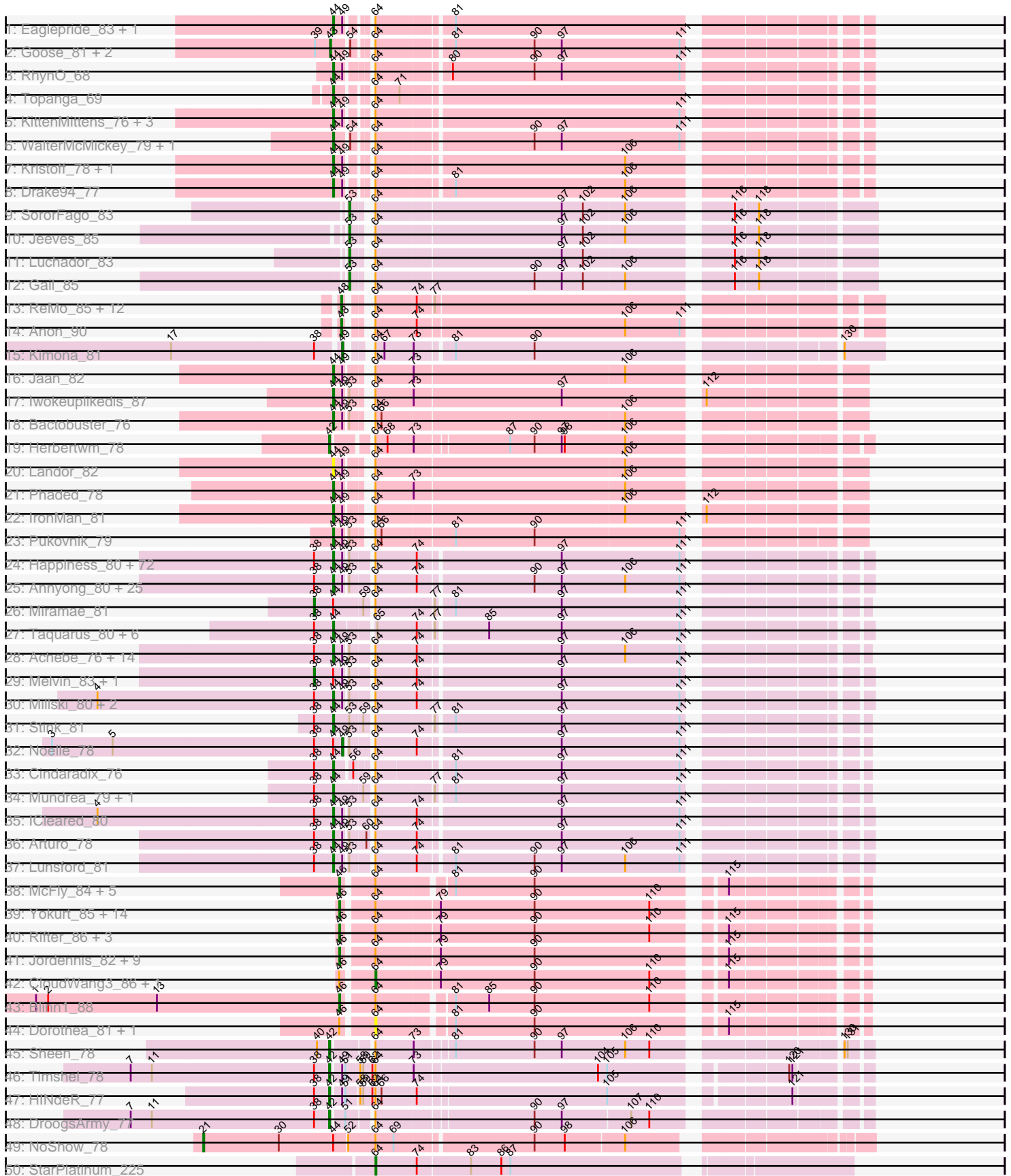
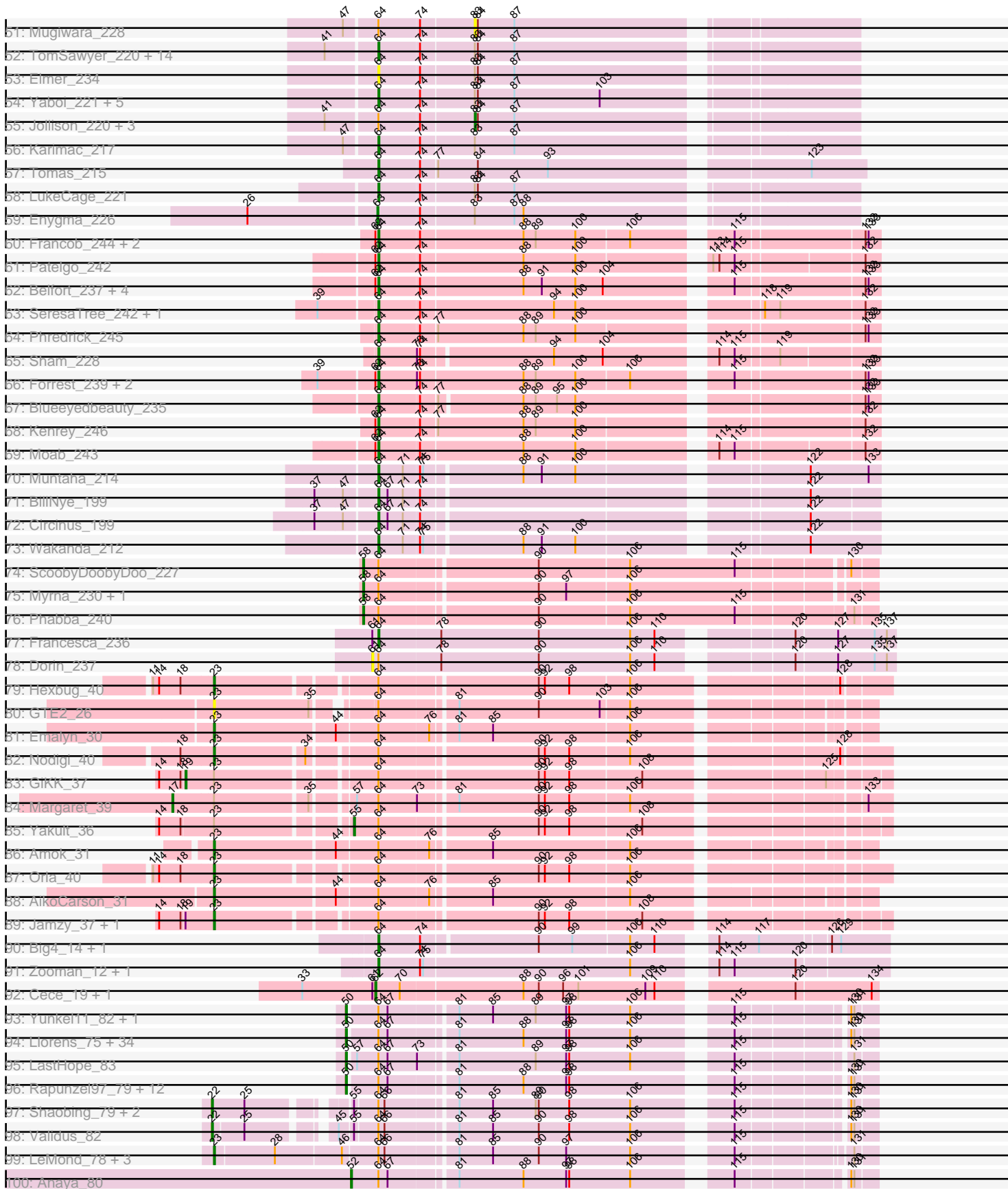


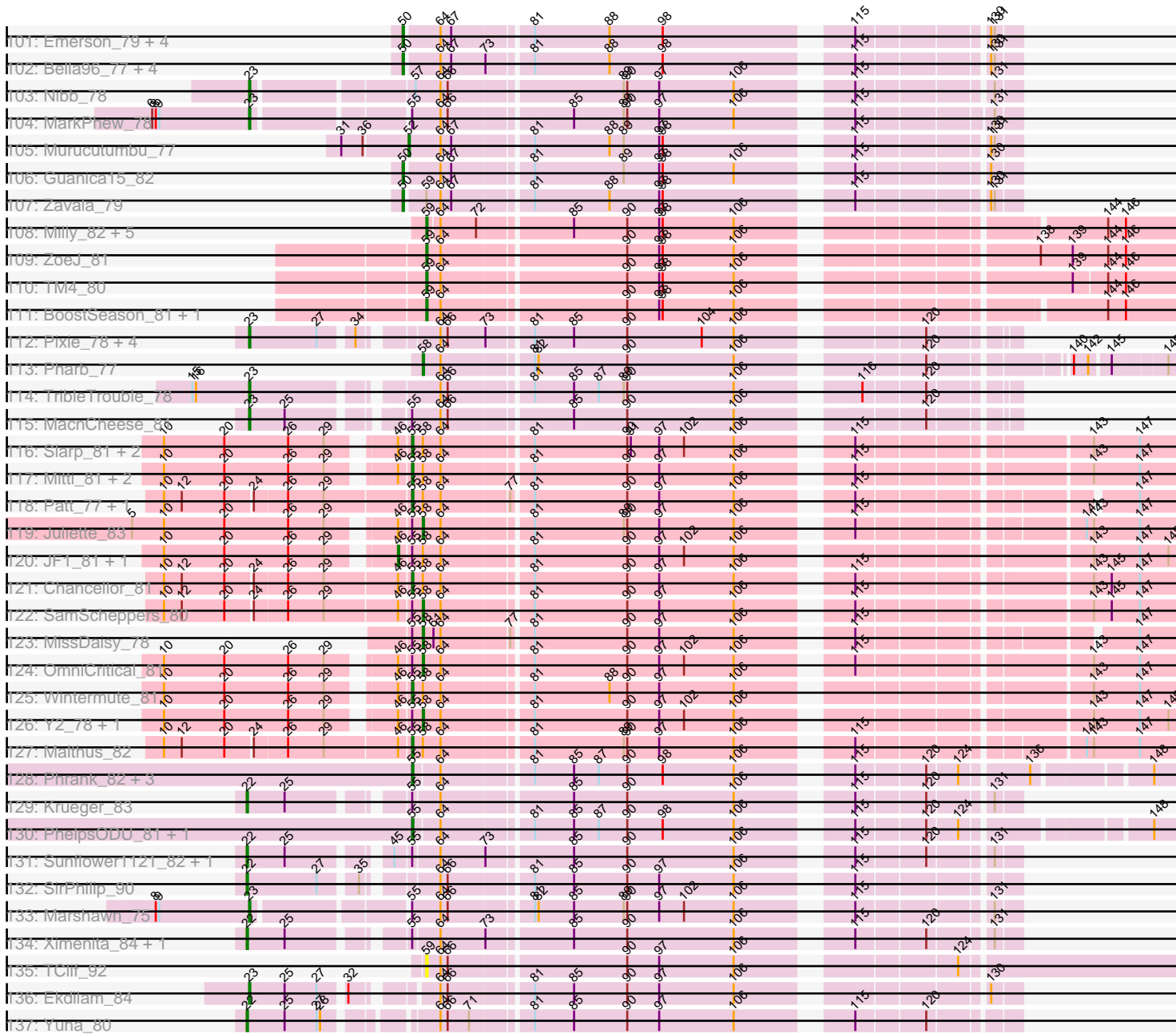
Pham 169597



Pham 169597



Pham 169597



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 169597 Report

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

Pham number 169597 has 430 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Eaglepride\_83, Stasia\_78
- Track 2 : Goose\_81, Chupacabra\_77, OKCentral2016\_79
- Track 3 : RhynO\_68
- Track 4 : Topanga\_69
- Track 5 : KittenMittens\_76, Poompha\_77, Severus\_78, PeaceMeal1\_77
- Track 6 : WalterMcMickey\_79, Twister\_80
- Track 7 : Kristoff\_78, Rebeuca\_81
- Track 8 : Drake94\_77
- Track 9 : SororFago\_83
- Track 10 : Jeeves\_85
- Track 11 : Luchador\_83
- Track 12 : Gail\_85
- Track 13 : ReMo\_85, MinecraftSteve\_88, ShayRa\_85, Boohoo\_86, Battleship\_90, Switzerland\_85, LastResort\_85, Anaysia\_87, JSwag\_87, KatherineG\_87, Waits\_87, DekHockey33\_89, Nebulosus\_84
- Track 14 : Anon\_90
- Track 15 : Kimona\_81
- Track 16 : Jaan\_82
- Track 17 : Iwokeuplikedis\_87
- Track 18 : Bactobuster\_76
- Track 19 : Herbertwm\_78
- Track 20 : Landor\_82
- Track 21 : Phaded\_78
- Track 22 : IronMan\_81
- Track 23 : Pukovnik\_79
- Track 24 : Happiness\_80, Eurydice\_82, Burger\_79, LochMonster\_82, Koreni\_80, Bombshell\_81, Romney\_80, Mazhar510\_81, Chaph\_81, OKaNui\_80, Wilbur\_81, Phelipe\_81, Obama12\_82, Funston\_80, Phighter1804\_81, Eris\_80, CentreCat\_81, Nebs\_82, NotAPhaseMom\_80, Lorenzo\_81, SheldonCooper\_81, Cerulean\_83, Relief\_80, Bruiser\_80, Camperdownii\_77, Medusa\_80, ChampagnePapi\_84, Scamp\_81, Flux\_82, Eapen\_81, Caelakin\_79, Eagle\_80, Dhanush\_81, Iceman\_79, Maverick\_80, Shygu2\_79, YoSam321\_81, Kyee\_81, Palestino\_80, PeterPeter\_81, Ulysses\_80, Ruin\_81, Cocoaberry\_81, TygerBlood\_81, Pipcraft\_77, Avle17\_81, Spino\_80, LHTSCC\_83, KFPoly\_80, Phacado\_81, Sabertooth\_81, Kremtemulon\_75, Xena\_77, Tinybot\_80, JoongJeon\_80, Ohfah\_82, Kratark\_80, NorthStar\_78, Maxo\_83, Cintron\_81, Kampy\_80, Gadost\_81, Nemo27\_80, Kingmustik0402\_81, Lemur\_81, Datway\_78, BangNhom\_78, Wander\_81, TroyPia\_82, LittleB\_81,

Houdini22\_80, Clarenza\_80, Iracema64\_81

- Track 25 : Anyong\_80, Albee\_81, Connomayer\_81, TinaFeyge\_79, Jaykayelowell\_78, Pumbaa\_81, Polymorphads\_82, Florean\_81, LappelDuVide\_77, DirtyDunning\_80, BubbleTrouble\_80, Baby16\_81, Sparxx\_82, Roosevelt\_79, TiroTheta9\_80, JetBlade\_82, Holli\_80, Abdiel\_80, Citius\_81, Broseidon\_81, Deano\_78, Shaka\_79, HamSlice\_77, Morrow\_83, Blackmoor\_80, Bartimeaus\_81
- Track 26 : Miramae\_81
- Track 27 : Taquarus\_80, LittleGuy\_81, Nyxis\_80, Eros\_81, Phontbonne\_81, Commander\_79, Peaches\_79
- Track 28 : Achebe\_76, Perplexer\_77, Morpher26\_77, Wile\_76, Alberto7\_82, Katalie136\_77, AbbysRanger\_77, Backyardigan\_75, Druantia\_79, Badger\_76, Wizard007\_77, Bumblebee11\_76, BellusTerra\_81, Cici\_77, PetiteSangsue\_77
- Track 29 : Melvin\_83, Skipitt\_80
- Track 30 : Millski\_80, Thanksgivukkah\_80, MeeZee\_80
- Track 31 : Stink\_81
- Track 32 : Noelle\_78
- Track 33 : Cindaradix\_76
- Track 34 : Mundrea\_79, AvatarAhPeg\_81
- Track 35 : ICleared\_80
- Track 36 : Arturo\_78
- Track 37 : Lunsford\_81
- Track 38 : McFly\_84, DaVinci\_82, Cookiedough\_84, Neeharika16\_83, Kipper29\_84, BABullseye\_77
- Track 39 : Yokurt\_85, ToneTone\_83, Wiks\_85, Artemis2UCLA\_85, WunderPhul\_86, Helmet\_87, Zulu\_87, Lilbunny\_83, Blue7\_87, Roksolana\_86, Zaka\_86, Tucker\_86, Indra\_89, Koko\_87, Garak\_87
- Track 40 : Rifter\_86, Gruunaga\_85, Hexamo\_85, Gladiator\_82
- Track 41 : Jordennis\_82, Candra\_82, Hoot\_79, Pmask\_83, Kazan\_85, SuperAwesome\_84, VohminGhazi\_84, GreedyLawyer\_78, Newrala\_83, SmellyB\_84
- Track 42 : CloudWang3\_86, Hammer\_86
- Track 43 : Blinn1\_88
- Track 44 : Dorothea\_81, Chartreuse\_82
- Track 45 : Sheen\_78
- Track 46 : Timshel\_78
- Track 47 : HINdeR\_77
- Track 48 : DroogsArmy\_77
- Track 49 : NoShow\_78
- Track 50 : StarPlatinum\_225
- Track 51 : Mugiwara\_228
- Track 52 : TomSawyer\_220, Spilled\_223, Starbow\_213, Bordeaux\_214, Amabiko\_220, Quarant19\_216, IchabodCrane\_211, Gibbi\_224, Spelly\_221, JimJam\_223, MindFlayer\_209, Birchlyn\_215, PumpkinSpice\_219, SaltySpittoon\_216, Battuta\_214
- Track 53 : Elmer\_234
- Track 54 : Yaboi\_221, Wofford\_218, Sollertia\_217, Stanimal\_216, Genie2\_215, BoomerJR\_215
- Track 55 : Jollison\_220, CeilingFan\_228, KentuckyRacer\_227, Wipeout\_207
- Track 56 : Karimac\_217
- Track 57 : Tomas\_215
- Track 58 : LukeCage\_221
- Track 59 : Enygma\_226
- Track 60 : Francob\_244, Gilson\_240, MeganTheeKilla\_243
- Track 61 : Patelgo\_242

- Track 62 : Belfort\_237, Comrade\_233, Karp\_236, SparkleGoddess\_238, Stigma\_236
- Track 63 : SeresaTree\_242, Faust\_238
- Track 64 : Phredrick\_245
- Track 65 : Sham\_228
- Track 66 : Forrest\_239, Emma1919\_241, Jada\_238
- Track 67 : Blueeyedbeauty\_235
- Track 68 : Kenrey\_246
- Track 69 : Moab\_243
- Track 70 : Muntaha\_214
- Track 71 : BillNye\_199
- Track 72 : Circinus\_199
- Track 73 : Wakanda\_212
- Track 74 : ScoobyDoobyDoo\_227
- Track 75 : Myrna\_230, Greely\_237
- Track 76 : Phabba\_240
- Track 77 : Francesca\_236
- Track 78 : Dorin\_237
- Track 79 : Hexbug\_40
- Track 80 : GTE2\_26
- Track 81 : Emalyn\_30
- Track 82 : Nodigi\_40
- Track 83 : GiKK\_37
- Track 84 : Margaret\_39
- Track 85 : Yakult\_36
- Track 86 : Amok\_31
- Track 87 : Orla\_40
- Track 88 : AikoCarson\_31
- Track 89 : Jamzy\_37, Button\_35
- Track 90 : Big4\_14, Big4\_340
- Track 91 : Zooman\_12, Zooman\_325
- Track 92 : Cece\_19, Cece\_321
- Track 93 : Yunkel11\_82, Efra2\_83
- Track 94 : Llorens\_75, CaseJules\_78, Boiiii\_76, BEEST\_76, Asayake\_76, Topper\_76, Twitch\_76, Blizzard\_76, Homura\_75, ShiaSurprise\_77, Joy99\_77, Dalmuri\_76, Peel\_76, Belladonna\_76, Jeckyll\_76, HedwigODU\_76, Atiba\_77, Hyperbowlee\_75, Durfee\_76, Zabiza\_72, Piatt\_75, Capricorn\_76, Tachez\_76, AlishaPH\_75, CREW\_75, Jarvi\_76, Rosmarinus\_76, Spock\_76, Lunahalos\_76, Adephegia\_75, Padfoot\_76, BaghaKamala\_75, Inky\_76, ActinUp\_77, BGlluviae\_76
- Track 95 : LastHope\_83
- Track 96 : Rapunzel97\_79, Apocalypse\_79, Slimphazie\_78, BarrelRoll\_77, TruffulaTree\_78, CheetoDust\_76, JAWS\_75, Veliki\_77, Deby\_76, Mynx\_78, Ramen\_77, Pokerus\_77, Jayhawk\_78
- Track 97 : Shaobing\_79, Niklas\_80, Peanam\_80
- Track 98 : Validus\_82
- Track 99 : LeMond\_78, Oscar\_78, Scarlett\_79, KiSi\_79
- Track 100 : Anaya\_80
- Track 101 : Emerson\_79, Prithvi\_79, LindNT\_75, Padpat\_80, TreyKay\_79
- Track 102 : Bella96\_77, TiniBug\_76, SamuelLPlaqson\_76, Urkel\_76, DrHayes\_76
- Track 103 : Nibb\_78
- Track 104 : MarkPhew\_78
- Track 105 : Murucutumbu\_77
- Track 106 : Guanica15\_82

- Track 107 : Zavala\_79
- Track 108 : Milly\_82, Strobilo\_83, Marcoliusprime\_81, DismalFunk\_82, DismalStressor\_82, Findley\_82
- Track 109 : ZoeJ\_81
- Track 110 : TM4\_80
- Track 111 : BoostSeason\_81, Mufasa\_81
- Track 112 : Pixie\_78, ShedlockHolmes\_81, TBond007\_75, Hurricane\_79, Keshu\_81
- Track 113 : Pharb\_77
- Track 114 : TribbleTrouble\_78
- Track 115 : MacnCheese\_81
- Track 116 : Slarp\_81, Cheetobro\_81, Taquito\_80
- Track 117 : Mitti\_81, Eponine\_83, Fionnbharth\_81
- Track 118 : Patt\_77, Reptar3000\_78
- Track 119 : Juliette\_83
- Track 120 : JF1\_81, Ruthiejr\_82
- Track 121 : Chancellor\_81
- Track 122 : SamScheppers\_80
- Track 123 : MissDaisy\_78
- Track 124 : OmniCritical\_81
- Track 125 : Wintermute\_81
- Track 126 : Y2\_78, Y10\_78
- Track 127 : Malthus\_82
- Track 128 : Phrank\_82, Tierra\_81, Bryler\_82, Cain\_82
- Track 129 : Krueger\_83
- Track 130 : PhelpsODU\_81, Unicorn\_81
- Track 131 : Sunflower1121\_82, Shadow1\_83
- Track 132 : SirPhilip\_90
- Track 133 : Marshawn\_75
- Track 134 : Ximenita\_84, Syra333\_82
- Track 135 : TClif\_92
- Track 136 : Ekdilam\_84
- Track 137 : Yuna\_80

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

The start number called the most often in the published annotations is 44, it was called in 148 of the 407 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_77, Abdiel\_80, Achebe\_76, Albee\_81, Alberto7\_82, Annyong\_80, Arturo\_78, AvatarAhPeg\_81, Avle17\_81, Baby16\_81, Backyardigan\_75, Bactobuster\_76, Badger\_76, BangNhom\_78, Bartimeaus\_81, BellusTerra\_81, Blackmoor\_80, Bombshell\_81, Broseidon\_81, Bruiser\_80, BubbleTrouble\_80, Bumblebee11\_76, Burger\_79, Caelakin\_79, Camperdownii\_77, CentreCat\_81, Cerulean\_83, ChampagnePapi\_84, Chaph\_81, Cici\_77, Cindaradix\_76, Cintron\_81, Citius\_81, Clarenza\_80, Cocoaberry\_81, Commander\_79, Connomayer\_81, Datway\_78, Deano\_78, Dhanush\_81, DirtyDunning\_80, Drake94\_77, Druantia\_79, Eagle\_80, Eaglepride\_83, Eapen\_81, Eris\_80, Eros\_81, Eurydice\_82, Floean\_81, Flux\_82, Funston\_80, Gadost\_81, HamSlice\_77, Happiness\_80, Holli\_80, Houdini22\_80, ICleared\_80, Iceman\_79, Iracema64\_81, IronMan\_81,

