, 42448), (102, 42436), (114, 42367),

Gene: Sham4\_69 Start: 41582, Stop: 41316, Start Num: 48

Candidate Starts for Sham4\_69:

(Start: 48 @41582 has 21 MA's), (82, 41489), (88, 41450), (98, 41417), (100, 41408), (102, 41396), (106, 41363),

Gene: ShayRa\_80 Start: 43325, Stop: 43047, Start Num: 52

Candidate Starts for ShayRa\_80:

(26, 43385), (Start: 52 @43325 has 61 MA's), (78, 43247), (83, 43208), (88, 43175), (97, 43145), (98, 43142), (102, 43121), (106, 43088),

Gene: SheaKeira\_67 Start: 41628, Stop: 41359, Start Num: 50

Candidate Starts for SheaKeira\_67:

(Start: 50 @41628 has 28 MA's), (81, 41532), (82, 41529), (91, 41475), (93, 41466), (102, 41436),

Gene: ShortQueendom\_57 Start: 40038, Stop: 39745, Start Num: 41

Candidate Starts for ShortQueendom\_57:

(34, 40065), (Start: 41 @40038 has 206 MA's), (Start: 68 @39993 has 3 MA's), (72, 39963), (81, 39915), (88, 39873),

Gene: Sibs6\_68 Start: 41229, Stop: 40936, Start Num: 41

Candidate Starts for Sibs6\_68:

(30, 41256), (Start: 41 @41229 has 206 MA's), (Start: 68 @41184 has 3 MA's), (72, 41154), (81, 41106), (88, 41064),

Gene: SkiPole\_74 Start: 44120, Stop: 43827, Start Num: 41

Candidate Starts for SkiPole\_74:

(Start: 41 @44120 has 206 MA's), (Start: 68 @44075 has 3 MA's), (72, 44045), (81, 43997), (88, 43955),

Gene: Sknot\_71 Start: 43051, Stop: 42812, Start Num: 69

Candidate Starts for Sknot\_71:

(Start: 47 @43090 has 8 MA's), (Start: 69 @43051 has 64 MA's), (Start: 74 @43024 has 1 MA's), (76, 43021), (83, 42976), (88, 42943), (98, 42910), (100, 42901), (102, 42889), (111, 42832),

Gene: Slagathor\_68 Start: 44595, Stop: 44302, Start Num: 41

Candidate Starts for Slagathor\_68:

(30, 44622), (Start: 41 @44595 has 206 MA's), (Start: 68 @44550 has 3 MA's), (72, 44520), (81, 44472), (88, 44430),

Gene: Smairt\_68 Start: 45112, Stop: 44819, Start Num: 41

Candidate Starts for Smairt\_68:

(Start: 41 @45112 has 206 MA's), (Start: 68 @45067 has 3 MA's), (72, 45037), (81, 44989), (88, 44947),

Gene: Smeadley\_80 Start: 43984, Stop: 43700, Start Num: 65

Candidate Starts for Smeadley\_80:

(Start: 65 @43984 has 20 MA's), (Start: 74 @43942 has 1 MA's), (82, 43900), (83, 43894), (105, 43786),

Gene: Smeagan\_73 Start: 43548, Stop: 43309, Start Num: 69

Candidate Starts for Smeagan\_73:

(Start: 47 @43587 has 8 MA's), (Start: 69 @43548 has 64 MA's), (83, 43473), (88, 43440), (98, 43407), (100, 43398), (102, 43386),

Gene: Smeagol\_68 Start: 44353, Stop: 44060, Start Num: 41

Candidate Starts for Smeagol\_68:

(Start: 41 @44353 has 206 MA's), (Start: 68 @44308 has 3 MA's), (72, 44278), (81, 44230), (88, 44188),

Gene: SmellyB\_71 Start: 41315, Stop: 41076, Start Num: 67

Candidate Starts for SmellyB\_71:

(Start: 67 @41315 has 8 MA's), (83, 41240), (88, 41207), (98, 41174), (100, 41165),

Gene: SnapTap\_70 Start: 43048, Stop: 42809, Start Num: 69

Candidate Starts for SnapTap\_70:

