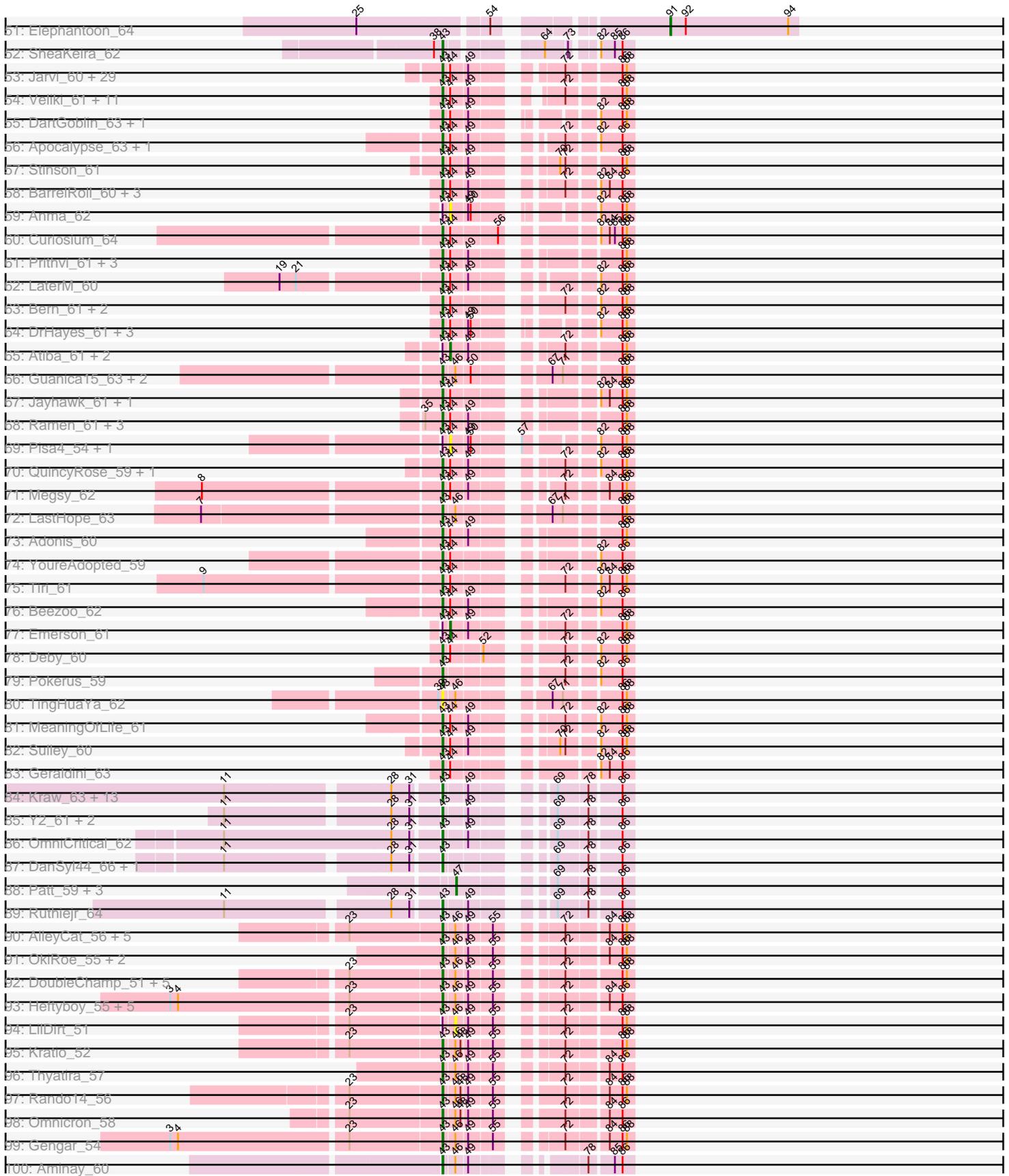
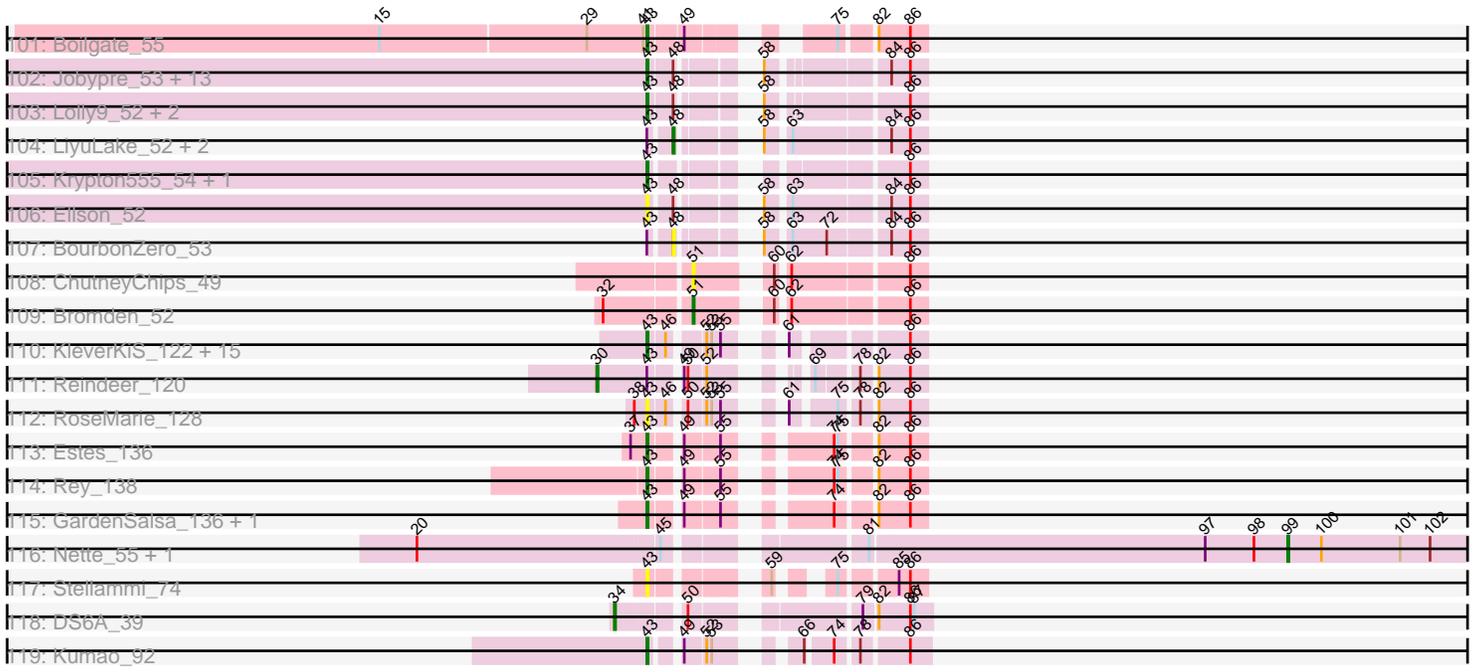




Pham 283406



# Pham 283406



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 283406 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283406 has 338 members, 54 are drafts.

Phages represented in each track:

- Track 1 : Zimmer\_61
- Track 2 : Steamy\_60
- Track 3 : DarthPhader\_61
- Track 4 : Refuge\_61
- Track 5 : Pharaoh\_59
- Track 6 : Jeeves\_67, Gail\_65
- Track 7 : Luchador\_66
- Track 8 : SororFago\_64
- Track 9 : Sunhee\_66
- Track 10 : MyraDee\_60
- Track 11 : AN9\_66, ANI8\_66
- Track 12 : Koduck\_64
- Track 13 : Che12\_65
- Track 14 : MajorMajor\_63, Quokka\_63, Bradman\_64
- Track 15 : L5\_60
- Track 16 : SwirlSquare\_69
- Track 17 : Ph8s\_65
- Track 18 : Caraxes\_64, Superchunk\_63
- Track 19 : Adzzy\_66
- Track 20 : Odin\_63
- Track 21 : Jsquared\_65
- Track 22 : TipsytheTRex\_61
- Track 23 : Serenity\_64
- Track 24 : FatCactus\_59
- Track 25 : Anthony\_65
- Track 26 : Kinmap\_63
- Track 27 : Chargerpower\_62
- Track 28 : Jabiru\_63, Airmid\_62, PetterN\_67, UnionJack\_63, Scorpia\_64, Chadwick\_64, ElTiger69\_64, Naca\_62
- Track 29 : Discoknowium\_60, Aragog\_62, Twigg\_58, HuhtaEnerson15\_60, ForGetIt\_63, Tiger\_62, Phlorence\_61, Bonamassa\_60, Cuco\_61, PickleBack\_63, Jovo\_63, Florence4\_59, Milcery\_60, Swirley\_62, Prinashe11\_59, Florence1\_57, Coog\_59, Theia\_59, Conspiracy\_63, Midas2\_59, AgentM\_62, Tarynearal\_59, LittleCherry\_60, Lev2\_63
- Track 30 : Benedict\_64
- Track 31 : Dublin\_60, Micasa\_60
- Track 32 : SydNat\_62, Archetta\_60, Ghoulboy\_62, Zolita\_61, Bluefalcon\_58

- Track 33 : George\_57
- Track 34 : MarysWell\_60
- Track 35 : Dixon\_66, Danforth\_67, Roary\_68, Saintus\_62, Expelliarmus\_64, Stephig9\_66, Smeadley\_67, Caitlin\_65
- Track 36 : Phillis\_64
- Track 37 : Astro\_67, NearlyHeadless\_67, Groundhog\_66
- Track 38 : Sachima\_62, Hanray\_64, EmyBug\_63, Halex\_64, Alma\_64, Conquerage\_64, Ayanochan\_64, HortumSL17\_67, Phaeder\_66, Eidsmoe\_64, Priya\_64, Beemo\_67, EdogawaKiddo\_64, Jiawan\_63, Qobbit\_64, ExplosioNervosa\_64, RyeScarlet\_68, Pioneer\_67, Catalina\_68, Tubs\_66, Onglai\_64, PackMan\_65, Phonnegut\_67, Aliter\_67, Lilleskat\_62, Fayely\_64, Myxus\_66, Spouty\_64
- Track 39 : Charm\_63, DreamTeam1\_63
- Track 40 : Scherzo\_66, Ugenie5\_62, LoneWolf\_66
- Track 41 : CogOmlette\_63, Minispark\_63, Rahalelujah\_65, Bellris\_63, WorldCup\_63
- Track 42 : Toaka\_66
- Track 43 : Vanisoa\_65
- Track 44 : Darrell\_67
- Track 45 : Klodlith\_63
- Track 46 : Maminiaina\_65, BogosyJay\_65
- Track 47 : Keziacharles14\_65
- Track 48 : Yecey3\_67
- Track 49 : MegTheThird\_63, Celestialunch\_63
- Track 50 : Arissanae\_64
- Track 51 : Elephantoon\_64
- Track 52 : SheaKeira\_62
- Track 53 : Jarvi\_60, Rosmarinus\_60, CREW\_60, Boiiii\_60, Topper\_60, Lunahalos\_60, BGlluviae\_60, Dalmuri\_60, Peel\_60, Hyperbowlee\_60, Asayake\_60, Jeckyll\_60, Durfee\_60, CaseJules\_62, BEEST\_60, ShiaSurprise\_61, Inky\_60, Joy99\_60, Capricorn\_60, CallaLilly\_60, Belladonna\_60, Adephagia\_60, Ageofdapage\_63, Homura\_60, Blizzard\_60, Tachez\_60, Spock\_60, Twitch\_60, Piatt\_60, Llorens\_60
- Track 54 : Veliki\_61, MacKat\_55, Padpat\_62, Clipper\_63, Devera\_67, JAWS\_60, TaiwanKao\_62, CrimD\_61, Dole\_65, Zavala\_62, Mynx\_61, Illumine\_65
- Track 55 : DartGoblin\_63, Bella96\_61
- Track 56 : Apocalypse\_63, Angelica\_60
- Track 57 : Stinson\_61
- Track 58 : BarrelRoll\_60, Rapunzel97\_61, Slimphazie\_60, TruffulaTree\_60
- Track 59 : Anma\_62
- Track 60 : Curiosium\_64
- Track 61 : Prithvi\_61, LindNT\_59, Murucutumbu\_61, TreyKay\_61
- Track 62 : LaterM\_60
- Track 63 : Bern\_61, BaghaKamala\_59, CheetoDust\_59
- Track 64 : DrHayes\_61, SamuelLPlaqson\_61, Urkel\_61, TiniBug\_61
- Track 65 : Atiba\_61, AlishaPH\_60, Padfoot\_60
- Track 66 : Guanica15\_63, Efra2\_64, Yunkel11\_63
- Track 67 : Jayhawk\_61, Anaya\_62
- Track 68 : Ramen\_61, ActinUp\_60, Zabiza\_55, HedwigODU\_60
- Track 69 : Pisa4\_54, Pisa1\_60
- Track 70 : QuincyRose\_59, Ganymede\_61
- Track 71 : Megsy\_62
- Track 72 : LastHope\_63
- Track 73 : Adonis\_60

- Track 74 : YoureAdopted\_59
- Track 75 : Tiri\_61
- Track 76 : Beezoo\_62
- Track 77 : Emerson\_61
- Track 78 : Deby\_60
- Track 79 : Pokerus\_59
- Track 80 : TingHuaYa\_62
- Track 81 : MeaningOfLife\_61
- Track 82 : Sulley\_60
- Track 83 : Geraldini\_63
- Track 84 : Kraw\_63, Eponine\_65, Taquito\_62, Malthus\_64, Juliette\_65, Slarp\_63, Fionnbharth\_63, Mitti\_63, Wintermute\_63, Qhanda\_65, Chancellor\_63, Cheetobro\_63, YasnayaPolyana\_62, SamScheppers\_61
- Track 85 : Y2\_61, Y10\_61, JF1\_63
- Track 86 : OmniCritical\_62
- Track 87 : DanSyl44\_66, Lebo14\_62
- Track 88 : Patt\_59, MissDaisy\_60, Bobquesha\_64, Reptar3000\_60
- Track 89 : Ruthiejr\_64
- Track 90 : AlleyCat\_56, Larva\_55, Edugator\_53, Neighly\_56, Psycho\_54, Dadosky\_56
- Track 91 : OkiRoe\_55, Feyre\_57, Miryou\_58
- Track 92 : DoubleChamp\_51, Agent47\_54, BananenDer11\_51, Collard\_52, InvictusManeo\_52, ViviJ\_53
- Track 93 : Heftyboy\_55, Leston\_54, Waterfoul\_56, Paola\_54, SoSeph\_55, Guillsminger\_55
- Track 94 : LilDirt\_51
- Track 95 : Kratio\_52
- Track 96 : Thyatira\_57
- Track 97 : Rando14\_56
- Track 98 : Omnicron\_58
- Track 99 : Gengar\_54
- Track 100 : Aminay\_60
- Track 101 : Boilgate\_55
- Track 102 : Jobypre\_53, Kingsolomon\_52, Finnry\_52, Bellis\_53, Clautastrophe\_52, Red305\_53, Samty\_52, TriFive\_54, Jubie\_52, Snenia\_52, MsGreen\_52, Nicholas\_52, Lumos\_54, Moostard\_52
- Track 103 : Lolly9\_52, MiniLon\_55, MiniMac\_55
- Track 104 : LiyuLake\_52, KirDoubleO7\_51, DuncansLeg\_53
- Track 105 : Krypton555\_54, Whirlwind\_53
- Track 106 : Ellson\_52
- Track 107 : BourbonZero\_53
- Track 108 : ChutneyChips\_49
- Track 109 : Bromden\_52
- Track 110 : KleverKiS\_122, Auspice\_119, Dulcita\_120, Diminimus\_120, Skinny\_125, IPhane7\_117, Izel\_120, Bricole\_121, FreakyGoo\_120, PegLeg\_123, Glaske16\_122, TyDawg\_114, TpudiCK\_121, LilhomieP\_119, Bongo\_119, SlimJimmy\_119
- Track 111 : Reindeer\_120
- Track 112 : RoseMarie\_128
- Track 113 : Estes\_136
- Track 114 : Rey\_138
- Track 115 : GardenSalsa\_136, MrMagoo\_138
- Track 116 : Nette\_55, Mendokysei\_52

