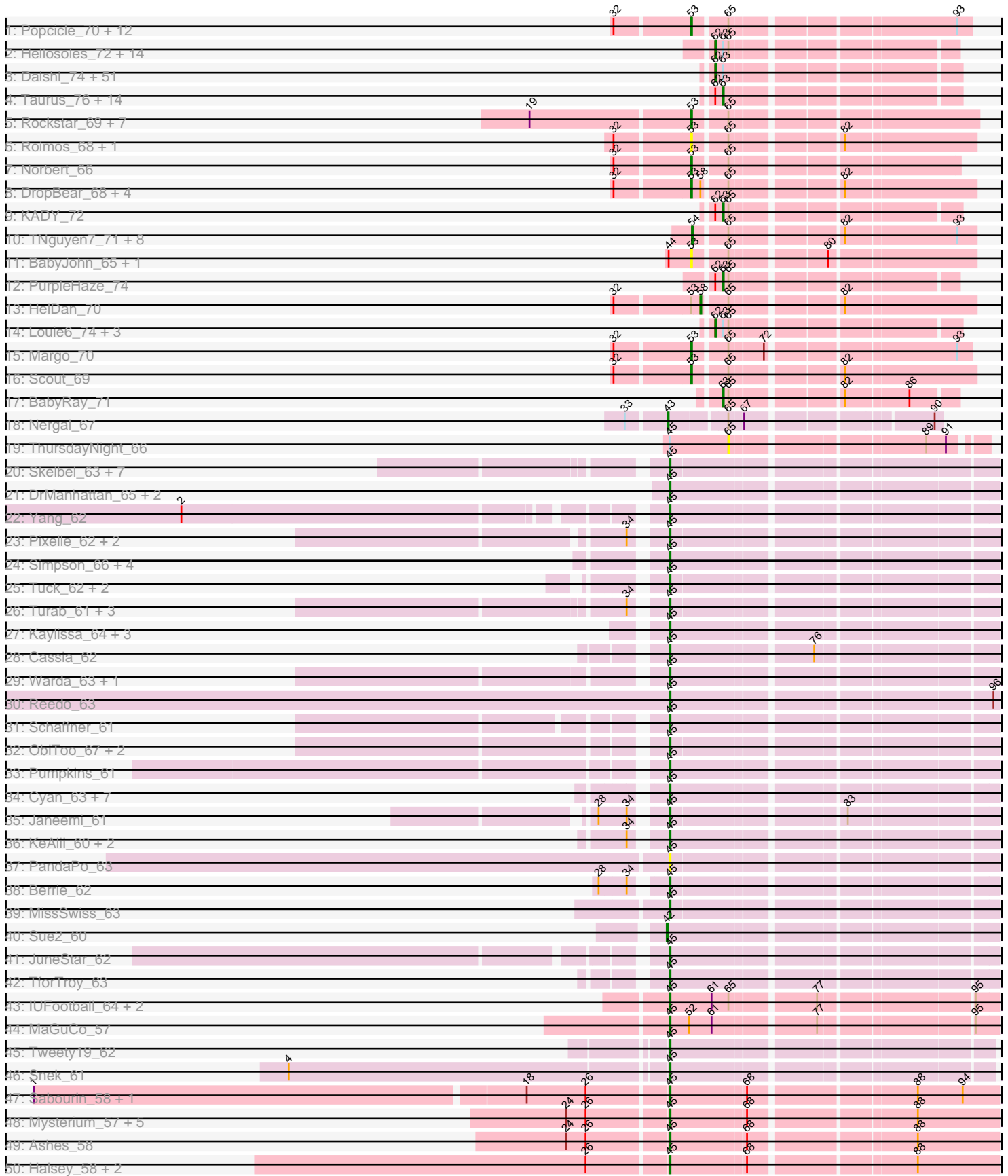
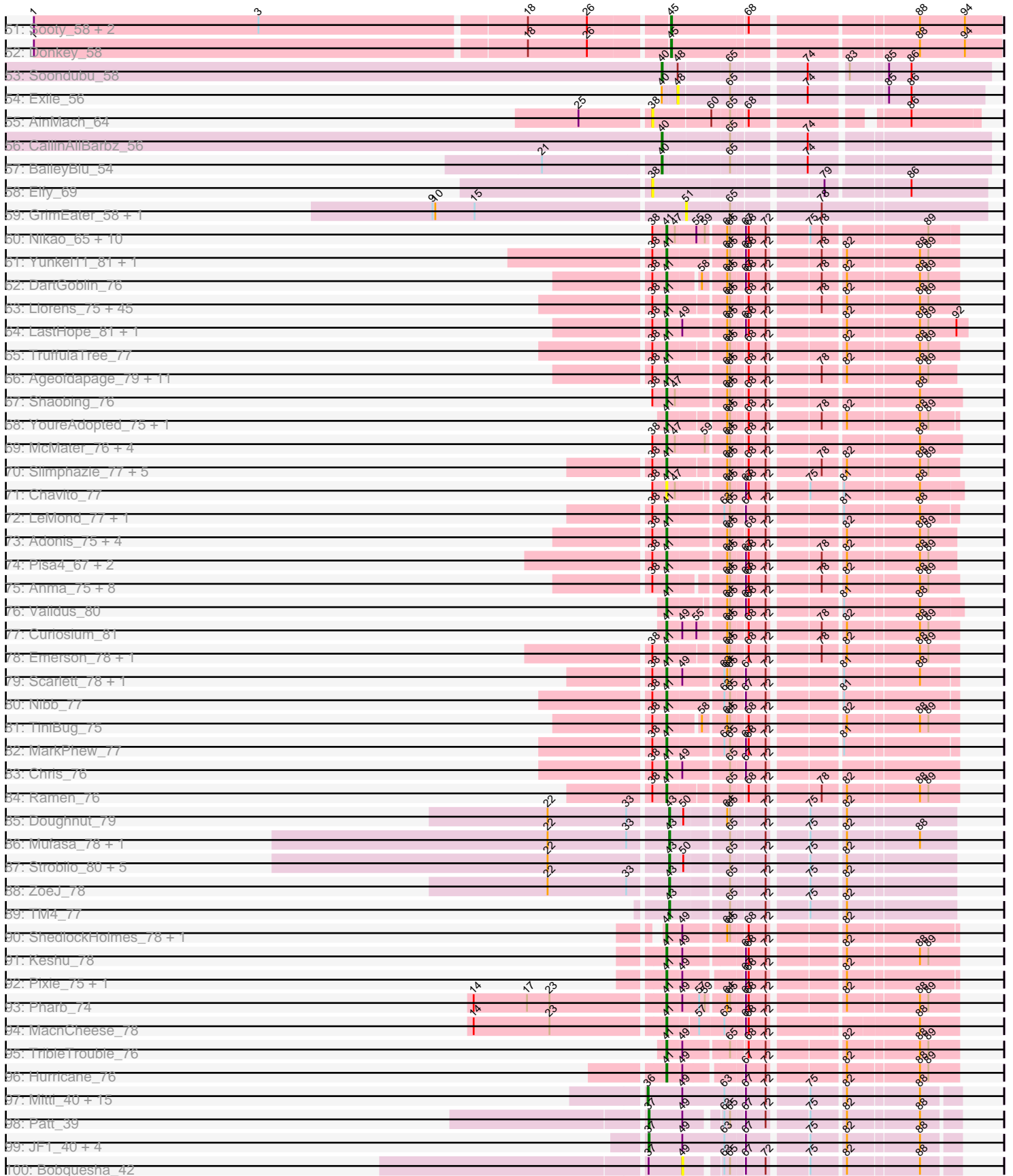


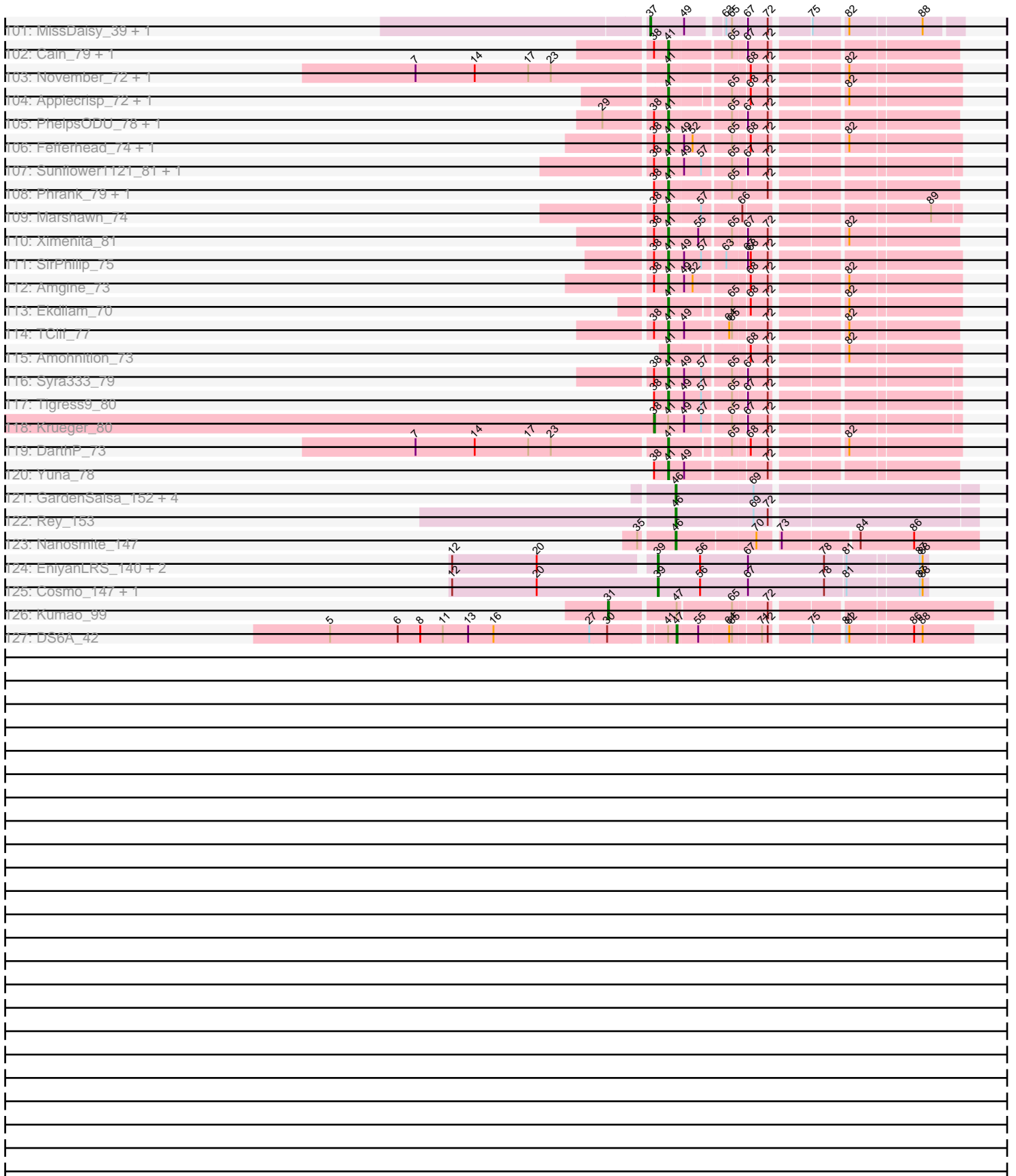
Pham 304614



Pham 304614



Pham 304614



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 304614 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304614 has 427 members, 51 are drafts.

Phages represented in each track:

- Track 1 : Popcicle\_70, Veracruz\_67, QuinnKiro\_69, Caviar\_70, Panamaxus\_68, EtoileNova\_68, Lambert1\_70, Todacoro\_70, Hookmount\_70, Pocahontas\_69, Texage\_68, Noella\_70, ResDef\_68
- Track 2 : Heliosoles\_72, Kalnoky\_75, PhishRPhriends\_71, Kalb97\_75, ACFishhook\_72, JeppNRM\_75, Pawn\_73, Groupthink\_75, Gemma\_72, Marius\_75, Calvinny\_72, ClownCar\_72, HaveUMetTed\_75, OlanP\_73, Manu\_74
- Track 3 : Daishi\_74, Snickers\_75, Penny1\_75, Grif\_73, Montavir\_70, AgronaGT15\_72, Vix\_71, Aglet\_76, Dieselweasel\_75, GingkoMaracino\_75, Grum1\_74, AugsMagnumOpus\_78, Pembroke\_75, Soshari\_77, GtownJaz\_75, Bxz2\_70, StepMih\_74, Malinsilva\_77, Wooldri\_77, LBerry\_76, Rummer\_74, SoYo\_72, Methuselah\_68, Mainiac\_74, Colbster\_71, Grub\_73, Cullens\_75, SoilDragon\_74, Beauxregard13\_74, EpicPhail\_76, Hercules11\_75, Fernando\_75, Sabia\_73, LugYA\_78, MadMarie\_73, LarryKay\_75, PGHhamlin\_77, PotatoSplit\_76, Lilith\_73, Zetzy\_72, P28Green\_75, Ollie\_75, BreSam8\_75, MoneyMay\_74, HashRod\_76, Marie\_73, Microwolf\_71, Watson\_74, MuchMore\_78, Farber\_75, DaHudson\_74, Phoebe\_76
- Track 4 : Taurus\_76, MarQuardt\_75, Croquant\_72, Jobu08\_71, Gwennie\_70, Stagni\_72, Phoxy\_75, Tiffany\_74, Spike509\_75, JenCasNa\_76, Sabinator\_73, Lowa\_72, Anubis\_78, Bigflo\_72, JHC117\_71
- Track 5 : Rockstar\_69, Isca\_68, MK4\_70, B1\_62, MA5\_70, JF4\_68, Phantastic\_72, JF2\_68
- Track 6 : Roimos\_68, Zarafa\_68
- Track 7 : Norbert\_66
- Track 8 : DropBear\_68, Fred313\_68, Marchesa\_68, Kachowdy\_68, Heathen\_70
- Track 9 : KADY\_72
- Track 10 : TNguyen7\_71, Bugatti\_70, Clammy\_70, Idleandcovert\_71, BlueBird\_73, SaturnRing\_70, Puppy\_71, Pistachio\_70, Giroux\_73
- Track 11 : BabyJohn\_65, Chiqui\_65
- Track 12 : PurpleHaze\_74
- Track 13 : HelDan\_70
- Track 14 : Louie6\_74, TinyPebbles\_74, BuzzBuzz\_69, Misomonster\_76
- Track 15 : Margo\_70
- Track 16 : Scout\_69
- Track 17 : BabyRay\_71
- Track 18 : Nergal\_67
- Track 19 : ThursdayNight\_66

- Track 20 : Skelbel\_63, Eraser\_62, Asa16\_62, Jstan\_63, London\_62, Subaru\_62, Niobe\_62, Elezi\_61
- Track 21 : DrManhattan\_65, Adolin\_64, VResidence\_62
- Track 22 : Yang\_62
- Track 23 : Pixelle\_62, Amyev\_62, Tian\_61
- Track 24 : Simpson\_66, Joemato\_63, Tallboi\_62, Nitro\_63, Flutur\_62
- Track 25 : Tuck\_62, Community\_62, Phives\_63
- Track 26 : Turab\_61, Adumb2043\_61, AEgle\_60, Amploria\_62
- Track 27 : Kaylissa\_64, Mudpuppy\_60, Lizalica\_61, Lego\_62
- Track 28 : Cassia\_62
- Track 29 : Warda\_63, Tbone\_62
- Track 30 : Reedo\_63
- Track 31 : Schaffner\_61
- Track 32 : ObiToo\_67, IttyBittyPiggy\_62, Crewmate\_67
- Track 33 : Pumpkins\_61
- Track 34 : Cyan\_63, Powerpuff\_64, Iter\_63, Tutumahutu\_64, Ascela\_64, YesChef\_62, AGrandiflora\_64, JohnDoe\_63
- Track 35 : Janeemi\_61
- Track 36 : KeAlii\_60, DrSierra\_59, Wildwest\_58
- Track 37 : PandaPo\_63
- Track 38 : Berrie\_62
- Track 39 : MissSwiss\_63
- Track 40 : Sue2\_60
- Track 41 : JuneStar\_62
- Track 42 : TforTroy\_63
- Track 43 : IUFootball\_64, Maureen\_64, Liebe\_64
- Track 44 : MaGuCo\_57
- Track 45 : Tweety19\_62
- Track 46 : Snek\_61
- Track 47 : Sabourin\_58, Gambol\_59
- Track 48 : Mysterium\_57, Giorgio\_57, RockScotty\_57, Beaupre\_57, Gumpizza\_57, Stuu\_58
- Track 49 : Ashes\_58
- Track 50 : Halsey\_58, Moss\_58, SpecialK\_58
- Track 51 : Sooty\_58, Cappuccino\_58, Kalimba\_58
- Track 52 : Donkey\_58
- Track 53 : Soondubu\_58
- Track 54 : Exile\_56
- Track 55 : AinMach\_64
- Track 56 : CallinAllBarbz\_56
- Track 57 : BaileyBlu\_54
- Track 58 : Elfy\_69
- Track 59 : GrimEater\_58, Jankie\_60
- Track 60 : Nikao\_65, Nutello\_62, Teejan\_64, Mdavu\_63, LilPharaoh\_63, Binglebops\_62, Torres\_65, SgtBeansprout\_63, Trice\_62, Enkosi\_64, Amelie\_62
- Track 61 : Yunkel11\_81, Efra2\_82
- Track 62 : DartGoblin\_76
- Track 63 : Llorens\_75, CaseJules\_77, Rapunzel97\_78, Boiiii\_75, Hyperbowlee\_74, Apocalypse\_78, Spock\_75, QuincyRose\_73, BEEST\_75, Asayake\_75, Topper\_75, Dalmuri\_75, Twitch\_75, BarrelRoll\_76, Blizzard\_75, Homura\_74, ShiaSurprise\_76, Joy99\_76, Peel\_75, CREW\_74, Belladonna\_75, Jeckyll\_75, HedwigODU\_75, Atiba\_76, Durfee\_75, Deby\_75, Piatt\_74, Capricorn\_75, Mynx\_77, Tachez\_75, Ganymede\_75, AlishaPH\_74, Zabiza\_71, Rosmarinus\_75, Lunahalos\_75,

Adephagia\_74, Jarvi\_75, Zavala\_78, Padfoot\_75, BaghaKamala\_74, Jayhawk\_78, Inky\_75, CallaLilly\_75, Geraldini\_79, ActinUp\_76, BGilluviae\_75

- Track 64 : LastHope\_81, TingHuaYa\_78
- Track 65 : TruffulaTree\_77
- Track 66 : Ageofdapage\_79, TaiwanKao\_77, Sulley\_74, MacKat\_72, Anaya\_79, Illumine\_81, Angelica\_74, Stinson\_76, Clipper\_80, Megsy\_77, Devera\_83, Dole\_80
- Track 67 : Shaobing\_76
- Track 68 : YoureAdopted\_75, Beezoo\_78
- Track 69 : McMater\_76, Niklas\_77, Richo\_76, Peanam\_77, Dartin\_76
- Track 70 : Slimphazie\_77, Tiri\_75, CheetoDust\_75, Veliki\_76, Pokerus\_76, JAWS\_74
- Track 71 : Chavito\_77
- Track 72 : LeMond\_77, Oscar\_77
- Track 73 : Adonis\_75, MeaningOfLife\_77, Bella96\_76, Murucutumbu\_76, LaterM\_75
- Track 74 : Pisa4\_67, Guanica15\_81, Pisa1\_73
- Track 75 : Anma\_75, Urkel\_75, DrHayes\_75, CrimD\_77, Bern\_76, Prithvi\_78, SamuelLPlaqson\_75, LindNT\_74, TreyKay\_78
- Track 76 : Validus\_80
- Track 77 : Curiosium\_81
- Track 78 : Emerson\_78, Padpat\_79
- Track 79 : Scarlett\_78, KiSi\_78
- Track 80 : Nibb\_77
- Track 81 : TiniBug\_75
- Track 82 : MarkPhew\_77
- Track 83 : Chris\_76
- Track 84 : Ramen\_76
- Track 85 : Doughnut\_79
- Track 86 : Mufasa\_78, BoostSeason\_78
- Track 87 : Strobilo\_80, Marcoliusprime\_78, DismalStressor\_79, Findley\_79, DismalFunk\_79, Milly\_79
- Track 88 : ZoeJ\_78
- Track 89 : TM4\_77
- Track 90 : ShedlockHolmes\_78, Lea83\_76
- Track 91 : Keshu\_78
- Track 92 : Pixie\_75, TBond007\_72
- Track 93 : Pharb\_74
- Track 94 : MacnCheese\_78
- Track 95 : TribbleTrouble\_76
- Track 96 : Hurricane\_76
- Track 97 : Mitti\_40, YasnayaPolyana\_40, Cheetobro\_40, Malthus\_41, Chancellor\_40, Qhanda\_41, Eponine\_42, Lebo14\_40, Wintermute\_40, Slarp\_40, OmniCritical\_39, Taquito\_40, SamScheppers\_39, Fionnbharth\_40, Kraw\_40, DanSyl44\_43
- Track 98 : Patt\_39
- Track 99 : JF1\_40, Y2\_39, Y10\_39, Juliette\_42, Ruthiejr\_41
- Track 100 : Bobquesha\_42
- Track 101 : MissDaisy\_39, Reptar3000\_40
- Track 102 : Cain\_79, Bryler\_79
- Track 103 : November\_72, Hammy\_73
- Track 104 : Applecrisp\_72, Ellie\_71
- Track 105 : PhelpsODU\_78, Unicorn\_78
- Track 106 : Fefferhead\_74, Lavahound\_72
- Track 107 : Sunflower1121\_81, Shadow1\_80