Iwokeuplikedis\_87, Jaan\_82, Jaykayelowell\_78, JetBlade\_82, JoongJeon\_80, KFPoly\_80, Kampy\_80, Katalie136\_77, Kingmustik0402\_81, KittenMittens\_76, Koreni\_80, Kratark\_80, Kremtemulon\_75, Kristoff\_78, Kyee\_81, LHTSCC\_83, Landor\_82, LappelDuVide\_77, Lemur\_81, LittleB\_81, LittleGuy\_81, LochMonster\_82, Lorenzo\_81, Lunsford\_81, Maverick\_80, Maxo\_83, Mazhar510\_81, Medusa\_80, MeeZee\_80, Millski\_80, Morpher26\_77, Morrow\_83, Mundrea\_79, Nebs\_82, Nemo27\_80, NorthStar\_78, NotAPhaseMom\_80, Nyxis\_80, OKaNui\_80, Obama12\_82, Ohfah\_82, Palestino\_80, PeaceMeal1\_77, Peaches\_79, Perplexer\_77, PeterPeter\_81, PetiteSangsue\_77, Phacado\_81, Phaded\_78, Felipe\_81, Phighter1804\_81, Phontbonne\_81, Pipcraft\_77, Polymorphads\_82, Poompha\_77, Pukovnik\_79, Pumbaa\_81, Rebeuca\_81, Relief\_80, RhynO\_68, Romney\_80, Roosevelt\_79, Ruin\_81, Sabertooth\_81, Scamp\_81, Severus\_78, Shaka\_79, SheldonCooper\_81, Shygu2\_79, Sparxx\_82, Spino\_80, Stasia\_78, Stink\_81, Taquarus\_80, Thanksgivukkah\_80, TinaFeyge\_79, Tinybot\_80, TiroTheta9\_80, Topanga\_69, TroyPia\_82, Twister\_80, TygerBlood\_81, Ulysses\_80, WalterMcMickey\_79, Wander\_81, Wilbur\_81, Wile\_76, Wizard007\_77, Xena\_77, YoSam321\_81,

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

- AikoCarson\_31, Amok\_31, Emalyn\_30, Melvin\_83, Miramae\_81, NoShow\_78, Noelle\_78, Skipitt\_80,

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

- ActinUp\_77, Adephegia\_75, AlishaPH\_75, Amabiko\_220, Anaya\_80, Anaysia\_87, Anon\_90, Apocalypse\_79, Artemis2UCLA\_85, Asayake\_76, Atiba\_77, BABullseye\_77, BEEST\_76, BGlluviae\_76, BaghaKamala\_75, BarrelRoll\_77, Battleship\_90, Battuta\_214, Belfort\_237, Bella96\_77, Belladonna\_76, Big4\_14, Big4\_340, BillNye\_199, Birchlyn\_215, Blinn1\_88, Blizzard\_76, Blue7\_87, Blueeyedbeauty\_235, Boiiii\_76, Boohoo\_86, BoomerJR\_215, BoostSeason\_81, Bordeaux\_214, Bryler\_82, Button\_35, CREW\_75, Cain\_82, Candra\_82, Capricorn\_76, CaseJules\_78, Cece\_19, Cece\_321, CeilingFan\_228, Chancellor\_81, Chartreuse\_82, CheetoDust\_76, Cheetobro\_81, Chupacabra\_77, Circinus\_199, CloudWang3\_86, Comrade\_233, Cookiedough\_84, DaVinci\_82, Dalmuri\_76, Deby\_76, DekHockey33\_89, DismalFunk\_82, DismalStressor\_82, Dorin\_237, Dorothea\_81, DrHayes\_76, DroogsArmy\_77, Durfee\_76, Efra2\_83, Ekdilam\_84, Elmer\_234, Emerson\_79, Emma1919\_241, Enygma\_226, Eponine\_83, Faust\_238, Findley\_82, Fionnbharth\_81, Forrest\_239, Francesca\_236, Francob\_244, GTE2\_26, Gail\_85, Garak\_87, Genie2\_215, GiKK\_37, Gibbi\_224, Gilson\_240, Gladiator\_82, Goose\_81, GreedyLawyer\_78, Greely\_237, Gruunaga\_85, Guanica15\_82, HINdeR\_77, Hammer\_86, HedwigODU\_76, Helmet\_87, Herbertwm\_78, Hexamo\_85, Hexbug\_40, Homura\_75, Hoot\_79, Hurricane\_79, Hyperbowlee\_75, IchabodCrane\_211, Indra\_89, Inky\_76, JAWS\_75, JF1\_81, JSwag\_87, Jada\_238, Jamzy\_37, Jarvi\_76, Jayhawk\_78, Jeckyll\_76, Jeeves\_85, JimJam\_223, Jollison\_220, Jordennis\_82, Joy99\_77, Juliette\_83, Karimac\_217, Karp\_236, KatherineG\_87, Kazan\_85, Kenrey\_246, KentuckyRacer\_227, Keshu\_81, KiSi\_79, Kimona\_81, Kipper29\_84, Koko\_87, Krueger\_83, LastHope\_83, LastResort\_85, LeMond\_78, Lilbunny\_83, LindNT\_75, Llorens\_75, Luchador\_83, LukeCage\_221, Lunahalos\_76, MacnCheese\_81, Malthus\_82, Marcoliusprime\_81, Margaret\_39, MarkPhew\_78, Marshawn\_75, McFly\_84, MeganTheeKilla\_243, Milly\_82, MindFlayer\_209, MinecraftSteve\_88, MissDaisy\_78, Mitti\_81, Moab\_243, Mufasa\_81, Mugiwara\_228, Muntaha\_214, Murucutumbu\_77, Mynx\_78, Myrna\_230, Nebulosus\_84, Neeharika16\_83, Newrala\_83, Nibb\_78, Niklas\_80, Nodigi\_40, OKCentral2016\_79, OmniCritical\_81, Orla\_40, Oscar\_78, Padfoot\_76, Padpat\_80,



Patelgo\_242, Patt\_77, Peanam\_80, Peel\_76, Phabba\_240, Pharb\_77, PhelpsODU\_81, Phrank\_82, Phredrick\_245, Piatt\_75, Pixie\_78, Pmask\_83, Pokerus\_77, Prithvi\_79, PumpkinSpice\_219, Quaran19\_216, Ramen\_77, Rapunzel97\_79, ReMo\_85, Reptar3000\_78, Rifter\_86, Roksolana\_86, Rosmarinus\_76, Ruthiejr\_82, SaltySpitoon\_216, SamScheppers\_80, SamuelLPlaqson\_76, Scarlett\_79, ScoobyDoobyDoo\_227, SeresaTree\_242, Shadow1\_83, Sham\_228, Shaobing\_79, ShayRa\_85, ShedlockHolmes\_81, Sheen\_78, ShiaSurprise\_77, SirPhilip\_90, Slarp\_81, Slimphazie\_78, SmellyB\_84, Sollertia\_217, SororFago\_83, SparkleGoddess\_238, Spelly\_221, Spilled\_223, Spock\_76, Stanimal\_216, StarPlatinum\_225, Starbow\_213, Stigma\_236, Strobilo\_83, Sunflower1121\_82, SuperAwesome\_84, Switzerland\_85, Syra333\_82, TBond007\_75, TClif\_92, TM4\_80, Tachez\_76, Taquito\_80, Tierra\_81, Timshel\_78, TiniBug\_76, TomSawyer\_220, Tomas\_215, ToneTone\_83, Topper\_76, TreyKay\_79, TribbleTrouble\_78, TruffulaTree\_78, Tucker\_86, Twitch\_76, Unicorn\_81, Urkel\_76, Validus\_82, Veliki\_77, VohminGhazi\_84, Waits\_87, Wakanda\_212, Wiks\_85, Wintermute\_81, Wipeout\_207, Wofford\_218, WunderPhul\_86, Ximenita\_84, Y10\_78, Y2\_78, Yaboi\_221, Yakult\_36, Yokurt\_85, Yuna\_80, Yunkel11\_82, Zabiza\_72, Zaka\_86, Zavala\_79, ZoeJ\_81, Zooman\_12, Zooman\_325, Zulu\_87,

### Summary by start number:

#### Start 17:

- Found in 2 of 430 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 407
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Margaret\_39 (CT),

#### Start 19:

- Found in 3 of 430 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 407
- Called 33.3% of time when present
- Phage (with cluster) where this start called: GiKK\_37 (CT),

#### Start 21:

- Found in 1 of 430 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoShow\_78 (AB),

#### Start 22:

- Found in 11 of 430 ( 2.6% ) of genes in pham
- Manual Annotations of this start: 11 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Krueger\_83 (K6), Niklas\_80 (K1), Peanam\_80 (K1), Shadow1\_83 (K6), Shaobing\_79 (K1), SirPhilip\_90 (K6), Sunflower1121\_82 (K6), Syra333\_82 (K6), Validus\_82 (K1), Ximenita\_84 (K6), Yuna\_80 (K6),

#### Start 23:

- Found in 27 of 430 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 23 of 407
- Called 88.9% of time when present

- Phage (with cluster) where this start called: AikoCarson\_31 (CT), Amok\_31 (CT), Button\_35 (CT), Ekdilam\_84 (K6), Emalyn\_30 (CT), GTE2\_26 (CT), Hexbug\_40 (CT), Hurricane\_79 (K3), Jamzy\_37 (CT), Keshu\_81 (K3), KiSi\_79 (K1), LeMond\_78 (K1), MacnCheese\_81 (K3), MarkPhew\_78 (K1), Marshawn\_75 (K6), Nibb\_78 (K1), Nodigi\_40 (CT), Orla\_40 (CT), Oscar\_78 (K1), Pixie\_78 (K3), Scarlett\_79 (K1), ShedlockHolmes\_81 (K3), TBond007\_75 (K3), TripleTrouble\_78 (K3),

Start 38:

- Found in 139 of 430 ( 32.3% ) of genes in pham
- Manual Annotations of this start: 3 of 407
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Melvin\_83 (A4), Miramae\_81 (A4), Skipitt\_80 (A4),

Start 42:

- Found in 5 of 430 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 5 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DroogsArmy\_77 (A7), HINdeR\_77 (A7), Herbertwm\_78 (A2), Sheen\_78 (A7), Timshel\_78 (A7),

Start 43:

- Found in 3 of 430 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chupacabra\_77 (A10), Goose\_81 (A10), OKCentral2016\_79 (A10),

Start 44:

- Found in 159 of 430 ( 37.0% ) of genes in pham
- Manual Annotations of this start: 148 of 407
- Called 95.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_77 (A4), Abdiel\_80 (A4), Achebe\_76 (A4), Albee\_81 (A4), Alberto7\_82 (A4), Annyong\_80 (A4), Arturo\_78 (A4), AvatarAhPeg\_81 (A4), Avle17\_81 (A4), Baby16\_81 (A4), Backyardigan\_75 (A4), Bactobuster\_76 (A2), Badger\_76 (A4), BangNhom\_78 (A4), Bartimeaus\_81 (A4), BellusTerra\_81 (A4), Blackmoor\_80 (A4), Bombshell\_81 (A4), Broseidon\_81 (A4), Bruiser\_80 (A4), BubbleTrouble\_80 (A4), Bumblebee11\_76 (A4), Burger\_79 (A4), Caelakin\_79 (A4), Camperdownii\_77 (A4), CentreCat\_81 (A4), Cerulean\_83 (A4), ChampagnePapi\_84 (A4), Chaph\_81 (A4), Cici\_77 (A4), Cindaradix\_76 (A4), Cintron\_81 (A4), Citius\_81 (A4), Clarenza\_80 (A4), Cocoaberry\_81 (A4), Commander\_79 (A4), Connomayer\_81 (A4), Datway\_78 (A4), Deano\_78 (A4), Dhanush\_81 (A4), DirtyDunning\_80 (A4), Drake94\_77 (A10), Druantia\_79 (A4), Eagle\_80 (A4), Eaglepride\_83 (A10), Eapen\_81 (A4), Eris\_80 (A4), Eros\_81 (A4), Eurydice\_82 (A4), Florean\_81 (A4), Flux\_82 (A4), Funston\_80 (A4), Gadost\_81 (A4), HamSlice\_77 (A4), Happiness\_80 (A4), Holli\_80 (A4), Houdini22\_80 (A4), ICleared\_80 (A4), Iceman\_79 (A4), Iracema64\_81 (A4), IronMan\_81 (A2), Iwokeuplikedis\_87 (A2), Jaan\_82 (A2), Jaykayelowell\_78 (A4), JetBlade\_82 (A4), JoongJeon\_80 (A4), KFPoly\_80 (A4), Kamy\_80 (A4), Katalie136\_77 (A4), Kingmustik0402\_81 (A4), KittenMittens\_76 (A10), Koreni\_80 (A4), Kratark\_80 (A4), Kremtemulon\_75 (A4), Kristoff\_78 (A10), Kyee\_81 (A4), LHTSCC\_83 (A4), Landor\_82 (A2), LappelDuVide\_77 (A4), Lemur\_81 (A4), LittleB\_81 (A4), LittleGuy\_81 (A4), LochMonster\_82 (A4), Lorenzo\_81 (A4), Lunsford\_81 (A4),

Maverick\_80 (A4), Maxo\_83 (A4), Mazhar510\_81 (A4), Medusa\_80 (A4), MeeZee\_80 (A4), Millski\_80 (A4), Morpher26\_77 (A4), Morrow\_83 (A4), Mundrea\_79 (A4), Nebs\_82 (A4), Nemo27\_80 (A4), NorthStar\_78 (A4), NotAPhaseMom\_80 (A4), Nyxis\_80 (A4), OKaNui\_80 (A4), Obama12\_82 (A4), Ohfah\_82 (A4), Palestino\_80 (A4), PeaceMeal1\_77 (A10), Peaches\_79 (A4), Perplexer\_77 (A4), PeterPeter\_81 (A4), PetiteSangsue\_77 (A4), Phacado\_81 (A4), Phaded\_78 (A2), Felipe\_81 (A4), Phighter1804\_81 (A4), Phontbonne\_81 (A4), Pipcraft\_77 (A4), Polymorphads\_82 (A4), Poompha\_77 (A10), Pukovnik\_79 (A2), Pumbaa\_81 (A4), Rebeuca\_81 (A10), Relief\_80 (A4), RhynO\_68 (A10), Romney\_80 (A4), Roosevelt\_79 (A4), Ruin\_81 (A4), Sabertooth\_81 (A4), Scamp\_81 (A4), Severus\_78 (A10), Shaka\_79 (A4), SheldonCooper\_81 (A4), Shygu2\_79 (A4), Sparxx\_82 (A4), Spino\_80 (A4), Stasia\_78 (A4), Stink\_81 (A4), Taquarus\_80 (A4), Thanksgivukkah\_80 (A4), TinaFeyge\_79 (A4), Tinybot\_80 (A4), TiroTheta9\_80 (A4), Topanga\_69 (A10), TroyPia\_82 (A4), Twister\_80 (A10), TygerBlood\_81 (A4), Ulysses\_80 (A4), WalterMcMickey\_79 (A10), Wander\_81 (A4), Wilbur\_81 (A4), Wile\_76 (A4), Wizard007\_77 (A4), Xena\_77 (A4), YoSam321\_81 (A4),

#### Start 46:

- Found in 60 of 430 ( 14.0% ) of genes in pham
- Manual Annotations of this start: 34 of 407
- Called 63.3% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_85 (A6), BABullseye\_77 (A6), Blinn1\_88 (A6), Blue7\_87 (A6), Candra\_82 (A6), Cookiedough\_84 (A6), DaVinci\_82 (A6), Garak\_87 (A6), Gladiator\_82 (A6), GreedyLawyer\_78 (A6), Gruunaga\_85 (A6), Helmet\_87 (A6), Hexamo\_85 (A6), Hoot\_79 (A6), Indra\_89 (A6), JF1\_81 (K4), Jordennis\_82 (A6), Kazan\_85 (A6), Kipper29\_84 (A6), Koko\_87 (A6), Lilbunny\_83 (A6), McFly\_84 (A6), Neeharika16\_83 (A6), Newrala\_83 (A6), Pmask\_83 (A6), Rifter\_86 (A6), Roksolana\_86 (A6), Ruthiejr\_82 (K4), SmellyB\_84 (A6), SuperAwesome\_84 (A6), ToneTone\_83 (A6), Tucker\_86 (A6), VohminGhazi\_84 (A6), Wiks\_85 (A6), WunderPhul\_86 (A6), Yokurt\_85 (A6), Zaka\_86 (A6), Zulu\_87 (A6),

#### Start 48:

- Found in 14 of 430 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 14 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia\_87 (A15), Anon\_90 (A15), Battleship\_90 (A15), Boohoo\_86 (A15), DekHockey33\_89 (A15), JSwag\_87 (A15), KatherineG\_87 (A15), LastResort\_85 (A15), MinecraftSteve\_88 (A15), Nebulosus\_84 (A15), ReMo\_85 (A15), ShayRa\_85 (A15), Switzerland\_85 (A15), Waits\_87 (A15),

#### Start 49:

- Found in 143 of 430 ( 33.3% ) of genes in pham
- Manual Annotations of this start: 2 of 407
- Called 1.4% of time when present
- Phage (with cluster) where this start called: Kimona\_81 (A19), Noelle\_78 (A4),

#### Start 50:

- Found in 63 of 430 ( 14.7% ) of genes in pham
- Manual Annotations of this start: 60 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_77 (K1), Adephegia\_75 (K1), AlishaPH\_75 (K1), Apocalypse\_79 (K1), Asayake\_76 (K1), Atiba\_77 (K1), BEEST\_76

(K1), BGlluviae\_76 (K1), BaghaKamala\_75 (K1), BarrelRoll\_77 (K1), Bella96\_77 (K1), Belladonna\_76 (K1), Blizzard\_76 (K1), Boiiii\_76 (K1), CREW\_75 (K1), Capricorn\_76 (K1), CaseJules\_78 (K1), CheetoDust\_76 (K1), Dalmuri\_76 (K1), Deby\_76 (K1), DrHayes\_76 (K1), Durfee\_76 (K1), Efra2\_83 (K1), Emerson\_79 (K1), Guanica15\_82 (K1), HedwigODU\_76 (K1), Homura\_75 (K1), Hyperbowlee\_75 (K1), Inky\_76 (K1), JAWS\_75 (K1), Jarvi\_76 (K1), Jayhawk\_78 (K1), Jeckyll\_76 (K1), Joy99\_77 (K1), LastHope\_83 (K1), LindNT\_75 (K1), Llorens\_75 (K1), Lunahalos\_76 (K1), Mynx\_78 (K1), Padfoot\_76 (K1), Padpat\_80 (K1), Peel\_76 (K1), Piatt\_75 (K1), Pokerus\_77 (K1), Prithvi\_79 (K1), Ramen\_77 (K1), Rapunzel97\_79 (K1), Rosmarinus\_76 (K1), SamuelLPlaqson\_76 (K1), ShiaSurprise\_77 (K1), Slimphazie\_78 (K1), Spock\_76 (K1), Tachez\_76 (K1), TiniBug\_76 (K1), Topper\_76 (K1), TreyKay\_79 (K1), TruffulaTree\_78 (K1), Twitch\_76 (K1), Urkel\_76 (K1), Veliki\_77 (K1), Yunkel11\_82 (K1), Zabiza\_72 (K1), Zavala\_79 (K1),

#### Start 52:

- Found in 3 of 430 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 407
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Anaya\_80 (K1), Murucutumbu\_77 (K1),

#### Start 53:

- Found in 131 of 430 ( 30.5% ) of genes in pham
- Manual Annotations of this start: 4 of 407
- Called 3.1% of time when present
- Phage (with cluster) where this start called: Gail\_85 (A14), Jeeves\_85 (A14), Luchador\_83 (A14), SororFago\_83 (A14),

#### Start 55:

- Found in 38 of 430 ( 8.8% ) of genes in pham
- Manual Annotations of this start: 18 of 407
- Called 47.4% of time when present
- Phage (with cluster) where this start called: Bryler\_82 (K6), Cain\_82 (K6), Chancellor\_81 (K4), Cheetobro\_81 (K4), Eponine\_83 (K4), Fionnbharth\_81 (K4), Malthus\_82 (K4), Mitti\_81 (K4), Patt\_77 (K4), PhelpsODU\_81 (K6), Phrank\_82 (K6), Reptar3000\_78 (K4), Slarp\_81 (K4), Taquito\_80 (K4), Tierra\_81 (K6), Unicorn\_81 (K6), Wintermute\_81 (K4), Yakult\_36 (CT),

#### Start 58:

- Found in 26 of 430 ( 6.0% ) of genes in pham
- Manual Annotations of this start: 10 of 407
- Called 42.3% of time when present
- Phage (with cluster) where this start called: Greely\_237 (C2), Juliette\_83 (K4), MissDaisy\_78 (K4), Myrna\_230 (C2), OmniCritical\_81 (K4), Phabba\_240 (C2), Pharb\_77 (K3), SamScheppers\_80 (K4), ScoobyDoobyDoo\_227 (C2), Y10\_78 (K4), Y2\_78 (K4),

#### Start 59:

- Found in 18 of 430 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 10 of 407
- Called 61.1% of time when present
- Phage (with cluster) where this start called: BoostSeason\_81 (K2), DismalFunk\_82 (K2), DismalStressor\_82 (K2), Findley\_82 (K2), Marcoliusprime\_81 (K2), Milly\_82 (K2), Mufasa\_81 (K2), Strobilo\_83 (K2), TClif\_92 (K6), TM4\_80 (K2), ZoeJ\_81 (K2),

Start 61:

- Found in 5 of 430 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Dorin\_237 (CG),

Start 62:

- Found in 18 of 430 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 407
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Cece\_19 (GD3), Cece\_321 (GD3),

Start 63:

- Found in 1 of 430 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 407
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Enygma\_226 (BE2),

Start 64:

- Found in 420 of 430 ( 97.7% ) of genes in pham
- Manual Annotations of this start: 53 of 407
- Called 13.8% of time when present
- Phage (with cluster) where this start called: Amabiko\_220 (BE2), Battuta\_214 (BE2), Belfort\_237 (BK1), Big4\_14 (GD2), Big4\_340 (GD2), BillNye\_199 (BK2), Birchlyn\_215 (BE2), Blueeyedbeauty\_235 (BK1), BoomerJR\_215 (BE2), Bordeaux\_214 (BE2), Chartreuse\_82 (A6), Circinus\_199 (BK2), CloudWang3\_86 (A6), Comrade\_233 (BK1), Dorothea\_81 (A6), Elmer\_234 (BE2), Emma1919\_241 (BK1), Faust\_238 (BK1), Forrest\_239 (BK1), Francesca\_236 (CG), Francob\_244 (BK1), Genie2\_215 (BE2), Gibbi\_224 (BE2), Gilson\_240 (BK1), Hammer\_86 (A6), IchabodCrane\_211 (BE2), Jada\_238 (BK1), JimJam\_223 (BE2), Karimac\_217 (BE2), Karp\_236 (BK1), Kenrey\_246 (BK1), LukeCage\_221 (BE2), MeganTheeKilla\_243 (BK1), MindFlayer\_209 (BE2), Moab\_243 (BK1), Muntaha\_214 (BK2), Patelgo\_242 (BK1), Phredrick\_245 (BK1), PumpkinSpice\_219 (BE2), Quarant19\_216 (BE2), SaltySpittoon\_216 (BE2), SeresaTree\_242 (BK1), Sham\_228 (BK1), Sollertia\_217 (BE2), SparkleGoddess\_238 (BK1), Spelly\_221 (BE2), Spilled\_223 (BE2), Stanimal\_216 (BE2), StarPlatinum\_225 (BE2), Starbow\_213 (BE2), Stigma\_236 (BK1), TomSawyer\_220 (BE2), Tomas\_215 (BE2), Wakanda\_212 (BK2), Wofford\_218 (BE2), Yaboi\_221 (BE2), Zooman\_12 (GD2), Zooman\_325 (GD2),

Start 83:

- Found in 31 of 430 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 1 of 407
- Called 16.1% of time when present
- Phage (with cluster) where this start called: CeilingFan\_228 (BE2), Jollison\_220 (BE2), KentuckyRacer\_227 (BE2), Mugiwara\_228 (BE2), Wipeout\_207 (BE2),

**Summary by clusters:**

There are 22 clusters represented in this pham: GD2, GD3, K3, K2, K1, K6, K4, A15, A14, A10, A19, A2, A4, A7, A6, C2, AB, CG, BK1, BK2, CT, BE2,

Info for manual annotations of cluster A10:

- Start number 43 was manually annotated 3 times for cluster A10.
- Start number 44 was manually annotated 12 times for cluster A10.