(Start: 47 @43087 has 8 MA's), (Start: 69 @43048 has 64 MA's), (83, 42973), (88, 42940), (98, 42907), (100, 42898), (102, 42886), (111, 42829),

Gene: Snape\_69 Start: 41574, Stop: 41308, Start Num: 48

Candidate Starts for Snape\_69:

(Start: 48 @41574 has 21 MA's), (82, 41481), (88, 41442), (98, 41409), (100, 41400), (102, 41388), (106, 41355),

Gene: Snazzy\_63 Start: 41494, Stop: 41201, Start Num: 41

Candidate Starts for Snazzy\_63:

(34, 41521), (Start: 41 @41494 has 206 MA's), (Start: 68 @41449 has 3 MA's), (72, 41419), (81, 41371), (88, 41329),

Gene: Solon\_64 Start: 42070, Stop: 41777, Start Num: 41

Candidate Starts for Solon\_64:

(30, 42097), (Start: 41 @42070 has 206 MA's), (Start: 68 @42025 has 3 MA's), (72, 41995), (77, 41983), (81, 41947), (88, 41905),

Gene: SororFago\_72 Start: 43648, Stop: 43376, Start Num: 57

Candidate Starts for SororFago\_72:

(2, 43936), (Start: 46 @43669 has 1 MA's), (Start: 57 @43648 has 4 MA's), (82, 43546), (87, 43510), (88, 43507), (100, 43465), (102, 43453), (109, 43402),

Gene: Sorpresa\_64 Start: 42329, Stop: 42036, Start Num: 41

Candidate Starts for Sorpresa\_64:

(30, 42356), (Start: 41 @42329 has 206 MA's), (Start: 68 @42284 has 3 MA's), (72, 42254), (81, 42206), (88, 42164),

Gene: Soups\_80 Start: 43589, Stop: 43311, Start Num: 52

Candidate Starts for Soups\_80:

(25, 43664), (Start: 52 @43589 has 61 MA's), (78, 43511), (83, 43472), (88, 43439), (97, 43409), (98, 43406), (102, 43385), (106, 43352),

Gene: SpikeBT\_64 Start: 42693, Stop: 42400, Start Num: 41

Candidate Starts for SpikeBT\_64:

(30, 42720), (Start: 41 @42693 has 206 MA's), (Start: 68 @42648 has 3 MA's), (72, 42618), (77, 42606), (81, 42570), (88, 42528),

Gene: Spouty\_71 Start: 42364, Stop: 42086, Start Num: 50

Candidate Starts for Spouty\_71:

(Start: 50 @42364 has 28 MA's), (82, 42256), (91, 42202), (93, 42193), (102, 42163),

Gene: Squee\_69 Start: 42726, Stop: 42433, Start Num: 41

Candidate Starts for Squee\_69:

(Start: 41 @42726 has 206 MA's), (Start: 68 @42681 has 3 MA's), (72, 42651), (81, 42603), (88, 42561),

Gene: Stagni\_69 Start: 42390, Stop: 42136, Start Num: 65

Candidate Starts for Stagni\_69:

(Start: 39 @42444 has 2 MA's), (44, 42426), (53, 42411), (Start: 65 @42390 has 20 MA's), (71, 42357), (81, 42306), (83, 42297), (86, 42270), (88, 42264), (98, 42231),

Gene: StarStuff\_74 Start: 43723, Stop: 43490, Start Num: 52

Candidate Starts for StarStuff\_74:

(Start: 52 @43723 has 61 MA's), (83, 43645), (88, 43612), (98, 43579), (102, 43558), (110, 43504),

Gene: Steamy\_66 Start: 42070, Stop: 41750, Start Num: 37

Candidate Starts for Steamy\_66:

(17, 42181), (Start: 37 @42070 has 1 MA's), (Start: 62 @42013 has 1 MA's), (83, 41914), (88, 41881), (91, 41866),

Gene: Stephig9\_79 Start: 43923, Stop: 43639, Start Num: 65

Candidate Starts for Stephig9\_79:

(Start: 65 @43923 has 20 MA's), (Start: 74 @43881 has 1 MA's), (82, 43839), (83, 43833), (105, 43725),

