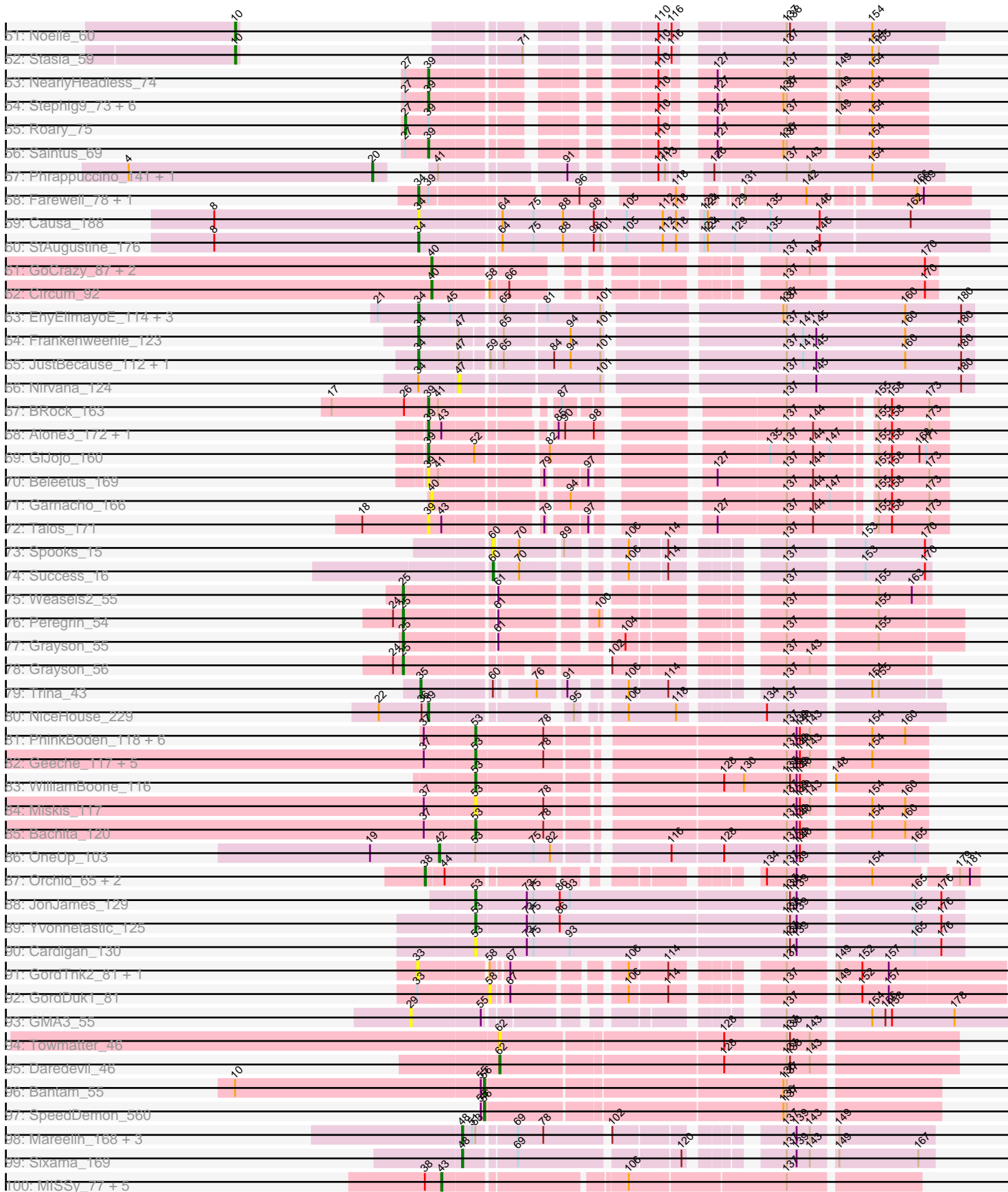
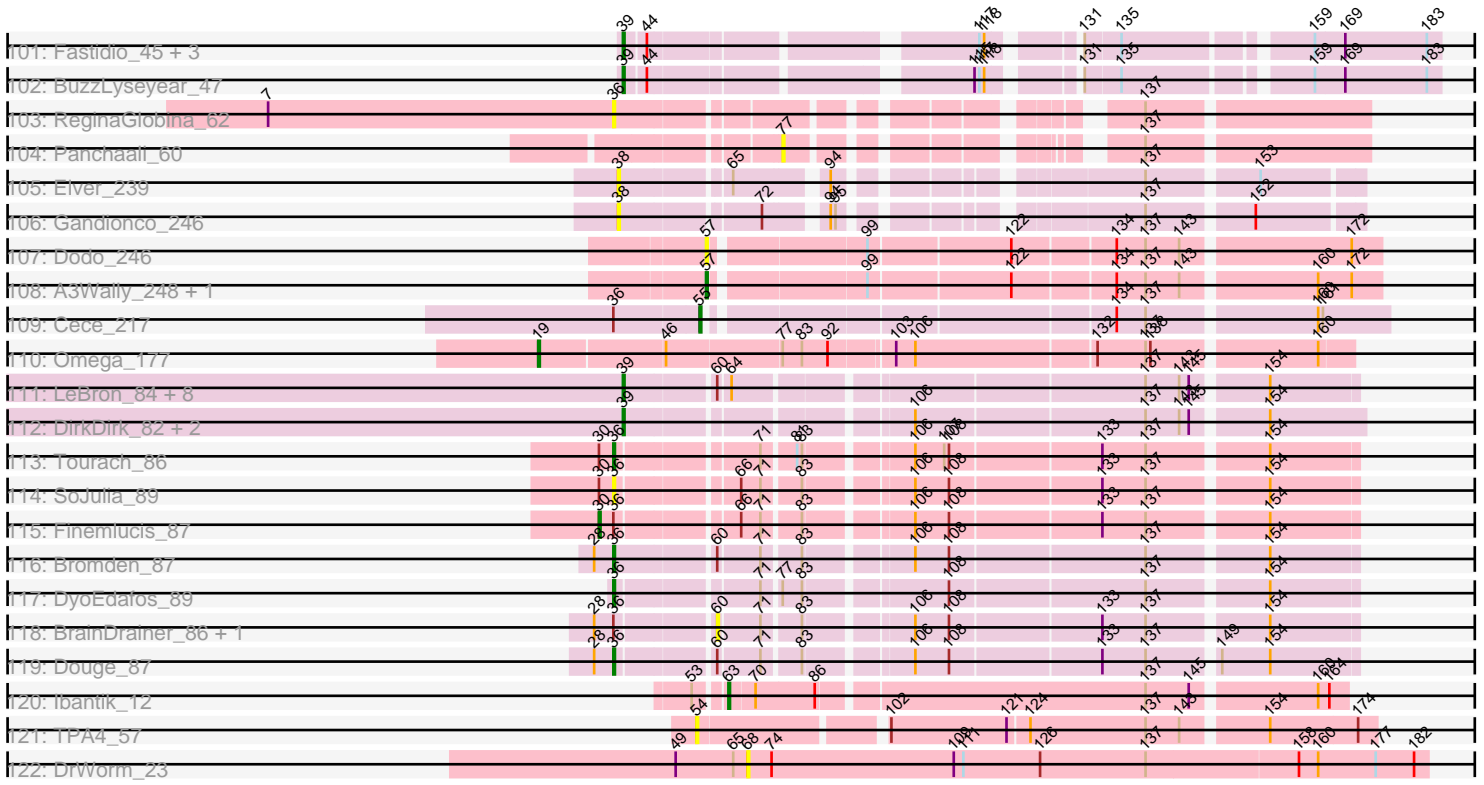


Pham 215726



Pham 215726



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 215726 Report

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

Pham number 215726 has 363 members, 52 are drafts.

Phages represented in each track:

- Track 1 : Killigrew\_36
- Track 2 : Gilberta\_64, Timothy\_63, Flaverint\_64, Orange\_62, Mabel\_63, Lucivia\_64, Snape\_63, Bowtie\_64
- Track 3 : Bud\_62, Aneem\_64, Salz\_62, Joselito\_64, Jabith\_64, TinyTimmy\_63, Munch\_63, Et2Brutus\_62, Fibonacci\_63, Mulciber\_62
- Track 4 : Ebony\_63
- Track 5 : Hutc2\_62, Insomnia\_64
- Track 6 : Bachome\_65
- Track 7 : Sham4\_63, Petersenfast\_61
- Track 8 : MaCh\_63
- Track 9 : Kimona\_58
- Track 10 : AN9\_68, VC3\_67, ANI8\_68, C3\_61
- Track 11 : L5\_61
- Track 12 : Kerberos\_66, Duplo\_66
- Track 13 : Caraxes\_65, Superchunk\_64
- Track 14 : DBQu4n\_66, Tomathan\_66, D32\_65, D29\_61, Pomar16\_65, Travvers\_65, Naji\_66
- Track 15 : TipsytheTRex\_62
- Track 16 : MissWhite\_64
- Track 17 : Ph8s\_66
- Track 18 : Adzzy\_67
- Track 19 : StarStuff\_66
- Track 20 : SwirlSquare\_70
- Track 21 : Serenity\_65
- Track 22 : Koduck\_65
- Track 23 : Jsquared\_66
- Track 24 : Che12\_66
- Track 25 : Quokka\_64, MajorMajor\_64
- Track 26 : Odin\_64
- Track 27 : Bradman\_65
- Track 28 : Anthony\_67
- Track 29 : Kinmap\_64
- Track 30 : Popcicle\_63, Panamaxus\_61, QuinnKiro\_62, Caviar\_63, Lambert1\_63, Todacoro\_63, Texage\_61, Hookmount\_63, Pocahontas\_63, Norbert\_60, Noella\_63, ResDef\_62, Veracruz\_61, Margo\_63
- Track 31 : Idleandcovert\_64, Bugatti\_64, Giroux\_63, TNguyen7\_65, SaturnRing\_64, Puppy\_64, Pistachio\_64, BlueBird\_66

- Track 32 : Phantastic\_65
- Track 33 : Rockstar\_62, B1\_56, JF2\_62
- Track 34 : MK4\_64, JF4\_62
- Track 35 : DropBear\_62, Fred313\_62, HelDan\_63
- Track 36 : Isca\_62
- Track 37 : Marchesa\_62, Kachowdy\_62, Heathen\_64, Scout\_63
- Track 38 : BabyRay\_64
- Track 39 : BabyJohn\_59, Chiqui\_59
- Track 40 : MA5\_64
- Track 41 : Kingmustik0402\_61, PeterPeter\_61, Mayonnaise\_59, Obama12\_62, Pumbaa\_61, KFPoly\_60, LHTSCC\_63, ChampagnePapi\_63, Palestino\_60, ICleared\_60, Arturo\_59, Kratak\_60, Caelakin\_60, Rosa24\_59, Funston\_60, Phacado\_61, Cerulean\_62, OKaNui\_61, Mazhar510\_61, JoongJeon\_60, Happiness\_60, Peaches\_59, Shaka\_59, Relief\_60, Eris\_60, Maverick\_60, AvatarAhPeg\_58, Miramae\_58, BangNhom\_60, Cocoaberry\_61, SheldonCooper\_61, Gadost\_61, NotAPhaseMom\_60, Annyong\_60, Tinybot\_60, Stink\_58, Phighter1804\_61, Iracema64\_62, DirtyDunning\_60, Houdini22\_60, Avle17\_61, Wander\_61, Huxley\_59, Kyee\_61, Bruiser\_60, Mundrea\_59, JetBlade\_61, Nemo27\_60, Shygu2\_59
- Track 42 : LochMonster\_62, Sparxx\_62, Eros\_61, Romney\_60, SenorClean\_57, MeeZee\_60, Eapen\_61, Alberto7\_62, Connomayer\_61, Scamp\_61, Millski\_60, LittleB\_61, Wilbur\_61, Ulysses\_60, Roosevelt\_59, Chaph\_61, TygerBlood\_61, Holli\_60, Citius\_61, Druantia\_60, NorthStar\_59, Medusa\_61, Kamy\_60, Sabertooth\_61, Pipcraft\_58, LittleGuy\_61, TroyPia\_62, Koan\_57, Taquarus\_60, Deano\_59, Commander\_60, Bartimeaus\_61, Lorenzo\_61, YoSam321\_61, Albee\_61, Maxo\_62, Flux\_61, Skipitt\_60, Blackmoor\_60, TiroTheta9\_60, Clarenza\_60, Melvin\_63, Burger\_59, Broseidon\_61, Polymorphads\_62, Koreni\_60, CentreCat\_61, Thanksgivukkah\_60, Jaykayelowell\_58, TinaFeyge\_59, Baby16\_61, Lemur\_61, LappelDuVide\_61, Iceman\_61, BubbleTrouble\_60, Spino\_60, Camperdownii\_59, Nyxis\_60, Ruin\_61, Florean\_61, Bombshell\_61, Dhanush\_61
- Track 43 : Cindaradix\_56
- Track 44 : BellusTerra\_62
- Track 45 : Kremtemulon\_60
- Track 46 : Badger\_58, Bumblebee11\_58, Xena\_58, Datway\_59, PetiteSangsue\_59, Wile\_59, Katalie136\_59, Achebe\_58, Morpher26\_59, Cici\_59, AbbysRanger\_59, Backyardigan\_57, Perplexer\_59
- Track 47 : Lunsford\_62, Phontbonne\_61, HamSlice\_58, Wizard007\_60
- Track 48 : Cintron\_60
- Track 49 : Eurydice\_62, Eagle\_60, Ohfah\_62, Phelipe\_62, Abdiel\_61, Nebs\_62, LeoAvram\_60
- Track 50 : Morrow\_62
- Track 51 : Noelle\_60
- Track 52 : Stasia\_59
- Track 53 : NearlyHeadless\_74
- Track 54 : Stephig9\_73, Groundhog\_73, Dixon\_73, Smeadley\_74, Danforth\_74, Astro\_74, Expelliarmus\_71
- Track 55 : Roary\_75
- Track 56 : Saintus\_69
- Track 57 : Phrappuccino\_141, Settecandela\_141
- Track 58 : Farewell\_78, Sparky\_77
- Track 59 : Causa\_188
- Track 60 : StAugustine\_176
- Track 61 : GoCrazy\_87, Hankly\_92, KeaneyLin\_89

- Track 62 : Circum\_92
- Track 63 : EhyElimayoE\_114, Quantum\_112, Kradal\_113, Satis\_113
- Track 64 : Frankenweenie\_123
- Track 65 : JustBecause\_112, Kela\_113
- Track 66 : Nirvana\_124
- Track 67 : BRock\_163
- Track 68 : Alone3\_172, LuckySocke\_170
- Track 69 : GiJojo\_160
- Track 70 : Beleetus\_169
- Track 71 : Garnacho\_166
- Track 72 : Talos\_171
- Track 73 : Spooks\_15
- Track 74 : Success\_16
- Track 75 : Weasels2\_55
- Track 76 : Peregrin\_54
- Track 77 : Grayson\_55
- Track 78 : Grayson\_56
- Track 79 : Trina\_43
- Track 80 : NiceHouse\_229
- Track 81 : PhinkBoden\_118, Toniann\_118, Cucurbita\_119, Culver\_119, Aphelion\_118, Lozinak\_118, Smoothie\_119
- Track 82 : Geeche\_117, Abscondus\_118, Dusty\_115, Norvs\_118, Engineer\_119, ClubL\_119
- Track 83 : WilliamBoone\_116
- Track 84 : Miskis\_117
- Track 85 : Bachita\_120
- Track 86 : OneUp\_103
- Track 87 : Orchid\_65, PatrickStar\_66, Kampe\_66
- Track 88 : JonJames\_129
- Track 89 : Yvonnetastic\_125
- Track 90 : Cardigan\_130
- Track 91 : GordTnk2\_81, Gmala1\_74
- Track 92 : GordDuk1\_81
- Track 93 : GMA3\_55
- Track 94 : Towmatter\_46
- Track 95 : Daredevil\_46
- Track 96 : Bantam\_55
- Track 97 : SpeedDemon\_560
- Track 98 : Mareelih\_168, BlueNGold\_167, Forza\_171, Boopy\_170
- Track 99 : Sixama\_169
- Track 100 : MISSy\_77, Kostya\_76, FoghornLeghorn\_70, Palpatine\_78, BugsBunny\_76, Thimble\_78
- Track 101 : Fastidio\_45, Demsculpinboyz\_49, Marker\_42, DaddyRickover\_42
- Track 102 : BuzzLyseyear\_47
- Track 103 : ReginaGlobina\_62
- Track 104 : Panchaali\_60
- Track 105 : Elver\_239
- Track 106 : Gandionco\_246
- Track 107 : Dodo\_246
- Track 108 : A3Wally\_248, PauloDiaboli\_248
- Track 109 : Cece\_217
- Track 110 : Omega\_177

- Track 111 : LeBron\_84, Rose5\_86, Acquire49\_85, Tyson\_86, AvadaKedavra\_85, JoeDirt\_86, Wyatt2\_86, UPIE\_84, CicholasNage\_82
- Track 112 : DirkDirk\_82, Appletree2\_84, Silverleaf\_85
- Track 113 : Tourach\_86
- Track 114 : SoJulia\_89
- Track 115 : Finemlucis\_87
- Track 116 : Bromden\_87
- Track 117 : DyoEdafos\_89
- Track 118 : BrainDrainer\_86, PYPDinur\_85
- Track 119 : Douge\_87
- Track 120 : Ibantik\_12
- Track 121 : TPA4\_57
- Track 122 : DrWorm\_23

