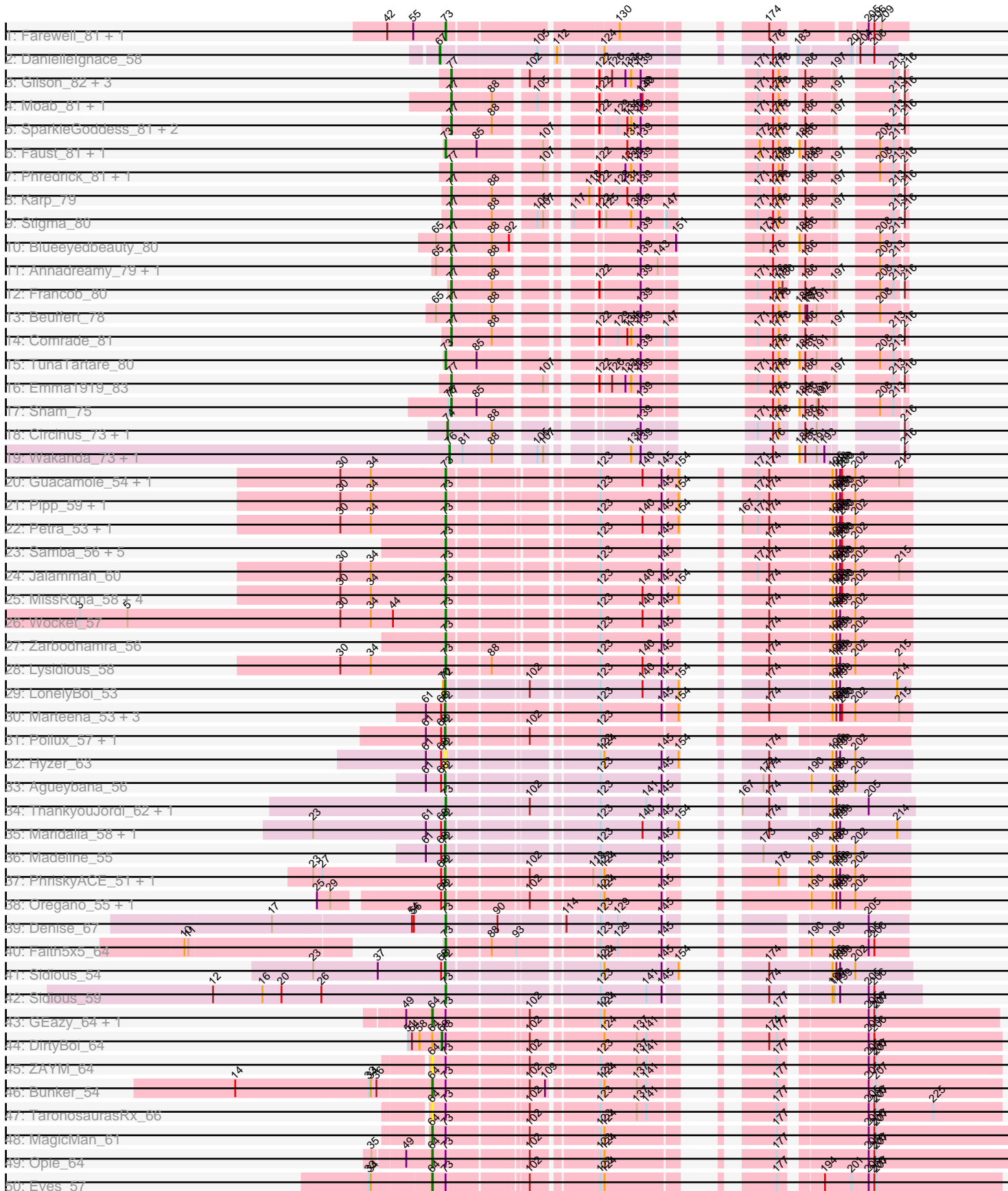
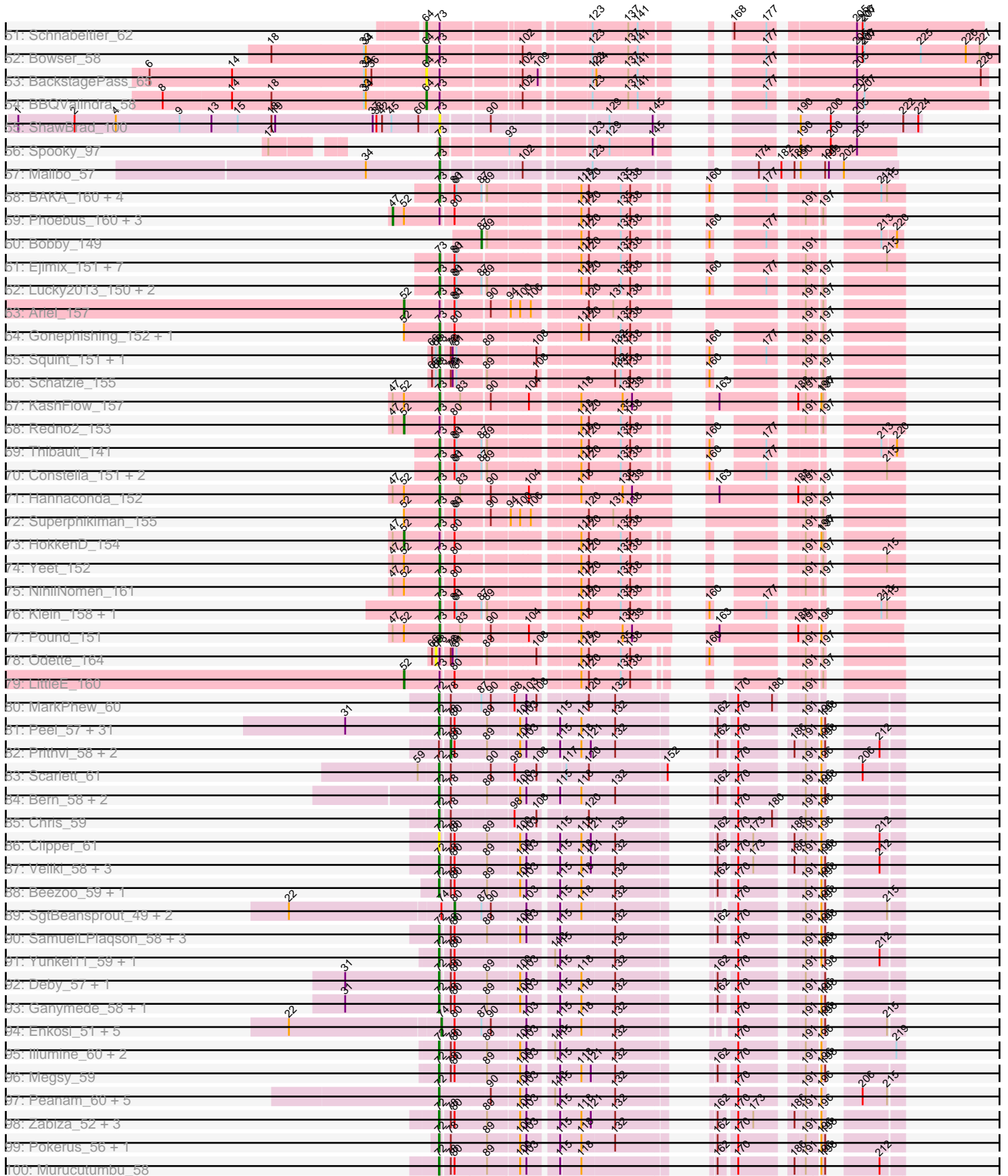


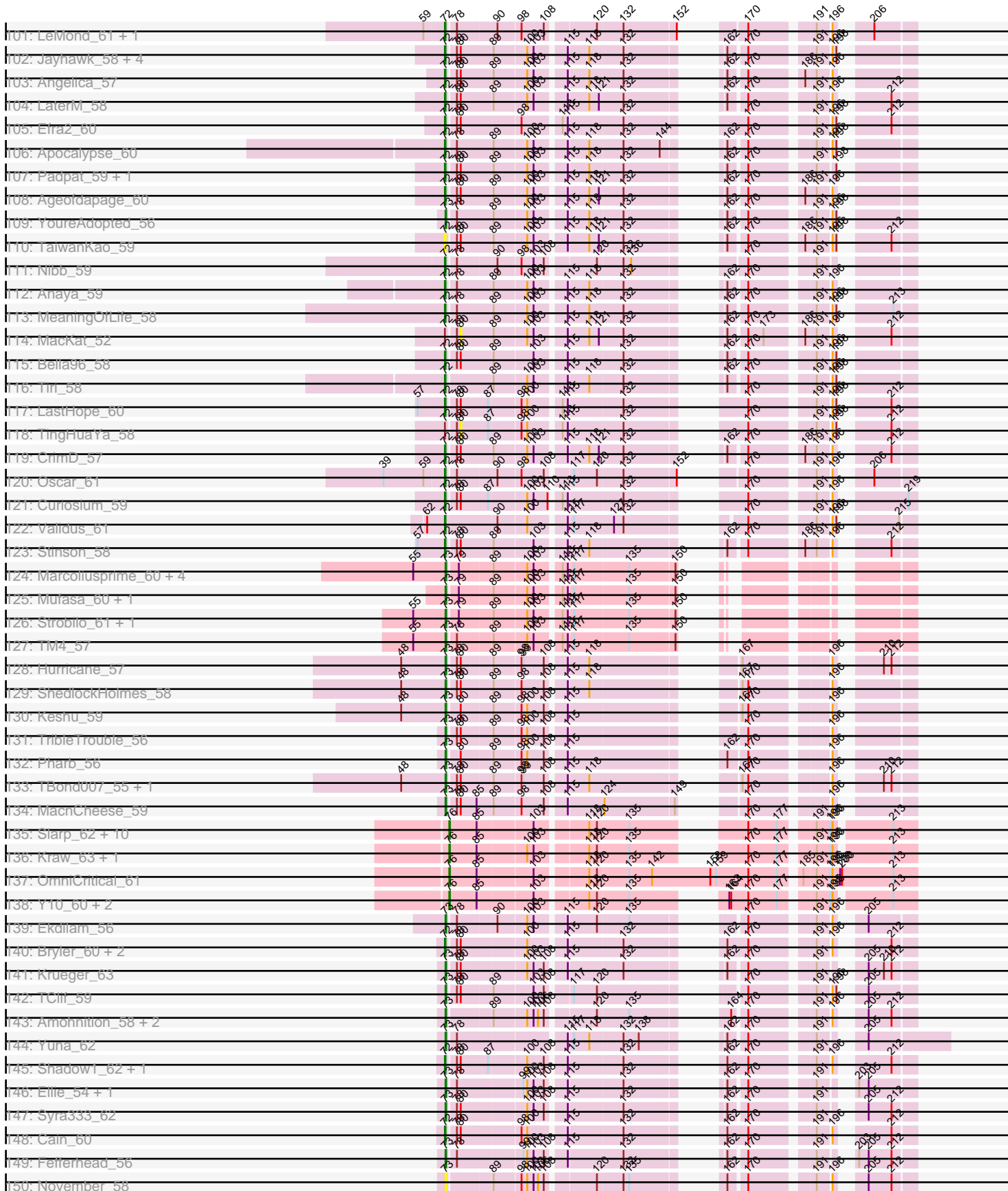
Pham 202602



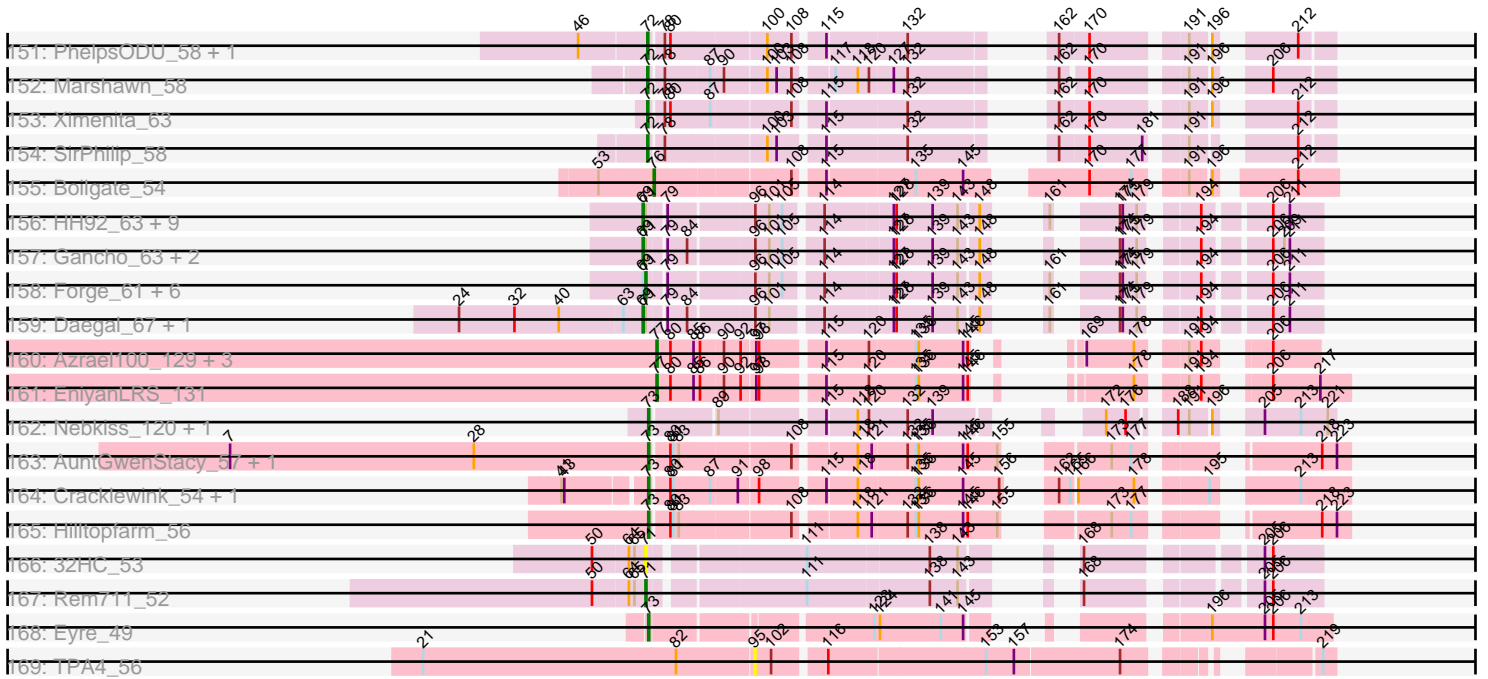
Pham 202602



Pham 202602



Pham 202602



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 202602 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202602 has 343 members, 27 are drafts.

Phages represented in each track:

- Track 1 : Farewell\_81, Sparky\_80
- Track 2 : DanielleIgnace\_58
- Track 3 : Gilson\_82, Jada\_82, Forrest\_84, MeganTheeKilla\_80
- Track 4 : Moab\_81, Patelgo\_81
- Track 5 : SparkleGoddess\_81, Westy\_79, Belfort\_83
- Track 6 : Faust\_81, SeresaTree\_81
- Track 7 : Phredrick\_81, Kenrey\_83
- Track 8 : Karp\_79
- Track 9 : Stigma\_80
- Track 10 : Blueeyedbeauty\_80
- Track 11 : Annadreamy\_79, Limpid\_78
- Track 12 : Francob\_80
- Track 13 : Beuffert\_78
- Track 14 : Comrade\_81
- Track 15 : TunaTartare\_80
- Track 16 : Emma1919\_83
- Track 17 : Sham\_75
- Track 18 : Circinus\_73, BillNye\_72
- Track 19 : Wakanda\_73, Muntaha\_74
- Track 20 : Guacamole\_54, JasperJr\_54
- Track 21 : Pipp\_59, Walrus\_55
- Track 22 : Petra\_53, Fenry\_55
- Track 23 : Samba\_56, Barco\_55, CaptainKirk2\_57, MintFen\_57, Hitter\_57, Delian\_60
- Track 24 : Jalammah\_60
- Track 25 : MissRona\_58, Blueberry\_57, Gambino\_60, Azula\_58, Mellie\_55
- Track 26 : Wocket\_57
- Track 27 : Zarbodnamra\_56
- Track 28 : Lysidious\_58
- Track 29 : LonelyBoi\_53
- Track 30 : Marteena\_53, BoyNamedSue\_56, AlumE\_56, EMSquaredA\_54
- Track 31 : Pollux\_57, Floral\_55
- Track 32 : Hyzer\_63
- Track 33 : Agueybana\_56
- Track 34 : ThankyouJordi\_62, WelcomeAyanna\_62
- Track 35 : Maridalia\_58, Bunnybear\_50
- Track 36 : Madeline\_55

- Track 37 : PhriskyACE\_51, Powerball\_52
- Track 38 : Oregano\_55, Annalisa\_54
- Track 39 : Denise\_67
- Track 40 : Faith5x5\_64
- Track 41 : Sidious\_54
- Track 42 : Sidious\_59
- Track 43 : GEazy\_64, HannahD\_61
- Track 44 : DirtyBoi\_64
- Track 45 : ZAYM\_64
- Track 46 : Bunker\_54
- Track 47 : TaronosaurusRx\_66
- Track 48 : MagicMan\_61
- Track 49 : Opie\_64
- Track 50 : Eyes\_57
- Track 51 : Schnabeltier\_62
- Track 52 : Bowser\_58
- Track 53 : BackstagePass\_65
- Track 54 : BBQValindra\_58
- Track 55 : ShawBrad\_100
- Track 56 : Spooky\_97
- Track 57 : Malibo\_57
- Track 58 : BAKA\_160, Duke13\_157, Bagrid\_163, Optimus\_151, Kalah2\_151
- Track 59 : Phoebus\_160, Bombitas\_146, JuicyJay\_154, Dove\_146
- Track 60 : Bobby\_149
- Track 61 : Ejimix\_151, DmpstrDiver\_159, Zelink\_153, Dallas\_159, Beem\_160, Wanda\_158, Halley\_160, Minerva\_158
- Track 62 : Lucky2013\_150, Porcelain\_154, MiaZeal\_157
- Track 63 : Ariel\_157
- Track 64 : Gonephishing\_152, ThreeRngTarjay\_155
- Track 65 : Squint\_151, Courthouse\_154
- Track 66 : Schatzie\_155
- Track 67 : KashFlow\_157
- Track 68 : Redno2\_153
- Track 69 : Thibault\_141
- Track 70 : Constella\_151, Omega\_164, EricMillard\_153
- Track 71 : Hannaconda\_152
- Track 72 : Superphikiman\_155
- Track 73 : HokkenD\_154
- Track 74 : Yeet\_152
- Track 75 : NihilNomen\_161
- Track 76 : Klein\_158, Hughesyang\_159
- Track 77 : Pound\_151
- Track 78 : Odette\_164
- Track 79 : LittleE\_160
- Track 80 : MarkPhew\_60
- Track 81 : Peel\_57, CREW\_57, Jeckyll\_57, Atiba\_58, Capricorn\_57, Durfee\_57, Tachez\_57, Piatt\_57, Jarvi\_57, Rosmarinus\_57, BGIluviae\_57, AlishaPH\_57, Inky\_57, Lunahalos\_57, CallaLilly\_59, Adephagia\_57, Llorens\_57, Padfoot\_57, CaseJules\_59, Boiiii\_57, Hyperbowlee\_57, BEEST\_57, Spock\_57, Twitch\_57, Topper\_57, Dalmuri\_57, Asayake\_57, Joy99\_57, Blizzard\_57, Belladonna\_57, Homura\_57, ShiaSurprise\_58
- Track 82 : Prithvi\_58, LindNT\_56, TreyKay\_58
- Track 83 : Scarlett\_61

- Track 84 : Bern\_58, BaghaKamala\_56, CheetoDust\_56
- Track 85 : Chris\_59
- Track 86 : Clipper\_61
- Track 87 : Veliki\_58, Mynx\_58, Zavala\_59, JAWS\_57
- Track 88 : Beezoo\_59, Sulley\_57
- Track 89 : SgtBeansprout\_49, Mdavu\_50, Nikao\_52
- Track 90 : SamuelLPlaqson\_58, TiniBug\_58, DrHayes\_58, Urkel\_58
- Track 91 : Yunkel11\_59, Guanica15\_59
- Track 92 : Deby\_57, Adonis\_57
- Track 93 : Ganymede\_58, QuincyRose\_56
- Track 94 : Enkosi\_51, Nutello\_49, Amelie\_49, LilPharaoh\_49, Torres\_51, Binglebops\_49
- Track 95 : Illumine\_60, Devera\_62, Dole\_60
- Track 96 : Megsy\_59
- Track 97 : Peanam\_60, Dartin\_60, Shaobing\_60, McMater\_60, Richo\_60, Niklas\_60
- Track 98 : Zabiza\_52, Ramen\_58, ActinUp\_57, HedwigODU\_57
- Track 99 : Pokerus\_56, Geraldini\_60
- Track 100 : Murucutumbu\_58
- Track 101 : LeMond\_61, KiSi\_61
- Track 102 : Jayhawk\_58, Rapunzel97\_58, Slimphazie\_57, BarrelRoll\_57, TruffulaTree\_57
- Track 103 : Angelica\_57
- Track 104 : LaterM\_58
- Track 105 : Efra2\_60
- Track 106 : Apocalypse\_60
- Track 107 : Padpat\_59, Emerson\_58
- Track 108 : Ageofdapage\_60
- Track 109 : YoureAdopted\_56
- Track 110 : TaiwanKao\_59
- Track 111 : Nibb\_59
- Track 112 : Anaya\_59
- Track 113 : MeaningOfLife\_58
- Track 114 : MacKat\_52
- Track 115 : Bella96\_58
- Track 116 : Tiri\_58
- Track 117 : LastHope\_60
- Track 118 : TingHuaYa\_58
- Track 119 : CrimD\_57
- Track 120 : Oscar\_61
- Track 121 : Curiosium\_59
- Track 122 : Validus\_61
- Track 123 : Stinson\_58
- Track 124 : Marcoliusprime\_60, Milly\_60, ZoeJ\_59, DismalFunk\_60, DismalStressor\_60
- Track 125 : Mufasa\_60, BoostSeason\_60
- Track 126 : Strobilo\_61, Findley\_60
- Track 127 : TM4\_57
- Track 128 : Hurricane\_57
- Track 129 : ShedlockHolmes\_58
- Track 130 : Keshu\_59
- Track 131 : TripleTrouble\_56
- Track 132 : Pharb\_56
- Track 133 : TBond007\_55, Pixie\_56