- Track 108 : Phrank\_79, Tierra\_79
- Track 109 : Marshawn\_74
- Track 110 : Ximenita\_81
- Track 111 : SirPhilip\_75
- Track 112 : Amgine\_73
- Track 113 : Ekdilam\_70
- Track 114 : TClif\_77
- Track 115 : Amohnition\_73
- Track 116 : Syra333\_79
- Track 117 : Tigress9\_80
- Track 118 : Krueger\_80
- Track 119 : DarthP\_73
- Track 120 : Yuna\_78
- Track 121 : GardenSalsa\_152, Aziz\_150, Estes\_152, GenevaB15\_153, MrMagoo\_154
- Track 122 : Rey\_153
- Track 123 : Nanosmite\_147
- Track 124 : EniyanLRS\_140, Wildcat\_147, MaryV\_133
- Track 125 : Cosmo\_147, Azrael100\_140
- Track 126 : Kumao\_99
- Track 127 : DS6A\_42

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

The start number called the most often in the published annotations is 41, it was called in 143 of the 376 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_76, Adephegia\_74, Adonis\_75, Ageofdapage\_79, AlishaPH\_74, Amelie\_62, Amgine\_73, Amohnition\_73, Anaya\_79, Angelica\_74, Anma\_75, Apocalypse\_78, Applecrisp\_72, Asayake\_75, Atiba\_76, BEEST\_75, BGlluviae\_75, BaghaKamala\_74, BarrelRoll\_76, Beezoo\_78, Bella96\_76, Belladonna\_75, Bern\_76, Biglebops\_62, Blizzard\_75, Boiiii\_75, Bryler\_79, CREW\_74, Cain\_79, CallaLilly\_75, Capricorn\_75, CaseJules\_77, Chavito\_77, CheetoDust\_75, Chris\_76, Clipper\_80, CrimD\_77, Curiosium\_81, Dalmuri\_75, DartGoblin\_76, DarthP\_73, Dartin\_76, Deby\_75, Devera\_83, Dole\_80, DrHayes\_75, Durfee\_75, Efra2\_82, Ekdilam\_70, Ellie\_71, Emerson\_78, Enkosi\_64, Fefferhead\_74, Ganymede\_75, Geraldini\_79, Guanica15\_81, Hammy\_73, HedwigODU\_75, Homura\_74, Hurricane\_76, Hyperbowlee\_74, Illumine\_81, Inky\_75, JAWS\_74, Jarvi\_75, Jayhawk\_78, Jeckyll\_75, Joy99\_76, Keshu\_78, KiSi\_78, LastHope\_81, LaterM\_75, Lavahound\_72, LeMond\_77, Lea83\_76, LilPharaoh\_63, LindNT\_74, Llorens\_75, Lunahalos\_75, MacKat\_72, MacnCheese\_78, MarkPhew\_77, Marshawn\_74, McMater\_76, Mdavu\_63, MeaningOfLife\_77, Megsy\_77, Murucutumbu\_76, Mynx\_77, Nibb\_77, Nikao\_65, Niklas\_77, November\_72, Nutello\_62, Oscar\_77, Padfoot\_75, Padpat\_79, Peanam\_77, Peel\_75, Pharb\_74, PhelpsODU\_78, Phrank\_79, Piatt\_74, Pisa1\_73, Pisa4\_67, Pixie\_75, Pokerus\_76, Prithvi\_78, QuincyRose\_73, Ramen\_76, Rapunzel97\_78, Richo\_76, Rosmarinus\_75, SamuelLPlaqson\_75, Scarlett\_78, SgtBeansprout\_63, Shadow1\_80, Shaobing\_76, ShedlockHolmes\_78, ShiaSurprise\_76, SirPhilip\_75, Slimphazie\_77, Spock\_75, Stinson\_76, Sulley\_74, Sunflower1121\_81, Syra333\_79, TBond007\_72, TClif\_77, Tachez\_75,

TaiwanKao\_77, Teejan\_64, Tierra\_79, Tigress9\_80, TingHuaYa\_78, TiniBug\_75, Tiri\_75, Topper\_75, Torres\_65, TreyKay\_78, TripleTrouble\_76, Trice\_62, TruffulaTree\_77, Twitch\_75, Unicorn\_78, Urkel\_75, Validus\_80, Veliki\_76, Ximenita\_81, YoureAdopted\_75, Yuna\_78, Yunkel11\_81, Zabiza\_71, Zavala\_78,

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

- DS6A\_42, Krueger\_80,

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

- ACFishhook\_72, AEgle\_60, AGrandiflora\_64, Adolin\_64, Adumb2043\_61, Aglet\_76, AgronaGT15\_72, AinMach\_64, Amploria\_62, Amyev\_62, Anubis\_78, Asa16\_62, Ascela\_64, Ashes\_58, AugsMagnumOpus\_78, Aziz\_150, Azrael100\_140, B1\_62, BabyJohn\_65, BabyRay\_71, BaileyBlu\_54, Beaupre\_57, Beauxregard13\_74, Berrie\_62, Bigflo\_72, BlueBird\_73, Bobquesha\_42, BoostSeason\_78, BreSam8\_75, Bugatti\_70, BuzzBuzz\_69, Bxz2\_70, CallinAllBarbz\_56, Calvinny\_72, Cappuccino\_58, Cassia\_62, Caviar\_70, Chancellor\_40, Cheetobro\_40, Chiqui\_65, Clammy\_70, ClownCar\_72, Colbster\_71, Community\_62, Cosmo\_147, Crewmate\_67, Croquant\_72, Cullens\_75, Cyan\_63, DaHudson\_74, Daishi\_74, DanSyl44\_43, Dieselweasel\_75, DismalFunk\_79, DismalStressor\_79, Donkey\_58, Doughnut\_79, DrManhattan\_65, DrSierra\_59, DropBear\_68, Elezi\_61, Elfy\_69, EniyanLRS\_140, EpicPhail\_76, Eponine\_42, Eraser\_62, Estes\_152, EtoileNova\_68, Exile\_56, Farber\_75, Fernando\_75, Findley\_79, Fionnbharth\_40, Flutur\_62, Fred313\_68, Gambol\_59, GardenSalsa\_152, Gemma\_72, GenevaB15\_153, GingkoMaracino\_75, Giorgio\_57, Giroux\_73, Grif\_73, GrimEater\_58, Groupthink\_75, Grub\_73, Grum1\_74, GtownJaz\_75, Gumpizza\_57, Gwennie\_70, Halsey\_58, HashRod\_76, HaveUMetTed\_75, Heathen\_70, HelDan\_70, Heliosoles\_72, Hercules11\_75, Hookmount\_70, IUFootball\_64, Idleandcovert\_71, Isca\_68, Iter\_63, IttyBittyPiggy\_62, JF1\_40, JF2\_68, JF4\_68, JHC117\_71, Janeemi\_61, Jankie\_60, JenCasNa\_76, JeppNRM\_75, Jobu08\_71, Joemato\_63, JohnDoe\_63, Jstan\_63, Juliette\_42, JuneStar\_62, KADY\_72, Kachowdy\_68, Kalb97\_75, Kalimba\_58, Kalnoky\_75, Kaylissa\_64, KeAlii\_60, Kraw\_40, Kumao\_99, LBerry\_76, Lambert1\_70, LarryKay\_75, Lebo14\_40, Lego\_62, Liebe\_64, Lilith\_73, Lizalica\_61, London\_62, Louie6\_74, Lova\_72, LugYA\_78, MA5\_70, MK4\_70, MaGuCo\_57, MadMarie\_73, Mainiac\_74, Malinsilva\_77, Malthus\_41, Manu\_74, MarQuardt\_75, Marchesa\_68, Marcoliusprime\_78, Margo\_70, Marie\_73, Marius\_75, MaryV\_133, Maureen\_64, Methuselah\_68, Microwolf\_71, Milly\_79, Misomonster\_76, MissDaisy\_39, MissSwiss\_63, Mitti\_40, MoneyMay\_74, Montavir\_70, Moss\_58, MrMagoo\_154, MuchMore\_78, Mudpuppy\_60, Mufasa\_78, Mysterium\_57, Nanosmite\_147, Nergal\_67, Niobe\_62, Nitro\_63, Noella\_70, Norbert\_66, ObiToo\_67, OlanP\_73, Ollie\_75, OmniCritical\_39, P28Green\_75, PGHhamlin\_77, Panamaxus\_68, PandaPo\_63, Patt\_39, Pawn\_73, Pembroke\_75, Penny1\_75, Phantastic\_72, PhishRPhriends\_71, Phives\_63, Phoebe\_76, Phoxy\_75, Pistachio\_70, Pixelle\_62, Pocahontas\_69, Popcicle\_70, PotatoSplit\_76, Powerpuff\_64, Pumpkins\_61, Puppy\_71, PurpleHaze\_74, Qhanda\_41, QuinnKiro\_69, Reedo\_63, Reptar3000\_40, ResDef\_68, Rey\_153, RockScotty\_57, Rockstar\_69, Roimos\_68, Rummer\_74, Ruthiejr\_41, Sabia\_73, Sabinator\_73, Sabourin\_58, SamScheppers\_39, SaturnRing\_70, Schaffner\_61, Scout\_69, Simpson\_66, Skelbel\_63, Slarp\_40, Snek\_61, Snickers\_75, SoYo\_72, SoilDragon\_74, Soondubu\_58, Sooty\_58, Soshari\_77, SpecialK\_58, Spike509\_75, Stagni\_72, StepMih\_74, Strobilo\_80, Stuu\_58, Subaru\_62, Sue2\_60, TM4\_77, TNguyen7\_71, Tallboi\_62, Taquito\_40, Taurus\_76, Tbone\_62, Texage\_68, TforTroy\_63, ThursdayNight\_66, Tian\_61, Tiffany\_74, TinyPebbles\_74, Todacoro\_70, Tuck\_62, Turab\_61, Tutumahutu\_64, Tweety19\_62, VResidence\_62, Veracruz\_67, Vix\_71, Warda\_63, Watson\_74,

Wildcat\_147, Wildwest\_58, Wintermute\_40, Wooldri\_77, Y10\_39, Y2\_39, Yang\_62, YasnayaPolyana\_40, YesChef\_62, Zarafa\_68, Zetzy\_72, ZoeJ\_78,

### Summary by start number:

#### Start 31:

- Found in 1 of 427 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao\_99 (singleton),

#### Start 36:

- Found in 16 of 427 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 14 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chancellor\_40 (K4), Cheetobro\_40 (K4), DanSyl44\_43 (K4), Eponine\_42 (K4), Fionnbharth\_40 (K4), Kraw\_40 (K4), Lebo14\_40 (K4), Malthus\_41 (K4), Mitti\_40 (K4), OmniCritical\_39 (K4), Qhanda\_41 (K4), SamScheppers\_39 (K4), Slarp\_40 (K4), Taquito\_40 (K4), Wintermute\_40 (K4), YasnayaPolyana\_40 (K4),

#### Start 37:

- Found in 9 of 427 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 8 of 376
- Called 88.9% of time when present
- Phage (with cluster) where this start called: JF1\_40 (K4), Juliette\_42 (K4), MissDaisy\_39 (K4), Patt\_39 (K4), Reptar3000\_40 (K4), Ruthiejr\_41 (K4), Y10\_39 (K4), Y2\_39 (K4),

#### Start 38:

- Found in 137 of 427 ( 32.1% ) of genes in pham
- Manual Annotations of this start: 1 of 376
- Called 2.2% of time when present
- Phage (with cluster) where this start called: AinMach\_64 (AZ7), Elfy\_69 (FP), Krueger\_80 (K6),

#### Start 39:

- Found in 5 of 427 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 5 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azrael100\_140 (V), Cosmo\_147 (V), EniyanLRS\_140 (V), MaryV\_133 (V), Wildcat\_147 (V),

#### Start 40:

- Found in 4 of 427 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 376
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_54 (FP), CallinAllBarbz\_56 (FP), Soondubu\_58 (AZ6),

#### Start 41:

- Found in 156 of 427 ( 36.5% ) of genes in pham
- Manual Annotations of this start: 143 of 376

- Called 98.7% of time when present
- Phage (with cluster) where this start called: ActinUp\_76 (K1), Adephagia\_74 (K1), Adonis\_75 (K1), Ageofdapage\_79 (K1), AlishaPH\_74 (K1), Amelie\_62 (K1), Amgine\_73 (K6), Amohndition\_73 (K6), Anaya\_79 (K1), Angelica\_74 (K1), Anma\_75 (K1), Apocalypse\_78 (K1), Applecrisp\_72 (K6), Asayake\_75 (K1), Atiba\_76 (K1), BEEST\_75 (K1), BGlluviae\_75 (K1), BaghaKamala\_74 (K1), BarrelRoll\_76 (K1), Beezoo\_78 (K1), Bella96\_76 (K1), Belladonna\_75 (K1), Bern\_76 (K1), Biglebops\_62 (K1), Blizzard\_75 (K1), Boiiii\_75 (K1), Bryler\_79 (K6), CREW\_74 (K1), Cain\_79 (K6), CallaLilly\_75 (K1), Capricorn\_75 (K1), CaseJules\_77 (K1), Chavito\_77 (K1), CheetoDust\_75 (K1), Chris\_76 (K1), Clipper\_80 (K1), CrimD\_77 (K1), Curiosium\_81 (K1), Dalmuri\_75 (K1), DartGoblin\_76 (K1), DARTH\_P\_73 (K6), Dartin\_76 (K1), Deby\_75 (K1), Devera\_83 (K1), Dole\_80 (K1), DrHayes\_75 (K1), Durfee\_75 (K1), Efra2\_82 (K1), Ekdilam\_70 (K6), Ellie\_71 (K6), Emerson\_78 (K1), Enkosi\_64 (K1), Fefferhead\_74 (K6), Ganymede\_75 (K1), Geraldini\_79 (K1), Guanica15\_81 (K1), Hammy\_73 (K6), HedwigODU\_75 (K1), Homura\_74 (K1), Hurricane\_76 (K3), Hyperbowlee\_74 (K1), Illumine\_81 (K1), Inky\_75 (K1), JAWS\_74 (K1), Jarvi\_75 (K1), Jayhawk\_78 (K1), Jeckyll\_75 (K1), Joy99\_76 (K1), Keshu\_78 (K3), KiSi\_78 (K1), LastHope\_81 (K1), LaterM\_75 (K1), Lavahound\_72 (K6), LeMond\_77 (K1), Lea83\_76 (K3), LilPharaoh\_63 (K1), LindNT\_74 (K1), Llorens\_75 (K1), Lunahalos\_75 (K1), MacKat\_72 (K1), MacnCheese\_78 (K3), MarkPhew\_77 (K1), Marshawn\_74 (K6), McMater\_76 (K1), Mdavu\_63 (K1), MeaningOfLife\_77 (K1), Megsy\_77 (K1), Murucutumbu\_76 (K1), Mynx\_77 (K1), Nibb\_77 (K1), Nikao\_65 (K1), Niklas\_77 (K1), November\_72 (K6), Nutello\_62 (K1), Oscar\_77 (K1), Padfoot\_75 (K1), Padpat\_79 (K1), Peanam\_77 (K1), Peel\_75 (K1), Pharb\_74 (K3), PhelpsODU\_78 (K6), Phrank\_79 (K6), Piatt\_74 (K1), Pisa1\_73 (K1), Pisa4\_67 (K1), Pixie\_75 (K3), Pokerus\_76 (K1), Prithvi\_78 (K1), QuincyRose\_73 (K1), Ramen\_76 (K1), Rapunzel97\_78 (K1), Richo\_76 (K1), Rosmarinus\_75 (K1), SamuelLPlaqson\_75 (K1), Scarlett\_78 (K1), SgtBeansprout\_63 (K1), Shadow1\_80 (K6), Shaobing\_76 (K1), ShedlockHolmes\_78 (K3), ShiaSurprise\_76 (K1), SirPhilip\_75 (K6), Slimphazie\_77 (K1), Spock\_75 (K1), Stinson\_76 (K1), Sulley\_74 (K1), Sunflower1121\_81 (K6), Syra333\_79 (K6), TBond007\_72 (K3), TClif\_77 (K6), Tachez\_75 (K1), TaiwanKao\_77 (K1), Teejan\_64 (K1), Tierra\_79 (K6), Tigress9\_80 (K6), TingHuaYa\_78 (K1), TiniBug\_75 (K1), Tiri\_75 (K1), Topper\_75 (K1), Torres\_65 (K1), TreyKay\_78 (K1), TribbleTrouble\_76 (K3), Trice\_62 (K1), TruffulaTree\_77 (K1), Twitch\_75 (K1), Unicorn\_78 (K6), Urkel\_75 (K1), Validus\_80 (K1), Veliki\_76 (K1), Ximenita\_81 (K6), YoureAdopted\_75 (K1), Yuna\_78 (K6), Yunkel11\_81 (K1), Zabiza\_71 (K1), Zavala\_78 (K1),

#### Start 42:

- Found in 1 of 427 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sue2\_60 (AZ1),

#### Start 43:

- Found in 12 of 427 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 12 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BoostSeason\_78 (K2), DismalFunk\_79 (K2), DismalStressor\_79 (K2), Doughnut\_79 (K2), Findley\_79 (K2), Marcoliusprime\_78 (K2), Milly\_79 (K2), Mufasa\_78 (K2), Nergal\_67 (AG), Strobilo\_80 (K2), TM4\_77 (K2), ZoeJ\_78 (K2),

Start 45:

- Found in 80 of 427 ( 18.7% ) of genes in pham
- Manual Annotations of this start: 66 of 376
- Called 98.8% of time when present
- Phage (with cluster) where this start called: AEgle\_60 (AZ1), AGrandiflora\_64 (AZ1), Adolin\_64 (AZ1), Adumb2043\_61 (AZ1), Amploria\_62 (AZ1), Amyev\_62 (AZ1), Asa16\_62 (AZ1), Ascela\_64 (AZ1), Ashes\_58 (AZ5), Beaupre\_57 (AZ5), Berrie\_62 (AZ1), Cappuccino\_58 (AZ5), Cassia\_62 (AZ1), Community\_62 (AZ1), Crewmate\_67 (AZ1), Cyan\_63 (AZ1), Donkey\_58 (AZ5), DrManhattan\_65 (AZ1), DrSierra\_59 (AZ1), Elezi\_61 (AZ1), Eraser\_62 (AZ1), Flutur\_62 (AZ), Gambol\_59 (AZ5), Giorgio\_57 (AZ5), Gumpizza\_57 (AZ5), Halsey\_58 (AZ5), IUFootball\_64 (AZ2), Iter\_63 (AZ1), IttyBittyPiggy\_62 (AZ1), Janeemi\_61 (AZ1), Joemato\_63 (AZ1), JohnDoe\_63 (AZ1), Jstan\_63 (AZ1), JuneStar\_62 (AZ1), Kalimba\_58 (AZ5), Kaylissa\_64 (AZ1), KeAlii\_60 (AZ1), Lego\_62 (AZ1), Liebe\_64 (AZ2), Lizalica\_61 (AZ1), London\_62 (AZ1), MaGuCo\_57 (AZ2), Maureen\_64 (AZ2), MissSwiss\_63 (AZ1), Moss\_58 (AZ5), Mudpuppy\_60 (AZ1), Mysterium\_57 (AZ5), Niobe\_62 (AZ1), Nitro\_63 (AZ1), ObiToo\_67 (AZ1), PandaPo\_63 (AZ1), Phives\_63 (AZ1), Pixelle\_62 (AZ1), Powerpuff\_64 (AZ1), Pumpkins\_61 (AZ1), Reedo\_63 (AZ1), RockScotty\_57 (AZ5), Sabourin\_58 (AZ5), Schaffner\_61 (AZ1), Simpson\_66 (AZ1), Skelbel\_63 (AZ1), Sneak\_61 (AZ3), Sooty\_58 (AZ5), SpecialK\_58 (AZ5), Stuu\_58 (AZ5), Subaru\_62 (AZ1), Tallboi\_62 (AZ1), Tbone\_62 (AZ1), TforTroy\_63 (AZ1), Tian\_61 (AZ1), Tuck\_62 (AZ1), Turab\_61 (AZ1), Tutumahutu\_64 (AZ1), Tweety19\_62 (AZ3), VResidence\_62 (AZ1), Warda\_63 (AZ1), Wildwest\_58 (AZ1), Yang\_62 (AZ1), YesChef\_62 (AZ1),

Start 46:

- Found in 7 of 427 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 7 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aziz\_150 (M2), Estes\_152 (M2), GardenSalsa\_152 (M2), GenevaB15\_153 (M2), MrMagoo\_154 (M2), Nanosmite\_147 (M3), Rey\_153 (M2),

Start 47:

- Found in 20 of 427 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 1 of 376
- Called 5.0% of time when present
- Phage (with cluster) where this start called: DS6A\_42 (singleton),

Start 48:

- Found in 2 of 427 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Exile\_56 (AZ6),

Start 49:

- Found in 50 of 427 ( 11.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Bobquesha\_42 (K4),

Start 51:

- Found in 2 of 427 ( 0.5% ) of genes in pham

- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GrimEater\_58 (FP), Jankie\_60 (FP),

#### Start 53:

- Found in 34 of 427 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 25 of 376
- Called 97.1% of time when present
- Phage (with cluster) where this start called: B1\_62 (A3), BabyJohn\_65 (A3), Caviar\_70 (A3), Chiqui\_65 (A3), DropBear\_68 (A3), EtoileNova\_68 (A3), Fred313\_68 (A3), Heathen\_70 (A3), Hookmount\_70 (A3), Isca\_68 (A3), JF2\_68 (A3), JF4\_68 (A3), Kachowdy\_68 (A3), Lambert1\_70 (A3), MA5\_70 (A3), MK4\_70 (A3), Marchesa\_68 (A3), Margo\_70 (A3), Noella\_70 (A3), Norbert\_66 (A3), Panamaxus\_68 (A3), Phantastic\_72 (A3), Pocahontas\_69 (A3), Popcicle\_70 (A3), QuinnKiro\_69 (A3), ResDef\_68 (A3), Rockstar\_69 (A3), Roimos\_68 (A3), Scout\_69 (A3), Texage\_68 (A3), Todacoro\_70 (A3), Veracruz\_67 (A3), Zarafa\_68 (A3),

#### Start 54:

- Found in 9 of 427 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 6 of 376
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueBird\_73 (A3), Bugatti\_70 (A3), Clammy\_70 (A3), Giroux\_73 (A3), Idleandcovert\_71 (A3), Pistachio\_70 (A3), Puppy\_71 (A3), SaturnRing\_70 (A3), TNguyen7\_71 (A3),

#### Start 58:

- Found in 8 of 427 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 376
- Called 12.5% of time when present
- Phage (with cluster) where this start called: HelDan\_70 (A3),

#### Start 62:

- Found in 88 of 427 ( 20.6% ) of genes in pham
- Manual Annotations of this start: 68 of 376
- Called 80.7% of time when present
- Phage (with cluster) where this start called: ACFishhook\_72 (A3), Aglet\_76 (A3), AgronaGT15\_72 (A3), AugsMagnumOpus\_78 (A3), Beauxregard13\_74 (A3), BreSam8\_75 (A3), BuzzBuzz\_69 (A3), Bxz2\_70 (A3), Calvinny\_72 (A3), ClownCar\_72 (A3), Colbster\_71(A3), Cullens\_75 (A3), DaHudson\_74 (A3), Daishi\_74 (A3), Dieselweasel\_75 (A3), EpicPhail\_76 (A3), Farber\_75 (A3), Fernando\_75 (A3), Gemma\_72 (A3), GingkoMaracino\_75 (A3), Grif\_73 (A3), Groupthink\_75 (A3), Grub\_73 (A3), Grum1\_74 (A3), GtownJaz\_75 (A3), HashRod\_76 (A3), HaveUMetTed\_75 (A3), Heliosoles\_72 (A3), Hercules11\_75 (A3), JeppNRM\_75 (A3), Kalb97\_75 (A3), Kalnoky\_75 (A3), LBerry\_76 (A3), LarryKay\_75 (A3), Lilith\_73 (A3), Louie6\_74 (A3), LugYA\_78 (A3), MadMarie\_73 (A3), Mainiac\_74 (A3), Malinsilva\_77 (A3), Manu\_74 (A3), Marie\_73 (A3), Marius\_75 (A3), Methuselah\_68 (A3), Microwolf\_71 (A3), Misomonster\_76 (A3), MoneyMay\_74 (A3), Montavir\_70 (A3), MuchMore\_78 (A3), OlanP\_73 (A3), Ollie\_75 (A3), P28Green\_75 (A3), PGHhamlin\_77 (A3), Pawn\_73 (A3), Pembroke\_75 (A3), Penny1\_75 (A3), PhishRPhriends\_71 (A3), Phoebe\_76 (A3), PotatoSplit\_76 (A3), Rummer\_74 (A3), Sabia\_73 (A3), Snickers\_75 (A3), SoYo\_72 (A3), SoilDragon\_74 (A3), Soshari\_77 (A3), StepMih\_74 (A3), TinyPebbles\_74 (A3), Vix\_71 (A3), Watson\_74 (A3), Wooldri\_77 (A3), Zetzy\_72 (A3),

Start 63:

- Found in 122 of 427 ( 28.6% ) of genes in pham
- Manual Annotations of this start: 14 of 376
- Called 14.8% of time when present
- Phage (with cluster) where this start called: Anubis\_78 (A3), BabyRay\_71 (A3), Bigflo\_72 (A3), Croquant\_72 (A3), Gwennie\_70 (A3), JHC117\_71 (A3), JenCasNa\_76 (A3), Jobu08\_71 (A3), KADY\_72 (A3), Lowa\_72 (A3), MarQuardt\_75 (A3), Phoxy\_75 (A3), PurpleHaze\_74 (A3), Sabinator\_73 (A3), Spike509\_75 (A3), Stagni\_72 (A3), Taurus\_76 (A3), Tiffany\_74 (A3),

Start 65:

- Found in 237 of 427 ( 55.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 0.4% of time when present
- Phage (with cluster) where this start called: ThursdayNight\_66 (AZ),

### **Summary by clusters:**

There are 19 clusters represented in this pham: FP, singleton, AZ, AG, K4, A3, K3, K2, K1, K6, M3, V, AZ1, AZ2, AZ3, M2, AZ5, AZ6, AZ7,

Info for manual annotations of cluster A3:

- Start number 53 was manually annotated 25 times for cluster A3.
- Start number 54 was manually annotated 6 times for cluster A3.
- Start number 58 was manually annotated 1 time for cluster A3.
- Start number 62 was manually annotated 68 times for cluster A3.
- Start number 63 was manually annotated 14 times for cluster A3.

Info for manual annotations of cluster AG:

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

Info for manual annotations of cluster AZ1:

- Start number 42 was manually annotated 1 time for cluster AZ1.
- Start number 45 was manually annotated 45 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 45 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 45 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ5:

- Start number 45 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 40 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster FP:

- Start number 40 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster K1:

- Start number 41 was manually annotated 109 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 43 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 41 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 36 was manually annotated 14 times for cluster K4.
- Start number 37 was manually annotated 8 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 38 was manually annotated 1 time for cluster K6.
- Start number 41 was manually annotated 25 times for cluster K6.

Info for manual annotations of cluster M2:

- Start number 46 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 46 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster V:

- Start number 39 was manually annotated 5 times for cluster V.

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

Gene: ACFishhook\_72 Start: 42957, Stop: 42733, Start Num: 62

Candidate Starts for ACFishhook\_72:

(Start: 62 @42957 has 68 MA's), (Start: 63 @42951 has 14 MA's), (65, 42945),

Gene: AEgle\_60 Start: 40834, Stop: 41145, Start Num: 45

Candidate Starts for AEgle\_60:

(34, 40807), (Start: 45 @40834 has 66 MA's),

Gene: AGrandiflora\_64 Start: 41727, Stop: 42041, Start Num: 45

Candidate Starts for AGrandiflora\_64:

(Start: 45 @41727 has 66 MA's),

Gene: ActinUp\_76 Start: 50161, Stop: 50433, Start Num: 41

Candidate Starts for ActinUp\_76:

(Start: 38 @50146 has 1 MA's), (Start: 41 @50161 has 143 MA's), (64, 50215), (65, 50218), (68, 50233), (72, 50251), (78, 50299), (82, 50320), (88, 50392), (89, 50401),

Gene: Adephagia\_74 Start: 49998, Stop: 50270, Start Num: 41

Candidate Starts for Adephagia\_74:

(Start: 38 @49983 has 1 MA's), (Start: 41 @49998 has 143 MA's), (64, 50052), (65, 50055), (68, 50070), (72, 50088), (78, 50136), (82, 50157), (88, 50229), (89, 50238),

Gene: Adolin\_64 Start: 40621, Stop: 40935, Start Num: 45

Candidate Starts for Adolin\_64:  
(Start: 45 @40621 has 66 MA's),

Gene: Adonis\_75 Start: 50433, Stop: 50705, Start Num: 41  
Candidate Starts for Adonis\_75:  
(Start: 38 @50418 has 1 MA's), (Start: 41 @50433 has 143 MA's), (64, 50490), (65, 50493), (68, 50508), (72, 50526), (82, 50595), (88, 50667), (89, 50676),

Gene: Adumb2043\_61 Start: 40858, Stop: 41169, Start Num: 45  
Candidate Starts for Adumb2043\_61:  
(34, 40831), (Start: 45 @40858 has 66 MA's),

Gene: Ageofdapage\_79 Start: 51358, Stop: 51630, Start Num: 41  
Candidate Starts for Ageofdapage\_79:  
(Start: 38 @51343 has 1 MA's), (Start: 41 @51358 has 143 MA's), (64, 51415), (65, 51418), (68, 51433), (72, 51451), (78, 51499), (82, 51520), (88, 51592), (89, 51601),

Gene: Aglet\_76 Start: 43069, Stop: 42842, Start Num: 62  
Candidate Starts for Aglet\_76:  
(Start: 62 @43069 has 68 MA's), (Start: 63 @43063 has 14 MA's),

Gene: AgronaGT15\_72 Start: 42917, Stop: 42690, Start Num: 62  
Candidate Starts for AgronaGT15\_72:  
(Start: 62 @42917 has 68 MA's), (Start: 63 @42911 has 14 MA's),

Gene: AinMach\_64 Start: 40671, Stop: 40973, Start Num: 38  
Candidate Starts for AinMach\_64:  
(25, 40599), (Start: 38 @40671 has 1 MA's), (60, 40731), (65, 40749), (68, 40764), (86, 40902),

Gene: AlishaPH\_74 Start: 50259, Stop: 50531, Start Num: 41  
Candidate Starts for AlishaPH\_74:  
(Start: 38 @50244 has 1 MA's), (Start: 41 @50259 has 143 MA's), (64, 50313), (65, 50316), (68, 50331), (72, 50349), (78, 50397), (82, 50418), (88, 50490), (89, 50499),

Gene: Amelie\_62 Start: 47156, Stop: 47428, Start Num: 41  
Candidate Starts for Amelie\_62:  
(Start: 38 @47141 has 1 MA's), (Start: 41 @47156 has 143 MA's), (Start: 47 @47165 has 1 MA's), (55, 47186), (59, 47195), (64, 47213), (65, 47216), (67, 47228), (68, 47231), (72, 47249), (75, 47285), (78, 47297), (89, 47399),

Gene: Amgine\_73 Start: 50668, Stop: 50943, Start Num: 41  
Candidate Starts for Amgine\_73:  
(Start: 38 @50653 has 1 MA's), (Start: 41 @50668 has 143 MA's), (49, 50683), (52, 50692), (68, 50743), (72, 50761), (82, 50830),

Gene: Amohnition\_73 Start: 50538, Stop: 50810, Start Num: 41  
Candidate Starts for Amohnition\_73:  
(Start: 41 @50538 has 143 MA's), (68, 50610), (72, 50628), (82, 50697),

Gene: Amploria\_62 Start: 41038, Stop: 41349, Start Num: 45  
Candidate Starts for Amploria\_62:  
(34, 41011), (Start: 45 @41038 has 66 MA's),

Gene: Amyev\_62 Start: 42418, Stop: 42732, Start Num: 45

Candidate Starts for Amyev\_62:

(34, 42391), (Start: 45 @42418 has 66 MA's),

Gene: Anaya\_79 Start: 51056, Stop: 51328, Start Num: 41

Candidate Starts for Anaya\_79:

(Start: 38 @51041 has 1 MA's), (Start: 41 @51056 has 143 MA's), (64, 51110), (65, 51113), (68, 51128), (72, 51146), (78, 51194), (82, 51215), (88, 51287), (89, 51296),

Gene: Angelica\_74 Start: 50118, Stop: 50390, Start Num: 41

Candidate Starts for Angelica\_74:

(Start: 38 @50103 has 1 MA's), (Start: 41 @50118 has 143 MA's), (64, 50175), (65, 50178), (68, 50193), (72, 50211), (78, 50259), (82, 50280), (88, 50352), (89, 50361),

Gene: Anma\_75 Start: 50512, Stop: 50781, Start Num: 41

Candidate Starts for Anma\_75:

(Start: 38 @50497 has 1 MA's), (Start: 41 @50512 has 143 MA's), (64, 50563), (65, 50566), (67, 50578), (68, 50581), (72, 50599), (78, 50647), (82, 50668), (88, 50740), (89, 50749),

Gene: Anubis\_78 Start: 42949, Stop: 42728, Start Num: 63

Candidate Starts for Anubis\_78:

(Start: 62 @42955 has 68 MA's), (Start: 63 @42949 has 14 MA's),

Gene: Apocalypse\_78 Start: 50800, Stop: 51072, Start Num: 41

Candidate Starts for Apocalypse\_78:

(Start: 38 @50785 has 1 MA's), (Start: 41 @50800 has 143 MA's), (64, 50854), (65, 50857), (68, 50872), (72, 50890), (78, 50938), (82, 50959), (88, 51031), (89, 51040),

Gene: Applecrisp\_72 Start: 50112, Stop: 50384, Start Num: 41

Candidate Starts for Applecrisp\_72:

(Start: 41 @50112 has 143 MA's), (65, 50169), (68, 50184), (72, 50202), (82, 50271),

Gene: Asa16\_62 Start: 41419, Stop: 41730, Start Num: 45

Candidate Starts for Asa16\_62:

(Start: 45 @41419 has 66 MA's),

Gene: Asayake\_75 Start: 50313, Stop: 50585, Start Num: 41

Candidate Starts for Asayake\_75:

(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Ascela\_64 Start: 41907, Stop: 42221, Start Num: 45

Candidate Starts for Ascela\_64:

(Start: 45 @41907 has 66 MA's),

Gene: Ashes\_58 Start: 38079, Stop: 38405, Start Num: 45

Candidate Starts for Ashes\_58:

(24, 37980), (26, 38001), (Start: 45 @38079 has 66 MA's), (68, 38157), (88, 38319),

Gene: Atiba\_76 Start: 49961, Stop: 50233, Start Num: 41

Candidate Starts for Atiba\_76:

(Start: 38 @49946 has 1 MA's), (Start: 41 @49961 has 143 MA's), (64, 50015), (65, 50018), (68, 50033), (72, 50051), (78, 50099), (82, 50120), (88, 50192), (89, 50201),

Gene: AugsMagnumOpus\_78 Start: 43060, Stop: 42833, Start Num: 62  
Candidate Starts for AugsMagnumOpus\_78:  
(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Aziz\_150 Start: 73022, Stop: 72717, Start Num: 46  
Candidate Starts for Aziz\_150:  
(Start: 46 @73022 has 7 MA's), (69, 72941),

Gene: Azrael100\_140 Start: 68576, Stop: 68298, Start Num: 39  
Candidate Starts for Azrael100\_140:  
(12, 68795), (20, 68705), (Start: 39 @68576 has 5 MA's), (56, 68531), (67, 68480), (78, 68399), (81, 68378), (87, 68306), (88, 68303),

Gene: B1\_62 Start: 41030, Stop: 40761, Start Num: 53  
Candidate Starts for B1\_62:  
(19, 41195), (Start: 53 @41030 has 25 MA's), (65, 41000),

Gene: BEEST\_75 Start: 50313, Stop: 50585, Start Num: 41  
Candidate Starts for BEEST\_75:  
(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: BGlluviae\_75 Start: 50116, Stop: 50388, Start Num: 41  
Candidate Starts for BGlluviae\_75:  
(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: BabyJohn\_65 Start: 42854, Stop: 42588, Start Num: 53  
Candidate Starts for BabyJohn\_65:  
(44, 42878), (Start: 53 @42854 has 25 MA's), (65, 42824), (80, 42734),

Gene: BabyRay\_71 Start: 42787, Stop: 42569, Start Num: 63  
Candidate Starts for BabyRay\_71:  
(Start: 63 @42787 has 14 MA's), (65, 42781), (82, 42679), (86, 42616),

Gene: BaghaKamala\_74 Start: 49547, Stop: 49819, Start Num: 41  
Candidate Starts for BaghaKamala\_74:  
(Start: 38 @49532 has 1 MA's), (Start: 41 @49547 has 143 MA's), (64, 49601), (65, 49604), (68, 49619), (72, 49637), (78, 49685), (82, 49706), (88, 49778), (89, 49787),

Gene: BaileyBlu\_54 Start: 37900, Stop: 38214, Start Num: 40  
Candidate Starts for BaileyBlu\_54:  
(21, 37780), (Start: 40 @37900 has 3 MA's), (65, 37966), (74, 38035),

Gene: BarrelRoll\_76 Start: 50518, Stop: 50790, Start Num: 41  
Candidate Starts for BarrelRoll\_76:  
(Start: 38 @50503 has 1 MA's), (Start: 41 @50518 has 143 MA's), (64, 50572), (65, 50575), (68, 50590), (72, 50608), (78, 50656), (82, 50677), (88, 50749), (89, 50758),

Gene: Beaupre\_57 Start: 37889, Stop: 38215, Start Num: 45  
Candidate Starts for Beaupre\_57:  
(24, 37790), (26, 37811), (Start: 45 @37889 has 66 MA's), (68, 37967), (88, 38129),

Gene: Beauxregard13\_74 Start: 43072, Stop: 42845, Start Num: 62  
Candidate Starts for Beauxregard13\_74:  
(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Beezoo\_78 Start: 51095, Stop: 51364, Start Num: 41  
Candidate Starts for Beezoo\_78:  
(Start: 41 @51095 has 143 MA's), (64, 51149), (65, 51152), (68, 51167), (72, 51185), (78, 51233), (82, 51254), (88, 51326), (89, 51335),