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

The start number called the most often in the published annotations is 10, it was called in 159 of the 311 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_59, Abdiel\_61, Achebe\_58, Albee\_61, Alberto7\_62, Annyong\_60, Arturo\_59, AvatarAhPeg\_58, Avle17\_61, Baby16\_61, BabyJohn\_59, Backyardigan\_57, Badger\_58, BangNhom\_60, Bartimeaus\_61, BellusTerra\_62, Blackmoor\_60, BlueBird\_66, Bombshell\_61, Broseidon\_61, Bruiser\_60, BubbleTrouble\_60, Bugatti\_64, Bumblebee11\_58, Burger\_59, Caelakin\_60, Camperdownii\_59, Caviar\_63, CentreCat\_61, Cerulean\_62, ChampagnePapi\_63, Chaph\_61, Chiqui\_59, Cici\_59, Cindaradix\_56, Citius\_61, Clarenza\_60, Cocoaberry\_61, Commander\_60, Connomayer\_61, Datway\_59, Deano\_59, Dhanush\_61, DirtyDunning\_60, Druantia\_60, Eagle\_60, Eapen\_61, Eris\_60, Eros\_61, Eurydice\_62, Florean\_61, Flux\_61, Funston\_60, Gadost\_61, Giroux\_63, HamSlice\_58, Happiness\_60, Heathen\_64, Holli\_60, Hookmount\_63, Houdini22\_60, Huxley\_59, ICleared\_60, Iceman\_61, Idleandcovert\_64, Iracema64\_62, JF4\_62, Jaykayelowell\_58, JetBlade\_61, JoongJeon\_60, KFPoly\_60, Kachowdy\_62, Kampy\_60, Katalie136\_59, Kingmustik0402\_61, Koan\_57, Koreni\_60, Kratark\_60, Kyee\_61, LHTSCC\_63, Lambert1\_63, LappelDuVide\_61, Lemur\_61, LeoAvram\_60, LittleB\_61, LittleGuy\_61, LochMonster\_62, Lorenzo\_61, Lunsford\_62, MA5\_64, MK4\_64, Marchesa\_62, Margo\_63, Maverick\_60, Maxo\_62, Mayonnaise\_59, Mazhar510\_61, Medusa\_61, MeeZee\_60, Melvin\_63, Millski\_60, Miramae\_58, Morpher26\_59, Morrow\_62, Mundrea\_59, Nebs\_62, Nemo27\_60, Noella\_63, Noelle\_60, Norbert\_60, NorthStar\_59, NotAPhaseMom\_60, Nyxis\_60, OKaNui\_61, Obama12\_62, Ohfah\_62, Palestino\_60, Panamaxus\_61, Peaches\_59, Perplexer\_59, PeterPeter\_61, PetiteSangsue\_59, Phacado\_61, Phelipe\_62, Phighter1804\_61, Phontbonne\_61, Pipcraft\_58, Pistachio\_64, Pocahontas\_63, Polymorphads\_62, Popcicle\_63, Pumbaa\_61, Puppy\_64, QuinnKiro\_62, Relief\_60, ResDef\_62, Romney\_60, Roosevelt\_59, Rosa24\_59, Ruin\_61, Sabertooth\_61, SaturnRing\_64, Scamp\_61, Scout\_63, SeniorClean\_57, Shaka\_59, SheldonCooper\_61, Shygu2\_59, Skipitt\_60, Sparxx\_62, Spino\_60, Stasia\_59, Stink\_58, TNguyen7\_65, Taquarus\_60, Texage\_61, Thanksgivukkah\_60, TinaFeyge\_59, Tinybot\_60, TiroTheta9\_60, Todacoro\_63, TroyPia\_62, TygerBlood\_61, Ulysses\_60, Veracruz\_61, Wander\_61, Wilbur\_61, Wile\_59, Wizard007\_60, Xena\_58, YoSam321\_61,

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

- B1\_56, BabyRay\_64, Bantam\_55, DropBear\_62, Fred313\_62, HelDan\_63, Isca\_62, JF2\_62, Phantastic\_65, Rockstar\_62,

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

- A3Wally\_248, AN9\_68, ANI8\_68, Abscondus\_118, Acquire49\_85, Adzzy\_67, Alone3\_172, Aneem\_64, Anthony\_67, Aphelion\_118, Appletree2\_84, Astro\_74, AvadaKedavra\_85, BRock\_163, Bachita\_120, Bachome\_65, Beleetus\_169, BlueNGold\_167, Boopy\_170, Bowtie\_64, Bradman\_65, BrainDrainer\_86, Bromden\_87, Bud\_62, BugsBunny\_76, BuzzLyseyear\_47, C3\_61, Caraxes\_65, Cardigan\_130, Causa\_188, Cece\_217, Che12\_66, CicholasNage\_82, Cintron\_60, Circum\_92, ClubL\_119, Cucurbita\_119, Culver\_119, D29\_61, D32\_65, DBQu4n\_66, DaddyRickover\_42, Danforth\_74, Daredevil\_46, Demsculpinboyz\_49, DirkDirk\_82, Dixon\_73, Dodo\_246, Douge\_87, DrWorm\_23, Duplo\_66, Dusty\_115, DyoEdafos\_89, Ebony\_63, EhyElimayoE\_114, Elver\_239, Engineer\_119, Et2Brutus\_62, Expelliarmus\_71, Farewell\_78, Fastidio\_45, Fibonacci\_63, Finemlucis\_87, Flaverint\_64, FoghornLeghorn\_70, Forza\_171, Frankenweenie\_123, GMA3\_55, Gandionco\_246, Garnacho\_166, Geeche\_117, GiJojo\_160, Gilberta\_64, Gmala1\_74, GoCrazy\_87, GordDuk1\_81, GordTnk2\_81, Grayson\_55, Grayson\_56, Groundhog\_73, Hankly\_92, Hutc2\_62, Ibantik\_12, Insomnia\_64, Jabith\_64, JoeDirt\_86, JonJames\_129, Joselito\_64, Jsquared\_66, JustBecause\_112, Kampe\_66, KeaneyLin\_89, Kela\_113, Kerberos\_66, Killigrew\_36, Kimona\_58, Kinmap\_64, Koduck\_65, Kostya\_76, Kradal\_113, Kremtemulon\_60, L5\_61, LeBron\_84, Lozinak\_118, Lucivia\_64, LuckySocke\_170, MISSy\_77, MaCh\_63, Mabel\_63, MajorMajor\_64, Mareelih\_168, Marker\_42, Miskis\_117, MissWhite\_64, Mulciber\_62, Munch\_63, Naji\_66, NearlyHeadless\_74, NiceHouse\_229, Nirvana\_124, Norvs\_118, Odin\_64, Omega\_177, OneUp\_103, Orange\_62, Orchid\_65, PYPDinur\_85, Palpatine\_78, Panchaali\_60, PatrickStar\_66, PauloDiaboli\_248, Peregrin\_54, Petersenfast\_61, Ph8s\_66, PhinkBoden\_118, Phrappuccino\_141, Pomar16\_65, Quantum\_112, Quokka\_64, ReginaGlobina\_62, Roary\_75, Rose5\_86, Saintus\_69, Salz\_62, Satis\_113, Serenity\_65, Settecandela\_141, Sham4\_63, Silverleaf\_85, Sixama\_169, Smeadley\_74, Smoothie\_119, Snape\_63, SoJulia\_89, Sparky\_77, SpeedDemon\_560, Spooks\_15, StAugustine\_176, StarStuff\_66, Stephig9\_73, Success\_16, Superchunk\_64, SwirlSquare\_70, TPA4\_57, Talos\_171, Thimble\_78, Timothy\_63, TinyTimmy\_63, TipsytheTRex\_62, Tomathan\_66, Toniann\_118, Tourach\_86, Towmatter\_46, Travvers\_65, Trina\_43, Tyson\_86, UPIE\_84, VC3\_67, Weasels2\_55, WilliamBoone\_116, Wyatt2\_86, Yvonnetastic\_125,

### Summary by start number:

Start 9:

- Found in 49 of 363 ( 13.5% ) of genes in pham
- Manual Annotations of this start: 8 of 311
- Called 18.4% of time when present
- Phage (with cluster) where this start called: B1\_56 (A3), BabyRay\_64 (A3), DropBear\_62 (A3), Fred313\_62 (A3), HelDan\_63 (A3), Isca\_62 (A3), JF2\_62 (A3), Phantastic\_65 (A3), Rockstar\_62 (A3),

Start 10:

- Found in 181 of 363 ( 49.9% ) of genes in pham
- Manual Annotations of this start: 159 of 311



- Called 94.5% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_59 (A4), Abdiel\_61 (A4), Achebe\_58 (A4), Albee\_61 (A4), Alberto7\_62 (A4), Annyong\_60 (A4), Arturo\_59 (A4), AvatarAhPeg\_58 (A4), Avle17\_61 (A4), Baby16\_61 (A4), BabyJohn\_59 (A3), Backyardigan\_57 (A4), Badger\_58 (A4), BangNhom\_60 (A4), Bartimeaus\_61 (A4), BellusTerra\_62 (A4), Blackmoor\_60 (A4), BlueBird\_66 (A3), Bombshell\_61 (A4), Broseidon\_61 (A4), Bruiser\_60 (A4), BubbleTrouble\_60 (A4), Bugatti\_64 (A3), Bumblebee11\_58 (A4), Burger\_59 (A4), Caelakin\_60 (A4), Camperdownii\_59 (A4), Caviar\_63 (A3), CentreCat\_61 (A4), Cerulean\_62 (A4), ChampagnePapi\_63 (A4), Chaph\_61 (A4), Chiqui\_59 (A3), Cici\_59 (A4), Cindaradix\_56 (A4), Citius\_61 (A4), Clarenza\_60 (A4), Cocoaberry\_61 (A4), Commander\_60 (A4), Connomayer\_61 (A4), Datway\_59 (A4), Deano\_59 (A4), Dhanush\_61 (A4), DirtyDunning\_60 (A4), Druantia\_60 (A4), Eagle\_60 (A4), Eapen\_61 (A4), Eris\_60 (A4), Eros\_61 (A4), Eurydice\_62 (A4), Florean\_61 (A4), Flux\_61 (A4), Funston\_60 (A4), Gadost\_61 (A4), Giroux\_63 (A3), HamSlice\_58 (A4), Happiness\_60 (A4), Heathen\_64 (A3), Holli\_60 (A4), Hookmount\_63 (A3), Houdini22\_60 (A4), Huxley\_59 (A4), ICleared\_60 (A4), Iceman\_61 (A4), Idleandcovert\_64 (A3), Iracema64\_62 (A4), JF4\_62 (A3), Jaykayelowell\_58 (A4), JetBlade\_61 (A4), JoongJeon\_60 (A4), KFPoly\_60 (A4), Kachowdy\_62 (A3), Kampy\_60 (A4), Katalie136\_59 (A4), Kingmustik0402\_61 (A4), Koan\_57 (A4), Koreni\_60 (A4), Kratark\_60 (A4), Kye\_61 (A4), LHTSCC\_63 (A4), Lambert1\_63 (A3), LappelDuVide\_61 (A4), Lemur\_61 (A4), LeoAvram\_60 (A4), LittleB\_61 (A4), LittleGuy\_61 (A4), LochMonster\_62 (A4), Lorenzo\_61 (A4), Lunsford\_62 (A4), MA5\_64 (A3), MK4\_64 (A3), Marchesa\_62 (A3), Margo\_63 (A3), Maverick\_60 (A4), Maxo\_62 (A4), Mayonnaise\_59 (A4), Mazhar510\_61 (A4), Medusa\_61 (A4), MeeZee\_60 (A4), Melvin\_63 (A4), Millski\_60 (A4), Miramae\_58 (A4), Morpher26\_59 (A4), Morrow\_62 (A4), Mundrea\_59 (A4), Nebs\_62 (A4), Nemo27\_60 (A4), Noella\_63 (A3), Noelle\_60 (A4), Norbert\_60 (A3), NorthStar\_59 (A4), NotAPhaseMom\_60 (A4), Nyxis\_60 (A4), OKaNui\_61 (A4), Obama12\_62 (A4), Ohfah\_62 (A4), Palestino\_60 (A4), Panamaxus\_61 (A3), Peaches\_59 (A4), Perplexer\_59 (A4), PeterPeter\_61 (A4), PetiteSangsue\_59 (A4), Phacado\_61 (A4), Philippe\_62 (A4), Phighter1804\_61 (A4), Phontbonne\_61 (A4), Pipcraft\_58 (A4), Pistachio\_64 (A3), Pocahontas\_63 (A3), Polymorphads\_62 (A4), Popcicle\_63 (A3), Pumbaa\_61 (A4), Puppy\_64 (A3), QuinnKiro\_62 (A3), Relief\_60 (A4), ResDef\_62 (A3), Romney\_60 (A4), Roosevelt\_59 (A4), Rosa24\_59 (A4), Ruin\_61 (A4), Sabertooth\_61 (A4), SaturnRing\_64 (A3), Scamp\_61 (A4), Scout\_63 (A3), SenorClean\_57 (A4), Shaka\_59 (A4), SheldonCooper\_61 (A4), Shygu2\_59 (A4), Skipitt\_60 (A4), Sparxx\_62 (A4), Spino\_60 (A4), Stasia\_59 (A4), Stink\_58 (A4), TNguyen7\_65 (A3), Taquarus\_60 (A4), Texage\_61 (A3), Thanksgivukkah\_60 (A4), TinaFeyge\_59 (A4), Tinybot\_60 (A4), TiroTheta9\_60 (A4), Todacoro\_63 (A3), TroyPia\_62 (A4), TygerBlood\_61 (A4), Ulysses\_60 (A4), Veracruz\_61 (A3), Wander\_61 (A4), Wilbur\_61 (A4), Wile\_59 (A4), Wizard007\_60 (A4), Xena\_58 (A4), YoSam321\_61 (A4),

#### Start 19:

- Found in 2 of 363 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Omega\_177 (J),

#### Start 20:

- Found in 2 of 363 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Phrappuccino\_141 (AA), Settecandela\_141 (AA),

Start 25:

- Found in 4 of 363 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 4 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson\_55 (CB), Grayson\_56 (CB), Peregrin\_54 (CB), Weasels2\_55 (CB),

Start 27:

- Found in 10 of 363 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Roary\_75 (A8),

Start 29:

- Found in 22 of 363 ( 6.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: GMA3\_55 (DF2),

Start 30:

- Found in 3 of 363 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Finemlucis\_87 (L2),

Start 32:

- Found in 25 of 363 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 5 of 311
- Called 24.0% of time when present
- Phage (with cluster) where this start called: Bachome\_65 (A11), Ebony\_63 (A11), Hutc2\_62 (A11), Insomnia\_64 (A11), Petersenfast\_61 (A11), Sham4\_63 (A11),

Start 33:

- Found in 3 of 363 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Gmala1\_74 (DF1), GordTnk2\_81 (DF1),

Start 34:

- Found in 13 of 363 ( 3.6% ) of genes in pham
- Manual Annotations of this start: 11 of 311
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Anthony\_67 (A20), Causa\_188 (AI), EhyElimayoE\_114 (BM), Farewell\_78 (AF), Frankenweenie\_123 (BM), JustBecause\_112 (BM), Kela\_113 (BM), Kradal\_113 (BM), Quantum\_112 (BM), Satis\_113 (BM), Sparky\_77 (AF), StAugustine\_176 (AI),

Start 35:

- Found in 1 of 363 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 311

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trina\_43 (CE),

#### Start 36:

- Found in 11 of 363 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 4 of 311
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Bromden\_87 (L4), Douge\_87 (L4), DyoEdafos\_89 (L4), ReginaGlobina\_62 (FC), SoJulia\_89 (L2), Tourach\_86 (L2),

#### Start 38:

- Found in 11 of 363 ( 3.0% ) of genes in pham
- Manual Annotations of this start: 3 of 311
- Called 45.5% of time when present
- Phage (with cluster) where this start called: Elver\_239 (FK), Gandionco\_246 (FK), Kampe\_66 (CX), Orchid\_65 (CX), PatrickStar\_66 (CX),

#### Start 39:

- Found in 96 of 363 ( 26.4% ) of genes in pham
- Manual Annotations of this start: 75 of 311
- Called 87.5% of time when present
- Phage (with cluster) where this start called: AN9\_68 (A2), ANI8\_68 (A2), Acquire49\_85 (L1), Adzzy\_67 (A2), Alone3\_172 (BS), Aneem\_64 (A11), Appletree2\_84 (L1), Astro\_74 (A8), AvadaKedavra\_85 (L1), BRock\_163 (BS), Beleetus\_169 (BS), Bowtie\_64 (A11), Bud\_62 (A11), BuzzLyseyear\_47 (F1), C3\_61 (A2), Caraxes\_65 (A2), Che12\_66 (A2), CicholasNage\_82 (L1), Cintron\_60 (A4), D29\_61 (A2), D32\_65 (A2), DBQu4n\_66 (A2), DaddyRickover\_42 (F1), Danforth\_74 (A8), Demsculpinboyz\_49 (F2), DirkDirk\_82 (L1), Dixon\_73 (A8), Duplo\_66 (A2), Et2Brutus\_62 (A11), Expelliarmus\_71 (A8), Fastidio\_45 (F1), Fibonacci\_63 (A11), Flaverint\_64 (A11), GiJojo\_160 (BS), Gilberta\_64 (A11), Groundhog\_73 (A8), Jabith\_64 (A11), JoeDirt\_86 (L1), Joselito\_64 (A11), Jsquared\_66 (A2), Kerberos\_66 (A2), Killigrew\_36 (A1), Kimona\_58 (A19), Koduck\_65 (A2), Kremtemulon\_60 (A4), L5\_61 (A2), LeBron\_84 (L1), Lucivia\_64 (A11), LuckySocke\_170 (BS), MaCh\_63 (A11), Mabel\_63 (A11), MajorMajor\_64 (A2), Marker\_42 (F1), MissWhite\_64 (A2), Mulciber\_62 (A11), Munch\_63 (A11), Naji\_66 (A2), NearlyHeadless\_74 (A8), NiceHouse\_229 (CE), Orange\_62 (A11), Ph8s\_66 (A2), Pomar16\_65 (A2), Quokka\_64 (A2), Rose5\_86 (L1), Saintus\_69 (A8), Salz\_62 (A11), Serenity\_65 (A2), Silverleaf\_85 (L1), Smeadley\_74 (A8), Snape\_63 (A11), StarStuff\_66 (A2), Stephig9\_73 (A8), Superchunk\_64 (A2), SwirlSquare\_70 (A2), Talos\_171 (BS), Timothy\_63 (A11), TinyTimmy\_63 (A11), TopsytheTRex\_62 (A2), Tomathan\_66 (A2), Travvers\_65 (A2), Tyson\_86 (L1), UPIE\_84 (L1), VC3\_67 (A2), Wyatt2\_86 (L1),