Gene: StewieG\_60 Start: 38877, Stop: 38584, Start Num: 41

Candidate Starts for StewieG\_60:

(3, 39135), (6, 39099), (30, 38904), (Start: 41 @38877 has 206 MA's), (Start: 68 @38832 has 3 MA's), (72, 38802), (81, 38754), (88, 38712),

Gene: StrongArm\_64 Start: 43443, Stop: 43150, Start Num: 41

Candidate Starts for StrongArm\_64:

(30, 43470), (Start: 41 @43443 has 206 MA's), (Start: 68 @43398 has 3 MA's), (72, 43368), (81, 43320), (88, 43278),

Gene: Strosahl\_81 Start: 43800, Stop: 43522, Start Num: 52

Candidate Starts for Strosahl\_81:

(25, 43875), (Start: 52 @43800 has 61 MA's), (78, 43722), (83, 43683), (88, 43650), (97, 43620), (98, 43617), (102, 43596), (106, 43563),

Gene: Sumter\_62 Start: 42684, Stop: 42391, Start Num: 41

Candidate Starts for Sumter\_62:

(30, 42711), (Start: 41 @42684 has 206 MA's), (Start: 68 @42639 has 3 MA's), (72, 42609), (81, 42561), (88, 42519),

Gene: Sunhee\_72 Start: 41700, Stop: 41431, Start Num: 57

Candidate Starts for Sunhee\_72:

(2, 41988), (Start: 46 @41721 has 1 MA's), (Start: 57 @41700 has 4 MA's), (82, 41601), (87, 41565), (88, 41562), (93, 41538), (100, 41520), (102, 41508), (109, 41457),

Gene: Sunshine924\_71 Start: 43388, Stop: 43095, Start Num: 41

Candidate Starts for Sunshine924\_71:

(Start: 41 @43388 has 206 MA's), (Start: 68 @43343 has 3 MA's), (72, 43313), (81, 43265), (88, 43223),

Gene: SuperAwesome\_71 Start: 41329, Stop: 41081, Start Num: 64

Candidate Starts for SuperAwesome\_71:

(10, 41569), (19, 41497), (30, 41416), (Start: 41 @41371 has 206 MA's), (Start: 64 @41329 has 21 MA's), (81, 41254), (88, 41212), (97, 41182), (100, 41170),

Gene: SuperCallie99\_68 Start: 41171, Stop: 40923, Start Num: 64

Candidate Starts for SuperCallie99\_68:

(10, 41411), (19, 41339), (30, 41258), (Start: 41 @41213 has 206 MA's), (Start: 64 @41171 has 21 MA's), (81, 41096), (88, 41054), (97, 41024), (100, 41012),

Gene: Superchunk\_72 Start: 41714, Stop: 41472, Start Num: 68

Candidate Starts for Superchunk\_72:

(Start: 68 @41714 has 3 MA's), (84, 41615), (87, 41600), (88, 41597), (89, 41591), (90, 41588), (98, 41564), (102, 41543),

Gene: SweetiePie\_70 Start: 43180, Stop: 42941, Start Num: 69

Candidate Starts for SweetiePie\_70:

(Start: 47 @43219 has 8 MA's), (Start: 69 @43180 has 64 MA's), (83, 43105), (88, 43072), (98, 43039), (100, 43030), (102, 43018), (111, 42961),

Gene: SwirlSquare\_77 Start: 42463, Stop: 42188, Start Num: 52

Candidate Starts for SwirlSquare\_77:

(1, 42814), (7, 42703), (23, 42577), (Start: 52 @42463 has 61 MA's), (Start: 57 @42454 has 4 MA's), (Start: 74 @42394 has 1 MA's), (88, 42313), (98, 42280),

Gene: Swirley\_65 Start: 41678, Stop: 41427, Start Num: 58

Candidate Starts for Swirley\_65:

(Start: 58 @41678 has 37 MA's), (83, 41585), (84, 41570), (100, 41507), (106, 41462), (110, 41441),

Gene: SwissCheese\_69 Start: 42912, Stop: 42619, Start Num: 41

Candidate Starts for SwissCheese\_69:

(30, 42939), (Start: 41 @42912 has 206 MA's), (Start: 68 @42867 has 3 MA's), (72, 42837), (81, 42789), (88, 42747),

