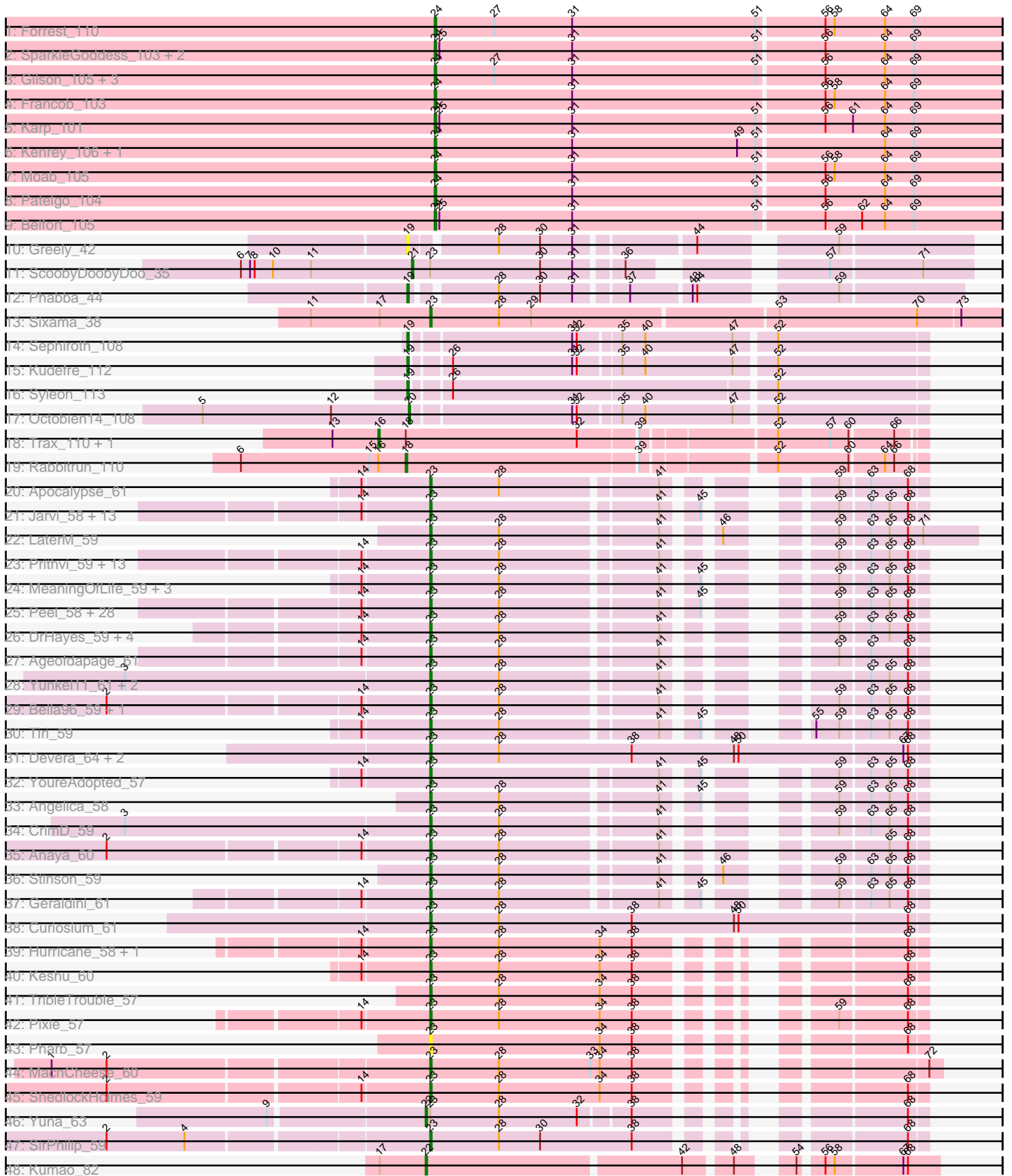


Pham 157707



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 157707 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157707 has 122 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Forrest\_110
- Track 2 : SparkleGoddess\_103, Comrade\_102, Stigma\_102
- Track 3 : Gilson\_105, MeganTheeKilla\_103, Emma1919\_106, Jada\_105
- Track 4 : Francob\_103
- Track 5 : Karp\_101
- Track 6 : Kenrey\_106, Phredrick\_104
- Track 7 : Moab\_105
- Track 8 : Patelgo\_104
- Track 9 : Belfort\_105
- Track 10 : Greely\_42
- Track 11 : ScoobyDoobyDoo\_35
- Track 12 : Phabba\_44
- Track 13 : Sixama\_38
- Track 14 : Sephiroth\_108
- Track 15 : Kudefre\_112
- Track 16 : Syleon\_113
- Track 17 : Octobien14\_108
- Track 18 : Trax\_110, Neville\_108
- Track 19 : Rabbitrun\_110
- Track 20 : Apocalypse\_61
- Track 21 : Jarvi\_58, Rosmarinus\_58, CREW\_58, Topper\_58, Dalmuri\_58, BGIluviae\_58, Jeckyll\_58, Joy99\_58, Inky\_58, Lunahalos\_58, Capricorn\_58, Belladonna\_58, Spock\_58, Llorens\_58
- Track 22 : LaterM\_59
- Track 23 : Prithvi\_59, Megsy\_60, LindNT\_57, Zabiza\_54, ActinUp\_58, Zavala\_60, JAWS\_58, TreyKay\_59, Veliki\_59, TaiwanKao\_60, Mynx\_59, HedwigODU\_58, Sulley\_58, Ramen\_59
- Track 24 : MeaningOfLife\_59, Adonis\_58, Deby\_58, Jayhawk\_59
- Track 25 : Peel\_58, TruffulaTree\_58, Tachez\_58, Boiiii\_58, Hyperbowlee\_58, Asayake\_58, AlishaPH\_58, Atiba\_59, BEEST\_58, BaghaKamala\_57, Slimphazie\_58, Pokerus\_57, CheetoDust\_57, Blizzard\_58, Durfee\_58, Beezoo\_60, Rapunzel97\_59, Homura\_58, Padpat\_60, BarrelRoll\_58, Twitch\_58, Emerson\_59, Ganymede\_59, QuincyRose\_57, ShiaSurprise\_59, Adephagia\_58, Piatt\_58, Padfoot\_58, CaseJules\_60
- Track 26 : DrHayes\_59, TiniBug\_59, Urkel\_59, SamuelLPlaqson\_59, LastHope\_61
- Track 27 : Ageofdapage\_61
- Track 28 : Yunkel11\_61, Guanica15\_61, Efra2\_62