#### Start 40:

- Found in 5 of 363 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 4 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Circum\_92 (AM), Garnacho\_166 (BS), GoCrazy\_87 (AM), Hankly\_92 (AM), KeaneyLin\_89 (AM),

#### Start 41:

- Found in 18 of 363 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 11.1% of time when present

- Phage (with cluster) where this start called: Kinmap\_64 (A21), Odin\_64 (A2),

#### Start 42:

- Found in 1 of 363 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OneUp\_103 (CQ2),

#### Start 43:

- Found in 15 of 363 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 3 of 311
- Called 46.7% of time when present
- Phage (with cluster) where this start called: Bradman\_65 (A2), BugsBunny\_76 (E), FoghornLeghorn\_70 (E), Kostya\_76 (E), MISSy\_77 (E), Palpatine\_78 (E), Thimble\_78 (E),

#### Start 47:

- Found in 4 of 363 ( 1.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Nirvana\_124 (BM),

#### Start 48:

- Found in 5 of 363 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 5 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueNGold\_167 (DS), Boopy\_170 (DS), Forza\_171 (DS), Mareelih\_168 (DS), Sixama\_169 (DS),

#### Start 53:

- Found in 25 of 363 ( 6.9% ) of genes in pham
- Manual Annotations of this start: 14 of 311
- Called 76.0% of time when present
- Phage (with cluster) where this start called: Abscondus\_118 (CQ1), Aphelion\_118 (CQ1), Bachita\_120 (CQ1), Cardigan\_130 (DD), ClubL\_119 (CQ1), Cucurbita\_119 (CQ1), Culver\_119 (CQ1), Dusty\_115 (CQ1), Engineer\_119 (CQ1), Geeche\_117 (CQ1), JonJames\_129 (DD), Lozinak\_118 (CQ1), Miskis\_117 (CQ1), Norvs\_118 (CQ1), PhinkBoden\_118 (CQ1), Smoothie\_119 (CQ1), Toniann\_118 (CQ1), WilliamBoone\_116 (CQ1), Yvonnestic\_125 (DD),

#### Start 54:

- Found in 1 of 363 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4\_57 (singleton),

#### Start 55:

- Found in 4 of 363 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Cece\_217 (GD3),

#### Start 56:

- Found in 2 of 363 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam\_55 (DL), SpeedDemon\_560 (DL),

Start 57:

- Found in 3 of 363 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 2 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_248 (GD1), Dodo\_246 (GD1), PauloDiaboli\_248 (GD1),

Start 58:

- Found in 11 of 363 ( 3.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: GordDuk1\_81 (DF1),

Start 60:

- Found in 27 of 363 ( 7.4% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 14.8% of time when present
- Phage (with cluster) where this start called: BrainDrainer\_86 (L4), PYPDinur\_85 (L4), Spooks\_15 (BT), Success\_16 (BT),

Start 62:

- Found in 2 of 363 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil\_46 (DL), Towmatter\_46 (DL),

Start 63:

- Found in 1 of 363 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 311
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ibantik\_12 (singleton),

Start 68:

- Found in 1 of 363 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrWorm\_23 (singleton),

Start 77:

- Found in 3 of 363 ( 0.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Panchaali\_60 (FC),

**Summary by clusters:**

There are 38 clusters represented in this pham: GD1, singleton, GD3, BM, DD, DL, A21, BT, FC, BS, FK, DS, A11, DF1, DF2, A1, A3, A2, A4, A8, CQ1, AA, E, AF, AI, CB, J, AM, CE, L4, CX, L2, L1, A20, F1, F2, CQ2, A19,

Info for manual annotations of cluster A1:

- Start number 39 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:

- Start number 32 was manually annotated 5 times for cluster A11.
- Start number 39 was manually annotated 19 times for cluster A11.

Info for manual annotations of cluster A19:

- Start number 39 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 39 was manually annotated 22 times for cluster A2.
- Start number 41 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 34 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 9 was manually annotated 8 times for cluster A3.
- Start number 10 was manually annotated 24 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 10 was manually annotated 135 times for cluster A4.
- Start number 39 was manually annotated 2 times for cluster A4.

Info for manual annotations of cluster A8:

- Start number 27 was manually annotated 1 time for cluster A8.
- Start number 39 was manually annotated 9 times for cluster A8.

Info for manual annotations of cluster AA:

- Start number 20 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AF:

- Start number 34 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AI:

- Start number 34 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster AM:

- Start number 40 was manually annotated 4 times for cluster AM.

Info for manual annotations of cluster BM:

- Start number 34 was manually annotated 7 times for cluster BM.

Info for manual annotations of cluster BS:

- Start number 39 was manually annotated 4 times for cluster BS.

Info for manual annotations of cluster BT:

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

Info for manual annotations of cluster CB:

- Start number 25 was manually annotated 4 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 35 was manually annotated 1 time for cluster CE.
- Start number 39 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CQ1:

- Start number 53 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 42 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CX:

- Start number 38 was manually annotated 3 times for cluster CX.

Info for manual annotations of cluster DD:

- Start number 53 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 56 was manually annotated 2 times for cluster DL.
- Start number 62 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster DS:

- Start number 48 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster E:

- Start number 43 was manually annotated 3 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 39 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 39 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster GD1:

- Start number 57 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD3:

- Start number 55 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster J:

- Start number 19 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster L1:

- Start number 39 was manually annotated 12 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 30 was manually annotated 1 time for cluster L2.
- Start number 36 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L4:

- Start number 36 was manually annotated 3 times for cluster L4.

**Gene Information:**

Gene: A3Wally\_248 Start: 138625, Stop: 139011, Start Num: 57

Candidate Starts for A3Wally\_248:

(Start: 57 @138625 has 2 MA's), (99, 138712), (122, 138796), (134, 138856), (137, 138874), (143, 138895), (160, 138973), (172, 138994),

Gene: AN9\_68 Start: 40889, Stop: 40512, Start Num: 39

Candidate Starts for AN9\_68:

(13, 41003), (Start: 39 @40889 has 75 MA's), (Start: 41 @40880 has 1 MA's), (49, 40859), (58, 40841), (66, 40826), (137, 40637), (145, 40610), (151, 40586), (154, 40568),

Gene: ANI8\_68 Start: 40889, Stop: 40512, Start Num: 39

Candidate Starts for ANI8\_68:

(13, 41003), (Start: 39 @40889 has 75 MA's), (Start: 41 @40880 has 1 MA's), (49, 40859), (58, 40841), (66, 40826), (137, 40637), (145, 40610), (151, 40586), (154, 40568),

Gene: AbbysRanger\_59 Start: 40097, Stop: 39711, Start Num: 10

Candidate Starts for AbbysRanger\_59:

(Start: 10 @40097 has 159 MA's), (110, 39938), (116, 39929), (137, 39845), (154, 39776),

Gene: Abdiel\_61 Start: 40247, Stop: 39867, Start Num: 10

Candidate Starts for Abdiel\_61:

(Start: 9 @40256 has 8 MA's), (Start: 10 @40247 has 159 MA's), (110, 40088), (111, 40085), (116, 40079), (137, 39995), (154, 39926),

Gene: Abscondus\_118 Start: 67747, Stop: 68124, Start Num: 53

Candidate Starts for Abscondus\_118:

(37, 67702), (Start: 53 @67747 has 14 MA's), (78, 67807), (137, 68005), (139, 68014), (140, 68017), (143, 68026), (154, 68074),

Gene: Achebe\_58 Start: 40080, Stop: 39694, Start Num: 10

Candidate Starts for Achebe\_58:

(Start: 10 @40080 has 159 MA's), (110, 39921), (116, 39912), (137, 39828), (154, 39759),

Gene: Acquire49\_85 Start: 54457, Stop: 54870, Start Num: 39

Candidate Starts for Acquire49\_85:

(Start: 39 @54457 has 75 MA's), (Start: 60 @54508 has 1 MA's), (64, 54514), (137, 54748), (143, 54769), (145, 54775), (154, 54817),

Gene: Adzzy\_67 Start: 39457, Stop: 39080, Start Num: 39

Candidate Starts for Adzzy\_67:

(29, 39472), (Start: 39 @39457 has 75 MA's), (Start: 41 @39448 has 1 MA's), (49, 39427), (89, 39361), (110, 39298), (137, 39205), (154, 39136),



Gene: Albee\_61 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Albee\_61:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Alberto7\_62 Start: 40580, Stop: 40200, Start Num: 10

Candidate Starts for Alberto7\_62:

(Start: 10 @40580 has 159 MA's), (110, 40421), (116, 40412), (137, 40328), (154, 40259), (155, 40253),

Gene: Alone3\_172 Start: 89660, Stop: 90058, Start Num: 39

Candidate Starts for Alone3\_172:

(Start: 39 @89660 has 75 MA's), (Start: 43 @89672 has 3 MA's), (85, 89756), (90, 89762), (98, 89786), (137, 89927), (144, 89951), (155, 89996), (158, 90008), (173, 90041),

Gene: Aneem\_64 Start: 39830, Stop: 39456, Start Num: 39

Candidate Starts for Aneem\_64:

(1, 40166), (3, 40118), (6, 40061), (15, 39938), (16, 39911), (Start: 32 @39842 has 5 MA's), (Start: 39 @39830 has 75 MA's), (89, 39734), (110, 39671), (116, 39662), (123, 39650), (134, 39596), (137, 39578), (154, 39509),

Gene: Annyong\_60 Start: 40288, Stop: 39908, Start Num: 10

Candidate Starts for Annyong\_60:

(Start: 10 @40288 has 159 MA's), (110, 40129), (116, 40120), (137, 40036), (154, 39967),

Gene: Anthony\_67 Start: 41229, Stop: 40837, Start Num: 34

Candidate Starts for Anthony\_67:

(23, 41259), (Start: 34 @41229 has 11 MA's), (Start: 60 @41169 has 1 MA's), (137, 40971), (154, 40902),

Gene: Aphelion\_118 Start: 68628, Stop: 69005, Start Num: 53

Candidate Starts for Aphelion\_118:

(37, 68583), (Start: 53 @68628 has 14 MA's), (78, 68688), (137, 68886), (139, 68895), (140, 68898), (143, 68907), (154, 68955), (160, 68985),

Gene: Appletree2\_84 Start: 54041, Stop: 54460, Start Num: 39

Candidate Starts for Appletree2\_84:

(Start: 39 @54041 has 75 MA's), (106, 54194), (137, 54332), (143, 54353), (145, 54359), (154, 54401),

Gene: Arturo\_59 Start: 40358, Stop: 39978, Start Num: 10

Candidate Starts for Arturo\_59:

(Start: 10 @40358 has 159 MA's), (110, 40199), (116, 40190), (137, 40106), (154, 40037),

Gene: Astro\_74 Start: 41340, Stop: 40969, Start Num: 39

Candidate Starts for Astro\_74:

(Start: 27 @41361 has 1 MA's), (Start: 39 @41340 has 75 MA's), (110, 41181), (127, 41148), (136, 41091), (137, 41088), (149, 41049), (154, 41019),

Gene: AvadaKedavra\_85 Start: 54536, Stop: 54949, Start Num: 39

Candidate Starts for AvadaKedavra\_85:

(Start: 39 @54536 has 75 MA's), (Start: 60 @54587 has 1 MA's), (64, 54593), (137, 54827), (143, 54848), (145, 54854), (154, 54896),

Gene: AvatarAhPeg\_58 Start: 39870, Stop: 39484, Start Num: 10  
Candidate Starts for AvatarAhPeg\_58:  
(Start: 10 @39870 has 159 MA's), (110, 39711), (116, 39702), (137, 39618), (154, 39549),

Gene: Avle17\_61 Start: 40240, Stop: 39860, Start Num: 10  
Candidate Starts for Avle17\_61:  
(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: B1\_56 Start: 38826, Stop: 38434, Start Num: 9  
Candidate Starts for B1\_56:  
(Start: 9 @38826 has 8 MA's), (Start: 10 @38817 has 159 MA's), (110, 38661), (134, 38586), (137, 38568), (154, 38499), (160, 38469), (170, 38451),

Gene: BRock\_163 Start: 85073, Stop: 85462, Start Num: 39  
Candidate Starts for BRock\_163:  
(17, 84986), (26, 85052), (Start: 39 @85073 has 75 MA's), (Start: 41 @85082 has 1 MA's), (87, 85169), (137, 85331), (155, 85400), (158, 85412), (173, 85445),

Gene: Baby16\_61 Start: 40254, Stop: 39874, Start Num: 10  
Candidate Starts for Baby16\_61:  
(Start: 10 @40254 has 159 MA's), (110, 40095), (116, 40086), (137, 40002), (154, 39933), (155, 39927),

Gene: BabyJohn\_59 Start: 40644, Stop: 40261, Start Num: 10  
Candidate Starts for BabyJohn\_59:  
(Start: 9 @40653 has 8 MA's), (Start: 10 @40644 has 159 MA's), (110, 40488), (134, 40413), (137, 40395), (143, 40374), (160, 40296),

Gene: BabyRay\_64 Start: 40631, Stop: 40239, Start Num: 9  
Candidate Starts for BabyRay\_64:  
(2, 40772), (Start: 9 @40631 has 8 MA's), (Start: 10 @40622 has 159 MA's), (66, 40559), (110, 40466), (137, 40373), (160, 40274), (175, 40244),

Gene: Bachita\_120 Start: 68407, Stop: 68784, Start Num: 53  
Candidate Starts for Bachita\_120:  
(37, 68362), (Start: 53 @68407 has 14 MA's), (78, 68467), (137, 68665), (139, 68674), (140, 68677), (154, 68734), (160, 68764),

Gene: Bachome\_65 Start: 39822, Stop: 39436, Start Num: 32  
Candidate Starts for Bachome\_65:  
(1, 40146), (3, 40098), (6, 40041), (15, 39918), (Start: 32 @39822 has 5 MA's), (Start: 39 @39810 has 75 MA's), (89, 39714), (110, 39651), (116, 39642), (123, 39630), (134, 39576), (137, 39558), (154, 39489),

Gene: Backyardigan\_57 Start: 40113, Stop: 39727, Start Num: 10  
Candidate Starts for Backyardigan\_57:  
(Start: 10 @40113 has 159 MA's), (110, 39954), (116, 39945), (137, 39861), (154, 39792),

Gene: Badger\_58 Start: 40081, Stop: 39695, Start Num: 10  
Candidate Starts for Badger\_58:  
(Start: 10 @40081 has 159 MA's), (110, 39922), (116, 39913), (137, 39829), (154, 39760),

Gene: BangNhom\_60 Start: 40646, Stop: 40266, Start Num: 10  
Candidate Starts for BangNhom\_60:  
(Start: 10 @40646 has 159 MA's), (110, 40487), (116, 40478), (137, 40394), (154, 40325),

Gene: Bantam\_55 Start: 44365, Stop: 44757, Start Num: 56  
Candidate Starts for Bantam\_55:  
(Start: 10 @44140 has 159 MA's), (Start: 55 @44362 has 1 MA's), (Start: 56 @44365 has 2 MA's),  
(136, 44623), (137, 44626),

Gene: Bartimeaus\_61 Start: 40245, Stop: 39865, Start Num: 10  
Candidate Starts for Bartimeaus\_61:  
(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155,  
39918),

Gene: Beleetus\_169 Start: 88129, Stop: 88518, Start Num: 39  
Candidate Starts for Beleetus\_169:  
(Start: 39 @88129 has 75 MA's), (Start: 41 @88138 has 1 MA's), (79, 88216), (97, 88246), (127,  
88327), (137, 88387), (144, 88411), (155, 88456), (158, 88468), (173, 88501),

Gene: BellusTerra\_62 Start: 40247, Stop: 39867, Start Num: 10  
Candidate Starts for BellusTerra\_62:  
(Start: 9 @40256 has 8 MA's), (Start: 10 @40247 has 159 MA's), (110, 40088), (116, 40079), (137,  
39995), (154, 39926), (155, 39920),

Gene: Blackmoor\_60 Start: 40245, Stop: 39865, Start Num: 10  
Candidate Starts for Blackmoor\_60:  
(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155,  
39918),

Gene: BlueBird\_66 Start: 40669, Stop: 40286, Start Num: 10  
Candidate Starts for BlueBird\_66:  
(2, 40819), (Start: 9 @40678 has 8 MA's), (Start: 10 @40669 has 159 MA's), (110, 40513), (125,  
40486), (134, 40438), (137, 40420), (160, 40321), (175, 40291),

Gene: BlueNGold\_167 Start: 97256, Stop: 96897, Start Num: 48  
Candidate Starts for BlueNGold\_167:  
(Start: 48 @97256 has 5 MA's), (51, 97247), (Start: 53 @97244 has 14 MA's), (69, 97214), (78, 97193),  
(102, 97139), (137, 97022), (139, 97013), (143, 97001), (149, 96983),

Gene: Bombshell\_61 Start: 40240, Stop: 39860, Start Num: 10  
Candidate Starts for Bombshell\_61:  
(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155,  
39913),

Gene: Boopy\_170 Start: 97267, Stop: 96908, Start Num: 48  
Candidate Starts for Boopy\_170:  
(Start: 48 @97267 has 5 MA's), (51, 97258), (Start: 53 @97255 has 14 MA's), (69, 97225), (78, 97204),  
(102, 97150), (137, 97033), (139, 97024), (143, 97012), (149, 96994),