Gene: Switzer\_67 Start: 44218, Stop: 43925, Start Num: 41

Candidate Starts for Switzer\_67:

(Start: 41 @44218 has 206 MA's), (Start: 68 @44173 has 3 MA's), (72, 44143), (81, 44095), (88, 44053),



Gene: Switzerland\_79 Start: 43464, Stop: 43186, Start Num: 52

Candidate Starts for Switzerland\_79:

(26, 43524), (Start: 52 @43464 has 61 MA's), (78, 43386), (83, 43347), (88, 43314), (97, 43284), (98, 43281), (102, 43260), (106, 43227),

Gene: Swole\_67 Start: 42487, Stop: 42194, Start Num: 41

Candidate Starts for Swole\_67:

(30, 42514), (Start: 41 @42487 has 206 MA's), (Start: 68 @42442 has 3 MA's), (72, 42412), (81, 42364), (88, 42322),

Gene: SydNat\_65 Start: 41870, Stop: 41619, Start Num: 58

Candidate Starts for SydNat\_65:

(Start: 58 @41870 has 37 MA's), (Start: 66 @41858 has 2 MA's), (81, 41786), (83, 41777), (84, 41762), (100, 41699), (106, 41654), (110, 41633), (113, 41627),

Gene: Target\_69 Start: 42804, Stop: 42511, Start Num: 41

Candidate Starts for Target\_69:

(Start: 41 @42804 has 206 MA's), (Start: 68 @42759 has 3 MA's), (72, 42729), (81, 42681), (88, 42639),

Gene: TarsusIV\_68 Start: 43024, Stop: 42785, Start Num: 69

Candidate Starts for TarsusIV\_68:

(Start: 47 @43063 has 8 MA's), (Start: 69 @43024 has 64 MA's), (76, 42994), (83, 42949), (88, 42916), (98, 42883), (100, 42874), (102, 42862), (112, 42802),

Gene: Tarynearal\_64 Start: 41514, Stop: 41263, Start Num: 58

Candidate Starts for Tarynearal\_64:

(Start: 58 @41514 has 37 MA's), (83, 41421), (84, 41406), (100, 41343), (106, 41298), (110, 41277), (113, 41271),

Gene: Tasp14\_69 Start: 44447, Stop: 44154, Start Num: 41

Candidate Starts for Tasp14\_69:

(Start: 41 @44447 has 206 MA's), (Start: 68 @44402 has 3 MA's), (72, 44372), (81, 44324), (88, 44282),

Gene: Temprado\_74 Start: 41848, Stop: 41591, Start Num: 52

Candidate Starts for Temprado\_74:

(Start: 52 @41848 has 61 MA's), (Start: 57 @41839 has 4 MA's), (81, 41764), (83, 41755), (88, 41722), (97, 41692), (100, 41680),

Gene: Teodoridan\_65 Start: 41810, Stop: 41517, Start Num: 41

Candidate Starts for Teodoridan\_65:

(Start: 41 @41810 has 206 MA's), (Start: 68 @41765 has 3 MA's), (72, 41735), (81, 41687), (88, 41645),

Gene: Terrific\_71 Start: 43025, Stop: 42786, Start Num: 69

Candidate Starts for Terrific\_71:

(Start: 69 @43025 has 64 MA's), (Start: 74 @42998 has 1 MA's), (76, 42995), (83, 42950), (88, 42917), (98, 42884), (100, 42875), (102, 42863),

Gene: Theia\_64 Start: 41988, Stop: 41749, Start Num: 66

Candidate Starts for Theia\_64:

(Start: 58 @42000 has 37 MA's), (Start: 66 @41988 has 2 MA's), (81, 41916), (83, 41907), (84, 41892), (100, 41829), (106, 41784), (110, 41763),

Gene: TheloniousMonk\_70 Start: 45181, Stop: 44888, Start Num: 41

Candidate Starts for TheloniousMonk\_70:

(30, 45208), (Start: 41 @45181 has 206 MA's), (Start: 68 @45136 has 3 MA's), (72, 45106), (81, 45058), (88, 45016),