- Track 29 : Bella96\_59, Murucutumbu\_59
- Track 30 : Tiri\_59
- Track 31 : Devera\_64, Dole\_62, Illumine\_62
- Track 32 : YoureAdopted\_57
- Track 33 : Angelica\_58
- Track 34 : CrimD\_59
- Track 35 : Anaya\_60
- Track 36 : Stinson\_59
- Track 37 : Geraldini\_61
- Track 38 : Curiosium\_61
- Track 39 : Hurricane\_58, TBond007\_56
- Track 40 : Keshu\_60
- Track 41 : TribbleTrouble\_57
- Track 42 : Pixie\_57
- Track 43 : Pharb\_57
- Track 44 : MacnCheese\_60
- Track 45 : ShedlockHolmes\_59
- Track 46 : Yuna\_63
- Track 47 : SirPhilip\_59
- Track 48 : Kumao\_82

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

The start number called the most often in the published annotations is 23, it was called in 89 of the 115 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_58, Adephegia\_58, Adonis\_58, Ageofdapage\_61, AlishaPH\_58, Anaya\_60, Angelica\_58, Apocalypse\_61, Asayake\_58, Atiba\_59, BEEST\_58, BGlluviae\_58, BaghaKamala\_57, BarrelRoll\_58, Beezoo\_60, Bella96\_59, Belladonna\_58, Blizzard\_58, Boiiii\_58, CREW\_58, Capricorn\_58, CaseJules\_60, CheetoDust\_57, CrimD\_59, Curiosium\_61, Dalmuri\_58, Deby\_58, Devera\_64, Dole\_62, DrHayes\_59, Durfee\_58, Efra2\_62, Emerson\_59, Ganymede\_59, Geraldini\_61, Guanica15\_61, HedwigODU\_58, Homura\_58, Hurricane\_58, Hyperbowlee\_58, Illumine\_62, Inky\_58, JAWS\_58, Jarvi\_58, Jayhawk\_59, Jeckyll\_58, Joy99\_58, Keshu\_60, LastHope\_61, LaterM\_59, LindNT\_57, Llorens\_58, Lunahalos\_58, MacnCheese\_60, MeaningOfLife\_59, Megsy\_60, Murucutumbu\_59, Mynx\_59, Padfoot\_58, Padpat\_60, Peel\_58, Pharb\_57, Piatt\_58, Pixie\_57, Pokerus\_57, Prithvi\_59, QuincyRose\_57, Ramen\_59, Rapunzel97\_59, Rosmarinus\_58, SamuelLPlaqson\_59, ShedlockHolmes\_59, ShiaSurprise\_59, SirPhilip\_59, Sixama\_38, Slimphazie\_58, Spock\_58, Stinson\_59, Sulley\_58, TBond007\_56, Tachez\_58, TaiwanKao\_60, TiniBug\_59, Tiri\_59, Topper\_58, TreyKay\_59, TribbleTrouble\_57, TruffulaTree\_58, Twitch\_58, Urkel\_59, Veliki\_59, YoureAdopted\_57, Yunkel11\_61, Zabiza\_54, Zavala\_60,

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

- ScoobyDoobyDoo\_35, Yuna\_63,

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

- Belfort\_105, Comrade\_102, Emma1919\_106, Forrest\_110, Francob\_103, Gilson\_105, Greely\_42, Jada\_105, Karp\_101, Kenrey\_106, Kudrefre\_112, Kumao\_82, MeganTheeKilla\_103, Moab\_105, Neville\_108, Octobien14\_108, Patelgo\_104, Phabba\_44, Phredrick\_104, Rabbitrun\_110, Sephiroth\_108, SparkleGoddess\_103, Stigma\_102, Syleon\_113, Trax\_110,

### Summary by start number:

#### Start 16:

- Found in 3 of 122 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 2 of 115
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Neville\_108 (DU2), Trax\_110 (DU2),

#### Start 18:

- Found in 3 of 122 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Rabbitrun\_110 (DU2),

#### Start 19:

- Found in 5 of 122 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 4 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Greely\_42 (C2), Kudrefre\_112 (DU1), Phabba\_44 (C2), Sephiroth\_108 (DU1), Syleon\_113 (DU1),

#### Start 20:

- Found in 1 of 122 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Octobien14\_108 (DU1),

#### Start 21:

- Found in 1 of 122 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ScoobyDoobyDoo\_35 (C2),

#### Start 22:

- Found in 2 of 122 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 2 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao\_82 (singleton), Yuna\_63 (K6),

#### Start 23:

- Found in 97 of 122 ( 79.5% ) of genes in pham
- Manual Annotations of this start: 89 of 115
- Called 97.9% of time when present
- Phage (with cluster) where this start called: ActinUp\_58 (K1), Adephegia\_58 (K1), Adonis\_58 (K1), Ageofdapage\_61 (K1), AlishaPH\_58 (K1), Anaya\_60 (K1), Angelica\_58 (K1), Apocalypse\_61 (K1), Asayake\_58 (K1), Atiba\_59 (K1), BEEST\_58 (K1), BGIluvia\_58 (K1), BaghaKamala\_57 (K1), BarrelRoll\_58 (K1), Beezoo\_60