- Track 117 : Stellammi\_74
- Track 118 : DS6A\_39
- Track 119 : Kumao\_92

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

The start number called the most often in the published annotations is 43, it was called in 263 of the 284 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_60, Adephegia\_60, Adonis\_60, Adzzy\_66, Agent47\_54, AgentM\_62, Ageofdapage\_63, Airmid\_62, Aliter\_67, AlleyCat\_56, Alma\_64, Aminay\_60, Anaya\_62, Angelica\_60, Anthony\_65, Apocalypse\_63, Aragog\_62, Archetta\_60, Asayake\_60, Astro\_67, Auspice\_119, Ayanochan\_64, BEEST\_60, BGlluviae\_60, BaghaKamala\_59, BananenDer11\_51, BarrelRoll\_60, Beemo\_67, Beezoo\_62, Bella96\_61, Belladonna\_60, Bellis\_53, Bellris\_63, Benedict\_64, Bern\_61, Blizzard\_60, Bluefalcon\_58, BogosyJay\_65, Boiiii\_60, Boilgate\_55, Bonamassa\_60, Bongo\_119, Bradman\_64, Bricole\_121, CREW\_60, Caitlin\_65, CallaLilly\_60, Capricorn\_60, Caraxes\_64, CaseJules\_62, Catalina\_68, Celestialunch\_63, Chadwick\_64, Chancellor\_63, Chargerpower\_62, Charm\_63, Che12\_65, CheetoDust\_59, Cheetobro\_63, Clautastrophe\_52, Clipper\_63, CogOmlette\_63, Collard\_52, Conquerage\_64, Conspiracy\_63, Coog\_59, CrimD\_61, Cuco\_61, Curiosium\_64, Dadosky\_56, Dalmuri\_60, DanSyl44\_66, Danforth\_67, DartGoblin\_63, DarthPhader\_61, Deby\_60, Devera\_67, Diminimus\_120, Discoknowium\_60, Dixon\_66, Dole\_65, DoubleChamp\_51, DrHayes\_61, DreamTeam1\_63, Dublin\_60, Dulcita\_120, Durfee\_60, EdogawaKiddo\_64, Edugator\_53, Efra2\_64, Eidsmoe\_64, EITiger69\_64, Ellson\_52, EmyBug\_63, Eponine\_65, Estes\_136, Expelliarmus\_64, ExplosioNervosa\_64, Fayely\_64, Feyre\_57, Finnry\_52, Fionnbharth\_63, Florence1\_57, Florence4\_59, ForGetIt\_63, FreakyGoo\_120, Gail\_65, Ganymede\_61, GardenSalsa\_136, Gengar\_54, George\_57, Geraldini\_63, Ghouboy\_62, Glaske16\_122, Groundhog\_66, Guanica15\_63, Guillsminger\_55, Hanray\_64, HedwigODU\_60, Heftyboy\_55, Halex\_64, Homura\_60, HortumSL17\_67, HuhtaEnerson15\_60, Hyperbowlee\_60, IPhane7\_117, Illumine\_65, Inky\_60, InvictusManeo\_52, Izel\_120, JAWS\_60, JF1\_63, Jabiru\_63, Jarvi\_60, Jayhawk\_61, Jeckyll\_60, Jeeves\_67, Jiawan\_63, Jobypre\_53, Jovo\_63, Joy99\_60, Jsquared\_65, Jubie\_52, Juliette\_65, Kingsolomon\_52, Kinmap\_63, KleverKiS\_122, Klodlith\_63, Koduck\_64, Kratio\_52, Kraw\_63, Krypton555\_54, Kumao\_92, L5\_60, Larva\_55, LastHope\_63, LaterM\_60, Lebo14\_62, Leston\_54, Lev2\_63, LilhomieP\_119, Lilleskat\_62, LindNT\_59, LittleCherry\_60, Llorens\_60, Lolly9\_52, LoneWolf\_66, Luchador\_66, Lumos\_54, Lunahalos\_60, MacKat\_55, MajorMajor\_63, Malthus\_64, Maminiaina\_65, MarysWell\_60, MeaningOfLife\_61, MegTheThird\_63, Megsy\_62, Micasa\_60, Midas2\_59, Milcery\_60, MiniLon\_55, MiniMac\_55, Minispark\_63, Miryou\_58, Mitti\_63, Moostard\_52, MrMagoo\_138, MsGreen\_52, Murucutumbu\_61, Mynx\_61, MyraDee\_60, Myxus\_66, Naca\_62, NearlyHeadless\_67, Neighly\_56, Nicholas\_52, Odin\_63, OkiRoe\_55, OmniCritical\_62, Omnicron\_58, Onglai\_64, PackMan\_65, Padpat\_62, Paola\_54, Peel\_60, PegLeg\_123, PetterN\_67, Ph8s\_65, Phaeder\_66, Pharaoh\_59, Phillis\_64, Phlorence\_61, Phonnegut\_67, Piatt\_60, PickleBack\_63, Pioneer\_67, Pokerus\_59, Prinashel1\_59, Prithvi\_61, Priya\_64, Psycho\_54, Qhanda\_65, Qobbit\_64, QuincyRose\_59, Quokka\_63, Rahalelujah\_65, Ramen\_61, Rando14\_56, Rapunzel97\_61, Red305\_53, Refuge\_61, Rey\_138,

Roary\_68, RoseMarie\_128, Rosmarinus\_60, Ruthiejr\_64, RyeScarlet\_68, Sachima\_62, Saintus\_62, SamScheppers\_61, Samty\_52, SamuelLPlaqson\_61, Scherzo\_66, Scorpio\_64, Serenity\_64, SheaKeira\_62, ShiaSurprise\_61, Skinny\_125, Slarp\_63, SlimJimmy\_119, Slimphazie\_60, Smeadley\_67, Snenia\_52, SoSeph\_55, SororFago\_64, Spock\_60, Spouty\_64, Steamy\_60, Stellammi\_74, Stephig9\_66, Stinson\_61, Sulley\_60, Sunhee\_66, Superchunk\_63, SwirlSquare\_69, Swirley\_62, SydNat\_62, Tachez\_60, TaiwanKao\_62, Taquito\_62, Tarynearal\_59, Theia\_59, Thyatira\_57, Tiger\_62, TingHuaYa\_62, TiniBug\_61, TopsytheTRex\_61, Tiri\_61, Topper\_60, TpudiCK\_121, TreyKay\_61, TriFive\_54, TruffulaTree\_60, Tubs\_66, Twigg\_58, Twitch\_60, TyDawg\_114, Ugenie5\_62, UnionJack\_63, Urkel\_61, Veliki\_61, ViviJ\_53, Waterfoul\_56, Whirlwind\_53, Wintermute\_63, WorldCup\_63, Y10\_61, Y2\_61, YasnayaPolyana\_62, YoureAdopted\_59, Yunkel11\_63, Zabiza\_55, Zavala\_62, Zimmer\_61, Zolita\_61,

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

- AlishaPH\_60, Anma\_62, Atiba\_61, BourbonZero\_53, DuncansLeg\_53, Emerson\_61, Keziacharles14\_65, KirDoubleO7\_51, LilDirt\_51, LiyuLake\_52, Padfoot\_60, Pisa1\_60, Pisa4\_54, Reindeer\_120, Toaka\_66,

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

- AN9\_66, ANI8\_66, Arissanae\_64, Bobquesha\_64, Bromden\_52, ChutneyChips\_49, DS6A\_39, Darrell\_67, Elephantoon\_64, FatCactus\_59, Mendokysei\_52, MissDaisy\_60, Nette\_55, Patt\_59, Reptar3000\_60, Vanisoa\_65, Yecy3\_67,

### Summary by start number:

Start 30:

- Found in 1 of 338 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Reindeer\_120 (M1),

Start 34:

- Found in 1 of 338 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DS6A\_39 (singleton),

Start 36:

- Found in 2 of 338 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9\_66 (A2), ANI8\_66 (A2),

Start 38:

- Found in 17 of 338 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 2 of 284
- Called 11.8% of time when present
- Phage (with cluster) where this start called: Keziacharles14\_65 (A9), Toaka\_66 (A9),

Start 40:

- Found in 3 of 338 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 284

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arissanae\_64 (A9), FatCactus\_59 (A20), Vanisoa\_65 (A9),

#### Start 43:

- Found in 321 of 338 ( 95.0% ) of genes in pham
- Manual Annotations of this start: 263 of 284
- Called 95.3% of time when present
- Phage (with cluster) where this start called: ActinUp\_60 (K1), Adephagia\_60 (K1), Adonis\_60 (K1), Adzzy\_66 (A2), Agent47\_54 (K5), AgentM\_62 (A5), Ageofdapage\_63 (K1), Airmid\_62 (A5), Aliter\_67 (A9), AlleyCat\_56 (K5), Alma\_64 (A9), Aminay\_60 (K7), Anaya\_62 (K1), Angelica\_60 (K1), Anthony\_65 (A20), Apocalypse\_63 (K1), Aragog\_62 (A5), Archetta\_60 (A5), Asayake\_60 (K1), Astro\_67 (A8), Auspice\_119 (M1), Ayanochan\_64 (A9), BEEST\_60 (K1), BGlluviae\_60 (K1), BaghaKamala\_59 (K1), BananenDer11\_51 (K5), BarrelRoll\_60 (K1), Beemo\_67 (A9), Beezoo\_62 (K1), Bella96\_61 (K1), Belladonna\_60 (K1), Bellis\_53 (L3), Bellris\_63 (A9), Benedict\_64 (A5), Bern\_61 (K1), Blizzard\_60 (K1), Bluefalcon\_58 (A5), BogosyJay\_65 (A9), Boiiii\_60 (K1), Boilgate\_55 (K8), Bonamassa\_60 (A5), Bongo\_119 (M1), Bradman\_64 (A2), Bricole\_121 (M1), CREW\_60 (K1), Caitlin\_65 (A8), CallaLilly\_60 (K1), Capricorn\_60 (K1), Caraxes\_64 (A2), CaseJules\_62 (K1), Catalina\_68 (A9), Celestiallunch\_63 (A9), Chadwick\_64 (A5), Chancellor\_63 (K4), Chargerpower\_62 (A22), Charm\_63 (A9), Che12\_65 (A2), CheetoDust\_59 (K1), Cheetobro\_63 (K4), Clautastrophe\_52 (L3), Clipper\_63 (K1), CogOmlette\_63 (A9), Collard\_52 (K5), Conquerage\_64 (A9), Conspiracy\_63 (A5), Coog\_59 (A5), CrimD\_61 (K1), Cuco\_61 (A5), Curiosium\_64 (K1), Dadosky\_56 (K5), Dalmuri\_60 (K1), DanSyl44\_66 (K4), Danforth\_67 (A8), DartGoblin\_63 (K1), DARTHPhader\_61 (A12), Deby\_60 (K1), Devera\_67 (K1), Diminimus\_120 (M1), Discoknowium\_60 (A5), Dixon\_66 (A8), Dole\_65 (K1), DoubleChamp\_51 (K5), DrHayes\_61 (K1), DreamTeam1\_63 (A9), Dublin\_60 (A5), Dulcita\_120 (M1), Durfee\_60 (K1), EdogawaKiddo\_64 (A9), Edugator\_53 (K5), Efra2\_64 (K1), Eidsmoe\_64 (A9), EITiger69\_64 (A5), Ellson\_52 (L3), EmyBug\_63 (A9), Eponine\_65 (K4), Estes\_136 (M2), Expelliarmus\_64 (A8), ExplosioNervosa\_64 (A9), Fayely\_64 (A9), Feyre\_57 (K5), Finnry\_52 (L3), Fionnbharth\_63 (K4), Florence1\_57 (A5), Florence4\_59 (A5), ForGetIt\_63 (A5), FreakyGoo\_120 (M1), Gail\_65 (A14), Ganymede\_61 (K1), GardenSalsa\_136 (M2), Gengar\_54 (K5), George\_57 (A5), Geraldini\_63 (K1), Ghoulboy\_62 (A5), Glaske16\_122 (M1), Groundhog\_66 (A8), Guanica15\_63 (K1), Guillsminger\_55 (K5), Hanray\_64 (A9), HedwigODU\_60 (K1), Heftyboy\_55 (K5), Horex\_64 (A9), Homura\_60 (K1), HortumSL17\_67 (A9), HuhtaEnerson15\_60 (A5), Hyperbowlee\_60 (K1), IPhane7\_117 (M1), Illumine\_65 (K1), Inky\_60 (K1), InvictusManeo\_52 (K5), Izel\_120 (M1), JAWS\_60 (K1), JF1\_63 (K4), Jabiru\_63 (A5), Jarvi\_60 (K1), Jayhawk\_61 (K1), Jeckyll\_60 (K1), Jeeves\_67 (A14), Jiawan\_63 (A9), Jobypre\_53 (L3), Jovo\_63 (A5), Joy99\_60 (K1), Jsquared\_65 (A2), Jubie\_52 (L3), Juliette\_65 (K4), Kingsolomon\_52 (L3), Kinmap\_63 (A21), KleverKiS\_122 (M1), Klodlith\_63 (A9), Koduck\_64 (A2), Kratio\_52 (K5), Kraw\_63 (K4), Krypton555\_54 (L3), Kumao\_92 (singleton), L5\_60 (A2), Larva\_55 (K5), LastHope\_63 (K1), LaterM\_60 (K1), Lebo14\_62 (K4), Leston\_54 (K5), Lev2\_63 (A5), LilhomieP\_119 (M1), Lilleskat\_62 (A9), LindNT\_59 (K1), LittleCherry\_60 (A5), Llorens\_60 (K1), Lolly9\_52 (L3), LoneWolf\_66 (A9), Luchador\_66 (A14), Lumos\_54 (L3), Lunahalos\_60 (K1), MacKat\_55 (K1), MajorMajor\_63 (A2), Malthus\_64 (K4), Maminiaina\_65 (A9), MarysWell\_60 (A5), MeaningOfLife\_61 (K1), MegTheThird\_63 (A9), Megsy\_62 (K1), Micasa\_60 (A5), Midas2\_59 (A5), Milcery\_60 (A5), MiniLon\_55 (L3), MiniMac\_55 (L3), Minispark\_63 (A9), Miryou\_58 (K5), Mitti\_63 (K4), Moostard\_52 (L3), MrMagoo\_138 (M2), MsGreen\_52 (L3), Murucutumbu\_61 (K1),