Gene: Thor\_65 Start: 41931, Stop: 41638, Start Num: 41

Candidate Starts for Thor\_65:

(30, 41958), (Start: 41 @41931 has 206 MA's), (Start: 68 @41886 has 3 MA's), (81, 41808), (88, 41766),

Gene: Tiger\_65 Start: 41442, Stop: 41191, Start Num: 58

Candidate Starts for Tiger\_65:

(Start: 58 @41442 has 37 MA's), (83, 41349), (84, 41334), (100, 41271), (106, 41226), (110, 41205), (113, 41199),

Gene: Timothy\_69 Start: 41551, Stop: 41285, Start Num: 48

Candidate Starts for Timothy\_69:

(Start: 48 @41551 has 21 MA's), (82, 41458), (88, 41419), (98, 41386), (100, 41377), (102, 41365), (106, 41332),

Gene: Timshel\_68 Start: 45505, Stop: 45218, Start Num: 43

Candidate Starts for Timshel\_68:

(15, 45658), (Start: 24 @45583 has 1 MA's), (32, 45550), (Start: 43 @45505 has 1 MA's), (Start: 74 @45427 has 1 MA's), (81, 45388), (83, 45379), (92, 45331), (94, 45319), (98, 45313), (102, 45292), (109, 45241), (115, 45223),

Gene: TinyPebbles\_68 Start: 42417, Stop: 42163, Start Num: 65

Candidate Starts for TinyPebbles\_68:

(9, 42678), (Start: 39 @42471 has 2 MA's), (42, 42459), (44, 42453), (53, 42438), (Start: 65 @42417 has 20 MA's), (71, 42384), (81, 42333), (83, 42324), (86, 42297), (88, 42291), (98, 42258),

Gene: TipsytheTRex\_70 Start: 42600, Stop: 42361, Start Num: 69

Candidate Starts for TipsytheTRex\_70:

(Start: 69 @42600 has 64 MA's), (80, 42558), (83, 42525), (86, 42498), (88, 42492), (98, 42459), (100, 42450), (102, 42438), (109, 42387), (114, 42369),

Gene: Toaka\_73 Start: 42844, Stop: 42566, Start Num: 49

Candidate Starts for Toaka\_73:

(Start: 49 @42844 has 1 MA's), (82, 42739), (102, 42646),

Gene: Tomathan\_74 Start: 43834, Stop: 43601, Start Num: 52

Candidate Starts for Tomathan\_74:

(Start: 52 @43834 has 61 MA's), (83, 43756), (88, 43723), (98, 43690), (102, 43669), (110, 43615),

Gene: ToneTone\_70 Start: 41408, Stop: 41151, Start Num: 52

Candidate Starts for ToneTone\_70:

(Start: 52 @41408 has 61 MA's), (Start: 57 @41399 has 4 MA's), (81, 41324), (83, 41315), (88, 41282), (97, 41252), (100, 41240),

Gene: Topgun\_63 Start: 41557, Stop: 41264, Start Num: 41

Candidate Starts for Topgun\_63:

(30, 41584), (Start: 41 @41557 has 206 MA's), (Start: 68 @41512 has 3 MA's), (72, 41482), (81, 41434), (88, 41392),

Gene: Tote\_62 Start: 39754, Stop: 39461, Start Num: 41

Candidate Starts for Tote\_62:

(30, 39781), (Start: 41 @39754 has 206 MA's), (Start: 68 @39709 has 3 MA's), (72, 39679), (81, 39631), (88, 39589),

Gene: Traft412\_69 Start: 43542, Stop: 43249, Start Num: 41

Candidate Starts for Traft412\_69:

(Start: 41 @43542 has 206 MA's), (Start: 68 @43497 has 3 MA's), (72, 43467), (81, 43419), (88, 43377),

Gene: Travvers\_73 Start: 43720, Stop: 43487, Start Num: 52

Candidate Starts for Travvers\_73:

(Start: 52 @43720 has 61 MA's), (83, 43642), (88, 43609), (98, 43576), (102, 43555), (110, 43501),

Gene: Treddle\_66 Start: 43796, Stop: 43503, Start Num: 41

Candidate Starts for Treddle\_66:

(30, 43823), (Start: 41 @43796 has 206 MA's), (Start: 68 @43751 has 3 MA's), (72, 43721), (77, 43709), (81, 43673), (88, 43631),

Gene: Tripl3t\_70 Start: 45279, Stop: 44986, Start Num: 41

Candidate Starts for Tripl3t\_70:

(Start: 41 @45279 has 206 MA's), (Start: 68 @45234 has 3 MA's), (72, 45204), (77, 45192), (81, 45156), (88, 45114),

Gene: Tristan\_66 Start: 43510, Stop: 43250, Start Num: 64

Candidate Starts for Tristan\_66:

(Start: 64 @43510 has 21 MA's), (83, 43414), (88, 43381), (98, 43348), (100, 43339), (102, 43327),

Gene: Trixie\_69 Start: 43058, Stop: 42813, Start Num: 64

Candidate Starts for Trixie\_69:

(Start: 59 @43064 has 1 MA's), (Start: 64 @43058 has 21 MA's), (Start: 74 @43025 has 1 MA's), (83, 42977), (88, 42944), (98, 42911), (100, 42902), (102, 42890), (109, 42839),

Gene: Trooper\_70 Start: 42983, Stop: 42744, Start Num: 69

Candidate Starts for Trooper\_70:

(Start: 47 @43022 has 8 MA's), (Start: 69 @42983 has 64 MA's), (83, 42908), (88, 42875), (98, 42842), (100, 42833), (112, 42761),

Gene: Trouble\_66 Start: 42897, Stop: 42604, Start Num: 41

Candidate Starts for Trouble\_66:

(Start: 41 @42897 has 206 MA's), (Start: 68 @42852 has 3 MA's), (72, 42822), (81, 42774), (88, 42732),

Gene: Tubs\_73 Start: 42568, Stop: 42290, Start Num: 50

Candidate Starts for Tubs\_73:

(Start: 50 @42568 has 28 MA's), (82, 42460), (91, 42406), (93, 42397), (102, 42367),

Gene: Tucker\_73 Start: 41611, Stop: 41354, Start Num: 52

Candidate Starts for Tucker\_73:

(Start: 52 @41611 has 61 MA's), (Start: 57 @41602 has 4 MA's), (81, 41527), (83, 41518), (88, 41485), (97, 41455), (100, 41443),

Gene: Turbido\_71 Start: 43267, Stop: 43028, Start Num: 69

Candidate Starts for Turbido\_71:

(Start: 47 @43306 has 8 MA's), (Start: 69 @43267 has 64 MA's), (83, 43192), (88, 43159), (98, 43126), (100, 43117), (102, 43105),

Gene: Turj99\_64 Start: 43466, Stop: 43173, Start Num: 41

Candidate Starts for Turj99\_64:

(30, 43493), (Start: 41 @43466 has 206 MA's), (72, 43391), (81, 43343), (88, 43301),

Gene: Twigg\_62 Start: 41326, Stop: 41075, Start Num: 58

Candidate Starts for Twigg\_62:

(Start: 58 @41326 has 37 MA's), (81, 41242), (83, 41233), (84, 41218), (100, 41155), (106, 41110), (110, 41089),

Gene: TwoPeat\_67 Start: 43318, Stop: 43025, Start Num: 41

Candidate Starts for TwoPeat\_67:

(30, 43345), (Start: 41 @43318 has 206 MA's), (Start: 68 @43273 has 3 MA's), (72, 43243), (81, 43195), (88, 43153),

Gene: U2\_62 Start: 43288, Stop: 42995, Start Num: 41

Candidate Starts for U2\_62:

(30, 43315), (Start: 41 @43288 has 206 MA's), (Start: 68 @43243 has 3 MA's), (72, 43213), (81, 43165), (88, 43123),

Gene: Ugenie5\_68 Start: 42856, Stop: 42578, Start Num: 50

Candidate Starts for Ugenie5\_68:

(Start: 50 @42856 has 28 MA's), (82, 42748), (91, 42694), (93, 42685), (102, 42655),

Gene: UnionJack\_69 Start: 41951, Stop: 41700, Start Num: 58

Candidate Starts for UnionJack\_69:

(Start: 58 @41951 has 37 MA's), (83, 41858), (84, 41843), (100, 41780), (106, 41735), (110, 41714), (113, 41708),

Gene: Updawg\_71 Start: 42915, Stop: 42676, Start Num: 69

Candidate Starts for Updawg\_71:

(Start: 69 @42915 has 64 MA's), (Start: 74 @42888 has 1 MA's), (76, 42885), (83, 42840), (88, 42807), (98, 42774), (100, 42765), (102, 42753),

Gene: VA6\_70 Start: 42966, Stop: 42727, Start Num: 69

Candidate Starts for VA6\_70:

(Start: 47 @43005 has 8 MA's), (Start: 69 @42966 has 64 MA's), (Start: 74 @42939 has 1 MA's), (83, 42891), (88, 42858), (98, 42825), (100, 42816), (102, 42804), (111, 42747),

Gene: VC3\_73 Start: 43176, Stop: 42916, Start Num: 52

Candidate Starts for VC3\_73:

(Start: 52 @43176 has 61 MA's), (83, 43071), (88, 43038), (98, 43005), (102, 42984), (110, 42930), (111, 42927),

Gene: Vanisoa\_70 Start: 43200, Stop: 42919, Start Num: 50

Candidate Starts for Vanisoa\_70:

(Start: 50 @43200 has 28 MA's), (88, 43059), (102, 43005),

Gene: Violet\_63 Start: 44154, Stop: 43861, Start Num: 41

Candidate Starts for Violet\_63:

(30, 44181), (Start: 41 @44154 has 206 MA's), (Start: 68 @44109 has 3 MA's), (72, 44079), (81, 44031), (88, 43989),

Gene: VohminGhazi\_71 Start: 41316, Stop: 41077, Start Num: 67

Candidate Starts for VohminGhazi\_71:

(Start: 67 @41316 has 8 MA's), (83, 41241), (88, 41208), (98, 41175), (100, 41166),

Gene: Waits\_80 Start: 43700, Stop: 43422, Start Num: 52

Candidate Starts for Waits\_80:

(25, 43775), (Start: 52 @43700 has 61 MA's), (78, 43622), (83, 43583), (88, 43550), (97, 43520), (98, 43517), (102, 43496), (106, 43463),

Gene: Warrior24\_82 Start: 44177, Stop: 43899, Start Num: 52

Candidate Starts for Warrior24\_82:

(25, 44252), (Start: 52 @44177 has 61 MA's), (78, 44099), (83, 44060), (88, 44027), (97, 43997), (98, 43994), (102, 43973), (106, 43940),

Gene: Watermelon\_65 Start: 41890, Stop: 41597, Start Num: 41

Candidate Starts for Watermelon\_65:

(30, 41917), (Start: 41 @41890 has 206 MA's), (Start: 68 @41845 has 3 MA's), (72, 41815), (81, 41767), (88, 41725),

Gene: WeiHuaDA\_71 Start: 43855, Stop: 43616, Start Num: 69

Candidate Starts for WeiHuaDA\_71:

(Start: 47 @43894 has 8 MA's), (Start: 69 @43855 has 64 MA's), (83, 43780), (88, 43747), (98, 43714), (100, 43705), (102, 43693), (109, 43642),

Gene: Whabigail7\_71 Start: 43267, Stop: 43028, Start Num: 69

Candidate Starts for Whabigail7\_71:

(Start: 47 @43306 has 8 MA's), (Start: 69 @43267 has 64 MA's), (83, 43192), (88, 43159), (98, 43126), (100, 43117), (102, 43105),

Gene: Wheeler\_68 Start: 43157, Stop: 42864, Start Num: 41

Candidate Starts for Wheeler\_68:

(30, 43184), (Start: 41 @43157 has 206 MA's), (Start: 68 @43112 has 3 MA's), (72, 43082), (77, 43070), (81, 43034), (88, 42992),

Gene: WideWale\_71 Start: 42915, Stop: 42676, Start Num: 69

Candidate Starts for WideWale\_71:

(Start: 69 @42915 has 64 MA's), (Start: 74 @42888 has 1 MA's), (76, 42885), (83, 42840), (88, 42807), (98, 42774), (100, 42765), (102, 42753),