Gene: Bella96\_76 Start: 50379, Stop: 50648, Start Num: 41  
Candidate Starts for Bella96\_76:  
(Start: 38 @50364 has 1 MA's), (Start: 41 @50379 has 143 MA's), (64, 50430), (65, 50433), (68, 50448), (72, 50466), (82, 50535), (88, 50607), (89, 50616),

Gene: Belladonna\_75 Start: 50116, Stop: 50388, Start Num: 41  
Candidate Starts for Belladonna\_75:  
(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Bern\_76 Start: 49065, Stop: 49337, Start Num: 41  
Candidate Starts for Bern\_76:  
(Start: 38 @49050 has 1 MA's), (Start: 41 @49065 has 143 MA's), (64, 49122), (65, 49125), (67, 49137), (68, 49140), (72, 49158), (78, 49206), (82, 49227), (88, 49299), (89, 49308),

Gene: Berrie\_62 Start: 41517, Stop: 41828, Start Num: 45  
Candidate Starts for Berrie\_62:  
(28, 41463), (34, 41490), (Start: 45 @41517 has 66 MA's),

Gene: Bigflo\_72 Start: 43062, Stop: 42841, Start Num: 63  
Candidate Starts for Bigflo\_72:  
(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Biglebops\_62 Start: 47171, Stop: 47443, Start Num: 41  
Candidate Starts for Biglebops\_62:  
(Start: 38 @47156 has 1 MA's), (Start: 41 @47171 has 143 MA's), (Start: 47 @47180 has 1 MA's), (55, 47201), (59, 47210), (64, 47228), (65, 47231), (67, 47243), (68, 47246), (72, 47264), (75, 47300), (78, 47312), (89, 47414),

Gene: Blizzard\_75 Start: 50313, Stop: 50585, Start Num: 41  
Candidate Starts for Blizzard\_75:  
(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: BlueBird\_73 Start: 42858, Stop: 42592, Start Num: 54  
Candidate Starts for BlueBird\_73:  
(Start: 54 @42858 has 6 MA's), (65, 42828), (82, 42726), (93, 42612),

Gene: Bobquesha\_42 Start: 31200, Stop: 31451, Start Num: 49  
Candidate Starts for Bobquesha\_42:  
(Start: 37 @31164 has 8 MA's), (49, 31200), (Start: 63 @31233 has 14 MA's), (65, 31239), (67, 31251), (72, 31272), (75, 31308), (82, 31341), (88, 31413),

Gene: Boiiii\_75 Start: 50315, Stop: 50587, Start Num: 41

Candidate Starts for Boiiii\_75:

(Start: 38 @50300 has 1 MA's), (Start: 41 @50315 has 143 MA's), (64, 50369), (65, 50372), (68, 50387), (72, 50405), (78, 50453), (82, 50474), (88, 50546), (89, 50555),

Gene: BoostSeason\_78 Start: 51944, Stop: 52213, Start Num: 43

Candidate Starts for BoostSeason\_78:

(22, 51821), (33, 51905), (Start: 43 @51944 has 12 MA's), (65, 52001), (72, 52034), (75, 52070), (82, 52103), (88, 52175),

Gene: BreSam8\_75 Start: 43062, Stop: 42835, Start Num: 62

Candidate Starts for BreSam8\_75:

(Start: 62 @43062 has 68 MA's), (Start: 63 @43056 has 14 MA's),

Gene: Bryler\_79 Start: 49944, Stop: 50216, Start Num: 41

Candidate Starts for Bryler\_79:

(Start: 38 @49929 has 1 MA's), (Start: 41 @49944 has 143 MA's), (65, 50004), (67, 50016), (72, 50037),

Gene: Bugatti\_70 Start: 42858, Stop: 42592, Start Num: 54

Candidate Starts for Bugatti\_70:

(Start: 54 @42858 has 6 MA's), (65, 42828), (82, 42726), (93, 42612),

Gene: BuzzBuzz\_69 Start: 43096, Stop: 42869, Start Num: 62

Candidate Starts for BuzzBuzz\_69:

(Start: 62 @43096 has 68 MA's), (Start: 63 @43090 has 14 MA's), (65, 43084),

Gene: Bxz2\_70 Start: 43103, Stop: 42876, Start Num: 62

Candidate Starts for Bxz2\_70:

(Start: 62 @43103 has 68 MA's), (Start: 63 @43097 has 14 MA's),

Gene: CREW\_74 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for CREW\_74:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Cain\_79 Start: 49932, Stop: 50204, Start Num: 41

Candidate Starts for Cain\_79:

(Start: 38 @49917 has 1 MA's), (Start: 41 @49932 has 143 MA's), (65, 49992), (67, 50004), (72, 50025),

Gene: CallaLilly\_75 Start: 50039, Stop: 50311, Start Num: 41

Candidate Starts for CallaLilly\_75:

(Start: 38 @50024 has 1 MA's), (Start: 41 @50039 has 143 MA's), (64, 50093), (65, 50096), (68, 50111), (72, 50129), (78, 50177), (82, 50198), (88, 50270), (89, 50279),

Gene: CallinAllBarbz\_56 Start: 38887, Stop: 39201, Start Num: 40

Candidate Starts for CallinAllBarbz\_56:

(Start: 40 @38887 has 3 MA's), (65, 38953), (74, 39022),

Gene: Calvinny\_72 Start: 42885, Stop: 42661, Start Num: 62

Candidate Starts for Calvinny\_72:

(Start: 62 @42885 has 68 MA's), (Start: 63 @42879 has 14 MA's), (65, 42873),

Gene: Cappuccino\_58 Start: 37929, Stop: 38255, Start Num: 45

Candidate Starts for Cappuccino\_58:

(1, 37272), (3, 37512), (18, 37788), (26, 37851), (Start: 45 @37929 has 66 MA's), (68, 38007), (88, 38169), (94, 38217),

Gene: Capricorn\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Capricorn\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: CaseJules\_77 Start: 50313, Stop: 50585, Start Num: 41

Candidate Starts for CaseJules\_77:

(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Cassia\_62 Start: 41532, Stop: 41846, Start Num: 45

Candidate Starts for Cassia\_62:

(Start: 45 @41532 has 66 MA's), (76, 41673),

Gene: Caviar\_70 Start: 42817, Stop: 42557, Start Num: 53

Candidate Starts for Caviar\_70:

(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: Chancellor\_40 Start: 31427, Stop: 31726, Start Num: 36

Candidate Starts for Chancellor\_40:

(Start: 36 @31427 has 14 MA's), (49, 31463), (Start: 63 @31508 has 14 MA's), (67, 31526), (72, 31547), (75, 31583), (82, 31616), (88, 31688),

Gene: Chavito\_77 Start: 51039, Stop: 51314, Start Num: 41

Candidate Starts for Chavito\_77:

(Start: 38 @51024 has 1 MA's), (Start: 41 @51039 has 143 MA's), (Start: 47 @51048 has 1 MA's), (64, 51093), (65, 51096), (67, 51108), (68, 51111), (72, 51129), (75, 51165), (81, 51195), (88, 51270),

Gene: CheetoDust\_75 Start: 49713, Stop: 49985, Start Num: 41

Candidate Starts for CheetoDust\_75:

(Start: 38 @49698 has 1 MA's), (Start: 41 @49713 has 143 MA's), (64, 49767), (65, 49770), (68, 49785), (72, 49803), (78, 49851), (82, 49872), (88, 49944), (89, 49953),

Gene: Cheetobro\_40 Start: 31424, Stop: 31723, Start Num: 36

Candidate Starts for Cheetobro\_40:

(Start: 36 @31424 has 14 MA's), (49, 31460), (Start: 63 @31505 has 14 MA's), (67, 31523), (72, 31544), (75, 31580), (82, 31613), (88, 31685),

Gene: Chiqui\_65 Start: 42863, Stop: 42597, Start Num: 53

Candidate Starts for Chiqui\_65:

(44, 42887), (Start: 53 @42863 has 25 MA's), (65, 42833), (80, 42743),

Gene: Chris\_76 Start: 50718, Stop: 50993, Start Num: 41

Candidate Starts for Chris\_76:

(Start: 38 @50703 has 1 MA's), (Start: 41 @50718 has 143 MA's), (49, 50733), (65, 50778), (67, 50790), (72, 50811),

Gene: Clammy\_70 Start: 42858, Stop: 42592, Start Num: 54  
Candidate Starts for Clammy\_70:  
(Start: 54 @42858 has 6 MA's), (65, 42828), (82, 42726), (93, 42612),

Gene: Clipper\_80 Start: 51215, Stop: 51487, Start Num: 41  
Candidate Starts for Clipper\_80:  
(Start: 38 @51200 has 1 MA's), (Start: 41 @51215 has 143 MA's), (64, 51272), (65, 51275), (68, 51290), (72, 51308), (78, 51356), (82, 51377), (88, 51449), (89, 51458),

Gene: ClownCar\_72 Start: 42878, Stop: 42654, Start Num: 62  
Candidate Starts for ClownCar\_72:  
(Start: 62 @42878 has 68 MA's), (Start: 63 @42872 has 14 MA's), (65, 42866),

Gene: Colbster\_71 Start: 43072, Stop: 42845, Start Num: 62  
Candidate Starts for Colbster\_71:  
(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Community\_62 Start: 41790, Stop: 42101, Start Num: 45  
Candidate Starts for Community\_62:  
(Start: 45 @41790 has 66 MA's),

Gene: Cosmo\_147 Start: 68740, Stop: 68462, Start Num: 39  
Candidate Starts for Cosmo\_147:  
(12, 68959), (20, 68869), (Start: 39 @68740 has 5 MA's), (56, 68695), (67, 68644), (78, 68563), (81, 68542), (87, 68470), (88, 68467),

Gene: Crewmate\_67 Start: 42141, Stop: 42452, Start Num: 45  
Candidate Starts for Crewmate\_67:  
(Start: 45 @42141 has 66 MA's),

Gene: CrimD\_77 Start: 51114, Stop: 51386, Start Num: 41  
Candidate Starts for CrimD\_77:  
(Start: 38 @51099 has 1 MA's), (Start: 41 @51114 has 143 MA's), (64, 51171), (65, 51174), (67, 51186), (68, 51189), (72, 51207), (78, 51255), (82, 51276), (88, 51348), (89, 51357),

Gene: Croquant\_72 Start: 43060, Stop: 42839, Start Num: 63  
Candidate Starts for Croquant\_72:  
(Start: 62 @43066 has 68 MA's), (Start: 63 @43060 has 14 MA's),

Gene: Cullens\_75 Start: 43068, Stop: 42841, Start Num: 62  
Candidate Starts for Cullens\_75:  
(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Curiosium\_81 Start: 50080, Stop: 50355, Start Num: 41  
Candidate Starts for Curiosium\_81:  
(Start: 41 @50080 has 143 MA's), (49, 50095), (55, 50110), (64, 50137), (65, 50140), (68, 50155), (72, 50173), (78, 50221), (82, 50242), (88, 50314), (89, 50323),

Gene: Cyan\_63 Start: 41471, Stop: 41785, Start Num: 45  
Candidate Starts for Cyan\_63:  
(Start: 45 @41471 has 66 MA's),

Gene: DS6A\_42 Start: 32699, Stop: 32980, Start Num: 47

Candidate Starts for DS6A\_42:

(5, 32342), (6, 32414), (8, 32438), (11, 32462), (13, 32489), (16, 32516), (27, 32618), (30, 32636), (Start: 41 @32690 has 143 MA's), (Start: 47 @32699 has 1 MA's), (55, 32720), (64, 32750), (65, 32753), (71, 32780), (72, 32786), (75, 32822), (81, 32852), (82, 32855), (86, 32918), (88, 32927),

Gene: DaHudson\_74 Start: 43061, Stop: 42834, Start Num: 62

Candidate Starts for DaHudson\_74:

(Start: 62 @43061 has 68 MA's), (Start: 63 @43055 has 14 MA's),

Gene: Daishi\_74 Start: 41936, Stop: 41709, Start Num: 62

Candidate Starts for Daishi\_74:

(Start: 62 @41936 has 68 MA's), (Start: 63 @41930 has 14 MA's),

Gene: Dalmuri\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Dalmuri\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: DanSyl44\_43 Start: 32293, Stop: 32592, Start Num: 36

Candidate Starts for DanSyl44\_43:

(Start: 36 @32293 has 14 MA's), (49, 32329), (Start: 63 @32374 has 14 MA's), (67, 32392), (72, 32413), (75, 32449), (82, 32482), (88, 32554),

Gene: DartGoblin\_76 Start: 50342, Stop: 50611, Start Num: 41

Candidate Starts for DartGoblin\_76:

(Start: 38 @50327 has 1 MA's), (Start: 41 @50342 has 143 MA's), (Start: 58 @50372 has 1 MA's), (64, 50393), (65, 50396), (67, 50408), (68, 50411), (72, 50429), (78, 50477), (82, 50498), (88, 50570), (89, 50579),

Gene: DarthP\_73 Start: 50395, Stop: 50667, Start Num: 41

Candidate Starts for DarthP\_73:

(7, 50134), (14, 50197), (17, 50254), (23, 50278), (Start: 41 @50395 has 143 MA's), (65, 50452), (68, 50467), (72, 50485), (82, 50554),

Gene: Dartin\_76 Start: 50287, Stop: 50565, Start Num: 41

Candidate Starts for Dartin\_76:

(Start: 38 @50272 has 1 MA's), (Start: 41 @50287 has 143 MA's), (Start: 47 @50296 has 1 MA's), (59, 50326), (64, 50344), (65, 50347), (68, 50362), (72, 50380), (88, 50521),

Gene: Deby\_75 Start: 50485, Stop: 50757, Start Num: 41

Candidate Starts for Deby\_75:

(Start: 38 @50470 has 1 MA's), (Start: 41 @50485 has 143 MA's), (64, 50539), (65, 50542), (68, 50557), (72, 50575), (78, 50623), (82, 50644), (88, 50716), (89, 50725),

Gene: Devera\_83 Start: 51910, Stop: 52182, Start Num: 41

Candidate Starts for Devera\_83:

(Start: 38 @51895 has 1 MA's), (Start: 41 @51910 has 143 MA's), (64, 51967), (65, 51970), (68, 51985), (72, 52003), (78, 52051), (82, 52072), (88, 52144), (89, 52153),

Gene: Dieselweasel\_75 Start: 43070, Stop: 42843, Start Num: 62

Candidate Starts for Dieselweasel\_75:

(Start: 62 @43070 has 68 MA's), (Start: 63 @43064 has 14 MA's),

Gene: DismalFunk\_79 Start: 52473, Stop: 52742, Start Num: 43  
Candidate Starts for DismalFunk\_79:  
(22, 52350), (Start: 43 @52473 has 12 MA's), (50, 52488), (65, 52530), (72, 52563), (75, 52599), (82, 52632),

Gene: DismalStressor\_79 Start: 52473, Stop: 52742, Start Num: 43  
Candidate Starts for DismalStressor\_79:  
(22, 52350), (Start: 43 @52473 has 12 MA's), (50, 52488), (65, 52530), (72, 52563), (75, 52599), (82, 52632),

Gene: Dole\_80 Start: 51913, Stop: 52185, Start Num: 41  
Candidate Starts for Dole\_80:  
(Start: 38 @51898 has 1 MA's), (Start: 41 @51913 has 143 MA's), (64, 51970), (65, 51973), (68, 51988), (72, 52006), (78, 52054), (82, 52075), (88, 52147), (89, 52156),

Gene: Donkey\_58 Start: 37919, Stop: 38245, Start Num: 45  
Candidate Starts for Donkey\_58:  
(1, 37262), (18, 37778), (26, 37841), (Start: 45 @37919 has 66 MA's), (88, 38159), (94, 38207),

Gene: Doughnut\_79 Start: 52109, Stop: 52378, Start Num: 43  
Candidate Starts for Doughnut\_79:  
(22, 51986), (33, 52070), (Start: 43 @52109 has 12 MA's), (50, 52124), (64, 52163), (65, 52166), (72, 52199), (75, 52235), (82, 52268),

Gene: DrHayes\_75 Start: 50512, Stop: 50781, Start Num: 41  
Candidate Starts for DrHayes\_75:  
(Start: 38 @50497 has 1 MA's), (Start: 41 @50512 has 143 MA's), (64, 50563), (65, 50566), (67, 50578), (68, 50581), (72, 50599), (78, 50647), (82, 50668), (88, 50740), (89, 50749),

Gene: DrManhattan\_65 Start: 40175, Stop: 40489, Start Num: 45  
Candidate Starts for DrManhattan\_65:  
(Start: 45 @40175 has 66 MA's),

Gene: DrSierra\_59 Start: 40307, Stop: 40618, Start Num: 45  
Candidate Starts for DrSierra\_59:  
(34, 40280), (Start: 45 @40307 has 66 MA's),

Gene: DropBear\_68 Start: 42778, Stop: 42512, Start Num: 53  
Candidate Starts for DropBear\_68:  
(32, 42853), (Start: 53 @42778 has 25 MA's), (Start: 58 @42769 has 1 MA's), (65, 42748), (82, 42646),

Gene: Durfee\_75 Start: 50313, Stop: 50585, Start Num: 41  
Candidate Starts for Durfee\_75:  
(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Efra2\_82 Start: 50946, Stop: 51221, Start Num: 41  
Candidate Starts for Efra2\_82:  
(Start: 38 @50931 has 1 MA's), (Start: 41 @50946 has 143 MA's), (64, 51003), (65, 51006), (67, 51018), (68, 51021), (72, 51039), (78, 51087), (82, 51108), (88, 51180), (89, 51189),

Gene: Ekdilam\_70 Start: 50603, Stop: 50875, Start Num: 41  
Candidate Starts for Ekdilam\_70:

(Start: 41 @50603 has 143 MA's), (65, 50660), (68, 50675), (72, 50693), (82, 50762),

Gene: Elezi\_61 Start: 41176, Stop: 41487, Start Num: 45

Candidate Starts for Elezi\_61:

(Start: 45 @41176 has 66 MA's),

Gene: Elfy\_69 Start: 40687, Stop: 41013, Start Num: 38

Candidate Starts for Elfy\_69:

(Start: 38 @40687 has 1 MA's), (79, 40852), (86, 40933),

Gene: Ellie\_71 Start: 49839, Stop: 50111, Start Num: 41

Candidate Starts for Ellie\_71:

(Start: 41 @49839 has 143 MA's), (65, 49896), (68, 49911), (72, 49929), (82, 49998),

Gene: Emerson\_78 Start: 50552, Stop: 50824, Start Num: 41

Candidate Starts for Emerson\_78:

(Start: 38 @50537 has 1 MA's), (Start: 41 @50552 has 143 MA's), (64, 50606), (65, 50609), (68, 50624), (72, 50642), (78, 50690), (82, 50711), (88, 50783), (89, 50792),

Gene: EniyanLRS\_140 Start: 69081, Stop: 68803, Start Num: 39

Candidate Starts for EniyanLRS\_140:

(12, 69288), (20, 69198), (Start: 39 @69081 has 5 MA's), (56, 69036), (67, 68985), (78, 68904), (81, 68883), (87, 68811), (88, 68808),

Gene: Enkosi\_64 Start: 49769, Stop: 50041, Start Num: 41

Candidate Starts for Enkosi\_64:

(Start: 38 @49754 has 1 MA's), (Start: 41 @49769 has 143 MA's), (Start: 47 @49778 has 1 MA's), (55, 49799), (59, 49808), (64, 49826), (65, 49829), (67, 49841), (68, 49844), (72, 49862), (75, 49898), (78, 49910), (89, 50012),

Gene: EpicPhail\_76 Start: 43072, Stop: 42845, Start Num: 62

Candidate Starts for EpicPhail\_76:

(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Eponine\_42 Start: 32180, Stop: 32479, Start Num: 36

Candidate Starts for Eponine\_42:

(Start: 36 @32180 has 14 MA's), (49, 32216), (Start: 63 @32261 has 14 MA's), (67, 32279), (72, 32300), (75, 32336), (82, 32369), (88, 32441),

Gene: Eraser\_62 Start: 41426, Stop: 41737, Start Num: 45

Candidate Starts for Eraser\_62:

(Start: 45 @41426 has 66 MA's),

Gene: Estes\_152 Start: 73391, Stop: 73086, Start Num: 46

Candidate Starts for Estes\_152:

(Start: 46 @73391 has 7 MA's), (69, 73310),

Gene: EtoileNova\_68 Start: 42821, Stop: 42561, Start Num: 53

Candidate Starts for EtoileNova\_68:

(32, 42896), (Start: 53 @42821 has 25 MA's), (65, 42791), (93, 42575),

Gene: Exile\_56 Start: 42346, Stop: 42639, Start Num: 48

Candidate Starts for Exile\_56:

(Start: 40 @42331 has 3 MA's), (48, 42346), (65, 42397), (74, 42466), (85, 42538), (86, 42562),

Gene: Farber\_75 Start: 43058, Stop: 42831, Start Num: 62

Candidate Starts for Farber\_75:

(Start: 62 @43058 has 68 MA's), (Start: 63 @43052 has 14 MA's),

Gene: Fefferhead\_74 Start: 49897, Stop: 50172, Start Num: 41

Candidate Starts for Fefferhead\_74:

(Start: 38 @49882 has 1 MA's), (Start: 41 @49897 has 143 MA's), (49, 49912), (52, 49921), (65, 49957), (68, 49972), (72, 49990), (82, 50059),

Gene: Fernando\_75 Start: 43068, Stop: 42841, Start Num: 62

Candidate Starts for Fernando\_75:

(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Findley\_79 Start: 52491, Stop: 52760, Start Num: 43

Candidate Starts for Findley\_79:

(22, 52368), (Start: 43 @52491 has 12 MA's), (50, 52506), (65, 52548), (72, 52581), (75, 52617), (82, 52650),

Gene: Fionnbharth\_40 Start: 31415, Stop: 31714, Start Num: 36

Candidate Starts for Fionnbharth\_40:

(Start: 36 @31415 has 14 MA's), (49, 31451), (Start: 63 @31496 has 14 MA's), (67, 31514), (72, 31535), (75, 31571), (82, 31604), (88, 31676),

Gene: Flutur\_62 Start: 41752, Stop: 42066, Start Num: 45

Candidate Starts for Flutur\_62:

(Start: 45 @41752 has 66 MA's),

Gene: Fred313\_68 Start: 42472, Stop: 42206, Start Num: 53

Candidate Starts for Fred313\_68:

(32, 42547), (Start: 53 @42472 has 25 MA's), (Start: 58 @42463 has 1 MA's), (65, 42442), (82, 42340),

Gene: Gambol\_59 Start: 37938, Stop: 38264, Start Num: 45

Candidate Starts for Gambol\_59:

(1, 37281), (18, 37797), (26, 37860), (Start: 45 @37938 has 66 MA's), (68, 38016), (88, 38178), (94, 38226),

Gene: Ganymede\_75 Start: 50523, Stop: 50792, Start Num: 41

Candidate Starts for Ganymede\_75:

(Start: 38 @50508 has 1 MA's), (Start: 41 @50523 has 143 MA's), (64, 50577), (65, 50580), (68, 50595), (72, 50613), (78, 50661), (82, 50682), (88, 50754), (89, 50763),

Gene: GardenSalsa\_152 Start: 73558, Stop: 73253, Start Num: 46

Candidate Starts for GardenSalsa\_152:

(Start: 46 @73558 has 7 MA's), (69, 73477),

Gene: Gemma\_72 Start: 42881, Stop: 42657, Start Num: 62

Candidate Starts for Gemma\_72:

(Start: 62 @42881 has 68 MA's), (Start: 63 @42875 has 14 MA's), (65, 42869),

Gene: GenevaB15\_153 Start: 73022, Stop: 72717, Start Num: 46

Candidate Starts for GenevaB15\_153:

(Start: 46 @73022 has 7 MA's), (69, 72941),

Gene: Geraldini\_79 Start: 51113, Stop: 51382, Start Num: 41

Candidate Starts for Geraldini\_79:

(Start: 38 @51098 has 1 MA's), (Start: 41 @51113 has 143 MA's), (64, 51167), (65, 51170), (68, 51185), (72, 51203), (78, 51251), (82, 51272), (88, 51344), (89, 51353),

Gene: GingkoMaracino\_75 Start: 42954, Stop: 42727, Start Num: 62

Candidate Starts for GingkoMaracino\_75:

(Start: 62 @42954 has 68 MA's), (Start: 63 @42948 has 14 MA's),

Gene: Giorgio\_57 Start: 37872, Stop: 38198, Start Num: 45

Candidate Starts for Giorgio\_57:

(24, 37773), (26, 37794), (Start: 45 @37872 has 66 MA's), (68, 37950), (88, 38112),

Gene: Giroux\_73 Start: 42857, Stop: 42591, Start Num: 54

Candidate Starts for Giroux\_73:

(Start: 54 @42857 has 6 MA's), (65, 42827), (82, 42725), (93, 42611),

Gene: Grif\_73 Start: 43142, Stop: 42915, Start Num: 62

Candidate Starts for Grif\_73:

(Start: 62 @43142 has 68 MA's), (Start: 63 @43136 has 14 MA's),

Gene: GrimEater\_58 Start: 38861, Stop: 39160, Start Num: 51

Candidate Starts for GrimEater\_58:

(9, 38597), (10, 38600), (15, 38642), (51, 38861), (65, 38906), (78, 38990),

Gene: Groupthink\_75 Start: 42885, Stop: 42661, Start Num: 62

Candidate Starts for Groupthink\_75:

(Start: 62 @42885 has 68 MA's), (Start: 63 @42879 has 14 MA's), (65, 42873),

Gene: Grub\_73 Start: 43060, Stop: 42833, Start Num: 62

Candidate Starts for Grub\_73:

(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Grum1\_74 Start: 43068, Stop: 42841, Start Num: 62

Candidate Starts for Grum1\_74:

(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: GtownJaz\_75 Start: 43069, Stop: 42842, Start Num: 62

Candidate Starts for GtownJaz\_75:

(Start: 62 @43069 has 68 MA's), (Start: 63 @43063 has 14 MA's),

Gene: Guanica15\_81 Start: 50692, Stop: 50967, Start Num: 41

Candidate Starts for Guanica15\_81:

(Start: 38 @50677 has 1 MA's), (Start: 41 @50692 has 143 MA's), (64, 50749), (65, 50752), (67, 50764), (68, 50767), (72, 50785), (78, 50833), (82, 50854), (88, 50926), (89, 50935),

Gene: Gumpizza\_57 Start: 37828, Stop: 38154, Start Num: 45

Candidate Starts for Gumpizza\_57:

(24, 37729), (26, 37750), (Start: 45 @37828 has 66 MA's), (68, 37906), (88, 38068),

Gene: Gwennie\_70 Start: 43066, Stop: 42845, Start Num: 63

Candidate Starts for Gwennie\_70:

(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Halsey\_58 Start: 38069, Stop: 38395, Start Num: 45

Candidate Starts for Halsey\_58:

(26, 37991), (Start: 45 @38069 has 66 MA's), (68, 38147), (88, 38309),

Gene: Hammy\_73 Start: 50380, Stop: 50652, Start Num: 41

Candidate Starts for Hammy\_73:

(7, 50119), (14, 50182), (17, 50239), (23, 50263), (Start: 41 @50380 has 143 MA's), (68, 50452), (72, 50470), (82, 50539),

Gene: HashRod\_76 Start: 43096, Stop: 42869, Start Num: 62

Candidate Starts for HashRod\_76:

(Start: 62 @43096 has 68 MA's), (Start: 63 @43090 has 14 MA's),

Gene: HaveUMetTed\_75 Start: 42870, Stop: 42646, Start Num: 62

Candidate Starts for HaveUMetTed\_75:

(Start: 62 @42870 has 68 MA's), (Start: 63 @42864 has 14 MA's), (65, 42858),

Gene: Heathen\_70 Start: 42567, Stop: 42301, Start Num: 53

Candidate Starts for Heathen\_70:

(32, 42642), (Start: 53 @42567 has 25 MA's), (Start: 58 @42558 has 1 MA's), (65, 42537), (82, 42435),

Gene: HedwigODU\_75 Start: 50161, Stop: 50433, Start Num: 41

Candidate Starts for HedwigODU\_75:

(Start: 38 @50146 has 1 MA's), (Start: 41 @50161 has 143 MA's), (64, 50215), (65, 50218), (68, 50233), (72, 50251), (78, 50299), (82, 50320), (88, 50392), (89, 50401),

Gene: HelDan\_70 Start: 42774, Stop: 42517, Start Num: 58

Candidate Starts for HelDan\_70:

(32, 42858), (Start: 53 @42783 has 25 MA's), (Start: 58 @42774 has 1 MA's), (65, 42753), (82, 42651),

Gene: Heliosoles\_72 Start: 42888, Stop: 42664, Start Num: 62

Candidate Starts for Heliosoles\_72:

(Start: 62 @42888 has 68 MA's), (Start: 63 @42882 has 14 MA's), (65, 42876),

Gene: Hercules11\_75 Start: 43077, Stop: 42850, Start Num: 62

Candidate Starts for Hercules11\_75:

(Start: 62 @43077 has 68 MA's), (Start: 63 @43071 has 14 MA's),

Gene: Homura\_74 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Homura\_74:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Hookmount\_70 Start: 42818, Stop: 42558, Start Num: 53

Candidate Starts for Hookmount\_70:

(32, 42893), (Start: 53 @42818 has 25 MA's), (65, 42788), (93, 42572),

Gene: Hurricane\_76 Start: 50335, Stop: 50607, Start Num: 41

Candidate Starts for Hurricane\_76:

(Start: 41 @50335 has 143 MA's), (49, 50350), (67, 50404), (72, 50425), (82, 50494), (88, 50566), (89, 50575),

Gene: Hyperbowlee\_74 Start: 50313, Stop: 50585, Start Num: 41

Candidate Starts for Hyperbowlee\_74:

(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: IUFootball\_64 Start: 43444, Stop: 43758, Start Num: 45

Candidate Starts for IUFootball\_64:

(Start: 45 @43444 has 66 MA's), (61, 43489), (65, 43507), (77, 43588), (95, 43735),

Gene: Idleandcovert\_71 Start: 42858, Stop: 42592, Start Num: 54

Candidate Starts for Idleandcovert\_71:

(Start: 54 @42858 has 6 MA's), (65, 42828), (82, 42726), (93, 42612),

Gene: Illumine\_81 Start: 51912, Stop: 52184, Start Num: 41

Candidate Starts for Illumine\_81:

(Start: 38 @51897 has 1 MA's), (Start: 41 @51912 has 143 MA's), (64, 51969), (65, 51972), (68, 51987), (72, 52005), (78, 52053), (82, 52074), (88, 52146), (89, 52155),

Gene: Inky\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Inky\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Isca\_68 Start: 42335, Stop: 42066, Start Num: 53

Candidate Starts for Isca\_68:

(19, 42500), (Start: 53 @42335 has 25 MA's), (65, 42305),

Gene: Iter\_63 Start: 41678, Stop: 41992, Start Num: 45

Candidate Starts for Iter\_63:

(Start: 45 @41678 has 66 MA's),

Gene: IttyBittyPiggy\_62 Start: 39776, Stop: 40090, Start Num: 45

Candidate Starts for IttyBittyPiggy\_62:

(Start: 45 @39776 has 66 MA's),

Gene: JAWS\_74 Start: 50078, Stop: 50350, Start Num: 41

Candidate Starts for JAWS\_74:

(Start: 38 @50063 has 1 MA's), (Start: 41 @50078 has 143 MA's), (64, 50132), (65, 50135), (68, 50150), (72, 50168), (78, 50216), (82, 50237), (88, 50309), (89, 50318),

Gene: JF1\_40 Start: 31413, Stop: 31712, Start Num: 37

Candidate Starts for JF1\_40:

(Start: 37 @31413 has 8 MA's), (49, 31449), (Start: 63 @31494 has 14 MA's), (67, 31512), (75, 31569), (82, 31602), (88, 31674),

Gene: JF2\_68 Start: 41030, Stop: 40761, Start Num: 53

Candidate Starts for JF2\_68:

(19, 41195), (Start: 53 @41030 has 25 MA's), (65, 41000),

Gene: JF4\_68 Start: 41030, Stop: 40761, Start Num: 53

Candidate Starts for JF4\_68:  
(19, 41195), (Start: 53 @41030 has 25 MA's), (65, 41000),

Gene: JHC117\_71 Start: 43060, Stop: 42839, Start Num: 63  
Candidate Starts for JHC117\_71:  
(Start: 62 @43066 has 68 MA's), (Start: 63 @43060 has 14 MA's),

Gene: Janeemi\_61 Start: 41291, Stop: 41602, Start Num: 45  
Candidate Starts for Janeemi\_61:  
(28, 41237), (34, 41264), (Start: 45 @41291 has 66 MA's), (83, 41456),

Gene: Jankie\_60 Start: 39043, Stop: 39342, Start Num: 51  
Candidate Starts for Jankie\_60:  
(9, 38779), (10, 38782), (15, 38824), (51, 39043), (65, 39088), (78, 39172),

Gene: Jarvi\_75 Start: 50116, Stop: 50388, Start Num: 41  
Candidate Starts for Jarvi\_75:  
(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Jayhawk\_78 Start: 50578, Stop: 50850, Start Num: 41  
Candidate Starts for Jayhawk\_78:  
(Start: 38 @50563 has 1 MA's), (Start: 41 @50578 has 143 MA's), (64, 50632), (65, 50635), (68, 50650), (72, 50668), (78, 50716), (82, 50737), (88, 50809), (89, 50818),

Gene: Jeckyll\_75 Start: 50116, Stop: 50388, Start Num: 41  
Candidate Starts for Jeckyll\_75:  
(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: JenCasNa\_76 Start: 43062, Stop: 42841, Start Num: 63  
Candidate Starts for JenCasNa\_76:  
(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: JeppNRM\_75 Start: 42886, Stop: 42662, Start Num: 62  
Candidate Starts for JeppNRM\_75:  
(Start: 62 @42886 has 68 MA's), (Start: 63 @42880 has 14 MA's), (65, 42874),

Gene: Jobu08\_71 Start: 42894, Stop: 42673, Start Num: 63  
Candidate Starts for Jobu08\_71:  
(Start: 62 @42900 has 68 MA's), (Start: 63 @42894 has 14 MA's),

Gene: Joemato\_63 Start: 41527, Stop: 41841, Start Num: 45  
Candidate Starts for Joemato\_63:  
(Start: 45 @41527 has 66 MA's),

Gene: JohnDoe\_63 Start: 41565, Stop: 41879, Start Num: 45  
Candidate Starts for JohnDoe\_63:  
(Start: 45 @41565 has 66 MA's),

Gene: Joy99\_76 Start: 50245, Stop: 50517, Start Num: 41  
Candidate Starts for Joy99\_76:

(Start: 38 @50230 has 1 MA's), (Start: 41 @50245 has 143 MA's), (64, 50299), (65, 50302), (68, 50317), (72, 50335), (78, 50383), (82, 50404), (88, 50476), (89, 50485),

Gene: Jstan\_63 Start: 41180, Stop: 41491, Start Num: 45

Candidate Starts for Jstan\_63:

(Start: 45 @41180 has 66 MA's),

Gene: Juliette\_42 Start: 31572, Stop: 31871, Start Num: 37

Candidate Starts for Juliette\_42:

(Start: 37 @31572 has 8 MA's), (49, 31608), (Start: 63 @31653 has 14 MA's), (67, 31671), (75, 31728), (82, 31761), (88, 31833),

Gene: JuneStar\_62 Start: 42627, Stop: 42941, Start Num: 45

Candidate Starts for JuneStar\_62:

(Start: 45 @42627 has 66 MA's),

Gene: KADY\_72 Start: 43090, Stop: 42869, Start Num: 63

Candidate Starts for KADY\_72:

(Start: 62 @43096 has 68 MA's), (Start: 63 @43090 has 14 MA's), (65, 43084),

Gene: Kachowdy\_68 Start: 42819, Stop: 42553, Start Num: 53

Candidate Starts for Kachowdy\_68:

(32, 42894), (Start: 53 @42819 has 25 MA's), (Start: 58 @42810 has 1 MA's), (65, 42789), (82, 42687),

Gene: Kalb97\_75 Start: 42884, Stop: 42660, Start Num: 62

Candidate Starts for Kalb97\_75:

(Start: 62 @42884 has 68 MA's), (Start: 63 @42878 has 14 MA's), (65, 42872),

Gene: Kalimba\_58 Start: 37916, Stop: 38242, Start Num: 45

Candidate Starts for Kalimba\_58:

(1, 37259), (3, 37499), (18, 37775), (26, 37838), (Start: 45 @37916 has 66 MA's), (68, 37994), (88, 38156), (94, 38204),

Gene: Kalnoky\_75 Start: 42882, Stop: 42658, Start Num: 62

Candidate Starts for Kalnoky\_75:

(Start: 62 @42882 has 68 MA's), (Start: 63 @42876 has 14 MA's), (65, 42870),

Gene: Kaylissa\_64 Start: 41927, Stop: 42241, Start Num: 45

Candidate Starts for Kaylissa\_64:

(Start: 45 @41927 has 66 MA's),

Gene: KeAlii\_60 Start: 39873, Stop: 40187, Start Num: 45

Candidate Starts for KeAlii\_60:

(34, 39846), (Start: 45 @39873 has 66 MA's),

Gene: Keshu\_78 Start: 50490, Stop: 50765, Start Num: 41

Candidate Starts for Keshu\_78:

(Start: 41 @50490 has 143 MA's), (49, 50505), (67, 50562), (68, 50565), (72, 50583), (82, 50652), (88, 50724), (89, 50733),

Gene: KiSi\_78 Start: 50706, Stop: 50978, Start Num: 41

Candidate Starts for KiSi\_78:

(Start: 38 @50691 has 1 MA's), (Start: 41 @50706 has 143 MA's), (49, 50721), (Start: 63 @50760 has 14 MA's), (64, 50763), (65, 50766), (67, 50778), (72, 50799), (81, 50865), (88, 50940),

Gene: Kraw\_40 Start: 31339, Stop: 31638, Start Num: 36

Candidate Starts for Kraw\_40:

(Start: 36 @31339 has 14 MA's), (49, 31375), (Start: 63 @31420 has 14 MA's), (67, 31438), (72, 31459), (75, 31495), (82, 31528), (88, 31600),

Gene: Krueger\_80 Start: 50443, Stop: 50730, Start Num: 38

Candidate Starts for Krueger\_80:

(Start: 38 @50443 has 1 MA's), (Start: 41 @50458 has 143 MA's), (49, 50473), (57, 50491), (65, 50518), (67, 50530), (72, 50551),

Gene: Kumao\_99 Start: 61525, Stop: 61157, Start Num: 31

Candidate Starts for Kumao\_99:

(Start: 31 @61525 has 1 MA's), (Start: 47 @61459 has 1 MA's), (65, 61405), (72, 61372),

Gene: LBerry\_76 Start: 43072, Stop: 42845, Start Num: 62

Candidate Starts for LBerry\_76:

(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Lambert1\_70 Start: 42817, Stop: 42557, Start Num: 53

Candidate Starts for Lambert1\_70:

(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: LarryKay\_75 Start: 43097, Stop: 42870, Start Num: 62

Candidate Starts for LarryKay\_75:

(Start: 62 @43097 has 68 MA's), (Start: 63 @43091 has 14 MA's),

Gene: LastHope\_81 Start: 49802, Stop: 50086, Start Num: 41

Candidate Starts for LastHope\_81:

(Start: 38 @49787 has 1 MA's), (Start: 41 @49802 has 143 MA's), (49, 49817), (64, 49859), (65, 49862), (67, 49874), (68, 49877), (72, 49895), (82, 49964), (88, 50036), (89, 50045), (92, 50075),

Gene: LaterM\_75 Start: 50776, Stop: 51048, Start Num: 41

Candidate Starts for LaterM\_75:

(Start: 38 @50761 has 1 MA's), (Start: 41 @50776 has 143 MA's), (64, 50833), (65, 50836), (68, 50851), (72, 50869), (82, 50938), (88, 51010), (89, 51019),