(K1), Bella96\_59 (K1), Belladonna\_58 (K1), Blizzard\_58 (K1), Boiiii\_58 (K1), CREW\_58 (K1), Capricorn\_58 (K1), CaseJules\_60 (K1), CheetoDust\_57 (K1), CrimD\_59 (K1), Curiosium\_61 (K1), Dalmuri\_58 (K1), Deby\_58 (K1), Devera\_64 (K1), Dole\_62 (K1), DrHayes\_59 (K1), Durfee\_58 (K1), Efra2\_62 (K1), Emerson\_59 (K1), Ganymede\_59 (K1), Geraldini\_61 (K1), Guanica15\_61 (K1), HedwigODU\_58 (K1), Homura\_58 (K1), Hurricane\_58 (K3), Hyperbowlee\_58 (K1), Illumine\_62 (K1), Inky\_58 (K1), JAWS\_58 (K1), Jarvi\_58 (K1), Jayhawk\_59 (K1), Jeckyll\_58 (K1), Joy99\_58 (K1), Keshu\_60 (K3), LastHope\_61 (K1), LaterM\_59 (K1), LindNT\_57 (K1), Llorens\_58 (K1), Lunahalos\_58 (K1), MacnCheese\_60 (K3), MeaningOfLife\_59 (K1), Megsy\_60 (K1), Murucutumbu\_59 (K1), Mynx\_59 (K1), Padfoot\_58 (K1), Padpat\_60 (K1), Peel\_58 (K1), Pharb\_57 (K3), Piatt\_58 (K1), Pixie\_57 (K3), Pokerus\_57 (K1), Prithvi\_59 (K1), QuincyRose\_57 (K1), Ramen\_59 (K1), Rapunzel97\_59 (K1), Rosmarinus\_58 (K1), SamuelLPlaqson\_59 (K1), ShedlockHolmes\_59 (K3), ShiaSurprise\_59 (K1), SirPhilip\_59 (K6), Sixama\_38 (DS), Slimphazie\_58 (K1), Spock\_58 (K1), Stinson\_59 (K1), Sulley\_58 (K1), TBond007\_56 (K3), Tachez\_58 (K1), TaiwanKao\_60 (K1), TiniBug\_59 (K1), Tiri\_59 (K1), Topper\_58 (K1), TreyKay\_59 (K1), TribbleTrouble\_57 (K3), TruffulaTree\_58 (K1), Twitch\_58 (K1), Urkel\_59 (K1), Veliki\_59 (K1), YoureAdopted\_57 (K1), Yunkel11\_61 (K1), Zabiza\_54 (K1), Zavala\_60 (K1),

Start 24:

- Found in 15 of 122 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 15 of 115
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belfort\_105 (BK1), Comrade\_102 (BK1), Emma1919\_106 (BK1), Forrest\_110 (BK1), Francob\_103 (BK1), Gilson\_105 (BK1), Jada\_105 (BK1), Karp\_101 (BK1), Kenrey\_106 (BK1), MeganTheeKilla\_103 (BK1), Moab\_105 (BK1), Patelgo\_104 (BK1), Phredrick\_104 (BK1), SparkleGoddess\_103 (BK1), Stigma\_102 (BK1),

### Summary by clusters:

There are 9 clusters represented in this pham: singleton, K3, K1, BK1, DU1, C2, DU2, DS, K6,

Info for manual annotations of cluster BK1:

- Start number 24 was manually annotated 15 times for cluster BK1.

Info for manual annotations of cluster C2:

- Start number 19 was manually annotated 1 time for cluster C2.
- Start number 21 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster DS:

- Start number 23 was manually annotated 1 time for cluster DS.

Info for manual annotations of cluster DU1:

- Start number 19 was manually annotated 3 times for cluster DU1.
- Start number 20 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 16 was manually annotated 2 times for cluster DU2.
- Start number 18 was manually annotated 1 time for cluster DU2.

Info for manual annotations of cluster K1:

- Start number 23 was manually annotated 80 times for cluster K1.

Info for manual annotations of cluster K3:

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

Info for manual annotations of cluster K6:

- Start number 22 was manually annotated 1 time for cluster K6.
- Start number 23 was manually annotated 1 time for cluster K6.

### **Gene Information:**

Gene: ActinUp\_58 Start: 40539, Stop: 40805, Start Num: 23

Candidate Starts for ActinUp\_58:

(14, 40497), (Start: 23 @40539 has 89 MA's), (28, 40584), (41, 40680), (59, 40752), (63, 40770), (65, 40782), (68, 40794),

Gene: Adephagia\_58 Start: 40540, Stop: 40806, Start Num: 23

Candidate Starts for Adephagia\_58:

(14, 40498), (Start: 23 @40540 has 89 MA's), (28, 40585), (41, 40681), (45, 40699), (59, 40753), (63, 40771), (65, 40783), (68, 40795),

Gene: Adonis\_58 Start: 40787, Stop: 41053, Start Num: 23

Candidate Starts for Adonis\_58:

(14, 40745), (Start: 23 @40787 has 89 MA's), (28, 40832), (41, 40928), (45, 40946), (59, 41000), (63, 41018), (65, 41030), (68, 41042),

Gene: Ageofdapage\_61 Start: 41528, Stop: 41794, Start Num: 23

Candidate Starts for Ageofdapage\_61:

(14, 41486), (Start: 23 @41528 has 89 MA's), (28, 41573), (41, 41669), (59, 41741), (63, 41759), (68, 41783),

Gene: AlishaPH\_58 Start: 40801, Stop: 41067, Start Num: 23

Candidate Starts for AlishaPH\_58:

(14, 40759), (Start: 23 @40801 has 89 MA's), (28, 40846), (41, 40942), (45, 40960), (59, 41014), (63, 41032), (65, 41044), (68, 41056),

Gene: Anaya\_60 Start: 41056, Stop: 41322, Start Num: 23

Candidate Starts for Anaya\_60:

(2, 40858), (14, 41014), (Start: 23 @41056 has 89 MA's), (28, 41101), (41, 41197), (65, 41299), (68, 41311),

Gene: Angelica\_58 Start: 40695, Stop: 40961, Start Num: 23

Candidate Starts for Angelica\_58:

(Start: 23 @40695 has 89 MA's), (28, 40740), (41, 40836), (45, 40854), (59, 40908), (63, 40926), (65, 40938), (68, 40950),

Gene: Apocalypse\_61 Start: 41464, Stop: 41730, Start Num: 23

Candidate Starts for Apocalypse\_61:

(14, 41422), (Start: 23 @41464 has 89 MA's), (28, 41509), (41, 41605), (59, 41677), (63, 41695), (68, 41719),

Gene: Asayake\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Asayake\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Atiba\_59 Start: 40503, Stop: 40769, Start Num: 23

Candidate Starts for Atiba\_59:

(14, 40461), (Start: 23 @40503 has 89 MA's), (28, 40548), (41, 40644), (45, 40662), (59, 40716), (63, 40734), (65, 40746), (68, 40758),

Gene: BEEST\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for BEEST\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: BGlluviae\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for BGlluviae\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: BaghaKamala\_57 Start: 39896, Stop: 40162, Start Num: 23

Candidate Starts for BaghaKamala\_57:

(14, 39854), (Start: 23 @39896 has 89 MA's), (28, 39941), (41, 40037), (45, 40055), (59, 40109), (63, 40127), (65, 40139), (68, 40151),

Gene: BarrelRoll\_58 Start: 40519, Stop: 40785, Start Num: 23

Candidate Starts for BarrelRoll\_58:

(14, 40477), (Start: 23 @40519 has 89 MA's), (28, 40564), (41, 40660), (45, 40678), (59, 40732), (63, 40750), (65, 40762), (68, 40774),

Gene: Beezoo\_60 Start: 41503, Stop: 41769, Start Num: 23

Candidate Starts for Beezoo\_60:

(14, 41461), (Start: 23 @41503 has 89 MA's), (28, 41548), (41, 41644), (45, 41662), (59, 41716), (63, 41734), (65, 41746), (68, 41758),

Gene: Belfort\_105 Start: 69661, Stop: 70026, Start Num: 24

Candidate Starts for Belfort\_105:

(Start: 24 @69661 has 15 MA's), (25, 69664), (31, 69751), (51, 69871), (56, 69913), (62, 69937), (64, 69952), (69, 69970),

Gene: Bella96\_59 Start: 41284, Stop: 41550, Start Num: 23

Candidate Starts for Bella96\_59:

(2, 41086), (14, 41242), (Start: 23 @41284 has 89 MA's), (28, 41329), (41, 41425), (59, 41497), (63, 41515), (65, 41527), (68, 41539),

Gene: Belladonna\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Belladonna\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Blizzard\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Blizzard\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Boiiii\_58 Start: 40857, Stop: 41123, Start Num: 23

Candidate Starts for Boiiii\_58:

(14, 40815), (Start: 23 @40857 has 89 MA's), (28, 40902), (41, 40998), (45, 41016), (59, 41070), (63, 41088), (65, 41100), (68, 41112),

Gene: CREW\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for CREW\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Capricorn\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Capricorn\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: CaseJules\_60 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for CaseJules\_60:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: CheetoDust\_57 Start: 39940, Stop: 40206, Start Num: 23

Candidate Starts for CheetoDust\_57:

(14, 39898), (Start: 23 @39940 has 89 MA's), (28, 39985), (41, 40081), (45, 40099), (59, 40153), (63, 40171), (65, 40183), (68, 40195),

Gene: Comrade\_102 Start: 68978, Stop: 69343, Start Num: 24

Candidate Starts for Comrade\_102:

(Start: 24 @68978 has 15 MA's), (25, 68981), (31, 69068), (51, 69188), (56, 69230), (64, 69269), (69, 69287),

Gene: CrimD\_59 Start: 41076, Stop: 41342, Start Num: 23

Candidate Starts for CrimD\_59:

(3, 40881), (Start: 23 @41076 has 89 MA's), (28, 41121), (41, 41217), (59, 41289), (63, 41307), (65, 41319), (68, 41331),

Gene: Curiosium\_61 Start: 39723, Stop: 40043, Start Num: 23

Candidate Starts for Curiosium\_61:

(Start: 23 @39723 has 89 MA's), (28, 39768), (38, 39855), (48, 39921), (50, 39924), (68, 40032),

Gene: Dalmuri\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Dalmuri\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Deby\_58 Start: 40717, Stop: 40983, Start Num: 23

Candidate Starts for Deby\_58:

(14, 40675), (Start: 23 @40717 has 89 MA's), (28, 40762), (41, 40858), (45, 40876), (59, 40930), (63, 40948), (65, 40960), (68, 40972),

Gene: Devera\_64 Start: 41616, Stop: 41936, Start Num: 23



Candidate Starts for Devera\_64:

(Start: 23 @41616 has 89 MA's), (28, 41661), (38, 41748), (48, 41814), (50, 41817), (67, 41922), (68, 41925),

Gene: Dole\_62 Start: 41619, Stop: 41939, Start Num: 23

Candidate Starts for Dole\_62:

(Start: 23 @41619 has 89 MA's), (28, 41664), (38, 41751), (48, 41817), (50, 41820), (67, 41925), (68, 41928),

Gene: DrHayes\_59 Start: 41439, Stop: 41705, Start Num: 23

Candidate Starts for DrHayes\_59:

(14, 41397), (Start: 23 @41439 has 89 MA's), (28, 41484), (41, 41580), (59, 41652), (63, 41670), (65, 41682), (68, 41694),

Gene: Durfee\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Durfee\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Efra2\_62 Start: 40615, Stop: 40881, Start Num: 23

Candidate Starts for Efra2\_62:

(3, 40420), (Start: 23 @40615 has 89 MA's), (28, 40660), (41, 40756), (63, 40846), (65, 40858), (68, 40870),

Gene: Emerson\_59 Start: 40536, Stop: 40802, Start Num: 23

Candidate Starts for Emerson\_59:

(14, 40494), (Start: 23 @40536 has 89 MA's), (28, 40581), (41, 40677), (45, 40695), (59, 40749), (63, 40767), (65, 40779), (68, 40791),

Gene: Emma1919\_106 Start: 68431, Stop: 68796, Start Num: 24

Candidate Starts for Emma1919\_106:

(Start: 24 @68431 has 15 MA's), (27, 68470), (31, 68521), (51, 68641), (56, 68683), (64, 68722), (69, 68740),

Gene: Forrest\_110 Start: 70740, Stop: 71105, Start Num: 24

Candidate Starts for Forrest\_110:

(Start: 24 @70740 has 15 MA's), (27, 70779), (31, 70830), (51, 70950), (56, 70992), (58, 70998), (64, 71031), (69, 71049),

Gene: Francob\_103 Start: 68601, Stop: 68966, Start Num: 24

Candidate Starts for Francob\_103:

(Start: 24 @68601 has 15 MA's), (31, 68691), (56, 68853), (58, 68859), (64, 68892), (69, 68910),

Gene: Ganymede\_59 Start: 40919, Stop: 41185, Start Num: 23

Candidate Starts for Ganymede\_59:

(14, 40877), (Start: 23 @40919 has 89 MA's), (28, 40964), (41, 41060), (45, 41078), (59, 41132), (63, 41150), (65, 41162), (68, 41174),

Gene: Geraldini\_61 Start: 41585, Stop: 41851, Start Num: 23

Candidate Starts for Geraldini\_61:

(14, 41543), (Start: 23 @41585 has 89 MA's), (28, 41630), (41, 41726), (45, 41744), (59, 41798), (63, 41816), (65, 41828), (68, 41840),

Gene: Gilson\_105 Start: 68393, Stop: 68758, Start Num: 24

Candidate Starts for Gilson\_105:

(Start: 24 @68393 has 15 MA's), (27, 68432), (31, 68483), (51, 68603), (56, 68645), (64, 68684), (69, 68702),

Gene: Greely\_42 Start: 16620, Stop: 16946, Start Num: 19

Candidate Starts for Greely\_42:

(Start: 19 @16620 has 4 MA's), (28, 16671), (30, 16698), (31, 16719), (44, 16788), (59, 16863),

Gene: Guanica15\_61 Start: 40356, Stop: 40622, Start Num: 23

Candidate Starts for Guanica15\_61:

(3, 40161), (Start: 23 @40356 has 89 MA's), (28, 40401), (41, 40497), (63, 40587), (65, 40599), (68, 40611),

Gene: HedwigODU\_58 Start: 40539, Stop: 40805, Start Num: 23

Candidate Starts for HedwigODU\_58:

(14, 40497), (Start: 23 @40539 has 89 MA's), (28, 40584), (41, 40680), (59, 40752), (63, 40770), (65, 40782), (68, 40794),

Gene: Homura\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Homura\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (28, 40703), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Hurricane\_58 Start: 40805, Stop: 41074, Start Num: 23

Candidate Starts for Hurricane\_58:

(14, 40766), (Start: 23 @40805 has 89 MA's), (28, 40850), (34, 40916), (38, 40937), (68, 41063),

Gene: Hyperbowlee\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Hyperbowlee\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Illumine\_62 Start: 41618, Stop: 41938, Start Num: 23

Candidate Starts for Illumine\_62:

(Start: 23 @41618 has 89 MA's), (28, 41663), (38, 41750), (48, 41816), (50, 41819), (67, 41924), (68, 41927),

Gene: Inky\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Inky\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: JAWS\_58 Start: 40525, Stop: 40791, Start Num: 23

Candidate Starts for JAWS\_58:

(14, 40483), (Start: 23 @40525 has 89 MA's), (28, 40570), (41, 40666), (59, 40738), (63, 40756), (65, 40768), (68, 40780),

Gene: Jada\_105 Start: 68906, Stop: 69271, Start Num: 24

Candidate Starts for Jada\_105:

(Start: 24 @68906 has 15 MA's), (27, 68945), (31, 68996), (51, 69116), (56, 69158), (64, 69197), (69, 69215),

Gene: Jarvi\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Jarvi\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Jayhawk\_59 Start: 40534, Stop: 40800, Start Num: 23

Candidate Starts for Jayhawk\_59:

(14, 40492), (Start: 23 @40534 has 89 MA's), (28, 40579), (41, 40675), (45, 40693), (59, 40747), (63, 40765), (65, 40777), (68, 40789),

Gene: Jeckyll\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Jeckyll\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Joy99\_58 Start: 40587, Stop: 40853, Start Num: 23

Candidate Starts for Joy99\_58:

(14, 40545), (Start: 23 @40587 has 89 MA's), (41, 40728), (45, 40746), (59, 40800), (63, 40818), (65, 40830), (68, 40842),

Gene: Karp\_101 Start: 68949, Stop: 69314, Start Num: 24

Candidate Starts for Karp\_101:

(Start: 24 @68949 has 15 MA's), (25, 68952), (31, 69039), (51, 69159), (56, 69201), (61, 69219), (64, 69240), (69, 69258),