Gene: Bowtie\_64 Start: 39837, Stop: 39463, Start Num: 39  
Candidate Starts for Bowtie\_64:  
(1, 40173), (3, 40125), (6, 40068), (15, 39945), (Start: 32 @39849 has 5 MA's), (Start: 39 @39837 has  
75 MA's), (110, 39678), (116, 39669), (134, 39603), (137, 39585), (154, 39516),

Gene: Bradman\_65 Start: 39794, Stop: 39429, Start Num: 43

Candidate Starts for Bradman\_65:

(13, 39920), (29, 39821), (Start: 39 @39806 has 75 MA's), (Start: 43 @39794 has 3 MA's), (66, 39743), (110, 39647), (137, 39554), (154, 39485),

Gene: BrainDrainer\_86 Start: 55106, Stop: 55468, Start Num: 60

Candidate Starts for BrainDrainer\_86:

(28, 55040), (Start: 36 @55052 has 4 MA's), (Start: 60 @55106 has 1 MA's), (71, 55130), (83, 55151), (106, 55208), (108, 55229), (133, 55319), (137, 55346), (154, 55415),

Gene: Bromden\_87 Start: 56046, Stop: 56465, Start Num: 36

Candidate Starts for Bromden\_87:

(28, 56034), (Start: 36 @56046 has 4 MA's), (Start: 60 @56103 has 1 MA's), (71, 56127), (83, 56148), (106, 56205), (108, 56226), (137, 56343), (154, 56412),

Gene: Broseidon\_61 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Broseidon\_61:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Bruiser\_60 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Bruiser\_60:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: BubbleTrouble\_60 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for BubbleTrouble\_60:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Bud\_62 Start: 39384, Stop: 39010, Start Num: 39

Candidate Starts for Bud\_62:

(1, 39720), (3, 39672), (6, 39615), (15, 39492), (16, 39465), (Start: 32 @39396 has 5 MA's), (Start: 39 @39384 has 75 MA's), (89, 39288), (110, 39225), (116, 39216), (123, 39204), (134, 39150), (137, 39132), (154, 39063),

Gene: Bugatti\_64 Start: 40669, Stop: 40286, Start Num: 10

Candidate Starts for Bugatti\_64:

(2, 40819), (Start: 9 @40678 has 8 MA's), (Start: 10 @40669 has 159 MA's), (110, 40513), (125, 40486), (134, 40438), (137, 40420), (160, 40321), (175, 40291),

Gene: BugsBunny\_76 Start: 48642, Stop: 49040, Start Num: 43

Candidate Starts for BugsBunny\_76:

(Start: 38 @48627 has 3 MA's), (Start: 43 @48642 has 3 MA's), (106, 48789), (137, 48927),

Gene: Bumblebee11\_58 Start: 40083, Stop: 39697, Start Num: 10

Candidate Starts for Bumblebee11\_58:

(Start: 10 @40083 has 159 MA's), (110, 39924), (116, 39915), (137, 39831), (154, 39762),

Gene: Burger\_59 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Burger\_59:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: BuzzLyseyear\_47 Start: 33161, Stop: 32727, Start Num: 39

Candidate Starts for BuzzLyseyear\_47:

(Start: 39 @33161 has 75 MA's), (44, 33149), (115, 32975), (117, 32972), (118, 32969), (131, 32927), (135, 32906), (159, 32804), (169, 32786), (183, 32735),

Gene: C3\_61 Start: 40889, Stop: 40512, Start Num: 39

Candidate Starts for C3\_61:

(13, 41003), (Start: 39 @40889 has 75 MA's), (Start: 41 @40880 has 1 MA's), (49, 40859), (58, 40841), (66, 40826), (137, 40637), (145, 40610), (151, 40586), (154, 40568),

Gene: Caelakin\_60 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Caelakin\_60:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: Camperdownii\_59 Start: 39917, Stop: 39537, Start Num: 10

Candidate Starts for Camperdownii\_59:

(Start: 10 @39917 has 159 MA's), (110, 39758), (116, 39749), (137, 39665), (154, 39596), (155, 39590),

Gene: Caraxes\_65 Start: 39205, Stop: 38822, Start Num: 39

Candidate Starts for Caraxes\_65:

(13, 39319), (29, 39220), (Start: 39 @39205 has 75 MA's), (58, 39157), (94, 39103), (110, 39040), (137, 38947), (143, 38926), (154, 38878),

Gene: Cardigan\_130 Start: 73527, Stop: 73958, Start Num: 53

Candidate Starts for Cardigan\_130:

(Start: 53 @73527 has 14 MA's), (73, 73572), (75, 73578), (93, 73611), (137, 73806), (138, 73809), (139, 73815), (165, 73914), (176, 73938),

Gene: Causa\_188 Start: 97632, Stop: 97144, Start Num: 34

Candidate Starts for Causa\_188:

(8, 97818), (Start: 34 @97632 has 11 MA's), (64, 97563), (75, 97536), (88, 97509), (98, 97482), (105, 97455), (112, 97422), (118, 97410), (123, 97395), (124, 97392), (129, 97368), (135, 97338), (146, 97293), (162, 97215),

Gene: Caviar\_63 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Caviar\_63:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Cece\_217 Start: 133054, Stop: 133446, Start Num: 55

Candidate Starts for Cece\_217:

(Start: 36 @133003 has 4 MA's), (Start: 55 @133054 has 1 MA's), (134, 133285), (137, 133303), (160, 133402), (161, 133405),

Gene: CentreCat\_61 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for CentreCat\_61:

(Start: 10 @40246 has 159 MA's), (110, 40087), (116, 40078), (137, 39994), (154, 39925), (155, 39919),

Gene: Cerulean\_62 Start: 40647, Stop: 40267, Start Num: 10

Candidate Starts for Cerulean\_62:

(Start: 10 @40647 has 159 MA's), (110, 40488), (116, 40479), (137, 40395), (154, 40326),

Gene: ChampagnePapi\_63 Start: 40646, Stop: 40266, Start Num: 10

Candidate Starts for ChampagnePapi\_63:

(Start: 10 @40646 has 159 MA's), (110, 40487), (116, 40478), (137, 40394), (154, 40325),

Gene: Chaph\_61 Start: 40254, Stop: 39874, Start Num: 10

Candidate Starts for Chaph\_61:

(Start: 10 @40254 has 159 MA's), (110, 40095), (116, 40086), (137, 40002), (154, 39933), (155, 39927),

Gene: Che12\_66 Start: 39418, Stop: 39041, Start Num: 39

Candidate Starts for Che12\_66:

(29, 39433), (Start: 39 @39418 has 75 MA's), (Start: 41 @39409 has 1 MA's), (49, 39388), (89, 39322), (110, 39259), (137, 39166), (151, 39115), (154, 39097), (160, 39067),

Gene: Chiqui\_59 Start: 40653, Stop: 40270, Start Num: 10

Candidate Starts for Chiqui\_59:

(Start: 9 @40662 has 8 MA's), (Start: 10 @40653 has 159 MA's), (110, 40497), (134, 40422), (137, 40404), (143, 40383), (160, 40305),

Gene: CicholasNage\_82 Start: 54121, Stop: 54534, Start Num: 39

Candidate Starts for CicholasNage\_82:

(Start: 39 @54121 has 75 MA's), (Start: 60 @54172 has 1 MA's), (64, 54178), (137, 54412), (143, 54433), (145, 54439), (154, 54481),

Gene: Cici\_59 Start: 40098, Stop: 39712, Start Num: 10

Candidate Starts for Cici\_59:

(Start: 10 @40098 has 159 MA's), (110, 39939), (116, 39930), (137, 39846), (154, 39777),

Gene: Cindaradix\_56 Start: 39716, Stop: 39336, Start Num: 10

Candidate Starts for Cindaradix\_56:

(Start: 10 @39716 has 159 MA's), (50, 39680), (110, 39557), (111, 39554), (116, 39548), (137, 39464), (154, 39395),

Gene: Cintron\_60 Start: 40223, Stop: 39843, Start Num: 39

Candidate Starts for Cintron\_60:

(Start: 39 @40223 has 75 MA's), (Start: 41 @40214 has 1 MA's), (110, 40064), (116, 40055), (137, 39971), (154, 39902),

Gene: Circum\_92 Start: 52997, Stop: 53359, Start Num: 40

Candidate Starts for Circum\_92:

(Start: 40 @52997 has 4 MA's), (58, 53042), (66, 53057), (137, 53231), (170, 53348),

Gene: Citius\_61 Start: 40264, Stop: 39884, Start Num: 10

Candidate Starts for Citius\_61:

(Start: 10 @40264 has 159 MA's), (110, 40105), (116, 40096), (137, 40012), (154, 39943), (155, 39937),

Gene: Clarenza\_60 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Clarenza\_60:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155, 39913),

Gene: ClubL\_119 Start: 67337, Stop: 67714, Start Num: 53

Candidate Starts for ClubL\_119:

(37, 67292), (Start: 53 @67337 has 14 MA's), (78, 67397), (137, 67595), (139, 67604), (140, 67607), (143, 67616), (154, 67664),

Gene: Cocoaberry\_61 Start: 40247, Stop: 39867, Start Num: 10

Candidate Starts for Cocoaberry\_61:

(Start: 10 @40247 has 159 MA's), (110, 40088), (116, 40079), (137, 39995), (154, 39926),

Gene: Commander\_60 Start: 40242, Stop: 39862, Start Num: 10

Candidate Starts for Commander\_60:

(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921), (155, 39915),

Gene: Connomayer\_61 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Connomayer\_61:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Cucurbita\_119 Start: 68902, Stop: 69279, Start Num: 53

Candidate Starts for Cucurbita\_119:

(37, 68857), (Start: 53 @68902 has 14 MA's), (78, 68962), (137, 69160), (139, 69169), (140, 69172), (143, 69181), (154, 69229), (160, 69259),

Gene: Culver\_119 Start: 67097, Stop: 67474, Start Num: 53

Candidate Starts for Culver\_119:

(37, 67052), (Start: 53 @67097 has 14 MA's), (78, 67157), (137, 67355), (139, 67364), (140, 67367), (143, 67376), (154, 67424), (160, 67454),

Gene: D29\_61 Start: 40913, Stop: 40536, Start Num: 39

Candidate Starts for D29\_61:

(13, 41027), (29, 40928), (Start: 39 @40913 has 75 MA's), (Start: 60 @40862 has 1 MA's), (91, 40814), (94, 40811), (110, 40754), (137, 40661), (138, 40658), (154, 40592),

Gene: D32\_65 Start: 40913, Stop: 40536, Start Num: 39

Candidate Starts for D32\_65:

(13, 41027), (29, 40928), (Start: 39 @40913 has 75 MA's), (Start: 60 @40862 has 1 MA's), (91, 40814), (94, 40811), (110, 40754), (137, 40661), (138, 40658), (154, 40592),

Gene: DBQu4n\_66 Start: 40894, Stop: 40517, Start Num: 39

Candidate Starts for DBQu4n\_66:

(13, 41008), (29, 40909), (Start: 39 @40894 has 75 MA's), (Start: 60 @40843 has 1 MA's), (91, 40795), (94, 40792), (110, 40735), (137, 40642), (138, 40639), (154, 40573),

Gene: DaddyRickover\_42 Start: 31755, Stop: 31321, Start Num: 39

Candidate Starts for DaddyRickover\_42:

(Start: 39 @31755 has 75 MA's), (44, 31743), (117, 31566), (118, 31563), (131, 31521), (135, 31500), (159, 31398), (169, 31380), (183, 31329),

Gene: Danforth\_74 Start: 41388, Stop: 41017, Start Num: 39

Candidate Starts for Danforth\_74:

(Start: 27 @41409 has 1 MA's), (Start: 39 @41388 has 75 MA's), (110, 41229), (127, 41196), (136, 41139), (137, 41136), (149, 41097), (154, 41067),

Gene: Daredevil\_46 Start: 39668, Stop: 40063, Start Num: 62

Candidate Starts for Daredevil\_46:

(Start: 62 @39668 has 1 MA's), (128, 39860), (137, 39917), (138, 39920), (143, 39938),

Gene: Datway\_59 Start: 40069, Stop: 39683, Start Num: 10

Candidate Starts for Datway\_59:

(Start: 10 @40069 has 159 MA's), (110, 39910), (116, 39901), (137, 39817), (154, 39748),

Gene: Deano\_59 Start: 40251, Stop: 39871, Start Num: 10

Candidate Starts for Deano\_59:

(Start: 10 @40251 has 159 MA's), (110, 40092), (116, 40083), (137, 39999), (154, 39930), (155, 39924),

Gene: Demsculpinboyz\_49 Start: 31194, Stop: 30760, Start Num: 39

Candidate Starts for Demsculpinboyz\_49:

(Start: 39 @31194 has 75 MA's), (44, 31182), (117, 31005), (118, 31002), (131, 30960), (135, 30939), (159, 30837), (169, 30819), (183, 30768),

Gene: Dhanush\_61 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for Dhanush\_61:

(Start: 10 @40246 has 159 MA's), (110, 40087), (116, 40078), (137, 39994), (154, 39925), (155, 39919),

Gene: DirkDirk\_82 Start: 53621, Stop: 54040, Start Num: 39

Candidate Starts for DirkDirk\_82:

(Start: 39 @53621 has 75 MA's), (106, 53774), (137, 53912), (143, 53933), (145, 53939), (154, 53981),

Gene: DirtyDunning\_60 Start: 40258, Stop: 39878, Start Num: 10

Candidate Starts for DirtyDunning\_60:

(Start: 10 @40258 has 159 MA's), (110, 40099), (116, 40090), (137, 40006), (154, 39937),

Gene: Dixon\_73 Start: 40908, Stop: 40537, Start Num: 39

Candidate Starts for Dixon\_73:

(Start: 27 @40929 has 1 MA's), (Start: 39 @40908 has 75 MA's), (110, 40749), (127, 40716), (136, 40659), (137, 40656), (149, 40617), (154, 40587),

Gene: Dodo\_246 Start: 138309, Stop: 138695, Start Num: 57

Candidate Starts for Dodo\_246:

(Start: 57 @138309 has 2 MA's), (99, 138396), (122, 138480), (134, 138540), (137, 138558), (143, 138579), (172, 138678),

Gene: Douge\_87 Start: 54998, Stop: 55414, Start Num: 36

Candidate Starts for Douge\_87:

(28, 54986), (Start: 36 @54998 has 4 MA's), (Start: 60 @55052 has 1 MA's), (71, 55076), (83, 55097), (106, 55154), (108, 55175), (133, 55265), (137, 55292), (149, 55331), (154, 55361),

Gene: DrWorm\_23 Start: 15744, Stop: 16166, Start Num: 68

Candidate Starts for DrWorm\_23:

(49, 15699), (65, 15735), (68, 15744), (74, 15759), (109, 15873), (111, 15879), (126, 15927), (137, 15993), (158, 16086), (160, 16098), (177, 16134), (182, 16158),



Gene: DropBear\_62 Start: 40580, Stop: 40188, Start Num: 9

Candidate Starts for DropBear\_62:

(2, 40721), (Start: 9 @40580 has 8 MA's), (Start: 10 @40571 has 159 MA's), (110, 40415), (134, 40340), (137, 40322), (160, 40223),

Gene: Druantia\_60 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for Druantia\_60:

(Start: 10 @40246 has 159 MA's), (110, 40087), (116, 40078), (137, 39994), (154, 39925), (155, 39919),

Gene: Duplo\_66 Start: 40950, Stop: 40573, Start Num: 39

Candidate Starts for Duplo\_66:

(13, 41064), (Start: 39 @40950 has 75 MA's), (Start: 60 @40899 has 1 MA's), (91, 40851), (94, 40848), (110, 40791), (137, 40698), (138, 40695), (154, 40629),

Gene: Dusty\_115 Start: 67309, Stop: 67686, Start Num: 53

Candidate Starts for Dusty\_115:

(37, 67264), (Start: 53 @67309 has 14 MA's), (78, 67369), (137, 67567), (139, 67576), (140, 67579), (143, 67588), (154, 67636),

Gene: DyoEdafos\_89 Start: 55386, Stop: 55802, Start Num: 36

Candidate Starts for DyoEdafos\_89:

(Start: 36 @55386 has 4 MA's), (71, 55464), (77, 55473), (83, 55485), (108, 55563), (137, 55680), (154, 55749),

Gene: Eagle\_60 Start: 40268, Stop: 39888, Start Num: 10

Candidate Starts for Eagle\_60:

(Start: 9 @40277 has 8 MA's), (Start: 10 @40268 has 159 MA's), (110, 40109), (111, 40106), (116, 40100), (137, 40016), (154, 39947),

Gene: Eapen\_61 Start: 40238, Stop: 39858, Start Num: 10

Candidate Starts for Eapen\_61:

(Start: 10 @40238 has 159 MA's), (110, 40079), (116, 40070), (137, 39986), (154, 39917), (155, 39911),

Gene: Ebony\_63 Start: 39413, Stop: 39027, Start Num: 32

Candidate Starts for Ebony\_63:

(1, 39737), (3, 39689), (6, 39632), (12, 39527), (15, 39509), (16, 39482), (Start: 32 @39413 has 5 MA's), (Start: 39 @39401 has 75 MA's), (89, 39305), (110, 39242), (113, 39236), (116, 39233), (123, 39221), (134, 39167), (137, 39149), (154, 39080),

Gene: EhyElimayoE\_114 Start: 75438, Stop: 74971, Start Num: 34

Candidate Starts for EhyElimayoE\_114:

(21, 75474), (Start: 34 @75438 has 11 MA's), (45, 75411), (65, 75372), (81, 75336), (101, 75288), (136, 75144), (137, 75141), (160, 75033), (180, 74982),

Gene: Elver\_239 Start: 108033, Stop: 108416, Start Num: 38

Candidate Starts for Elver\_239:

(Start: 38 @108033 has 3 MA's), (65, 108093), (94, 108141), (137, 108294), (153, 108357),

Gene: Engineer\_119 Start: 68380, Stop: 68757, Start Num: 53

Candidate Starts for Engineer\_119:

(37, 68335), (Start: 53 @68380 has 14 MA's), (78, 68440), (137, 68638), (139, 68647), (140, 68650), (143, 68659), (154, 68707),

Gene: Eris\_60 Start: 40258, Stop: 39878, Start Num: 10

Candidate Starts for Eris\_60:

(Start: 10 @40258 has 159 MA's), (110, 40099), (116, 40090), (137, 40006), (154, 39937),

Gene: Eros\_61 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Eros\_61:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Et2Brutus\_62 Start: 39364, Stop: 38990, Start Num: 39

Candidate Starts for Et2Brutus\_62:

(1, 39700), (3, 39652), (6, 39595), (15, 39472), (16, 39445), (Start: 32 @39376 has 5 MA's), (Start: 39 @39364 has 75 MA's), (89, 39268), (110, 39205), (116, 39196), (123, 39184), (134, 39130), (137, 39112), (154, 39043),

Gene: Eurydice\_62 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Eurydice\_62:

(Start: 9 @40252 has 8 MA's), (Start: 10 @40243 has 159 MA's), (110, 40084), (111, 40081), (116, 40075), (137, 39991), (154, 39922),

Gene: Expelliarmus\_71 Start: 41112, Stop: 40741, Start Num: 39

Candidate Starts for Expelliarmus\_71:

(Start: 27 @41133 has 1 MA's), (Start: 39 @41112 has 75 MA's), (110, 40953), (127, 40920), (136, 40863), (137, 40860), (149, 40821), (154, 40791),

Gene: Farewell\_78 Start: 51653, Stop: 52063, Start Num: 34

Candidate Starts for Farewell\_78:

(Start: 34 @51653 has 11 MA's), (Start: 39 @51662 has 75 MA's), (96, 51782), (118, 51854), (131, 51881), (142, 51935), (166, 52016), (169, 52022),

Gene: Fastidio\_45 Start: 32251, Stop: 31817, Start Num: 39

Candidate Starts for Fastidio\_45:

(Start: 39 @32251 has 75 MA's), (44, 32239), (117, 32062), (118, 32059), (131, 32017), (135, 31996), (159, 31894), (169, 31876), (183, 31825),

Gene: Fibonacci\_63 Start: 39370, Stop: 38996, Start Num: 39

Candidate Starts for Fibonacci\_63:

(1, 39706), (3, 39658), (6, 39601), (15, 39478), (16, 39451), (Start: 32 @39382 has 5 MA's), (Start: 39 @39370 has 75 MA's), (89, 39274), (110, 39211), (116, 39202), (123, 39190), (134, 39136), (137, 39118), (154, 39049),

Gene: Finemlucis\_87 Start: 56813, Stop: 57238, Start Num: 30

Candidate Starts for Finemlucis\_87:

(Start: 30 @56813 has 1 MA's), (Start: 36 @56822 has 4 MA's), (66, 56888), (71, 56900), (83, 56921), (106, 56978), (108, 56999), (133, 57089), (137, 57116), (154, 57185),

Gene: Flaverint\_64 Start: 39828, Stop: 39454, Start Num: 39

Candidate Starts for Flaverint\_64:

(1, 40164), (3, 40116), (6, 40059), (15, 39936), (Start: 32 @39840 has 5 MA's), (Start: 39 @39828 has 75 MA's), (110, 39669), (116, 39660), (134, 39594), (137, 39576), (154, 39507),

Gene: Florean\_61 Start: 40242, Stop: 39862, Start Num: 10  
Candidate Starts for Florean\_61:  
(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921), (155, 39915),

Gene: Flux\_61 Start: 40242, Stop: 39862, Start Num: 10  
Candidate Starts for Flux\_61:  
(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921), (155, 39915),

Gene: FoghornLeghorn\_70 Start: 46594, Stop: 46992, Start Num: 43  
Candidate Starts for FoghornLeghorn\_70:  
(Start: 38 @46579 has 3 MA's), (Start: 43 @46594 has 3 MA's), (106, 46741), (137, 46879),

Gene: Forza\_171 Start: 97184, Stop: 96825, Start Num: 48  
Candidate Starts for Forza\_171:  
(Start: 48 @97184 has 5 MA's), (51, 97175), (Start: 53 @97172 has 14 MA's), (69, 97142), (78, 97121), (102, 97067), (137, 96950), (139, 96941), (143, 96929), (149, 96911),

Gene: Frankenweenie\_123 Start: 80415, Stop: 79951, Start Num: 34  
Candidate Starts for Frankenweenie\_123:  
(Start: 34 @80415 has 11 MA's), (47, 80382), (65, 80352), (94, 80295), (101, 80268), (137, 80121), (141, 80106), (145, 80094), (160, 80013), (180, 79962),

Gene: Fred313\_62 Start: 40274, Stop: 39882, Start Num: 9  
Candidate Starts for Fred313\_62:  
(2, 40415), (Start: 9 @40274 has 8 MA's), (Start: 10 @40265 has 159 MA's), (110, 40109), (134, 40034), (137, 40016), (160, 39917),

Gene: Funston\_60 Start: 40243, Stop: 39863, Start Num: 10  
Candidate Starts for Funston\_60:  
(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: GMA3\_55 Start: 48480, Stop: 48010, Start Num: 29  
Candidate Starts for GMA3\_55:  
(29, 48480), (Start: 55 @48420 has 1 MA's), (137, 48225), (154, 48156), (156, 48144), (158, 48138), (178, 48081),

Gene: Gadost\_61 Start: 40247, Stop: 39867, Start Num: 10  
Candidate Starts for Gadost\_61:  
(Start: 10 @40247 has 159 MA's), (110, 40088), (116, 40079), (137, 39995), (154, 39926),

Gene: Gandionco\_246 Start: 108817, Stop: 109200, Start Num: 38  
Candidate Starts for Gandionco\_246:  
(Start: 38 @108817 has 3 MA's), (72, 108895), (94, 108925), (95, 108928), (137, 109078), (152, 109138),

Gene: Garnacho\_166 Start: 87772, Stop: 88170, Start Num: 40  
Candidate Starts for Garnacho\_166:  
(Start: 40 @87772 has 4 MA's), (94, 87877), (137, 88039), (144, 88063), (147, 88078), (155, 88108), (158, 88120), (173, 88153),

Gene: Geeche\_117 Start: 67532, Stop: 67909, Start Num: 53

Candidate Starts for Geeche\_117:

(37, 67487), (Start: 53 @67532 has 14 MA's), (78, 67592), (137, 67790), (139, 67799), (140, 67802), (143, 67811), (154, 67859),

Gene: GiJojo\_160 Start: 88793, Stop: 89200, Start Num: 39

Candidate Starts for GiJojo\_160:

(Start: 39 @88793 has 75 MA's), (52, 88832), (82, 88889), (135, 89054), (137, 89069), (144, 89093), (147, 89108), (155, 89138), (158, 89150), (168, 89174), (171, 89180),

Gene: Gilberta\_64 Start: 39821, Stop: 39447, Start Num: 39

Candidate Starts for Gilberta\_64:

(1, 40157), (3, 40109), (6, 40052), (15, 39929), (Start: 32 @39833 has 5 MA's), (Start: 39 @39821 has 75 MA's), (110, 39662), (116, 39653), (134, 39587), (137, 39569), (154, 39500),

Gene: Giroux\_63 Start: 40668, Stop: 40285, Start Num: 10

Candidate Starts for Giroux\_63:

(2, 40818), (Start: 9 @40677 has 8 MA's), (Start: 10 @40668 has 159 MA's), (110, 40512), (125, 40485), (134, 40437), (137, 40419), (160, 40320), (175, 40290),

Gene: Gmala1\_74 Start: 58542, Stop: 58096, Start Num: 33

Candidate Starts for Gmala1\_74:

(33, 58542), (58, 58485), (67, 58473), (106, 58389), (114, 58356), (137, 58284), (149, 58245), (152, 58224), (157, 58200),

Gene: GoCrazy\_87 Start: 51181, Stop: 51546, Start Num: 40

Candidate Starts for GoCrazy\_87:

(Start: 40 @51181 has 4 MA's), (137, 51418), (143, 51439), (170, 51535),

Gene: GordDuk1\_81 Start: 59275, Stop: 58886, Start Num: 58

Candidate Starts for GordDuk1\_81:

(33, 59332), (58, 59275), (67, 59263), (106, 59179), (114, 59146), (137, 59074), (149, 59035), (152, 59014), (157, 58990),

Gene: GordTnk2\_81 Start: 59262, Stop: 58816, Start Num: 33

Candidate Starts for GordTnk2\_81:

(33, 59262), (58, 59205), (67, 59193), (106, 59109), (114, 59076), (137, 59004), (149, 58965), (152, 58944), (157, 58920),

Gene: Grayson\_55 Start: 20751, Stop: 20332, Start Num: 25

Candidate Starts for Grayson\_55:

(Start: 25 @20751 has 4 MA's), (61, 20676), (104, 20586), (137, 20481), (155, 20406),

Gene: Grayson\_56 Start: 21137, Stop: 20748, Start Num: 25

Candidate Starts for Grayson\_56:

(24, 21146), (Start: 25 @21137 has 4 MA's), (102, 20984), (137, 20867), (143, 20846),

Gene: Groundhog\_73 Start: 41318, Stop: 40947, Start Num: 39

Candidate Starts for Groundhog\_73:

(Start: 27 @41339 has 1 MA's), (Start: 39 @41318 has 75 MA's), (110, 41159), (127, 41126), (136, 41069), (137, 41066), (149, 41027), (154, 40997),

Gene: HamSlice\_58 Start: 40241, Stop: 39861, Start Num: 10

Candidate Starts for HamSlice\_58:

(Start: 10 @40241 has 159 MA's), (110, 40082), (111, 40079), (116, 40073), (137, 39989), (154, 39920),

Gene: Hankly\_92 Start: 52366, Stop: 52731, Start Num: 40

Candidate Starts for Hankly\_92:

(Start: 40 @52366 has 4 MA's), (137, 52603), (143, 52624), (170, 52720),

Gene: Happiness\_60 Start: 40229, Stop: 39849, Start Num: 10

Candidate Starts for Happiness\_60:

(Start: 10 @40229 has 159 MA's), (110, 40070), (116, 40061), (137, 39977), (154, 39908),

Gene: Heathen\_64 Start: 40360, Stop: 39977, Start Num: 10

Candidate Starts for Heathen\_64:

(2, 40510), (Start: 9 @40369 has 8 MA's), (Start: 10 @40360 has 159 MA's), (110, 40204), (134, 40129), (137, 40111), (160, 40012),

Gene: HelDan\_63 Start: 40585, Stop: 40193, Start Num: 9

Candidate Starts for HelDan\_63:

(2, 40726), (Start: 9 @40585 has 8 MA's), (Start: 10 @40576 has 159 MA's), (110, 40420), (134, 40345), (137, 40327), (160, 40228),

Gene: Holli\_60 Start: 40033, Stop: 39653, Start Num: 10

Candidate Starts for Holli\_60:

(Start: 10 @40033 has 159 MA's), (110, 39874), (116, 39865), (137, 39781), (154, 39712), (155, 39706),

Gene: Hookmount\_63 Start: 40647, Stop: 40264, Start Num: 10

Candidate Starts for Hookmount\_63:

(Start: 9 @40656 has 8 MA's), (Start: 10 @40647 has 159 MA's), (91, 40551), (110, 40491), (137, 40398), (160, 40299), (161, 40296), (175, 40269),

Gene: Houdini22\_60 Start: 40247, Stop: 39867, Start Num: 10

Candidate Starts for Houdini22\_60:

(Start: 10 @40247 has 159 MA's), (110, 40088), (116, 40079), (137, 39995), (154, 39926),

Gene: Hutc2\_62 Start: 39382, Stop: 38996, Start Num: 32

Candidate Starts for Hutc2\_62:

(1, 39706), (3, 39658), (6, 39601), (15, 39478), (16, 39451), (Start: 32 @39382 has 5 MA's), (Start: 39 @39370 has 75 MA's), (89, 39274), (110, 39211), (116, 39202), (123, 39190), (134, 39136), (137, 39118), (154, 39049),

Gene: Huxley\_59 Start: 40307, Stop: 39927, Start Num: 10

Candidate Starts for Huxley\_59:

(Start: 10 @40307 has 159 MA's), (110, 40148), (116, 40139), (137, 40055), (154, 39986),

Gene: ICleared\_60 Start: 40275, Stop: 39895, Start Num: 10

Candidate Starts for ICleared\_60:

(Start: 10 @40275 has 159 MA's), (110, 40116), (116, 40107), (137, 40023), (154, 39954),

Gene: Ibantik\_12 Start: 5154, Stop: 4792, Start Num: 63

Candidate Starts for Ibantik\_12:

(Start: 53 @5169 has 14 MA's), (Start: 63 @5154 has 1 MA's), (70, 5139), (86, 5103), (137, 4908), (145, 4881), (160, 4809), (164, 4803),

Gene: Iceman\_61 Start: 40532, Stop: 40152, Start Num: 10

Candidate Starts for Iceman\_61:

(Start: 10 @40532 has 159 MA's), (110, 40373), (116, 40364), (137, 40280), (154, 40211), (155, 40205),

Gene: Idleandcovert\_64 Start: 40669, Stop: 40286, Start Num: 10

Candidate Starts for Idleandcovert\_64:

(2, 40819), (Start: 9 @40678 has 8 MA's), (Start: 10 @40669 has 159 MA's), (110, 40513), (125, 40486), (134, 40438), (137, 40420), (160, 40321), (175, 40291),

Gene: Insomnia\_64 Start: 39893, Stop: 39507, Start Num: 32

Candidate Starts for Insomnia\_64:

(1, 40217), (3, 40169), (6, 40112), (15, 39989), (16, 39962), (Start: 32 @39893 has 5 MA's), (Start: 39 @39881 has 75 MA's), (89, 39785), (110, 39722), (116, 39713), (123, 39701), (134, 39647), (137, 39629), (154, 39560),

Gene: Iracema64\_62 Start: 40510, Stop: 40130, Start Num: 10

Candidate Starts for Iracema64\_62:

(Start: 10 @40510 has 159 MA's), (110, 40351), (116, 40342), (137, 40258), (154, 40189),

Gene: Isca\_62 Start: 40131, Stop: 39739, Start Num: 9

Candidate Starts for Isca\_62:

(Start: 9 @40131 has 8 MA's), (Start: 10 @40122 has 159 MA's), (110, 39966), (134, 39891), (137, 39873), (160, 39774),

Gene: JF2\_62 Start: 38826, Stop: 38434, Start Num: 9

Candidate Starts for JF2\_62:

(Start: 9 @38826 has 8 MA's), (Start: 10 @38817 has 159 MA's), (110, 38661), (134, 38586), (137, 38568), (154, 38499), (160, 38469), (170, 38451),

Gene: JF4\_62 Start: 38817, Stop: 38434, Start Num: 10

Candidate Starts for JF4\_62:

(Start: 9 @38826 has 8 MA's), (Start: 10 @38817 has 159 MA's), (110, 38661), (134, 38586), (137, 38568), (154, 38499), (160, 38469), (170, 38451),

Gene: Jabith\_64 Start: 39882, Stop: 39508, Start Num: 39

Candidate Starts for Jabith\_64:

(1, 40218), (3, 40170), (6, 40113), (15, 39990), (16, 39963), (Start: 32 @39894 has 5 MA's), (Start: 39 @39882 has 75 MA's), (89, 39786), (110, 39723), (116, 39714), (123, 39702), (134, 39648), (137, 39630), (154, 39561),

Gene: Jaykayelowell\_58 Start: 40236, Stop: 39856, Start Num: 10

Candidate Starts for Jaykayelowell\_58:

(Start: 10 @40236 has 159 MA's), (110, 40077), (116, 40068), (137, 39984), (154, 39915), (155, 39909),

Gene: JetBlade\_61 Start: 40237, Stop: 39857, Start Num: 10

Candidate Starts for JetBlade\_61:

(Start: 10 @40237 has 159 MA's), (110, 40078), (116, 40069), (137, 39985), (154, 39916),

Gene: JoeDirt\_86 Start: 55023, Stop: 55436, Start Num: 39  
Candidate Starts for JoeDirt\_86:  
(Start: 39 @55023 has 75 MA's), (Start: 60 @55074 has 1 MA's), (64, 55080), (137, 55314), (143, 55335), (145, 55341), (154, 55383),

Gene: JonJames\_129 Start: 74477, Stop: 74908, Start Num: 53  
Candidate Starts for JonJames\_129:  
(Start: 53 @74477 has 14 MA's), (73, 74522), (75, 74528), (86, 74552), (93, 74561), (137, 74756), (138, 74759), (139, 74765), (165, 74864), (176, 74888),

Gene: JoongJeon\_60 Start: 40240, Stop: 39860, Start Num: 10  
Candidate Starts for JoongJeon\_60:  
(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: Joselito\_64 Start: 39830, Stop: 39456, Start Num: 39  
Candidate Starts for Joselito\_64:  
(1, 40166), (3, 40118), (6, 40061), (15, 39938), (16, 39911), (Start: 32 @39842 has 5 MA's), (Start: 39 @39830 has 75 MA's), (89, 39734), (110, 39671), (116, 39662), (123, 39650), (134, 39596), (137, 39578), (154, 39509),

Gene: Jsquared\_66 Start: 39964, Stop: 39587, Start Num: 39  
Candidate Starts for Jsquared\_66:  
(29, 39979), (Start: 39 @39964 has 75 MA's), (Start: 43 @39952 has 3 MA's), (49, 39934), (66, 39901), (110, 39805), (137, 39712), (150, 39667), (154, 39643),