Mynx\_61 (K1), MyraDee\_60 (A18), Myxus\_66 (A9), Naca\_62 (A5), NearlyHeadless\_67 (A8), Neighly\_56 (K3), Nicholas\_52 (L3), Odin\_63 (A2), OkiRoe\_55 (K5), OmniCritical\_62 (K4), Omnicron\_58 (K5), Onglai\_64 (A9), PackMan\_65 (A9), Padpat\_62 (K1), Paola\_54 (K5), Peel\_60 (K1), PegLeg\_123 (M1), PetterN\_67 (A5), Ph8s\_65 (A2), Phaeder\_66 (A9), Pharaoh\_59 (A12), Phillis\_64 (A8), Phlorence\_61 (A5), Phonnegut\_67 (A9), Piatt\_60 (K1), PickleBack\_63 (A5), Pioneer\_67 (A9), Pokerus\_59 (K1), Prinashel1\_59 (A5), Prithvi\_61 (K1), Priya\_64 (A9), Psycho\_54 (K5), Qhanda\_65 (K4), Qobbit\_64 (A9), QuincyRose\_59 (K1), Quokka\_63 (A2), Rahalelujah\_65 (A9), Ramen\_61 (K1), Rando14\_56 (K5), Rapunzel97\_61 (K1), Red305\_53 (L3), Refuge\_61 (A12), Rey\_138 (M2), Roary\_68 (A8), RoseMarie\_128 (M1), Rosmarinus\_60 (K1), Ruthiejr\_64 (K4), RyeScarlet\_68 (A9), Sachima\_62 (A9), Saintus\_62 (A8), SamScheppers\_61 (K4), Samty\_52 (L3), SamuelLPlaqson\_61 (K1), Scherzo\_66 (A9), Scorpia\_64 (A5), Serenity\_64 (A2), SheaKeira\_62 (A9), ShiaSurprise\_61 (K1), Skinny\_125 (M1), Slarp\_63 (K4), SlimJimmy\_119 (M1), Slimphazie\_60 (K1), Smeadley\_67 (A8), Snenia\_52 (L3), SoSeph\_55 (K5), SororFago\_64 (A14), Spock\_60 (K1), Spouty\_64 (A9), Steamy\_60 (A12), Stellammi\_74 (UNK), Stephig9\_66 (A8), Stinson\_61 (K1), Sulley\_60 (K1), Sunhee\_66 (A14), Superchunk\_63 (A2), SwirlSquare\_69 (A2), Swirley\_62 (A5), SydNat\_62 (A5), Tachez\_60 (K1), TaiwanKao\_62 (K1), Taquito\_62 (K4), Tarynearal\_59 (A5), Theia\_59 (A5), Thyatira\_57 (K5), Tiger\_62 (A5), TingHuaYa\_62 (K1), TiniBug\_61 (K1), TipsytheTRex\_61 (A2), Tiri\_61 (K1), Topper\_60 (K1), TpudiCK\_121 (M1), TreyKay\_61 (K1), TriFive\_54 (L3), TruffulaTree\_60 (K1), Tubs\_66 (A9), Twigg\_58 (A5), Twitch\_60 (K1), TyDawg\_114 (M1), Ugenie5\_62 (A9), UnionJack\_63 (A5), Urkel\_61 (K1), Veliki\_61 (K1), ViviJ\_53 (K5), Waterfoul\_56 (K5), Whirlwind\_53 (L3), Wintermute\_63 (K4), WorldCup\_63 (A9), Y10\_61 (K4), Y2\_61 (K4), YasnayaPolyana\_62 (K4), YoureAdopted\_59 (K1), Yunkel11\_63 (K1), Zabiza\_55 (K1), Zavala\_62 (K1), Zimmer\_61 (A12), Zolita\_61 (A5),

#### Start 44:

- Found in 168 of 338 ( 49.7% ) of genes in pham
- Manual Annotations of this start: 4 of 284
- Called 4.2% of time when present
- Phage (with cluster) where this start called: AlishaPH\_60 (K1), Anma\_62 (K1), Atiba\_61 (K1), Emerson\_61 (K1), Padfoot\_60 (K1), Pisa1\_60 (K1), Pisa4\_54 (K1),

#### Start 46:

- Found in 53 of 338 ( 15.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 1.9% of time when present
- Phage (with cluster) where this start called: LilDirt\_51 (K5),

#### Start 47:

- Found in 4 of 338 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bobquesha\_64 (K4), MissDaisy\_60 (K4), Patt\_59 (K4), Reptar3000\_60 (K4),

#### Start 48:

- Found in 25 of 338 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 16.0% of time when present

- Phage (with cluster) where this start called: BourbonZero\_53 (L3), DuncansLeg\_53 (L3), KirDoubleO7\_51 (L3), LiyuLake\_52 (L3),

Start 51:

- Found in 2 of 338 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bromden\_52 (L4), ChutneyChips\_49 (L4),

Start 91:

- Found in 2 of 338 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Darrell\_67 (A9), Elephantoon\_64 (A9),

Start 93:

- Found in 1 of 338 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yecey3\_67 (A9),

Start 99:

- Found in 2 of 338 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 284
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mendokysei\_52 (T), Nette\_55 (T),

### **Summary by clusters:**

There are 23 clusters represented in this pham: singleton, K4, K3, K1, M1, K5, M2, K8, A14, A12, A18, A2, A5, A9, A8, L4, L3, UNK, A20, A21, A22, K7, T,

Info for manual annotations of cluster A12:

- Start number 43 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 43 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A18:

- Start number 43 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 36 was manually annotated 2 times for cluster A2.
- Start number 43 was manually annotated 9 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 43 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A22:

- Start number 43 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A5:

- Start number 43 was manually annotated 38 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 43 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 38 was manually annotated 2 times for cluster A9.
- Start number 40 was manually annotated 2 times for cluster A9.
- Start number 43 was manually annotated 28 times for cluster A9.
- Start number 91 was manually annotated 2 times for cluster A9.
- Start number 93 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster K1:

- Start number 43 was manually annotated 84 times for cluster K1.
- Start number 44 was manually annotated 4 times for cluster K1.

Info for manual annotations of cluster K4:

- Start number 43 was manually annotated 19 times for cluster K4.
- Start number 47 was manually annotated 3 times for cluster K4.

Info for manual annotations of cluster K5:

- Start number 43 was manually annotated 23 times for cluster K5.

Info for manual annotations of cluster K7:

- Start number 43 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 43 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L3:

- Start number 43 was manually annotated 18 times for cluster L3.
- Start number 48 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 51 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster M1:

- Start number 30 was manually annotated 1 time for cluster M1.
- Start number 43 was manually annotated 14 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 43 was manually annotated 4 times for cluster M2.

Info for manual annotations of cluster T:

- Start number 99 was manually annotated 1 time for cluster T.

***Gene Information:***

Gene: AN9\_66 Start: 40276, Stop: 40106, Start Num: 36  
Candidate Starts for AN9\_66:  
(Start: 36 @40276 has 2 MA's), (42, 40261), (72, 40183), (76, 40168), (80, 40159), (82, 40147), (86, 40123),

Gene: ANI8\_66 Start: 40276, Stop: 40106, Start Num: 36  
Candidate Starts for ANI8\_66:  
(Start: 36 @40276 has 2 MA's), (42, 40261), (72, 40183), (76, 40168), (80, 40159), (82, 40147), (86, 40123),

Gene: ActinUp\_60 Start: 41125, Stop: 41289, Start Num: 43  
Candidate Starts for ActinUp\_60:  
(35, 41110), (Start: 43 @41125 has 263 MA's), (Start: 44 @41131 has 4 MA's), (49, 41149), (86, 41278), (88, 41281),

Gene: Adephagia\_60 Start: 41132, Stop: 41296, Start Num: 43  
Candidate Starts for Adephagia\_60:  
(Start: 43 @41132 has 263 MA's), (Start: 44 @41138 has 4 MA's), (49, 41156), (72, 41231), (86, 41285), (88, 41288),

Gene: Adonis\_60 Start: 41367, Stop: 41531, Start Num: 43  
Candidate Starts for Adonis\_60:  
(Start: 43 @41367 has 263 MA's), (Start: 44 @41373 has 4 MA's), (49, 41391), (86, 41520), (88, 41523),

Gene: Adzzy\_66 Start: 39083, Stop: 38940, Start Num: 43  
Candidate Starts for Adzzy\_66:  
(Start: 43 @39083 has 263 MA's), (46, 39071), (76, 38990), (88, 38948),

Gene: Agent47\_54 Start: 38364, Stop: 38531, Start Num: 43  
Candidate Starts for Agent47\_54:  
(23, 38262), (Start: 43 @38364 has 263 MA's), (46, 38376), (49, 38388), (55, 38412), (72, 38463), (86, 38520), (88, 38523),

Gene: AgentM\_62 Start: 40126, Stop: 39974, Start Num: 43  
Candidate Starts for AgentM\_62:  
(Start: 43 @40126 has 263 MA's), (Start: 44 @40120 has 4 MA's), (49, 40108), (78, 40018), (86, 39985),

Gene: Ageofdapage\_63 Start: 42108, Stop: 42269, Start Num: 43  
Candidate Starts for Ageofdapage\_63:  
(Start: 43 @42108 has 263 MA's), (Start: 44 @42114 has 4 MA's), (49, 42132), (72, 42204), (86, 42258), (88, 42261),

Gene: Airmid\_62 Start: 40118, Stop: 39966, Start Num: 43  
Candidate Starts for Airmid\_62:  
(Start: 43 @40118 has 263 MA's), (Start: 44 @40112 has 4 MA's), (49, 40100), (77, 40013), (86, 39977),

Gene: AlishaPH\_60 Start: 41399, Stop: 41557, Start Num: 44  
Candidate Starts for AlishaPH\_60:  
(Start: 43 @41393 has 263 MA's), (Start: 44 @41399 has 4 MA's), (49, 41417), (72, 41492), (86, 41546), (88, 41549),

Gene: Aliter\_67 Start: 40348, Stop: 40199, Start Num: 43

Candidate Starts for Aliter\_67:

(Start: 43 @40348 has 263 MA's), (Start: 44 @40342 has 4 MA's), (49, 40330), (68, 40264), (82, 40234), (86, 40210),

Gene: AlleyCat\_56 Start: 38668, Stop: 38835, Start Num: 43

Candidate Starts for AlleyCat\_56:

(23, 38566), (Start: 43 @38668 has 263 MA's), (46, 38680), (49, 38692), (55, 38716), (72, 38767), (84, 38809), (86, 38824), (88, 38827),

Gene: Alma\_64 Start: 40243, Stop: 40094, Start Num: 43

Candidate Starts for Alma\_64:

(Start: 43 @40243 has 263 MA's), (Start: 44 @40237 has 4 MA's), (49, 40225), (68, 40159), (82, 40129), (86, 40105),

Gene: Aminay\_60 Start: 40828, Stop: 40986, Start Num: 43

Candidate Starts for Aminay\_60:

(Start: 43 @40828 has 263 MA's), (46, 40840), (49, 40852), (78, 40942), (85, 40966), (86, 40975),

Gene: Anaya\_62 Start: 41648, Stop: 41815, Start Num: 43

Candidate Starts for Anaya\_62:

(Start: 43 @41648 has 263 MA's), (Start: 44 @41654 has 4 MA's), (82, 41780), (84, 41789), (86, 41804), (88, 41807),

Gene: Angelica\_60 Start: 41275, Stop: 41439, Start Num: 43

Candidate Starts for Angelica\_60:

(Start: 43 @41275 has 263 MA's), (Start: 44 @41281 has 4 MA's), (49, 41299), (72, 41374), (82, 41404), (86, 41428),

Gene: Anma\_62 Start: 42025, Stop: 42177, Start Num: 44

Candidate Starts for Anma\_62:

(Start: 43 @42019 has 263 MA's), (Start: 44 @42025 has 4 MA's), (49, 42043), (50, 42046), (82, 42142), (86, 42166), (88, 42169),

Gene: Anthony\_65 Start: 40664, Stop: 40509, Start Num: 43

Candidate Starts for Anthony\_65:

(Start: 43 @40664 has 263 MA's), (Start: 44 @40658 has 4 MA's), (49, 40646), (55, 40622), (85, 40529), (86, 40520),

Gene: Apocalypse\_63 Start: 42044, Stop: 42205, Start Num: 43

Candidate Starts for Apocalypse\_63:

(Start: 43 @42044 has 263 MA's), (Start: 44 @42050 has 4 MA's), (49, 42068), (72, 42140), (82, 42170), (86, 42194),

Gene: Aragog\_62 Start: 40146, Stop: 39994, Start Num: 43

Candidate Starts for Aragog\_62:

(Start: 43 @40146 has 263 MA's), (Start: 44 @40140 has 4 MA's), (49, 40128), (78, 40038), (86, 40005),

Gene: Archetta\_60 Start: 40330, Stop: 40178, Start Num: 43

Candidate Starts for Archetta\_60:

(Start: 43 @40330 has 263 MA's), (49, 40312), (78, 40222), (86, 40189),

Gene: Arissanae\_64 Start: 40777, Stop: 40631, Start Num: 40

Candidate Starts for Arissanae\_64:

(Start: 38 @40783 has 2 MA's), (Start: 40 @40777 has 2 MA's), (83, 40654), (86, 40642),

Gene: Asayake\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for Asayake\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: Astro\_67 Start: 39968, Stop: 39795, Start Num: 43

Candidate Starts for Astro\_67:

(Start: 43 @39968 has 263 MA's), (49, 39950), (68, 39872), (86, 39806),

Gene: Atiba\_61 Start: 41101, Stop: 41259, Start Num: 44

Candidate Starts for Atiba\_61:

(Start: 43 @41095 has 263 MA's), (Start: 44 @41101 has 4 MA's), (49, 41119), (72, 41194), (86, 41248), (88, 41251),

Gene: Auspice\_119 Start: 63668, Stop: 63817, Start Num: 43

Candidate Starts for Auspice\_119:

(Start: 43 @63668 has 263 MA's), (46, 63680), (52, 63701), (53, 63704), (55, 63710), (61, 63731), (86, 63806),

Gene: Ayanochan\_64 Start: 40026, Stop: 39877, Start Num: 43

Candidate Starts for Ayanochan\_64:

(Start: 43 @40026 has 263 MA's), (Start: 44 @40020 has 4 MA's), (49, 40008), (68, 39942), (82, 39912), (86, 39888),

Gene: BEEST\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for BEEST\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: BGlluviae\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for BGlluviae\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: BaghaKamala\_59 Start: 40476, Stop: 40640, Start Num: 43

Candidate Starts for BaghaKamala\_59:

(Start: 43 @40476 has 263 MA's), (Start: 44 @40482 has 4 MA's), (72, 40575), (82, 40605), (86, 40629), (88, 40632),

Gene: BananenDer11\_51 Start: 38325, Stop: 38492, Start Num: 43

Candidate Starts for BananenDer11\_51:

(23, 38223), (Start: 43 @38325 has 263 MA's), (46, 38337), (49, 38349), (55, 38373), (72, 38424), (86, 38481), (88, 38484),

Gene: BarrelRoll\_60 Start: 41099, Stop: 41263, Start Num: 43

Candidate Starts for BarrelRoll\_60:

(Start: 43 @41099 has 263 MA's), (Start: 44 @41105 has 4 MA's), (49, 41123), (72, 41198), (82, 41228), (84, 41237), (86, 41252),

Gene: Beemo\_67 Start: 40518, Stop: 40369, Start Num: 43

Candidate Starts for Beemo\_67:

(Start: 43 @40518 has 263 MA's), (Start: 44 @40512 has 4 MA's), (49, 40500), (68, 40434), (82, 40404), (86, 40380),

Gene: Beezoo\_62 Start: 42083, Stop: 42247, Start Num: 43

Candidate Starts for Beezoo\_62:

(Start: 43 @42083 has 263 MA's), (Start: 44 @42089 has 4 MA's), (49, 42107), (82, 42212), (86, 42236),

Gene: Bella96\_61 Start: 41864, Stop: 42022, Start Num: 43

Candidate Starts for Bella96\_61:

(Start: 43 @41864 has 263 MA's), (Start: 44 @41870 has 4 MA's), (49, 41888), (82, 41987), (86, 42011), (88, 42014),

Gene: Belladonna\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Belladonna\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Bellis\_53 Start: 40421, Stop: 40579, Start Num: 43

Candidate Starts for Bellis\_53:

(Start: 43 @40421 has 263 MA's), (Start: 48 @40439 has 1 MA's), (58, 40475), (84, 40553), (86, 40568),

Gene: Bellris\_63 Start: 39913, Stop: 39764, Start Num: 43

Candidate Starts for Bellris\_63:

(Start: 38 @39922 has 2 MA's), (Start: 43 @39913 has 263 MA's), (66, 39832), (68, 39829), (86, 39775),

Gene: Benedict\_64 Start: 40407, Stop: 40219, Start Num: 43

Candidate Starts for Benedict\_64:

(Start: 43 @40407 has 263 MA's), (Start: 44 @40401 has 4 MA's), (49, 40389), (77, 40302), (86, 40266), (90, 40236),

Gene: Bern\_61 Start: 40066, Stop: 40233, Start Num: 43

Candidate Starts for Bern\_61:

(Start: 43 @40066 has 263 MA's), (Start: 44 @40072 has 4 MA's), (72, 40168), (82, 40198), (86, 40222), (88, 40225),

Gene: Blizzard\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for Blizzard\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: Bluefalcon\_58 Start: 40350, Stop: 40198, Start Num: 43

Candidate Starts for Bluefalcon\_58:

(Start: 43 @40350 has 263 MA's), (49, 40332), (78, 40242), (86, 40209),

Gene: Bobquesha\_64 Start: 39659, Stop: 39811, Start Num: 47

Candidate Starts for Bobquesha\_64:

(Start: 47 @39659 has 3 MA's), (69, 39734), (78, 39767), (86, 39800),

Gene: BogosyJay\_65 Start: 40318, Stop: 40169, Start Num: 43  
Candidate Starts for BogosyJay\_65:  
(Start: 43 @40318 has 263 MA's), (49, 40300), (64, 40240), (68, 40234), (82, 40204), (86, 40180),

Gene: Boiiii\_60 Start: 41449, Stop: 41613, Start Num: 43  
Candidate Starts for Boiiii\_60:  
(Start: 43 @41449 has 263 MA's), (Start: 44 @41455 has 4 MA's), (49, 41473), (72, 41548), (86, 41602), (88, 41605),

Gene: Boilgate\_55 Start: 40489, Stop: 40644, Start Num: 43  
Candidate Starts for Boilgate\_55:  
(15, 40279), (29, 40441), (41, 40486), (Start: 43 @40489 has 263 MA's), (49, 40513), (75, 40588), (82, 40609), (86, 40633),

Gene: Bonamassa\_60 Start: 39968, Stop: 39816, Start Num: 43  
Candidate Starts for Bonamassa\_60:  
(Start: 43 @39968 has 263 MA's), (Start: 44 @39962 has 4 MA's), (49, 39950), (78, 39860), (86, 39827),

Gene: Bongo\_119 Start: 63284, Stop: 63433, Start Num: 43  
Candidate Starts for Bongo\_119:  
(Start: 43 @63284 has 263 MA's), (46, 63296), (52, 63317), (53, 63320), (55, 63326), (61, 63347), (86, 63422),

Gene: BourbonZero\_53 Start: 40479, Stop: 40625, Start Num: 48  
Candidate Starts for BourbonZero\_53:  
(Start: 43 @40464 has 263 MA's), (Start: 48 @40479 has 1 MA's), (58, 40515), (63, 40530), (72, 40557), (84, 40599), (86, 40614),

Gene: Bradman\_64 Start: 39432, Stop: 39280, Start Num: 43  
Candidate Starts for Bradman\_64:  
(27, 39489), (Start: 43 @39432 has 263 MA's), (77, 39339), (82, 39327), (86, 39303),

Gene: Bricole\_121 Start: 63432, Stop: 63581, Start Num: 43  
Candidate Starts for Bricole\_121:  
(Start: 43 @63432 has 263 MA's), (46, 63444), (52, 63465), (53, 63468), (55, 63474), (61, 63495), (86, 63570),

Gene: Bromden\_52 Start: 39680, Stop: 39823, Start Num: 51  
Candidate Starts for Bromden\_52:  
(32, 39617), (Start: 51 @39680 has 1 MA's), (60, 39722), (62, 39728), (86, 39812),

Gene: CREW\_60 Start: 41250, Stop: 41414, Start Num: 43  
Candidate Starts for CREW\_60:  
(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Caitlin\_65 Start: 39675, Stop: 39502, Start Num: 43  
Candidate Starts for Caitlin\_65:  
(Start: 43 @39675 has 263 MA's), (49, 39657), (86, 39513),

Gene: CallaLilly\_60 Start: 41173, Stop: 41337, Start Num: 43

Candidate Starts for CallaLilly\_60:

(Start: 43 @41173 has 263 MA's), (Start: 44 @41179 has 4 MA's), (49, 41197), (72, 41272), (86, 41326), (88, 41329),

Gene: Capricorn\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Capricorn\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Caraxes\_64 Start: 38825, Stop: 38673, Start Num: 43

Candidate Starts for Caraxes\_64:

(Start: 43 @38825 has 263 MA's), (77, 38732), (82, 38720), (86, 38696), (88, 38693),

Gene: CaseJules\_62 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for CaseJules\_62:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: Catalina\_68 Start: 40421, Stop: 40272, Start Num: 43

Candidate Starts for Catalina\_68:

(Start: 43 @40421 has 263 MA's), (Start: 44 @40415 has 4 MA's), (49, 40403), (68, 40337), (82, 40307), (86, 40283),

Gene: Celestiallunch\_63 Start: 39862, Stop: 39704, Start Num: 43

Candidate Starts for Celestiallunch\_63:

(Start: 38 @39871 has 2 MA's), (Start: 43 @39862 has 263 MA's), (64, 39784), (73, 39760), (82, 39739), (86, 39715),

Gene: Chadwick\_64 Start: 40094, Stop: 39942, Start Num: 43

Candidate Starts for Chadwick\_64:

(Start: 43 @40094 has 263 MA's), (Start: 44 @40088 has 4 MA's), (49, 40076), (77, 39989), (86, 39953),

Gene: Chancellor\_63 Start: 40757, Stop: 40921, Start Num: 43

Candidate Starts for Chancellor\_63:

(11, 40532), (28, 40709), (31, 40730), (Start: 43 @40757 has 263 MA's), (49, 40781), (69, 40844), (78, 40877), (86, 40910),

Gene: Chargerpower\_62 Start: 38721, Stop: 38578, Start Num: 43

Candidate Starts for Chargerpower\_62:

(12, 38973), (13, 38970), (Start: 38 @38730 has 2 MA's), (Start: 43 @38721 has 263 MA's), (Start: 44 @38715 has 4 MA's), (68, 38634), (86, 38589),

Gene: Charm\_63 Start: 39921, Stop: 39760, Start Num: 43

Candidate Starts for Charm\_63:

(1, 40392), (10, 40179), (Start: 38 @39930 has 2 MA's), (Start: 43 @39921 has 263 MA's), (86, 39771),

Gene: Che12\_65 Start: 39044, Stop: 38901, Start Num: 43

Candidate Starts for Che12\_65:

(Start: 43 @39044 has 263 MA's), (46, 39032), (49, 39026), (76, 38951), (88, 38909),

Gene: CheetoDust\_59 Start: 40520, Stop: 40687, Start Num: 43

Candidate Starts for CheetoDust\_59:

(Start: 43 @40520 has 263 MA's), (Start: 44 @40526 has 4 MA's), (72, 40622), (82, 40652), (86, 40676), (88, 40679),

Gene: Cheetobro\_63 Start: 40754, Stop: 40918, Start Num: 43

Candidate Starts for Cheetobro\_63:

(11, 40529), (28, 40706), (31, 40727), (Start: 43 @40754 has 263 MA's), (49, 40778), (69, 40841), (78, 40874), (86, 40907),

Gene: ChutneyChips\_49 Start: 39044, Stop: 39187, Start Num: 51

Candidate Starts for ChutneyChips\_49:

(Start: 51 @39044 has 1 MA's), (60, 39086), (62, 39092), (86, 39176),

Gene: Clautastrophe\_52 Start: 40418, Stop: 40576, Start Num: 43

Candidate Starts for Clautastrophe\_52:

(Start: 43 @40418 has 263 MA's), (Start: 48 @40436 has 1 MA's), (58, 40472), (84, 40550), (86, 40565),

Gene: Clipper\_63 Start: 41698, Stop: 41862, Start Num: 43

Candidate Starts for Clipper\_63:

(Start: 43 @41698 has 263 MA's), (Start: 44 @41704 has 4 MA's), (49, 41722), (72, 41797), (86, 41851), (88, 41854),

Gene: CogOmlette\_63 Start: 39910, Stop: 39761, Start Num: 43

Candidate Starts for CogOmlette\_63:

(Start: 38 @39919 has 2 MA's), (Start: 43 @39910 has 263 MA's), (66, 39829), (68, 39826), (86, 39772),

Gene: Collard\_52 Start: 38325, Stop: 38492, Start Num: 43

Candidate Starts for Collard\_52:

(23, 38223), (Start: 43 @38325 has 263 MA's), (46, 38337), (49, 38349), (55, 38373), (72, 38424), (86, 38481), (88, 38484),

Gene: Conquerage\_64 Start: 40012, Stop: 39863, Start Num: 43

Candidate Starts for Conquerage\_64:

(Start: 43 @40012 has 263 MA's), (Start: 44 @40006 has 4 MA's), (49, 39994), (68, 39928), (82, 39898), (86, 39874),

Gene: Conspiracy\_63 Start: 40368, Stop: 40216, Start Num: 43

Candidate Starts for Conspiracy\_63:

(Start: 43 @40368 has 263 MA's), (Start: 44 @40362 has 4 MA's), (49, 40350), (78, 40260), (86, 40227),

Gene: Coog\_59 Start: 40182, Stop: 40030, Start Num: 43

Candidate Starts for Coog\_59:

(Start: 43 @40182 has 263 MA's), (Start: 44 @40176 has 4 MA's), (49, 40164), (78, 40074), (86, 40041),

Gene: CrimD\_61 Start: 41656, Stop: 41820, Start Num: 43

Candidate Starts for CrimD\_61:

(Start: 43 @41656 has 263 MA's), (Start: 44 @41662 has 4 MA's), (49, 41680), (72, 41755), (86, 41809), (88, 41812),

Gene: Cuco\_61 Start: 40042, Stop: 39890, Start Num: 43

Candidate Starts for Cuco\_61:

(Start: 43 @40042 has 263 MA's), (Start: 44 @40036 has 4 MA's), (49, 40024), (78, 39934), (86, 39901),

Gene: Curiosium\_64 Start: 40772, Stop: 40939, Start Num: 43

Candidate Starts for Curiosium\_64:

(Start: 43 @40772 has 263 MA's), (Start: 44 @40778 has 4 MA's), (56, 40826), (82, 40904), (84, 40913), (85, 40919), (86, 40928), (88, 40931),

Gene: DS6A\_39 Start: 32218, Stop: 32024, Start Num: 34

Candidate Starts for DS6A\_39:

(Start: 34 @32218 has 1 MA's), (50, 32176), (79, 32074), (82, 32065), (86, 32041), (87, 32038),

Gene: Dadosky\_56 Start: 38670, Stop: 38837, Start Num: 43

Candidate Starts for Dadosky\_56:

(23, 38568), (Start: 43 @38670 has 263 MA's), (46, 38682), (49, 38694), (55, 38718), (72, 38769), (84, 38811), (86, 38826), (88, 38829),

Gene: Dalmuri\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Dalmuri\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: DanSyl44\_66 Start: 41948, Stop: 42112, Start Num: 43

Candidate Starts for DanSyl44\_66:

(11, 41723), (28, 41900), (31, 41921), (Start: 43 @41948 has 263 MA's), (69, 42035), (78, 42068), (86, 42101),

Gene: Danforth\_67 Start: 40022, Stop: 39849, Start Num: 43

Candidate Starts for Danforth\_67:

(Start: 43 @40022 has 263 MA's), (49, 40004), (86, 39860),

Gene: Darrell\_67 Start: 40849, Stop: 40700, Start Num: 91

Candidate Starts for Darrell\_67:

(25, 41098), (Start: 91 @40849 has 2 MA's), (92, 40831), (94, 40711),

Gene: DartGoblin\_63 Start: 41836, Stop: 41994, Start Num: 43

Candidate Starts for DartGoblin\_63:

(Start: 43 @41836 has 263 MA's), (Start: 44 @41842 has 4 MA's), (49, 41860), (82, 41959), (86, 41983), (88, 41986),

Gene: DARTHPhader\_61 Start: 41122, Stop: 40982, Start Num: 43

Candidate Starts for DARTHPhader\_61:

(33, 41149), (Start: 43 @41122 has 263 MA's), (Start: 44 @41116 has 4 MA's), (49, 41104), (82, 41017), (86, 40993),

Gene: Deby\_60 Start: 41297, Stop: 41464, Start Num: 43

Candidate Starts for Deby\_60:

(Start: 43 @41297 has 263 MA's), (Start: 44 @41303 has 4 MA's), (52, 41336), (72, 41399), (82, 41429), (86, 41453), (88, 41456),

Gene: Devera\_67 Start: 42665, Stop: 42826, Start Num: 43

Candidate Starts for Devera\_67:

(Start: 43 @42665 has 263 MA's), (Start: 44 @42671 has 4 MA's), (49, 42689), (72, 42761), (86, 42815), (88, 42818),

Gene: Diminimus\_120 Start: 63279, Stop: 63428, Start Num: 43

Candidate Starts for Diminimus\_120:

(Start: 43 @63279 has 263 MA's), (46, 63291), (52, 63312), (53, 63315), (55, 63321), (61, 63342), (86, 63417),

Gene: Discoknowium\_60 Start: 39885, Stop: 39733, Start Num: 43

Candidate Starts for Discoknowium\_60:

(Start: 43 @39885 has 263 MA's), (Start: 44 @39879 has 4 MA's), (49, 39867), (78, 39777), (86, 39744),

Gene: Dixon\_66 Start: 39542, Stop: 39369, Start Num: 43

Candidate Starts for Dixon\_66:

(Start: 43 @39542 has 263 MA's), (49, 39524), (86, 39380),

Gene: Dole\_65 Start: 42668, Stop: 42829, Start Num: 43

Candidate Starts for Dole\_65:

(Start: 43 @42668 has 263 MA's), (Start: 44 @42674 has 4 MA's), (49, 42692), (72, 42764), (86, 42818), (88, 42821),

Gene: DoubleChamp\_51 Start: 38325, Stop: 38492, Start Num: 43

Candidate Starts for DoubleChamp\_51:

(23, 38223), (Start: 43 @38325 has 263 MA's), (46, 38337), (49, 38349), (55, 38373), (72, 38424), (86, 38481), (88, 38484),

Gene: DrHayes\_61 Start: 42019, Stop: 42177, Start Num: 43

Candidate Starts for DrHayes\_61:

(Start: 43 @42019 has 263 MA's), (Start: 44 @42025 has 4 MA's), (49, 42043), (50, 42046), (82, 42142), (86, 42166), (88, 42169),

Gene: DreamTeam1\_63 Start: 39753, Stop: 39592, Start Num: 43

Candidate Starts for DreamTeam1\_63:

(1, 40224), (10, 40011), (Start: 38 @39762 has 2 MA's), (Start: 43 @39753 has 263 MA's), (86, 39603),

Gene: Dublin\_60 Start: 40039, Stop: 39890, Start Num: 43

Candidate Starts for Dublin\_60:

(Start: 43 @40039 has 263 MA's), (Start: 44 @40033 has 4 MA's), (52, 40006), (77, 39937), (78, 39934), (86, 39901),

Gene: Dulcita\_120 Start: 63280, Stop: 63429, Start Num: 43

Candidate Starts for Dulcita\_120:

(Start: 43 @63280 has 263 MA's), (46, 63292), (52, 63313), (53, 63316), (55, 63322), (61, 63343), (86, 63418),

Gene: DuncansLeg\_53 Start: 40461, Stop: 40607, Start Num: 48

Candidate Starts for DuncansLeg\_53:

(Start: 43 @40446 has 263 MA's), (Start: 48 @40461 has 1 MA's), (58, 40497), (63, 40512), (84, 40581), (86, 40596),

Gene: Durfee\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for Durfee\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: EdogawaKiddo\_64 Start: 40388, Stop: 40239, Start Num: 43

Candidate Starts for EdogawaKiddo\_64:

(Start: 43 @40388 has 263 MA's), (Start: 44 @40382 has 4 MA's), (49, 40370), (68, 40304), (82, 40274), (86, 40250),

Gene: Edugator\_53 Start: 40091, Stop: 40258, Start Num: 43

Candidate Starts for Edugator\_53:

(23, 39989), (Start: 43 @40091 has 263 MA's), (46, 40103), (49, 40115), (55, 40139), (72, 40190), (84, 40232), (86, 40247), (88, 40250),

Gene: Efra2\_64 Start: 41207, Stop: 41377, Start Num: 43

Candidate Starts for Efra2\_64:

(Start: 43 @41207 has 263 MA's), (46, 41219), (50, 41234), (67, 41297), (71, 41309), (86, 41366), (88, 41369),

Gene: Eidsmoe\_64 Start: 40004, Stop: 39855, Start Num: 43

Candidate Starts for Eidsmoe\_64:

(Start: 43 @40004 has 263 MA's), (Start: 44 @39998 has 4 MA's), (49, 39986), (68, 39920), (82, 39890), (86, 39866),

Gene: EITiger69\_64 Start: 40342, Stop: 40190, Start Num: 43

Candidate Starts for EITiger69\_64:

(Start: 43 @40342 has 263 MA's), (Start: 44 @40336 has 4 MA's), (49, 40324), (77, 40237), (86, 40201),