Gene: Wiks\_72 Start: 41479, Stop: 41222, Start Num: 52

Candidate Starts for Wiks\_72:

(Start: 52 @41479 has 61 MA's), (Start: 57 @41470 has 4 MA's), (81, 41395), (83, 41386), (88, 41353), (97, 41323), (100, 41311),

Gene: Wilkins\_64 Start: 41487, Stop: 41194, Start Num: 41

Candidate Starts for Wilkins\_64:

(30, 41514), (Start: 41 @41487 has 206 MA's), (Start: 68 @41442 has 3 MA's), (72, 41412), (81, 41364), (88, 41322),

Gene: WunderPhul\_73 Start: 41477, Stop: 41220, Start Num: 52

Candidate Starts for WunderPhul\_73:

(Start: 52 @41477 has 61 MA's), (Start: 57 @41468 has 4 MA's), (81, 41393), (83, 41384), (88, 41351), (97, 41321), (100, 41309),

Gene: XianYue\_66 Start: 42239, Stop: 41988, Start Num: 59

Candidate Starts for XianYue\_66:

(Start: 41 @42275 has 206 MA's), (Start: 59 @42239 has 1 MA's), (76, 42197), (83, 42152), (88, 42119), (98, 42086), (100, 42077), (102, 42065),

Gene: Yecey3\_74 Start: 42420, Stop: 42151, Start Num: 56

Candidate Starts for Yecey3\_74:

(Start: 56 @42420 has 1 MA's), (81, 42324), (82, 42321), (91, 42267), (93, 42258), (102, 42228),

Gene: Yokurt\_72 Start: 41479, Stop: 41222, Start Num: 52

Candidate Starts for Yokurt\_72:

(Start: 52 @41479 has 61 MA's), (Start: 57 @41470 has 4 MA's), (81, 41395), (83, 41386), (88, 41353), (97, 41323), (100, 41311),

Gene: Zaka\_73 Start: 41479, Stop: 41222, Start Num: 52

Candidate Starts for Zaka\_73:

(Start: 52 @41479 has 61 MA's), (Start: 57 @41470 has 4 MA's), (81, 41395), (83, 41386), (88, 41353), (97, 41323), (100, 41311),

Gene: Zeeculate\_65 Start: 43127, Stop: 42834, Start Num: 41

Candidate Starts for Zeeculate\_65:

(Start: 41 @43127 has 206 MA's), (Start: 68 @43082 has 3 MA's), (72, 43052), (81, 43004), (88, 42962), (109, 42857),

Gene: Zephyr\_67 Start: 42228, Stop: 41935, Start Num: 41

Candidate Starts for Zephyr\_67:

(30, 42255), (Start: 41 @42228 has 206 MA's), (Start: 68 @42183 has 3 MA's), (72, 42153), (81, 42105), (88, 42063),

Gene: Zeuska\_71 Start: 45391, Stop: 45098, Start Num: 41

Candidate Starts for Zeuska\_71:

(Start: 41 @45391 has 206 MA's), (Start: 68 @45346 has 3 MA's), (72, 45316), (81, 45268), (88, 45226),

Gene: Zimmer\_68 Start: 43433, Stop: 43122, Start Num: 38

Candidate Starts for Zimmer\_68:

(Start: 37 @43436 has 1 MA's), (Start: 38 @43433 has 3 MA's), (Start: 62 @43385 has 1 MA's), (Start: 74 @43334 has 1 MA's), (81, 43295), (83, 43286), (88, 43253), (95, 43226), (109, 43148),

Gene: Zolita\_64 Start: 41874, Stop: 41623, Start Num: 58

Candidate Starts for Zolita\_64:

(Start: 58 @41874 has 37 MA's), (Start: 66 @41862 has 2 MA's), (81, 41790), (83, 41781), (84, 41766), (100, 41703), (106, 41658), (110, 41637), (113, 41631),

Gene: Zulu\_74 Start: 41857, Stop: 41600, Start Num: 52

Candidate Starts for Zulu\_74:

(Start: 52 @41857 has 61 MA's), (Start: 57 @41848 has 4 MA's), (81, 41773), (83, 41764), (88, 41731),  
(97, 41701), (100, 41689),