Gene: JustBecause\_112 Start: 74626, Stop: 74162, Start Num: 34  
Candidate Starts for JustBecause\_112:  
(Start: 34 @74626 has 11 MA's), (47, 74593), (59, 74572), (65, 74563), (84, 74521), (94, 74506), (101, 74479), (137, 74332), (141, 74317), (145, 74305), (160, 74224), (180, 74173),

Gene: KFPoly\_60 Start: 40237, Stop: 39857, Start Num: 10  
Candidate Starts for KFPoly\_60:  
(Start: 10 @40237 has 159 MA's), (110, 40078), (116, 40069), (137, 39985), (154, 39916),

Gene: Kachowdy\_62 Start: 40612, Stop: 40229, Start Num: 10  
Candidate Starts for Kachowdy\_62:  
(2, 40762), (Start: 9 @40621 has 8 MA's), (Start: 10 @40612 has 159 MA's), (110, 40456), (134, 40381), (137, 40363), (160, 40264),

Gene: Kampe\_66 Start: 55077, Stop: 54682, Start Num: 38  
Candidate Starts for Kampe\_66:  
(Start: 38 @55077 has 3 MA's), (44, 55062), (134, 54852), (137, 54834), (139, 54825), (154, 54765), (179, 54699), (181, 54690),

Gene: Kampy\_60 Start: 40245, Stop: 39865, Start Num: 10  
Candidate Starts for Kampy\_60:  
(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Katalie136\_59 Start: 40083, Stop: 39697, Start Num: 10  
Candidate Starts for Katalie136\_59:  
(Start: 10 @40083 has 159 MA's), (110, 39924), (116, 39915), (137, 39831), (154, 39762),

Gene: KeaneyLin\_89 Start: 52219, Stop: 52584, Start Num: 40  
Candidate Starts for KeaneyLin\_89:  
(Start: 40 @52219 has 4 MA's), (137, 52456), (143, 52477), (170, 52573),

Gene: Kela\_113 Start: 74506, Stop: 74042, Start Num: 34  
Candidate Starts for Kela\_113:  
(Start: 34 @74506 has 11 MA's), (47, 74473), (59, 74452), (65, 74443), (84, 74401), (94, 74386), (101, 74359), (137, 74212), (141, 74197), (145, 74185), (160, 74104), (180, 74053),

Gene: Kerberos\_66 Start: 40912, Stop: 40535, Start Num: 39  
Candidate Starts for Kerberos\_66:  
(13, 41026), (Start: 39 @40912 has 75 MA's), (Start: 60 @40861 has 1 MA's), (91, 40813), (94, 40810), (110, 40753), (137, 40660), (138, 40657), (154, 40591),

Gene: Killigrew\_36 Start: 30926, Stop: 30498, Start Num: 39  
Candidate Starts for Killigrew\_36:  
(Start: 39 @30926 has 75 MA's), (78, 30839), (117, 30737), (118, 30734), (129, 30695), (144, 30632),

Gene: Kimona\_58 Start: 38659, Stop: 38276, Start Num: 39  
Candidate Starts for Kimona\_58:  
(14, 38791), (Start: 39 @38659 has 75 MA's), (66, 38596), (94, 38557), (110, 38500), (116, 38491), (134, 38425), (137, 38407), (143, 38386), (154, 38338),

Gene: Kingmustik0402\_61 Start: 40232, Stop: 39852, Start Num: 10  
Candidate Starts for Kingmustik0402\_61:  
(Start: 10 @40232 has 159 MA's), (110, 40073), (116, 40064), (137, 39980), (154, 39911),

Gene: Kinmap\_64 Start: 39098, Stop: 38730, Start Num: 41  
Candidate Starts for Kinmap\_64:  
(Start: 39 @39107 has 75 MA's), (Start: 41 @39098 has 1 MA's), (80, 39026), (137, 38858), (138, 38855), (154, 38789),

Gene: Koan\_57 Start: 40243, Stop: 39863, Start Num: 10  
Candidate Starts for Koan\_57:  
(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Koduck\_65 Start: 39809, Stop: 39432, Start Num: 39  
Candidate Starts for Koduck\_65:  
(29, 39824), (Start: 39 @39809 has 75 MA's), (Start: 41 @39800 has 1 MA's), (Start: 43 @39797 has 3 MA's), (66, 39746), (110, 39650), (123, 39629), (137, 39557), (145, 39530), (154, 39488),

Gene: Koreni\_60 Start: 39924, Stop: 39544, Start Num: 10  
Candidate Starts for Koreni\_60:  
(Start: 10 @39924 has 159 MA's), (110, 39765), (116, 39756), (137, 39672), (154, 39603), (155, 39597),

Gene: Kostya\_76 Start: 48238, Stop: 48636, Start Num: 43  
Candidate Starts for Kostya\_76:  
(Start: 38 @48223 has 3 MA's), (Start: 43 @48238 has 3 MA's), (106, 48385), (137, 48523),

Gene: Kradal\_113 Start: 75438, Stop: 74971, Start Num: 34  
Candidate Starts for Kradal\_113:



(21, 75474), (Start: 34 @75438 has 11 MA's), (45, 75411), (65, 75372), (81, 75336), (101, 75288), (136, 75144), (137, 75141), (160, 75033), (180, 74982),

Gene: Kratak\_60 Start: 40241, Stop: 39861, Start Num: 10

Candidate Starts for Kratak\_60:

(Start: 10 @40241 has 159 MA's), (110, 40082), (116, 40073), (137, 39989), (154, 39920),

Gene: Kremtemulon\_60 Start: 40191, Stop: 39811, Start Num: 39

Candidate Starts for Kremtemulon\_60:

(5, 40425), (11, 40326), (Start: 39 @40191 has 75 MA's), (Start: 41 @40182 has 1 MA's), (110, 40032), (116, 40023), (137, 39939), (154, 39870),

Gene: Kyee\_61 Start: 40241, Stop: 39861, Start Num: 10

Candidate Starts for Kyee\_61:

(Start: 10 @40241 has 159 MA's), (110, 40082), (116, 40073), (137, 39989), (154, 39920),

Gene: L5\_61 Start: 39896, Stop: 39519, Start Num: 39

Candidate Starts for L5\_61:

(13, 40010), (29, 39911), (Start: 39 @39896 has 75 MA's), (66, 39833), (110, 39737), (123, 39716), (137, 39644), (154, 39575),

Gene: LHTSCC\_63 Start: 40646, Stop: 40266, Start Num: 10

Candidate Starts for LHTSCC\_63:

(Start: 10 @40646 has 159 MA's), (110, 40487), (116, 40478), (137, 40394), (154, 40325),

Gene: Lambert1\_63 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Lambert1\_63:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: LappelDuVide\_61 Start: 40242, Stop: 39862, Start Num: 10

Candidate Starts for LappelDuVide\_61:

(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921), (155, 39915),

Gene: LeBron\_84 Start: 53694, Stop: 54107, Start Num: 39

Candidate Starts for LeBron\_84:

(Start: 39 @53694 has 75 MA's), (Start: 60 @53745 has 1 MA's), (64, 53751), (137, 53985), (143, 54006), (145, 54012), (154, 54054),

Gene: Lemur\_61 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Lemur\_61:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155, 39913),

Gene: LeoAvram\_60 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for LeoAvram\_60:

(Start: 9 @40255 has 8 MA's), (Start: 10 @40246 has 159 MA's), (110, 40087), (111, 40084), (116, 40078), (137, 39994), (154, 39925),

Gene: LittleB\_61 Start: 40244, Stop: 39864, Start Num: 10

Candidate Starts for LittleB\_61:

(Start: 10 @40244 has 159 MA's), (110, 40085), (116, 40076), (137, 39992), (154, 39923), (155, 39917),

Gene: LittleGuy\_61 Start: 40139, Stop: 39759, Start Num: 10

Candidate Starts for LittleGuy\_61:

(Start: 10 @40139 has 159 MA's), (110, 39980), (116, 39971), (137, 39887), (154, 39818), (155, 39812),

Gene: LochMonster\_62 Start: 40482, Stop: 40102, Start Num: 10

Candidate Starts for LochMonster\_62:

(Start: 10 @40482 has 159 MA's), (110, 40323), (116, 40314), (137, 40230), (154, 40161), (155, 40155),

Gene: Lorenzo\_61 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Lorenzo\_61:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Lozinak\_118 Start: 68218, Stop: 68595, Start Num: 53

Candidate Starts for Lozinak\_118:

(37, 68173), (Start: 53 @68218 has 14 MA's), (78, 68278), (137, 68476), (139, 68485), (140, 68488), (143, 68497), (154, 68545), (160, 68575),

Gene: Lucivia\_64 Start: 39879, Stop: 39505, Start Num: 39

Candidate Starts for Lucivia\_64:

(1, 40215), (3, 40167), (6, 40110), (15, 39987), (Start: 32 @39891 has 5 MA's), (Start: 39 @39879 has 75 MA's), (110, 39720), (116, 39711), (134, 39645), (137, 39627), (154, 39558),

Gene: LuckySocke\_170 Start: 88165, Stop: 88563, Start Num: 39

Candidate Starts for LuckySocke\_170:

(Start: 39 @88165 has 75 MA's), (Start: 43 @88177 has 3 MA's), (85, 88261), (90, 88267), (98, 88291), (137, 88432), (144, 88456), (155, 88501), (158, 88513), (173, 88546),

Gene: Lunsford\_62 Start: 40237, Stop: 39857, Start Num: 10

Candidate Starts for Lunsford\_62:

(Start: 10 @40237 has 159 MA's), (110, 40078), (111, 40075), (116, 40069), (137, 39985), (154, 39916),

Gene: MA5\_64 Start: 40026, Stop: 39643, Start Num: 10

Candidate Starts for MA5\_64:

(Start: 9 @40035 has 8 MA's), (Start: 10 @40026 has 159 MA's), (110, 39870), (134, 39795), (137, 39777), (160, 39678),

Gene: MISSy\_77 Start: 48096, Stop: 48494, Start Num: 43

Candidate Starts for MISSy\_77:

(Start: 38 @48081 has 3 MA's), (Start: 43 @48096 has 3 MA's), (106, 48243), (137, 48381),

Gene: MK4\_64 Start: 40101, Stop: 39718, Start Num: 10

Candidate Starts for MK4\_64:

(Start: 9 @40110 has 8 MA's), (Start: 10 @40101 has 159 MA's), (110, 39945), (134, 39870), (137, 39852), (154, 39783), (160, 39753), (170, 39735),

Gene: MaCh\_63 Start: 39809, Stop: 39435, Start Num: 39

Candidate Starts for MaCh\_63:

(1, 40145), (3, 40097), (6, 40040), (15, 39917), (Start: 32 @39821 has 5 MA's), (Start: 39 @39809 has 75 MA's), (89, 39713), (110, 39650), (116, 39641), (123, 39629), (134, 39575), (137, 39557), (154, 39488),

Gene: Mabel\_63 Start: 39826, Stop: 39452, Start Num: 39

Candidate Starts for Mabel\_63:

(1, 40162), (3, 40114), (6, 40057), (15, 39934), (Start: 32 @39838 has 5 MA's), (Start: 39 @39826 has 75 MA's), (110, 39667), (116, 39658), (134, 39592), (137, 39574), (154, 39505),

Gene: MajorMajor\_64 Start: 39806, Stop: 39429, Start Num: 39

Candidate Starts for MajorMajor\_64:

(13, 39920), (29, 39821), (Start: 39 @39806 has 75 MA's), (Start: 43 @39794 has 3 MA's), (66, 39743), (110, 39647), (137, 39554), (154, 39485),

Gene: Marchesa\_62 Start: 40562, Stop: 40179, Start Num: 10

Candidate Starts for Marchesa\_62:

(2, 40712), (Start: 9 @40571 has 8 MA's), (Start: 10 @40562 has 159 MA's), (110, 40406), (134, 40331), (137, 40313), (160, 40214),

Gene: Mareelih\_168 Start: 96702, Stop: 96343, Start Num: 48

Candidate Starts for Mareelih\_168:

(Start: 48 @96702 has 5 MA's), (51, 96693), (Start: 53 @96690 has 14 MA's), (69, 96660), (78, 96639), (102, 96585), (137, 96468), (139, 96459), (143, 96447), (149, 96429),

Gene: Margo\_63 Start: 40672, Stop: 40289, Start Num: 10

Candidate Starts for Margo\_63:

(Start: 9 @40681 has 8 MA's), (Start: 10 @40672 has 159 MA's), (91, 40576), (110, 40516), (137, 40423), (160, 40324), (161, 40321), (175, 40294),

Gene: Marker\_42 Start: 31554, Stop: 31120, Start Num: 39

Candidate Starts for Marker\_42:

(Start: 39 @31554 has 75 MA's), (44, 31542), (117, 31365), (118, 31362), (131, 31320), (135, 31299), (159, 31197), (169, 31179), (183, 31128),

Gene: Maverick\_60 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Maverick\_60:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: Maxo\_62 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Maxo\_62:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Mayonnaise\_59 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Mayonnaise\_59:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: Mazhar510\_61 Start: 40244, Stop: 39864, Start Num: 10

Candidate Starts for Mazhar510\_61:

(Start: 10 @40244 has 159 MA's), (110, 40085), (116, 40076), (137, 39992), (154, 39923),

Gene: Medusa\_61 Start: 40257, Stop: 39877, Start Num: 10

Candidate Starts for Medusa\_61:

(Start: 10 @40257 has 159 MA's), (110, 40098), (116, 40089), (137, 40005), (154, 39936), (155, 39930),

Gene: MeeZee\_60 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for MeeZee\_60:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155, 39913),

Gene: Melvin\_63 Start: 40238, Stop: 39858, Start Num: 10

Candidate Starts for Melvin\_63:

(Start: 10 @40238 has 159 MA's), (110, 40079), (116, 40070), (137, 39986), (154, 39917), (155, 39911),

Gene: Millski\_60 Start: 40244, Stop: 39864, Start Num: 10

Candidate Starts for Millski\_60:

(Start: 10 @40244 has 159 MA's), (110, 40085), (116, 40076), (137, 39992), (154, 39923), (155, 39917),

Gene: Miramae\_58 Start: 39532, Stop: 39146, Start Num: 10

Candidate Starts for Miramae\_58:

(Start: 10 @39532 has 159 MA's), (110, 39373), (116, 39364), (137, 39280), (154, 39211),

Gene: Miskis\_117 Start: 67235, Stop: 67612, Start Num: 53

Candidate Starts for Miskis\_117:

(37, 67190), (Start: 53 @67235 has 14 MA's), (78, 67295), (137, 67493), (139, 67502), (140, 67505), (143, 67514), (154, 67562), (160, 67592),

Gene: MissWhite\_64 Start: 39952, Stop: 39575, Start Num: 39

Candidate Starts for MissWhite\_64:

(13, 40063), (31, 39964), (Start: 39 @39952 has 75 MA's), (Start: 41 @39943 has 1 MA's), (Start: 43 @39940 has 3 MA's), (49, 39922), (66, 39889), (110, 39793), (137, 39700), (145, 39673), (154, 39631),

Gene: Morpher26\_59 Start: 40104, Stop: 39718, Start Num: 10

Candidate Starts for Morpher26\_59:

(Start: 10 @40104 has 159 MA's), (110, 39945), (116, 39936), (137, 39852), (154, 39783),

Gene: Morrow\_62 Start: 40249, Stop: 39869, Start Num: 10

Candidate Starts for Morrow\_62:

(Start: 9 @40258 has 8 MA's), (Start: 10 @40249 has 159 MA's), (110, 40090), (111, 40087), (116, 40081), (137, 39997), (154, 39928), (155, 39922),

Gene: Mulciber\_62 Start: 39367, Stop: 38993, Start Num: 39

Candidate Starts for Mulciber\_62:

(1, 39703), (3, 39655), (6, 39598), (15, 39475), (16, 39448), (Start: 32 @39379 has 5 MA's), (Start: 39 @39367 has 75 MA's), (89, 39271), (110, 39208), (116, 39199), (123, 39187), (134, 39133), (137, 39115), (154, 39046),

Gene: Munch\_63 Start: 39830, Stop: 39456, Start Num: 39

Candidate Starts for Munch\_63:

(1, 40166), (3, 40118), (6, 40061), (15, 39938), (16, 39911), (Start: 32 @39842 has 5 MA's), (Start: 39 @39830 has 75 MA's), (89, 39734), (110, 39671), (116, 39662), (123, 39650), (134, 39596), (137,

39578), (154, 39509),

Gene: Mundrea\_59 Start: 40096, Stop: 39716, Start Num: 10

Candidate Starts for Mundrea\_59:

(Start: 10 @40096 has 159 MA's), (110, 39937), (116, 39928), (137, 39844), (154, 39775),

Gene: Naji\_66 Start: 40913, Stop: 40536, Start Num: 39

Candidate Starts for Naji\_66:

(13, 41027), (29, 40928), (Start: 39 @40913 has 75 MA's), (Start: 60 @40862 has 1 MA's), (91, 40814), (94, 40811), (110, 40754), (137, 40661), (138, 40658), (154, 40592),

Gene: NearlyHeadless\_74 Start: 41154, Stop: 40783, Start Num: 39

Candidate Starts for NearlyHeadless\_74:

(Start: 27 @41175 has 1 MA's), (Start: 39 @41154 has 75 MA's), (110, 40995), (127, 40962), (137, 40902), (149, 40863), (154, 40833),

Gene: Nebs\_62 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for Nebs\_62:

(Start: 9 @40255 has 8 MA's), (Start: 10 @40246 has 159 MA's), (110, 40087), (111, 40084), (116, 40078), (137, 39994), (154, 39925),

Gene: Nemo27\_60 Start: 40242, Stop: 39862, Start Num: 10

Candidate Starts for Nemo27\_60:

(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921),

Gene: NiceHouse\_229 Start: 121776, Stop: 122174, Start Num: 39

Candidate Starts for NiceHouse\_229:

(22, 121731), (Start: 36 @121770 has 4 MA's), (Start: 39 @121776 has 75 MA's), (95, 121881), (106, 121911), (118, 121953), (134, 122022), (137, 122040),

Gene: Nirvana\_124 Start: 78772, Stop: 78338, Start Num: 47

Candidate Starts for Nirvana\_124:

(Start: 34 @78805 has 11 MA's), (47, 78772), (101, 78655), (137, 78508), (145, 78481), (180, 78349),

Gene: Noella\_63 Start: 40647, Stop: 40264, Start Num: 10

Candidate Starts for Noella\_63:

(Start: 9 @40656 has 8 MA's), (Start: 10 @40647 has 159 MA's), (91, 40551), (110, 40491), (137, 40398), (160, 40299), (161, 40296), (175, 40269),

Gene: Noelle\_60 Start: 40405, Stop: 40019, Start Num: 10

Candidate Starts for Noelle\_60:

(Start: 10 @40405 has 159 MA's), (110, 40246), (116, 40237), (137, 40153), (138, 40150), (154, 40084),

Gene: Norbert\_60 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Norbert\_60:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: NorthStar\_59 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for NorthStar\_59:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Norvs\_118 Start: 67819, Stop: 68196, Start Num: 53

Candidate Starts for Norvs\_118:

(37, 67774), (Start: 53 @67819 has 14 MA's), (78, 67879), (137, 68077), (139, 68086), (140, 68089), (143, 68098), (154, 68146),

Gene: NotAPhaseMom\_60 Start: 40247, Stop: 39867, Start Num: 10

Candidate Starts for NotAPhaseMom\_60:

(Start: 10 @40247 has 159 MA's), (110, 40088), (116, 40079), (137, 39995), (154, 39926),

Gene: Nyxis\_60 Start: 40133, Stop: 39753, Start Num: 10

Candidate Starts for Nyxis\_60:

(Start: 10 @40133 has 159 MA's), (110, 39974), (116, 39965), (137, 39881), (154, 39812), (155, 39806),

Gene: OKaNui\_61 Start: 40293, Stop: 39913, Start Num: 10

Candidate Starts for OKaNui\_61:

(Start: 10 @40293 has 159 MA's), (110, 40134), (116, 40125), (137, 40041), (154, 39972),

Gene: Obama12\_62 Start: 40630, Stop: 40250, Start Num: 10

Candidate Starts for Obama12\_62:

(Start: 10 @40630 has 159 MA's), (110, 40471), (116, 40462), (137, 40378), (154, 40309),

Gene: Odin\_64 Start: 39580, Stop: 39206, Start Num: 41

Candidate Starts for Odin\_64:

(13, 39706), (29, 39604), (Start: 39 @39589 has 75 MA's), (Start: 41 @39580 has 1 MA's), (58, 39541), (71, 39514), (110, 39424), (137, 39331), (143, 39310), (150, 39286), (154, 39262),

Gene: Ohfah\_62 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for Ohfah\_62:

(Start: 9 @40255 has 8 MA's), (Start: 10 @40246 has 159 MA's), (110, 40087), (111, 40084), (116, 40078), (137, 39994), (154, 39925),

Gene: Omega\_177 Start: 91771, Stop: 92247, Start Num: 19

Candidate Starts for Omega\_177:

(Start: 19 @91771 has 1 MA's), (46, 91846), (77, 91915), (83, 91927), (92, 91942), (103, 91978), (106, 91990), (132, 92098), (137, 92128), (138, 92131), (160, 92227),

Gene: OneUp\_103 Start: 65646, Stop: 66053, Start Num: 42

Candidate Starts for OneUp\_103:

(Start: 19 @65583 has 1 MA's), (Start: 42 @65646 has 1 MA's), (Start: 53 @65676 has 14 MA's), (75, 65727), (82, 65742), (116, 65832), (128, 65877), (137, 65934), (139, 65943), (140, 65946), (165, 66042),

Gene: Orange\_62 Start: 39379, Stop: 39005, Start Num: 39

Candidate Starts for Orange\_62:

(1, 39715), (3, 39667), (6, 39610), (15, 39487), (Start: 32 @39391 has 5 MA's), (Start: 39 @39379 has 75 MA's), (110, 39220), (116, 39211), (134, 39145), (137, 39127), (154, 39058),

Gene: Orchid\_65 Start: 55078, Stop: 54683, Start Num: 38

Candidate Starts for Orchid\_65:

(Start: 38 @55078 has 3 MA's), (44, 55063), (134, 54853), (137, 54835), (139, 54826), (154, 54766), (179, 54700), (181, 54691),

Gene: PYPDinur\_85 Start: 55358, Stop: 55720, Start Num: 60

Candidate Starts for PYPDinur\_85:

(28, 55292), (Start: 36 @55304 has 4 MA's), (Start: 60 @55358 has 1 MA's), (71, 55382), (83, 55403), (106, 55460), (108, 55481), (133, 55571), (137, 55598), (154, 55667),

Gene: Palestino\_60 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for Palestino\_60:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922),

Gene: Palpatine\_78 Start: 49067, Stop: 49465, Start Num: 43

Candidate Starts for Palpatine\_78:

(Start: 38 @49052 has 3 MA's), (Start: 43 @49067 has 3 MA's), (106, 49214), (137, 49352),

Gene: Panamaxus\_61 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Panamaxus\_61:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Panchaali\_60 Start: 22071, Stop: 22361, Start Num: 77

Candidate Starts for Panchaali\_60:

(77, 22071), (137, 22230),

Gene: PatrickStar\_66 Start: 55077, Stop: 54682, Start Num: 38

Candidate Starts for PatrickStar\_66:

(Start: 38 @55077 has 3 MA's), (44, 55062), (134, 54852), (137, 54834), (139, 54825), (154, 54765), (179, 54699), (181, 54690),

Gene: PauloDiaboli\_248 Start: 135825, Stop: 136211, Start Num: 57

Candidate Starts for PauloDiaboli\_248:

(Start: 57 @135825 has 2 MA's), (99, 135912), (122, 135996), (134, 136056), (137, 136074), (143, 136095), (160, 136173), (172, 136194),

Gene: Peaches\_59 Start: 40242, Stop: 39862, Start Num: 10

Candidate Starts for Peaches\_59:

(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921),

Gene: Peregrin\_54 Start: 20303, Stop: 19884, Start Num: 25

Candidate Starts for Peregrin\_54:

(24, 20312), (Start: 25 @20303 has 4 MA's), (61, 20228), (100, 20153), (137, 20033), (155, 19958),

Gene: Perplexer\_59 Start: 40080, Stop: 39694, Start Num: 10

Candidate Starts for Perplexer\_59:

(Start: 10 @40080 has 159 MA's), (110, 39921), (116, 39912), (137, 39828), (154, 39759),

Gene: PeterPeter\_61 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for PeterPeter\_61:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: Petersenfast\_61 Start: 39390, Stop: 39004, Start Num: 32

Candidate Starts for Petersenfast\_61:

(1, 39714), (3, 39666), (6, 39609), (15, 39486), (Start: 32 @39390 has 5 MA's), (Start: 39 @39378 has 75 MA's), (110, 39219), (116, 39210), (134, 39144), (137, 39126), (154, 39057),

Gene: PetiteSangusue\_59 Start: 40083, Stop: 39697, Start Num: 10  
Candidate Starts for PetiteSangusue\_59:  
(Start: 10 @40083 has 159 MA's), (110, 39924), (116, 39915), (137, 39831), (154, 39762),

Gene: Ph8s\_66 Start: 39754, Stop: 39380, Start Num: 39  
Candidate Starts for Ph8s\_66:  
(13, 39868), (29, 39769), (Start: 39 @39754 has 75 MA's), (Start: 41 @39745 has 1 MA's), (66, 39691),  
(89, 39658), (110, 39595), (123, 39577), (137, 39505), (151, 39454), (154, 39436),

Gene: Phacado\_61 Start: 40242, Stop: 39862, Start Num: 10  
Candidate Starts for Phacado\_61:  
(Start: 10 @40242 has 159 MA's), (110, 40083), (116, 40074), (137, 39990), (154, 39921),

Gene: Phantastic\_65 Start: 40293, Stop: 39901, Start Num: 9  
Candidate Starts for Phantastic\_65:  
(2, 40434), (Start: 9 @40293 has 8 MA's), (Start: 10 @40284 has 159 MA's), (110, 40128), (134,  
40053), (137, 40035), (160, 39936),

Gene: Phelipe\_62 Start: 40246, Stop: 39866, Start Num: 10  
Candidate Starts for Phelipe\_62:  
(Start: 9 @40255 has 8 MA's), (Start: 10 @40246 has 159 MA's), (110, 40087), (111, 40084), (116,  
40078), (137, 39994), (154, 39925),

Gene: Phighter1804\_61 Start: 40307, Stop: 39927, Start Num: 10  
Candidate Starts for Phighter1804\_61:  
(Start: 10 @40307 has 159 MA's), (110, 40148), (116, 40139), (137, 40055), (154, 39986),

Gene: PhinkBoden\_118 Start: 68507, Stop: 68884, Start Num: 53  
Candidate Starts for PhinkBoden\_118:  
(37, 68462), (Start: 53 @68507 has 14 MA's), (78, 68567), (137, 68765), (139, 68774), (140, 68777),  
(143, 68786), (154, 68834), (160, 68864),

Gene: Phontbonne\_61 Start: 40149, Stop: 39769, Start Num: 10  
Candidate Starts for Phontbonne\_61:  
(Start: 10 @40149 has 159 MA's), (110, 39990), (111, 39987), (116, 39981), (137, 39897), (154,  
39828),

Gene: Phrappuccino\_141 Start: 99435, Stop: 99845, Start Num: 20  
Candidate Starts for Phrappuccino\_141:  
(4, 99213), (Start: 20 @99435 has 2 MA's), (Start: 41 @99456 has 1 MA's), (91, 99555), (110, 99615),  
(113, 99621), (126, 99639), (137, 99702), (143, 99723), (154, 99780),

Gene: Pipcraft\_58 Start: 40243, Stop: 39863, Start Num: 10  
Candidate Starts for Pipcraft\_58:  
(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155,  
39916),

Gene: Pistachio\_64 Start: 40216, Stop: 39833, Start Num: 10  
Candidate Starts for Pistachio\_64:  
(2, 40366), (Start: 9 @40225 has 8 MA's), (Start: 10 @40216 has 159 MA's), (110, 40060), (125,  
40033), (134, 39985), (137, 39967), (160, 39868), (175, 39838),



Gene: Pocahontas\_63 Start: 40643, Stop: 40260, Start Num: 10  
Candidate Starts for Pocahontas\_63:  
(Start: 9 @40652 has 8 MA's), (Start: 10 @40643 has 159 MA's), (91, 40547), (110, 40487), (137, 40394), (160, 40295), (161, 40292), (175, 40265),

Gene: Polymorphads\_62 Start: 40236, Stop: 39856, Start Num: 10  
Candidate Starts for Polymorphads\_62:  
(Start: 10 @40236 has 159 MA's), (110, 40077), (116, 40068), (137, 39984), (154, 39915), (155, 39909),

Gene: Pomar16\_65 Start: 40953, Stop: 40576, Start Num: 39  
Candidate Starts for Pomar16\_65:  
(13, 41067), (29, 40968), (Start: 39 @40953 has 75 MA's), (Start: 60 @40902 has 1 MA's), (91, 40854), (94, 40851), (110, 40794), (137, 40701), (138, 40698), (154, 40632),

Gene: Popcicle\_63 Start: 40643, Stop: 40260, Start Num: 10  
Candidate Starts for Popcicle\_63:  
(Start: 9 @40652 has 8 MA's), (Start: 10 @40643 has 159 MA's), (91, 40547), (110, 40487), (137, 40394), (160, 40295), (161, 40292), (175, 40265),

Gene: Pumbaa\_61 Start: 40188, Stop: 39808, Start Num: 10  
Candidate Starts for Pumbaa\_61:  
(Start: 10 @40188 has 159 MA's), (110, 40029), (116, 40020), (137, 39936), (154, 39867),

Gene: Puppy\_64 Start: 40288, Stop: 39905, Start Num: 10  
Candidate Starts for Puppy\_64:  
(2, 40438), (Start: 9 @40297 has 8 MA's), (Start: 10 @40288 has 159 MA's), (110, 40132), (125, 40105), (134, 40057), (137, 40039), (160, 39940), (175, 39910),

Gene: Quantum\_112 Start: 75438, Stop: 74971, Start Num: 34  
Candidate Starts for Quantum\_112:  
(21, 75474), (Start: 34 @75438 has 11 MA's), (45, 75411), (65, 75372), (81, 75336), (101, 75288), (136, 75144), (137, 75141), (160, 75033), (180, 74982),

Gene: QuinnKiro\_62 Start: 40646, Stop: 40263, Start Num: 10  
Candidate Starts for QuinnKiro\_62:  
(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Quokka\_64 Start: 39806, Stop: 39429, Start Num: 39  
Candidate Starts for Quokka\_64:  
(13, 39920), (29, 39821), (Start: 39 @39806 has 75 MA's), (Start: 43 @39794 has 3 MA's), (66, 39743), (110, 39647), (137, 39554), (154, 39485),

Gene: ReginaGlobina\_62 Start: 25464, Stop: 25847, Start Num: 36  
Candidate Starts for ReginaGlobina\_62:  
(7, 25248), (Start: 36 @25464 has 4 MA's), (137, 25716),

Gene: Relief\_60 Start: 40240, Stop: 39860, Start Num: 10  
Candidate Starts for Relief\_60:  
(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: ResDef\_62 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for ResDef\_62:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Roary\_75 Start: 41394, Stop: 41002, Start Num: 27

Candidate Starts for Roary\_75:

(Start: 27 @41394 has 1 MA's), (Start: 39 @41373 has 75 MA's), (110, 41214), (127, 41181), (137, 41121), (149, 41082), (154, 41052),

Gene: Rockstar\_62 Start: 40119, Stop: 39727, Start Num: 9

Candidate Starts for Rockstar\_62:

(Start: 9 @40119 has 8 MA's), (Start: 10 @40110 has 159 MA's), (110, 39954), (134, 39879), (137, 39861), (154, 39792), (160, 39762), (170, 39744),

Gene: Romney\_60 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Romney\_60:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155, 39913),

Gene: Roosevelt\_59 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Roosevelt\_59:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Rosa24\_59 Start: 40274, Stop: 39894, Start Num: 10

Candidate Starts for Rosa24\_59:

(Start: 10 @40274 has 159 MA's), (110, 40115), (116, 40106), (137, 40022), (154, 39953),

Gene: Rose5\_86 Start: 54868, Stop: 55281, Start Num: 39

Candidate Starts for Rose5\_86:

(Start: 39 @54868 has 75 MA's), (Start: 60 @54919 has 1 MA's), (64, 54925), (137, 55159), (143, 55180), (145, 55186), (154, 55228),

Gene: Ruin\_61 Start: 40236, Stop: 39856, Start Num: 10

Candidate Starts for Ruin\_61:

(Start: 10 @40236 has 159 MA's), (110, 40077), (116, 40068), (137, 39984), (154, 39915), (155, 39909),

Gene: Sabertooth\_61 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Sabertooth\_61:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Saintus\_69 Start: 38038, Stop: 37667, Start Num: 39

Candidate Starts for Saintus\_69:

(Start: 27 @38059 has 1 MA's), (Start: 39 @38038 has 75 MA's), (110, 37879), (127, 37846), (136, 37789), (137, 37786), (154, 37717),

Gene: Salz\_62 Start: 39349, Stop: 38975, Start Num: 39

Candidate Starts for Salz\_62:

(1, 39685), (3, 39637), (6, 39580), (15, 39457), (16, 39430), (Start: 32 @39361 has 5 MA's), (Start: 39 @39349 has 75 MA's), (89, 39253), (110, 39190), (116, 39181), (123, 39169), (134, 39115), (137, 39097), (154, 39028),

Gene: Satis\_113 Start: 75434, Stop: 74967, Start Num: 34

Candidate Starts for Satis\_113:

(21, 75470), (Start: 34 @75434 has 11 MA's), (45, 75407), (65, 75368), (81, 75332), (101, 75284), (136, 75140), (137, 75137), (160, 75029), (180, 74978),

Gene: SaturnRing\_64 Start: 40669, Stop: 40286, Start Num: 10

Candidate Starts for SaturnRing\_64:

(2, 40819), (Start: 9 @40678 has 8 MA's), (Start: 10 @40669 has 159 MA's), (110, 40513), (125, 40486), (134, 40438), (137, 40420), (160, 40321), (175, 40291),

Gene: Scamp\_61 Start: 40245, Stop: 39865, Start Num: 10

Candidate Starts for Scamp\_61:

(Start: 10 @40245 has 159 MA's), (110, 40086), (116, 40077), (137, 39993), (154, 39924), (155, 39918),

Gene: Scout\_63 Start: 39823, Stop: 39440, Start Num: 10

Candidate Starts for Scout\_63:

(2, 39973), (Start: 9 @39832 has 8 MA's), (Start: 10 @39823 has 159 MA's), (110, 39667), (134, 39592), (137, 39574), (160, 39475),

Gene: SenorClean\_57 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for SenorClean\_57:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Serenity\_65 Start: 39936, Stop: 39559, Start Num: 39

Candidate Starts for Serenity\_65:

(29, 39951), (Start: 39 @39936 has 75 MA's), (110, 39777), (137, 39684), (145, 39657), (150, 39639), (154, 39615),

Gene: Settecandela\_141 Start: 99435, Stop: 99845, Start Num: 20

Candidate Starts for Settecandela\_141:

(4, 99213), (Start: 20 @99435 has 2 MA's), (Start: 41 @99456 has 1 MA's), (91, 99555), (110, 99615), (113, 99621), (126, 99639), (137, 99702), (143, 99723), (154, 99780),