- Track 134 : MacnCheese\_59
- Track 135 : Slarp\_62, Mitti\_62, Juliette\_64, Chancellor\_62, Cheetobro\_62, Ruthiejr\_63, Taquito\_61, Wintermute\_62, Eponine\_64, Fionnbharth\_62, SamScheppers\_60
- Track 136 : Kraw\_63, Malthus\_63
- Track 137 : OmniCritical\_61
- Track 138 : Y10\_60, Y2\_60, JF1\_62
- Track 139 : Ekdilam\_56
- Track 140 : Bryler\_60, Tierra\_60, Phrank\_60
- Track 141 : Krueger\_63
- Track 142 : TClif\_59
- Track 143 : Amohntion\_58, Hammy\_58, DARTH\_P\_58
- Track 144 : Yuna\_62
- Track 145 : Shadow1\_62, Sunflower1121\_63
- Track 146 : Ellie\_54, Amgine\_57
- Track 147 : Syra333\_62
- Track 148 : Cain\_60
- Track 149 : Fefferhead\_56
- Track 150 : November\_58
- Track 151 : PhelpsODU\_58, Unicorn\_58
- Track 152 : Marshawn\_58
- Track 153 : Ximenita\_63
- Track 154 : SirPhilip\_58
- Track 155 : Boilgate\_54
- Track 156 : HH92\_63, Webster2\_64, LilHazelNut\_64, Giles\_61, Evanesce\_63, Ein37\_64, Kinbote\_63, Dewey\_61, Hadrien\_63, DeepSoil15\_64
- Track 157 : Gancho\_63, OBUpride\_64, Gravaillia\_62
- Track 158 : Forge\_61, Hail\_61, Wishmaker\_61, Ubuntu\_64, Luna22\_61, Luke\_63, Amymech\_64
- Track 159 : Daegal\_67, Amochick\_65
- Track 160 : Azrael100\_129, Cosmo\_137, Wildcat\_136, MaryV\_122
- Track 161 : EniyanLRS\_131
- Track 162 : Nebkiss\_120, Gaia\_119
- Track 163 : AuntGwenStacy\_57, Typha\_56
- Track 164 : Cracklewink\_54, Bipper\_54
- Track 165 : Hilltopfarm\_56
- Track 166 : 32HC\_53
- Track 167 : Rem711\_52
- Track 168 : Eyre\_49
- Track 169 : TPA4\_56

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

The start number called the most often in the published annotations is 72, it was called in 116 of the 316 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_57, Adephegia\_57, Adonis\_57, Ageofdapage\_60, Agueybana\_56, AlishaPH\_57, AlumE\_56, Anaya\_59, Angelica\_57, Annalisa\_54, Apocalypse\_60, Asayake\_57, Atiba\_58, BEEST\_57, BGlluviae\_57, BaghaKamala\_56, BarrelRoll\_57,



Beezoo\_59, Bella96\_58, Belladonna\_57, Bern\_58, Blizzard\_57, Boiiii\_57, BoyNamedSue\_56, Bryler\_60, Bunnybear\_50, CREW\_57, Cain\_60, CallaLilly\_59, Capricorn\_57, CaseJules\_59, CheetoDust\_56, Chris\_59, Clipper\_61, CrimD\_57, Curiosium\_59, Dalmuri\_57, Dartin\_60, Deby\_57, Devera\_62, Dole\_60, DrHayes\_58, Durfee\_57, EMSquaredA\_54, Efra2\_60, Emerson\_58, Floral\_55, Ganymede\_58, Geraldini\_60, Guanica15\_59, HedwigODU\_57, Homura\_57, Hyperbowlee\_57, Hyzer\_63, Illumine\_60, Inky\_57, JAWS\_57, Jarvi\_57, Jayhawk\_58, Jeckyll\_57, Joy99\_57, KiSi\_61, LastHope\_60, LaterM\_58, LeMond\_61, Llorens\_57, LonelyBoi\_53, Lunahalos\_57, Madeline\_55, Maridalia\_58, MarkPhew\_60, Marshawn\_58, Marteenaa\_53, McMater\_60, MeaningOfLife\_58, Megsy\_59, Murucutumbu\_58, Mynx\_58, Nibb\_59, Niklas\_60, Oregano\_55, Oscar\_61, Padfoot\_57, Padpat\_59, Peanam\_60, Peel\_57, PhelpsODU\_58, Phrank\_60, PhriskyACE\_51, Piatt\_57, Pokerus\_56, Pollux\_57, Powerball\_52, QuincyRose\_56, Ramen\_58, Rapunzel97\_58, Richo\_60, Rosmarinus\_57, SamuelLPlaqson\_58, Scarlett\_61, Shadow1\_62, Shaobing\_60, ShiaSurprise\_58, Sidious\_54, SirPhilip\_58, Slimphazie\_57, Spock\_57, Stinson\_58, Sulley\_57, Sunflower1121\_63, Tachez\_57, TaiwanKao\_59, Tierra\_60, TiniBug\_58, Tiri\_58, Topper\_57, TruffulaTree\_57, Twitch\_57, Unicorn\_58, Urkel\_58, Validus\_61, Veliki\_58, Ximenita\_63, Yunkel11\_59, Zabiza\_52, Zavala\_59,

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

- LindNT\_56, MacKat\_52, Prithvi\_58, TingHuaYa\_58, TreyKay\_58,

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

- 32HC\_53, Amelie\_49, Amgine\_57, Amochick\_65, Amohnition\_58, Amymech\_64, Annadreamy\_79, Ariel\_157, AuntGwenStacy\_57, Azrael100\_129, Azula\_58, BAKA\_160, BBQValindra\_58, BackstagePass\_65, Bagrid\_163, Barco\_55, Beem\_160, Belfort\_83, Beuffert\_78, Binglebops\_49, BillNye\_72, Bipper\_54, Blueberry\_57, Blueeyedbeauty\_80, Bobby\_149, Boilgate\_54, Bombitas\_146, BoostSeason\_60, Bowser\_58, Bunker\_54, CaptainKirk2\_57, Chancellor\_62, Cheetobro\_62, Circinus\_73, Comrade\_81, Constella\_151, Cosmo\_137, Courthouse\_154, Cracklewink\_54, Daegal\_67, Dallas\_159, DanielleIgnace\_58, DarthP\_58, DeepSoil15\_64, Delian\_60, Denise\_67, Dewey\_61, DirtyBoi\_64, DismalFunk\_60, DismalStressor\_60, DmpstrDiver\_159, Dove\_146, Duke13\_157, Ein37\_64, Ejimix\_151, Ekdilam\_56, Ellie\_54, Emma1919\_83, EniyanLRS\_131, Enkosi\_51, Eponine\_64, EricMillard\_153, Evanesce\_63, Eyes\_57, Eyre\_49, Faith5x5\_64, Farewell\_81, Faust\_81, Fefferhead\_56, Fenry\_55, Findley\_60, Fionnbharth\_62, Forge\_61, Forrest\_84, Francob\_80, GEazy\_64, Gaia\_119, Gambino\_60, Gancho\_63, Giles\_61, Gilson\_82, Gonephishing\_152, Gravallia\_62, Guacamole\_54, HH92\_63, Hadrien\_63, Hail\_61, Halley\_160, Hammy\_58, Hannaconda\_152, HannahD\_61, Hilltopfarm\_56, Hitter\_57, HokkenD\_154, Hughesyang\_159, Hurricane\_57, JF1\_62, Jada\_82, Jalammah\_60, JasperJr\_54, JuicyJay\_154, Juliette\_64, Kalah2\_151, Karp\_79, KashFlow\_157, Kenrey\_83, Keshu\_59, Kinbote\_63, Klein\_158, Kraw\_63, Krueger\_63, LilHazelnut\_64, LilPharaoh\_49, Limpid\_78, LittleE\_160, Lucky2013\_150, Luke\_63, Luna22\_61, Lysidious\_58, MacnCheese\_59, MagicMan\_61, Malibo\_57, Malthus\_63, Marcoliusprime\_60, MaryV\_122, Mdavu\_50, MeganTheeKilla\_80, Mellie\_55, MiaZeal\_157, Milly\_60, Minerva\_158, MintFen\_57, MissRona\_58, Mitti\_62, Moab\_81, Mufasa\_60, Muntaha\_74, Nebkiss\_120, NihilNomen\_161, Nikao\_52, November\_58, Nutello\_49, OBUpride\_64, Odette\_164, Omega\_164, OmniCritical\_61, Opie\_64, Optimus\_151, Patelgo\_81, Petra\_53, Pharb\_56, Phoebus\_160, Phredrick\_81, Pipp\_59, Pixie\_56, Porcelain\_154, Pound\_151, Redno2\_153, Rem711\_52, Ruthiejr\_63, SamScheppers\_60, Samba\_56, Schatzie\_155, Schnabeltier\_62,

SeresaTree\_81, SgtBeansprout\_49, Sham\_75, ShawBrad\_100, ShedlockHolmes\_58, Sidious\_59, Slarp\_62, SparkleGoddess\_81, Sparky\_80, Spooky\_97, Squint\_151, Stigma\_80, Strobilo\_61, Superphikiman\_155, Syra333\_62, TBond007\_55, TClif\_59, TM4\_57, TPA4\_56, Taquito\_61, TaronosaurusRx\_66, ThankyouJordi\_62, Thibault\_141, ThreeRngTarjay\_155, Torres\_51, TribbleTrouble\_56, TunaTartare\_80, Typha\_56, Ubuntu\_64, Wakanda\_73, Walrus\_55, Wanda\_158, Webster2\_64, WelcomeAyanna\_62, Westy\_79, Wildcat\_136, Wintermute\_62, Wishmaker\_61, Wocket\_57, Y10\_60, Y2\_60, Yeet\_152, YoureAdopted\_56, Yuna\_62, ZAYM\_64, Zarbodnamra\_56, Zelink\_153, ZoeJ\_59,

### Summary by start number:

#### Start 47:

- Found in 11 of 343 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 4 of 316
- Called 36.4% of time when present
- Phage (with cluster) where this start called: Bombitas\_146 (J), Dove\_146 (J), JuicyJay\_154 (J), Phoebus\_160 (J),

#### Start 52:

- Found in 16 of 343 ( 4.7% ) of genes in pham
- Manual Annotations of this start: 4 of 316
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Ariel\_157 (J), HokkenD\_154 (J), LittleE\_160 (J), Redno2\_153 (J),

#### Start 64:

- Found in 15 of 343 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 9 of 316
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BBQValindra\_58 (DB), BackstagePass\_65 (DB), Bowser\_58 (DB), Bunker\_54 (DB), Eyes\_57 (DB), GEazy\_64 (DB), HannahD\_61 (DB), MagicMan\_61 (DB), Opie\_64 (DB), Schnabeltier\_62 (DB), TaronosaurusRx\_66 (DB), ZAYM\_64 (DB),

#### Start 67:

- Found in 1 of 343 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 316
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DanielleIgnace\_58 (AT),

#### Start 69:

- Found in 27 of 343 ( 7.9% ) of genes in pham
- Manual Annotations of this start: 16 of 316
- Called 63.0% of time when present
- Phage (with cluster) where this start called: Amochick\_65 (Q), Daegal\_67 (Q), DeepSoil15\_64 (Q), Dewey\_61 (Q), DirtyBoi\_64 (DB), Ein37\_64 (Q), Evanesce\_63 (Q), Gancho\_63 (Q), Giles\_61 (Q), Gravaillia\_62 (Q), HH92\_63 (Q), Hadrien\_63 (Q), Kinbote\_63 (Q), LilHazelNut\_64 (Q), OBUpride\_64 (Q), Odette\_164 (J), Webster2\_64 (Q),

#### Start 71:

- Found in 24 of 343 ( 7.0% ) of genes in pham

- Manual Annotations of this start: 8 of 316
- Called 37.5% of time when present
- Phage (with cluster) where this start called: 32HC\_53 (Z), Amymech\_64 (Q), Forge\_61 (Q), Hail\_61 (Q), Luke\_63 (Q), Luna22\_61 (Q), Rem711\_52 (Z), Ubuntu\_64 (Q), Wishmaker\_61 (Q),

#### Start 72:

- Found in 131 of 343 ( 38.2% ) of genes in pham
- Manual Annotations of this start: 116 of 316
- Called 96.2% of time when present
- Phage (with cluster) where this start called: ActinUp\_57 (K1), Adephagia\_57 (K1), Adonis\_57 (K1), Ageofdapage\_60 (K1), Agueybana\_56 (CZ1), AlishaPH\_57 (K1), AlumE\_56 (CZ1), Anaya\_59 (K1), Angelica\_57 (K1), Annalisa\_54 (CZ4), Apocalypse\_60 (K1), Asayake\_57 (K1), Atiba\_58 (K1), BEEST\_57 (K1), BGIlluviae\_57 (K1), BaghaKamala\_56 (K1), BarrelRoll\_57 (K1), Beezoo\_59 (K1), Bella96\_58 (K1), Belladonna\_57 (K1), Bern\_58 (K1), Blizzard\_57 (K1), Boiiii\_57 (K1), BoyNamedSue\_56 (CZ1), Bryler\_60 (K6), Bunnybear\_50 (CZ), CREW\_57 (K1), Cain\_60 (K6), CallaLilly\_59 (K1), Capricorn\_57 (K1), CaseJules\_59 (K1), CheetoDust\_56 (K1), Chris\_59 (K1), Clipper\_61 (K1), CrimD\_57 (K1), Curiosium\_59 (K1), Dalmuri\_57 (K1), Dartin\_60 (K1), Deby\_57 (K1), Devera\_62 (K1), Dole\_60 (K1), DrHayes\_58 (K1), Durfee\_57 (K1), EMsquaredA\_54 (CY1), Efra2\_60 (K1), Emerson\_58 (K1), Floral\_55 (CY1), Ganymede\_58 (K1), Geraldini\_60 (K1), Guanica15\_59 (K1), HedwigODU\_57 (K1), Homura\_57 (K1), Hyperbowlee\_57 (K1), Hyzer\_63 (CZ1), Illumine\_60 (K1), Inky\_57 (K1), JAWS\_57 (K1), Jarvi\_57 (K1), Jayhawk\_58 (K1), Jeckyll\_57 (K1), Joy99\_57 (K1), KiSi\_61 (K1), LastHope\_60 (K1), LaterM\_58 (K1), LeMond\_61 (K1), Llorens\_57 (K1), LonelyBoi\_53 (CY), Lunahalos\_57 (K1), Madeline\_55 (CZ1), Maridalia\_58 (CZ1), MarkPhew\_60 (K1), Marshawn\_58 (K6), Marteena\_53 (CY1), McMater\_60 (K1), MeaningOfLife\_58 (K1), Megsy\_59 (K1), Murucutumbu\_58 (K1), Mynx\_58 (K1), Nibb\_59 (K1), Niklas\_60 (K1), Oregano\_55 (CZ4), Oscar\_61 (K1), Padfoot\_57 (K1), Padpat\_59 (K1), Peanam\_60 (K1), Peel\_57 (K1), PhelpsODU\_58 (K6), Phrank\_60 (K6), PhriskyACE\_51 (CZ4), Piatt\_57 (K1), Pokerus\_56 (K1), Pollux\_57 (CY1), Powerball\_52 (CZ4), QuincyRose\_56 (K1), Ramen\_58 (K1), Rapunzel97\_58 (K1), Richo\_60 (K1), Rosmarinus\_57 (K1), SamuelLPlaqson\_58 (K1), Scarlett\_61 (K1), Shadow1\_62 (K6), Shaobing\_60 (K1), ShiaSurprise\_58 (K1), Sidious\_54 (CZ7), SirPhilip\_58 (K6), Slimphazie\_57 (K1), Spock\_57 (K1), Stinson\_58 (K1), Sulley\_57 (K1), Sunflower1121\_63 (K6), Tachez\_57 (K1), TaiwanKao\_59 (K1), Tierra\_60 (K6), TiniBug\_58 (K1), Tiri\_58 (K1), Topper\_57 (K1), TruffulaTree\_57 (K1), Twitch\_57 (K1), Unicorn\_58 (K6), Urkel\_58 (K1), Validus\_61 (K1), Veliki\_58 (K1), Ximenita\_63 (K6), Yunkel11\_59 (K1), Zabiza\_52 (K1), Zavala\_59 (K1),

#### Start 73:

- Found in 128 of 343 ( 37.3% ) of genes in pham
- Manual Annotations of this start: 100 of 316
- Called 82.8% of time when present
- Phage (with cluster) where this start called: Amgine\_57 (K6), Amohnition\_58 (K6), AuntGwenStacy\_57 (Y), Azula\_58 (CV), BAKA\_160 (J), Bagrid\_163 (J), Barco\_55 (CV), Beem\_160 (J), Bipper\_54 (Y), Blueberry\_57 (CV), BoostSeason\_60 (K2), CaptainKirk2\_57 (CV), Constella\_151 (J), Courthouse\_154 (J), Cracklewink\_54 (Y), Dallas\_159 (J), DarthP\_58 (K6), Delian\_60 (CV), Denise\_67 (CZ5), DismalFunk\_60 (K2), DismalStressor\_60 (K2), DmpstrDiver\_159 (J), Duke13\_157 (J), Ejimix\_151 (J), Ekdilam\_56 (K6), Ellie\_54 (K6), EricMillard\_153 (J), Eyre\_49 (singleton), Faith5x5\_64 (CZ6), Farewell\_81 (AF), Faust\_81 (BK1), Fefferhead\_56 (K6), Fenry\_55 (CV),

Findley\_60 (K2), Gaia\_119 (X), Gambino\_60 (CV), Gonephishing\_152 (J), Guacamole\_54 (CV), Halley\_160 (J), Hammy\_58 (K6), Hannaconda\_152 (J), Hilltopfarm\_56 (Y), Hitter\_57 (CV), Hughesyang\_159 (J), Hurricane\_57 (K3), Jalammah\_60 (CV), JasperJr\_54 (CV), Kalah2\_151 (J), KashFlow\_157 (J), Keshu\_59 (K3), Klein\_158 (J), Krueger\_63 (K6), Lucky2013\_150 (J), Lysidious\_58 (CV), MacnCheese\_59 (K3), Malibo\_57 (DW), Marcoliusprime\_60 (K2), Mellie\_55 (CV), MiaZeal\_157 (J), Milly\_60 (K2), Minerva\_158 (J), MintFen\_57 (CV), MissRona\_58 (CV), Mufasa\_60 (K2), Nebkiss\_120 (X), NihilNomen\_161 (J), November\_58 (K6), Omega\_164 (J), Optimus\_151 (J), Petra\_53 (CV), Pharb\_56 (K3), Pipp\_59 (CV), Pixie\_56 (K3), Porcelain\_154 (J), Pound\_151 (J), Samba\_56 (CV), Schatzie\_155 (J), SeresaTree\_81 (BK1), ShawBrad\_100 (DN1), ShedlockHolmes\_58 (K3), Sidious\_59 (CZ7), Sparky\_80 (AF), Spooky\_97 (DN2), Squint\_151 (J), Strobilo\_61 (K2), Superphikiman\_155 (J), Syra333\_62 (K6), TBond007\_55 (K3), TClif\_59 (K6), TM4\_57 (K2), ThankyouJordi\_62 (CZ1), Thibault\_141 (J), ThreeRngTarjay\_155 (J), TripleTrouble\_56 (K3), TunaTartare\_80 (BK1), Typha\_56 (Y), Walrus\_55 (CV), Wanda\_158 (J), WelcomeAyanna\_62 (CZ1), Wocket\_57 (CV), Yeet\_152 (J), YoureAdopted\_56 (K1), Yuna\_62 (K6), Zarbodnamra\_56 (CV), Zelink\_153 (J), ZoeJ\_59 (K2),

#### Start 74:

- Found in 11 of 343 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 7 of 316
- Called 72.7% of time when present
- Phage (with cluster) where this start called: Amelie\_49 (K1), Binglebops\_49 (K1), BillNye\_72 (BK2), Circinus\_73 (BK2), Enkosi\_51 (K1), LilPharaoh\_49 (K1), Nutello\_49 (K1), Torres\_51 (K1),

#### Start 76:

- Found in 20 of 343 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 19 of 316
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate\_54 (K8), Chancellor\_62 (K4), Cheetobro\_62 (K4), Eponine\_64 (K4), Fionnbharth\_62 (K4), JF1\_62 (K4), Juliette\_64 (K4), Kraw\_63 (K4), Malthus\_63 (K4), Mitti\_62 (K4), Muntaha\_74 (BK2), OmniCritical\_61 (K4), Ruthiejr\_63 (K4), SamScheppers\_60 (K4), Slarp\_62 (K4), Taquito\_61 (K4), Wakanda\_73 (BK2), Wintermute\_62 (K4), Y10\_60 (K4), Y2\_60 (K4),

#### Start 77:

- Found in 26 of 343 ( 7.6% ) of genes in pham
- Manual Annotations of this start: 25 of 316
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annadreamy\_79 (BK1), Azrael100\_129 (V), Belfort\_83 (BK1), Beuffert\_78 (BK1), Blueeyedbeauty\_80 (BK1), Comrade\_81 (BK1), Cosmo\_137 (V), Emma1919\_83 (BK1), EniyanLRS\_131 (V), Forrest\_84 (BK1), Francob\_80 (BK1), Gilson\_82 (BK1), Jada\_82 (BK1), Karp\_79 (BK1), Kenrey\_83 (BK1), Limpid\_78 (BK1), MaryV\_122 (V), MeganTheeKilla\_80 (BK1), Moab\_81 (BK1), Patelgo\_81 (BK1), Phredrick\_81 (BK1), Sham\_75 (BK1), SparkleGoddess\_81 (BK1), Stigma\_80 (BK1), Westy\_79 (BK1), Wildcat\_136 (V),

#### Start 78:

- Found in 126 of 343 ( 36.7% ) of genes in pham
- Manual Annotations of this start: 3 of 316
- Called 2.4% of time when present

- Phage (with cluster) where this start called: LindNT\_56 (K1), Prithvi\_58 (K1), TreyKay\_58 (K1),

Start 80:

- Found in 154 of 343 ( 44.9% ) of genes in pham
- Manual Annotations of this start: 3 of 316
- Called 3.2% of time when present
- Phage (with cluster) where this start called: MacKat\_52 (K1), Mdavu\_50 (K1), Nikao\_52 (K1), SgtBeansprout\_49 (K1), TingHuaYa\_58 (K1),

Start 87:

- Found in 34 of 343 ( 9.9% ) of genes in pham
- Manual Annotations of this start: 1 of 316
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Bobby\_149 (J),

Start 95:

- Found in 1 of 343 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4\_56 (singleton),

### **Summary by clusters:**

There are 30 clusters represented in this pham: singleton, CZ1, CZ6, CZ7, CZ4, CZ5, K3, K2, K1, K6, K4, DW, K8, DN1, DN2, CY1, AF, DB, J, Q, CZ, CY, BK1, BK2, V, Y, X, Z, CV, AT,

Info for manual annotations of cluster AF:

- Start number 73 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AT:

- Start number 67 was manually annotated 1 time for cluster AT.