Gene: Lavahound\_72 Start: 50802, Stop: 51077, Start Num: 41

Candidate Starts for Lavahound\_72:

(Start: 38 @50787 has 1 MA's), (Start: 41 @50802 has 143 MA's), (49, 50817), (52, 50826), (65, 50862), (68, 50877), (72, 50895), (82, 50964),

Gene: LeMond\_77 Start: 50310, Stop: 50582, Start Num: 41

Candidate Starts for LeMond\_77:

(Start: 38 @50295 has 1 MA's), (Start: 41 @50310 has 143 MA's), (Start: 63 @50364 has 14 MA's), (65, 50370), (67, 50382), (72, 50403), (81, 50469), (88, 50544),

Gene: Lea83\_76 Start: 50414, Stop: 50686, Start Num: 41

Candidate Starts for Lea83\_76:

(Start: 41 @50414 has 143 MA's), (49, 50429), (64, 50471), (65, 50474), (68, 50489), (72, 50507), (82, 50576),

Gene: Lebo14\_40 Start: 31428, Stop: 31727, Start Num: 36

Candidate Starts for Lebo14\_40:

(Start: 36 @31428 has 14 MA's), (49, 31464), (Start: 63 @31509 has 14 MA's), (67, 31527), (72, 31548), (75, 31584), (82, 31617), (88, 31689),

Gene: Lego\_62 Start: 41246, Stop: 41560, Start Num: 45

Candidate Starts for Lego\_62:

(Start: 45 @41246 has 66 MA's),

Gene: Liebe\_64 Start: 43443, Stop: 43757, Start Num: 45

Candidate Starts for Liebe\_64:

(Start: 45 @43443 has 66 MA's), (61, 43488), (65, 43506), (77, 43587), (95, 43734),

Gene: LilPharaoh\_63 Start: 46884, Stop: 47156, Start Num: 41

Candidate Starts for LilPharaoh\_63:

(Start: 38 @46869 has 1 MA's), (Start: 41 @46884 has 143 MA's), (Start: 47 @46893 has 1 MA's), (55, 46914), (59, 46923), (64, 46941), (65, 46944), (67, 46956), (68, 46959), (72, 46977), (75, 47013), (78, 47025), (89, 47127),

Gene: Lilith\_73 Start: 43061, Stop: 42834, Start Num: 62

Candidate Starts for Lilith\_73:

(Start: 62 @43061 has 68 MA's), (Start: 63 @43055 has 14 MA's),

Gene: LindNT\_74 Start: 50578, Stop: 50853, Start Num: 41

Candidate Starts for LindNT\_74:

(Start: 38 @50563 has 1 MA's), (Start: 41 @50578 has 143 MA's), (64, 50635), (65, 50638), (67, 50650), (68, 50653), (72, 50671), (78, 50719), (82, 50740), (88, 50812), (89, 50821),

Gene: Lizalica\_61 Start: 40721, Stop: 41032, Start Num: 45

Candidate Starts for Lizalica\_61:

(Start: 45 @40721 has 66 MA's),

Gene: Llorens\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Llorens\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: London\_62 Start: 41417, Stop: 41728, Start Num: 45

Candidate Starts for London\_62:

(Start: 45 @41417 has 66 MA's),

Gene: Louie6\_74 Start: 43098, Stop: 42871, Start Num: 62

Candidate Starts for Louie6\_74:

(Start: 62 @43098 has 68 MA's), (Start: 63 @43092 has 14 MA's), (65, 43086),

Gene: Lowa\_72 Start: 43054, Stop: 42833, Start Num: 63

Candidate Starts for Lowa\_72:

(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: LugYA\_78 Start: 43069, Stop: 42842, Start Num: 62

Candidate Starts for LugYA\_78:

(Start: 62 @43069 has 68 MA's), (Start: 63 @43063 has 14 MA's),

Gene: Lunahalos\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Lunahalos\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: MA5\_70 Start: 42239, Stop: 41970, Start Num: 53

Candidate Starts for MA5\_70:

(19, 42404), (Start: 53 @42239 has 25 MA's), (65, 42209),

Gene: MK4\_70 Start: 42314, Stop: 42045, Start Num: 53

Candidate Starts for MK4\_70:

(19, 42479), (Start: 53 @42314 has 25 MA's), (65, 42284),

Gene: MaGuCo\_57 Start: 41443, Stop: 41757, Start Num: 45

Candidate Starts for MaGuCo\_57:

(Start: 45 @41443 has 66 MA's), (52, 41464), (61, 41488), (77, 41587), (95, 41734),

Gene: MacKat\_72 Start: 46099, Stop: 46371, Start Num: 41

Candidate Starts for MacKat\_72:

(Start: 38 @46084 has 1 MA's), (Start: 41 @46099 has 143 MA's), (64, 46156), (65, 46159), (68, 46174), (72, 46192), (78, 46240), (82, 46261), (88, 46333), (89, 46342),

Gene: MacnCheese\_78 Start: 50941, Stop: 51216, Start Num: 41

Candidate Starts for MacnCheese\_78:

(14, 50743), (23, 50824), (Start: 41 @50941 has 143 MA's), (57, 50971), (Start: 63 @50995 has 14 MA's), (67, 51013), (68, 51016), (72, 51034), (88, 51175),

Gene: MadMarie\_73 Start: 43069, Stop: 42842, Start Num: 62

Candidate Starts for MadMarie\_73:

(Start: 62 @43069 has 68 MA's), (Start: 63 @43063 has 14 MA's),

Gene: Mainiac\_74 Start: 43061, Stop: 42834, Start Num: 62

Candidate Starts for Mainiac\_74:

(Start: 62 @43061 has 68 MA's), (Start: 63 @43055 has 14 MA's),

Gene: Malinsilva\_77 Start: 43060, Stop: 42833, Start Num: 62

Candidate Starts for Malinsilva\_77:

(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Malthus\_41 Start: 31339, Stop: 31638, Start Num: 36

Candidate Starts for Malthus\_41:

(Start: 36 @31339 has 14 MA's), (49, 31375), (Start: 63 @31420 has 14 MA's), (67, 31438), (72, 31459), (75, 31495), (82, 31528), (88, 31600),

Gene: Manu\_74 Start: 42885, Stop: 42661, Start Num: 62

Candidate Starts for Manu\_74:

(Start: 62 @42885 has 68 MA's), (Start: 63 @42879 has 14 MA's), (65, 42873),

Gene: MarQuardt\_75 Start: 43064, Stop: 42843, Start Num: 63

Candidate Starts for MarQuardt\_75:

(Start: 62 @43070 has 68 MA's), (Start: 63 @43064 has 14 MA's),

Gene: Marchesa\_68 Start: 42769, Stop: 42503, Start Num: 53  
Candidate Starts for Marchesa\_68:  
(32, 42844), (Start: 53 @42769 has 25 MA's), (Start: 58 @42760 has 1 MA's), (65, 42739), (82, 42637),

Gene: Marcoliusprime\_78 Start: 52473, Stop: 52742, Start Num: 43  
Candidate Starts for Marcoliusprime\_78:  
(22, 52350), (Start: 43 @52473 has 12 MA's), (50, 52488), (65, 52530), (72, 52563), (75, 52599), (82, 52632),

Gene: Margo\_70 Start: 42843, Stop: 42583, Start Num: 53  
Candidate Starts for Margo\_70:  
(32, 42918), (Start: 53 @42843 has 25 MA's), (65, 42813), (72, 42780), (93, 42597),

Gene: Marie\_73 Start: 43068, Stop: 42841, Start Num: 62  
Candidate Starts for Marie\_73:  
(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Marius\_75 Start: 42882, Stop: 42658, Start Num: 62  
Candidate Starts for Marius\_75:  
(Start: 62 @42882 has 68 MA's), (Start: 63 @42876 has 14 MA's), (65, 42870),

Gene: MarkPhew\_77 Start: 50195, Stop: 50467, Start Num: 41  
Candidate Starts for MarkPhew\_77:  
(Start: 38 @50180 has 1 MA's), (Start: 41 @50195 has 143 MA's), (Start: 63 @50249 has 14 MA's), (65, 50255), (67, 50267), (68, 50270), (72, 50288), (81, 50354),

Gene: Marshawn\_74 Start: 50588, Stop: 50860, Start Num: 41  
Candidate Starts for Marshawn\_74:  
(Start: 38 @50573 has 1 MA's), (Start: 41 @50588 has 143 MA's), (57, 50621), (66, 50657), (89, 50831),

Gene: MaryV\_133 Start: 66927, Stop: 66649, Start Num: 39  
Candidate Starts for MaryV\_133:  
(12, 67134), (20, 67044), (Start: 39 @66927 has 5 MA's), (56, 66882), (67, 66831), (78, 66750), (81, 66729), (87, 66657), (88, 66654),

Gene: Maureen\_64 Start: 43442, Stop: 43756, Start Num: 45  
Candidate Starts for Maureen\_64:  
(Start: 45 @43442 has 66 MA's), (61, 43487), (65, 43505), (77, 43586), (95, 43733),

Gene: McMater\_76 Start: 50287, Stop: 50565, Start Num: 41  
Candidate Starts for McMater\_76:  
(Start: 38 @50272 has 1 MA's), (Start: 41 @50287 has 143 MA's), (Start: 47 @50296 has 1 MA's), (59, 50326), (64, 50344), (65, 50347), (68, 50362), (72, 50380), (88, 50521),

Gene: Mdavu\_63 Start: 47160, Stop: 47432, Start Num: 41  
Candidate Starts for Mdavu\_63:  
(Start: 38 @47145 has 1 MA's), (Start: 41 @47160 has 143 MA's), (Start: 47 @47169 has 1 MA's), (55, 47190), (59, 47199), (64, 47217), (65, 47220), (67, 47232), (68, 47235), (72, 47253), (75, 47289), (78, 47301), (89, 47403),

Gene: MeaningOfLife\_77 Start: 51068, Stop: 51340, Start Num: 41  
Candidate Starts for MeaningOfLife\_77:

(Start: 38 @51053 has 1 MA's), (Start: 41 @51068 has 143 MA's), (64, 51125), (65, 51128), (68, 51143), (72, 51161), (82, 51230), (88, 51302), (89, 51311),

Gene: Megsy\_77 Start: 50206, Stop: 50481, Start Num: 41

Candidate Starts for Megsy\_77:

(Start: 38 @50191 has 1 MA's), (Start: 41 @50206 has 143 MA's), (64, 50263), (65, 50266), (68, 50281), (72, 50299), (78, 50347), (82, 50368), (88, 50440), (89, 50449),

Gene: Methuselah\_68 Start: 43092, Stop: 42865, Start Num: 62

Candidate Starts for Methuselah\_68:

(Start: 62 @43092 has 68 MA's), (Start: 63 @43086 has 14 MA's),

Gene: Microwolf\_71 Start: 43084, Stop: 42857, Start Num: 62

Candidate Starts for Microwolf\_71:

(Start: 62 @43084 has 68 MA's), (Start: 63 @43078 has 14 MA's),

Gene: Milly\_79 Start: 52464, Stop: 52733, Start Num: 43

Candidate Starts for Milly\_79:

(22, 52341), (Start: 43 @52464 has 12 MA's), (50, 52479), (65, 52521), (72, 52554), (75, 52590), (82, 52623),

Gene: Misomonster\_76 Start: 43095, Stop: 42868, Start Num: 62

Candidate Starts for Misomonster\_76:

(Start: 62 @43095 has 68 MA's), (Start: 63 @43089 has 14 MA's), (65, 43083),

Gene: MissDaisy\_39 Start: 31179, Stop: 31466, Start Num: 37

Candidate Starts for MissDaisy\_39:

(Start: 37 @31179 has 8 MA's), (49, 31215), (Start: 63 @31248 has 14 MA's), (65, 31254), (67, 31266), (72, 31287), (75, 31323), (82, 31356), (88, 31428),

Gene: MissSwiss\_63 Start: 40182, Stop: 40493, Start Num: 45

Candidate Starts for MissSwiss\_63:

(Start: 45 @40182 has 66 MA's),

Gene: Mitti\_40 Start: 31340, Stop: 31639, Start Num: 36

Candidate Starts for Mitti\_40:

(Start: 36 @31340 has 14 MA's), (49, 31376), (Start: 63 @31421 has 14 MA's), (67, 31439), (72, 31460), (75, 31496), (82, 31529), (88, 31601),

Gene: MoneyMay\_74 Start: 43068, Stop: 42841, Start Num: 62

Candidate Starts for MoneyMay\_74:

(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Montavir\_70 Start: 43068, Stop: 42841, Start Num: 62

Candidate Starts for Montavir\_70:

(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Moss\_58 Start: 38016, Stop: 38342, Start Num: 45

Candidate Starts for Moss\_58:

(26, 37938), (Start: 45 @38016 has 66 MA's), (68, 38094), (88, 38256),

Gene: MrMagoo\_154 Start: 73559, Stop: 73254, Start Num: 46

Candidate Starts for MrMagoo\_154:

(Start: 46 @73559 has 7 MA's), (69, 73478),

Gene: MuchMore\_78 Start: 43060, Stop: 42833, Start Num: 62

Candidate Starts for MuchMore\_78:

(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Mudpuppy\_60 Start: 41493, Stop: 41807, Start Num: 45

Candidate Starts for Mudpuppy\_60:

(Start: 45 @41493 has 66 MA's),

Gene: Mufasa\_78 Start: 51931, Stop: 52200, Start Num: 43

Candidate Starts for Mufasa\_78:

(22, 51808), (33, 51892), (Start: 43 @51931 has 12 MA's), (65, 51988), (72, 52021), (75, 52057), (82, 52090), (88, 52162),

Gene: Murucutumbu\_76 Start: 51352, Stop: 51627, Start Num: 41

Candidate Starts for Murucutumbu\_76:

(Start: 38 @51337 has 1 MA's), (Start: 41 @51352 has 143 MA's), (64, 51409), (65, 51412), (68, 51427), (72, 51445), (82, 51514), (88, 51586), (89, 51595),

Gene: Mynx\_77 Start: 50847, Stop: 51119, Start Num: 41

Candidate Starts for Mynx\_77:

(Start: 38 @50832 has 1 MA's), (Start: 41 @50847 has 143 MA's), (64, 50901), (65, 50904), (68, 50919), (72, 50937), (78, 50985), (82, 51006), (88, 51078), (89, 51087),

Gene: Mysterium\_57 Start: 37857, Stop: 38183, Start Num: 45

Candidate Starts for Mysterium\_57:

(24, 37758), (26, 37779), (Start: 45 @37857 has 66 MA's), (68, 37935), (88, 38097),

Gene: Nanosmite\_147 Start: 72834, Stop: 72535, Start Num: 46

Candidate Starts for Nanosmite\_147:

(35, 72867), (Start: 46 @72834 has 7 MA's), (70, 72753), (73, 72735), (84, 72660), (86, 72603),

Gene: Nergal\_67 Start: 46690, Stop: 46941, Start Num: 43

Candidate Starts for Nergal\_67:

(33, 46651), (Start: 43 @46690 has 12 MA's), (65, 46747), (67, 46759), (90, 46933),

Gene: Nibb\_77 Start: 50011, Stop: 50283, Start Num: 41

Candidate Starts for Nibb\_77:

(Start: 38 @49996 has 1 MA's), (Start: 41 @50011 has 143 MA's), (Start: 63 @50065 has 14 MA's), (65, 50071), (67, 50083), (72, 50104), (81, 50170),

Gene: Nikao\_65 Start: 49769, Stop: 50041, Start Num: 41

Candidate Starts for Nikao\_65:

(Start: 38 @49754 has 1 MA's), (Start: 41 @49769 has 143 MA's), (Start: 47 @49778 has 1 MA's), (55, 49799), (59, 49808), (64, 49826), (65, 49829), (67, 49841), (68, 49844), (72, 49862), (75, 49898), (78, 49910), (89, 50012),

Gene: Niklas\_77 Start: 50348, Stop: 50626, Start Num: 41

Candidate Starts for Niklas\_77:

(Start: 38 @50333 has 1 MA's), (Start: 41 @50348 has 143 MA's), (Start: 47 @50357 has 1 MA's), (59, 50387), (64, 50405), (65, 50408), (68, 50423), (72, 50441), (88, 50582),

Gene: Niobe\_62 Start: 41420, Stop: 41731, Start Num: 45  
Candidate Starts for Niobe\_62:  
(Start: 45 @41420 has 66 MA's),

Gene: Nitro\_63 Start: 42114, Stop: 42428, Start Num: 45  
Candidate Starts for Nitro\_63:  
(Start: 45 @42114 has 66 MA's),

Gene: Noella\_70 Start: 42818, Stop: 42558, Start Num: 53  
Candidate Starts for Noella\_70:  
(32, 42893), (Start: 53 @42818 has 25 MA's), (65, 42788), (93, 42572),

Gene: Norbert\_66 Start: 42816, Stop: 42568, Start Num: 53  
Candidate Starts for Norbert\_66:  
(32, 42891), (Start: 53 @42816 has 25 MA's), (65, 42786),

Gene: November\_72 Start: 50276, Stop: 50551, Start Num: 41  
Candidate Starts for November\_72:  
(7, 50015), (14, 50078), (17, 50135), (23, 50159), (Start: 41 @50276 has 143 MA's), (68, 50351), (72, 50369), (82, 50438),

Gene: Nutello\_62 Start: 47156, Stop: 47428, Start Num: 41  
Candidate Starts for Nutello\_62:  
(Start: 38 @47141 has 1 MA's), (Start: 41 @47156 has 143 MA's), (Start: 47 @47165 has 1 MA's), (55, 47186), (59, 47195), (64, 47213), (65, 47216), (67, 47228), (68, 47231), (72, 47249), (75, 47285), (78, 47297), (89, 47399),

Gene: ObiToo\_67 Start: 41757, Stop: 42068, Start Num: 45  
Candidate Starts for ObiToo\_67:  
(Start: 45 @41757 has 66 MA's),

Gene: OlanP\_73 Start: 43058, Stop: 42834, Start Num: 62  
Candidate Starts for OlanP\_73:  
(Start: 62 @43058 has 68 MA's), (Start: 63 @43052 has 14 MA's), (65, 43046),

Gene: Ollie\_75 Start: 42939, Stop: 42712, Start Num: 62  
Candidate Starts for Ollie\_75:  
(Start: 62 @42939 has 68 MA's), (Start: 63 @42933 has 14 MA's),

Gene: OmniCritical\_39 Start: 31324, Stop: 31623, Start Num: 36  
Candidate Starts for OmniCritical\_39:  
(Start: 36 @31324 has 14 MA's), (49, 31360), (Start: 63 @31405 has 14 MA's), (67, 31423), (72, 31444), (75, 31480), (82, 31513), (88, 31585),

Gene: Oscar\_77 Start: 50230, Stop: 50502, Start Num: 41  
Candidate Starts for Oscar\_77:  
(Start: 38 @50215 has 1 MA's), (Start: 41 @50230 has 143 MA's), (Start: 63 @50284 has 14 MA's), (65, 50290), (67, 50302), (72, 50323), (81, 50389), (88, 50464),

Gene: P28Green\_75 Start: 43071, Stop: 42844, Start Num: 62  
Candidate Starts for P28Green\_75:  
(Start: 62 @43071 has 68 MA's), (Start: 63 @43065 has 14 MA's),

Gene: PGHhamlin\_77 Start: 43060, Stop: 42833, Start Num: 62  
Candidate Starts for PGHhamlin\_77:  
(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Padfoot\_75 Start: 50313, Stop: 50585, Start Num: 41  
Candidate Starts for Padfoot\_75:  
(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Padpat\_79 Start: 50552, Stop: 50824, Start Num: 41  
Candidate Starts for Padpat\_79:  
(Start: 38 @50537 has 1 MA's), (Start: 41 @50552 has 143 MA's), (64, 50606), (65, 50609), (68, 50624), (72, 50642), (78, 50690), (82, 50711), (88, 50783), (89, 50792),

Gene: Panamaxus\_68 Start: 42817, Stop: 42557, Start Num: 53  
Candidate Starts for Panamaxus\_68:  
(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: PandaPo\_63 Start: 40189, Stop: 40500, Start Num: 45  
Candidate Starts for PandaPo\_63:  
(Start: 45 @40189 has 66 MA's),