Gene: Kenrey\_106 Start: 68621, Stop: 68986, Start Num: 24

Candidate Starts for Kenrey\_106:

(Start: 24 @68621 has 15 MA's), (31, 68711), (49, 68819), (51, 68831), (64, 68912), (69, 68930),

Gene: Keshu\_60 Start: 40903, Stop: 41172, Start Num: 23

Candidate Starts for Keshu\_60:

(14, 40864), (Start: 23 @40903 has 89 MA's), (28, 40948), (34, 41014), (38, 41035), (68, 41161),

Gene: Kudrefre\_112 Start: 61740, Stop: 62057, Start Num: 19

Candidate Starts for Kudrefre\_112:

(Start: 19 @61740 has 4 MA's), (26, 61761), (31, 61839), (32, 61842), (35, 61866), (40, 61881), (47, 61938), (52, 61962),

Gene: Kumao\_82 Start: 53900, Stop: 54196, Start Num: 22

Candidate Starts for Kumao\_82:

(17, 53870), (Start: 22 @53900 has 2 MA's), (42, 54062), (48, 54089), (54, 54113), (56, 54125), (58, 54131), (67, 54173), (68, 54176),

Gene: LastHope\_61 Start: 39701, Stop: 39967, Start Num: 23

Candidate Starts for LastHope\_61:

(14, 39659), (Start: 23 @39701 has 89 MA's), (28, 39746), (41, 39842), (59, 39914), (63, 39932), (65, 39944), (68, 39956),

Gene: LaterM\_59 Start: 41420, Stop: 41719, Start Num: 23

Candidate Starts for LaterM\_59:

(Start: 23 @41420 has 89 MA's), (28, 41465), (41, 41561), (46, 41585), (59, 41633), (63, 41651), (65, 41663), (68, 41675), (71, 41684),

Gene: LindNT\_57 Start: 40742, Stop: 41008, Start Num: 23

Candidate Starts for LindNT\_57:

(14, 40700), (Start: 23 @40742 has 89 MA's), (28, 40787), (41, 40883), (59, 40955), (63, 40973), (65, 40985), (68, 40997),

Gene: Llorens\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Llorens\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Lunahalos\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Lunahalos\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: MacnCheese\_60 Start: 41385, Stop: 41663, Start Num: 23

Candidate Starts for MacnCheese\_60:

(1, 41154), (2, 41190), (Start: 23 @41385 has 89 MA's), (28, 41430), (33, 41490), (34, 41496), (38, 41517), (72, 41655),

Gene: MeaningOfLife\_59 Start: 41413, Stop: 41679, Start Num: 23

Candidate Starts for MeaningOfLife\_59:

(14, 41371), (Start: 23 @41413 has 89 MA's), (28, 41458), (41, 41554), (45, 41572), (59, 41626), (63, 41644), (65, 41656), (68, 41668),

Gene: MeganTheeKilla\_103 Start: 67750, Stop: 68115, Start Num: 24

Candidate Starts for MeganTheeKilla\_103:

(Start: 24 @67750 has 15 MA's), (27, 67789), (31, 67840), (51, 67960), (56, 68002), (64, 68041), (69, 68059),

Gene: Megsy\_60 Start: 40807, Stop: 41073, Start Num: 23

Candidate Starts for Megsy\_60:

(14, 40765), (Start: 23 @40807 has 89 MA's), (28, 40852), (41, 40948), (59, 41020), (63, 41038), (65, 41050), (68, 41062),

Gene: Moab\_105 Start: 70915, Stop: 71280, Start Num: 24

Candidate Starts for Moab\_105:

(Start: 24 @70915 has 15 MA's), (31, 71005), (51, 71125), (56, 71167), (58, 71173), (64, 71206), (69, 71224),

Gene: Murucutumbu\_59 Start: 41513, Stop: 41779, Start Num: 23

Candidate Starts for Murucutumbu\_59:

(2, 41315), (14, 41471), (Start: 23 @41513 has 89 MA's), (28, 41558), (41, 41654), (59, 41726), (63, 41744), (65, 41756), (68, 41768),

Gene: Mynx\_59 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Mynx\_59:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Neville\_108 Start: 62420, Stop: 62755, Start Num: 16

Candidate Starts for Neville\_108:

(13, 62390), (Start: 16 @62420 has 2 MA's), (Start: 18 @62438 has 1 MA's), (32, 62549), (39, 62585), (52, 62666), (57, 62699), (60, 62711), (66, 62738),

Gene: Octobien14\_108 Start: 60532, Stop: 60849, Start Num: 20

Candidate Starts for Octobien14\_108:

(5, 60397), (12, 60481), (Start: 20 @60532 has 1 MA's), (31, 60631), (32, 60634), (35, 60658), (40, 60673), (47, 60730), (52, 60754),

Gene: Padfoot\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Padfoot\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Padpat\_60 Start: 40536, Stop: 40802, Start Num: 23

Candidate Starts for Padpat\_60:

(14, 40494), (Start: 23 @40536 has 89 MA's), (28, 40581), (41, 40677), (45, 40695), (59, 40749), (63, 40767), (65, 40779), (68, 40791),

Gene: Patelgo\_104 Start: 70001, Stop: 70366, Start Num: 24

Candidate Starts for Patelgo\_104:

(Start: 24 @70001 has 15 MA's), (31, 70091), (51, 70211), (56, 70253), (64, 70292), (69, 70310),

Gene: Peel\_58 Start: 40660, Stop: 40926, Start Num: 23

Candidate Starts for Peel\_58:

(14, 40618), (Start: 23 @40660 has 89 MA's), (28, 40705), (41, 40801), (45, 40819), (59, 40873), (63, 40891), (65, 40903), (68, 40915),

Gene: Phabba\_44 Start: 16811, Stop: 17128, Start Num: 19

Candidate Starts for Phabba\_44:

(Start: 19 @16811 has 4 MA's), (28, 16859), (30, 16886), (31, 16907), (37, 16937), (43, 16973), (44, 16976), (59, 17051),

Gene: Pharb\_57 Start: 40007, Stop: 40276, Start Num: 23

Candidate Starts for Pharb\_57:

(Start: 23 @40007 has 89 MA's), (34, 40118), (38, 40139), (68, 40265),

Gene: Phredrick\_104 Start: 67726, Stop: 68091, Start Num: 24

Candidate Starts for Phredrick\_104:

(Start: 24 @67726 has 15 MA's), (31, 67816), (49, 67924), (51, 67936), (64, 68017), (69, 68035),

Gene: Piatt\_58 Start: 40855, Stop: 41121, Start Num: 23

Candidate Starts for Piatt\_58:

(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: Pixie\_57 Start: 40343, Stop: 40612, Start Num: 23

Candidate Starts for Pixie\_57:

(14, 40304), (Start: 23 @40343 has 89 MA's), (28, 40388), (34, 40454), (38, 40475), (59, 40559), (68, 40601),

Gene: Pokerus\_57 Start: 40585, Stop: 40851, Start Num: 23

Candidate Starts for Pokerus\_57:

(14, 40543), (Start: 23 @40585 has 89 MA's), (28, 40630), (41, 40726), (45, 40744), (59, 40798), (63, 40816), (65, 40828), (68, 40840),

Gene: Prithvi\_59 Start: 40742, Stop: 41008, Start Num: 23

Candidate Starts for Prithvi\_59:

(14, 40700), (Start: 23 @40742 has 89 MA's), (28, 40787), (41, 40883), (59, 40955), (63, 40973), (65, 40985), (68, 40997),

Gene: QuincyRose\_57 Start: 40919, Stop: 41185, Start Num: 23

Candidate Starts for QuincyRose\_57:

(14, 40877), (Start: 23 @40919 has 89 MA's), (28, 40964), (41, 41060), (45, 41078), (59, 41132), (63, 41150), (65, 41162), (68, 41174),

Gene: Rabbitrun\_110 Start: 63382, Stop: 63696, Start Num: 18

Candidate Starts for Rabbitrun\_110:

(6, 63274), (15, 63358), (Start: 16 @63364 has 2 MA's), (Start: 18 @63382 has 1 MA's), (39, 63529), (52, 63607), (60, 63652), (64, 63673), (66, 63679),

Gene: Ramen\_59 Start: 40541, Stop: 40807, Start Num: 23

Candidate Starts for Ramen\_59:

(14, 40499), (Start: 23 @40541 has 89 MA's), (28, 40586), (41, 40682), (59, 40754), (63, 40772), (65, 40784), (68, 40796),

Gene: Rapunzel97\_59 Start: 40534, Stop: 40800, Start Num: 23

Candidate Starts for Rapunzel97\_59:

(14, 40492), (Start: 23 @40534 has 89 MA's), (28, 40579), (41, 40675), (45, 40693), (59, 40747), (63, 40765), (65, 40777), (68, 40789),

Gene: Rosmarinus\_58 Start: 40646, Stop: 40912, Start Num: 23

Candidate Starts for Rosmarinus\_58:

(14, 40604), (Start: 23 @40646 has 89 MA's), (41, 40787), (45, 40805), (59, 40859), (63, 40877), (65, 40889), (68, 40901),

Gene: SamuelLPlaqson\_59 Start: 41439, Stop: 41705, Start Num: 23

Candidate Starts for SamuelLPlaqson\_59:

(14, 41397), (Start: 23 @41439 has 89 MA's), (28, 41484), (41, 41580), (59, 41652), (63, 41670), (65, 41682), (68, 41694),

Gene: ScoobyDoobyDoo\_35 Start: 13310, Stop: 13627, Start Num: 21

Candidate Starts for ScoobyDoobyDoo\_35:

(6, 13199), (7, 13205), (8, 13208), (10, 13220), (11, 13244), (Start: 21 @13310 has 1 MA's), (Start: 23 @13322 has 89 MA's), (30, 13394), (31, 13415), (36, 13442), (57, 13538), (71, 13595),

Gene: Sephiroth\_108 Start: 61495, Stop: 61812, Start Num: 19

Candidate Starts for Sephiroth\_108:

(Start: 19 @61495 has 4 MA's), (31, 61594), (32, 61597), (35, 61621), (40, 61636), (47, 61693), (52, 61717),

Gene: ShedlockHolmes\_59 Start: 40862, Stop: 41131, Start Num: 23

Candidate Starts for ShedlockHolmes\_59:

(2, 40667), (14, 40823), (Start: 23 @40862 has 89 MA's), (28, 40907), (34, 40973), (38, 40994), (68, 41120),

Gene: ShiaSurprise\_59 Start: 40855, Stop: 41121, Start Num: 23  
Candidate Starts for ShiaSurprise\_59:  
(14, 40813), (Start: 23 @40855 has 89 MA's), (28, 40900), (41, 40996), (45, 41014), (59, 41068), (63, 41086), (65, 41098), (68, 41110),

Gene: SirPhilip\_59 Start: 41271, Stop: 41540, Start Num: 23  
Candidate Starts for SirPhilip\_59:  
(2, 41073), (4, 41124), (Start: 23 @41271 has 89 MA's), (28, 41316), (30, 41343), (38, 41403), (68, 41529),

Gene: Sixama\_38 Start: 12651, Stop: 12286, Start Num: 23  
Candidate Starts for Sixama\_38:  
(11, 12729), (17, 12684), (Start: 23 @12651 has 89 MA's), (28, 12606), (29, 12585), (53, 12429), (70, 12339), (73, 12312),