Info for manual annotations of cluster BK1:

- Start number 73 was manually annotated 2 times for cluster BK1.
- Start number 77 was manually annotated 20 times for cluster BK1.

Info for manual annotations of cluster BK2:

- Start number 74 was manually annotated 2 times for cluster BK2.
- Start number 76 was manually annotated 2 times for cluster BK2.

Info for manual annotations of cluster CV:

- Start number 73 was manually annotated 21 times for cluster CV.

Info for manual annotations of cluster CY:

- Start number 72 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 72 was manually annotated 4 times for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 72 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 72 was manually annotated 5 times for cluster CZ1.
- Start number 73 was manually annotated 2 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 72 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 73 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 73 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 72 was manually annotated 1 time for cluster CZ7.
- Start number 73 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:

- Start number 64 was manually annotated 9 times for cluster DB.
- Start number 69 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DN2:

- Start number 73 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster DW:

- Start number 73 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster J:

- Start number 47 was manually annotated 4 times for cluster J.
- Start number 52 was manually annotated 4 times for cluster J.
- Start number 73 was manually annotated 31 times for cluster J.
- Start number 87 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster K1:

- Start number 72 was manually annotated 91 times for cluster K1.
- Start number 73 was manually annotated 1 time for cluster K1.
- Start number 74 was manually annotated 5 times for cluster K1.
- Start number 78 was manually annotated 3 times for cluster K1.
- Start number 80 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 73 was manually annotated 10 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 73 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 76 was manually annotated 16 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 72 was manually annotated 11 times for cluster K6.

- Start number 73 was manually annotated 11 times for cluster K6.

Info for manual annotations of cluster K8:

- Start number 76 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster Q:

- Start number 69 was manually annotated 15 times for cluster Q.
- Start number 71 was manually annotated 7 times for cluster Q.

Info for manual annotations of cluster V:

- Start number 77 was manually annotated 5 times for cluster V.

Info for manual annotations of cluster X:

- Start number 73 was manually annotated 2 times for cluster X.

Info for manual annotations of cluster Y:

- Start number 73 was manually annotated 4 times for cluster Y.

Info for manual annotations of cluster Z:

- Start number 71 was manually annotated 1 time for cluster Z.

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

Gene: 32HC\_53 Start: 36136, Stop: 36690, Start Num: 71

Candidate Starts for 32HC\_53:

(50, 36082), (Start: 64 @36118 has 9 MA's), (65, 36124), (Start: 71 @36136 has 8 MA's), (111, 36283), (138, 36409), (143, 36439), (168, 36478), (205, 36631), (206, 36640),

Gene: ActinUp\_57 Start: 39985, Stop: 40539, Start Num: 72

Candidate Starts for ActinUp\_57:

(Start: 72 @39985 has 116 MA's), (Start: 78 @39997 has 3 MA's), (Start: 80 @40003 has 3 MA's), (89, 40051), (100, 40099), (103, 40108), (115, 40147), (118, 40177), (121, 40192), (132, 40228), (162, 40315), (170, 40339), (173, 40363), (186, 40411), (191, 40426), (196, 40444),

Gene: Adephagia\_57 Start: 39986, Stop: 40540, Start Num: 72

Candidate Starts for Adephagia\_57:

(31, 39839), (Start: 72 @39986 has 116 MA's), (Start: 78 @39998 has 3 MA's), (Start: 80 @40004 has 3 MA's), (89, 40052), (100, 40100), (103, 40109), (115, 40148), (118, 40178), (132, 40229), (162, 40316), (170, 40340), (191, 40427), (196, 40445), (198, 40451),

Gene: Adonis\_57 Start: 40233, Stop: 40787, Start Num: 72

Candidate Starts for Adonis\_57:

(31, 40083), (Start: 72 @40233 has 116 MA's), (Start: 78 @40245 has 3 MA's), (Start: 80 @40251 has 3 MA's), (89, 40299), (100, 40347), (103, 40356), (115, 40395), (118, 40425), (132, 40476), (162, 40563), (170, 40587), (191, 40674), (198, 40698),

Gene: Ageofdapage\_60 Start: 40974, Stop: 41528, Start Num: 72

Candidate Starts for Ageofdapage\_60:

(Start: 72 @40974 has 116 MA's), (Start: 78 @40986 has 3 MA's), (Start: 80 @40992 has 3 MA's), (89, 41040), (100, 41088), (103, 41097), (115, 41136), (118, 41166), (121, 41181), (132, 41217), (162, 41304), (170, 41328), (186, 41400), (191, 41415), (196, 41433),

Gene: Agueybana\_56 Start: 39653, Stop: 40237, Start Num: 72

Candidate Starts for Agueybana\_56:

(61, 39623), (68, 39647), (Start: 72 @39653 has 116 MA's), (123, 39854), (145, 39950), (173, 40013), (174, 40022), (190, 40085), (196, 40118), (198, 40121), (202, 40151),

Gene: AlishaPH\_57 Start: 40247, Stop: 40801, Start Num: 72

Candidate Starts for AlishaPH\_57:

(31, 40100), (Start: 72 @40247 has 116 MA's), (Start: 78 @40259 has 3 MA's), (Start: 80 @40265 has 3 MA's), (89, 40313), (100, 40361), (103, 40370), (115, 40409), (118, 40439), (132, 40490), (162, 40577), (170, 40601), (191, 40688), (196, 40706), (198, 40712),

Gene: AlumE\_56 Start: 39435, Stop: 40025, Start Num: 72

Candidate Starts for AlumE\_56:

(61, 39405), (68, 39429), (Start: 72 @39435 has 116 MA's), (123, 39639), (145, 39735), (154, 39756), (174, 39807), (196, 39903), (198, 39906), (199, 39912), (200, 39915), (202, 39936), (215, 40005),

Gene: Amelie\_49 Start: 38047, Stop: 38598, Start Num: 74

Candidate Starts for Amelie\_49:

(22, 37813), (Start: 74 @38047 has 7 MA's), (Start: 80 @38068 has 3 MA's), (Start: 87 @38110 has 1 MA's), (90, 38122), (103, 38173), (115, 38212), (118, 38242), (132, 38293), (170, 38398), (191, 38485), (196, 38503), (198, 38509), (215, 38578),

Gene: Amgine\_57 Start: 41112, Stop: 41666, Start Num: 73

Candidate Starts for Amgine\_57:

(Start: 73 @41112 has 100 MA's), (Start: 78 @41124 has 3 MA's), (99, 41220), (100, 41226), (103, 41235), (108, 41250), (115, 41274), (132, 41355), (162, 41442), (170, 41466), (191, 41553), (203, 41583), (205, 41598),

Gene: Amochick\_65 Start: 44443, Stop: 44997, Start Num: 69

Candidate Starts for Amochick\_65:

(24, 44248), (32, 44308), (40, 44356), (63, 44422), (Start: 69 @44443 has 16 MA's), (Start: 71 @44446 has 8 MA's), (79, 44461), (84, 44482), (96, 44545), (101, 44557), (114, 44602), (127, 44671), (128, 44674), (139, 44713), (143, 44740), (148, 44758), (161, 44776), (174, 44821), (175, 44824), (179, 44839), (194, 44884), (206, 44944), (211, 44962),

Gene: Amohnition\_58 Start: 40704, Stop: 41258, Start Num: 73

Candidate Starts for Amohnition\_58:

(Start: 73 @40704 has 100 MA's), (89, 40767), (100, 40815), (103, 40824), (106, 40830), (108, 40839), (120, 40905), (135, 40953), (164, 41040), (170, 41058), (191, 41145), (196, 41163), (205, 41190), (212, 41226),

Gene: Amymech\_64 Start: 43962, Stop: 44513, Start Num: 71

Candidate Starts for Amymech\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Anaya\_59 Start: 40502, Stop: 41056, Start Num: 72

Candidate Starts for Anaya\_59:

(Start: 72 @40502 has 116 MA's), (Start: 78 @40514 has 3 MA's), (89, 40568), (100, 40616), (103, 40625), (115, 40664), (118, 40694), (132, 40745), (162, 40832), (170, 40856), (191, 40943), (196,



40961),

Gene: Angelica\_57 Start: 40141, Stop: 40695, Start Num: 72

Candidate Starts for Angelica\_57:

(Start: 72 @40141 has 116 MA's), (Start: 78 @40153 has 3 MA's), (Start: 80 @40159 has 3 MA's), (89, 40207), (100, 40255), (103, 40264), (115, 40303), (118, 40333), (132, 40384), (162, 40471), (170, 40495), (186, 40567), (191, 40582), (196, 40600),

Gene: Annadreamy\_79 Start: 59408, Stop: 59899, Start Num: 77

Candidate Starts for Annadreamy\_79:

(65, 59384), (Start: 77 @59408 has 25 MA's), (88, 59468), (139, 59648), (143, 59675), (176, 59744), (186, 59777), (208, 59861), (213, 59882),

Gene: Annalisa\_54 Start: 35792, Stop: 36379, Start Num: 72

Candidate Starts for Annalisa\_54:

(25, 35615), (29, 35636), (68, 35786), (Start: 72 @35792 has 116 MA's), (102, 35900), (123, 35996), (124, 36002), (145, 36092), (190, 36230), (196, 36263), (198, 36266), (199, 36272), (202, 36296),

Gene: Apocalypse\_60 Start: 40910, Stop: 41464, Start Num: 72

Candidate Starts for Apocalypse\_60:

(Start: 72 @40910 has 116 MA's), (Start: 78 @40922 has 3 MA's), (89, 40976), (100, 41024), (103, 41033), (115, 41072), (118, 41102), (132, 41153), (144, 41210), (162, 41240), (170, 41264), (191, 41351), (196, 41369), (198, 41375),

Gene: Ariel\_157 Start: 81050, Stop: 81694, Start Num: 52

Candidate Starts for Ariel\_157:

(Start: 52 @81050 has 4 MA's), (Start: 73 @81107 has 100 MA's), (Start: 80 @81125 has 3 MA's), (81, 81128), (90, 81176), (94, 81203), (100, 81218), (106, 81233), (120, 81308), (131, 81344), (138, 81371), (191, 81575), (197, 81596),

Gene: Asayake\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Asayake\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Atiba\_58 Start: 39949, Stop: 40503, Start Num: 72

Candidate Starts for Atiba\_58:

(31, 39802), (Start: 72 @39949 has 116 MA's), (Start: 78 @39961 has 3 MA's), (Start: 80 @39967 has 3 MA's), (89, 40015), (100, 40063), (103, 40072), (115, 40111), (118, 40141), (132, 40192), (162, 40279), (170, 40303), (191, 40390), (196, 40408), (198, 40414),

Gene: AuntGwenStacy\_57 Start: 42274, Stop: 42870, Start Num: 73

Candidate Starts for AuntGwenStacy\_57:

(7, 41821), (28, 42085), (Start: 73 @42274 has 100 MA's), (Start: 80 @42292 has 3 MA's), (81, 42295), (83, 42301), (108, 42412), (118, 42466), (121, 42481), (132, 42517), (135, 42526), (136, 42529), (145, 42577), (146, 42580), (155, 42610), (173, 42676), (177, 42697), (218, 42844), (223, 42859),

Gene: Azrael100\_129 Start: 64551, Stop: 65066, Start Num: 77

Candidate Starts for Azrael100\_129:

(Start: 77 @64551 has 25 MA's), (Start: 80 @64566 has 3 MA's), (85, 64590), (86, 64596), (90, 64617), (92, 64635), (97, 64647), (98, 64650), (115, 64707), (120, 64749), (135, 64797), (136, 64800), (145, 64848), (146, 64851), (169, 64869), (178, 64920), (191, 64959), (194, 64971), (206, 65016),

Gene: Azula\_58 Start: 39149, Stop: 39736, Start Num: 73

Candidate Starts for Azula\_58:

(30, 38987), (34, 39035), (Start: 73 @39149 has 100 MA's), (123, 39350), (140, 39416), (145, 39446), (154, 39467), (174, 39518), (196, 39614), (198, 39617), (199, 39623), (200, 39626), (202, 39647),

Gene: BAKA\_160 Start: 84987, Stop: 85523, Start Num: 73

Candidate Starts for BAKA\_160:

(Start: 73 @84987 has 100 MA's), (Start: 80 @85005 has 3 MA's), (81, 85008), (Start: 87 @85047 has 1 MA's), (89, 85050), (118, 85176), (120, 85188), (135, 85239), (138, 85254), (160, 85305), (177, 85362), (213, 85488), (215, 85497),

Gene: BBQValindra\_58 Start: 41020, Stop: 41751, Start Num: 64

Candidate Starts for BBQValindra\_58:

(8, 40606), (14, 40714), (18, 40777), (33, 40924), (34, 40927), (Start: 64 @41020 has 9 MA's), (Start: 73 @41038 has 100 MA's), (102, 41152), (123, 41245), (137, 41302), (141, 41317), (177, 41425), (205, 41545), (207, 41557),

Gene: BEEST\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for BEEST\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: BGlluviae\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for BGlluviae\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: BackstagePass\_65 Start: 40434, Stop: 41168, Start Num: 64

Candidate Starts for BackstagePass\_65:

(6, 39999), (14, 40131), (33, 40341), (34, 40344), (36, 40353), (Start: 64 @40434 has 9 MA's), (Start: 73 @40452 has 100 MA's), (102, 40566), (109, 40590), (123, 40659), (124, 40665), (137, 40716), (141, 40731), (177, 40839), (205, 40959), (228, 41157),

Gene: BaghaKamala\_56 Start: 39342, Stop: 39896, Start Num: 72

Candidate Starts for BaghaKamala\_56:

(Start: 72 @39342 has 116 MA's), (Start: 78 @39354 has 3 MA's), (89, 39408), (100, 39456), (103, 39465), (115, 39504), (118, 39534), (132, 39585), (162, 39672), (170, 39696), (191, 39783), (196, 39801), (198, 39807),

Gene: Bagrid\_163 Start: 86216, Stop: 86752, Start Num: 73

Candidate Starts for Bagrid\_163:

(Start: 73 @86216 has 100 MA's), (Start: 80 @86234 has 3 MA's), (81, 86237), (Start: 87 @86276 has 1 MA's), (89, 86279), (118, 86405), (120, 86417), (135, 86468), (138, 86483), (160, 86534), (177, 86591), (213, 86717), (215, 86726),

Gene: Barco\_55 Start: 36423, Stop: 37010, Start Num: 73

Candidate Starts for Barco\_55:

(Start: 73 @36423 has 100 MA's), (123, 36624), (145, 36720), (174, 36792), (196, 36888), (198, 36891), (199, 36897), (200, 36900), (202, 36921),

Gene: BarrelRoll\_57 Start: 39965, Stop: 40519, Start Num: 72

Candidate Starts for BarrelRoll\_57:

(Start: 72 @39965 has 116 MA's), (Start: 78 @39977 has 3 MA's), (Start: 80 @39983 has 3 MA's), (89, 40031), (100, 40079), (103, 40088), (115, 40127), (118, 40157), (132, 40208), (162, 40295), (170, 40319), (191, 40406), (196, 40424), (198, 40430),

Gene: Beem\_160 Start: 86179, Stop: 86715, Start Num: 73

Candidate Starts for Beem\_160:

(Start: 73 @86179 has 100 MA's), (Start: 80 @86197 has 3 MA's), (81, 86200), (118, 86368), (120, 86380), (135, 86431), (138, 86446), (191, 86596), (215, 86689),

Gene: Beezoo\_59 Start: 40949, Stop: 41503, Start Num: 72

Candidate Starts for Beezoo\_59:

(Start: 72 @40949 has 116 MA's), (Start: 78 @40961 has 3 MA's), (Start: 80 @40967 has 3 MA's), (89, 41015), (100, 41063), (103, 41072), (115, 41111), (118, 41141), (132, 41192), (162, 41279), (170, 41303), (191, 41390), (196, 41408), (198, 41414),

Gene: Belfort\_83 Start: 61237, Stop: 61725, Start Num: 77

Candidate Starts for Belfort\_83:

(Start: 77 @61237 has 25 MA's), (88, 61297), (122, 61417), (129, 61441), (134, 61456), (136, 61462), (139, 61477), (171, 61549), (176, 61573), (178, 61582), (186, 61606), (197, 61648), (213, 61711), (216, 61720),

Gene: Bella96\_58 Start: 40730, Stop: 41284, Start Num: 72

Candidate Starts for Bella96\_58:

(Start: 72 @40730 has 116 MA's), (Start: 78 @40742 has 3 MA's), (Start: 80 @40748 has 3 MA's), (89, 40796), (103, 40853), (115, 40892), (132, 40973), (162, 41060), (170, 41084), (191, 41171), (196, 41189), (198, 41195),

Gene: Belladonna\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Belladonna\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: Bern\_58 Start: 38932, Stop: 39486, Start Num: 72

Candidate Starts for Bern\_58:

(Start: 72 @38932 has 116 MA's), (Start: 78 @38944 has 3 MA's), (89, 38998), (100, 39046), (103, 39055), (115, 39094), (118, 39124), (132, 39175), (162, 39262), (170, 39286), (191, 39373), (196, 39391), (198, 39397),

Gene: Beuffert\_78 Start: 59970, Stop: 60461, Start Num: 77

Candidate Starts for Beuffert\_78:

(65, 59946), (Start: 77 @59970 has 25 MA's), (88, 60030), (139, 60210), (176, 60306), (178, 60315), (184, 60330), (186, 60339), (187, 60342), (191, 60357), (208, 60423),

Gene: Biglebops\_49 Start: 38047, Stop: 38598, Start Num: 74

Candidate Starts for Biglebops\_49:

(22, 37813), (Start: 74 @38047 has 7 MA's), (Start: 80 @38068 has 3 MA's), (Start: 87 @38110 has 1 MA's), (90, 38122), (103, 38173), (115, 38212), (118, 38242), (132, 38293), (170, 38398), (191, 38485), (196, 38503), (198, 38509), (215, 38578),

Gene: BillNye\_72 Start: 61063, Stop: 61557, Start Num: 74

Candidate Starts for BillNye\_72:

(Start: 74 @61063 has 7 MA's), (88, 61129), (139, 61309), (171, 61381), (176, 61405), (178, 61414), (186, 61438), (191, 61456), (216, 61552),

Gene: Bipper\_54 Start: 40859, Stop: 41473, Start Num: 73

Candidate Starts for Bipper\_54:

(41, 40778), (43, 40781), (Start: 73 @40859 has 100 MA's), (Start: 80 @40877 has 3 MA's), (81, 40880), (Start: 87 @40919 has 1 MA's), (91, 40946), (98, 40964), (115, 41021), (118, 41051), (135, 41111), (136, 41114), (145, 41162), (156, 41198), (162, 41216), (165, 41228), (166, 41231), (178, 41291), (195, 41351), (213, 41420),

Gene: Blizzard\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Blizzard\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Blueberry\_57 Start: 39149, Stop: 39736, Start Num: 73

Candidate Starts for Blueberry\_57:

(30, 38987), (34, 39035), (Start: 73 @39149 has 100 MA's), (123, 39350), (140, 39416), (145, 39446), (154, 39467), (174, 39518), (196, 39614), (198, 39617), (199, 39623), (200, 39626), (202, 39647),

Gene: Blueeyedbeauty\_80 Start: 59360, Stop: 59851, Start Num: 77

Candidate Starts for Blueeyedbeauty\_80:

(65, 59336), (Start: 77 @59360 has 25 MA's), (88, 59420), (92, 59447), (139, 59600), (151, 59651), (173, 59681), (176, 59696), (184, 59720), (186, 59729), (208, 59813), (213, 59834),

Gene: Bobby\_149 Start: 86590, Stop: 87060, Start Num: 87

Candidate Starts for Bobby\_149:

(Start: 87 @86590 has 1 MA's), (89, 86593), (118, 86719), (120, 86731), (135, 86782), (138, 86797), (160, 86848), (177, 86905), (213, 87031), (220, 87052),

Gene: Boiiii\_57 Start: 40303, Stop: 40857, Start Num: 72

Candidate Starts for Boiiii\_57:

(31, 40156), (Start: 72 @40303 has 116 MA's), (Start: 78 @40315 has 3 MA's), (Start: 80 @40321 has 3 MA's), (89, 40369), (100, 40417), (103, 40426), (115, 40465), (118, 40495), (132, 40546), (162, 40633), (170, 40657), (191, 40744), (196, 40762), (198, 40768),

Gene: Boilgate\_54 Start: 39890, Stop: 40492, Start Num: 76

Candidate Starts for Boilgate\_54:

(53, 39833), (Start: 76 @39890 has 19 MA's), (108, 40025), (115, 40049), (135, 40139), (145, 40190), (170, 40277), (177, 40322), (191, 40364), (196, 40382), (212, 40451),

Gene: Bombitas\_146 Start: 82178, Stop: 82789, Start Num: 47

Candidate Starts for Bombitas\_146:

(Start: 47 @82178 has 4 MA's), (Start: 52 @82196 has 4 MA's), (Start: 73 @82253 has 100 MA's), (Start: 80 @82271 has 3 MA's), (118, 82442), (120, 82454), (135, 82505), (138, 82520), (191, 82670), (197, 82691),

Gene: BoostSeason\_60 Start: 41609, Stop: 42142, Start Num: 73

Candidate Starts for BoostSeason\_60:

(Start: 73 @41609 has 100 MA's), (79, 41624), (89, 41672), (100, 41720), (103, 41729), (113, 41762), (115, 41768), (117, 41774), (135, 41858), (150, 41924),

Gene: Bowser\_58 Start: 40743, Stop: 41495, Start Num: 64

Candidate Starts for Bowser\_58:

(18, 40503), (33, 40650), (34, 40653), (Start: 64 @40743 has 9 MA's), (Start: 73 @40761 has 100 MA's), (102, 40875), (123, 40968), (137, 41025), (141, 41040), (177, 41148), (205, 41268), (206, 41277), (207, 41280), (225, 41370), (226, 41442), (227, 41463),

Gene: BoyNamedSue\_56 Start: 39435, Stop: 40025, Start Num: 72

Candidate Starts for BoyNamedSue\_56:

(61, 39405), (68, 39429), (Start: 72 @39435 has 116 MA's), (123, 39639), (145, 39735), (154, 39756), (174, 39807), (196, 39903), (198, 39906), (199, 39912), (200, 39915), (202, 39936), (215, 40005),

Gene: Bryler\_60 Start: 39479, Stop: 40042, Start Num: 72

Candidate Starts for Bryler\_60:

(Start: 72 @39479 has 116 MA's), (Start: 78 @39491 has 3 MA's), (Start: 80 @39497 has 3 MA's), (100, 39593), (115, 39641), (132, 39722), (162, 39812), (170, 39842), (191, 39929), (196, 39947), (212, 40010),

Gene: Bunker\_54 Start: 39327, Stop: 40058, Start Num: 64

Candidate Starts for Bunker\_54:

(14, 39024), (33, 39234), (34, 39237), (36, 39246), (Start: 64 @39327 has 9 MA's), (Start: 73 @39345 has 100 MA's), (102, 39459), (109, 39483), (123, 39552), (124, 39558), (137, 39609), (141, 39624), (177, 39732), (205, 39852), (207, 39864),

Gene: Bunnybear\_50 Start: 37443, Stop: 38027, Start Num: 72

Candidate Starts for Bunnybear\_50:

(23, 37239), (61, 37413), (68, 37437), (Start: 72 @37443 has 116 MA's), (123, 37644), (140, 37710), (145, 37740), (154, 37761), (174, 37812), (196, 37908), (198, 37911), (199, 37917), (214, 38007),

Gene: CREW\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for CREW\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: Cain\_60 Start: 39467, Stop: 40030, Start Num: 72

Candidate Starts for Cain\_60:

(Start: 72 @39467 has 116 MA's), (Start: 78 @39479 has 3 MA's), (Start: 80 @39485 has 3 MA's), (98, 39572), (100, 39581), (115, 39629), (132, 39710), (162, 39800), (170, 39830), (191, 39917), (196, 39935), (212, 39998),

Gene: CallaLilly\_59 Start: 40027, Stop: 40581, Start Num: 72

Candidate Starts for CallaLilly\_59:

(31, 39880), (Start: 72 @40027 has 116 MA's), (Start: 78 @40039 has 3 MA's), (Start: 80 @40045 has 3 MA's), (89, 40093), (100, 40141), (103, 40150), (115, 40189), (118, 40219), (132, 40270), (162, 40357), (170, 40381), (191, 40468), (196, 40486), (198, 40492),

Gene: Capricorn\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Capricorn\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: CaptainKirk2\_57 Start: 36662, Stop: 37249, Start Num: 73

Candidate Starts for CaptainKirk2\_57:

(Start: 73 @36662 has 100 MA's), (123, 36863), (145, 36959), (174, 37031), (196, 37127), (198, 37130), (199, 37136), (200, 37139), (202, 37160),

Gene: CaseJules\_59 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for CaseJules\_59:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Chancellor\_62 Start: 40161, Stop: 40757, Start Num: 76

Candidate Starts for Chancellor\_62:

(Start: 76 @40161 has 19 MA's), (85, 40203), (103, 40281), (118, 40350), (120, 40362), (135, 40410), (170, 40530), (177, 40575), (191, 40617), (195, 40638), (196, 40641), (213, 40722),

Gene: CheetoDust\_56 Start: 39386, Stop: 39940, Start Num: 72

Candidate Starts for CheetoDust\_56:

(Start: 72 @39386 has 116 MA's), (Start: 78 @39398 has 3 MA's), (89, 39452), (100, 39500), (103, 39509), (115, 39548), (118, 39578), (132, 39629), (162, 39716), (170, 39740), (191, 39827), (196, 39845), (198, 39851),

Gene: Cheetobro\_62 Start: 40158, Stop: 40754, Start Num: 76

Candidate Starts for Cheetobro\_62:

(Start: 76 @40158 has 19 MA's), (85, 40200), (103, 40278), (118, 40347), (120, 40359), (135, 40407), (170, 40527), (177, 40572), (191, 40614), (195, 40635), (196, 40638), (213, 40719),

Gene: Chris\_59 Start: 40680, Stop: 41237, Start Num: 72

Candidate Starts for Chris\_59:

(Start: 72 @40680 has 116 MA's), (Start: 78 @40692 has 3 MA's), (98, 40782), (108, 40815), (120, 40881), (170, 41037), (180, 41091), (191, 41124), (196, 41142),

Gene: Circinus\_73 Start: 61050, Stop: 61544, Start Num: 74

Candidate Starts for Circinus\_73:

(Start: 74 @61050 has 7 MA's), (88, 61116), (139, 61296), (171, 61368), (176, 61392), (178, 61401), (186, 61425), (191, 61443), (216, 61539),

Gene: Clipper\_61 Start: 40564, Stop: 41118, Start Num: 72

Candidate Starts for Clipper\_61:

(Start: 72 @40564 has 116 MA's), (Start: 78 @40576 has 3 MA's), (Start: 80 @40582 has 3 MA's), (89, 40630), (100, 40678), (103, 40687), (115, 40726), (118, 40756), (121, 40771), (132, 40807), (162, 40894), (170, 40918), (173, 40942), (186, 40990), (191, 41005), (196, 41023), (212, 41086),

Gene: Comrade\_81 Start: 60853, Stop: 61341, Start Num: 77

Candidate Starts for Comrade\_81:

(Start: 77 @60853 has 25 MA's), (88, 60913), (122, 61033), (129, 61057), (134, 61072), (136, 61078), (139, 61093), (147, 61129), (171, 61165), (176, 61189), (178, 61198), (186, 61222), (197, 61264), (213, 61327), (216, 61336),

Gene: Constella\_151 Start: 83218, Stop: 83754, Start Num: 73

Candidate Starts for Constella\_151:

(Start: 73 @83218 has 100 MA's), (Start: 80 @83236 has 3 MA's), (81, 83239), (Start: 87 @83278 has 1 MA's), (89, 83281), (118, 83407), (120, 83419), (135, 83470), (138, 83485), (160, 83536), (177,

83593), (215, 83728),

Gene: Cosmo\_137 Start: 64981, Stop: 65496, Start Num: 77

Candidate Starts for Cosmo\_137:

(Start: 77 @64981 has 25 MA's), (Start: 80 @64996 has 3 MA's), (85, 65020), (86, 65026), (90, 65047), (92, 65065), (97, 65077), (98, 65080), (115, 65137), (120, 65179), (135, 65227), (136, 65230), (145, 65278), (146, 65281), (169, 65299), (178, 65350), (191, 65389), (194, 65401), (206, 65446),

Gene: Courthouse\_154 Start: 81602, Stop: 82138, Start Num: 73

Candidate Starts for Courthouse\_154:

(66, 81590), (Start: 69 @81596 has 16 MA's), (Start: 73 @81602 has 100 MA's), (Start: 78 @81614 has 3 MA's), (79, 81617), (81, 81623), (89, 81665), (108, 81737), (132, 81845), (135, 81854), (138, 81869), (160, 81920), (177, 81977), (191, 82019), (197, 82040),

Gene: Cracklewink\_54 Start: 40852, Stop: 41466, Start Num: 73

Candidate Starts for Cracklewink\_54:

(41, 40771), (43, 40774), (Start: 73 @40852 has 100 MA's), (Start: 80 @40870 has 3 MA's), (81, 40873), (Start: 87 @40912 has 1 MA's), (91, 40939), (98, 40957), (115, 41014), (118, 41044), (135, 41104), (136, 41107), (145, 41155), (156, 41191), (162, 41209), (165, 41221), (166, 41224), (178, 41284), (195, 41344), (213, 41413),

Gene: CrimD\_57 Start: 40220, Stop: 40774, Start Num: 72

Candidate Starts for CrimD\_57:

(Start: 72 @40220 has 116 MA's), (Start: 78 @40232 has 3 MA's), (Start: 80 @40238 has 3 MA's), (89, 40286), (100, 40334), (103, 40343), (115, 40382), (118, 40412), (121, 40427), (132, 40463), (162, 40550), (170, 40574), (186, 40646), (191, 40661), (196, 40679), (212, 40742),

Gene: Curiosium\_59 Start: 38846, Stop: 39418, Start Num: 72

Candidate Starts for Curiosium\_59:

(Start: 72 @38846 has 116 MA's), (Start: 78 @38858 has 3 MA's), (Start: 80 @38864 has 3 MA's), (Start: 87 @38906 has 1 MA's), (100, 38960), (103, 38969), (110, 38990), (113, 39002), (115, 39008), (132, 39089), (170, 39212), (191, 39299), (196, 39317), (219, 39407),

Gene: Daegal\_67 Start: 45005, Stop: 45559, Start Num: 69

Candidate Starts for Daegal\_67:

(24, 44810), (32, 44870), (40, 44918), (63, 44984), (Start: 69 @45005 has 16 MA's), (Start: 71 @45008 has 8 MA's), (79, 45023), (84, 45044), (96, 45107), (101, 45119), (114, 45164), (127, 45233), (128, 45236), (139, 45275), (143, 45302), (148, 45320), (161, 45338), (174, 45383), (175, 45386), (179, 45401), (194, 45446), (206, 45506), (211, 45524),

Gene: Dallas\_159 Start: 85402, Stop: 85938, Start Num: 73

Candidate Starts for Dallas\_159:

(Start: 73 @85402 has 100 MA's), (Start: 80 @85420 has 3 MA's), (81, 85423), (118, 85591), (120, 85603), (135, 85654), (138, 85669), (191, 85819), (215, 85912),

Gene: Dalmuri\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Dalmuri\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: DanielleIgnace\_58 Start: 38690, Stop: 39253, Start Num: 67

Candidate Starts for DanielleIgnace\_58:

(Start: 67 @38690 has 1 MA's), (105, 38831), (112, 38852), (124, 38915), (176, 39083), (183, 39110), (201, 39188), (204, 39197), (206, 39218),

Gene: DarthP\_58 Start: 40588, Stop: 41142, Start Num: 73

Candidate Starts for DarthP\_58:

(Start: 73 @40588 has 100 MA's), (89, 40651), (100, 40699), (103, 40708), (106, 40714), (108, 40723), (120, 40789), (135, 40837), (164, 40924), (170, 40942), (191, 41029), (196, 41047), (205, 41074), (212, 41110),

Gene: Dartin\_60 Start: 40625, Stop: 41188, Start Num: 72

Candidate Starts for Dartin\_60:

(Start: 72 @40625 has 116 MA's), (90, 40700), (100, 40742), (103, 40751), (113, 40784), (115, 40790), (132, 40871), (170, 40988), (191, 41075), (196, 41093), (206, 41129), (215, 41168),

Gene: Deby\_57 Start: 40163, Stop: 40717, Start Num: 72

Candidate Starts for Deby\_57:

(31, 40013), (Start: 72 @40163 has 116 MA's), (Start: 78 @40175 has 3 MA's), (Start: 80 @40181 has 3 MA's), (89, 40229), (100, 40277), (103, 40286), (115, 40325), (118, 40355), (132, 40406), (162, 40493), (170, 40517), (191, 40604), (198, 40628),

Gene: DeepSoil15\_64 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for DeepSoil15\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Delian\_60 Start: 36660, Stop: 37247, Start Num: 73

Candidate Starts for Delian\_60:

(Start: 73 @36660 has 100 MA's), (123, 36861), (145, 36957), (174, 37029), (196, 37125), (198, 37128), (199, 37134), (200, 37137), (202, 37158),

Gene: Denise\_67 Start: 40135, Stop: 40689, Start Num: 73

Candidate Starts for Denise\_67:

(17, 39871), (54, 40084), (56, 40087), (Start: 73 @40135 has 100 MA's), (90, 40201), (114, 40285), (123, 40333), (129, 40357), (145, 40423), (205, 40627),

Gene: Devera\_62 Start: 40742, Stop: 41314, Start Num: 72

Candidate Starts for Devera\_62:

(Start: 72 @40742 has 116 MA's), (Start: 78 @40754 has 3 MA's), (Start: 80 @40760 has 3 MA's), (89, 40808), (100, 40856), (103, 40865), (113, 40898), (115, 40904), (132, 40985), (170, 41108), (191, 41195), (196, 41213), (219, 41303),

Gene: Dewey\_61 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Dewey\_61:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: DirtyBoi\_64 Start: 41042, Stop: 41764, Start Num: 69

Candidate Starts for DirtyBoi\_64:



(51, 40991), (54, 40997), (58, 41009), (Start: 64 @41027 has 9 MA's), (Start: 69 @41042 has 16 MA's), (Start: 73 @41048 has 100 MA's), (102, 41162), (124, 41261), (137, 41312), (141, 41327), (174, 41423), (177, 41435), (205, 41555), (206, 41564),

Gene: DismalFunk\_60 Start: 42031, Stop: 42564, Start Num: 73

Candidate Starts for DismalFunk\_60:

(55, 41980), (Start: 73 @42031 has 100 MA's), (79, 42046), (89, 42094), (100, 42142), (103, 42151), (113, 42184), (115, 42190), (117, 42196), (135, 42280), (150, 42346),

Gene: DismalStressor\_60 Start: 42031, Stop: 42564, Start Num: 73

Candidate Starts for DismalStressor\_60:

(55, 41980), (Start: 73 @42031 has 100 MA's), (79, 42046), (89, 42094), (100, 42142), (103, 42151), (113, 42184), (115, 42190), (117, 42196), (135, 42280), (150, 42346),

Gene: DmpstrDiver\_159 Start: 84129, Stop: 84665, Start Num: 73

Candidate Starts for DmpstrDiver\_159:

(Start: 73 @84129 has 100 MA's), (Start: 80 @84147 has 3 MA's), (81, 84150), (118, 84318), (120, 84330), (135, 84381), (138, 84396), (191, 84546), (215, 84639),

Gene: Dole\_60 Start: 40745, Stop: 41317, Start Num: 72

Candidate Starts for Dole\_60:

(Start: 72 @40745 has 116 MA's), (Start: 78 @40757 has 3 MA's), (Start: 80 @40763 has 3 MA's), (89, 40811), (100, 40859), (103, 40868), (113, 40901), (115, 40907), (132, 40988), (170, 41111), (191, 41198), (196, 41216), (219, 41306),

Gene: Dove\_146 Start: 80534, Stop: 81145, Start Num: 47

Candidate Starts for Dove\_146:

(Start: 47 @80534 has 4 MA's), (Start: 52 @80552 has 4 MA's), (Start: 73 @80609 has 100 MA's), (Start: 80 @80627 has 3 MA's), (118, 80798), (120, 80810), (135, 80861), (138, 80876), (191, 81026), (197, 81047),

Gene: DrHayes\_58 Start: 40885, Stop: 41439, Start Num: 72

Candidate Starts for DrHayes\_58:

(Start: 72 @40885 has 116 MA's), (Start: 78 @40897 has 3 MA's), (Start: 80 @40903 has 3 MA's), (89, 40951), (100, 40999), (103, 41008), (115, 41047), (132, 41128), (162, 41215), (170, 41239), (191, 41326), (196, 41344), (198, 41350),

Gene: Duke13\_157 Start: 83483, Stop: 84019, Start Num: 73

Candidate Starts for Duke13\_157:

(Start: 73 @83483 has 100 MA's), (Start: 80 @83501 has 3 MA's), (81, 83504), (Start: 87 @83543 has 1 MA's), (89, 83546), (118, 83672), (120, 83684), (135, 83735), (138, 83750), (160, 83801), (177, 83858), (213, 83984), (215, 83993),

Gene: Durfee\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Durfee\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: EMSquaredA\_54 Start: 38610, Stop: 39200, Start Num: 72

Candidate Starts for EMSquaredA\_54:

(61, 38580), (68, 38604), (Start: 72 @38610 has 116 MA's), (123, 38814), (145, 38910), (154, 38931), (174, 38982), (196, 39078), (198, 39081), (199, 39087), (200, 39090), (202, 39111), (215, 39180),

Gene: Efra2\_60 Start: 39747, Stop: 40313, Start Num: 72

Candidate Starts for Efra2\_60:

(Start: 72 @39747 has 116 MA's), (Start: 78 @39759 has 3 MA's), (Start: 80 @39765 has 3 MA's), (98, 39852), (113, 39903), (115, 39909), (132, 39990), (170, 40113), (191, 40200), (196, 40218), (198, 40224), (212, 40281),

Gene: Ein37\_64 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Ein37\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Ejimix\_151 Start: 84390, Stop: 84926, Start Num: 73

Candidate Starts for Ejimix\_151:

(Start: 73 @84390 has 100 MA's), (Start: 80 @84408 has 3 MA's), (81, 84411), (118, 84579), (120, 84591), (135, 84642), (138, 84657), (191, 84807), (215, 84900),

Gene: Ekdilam\_56 Start: 40591, Stop: 41142, Start Num: 73

Candidate Starts for Ekdilam\_56:

(Start: 73 @40591 has 100 MA's), (Start: 78 @40603 has 3 MA's), (90, 40660), (100, 40702), (103, 40711), (115, 40750), (120, 40792), (135, 40840), (170, 40942), (191, 41029), (196, 41047), (205, 41074),

Gene: Ellie\_54 Start: 39941, Stop: 40495, Start Num: 73

Candidate Starts for Ellie\_54:

(Start: 73 @39941 has 100 MA's), (Start: 78 @39953 has 3 MA's), (99, 40049), (100, 40055), (103, 40064), (108, 40079), (115, 40103), (132, 40184), (162, 40271), (170, 40295), (191, 40382), (203, 40412), (205, 40427),

Gene: Emerson\_58 Start: 39982, Stop: 40536, Start Num: 72

Candidate Starts for Emerson\_58:

(Start: 72 @39982 has 116 MA's), (Start: 78 @39994 has 3 MA's), (Start: 80 @40000 has 3 MA's), (89, 40048), (100, 40096), (103, 40105), (115, 40144), (118, 40174), (132, 40225), (162, 40312), (170, 40336), (191, 40423), (198, 40447),

Gene: Emma1919\_83 Start: 59575, Stop: 60063, Start Num: 77

Candidate Starts for Emma1919\_83:

(Start: 77 @59575 has 25 MA's), (107, 59701), (122, 59755), (126, 59770), (133, 59791), (136, 59800), (139, 59815), (171, 59887), (176, 59911), (178, 59920), (186, 59944), (197, 59986), (213, 60049), (216, 60058),

Gene: EniyanLRS\_131 Start: 65177, Stop: 65725, Start Num: 77

Candidate Starts for EniyanLRS\_131:

(Start: 77 @65177 has 25 MA's), (Start: 80 @65192 has 3 MA's), (85, 65216), (86, 65222), (90, 65243), (92, 65261), (97, 65273), (98, 65276), (115, 65333), (120, 65375), (135, 65423), (136, 65426), (145, 65474), (146, 65477), (178, 65546), (191, 65585), (194, 65597), (206, 65642), (217, 65693),

Gene: Enkosi\_51 Start: 40660, Stop: 41211, Start Num: 74

Candidate Starts for Enkosi\_51:

(22, 40426), (Start: 74 @40660 has 7 MA's), (Start: 80 @40681 has 3 MA's), (Start: 87 @40723 has 1 MA's), (90, 40735), (103, 40786), (115, 40825), (118, 40855), (132, 40906), (170, 41011), (191,

41098), (196, 41116), (198, 41122), (215, 41191),

Gene: Eponine\_64 Start: 41004, Stop: 41600, Start Num: 76

Candidate Starts for Eponine\_64:

(Start: 76 @41004 has 19 MA's), (85, 41046), (103, 41124), (118, 41193), (120, 41205), (135, 41253), (170, 41373), (177, 41418), (191, 41460), (195, 41481), (196, 41484), (213, 41565),

Gene: EricMillard\_153 Start: 84826, Stop: 85362, Start Num: 73

Candidate Starts for EricMillard\_153:

(Start: 73 @84826 has 100 MA's), (Start: 80 @84844 has 3 MA's), (81, 84847), (Start: 87 @84886 has 1 MA's), (89, 84889), (118, 85015), (120, 85027), (135, 85078), (138, 85093), (160, 85144), (177, 85201), (215, 85336),

Gene: Evanesce\_63 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Evanesce\_63:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Eyes\_57 Start: 40795, Stop: 41526, Start Num: 64

Candidate Starts for Eyes\_57:

(33, 40702), (34, 40705), (Start: 64 @40795 has 9 MA's), (Start: 73 @40813 has 100 MA's), (102, 40927), (123, 41020), (124, 41026), (177, 41200), (194, 41251), (201, 41293), (205, 41320), (206, 41329), (207, 41332),

Gene: Eyre\_49 Start: 34637, Stop: 35221, Start Num: 73

Candidate Starts for Eyre\_49:

(Start: 73 @34637 has 100 MA's), (123, 34853), (124, 34859), (141, 34925), (145, 34949), (196, 35096), (205, 35153), (206, 35162), (213, 35192),

Gene: Faith5x5\_64 Start: 38441, Stop: 39004, Start Num: 73

Candidate Starts for Faith5x5\_64:

(10, 38189), (11, 38195), (Start: 73 @38441 has 100 MA's), (88, 38498), (93, 38537), (123, 38648), (129, 38672), (145, 38738), (190, 38852), (196, 38885), (205, 38942), (206, 38951),

Gene: Farewell\_81 Start: 52822, Stop: 53370, Start Num: 73

Candidate Starts for Farewell\_81:

(42, 52732), (55, 52771), (Start: 73 @52822 has 100 MA's), (130, 53056), (174, 53191), (205, 53308), (206, 53317), (209, 53329),