Gene: Patt\_39 Start: 31155, Stop: 31442, Start Num: 37  
Candidate Starts for Patt\_39:  
(Start: 37 @31155 has 8 MA's), (49, 31191), (Start: 63 @31224 has 14 MA's), (65, 31230), (67, 31242), (72, 31263), (75, 31299), (82, 31332), (88, 31404),

Gene: Pawn\_73 Start: 42889, Stop: 42665, Start Num: 62  
Candidate Starts for Pawn\_73:  
(Start: 62 @42889 has 68 MA's), (Start: 63 @42883 has 14 MA's), (65, 42877),

Gene: Peanam\_77 Start: 50306, Stop: 50584, Start Num: 41  
Candidate Starts for Peanam\_77:  
(Start: 38 @50291 has 1 MA's), (Start: 41 @50306 has 143 MA's), (Start: 47 @50315 has 1 MA's), (59, 50345), (64, 50363), (65, 50366), (68, 50381), (72, 50399), (88, 50540),

Gene: Peel\_75 Start: 50118, Stop: 50390, Start Num: 41  
Candidate Starts for Peel\_75:  
(Start: 38 @50103 has 1 MA's), (Start: 41 @50118 has 143 MA's), (64, 50172), (65, 50175), (68, 50190), (72, 50208), (78, 50256), (82, 50277), (88, 50349), (89, 50358),

Gene: Pembroke\_75 Start: 43069, Stop: 42842, Start Num: 62  
Candidate Starts for Pembroke\_75:  
(Start: 62 @43069 has 68 MA's), (Start: 63 @43063 has 14 MA's),

Gene: Penny1\_75 Start: 43072, Stop: 42845, Start Num: 62  
Candidate Starts for Penny1\_75:  
(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Phantastic\_72 Start: 42500, Stop: 42231, Start Num: 53  
Candidate Starts for Phantastic\_72:  
(19, 42665), (Start: 53 @42500 has 25 MA's), (65, 42470),

Gene: Pharb\_74 Start: 49614, Stop: 49889, Start Num: 41

Candidate Starts for Pharb\_74:

(14, 49416), (17, 49473), (23, 49497), (Start: 41 @49614 has 143 MA's), (49, 49629), (57, 49647), (59, 49653), (64, 49671), (65, 49674), (67, 49686), (68, 49689), (72, 49707), (82, 49776), (88, 49848), (89, 49857),

Gene: PhelpsODU\_78 Start: 50059, Stop: 50331, Start Num: 41

Candidate Starts for PhelpsODU\_78:

(29, 49996), (Start: 38 @50044 has 1 MA's), (Start: 41 @50059 has 143 MA's), (65, 50119), (67, 50131), (72, 50152),

Gene: PhishRPhriends\_71 Start: 42066, Stop: 41842, Start Num: 62

Candidate Starts for PhishRPhriends\_71:

(Start: 62 @42066 has 68 MA's), (Start: 63 @42060 has 14 MA's), (65, 42054),

Gene: Phives\_63 Start: 41905, Stop: 42216, Start Num: 45

Candidate Starts for Phives\_63:

(Start: 45 @41905 has 66 MA's),

Gene: Phoebe\_76 Start: 43061, Stop: 42834, Start Num: 62

Candidate Starts for Phoebe\_76:

(Start: 62 @43061 has 68 MA's), (Start: 63 @43055 has 14 MA's),

Gene: Phoxy\_75 Start: 43087, Stop: 42866, Start Num: 63

Candidate Starts for Phoxy\_75:

(Start: 62 @43093 has 68 MA's), (Start: 63 @43087 has 14 MA's),

Gene: Phrank\_79 Start: 49919, Stop: 50191, Start Num: 41

Candidate Starts for Phrank\_79:

(Start: 38 @49904 has 1 MA's), (Start: 41 @49919 has 143 MA's), (65, 49979), (72, 50012),

Gene: Piatt\_74 Start: 50313, Stop: 50585, Start Num: 41

Candidate Starts for Piatt\_74:

(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Pisa1\_73 Start: 50611, Stop: 50883, Start Num: 41

Candidate Starts for Pisa1\_73:

(Start: 38 @50596 has 1 MA's), (Start: 41 @50611 has 143 MA's), (64, 50668), (65, 50671), (67, 50683), (68, 50686), (72, 50704), (78, 50752), (82, 50773), (88, 50845), (89, 50854),

Gene: Pisa4\_67 Start: 45980, Stop: 46252, Start Num: 41

Candidate Starts for Pisa4\_67:

(Start: 38 @45965 has 1 MA's), (Start: 41 @45980 has 143 MA's), (64, 46037), (65, 46040), (67, 46052), (68, 46055), (72, 46073), (78, 46121), (82, 46142), (88, 46214), (89, 46223),

Gene: Pistachio\_70 Start: 42405, Stop: 42139, Start Num: 54

Candidate Starts for Pistachio\_70:

(Start: 54 @42405 has 6 MA's), (65, 42375), (82, 42273), (93, 42159),

Gene: Pixelle\_62 Start: 42519, Stop: 42833, Start Num: 45

Candidate Starts for Pixelle\_62:

(34, 42492), (Start: 45 @42519 has 66 MA's),

Gene: Pixie\_75 Start: 49917, Stop: 50186, Start Num: 41  
Candidate Starts for Pixie\_75:  
(Start: 41 @49917 has 143 MA's), (49, 49932), (67, 49986), (68, 49989), (72, 50007), (82, 50076),

Gene: Pocahontas\_69 Start: 42814, Stop: 42554, Start Num: 53  
Candidate Starts for Pocahontas\_69:  
(32, 42889), (Start: 53 @42814 has 25 MA's), (65, 42784), (93, 42568),

Gene: Pokerus\_76 Start: 50561, Stop: 50833, Start Num: 41  
Candidate Starts for Pokerus\_76:  
(Start: 38 @50546 has 1 MA's), (Start: 41 @50561 has 143 MA's), (64, 50615), (65, 50618), (68, 50633), (72, 50651), (78, 50699), (82, 50720), (88, 50792), (89, 50801),

Gene: Popcicle\_70 Start: 42814, Stop: 42554, Start Num: 53  
Candidate Starts for Popcicle\_70:  
(32, 42889), (Start: 53 @42814 has 25 MA's), (65, 42784), (93, 42568),

Gene: PotatoSplit\_76 Start: 43072, Stop: 42845, Start Num: 62  
Candidate Starts for PotatoSplit\_76:  
(Start: 62 @43072 has 68 MA's), (Start: 63 @43066 has 14 MA's),

Gene: Powerpuff\_64 Start: 42450, Stop: 42764, Start Num: 45  
Candidate Starts for Powerpuff\_64:  
(Start: 45 @42450 has 66 MA's),

Gene: Prithvi\_78 Start: 50578, Stop: 50853, Start Num: 41  
Candidate Starts for Prithvi\_78:  
(Start: 38 @50563 has 1 MA's), (Start: 41 @50578 has 143 MA's), (64, 50635), (65, 50638), (67, 50650), (68, 50653), (72, 50671), (78, 50719), (82, 50740), (88, 50812), (89, 50821),

Gene: Pumpkins\_61 Start: 42050, Stop: 42364, Start Num: 45  
Candidate Starts for Pumpkins\_61:  
(Start: 45 @42050 has 66 MA's),

Gene: Puppy\_71 Start: 42477, Stop: 42211, Start Num: 54  
Candidate Starts for Puppy\_71:  
(Start: 54 @42477 has 6 MA's), (65, 42447), (82, 42345), (93, 42231),

Gene: PurpleHaze\_74 Start: 42878, Stop: 42660, Start Num: 63  
Candidate Starts for PurpleHaze\_74:  
(Start: 62 @42884 has 68 MA's), (Start: 63 @42878 has 14 MA's), (65, 42872),

Gene: Qhanda\_41 Start: 31436, Stop: 31735, Start Num: 36  
Candidate Starts for Qhanda\_41:  
(Start: 36 @31436 has 14 MA's), (49, 31472), (Start: 63 @31517 has 14 MA's), (67, 31535), (72, 31556), (75, 31592), (82, 31625), (88, 31697),

Gene: QuincyRose\_73 Start: 50523, Stop: 50792, Start Num: 41  
Candidate Starts for QuincyRose\_73:  
(Start: 38 @50508 has 1 MA's), (Start: 41 @50523 has 143 MA's), (64, 50577), (65, 50580), (68, 50595), (72, 50613), (78, 50661), (82, 50682), (88, 50754), (89, 50763),

Gene: QuinnKiro\_69 Start: 42817, Stop: 42557, Start Num: 53  
Candidate Starts for QuinnKiro\_69:  
(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: Ramen\_76 Start: 49882, Stop: 50154, Start Num: 41  
Candidate Starts for Ramen\_76:  
(Start: 38 @49867 has 1 MA's), (Start: 41 @49882 has 143 MA's), (65, 49939), (68, 49954), (72, 49972), (78, 50020), (82, 50041), (88, 50113), (89, 50122),

Gene: Rapunzel97\_78 Start: 50533, Stop: 50805, Start Num: 41  
Candidate Starts for Rapunzel97\_78:  
(Start: 38 @50518 has 1 MA's), (Start: 41 @50533 has 143 MA's), (64, 50587), (65, 50590), (68, 50605), (72, 50623), (78, 50671), (82, 50692), (88, 50764), (89, 50773),

Gene: Reedo\_63 Start: 40030, Stop: 40344, Start Num: 45  
Candidate Starts for Reedo\_63:  
(Start: 45 @40030 has 66 MA's), (96, 40339),

Gene: Reptar3000\_40 Start: 31146, Stop: 31433, Start Num: 37  
Candidate Starts for Reptar3000\_40:  
(Start: 37 @31146 has 8 MA's), (49, 31182), (Start: 63 @31215 has 14 MA's), (65, 31221), (67, 31233), (72, 31254), (75, 31290), (82, 31323), (88, 31395),

Gene: ResDef\_68 Start: 42817, Stop: 42557, Start Num: 53  
Candidate Starts for ResDef\_68:  
(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: Rey\_153 Start: 72809, Stop: 72504, Start Num: 46  
Candidate Starts for Rey\_153:  
(Start: 46 @72809 has 7 MA's), (69, 72728), (72, 72713),

Gene: Richo\_76 Start: 50287, Stop: 50565, Start Num: 41  
Candidate Starts for Richo\_76:  
(Start: 38 @50272 has 1 MA's), (Start: 41 @50287 has 143 MA's), (Start: 47 @50296 has 1 MA's), (59, 50326), (64, 50344), (65, 50347), (68, 50362), (72, 50380), (88, 50521),

Gene: RockScotty\_57 Start: 37852, Stop: 38178, Start Num: 45  
Candidate Starts for RockScotty\_57:  
(24, 37753), (26, 37774), (Start: 45 @37852 has 66 MA's), (68, 37930), (88, 38092),

Gene: Rockstar\_69 Start: 42323, Stop: 42054, Start Num: 53  
Candidate Starts for Rockstar\_69:  
(19, 42488), (Start: 53 @42323 has 25 MA's), (65, 42293),

Gene: Roimos\_68 Start: 42699, Stop: 42433, Start Num: 53  
Candidate Starts for Roimos\_68:  
(32, 42774), (Start: 53 @42699 has 25 MA's), (65, 42669), (82, 42567),

Gene: Rosmarinus\_75 Start: 50104, Stop: 50376, Start Num: 41  
Candidate Starts for Rosmarinus\_75:  
(Start: 38 @50089 has 1 MA's), (Start: 41 @50104 has 143 MA's), (64, 50158), (65, 50161), (68, 50176), (72, 50194), (78, 50242), (82, 50263), (88, 50335), (89, 50344),

Gene: Rummer\_74 Start: 43096, Stop: 42869, Start Num: 62  
Candidate Starts for Rummer\_74:  
(Start: 62 @43096 has 68 MA's), (Start: 63 @43090 has 14 MA's),

Gene: Ruthiejr\_41 Start: 31304, Stop: 31603, Start Num: 37  
Candidate Starts for Ruthiejr\_41:  
(Start: 37 @31304 has 8 MA's), (49, 31340), (Start: 63 @31385 has 14 MA's), (67, 31403), (75, 31460),  
(82, 31493), (88, 31565),

Gene: Sabia\_73 Start: 43076, Stop: 42849, Start Num: 62  
Candidate Starts for Sabia\_73:  
(Start: 62 @43076 has 68 MA's), (Start: 63 @43070 has 14 MA's),

Gene: Sabinator\_73 Start: 43061, Stop: 42840, Start Num: 63  
Candidate Starts for Sabinator\_73:  
(Start: 62 @43067 has 68 MA's), (Start: 63 @43061 has 14 MA's),

Gene: Sabourin\_58 Start: 37917, Stop: 38243, Start Num: 45  
Candidate Starts for Sabourin\_58:  
(1, 37260), (18, 37776), (26, 37839), (Start: 45 @37917 has 66 MA's), (68, 37995), (88, 38157), (94,  
38205),

Gene: SamScheppers\_39 Start: 31818, Stop: 32117, Start Num: 36  
Candidate Starts for SamScheppers\_39:  
(Start: 36 @31818 has 14 MA's), (49, 31854), (Start: 63 @31899 has 14 MA's), (67, 31917), (72,  
31938), (75, 31974), (82, 32007), (88, 32079),

Gene: SamuelLPlaqson\_75 Start: 50512, Stop: 50781, Start Num: 41  
Candidate Starts for SamuelLPlaqson\_75:  
(Start: 38 @50497 has 1 MA's), (Start: 41 @50512 has 143 MA's), (64, 50563), (65, 50566), (67,  
50578), (68, 50581), (72, 50599), (78, 50647), (82, 50668), (88, 50740), (89, 50749),

Gene: SaturnRing\_70 Start: 42858, Stop: 42592, Start Num: 54  
Candidate Starts for SaturnRing\_70:  
(Start: 54 @42858 has 6 MA's), (65, 42828), (82, 42726), (93, 42612),

Gene: Scarlett\_78 Start: 50566, Stop: 50838, Start Num: 41  
Candidate Starts for Scarlett\_78:  
(Start: 38 @50551 has 1 MA's), (Start: 41 @50566 has 143 MA's), (49, 50581), (Start: 63 @50620 has  
14 MA's), (64, 50623), (65, 50626), (67, 50638), (72, 50659), (81, 50725), (88, 50800),

Gene: Schaffner\_61 Start: 41733, Stop: 42047, Start Num: 45  
Candidate Starts for Schaffner\_61:  
(Start: 45 @41733 has 66 MA's),

Gene: Scout\_69 Start: 42030, Stop: 41764, Start Num: 53  
Candidate Starts for Scout\_69:  
(32, 42105), (Start: 53 @42030 has 25 MA's), (65, 42000), (82, 41898),

Gene: SgtBeansprout\_63 Start: 47156, Stop: 47428, Start Num: 41  
Candidate Starts for SgtBeansprout\_63:  
(Start: 38 @47141 has 1 MA's), (Start: 41 @47156 has 143 MA's), (Start: 47 @47165 has 1 MA's), (55,  
47186), (59, 47195), (64, 47213), (65, 47216), (67, 47228), (68, 47231), (72, 47249), (75, 47285), (78,

47297), (89, 47399),

Gene: Shadow1\_80 Start: 50598, Stop: 50870, Start Num: 41

Candidate Starts for Shadow1\_80:

(Start: 38 @50583 has 1 MA's), (Start: 41 @50598 has 143 MA's), (49, 50613), (57, 50631), (65, 50658), (67, 50670), (72, 50691),

Gene: Shaobing\_76 Start: 50323, Stop: 50601, Start Num: 41

Candidate Starts for Shaobing\_76:

(Start: 38 @50308 has 1 MA's), (Start: 41 @50323 has 143 MA's), (Start: 47 @50332 has 1 MA's), (64, 50380), (65, 50383), (68, 50398), (72, 50416), (88, 50557),

Gene: ShedlockHolmes\_78 Start: 50418, Stop: 50690, Start Num: 41

Candidate Starts for ShedlockHolmes\_78:

(Start: 41 @50418 has 143 MA's), (49, 50433), (64, 50475), (65, 50478), (68, 50493), (72, 50511), (82, 50580),

Gene: ShiaSurprise\_76 Start: 50313, Stop: 50585, Start Num: 41

Candidate Starts for ShiaSurprise\_76:

(Start: 38 @50298 has 1 MA's), (Start: 41 @50313 has 143 MA's), (64, 50367), (65, 50370), (68, 50385), (72, 50403), (78, 50451), (82, 50472), (88, 50544), (89, 50553),

Gene: Simpson\_66 Start: 41531, Stop: 41845, Start Num: 45

Candidate Starts for Simpson\_66:

(Start: 45 @41531 has 66 MA's),

Gene: SirPhilip\_75 Start: 50824, Stop: 51099, Start Num: 41

Candidate Starts for SirPhilip\_75:

(Start: 38 @50809 has 1 MA's), (Start: 41 @50824 has 143 MA's), (49, 50839), (57, 50857), (Start: 63 @50878 has 14 MA's), (67, 50896), (68, 50899), (72, 50917),

Gene: Skelbel\_63 Start: 41420, Stop: 41731, Start Num: 45

Candidate Starts for Skelbel\_63:

(Start: 45 @41420 has 66 MA's),

Gene: Slarp\_40 Start: 31427, Stop: 31726, Start Num: 36

Candidate Starts for Slarp\_40:

(Start: 36 @31427 has 14 MA's), (49, 31463), (Start: 63 @31508 has 14 MA's), (67, 31526), (72, 31547), (75, 31583), (82, 31616), (88, 31688),

Gene: Slimphazie\_77 Start: 50533, Stop: 50805, Start Num: 41

Candidate Starts for Slimphazie\_77:

(Start: 38 @50518 has 1 MA's), (Start: 41 @50533 has 143 MA's), (64, 50587), (65, 50590), (68, 50605), (72, 50623), (78, 50671), (82, 50692), (88, 50764), (89, 50773),

Gene: Snek\_61 Start: 38593, Stop: 38904, Start Num: 45

Candidate Starts for Snek\_61:

(4, 38203), (Start: 45 @38593 has 66 MA's),

Gene: Snickers\_75 Start: 43041, Stop: 42814, Start Num: 62

Candidate Starts for Snickers\_75:

(Start: 62 @43041 has 68 MA's), (Start: 63 @43035 has 14 MA's),

Gene: SoYo\_72 Start: 42980, Stop: 42753, Start Num: 62  
Candidate Starts for SoYo\_72:  
(Start: 62 @42980 has 68 MA's), (Start: 63 @42974 has 14 MA's),

Gene: SoilDragon\_74 Start: 42516, Stop: 42289, Start Num: 62  
Candidate Starts for SoilDragon\_74:  
(Start: 62 @42516 has 68 MA's), (Start: 63 @42510 has 14 MA's),

Gene: Soondubu\_58 Start: 42991, Stop: 43305, Start Num: 40  
Candidate Starts for Soondubu\_58:  
(Start: 40 @42991 has 3 MA's), (48, 43006), (65, 43057), (74, 43126), (83, 43162), (85, 43198), (86, 43222),

Gene: Sooty\_58 Start: 37931, Stop: 38257, Start Num: 45  
Candidate Starts for Sooty\_58:  
(1, 37274), (3, 37514), (18, 37790), (26, 37853), (Start: 45 @37931 has 66 MA's), (68, 38009), (88, 38171), (94, 38219),

Gene: Soshari\_77 Start: 43092, Stop: 42865, Start Num: 62  
Candidate Starts for Soshari\_77:  
(Start: 62 @43092 has 68 MA's), (Start: 63 @43086 has 14 MA's),

Gene: SpecialK\_58 Start: 37925, Stop: 38251, Start Num: 45  
Candidate Starts for SpecialK\_58:  
(26, 37847), (Start: 45 @37925 has 66 MA's), (68, 38003), (88, 38165),

Gene: Spike509\_75 Start: 43087, Stop: 42866, Start Num: 63  
Candidate Starts for Spike509\_75:  
(Start: 62 @43093 has 68 MA's), (Start: 63 @43087 has 14 MA's),