Gene: Elephantoon\_64 Start: 39594, Stop: 39445, Start Num: 91

Candidate Starts for Elephantoon\_64:

(25, 39897), (54, 39756), (Start: 91 @39594 has 2 MA's), (92, 39576), (94, 39456),

Gene: Ellson\_52 Start: 40476, Stop: 40637, Start Num: 43

Candidate Starts for Ellson\_52:

(Start: 43 @40476 has 263 MA's), (Start: 48 @40491 has 1 MA's), (58, 40527), (63, 40542), (84, 40611), (86, 40626),

Gene: Emerson\_61 Start: 41122, Stop: 41280, Start Num: 44

Candidate Starts for Emerson\_61:

(Start: 43 @41116 has 263 MA's), (Start: 44 @41122 has 4 MA's), (49, 41140), (72, 41215), (86, 41269), (88, 41272),

Gene: EmyBug\_63 Start: 40006, Stop: 39857, Start Num: 43

Candidate Starts for EmyBug\_63:

(Start: 43 @40006 has 263 MA's), (Start: 44 @40000 has 4 MA's), (49, 39988), (68, 39922), (82, 39892), (86, 39868),

Gene: Eponine\_65 Start: 41600, Stop: 41764, Start Num: 43

Candidate Starts for Eponine\_65:

(11, 41375), (28, 41552), (31, 41573), (Start: 43 @41600 has 263 MA's), (49, 41624), (69, 41687), (78, 41720), (86, 41753),

Gene: Estes\_136 Start: 65447, Stop: 65605, Start Num: 43

Candidate Starts for Estes\_136:

(37, 65435), (Start: 43 @65447 has 263 MA's), (49, 65465), (55, 65489), (74, 65546), (75, 65549), (82, 65570), (86, 65594),

Gene: Expelliarmus\_64 Start: 39746, Stop: 39573, Start Num: 43

Candidate Starts for Expelliarmus\_64:

(Start: 43 @39746 has 263 MA's), (49, 39728), (86, 39584),

Gene: ExplosioNervosa\_64 Start: 40072, Stop: 39923, Start Num: 43

Candidate Starts for ExplosioNervosa\_64:

(Start: 43 @40072 has 263 MA's), (Start: 44 @40066 has 4 MA's), (49, 40054), (68, 39988), (82, 39958), (86, 39934),

Gene: FatCactus\_59 Start: 39594, Stop: 39439, Start Num: 40

Candidate Starts for FatCactus\_59:

(Start: 40 @39594 has 2 MA's), (Start: 44 @39585 has 4 MA's), (49, 39573), (72, 39504), (82, 39474), (85, 39459), (86, 39450),

Gene: Fayely\_64 Start: 39973, Stop: 39824, Start Num: 43

Candidate Starts for Fayely\_64:

(Start: 43 @39973 has 263 MA's), (Start: 44 @39967 has 4 MA's), (49, 39955), (68, 39889), (82, 39859), (86, 39835),

Gene: Feyre\_57 Start: 42050, Stop: 42217, Start Num: 43

Candidate Starts for Feyre\_57:

(Start: 43 @42050 has 263 MA's), (46, 42062), (49, 42074), (55, 42098), (72, 42149), (84, 42191), (86, 42206), (88, 42209),

Gene: Finnry\_52 Start: 40683, Stop: 40844, Start Num: 43

Candidate Starts for Finnry\_52:

(Start: 43 @40683 has 263 MA's), (Start: 48 @40701 has 1 MA's), (58, 40737), (84, 40818), (86, 40833),

Gene: Fionnbharth\_63 Start: 40998, Stop: 41162, Start Num: 43

Candidate Starts for Fionnbharth\_63:

(11, 40773), (28, 40950), (31, 40971), (Start: 43 @40998 has 263 MA's), (49, 41022), (69, 41085), (78, 41118), (86, 41151),

Gene: Florence1\_57 Start: 39480, Stop: 39328, Start Num: 43

Candidate Starts for Florence1\_57:

(Start: 43 @39480 has 263 MA's), (Start: 44 @39474 has 4 MA's), (49, 39462), (78, 39372), (86, 39339),

Gene: Florence4\_59 Start: 39480, Stop: 39328, Start Num: 43

Candidate Starts for Florence4\_59:

(Start: 43 @39480 has 263 MA's), (Start: 44 @39474 has 4 MA's), (49, 39462), (78, 39372), (86, 39339),

Gene: ForGetIt\_63 Start: 40393, Stop: 40241, Start Num: 43

Candidate Starts for ForGetIt\_63:

(Start: 43 @40393 has 263 MA's), (Start: 44 @40387 has 4 MA's), (49, 40375), (78, 40285), (86, 40252),

Gene: FreakyGoo\_120 Start: 63764, Stop: 63913, Start Num: 43  
Candidate Starts for FreakyGoo\_120:  
(Start: 43 @63764 has 263 MA's), (46, 63776), (52, 63797), (53, 63800), (55, 63806), (61, 63827), (86, 63902),

Gene: Gail\_65 Start: 41004, Stop: 40843, Start Num: 43  
Candidate Starts for Gail\_65:  
(22, 41157), (Start: 43 @41004 has 263 MA's), (Start: 44 @40998 has 4 MA's), (64, 40926), (82, 40878), (86, 40854),

Gene: Ganymede\_61 Start: 41511, Stop: 41675, Start Num: 43  
Candidate Starts for Ganymede\_61:  
(Start: 43 @41511 has 263 MA's), (Start: 44 @41517 has 4 MA's), (49, 41535), (72, 41610), (82, 41640), (86, 41664), (88, 41667),

Gene: GardenSalsa\_136 Start: 65626, Stop: 65784, Start Num: 43  
Candidate Starts for GardenSalsa\_136:  
(Start: 43 @65626 has 263 MA's), (49, 65644), (55, 65668), (74, 65725), (82, 65749), (86, 65773),

Gene: Gengar\_54 Start: 40069, Stop: 40236, Start Num: 43  
Candidate Starts for Gengar\_54:  
(3, 39766), (4, 39775), (23, 39967), (Start: 43 @40069 has 263 MA's), (46, 40081), (49, 40093), (55, 40117), (72, 40168), (84, 40210), (86, 40225), (88, 40228),

Gene: George\_57 Start: 39712, Stop: 39560, Start Num: 43  
Candidate Starts for George\_57:  
(Start: 43 @39712 has 263 MA's), (Start: 44 @39706 has 4 MA's), (49, 39694), (78, 39604),

Gene: Geraldini\_63 Start: 42165, Stop: 42332, Start Num: 43  
Candidate Starts for Geraldini\_63:  
(Start: 43 @42165 has 263 MA's), (Start: 44 @42171 has 4 MA's), (82, 42297), (84, 42306), (86, 42321),

Gene: Ghoulboy\_62 Start: 40604, Stop: 40452, Start Num: 43  
Candidate Starts for Ghoulboy\_62:  
(Start: 43 @40604 has 263 MA's), (49, 40586), (78, 40496), (86, 40463),

Gene: Glaske16\_122 Start: 64397, Stop: 64546, Start Num: 43  
Candidate Starts for Glaske16\_122:  
(Start: 43 @64397 has 263 MA's), (46, 64409), (52, 64430), (53, 64433), (55, 64439), (61, 64460), (86, 64535),

Gene: Groundhog\_66 Start: 39946, Stop: 39773, Start Num: 43  
Candidate Starts for Groundhog\_66:  
(Start: 43 @39946 has 263 MA's), (49, 39928), (68, 39850), (86, 39784),

Gene: Guanica15\_63 Start: 40948, Stop: 41118, Start Num: 43  
Candidate Starts for Guanica15\_63:  
(Start: 43 @40948 has 263 MA's), (46, 40960), (50, 40975), (67, 41038), (71, 41050), (86, 41107), (88, 41110),

Gene: Guillsminger\_55 Start: 40040, Stop: 40207, Start Num: 43  
Candidate Starts for Guillsminger\_55:

(3, 39737), (4, 39746), (23, 39938), (Start: 43 @40040 has 263 MA's), (46, 40052), (49, 40064), (55, 40088), (72, 40139), (84, 40181), (86, 40196),

Gene: Hanray\_64 Start: 40336, Stop: 40187, Start Num: 43

Candidate Starts for Hanray\_64:

(Start: 43 @40336 has 263 MA's), (Start: 44 @40330 has 4 MA's), (49, 40318), (68, 40252), (82, 40222), (86, 40198),

Gene: HedwigODU\_60 Start: 41125, Stop: 41289, Start Num: 43

Candidate Starts for HedwigODU\_60:

(35, 41110), (Start: 43 @41125 has 263 MA's), (Start: 44 @41131 has 4 MA's), (49, 41149), (86, 41278), (88, 41281),

Gene: Heftyboy\_55 Start: 40412, Stop: 40579, Start Num: 43

Candidate Starts for Heftyboy\_55:

(3, 40109), (4, 40118), (23, 40310), (Start: 43 @40412 has 263 MA's), (46, 40424), (49, 40436), (55, 40460), (72, 40511), (84, 40553), (86, 40568),

Gene: Horex\_64 Start: 40352, Stop: 40203, Start Num: 43

Candidate Starts for Horex\_64:

(Start: 43 @40352 has 263 MA's), (Start: 44 @40346 has 4 MA's), (49, 40334), (68, 40268), (82, 40238), (86, 40214),

Gene: Homura\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Homura\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: HortumSL17\_67 Start: 40420, Stop: 40271, Start Num: 43

Candidate Starts for HortumSL17\_67:

(Start: 43 @40420 has 263 MA's), (Start: 44 @40414 has 4 MA's), (49, 40402), (68, 40336), (82, 40306), (86, 40282),

Gene: HuhtaEnerson15\_60 Start: 39862, Stop: 39710, Start Num: 43

Candidate Starts for HuhtaEnerson15\_60:

(Start: 43 @39862 has 263 MA's), (Start: 44 @39856 has 4 MA's), (49, 39844), (78, 39754), (86, 39721),

Gene: Hyperbowlee\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for Hyperbowlee\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: IPHane7\_117 Start: 63284, Stop: 63433, Start Num: 43

Candidate Starts for IPHane7\_117:

(Start: 43 @63284 has 263 MA's), (46, 63296), (52, 63317), (53, 63320), (55, 63326), (61, 63347), (86, 63422),

Gene: Illumine\_65 Start: 42667, Stop: 42828, Start Num: 43

Candidate Starts for Illumine\_65:

(Start: 43 @42667 has 263 MA's), (Start: 44 @42673 has 4 MA's), (49, 42691), (72, 42763), (86, 42817), (88, 42820),

Gene: Inky\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Inky\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: InvictusManeo\_52 Start: 38368, Stop: 38535, Start Num: 43

Candidate Starts for InvictusManeo\_52:

(23, 38266), (Start: 43 @38368 has 263 MA's), (46, 38380), (49, 38392), (55, 38416), (72, 38467), (86, 38524), (88, 38527),

Gene: Izel\_120 Start: 63279, Stop: 63428, Start Num: 43

Candidate Starts for Izel\_120:

(Start: 43 @63279 has 263 MA's), (46, 63291), (52, 63312), (53, 63315), (55, 63321), (61, 63342), (86, 63417),

Gene: JAWS\_60 Start: 41105, Stop: 41263, Start Num: 43

Candidate Starts for JAWS\_60:

(Start: 43 @41105 has 263 MA's), (Start: 44 @41111 has 4 MA's), (49, 41129), (72, 41198), (86, 41252), (88, 41255),

Gene: JF1\_63 Start: 40915, Stop: 41079, Start Num: 43

Candidate Starts for JF1\_63:

(11, 40690), (28, 40867), (31, 40888), (Start: 43 @40915 has 263 MA's), (49, 40939), (69, 41002), (78, 41035), (86, 41068),

Gene: Jabiru\_63 Start: 40261, Stop: 40109, Start Num: 43

Candidate Starts for Jabiru\_63:

(Start: 43 @40261 has 263 MA's), (Start: 44 @40255 has 4 MA's), (49, 40243), (77, 40156), (86, 40120),

Gene: Jarvi\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Jarvi\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Jayhawk\_61 Start: 41120, Stop: 41284, Start Num: 43

Candidate Starts for Jayhawk\_61:

(Start: 43 @41120 has 263 MA's), (Start: 44 @41126 has 4 MA's), (82, 41249), (84, 41258), (86, 41273), (88, 41276),

Gene: Jeckyll\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Jeckyll\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Jeeves\_67 Start: 39998, Stop: 39837, Start Num: 43

Candidate Starts for Jeeves\_67:

(22, 40151), (Start: 43 @39998 has 263 MA's), (Start: 44 @39992 has 4 MA's), (64, 39920), (82, 39872), (86, 39848),

Gene: Jiawan\_63 Start: 40368, Stop: 40219, Start Num: 43

Candidate Starts for Jiawan\_63:

(Start: 43 @40368 has 263 MA's), (Start: 44 @40362 has 4 MA's), (49, 40350), (68, 40284), (82, 40254), (86, 40230),

Gene: Jobypre\_53 Start: 40418, Stop: 40576, Start Num: 43

Candidate Starts for Jobypre\_53:

(Start: 43 @40418 has 263 MA's), (Start: 48 @40436 has 1 MA's), (58, 40472), (84, 40550), (86, 40565),

Gene: Jovo\_63 Start: 40649, Stop: 40497, Start Num: 43

Candidate Starts for Jovo\_63:

(Start: 43 @40649 has 263 MA's), (Start: 44 @40643 has 4 MA's), (49, 40631), (78, 40541), (86, 40508),

Gene: Joy99\_60 Start: 41179, Stop: 41343, Start Num: 43

Candidate Starts for Joy99\_60:

(Start: 43 @41179 has 263 MA's), (Start: 44 @41185 has 4 MA's), (49, 41203), (72, 41278), (86, 41332), (88, 41335),

Gene: Jsquared\_65 Start: 39590, Stop: 39438, Start Num: 43

Candidate Starts for Jsquared\_65:

(Start: 43 @39590 has 263 MA's), (77, 39497), (82, 39485), (86, 39461),

Gene: Jubie\_52 Start: 40553, Stop: 40711, Start Num: 43

Candidate Starts for Jubie\_52:

(Start: 43 @40553 has 263 MA's), (Start: 48 @40571 has 1 MA's), (58, 40607), (84, 40685), (86, 40700),

Gene: Juliette\_65 Start: 41062, Stop: 41226, Start Num: 43

Candidate Starts for Juliette\_65:

(11, 40837), (28, 41014), (31, 41035), (Start: 43 @41062 has 263 MA's), (49, 41086), (69, 41149), (78, 41182), (86, 41215),

Gene: Keziacharles14\_65 Start: 41367, Stop: 41209, Start Num: 38

Candidate Starts for Keziacharles14\_65:

(Start: 38 @41367 has 2 MA's), (Start: 43 @41358 has 263 MA's), (66, 41274), (86, 41220),

Gene: Kingsolomon\_52 Start: 40419, Stop: 40580, Start Num: 43

Candidate Starts for Kingsolomon\_52:

(Start: 43 @40419 has 263 MA's), (Start: 48 @40437 has 1 MA's), (58, 40473), (84, 40554), (86, 40569),

Gene: Kinmap\_63 Start: 38733, Stop: 38560, Start Num: 43

Candidate Starts for Kinmap\_63:

(27, 38793), (Start: 43 @38733 has 263 MA's), (49, 38715), (71, 38634), (82, 38601), (86, 38577),

Gene: KirDoubleO7\_51 Start: 40465, Stop: 40611, Start Num: 48

Candidate Starts for KirDoubleO7\_51:

(Start: 43 @40450 has 263 MA's), (Start: 48 @40465 has 1 MA's), (58, 40501), (63, 40516), (84, 40585), (86, 40600),

Gene: KleverKiS\_122 Start: 64769, Stop: 64918, Start Num: 43

Candidate Starts for KleverKiS\_122:

(Start: 43 @64769 has 263 MA's), (46, 64781), (52, 64802), (53, 64805), (55, 64811), (61, 64832), (86, 64907),

Gene: Klodlith\_63 Start: 39818, Stop: 39657, Start Num: 43

Candidate Starts for Klodlith\_63:

(10, 40076), (Start: 38 @39827 has 2 MA's), (Start: 43 @39818 has 263 MA's), (86, 39668),

Gene: Koduck\_64 Start: 39435, Stop: 39292, Start Num: 43

Candidate Starts for Koduck\_64:

(17, 39636), (21, 39603), (Start: 43 @39435 has 263 MA's), (Start: 44 @39429 has 4 MA's), (86, 39303), (88, 39300),

Gene: Kratio\_52 Start: 38110, Stop: 38277, Start Num: 43

Candidate Starts for Kratio\_52:

(23, 38008), (Start: 43 @38110 has 263 MA's), (46, 38122), (Start: 48 @38128 has 1 MA's), (49, 38134), (55, 38158), (72, 38209), (86, 38266), (88, 38269),

Gene: Kraw\_63 Start: 40750, Stop: 40914, Start Num: 43

Candidate Starts for Kraw\_63:

(11, 40525), (28, 40702), (31, 40723), (Start: 43 @40750 has 263 MA's), (49, 40774), (69, 40837), (78, 40870), (86, 40903),

Gene: Krypton555\_54 Start: 40655, Stop: 40813, Start Num: 43

Candidate Starts for Krypton555\_54:

(Start: 43 @40655 has 263 MA's), (86, 40802),

Gene: Kumao\_92 Start: 57451, Stop: 57603, Start Num: 43

Candidate Starts for Kumao\_92:

(Start: 43 @57451 has 263 MA's), (49, 57466), (52, 57481), (53, 57484), (66, 57523), (74, 57541), (78, 57556), (86, 57589),

Gene: L5\_60 Start: 39522, Stop: 39379, Start Num: 43

Candidate Starts for L5\_60:

(17, 39723), (Start: 43 @39522 has 263 MA's), (Start: 44 @39516 has 4 MA's), (86, 39390), (88, 39387),

Gene: Larva\_55 Start: 39542, Stop: 39709, Start Num: 43

Candidate Starts for Larva\_55:

(23, 39440), (Start: 43 @39542 has 263 MA's), (46, 39554), (49, 39566), (55, 39590), (72, 39641), (84, 39683), (86, 39698), (88, 39701),

Gene: LastHope\_63 Start: 40287, Stop: 40457, Start Num: 43

Candidate Starts for LastHope\_63:

(7, 40026), (Start: 43 @40287 has 263 MA's), (46, 40299), (67, 40377), (71, 40389), (86, 40446), (88, 40449),

Gene: LaterM\_60 Start: 41716, Stop: 41877, Start Num: 43

Candidate Starts for LaterM\_60:

(19, 41548), (21, 41566), (Start: 43 @41716 has 263 MA's), (Start: 44 @41722 has 4 MA's), (49, 41740), (82, 41842), (86, 41866), (88, 41869),

Gene: Lebo14\_62 Start: 41083, Stop: 41247, Start Num: 43

Candidate Starts for Lebo14\_62:

(11, 40858), (28, 41035), (31, 41056), (Start: 43 @41083 has 263 MA's), (69, 41170), (78, 41203), (86, 41236),

Gene: Leston\_54 Start: 40169, Stop: 40336, Start Num: 43

Candidate Starts for Leston\_54:

(3, 39866), (4, 39875), (23, 40067), (Start: 43 @40169 has 263 MA's), (46, 40181), (49, 40193), (55, 40217), (72, 40268), (84, 40310), (86, 40325),

Gene: Lev2\_63 Start: 40281, Stop: 40129, Start Num: 43

Candidate Starts for Lev2\_63:

(Start: 43 @40281 has 263 MA's), (Start: 44 @40275 has 4 MA's), (49, 40263), (78, 40173), (86, 40140),

Gene: LilDirt\_51 Start: 38138, Stop: 38293, Start Num: 46

Candidate Starts for LilDirt\_51:

(23, 38024), (Start: 43 @38126 has 263 MA's), (46, 38138), (49, 38150), (55, 38174), (72, 38225), (86, 38282), (88, 38285),

Gene: LilhomieP\_119 Start: 64562, Stop: 64711, Start Num: 43

Candidate Starts for LilhomieP\_119:

(Start: 43 @64562 has 263 MA's), (46, 64574), (52, 64595), (53, 64598), (55, 64604), (61, 64625), (86, 64700),

Gene: Lilleskat\_62 Start: 40204, Stop: 40055, Start Num: 43

Candidate Starts for Lilleskat\_62:

(Start: 43 @40204 has 263 MA's), (Start: 44 @40198 has 4 MA's), (49, 40186), (68, 40120), (82, 40090), (86, 40066),

Gene: LindNT\_59 Start: 41322, Stop: 41486, Start Num: 43

Candidate Starts for LindNT\_59:

(Start: 43 @41322 has 263 MA's), (Start: 44 @41328 has 4 MA's), (49, 41346), (86, 41475), (88, 41478),

Gene: LittleCherry\_60 Start: 39732, Stop: 39580, Start Num: 43

Candidate Starts for LittleCherry\_60:

(Start: 43 @39732 has 263 MA's), (Start: 44 @39726 has 4 MA's), (49, 39714), (78, 39624), (86, 39591),

Gene: LiyuLake\_52 Start: 40481, Stop: 40627, Start Num: 48

Candidate Starts for LiyuLake\_52:

(Start: 43 @40466 has 263 MA's), (Start: 48 @40481 has 1 MA's), (58, 40517), (63, 40532), (84, 40601), (86, 40616),

Gene: Llorens\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Llorens\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: Lolly9\_52 Start: 40240, Stop: 40398, Start Num: 43

Candidate Starts for Lolly9\_52:

(Start: 43 @40240 has 263 MA's), (Start: 48 @40258 has 1 MA's), (58, 40294), (86, 40387),

Gene: LoneWolf\_66 Start: 40322, Stop: 40173, Start Num: 43

Candidate Starts for LoneWolf\_66:

(Start: 43 @40322 has 263 MA's), (Start: 44 @40316 has 4 MA's), (49, 40304), (64, 40244), (68, 40238), (86, 40184),

Gene: Luchador\_66 Start: 41501, Stop: 41346, Start Num: 43

Candidate Starts for Luchador\_66:

(Start: 43 @41501 has 263 MA's), (49, 41483), (68, 41411), (78, 41390), (82, 41381), (85, 41366), (86, 41357),

Gene: Lumos\_54 Start: 40415, Stop: 40573, Start Num: 43

Candidate Starts for Lumos\_54:

(Start: 43 @40415 has 263 MA's), (Start: 48 @40433 has 1 MA's), (58, 40469), (84, 40547), (86, 40562),

Gene: Lunahalos\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Lunahalos\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: MacKat\_55 Start: 36582, Stop: 36746, Start Num: 43

Candidate Starts for MacKat\_55:

(Start: 43 @36582 has 263 MA's), (Start: 44 @36588 has 4 MA's), (49, 36606), (72, 36681), (86, 36735), (88, 36738),

Gene: MajorMajor\_63 Start: 39432, Stop: 39280, Start Num: 43

Candidate Starts for MajorMajor\_63:

(27, 39489), (Start: 43 @39432 has 263 MA's), (77, 39339), (82, 39327), (86, 39303),

Gene: Malthus\_64 Start: 40750, Stop: 40914, Start Num: 43

Candidate Starts for Malthus\_64:

(11, 40525), (28, 40702), (31, 40723), (Start: 43 @40750 has 263 MA's), (49, 40774), (69, 40837), (78, 40870), (86, 40903),

Gene: Maminiaina\_65 Start: 40300, Stop: 40151, Start Num: 43

Candidate Starts for Maminiaina\_65:

(Start: 43 @40300 has 263 MA's), (49, 40282), (64, 40222), (68, 40216), (82, 40186), (86, 40162),

Gene: MarysWell\_60 Start: 40282, Stop: 40133, Start Num: 43

Candidate Starts for MarysWell\_60:

(Start: 43 @40282 has 263 MA's), (Start: 44 @40276 has 4 MA's), (52, 40249), (78, 40177), (86, 40144),

Gene: MeaningOfLife\_61 Start: 41993, Stop: 42157, Start Num: 43

Candidate Starts for MeaningOfLife\_61:

(Start: 43 @41993 has 263 MA's), (Start: 44 @41999 has 4 MA's), (49, 42017), (72, 42092), (82, 42122), (86, 42146), (88, 42149),

Gene: MegTheThird\_63 Start: 39861, Stop: 39703, Start Num: 43

Candidate Starts for MegTheThird\_63:

(Start: 38 @39870 has 2 MA's), (Start: 43 @39861 has 263 MA's), (64, 39783), (73, 39759), (82, 39738), (86, 39714),

Gene: Megsy\_62 Start: 41393, Stop: 41554, Start Num: 43

Candidate Starts for Megsy\_62:

(8, 41132), (Start: 43 @41393 has 263 MA's), (Start: 44 @41399 has 4 MA's), (49, 41417), (72, 41489), (84, 41528), (86, 41543), (88, 41546),

Gene: Mendokysei\_52 Start: 37971, Stop: 38135, Start Num: 99

Candidate Starts for Mendokysei\_52:

(20, 37329), (45, 37518), (81, 37641), (97, 37905), (98, 37944), (Start: 99 @37971 has 1 MA's), (100, 37998), (101, 38061), (102, 38085),

Gene: Micasa\_60 Start: 40004, Stop: 39855, Start Num: 43

Candidate Starts for Micasa\_60:

(Start: 43 @40004 has 263 MA's), (Start: 44 @39998 has 4 MA's), (52, 39971), (77, 39902), (78, 39899), (86, 39866),

Gene: Midas2\_59 Start: 40182, Stop: 40030, Start Num: 43

Candidate Starts for Midas2\_59:

(Start: 43 @40182 has 263 MA's), (Start: 44 @40176 has 4 MA's), (49, 40164), (78, 40074), (86, 40041),

Gene: Milcery\_60 Start: 39680, Stop: 39528, Start Num: 43

Candidate Starts for Milcery\_60:

(Start: 43 @39680 has 263 MA's), (Start: 44 @39674 has 4 MA's), (49, 39662), (78, 39572), (86, 39539),

Gene: MiniLon\_55 Start: 40241, Stop: 40399, Start Num: 43

Candidate Starts for MiniLon\_55:

(Start: 43 @40241 has 263 MA's), (Start: 48 @40259 has 1 MA's), (58, 40295), (86, 40388),

Gene: MiniMac\_55 Start: 40239, Stop: 40397, Start Num: 43

Candidate Starts for MiniMac\_55:

(Start: 43 @40239 has 263 MA's), (Start: 48 @40257 has 1 MA's), (58, 40293), (86, 40386),

Gene: Minispark\_63 Start: 39907, Stop: 39758, Start Num: 43

Candidate Starts for Minispark\_63:

(Start: 38 @39916 has 2 MA's), (Start: 43 @39907 has 263 MA's), (66, 39826), (68, 39823), (86, 39769),

Gene: Miryou\_58 Start: 42766, Stop: 42933, Start Num: 43

Candidate Starts for Miryou\_58:

(Start: 43 @42766 has 263 MA's), (46, 42778), (49, 42790), (55, 42814), (72, 42865), (84, 42907), (86, 42922), (88, 42925),

Gene: MissDaisy\_60 Start: 39674, Stop: 39826, Start Num: 47

Candidate Starts for MissDaisy\_60:

(Start: 47 @39674 has 3 MA's), (69, 39749), (78, 39782), (86, 39815),

Gene: Mitti\_63 Start: 40929, Stop: 41093, Start Num: 43

Candidate Starts for Mitti\_63:

(11, 40704), (28, 40881), (31, 40902), (Start: 43 @40929 has 263 MA's), (49, 40953), (69, 41016), (78, 41049), (86, 41082),

Gene: Moostard\_52 Start: 40421, Stop: 40579, Start Num: 43

Candidate Starts for Moostard\_52:

(Start: 43 @40421 has 263 MA's), (Start: 48 @40439 has 1 MA's), (58, 40475), (84, 40553), (86, 40568),

Gene: MrMagoo\_138 Start: 65627, Stop: 65785, Start Num: 43

Candidate Starts for MrMagoo\_138:

(Start: 43 @65627 has 263 MA's), (49, 65645), (55, 65669), (74, 65726), (82, 65750), (86, 65774),

Gene: MsGreen\_52 Start: 40418, Stop: 40576, Start Num: 43

Candidate Starts for MsGreen\_52:

(Start: 43 @40418 has 263 MA's), (Start: 48 @40436 has 1 MA's), (58, 40472), (84, 40550), (86, 40565),

Gene: Murucutumbu\_61 Start: 42093, Stop: 42257, Start Num: 43

Candidate Starts for Murucutumbu\_61:

(Start: 43 @42093 has 263 MA's), (Start: 44 @42099 has 4 MA's), (49, 42117), (86, 42246), (88, 42249),

Gene: Mynx\_61 Start: 41435, Stop: 41599, Start Num: 43

Candidate Starts for Mynx\_61:

(Start: 43 @41435 has 263 MA's), (Start: 44 @41441 has 4 MA's), (49, 41459), (72, 41534), (86, 41588), (88, 41591),

Gene: MyraDee\_60 Start: 36959, Stop: 36816, Start Num: 43

Candidate Starts for MyraDee\_60:

(26, 37049), (Start: 43 @36959 has 263 MA's), (Start: 44 @36953 has 4 MA's), (72, 36881), (74, 36875), (82, 36851), (86, 36827),

Gene: Myxus\_66 Start: 40420, Stop: 40271, Start Num: 43

Candidate Starts for Myxus\_66:

(Start: 43 @40420 has 263 MA's), (Start: 44 @40414 has 4 MA's), (49, 40402), (68, 40336), (82, 40306), (86, 40282),

Gene: Naca\_62 Start: 40646, Stop: 40494, Start Num: 43

Candidate Starts for Naca\_62:

(Start: 43 @40646 has 263 MA's), (Start: 44 @40640 has 4 MA's), (49, 40628), (77, 40541), (86, 40505),

Gene: NearlyHeadless\_67 Start: 39788, Stop: 39615, Start Num: 43

Candidate Starts for NearlyHeadless\_67:

(Start: 43 @39788 has 263 MA's), (49, 39770), (68, 39692), (86, 39626),

Gene: Neighly\_56 Start: 39541, Stop: 39708, Start Num: 43

Candidate Starts for Neighly\_56:

(23, 39439), (Start: 43 @39541 has 263 MA's), (46, 39553), (49, 39565), (55, 39589), (72, 39640), (84, 39682), (86, 39697), (88, 39700),

Gene: Nette\_55 Start: 37980, Stop: 38144, Start Num: 99

Candidate Starts for Nette\_55:

(20, 37338), (45, 37527), (81, 37650), (97, 37914), (98, 37953), (Start: 99 @37980 has 1 MA's), (100, 38007), (101, 38070), (102, 38094),

Gene: Nicholas\_52 Start: 40419, Stop: 40580, Start Num: 43

Candidate Starts for Nicholas\_52:

(Start: 43 @40419 has 263 MA's), (Start: 48 @40437 has 1 MA's), (58, 40473), (84, 40554), (86, 40569),

Gene: Odin\_63 Start: 39209, Stop: 39057, Start Num: 43

Candidate Starts for Odin\_63:

(24, 39308), (Start: 43 @39209 has 263 MA's), (77, 39116), (82, 39104), (86, 39080), (88, 39077),

Gene: OkiRoe\_55 Start: 40437, Stop: 40604, Start Num: 43

Candidate Starts for OkiRoe\_55:

(Start: 43 @40437 has 263 MA's), (46, 40449), (49, 40461), (55, 40485), (72, 40536), (84, 40578), (86, 40593), (88, 40596),

Gene: OmniCritical\_62 Start: 40819, Stop: 40983, Start Num: 43

Candidate Starts for OmniCritical\_62:

(11, 40579), (28, 40771), (31, 40792), (Start: 43 @40819 has 263 MA's), (49, 40843), (69, 40906), (78, 40939), (86, 40972),

Gene: Omnicron\_58 Start: 40537, Stop: 40707, Start Num: 43

Candidate Starts for Omnicron\_58:

(23, 40435), (Start: 43 @40537 has 263 MA's), (46, 40549), (Start: 48 @40555 has 1 MA's), (49, 40561), (55, 40585), (72, 40639), (84, 40681), (86, 40696),