Gene: Faust\_81 Start: 60777, Stop: 61277, Start Num: 73

Candidate Starts for Faust\_81:

(Start: 73 @60777 has 100 MA's), (85, 60825), (107, 60912), (134, 61005), (139, 61026), (172, 61101), (176, 61122), (178, 61131), (184, 61146), (186, 61155), (208, 61239), (213, 61260),

Gene: Fefferhead\_56 Start: 39888, Stop: 40442, Start Num: 73

Candidate Starts for Fefferhead\_56:

(Start: 73 @39888 has 100 MA's), (Start: 78 @39900 has 3 MA's), (99, 39996), (100, 40002), (103, 40011), (108, 40026), (115, 40050), (132, 40131), (162, 40218), (170, 40242), (191, 40329), (203, 40359), (205, 40374), (212, 40410),

Gene: Fenry\_55 Start: 38167, Stop: 38757, Start Num: 73

Candidate Starts for Fenry\_55:

(30, 38005), (34, 38053), (Start: 73 @38167 has 100 MA's), (123, 38371), (140, 38437), (145, 38467), (154, 38488), (167, 38497), (171, 38521), (174, 38539), (196, 38635), (198, 38638), (199, 38644), (200, 38647), (202, 38668),

Gene: Findley\_60 Start: 42024, Stop: 42557, Start Num: 73

Candidate Starts for Findley\_60:

(55, 41973), (Start: 73 @42024 has 100 MA's), (79, 42039), (89, 42087), (100, 42135), (103, 42144), (113, 42177), (115, 42183), (117, 42189), (135, 42273), (150, 42339),

Gene: Fionnbharth\_62 Start: 40402, Stop: 40998, Start Num: 76

Candidate Starts for Fionnbharth\_62:

(Start: 76 @40402 has 19 MA's), (85, 40444), (103, 40522), (118, 40591), (120, 40603), (135, 40651), (170, 40771), (177, 40816), (191, 40858), (195, 40879), (196, 40882), (213, 40963),

Gene: Floral\_55 Start: 40516, Stop: 41088, Start Num: 72

Candidate Starts for Floral\_55:

(61, 40486), (68, 40510), (Start: 72 @40516 has 116 MA's), (102, 40624), (123, 40720),

Gene: Forge\_61 Start: 43962, Stop: 44513, Start Num: 71

Candidate Starts for Forge\_61:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Forrest\_84 Start: 60868, Stop: 61356, Start Num: 77

Candidate Starts for Forrest\_84:

(Start: 77 @60868 has 25 MA's), (102, 60973), (122, 61048), (126, 61063), (133, 61084), (136, 61093), (139, 61108), (171, 61180), (176, 61204), (178, 61213), (186, 61237), (197, 61279), (213, 61342), (216, 61351),

Gene: Francob\_80 Start: 59594, Stop: 60082, Start Num: 77

Candidate Starts for Francob\_80:

(Start: 77 @59594 has 25 MA's), (88, 59654), (122, 59774), (139, 59834), (171, 59906), (176, 59930), (178, 59939), (180, 59945), (186, 59963), (197, 60005), (208, 60047), (213, 60068), (216, 60077),

Gene: GEazy\_64 Start: 40986, Stop: 41714, Start Num: 64

Candidate Starts for GEazy\_64:

(49, 40947), (Start: 64 @40986 has 9 MA's), (Start: 73 @41004 has 100 MA's), (102, 41118), (123, 41211), (124, 41217), (177, 41391), (205, 41511), (206, 41520), (207, 41523),

Gene: Gaia\_119 Start: 67024, Stop: 67569, Start Num: 73

Candidate Starts for Gaia\_119:

(Start: 73 @67024 has 100 MA's), (89, 67087), (115, 67183), (118, 67213), (120, 67225), (132, 67267), (139, 67294), (172, 67387), (176, 67408), (188, 67441), (191, 67450), (196, 67468), (205, 67495), (213, 67534), (221, 67561),

Gene: Gambino\_60 Start: 39149, Stop: 39736, Start Num: 73

Candidate Starts for Gambino\_60:

(30, 38987), (34, 39035), (Start: 73 @39149 has 100 MA's), (123, 39350), (140, 39416), (145, 39446), (154, 39467), (174, 39518), (196, 39614), (198, 39617), (199, 39623), (200, 39626), (202, 39647),

Gene: Gancho\_63 Start: 43686, Stop: 44240, Start Num: 69

Candidate Starts for Gancho\_63:

(Start: 69 @43686 has 16 MA's), (Start: 71 @43689 has 8 MA's), (79, 43704), (84, 43725), (96, 43788), (101, 43800), (105, 43812), (114, 43845), (127, 43914), (128, 43917), (139, 43956), (143, 43983), (148, 44001), (174, 44064), (175, 44067), (179, 44082), (194, 44127), (206, 44187), (209, 44199), (211, 44205),

Gene: Ganymede\_58 Start: 40365, Stop: 40919, Start Num: 72

Candidate Starts for Ganymede\_58:

(31, 40215), (Start: 72 @40365 has 116 MA's), (Start: 78 @40377 has 3 MA's), (Start: 80 @40383 has 3 MA's), (89, 40431), (100, 40479), (103, 40488), (115, 40527), (118, 40557), (132, 40608), (162, 40695), (170, 40719), (191, 40806), (196, 40824), (198, 40830),

Gene: Geraldini\_60 Start: 41031, Stop: 41585, Start Num: 72

Candidate Starts for Geraldini\_60:

(Start: 72 @41031 has 116 MA's), (Start: 78 @41043 has 3 MA's), (89, 41097), (100, 41145), (103, 41154), (115, 41193), (118, 41223), (132, 41274), (162, 41361), (170, 41385), (191, 41472), (196, 41490), (198, 41496),

Gene: Giles\_61 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Giles\_61:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Gilson\_82 Start: 59537, Stop: 60025, Start Num: 77

Candidate Starts for Gilson\_82:

(Start: 77 @59537 has 25 MA's), (102, 59642), (122, 59717), (126, 59732), (133, 59753), (136, 59762), (139, 59777), (171, 59849), (176, 59873), (178, 59882), (186, 59906), (197, 59948), (213, 60011), (216, 60020),

Gene: Gonephishing\_152 Start: 83062, Stop: 83598, Start Num: 73

Candidate Starts for Gonephishing\_152:

(Start: 52 @83005 has 4 MA's), (Start: 73 @83062 has 100 MA's), (Start: 80 @83080 has 3 MA's), (118, 83251), (120, 83263), (135, 83314), (138, 83329), (191, 83479), (197, 83500),

Gene: Gravaillia\_62 Start: 43967, Stop: 44521, Start Num: 69

Candidate Starts for Gravaillia\_62:

(Start: 69 @43967 has 16 MA's), (Start: 71 @43970 has 8 MA's), (79, 43985), (84, 44006), (96, 44069), (101, 44081), (105, 44093), (114, 44126), (127, 44195), (128, 44198), (139, 44237), (143, 44264), (148, 44282), (174, 44345), (175, 44348), (179, 44363), (194, 44408), (206, 44468), (209, 44480), (211, 44486),

Gene: Guacamole\_54 Start: 36889, Stop: 37476, Start Num: 73

Candidate Starts for Guacamole\_54:

(30, 36727), (34, 36775), (Start: 73 @36889 has 100 MA's), (123, 37090), (140, 37156), (145, 37186), (154, 37207), (171, 37240), (174, 37258), (196, 37354), (198, 37357), (199, 37363), (200, 37366), (202, 37387), (215, 37456),

Gene: Guanica15\_59 Start: 39488, Stop: 40054, Start Num: 72

Candidate Starts for Guanica15\_59:

(Start: 72 @39488 has 116 MA's), (Start: 78 @39500 has 3 MA's), (Start: 80 @39506 has 3 MA's), (113, 39644), (115, 39650), (132, 39731), (170, 39854), (191, 39941), (196, 39959), (198, 39965), (212, 40022),

Gene: HH92\_63 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for HH92\_63:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Hadrien\_63 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Hadrien\_63:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Hail\_61 Start: 43962, Stop: 44513, Start Num: 71

Candidate Starts for Hail\_61:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Halley\_160 Start: 84706, Stop: 85242, Start Num: 73

Candidate Starts for Halley\_160:

(Start: 73 @84706 has 100 MA's), (Start: 80 @84724 has 3 MA's), (81, 84727), (118, 84895), (120, 84907), (135, 84958), (138, 84973), (191, 85123), (215, 85216),

Gene: Hammy\_58 Start: 40576, Stop: 41130, Start Num: 73

Candidate Starts for Hammy\_58:

(Start: 73 @40576 has 100 MA's), (89, 40639), (100, 40687), (103, 40696), (106, 40702), (108, 40711), (120, 40777), (135, 40825), (164, 40912), (170, 40930), (191, 41017), (196, 41035), (205, 41062), (212, 41098),

Gene: Hannaconda\_152 Start: 85066, Stop: 85653, Start Num: 73

Candidate Starts for Hannaconda\_152:

(Start: 47 @84991 has 4 MA's), (Start: 52 @85009 has 4 MA's), (Start: 73 @85066 has 100 MA's), (83, 85093), (90, 85135), (104, 85189), (118, 85255), (136, 85318), (139, 85333), (163, 85417), (188, 85525), (191, 85534), (197, 85555),

Gene: HannahD\_61 Start: 40353, Stop: 41081, Start Num: 64

Candidate Starts for HannahD\_61:

(49, 40314), (Start: 64 @40353 has 9 MA's), (Start: 73 @40371 has 100 MA's), (102, 40485), (123, 40578), (124, 40584), (177, 40758), (205, 40878), (206, 40887), (207, 40890),

Gene: HedwigODU\_57 Start: 39985, Stop: 40539, Start Num: 72

Candidate Starts for HedwigODU\_57:

(Start: 72 @39985 has 116 MA's), (Start: 78 @39997 has 3 MA's), (Start: 80 @40003 has 3 MA's), (89, 40051), (100, 40099), (103, 40108), (115, 40147), (118, 40177), (121, 40192), (132, 40228), (162, 40315), (170, 40339), (173, 40363), (186, 40411), (191, 40426), (196, 40444),

Gene: Hilltopfarm\_56 Start: 41966, Stop: 42562, Start Num: 73

Candidate Starts for Hilltopfarm\_56:

(Start: 73 @41966 has 100 MA's), (Start: 80 @41984 has 3 MA's), (81, 41987), (83, 41993), (108, 42104), (118, 42158), (121, 42173), (132, 42209), (135, 42218), (136, 42221), (145, 42269), (146, 42272), (155, 42302), (173, 42368), (177, 42389), (218, 42536), (223, 42551),

Gene: Hitter\_57 Start: 36465, Stop: 37052, Start Num: 73

Candidate Starts for Hitter\_57:

(Start: 73 @36465 has 100 MA's), (123, 36666), (145, 36762), (174, 36834), (196, 36930), (198, 36933), (199, 36939), (200, 36942), (202, 36963),

Gene: HokkenD\_154 Start: 86274, Stop: 86867, Start Num: 52

Candidate Starts for HokkenD\_154:

(Start: 47 @86256 has 4 MA's), (Start: 52 @86274 has 4 MA's), (Start: 73 @86331 has 100 MA's), (Start: 80 @86349 has 3 MA's), (118, 86520), (120, 86532), (135, 86583), (138, 86598), (191, 86748), (196, 86766), (197, 86769),

Gene: Homura\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Homura\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: Hughesyang\_159 Start: 85284, Stop: 85820, Start Num: 73

Candidate Starts for Hughesyang\_159:

(Start: 73 @85284 has 100 MA's), (Start: 80 @85302 has 3 MA's), (81, 85305), (Start: 87 @85344 has 1 MA's), (89, 85347), (118, 85473), (120, 85485), (135, 85536), (138, 85551), (160, 85602), (177, 85659), (213, 85785), (215, 85794),

Gene: Hurricane\_57 Start: 40251, Stop: 40808, Start Num: 73

Candidate Starts for Hurricane\_57:

(48, 40182), (Start: 73 @40251 has 100 MA's), (Start: 78 @40263 has 3 MA's), (Start: 80 @40269 has 3 MA's), (89, 40314), (98, 40353), (99, 40356), (108, 40386), (115, 40410), (118, 40440), (167, 40599), (196, 40713), (210, 40764), (212, 40776),

Gene: Hyperbowlee\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Hyperbowlee\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Hyzer\_63 Start: 42350, Stop: 42940, Start Num: 72

Candidate Starts for Hyzer\_63:

(61, 42320), (68, 42344), (Start: 72 @42350 has 116 MA's), (123, 42554), (124, 42560), (145, 42650), (154, 42671), (174, 42722), (196, 42818), (198, 42821), (199, 42827), (202, 42851),

Gene: Illumine\_60 Start: 40744, Stop: 41316, Start Num: 72

Candidate Starts for Illumine\_60:

(Start: 72 @40744 has 116 MA's), (Start: 78 @40756 has 3 MA's), (Start: 80 @40762 has 3 MA's), (89, 40810), (100, 40858), (103, 40867), (113, 40900), (115, 40906), (132, 40987), (170, 41110), (191, 41197), (196, 41215), (219, 41305),

Gene: Inky\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Inky\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: JAWS\_57 Start: 39971, Stop: 40525, Start Num: 72

Candidate Starts for JAWS\_57:

(Start: 72 @39971 has 116 MA's), (Start: 78 @39983 has 3 MA's), (Start: 80 @39989 has 3 MA's), (89, 40037), (100, 40085), (103, 40094), (115, 40133), (118, 40163), (121, 40178), (132, 40214), (162, 40301), (170, 40325), (173, 40349), (186, 40397), (191, 40412), (196, 40430), (198, 40436), (212, 40493),

Gene: JF1\_62 Start: 40319, Stop: 40915, Start Num: 76

Candidate Starts for JF1\_62:

(Start: 76 @40319 has 19 MA's), (85, 40361), (103, 40439), (118, 40508), (120, 40520), (135, 40568), (163, 40658), (164, 40661), (170, 40688), (177, 40733), (191, 40775), (195, 40796), (196, 40799), (213, 40880),

Gene: Jada\_82 Start: 60050, Stop: 60538, Start Num: 77

Candidate Starts for Jada\_82:

(Start: 77 @60050 has 25 MA's), (102, 60155), (122, 60230), (126, 60245), (133, 60266), (136, 60275), (139, 60290), (171, 60362), (176, 60386), (178, 60395), (186, 60419), (197, 60461), (213, 60524), (216, 60533),

Gene: Jalammah\_60 Start: 39468, Stop: 40055, Start Num: 73

Candidate Starts for Jalammah\_60:

(30, 39306), (34, 39354), (Start: 73 @39468 has 100 MA's), (123, 39669), (145, 39765), (171, 39819), (174, 39837), (196, 39933), (198, 39936), (199, 39942), (200, 39945), (202, 39966), (215, 40035),

Gene: Jarvi\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Jarvi\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: JasperJr\_54 Start: 36889, Stop: 37476, Start Num: 73

Candidate Starts for JasperJr\_54:

(30, 36727), (34, 36775), (Start: 73 @36889 has 100 MA's), (123, 37090), (140, 37156), (145, 37186), (154, 37207), (171, 37240), (174, 37258), (196, 37354), (198, 37357), (199, 37363), (200, 37366), (202, 37387), (215, 37456),

Gene: Jayhawk\_58 Start: 39980, Stop: 40534, Start Num: 72

Candidate Starts for Jayhawk\_58:

(Start: 72 @39980 has 116 MA's), (Start: 78 @39992 has 3 MA's), (Start: 80 @39998 has 3 MA's), (89, 40046), (100, 40094), (103, 40103), (115, 40142), (118, 40172), (132, 40223), (162, 40310), (170, 40334), (191, 40421), (196, 40439), (198, 40445),

Gene: Jeckyll\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Jeckyll\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),



Gene: Joy99\_57 Start: 40033, Stop: 40587, Start Num: 72

Candidate Starts for Joy99\_57:

(31, 39886), (Start: 72 @40033 has 116 MA's), (Start: 78 @40045 has 3 MA's), (Start: 80 @40051 has 3 MA's), (89, 40099), (100, 40147), (103, 40156), (115, 40195), (118, 40225), (132, 40276), (162, 40363), (170, 40387), (191, 40474), (196, 40492), (198, 40498),

Gene: JuicyJay\_154 Start: 85903, Stop: 86514, Start Num: 47

Candidate Starts for JuicyJay\_154:

(Start: 47 @85903 has 4 MA's), (Start: 52 @85921 has 4 MA's), (Start: 73 @85978 has 100 MA's), (Start: 80 @85996 has 3 MA's), (118, 86167), (120, 86179), (135, 86230), (138, 86245), (191, 86395), (197, 86416),

Gene: Juliette\_64 Start: 40466, Stop: 41062, Start Num: 76

Candidate Starts for Juliette\_64:

(Start: 76 @40466 has 19 MA's), (85, 40508), (103, 40586), (118, 40655), (120, 40667), (135, 40715), (170, 40835), (177, 40880), (191, 40922), (195, 40943), (196, 40946), (213, 41027),

Gene: Kalah2\_151 Start: 84414, Stop: 84950, Start Num: 73

Candidate Starts for Kalah2\_151:

(Start: 73 @84414 has 100 MA's), (Start: 80 @84432 has 3 MA's), (81, 84435), (Start: 87 @84474 has 1 MA's), (89, 84477), (118, 84603), (120, 84615), (135, 84666), (138, 84681), (160, 84732), (177, 84789), (213, 84915), (215, 84924),

Gene: Karp\_79 Start: 60446, Stop: 60934, Start Num: 77

Candidate Starts for Karp\_79:

(Start: 77 @60446 has 25 MA's), (88, 60506), (118, 60617), (122, 60626), (129, 60650), (134, 60665), (139, 60686), (171, 60758), (176, 60782), (178, 60791), (186, 60815), (197, 60857), (213, 60920), (216, 60929),

Gene: KashFlow\_157 Start: 84879, Stop: 85466, Start Num: 73

Candidate Starts for KashFlow\_157:

(Start: 47 @84804 has 4 MA's), (Start: 52 @84822 has 4 MA's), (Start: 73 @84879 has 100 MA's), (83, 84906), (90, 84948), (104, 85002), (118, 85068), (136, 85131), (139, 85146), (163, 85230), (188, 85338), (191, 85347), (196, 85365), (197, 85368),

Gene: Kenrey\_83 Start: 59731, Stop: 60219, Start Num: 77

Candidate Starts for Kenrey\_83:

(Start: 77 @59731 has 25 MA's), (107, 59857), (122, 59911), (133, 59947), (136, 59956), (139, 59971), (171, 60043), (176, 60067), (178, 60076), (180, 60082), (186, 60100), (189, 60109), (197, 60142), (208, 60184), (213, 60205), (216, 60214),

Gene: Keshu\_59 Start: 40349, Stop: 40906, Start Num: 73

Candidate Starts for Keshu\_59:

(48, 40280), (Start: 73 @40349 has 100 MA's), (Start: 80 @40367 has 3 MA's), (89, 40412), (98, 40451), (100, 40460), (108, 40484), (115, 40508), (167, 40697), (170, 40706), (196, 40811),

Gene: KiSi\_61 Start: 40705, Stop: 41262, Start Num: 72

Candidate Starts for KiSi\_61:

(59, 40675), (Start: 72 @40705 has 116 MA's), (Start: 78 @40717 has 3 MA's), (90, 40774), (98, 40807), (108, 40840), (120, 40906), (132, 40945), (152, 41023), (170, 41062), (191, 41149), (196, 41167), (206, 41203),

Gene: Kinbote\_63 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Kinbote\_63:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Klein\_158 Start: 82774, Stop: 83310, Start Num: 73

Candidate Starts for Klein\_158:

(Start: 73 @82774 has 100 MA's), (Start: 80 @82792 has 3 MA's), (81, 82795), (Start: 87 @82834 has 1 MA's), (89, 82837), (118, 82963), (120, 82975), (135, 83026), (138, 83041), (160, 83092), (177, 83149), (213, 83275), (215, 83284),

Gene: Kraw\_63 Start: 40154, Stop: 40750, Start Num: 76

Candidate Starts for Kraw\_63:

(Start: 76 @40154 has 19 MA's), (85, 40196), (100, 40265), (103, 40274), (118, 40343), (120, 40355), (135, 40403), (170, 40523), (177, 40568), (191, 40610), (195, 40631), (196, 40634), (213, 40715),

Gene: Krueger\_63 Start: 40459, Stop: 41013, Start Num: 73

Candidate Starts for Krueger\_63:

(Start: 73 @40459 has 100 MA's), (Start: 78 @40471 has 3 MA's), (Start: 80 @40477 has 3 MA's), (100, 40573), (103, 40582), (108, 40597), (115, 40621), (132, 40702), (162, 40789), (170, 40813), (191, 40900), (205, 40945), (210, 40969), (212, 40981),

Gene: LastHope\_60 Start: 39135, Stop: 39701, Start Num: 72

Candidate Starts for LastHope\_60:

(57, 39096), (Start: 72 @39135 has 116 MA's), (Start: 78 @39147 has 3 MA's), (Start: 80 @39153 has 3 MA's), (Start: 87 @39195 has 1 MA's), (98, 39240), (100, 39249), (113, 39291), (115, 39297), (132, 39378), (170, 39501), (191, 39588), (196, 39606), (198, 39612), (212, 39669),

Gene: LaterM\_58 Start: 40866, Stop: 41420, Start Num: 72

Candidate Starts for LaterM\_58:

(Start: 72 @40866 has 116 MA's), (Start: 78 @40878 has 3 MA's), (Start: 80 @40884 has 3 MA's), (89, 40932), (100, 40980), (103, 40989), (115, 41028), (118, 41058), (121, 41073), (132, 41109), (162, 41196), (170, 41220), (191, 41307), (196, 41325), (212, 41388),

Gene: LeMond\_61 Start: 40686, Stop: 41243, Start Num: 72

Candidate Starts for LeMond\_61:

(59, 40656), (Start: 72 @40686 has 116 MA's), (Start: 78 @40698 has 3 MA's), (90, 40755), (98, 40788), (108, 40821), (120, 40887), (132, 40926), (152, 41004), (170, 41043), (191, 41130), (196, 41148), (206, 41184),