Info for manual annotations of cluster A14:

- Start number 53 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 48 was manually annotated 14 times for cluster A15.

Info for manual annotations of cluster A19:

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

Info for manual annotations of cluster A2:

- Start number 42 was manually annotated 1 time for cluster A2.
- Start number 44 was manually annotated 6 times for cluster A2.

Info for manual annotations of cluster A4:

- Start number 38 was manually annotated 3 times for cluster A4.
- Start number 44 was manually annotated 130 times for cluster A4.
- Start number 49 was manually annotated 1 time for cluster A4.

Info for manual annotations of cluster A6:

- Start number 46 was manually annotated 32 times for cluster A6.
- Start number 64 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 42 was manually annotated 4 times for cluster A7.

Info for manual annotations of cluster AB:

- Start number 21 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster BE2:

- Start number 63 was manually annotated 1 time for cluster BE2.
- Start number 64 was manually annotated 24 times for cluster BE2.
- Start number 83 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 64 was manually annotated 18 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 64 was manually annotated 4 times for cluster BK2.

Info for manual annotations of cluster C2:

- Start number 58 was manually annotated 3 times for cluster C2.

Info for manual annotations of cluster CG:

- Start number 64 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster CT:

- Start number 17 was manually annotated 1 time for cluster CT.
- Start number 19 was manually annotated 1 time for cluster CT.
- Start number 23 was manually annotated 8 times for cluster CT.
- Start number 55 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster GD2:

- Start number 64 was manually annotated 4 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 62 was manually annotated 2 times for cluster GD3.

Info for manual annotations of cluster K1:

- Start number 22 was manually annotated 4 times for cluster K1.
- Start number 23 was manually annotated 6 times for cluster K1.
- Start number 50 was manually annotated 60 times for cluster K1.
- Start number 52 was manually annotated 2 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 59 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 23 was manually annotated 7 times for cluster K3.
- Start number 58 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K4:

- Start number 46 was manually annotated 2 times for cluster K4.
- Start number 55 was manually annotated 11 times for cluster K4.
- Start number 58 was manually annotated 6 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 22 was manually annotated 7 times for cluster K6.
- Start number 23 was manually annotated 2 times for cluster K6.
- Start number 55 was manually annotated 6 times for cluster K6.

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

Gene: AbbysRanger\_77 Start: 47535, Stop: 47068, Start Num: 44

Candidate Starts for AbbysRanger\_77:

(Start: 38 @47553 has 3 MA's), (Start: 44 @47535 has 148 MA's), (Start: 49 @47526 has 2 MA's), (Start: 53 @47523 has 4 MA's), (Start: 64 @47505 has 53 MA's), (74, 47466), (97, 47331), (106, 47268), (111, 47214),

Gene: Abdiel\_80 Start: 47911, Stop: 47441, Start Num: 44

Candidate Starts for Abdiel\_80:

(Start: 38 @47929 has 3 MA's), (Start: 44 @47911 has 148 MA's), (Start: 49 @47902 has 2 MA's), (Start: 53 @47899 has 4 MA's), (Start: 64 @47881 has 53 MA's), (74, 47842), (90, 47734), (97, 47707), (106, 47644), (111, 47590),

Gene: Achebe\_76 Start: 47514, Stop: 47047, Start Num: 44

Candidate Starts for Achebe\_76:

(Start: 38 @47532 has 3 MA's), (Start: 44 @47514 has 148 MA's), (Start: 49 @47505 has 2 MA's), (Start: 53 @47502 has 4 MA's), (Start: 64 @47484 has 53 MA's), (74, 47445), (97, 47310), (106, 47247), (111, 47193),

Gene: ActinUp\_77 Start: 50506, Stop: 50967, Start Num: 50

Candidate Starts for ActinUp\_77:

(Start: 50 @50506 has 60 MA's), (Start: 64 @50533 has 53 MA's), (67, 50542), (81, 50602), (88, 50665), (97, 50707), (98, 50710), (106, 50770), (115, 50848), (130, 50944), (131, 50947),

Gene: Adephagia\_75 Start: 50343, Stop: 50804, Start Num: 50

Candidate Starts for Adephagia\_75:

(Start: 50 @50343 has 60 MA's), (Start: 64 @50370 has 53 MA's), (67, 50379), (81, 50439), (88, 50502), (97, 50544), (98, 50547), (106, 50607), (115, 50685), (130, 50781), (131, 50784),

Gene: AikoCarson\_31 Start: 24720, Stop: 24127, Start Num: 23

Candidate Starts for AikoCarson\_31:

(Start: 23 @24720 has 23 MA's), (Start: 44 @24606 has 148 MA's), (Start: 64 @24567 has 53 MA's), (76, 24519), (85, 24465), (106, 24333),

Gene: Albee\_81 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Albee\_81:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (90, 47722), (97, 47695), (106, 47632), (111, 47578),

Gene: Alberto7\_82 Start: 48236, Stop: 47766, Start Num: 44

Candidate Starts for Alberto7\_82:

(Start: 38 @48254 has 3 MA's), (Start: 44 @48236 has 148 MA's), (Start: 49 @48227 has 2 MA's), (Start: 53 @48224 has 4 MA's), (Start: 64 @48206 has 53 MA's), (74, 48167), (97, 48032), (106, 47969), (111, 47915),

Gene: AlishaPH\_75 Start: 50604, Stop: 51065, Start Num: 50

Candidate Starts for AlishaPH\_75:

(Start: 50 @50604 has 60 MA's), (Start: 64 @50631 has 53 MA's), (67, 50640), (81, 50700), (88, 50763), (97, 50805), (98, 50808), (106, 50868), (115, 50946), (130, 51042), (131, 51045),

Gene: Amabiko\_220 Start: 105547, Stop: 105984, Start Num: 64

Candidate Starts for Amabiko\_220:

(41, 105499), (Start: 64 @105547 has 53 MA's), (74, 105586), (Start: 83 @105637 has 1 MA's), (84, 105640), (87, 105676),

Gene: Amok\_31 Start: 24679, Stop: 24086, Start Num: 23

Candidate Starts for Amok\_31:

(Start: 23 @24679 has 23 MA's), (Start: 44 @24565 has 148 MA's), (Start: 64 @24526 has 53 MA's), (76, 24478), (85, 24424), (106, 24292),

Gene: Anaya\_80 Start: 51402, Stop: 51863, Start Num: 52

Candidate Starts for Anaya\_80:

(Start: 52 @51402 has 2 MA's), (Start: 64 @51429 has 53 MA's), (67, 51438), (81, 51498), (88, 51561), (97, 51603), (98, 51606), (106, 51666), (115, 51744), (130, 51840), (131, 51843),

Gene: Anaysia\_87 Start: 47291, Stop: 46824, Start Num: 48

Candidate Starts for Anaysia\_87:

(Start: 48 @47291 has 14 MA's), (Start: 64 @47279 has 53 MA's), (74, 47240), (77, 47225),

Gene: Annyong\_80 Start: 47944, Stop: 47474, Start Num: 44

Candidate Starts for Annyong\_80:



(Start: 38 @47962 has 3 MA's), (Start: 44 @47944 has 148 MA's), (Start: 49 @47935 has 2 MA's), (Start: 53 @47932 has 4 MA's), (Start: 64 @47914 has 53 MA's), (74, 47875), (90, 47767), (97, 47740), (106, 47677), (111, 47623),

Gene: Anon\_90 Start: 48046, Stop: 47579, Start Num: 48

Candidate Starts for Anon\_90:

(Start: 48 @48046 has 14 MA's), (Start: 64 @48034 has 53 MA's), (74, 47995), (106, 47794), (111, 47740),

Gene: Apocalypse\_79 Start: 51145, Stop: 51606, Start Num: 50

Candidate Starts for Apocalypse\_79:

(Start: 50 @51145 has 60 MA's), (Start: 64 @51172 has 53 MA's), (67, 51181), (81, 51241), (88, 51304), (97, 51346), (98, 51349), (115, 51487), (130, 51583), (131, 51586),

Gene: Artemis2UCLA\_85 Start: 46023, Stop: 45562, Start Num: 46

Candidate Starts for Artemis2UCLA\_85:

(Start: 46 @46023 has 34 MA's), (Start: 64 @45996 has 53 MA's), (79, 45936), (90, 45843), (110, 45729),

Gene: Arturo\_78 Start: 48027, Stop: 47557, Start Num: 44

Candidate Starts for Arturo\_78:

(Start: 38 @48045 has 3 MA's), (Start: 44 @48027 has 148 MA's), (Start: 49 @48018 has 2 MA's), (Start: 53 @48015 has 4 MA's), (60, 48000), (Start: 64 @47997 has 53 MA's), (74, 47958), (97, 47823), (111, 47706),

Gene: Asayake\_76 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for Asayake\_76:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Atiba\_77 Start: 50306, Stop: 50767, Start Num: 50

Candidate Starts for Atiba\_77:

(Start: 50 @50306 has 60 MA's), (Start: 64 @50333 has 53 MA's), (67, 50342), (81, 50402), (88, 50465), (97, 50507), (98, 50510), (106, 50570), (115, 50648), (130, 50744), (131, 50747),

Gene: AvatarAhPeg\_81 Start: 48152, Stop: 47682, Start Num: 44

Candidate Starts for AvatarAhPeg\_81:

(Start: 38 @48170 has 3 MA's), (Start: 44 @48152 has 148 MA's), (Start: 59 @48125 has 10 MA's), (Start: 64 @48119 has 53 MA's), (77, 48065), (81, 48050), (97, 47945), (111, 47828),

Gene: Avle17\_81 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for Avle17\_81:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: BABullseye\_77 Start: 44344, Stop: 43892, Start Num: 46

Candidate Starts for BABullseye\_77:

(Start: 46 @44344 has 34 MA's), (Start: 64 @44317 has 53 MA's), (81, 44251), (90, 44173), (115, 44005),

Gene: BEEST\_76 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for BEEST\_76:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: BGlluviae\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for BGlluviae\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Baby16\_81 Start: 47910, Stop: 47440, Start Num: 44

Candidate Starts for Baby16\_81:

(Start: 38 @47928 has 3 MA's), (Start: 44 @47910 has 148 MA's), (Start: 49 @47901 has 2 MA's), (Start: 53 @47898 has 4 MA's), (Start: 64 @47880 has 53 MA's), (74, 47841), (90, 47733), (97, 47706), (106, 47643), (111, 47589),

Gene: Backyardigan\_75 Start: 47551, Stop: 47084, Start Num: 44

Candidate Starts for Backyardigan\_75:

(Start: 38 @47569 has 3 MA's), (Start: 44 @47551 has 148 MA's), (Start: 49 @47542 has 2 MA's), (Start: 53 @47539 has 4 MA's), (Start: 64 @47521 has 53 MA's), (74, 47482), (97, 47347), (106, 47284), (111, 47230),

Gene: Bactobuster\_76 Start: 47201, Stop: 46731, Start Num: 44

Candidate Starts for Bactobuster\_76:

(Start: 44 @47201 has 148 MA's), (Start: 49 @47192 has 2 MA's), (Start: 53 @47189 has 4 MA's), (Start: 64 @47177 has 53 MA's), (66, 47171), (106, 46937),

Gene: Badger\_76 Start: 47517, Stop: 47050, Start Num: 44

Candidate Starts for Badger\_76:

(Start: 38 @47535 has 3 MA's), (Start: 44 @47517 has 148 MA's), (Start: 49 @47508 has 2 MA's), (Start: 53 @47505 has 4 MA's), (Start: 64 @47487 has 53 MA's), (74, 47448), (97, 47313), (106, 47250), (111, 47196),

Gene: BaghaKamala\_75 Start: 49892, Stop: 50353, Start Num: 50

Candidate Starts for BaghaKamala\_75:

(Start: 50 @49892 has 60 MA's), (Start: 64 @49919 has 53 MA's), (67, 49928), (81, 49988), (88, 50051), (97, 50093), (98, 50096), (106, 50156), (115, 50234), (130, 50330), (131, 50333),

Gene: BangNhom\_78 Start: 48336, Stop: 47866, Start Num: 44

Candidate Starts for BangNhom\_78:

(Start: 38 @48354 has 3 MA's), (Start: 44 @48336 has 148 MA's), (Start: 49 @48327 has 2 MA's), (Start: 53 @48324 has 4 MA's), (Start: 64 @48306 has 53 MA's), (74, 48267), (97, 48132), (111, 48015),

Gene: BarrelRoll\_77 Start: 50863, Stop: 51324, Start Num: 50

Candidate Starts for BarrelRoll\_77:

(Start: 50 @50863 has 60 MA's), (Start: 64 @50890 has 53 MA's), (67, 50899), (81, 50959), (88, 51022), (97, 51064), (98, 51067), (115, 51205), (130, 51301), (131, 51304),

Gene: Bartimeaus\_81 Start: 47901, Stop: 47431, Start Num: 44

Candidate Starts for Bartimeaus\_81:

(Start: 38 @47919 has 3 MA's), (Start: 44 @47901 has 148 MA's), (Start: 49 @47892 has 2 MA's), (Start: 53 @47889 has 4 MA's), (Start: 64 @47871 has 53 MA's), (74, 47832), (90, 47724), (97, 47697), (106, 47634), (111, 47580),

Gene: Battleship\_90 Start: 47304, Stop: 46837, Start Num: 48  
Candidate Starts for Battleship\_90:  
(Start: 48 @47304 has 14 MA's), (Start: 64 @47292 has 53 MA's), (74, 47253), (77, 47238),

Gene: Battuta\_214 Start: 104863, Stop: 105300, Start Num: 64  
Candidate Starts for Battuta\_214:  
(41, 104815), (Start: 64 @104863 has 53 MA's), (74, 104902), (Start: 83 @104953 has 1 MA's), (84, 104956), (87, 104992),

Gene: Belfort\_237 Start: 115212, Stop: 115670, Start Num: 64  
Candidate Starts for Belfort\_237:  
(Start: 62 @115209 has 2 MA's), (Start: 64 @115212 has 53 MA's), (74, 115251), (88, 115350), (91, 115368), (100, 115401), (104, 115428), (115, 115536), (132, 115656), (133, 115659),

Gene: Bella96\_77 Start: 50721, Stop: 51182, Start Num: 50  
Candidate Starts for Bella96\_77:  
(Start: 50 @50721 has 60 MA's), (Start: 64 @50748 has 53 MA's), (67, 50757), (73, 50784), (81, 50817), (88, 50880), (98, 50925), (115, 51063), (130, 51159), (131, 51162),

Gene: Belladonna\_76 Start: 50461, Stop: 50922, Start Num: 50  
Candidate Starts for Belladonna\_76:  
(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: BellusTerra\_81 Start: 47764, Stop: 47297, Start Num: 44  
Candidate Starts for BellusTerra\_81:  
(Start: 38 @47782 has 3 MA's), (Start: 44 @47764 has 148 MA's), (Start: 49 @47755 has 2 MA's), (Start: 53 @47752 has 4 MA's), (Start: 64 @47734 has 53 MA's), (74, 47695), (97, 47560), (106, 47497), (111, 47443),

Gene: Big4\_14 Start: 6390, Stop: 6845, Start Num: 64  
Candidate Starts for Big4\_14:  
(Start: 64 @6390 has 53 MA's), (74, 6429), (90, 6537), (99, 6570), (106, 6624), (110, 6648), (114, 6687), (117, 6726), (126, 6789), (129, 6798),

Gene: Big4\_340 Start: 181084, Stop: 181539, Start Num: 64  
Candidate Starts for Big4\_340:  
(Start: 64 @181084 has 53 MA's), (74, 181123), (90, 181231), (99, 181264), (106, 181318), (110, 181342), (114, 181381), (117, 181420), (126, 181483), (129, 181492),

Gene: BillNye\_199 Start: 106142, Stop: 106591, Start Num: 64  
Candidate Starts for BillNye\_199:  
(37, 106085), (47, 106112), (Start: 64 @106142 has 53 MA's), (67, 106151), (71, 106166), (74, 106181), (122, 106526),

Gene: Birchlyn\_215 Start: 102795, Stop: 103232, Start Num: 64  
Candidate Starts for Birchlyn\_215:  
(41, 102747), (Start: 64 @102795 has 53 MA's), (74, 102834), (Start: 83 @102885 has 1 MA's), (84, 102888), (87, 102924),

Gene: Blackmoor\_80 Start: 47901, Stop: 47431, Start Num: 44  
Candidate Starts for Blackmoor\_80:

(Start: 38 @47919 has 3 MA's), (Start: 44 @47901 has 148 MA's), (Start: 49 @47892 has 2 MA's), (Start: 53 @47889 has 4 MA's), (Start: 64 @47871 has 53 MA's), (74, 47832), (90, 47724), (97, 47697), (106, 47634), (111, 47580),

Gene: Blinn1\_88 Start: 47002, Stop: 46550, Start Num: 46

Candidate Starts for Blinn1\_88:

(1, 47302), (2, 47290), (13, 47182), (Start: 46 @47002 has 34 MA's), (Start: 64 @46975 has 53 MA's), (81, 46909), (85, 46876), (90, 46831), (110, 46717),

Gene: Blizzard\_76 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for Blizzard\_76:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Blue7\_87 Start: 46242, Stop: 45781, Start Num: 46

Candidate Starts for Blue7\_87:

(Start: 46 @46242 has 34 MA's), (Start: 64 @46215 has 53 MA's), (79, 46155), (90, 46062), (110, 45948),

Gene: Blueeyedbeauty\_235 Start: 114281, Stop: 114733, Start Num: 64

Candidate Starts for Blueeyedbeauty\_235:

(Start: 64 @114281 has 53 MA's), (74, 114320), (77, 114335), (88, 114413), (89, 114425), (95, 114446), (100, 114464), (132, 114719), (133, 114722),

Gene: Boiiii\_76 Start: 50660, Stop: 51121, Start Num: 50

Candidate Starts for Boiiii\_76:

(Start: 50 @50660 has 60 MA's), (Start: 64 @50687 has 53 MA's), (67, 50696), (81, 50756), (88, 50819), (97, 50861), (98, 50864), (106, 50924), (115, 51002), (130, 51098), (131, 51101),

Gene: Bombshell\_81 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Bombshell\_81:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Boohoo\_86 Start: 46608, Stop: 46141, Start Num: 48

Candidate Starts for Boohoo\_86:

(Start: 48 @46608 has 14 MA's), (Start: 64 @46596 has 53 MA's), (74, 46557), (77, 46542),

Gene: BoomerJR\_215 Start: 106090, Stop: 106527, Start Num: 64

Candidate Starts for BoomerJR\_215:

(Start: 64 @106090 has 53 MA's), (74, 106129), (Start: 83 @106180 has 1 MA's), (84, 106183), (87, 106219), (103, 106303),

Gene: BoostSeason\_81 Start: 52795, Stop: 53367, Start Num: 59

Candidate Starts for BoostSeason\_81:

(Start: 59 @52795 has 10 MA's), (Start: 64 @52807 has 53 MA's), (90, 52954), (97, 52981), (98, 52984), (106, 53044), (144, 53308), (146, 53323),

Gene: Bordeaux\_214 Start: 105446, Stop: 105883, Start Num: 64

Candidate Starts for Bordeaux\_214:

(41, 105398), (Start: 64 @105446 has 53 MA's), (74, 105485), (Start: 83 @105536 has 1 MA's), (84, 105539), (87, 105575),

Gene: Broseidon\_81 Start: 47902, Stop: 47432, Start Num: 44

Candidate Starts for Broseidon\_81:

(Start: 38 @47920 has 3 MA's), (Start: 44 @47902 has 148 MA's), (Start: 49 @47893 has 2 MA's), (Start: 53 @47890 has 4 MA's), (Start: 64 @47872 has 53 MA's), (74, 47833), (90, 47725), (97, 47698), (106, 47635), (111, 47581),

Gene: Bruiser\_80 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Bruiser\_80:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: Bryler\_82 Start: 50964, Stop: 51536, Start Num: 55

Candidate Starts for Bryler\_82:

(Start: 55 @50964 has 18 MA's), (Start: 64 @50985 has 53 MA's), (81, 51054), (85, 51087), (87, 51108), (90, 51132), (98, 51162), (106, 51222), (115, 51300), (120, 51354), (124, 51378), (136, 51429), (148, 51516),

Gene: BubbleTrouble\_80 Start: 47926, Stop: 47456, Start Num: 44

Candidate Starts for BubbleTrouble\_80:

(Start: 38 @47944 has 3 MA's), (Start: 44 @47926 has 148 MA's), (Start: 49 @47917 has 2 MA's), (Start: 53 @47914 has 4 MA's), (Start: 64 @47896 has 53 MA's), (74, 47857), (90, 47749), (97, 47722), (106, 47659), (111, 47605),

Gene: Bumblebee11\_76 Start: 47517, Stop: 47050, Start Num: 44

Candidate Starts for Bumblebee11\_76:

(Start: 38 @47535 has 3 MA's), (Start: 44 @47517 has 148 MA's), (Start: 49 @47508 has 2 MA's), (Start: 53 @47505 has 4 MA's), (Start: 64 @47487 has 53 MA's), (74, 47448), (97, 47313), (106, 47250), (111, 47196),

Gene: Burger\_79 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Burger\_79:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: Button\_35 Start: 26057, Stop: 25458, Start Num: 23

Candidate Starts for Button\_35:

(14, 26108), (18, 26087), (Start: 19 @26084 has 1 MA's), (Start: 23 @26057 has 23 MA's), (Start: 64 @25916 has 53 MA's), (90, 25769), (92, 25763), (98, 25739), (108, 25670),

Gene: CREW\_75 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for CREW\_75:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Caelakin\_79 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Caelakin\_79:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: Cain\_82 Start: 50952, Stop: 51524, Start Num: 55

Candidate Starts for Cain\_82:

(Start: 55 @50952 has 18 MA's), (Start: 64 @50973 has 53 MA's), (81, 51042), (85, 51075), (87, 51096), (90, 51120), (98, 51150), (106, 51210), (115, 51288), (120, 51342), (124, 51366), (136, 51417), (148, 51504),

Gene: Camperdownii\_77 Start: 47142, Stop: 46675, Start Num: 44

Candidate Starts for Camperdownii\_77:

(Start: 38 @47160 has 3 MA's), (Start: 44 @47142 has 148 MA's), (Start: 49 @47133 has 2 MA's), (Start: 53 @47130 has 4 MA's), (Start: 64 @47112 has 53 MA's), (74, 47073), (97, 46938), (111, 46821),

Gene: Candra\_82 Start: 46048, Stop: 45587, Start Num: 46

Candidate Starts for Candra\_82:

(Start: 46 @46048 has 34 MA's), (Start: 64 @46021 has 53 MA's), (79, 45961), (90, 45868), (115, 45700),

Gene: Capricorn\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Capricorn\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: CaseJules\_78 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for CaseJules\_78:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Cece\_19 Start: 6614, Stop: 7075, Start Num: 62

Candidate Starts for Cece\_19:

(33, 6542), (61, 6611), (Start: 62 @6614 has 2 MA's), (70, 6638), (88, 6755), (90, 6770), (96, 6794), (101, 6809), (109, 6875), (110, 6884), (120, 6998), (134, 7070),

Gene: Cece\_321 Start: 175048, Stop: 175509, Start Num: 62

Candidate Starts for Cece\_321:

(33, 174976), (61, 175045), (Start: 62 @175048 has 2 MA's), (70, 175072), (88, 175189), (90, 175204), (96, 175228), (101, 175243), (109, 175309), (110, 175318), (120, 175432), (134, 175504),

Gene: CeilingFan\_228 Start: 106330, Stop: 106677, Start Num: 83

Candidate Starts for CeilingFan\_228:

(41, 106192), (Start: 64 @106240 has 53 MA's), (74, 106279), (Start: 83 @106330 has 1 MA's), (84, 106333), (87, 106369),

Gene: CentreCat\_81 Start: 47939, Stop: 47469, Start Num: 44

Candidate Starts for CentreCat\_81:

(Start: 38 @47957 has 3 MA's), (Start: 44 @47939 has 148 MA's), (Start: 49 @47930 has 2 MA's), (Start: 53 @47927 has 4 MA's), (Start: 64 @47909 has 53 MA's), (74, 47870), (97, 47735), (111, 47618),

Gene: Cerulean\_83 Start: 48337, Stop: 47867, Start Num: 44

Candidate Starts for Cerulean\_83:

(Start: 38 @48355 has 3 MA's), (Start: 44 @48337 has 148 MA's), (Start: 49 @48328 has 2 MA's), (Start: 53 @48325 has 4 MA's), (Start: 64 @48307 has 53 MA's), (74, 48268), (97, 48133), (111, 48016),

Gene: ChampagnePapi\_84 Start: 48339, Stop: 47869, Start Num: 44

Candidate Starts for ChampagnePapi\_84:

(Start: 38 @48357 has 3 MA's), (Start: 44 @48339 has 148 MA's), (Start: 49 @48330 has 2 MA's), (Start: 53 @48327 has 4 MA's), (Start: 64 @48309 has 53 MA's), (74, 48270), (97, 48135), (111, 48018),

Gene: Chancellor\_81 Start: 51093, Stop: 51677, Start Num: 55

Candidate Starts for Chancellor\_81:

(10, 50895), (12, 50910), (20, 50946), (24, 50967), (26, 50994), (29, 51024), (Start: 46 @51084 has 34 MA's), (Start: 55 @51093 has 18 MA's), (Start: 58 @51102 has 10 MA's), (Start: 64 @51117 has 53 MA's), (81, 51186), (90, 51264), (97, 51291), (106, 51354), (115, 51432), (143, 51606), (145, 51621), (147, 51645),

Gene: Chaph\_81 Start: 47910, Stop: 47440, Start Num: 44

Candidate Starts for Chaph\_81:

(Start: 38 @47928 has 3 MA's), (Start: 44 @47910 has 148 MA's), (Start: 49 @47901 has 2 MA's), (Start: 53 @47898 has 4 MA's), (Start: 64 @47880 has 53 MA's), (74, 47841), (97, 47706), (111, 47589),

Gene: Chartreuse\_82 Start: 45323, Stop: 44898, Start Num: 64

Candidate Starts for Chartreuse\_82:

(Start: 46 @45350 has 34 MA's), (Start: 64 @45323 has 53 MA's), (81, 45257), (90, 45179), (115, 45011),

Gene: CheetoDust\_76 Start: 50058, Stop: 50519, Start Num: 50

Candidate Starts for CheetoDust\_76:

(Start: 50 @50058 has 60 MA's), (Start: 64 @50085 has 53 MA's), (67, 50094), (81, 50154), (88, 50217), (97, 50259), (98, 50262), (115, 50400), (130, 50496), (131, 50499),

Gene: Cheetobro\_81 Start: 51228, Stop: 51812, Start Num: 55

Candidate Starts for Cheetobro\_81:

(10, 51039), (20, 51090), (26, 51144), (29, 51174), (Start: 46 @51219 has 34 MA's), (Start: 55 @51228 has 18 MA's), (Start: 58 @51237 has 10 MA's), (Start: 64 @51252 has 53 MA's), (81, 51321), (90, 51399), (91, 51402), (97, 51426), (102, 51447), (106, 51489), (115, 51567), (143, 51741), (147, 51780),

Gene: Chupacabra\_77 Start: 47509, Stop: 47042, Start Num: 43

Candidate Starts for Chupacabra\_77:

(39, 47524), (Start: 43 @47509 has 3 MA's), (54, 47494), (Start: 64 @47482 has 53 MA's), (81, 47413), (90, 47335), (97, 47308), (111, 47191),

Gene: Cici\_77 Start: 47530, Stop: 47063, Start Num: 44

Candidate Starts for Cici\_77:

(Start: 38 @47548 has 3 MA's), (Start: 44 @47530 has 148 MA's), (Start: 49 @47521 has 2 MA's), (Start: 53 @47518 has 4 MA's), (Start: 64 @47500 has 53 MA's), (74, 47461), (97, 47326), (106, 47263), (111, 47209),

Gene: Cindaradix\_76 Start: 48112, Stop: 47648, Start Num: 44

Candidate Starts for Cindaradix\_76:

(Start: 38 @48130 has 3 MA's), (Start: 44 @48112 has 148 MA's), (56, 48097), (Start: 64 @48085 has 53 MA's), (81, 48016), (97, 47911), (111, 47794),

Gene: Cintron\_81 Start: 48015, Stop: 47545, Start Num: 44

Candidate Starts for Cintron\_81:

(Start: 38 @48033 has 3 MA's), (Start: 44 @48015 has 148 MA's), (Start: 49 @48006 has 2 MA's), (Start: 53 @48003 has 4 MA's), (Start: 64 @47985 has 53 MA's), (74, 47946), (97, 47811), (111, 47694),

Gene: Circinus\_199 Start: 105749, Stop: 106198, Start Num: 64

Candidate Starts for Circinus\_199:

(37, 105692), (47, 105719), (Start: 64 @105749 has 53 MA's), (67, 105758), (71, 105773), (74, 105788), (122, 106133),

Gene: Citius\_81 Start: 47920, Stop: 47450, Start Num: 44

Candidate Starts for Citius\_81:

(Start: 38 @47938 has 3 MA's), (Start: 44 @47920 has 148 MA's), (Start: 49 @47911 has 2 MA's), (Start: 53 @47908 has 4 MA's), (Start: 64 @47890 has 53 MA's), (74, 47851), (90, 47743), (97, 47716), (106, 47653), (111, 47599),

Gene: Clarenza\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Clarenza\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: CloudWang3\_86 Start: 46525, Stop: 46091, Start Num: 64

Candidate Starts for CloudWang3\_86:

(Start: 46 @46552 has 34 MA's), (Start: 64 @46525 has 53 MA's), (79, 46465), (90, 46372), (110, 46258), (115, 46204),

Gene: Cocoaberry\_81 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for Cocoaberry\_81:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Commander\_79 Start: 47900, Stop: 47427, Start Num: 44

Candidate Starts for Commander\_79:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (65, 47867), (74, 47828), (77, 47813), (85, 47765), (97, 47693), (111, 47576),

Gene: Comrade\_233 Start: 115408, Stop: 115866, Start Num: 64

Candidate Starts for Comrade\_233:

(Start: 62 @115405 has 2 MA's), (Start: 64 @115408 has 53 MA's), (74, 115447), (88, 115546), (91, 115564), (100, 115597), (104, 115624), (115, 115732), (132, 115852), (133, 115855),

Gene: Connomayer\_81 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Connomayer\_81:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (90, 47722), (97, 47695), (106, 47632), (111, 47578),

Gene: Cookiedough\_84 Start: 46657, Stop: 46205, Start Num: 46

Candidate Starts for Cookiedough\_84:



(Start: 46 @46657 has 34 MA's), (Start: 64 @46630 has 53 MA's), (81, 46564), (90, 46486), (115, 46318),

Gene: DaVinci\_82 Start: 45404, Stop: 44952, Start Num: 46

Candidate Starts for DaVinci\_82:

(Start: 46 @45404 has 34 MA's), (Start: 64 @45377 has 53 MA's), (81, 45311), (90, 45233), (115, 45065),

Gene: Dalmuri\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Dalmuri\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Datway\_78 Start: 47710, Stop: 47240, Start Num: 44

Candidate Starts for Datway\_78:

(Start: 38 @47728 has 3 MA's), (Start: 44 @47710 has 148 MA's), (Start: 49 @47701 has 2 MA's), (Start: 53 @47698 has 4 MA's), (Start: 64 @47680 has 53 MA's), (74, 47641), (97, 47506), (111, 47389),

Gene: Deano\_78 Start: 47907, Stop: 47437, Start Num: 44

Candidate Starts for Deano\_78:

(Start: 38 @47925 has 3 MA's), (Start: 44 @47907 has 148 MA's), (Start: 49 @47898 has 2 MA's), (Start: 53 @47895 has 4 MA's), (Start: 64 @47877 has 53 MA's), (74, 47838), (90, 47730), (97, 47703), (106, 47640), (111, 47586),

Gene: Deby\_76 Start: 50830, Stop: 51291, Start Num: 50

Candidate Starts for Deby\_76:

(Start: 50 @50830 has 60 MA's), (Start: 64 @50857 has 53 MA's), (67, 50866), (81, 50926), (88, 50989), (97, 51031), (98, 51034), (115, 51172), (130, 51268), (131, 51271),

Gene: DekHockey33\_89 Start: 47389, Stop: 46922, Start Num: 48

Candidate Starts for DekHockey33\_89:

(Start: 48 @47389 has 14 MA's), (Start: 64 @47377 has 53 MA's), (74, 47338), (77, 47323),

Gene: Dhanush\_81 Start: 47902, Stop: 47432, Start Num: 44

Candidate Starts for Dhanush\_81:

(Start: 38 @47920 has 3 MA's), (Start: 44 @47902 has 148 MA's), (Start: 49 @47893 has 2 MA's), (Start: 53 @47890 has 4 MA's), (Start: 64 @47872 has 53 MA's), (74, 47833), (97, 47698), (111, 47581),

Gene: DirtyDunning\_80 Start: 47911, Stop: 47441, Start Num: 44

Candidate Starts for DirtyDunning\_80:

(Start: 38 @47929 has 3 MA's), (Start: 44 @47911 has 148 MA's), (Start: 49 @47902 has 2 MA's), (Start: 53 @47899 has 4 MA's), (Start: 64 @47881 has 53 MA's), (74, 47842), (90, 47734), (97, 47707), (106, 47644), (111, 47590),

Gene: DismalFunk\_82 Start: 53325, Stop: 53894, Start Num: 59

Candidate Starts for DismalFunk\_82:

(Start: 59 @53325 has 10 MA's), (Start: 64 @53334 has 53 MA's), (72, 53364), (85, 53436), (90, 53481), (97, 53508), (98, 53511), (106, 53571), (144, 53835), (146, 53850),

Gene: DismalStressor\_82 Start: 53325, Stop: 53894, Start Num: 59

Candidate Starts for DismalStressor\_82:

(Start: 59 @53325 has 10 MA's), (Start: 64 @53334 has 53 MA's), (72, 53364), (85, 53436), (90, 53481), (97, 53508), (98, 53511), (106, 53571), (144, 53835), (146, 53850),

Gene: Dorin\_237 Start: 120735, Stop: 121214, Start Num: 61

Candidate Starts for Dorin\_237:

(61, 120735), (Start: 64 @120741 has 53 MA's), (78, 120801), (90, 120897), (106, 120987), (110, 121011), (120, 121119), (127, 121158), (135, 121194), (137, 121206),

Gene: Dorothea\_81 Start: 46623, Stop: 46198, Start Num: 64

Candidate Starts for Dorothea\_81:

(Start: 46 @46650 has 34 MA's), (Start: 64 @46623 has 53 MA's), (81, 46557), (90, 46479), (115, 46311),

Gene: DrHayes\_76 Start: 50854, Stop: 51315, Start Num: 50

Candidate Starts for DrHayes\_76:

(Start: 50 @50854 has 60 MA's), (Start: 64 @50881 has 53 MA's), (67, 50890), (73, 50917), (81, 50950), (88, 51013), (98, 51058), (115, 51196), (130, 51292), (131, 51295),

Gene: Drake94\_77 Start: 46666, Stop: 46199, Start Num: 44

Candidate Starts for Drake94\_77:

(Start: 44 @46666 has 148 MA's), (Start: 49 @46657 has 2 MA's), (Start: 64 @46642 has 53 MA's), (81, 46573), (106, 46405),

Gene: DroogsArmy\_77 Start: 49905, Stop: 49435, Start Num: 42

Candidate Starts for DroogsArmy\_77:

(7, 50100), (11, 50079), (Start: 38 @49920 has 3 MA's), (Start: 42 @49905 has 5 MA's), (51, 49893), (Start: 64 @49872 has 53 MA's), (90, 49725), (97, 49698), (107, 49632), (110, 49614),

Gene: Druantia\_79 Start: 47726, Stop: 47259, Start Num: 44

Candidate Starts for Druantia\_79:

(Start: 38 @47744 has 3 MA's), (Start: 44 @47726 has 148 MA's), (Start: 49 @47717 has 2 MA's), (Start: 53 @47714 has 4 MA's), (Start: 64 @47696 has 53 MA's), (74, 47657), (97, 47522), (106, 47459), (111, 47405),

Gene: Durfee\_76 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for Durfee\_76:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Eagle\_80 Start: 47961, Stop: 47491, Start Num: 44

Candidate Starts for Eagle\_80:

(Start: 38 @47979 has 3 MA's), (Start: 44 @47961 has 148 MA's), (Start: 49 @47952 has 2 MA's), (Start: 53 @47949 has 4 MA's), (Start: 64 @47931 has 53 MA's), (74, 47892), (97, 47757), (111, 47640),

Gene: Eaglepride\_83 Start: 47586, Stop: 47122, Start Num: 44

Candidate Starts for Eaglepride\_83:

(Start: 44 @47586 has 148 MA's), (Start: 49 @47577 has 2 MA's), (Start: 64 @47562 has 53 MA's), (81, 47493),

Gene: Eapen\_81 Start: 47894, Stop: 47424, Start Num: 44

Candidate Starts for Eapen\_81:

(Start: 38 @47912 has 3 MA's), (Start: 44 @47894 has 148 MA's), (Start: 49 @47885 has 2 MA's), (Start: 53 @47882 has 4 MA's), (Start: 64 @47864 has 53 MA's), (74, 47825), (97, 47690), (111, 47573),

Gene: Efra2\_83 Start: 51293, Stop: 51754, Start Num: 50

Candidate Starts for Efra2\_83:

(Start: 50 @51293 has 60 MA's), (Start: 64 @51320 has 53 MA's), (67, 51329), (81, 51389), (85, 51422), (89, 51464), (97, 51494), (98, 51497), (106, 51557), (115, 51635), (130, 51731), (131, 51734),

Gene: Ekdilam\_84 Start: 58038, Stop: 58601, Start Num: 23

Candidate Starts for Ekdilam\_84:

(Start: 23 @58038 has 23 MA's), (25, 58068), (27, 58095), (32, 58113), (Start: 64 @58167 has 53 MA's), (66, 58173), (81, 58236), (85, 58269), (90, 58314), (97, 58341), (106, 58404), (130, 58578),

Gene: Elmer\_234 Start: 109351, Stop: 109788, Start Num: 64

Candidate Starts for Elmer\_234:

(Start: 64 @109351 has 53 MA's), (74, 109390), (Start: 83 @109441 has 1 MA's), (84, 109444), (87, 109480),

Gene: Emalyn\_30 Start: 23911, Stop: 23318, Start Num: 23

Candidate Starts for Emalyn\_30:

(Start: 23 @23911 has 23 MA's), (Start: 44 @23797 has 148 MA's), (Start: 64 @23758 has 53 MA's), (76, 23710), (81, 23689), (85, 23656), (106, 23524),

Gene: Emerson\_79 Start: 50897, Stop: 51358, Start Num: 50

Candidate Starts for Emerson\_79:

(Start: 50 @50897 has 60 MA's), (Start: 64 @50924 has 53 MA's), (67, 50933), (81, 50993), (88, 51056), (98, 51101), (115, 51239), (130, 51335), (131, 51338),

Gene: Emma1919\_241 Start: 114442, Stop: 114897, Start Num: 64

Candidate Starts for Emma1919\_241:

(39, 114388), (Start: 62 @114439 has 2 MA's), (Start: 64 @114442 has 53 MA's), (73, 114478), (74, 114481), (88, 114580), (89, 114592), (100, 114631), (106, 114682), (115, 114763), (132, 114883), (133, 114886),

Gene: Enygma\_226 Start: 109104, Stop: 109541, Start Num: 63

Candidate Starts for Enygma\_226:

(26, 108981), (Start: 63 @109104 has 1 MA's), (74, 109143), (Start: 83 @109194 has 1 MA's), (87, 109233), (88, 109242),

Gene: Eponine\_83 Start: 52075, Stop: 52659, Start Num: 55

Candidate Starts for Eponine\_83:

(10, 51886), (20, 51937), (26, 51991), (29, 52021), (Start: 46 @52066 has 34 MA's), (Start: 55 @52075 has 18 MA's), (Start: 58 @52084 has 10 MA's), (Start: 64 @52099 has 53 MA's), (81, 52168), (90, 52246), (97, 52273), (106, 52336), (115, 52414), (143, 52588), (147, 52627),

Gene: Eris\_80 Start: 47911, Stop: 47441, Start Num: 44

Candidate Starts for Eris\_80:

(Start: 38 @47929 has 3 MA's), (Start: 44 @47911 has 148 MA's), (Start: 49 @47902 has 2 MA's), (Start: 53 @47899 has 4 MA's), (Start: 64 @47881 has 53 MA's), (74, 47842), (97, 47707), (111, 47590),

Gene: Eros\_81 Start: 47904, Stop: 47431, Start Num: 44

Candidate Starts for Eros\_81:

(Start: 38 @47922 has 3 MA's), (Start: 44 @47904 has 148 MA's), (65, 47871), (74, 47832), (77, 47817), (85, 47769), (97, 47697), (111, 47580),

Gene: Eurydice\_82 Start: 47936, Stop: 47466, Start Num: 44

Candidate Starts for Eurydice\_82:

(Start: 38 @47954 has 3 MA's), (Start: 44 @47936 has 148 MA's), (Start: 49 @47927 has 2 MA's), (Start: 53 @47924 has 4 MA's), (Start: 64 @47906 has 53 MA's), (74, 47867), (97, 47732), (111, 47615),

Gene: Faust\_238 Start: 116256, Stop: 116714, Start Num: 64

Candidate Starts for Faust\_238:

(39, 116202), (Start: 64 @116256 has 53 MA's), (74, 116295), (94, 116424), (100, 116445), (118, 116604), (119, 116619), (132, 116700),

Gene: Findley\_82 Start: 53343, Stop: 53912, Start Num: 59

Candidate Starts for Findley\_82:

(Start: 59 @53343 has 10 MA's), (Start: 64 @53352 has 53 MA's), (72, 53382), (85, 53454), (90, 53499), (97, 53526), (98, 53529), (106, 53589), (144, 53853), (146, 53868),

Gene: Fionnbharth\_81 Start: 51473, Stop: 52057, Start Num: 55

Candidate Starts for Fionnbharth\_81:

(10, 51284), (20, 51335), (26, 51389), (29, 51419), (Start: 46 @51464 has 34 MA's), (Start: 55 @51473 has 18 MA's), (Start: 58 @51482 has 10 MA's), (Start: 64 @51497 has 53 MA's), (81, 51566), (90, 51644), (97, 51671), (106, 51734), (115, 51812), (143, 51986), (147, 52025),

Gene: Florean\_81 Start: 47898, Stop: 47428, Start Num: 44

Candidate Starts for Florean\_81:

(Start: 38 @47916 has 3 MA's), (Start: 44 @47898 has 148 MA's), (Start: 49 @47889 has 2 MA's), (Start: 53 @47886 has 4 MA's), (Start: 64 @47868 has 53 MA's), (74, 47829), (90, 47721), (97, 47694), (106, 47631), (111, 47577),

Gene: Flux\_82 Start: 47897, Stop: 47427, Start Num: 44

Candidate Starts for Flux\_82:

(Start: 38 @47915 has 3 MA's), (Start: 44 @47897 has 148 MA's), (Start: 49 @47888 has 2 MA's), (Start: 53 @47885 has 4 MA's), (Start: 64 @47867 has 53 MA's), (74, 47828), (97, 47693), (111, 47576),

Gene: Forrest\_239 Start: 115200, Stop: 115655, Start Num: 64

Candidate Starts for Forrest\_239:

(39, 115146), (Start: 62 @115197 has 2 MA's), (Start: 64 @115200 has 53 MA's), (73, 115236), (74, 115239), (88, 115338), (89, 115350), (100, 115389), (106, 115440), (115, 115521), (132, 115641), (133, 115644),

Gene: Francesca\_236 Start: 121384, Stop: 121857, Start Num: 64

Candidate Starts for Francesca\_236:

(61, 121378), (Start: 64 @121384 has 53 MA's), (78, 121444), (90, 121540), (106, 121630), (110, 121654), (120, 121762), (127, 121801), (135, 121837), (137, 121849),

Gene: Francob\_244 Start: 115817, Stop: 116272, Start Num: 64

Candidate Starts for Francob\_244:

(Start: 62 @115814 has 2 MA's), (Start: 64 @115817 has 53 MA's), (74, 115856), (88, 115955), (89, 115967), (100, 116006), (106, 116057), (115, 116138), (132, 116258), (133, 116261),

Gene: Funston\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Funston\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: GTE2\_26 Start: 24090, Stop: 23512, Start Num: 23

Candidate Starts for GTE2\_26:

(Start: 23 @24090 has 23 MA's), (35, 23997), (Start: 64 @23952 has 53 MA's), (81, 23883), (90, 23805), (103, 23745), (106, 23718),

Gene: Gadost\_81 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for Gadost\_81:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Gail\_85 Start: 47839, Stop: 47372, Start Num: 53

Candidate Starts for Gail\_85:

(Start: 53 @47839 has 4 MA's), (Start: 64 @47827 has 53 MA's), (90, 47674), (97, 47647), (102, 47626), (106, 47587), (116, 47497), (118, 47476),

Gene: Garak\_87 Start: 46485, Stop: 46024, Start Num: 46

Candidate Starts for Garak\_87:

(Start: 46 @46485 has 34 MA's), (Start: 64 @46458 has 53 MA's), (79, 46398), (90, 46305), (110, 46191),

Gene: Genie2\_215 Start: 106215, Stop: 106652, Start Num: 64

Candidate Starts for Genie2\_215:

(Start: 64 @106215 has 53 MA's), (74, 106254), (Start: 83 @106305 has 1 MA's), (84, 106308), (87, 106344), (103, 106428),

Gene: GiKK\_37 Start: 26414, Stop: 25788, Start Num: 19

Candidate Starts for GiKK\_37:

(14, 26438), (18, 26417), (Start: 19 @26414 has 1 MA's), (Start: 23 @26387 has 23 MA's), (Start: 64 @26246 has 53 MA's), (90, 26099), (92, 26093), (98, 26069), (108, 26000), (125, 25841),

Gene: Gibbi\_224 Start: 105733, Stop: 106170, Start Num: 64

Candidate Starts for Gibbi\_224:

(41, 105685), (Start: 64 @105733 has 53 MA's), (74, 105772), (Start: 83 @105823 has 1 MA's), (84, 105826), (87, 105862),

Gene: Gilson\_240 Start: 115082, Stop: 115537, Start Num: 64

Candidate Starts for Gilson\_240:

(Start: 62 @115079 has 2 MA's), (Start: 64 @115082 has 53 MA's), (74, 115121), (88, 115220), (89, 115232), (100, 115271), (106, 115322), (115, 115403), (132, 115523), (133, 115526),

Gene: Gladiator\_82 Start: 46208, Stop: 45747, Start Num: 46

Candidate Starts for Gladiator\_82:

(Start: 46 @46208 has 34 MA's), (Start: 64 @46181 has 53 MA's), (79, 46121), (90, 46028), (110, 45914), (115, 45860),

Gene: Goose\_81 Start: 47320, Stop: 46853, Start Num: 43

Candidate Starts for Goose\_81:

(39, 47335), (Start: 43 @47320 has 3 MA's), (54, 47305), (Start: 64 @47293 has 53 MA's), (81, 47224), (90, 47146), (97, 47119), (111, 47002),

Gene: GreedyLawyer\_78 Start: 45978, Stop: 45517, Start Num: 46

Candidate Starts for GreedyLawyer\_78:

(Start: 46 @45978 has 34 MA's), (Start: 64 @45951 has 53 MA's), (79, 45891), (90, 45798), (115, 45630),

Gene: Greely\_237 Start: 134475, Stop: 134945, Start Num: 58

Candidate Starts for Greely\_237:

(Start: 58 @134475 has 10 MA's), (Start: 64 @134490 has 53 MA's), (90, 134637), (97, 134664), (106, 134724),

Gene: Gruunaga\_85 Start: 46163, Stop: 45702, Start Num: 46

Candidate Starts for Gruunaga\_85:

(Start: 46 @46163 has 34 MA's), (Start: 64 @46136 has 53 MA's), (79, 46076), (90, 45983), (110, 45869), (115, 45815),

Gene: Guanica15\_82 Start: 51039, Stop: 51500, Start Num: 50

Candidate Starts for Guanica15\_82:

(Start: 50 @51039 has 60 MA's), (Start: 64 @51066 has 53 MA's), (67, 51075), (81, 51135), (89, 51210), (97, 51240), (98, 51243), (106, 51303), (115, 51381), (130, 51477),

Gene: HINdeR\_77 Start: 49316, Stop: 48840, Start Num: 42

Candidate Starts for HINdeR\_77:

(Start: 38 @49331 has 3 MA's), (Start: 42 @49316 has 5 MA's), (Start: 49 @49307 has 2 MA's), (51, 49304), (Start: 58 @49292 has 10 MA's), (Start: 59 @49289 has 10 MA's), (Start: 62 @49280 has 2 MA's), (Start: 64 @49277 has 53 MA's), (66, 49271), (74, 49238), (105, 49058), (121, 48905),

Gene: HamSlice\_77 Start: 47898, Stop: 47428, Start Num: 44

Candidate Starts for HamSlice\_77:

(Start: 38 @47916 has 3 MA's), (Start: 44 @47898 has 148 MA's), (Start: 49 @47889 has 2 MA's), (Start: 53 @47886 has 4 MA's), (Start: 64 @47868 has 53 MA's), (74, 47829), (90, 47721), (97, 47694), (106, 47631), (111, 47577),

Gene: Hammer\_86 Start: 45843, Stop: 45409, Start Num: 64

Candidate Starts for Hammer\_86:

(Start: 46 @45870 has 34 MA's), (Start: 64 @45843 has 53 MA's), (79, 45783), (90, 45690), (110, 45576), (115, 45522),

Gene: Happiness\_80 Start: 47922, Stop: 47452, Start Num: 44

Candidate Starts for Happiness\_80:

(Start: 38 @47940 has 3 MA's), (Start: 44 @47922 has 148 MA's), (Start: 49 @47913 has 2 MA's), (Start: 53 @47910 has 4 MA's), (Start: 64 @47892 has 53 MA's), (74, 47853), (97, 47718), (111, 47601),

Gene: HedwigODU\_76 Start: 50506, Stop: 50967, Start Num: 50

Candidate Starts for HedwigODU\_76:

(Start: 50 @50506 has 60 MA's), (Start: 64 @50533 has 53 MA's), (67, 50542), (81, 50602), (88, 50665), (97, 50707), (98, 50710), (106, 50770), (115, 50848), (130, 50944), (131, 50947),

Gene: Helmet\_87 Start: 46485, Stop: 46024, Start Num: 46  
Candidate Starts for Helmet\_87:  
(Start: 46 @46485 has 34 MA's), (Start: 64 @46458 has 53 MA's), (79, 46398), (90, 46305), (110, 46191),

Gene: Herbertwm\_78 Start: 46898, Stop: 46428, Start Num: 42  
Candidate Starts for Herbertwm\_78:  
(Start: 42 @46898 has 5 MA's), (Start: 64 @46868 has 53 MA's), (68, 46856), (73, 46832), (87, 46745), (90, 46721), (97, 46694), (98, 46691), (106, 46631),

Gene: Hexamo\_85 Start: 46038, Stop: 45577, Start Num: 46  
Candidate Starts for Hexamo\_85:  
(Start: 46 @46038 has 34 MA's), (Start: 64 @46011 has 53 MA's), (79, 45951), (90, 45858), (110, 45744), (115, 45690),

Gene: Hexbug\_40 Start: 28044, Stop: 27442, Start Num: 23  
Candidate Starts for Hexbug\_40:  
(11, 28101), (14, 28095), (18, 28074), (Start: 23 @28044 has 23 MA's), (Start: 64 @27903 has 53 MA's), (90, 27756), (92, 27750), (98, 27726), (106, 27669), (128, 27486),

Gene: Holli\_80 Start: 47689, Stop: 47219, Start Num: 44  
Candidate Starts for Holli\_80:  
(Start: 38 @47707 has 3 MA's), (Start: 44 @47689 has 148 MA's), (Start: 49 @47680 has 2 MA's), (Start: 53 @47677 has 4 MA's), (Start: 64 @47659 has 53 MA's), (74, 47620), (90, 47512), (97, 47485), (106, 47422), (111, 47368),

Gene: Homura\_75 Start: 50461, Stop: 50922, Start Num: 50  
Candidate Starts for Homura\_75:  
(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Hoot\_79 Start: 43863, Stop: 43402, Start Num: 46  
Candidate Starts for Hoot\_79:  
(Start: 46 @43863 has 34 MA's), (Start: 64 @43836 has 53 MA's), (79, 43776), (90, 43683), (115, 43515),

Gene: Houdini22\_80 Start: 47900, Stop: 47430, Start Num: 44  
Candidate Starts for Houdini22\_80:  
(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Hurricane\_79 Start: 51359, Stop: 51922, Start Num: 23  
Candidate Starts for Hurricane\_79:  
(Start: 23 @51359 has 23 MA's), (27, 51416), (34, 51440), (Start: 64 @51491 has 53 MA's), (66, 51497), (73, 51527), (81, 51560), (85, 51593), (90, 51638), (104, 51701), (106, 51728), (120, 51860),

Gene: Hyperbowlee\_75 Start: 50658, Stop: 51119, Start Num: 50  
Candidate Starts for Hyperbowlee\_75:  
(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: ICleared\_80 Start: 47967, Stop: 47497, Start Num: 44

Candidate Starts for ICleared\_80:

(4, 48198), (Start: 38 @47985 has 3 MA's), (Start: 44 @47967 has 148 MA's), (Start: 49 @47958 has 2 MA's), (Start: 53 @47955 has 4 MA's), (Start: 64 @47937 has 53 MA's), (74, 47898), (97, 47763), (111, 47646),

Gene: Iceman\_79 Start: 48189, Stop: 47719, Start Num: 44

Candidate Starts for Iceman\_79:

(Start: 38 @48207 has 3 MA's), (Start: 44 @48189 has 148 MA's), (Start: 49 @48180 has 2 MA's), (Start: 53 @48177 has 4 MA's), (Start: 64 @48159 has 53 MA's), (74, 48120), (97, 47985), (111, 47868),

Gene: IchabodCrane\_211 Start: 105248, Stop: 105685, Start Num: 64

Candidate Starts for IchabodCrane\_211:

(41, 105200), (Start: 64 @105248 has 53 MA's), (74, 105287), (Start: 83 @105338 has 1 MA's), (84, 105341), (87, 105377),

Gene: Indra\_89 Start: 46486, Stop: 46025, Start Num: 46

Candidate Starts for Indra\_89:

(Start: 46 @46486 has 34 MA's), (Start: 64 @46459 has 53 MA's), (79, 46399), (90, 46306), (110, 46192),

Gene: Inky\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Inky\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Iracema64\_81 Start: 48163, Stop: 47693, Start Num: 44

Candidate Starts for Iracema64\_81:

(Start: 38 @48181 has 3 MA's), (Start: 44 @48163 has 148 MA's), (Start: 49 @48154 has 2 MA's), (Start: 53 @48151 has 4 MA's), (Start: 64 @48133 has 53 MA's), (74, 48094), (97, 47959), (111, 47842),

Gene: IronMan\_81 Start: 48725, Stop: 48255, Start Num: 44

Candidate Starts for IronMan\_81:

(Start: 44 @48725 has 148 MA's), (Start: 49 @48716 has 2 MA's), (Start: 64 @48701 has 53 MA's), (106, 48461), (112, 48398),

Gene: Iwokeuplikedis\_87 Start: 48540, Stop: 48067, Start Num: 44

Candidate Starts for Iwokeuplikedis\_87:

(Start: 44 @48540 has 148 MA's), (Start: 49 @48531 has 2 MA's), (Start: 53 @48528 has 4 MA's), (Start: 64 @48516 has 53 MA's), (73, 48480), (97, 48336), (112, 48210),

Gene: JAWS\_75 Start: 50423, Stop: 50884, Start Num: 50

Candidate Starts for JAWS\_75:

(Start: 50 @50423 has 60 MA's), (Start: 64 @50450 has 53 MA's), (67, 50459), (81, 50519), (88, 50582), (97, 50624), (98, 50627), (115, 50765), (130, 50861), (131, 50864),

Gene: JF1\_81 Start: 51381, Stop: 51974, Start Num: 46

Candidate Starts for JF1\_81:

(10, 51201), (20, 51252), (26, 51306), (29, 51336), (Start: 46 @51381 has 34 MA's), (Start: 55 @51390 has 18 MA's), (Start: 58 @51399 has 10 MA's), (Start: 64 @51414 has 53 MA's), (81, 51483), (90, 51561), (97, 51588), (102, 51609), (106, 51651), (143, 51903), (147, 51942), (149, 51966),



Gene: JSwag\_87 Start: 46806, Stop: 46339, Start Num: 48

Candidate Starts for JSwag\_87:

(Start: 48 @46806 has 14 MA's), (Start: 64 @46794 has 53 MA's), (74, 46755), (77, 46740),

Gene: Jaan\_82 Start: 48833, Stop: 48363, Start Num: 44

Candidate Starts for Jaan\_82:

(Start: 44 @48833 has 148 MA's), (Start: 49 @48824 has 2 MA's), (Start: 64 @48809 has 53 MA's), (73, 48773), (106, 48569),

Gene: Jada\_238 Start: 114440, Stop: 114895, Start Num: 64

Candidate Starts for Jada\_238:

(39, 114386), (Start: 62 @114437 has 2 MA's), (Start: 64 @114440 has 53 MA's), (73, 114476), (74, 114479), (88, 114578), (89, 114590), (100, 114629), (106, 114680), (115, 114761), (132, 114881), (133, 114884),

Gene: Jamzy\_37 Start: 26370, Stop: 25771, Start Num: 23

Candidate Starts for Jamzy\_37:

(14, 26421), (18, 26400), (Start: 19 @26397 has 1 MA's), (Start: 23 @26370 has 23 MA's), (Start: 64 @26229 has 53 MA's), (90, 26082), (92, 26076), (98, 26052), (108, 25983),

Gene: Jarvi\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Jarvi\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Jayhawk\_78 Start: 50923, Stop: 51384, Start Num: 50

Candidate Starts for Jayhawk\_78:

(Start: 50 @50923 has 60 MA's), (Start: 64 @50950 has 53 MA's), (67, 50959), (81, 51019), (88, 51082), (97, 51124), (98, 51127), (115, 51265), (130, 51361), (131, 51364),

Gene: Jaykayelowell\_78 Start: 47892, Stop: 47422, Start Num: 44

Candidate Starts for Jaykayelowell\_78:

(Start: 38 @47910 has 3 MA's), (Start: 44 @47892 has 148 MA's), (Start: 49 @47883 has 2 MA's), (Start: 53 @47880 has 4 MA's), (Start: 64 @47862 has 53 MA's), (74, 47823), (90, 47715), (97, 47688), (106, 47625), (111, 47571),

Gene: Jeckyll\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Jeckyll\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Jeeves\_85 Start: 46559, Stop: 46092, Start Num: 53

Candidate Starts for Jeeves\_85:

(Start: 53 @46559 has 4 MA's), (Start: 64 @46547 has 53 MA's), (97, 46367), (102, 46346), (106, 46307), (116, 46217), (118, 46196),

Gene: JetBlade\_82 Start: 47927, Stop: 47457, Start Num: 44

Candidate Starts for JetBlade\_82:

(Start: 38 @47945 has 3 MA's), (Start: 44 @47927 has 148 MA's), (Start: 49 @47918 has 2 MA's), (Start: 53 @47915 has 4 MA's), (Start: 64 @47897 has 53 MA's), (74, 47858), (90, 47750), (97, 47723), (106, 47660), (111, 47606),

Gene: JimJam\_223 Start: 107169, Stop: 107606, Start Num: 64

Candidate Starts for JimJam\_223:

(41, 107121), (Start: 64 @107169 has 53 MA's), (74, 107208), (Start: 83 @107259 has 1 MA's), (84, 107262), (87, 107298),

Gene: Jollison\_220 Start: 105469, Stop: 105816, Start Num: 83

Candidate Starts for Jollison\_220:

(41, 105331), (Start: 64 @105379 has 53 MA's), (74, 105418), (Start: 83 @105469 has 1 MA's), (84, 105472), (87, 105508),

Gene: JoongJeon\_80 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for JoongJeon\_80:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: Jordennis\_82 Start: 46245, Stop: 45784, Start Num: 46

Candidate Starts for Jordennis\_82:

(Start: 46 @46245 has 34 MA's), (Start: 64 @46218 has 53 MA's), (79, 46158), (90, 46065), (115, 45897),

Gene: Joy99\_77 Start: 50590, Stop: 51051, Start Num: 50

Candidate Starts for Joy99\_77:

(Start: 50 @50590 has 60 MA's), (Start: 64 @50617 has 53 MA's), (67, 50626), (81, 50686), (88, 50749), (97, 50791), (98, 50794), (106, 50854), (115, 50932), (130, 51028), (131, 51031),

Gene: Juliette\_83 Start: 51509, Stop: 52081, Start Num: 58

Candidate Starts for Juliette\_83:

(5, 51284), (10, 51311), (20, 51362), (26, 51416), (29, 51446), (Start: 46 @51491 has 34 MA's), (Start: 55 @51500 has 18 MA's), (Start: 58 @51509 has 10 MA's), (Start: 64 @51524 has 53 MA's), (81, 51593), (89, 51668), (90, 51671), (97, 51698), (106, 51761), (115, 51839), (141, 52004), (143, 52010), (147, 52049),

Gene: KFPoly\_80 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for KFPoly\_80:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: Kamy\_80 Start: 47902, Stop: 47432, Start Num: 44

Candidate Starts for Kamy\_80:

(Start: 38 @47920 has 3 MA's), (Start: 44 @47902 has 148 MA's), (Start: 49 @47893 has 2 MA's), (Start: 53 @47890 has 4 MA's), (Start: 64 @47872 has 53 MA's), (74, 47833), (97, 47698), (111, 47581),

Gene: Karimac\_217 Start: 105564, Stop: 106001, Start Num: 64

Candidate Starts for Karimac\_217:

(47, 105534), (Start: 64 @105564 has 53 MA's), (74, 105603), (Start: 83 @105654 has 1 MA's), (87, 105693),

Gene: Karp\_236 Start: 116720, Stop: 117178, Start Num: 64

Candidate Starts for Karp\_236:

(Start: 62 @116717 has 2 MA's), (Start: 64 @116720 has 53 MA's), (74, 116759), (88, 116858), (91, 116876), (100, 116909), (104, 116936), (115, 117044), (132, 117164), (133, 117167),

Gene: Katalie136\_77 Start: 47517, Stop: 47050, Start Num: 44

Candidate Starts for Katalie136\_77:

(Start: 38 @47535 has 3 MA's), (Start: 44 @47517 has 148 MA's), (Start: 49 @47508 has 2 MA's), (Start: 53 @47505 has 4 MA's), (Start: 64 @47487 has 53 MA's), (74, 47448), (97, 47313), (106, 47250), (111, 47196),

Gene: KatherineG\_87 Start: 47118, Stop: 46651, Start Num: 48

Candidate Starts for KatherineG\_87:

(Start: 48 @47118 has 14 MA's), (Start: 64 @47106 has 53 MA's), (74, 47067), (77, 47052),

Gene: Kazan\_85 Start: 46018, Stop: 45557, Start Num: 46

Candidate Starts for Kazan\_85:

(Start: 46 @46018 has 34 MA's), (Start: 64 @45991 has 53 MA's), (79, 45931), (90, 45838), (115, 45670),

Gene: Kenrey\_246 Start: 116000, Stop: 116455, Start Num: 64

Candidate Starts for Kenrey\_246:

(Start: 62 @115997 has 2 MA's), (Start: 64 @116000 has 53 MA's), (74, 116039), (77, 116054), (88, 116138), (89, 116150), (100, 116189), (132, 116441),

Gene: KentuckyRacer\_227 Start: 107174, Stop: 107521, Start Num: 83

Candidate Starts for KentuckyRacer\_227:

(41, 107036), (Start: 64 @107084 has 53 MA's), (74, 107123), (Start: 83 @107174 has 1 MA's), (84, 107177), (87, 107213),

Gene: Keshu\_81 Start: 51550, Stop: 52113, Start Num: 23

Candidate Starts for Keshu\_81:

(Start: 23 @51550 has 23 MA's), (27, 51607), (34, 51631), (Start: 64 @51682 has 53 MA's), (66, 51688), (73, 51718), (81, 51751), (85, 51784), (90, 51829), (104, 51892), (106, 51919), (120, 52051),

Gene: KiSi\_79 Start: 51113, Stop: 51700, Start Num: 23

Candidate Starts for KiSi\_79:

(Start: 23 @51113 has 23 MA's), (28, 51170), (Start: 46 @51233 has 34 MA's), (Start: 64 @51266 has 53 MA's), (66, 51272), (81, 51335), (85, 51368), (90, 51413), (97, 51440), (106, 51503), (115, 51581), (131, 51680),

Gene: Kimona\_81 Start: 46685, Stop: 46218, Start Num: 49

Candidate Starts for Kimona\_81:

(Start: 17 @46847 has 1 MA's), (Start: 38 @46706 has 3 MA's), (Start: 49 @46685 has 2 MA's), (Start: 64 @46673 has 53 MA's), (67, 46664), (73, 46637), (81, 46604), (90, 46526), (130, 46256),

Gene: Kingmustik0402\_81 Start: 47888, Stop: 47418, Start Num: 44

Candidate Starts for Kingmustik0402\_81:

(Start: 38 @47906 has 3 MA's), (Start: 44 @47888 has 148 MA's), (Start: 49 @47879 has 2 MA's), (Start: 53 @47876 has 4 MA's), (Start: 64 @47858 has 53 MA's), (74, 47819), (97, 47684), (111, 47567),

Gene: Kipper29\_84 Start: 46022, Stop: 45570, Start Num: 46

Candidate Starts for Kipper29\_84:

(Start: 46 @46022 has 34 MA's), (Start: 64 @45995 has 53 MA's), (81, 45929), (90, 45851), (115, 45683),

Gene: KittenMittens\_76 Start: 46673, Stop: 46209, Start Num: 44  
Candidate Starts for KittenMittens\_76:  
(Start: 44 @46673 has 148 MA's), (Start: 49 @46664 has 2 MA's), (Start: 64 @46649 has 53 MA's),  
(111, 46358),

Gene: Koko\_87 Start: 46875, Stop: 46414, Start Num: 46  
Candidate Starts for Koko\_87:  
(Start: 46 @46875 has 34 MA's), (Start: 64 @46848 has 53 MA's), (79, 46788), (90, 46695), (110,  
46581),

Gene: Koreni\_80 Start: 47580, Stop: 47110, Start Num: 44  
Candidate Starts for Koreni\_80:  
(Start: 38 @47598 has 3 MA's), (Start: 44 @47580 has 148 MA's), (Start: 49 @47571 has 2 MA's),  
(Start: 53 @47568 has 4 MA's), (Start: 64 @47550 has 53 MA's), (74, 47511), (97, 47376), (111,  
47259),

Gene: Kratak\_80 Start: 47933, Stop: 47463, Start Num: 44  
Candidate Starts for Kratak\_80:  
(Start: 38 @47951 has 3 MA's), (Start: 44 @47933 has 148 MA's), (Start: 49 @47924 has 2 MA's),  
(Start: 53 @47921 has 4 MA's), (Start: 64 @47903 has 53 MA's), (74, 47864), (97, 47729), (111,  
47612),

Gene: Kremtemulon\_75 Start: 47779, Stop: 47309, Start Num: 44  
Candidate Starts for Kremtemulon\_75:  
(Start: 38 @47797 has 3 MA's), (Start: 44 @47779 has 148 MA's), (Start: 49 @47770 has 2 MA's),  
(Start: 53 @47767 has 4 MA's), (Start: 64 @47749 has 53 MA's), (74, 47710), (97, 47575), (111,  
47458),

Gene: Kristoff\_78 Start: 47941, Stop: 47477, Start Num: 44  
Candidate Starts for Kristoff\_78:  
(Start: 44 @47941 has 148 MA's), (Start: 49 @47932 has 2 MA's), (Start: 64 @47917 has 53 MA's),  
(106, 47680),

Gene: Krueger\_83 Start: 51452, Stop: 52018, Start Num: 22  
Candidate Starts for Krueger\_83:  
(Start: 22 @51452 has 11 MA's), (25, 51482), (Start: 55 @51563 has 18 MA's), (Start: 64 @51584 has  
53 MA's), (85, 51686), (90, 51731), (106, 51821), (115, 51899), (120, 51953), (131, 51998),

Gene: Kyee\_81 Start: 47894, Stop: 47424, Start Num: 44  
Candidate Starts for Kyee\_81:  
(Start: 38 @47912 has 3 MA's), (Start: 44 @47894 has 148 MA's), (Start: 49 @47885 has 2 MA's),  
(Start: 53 @47882 has 4 MA's), (Start: 64 @47864 has 53 MA's), (74, 47825), (97, 47690), (111,  
47573),

Gene: LHTSCC\_83 Start: 48339, Stop: 47869, Start Num: 44  
Candidate Starts for LHTSCC\_83:  
(Start: 38 @48357 has 3 MA's), (Start: 44 @48339 has 148 MA's), (Start: 49 @48330 has 2 MA's),  
(Start: 53 @48327 has 4 MA's), (Start: 64 @48309 has 53 MA's), (74, 48270), (97, 48135), (111,  
48018),

Gene: Landor\_82 Start: 48758, Stop: 48288, Start Num: 44  
Candidate Starts for Landor\_82:

(Start: 44 @48758 has 148 MA's), (Start: 49 @48749 has 2 MA's), (Start: 64 @48734 has 53 MA's), (106, 48494),

Gene: LappelDuVide\_77 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for LappelDuVide\_77:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (90, 47722), (97, 47695), (106, 47632), (111, 47578),

Gene: LastHope\_83 Start: 51070, Stop: 51531, Start Num: 50

Candidate Starts for LastHope\_83:

(Start: 50 @51070 has 60 MA's), (57, 51076), (Start: 64 @51097 has 53 MA's), (67, 51106), (73, 51133), (81, 51166), (89, 51241), (97, 51271), (98, 51274), (106, 51334), (115, 51412), (131, 51511),

Gene: LastResort\_85 Start: 47049, Stop: 46582, Start Num: 48

Candidate Starts for LastResort\_85:

(Start: 48 @47049 has 14 MA's), (Start: 64 @47037 has 53 MA's), (74, 46998), (77, 46983),

Gene: LeMond\_78 Start: 50717, Stop: 51304, Start Num: 23

Candidate Starts for LeMond\_78:

(Start: 23 @50717 has 23 MA's), (28, 50774), (Start: 46 @50837 has 34 MA's), (Start: 64 @50870 has 53 MA's), (66, 50876), (81, 50939), (85, 50972), (90, 51017), (97, 51044), (106, 51107), (115, 51185), (131, 51284),

Gene: Lemur\_81 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Lemur\_81:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Lilbunny\_83 Start: 46117, Stop: 45656, Start Num: 46

Candidate Starts for Lilbunny\_83:

(Start: 46 @46117 has 34 MA's), (Start: 64 @46090 has 53 MA's), (79, 46030), (90, 45937), (110, 45823),

Gene: LindNT\_75 Start: 50926, Stop: 51387, Start Num: 50

Candidate Starts for LindNT\_75:

(Start: 50 @50926 has 60 MA's), (Start: 64 @50953 has 53 MA's), (67, 50962), (81, 51022), (88, 51085), (98, 51130), (115, 51268), (130, 51364), (131, 51367),

Gene: LittleB\_81 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for LittleB\_81:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: LittleGuy\_81 Start: 47787, Stop: 47314, Start Num: 44

Candidate Starts for LittleGuy\_81:

(Start: 38 @47805 has 3 MA's), (Start: 44 @47787 has 148 MA's), (65, 47754), (74, 47715), (77, 47700), (85, 47652), (97, 47580), (111, 47463),

Gene: Llorens\_75 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Llorens\_75:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: LochMonster\_82 Start: 48136, Stop: 47666, Start Num: 44