Gene: Shaka\_59 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Shaka\_59:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: Sham4\_63 Start: 39389, Stop: 39003, Start Num: 32

Candidate Starts for Sham4\_63:

(1, 39713), (3, 39665), (6, 39608), (15, 39485), (Start: 32 @39389 has 5 MA's), (Start: 39 @39377 has 75 MA's), (110, 39218), (116, 39209), (134, 39143), (137, 39125), (154, 39056),

Gene: SheldonCooper\_61 Start: 40647, Stop: 40267, Start Num: 10

Candidate Starts for SheldonCooper\_61:

(Start: 10 @40647 has 159 MA's), (110, 40488), (116, 40479), (137, 40395), (154, 40326),

Gene: Shygu2\_59 Start: 40134, Stop: 39754, Start Num: 10

Candidate Starts for Shygu2\_59:

(Start: 10 @40134 has 159 MA's), (110, 39975), (116, 39966), (137, 39882), (154, 39813),

Gene: Silverleaf\_85 Start: 54367, Stop: 54780, Start Num: 39  
Candidate Starts for Silverleaf\_85:  
(Start: 39 @54367 has 75 MA's), (106, 54520), (137, 54658), (143, 54679), (145, 54685), (154, 54727),

Gene: Sixama\_169 Start: 96671, Stop: 96312, Start Num: 48  
Candidate Starts for Sixama\_169:  
(Start: 48 @96671 has 5 MA's), (69, 96629), (120, 96497), (137, 96437), (139, 96428), (143, 96416),  
(149, 96398), (167, 96326),

Gene: Skipitt\_60 Start: 40237, Stop: 39857, Start Num: 10  
Candidate Starts for Skipitt\_60:  
(Start: 10 @40237 has 159 MA's), (110, 40078), (116, 40069), (137, 39985), (154, 39916), (155,  
39910),

Gene: Smeadley\_74 Start: 41234, Stop: 40863, Start Num: 39  
Candidate Starts for Smeadley\_74:  
(Start: 27 @41255 has 1 MA's), (Start: 39 @41234 has 75 MA's), (110, 41075), (127, 41042), (136,  
40985), (137, 40982), (149, 40943), (154, 40913),

Gene: Smoothie\_119 Start: 68218, Stop: 68595, Start Num: 53  
Candidate Starts for Smoothie\_119:  
(37, 68173), (Start: 53 @68218 has 14 MA's), (78, 68278), (137, 68476), (139, 68485), (140, 68488),  
(143, 68497), (154, 68545), (160, 68575),

Gene: Snape\_63 Start: 39369, Stop: 38995, Start Num: 39  
Candidate Starts for Snape\_63:  
(1, 39705), (3, 39657), (6, 39600), (15, 39477), (Start: 32 @39381 has 5 MA's), (Start: 39 @39369 has  
75 MA's), (110, 39210), (116, 39201), (134, 39135), (137, 39117), (154, 39048),

Gene: SoJulia\_89 Start: 57296, Stop: 57712, Start Num: 36  
Candidate Starts for SoJulia\_89:  
(Start: 30 @57287 has 1 MA's), (Start: 36 @57296 has 4 MA's), (66, 57362), (71, 57374), (83, 57395),  
(106, 57452), (108, 57473), (133, 57563), (137, 57590), (154, 57659),

Gene: Sparky\_77 Start: 53247, Stop: 53657, Start Num: 34  
Candidate Starts for Sparky\_77:  
(Start: 34 @53247 has 11 MA's), (Start: 39 @53256 has 75 MA's), (96, 53376), (118, 53448), (131,  
53475), (142, 53529), (166, 53610), (169, 53616),

Gene: Sparxx\_62 Start: 40238, Stop: 39858, Start Num: 10  
Candidate Starts for Sparxx\_62:  
(Start: 10 @40238 has 159 MA's), (110, 40079), (116, 40070), (137, 39986), (154, 39917), (155,  
39911),

Gene: SpeedDemon\_560 Start: 46149, Stop: 46541, Start Num: 56  
Candidate Starts for SpeedDemon\_560:  
(Start: 55 @46146 has 1 MA's), (Start: 56 @46149 has 2 MA's), (136, 46407), (137, 46410),

Gene: Spino\_60 Start: 40246, Stop: 39866, Start Num: 10  
Candidate Starts for Spino\_60:  
(Start: 10 @40246 has 159 MA's), (110, 40087), (116, 40078), (137, 39994), (154, 39925), (155,  
39919),

Gene: Spooks\_15 Start: 10305, Stop: 9985, Start Num: 60

Candidate Starts for Spooks\_15:

(Start: 60 @10305 has 1 MA's), (70, 10284), (89, 10251), (106, 10209), (114, 10179), (137, 10107), (153, 10044), (170, 9990),

Gene: StAugustine\_176 Start: 97616, Stop: 97128, Start Num: 34

Candidate Starts for StAugustine\_176:

(8, 97802), (Start: 34 @97616 has 11 MA's), (64, 97547), (75, 97520), (88, 97493), (98, 97466), (101, 97460), (105, 97439), (112, 97406), (118, 97394), (123, 97379), (124, 97376), (129, 97352), (135, 97322), (146, 97277),

Gene: StarStuff\_66 Start: 40915, Stop: 40538, Start Num: 39

Candidate Starts for StarStuff\_66:

(13, 41029), (Start: 39 @40915 has 75 MA's), (Start: 60 @40864 has 1 MA's), (66, 40852), (91, 40816), (94, 40813), (110, 40756), (137, 40663), (138, 40660), (154, 40594),

Gene: Stasia\_59 Start: 40011, Stop: 39631, Start Num: 10

Candidate Starts for Stasia\_59:

(Start: 10 @40011 has 159 MA's), (71, 39936), (110, 39852), (116, 39843), (137, 39759), (154, 39690), (155, 39684),

Gene: Stephig9\_73 Start: 41171, Stop: 40800, Start Num: 39

Candidate Starts for Stephig9\_73:

(Start: 27 @41192 has 1 MA's), (Start: 39 @41171 has 75 MA's), (110, 41012), (127, 40979), (136, 40922), (137, 40919), (149, 40880), (154, 40850),

Gene: Stink\_58 Start: 39812, Stop: 39426, Start Num: 10

Candidate Starts for Stink\_58:

(Start: 10 @39812 has 159 MA's), (110, 39653), (116, 39644), (137, 39560), (154, 39491),

Gene: Success\_16 Start: 9522, Stop: 9202, Start Num: 60

Candidate Starts for Success\_16:

(Start: 60 @9522 has 1 MA's), (70, 9501), (106, 9426), (114, 9396), (137, 9324), (153, 9261), (170, 9207),

Gene: Superchunk\_64 Start: 39205, Stop: 38822, Start Num: 39

Candidate Starts for Superchunk\_64:

(13, 39319), (29, 39220), (Start: 39 @39205 has 75 MA's), (58, 39157), (94, 39103), (110, 39040), (137, 38947), (143, 38926), (154, 38878),

Gene: SwirlSquare\_70 Start: 40121, Stop: 39744, Start Num: 39

Candidate Starts for SwirlSquare\_70:

(13, 40235), (Start: 39 @40121 has 75 MA's), (Start: 41 @40112 has 1 MA's), (89, 40025), (110, 39962), (119, 39947), (127, 39929), (137, 39869), (151, 39818), (154, 39800),

Gene: TNguyen7\_65 Start: 40635, Stop: 40252, Start Num: 10

Candidate Starts for TNguyen7\_65:

(2, 40785), (Start: 9 @40644 has 8 MA's), (Start: 10 @40635 has 159 MA's), (110, 40479), (125, 40452), (134, 40404), (137, 40386), (160, 40287), (175, 40257),

Gene: TPA4\_57 Start: 41159, Stop: 41554, Start Num: 54

Candidate Starts for TPA4\_57:

(54, 41159), (102, 41264), (121, 41336), (124, 41348), (137, 41420), (143, 41441), (154, 41489), (174, 41543),

Gene: Talos\_171 Start: 87963, Stop: 88352, Start Num: 39

Candidate Starts for Talos\_171:

(18, 87903), (Start: 39 @87963 has 75 MA's), (Start: 43 @87975 has 3 MA's), (79, 88050), (97, 88080), (127, 88161), (137, 88221), (144, 88245), (155, 88290), (158, 88302), (173, 88335),

Gene: Taquarus\_60 Start: 40246, Stop: 39866, Start Num: 10

Candidate Starts for Taquarus\_60:

(Start: 10 @40246 has 159 MA's), (110, 40087), (116, 40078), (137, 39994), (154, 39925), (155, 39919),

Gene: Texage\_61 Start: 40647, Stop: 40264, Start Num: 10

Candidate Starts for Texage\_61:

(Start: 9 @40656 has 8 MA's), (Start: 10 @40647 has 159 MA's), (91, 40551), (110, 40491), (137, 40398), (160, 40299), (161, 40296), (175, 40269),

Gene: Thanksgivukkah\_60 Start: 40241, Stop: 39861, Start Num: 10

Candidate Starts for Thanksgivukkah\_60:

(Start: 10 @40241 has 159 MA's), (110, 40082), (116, 40073), (137, 39989), (154, 39920), (155, 39914),

Gene: Thimble\_78 Start: 47556, Stop: 47954, Start Num: 43

Candidate Starts for Thimble\_78:

(Start: 38 @47541 has 3 MA's), (Start: 43 @47556 has 3 MA's), (106, 47703), (137, 47841),

Gene: Timothy\_63 Start: 39346, Stop: 38972, Start Num: 39

Candidate Starts for Timothy\_63:

(1, 39682), (3, 39634), (6, 39577), (15, 39454), (Start: 32 @39358 has 5 MA's), (Start: 39 @39346 has 75 MA's), (110, 39187), (116, 39178), (134, 39112), (137, 39094), (154, 39025),

Gene: TinaFeyge\_59 Start: 40238, Stop: 39858, Start Num: 10

Candidate Starts for TinaFeyge\_59:

(Start: 10 @40238 has 159 MA's), (110, 40079), (116, 40070), (137, 39986), (154, 39917), (155, 39911),

Gene: TinyTimmy\_63 Start: 39395, Stop: 39021, Start Num: 39

Candidate Starts for TinyTimmy\_63:

(1, 39731), (3, 39683), (6, 39626), (15, 39503), (16, 39476), (Start: 32 @39407 has 5 MA's), (Start: 39 @39395 has 75 MA's), (89, 39299), (110, 39236), (116, 39227), (123, 39215), (134, 39161), (137, 39143), (154, 39074),

Gene: Tinybot\_60 Start: 40273, Stop: 39893, Start Num: 10

Candidate Starts for Tinybot\_60:

(Start: 10 @40273 has 159 MA's), (110, 40114), (116, 40105), (137, 40021), (154, 39952),

Gene: TipsytheTRex\_62 Start: 40006, Stop: 39629, Start Num: 39

Candidate Starts for TipsytheTRex\_62:

(29, 40021), (Start: 39 @40006 has 75 MA's), (94, 39904), (110, 39847), (137, 39754), (150, 39709), (154, 39685),

Gene: TiroTheta9\_60 Start: 40237, Stop: 39857, Start Num: 10

Candidate Starts for TiroTheta9\_60:

(Start: 10 @40237 has 159 MA's), (110, 40078), (116, 40069), (137, 39985), (154, 39916), (155, 39910),

Gene: Todacoro\_63 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Todacoro\_63:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Tomathan\_66 Start: 40962, Stop: 40585, Start Num: 39

Candidate Starts for Tomathan\_66:

(13, 41076), (29, 40977), (Start: 39 @40962 has 75 MA's), (Start: 60 @40911 has 1 MA's), (91, 40863), (94, 40860), (110, 40803), (137, 40710), (138, 40707), (154, 40641),

Gene: Toniann\_118 Start: 67752, Stop: 68129, Start Num: 53

Candidate Starts for Toniann\_118:

(37, 67707), (Start: 53 @67752 has 14 MA's), (78, 67812), (137, 68010), (139, 68019), (140, 68022), (143, 68031), (154, 68079), (160, 68109),

Gene: Tourach\_86 Start: 56255, Stop: 56671, Start Num: 36

Candidate Starts for Tourach\_86:

(Start: 30 @56246 has 1 MA's), (Start: 36 @56255 has 4 MA's), (71, 56333), (81, 56351), (83, 56354), (106, 56411), (107, 56429), (108, 56432), (133, 56522), (137, 56549), (154, 56618),

Gene: Towmatter\_46 Start: 39505, Stop: 39900, Start Num: 62

Candidate Starts for Towmatter\_46:

(Start: 62 @39505 has 1 MA's), (128, 39697), (137, 39754), (138, 39757), (143, 39775),

Gene: Travvers\_65 Start: 40912, Stop: 40535, Start Num: 39

Candidate Starts for Travvers\_65:

(13, 41026), (29, 40927), (Start: 39 @40912 has 75 MA's), (Start: 60 @40861 has 1 MA's), (91, 40813), (94, 40810), (110, 40753), (137, 40660), (138, 40657), (154, 40591),

Gene: Trina\_43 Start: 16818, Stop: 16444, Start Num: 35

Candidate Starts for Trina\_43:

(Start: 35 @16818 has 1 MA's), (Start: 60 @16761 has 1 MA's), (76, 16734), (91, 16713), (106, 16677), (114, 16644), (137, 16572), (154, 16503), (155, 16497),

Gene: TroyPia\_62 Start: 40241, Stop: 39861, Start Num: 10

Candidate Starts for TroyPia\_62:

(Start: 10 @40241 has 159 MA's), (110, 40082), (116, 40073), (137, 39989), (154, 39920), (155, 39914),

Gene: TygerBlood\_61 Start: 40243, Stop: 39863, Start Num: 10

Candidate Starts for TygerBlood\_61:

(Start: 10 @40243 has 159 MA's), (110, 40084), (116, 40075), (137, 39991), (154, 39922), (155, 39916),

Gene: Tyson\_86 Start: 54794, Stop: 55207, Start Num: 39

Candidate Starts for Tyson\_86:

(Start: 39 @54794 has 75 MA's), (Start: 60 @54845 has 1 MA's), (64, 54851), (137, 55085), (143, 55106), (145, 55112), (154, 55154),

Gene: UPIE\_84 Start: 54390, Stop: 54803, Start Num: 39

Candidate Starts for UPIE\_84:

(Start: 39 @54390 has 75 MA's), (Start: 60 @54441 has 1 MA's), (64, 54447), (137, 54681), (143, 54702), (145, 54708), (154, 54750),

Gene: Ulysses\_60 Start: 39923, Stop: 39543, Start Num: 10

Candidate Starts for Ulysses\_60:

(Start: 10 @39923 has 159 MA's), (110, 39764), (116, 39755), (137, 39671), (154, 39602), (155, 39596),

Gene: VC3\_67 Start: 40889, Stop: 40512, Start Num: 39

Candidate Starts for VC3\_67:

(13, 41003), (Start: 39 @40889 has 75 MA's), (Start: 41 @40880 has 1 MA's), (49, 40859), (58, 40841), (66, 40826), (137, 40637), (145, 40610), (151, 40586), (154, 40568),

Gene: Veracruz\_61 Start: 40646, Stop: 40263, Start Num: 10

Candidate Starts for Veracruz\_61:

(Start: 9 @40655 has 8 MA's), (Start: 10 @40646 has 159 MA's), (91, 40550), (110, 40490), (137, 40397), (160, 40298), (161, 40295), (175, 40268),

Gene: Wander\_61 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Wander\_61:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919),

Gene: Weasels2\_55 Start: 20844, Stop: 20455, Start Num: 25

Candidate Starts for Weasels2\_55:

(Start: 25 @20844 has 4 MA's), (61, 20769), (137, 20574), (155, 20499), (163, 20469),

Gene: Wilbur\_61 Start: 40240, Stop: 39860, Start Num: 10

Candidate Starts for Wilbur\_61:

(Start: 10 @40240 has 159 MA's), (110, 40081), (116, 40072), (137, 39988), (154, 39919), (155, 39913),

Gene: Wile\_59 Start: 40114, Stop: 39728, Start Num: 10

Candidate Starts for Wile\_59:

(Start: 10 @40114 has 159 MA's), (110, 39955), (116, 39946), (137, 39862), (154, 39793),

Gene: WilliamBoone\_116 Start: 65070, Stop: 65447, Start Num: 53

Candidate Starts for WilliamBoone\_116:

(Start: 53 @65070 has 14 MA's), (128, 65271), (130, 65289), (137, 65328), (138, 65331), (139, 65337), (140, 65340), (148, 65364),

Gene: Wizard007\_60 Start: 40248, Stop: 39868, Start Num: 10

Candidate Starts for Wizard007\_60:

(Start: 10 @40248 has 159 MA's), (110, 40089), (111, 40086), (116, 40080), (137, 39996), (154, 39927),

Gene: Wyatt2\_86 Start: 54792, Stop: 55205, Start Num: 39

Candidate Starts for Wyatt2\_86:

(Start: 39 @54792 has 75 MA's), (Start: 60 @54843 has 1 MA's), (64, 54849), (137, 55083), (143, 55104), (145, 55110), (154, 55152),

Gene: Xena\_58 Start: 40080, Stop: 39694, Start Num: 10



Candidate Starts for Xena\_58:

(Start: 10 @40080 has 159 MA's), (110, 39921), (116, 39912), (137, 39828), (154, 39759),

Gene: YoSam321\_61 Start: 40237, Stop: 39857, Start Num: 10

Candidate Starts for YoSam321\_61:

(Start: 10 @40237 has 159 MA's), (110, 40078), (116, 40069), (137, 39985), (154, 39916), (155, 39910),

Gene: Yvonnetastic\_125 Start: 70757, Stop: 71188, Start Num: 53

Candidate Starts for Yvonnetastic\_125:

(Start: 53 @70757 has 14 MA's), (73, 70802), (75, 70808), (86, 70832), (137, 71036), (138, 71039), (139, 71045), (165, 71144), (176, 71168),