Gene: Onglai\_64 Start: 38624, Stop: 38475, Start Num: 43

Candidate Starts for Onglai\_64:

(Start: 43 @38624 has 263 MA's), (Start: 44 @38618 has 4 MA's), (49, 38606), (68, 38540), (82, 38510), (86, 38486),

Gene: PackMan\_65 Start: 40295, Stop: 40146, Start Num: 43

Candidate Starts for PackMan\_65:

(Start: 43 @40295 has 263 MA's), (Start: 44 @40289 has 4 MA's), (49, 40277), (68, 40211), (82, 40181), (86, 40157),

Gene: Padfoot\_60 Start: 41453, Stop: 41611, Start Num: 44

Candidate Starts for Padfoot\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: Padpat\_62 Start: 41116, Stop: 41280, Start Num: 43

Candidate Starts for Padpat\_62:

(Start: 43 @41116 has 263 MA's), (Start: 44 @41122 has 4 MA's), (49, 41140), (72, 41215), (86, 41269), (88, 41272),

Gene: Paola\_54 Start: 40040, Stop: 40207, Start Num: 43

Candidate Starts for Paola\_54:

(3, 39737), (4, 39746), (23, 39938), (Start: 43 @40040 has 263 MA's), (46, 40052), (49, 40064), (55, 40088), (72, 40139), (84, 40181), (86, 40196),

Gene: Patt\_59 Start: 39398, Stop: 39550, Start Num: 47

Candidate Starts for Patt\_59:

(Start: 47 @39398 has 3 MA's), (69, 39473), (78, 39506), (86, 39539),

Gene: Peel\_60 Start: 41252, Stop: 41416, Start Num: 43

Candidate Starts for Peel\_60:

(Start: 43 @41252 has 263 MA's), (Start: 44 @41258 has 4 MA's), (49, 41276), (72, 41351), (86, 41405), (88, 41408),

Gene: PegLeg\_123 Start: 64446, Stop: 64595, Start Num: 43

Candidate Starts for PegLeg\_123:

(Start: 43 @64446 has 263 MA's), (46, 64458), (52, 64479), (53, 64482), (55, 64488), (61, 64509), (86, 64584),

Gene: PetterN\_67 Start: 40392, Stop: 40240, Start Num: 43

Candidate Starts for PetterN\_67:

(Start: 43 @40392 has 263 MA's), (Start: 44 @40386 has 4 MA's), (49, 40374), (77, 40287), (86, 40251),

Gene: Ph8s\_65 Start: 39383, Stop: 39240, Start Num: 43

Candidate Starts for Ph8s\_65:

(Start: 43 @39383 has 263 MA's), (46, 39371), (74, 39299), (76, 39290), (88, 39248),

Gene: Phaeder\_66 Start: 40295, Stop: 40146, Start Num: 43

Candidate Starts for Phaeder\_66:

(Start: 43 @40295 has 263 MA's), (Start: 44 @40289 has 4 MA's), (49, 40277), (68, 40211), (82, 40181), (86, 40157),

Gene: Pharaoh\_59 Start: 39999, Stop: 39856, Start Num: 43

Candidate Starts for Pharaoh\_59:

(Start: 43 @39999 has 263 MA's), (75, 39912), (82, 39891), (86, 39867), (88, 39864),

Gene: Phillis\_64 Start: 39236, Stop: 39063, Start Num: 43

Candidate Starts for Phillis\_64:

(Start: 43 @39236 has 263 MA's), (49, 39218), (86, 39074), (89, 39068),

Gene: Phlorence\_61 Start: 40026, Stop: 39874, Start Num: 43

Candidate Starts for Phlorence\_61:

(Start: 43 @40026 has 263 MA's), (Start: 44 @40020 has 4 MA's), (49, 40008), (78, 39918), (86, 39885),

Gene: Phonnegut\_67 Start: 40517, Stop: 40368, Start Num: 43

Candidate Starts for Phonnegut\_67:

(Start: 43 @40517 has 263 MA's), (Start: 44 @40511 has 4 MA's), (49, 40499), (68, 40433), (82, 40403), (86, 40379),

Gene: Piatt\_60 Start: 41447, Stop: 41611, Start Num: 43

Candidate Starts for Piatt\_60:

(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: PickleBack\_63 Start: 40203, Stop: 40051, Start Num: 43

Candidate Starts for PickleBack\_63:

(Start: 43 @40203 has 263 MA's), (Start: 44 @40197 has 4 MA's), (49, 40185), (78, 40095), (86, 40062),

Gene: Pioneer\_67 Start: 40517, Stop: 40368, Start Num: 43

Candidate Starts for Pioneer\_67:

(Start: 43 @40517 has 263 MA's), (Start: 44 @40511 has 4 MA's), (49, 40499), (68, 40433), (82, 40403), (86, 40379),

Gene: Pisa1\_60 Start: 42104, Stop: 42259, Start Num: 44

Candidate Starts for Pisa1\_60:

(Start: 43 @42098 has 263 MA's), (Start: 44 @42104 has 4 MA's), (49, 42122), (50, 42125), (57, 42158), (82, 42224), (86, 42248), (88, 42251),

Gene: Pisa4\_54 Start: 37473, Stop: 37628, Start Num: 44

Candidate Starts for Pisa4\_54:

(Start: 43 @37467 has 263 MA's), (Start: 44 @37473 has 4 MA's), (49, 37491), (50, 37494), (57, 37527), (82, 37593), (86, 37617), (88, 37620),

Gene: Pokerus\_59 Start: 41165, Stop: 41332, Start Num: 43

Candidate Starts for Pokerus\_59:

(Start: 43 @41165 has 263 MA's), (72, 41267), (82, 41297), (86, 41321),

Gene: Prin Ashe11\_59 Start: 39741, Stop: 39589, Start Num: 43

Candidate Starts for Prin Ashe11\_59:

(Start: 43 @39741 has 263 MA's), (Start: 44 @39735 has 4 MA's), (49, 39723), (78, 39633), (86, 39600),

Gene: Prithvi\_61 Start: 41322, Stop: 41486, Start Num: 43

Candidate Starts for Prithvi\_61:

(Start: 43 @41322 has 263 MA's), (Start: 44 @41328 has 4 MA's), (49, 41346), (86, 41475), (88, 41478),

Gene: Priya\_64 Start: 40007, Stop: 39858, Start Num: 43

Candidate Starts for Priya\_64:

(Start: 43 @40007 has 263 MA's), (Start: 44 @40001 has 4 MA's), (49, 39989), (68, 39923), (82, 39893), (86, 39869),

Gene: Psycho\_54 Start: 38667, Stop: 38834, Start Num: 43

Candidate Starts for Psycho\_54:

(23, 38565), (Start: 43 @38667 has 263 MA's), (46, 38679), (49, 38691), (55, 38715), (72, 38766), (84, 38808), (86, 38823), (88, 38826),

Gene: Qhanda\_65 Start: 40766, Stop: 40930, Start Num: 43

Candidate Starts for Qhanda\_65:

(11, 40541), (28, 40718), (31, 40739), (Start: 43 @40766 has 263 MA's), (49, 40790), (69, 40853), (78, 40886), (86, 40919),

Gene: Qobbit\_64 Start: 39969, Stop: 39820, Start Num: 43

Candidate Starts for Qobbit\_64:

(Start: 43 @39969 has 263 MA's), (Start: 44 @39963 has 4 MA's), (49, 39951), (68, 39885), (82, 39855), (86, 39831),

Gene: QuincyRose\_59 Start: 41511, Stop: 41675, Start Num: 43

Candidate Starts for QuincyRose\_59:

(Start: 43 @41511 has 263 MA's), (Start: 44 @41517 has 4 MA's), (49, 41535), (72, 41610), (82, 41640), (86, 41664), (88, 41667),

Gene: Quokka\_63 Start: 39432, Stop: 39280, Start Num: 43

Candidate Starts for Quokka\_63:

(27, 39489), (Start: 43 @39432 has 263 MA's), (77, 39339), (82, 39327), (86, 39303),

Gene: Rahalelujah\_65 Start: 39922, Stop: 39773, Start Num: 43

Candidate Starts for Rahalelujah\_65:

(Start: 38 @39931 has 2 MA's), (Start: 43 @39922 has 263 MA's), (66, 39841), (68, 39838), (86, 39784),

Gene: Ramen\_61 Start: 41127, Stop: 41291, Start Num: 43

Candidate Starts for Ramen\_61:

(35, 41112), (Start: 43 @41127 has 263 MA's), (Start: 44 @41133 has 4 MA's), (49, 41151), (86, 41280), (88, 41283),

Gene: Rando14\_56 Start: 38237, Stop: 38407, Start Num: 43

Candidate Starts for Rando14\_56:

(23, 38135), (Start: 43 @38237 has 263 MA's), (46, 38249), (Start: 48 @38255 has 1 MA's), (49, 38261), (55, 38285), (72, 38339), (84, 38381), (86, 38396), (88, 38399),

Gene: Rapunzel97\_61 Start: 41114, Stop: 41278, Start Num: 43

Candidate Starts for Rapunzel97\_61:

(Start: 43 @41114 has 263 MA's), (Start: 44 @41120 has 4 MA's), (49, 41138), (72, 41213), (82, 41243), (84, 41252), (86, 41267),

Gene: Red305\_53 Start: 40418, Stop: 40576, Start Num: 43

Candidate Starts for Red305\_53:

(Start: 43 @40418 has 263 MA's), (Start: 48 @40436 has 1 MA's), (58, 40472), (84, 40550), (86, 40565),

Gene: Refuge\_61 Start: 41137, Stop: 40997, Start Num: 43

Candidate Starts for Refuge\_61:

(33, 41164), (Start: 43 @41137 has 263 MA's), (Start: 44 @41131 has 4 MA's), (49, 41119), (82, 41032), (86, 41008),

Gene: Reindeer\_120 Start: 64620, Stop: 64802, Start Num: 30

Candidate Starts for Reindeer\_120:

(Start: 30 @64620 has 1 MA's), (Start: 43 @64659 has 263 MA's), (49, 64677), (50, 64680), (52, 64692), (69, 64731), (78, 64758), (82, 64767), (86, 64791),

Gene: Reptar3000\_60 Start: 39386, Stop: 39538, Start Num: 47

Candidate Starts for Reptar3000\_60:

(Start: 47 @39386 has 3 MA's), (69, 39461), (78, 39494), (86, 39527),

Gene: Rey\_138 Start: 65174, Stop: 65332, Start Num: 43

Candidate Starts for Rey\_138:

(Start: 43 @65174 has 263 MA's), (49, 65192), (55, 65216), (74, 65273), (75, 65276), (82, 65297), (86, 65321),

Gene: Roary\_68 Start: 40007, Stop: 39834, Start Num: 43

Candidate Starts for Roary\_68:

(Start: 43 @40007 has 263 MA's), (49, 39989), (86, 39845),

Gene: RoseMarie\_128 Start: 67157, Stop: 67306, Start Num: 43

Candidate Starts for RoseMarie\_128:

(Start: 38 @67148 has 2 MA's), (Start: 43 @67157 has 263 MA's), (46, 67169), (50, 67178), (52, 67190), (53, 67193), (55, 67199), (61, 67220), (75, 67250), (78, 67262), (82, 67271), (86, 67295),

Gene: Rosmarinus\_60 Start: 41238, Stop: 41402, Start Num: 43

Candidate Starts for Rosmarinus\_60:

(Start: 43 @41238 has 263 MA's), (Start: 44 @41244 has 4 MA's), (49, 41262), (72, 41337), (86, 41391), (88, 41394),

Gene: Ruthiejr\_64 Start: 40800, Stop: 40964, Start Num: 43

Candidate Starts for Ruthiejr\_64:

(11, 40575), (28, 40752), (31, 40773), (Start: 43 @40800 has 263 MA's), (49, 40824), (69, 40887), (78, 40920), (86, 40953),

Gene: RyeScarlet\_68 Start: 40492, Stop: 40343, Start Num: 43

Candidate Starts for RyeScarlet\_68:

(Start: 43 @40492 has 263 MA's), (Start: 44 @40486 has 4 MA's), (49, 40474), (68, 40408), (82, 40378), (86, 40354),

Gene: Sachima\_62 Start: 40321, Stop: 40172, Start Num: 43

Candidate Starts for Sachima\_62:

(Start: 43 @40321 has 263 MA's), (Start: 44 @40315 has 4 MA's), (49, 40303), (68, 40237), (82, 40207), (86, 40183),

Gene: Saintus\_62 Start: 36672, Stop: 36499, Start Num: 43

Candidate Starts for Saintus\_62:

(Start: 43 @36672 has 263 MA's), (49, 36654), (86, 36510),

Gene: SamScheppers\_61 Start: 41229, Stop: 41393, Start Num: 43

Candidate Starts for SamScheppers\_61:

(11, 41004), (28, 41181), (31, 41202), (Start: 43 @41229 has 263 MA's), (49, 41253), (69, 41316), (78, 41349), (86, 41382),

Gene: Samty\_52 Start: 40420, Stop: 40581, Start Num: 43

Candidate Starts for Samty\_52:

(Start: 43 @40420 has 263 MA's), (Start: 48 @40438 has 1 MA's), (58, 40474), (84, 40555), (86, 40570),

Gene: SamuelLPlaqson\_61 Start: 42019, Stop: 42177, Start Num: 43

Candidate Starts for SamuelLPlaqson\_61:

(Start: 43 @42019 has 263 MA's), (Start: 44 @42025 has 4 MA's), (49, 42043), (50, 42046), (82, 42142), (86, 42166), (88, 42169),

Gene: Scherzo\_66 Start: 40652, Stop: 40503, Start Num: 43

Candidate Starts for Scherzo\_66:

(Start: 43 @40652 has 263 MA's), (Start: 44 @40646 has 4 MA's), (49, 40634), (64, 40574), (68, 40568), (86, 40514),

Gene: Scorpia\_64 Start: 40451, Stop: 40299, Start Num: 43

Candidate Starts for Scorpia\_64:

(Start: 43 @40451 has 263 MA's), (Start: 44 @40445 has 4 MA's), (49, 40433), (77, 40346), (86, 40310),

Gene: Serenity\_64 Start: 39562, Stop: 39410, Start Num: 43

Candidate Starts for Serenity\_64:  
(14, 39784), (Start: 43 @39562 has 263 MA's), (74, 39481), (77, 39469), (82, 39457), (86, 39433),

Gene: SheaKeira\_62 Start: 39772, Stop: 39614, Start Num: 43  
Candidate Starts for SheaKeira\_62:  
(Start: 38 @39781 has 2 MA's), (Start: 43 @39772 has 263 MA's), (64, 39694), (73, 39670), (82, 39649), (85, 39634), (86, 39625),

Gene: ShiaSurprise\_61 Start: 41447, Stop: 41611, Start Num: 43  
Candidate Starts for ShiaSurprise\_61:  
(Start: 43 @41447 has 263 MA's), (Start: 44 @41453 has 4 MA's), (49, 41471), (72, 41546), (86, 41600), (88, 41603),

Gene: Skinny\_125 Start: 65562, Stop: 65711, Start Num: 43  
Candidate Starts for Skinny\_125:  
(Start: 43 @65562 has 263 MA's), (46, 65574), (52, 65595), (53, 65598), (55, 65604), (61, 65625), (86, 65700),

Gene: Slarp\_63 Start: 40757, Stop: 40921, Start Num: 43  
Candidate Starts for Slarp\_63:  
(11, 40532), (28, 40709), (31, 40730), (Start: 43 @40757 has 263 MA's), (49, 40781), (69, 40844), (78, 40877), (86, 40910),

Gene: SlimJimmy\_119 Start: 64271, Stop: 64420, Start Num: 43  
Candidate Starts for SlimJimmy\_119:  
(Start: 43 @64271 has 263 MA's), (46, 64283), (52, 64304), (53, 64307), (55, 64313), (61, 64334), (86, 64409),

Gene: Slimphazie\_60 Start: 41114, Stop: 41278, Start Num: 43  
Candidate Starts for Slimphazie\_60:  
(Start: 43 @41114 has 263 MA's), (Start: 44 @41120 has 4 MA's), (49, 41138), (72, 41213), (82, 41243), (84, 41252), (86, 41267),