Candidate Starts for LochMonster\_82:

(Start: 38 @48154 has 3 MA's), (Start: 44 @48136 has 148 MA's), (Start: 49 @48127 has 2 MA's), (Start: 53 @48124 has 4 MA's), (Start: 64 @48106 has 53 MA's), (74, 48067), (97, 47932), (111, 47815),

Gene: Lorenzo\_81 Start: 47897, Stop: 47427, Start Num: 44

Candidate Starts for Lorenzo\_81:

(Start: 38 @47915 has 3 MA's), (Start: 44 @47897 has 148 MA's), (Start: 49 @47888 has 2 MA's), (Start: 53 @47885 has 4 MA's), (Start: 64 @47867 has 53 MA's), (74, 47828), (97, 47693), (111, 47576),

Gene: Luchador\_83 Start: 47820, Stop: 47353, Start Num: 53

Candidate Starts for Luchador\_83:

(Start: 53 @47820 has 4 MA's), (Start: 64 @47808 has 53 MA's), (97, 47628), (102, 47607), (116, 47478), (118, 47457),

Gene: LukeCage\_221 Start: 107799, Stop: 108236, Start Num: 64

Candidate Starts for LukeCage\_221:

(Start: 64 @107799 has 53 MA's), (74, 107838), (Start: 83 @107889 has 1 MA's), (84, 107892), (87, 107928),

Gene: Lunahalos\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Lunahalos\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: Lunsford\_81 Start: 47892, Stop: 47422, Start Num: 44

Candidate Starts for Lunsford\_81:

(Start: 38 @47910 has 3 MA's), (Start: 44 @47892 has 148 MA's), (Start: 49 @47883 has 2 MA's), (Start: 53 @47880 has 4 MA's), (Start: 64 @47862 has 53 MA's), (74, 47823), (81, 47793), (90, 47715), (97, 47688), (106, 47625), (111, 47571),

Gene: MacnCheese\_81 Start: 51963, Stop: 52529, Start Num: 23

Candidate Starts for MacnCheese\_81:

(Start: 23 @51963 has 23 MA's), (25, 51993), (Start: 55 @52074 has 18 MA's), (Start: 64 @52098 has 53 MA's), (66, 52104), (85, 52200), (90, 52245), (106, 52335), (120, 52467),

Gene: Malthus\_82 Start: 51209, Stop: 51790, Start Num: 55

Candidate Starts for Malthus\_82:

(10, 51011), (12, 51026), (20, 51062), (24, 51083), (26, 51110), (29, 51140), (Start: 46 @51200 has 34 MA's), (Start: 55 @51209 has 18 MA's), (Start: 58 @51218 has 10 MA's), (Start: 64 @51233 has 53 MA's), (81, 51302), (89, 51377), (90, 51380), (97, 51407), (106, 51470), (115, 51548), (141, 51713), (143, 51719), (147, 51758),

Gene: Marcoliusprime\_81 Start: 53325, Stop: 53894, Start Num: 59

Candidate Starts for Marcoliusprime\_81:

(Start: 59 @53325 has 10 MA's), (Start: 64 @53334 has 53 MA's), (72, 53364), (85, 53436), (90, 53481), (97, 53508), (98, 53511), (106, 53571), (144, 53835), (146, 53850),

Gene: Margaret\_39 Start: 27083, Stop: 26442, Start Num: 17

Candidate Starts for Margaret\_39:

(Start: 17 @27083 has 1 MA's), (Start: 23 @27044 has 23 MA's), (35, 26957), (57, 26924), (Start: 64 @26903 has 53 MA's), (73, 26867), (81, 26834), (90, 26756), (92, 26750), (98, 26726), (106, 26669), (133, 26465),

Gene: MarkPhew\_78 Start: 50597, Stop: 51175, Start Num: 23

Candidate Starts for MarkPhew\_78:

(6, 50516), (8, 50519), (9, 50522), (Start: 23 @50597 has 23 MA's), (Start: 55 @50714 has 18 MA's), (Start: 64 @50738 has 53 MA's), (66, 50744), (85, 50840), (89, 50882), (90, 50885), (97, 50912), (106, 50975), (115, 51053), (131, 51155),

Gene: Marshawn\_75 Start: 50991, Stop: 51566, Start Num: 23

Candidate Starts for Marshawn\_75:

(8, 50913), (9, 50916), (Start: 23 @50991 has 23 MA's), (Start: 55 @51108 has 18 MA's), (Start: 64 @51132 has 53 MA's), (66, 51138), (81, 51201), (82, 51204), (85, 51234), (89, 51276), (90, 51279), (97, 51306), (102, 51327), (106, 51369), (115, 51447), (131, 51546),

Gene: Maverick\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Maverick\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Maxo\_83 Start: 47902, Stop: 47432, Start Num: 44

Candidate Starts for Maxo\_83:

(Start: 38 @47920 has 3 MA's), (Start: 44 @47902 has 148 MA's), (Start: 49 @47893 has 2 MA's), (Start: 53 @47890 has 4 MA's), (Start: 64 @47872 has 53 MA's), (74, 47833), (97, 47698), (111, 47581),

Gene: Mazhar510\_81 Start: 47897, Stop: 47427, Start Num: 44

Candidate Starts for Mazhar510\_81:

(Start: 38 @47915 has 3 MA's), (Start: 44 @47897 has 148 MA's), (Start: 49 @47888 has 2 MA's), (Start: 53 @47885 has 4 MA's), (Start: 64 @47867 has 53 MA's), (74, 47828), (97, 47693), (111, 47576),

Gene: McFly\_84 Start: 46358, Stop: 45906, Start Num: 46

Candidate Starts for McFly\_84:

(Start: 46 @46358 has 34 MA's), (Start: 64 @46331 has 53 MA's), (81, 46265), (90, 46187), (115, 46019),

Gene: Medusa\_80 Start: 47912, Stop: 47442, Start Num: 44

Candidate Starts for Medusa\_80:

(Start: 38 @47930 has 3 MA's), (Start: 44 @47912 has 148 MA's), (Start: 49 @47903 has 2 MA's), (Start: 53 @47900 has 4 MA's), (Start: 64 @47882 has 53 MA's), (74, 47843), (97, 47708), (111, 47591),

Gene: MeeZee\_80 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for MeeZee\_80:

(4, 48124), (Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: MeganTheeKilla\_243 Start: 114982, Stop: 115437, Start Num: 64

Candidate Starts for MeganTheeKilla\_243:

(Start: 62 @114979 has 2 MA's), (Start: 64 @114982 has 53 MA's), (74, 115021), (88, 115120), (89, 115132), (100, 115171), (106, 115222), (115, 115303), (132, 115423), (133, 115426),

Gene: Melvin\_83 Start: 47912, Stop: 47424, Start Num: 38

Candidate Starts for Melvin\_83:

(Start: 38 @47912 has 3 MA's), (Start: 44 @47894 has 148 MA's), (Start: 49 @47885 has 2 MA's), (Start: 53 @47882 has 4 MA's), (Start: 64 @47864 has 53 MA's), (74, 47825), (97, 47690), (111, 47573),

Gene: Millski\_80 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for Millski\_80:

(4, 48131), (Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Milly\_82 Start: 53316, Stop: 53885, Start Num: 59

Candidate Starts for Milly\_82:

(Start: 59 @53316 has 10 MA's), (Start: 64 @53325 has 53 MA's), (72, 53355), (85, 53427), (90, 53472), (97, 53499), (98, 53502), (106, 53562), (144, 53826), (146, 53841),

Gene: MindFlayer\_209 Start: 104764, Stop: 105201, Start Num: 64

Candidate Starts for MindFlayer\_209:

(41, 104716), (Start: 64 @104764 has 53 MA's), (74, 104803), (Start: 83 @104854 has 1 MA's), (84, 104857), (87, 104893),

Gene: MinecraftSteve\_88 Start: 47100, Stop: 46633, Start Num: 48

Candidate Starts for MinecraftSteve\_88:

(Start: 48 @47100 has 14 MA's), (Start: 64 @47088 has 53 MA's), (74, 47049), (77, 47034),

Gene: Miramae\_81 Start: 47833, Stop: 47345, Start Num: 38

Candidate Starts for Miramae\_81:

(Start: 38 @47833 has 3 MA's), (Start: 44 @47815 has 148 MA's), (Start: 59 @47788 has 10 MA's), (Start: 64 @47782 has 53 MA's), (77, 47728), (81, 47713), (97, 47608), (111, 47491),

Gene: MissDaisy\_78 Start: 49211, Stop: 49774, Start Num: 58

Candidate Starts for MissDaisy\_78:

(Start: 55 @49202 has 18 MA's), (Start: 58 @49211 has 10 MA's), (61, 49220), (Start: 64 @49226 has 53 MA's), (77, 49280), (81, 49295), (90, 49373), (97, 49400), (106, 49463), (115, 49541), (147, 49742),

Gene: Mitti\_81 Start: 51367, Stop: 51951, Start Num: 55

Candidate Starts for Mitti\_81:

(10, 51178), (20, 51229), (26, 51283), (29, 51313), (Start: 46 @51358 has 34 MA's), (Start: 55 @51367 has 18 MA's), (Start: 58 @51376 has 10 MA's), (Start: 64 @51391 has 53 MA's), (81, 51460), (90, 51538), (97, 51565), (106, 51628), (115, 51706), (143, 51880), (147, 51919),

Gene: Moab\_243 Start: 117249, Stop: 117701, Start Num: 64

Candidate Starts for Moab\_243:

(Start: 62 @117246 has 2 MA's), (Start: 64 @117249 has 53 MA's), (74, 117288), (88, 117387), (100, 117438), (114, 117555), (115, 117570), (132, 117687),

Gene: Morpher26\_77 Start: 47538, Stop: 47071, Start Num: 44



Candidate Starts for Morpher26\_77:

(Start: 38 @47556 has 3 MA's), (Start: 44 @47538 has 148 MA's), (Start: 49 @47529 has 2 MA's), (Start: 53 @47526 has 4 MA's), (Start: 64 @47508 has 53 MA's), (74, 47469), (97, 47334), (106, 47271), (111, 47217),

Gene: Morrow\_83 Start: 47939, Stop: 47469, Start Num: 44

Candidate Starts for Morrow\_83:

(Start: 38 @47957 has 3 MA's), (Start: 44 @47939 has 148 MA's), (Start: 49 @47930 has 2 MA's), (Start: 53 @47927 has 4 MA's), (Start: 64 @47909 has 53 MA's), (74, 47870), (90, 47762), (97, 47735), (106, 47672), (111, 47618),

Gene: Mufasa\_81 Start: 52782, Stop: 53354, Start Num: 59

Candidate Starts for Mufasa\_81:

(Start: 59 @52782 has 10 MA's), (Start: 64 @52794 has 53 MA's), (90, 52941), (97, 52968), (98, 52971), (106, 53031), (144, 53295), (146, 53310),

Gene: Mugiwara\_228 Start: 108345, Stop: 108692, Start Num: 83

Candidate Starts for Mugiwara\_228:

(47, 108225), (Start: 64 @108255 has 53 MA's), (74, 108294), (Start: 83 @108345 has 1 MA's), (84, 108348), (87, 108384),

Gene: Mundrea\_79 Start: 47777, Stop: 47307, Start Num: 44

Candidate Starts for Mundrea\_79:

(Start: 38 @47795 has 3 MA's), (Start: 44 @47777 has 148 MA's), (Start: 59 @47750 has 10 MA's), (Start: 64 @47744 has 53 MA's), (77, 47690), (81, 47675), (97, 47570), (111, 47453),

Gene: Muntaha\_214 Start: 105868, Stop: 106320, Start Num: 64

Candidate Starts for Muntaha\_214:

(Start: 64 @105868 has 53 MA's), (71, 105892), (74, 105907), (75, 105910), (88, 106000), (91, 106018), (100, 106051), (122, 106252), (133, 106309),

Gene: Murucutumbu\_77 Start: 51702, Stop: 52163, Start Num: 52

Candidate Starts for Murucutumbu\_77:

(31, 51651), (36, 51669), (Start: 52 @51702 has 2 MA's), (Start: 64 @51729 has 53 MA's), (67, 51738), (81, 51798), (88, 51861), (89, 51873), (97, 51903), (98, 51906), (115, 52044), (130, 52140), (131, 52143),

Gene: Mynx\_78 Start: 51192, Stop: 51653, Start Num: 50

Candidate Starts for Mynx\_78:

(Start: 50 @51192 has 60 MA's), (Start: 64 @51219 has 53 MA's), (67, 51228), (81, 51288), (88, 51351), (97, 51393), (98, 51396), (115, 51534), (130, 51630), (131, 51633),

Gene: Myrna\_230 Start: 134129, Stop: 134599, Start Num: 58

Candidate Starts for Myrna\_230:

(Start: 58 @134129 has 10 MA's), (Start: 64 @134144 has 53 MA's), (90, 134291), (97, 134318), (106, 134378),

Gene: Nebs\_82 Start: 47939, Stop: 47469, Start Num: 44

Candidate Starts for Nebs\_82:

(Start: 38 @47957 has 3 MA's), (Start: 44 @47939 has 148 MA's), (Start: 49 @47930 has 2 MA's), (Start: 53 @47927 has 4 MA's), (Start: 64 @47909 has 53 MA's), (74, 47870), (97, 47735), (111, 47618),

Gene: Nebulosus\_84 Start: 46606, Stop: 46139, Start Num: 48

Candidate Starts for Nebulosus\_84:

(Start: 48 @46606 has 14 MA's), (Start: 64 @46594 has 53 MA's), (74, 46555), (77, 46540),

Gene: Neeharika16\_83 Start: 46108, Stop: 45656, Start Num: 46

Candidate Starts for Neeharika16\_83:

(Start: 46 @46108 has 34 MA's), (Start: 64 @46081 has 53 MA's), (81, 46015), (90, 45937), (115, 45769),

Gene: Nemo27\_80 Start: 47895, Stop: 47425, Start Num: 44

Candidate Starts for Nemo27\_80:

(Start: 38 @47913 has 3 MA's), (Start: 44 @47895 has 148 MA's), (Start: 49 @47886 has 2 MA's), (Start: 53 @47883 has 4 MA's), (Start: 64 @47865 has 53 MA's), (74, 47826), (97, 47691), (111, 47574),

Gene: Newrala\_83 Start: 46453, Stop: 45992, Start Num: 46

Candidate Starts for Newrala\_83:

(Start: 46 @46453 has 34 MA's), (Start: 64 @46426 has 53 MA's), (79, 46366), (90, 46273), (115, 46105),

Gene: Nibb\_78 Start: 50412, Stop: 50990, Start Num: 23

Candidate Starts for Nibb\_78:

(Start: 23 @50412 has 23 MA's), (57, 50535), (Start: 64 @50556 has 53 MA's), (66, 50562), (89, 50700), (90, 50703), (97, 50730), (106, 50793), (115, 50871), (131, 50970),

Gene: Niklas\_80 Start: 51901, Stop: 52464, Start Num: 22

Candidate Starts for Niklas\_80:

(Start: 22 @51901 has 11 MA's), (25, 51931), (Start: 55 @52009 has 18 MA's), (Start: 64 @52030 has 53 MA's), (66, 52036), (81, 52099), (85, 52132), (89, 52174), (90, 52177), (98, 52207), (106, 52267), (115, 52345), (130, 52441), (131, 52444),

Gene: NoShow\_78 Start: 51191, Stop: 51799, Start Num: 21

Candidate Starts for NoShow\_78:

(Start: 21 @51191 has 1 MA's), (30, 51266), (Start: 44 @51320 has 148 MA's), (Start: 52 @51332 has 2 MA's), (Start: 64 @51359 has 53 MA's), (69, 51377), (90, 51506), (98, 51536), (106, 51593),

Gene: Nodigi\_40 Start: 28027, Stop: 27425, Start Num: 23

Candidate Starts for Nodigi\_40:

(18, 28057), (Start: 23 @28027 has 23 MA's), (34, 27943), (Start: 64 @27886 has 53 MA's), (90, 27739), (92, 27733), (98, 27709), (106, 27652), (128, 27469),

Gene: Noelle\_78 Start: 47735, Stop: 47277, Start Num: 49

Candidate Starts for Noelle\_78:

(3, 48020), (5, 47960), (Start: 38 @47762 has 3 MA's), (Start: 44 @47744 has 148 MA's), (Start: 49 @47735 has 2 MA's), (Start: 53 @47732 has 4 MA's), (Start: 64 @47714 has 53 MA's), (74, 47675), (97, 47540), (111, 47423),

Gene: NorthStar\_78 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for NorthStar\_78:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: NotAPhaseMom\_80 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for NotAPhaseMom\_80:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Nyxis\_80 Start: 47781, Stop: 47308, Start Num: 44

Candidate Starts for Nyxis\_80:

(Start: 38 @47799 has 3 MA's), (Start: 44 @47781 has 148 MA's), (65, 47748), (74, 47709), (77, 47694), (85, 47646), (97, 47574), (111, 47457),

Gene: OKCentral2016\_79 Start: 46747, Stop: 46280, Start Num: 43

Candidate Starts for OKCentral2016\_79:

(39, 46762), (Start: 43 @46747 has 3 MA's), (54, 46732), (Start: 64 @46720 has 53 MA's), (81, 46651), (90, 46573), (97, 46546), (111, 46429),

Gene: OKaNui\_80 Start: 47950, Stop: 47480, Start Num: 44

Candidate Starts for OKaNui\_80:

(Start: 38 @47968 has 3 MA's), (Start: 44 @47950 has 148 MA's), (Start: 49 @47941 has 2 MA's), (Start: 53 @47938 has 4 MA's), (Start: 64 @47920 has 53 MA's), (74, 47881), (97, 47746), (111, 47629),

Gene: Obama12\_82 Start: 48323, Stop: 47853, Start Num: 44

Candidate Starts for Obama12\_82:

(Start: 38 @48341 has 3 MA's), (Start: 44 @48323 has 148 MA's), (Start: 49 @48314 has 2 MA's), (Start: 53 @48311 has 4 MA's), (Start: 64 @48293 has 53 MA's), (74, 48254), (97, 48119), (111, 48002),

Gene: Ohfah\_82 Start: 47939, Stop: 47469, Start Num: 44

Candidate Starts for Ohfah\_82:

(Start: 38 @47957 has 3 MA's), (Start: 44 @47939 has 148 MA's), (Start: 49 @47930 has 2 MA's), (Start: 53 @47927 has 4 MA's), (Start: 64 @47909 has 53 MA's), (74, 47870), (97, 47735), (111, 47618),

Gene: OmniCritical\_81 Start: 51378, Stop: 51953, Start Num: 58

Candidate Starts for OmniCritical\_81:

(10, 51180), (20, 51231), (26, 51285), (29, 51315), (Start: 46 @51360 has 34 MA's), (Start: 55 @51369 has 18 MA's), (Start: 58 @51378 has 10 MA's), (Start: 64 @51393 has 53 MA's), (81, 51462), (90, 51540), (97, 51567), (102, 51588), (106, 51630), (115, 51708), (143, 51882), (147, 51921),

Gene: Orla\_40 Start: 28015, Stop: 27413, Start Num: 23

Candidate Starts for Orla\_40:

(11, 28072), (14, 28066), (18, 28045), (Start: 23 @28015 has 23 MA's), (Start: 64 @27874 has 53 MA's), (90, 27727), (92, 27721), (98, 27697), (106, 27640),

Gene: Oscar\_78 Start: 50636, Stop: 51223, Start Num: 23

Candidate Starts for Oscar\_78:

(Start: 23 @50636 has 23 MA's), (28, 50693), (Start: 46 @50756 has 34 MA's), (Start: 64 @50789 has 53 MA's), (66, 50795), (81, 50858), (85, 50891), (90, 50936), (97, 50963), (106, 51026), (115, 51104), (131, 51203),

Gene: Padfoot\_76 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for Padfoot\_76:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Padpat\_80 Start: 50897, Stop: 51358, Start Num: 50

Candidate Starts for Padpat\_80:

(Start: 50 @50897 has 60 MA's), (Start: 64 @50924 has 53 MA's), (67, 50933), (81, 50993), (88, 51056), (98, 51101), (115, 51239), (130, 51335), (131, 51338),

Gene: Palestino\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Palestino\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Patelgo\_242 Start: 117496, Stop: 117948, Start Num: 64

Candidate Starts for Patelgo\_242:

(Start: 62 @117493 has 2 MA's), (Start: 64 @117496 has 53 MA's), (74, 117535), (88, 117634), (100, 117685), (113, 117796), (114, 117802), (115, 117817), (132, 117934),

Gene: Patt\_77 Start: 49361, Stop: 49933, Start Num: 55

Candidate Starts for Patt\_77:

(10, 49163), (12, 49178), (20, 49214), (24, 49235), (26, 49262), (29, 49292), (Start: 55 @49361 has 18 MA's), (Start: 58 @49370 has 10 MA's), (Start: 64 @49385 has 53 MA's), (77, 49439), (81, 49454), (90, 49532), (97, 49559), (106, 49622), (115, 49700), (147, 49901),

Gene: PeaceMeal1\_77 Start: 46674, Stop: 46210, Start Num: 44

Candidate Starts for PeaceMeal1\_77:

(Start: 44 @46674 has 148 MA's), (Start: 49 @46665 has 2 MA's), (Start: 64 @46650 has 53 MA's), (111, 46359),

Gene: Peaches\_79 Start: 47901, Stop: 47428, Start Num: 44

Candidate Starts for Peaches\_79:

(Start: 38 @47919 has 3 MA's), (Start: 44 @47901 has 148 MA's), (65, 47868), (74, 47829), (77, 47814), (85, 47766), (97, 47694), (111, 47577),

Gene: Peanam\_80 Start: 51859, Stop: 52422, Start Num: 22

Candidate Starts for Peanam\_80:

(Start: 22 @51859 has 11 MA's), (25, 51889), (Start: 55 @51967 has 18 MA's), (Start: 64 @51988 has 53 MA's), (66, 51994), (81, 52057), (85, 52090), (89, 52132), (90, 52135), (98, 52165), (106, 52225), (115, 52303), (130, 52399), (131, 52402),

Gene: Peel\_76 Start: 50463, Stop: 50924, Start Num: 50

Candidate Starts for Peel\_76:

(Start: 50 @50463 has 60 MA's), (Start: 64 @50490 has 53 MA's), (67, 50499), (81, 50559), (88, 50622), (97, 50664), (98, 50667), (106, 50727), (115, 50805), (130, 50901), (131, 50904),

Gene: Perplexer\_77 Start: 47518, Stop: 47051, Start Num: 44

Candidate Starts for Perplexer\_77:

(Start: 38 @47536 has 3 MA's), (Start: 44 @47518 has 148 MA's), (Start: 49 @47509 has 2 MA's), (Start: 53 @47506 has 4 MA's), (Start: 64 @47488 has 53 MA's), (74, 47449), (97, 47314), (106, 47251), (111, 47197),

Gene: PeterPeter\_81 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for PeterPeter\_81:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: PetiteSangsue\_77 Start: 47521, Stop: 47054, Start Num: 44

Candidate Starts for PetiteSangsue\_77:

(Start: 38 @47539 has 3 MA's), (Start: 44 @47521 has 148 MA's), (Start: 49 @47512 has 2 MA's), (Start: 53 @47509 has 4 MA's), (Start: 64 @47491 has 53 MA's), (74, 47452), (97, 47317), (106, 47254), (111, 47200),

Gene: Phabba\_240 Start: 133855, Stop: 134328, Start Num: 58

Candidate Starts for Phabba\_240:

(Start: 58 @133855 has 10 MA's), (Start: 64 @133870 has 53 MA's), (90, 134017), (106, 134104), (115, 134206), (131, 134308),

Gene: Phacado\_81 Start: 47895, Stop: 47425, Start Num: 44

Candidate Starts for Phacado\_81:

(Start: 38 @47913 has 3 MA's), (Start: 44 @47895 has 148 MA's), (Start: 49 @47886 has 2 MA's), (Start: 53 @47883 has 4 MA's), (Start: 64 @47865 has 53 MA's), (74, 47826), (97, 47691), (111, 47574),

Gene: Phaded\_78 Start: 48717, Stop: 48247, Start Num: 44

Candidate Starts for Phaded\_78:

(Start: 44 @48717 has 148 MA's), (Start: 49 @48708 has 2 MA's), (Start: 64 @48693 has 53 MA's), (73, 48657), (106, 48453),

Gene: Pharb\_77 Start: 50633, Stop: 51190, Start Num: 58

Candidate Starts for Pharb\_77:

(Start: 58 @50633 has 10 MA's), (Start: 64 @50648 has 53 MA's), (81, 50717), (82, 50720), (90, 50795), (106, 50885), (120, 51017), (140, 51113), (142, 51125), (145, 51140), (149, 51182),

Gene: Phelipe\_81 Start: 47860, Stop: 47345, Start Num: 44

Candidate Starts for Phelipe\_81:

(Start: 38 @47878 has 3 MA's), (Start: 44 @47860 has 148 MA's), (Start: 49 @47851 has 2 MA's), (Start: 53 @47848 has 4 MA's), (Start: 64 @47830 has 53 MA's), (74, 47791), (97, 47656), (111, 47539),

Gene: PhelpsODU\_81 Start: 51079, Stop: 51651, Start Num: 55

Candidate Starts for PhelpsODU\_81:

(Start: 55 @51079 has 18 MA's), (Start: 64 @51100 has 53 MA's), (81, 51169), (85, 51202), (87, 51223), (90, 51247), (98, 51277), (106, 51337), (115, 51415), (120, 51469), (124, 51493), (148, 51631),

Gene: Phighter1804\_81 Start: 47960, Stop: 47490, Start Num: 44

Candidate Starts for Phighter1804\_81:

(Start: 38 @47978 has 3 MA's), (Start: 44 @47960 has 148 MA's), (Start: 49 @47951 has 2 MA's), (Start: 53 @47948 has 4 MA's), (Start: 64 @47930 has 53 MA's), (74, 47891), (97, 47756), (111, 47639),

Gene: Phontbonne\_81 Start: 47797, Stop: 47324, Start Num: 44

Candidate Starts for Phontbonne\_81:

(Start: 38 @47815 has 3 MA's), (Start: 44 @47797 has 148 MA's), (65, 47764), (74, 47725), (77, 47710), (85, 47662), (97, 47590), (111, 47473),

Gene: Phrank\_82 Start: 50939, Stop: 51511, Start Num: 55

Candidate Starts for Phrank\_82:

(Start: 55 @50939 has 18 MA's), (Start: 64 @50960 has 53 MA's), (81, 51029), (85, 51062), (87, 51083), (90, 51107), (98, 51137), (106, 51197), (115, 51275), (120, 51329), (124, 51353), (136, 51404), (148, 51491),

Gene: Phredrick\_245 Start: 114858, Stop: 115313, Start Num: 64

Candidate Starts for Phredrick\_245:

(Start: 64 @114858 has 53 MA's), (74, 114897), (77, 114912), (88, 114996), (89, 115008), (100, 115047), (132, 115299), (133, 115302),

Gene: Piatt\_75 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for Piatt\_75:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Pipcraft\_77 Start: 47900, Stop: 47430, Start Num: 44

Candidate Starts for Pipcraft\_77:

(Start: 38 @47918 has 3 MA's), (Start: 44 @47900 has 148 MA's), (Start: 49 @47891 has 2 MA's), (Start: 53 @47888 has 4 MA's), (Start: 64 @47870 has 53 MA's), (74, 47831), (97, 47696), (111, 47579),

Gene: Pixie\_78 Start: 50938, Stop: 51501, Start Num: 23

Candidate Starts for Pixie\_78:

(Start: 23 @50938 has 23 MA's), (27, 50995), (34, 51019), (Start: 64 @51070 has 53 MA's), (66, 51076), (73, 51106), (81, 51139), (85, 51172), (90, 51217), (104, 51280), (106, 51307), (120, 51439),

Gene: Pmask\_83 Start: 46654, Stop: 46193, Start Num: 46

Candidate Starts for Pmask\_83:

(Start: 46 @46654 has 34 MA's), (Start: 64 @46627 has 53 MA's), (79, 46567), (90, 46474), (115, 46306),

Gene: Pokerus\_77 Start: 50906, Stop: 51367, Start Num: 50

Candidate Starts for Pokerus\_77:

(Start: 50 @50906 has 60 MA's), (Start: 64 @50933 has 53 MA's), (67, 50942), (81, 51002), (88, 51065), (97, 51107), (98, 51110), (115, 51248), (130, 51344), (131, 51347),

Gene: Polymorphads\_82 Start: 47920, Stop: 47450, Start Num: 44

Candidate Starts for Polymorphads\_82:

(Start: 38 @47938 has 3 MA's), (Start: 44 @47920 has 148 MA's), (Start: 49 @47911 has 2 MA's), (Start: 53 @47908 has 4 MA's), (Start: 64 @47890 has 53 MA's), (74, 47851), (90, 47743), (97, 47716), (106, 47653), (111, 47599),

Gene: Poompha\_77 Start: 46672, Stop: 46208, Start Num: 44

Candidate Starts for Poompha\_77:

(Start: 44 @46672 has 148 MA's), (Start: 49 @46663 has 2 MA's), (Start: 64 @46648 has 53 MA's), (111, 46357),

Gene: Prithvi\_79 Start: 50926, Stop: 51387, Start Num: 50

Candidate Starts for Prithvi\_79:

(Start: 50 @50926 has 60 MA's), (Start: 64 @50953 has 53 MA's), (67, 50962), (81, 51022), (88, 51085), (98, 51130), (115, 51268), (130, 51364), (131, 51367),

Gene: Pukovnik\_79 Start: 48185, Stop: 47718, Start Num: 44

Candidate Starts for Pukovnik\_79:

(Start: 44 @48185 has 148 MA's), (Start: 49 @48176 has 2 MA's), (Start: 53 @48173 has 4 MA's), (Start: 64 @48161 has 53 MA's), (66, 48155), (81, 48086), (90, 48008), (111, 47867),

Gene: Pumbaa\_81 Start: 47844, Stop: 47374, Start Num: 44

Candidate Starts for Pumbaa\_81:

(Start: 38 @47862 has 3 MA's), (Start: 44 @47844 has 148 MA's), (Start: 49 @47835 has 2 MA's), (Start: 53 @47832 has 4 MA's), (Start: 64 @47814 has 53 MA's), (74, 47775), (90, 47667), (97, 47640), (106, 47577), (111, 47523),

Gene: PumpkinSpice\_219 Start: 105985, Stop: 106422, Start Num: 64

Candidate Starts for PumpkinSpice\_219:

(41, 105937), (Start: 64 @105985 has 53 MA's), (74, 106024), (Start: 83 @106075 has 1 MA's), (84, 106078), (87, 106114),

Gene: Quaran19\_216 Start: 105426, Stop: 105863, Start Num: 64

Candidate Starts for Quaran19\_216:

(41, 105378), (Start: 64 @105426 has 53 MA's), (74, 105465), (Start: 83 @105516 has 1 MA's), (84, 105519), (87, 105555),

Gene: Ramen\_77 Start: 50227, Stop: 50688, Start Num: 50

Candidate Starts for Ramen\_77:

(Start: 50 @50227 has 60 MA's), (Start: 64 @50254 has 53 MA's), (67, 50263), (81, 50323), (88, 50386), (97, 50428), (98, 50431), (115, 50569), (130, 50665), (131, 50668),

Gene: Rapunzel97\_79 Start: 50878, Stop: 51339, Start Num: 50

Candidate Starts for Rapunzel97\_79:

(Start: 50 @50878 has 60 MA's), (Start: 64 @50905 has 53 MA's), (67, 50914), (81, 50974), (88, 51037), (97, 51079), (98, 51082), (115, 51220), (130, 51316), (131, 51319),

Gene: ReMo\_85 Start: 47046, Stop: 46579, Start Num: 48

Candidate Starts for ReMo\_85:

(Start: 48 @47046 has 14 MA's), (Start: 64 @47034 has 53 MA's), (74, 46995), (77, 46980),

Gene: Rebeuca\_81 Start: 47942, Stop: 47478, Start Num: 44

Candidate Starts for Rebeuca\_81:

(Start: 44 @47942 has 148 MA's), (Start: 49 @47933 has 2 MA's), (Start: 64 @47918 has 53 MA's), (106, 47681),

Gene: Relief\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Relief\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Reptar3000\_78 Start: 49350, Stop: 49922, Start Num: 55

Candidate Starts for Reptar3000\_78:

(10, 49152), (12, 49167), (20, 49203), (24, 49224), (26, 49251), (29, 49281), (Start: 55 @49350 has 18 MA's), (Start: 58 @49359 has 10 MA's), (Start: 64 @49374 has 53 MA's), (77, 49428), (81, 49443),

(90, 49521), (97, 49548), (106, 49611), (115, 49689), (147, 49890),

Gene: RhynO\_68 Start: 43272, Stop: 42805, Start Num: 44

Candidate Starts for RhynO\_68:

(Start: 44 @43272 has 148 MA's), (Start: 49 @43263 has 2 MA's), (Start: 64 @43245 has 53 MA's), (80, 43179), (90, 43098), (97, 43071), (111, 42954),

Gene: Rifter\_86 Start: 45665, Stop: 45204, Start Num: 46

Candidate Starts for Rifter\_86:

(Start: 46 @45665 has 34 MA's), (Start: 64 @45638 has 53 MA's), (79, 45578), (90, 45485), (110, 45371), (115, 45317),

Gene: Roksolana\_86 Start: 46381, Stop: 45920, Start Num: 46

Candidate Starts for Roksolana\_86:

(Start: 46 @46381 has 34 MA's), (Start: 64 @46354 has 53 MA's), (79, 46294), (90, 46201), (110, 46087),

Gene: Romney\_80 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Romney\_80:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Roosevelt\_79 Start: 47901, Stop: 47431, Start Num: 44

Candidate Starts for Roosevelt\_79:

(Start: 38 @47919 has 3 MA's), (Start: 44 @47901 has 148 MA's), (Start: 49 @47892 has 2 MA's), (Start: 53 @47889 has 4 MA's), (Start: 64 @47871 has 53 MA's), (74, 47832), (90, 47724), (97, 47697), (106, 47634), (111, 47580),

Gene: Rosmarinus\_76 Start: 50449, Stop: 50910, Start Num: 50

Candidate Starts for Rosmarinus\_76:

(Start: 50 @50449 has 60 MA's), (Start: 64 @50476 has 53 MA's), (67, 50485), (81, 50545), (88, 50608), (97, 50650), (98, 50653), (106, 50713), (115, 50791), (130, 50887), (131, 50890),

Gene: Ruin\_81 Start: 47892, Stop: 47422, Start Num: 44

Candidate Starts for Ruin\_81:

(Start: 38 @47910 has 3 MA's), (Start: 44 @47892 has 148 MA's), (Start: 49 @47883 has 2 MA's), (Start: 53 @47880 has 4 MA's), (Start: 64 @47862 has 53 MA's), (74, 47823), (97, 47688), (111, 47571),

Gene: Ruthiejr\_82 Start: 51254, Stop: 51847, Start Num: 46

Candidate Starts for Ruthiejr\_82:

(10, 51074), (20, 51125), (26, 51179), (29, 51209), (Start: 46 @51254 has 34 MA's), (Start: 55 @51263 has 18 MA's), (Start: 58 @51272 has 10 MA's), (Start: 64 @51287 has 53 MA's), (81, 51356), (90, 51434), (97, 51461), (102, 51482), (106, 51524), (143, 51776), (147, 51815), (149, 51839),

Gene: Sabertooth\_81 Start: 47904, Stop: 47434, Start Num: 44

Candidate Starts for Sabertooth\_81:

(Start: 38 @47922 has 3 MA's), (Start: 44 @47904 has 148 MA's), (Start: 49 @47895 has 2 MA's), (Start: 53 @47892 has 4 MA's), (Start: 64 @47874 has 53 MA's), (74, 47835), (97, 47700), (111, 47583),

Gene: SaltySpittoon\_216 Start: 104968, Stop: 105405, Start Num: 64



Candidate Starts for SaltySpitooon\_216:

(41, 104920), (Start: 64 @104968 has 53 MA's), (74, 105007), (Start: 83 @105058 has 1 MA's), (84, 105061), (87, 105097),

Gene: SamScheppers\_80 Start: 51574, Stop: 52149, Start Num: 58

Candidate Starts for SamScheppers\_80:

(10, 51367), (12, 51382), (20, 51418), (24, 51439), (26, 51466), (29, 51496), (Start: 46 @51556 has 34 MA's), (Start: 55 @51565 has 18 MA's), (Start: 58 @51574 has 10 MA's), (Start: 64 @51589 has 53 MA's), (81, 51658), (90, 51736), (97, 51763), (106, 51826), (115, 51904), (143, 52078), (145, 52093), (147, 52117),

Gene: SamuelLPlaqson\_76 Start: 50854, Stop: 51315, Start Num: 50

Candidate Starts for SamuelLPlaqson\_76:

(Start: 50 @50854 has 60 MA's), (Start: 64 @50881 has 53 MA's), (67, 50890), (73, 50917), (81, 50950), (88, 51013), (98, 51058), (115, 51196), (130, 51292), (131, 51295),

Gene: Scamp\_81 Start: 47901, Stop: 47431, Start Num: 44

Candidate Starts for Scamp\_81:

(Start: 38 @47919 has 3 MA's), (Start: 44 @47901 has 148 MA's), (Start: 49 @47892 has 2 MA's), (Start: 53 @47889 has 4 MA's), (Start: 64 @47871 has 53 MA's), (74, 47832), (97, 47697), (111, 47580),

Gene: Scarlett\_79 Start: 50972, Stop: 51559, Start Num: 23

Candidate Starts for Scarlett\_79:

(Start: 23 @50972 has 23 MA's), (28, 51029), (Start: 46 @51092 has 34 MA's), (Start: 64 @51125 has 53 MA's), (66, 51131), (81, 51194), (85, 51227), (90, 51272), (97, 51299), (106, 51362), (115, 51440), (131, 51539),

Gene: ScoobyDoobyDoo\_227 Start: 131341, Stop: 131811, Start Num: 58

Candidate Starts for ScoobyDoobyDoo\_227:

(Start: 58 @131341 has 10 MA's), (Start: 64 @131356 has 53 MA's), (90, 131503), (106, 131590), (115, 131692), (130, 131788),

Gene: SeresaTree\_242 Start: 116481, Stop: 116939, Start Num: 64

Candidate Starts for SeresaTree\_242:

(39, 116427), (Start: 64 @116481 has 53 MA's), (74, 116520), (94, 116649), (100, 116670), (118, 116829), (119, 116844), (132, 116925),

Gene: Severus\_78 Start: 46672, Stop: 46208, Start Num: 44

Candidate Starts for Severus\_78:

(Start: 44 @46672 has 148 MA's), (Start: 49 @46663 has 2 MA's), (Start: 64 @46648 has 53 MA's), (111, 46357),

Gene: Shadow1\_83 Start: 51593, Stop: 52159, Start Num: 22

Candidate Starts for Shadow1\_83:

(Start: 22 @51593 has 11 MA's), (25, 51623), (45, 51692), (Start: 55 @51704 has 18 MA's), (Start: 64 @51725 has 53 MA's), (73, 51761), (85, 51827), (90, 51872), (106, 51962), (115, 52040), (120, 52094), (131, 52139),

Gene: Shaka\_79 Start: 47897, Stop: 47427, Start Num: 44

Candidate Starts for Shaka\_79:

(Start: 38 @47915 has 3 MA's), (Start: 44 @47897 has 148 MA's), (Start: 49 @47888 has 2 MA's), (Start: 53 @47885 has 4 MA's), (Start: 64 @47867 has 53 MA's), (74, 47828), (90, 47720), (97,

47693), (106, 47630), (111, 47576),

Gene: Sham\_228 Start: 116010, Stop: 116459, Start Num: 64

Candidate Starts for Sham\_228:

(Start: 64 @116010 has 53 MA's), (73, 116046), (74, 116049), (94, 116172), (104, 116220), (114, 116313), (115, 116328), (119, 116367),

Gene: Shaobing\_79 Start: 51876, Stop: 52439, Start Num: 22

Candidate Starts for Shaobing\_79:

(Start: 22 @51876 has 11 MA's), (25, 51906), (Start: 55 @51984 has 18 MA's), (Start: 64 @52005 has 53 MA's), (66, 52011), (81, 52074), (85, 52107), (89, 52149), (90, 52152), (98, 52182), (106, 52242), (115, 52320), (130, 52416), (131, 52419),

Gene: ShayRa\_85 Start: 45678, Stop: 45211, Start Num: 48

Candidate Starts for ShayRa\_85:

(Start: 48 @45678 has 14 MA's), (Start: 64 @45666 has 53 MA's), (74, 45627), (77, 45612),

Gene: ShedlockHolmes\_81 Start: 51455, Stop: 52018, Start Num: 23

Candidate Starts for ShedlockHolmes\_81:

(Start: 23 @51455 has 23 MA's), (27, 51512), (34, 51536), (Start: 64 @51587 has 53 MA's), (66, 51593), (73, 51623), (81, 51656), (85, 51689), (90, 51734), (104, 51797), (106, 51824), (120, 51956),

Gene: Sheen\_78 Start: 49775, Stop: 49302, Start Num: 42

Candidate Starts for Sheen\_78:

(40, 49787), (Start: 42 @49775 has 5 MA's), (Start: 64 @49742 has 53 MA's), (73, 49706), (81, 49673), (90, 49595), (97, 49568), (106, 49505), (110, 49481), (130, 49325), (131, 49322),

Gene: SheldonCooper\_81 Start: 48337, Stop: 47867, Start Num: 44

Candidate Starts for SheldonCooper\_81:

(Start: 38 @48355 has 3 MA's), (Start: 44 @48337 has 148 MA's), (Start: 49 @48328 has 2 MA's), (Start: 53 @48325 has 4 MA's), (Start: 64 @48307 has 53 MA's), (74, 48268), (97, 48133), (111, 48016),

Gene: ShiaSurprise\_77 Start: 50658, Stop: 51119, Start Num: 50

Candidate Starts for ShiaSurprise\_77:

(Start: 50 @50658 has 60 MA's), (Start: 64 @50685 has 53 MA's), (67, 50694), (81, 50754), (88, 50817), (97, 50859), (98, 50862), (106, 50922), (115, 51000), (130, 51096), (131, 51099),

Gene: Shygu2\_79 Start: 47843, Stop: 47373, Start Num: 44

Candidate Starts for Shygu2\_79:

(Start: 38 @47861 has 3 MA's), (Start: 44 @47843 has 148 MA's), (Start: 49 @47834 has 2 MA's), (Start: 53 @47831 has 4 MA's), (Start: 64 @47813 has 53 MA's), (74, 47774), (97, 47639), (111, 47522),

Gene: SirPhilip\_90 Start: 57157, Stop: 57723, Start Num: 22

Candidate Starts for SirPhilip\_90:

(Start: 22 @57157 has 11 MA's), (27, 57214), (35, 57241), (Start: 64 @57289 has 53 MA's), (66, 57295), (81, 57358), (85, 57391), (90, 57436), (97, 57463), (106, 57526), (115, 57604),

Gene: Skipitt\_80 Start: 47911, Stop: 47423, Start Num: 38

Candidate Starts for Skipitt\_80:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111,

47572),

Gene: Slarp\_81 Start: 51231, Stop: 51815, Start Num: 55

Candidate Starts for Slarp\_81:

(10, 51042), (20, 51093), (26, 51147), (29, 51177), (Start: 46 @51222 has 34 MA's), (Start: 55 @51231 has 18 MA's), (Start: 58 @51240 has 10 MA's), (Start: 64 @51255 has 53 MA's), (81, 51324), (90, 51402), (91, 51405), (97, 51429), (102, 51450), (106, 51492), (115, 51570), (143, 51744), (147, 51783),

Gene: Slimphazie\_78 Start: 50878, Stop: 51339, Start Num: 50

Candidate Starts for Slimphazie\_78:

(Start: 50 @50878 has 60 MA's), (Start: 64 @50905 has 53 MA's), (67, 50914), (81, 50974), (88, 51037), (97, 51079), (98, 51082), (115, 51220), (130, 51316), (131, 51319),

Gene: SmellyB\_84 Start: 46012, Stop: 45551, Start Num: 46

Candidate Starts for SmellyB\_84:

(Start: 46 @46012 has 34 MA's), (Start: 64 @45985 has 53 MA's), (79, 45925), (90, 45832), (115, 45664),

Gene: Sollertia\_217 Start: 106204, Stop: 106641, Start Num: 64

Candidate Starts for Sollertia\_217:

(Start: 64 @106204 has 53 MA's), (74, 106243), (Start: 83 @106294 has 1 MA's), (84, 106297), (87, 106333), (103, 106417),

Gene: SororFago\_83 Start: 47758, Stop: 47291, Start Num: 53

Candidate Starts for SororFago\_83:

(Start: 53 @47758 has 4 MA's), (Start: 64 @47746 has 53 MA's), (97, 47566), (102, 47545), (106, 47506), (116, 47416), (118, 47395),

Gene: SparkleGoddess\_238 Start: 115994, Stop: 116452, Start Num: 64

Candidate Starts for SparkleGoddess\_238:

(Start: 62 @115991 has 2 MA's), (Start: 64 @115994 has 53 MA's), (74, 116033), (88, 116132), (91, 116150), (100, 116183), (104, 116210), (115, 116318), (132, 116438), (133, 116441),

Gene: Sparxx\_82 Start: 47895, Stop: 47425, Start Num: 44

Candidate Starts for Sparxx\_82:

(Start: 38 @47913 has 3 MA's), (Start: 44 @47895 has 148 MA's), (Start: 49 @47886 has 2 MA's), (Start: 53 @47883 has 4 MA's), (Start: 64 @47865 has 53 MA's), (74, 47826), (90, 47718), (97, 47691), (106, 47628), (111, 47574),

Gene: Spelly\_221 Start: 104897, Stop: 105334, Start Num: 64

Candidate Starts for Spelly\_221:

(41, 104849), (Start: 64 @104897 has 53 MA's), (74, 104936), (Start: 83 @104987 has 1 MA's), (84, 104990), (87, 105026),

Gene: Spilled\_223 Start: 106101, Stop: 106538, Start Num: 64

Candidate Starts for Spilled\_223:

(41, 106053), (Start: 64 @106101 has 53 MA's), (74, 106140), (Start: 83 @106191 has 1 MA's), (84, 106194), (87, 106230),

Gene: Spino\_80 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for Spino\_80:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: Spock\_76 Start: 50462, Stop: 50923, Start Num: 50

Candidate Starts for Spock\_76:

(Start: 50 @50462 has 60 MA's), (Start: 64 @50489 has 53 MA's), (67, 50498), (81, 50558), (88, 50621), (97, 50663), (98, 50666), (106, 50726), (115, 50804), (130, 50900), (131, 50903),

Gene: Stanimal\_216 Start: 106576, Stop: 107013, Start Num: 64

Candidate Starts for Stanimal\_216:

(Start: 64 @106576 has 53 MA's), (74, 106615), (Start: 83 @106666 has 1 MA's), (84, 106669), (87, 106705), (103, 106789),

Gene: StarPlatinum\_225 Start: 108298, Stop: 108735, Start Num: 64

Candidate Starts for StarPlatinum\_225:

(Start: 64 @108298 has 53 MA's), (74, 108337), (Start: 83 @108388 has 1 MA's), (86, 108418), (87, 108427),

Gene: Starbow\_213 Start: 104941, Stop: 105378, Start Num: 64

Candidate Starts for Starbow\_213:

(41, 104893), (Start: 64 @104941 has 53 MA's), (74, 104980), (Start: 83 @105031 has 1 MA's), (84, 105034), (87, 105070),

Gene: Stasia\_78 Start: 47849, Stop: 47385, Start Num: 44

Candidate Starts for Stasia\_78:

(Start: 44 @47849 has 148 MA's), (Start: 49 @47840 has 2 MA's), (Start: 64 @47825 has 53 MA's), (81, 47756),

Gene: Stigma\_236 Start: 115959, Stop: 116417, Start Num: 64

Candidate Starts for Stigma\_236:

(Start: 62 @115956 has 2 MA's), (Start: 64 @115959 has 53 MA's), (74, 115998), (88, 116097), (91, 116115), (100, 116148), (104, 116175), (115, 116283), (132, 116403), (133, 116406),