Gene: LilHazelnut\_64 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for LilHazelnut\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: LilPharaoh\_49 Start: 37775, Stop: 38326, Start Num: 74

Candidate Starts for LilPharaoh\_49:

(22, 37541), (Start: 74 @37775 has 7 MA's), (Start: 80 @37796 has 3 MA's), (Start: 87 @37838 has 1 MA's), (90, 37850), (103, 37901), (115, 37940), (118, 37970), (132, 38021), (170, 38126), (191, 38213), (196, 38231), (198, 38237), (215, 38306),

Gene: Limpid\_78 Start: 59407, Stop: 59898, Start Num: 77

Candidate Starts for Limpid\_78:

(65, 59383), (Start: 77 @59407 has 25 MA's), (88, 59467), (139, 59647), (143, 59674), (176, 59743), (186, 59776), (208, 59860), (213, 59881),

Gene: LindNT\_56 Start: 40200, Stop: 40742, Start Num: 78

Candidate Starts for LindNT\_56:

(Start: 72 @40188 has 116 MA's), (Start: 78 @40200 has 3 MA's), (Start: 80 @40206 has 3 MA's), (89, 40254), (100, 40302), (103, 40311), (115, 40350), (118, 40380), (121, 40395), (132, 40431), (162, 40518), (170, 40542), (186, 40614), (191, 40629), (196, 40647), (198, 40653), (212, 40710),

Gene: LittleE\_160 Start: 84645, Stop: 85238, Start Num: 52

Candidate Starts for LittleE\_160:

(Start: 52 @84645 has 4 MA's), (Start: 73 @84702 has 100 MA's), (Start: 80 @84720 has 3 MA's), (118, 84891), (120, 84903), (135, 84954), (138, 84969), (191, 85119), (197, 85140),

Gene: Llorens\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Llorens\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: LonelyBoi\_53 Start: 40470, Stop: 41057, Start Num: 72

Candidate Starts for LonelyBoi\_53:

(70, 40467), (Start: 72 @40470 has 116 MA's), (102, 40578), (123, 40674), (140, 40740), (145, 40770), (154, 40791), (174, 40842), (196, 40938), (198, 40941), (199, 40947), (214, 41037),

Gene: Lucky2013\_150 Start: 79771, Stop: 80307, Start Num: 73

Candidate Starts for Lucky2013\_150:

(Start: 73 @79771 has 100 MA's), (Start: 80 @79789 has 3 MA's), (81, 79792), (Start: 87 @79831 has 1 MA's), (89, 79834), (118, 79960), (120, 79972), (135, 80023), (138, 80038), (160, 80089), (177, 80146), (191, 80188), (197, 80209),

Gene: Luke\_63 Start: 43917, Stop: 44468, Start Num: 71

Candidate Starts for Luke\_63:

(Start: 69 @43914 has 16 MA's), (Start: 71 @43917 has 8 MA's), (79, 43932), (96, 44016), (101, 44028), (105, 44040), (114, 44073), (127, 44142), (128, 44145), (139, 44184), (143, 44211), (148, 44229), (161, 44247), (174, 44292), (175, 44295), (179, 44310), (194, 44355), (206, 44415), (211, 44433),

Gene: Luna22\_61 Start: 43946, Stop: 44497, Start Num: 71

Candidate Starts for Luna22\_61:

(Start: 69 @43943 has 16 MA's), (Start: 71 @43946 has 8 MA's), (79, 43961), (96, 44045), (101, 44057), (105, 44069), (114, 44102), (127, 44171), (128, 44174), (139, 44213), (143, 44240), (148, 44258), (161, 44276), (174, 44321), (175, 44324), (179, 44339), (194, 44384), (206, 44444), (211, 44462),

Gene: Lunahalos\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Lunahalos\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: Lysidious\_58 Start: 38835, Stop: 39422, Start Num: 73

Candidate Starts for Lysidious\_58:

(30, 38673), (34, 38721), (Start: 73 @38835 has 100 MA's), (88, 38892), (123, 39036), (140, 39102), (145, 39132), (174, 39204), (196, 39300), (198, 39303), (199, 39309), (202, 39333), (215, 39402),

Gene: MacKat\_52 Start: 35466, Stop: 36002, Start Num: 80

Candidate Starts for MacKat\_52:

(Start: 72 @35448 has 116 MA's), (Start: 78 @35460 has 3 MA's), (Start: 80 @35466 has 3 MA's), (89, 35514), (100, 35562), (103, 35571), (115, 35610), (118, 35640), (121, 35655), (132, 35691), (162, 35778), (170, 35802), (173, 35826), (186, 35874), (191, 35889), (196, 35907), (212, 35970),

Gene: MacnCheese\_59 Start: 40831, Stop: 41388, Start Num: 73

Candidate Starts for MacnCheese\_59:

(Start: 73 @40831 has 100 MA's), (Start: 78 @40843 has 3 MA's), (Start: 80 @40849 has 3 MA's), (85, 40873), (89, 40894), (98, 40933), (108, 40966), (115, 40990), (124, 41041), (149, 41146), (170, 41188), (196, 41293),

Gene: Madeline\_55 Start: 39843, Stop: 40427, Start Num: 72

Candidate Starts for Madeline\_55:

(61, 39813), (68, 39837), (Start: 72 @39843 has 116 MA's), (123, 40044), (145, 40140), (173, 40203), (190, 40275), (196, 40308), (198, 40311), (202, 40341),

Gene: MagicMan\_61 Start: 41953, Stop: 42714, Start Num: 64

Candidate Starts for MagicMan\_61:

(Start: 64 @41953 has 9 MA's), (Start: 73 @41971 has 100 MA's), (102, 42085), (123, 42178), (124, 42184), (177, 42358), (205, 42478), (206, 42487), (207, 42490),

Gene: Malibo\_57 Start: 39555, Stop: 40142, Start Num: 73

Candidate Starts for Malibo\_57:

(34, 39441), (Start: 73 @39555 has 100 MA's), (102, 39663), (123, 39759), (174, 39927), (182, 39963), (186, 39984), (190, 39990), (198, 40026), (199, 40032), (202, 40056),

Gene: Malthus\_63 Start: 40154, Stop: 40750, Start Num: 76

Candidate Starts for Malthus\_63:

(Start: 76 @40154 has 19 MA's), (85, 40196), (100, 40265), (103, 40274), (118, 40343), (120, 40355), (135, 40403), (170, 40523), (177, 40568), (191, 40610), (195, 40631), (196, 40634), (213, 40715),

Gene: Marcoliusprime\_60 Start: 42031, Stop: 42564, Start Num: 73

Candidate Starts for Marcoliusprime\_60:

(55, 41980), (Start: 73 @42031 has 100 MA's), (79, 42046), (89, 42094), (100, 42142), (103, 42151), (113, 42184), (115, 42190), (117, 42196), (135, 42280), (150, 42346),

Gene: Maridalia\_58 Start: 39189, Stop: 39773, Start Num: 72

Candidate Starts for Maridalia\_58:

(23, 38985), (61, 39159), (68, 39183), (Start: 72 @39189 has 116 MA's), (123, 39390), (140, 39456), (145, 39486), (154, 39507), (174, 39558), (196, 39654), (198, 39657), (199, 39663), (214, 39753),

Gene: MarkPhew\_60 Start: 40383, Stop: 40940, Start Num: 72

Candidate Starts for MarkPhew\_60:

(Start: 72 @40383 has 116 MA's), (Start: 78 @40395 has 3 MA's), (Start: 87 @40440 has 1 MA's), (90, 40452), (98, 40485), (103, 40503), (108, 40518), (120, 40584), (132, 40623), (170, 40740), (180, 40794), (191, 40827),

Gene: Marshawn\_58 Start: 40229, Stop: 40783, Start Num: 72

Candidate Starts for Marshawn\_58:

(Start: 72 @40229 has 116 MA's), (Start: 78 @40241 has 3 MA's), (Start: 87 @40286 has 1 MA's), (90, 40298), (100, 40340), (103, 40349), (108, 40364), (117, 40394), (118, 40418), (120, 40430), (127, 40454), (132, 40469), (162, 40559), (170, 40583), (191, 40670), (196, 40688), (206, 40724),

Gene: Marteena\_53 Start: 38610, Stop: 39200, Start Num: 72

Candidate Starts for Marteena\_53:

(61, 38580), (68, 38604), (Start: 72 @38610 has 116 MA's), (123, 38814), (145, 38910), (154, 38931), (174, 38982), (196, 39078), (198, 39081), (199, 39087), (200, 39090), (202, 39111), (215, 39180),

Gene: MaryV\_122 Start: 63041, Stop: 63556, Start Num: 77

Candidate Starts for MaryV\_122:

(Start: 77 @63041 has 25 MA's), (Start: 80 @63056 has 3 MA's), (85, 63080), (86, 63086), (90, 63107), (92, 63125), (97, 63137), (98, 63140), (115, 63197), (120, 63239), (135, 63287), (136, 63290), (145, 63338), (146, 63341), (169, 63359), (178, 63410), (191, 63449), (194, 63461), (206, 63506),

Gene: McMater\_60 Start: 40625, Stop: 41188, Start Num: 72

Candidate Starts for McMater\_60:

(Start: 72 @40625 has 116 MA's), (90, 40700), (100, 40742), (103, 40751), (113, 40784), (115, 40790), (132, 40871), (170, 40988), (191, 41075), (196, 41093), (206, 41129), (215, 41168),

Gene: Mdavu\_50 Start: 38057, Stop: 38587, Start Num: 80

Candidate Starts for Mdavu\_50:

(22, 37802), (Start: 74 @38036 has 7 MA's), (Start: 80 @38057 has 3 MA's), (Start: 87 @38099 has 1 MA's), (90, 38111), (103, 38162), (115, 38201), (118, 38231), (132, 38282), (170, 38387), (191, 38474), (196, 38492), (198, 38498), (215, 38567),

Gene: MeaningOfLife\_58 Start: 40859, Stop: 41413, Start Num: 72

Candidate Starts for MeaningOfLife\_58:

(Start: 72 @40859 has 116 MA's), (Start: 78 @40871 has 3 MA's), (89, 40925), (100, 40973), (103, 40982), (115, 41021), (118, 41051), (132, 41102), (162, 41189), (170, 41213), (191, 41300), (196, 41318), (198, 41324), (213, 41384),

Gene: MeganTheeKilla\_80 Start: 58898, Stop: 59386, Start Num: 77

Candidate Starts for MeganTheeKilla\_80:

(Start: 77 @58898 has 25 MA's), (102, 59003), (122, 59078), (126, 59093), (133, 59114), (136, 59123), (139, 59138), (171, 59210), (176, 59234), (178, 59243), (186, 59267), (197, 59309), (213, 59372), (216, 59381),

Gene: Megsy\_59 Start: 40253, Stop: 40807, Start Num: 72

Candidate Starts for Megsy\_59:

(Start: 72 @40253 has 116 MA's), (Start: 78 @40265 has 3 MA's), (Start: 80 @40271 has 3 MA's), (89, 40319), (100, 40367), (103, 40376), (115, 40415), (118, 40445), (121, 40460), (132, 40496), (162, 40583), (170, 40607), (191, 40694), (196, 40712), (198, 40718),

Gene: Mellie\_55 Start: 36842, Stop: 37432, Start Num: 73

Candidate Starts for Mellie\_55:

(30, 36680), (34, 36728), (Start: 73 @36842 has 100 MA's), (123, 37046), (140, 37112), (145, 37142), (154, 37163), (174, 37214), (196, 37310), (198, 37313), (199, 37319), (200, 37322), (202, 37343),

Gene: MiaZeal\_157 Start: 80918, Stop: 81454, Start Num: 73

Candidate Starts for MiaZeal\_157:

(Start: 73 @80918 has 100 MA's), (Start: 80 @80936 has 3 MA's), (81, 80939), (Start: 87 @80978 has 1 MA's), (89, 80981), (118, 81107), (120, 81119), (135, 81170), (138, 81185), (160, 81236), (177, 81293), (191, 81335), (197, 81356),

Gene: Milly\_60 Start: 42004, Stop: 42537, Start Num: 73

Candidate Starts for Milly\_60:

(55, 41953), (Start: 73 @42004 has 100 MA's), (79, 42019), (89, 42067), (100, 42115), (103, 42124), (113, 42157), (115, 42163), (117, 42169), (135, 42253), (150, 42319),

Gene: Minerva\_158 Start: 84013, Stop: 84549, Start Num: 73

Candidate Starts for Minerva\_158:

(Start: 73 @84013 has 100 MA's), (Start: 80 @84031 has 3 MA's), (81, 84034), (118, 84202), (120, 84214), (135, 84265), (138, 84280), (191, 84430), (215, 84523),

Gene: MintFen\_57 Start: 37276, Stop: 37863, Start Num: 73

Candidate Starts for MintFen\_57:

(Start: 73 @37276 has 100 MA's), (123, 37477), (145, 37573), (174, 37645), (196, 37741), (198, 37744), (199, 37750), (200, 37753), (202, 37774),

Gene: MissRona\_58 Start: 39150, Stop: 39737, Start Num: 73

Candidate Starts for MissRona\_58:

(30, 38988), (34, 39036), (Start: 73 @39150 has 100 MA's), (123, 39351), (140, 39417), (145, 39447), (154, 39468), (174, 39519), (196, 39615), (198, 39618), (199, 39624), (200, 39627), (202, 39648),

Gene: Mitti\_62 Start: 40333, Stop: 40929, Start Num: 76

Candidate Starts for Mitti\_62:

(Start: 76 @40333 has 19 MA's), (85, 40375), (103, 40453), (118, 40522), (120, 40534), (135, 40582), (170, 40702), (177, 40747), (191, 40789), (195, 40810), (196, 40813), (213, 40894),

Gene: Moab\_81 Start: 60787, Stop: 61275, Start Num: 77

Candidate Starts for Moab\_81:

(Start: 77 @60787 has 25 MA's), (88, 60847), (105, 60904), (122, 60967), (139, 61027), (140, 61030), (171, 61099), (176, 61123), (178, 61132), (186, 61156), (197, 61198), (213, 61261), (216, 61270),

Gene: Mufasa\_60 Start: 41594, Stop: 42127, Start Num: 73

Candidate Starts for Mufasa\_60:

(Start: 73 @41594 has 100 MA's), (79, 41609), (89, 41657), (100, 41705), (103, 41714), (113, 41747), (115, 41753), (117, 41759), (135, 41843), (150, 41909),

Gene: Muntaha\_74 Start: 59541, Stop: 60032, Start Num: 76

Candidate Starts for Muntaha\_74:

(Start: 76 @59541 has 19 MA's), (81, 59562), (88, 59604), (105, 59661), (107, 59670), (136, 59769), (139, 59784), (176, 59880), (184, 59904), (186, 59913), (191, 59931), (193, 59943), (216, 60027),

Gene: Murucutumbu\_58 Start: 40959, Stop: 41513, Start Num: 72

Candidate Starts for Murucutumbu\_58:

(Start: 72 @40959 has 116 MA's), (Start: 78 @40971 has 3 MA's), (Start: 80 @40977 has 3 MA's), (89, 41025), (100, 41073), (103, 41082), (115, 41121), (118, 41151), (162, 41289), (170, 41313), (186, 41385), (191, 41400), (196, 41418), (198, 41424), (212, 41481),

Gene: Mynx\_58 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Mynx\_58:

(Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (121, 40508), (132, 40544), (162, 40631), (170, 40655), (173, 40679), (186, 40727), (191, 40742), (196, 40760), (198, 40766), (212, 40823),

Gene: Nebkiss\_120 Start: 65950, Stop: 66495, Start Num: 73

Candidate Starts for Nebkiss\_120:

(Start: 73 @65950 has 100 MA's), (89, 66013), (115, 66109), (118, 66139), (120, 66151), (132, 66193), (139, 66220), (172, 66313), (176, 66334), (188, 66367), (191, 66376), (196, 66394), (205, 66421), (213, 66460), (221, 66487),

Gene: Nibb\_59 Start: 40078, Stop: 40635, Start Num: 72

Candidate Starts for Nibb\_59:

(Start: 72 @40078 has 116 MA's), (Start: 78 @40090 has 3 MA's), (90, 40147), (98, 40180), (103, 40198), (108, 40213), (120, 40279), (132, 40318), (136, 40330), (170, 40435), (191, 40522),

Gene: NihilNomen\_161 Start: 84104, Stop: 84640, Start Num: 73

Candidate Starts for NihilNomen\_161:

(Start: 47 @84029 has 4 MA's), (Start: 52 @84047 has 4 MA's), (Start: 73 @84104 has 100 MA's), (Start: 80 @84122 has 3 MA's), (118, 84293), (120, 84305), (135, 84356), (138, 84371), (191, 84521), (197, 84542),

Gene: Nikao\_52 Start: 40681, Stop: 41211, Start Num: 80

Candidate Starts for Nikao\_52:

(22, 40426), (Start: 74 @40660 has 7 MA's), (Start: 80 @40681 has 3 MA's), (Start: 87 @40723 has 1 MA's), (90, 40735), (103, 40786), (115, 40825), (118, 40855), (132, 40906), (170, 41011), (191, 41098), (196, 41116), (198, 41122), (215, 41191),

Gene: Niklas\_60 Start: 40686, Stop: 41249, Start Num: 72

Candidate Starts for Niklas\_60:

(Start: 72 @40686 has 116 MA's), (90, 40761), (100, 40803), (103, 40812), (113, 40845), (115, 40851), (132, 40932), (170, 41049), (191, 41136), (196, 41154), (206, 41190), (215, 41229),

Gene: November\_58 Start: 40462, Stop: 41016, Start Num: 73

Candidate Starts for November\_58:

(Start: 73 @40462 has 100 MA's), (89, 40525), (98, 40564), (100, 40573), (103, 40582), (106, 40588), (108, 40597), (120, 40663), (132, 40702), (135, 40711), (162, 40792), (170, 40816), (191, 40903), (196, 40921), (205, 40948), (212, 40984),

Gene: Nutello\_49 Start: 38047, Stop: 38598, Start Num: 74

Candidate Starts for Nutello\_49:

(22, 37813), (Start: 74 @38047 has 7 MA's), (Start: 80 @38068 has 3 MA's), (Start: 87 @38110 has 1 MA's), (90, 38122), (103, 38173), (115, 38212), (118, 38242), (132, 38293), (170, 38398), (191, 38485), (196, 38503), (198, 38509), (215, 38578),

Gene: OBUpride\_64 Start: 43955, Stop: 44509, Start Num: 69

Candidate Starts for OBUpride\_64:

(Start: 69 @43955 has 16 MA's), (Start: 71 @43958 has 8 MA's), (79, 43973), (84, 43994), (96, 44057), (101, 44069), (105, 44081), (114, 44114), (127, 44183), (128, 44186), (139, 44225), (143, 44252), (148, 44270), (174, 44333), (175, 44336), (179, 44351), (194, 44396), (206, 44456), (209, 44468), (211, 44474),

Gene: Odette\_164 Start: 87031, Stop: 87573, Start Num: 69

Candidate Starts for Odette\_164:

(66, 87025), (Start: 69 @87031 has 16 MA's), (Start: 73 @87037 has 100 MA's), (Start: 78 @87049 has 3 MA's), (79, 87052), (81, 87058), (89, 87100), (108, 87172), (118, 87226), (120, 87238), (135, 87289), (138, 87304), (160, 87355), (191, 87454), (197, 87475),

Gene: Omega\_164 Start: 85807, Stop: 86343, Start Num: 73

Candidate Starts for Omega\_164:

(Start: 73 @85807 has 100 MA's), (Start: 80 @85825 has 3 MA's), (81, 85828), (Start: 87 @85867 has 1 MA's), (89, 85870), (118, 85996), (120, 86008), (135, 86059), (138, 86074), (160, 86125), (177, 86182), (215, 86317),

Gene: OmniCritical\_61 Start: 40142, Stop: 40819, Start Num: 76

Candidate Starts for OmniCritical\_61:

(Start: 76 @40142 has 19 MA's), (85, 40184), (103, 40262), (118, 40331), (120, 40343), (135, 40391), (142, 40427), (158, 40517), (159, 40526), (170, 40577), (177, 40622), (185, 40646), (191, 40664), (195, 40685), (196, 40688), (199, 40700), (200, 40703), (213, 40784),

Gene: Opie\_64 Start: 42071, Stop: 42832, Start Num: 64

Candidate Starts for Opie\_64:

(35, 41987), (49, 42032), (Start: 64 @42071 has 9 MA's), (Start: 73 @42089 has 100 MA's), (102, 42203), (123, 42296), (124, 42302), (177, 42476), (205, 42596), (206, 42605), (207, 42608),

Gene: Optimus\_151 Start: 83303, Stop: 83839, Start Num: 73

Candidate Starts for Optimus\_151:

(Start: 73 @83303 has 100 MA's), (Start: 80 @83321 has 3 MA's), (81, 83324), (Start: 87 @83363 has 1 MA's), (89, 83366), (118, 83492), (120, 83504), (135, 83555), (138, 83570), (160, 83621), (177, 83678), (213, 83804), (215, 83813),

Gene: Oregano\_55 Start: 36424, Stop: 37011, Start Num: 72

Candidate Starts for Oregano\_55:

(25, 36247), (29, 36268), (68, 36418), (Start: 72 @36424 has 116 MA's), (102, 36532), (123, 36628), (124, 36634), (145, 36724), (190, 36862), (196, 36895), (198, 36898), (199, 36904), (202, 36928),

Gene: Oscar\_61 Start: 40591, Stop: 41148, Start Num: 72

Candidate Starts for Oscar\_61:

(39, 40498), (59, 40561), (Start: 72 @40591 has 116 MA's), (Start: 78 @40603 has 3 MA's), (90, 40660), (98, 40693), (108, 40726), (117, 40756), (120, 40792), (132, 40831), (152, 40909), (170, 40948), (191, 41035), (196, 41053), (206, 41089),

Gene: Padfoot\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Padfoot\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Padpat\_59 Start: 39982, Stop: 40536, Start Num: 72

Candidate Starts for Padpat\_59:

(Start: 72 @39982 has 116 MA's), (Start: 78 @39994 has 3 MA's), (Start: 80 @40000 has 3 MA's), (89, 40048), (100, 40096), (103, 40105), (115, 40144), (118, 40174), (132, 40225), (162, 40312), (170, 40336), (191, 40423), (198, 40447),