Gene: Smeadley\_67 Start: 39868, Stop: 39695, Start Num: 43  
Candidate Starts for Smeadley\_67:  
(Start: 43 @39868 has 263 MA's), (49, 39850), (86, 39706),

Gene: Snenia\_52 Start: 40419, Stop: 40577, Start Num: 43  
Candidate Starts for Snenia\_52:  
(Start: 43 @40419 has 263 MA's), (Start: 48 @40437 has 1 MA's), (58, 40473), (84, 40551), (86, 40566),

Gene: SoSeph\_55 Start: 40412, Stop: 40579, Start Num: 43  
Candidate Starts for SoSeph\_55:  
(3, 40109), (4, 40118), (23, 40310), (Start: 43 @40412 has 263 MA's), (46, 40424), (49, 40436), (55, 40460), (72, 40511), (84, 40553), (86, 40568),

Gene: SororFago\_64 Start: 40881, Stop: 40684, Start Num: 43  
Candidate Starts for SororFago\_64:  
(18, 41076), (Start: 43 @40881 has 263 MA's), (64, 40779), (68, 40767), (78, 40728), (82, 40719), (86, 40695),

Gene: Spock\_60 Start: 41251, Stop: 41415, Start Num: 43

Candidate Starts for Spock\_60:

(Start: 43 @41251 has 263 MA's), (Start: 44 @41257 has 4 MA's), (49, 41275), (72, 41350), (86, 41404), (88, 41407),

Gene: Spouty\_64 Start: 40006, Stop: 39857, Start Num: 43

Candidate Starts for Spouty\_64:

(Start: 43 @40006 has 263 MA's), (Start: 44 @40000 has 4 MA's), (49, 39988), (68, 39922), (82, 39892), (86, 39868),

Gene: Steamy\_60 Start: 39733, Stop: 39590, Start Num: 43

Candidate Starts for Steamy\_60:

(2, 40096), (Start: 43 @39733 has 263 MA's), (49, 39715), (82, 39625), (86, 39601), (88, 39598),

Gene: Stellammi\_74 Start: 39941, Stop: 40081, Start Num: 43

Candidate Starts for Stellammi\_74:

(Start: 43 @39941 has 263 MA's), (59, 40001), (75, 40025), (85, 40061), (86, 40070),

Gene: Stephig9\_66 Start: 39802, Stop: 39629, Start Num: 43

Candidate Starts for Stephig9\_66:

(Start: 43 @39802 has 263 MA's), (49, 39784), (86, 39640),

Gene: Stinson\_61 Start: 41616, Stop: 41780, Start Num: 43

Candidate Starts for Stinson\_61:

(Start: 43 @41616 has 263 MA's), (Start: 44 @41622 has 4 MA's), (49, 41640), (70, 41709), (72, 41715), (86, 41769), (88, 41772),

Gene: Sulley\_60 Start: 41302, Stop: 41466, Start Num: 43

Candidate Starts for Sulley\_60:

(Start: 43 @41302 has 263 MA's), (Start: 44 @41308 has 4 MA's), (49, 41326), (70, 41395), (72, 41401), (82, 41431), (86, 41455), (88, 41458),

Gene: Sunhee\_66 Start: 39448, Stop: 39299, Start Num: 43

Candidate Starts for Sunhee\_66:

(22, 39601), (Start: 43 @39448 has 263 MA's), (Start: 44 @39442 has 4 MA's), (65, 39379), (73, 39355), (86, 39310),

Gene: Superchunk\_63 Start: 38825, Stop: 38673, Start Num: 43

Candidate Starts for Superchunk\_63:

(Start: 43 @38825 has 263 MA's), (77, 38732), (82, 38720), (86, 38696), (88, 38693),

Gene: SwirlSquare\_69 Start: 39747, Stop: 39595, Start Num: 43

Candidate Starts for SwirlSquare\_69:

(Start: 43 @39747 has 263 MA's), (77, 39654), (82, 39642), (85, 39627), (86, 39618), (88, 39615),

Gene: Swirley\_62 Start: 40071, Stop: 39919, Start Num: 43

Candidate Starts for Swirley\_62:

(Start: 43 @40071 has 263 MA's), (Start: 44 @40065 has 4 MA's), (49, 40053), (78, 39963), (86, 39930),

Gene: SydNat\_62 Start: 40613, Stop: 40461, Start Num: 43

Candidate Starts for SydNat\_62:

(Start: 43 @40613 has 263 MA's), (49, 40595), (78, 40505), (86, 40472),

Gene: Tachez\_60 Start: 41095, Stop: 41259, Start Num: 43

Candidate Starts for Tachez\_60:

(Start: 43 @41095 has 263 MA's), (Start: 44 @41101 has 4 MA's), (49, 41119), (72, 41194), (86, 41248), (88, 41251),

Gene: TaiwanKao\_62 Start: 41384, Stop: 41548, Start Num: 43

Candidate Starts for TaiwanKao\_62:

(Start: 43 @41384 has 263 MA's), (Start: 44 @41390 has 4 MA's), (49, 41408), (72, 41483), (86, 41537), (88, 41540),

Gene: Taquito\_62 Start: 40992, Stop: 41156, Start Num: 43

Candidate Starts for Taquito\_62:

(11, 40767), (28, 40944), (31, 40965), (Start: 43 @40992 has 263 MA's), (49, 41016), (69, 41079), (78, 41112), (86, 41145),

Gene: Tarynearal\_59 Start: 39666, Stop: 39514, Start Num: 43

Candidate Starts for Tarynearal\_59:

(Start: 43 @39666 has 263 MA's), (Start: 44 @39660 has 4 MA's), (49, 39648), (78, 39558), (86, 39525),

Gene: Theia\_59 Start: 40266, Stop: 40114, Start Num: 43

Candidate Starts for Theia\_59:

(Start: 43 @40266 has 263 MA's), (Start: 44 @40260 has 4 MA's), (49, 40248), (78, 40158), (86, 40125),

Gene: Thyatira\_57 Start: 42370, Stop: 42537, Start Num: 43

Candidate Starts for Thyatira\_57:

(Start: 43 @42370 has 263 MA's), (46, 42382), (49, 42394), (55, 42418), (72, 42469), (84, 42511), (86, 42526),

Gene: Tiger\_62 Start: 39947, Stop: 39795, Start Num: 43

Candidate Starts for Tiger\_62:

(Start: 43 @39947 has 263 MA's), (Start: 44 @39941 has 4 MA's), (49, 39929), (78, 39839), (86, 39806),

Gene: TingHuaYa\_62 Start: 40455, Stop: 40625, Start Num: 43

Candidate Starts for TingHuaYa\_62:

(39, 40452), (Start: 43 @40455 has 263 MA's), (46, 40467), (67, 40545), (71, 40557), (86, 40614), (88, 40617),

Gene: TiniBug\_61 Start: 42015, Stop: 42173, Start Num: 43

Candidate Starts for TiniBug\_61:

(Start: 43 @42015 has 263 MA's), (Start: 44 @42021 has 4 MA's), (49, 42039), (50, 42042), (82, 42138), (86, 42162), (88, 42165),

Gene: TipsytheTRex\_61 Start: 39632, Stop: 39480, Start Num: 43

Candidate Starts for TipsytheTRex\_61:

(14, 39854), (Start: 43 @39632 has 263 MA's), (74, 39551), (82, 39527), (86, 39503),

Gene: Tiri\_61 Start: 41410, Stop: 41577, Start Num: 43

Candidate Starts for Tiri\_61:

(9, 41149), (Start: 43 @41410 has 263 MA's), (Start: 44 @41416 has 4 MA's), (72, 41512), (82, 41542), (84, 41551), (86, 41566), (88, 41569),

Gene: Toaka\_66 Start: 40403, Stop: 40245, Start Num: 38

Candidate Starts for Toaka\_66:

(Start: 38 @40403 has 2 MA's), (Start: 43 @40394 has 263 MA's), (68, 40310), (85, 40265), (86, 40256),

Gene: Topper\_60 Start: 41250, Stop: 41414, Start Num: 43

Candidate Starts for Topper\_60:

(Start: 43 @41250 has 263 MA's), (Start: 44 @41256 has 4 MA's), (49, 41274), (72, 41349), (86, 41403), (88, 41406),

Gene: TpudiCK\_121 Start: 63284, Stop: 63433, Start Num: 43

Candidate Starts for TpudiCK\_121:

(Start: 43 @63284 has 263 MA's), (46, 63296), (52, 63317), (53, 63320), (55, 63326), (61, 63347), (86, 63422),

Gene: TreyKay\_61 Start: 41322, Stop: 41486, Start Num: 43

Candidate Starts for TreyKay\_61:

(Start: 43 @41322 has 263 MA's), (Start: 44 @41328 has 4 MA's), (49, 41346), (86, 41475), (88, 41478),

Gene: TriFive\_54 Start: 40418, Stop: 40576, Start Num: 43

Candidate Starts for TriFive\_54:

(Start: 43 @40418 has 263 MA's), (Start: 48 @40436 has 1 MA's), (58, 40472), (84, 40550), (86, 40565),

Gene: TruffulaTree\_60 Start: 41110, Stop: 41274, Start Num: 43

Candidate Starts for TruffulaTree\_60:

(Start: 43 @41110 has 263 MA's), (Start: 44 @41116 has 4 MA's), (49, 41134), (72, 41209), (82, 41239), (84, 41248), (86, 41263),

Gene: Tubs\_66 Start: 40295, Stop: 40146, Start Num: 43

Candidate Starts for Tubs\_66:

(Start: 43 @40295 has 263 MA's), (Start: 44 @40289 has 4 MA's), (49, 40277), (68, 40211), (82, 40181), (86, 40157),

Gene: Twigg\_58 Start: 39719, Stop: 39567, Start Num: 43

Candidate Starts for Twigg\_58:

(Start: 43 @39719 has 263 MA's), (Start: 44 @39713 has 4 MA's), (49, 39701), (78, 39611), (86, 39578),

Gene: Twitch\_60 Start: 41252, Stop: 41416, Start Num: 43

Candidate Starts for Twitch\_60:

(Start: 43 @41252 has 263 MA's), (Start: 44 @41258 has 4 MA's), (49, 41276), (72, 41351), (86, 41405), (88, 41408),

Gene: TyDawg\_114 Start: 63287, Stop: 63436, Start Num: 43

Candidate Starts for TyDawg\_114:

(Start: 43 @63287 has 263 MA's), (46, 63299), (52, 63320), (53, 63323), (55, 63329), (61, 63350), (86, 63425),

Gene: Ugenie5\_62 Start: 40651, Stop: 40502, Start Num: 43

Candidate Starts for Ugenie5\_62:

(Start: 43 @40651 has 263 MA's), (Start: 44 @40645 has 4 MA's), (49, 40633), (64, 40573), (68, 40567), (86, 40513),

Gene: UnionJack\_63 Start: 39933, Stop: 39781, Start Num: 43

Candidate Starts for UnionJack\_63:

(Start: 43 @39933 has 263 MA's), (Start: 44 @39927 has 4 MA's), (49, 39915), (77, 39828), (86, 39792),

Gene: Urkel\_61 Start: 42019, Stop: 42177, Start Num: 43

Candidate Starts for Urkel\_61:

(Start: 43 @42019 has 263 MA's), (Start: 44 @42025 has 4 MA's), (49, 42043), (50, 42046), (82, 42142), (86, 42166), (88, 42169),

Gene: Vanisoa\_65 Start: 41342, Stop: 41196, Start Num: 40

Candidate Starts for Vanisoa\_65:

(Start: 38 @41348 has 2 MA's), (Start: 40 @41342 has 2 MA's), (86, 41207),

Gene: Veliki\_61 Start: 41096, Stop: 41254, Start Num: 43

Candidate Starts for Veliki\_61:

(Start: 43 @41096 has 263 MA's), (Start: 44 @41102 has 4 MA's), (49, 41120), (72, 41189), (86, 41243), (88, 41246),

Gene: ViviJ\_53 Start: 38125, Stop: 38292, Start Num: 43

Candidate Starts for ViviJ\_53:

(23, 38023), (Start: 43 @38125 has 263 MA's), (46, 38137), (49, 38149), (55, 38173), (72, 38224), (86, 38281), (88, 38284),

Gene: Waterfoul\_56 Start: 40474, Stop: 40641, Start Num: 43

Candidate Starts for Waterfoul\_56:

(3, 40171), (4, 40180), (23, 40372), (Start: 43 @40474 has 263 MA's), (46, 40486), (49, 40498), (55, 40522), (72, 40573), (84, 40615), (86, 40630),

Gene: Whirlwind\_53 Start: 40234, Stop: 40392, Start Num: 43

Candidate Starts for Whirlwind\_53:

(Start: 43 @40234 has 263 MA's), (86, 40381),

Gene: Wintermute\_63 Start: 40987, Stop: 41151, Start Num: 43

Candidate Starts for Wintermute\_63:

(11, 40762), (28, 40939), (31, 40960), (Start: 43 @40987 has 263 MA's), (49, 41011), (69, 41074), (78, 41107), (86, 41140),

Gene: WorldCup\_63 Start: 39916, Stop: 39767, Start Num: 43

Candidate Starts for WorldCup\_63:

(Start: 38 @39925 has 2 MA's), (Start: 43 @39916 has 263 MA's), (66, 39835), (68, 39832), (86, 39778),

Gene: Y10\_61 Start: 40915, Stop: 41079, Start Num: 43

Candidate Starts for Y10\_61:

(11, 40690), (28, 40867), (31, 40888), (Start: 43 @40915 has 263 MA's), (49, 40939), (69, 41002), (78, 41035), (86, 41068),

Gene: Y2\_61 Start: 40915, Stop: 41079, Start Num: 43

Candidate Starts for Y2\_61:

(11, 40690), (28, 40867), (31, 40888), (Start: 43 @40915 has 263 MA's), (49, 40939), (69, 41002), (78, 41035), (86, 41068),

Gene: YasnayaPolyana\_62 Start: 40840, Stop: 41004, Start Num: 43

Candidate Starts for YasnayaPolyana\_62:

(11, 40615), (28, 40792), (31, 40813), (Start: 43 @40840 has 263 MA's), (49, 40864), (69, 40927), (78, 40960), (86, 40993),

Gene: Yecey3\_67 Start: 40309, Stop: 40154, Start Num: 93

Candidate Starts for Yecey3\_67:

(Start: 93 @40309 has 1 MA's), (95, 40174), (96, 40165),

Gene: YoureAdopted\_59 Start: 41239, Stop: 41403, Start Num: 43

Candidate Starts for YoureAdopted\_59:

(Start: 43 @41239 has 263 MA's), (Start: 44 @41245 has 4 MA's), (82, 41368), (86, 41392),

Gene: Yunkel11\_63 Start: 40947, Stop: 41123, Start Num: 43

Candidate Starts for Yunkel11\_63:

(Start: 43 @40947 has 263 MA's), (46, 40959), (50, 40974), (67, 41043), (71, 41055), (86, 41112), (88, 41115),

Gene: Zabiza\_55 Start: 37430, Stop: 37594, Start Num: 43

Candidate Starts for Zabiza\_55:

(35, 37415), (Start: 43 @37430 has 263 MA's), (Start: 44 @37436 has 4 MA's), (49, 37454), (86, 37583), (88, 37586),

Gene: Zavala\_62 Start: 41395, Stop: 41559, Start Num: 43

Candidate Starts for Zavala\_62:

(Start: 43 @41395 has 263 MA's), (Start: 44 @41401 has 4 MA's), (49, 41419), (72, 41494), (86, 41548), (88, 41551),

Gene: Zimmer\_61 Start: 40965, Stop: 40825, Start Num: 43

Candidate Starts for Zimmer\_61:

(5, 41262), (6, 41250), (16, 41172), (Start: 43 @40965 has 263 MA's), (Start: 44 @40959 has 4 MA's), (49, 40947), (82, 40860), (85, 40845), (86, 40836),

Gene: Zolita\_61 Start: 40617, Stop: 40465, Start Num: 43

Candidate Starts for Zolita\_61:

(Start: 43 @40617 has 263 MA's), (49, 40599), (78, 40509), (86, 40476),