Gene: Stink\_81 Start: 48123, Stop: 47653, Start Num: 44

Candidate Starts for Stink\_81:

(Start: 38 @48141 has 3 MA's), (Start: 44 @48123 has 148 MA's), (Start: 53 @48108 has 4 MA's), (Start: 59 @48096 has 10 MA's), (Start: 64 @48090 has 53 MA's), (77, 48036), (81, 48021), (97, 47916), (111, 47799),

Gene: Strobilo\_83 Start: 53322, Stop: 53891, Start Num: 59

Candidate Starts for Strobilo\_83:

(Start: 59 @53322 has 10 MA's), (Start: 64 @53331 has 53 MA's), (72, 53361), (85, 53433), (90, 53478), (97, 53505), (98, 53508), (106, 53568), (144, 53832), (146, 53847),

Gene: Sunflower1121\_82 Start: 51137, Stop: 51703, Start Num: 22

Candidate Starts for Sunflower1121\_82:

(Start: 22 @51137 has 11 MA's), (25, 51167), (45, 51236), (Start: 55 @51248 has 18 MA's), (Start: 64 @51269 has 53 MA's), (73, 51305), (85, 51371), (90, 51416), (106, 51506), (115, 51584), (120, 51638), (131, 51683),

Gene: SuperAwesome\_84 Start: 46693, Stop: 46232, Start Num: 46

Candidate Starts for SuperAwesome\_84:

(Start: 46 @46693 has 34 MA's), (Start: 64 @46666 has 53 MA's), (79, 46606), (90, 46513), (115, 46345),

Gene: Switzerland\_85 Start: 46647, Stop: 46180, Start Num: 48

Candidate Starts for Switzerland\_85:

(Start: 48 @46647 has 14 MA's), (Start: 64 @46635 has 53 MA's), (74, 46596), (77, 46581),

Gene: Syra333\_82 Start: 51468, Stop: 52034, Start Num: 22

Candidate Starts for Syra333\_82:

(Start: 22 @51468 has 11 MA's), (25, 51498), (Start: 55 @51579 has 18 MA's), (Start: 64 @51600 has 53 MA's), (73, 51636), (85, 51702), (90, 51747), (106, 51837), (115, 51915), (120, 51969), (131, 52014),

Gene: TBond007\_75 Start: 50937, Stop: 51500, Start Num: 23

Candidate Starts for TBond007\_75:

(Start: 23 @50937 has 23 MA's), (27, 50994), (34, 51018), (Start: 64 @51069 has 53 MA's), (66, 51075), (73, 51105), (81, 51138), (85, 51171), (90, 51216), (104, 51279), (106, 51306), (120, 51438),

Gene: TClif\_92 Start: 57429, Stop: 58010, Start Num: 59

Candidate Starts for TClif\_92:

(Start: 59 @57429 has 10 MA's), (Start: 64 @57441 has 53 MA's), (66, 57447), (90, 57588), (97, 57615), (106, 57678), (124, 57834),

Gene: TM4\_80 Start: 47753, Stop: 48331, Start Num: 59

Candidate Starts for TM4\_80:

(Start: 59 @47753 has 10 MA's), (Start: 64 @47765 has 53 MA's), (90, 47912), (97, 47939), (98, 47942), (106, 48002), (139, 48245), (144, 48272), (146, 48287),

Gene: Tachez\_76 Start: 50306, Stop: 50767, Start Num: 50

Candidate Starts for Tachez\_76:

(Start: 50 @50306 has 60 MA's), (Start: 64 @50333 has 53 MA's), (67, 50342), (81, 50402), (88, 50465), (97, 50507), (98, 50510), (106, 50570), (115, 50648), (130, 50744), (131, 50747),

Gene: Taquarus\_80 Start: 47905, Stop: 47432, Start Num: 44

Candidate Starts for Taquarus\_80:

(Start: 38 @47923 has 3 MA's), (Start: 44 @47905 has 148 MA's), (65, 47872), (74, 47833), (77, 47818), (85, 47770), (97, 47698), (111, 47581),

Gene: Taquito\_80 Start: 51265, Stop: 51849, Start Num: 55

Candidate Starts for Taquito\_80:

(10, 51076), (20, 51127), (26, 51181), (29, 51211), (Start: 46 @51256 has 34 MA's), (Start: 55 @51265 has 18 MA's), (Start: 58 @51274 has 10 MA's), (Start: 64 @51289 has 53 MA's), (81, 51358), (90, 51436), (91, 51439), (97, 51463), (102, 51484), (106, 51526), (115, 51604), (143, 51778), (147, 51817),

Gene: Thanksgivukkah\_80 Start: 47897, Stop: 47427, Start Num: 44

Candidate Starts for Thanksgivukkah\_80:

(4, 48128), (Start: 38 @47915 has 3 MA's), (Start: 44 @47897 has 148 MA's), (Start: 49 @47888 has 2 MA's), (Start: 53 @47885 has 4 MA's), (Start: 64 @47867 has 53 MA's), (74, 47828), (97, 47693), (111, 47576),

Gene: Tierra\_81 Start: 51365, Stop: 51937, Start Num: 55

Candidate Starts for Tierra\_81:

(Start: 55 @51365 has 18 MA's), (Start: 64 @51386 has 53 MA's), (81, 51455), (85, 51488), (87, 51509), (90, 51533), (98, 51563), (106, 51623), (115, 51701), (120, 51755), (124, 51779), (136, 51830), (148, 51917),

Gene: Timshel\_78 Start: 49748, Stop: 49266, Start Num: 42

Candidate Starts for Timshel\_78:

(7, 49943), (11, 49922), (Start: 38 @49763 has 3 MA's), (Start: 42 @49748 has 5 MA's), (Start: 49 @49739 has 2 MA's), (51, 49736), (Start: 58 @49721 has 10 MA's), (Start: 59 @49718 has 10 MA's), (Start: 62 @49709 has 2 MA's), (Start: 64 @49706 has 53 MA's), (73, 49670), (104, 49493), (105, 49484), (120, 49334), (121, 49331),

Gene: TinaFeyge\_79 Start: 47894, Stop: 47424, Start Num: 44

Candidate Starts for TinaFeyge\_79:

(Start: 38 @47912 has 3 MA's), (Start: 44 @47894 has 148 MA's), (Start: 49 @47885 has 2 MA's), (Start: 53 @47882 has 4 MA's), (Start: 64 @47864 has 53 MA's), (74, 47825), (90, 47717), (97, 47690), (106, 47627), (111, 47573),

Gene: TiniBug\_76 Start: 50853, Stop: 51314, Start Num: 50

Candidate Starts for TiniBug\_76:

(Start: 50 @50853 has 60 MA's), (Start: 64 @50880 has 53 MA's), (67, 50889), (73, 50916), (81, 50949), (88, 51012), (98, 51057), (115, 51195), (130, 51291), (131, 51294),

Gene: Tinybot\_80 Start: 47926, Stop: 47456, Start Num: 44

Candidate Starts for Tinybot\_80:

(Start: 38 @47944 has 3 MA's), (Start: 44 @47926 has 148 MA's), (Start: 49 @47917 has 2 MA's), (Start: 53 @47914 has 4 MA's), (Start: 64 @47896 has 53 MA's), (74, 47857), (97, 47722), (111, 47605),

Gene: TiroTheta9\_80 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for TiroTheta9\_80:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (90, 47716), (97, 47689), (106, 47626), (111, 47572),

Gene: TomSawyer\_220 Start: 107412, Stop: 107849, Start Num: 64

Candidate Starts for TomSawyer\_220:

(41, 107364), (Start: 64 @107412 has 53 MA's), (74, 107451), (Start: 83 @107502 has 1 MA's), (84, 107505), (87, 107541),

Gene: Tomas\_215 Start: 106606, Stop: 107055, Start Num: 64

Candidate Starts for Tomas\_215:

(Start: 64 @106606 has 53 MA's), (74, 106645), (77, 106660), (84, 106699), (93, 106768), (123, 107002),

Gene: ToneTone\_83 Start: 46045, Stop: 45584, Start Num: 46

Candidate Starts for ToneTone\_83:

(Start: 46 @46045 has 34 MA's), (Start: 64 @46018 has 53 MA's), (79, 45958), (90, 45865), (110, 45751),

Gene: Topanga\_69 Start: 44300, Stop: 43836, Start Num: 44

Candidate Starts for Topanga\_69:

(Start: 44 @44300 has 148 MA's), (Start: 64 @44276 has 53 MA's), (71, 44252),

Gene: Topper\_76 Start: 50461, Stop: 50922, Start Num: 50

Candidate Starts for Topper\_76:

(Start: 50 @50461 has 60 MA's), (Start: 64 @50488 has 53 MA's), (67, 50497), (81, 50557), (88, 50620), (97, 50662), (98, 50665), (106, 50725), (115, 50803), (130, 50899), (131, 50902),

Gene: TreyKay\_79 Start: 50926, Stop: 51387, Start Num: 50

Candidate Starts for TreyKay\_79:

(Start: 50 @50926 has 60 MA's), (Start: 64 @50953 has 53 MA's), (67, 50962), (81, 51022), (88, 51085), (98, 51130), (115, 51268), (130, 51364), (131, 51367),

Gene: TribbleTrouble\_78 Start: 51156, Stop: 51722, Start Num: 23

Candidate Starts for TribbleTrouble\_78:

(15, 51108), (16, 51111), (Start: 23 @51156 has 23 MA's), (Start: 64 @51291 has 53 MA's), (66, 51297), (81, 51360), (85, 51393), (87, 51414), (89, 51435), (90, 51438), (106, 51528), (116, 51612), (120, 51660),

Gene: TroyPia\_82 Start: 47934, Stop: 47464, Start Num: 44

Candidate Starts for TroyPia\_82:

(Start: 38 @47952 has 3 MA's), (Start: 44 @47934 has 148 MA's), (Start: 49 @47925 has 2 MA's), (Start: 53 @47922 has 4 MA's), (Start: 64 @47904 has 53 MA's), (74, 47865), (97, 47730), (111, 47613),

Gene: TruffulaTree\_78 Start: 50874, Stop: 51335, Start Num: 50

Candidate Starts for TruffulaTree\_78:

(Start: 50 @50874 has 60 MA's), (Start: 64 @50901 has 53 MA's), (67, 50910), (81, 50970), (88, 51033), (97, 51075), (98, 51078), (115, 51216), (130, 51312), (131, 51315),

Gene: Tucker\_86 Start: 46248, Stop: 45787, Start Num: 46

Candidate Starts for Tucker\_86:

(Start: 46 @46248 has 34 MA's), (Start: 64 @46221 has 53 MA's), (79, 46161), (90, 46068), (110, 45954),

Gene: Twister\_80 Start: 47500, Stop: 47036, Start Num: 44

Candidate Starts for Twister\_80:

(Start: 44 @47500 has 148 MA's), (54, 47488), (Start: 64 @47476 has 53 MA's), (90, 47329), (97, 47302), (111, 47185),

Gene: Twitch\_76 Start: 50463, Stop: 50924, Start Num: 50

Candidate Starts for Twitch\_76:

(Start: 50 @50463 has 60 MA's), (Start: 64 @50490 has 53 MA's), (67, 50499), (81, 50559), (88, 50622), (97, 50664), (98, 50667), (106, 50727), (115, 50805), (130, 50901), (131, 50904),

Gene: TygerBlood\_81 Start: 47899, Stop: 47429, Start Num: 44

Candidate Starts for TygerBlood\_81:

(Start: 38 @47917 has 3 MA's), (Start: 44 @47899 has 148 MA's), (Start: 49 @47890 has 2 MA's), (Start: 53 @47887 has 4 MA's), (Start: 64 @47869 has 53 MA's), (74, 47830), (97, 47695), (111, 47578),

Gene: Ulysses\_80 Start: 47582, Stop: 47112, Start Num: 44

Candidate Starts for Ulysses\_80:

(Start: 38 @47600 has 3 MA's), (Start: 44 @47582 has 148 MA's), (Start: 49 @47573 has 2 MA's), (Start: 53 @47570 has 4 MA's), (Start: 64 @47552 has 53 MA's), (74, 47513), (97, 47378), (111, 47261),

Gene: Unicorn\_81 Start: 51079, Stop: 51651, Start Num: 55

Candidate Starts for Unicorn\_81:

(Start: 55 @51079 has 18 MA's), (Start: 64 @51100 has 53 MA's), (81, 51169), (85, 51202), (87, 51223), (90, 51247), (98, 51277), (106, 51337), (115, 51415), (120, 51469), (124, 51493), (148, 51631),

Gene: Urkel\_76 Start: 50854, Stop: 51315, Start Num: 50

Candidate Starts for Urkel\_76:

(Start: 50 @50854 has 60 MA's), (Start: 64 @50881 has 53 MA's), (67, 50890), (73, 50917), (81, 50950), (88, 51013), (98, 51058), (115, 51196), (130, 51292), (131, 51295),

Gene: Validus\_82 Start: 52159, Stop: 52722, Start Num: 22

Candidate Starts for Validus\_82:

(Start: 22 @52159 has 11 MA's), (25, 52186), (45, 52255), (Start: 55 @52267 has 18 MA's), (Start: 64 @52288 has 53 MA's), (66, 52294), (81, 52357), (85, 52390), (90, 52435), (98, 52465), (106, 52525), (115, 52603), (130, 52699), (131, 52702),

Gene: Veliki\_77 Start: 50414, Stop: 50875, Start Num: 50

Candidate Starts for Veliki\_77:

(Start: 50 @50414 has 60 MA's), (Start: 64 @50441 has 53 MA's), (67, 50450), (81, 50510), (88, 50573), (97, 50615), (98, 50618), (115, 50756), (130, 50852), (131, 50855),

Gene: VohminGhazi\_84 Start: 46013, Stop: 45552, Start Num: 46

Candidate Starts for VohminGhazi\_84:

(Start: 46 @46013 has 34 MA's), (Start: 64 @45986 has 53 MA's), (79, 45926), (90, 45833), (115, 45665),

Gene: Waits\_87 Start: 47034, Stop: 46567, Start Num: 48

Candidate Starts for Waits\_87:

(Start: 48 @47034 has 14 MA's), (Start: 64 @47022 has 53 MA's), (74, 46983), (77, 46968),

Gene: Wakanda\_212 Start: 105499, Stop: 105951, Start Num: 64

Candidate Starts for Wakanda\_212:

(Start: 64 @105499 has 53 MA's), (71, 105523), (74, 105538), (75, 105541), (88, 105631), (91, 105649), (100, 105682), (122, 105883),

Gene: WalterMcMickey\_79 Start: 47500, Stop: 47036, Start Num: 44

Candidate Starts for WalterMcMickey\_79:

(Start: 44 @47500 has 148 MA's), (54, 47488), (Start: 64 @47476 has 53 MA's), (90, 47329), (97, 47302), (111, 47185),

Gene: Wander\_81 Start: 47893, Stop: 47423, Start Num: 44

Candidate Starts for Wander\_81:

(Start: 38 @47911 has 3 MA's), (Start: 44 @47893 has 148 MA's), (Start: 49 @47884 has 2 MA's), (Start: 53 @47881 has 4 MA's), (Start: 64 @47863 has 53 MA's), (74, 47824), (97, 47689), (111, 47572),

Gene: Wiks\_85 Start: 46116, Stop: 45655, Start Num: 46

Candidate Starts for Wiks\_85:

(Start: 46 @46116 has 34 MA's), (Start: 64 @46089 has 53 MA's), (79, 46029), (90, 45936), (110, 45822),



Gene: Wilbur\_81 Start: 47896, Stop: 47426, Start Num: 44

Candidate Starts for Wilbur\_81:

(Start: 38 @47914 has 3 MA's), (Start: 44 @47896 has 148 MA's), (Start: 49 @47887 has 2 MA's), (Start: 53 @47884 has 4 MA's), (Start: 64 @47866 has 53 MA's), (74, 47827), (97, 47692), (111, 47575),

Gene: Wile\_76 Start: 47547, Stop: 47080, Start Num: 44

Candidate Starts for Wile\_76:

(Start: 38 @47565 has 3 MA's), (Start: 44 @47547 has 148 MA's), (Start: 49 @47538 has 2 MA's), (Start: 53 @47535 has 4 MA's), (Start: 64 @47517 has 53 MA's), (74, 47478), (97, 47343), (106, 47280), (111, 47226),

Gene: Wintermute\_81 Start: 51441, Stop: 52025, Start Num: 55

Candidate Starts for Wintermute\_81:

(10, 51252), (20, 51303), (26, 51357), (29, 51387), (Start: 46 @51432 has 34 MA's), (Start: 55 @51441 has 18 MA's), (Start: 58 @51450 has 10 MA's), (Start: 64 @51465 has 53 MA's), (81, 51534), (88, 51597), (90, 51612), (97, 51639), (106, 51702), (143, 51954), (147, 51993),

Gene: Wipeout\_207 Start: 106454, Stop: 106801, Start Num: 83

Candidate Starts for Wipeout\_207:

(41, 106316), (Start: 64 @106364 has 53 MA's), (74, 106403), (Start: 83 @106454 has 1 MA's), (84, 106457), (87, 106493),

Gene: Wizard007\_77 Start: 47273, Stop: 46806, Start Num: 44

Candidate Starts for Wizard007\_77:

(Start: 38 @47291 has 3 MA's), (Start: 44 @47273 has 148 MA's), (Start: 49 @47264 has 2 MA's), (Start: 53 @47261 has 4 MA's), (Start: 64 @47243 has 53 MA's), (74, 47204), (97, 47069), (106, 47006), (111, 46952),

Gene: Wofford\_218 Start: 109219, Stop: 109656, Start Num: 64

Candidate Starts for Wofford\_218:

(Start: 64 @109219 has 53 MA's), (74, 109258), (Start: 83 @109309 has 1 MA's), (84, 109312), (87, 109348), (103, 109432),

Gene: WunderPhul\_86 Start: 46114, Stop: 45653, Start Num: 46

Candidate Starts for WunderPhul\_86:

(Start: 46 @46114 has 34 MA's), (Start: 64 @46087 has 53 MA's), (79, 46027), (90, 45934), (110, 45820),

Gene: Xena\_77 Start: 47718, Stop: 47248, Start Num: 44

Candidate Starts for Xena\_77:

(Start: 38 @47736 has 3 MA's), (Start: 44 @47718 has 148 MA's), (Start: 49 @47709 has 2 MA's), (Start: 53 @47706 has 4 MA's), (Start: 64 @47688 has 53 MA's), (74, 47649), (97, 47514), (111, 47397),

Gene: Ximenita\_84 Start: 51791, Stop: 52357, Start Num: 22

Candidate Starts for Ximenita\_84:

(Start: 22 @51791 has 11 MA's), (25, 51821), (Start: 55 @51902 has 18 MA's), (Start: 64 @51923 has 53 MA's), (73, 51959), (85, 52025), (90, 52070), (106, 52160), (115, 52238), (120, 52292), (131, 52337),

Gene: Y10\_78 Start: 51399, Stop: 51974, Start Num: 58

Candidate Starts for Y10\_78:

(10, 51201), (20, 51252), (26, 51306), (29, 51336), (Start: 46 @51381 has 34 MA's), (Start: 55 @51390 has 18 MA's), (Start: 58 @51399 has 10 MA's), (Start: 64 @51414 has 53 MA's), (81, 51483), (90, 51561), (97, 51588), (102, 51609), (106, 51651), (143, 51903), (147, 51942), (149, 51966),

Gene: Y2\_78 Start: 51399, Stop: 51974, Start Num: 58

Candidate Starts for Y2\_78:

(10, 51201), (20, 51252), (26, 51306), (29, 51336), (Start: 46 @51381 has 34 MA's), (Start: 55 @51390 has 18 MA's), (Start: 58 @51399 has 10 MA's), (Start: 64 @51414 has 53 MA's), (81, 51483), (90, 51561), (97, 51588), (102, 51609), (106, 51651), (143, 51903), (147, 51942), (149, 51966),

Gene: Yaboi\_221 Start: 106139, Stop: 106576, Start Num: 64

Candidate Starts for Yaboi\_221:

(Start: 64 @106139 has 53 MA's), (74, 106178), (Start: 83 @106229 has 1 MA's), (84, 106232), (87, 106268), (103, 106352),

Gene: Yakult\_36 Start: 26432, Stop: 25950, Start Num: 55

Candidate Starts for Yakult\_36:

(14, 26600), (18, 26579), (Start: 23 @26549 has 23 MA's), (Start: 55 @26432 has 18 MA's), (Start: 64 @26408 has 53 MA's), (90, 26261), (92, 26255), (98, 26231), (108, 26162),

Gene: YoSam321\_81 Start: 47894, Stop: 47424, Start Num: 44

Candidate Starts for YoSam321\_81:

(Start: 38 @47912 has 3 MA's), (Start: 44 @47894 has 148 MA's), (Start: 49 @47885 has 2 MA's), (Start: 53 @47882 has 4 MA's), (Start: 64 @47864 has 53 MA's), (74, 47825), (97, 47690), (111, 47573),

Gene: Yokurt\_85 Start: 46116, Stop: 45655, Start Num: 46

Candidate Starts for Yokurt\_85:

(Start: 46 @46116 has 34 MA's), (Start: 64 @46089 has 53 MA's), (79, 46029), (90, 45936), (110, 45822),

Gene: Yuna\_80 Start: 52283, Stop: 52852, Start Num: 22

Candidate Starts for Yuna\_80:

(Start: 22 @52283 has 11 MA's), (25, 52313), (27, 52340), (28, 52343), (Start: 64 @52418 has 53 MA's), (66, 52424), (71, 52442), (81, 52487), (85, 52520), (90, 52565), (97, 52592), (106, 52655), (115, 52733), (120, 52787),

Gene: Yunkel11\_82 Start: 51044, Stop: 51505, Start Num: 50

Candidate Starts for Yunkel11\_82:

(Start: 50 @51044 has 60 MA's), (Start: 64 @51071 has 53 MA's), (67, 51080), (81, 51140), (85, 51173), (89, 51215), (97, 51245), (98, 51248), (106, 51308), (115, 51386), (130, 51482), (131, 51485),

Gene: Zabiza\_72 Start: 46811, Stop: 47272, Start Num: 50

Candidate Starts for Zabiza\_72:

(Start: 50 @46811 has 60 MA's), (Start: 64 @46838 has 53 MA's), (67, 46847), (81, 46907), (88, 46970), (97, 47012), (98, 47015), (106, 47075), (115, 47153), (130, 47249), (131, 47252),

Gene: Zaka\_86 Start: 46116, Stop: 45655, Start Num: 46

Candidate Starts for Zaka\_86:

(Start: 46 @46116 has 34 MA's), (Start: 64 @46089 has 53 MA's), (79, 46029), (90, 45936), (110, 45822),

Gene: Zavala\_79 Start: 50952, Stop: 51413, Start Num: 50

Candidate Starts for Zavala\_79:

(Start: 50 @50952 has 60 MA's), (Start: 59 @50967 has 10 MA's), (Start: 64 @50979 has 53 MA's), (67, 50988), (81, 51048), (88, 51111), (97, 51153), (98, 51156), (115, 51294), (130, 51390), (131, 51393),

Gene: ZoeJ\_81 Start: 52756, Stop: 53337, Start Num: 59

Candidate Starts for ZoeJ\_81:

(Start: 59 @52756 has 10 MA's), (Start: 64 @52768 has 53 MA's), (90, 52915), (97, 52942), (98, 52945), (106, 53005), (138, 53221), (139, 53248), (144, 53278), (146, 53293),

Gene: Zooman\_12 Start: 5578, Stop: 6045, Start Num: 64

Candidate Starts for Zooman\_12:

(Start: 64 @5578 has 53 MA's), (74, 5617), (75, 5620), (106, 5821), (114, 5884), (115, 5899), (120, 5959),

Gene: Zooman\_325 Start: 181229, Stop: 181696, Start Num: 64

Candidate Starts for Zooman\_325:

(Start: 64 @181229 has 53 MA's), (74, 181268), (75, 181271), (106, 181472), (114, 181535), (115, 181550), (120, 181610),

Gene: Zulu\_87 Start: 46494, Stop: 46033, Start Num: 46

Candidate Starts for Zulu\_87:

(Start: 46 @46494 has 34 MA's), (Start: 64 @46467 has 53 MA's), (79, 46407), (90, 46314), (110, 46200),