Gene: Patelgo\_81 Start: 60950, Stop: 61438, Start Num: 77

Candidate Starts for Patelgo\_81:



(Start: 77 @60950 has 25 MA's), (88, 61010), (105, 61067), (122, 61130), (139, 61190), (140, 61193), (171, 61262), (176, 61286), (178, 61295), (186, 61319), (197, 61361), (213, 61424), (216, 61433),

Gene: Peanam\_60 Start: 40644, Stop: 41207, Start Num: 72

Candidate Starts for Peanam\_60:

(Start: 72 @40644 has 116 MA's), (90, 40719), (100, 40761), (103, 40770), (113, 40803), (115, 40809), (132, 40890), (170, 41007), (191, 41094), (196, 41112), (206, 41148), (215, 41187),

Gene: Peel\_57 Start: 40106, Stop: 40660, Start Num: 72

Candidate Starts for Peel\_57:

(31, 39959), (Start: 72 @40106 has 116 MA's), (Start: 78 @40118 has 3 MA's), (Start: 80 @40124 has 3 MA's), (89, 40172), (100, 40220), (103, 40229), (115, 40268), (118, 40298), (132, 40349), (162, 40436), (170, 40460), (191, 40547), (196, 40565), (198, 40571),

Gene: Petra\_53 Start: 35617, Stop: 36207, Start Num: 73

Candidate Starts for Petra\_53:

(30, 35455), (34, 35503), (Start: 73 @35617 has 100 MA's), (123, 35821), (140, 35887), (145, 35917), (154, 35938), (167, 35947), (171, 35971), (174, 35989), (196, 36085), (198, 36088), (199, 36094), (200, 36097), (202, 36118),

Gene: Pharb\_56 Start: 39453, Stop: 40010, Start Num: 73

Candidate Starts for Pharb\_56:

(Start: 73 @39453 has 100 MA's), (Start: 80 @39471 has 3 MA's), (89, 39516), (98, 39555), (100, 39564), (108, 39588), (115, 39612), (162, 39783), (170, 39810), (196, 39915),

Gene: PhelpsODU\_58 Start: 39396, Stop: 39959, Start Num: 72

Candidate Starts for PhelpsODU\_58:

(46, 39327), (Start: 72 @39396 has 116 MA's), (Start: 78 @39408 has 3 MA's), (Start: 80 @39414 has 3 MA's), (100, 39510), (108, 39534), (115, 39558), (132, 39639), (162, 39729), (170, 39759), (191, 39846), (196, 39864), (212, 39927),

Gene: Phoebus\_160 Start: 87716, Stop: 88327, Start Num: 47

Candidate Starts for Phoebus\_160:

(Start: 47 @87716 has 4 MA's), (Start: 52 @87734 has 4 MA's), (Start: 73 @87791 has 100 MA's), (Start: 80 @87809 has 3 MA's), (118, 87980), (120, 87992), (135, 88043), (138, 88058), (191, 88208), (197, 88229),

Gene: Phrank\_60 Start: 39457, Stop: 40020, Start Num: 72

Candidate Starts for Phrank\_60:

(Start: 72 @39457 has 116 MA's), (Start: 78 @39469 has 3 MA's), (Start: 80 @39475 has 3 MA's), (100, 39571), (115, 39619), (132, 39700), (162, 39790), (170, 39820), (191, 39907), (196, 39925), (212, 39988),

Gene: Phredrick\_81 Start: 58811, Stop: 59299, Start Num: 77

Candidate Starts for Phredrick\_81:

(Start: 77 @58811 has 25 MA's), (107, 58937), (122, 58991), (133, 59027), (136, 59036), (139, 59051), (171, 59123), (176, 59147), (178, 59156), (180, 59162), (186, 59180), (189, 59189), (197, 59222), (208, 59264), (213, 59285), (216, 59294),

Gene: PhriskyACE\_51 Start: 36416, Stop: 36979, Start Num: 72

Candidate Starts for PhriskyACE\_51:

(23, 36212), (27, 36227), (68, 36410), (Start: 72 @36416 has 116 MA's), (102, 36524), (119, 36608), (123, 36620), (124, 36626), (145, 36716), (178, 36803), (190, 36830), (196, 36863), (198, 36866),

(199, 36872), (202, 36896),

Gene: Piatt\_57 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for Piatt\_57:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Pipp\_59 Start: 37969, Stop: 38559, Start Num: 73

Candidate Starts for Pipp\_59:

(30, 37807), (34, 37855), (Start: 73 @37969 has 100 MA's), (123, 38173), (145, 38269), (154, 38290), (171, 38323), (174, 38341), (196, 38437), (198, 38440), (199, 38446), (200, 38449), (202, 38470),

Gene: Pixie\_56 Start: 39789, Stop: 40346, Start Num: 73

Candidate Starts for Pixie\_56:

(48, 39720), (Start: 73 @39789 has 100 MA's), (Start: 78 @39801 has 3 MA's), (Start: 80 @39807 has 3 MA's), (89, 39852), (98, 39891), (99, 39894), (108, 39924), (115, 39948), (118, 39978), (167, 40137), (170, 40146), (196, 40251), (210, 40302), (212, 40314),

Gene: Pokerus\_56 Start: 40031, Stop: 40585, Start Num: 72

Candidate Starts for Pokerus\_56:

(Start: 72 @40031 has 116 MA's), (Start: 78 @40043 has 3 MA's), (89, 40097), (100, 40145), (103, 40154), (115, 40193), (118, 40223), (132, 40274), (162, 40361), (170, 40385), (191, 40472), (196, 40490), (198, 40496),

Gene: Pollux\_57 Start: 40516, Stop: 41088, Start Num: 72

Candidate Starts for Pollux\_57:

(61, 40486), (68, 40510), (Start: 72 @40516 has 116 MA's), (102, 40624), (123, 40720),

Gene: Porcelain\_154 Start: 80717, Stop: 81253, Start Num: 73

Candidate Starts for Porcelain\_154:

(Start: 73 @80717 has 100 MA's), (Start: 80 @80735 has 3 MA's), (81, 80738), (Start: 87 @80777 has 1 MA's), (89, 80780), (118, 80906), (120, 80918), (135, 80969), (138, 80984), (160, 81035), (177, 81092), (191, 81134), (197, 81155),

Gene: Pound\_151 Start: 82794, Stop: 83378, Start Num: 73

Candidate Starts for Pound\_151:

(Start: 47 @82719 has 4 MA's), (Start: 52 @82737 has 4 MA's), (Start: 73 @82794 has 100 MA's), (83, 82821), (90, 82863), (104, 82917), (118, 82983), (136, 83046), (139, 83061), (163, 83145), (188, 83253), (191, 83262), (196, 83280),

Gene: Powerball\_52 Start: 36542, Stop: 37105, Start Num: 72

Candidate Starts for Powerball\_52:

(23, 36338), (27, 36353), (68, 36536), (Start: 72 @36542 has 116 MA's), (102, 36650), (119, 36734), (123, 36746), (124, 36752), (145, 36842), (178, 36929), (190, 36956), (196, 36989), (198, 36992), (199, 36998), (202, 37022),

Gene: Prithvi\_58 Start: 40200, Stop: 40742, Start Num: 78

Candidate Starts for Prithvi\_58:

(Start: 72 @40188 has 116 MA's), (Start: 78 @40200 has 3 MA's), (Start: 80 @40206 has 3 MA's), (89, 40254), (100, 40302), (103, 40311), (115, 40350), (118, 40380), (121, 40395), (132, 40431), (162, 40518), (170, 40542), (186, 40614), (191, 40629), (196, 40647), (198, 40653), (212, 40710),

Gene: QuincyRose\_56 Start: 40365, Stop: 40919, Start Num: 72

Candidate Starts for QuincyRose\_56:

(31, 40215), (Start: 72 @40365 has 116 MA's), (Start: 78 @40377 has 3 MA's), (Start: 80 @40383 has 3 MA's), (89, 40431), (100, 40479), (103, 40488), (115, 40527), (118, 40557), (132, 40608), (162, 40695), (170, 40719), (191, 40806), (196, 40824), (198, 40830),

Gene: Ramen\_58 Start: 39987, Stop: 40541, Start Num: 72

Candidate Starts for Ramen\_58:

(Start: 72 @39987 has 116 MA's), (Start: 78 @39999 has 3 MA's), (Start: 80 @40005 has 3 MA's), (89, 40053), (100, 40101), (103, 40110), (115, 40149), (118, 40179), (121, 40194), (132, 40230), (162, 40317), (170, 40341), (173, 40365), (186, 40413), (191, 40428), (196, 40446),

Gene: Rapunzel97\_58 Start: 39980, Stop: 40534, Start Num: 72

Candidate Starts for Rapunzel97\_58:

(Start: 72 @39980 has 116 MA's), (Start: 78 @39992 has 3 MA's), (Start: 80 @39998 has 3 MA's), (89, 40046), (100, 40094), (103, 40103), (115, 40142), (118, 40172), (132, 40223), (162, 40310), (170, 40334), (191, 40421), (196, 40439), (198, 40445),

Gene: Redno2\_153 Start: 81847, Stop: 82440, Start Num: 52

Candidate Starts for Redno2\_153:

(Start: 47 @81829 has 4 MA's), (Start: 52 @81847 has 4 MA's), (Start: 73 @81904 has 100 MA's), (Start: 80 @81922 has 3 MA's), (118, 82093), (120, 82105), (135, 82156), (138, 82171), (191, 82321), (197, 82342),

Gene: Rem711\_52 Start: 36120, Stop: 36674, Start Num: 71

Candidate Starts for Rem711\_52:

(50, 36066), (Start: 64 @36102 has 9 MA's), (65, 36108), (Start: 71 @36120 has 8 MA's), (111, 36267), (138, 36393), (143, 36423), (168, 36462), (205, 36615), (206, 36624),

Gene: Richo\_60 Start: 40625, Stop: 41188, Start Num: 72

Candidate Starts for Richo\_60:

(Start: 72 @40625 has 116 MA's), (90, 40700), (100, 40742), (103, 40751), (113, 40784), (115, 40790), (132, 40871), (170, 40988), (191, 41075), (196, 41093), (206, 41129), (215, 41168),

Gene: Rosmarinus\_57 Start: 40092, Stop: 40646, Start Num: 72

Candidate Starts for Rosmarinus\_57:

(31, 39945), (Start: 72 @40092 has 116 MA's), (Start: 78 @40104 has 3 MA's), (Start: 80 @40110 has 3 MA's), (89, 40158), (100, 40206), (103, 40215), (115, 40254), (118, 40284), (132, 40335), (162, 40422), (170, 40446), (191, 40533), (196, 40551), (198, 40557),

Gene: Ruthiejr\_63 Start: 40204, Stop: 40800, Start Num: 76

Candidate Starts for Ruthiejr\_63:

(Start: 76 @40204 has 19 MA's), (85, 40246), (103, 40324), (118, 40393), (120, 40405), (135, 40453), (170, 40573), (177, 40618), (191, 40660), (195, 40681), (196, 40684), (213, 40765),

Gene: SamScheppers\_60 Start: 40633, Stop: 41229, Start Num: 76

Candidate Starts for SamScheppers\_60:

(Start: 76 @40633 has 19 MA's), (85, 40675), (103, 40753), (118, 40822), (120, 40834), (135, 40882), (170, 41002), (177, 41047), (191, 41089), (195, 41110), (196, 41113), (213, 41194),

Gene: Samba\_56 Start: 39498, Stop: 40085, Start Num: 73

Candidate Starts for Samba\_56:

(Start: 73 @39498 has 100 MA's), (123, 39699), (145, 39795), (174, 39867), (196, 39963), (198, 39966), (199, 39972), (200, 39975), (202, 39996),

Gene: SamuelLPlaqson\_58 Start: 40885, Stop: 41439, Start Num: 72

Candidate Starts for SamuelLPlaqson\_58:

(Start: 72 @40885 has 116 MA's), (Start: 78 @40897 has 3 MA's), (Start: 80 @40903 has 3 MA's), (89, 40951), (100, 40999), (103, 41008), (115, 41047), (132, 41128), (162, 41215), (170, 41239), (191, 41326), (196, 41344), (198, 41350),

Gene: Scarlett\_61 Start: 40586, Stop: 41143, Start Num: 72

Candidate Starts for Scarlett\_61:

(59, 40556), (Start: 72 @40586 has 116 MA's), (Start: 78 @40598 has 3 MA's), (90, 40655), (98, 40688), (108, 40721), (117, 40751), (120, 40787), (152, 40904), (170, 40943), (191, 41030), (196, 41048), (206, 41084),

Gene: Schatzie\_155 Start: 85091, Stop: 85627, Start Num: 73

Candidate Starts for Schatzie\_155:

(66, 85079), (Start: 69 @85085 has 16 MA's), (Start: 73 @85091 has 100 MA's), (Start: 78 @85103 has 3 MA's), (79, 85106), (81, 85112), (89, 85154), (108, 85226), (132, 85334), (135, 85343), (138, 85358), (160, 85409), (191, 85508), (197, 85529),

Gene: Schnabeltier\_62 Start: 41372, Stop: 42097, Start Num: 64

Candidate Starts for Schnabeltier\_62:

(Start: 64 @41372 has 9 MA's), (Start: 73 @41390 has 100 MA's), (123, 41597), (137, 41654), (141, 41669), (168, 41726), (177, 41777), (205, 41897), (206, 41906), (207, 41909),

Gene: SeresaTree\_81 Start: 60167, Stop: 60667, Start Num: 73

Candidate Starts for SeresaTree\_81:

(Start: 73 @60167 has 100 MA's), (85, 60215), (107, 60302), (134, 60395), (139, 60416), (172, 60491), (176, 60512), (178, 60521), (184, 60536), (186, 60545), (208, 60629), (213, 60650),

Gene: SgtBeansprout\_49 Start: 38068, Stop: 38598, Start Num: 80

Candidate Starts for SgtBeansprout\_49:

(22, 37813), (Start: 74 @38047 has 7 MA's), (Start: 80 @38068 has 3 MA's), (Start: 87 @38110 has 1 MA's), (90, 38122), (103, 38173), (115, 38212), (118, 38242), (132, 38293), (170, 38398), (191, 38485), (196, 38503), (198, 38509), (215, 38578),

Gene: Shadow1\_62 Start: 40304, Stop: 40867, Start Num: 72

Candidate Starts for Shadow1\_62:

(Start: 72 @40304 has 116 MA's), (Start: 78 @40316 has 3 MA's), (Start: 80 @40322 has 3 MA's), (Start: 87 @40364 has 1 MA's), (100, 40418), (108, 40442), (115, 40466), (132, 40547), (162, 40637), (170, 40667), (191, 40754), (196, 40772), (212, 40835),

Gene: Sham\_75 Start: 59928, Stop: 60419, Start Num: 77

Candidate Starts for Sham\_75:

(75, 59925), (Start: 77 @59928 has 25 MA's), (85, 59967), (139, 60168), (176, 60264), (178, 60273), (184, 60288), (186, 60297), (191, 60315), (192, 60318), (208, 60381), (213, 60402),

Gene: Shaobing\_60 Start: 40662, Stop: 41225, Start Num: 72

Candidate Starts for Shaobing\_60:

(Start: 72 @40662 has 116 MA's), (90, 40737), (100, 40779), (103, 40788), (113, 40821), (115, 40827), (132, 40908), (170, 41025), (191, 41112), (196, 41130), (206, 41166), (215, 41205),

Gene: ShawBrad\_100 Start: 50885, Stop: 51478, Start Num: 73

Candidate Starts for ShawBrad\_100:

(1, 50216), (2, 50306), (4, 50372), (9, 50474), (13, 50525), (15, 50567), (18, 50621), (19, 50627), (37, 50783), (38, 50789), (42, 50798), (45, 50813), (60, 50855), (Start: 73 @50885 has 100 MA's), (90, 50951), (129, 51107), (145, 51173), (190, 51287), (200, 51335), (205, 51377), (222, 51449), (224, 51473),

Gene: ShedlockHolmes\_58 Start: 40308, Stop: 40865, Start Num: 73

Candidate Starts for ShedlockHolmes\_58:

(48, 40239), (Start: 73 @40308 has 100 MA's), (Start: 78 @40320 has 3 MA's), (Start: 80 @40326 has 3 MA's), (89, 40371), (98, 40410), (108, 40443), (115, 40467), (118, 40497), (167, 40656), (170, 40665), (196, 40770),

Gene: ShiaSurprise\_58 Start: 40301, Stop: 40855, Start Num: 72

Candidate Starts for ShiaSurprise\_58:

(31, 40154), (Start: 72 @40301 has 116 MA's), (Start: 78 @40313 has 3 MA's), (Start: 80 @40319 has 3 MA's), (89, 40367), (100, 40415), (103, 40424), (115, 40463), (118, 40493), (132, 40544), (162, 40631), (170, 40655), (191, 40742), (196, 40760), (198, 40766),

Gene: Sidious\_54 Start: 38723, Stop: 39313, Start Num: 72

Candidate Starts for Sidious\_54:

(23, 38519), (37, 38621), (68, 38717), (Start: 72 @38723 has 116 MA's), (123, 38927), (124, 38933), (145, 39023), (154, 39044), (174, 39095), (196, 39191), (198, 39194), (199, 39200), (202, 39224),

Gene: Sidious\_59 Start: 42258, Stop: 42845, Start Num: 73

Candidate Starts for Sidious\_59:

(12, 41895), (16, 41973), (20, 42003), (26, 42066), (Start: 73 @42258 has 100 MA's), (123, 42468), (141, 42540), (145, 42564), (174, 42636), (196, 42711), (197, 42714), (199, 42720), (205, 42765), (206, 42774),

Gene: SirPhilip\_58 Start: 40708, Stop: 41271, Start Num: 72

Candidate Starts for SirPhilip\_58:

(Start: 72 @40708 has 116 MA's), (Start: 78 @40720 has 3 MA's), (100, 40822), (103, 40831), (115, 40870), (132, 40951), (162, 41041), (170, 41071), (181, 41128), (191, 41158), (212, 41239),

Gene: Slarp\_62 Start: 40161, Stop: 40757, Start Num: 76

Candidate Starts for Slarp\_62:

(Start: 76 @40161 has 19 MA's), (85, 40203), (103, 40281), (118, 40350), (120, 40362), (135, 40410), (170, 40530), (177, 40575), (191, 40617), (195, 40638), (196, 40641), (213, 40722),

Gene: Slimphazie\_57 Start: 39980, Stop: 40534, Start Num: 72

Candidate Starts for Slimphazie\_57:

(Start: 72 @39980 has 116 MA's), (Start: 78 @39992 has 3 MA's), (Start: 80 @39998 has 3 MA's), (89, 40046), (100, 40094), (103, 40103), (115, 40142), (118, 40172), (132, 40223), (162, 40310), (170, 40334), (191, 40421), (196, 40439), (198, 40445),

Gene: SparkleGoddess\_81 Start: 60854, Stop: 61342, Start Num: 77

Candidate Starts for SparkleGoddess\_81:

(Start: 77 @60854 has 25 MA's), (88, 60914), (122, 61034), (129, 61058), (134, 61073), (136, 61079), (139, 61094), (171, 61166), (176, 61190), (178, 61199), (186, 61223), (197, 61265), (213, 61328), (216, 61337),

Gene: Sparky\_80 Start: 54416, Stop: 54964, Start Num: 73

Candidate Starts for Sparky\_80:

(42, 54326), (55, 54365), (Start: 73 @54416 has 100 MA's), (130, 54650), (174, 54785), (205, 54902), (206, 54911), (209, 54923),

Gene: Spock\_57 Start: 40105, Stop: 40659, Start Num: 72

Candidate Starts for Spock\_57:

(31, 39958), (Start: 72 @40105 has 116 MA's), (Start: 78 @40117 has 3 MA's), (Start: 80 @40123 has 3 MA's), (89, 40171), (100, 40219), (103, 40228), (115, 40267), (118, 40297), (132, 40348), (162, 40435), (170, 40459), (191, 40546), (196, 40564), (198, 40570),

Gene: Spooky\_97 Start: 52512, Stop: 53075, Start Num: 73

Candidate Starts for Spooky\_97:

(17, 52416), (Start: 73 @52512 has 100 MA's), (93, 52608), (123, 52719), (129, 52743), (145, 52809), (190, 52923), (200, 52971), (205, 53013),

Gene: Squint\_151 Start: 81411, Stop: 81947, Start Num: 73

Candidate Starts for Squint\_151:

(66, 81399), (Start: 69 @81405 has 16 MA's), (Start: 73 @81411 has 100 MA's), (Start: 78 @81423 has 3 MA's), (79, 81426), (81, 81432), (89, 81474), (108, 81546), (132, 81654), (135, 81663), (138, 81678), (160, 81729), (177, 81786), (191, 81828), (197, 81849),

Gene: Stigma\_80 Start: 60862, Stop: 61350, Start Num: 77

Candidate Starts for Stigma\_80:

(Start: 77 @60862 has 25 MA's), (88, 60922), (105, 60979), (107, 60988), (117, 61009), (122, 61042), (125, 61048), (136, 61087), (139, 61102), (147, 61138), (171, 61174), (176, 61198), (178, 61207), (186, 61231), (197, 61273), (213, 61336), (216, 61345),

Gene: Stinson\_58 Start: 40482, Stop: 41036, Start Num: 72

Candidate Starts for Stinson\_58:

(57, 40443), (Start: 72 @40482 has 116 MA's), (Start: 78 @40494 has 3 MA's), (Start: 80 @40500 has 3 MA's), (89, 40548), (103, 40605), (115, 40644), (118, 40674), (162, 40812), (170, 40836), (186, 40908), (191, 40923), (196, 40941), (212, 41004),

Gene: Strobilo\_61 Start: 42006, Stop: 42539, Start Num: 73

Candidate Starts for Strobilo\_61:

(55, 41955), (Start: 73 @42006 has 100 MA's), (79, 42021), (89, 42069), (100, 42117), (103, 42126), (113, 42159), (115, 42165), (117, 42171), (135, 42255), (150, 42321),

Gene: Sulley\_57 Start: 40156, Stop: 40710, Start Num: 72

Candidate Starts for Sulley\_57:

(Start: 72 @40156 has 116 MA's), (Start: 78 @40168 has 3 MA's), (Start: 80 @40174 has 3 MA's), (89, 40222), (100, 40270), (103, 40279), (115, 40318), (118, 40348), (132, 40399), (162, 40486), (170, 40510), (191, 40597), (196, 40615), (198, 40621),

Gene: Sunflower1121\_63 Start: 40450, Stop: 41013, Start Num: 72

Candidate Starts for Sunflower1121\_63:

(Start: 72 @40450 has 116 MA's), (Start: 78 @40462 has 3 MA's), (Start: 80 @40468 has 3 MA's), (Start: 87 @40510 has 1 MA's), (100, 40564), (108, 40588), (115, 40612), (132, 40693), (162, 40783), (170, 40813), (191, 40900), (196, 40918), (212, 40981),

Gene: Superphikiman\_155 Start: 81247, Stop: 81834, Start Num: 73

Candidate Starts for Superphikiman\_155:

(Start: 52 @81190 has 4 MA's), (Start: 73 @81247 has 100 MA's), (Start: 80 @81265 has 3 MA's), (81, 81268), (90, 81316), (94, 81343), (100, 81358), (106, 81373), (120, 81448), (131, 81484), (138, 81511), (191, 81715), (197, 81736),

Gene: Syra333\_62 Start: 40471, Stop: 41025, Start Num: 73

Candidate Starts for Syra333\_62:

(Start: 73 @40471 has 100 MA's), (Start: 78 @40483 has 3 MA's), (Start: 80 @40489 has 3 MA's), (100, 40585), (103, 40594), (108, 40609), (115, 40633), (132, 40714), (162, 40801), (170, 40825), (191, 40912), (205, 40957), (212, 40993),

Gene: TBond007\_55 Start: 39788, Stop: 40345, Start Num: 73

Candidate Starts for TBond007\_55:

(48, 39719), (Start: 73 @39788 has 100 MA's), (Start: 78 @39800 has 3 MA's), (Start: 80 @39806 has 3 MA's), (89, 39851), (98, 39890), (99, 39893), (108, 39923), (115, 39947), (118, 39977), (167, 40136), (170, 40145), (196, 40250), (210, 40301), (212, 40313),

Gene: TClif\_59 Start: 40127, Stop: 40678, Start Num: 73

Candidate Starts for TClif\_59:

(Start: 73 @40127 has 100 MA's), (Start: 78 @40139 has 3 MA's), (Start: 80 @40145 has 3 MA's), (89, 40190), (103, 40247), (108, 40262), (117, 40292), (120, 40328), (170, 40478), (191, 40565), (196, 40583), (198, 40589), (205, 40610),

Gene: TM4\_57 Start: 36361, Stop: 36894, Start Num: 73

Candidate Starts for TM4\_57:

(55, 36310), (Start: 73 @36361 has 100 MA's), (Start: 78 @36373 has 3 MA's), (89, 36424), (100, 36472), (103, 36481), (113, 36514), (115, 36520), (117, 36526), (135, 36610), (150, 36676),

Gene: TPA4\_56 Start: 40632, Stop: 41162, Start Num: 95

Candidate Starts for TPA4\_56:

(21, 40278), (82, 40551), (95, 40632), (102, 40650), (116, 40698), (153, 40863), (157, 40893), (174, 41004), (219, 41151),

Gene: Tachez\_57 Start: 39949, Stop: 40503, Start Num: 72

Candidate Starts for Tachez\_57:

(31, 39802), (Start: 72 @39949 has 116 MA's), (Start: 78 @39961 has 3 MA's), (Start: 80 @39967 has 3 MA's), (89, 40015), (100, 40063), (103, 40072), (115, 40111), (118, 40141), (132, 40192), (162, 40279), (170, 40303), (191, 40390), (196, 40408), (198, 40414),

Gene: TaiwanKao\_59 Start: 40250, Stop: 40804, Start Num: 72

Candidate Starts for TaiwanKao\_59:

(Start: 72 @40250 has 116 MA's), (Start: 78 @40262 has 3 MA's), (Start: 80 @40268 has 3 MA's), (89, 40316), (100, 40364), (103, 40373), (115, 40412), (118, 40442), (121, 40457), (132, 40493), (162, 40580), (170, 40604), (186, 40676), (191, 40691), (196, 40709), (198, 40715), (212, 40772),

Gene: Taquito\_61 Start: 40396, Stop: 40992, Start Num: 76

Candidate Starts for Taquito\_61:

(Start: 76 @40396 has 19 MA's), (85, 40438), (103, 40516), (118, 40585), (120, 40597), (135, 40645), (170, 40765), (177, 40810), (191, 40852), (195, 40873), (196, 40876), (213, 40957),

Gene: TaronosaurusRx\_66 Start: 41369, Stop: 42100, Start Num: 64

Candidate Starts for TaronosaurusRx\_66:

(Start: 64 @41369 has 9 MA's), (Start: 73 @41387 has 100 MA's), (102, 41501), (123, 41594), (137, 41651), (141, 41666), (177, 41774), (205, 41894), (206, 41903), (207, 41906), (225, 41996),

Gene: ThankyouJordi\_62 Start: 43975, Stop: 44550, Start Num: 73

Candidate Starts for ThankyouJordi\_62:

(Start: 73 @43975 has 100 MA's), (102, 44089), (123, 44182), (141, 44254), (145, 44278), (167, 44308), (174, 44350), (196, 44425), (198, 44431), (205, 44482),

Gene: Thibault\_141 Start: 81109, Stop: 81639, Start Num: 73

Candidate Starts for Thibault\_141:

(Start: 73 @81109 has 100 MA's), (Start: 80 @81127 has 3 MA's), (81, 81130), (Start: 87 @81169 has 1 MA's), (89, 81172), (118, 81298), (120, 81310), (135, 81361), (138, 81376), (160, 81427), (177, 81484), (213, 81610), (220, 81631),

Gene: ThreeRngTarjay\_155 Start: 85312, Stop: 85848, Start Num: 73

Candidate Starts for ThreeRngTarjay\_155:

(Start: 52 @85255 has 4 MA's), (Start: 73 @85312 has 100 MA's), (Start: 80 @85330 has 3 MA's), (118, 85501), (120, 85513), (135, 85564), (138, 85579), (191, 85729), (197, 85750),

Gene: Tierra\_60 Start: 40268, Stop: 40831, Start Num: 72

Candidate Starts for Tierra\_60:

(Start: 72 @40268 has 116 MA's), (Start: 78 @40280 has 3 MA's), (Start: 80 @40286 has 3 MA's), (100, 40382), (115, 40430), (132, 40511), (162, 40601), (170, 40631), (191, 40718), (196, 40736), (212, 40799),

Gene: TingHuaYa\_58 Start: 39013, Stop: 39561, Start Num: 80

Candidate Starts for TingHuaYa\_58:

(Start: 72 @38995 has 116 MA's), (Start: 78 @39007 has 3 MA's), (Start: 80 @39013 has 3 MA's), (Start: 87 @39055 has 1 MA's), (98, 39100), (100, 39109), (113, 39151), (115, 39157), (132, 39238), (170, 39361), (191, 39448), (196, 39466), (198, 39472), (212, 39529),

Gene: TiniBug\_58 Start: 40881, Stop: 41435, Start Num: 72

Candidate Starts for TiniBug\_58:

(Start: 72 @40881 has 116 MA's), (Start: 78 @40893 has 3 MA's), (Start: 80 @40899 has 3 MA's), (89, 40947), (100, 40995), (103, 41004), (115, 41043), (132, 41124), (162, 41211), (170, 41235), (191, 41322), (196, 41340), (198, 41346),

Gene: Tiri\_58 Start: 40270, Stop: 40824, Start Num: 72

Candidate Starts for Tiri\_58:

(Start: 72 @40270 has 116 MA's), (89, 40336), (100, 40384), (103, 40393), (115, 40432), (118, 40462), (132, 40513), (162, 40600), (170, 40624), (191, 40711), (196, 40729), (198, 40735),

Gene: Topper\_57 Start: 40104, Stop: 40658, Start Num: 72

Candidate Starts for Topper\_57:

(31, 39957), (Start: 72 @40104 has 116 MA's), (Start: 78 @40116 has 3 MA's), (Start: 80 @40122 has 3 MA's), (89, 40170), (100, 40218), (103, 40227), (115, 40266), (118, 40296), (132, 40347), (162, 40434), (170, 40458), (191, 40545), (196, 40563), (198, 40569),

Gene: Torres\_51 Start: 40661, Stop: 41212, Start Num: 74

Candidate Starts for Torres\_51:

(22, 40427), (Start: 74 @40661 has 7 MA's), (Start: 80 @40682 has 3 MA's), (Start: 87 @40724 has 1 MA's), (90, 40736), (103, 40787), (115, 40826), (118, 40856), (132, 40907), (170, 41012), (191, 41099), (196, 41117), (198, 41123), (215, 41192),

Gene: TreyKay\_58 Start: 40200, Stop: 40742, Start Num: 78



Candidate Starts for TreyKay\_58:

(Start: 72 @40188 has 116 MA's), (Start: 78 @40200 has 3 MA's), (Start: 80 @40206 has 3 MA's), (89, 40254), (100, 40302), (103, 40311), (115, 40350), (118, 40380), (121, 40395), (132, 40431), (162, 40518), (170, 40542), (186, 40614), (191, 40629), (196, 40647), (198, 40653), (212, 40710),

Gene: TribbleTrouble\_56 Start: 40264, Stop: 40821, Start Num: 73

Candidate Starts for TribbleTrouble\_56:

(Start: 73 @40264 has 100 MA's), (Start: 78 @40276 has 3 MA's), (Start: 80 @40282 has 3 MA's), (89, 40327), (98, 40366), (100, 40375), (108, 40399), (115, 40423), (170, 40621), (196, 40726),

Gene: TruffulaTree\_57 Start: 39976, Stop: 40530, Start Num: 72

Candidate Starts for TruffulaTree\_57:

(Start: 72 @39976 has 116 MA's), (Start: 78 @39988 has 3 MA's), (Start: 80 @39994 has 3 MA's), (89, 40042), (100, 40090), (103, 40099), (115, 40138), (118, 40168), (132, 40219), (162, 40306), (170, 40330), (191, 40417), (196, 40435), (198, 40441),

Gene: TunaTartare\_80 Start: 61330, Stop: 61827, Start Num: 73

Candidate Starts for TunaTartare\_80:

(Start: 73 @61330 has 100 MA's), (85, 61375), (139, 61576), (176, 61672), (178, 61681), (184, 61696), (186, 61705), (191, 61723), (208, 61789), (213, 61810),

Gene: Twitch\_57 Start: 40106, Stop: 40660, Start Num: 72

Candidate Starts for Twitch\_57:

(31, 39959), (Start: 72 @40106 has 116 MA's), (Start: 78 @40118 has 3 MA's), (Start: 80 @40124 has 3 MA's), (89, 40172), (100, 40220), (103, 40229), (115, 40268), (118, 40298), (132, 40349), (162, 40436), (170, 40460), (191, 40547), (196, 40565), (198, 40571),

Gene: Typha\_56 Start: 42274, Stop: 42870, Start Num: 73

Candidate Starts for Typha\_56:

(7, 41821), (28, 42085), (Start: 73 @42274 has 100 MA's), (Start: 80 @42292 has 3 MA's), (81, 42295), (83, 42301), (108, 42412), (118, 42466), (121, 42481), (132, 42517), (135, 42526), (136, 42529), (145, 42577), (146, 42580), (155, 42610), (173, 42676), (177, 42697), (218, 42844), (223, 42859),

Gene: Ubuntu\_64 Start: 43962, Stop: 44513, Start Num: 71

Candidate Starts for Ubuntu\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Unicorn\_58 Start: 39396, Stop: 39959, Start Num: 72

Candidate Starts for Unicorn\_58:

(46, 39327), (Start: 72 @39396 has 116 MA's), (Start: 78 @39408 has 3 MA's), (Start: 80 @39414 has 3 MA's), (100, 39510), (108, 39534), (115, 39558), (132, 39639), (162, 39729), (170, 39759), (191, 39846), (196, 39864), (212, 39927),

Gene: Urkel\_58 Start: 40885, Stop: 41439, Start Num: 72

Candidate Starts for Urkel\_58:

(Start: 72 @40885 has 116 MA's), (Start: 78 @40897 has 3 MA's), (Start: 80 @40903 has 3 MA's), (89, 40951), (100, 40999), (103, 41008), (115, 41047), (132, 41128), (162, 41215), (170, 41239), (191, 41326), (196, 41344), (198, 41350),

Gene: Validus\_61 Start: 40705, Stop: 41262, Start Num: 72

Candidate Starts for Validus\_61:

(62, 40678), (Start: 72 @40705 has 116 MA's), (90, 40780), (100, 40822), (115, 40870), (117, 40876), (127, 40936), (132, 40951), (170, 41062), (191, 41149), (196, 41167), (198, 41173), (215, 41242),

Gene: Veliki\_58 Start: 39962, Stop: 40516, Start Num: 72

Candidate Starts for Veliki\_58:

(Start: 72 @39962 has 116 MA's), (Start: 78 @39974 has 3 MA's), (Start: 80 @39980 has 3 MA's), (89, 40028), (100, 40076), (103, 40085), (115, 40124), (118, 40154), (121, 40169), (132, 40205), (162, 40292), (170, 40316), (173, 40340), (186, 40388), (191, 40403), (196, 40421), (198, 40427), (212, 40484),

Gene: Wakanda\_73 Start: 59478, Stop: 59969, Start Num: 76

Candidate Starts for Wakanda\_73:

(Start: 76 @59478 has 19 MA's), (81, 59499), (88, 59541), (105, 59598), (107, 59607), (136, 59706), (139, 59721), (176, 59817), (184, 59841), (186, 59850), (191, 59868), (193, 59880), (216, 59964),

Gene: Walrus\_55 Start: 36777, Stop: 37367, Start Num: 73

Candidate Starts for Walrus\_55:

(30, 36615), (34, 36663), (Start: 73 @36777 has 100 MA's), (123, 36981), (145, 37077), (154, 37098), (171, 37131), (174, 37149), (196, 37245), (198, 37248), (199, 37254), (200, 37257), (202, 37278),

Gene: Wanda\_158 Start: 82485, Stop: 83021, Start Num: 73

Candidate Starts for Wanda\_158:

(Start: 73 @82485 has 100 MA's), (Start: 80 @82503 has 3 MA's), (81, 82506), (118, 82674), (120, 82686), (135, 82737), (138, 82752), (191, 82902), (215, 82995),

Gene: Webster2\_64 Start: 43959, Stop: 44513, Start Num: 69

Candidate Starts for Webster2\_64:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: WelcomeAyanna\_62 Start: 44122, Stop: 44697, Start Num: 73

Candidate Starts for WelcomeAyanna\_62:

(Start: 73 @44122 has 100 MA's), (102, 44236), (123, 44329), (141, 44401), (145, 44425), (167, 44455), (174, 44497), (196, 44572), (198, 44578), (205, 44629),

Gene: Westy\_79 Start: 60854, Stop: 61342, Start Num: 77

Candidate Starts for Westy\_79:

(Start: 77 @60854 has 25 MA's), (88, 60914), (122, 61034), (129, 61058), (134, 61073), (136, 61079), (139, 61094), (171, 61166), (176, 61190), (178, 61199), (186, 61223), (197, 61265), (213, 61328), (216, 61337),

Gene: Wildcat\_136 Start: 64934, Stop: 65449, Start Num: 77

Candidate Starts for Wildcat\_136:

(Start: 77 @64934 has 25 MA's), (Start: 80 @64949 has 3 MA's), (85, 64973), (86, 64979), (90, 65000), (92, 65018), (97, 65030), (98, 65033), (115, 65090), (120, 65132), (135, 65180), (136, 65183), (145, 65231), (146, 65234), (169, 65252), (178, 65303), (191, 65342), (194, 65354), (206, 65399),

Gene: Wintermute\_62 Start: 40391, Stop: 40987, Start Num: 76

Candidate Starts for Wintermute\_62:

(Start: 76 @40391 has 19 MA's), (85, 40433), (103, 40511), (118, 40580), (120, 40592), (135, 40640), (170, 40760), (177, 40805), (191, 40847), (195, 40868), (196, 40871), (213, 40952),

Gene: Wishmaker\_61 Start: 43962, Stop: 44513, Start Num: 71

Candidate Starts for Wishmaker\_61:

(Start: 69 @43959 has 16 MA's), (Start: 71 @43962 has 8 MA's), (79, 43977), (96, 44061), (101, 44073), (105, 44085), (114, 44118), (127, 44187), (128, 44190), (139, 44229), (143, 44256), (148, 44274), (161, 44292), (174, 44337), (175, 44340), (179, 44355), (194, 44400), (206, 44460), (211, 44478),

Gene: Wocket\_57 Start: 37262, Stop: 37849, Start Num: 73

Candidate Starts for Wocket\_57:

(3, 36689), (5, 36764), (30, 37100), (34, 37148), (44, 37181), (Start: 73 @37262 has 100 MA's), (123, 37463), (140, 37529), (145, 37559), (174, 37631), (196, 37727), (198, 37730), (199, 37736), (202, 37760),

Gene: Ximenita\_63 Start: 40468, Stop: 41031, Start Num: 72

Candidate Starts for Ximenita\_63:

(Start: 72 @40468 has 116 MA's), (Start: 78 @40480 has 3 MA's), (Start: 80 @40486 has 3 MA's), (Start: 87 @40528 has 1 MA's), (108, 40606), (115, 40630), (132, 40711), (162, 40801), (170, 40831), (191, 40918), (196, 40936), (212, 40999),

Gene: Y10\_60 Start: 40319, Stop: 40915, Start Num: 76

Candidate Starts for Y10\_60:

(Start: 76 @40319 has 19 MA's), (85, 40361), (103, 40439), (118, 40508), (120, 40520), (135, 40568), (163, 40658), (164, 40661), (170, 40688), (177, 40733), (191, 40775), (195, 40796), (196, 40799), (213, 40880),

Gene: Y2\_60 Start: 40319, Stop: 40915, Start Num: 76

Candidate Starts for Y2\_60:

(Start: 76 @40319 has 19 MA's), (85, 40361), (103, 40439), (118, 40508), (120, 40520), (135, 40568), (163, 40658), (164, 40661), (170, 40688), (177, 40733), (191, 40775), (195, 40796), (196, 40799), (213, 40880),

Gene: Yeet\_152 Start: 83848, Stop: 84384, Start Num: 73

Candidate Starts for Yeet\_152:

(Start: 47 @83773 has 4 MA's), (Start: 52 @83791 has 4 MA's), (Start: 73 @83848 has 100 MA's), (Start: 80 @83866 has 3 MA's), (118, 84037), (120, 84049), (135, 84100), (138, 84115), (191, 84265), (197, 84286), (215, 84358),

Gene: YoureAdopted\_56 Start: 40105, Stop: 40659, Start Num: 73

Candidate Starts for YoureAdopted\_56:

(Start: 73 @40105 has 100 MA's), (Start: 78 @40117 has 3 MA's), (89, 40171), (100, 40219), (103, 40228), (115, 40267), (118, 40297), (132, 40348), (162, 40435), (170, 40459), (191, 40546), (196, 40564), (198, 40570),

Gene: Yuna\_62 Start: 41255, Stop: 41863, Start Num: 73

Candidate Starts for Yuna\_62:

(Start: 73 @41255 has 100 MA's), (Start: 78 @41267 has 3 MA's), (115, 41417), (117, 41423), (118, 41447), (132, 41498), (138, 41522), (162, 41585), (170, 41609), (191, 41696), (205, 41741),

Gene: Yunkel11\_59 Start: 39487, Stop: 40053, Start Num: 72

Candidate Starts for Yunkel11\_59:

(Start: 72 @39487 has 116 MA's), (Start: 78 @39499 has 3 MA's), (Start: 80 @39505 has 3 MA's), (113, 39643), (115, 39649), (132, 39730), (170, 39853), (191, 39940), (196, 39958), (198, 39964), (212, 40021),

Gene: ZAYM\_64 Start: 41414, Stop: 42145, Start Num: 64

Candidate Starts for ZAYM\_64:

(Start: 64 @41414 has 9 MA's), (Start: 73 @41432 has 100 MA's), (102, 41546), (123, 41639), (137, 41696), (141, 41711), (177, 41819), (205, 41939), (206, 41948), (207, 41951),

Gene: Zabiza\_52 Start: 36290, Stop: 36844, Start Num: 72

Candidate Starts for Zabiza\_52:

(Start: 72 @36290 has 116 MA's), (Start: 78 @36302 has 3 MA's), (Start: 80 @36308 has 3 MA's), (89, 36356), (100, 36404), (103, 36413), (115, 36452), (118, 36482), (121, 36497), (132, 36533), (162, 36620), (170, 36644), (173, 36668), (186, 36716), (191, 36731), (196, 36749),

Gene: Zarbodnamra\_56 Start: 36684, Stop: 37271, Start Num: 73

Candidate Starts for Zarbodnamra\_56:

(Start: 73 @36684 has 100 MA's), (123, 36885), (145, 36981), (174, 37053), (196, 37149), (198, 37152), (199, 37158), (202, 37182),

Gene: Zavala\_59 Start: 40261, Stop: 40815, Start Num: 72

Candidate Starts for Zavala\_59:

(Start: 72 @40261 has 116 MA's), (Start: 78 @40273 has 3 MA's), (Start: 80 @40279 has 3 MA's), (89, 40327), (100, 40375), (103, 40384), (115, 40423), (118, 40453), (121, 40468), (132, 40504), (162, 40591), (170, 40615), (173, 40639), (186, 40687), (191, 40702), (196, 40720), (198, 40726), (212, 40783),

Gene: Zelink\_153 Start: 84208, Stop: 84744, Start Num: 73

Candidate Starts for Zelink\_153:

(Start: 73 @84208 has 100 MA's), (Start: 80 @84226 has 3 MA's), (81, 84229), (118, 84397), (120, 84409), (135, 84460), (138, 84475), (191, 84625), (215, 84718),

Gene: ZoeJ\_59 Start: 41402, Stop: 41935, Start Num: 73

Candidate Starts for ZoeJ\_59:

(55, 41351), (Start: 73 @41402 has 100 MA's), (79, 41417), (89, 41465), (100, 41513), (103, 41522), (113, 41555), (115, 41561), (117, 41567), (135, 41651), (150, 41717),