Gene: Spock\_75 Start: 50117, Stop: 50389, Start Num: 41  
Candidate Starts for Spock\_75:  
(Start: 38 @50102 has 1 MA's), (Start: 41 @50117 has 143 MA's), (64, 50171), (65, 50174), (68, 50189), (72, 50207), (78, 50255), (82, 50276), (88, 50348), (89, 50357),

Gene: Stagni\_72 Start: 43065, Stop: 42844, Start Num: 63  
Candidate Starts for Stagni\_72:  
(Start: 62 @43071 has 68 MA's), (Start: 63 @43065 has 14 MA's),

Gene: StepMih\_74 Start: 43062, Stop: 42835, Start Num: 62  
Candidate Starts for StepMih\_74:  
(Start: 62 @43062 has 68 MA's), (Start: 63 @43056 has 14 MA's),

Gene: Stinson\_76 Start: 50711, Stop: 50983, Start Num: 41  
Candidate Starts for Stinson\_76:  
(Start: 38 @50696 has 1 MA's), (Start: 41 @50711 has 143 MA's), (64, 50768), (65, 50771), (68, 50786), (72, 50804), (78, 50852), (82, 50873), (88, 50945), (89, 50954),

Gene: Strobilo\_80 Start: 52470, Stop: 52739, Start Num: 43  
Candidate Starts for Strobilo\_80:  
(22, 52347), (Start: 43 @52470 has 12 MA's), (50, 52485), (65, 52527), (72, 52560), (75, 52596), (82, 52629),

Gene: Stuu\_58 Start: 38034, Stop: 38360, Start Num: 45  
Candidate Starts for Stuu\_58:  
(24, 37935), (26, 37956), (Start: 45 @38034 has 66 MA's), (68, 38112), (88, 38274),

Gene: Subaru\_62 Start: 41176, Stop: 41487, Start Num: 45  
Candidate Starts for Subaru\_62:  
(Start: 45 @41176 has 66 MA's),

Gene: Sue2\_60 Start: 39873, Stop: 40190, Start Num: 42  
Candidate Starts for Sue2\_60:  
(Start: 42 @39873 has 1 MA's),

Gene: Sulley\_74 Start: 50144, Stop: 50416, Start Num: 41  
Candidate Starts for Sulley\_74:  
(Start: 38 @50129 has 1 MA's), (Start: 41 @50144 has 143 MA's), (64, 50201), (65, 50204), (68, 50219), (72, 50237), (78, 50285), (82, 50306), (88, 50378), (89, 50387),

Gene: Sunflower1121\_81 Start: 50744, Stop: 51016, Start Num: 41  
Candidate Starts for Sunflower1121\_81:  
(Start: 38 @50729 has 1 MA's), (Start: 41 @50744 has 143 MA's), (49, 50759), (57, 50777), (65, 50804), (67, 50816), (72, 50837),

Gene: Syra333\_79 Start: 50472, Stop: 50744, Start Num: 41  
Candidate Starts for Syra333\_79:  
(Start: 38 @50457 has 1 MA's), (Start: 41 @50472 has 143 MA's), (49, 50487), (57, 50505), (65, 50532), (67, 50544), (72, 50565),

Gene: TBond007\_72 Start: 49916, Stop: 50185, Start Num: 41  
Candidate Starts for TBond007\_72:  
(Start: 41 @49916 has 143 MA's), (49, 49931), (67, 49985), (68, 49988), (72, 50006), (82, 50075),

Gene: TClif\_77 Start: 50210, Stop: 50482, Start Num: 41  
Candidate Starts for TClif\_77:  
(Start: 38 @50195 has 1 MA's), (Start: 41 @50210 has 143 MA's), (49, 50225), (64, 50267), (65, 50270), (72, 50303), (82, 50372),

Gene: TM4\_77 Start: 46904, Stop: 47173, Start Num: 43  
Candidate Starts for TM4\_77:  
(Start: 43 @46904 has 12 MA's), (65, 46961), (72, 46994), (75, 47030), (82, 47063),

Gene: TNguyen7\_71 Start: 42818, Stop: 42552, Start Num: 54  
Candidate Starts for TNguyen7\_71:  
(Start: 54 @42818 has 6 MA's), (65, 42788), (82, 42686), (93, 42572),

Gene: Tachez\_75 Start: 49961, Stop: 50233, Start Num: 41  
Candidate Starts for Tachez\_75:  
(Start: 38 @49946 has 1 MA's), (Start: 41 @49961 has 143 MA's), (64, 50015), (65, 50018), (68, 50033), (72, 50051), (78, 50099), (82, 50120), (88, 50192), (89, 50201),

Gene: TaiwanKao\_77 Start: 50636, Stop: 50908, Start Num: 41  
Candidate Starts for TaiwanKao\_77:  
(Start: 38 @50621 has 1 MA's), (Start: 41 @50636 has 143 MA's), (64, 50693), (65, 50696), (68, 50711), (72, 50729), (78, 50777), (82, 50798), (88, 50870), (89, 50879),

Gene: Tallboi\_62 Start: 41422, Stop: 41733, Start Num: 45

Candidate Starts for Tallboi\_62:

(Start: 45 @41422 has 66 MA's),

Gene: Taquito\_40 Start: 31813, Stop: 32112, Start Num: 36

Candidate Starts for Taquito\_40:

(Start: 36 @31813 has 14 MA's), (49, 31849), (Start: 63 @31894 has 14 MA's), (67, 31912), (72, 31933), (75, 31969), (82, 32002), (88, 32074),

Gene: Taurus\_76 Start: 43062, Stop: 42841, Start Num: 63

Candidate Starts for Taurus\_76:

(Start: 62 @43068 has 68 MA's), (Start: 63 @43062 has 14 MA's),

Gene: Tbone\_62 Start: 41901, Stop: 42215, Start Num: 45

Candidate Starts for Tbone\_62:

(Start: 45 @41901 has 66 MA's),

Gene: Teejan\_64 Start: 49769, Stop: 50041, Start Num: 41

Candidate Starts for Teejan\_64:

(Start: 38 @49754 has 1 MA's), (Start: 41 @49769 has 143 MA's), (Start: 47 @49778 has 1 MA's), (55, 49799), (59, 49808), (64, 49826), (65, 49829), (67, 49841), (68, 49844), (72, 49862), (75, 49898), (78, 49910), (89, 50012),

Gene: Texage\_68 Start: 42818, Stop: 42558, Start Num: 53

Candidate Starts for Texage\_68:

(32, 42893), (Start: 53 @42818 has 25 MA's), (65, 42788), (93, 42572),

Gene: TforTroy\_63 Start: 41704, Stop: 42018, Start Num: 45

Candidate Starts for TforTroy\_63:

(Start: 45 @41704 has 66 MA's),

Gene: ThursdayNight\_66 Start: 42858, Stop: 43094, Start Num: 65

Candidate Starts for ThursdayNight\_66:

(Start: 45 @42795 has 66 MA's), (65, 42858), (89, 43041), (91, 43062),

Gene: Tian\_61 Start: 42417, Stop: 42731, Start Num: 45

Candidate Starts for Tian\_61:

(34, 42390), (Start: 45 @42417 has 66 MA's),

Gene: Tierra\_79 Start: 50730, Stop: 51002, Start Num: 41

Candidate Starts for Tierra\_79:

(Start: 38 @50715 has 1 MA's), (Start: 41 @50730 has 143 MA's), (65, 50790), (72, 50823),

Gene: Tiffany\_74 Start: 42947, Stop: 42726, Start Num: 63

Candidate Starts for Tiffany\_74:

(Start: 62 @42953 has 68 MA's), (Start: 63 @42947 has 14 MA's),

Gene: Tigress9\_80 Start: 50787, Stop: 51059, Start Num: 41

Candidate Starts for Tigress9\_80:

(Start: 38 @50772 has 1 MA's), (Start: 41 @50787 has 143 MA's), (49, 50802), (57, 50820), (65, 50847), (67, 50859), (72, 50880),

Gene: TingHuaYa\_78 Start: 49873, Stop: 50157, Start Num: 41

Candidate Starts for TingHuaYa\_78:

(Start: 38 @49858 has 1 MA's), (Start: 41 @49873 has 143 MA's), (49, 49888), (64, 49930), (65, 49933), (67, 49945), (68, 49948), (72, 49966), (82, 50035), (88, 50107), (89, 50116), (92, 50146),

Gene: TiniBug\_75 Start: 50512, Stop: 50781, Start Num: 41

Candidate Starts for TiniBug\_75:

(Start: 38 @50497 has 1 MA's), (Start: 41 @50512 has 143 MA's), (Start: 58 @50542 has 1 MA's), (64, 50563), (65, 50566), (68, 50581), (72, 50599), (82, 50668), (88, 50740), (89, 50749),

Gene: TinyPebbles\_74 Start: 43098, Stop: 42871, Start Num: 62

Candidate Starts for TinyPebbles\_74:

(Start: 62 @43098 has 68 MA's), (Start: 63 @43092 has 14 MA's), (65, 43086),

Gene: Tiri\_75 Start: 50017, Stop: 50286, Start Num: 41

Candidate Starts for Tiri\_75:

(Start: 38 @50002 has 1 MA's), (Start: 41 @50017 has 143 MA's), (64, 50071), (65, 50074), (68, 50089), (72, 50107), (78, 50155), (82, 50176), (88, 50248), (89, 50257),

Gene: Todacoro\_70 Start: 42817, Stop: 42557, Start Num: 53

Candidate Starts for Todacoro\_70:

(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: Topper\_75 Start: 50116, Stop: 50388, Start Num: 41

Candidate Starts for Topper\_75:

(Start: 38 @50101 has 1 MA's), (Start: 41 @50116 has 143 MA's), (64, 50170), (65, 50173), (68, 50188), (72, 50206), (78, 50254), (82, 50275), (88, 50347), (89, 50356),

Gene: Torres\_65 Start: 49770, Stop: 50042, Start Num: 41

Candidate Starts for Torres\_65:

(Start: 38 @49755 has 1 MA's), (Start: 41 @49770 has 143 MA's), (Start: 47 @49779 has 1 MA's), (55, 49800), (59, 49809), (64, 49827), (65, 49830), (67, 49842), (68, 49845), (72, 49863), (75, 49899), (78, 49911), (89, 50013),

Gene: TreyKay\_78 Start: 50578, Stop: 50853, Start Num: 41

Candidate Starts for TreyKay\_78:

(Start: 38 @50563 has 1 MA's), (Start: 41 @50578 has 143 MA's), (64, 50635), (65, 50638), (67, 50650), (68, 50653), (72, 50671), (78, 50719), (82, 50740), (88, 50812), (89, 50821),

Gene: TribbleTrouble\_76 Start: 50522, Stop: 50797, Start Num: 41

Candidate Starts for TribbleTrouble\_76:

(Start: 41 @50522 has 143 MA's), (49, 50537), (65, 50582), (68, 50597), (72, 50615), (82, 50684), (88, 50756), (89, 50765),

Gene: Trice\_62 Start: 47157, Stop: 47429, Start Num: 41

Candidate Starts for Trice\_62:

(Start: 38 @47142 has 1 MA's), (Start: 41 @47157 has 143 MA's), (Start: 47 @47166 has 1 MA's), (55, 47187), (59, 47196), (64, 47214), (65, 47217), (67, 47229), (68, 47232), (72, 47250), (75, 47286), (78, 47298), (89, 47400),

Gene: TruffulaTree\_77 Start: 50529, Stop: 50801, Start Num: 41

Candidate Starts for TruffulaTree\_77:

(Start: 38 @50514 has 1 MA's), (Start: 41 @50529 has 143 MA's), (64, 50583), (65, 50586), (68, 50601), (72, 50619), (82, 50688), (88, 50760), (89, 50769),

Gene: Tuck\_62 Start: 41693, Stop: 42004, Start Num: 45  
Candidate Starts for Tuck\_62:  
(Start: 45 @41693 has 66 MA's),

Gene: Turab\_61 Start: 40878, Stop: 41189, Start Num: 45  
Candidate Starts for Turab\_61:  
(34, 40851), (Start: 45 @40878 has 66 MA's),

Gene: Tutumahutu\_64 Start: 41493, Stop: 41807, Start Num: 45  
Candidate Starts for Tutumahutu\_64:  
(Start: 45 @41493 has 66 MA's),

Gene: Tweety19\_62 Start: 38594, Stop: 38905, Start Num: 45  
Candidate Starts for Tweety19\_62:  
(Start: 45 @38594 has 66 MA's),

Gene: Twitch\_75 Start: 50118, Stop: 50390, Start Num: 41  
Candidate Starts for Twitch\_75:  
(Start: 38 @50103 has 1 MA's), (Start: 41 @50118 has 143 MA's), (64, 50172), (65, 50175), (68, 50190), (72, 50208), (78, 50256), (82, 50277), (88, 50349), (89, 50358),

Gene: Unicorn\_78 Start: 50059, Stop: 50331, Start Num: 41  
Candidate Starts for Unicorn\_78:  
(29, 49996), (Start: 38 @50044 has 1 MA's), (Start: 41 @50059 has 143 MA's), (65, 50119), (67, 50131), (72, 50152),

Gene: Urkel\_75 Start: 50512, Stop: 50781, Start Num: 41  
Candidate Starts for Urkel\_75:  
(Start: 38 @50497 has 1 MA's), (Start: 41 @50512 has 143 MA's), (64, 50563), (65, 50566), (67, 50578), (68, 50581), (72, 50599), (78, 50647), (82, 50668), (88, 50740), (89, 50749),

Gene: VResidence\_62 Start: 39424, Stop: 39738, Start Num: 45  
Candidate Starts for VResidence\_62:  
(Start: 45 @39424 has 66 MA's),

Gene: Validus\_80 Start: 50873, Stop: 51148, Start Num: 41  
Candidate Starts for Validus\_80:  
(Start: 41 @50873 has 143 MA's), (64, 50927), (65, 50930), (67, 50942), (68, 50945), (72, 50963), (81, 51029), (88, 51104),

Gene: Veliki\_76 Start: 50069, Stop: 50341, Start Num: 41  
Candidate Starts for Veliki\_76:  
(Start: 38 @50054 has 1 MA's), (Start: 41 @50069 has 143 MA's), (64, 50123), (65, 50126), (68, 50141), (72, 50159), (78, 50207), (82, 50228), (88, 50300), (89, 50309),

Gene: Veracruz\_67 Start: 42817, Stop: 42557, Start Num: 53  
Candidate Starts for Veracruz\_67:  
(32, 42892), (Start: 53 @42817 has 25 MA's), (65, 42787), (93, 42571),

Gene: Vix\_71 Start: 43151, Stop: 42924, Start Num: 62

Candidate Starts for Vix\_71:  
(Start: 62 @43151 has 68 MA's), (Start: 63 @43145 has 14 MA's),

Gene: Warda\_63 Start: 41627, Stop: 41941, Start Num: 45  
Candidate Starts for Warda\_63:  
(Start: 45 @41627 has 66 MA's),

Gene: Watson\_74 Start: 43060, Stop: 42833, Start Num: 62  
Candidate Starts for Watson\_74:  
(Start: 62 @43060 has 68 MA's), (Start: 63 @43054 has 14 MA's),

Gene: Wildcat\_147 Start: 68820, Stop: 68542, Start Num: 39  
Candidate Starts for Wildcat\_147:  
(12, 69027), (20, 68937), (Start: 39 @68820 has 5 MA's), (56, 68775), (67, 68724), (78, 68643), (81, 68622), (87, 68550), (88, 68547),

Gene: Wildwest\_58 Start: 41296, Stop: 41607, Start Num: 45  
Candidate Starts for Wildwest\_58:  
(34, 41269), (Start: 45 @41296 has 66 MA's),

Gene: Wintermute\_40 Start: 31413, Stop: 31712, Start Num: 36  
Candidate Starts for Wintermute\_40:  
(Start: 36 @31413 has 14 MA's), (49, 31449), (Start: 63 @31494 has 14 MA's), (67, 31512), (72, 31533), (75, 31569), (82, 31602), (88, 31674),

Gene: Wooldri\_77 Start: 42980, Stop: 42753, Start Num: 62  
Candidate Starts for Wooldri\_77:  
(Start: 62 @42980 has 68 MA's), (Start: 63 @42974 has 14 MA's),

Gene: Ximenita\_81 Start: 50796, Stop: 51068, Start Num: 41  
Candidate Starts for Ximenita\_81:  
(Start: 38 @50781 has 1 MA's), (Start: 41 @50796 has 143 MA's), (55, 50826), (65, 50856), (67, 50868), (72, 50889), (82, 50958),

Gene: Y10\_39 Start: 31413, Stop: 31712, Start Num: 37  
Candidate Starts for Y10\_39:  
(Start: 37 @31413 has 8 MA's), (49, 31449), (Start: 63 @31494 has 14 MA's), (67, 31512), (75, 31569), (82, 31602), (88, 31674),

Gene: Y2\_39 Start: 31413, Stop: 31712, Start Num: 37  
Candidate Starts for Y2\_39:  
(Start: 37 @31413 has 8 MA's), (49, 31449), (Start: 63 @31494 has 14 MA's), (67, 31512), (75, 31569), (82, 31602), (88, 31674),

Gene: Yang\_62 Start: 41347, Stop: 41661, Start Num: 45  
Candidate Starts for Yang\_62:  
(2, 40882), (Start: 45 @41347 has 66 MA's),

Gene: YasnayaPolyana\_40 Start: 31415, Stop: 31714, Start Num: 36  
Candidate Starts for YasnayaPolyana\_40:  
(Start: 36 @31415 has 14 MA's), (49, 31451), (Start: 63 @31496 has 14 MA's), (67, 31514), (72, 31535), (75, 31571), (82, 31604), (88, 31676),

Gene: YesChef\_62 Start: 41309, Stop: 41623, Start Num: 45

Candidate Starts for YesChef\_62:

(Start: 45 @41309 has 66 MA's),

Gene: YoureAdopted\_75 Start: 50480, Stop: 50749, Start Num: 41

Candidate Starts for YoureAdopted\_75:

(Start: 41 @50480 has 143 MA's), (64, 50534), (65, 50537), (68, 50552), (72, 50570), (78, 50618), (82, 50639), (88, 50711), (89, 50720),

Gene: Yuna\_78 Start: 51558, Stop: 51830, Start Num: 41

Candidate Starts for Yuna\_78:

(Start: 38 @51543 has 1 MA's), (Start: 41 @51558 has 143 MA's), (49, 51573), (72, 51651),

Gene: Yunkel11\_81 Start: 50697, Stop: 50972, Start Num: 41

Candidate Starts for Yunkel11\_81:

(Start: 38 @50682 has 1 MA's), (Start: 41 @50697 has 143 MA's), (64, 50754), (65, 50757), (67, 50769), (68, 50772), (72, 50790), (78, 50838), (82, 50859), (88, 50931), (89, 50940),

Gene: Zabiza\_71 Start: 46466, Stop: 46738, Start Num: 41

Candidate Starts for Zabiza\_71:

(Start: 38 @46451 has 1 MA's), (Start: 41 @46466 has 143 MA's), (64, 46520), (65, 46523), (68, 46538), (72, 46556), (78, 46604), (82, 46625), (88, 46697), (89, 46706),

Gene: Zarafa\_68 Start: 42792, Stop: 42526, Start Num: 53

Candidate Starts for Zarafa\_68:

(32, 42867), (Start: 53 @42792 has 25 MA's), (65, 42762), (82, 42660),

Gene: Zavala\_78 Start: 50607, Stop: 50879, Start Num: 41

Candidate Starts for Zavala\_78:

(Start: 38 @50592 has 1 MA's), (Start: 41 @50607 has 143 MA's), (64, 50661), (65, 50664), (68, 50679), (72, 50697), (78, 50745), (82, 50766), (88, 50838), (89, 50847),

Gene: Zetzy\_72 Start: 42631, Stop: 42404, Start Num: 62

Candidate Starts for Zetzy\_72:

(Start: 62 @42631 has 68 MA's), (Start: 63 @42625 has 14 MA's),

Gene: ZoeJ\_78 Start: 51905, Stop: 52174, Start Num: 43

Candidate Starts for ZoeJ\_78:

(22, 51782), (33, 51866), (Start: 43 @51905 has 12 MA's), (65, 51962), (72, 51995), (75, 52031), (82, 52064),