Gene: Slimphazie\_58 Start: 40534, Stop: 40800, Start Num: 23  
Candidate Starts for Slimphazie\_58:  
(14, 40492), (Start: 23 @40534 has 89 MA's), (28, 40579), (41, 40675), (45, 40693), (59, 40747), (63, 40765), (65, 40777), (68, 40789),

Gene: SparkleGoddess\_103 Start: 69278, Stop: 69643, Start Num: 24  
Candidate Starts for SparkleGoddess\_103:  
(Start: 24 @69278 has 15 MA's), (25, 69281), (31, 69368), (51, 69488), (56, 69530), (64, 69569), (69, 69587),

Gene: Spock\_58 Start: 40659, Stop: 40925, Start Num: 23  
Candidate Starts for Spock\_58:  
(14, 40617), (Start: 23 @40659 has 89 MA's), (41, 40800), (45, 40818), (59, 40872), (63, 40890), (65, 40902), (68, 40914),

Gene: Stigma\_102 Start: 69286, Stop: 69651, Start Num: 24  
Candidate Starts for Stigma\_102:  
(Start: 24 @69286 has 15 MA's), (25, 69289), (31, 69376), (51, 69496), (56, 69538), (64, 69577), (69, 69595),

Gene: Stinson\_59 Start: 41036, Stop: 41302, Start Num: 23  
Candidate Starts for Stinson\_59:  
(Start: 23 @41036 has 89 MA's), (28, 41081), (41, 41177), (46, 41201), (59, 41249), (63, 41267), (65, 41279), (68, 41291),

Gene: Sulley\_58 Start: 40710, Stop: 40976, Start Num: 23  
Candidate Starts for Sulley\_58:  
(14, 40668), (Start: 23 @40710 has 89 MA's), (28, 40755), (41, 40851), (59, 40923), (63, 40941), (65, 40953), (68, 40965),

Gene: Syleon\_113 Start: 62277, Stop: 62594, Start Num: 19  
Candidate Starts for Syleon\_113:  
(Start: 19 @62277 has 4 MA's), (26, 62298), (52, 62499),

Gene: TBond007\_56 Start: 40342, Stop: 40611, Start Num: 23  
Candidate Starts for TBond007\_56:  
(14, 40303), (Start: 23 @40342 has 89 MA's), (28, 40387), (34, 40453), (38, 40474), (68, 40600),

Gene: Tachez\_58 Start: 40503, Stop: 40769, Start Num: 23

Candidate Starts for Tachez\_58:

(14, 40461), (Start: 23 @40503 has 89 MA's), (28, 40548), (41, 40644), (45, 40662), (59, 40716), (63, 40734), (65, 40746), (68, 40758),

Gene: TaiwanKao\_60 Start: 40804, Stop: 41070, Start Num: 23

Candidate Starts for TaiwanKao\_60:

(14, 40762), (Start: 23 @40804 has 89 MA's), (28, 40849), (41, 40945), (59, 41017), (63, 41035), (65, 41047), (68, 41059),

Gene: TiniBug\_59 Start: 41435, Stop: 41701, Start Num: 23

Candidate Starts for TiniBug\_59:

(14, 41393), (Start: 23 @41435 has 89 MA's), (28, 41480), (41, 41576), (59, 41648), (63, 41666), (65, 41678), (68, 41690),

Gene: Tiri\_59 Start: 40824, Stop: 41090, Start Num: 23

Candidate Starts for Tiri\_59:

(14, 40782), (Start: 23 @40824 has 89 MA's), (28, 40869), (41, 40965), (45, 40983), (55, 41022), (59, 41037), (63, 41055), (65, 41067), (68, 41079),

Gene: Topper\_58 Start: 40658, Stop: 40924, Start Num: 23

Candidate Starts for Topper\_58:

(14, 40616), (Start: 23 @40658 has 89 MA's), (41, 40799), (45, 40817), (59, 40871), (63, 40889), (65, 40901), (68, 40913),

Gene: Trax\_110 Start: 63415, Stop: 63750, Start Num: 16

Candidate Starts for Trax\_110:

(13, 63385), (Start: 16 @63415 has 2 MA's), (Start: 18 @63433 has 1 MA's), (32, 63544), (39, 63580), (52, 63661), (57, 63694), (60, 63706), (66, 63733),

Gene: TreyKay\_59 Start: 40742, Stop: 41008, Start Num: 23

Candidate Starts for TreyKay\_59:

(14, 40700), (Start: 23 @40742 has 89 MA's), (28, 40787), (41, 40883), (59, 40955), (63, 40973), (65, 40985), (68, 40997),

Gene: TribbleTrouble\_57 Start: 40818, Stop: 41087, Start Num: 23

Candidate Starts for TribbleTrouble\_57:

(Start: 23 @40818 has 89 MA's), (28, 40863), (34, 40929), (38, 40950), (68, 41076),

Gene: TruffulaTree\_58 Start: 40530, Stop: 40796, Start Num: 23

Candidate Starts for TruffulaTree\_58:

(14, 40488), (Start: 23 @40530 has 89 MA's), (28, 40575), (41, 40671), (45, 40689), (59, 40743), (63, 40761), (65, 40773), (68, 40785),

Gene: Twitch\_58 Start: 40660, Stop: 40926, Start Num: 23

Candidate Starts for Twitch\_58:

(14, 40618), (Start: 23 @40660 has 89 MA's), (28, 40705), (41, 40801), (45, 40819), (59, 40873), (63, 40891), (65, 40903), (68, 40915),

Gene: Urkel\_59 Start: 41439, Stop: 41705, Start Num: 23

Candidate Starts for Urkel\_59:

(14, 41397), (Start: 23 @41439 has 89 MA's), (28, 41484), (41, 41580), (59, 41652), (63, 41670), (65, 41682), (68, 41694),



Gene: Veliki\_59 Start: 40516, Stop: 40782, Start Num: 23

Candidate Starts for Veliki\_59:

(14, 40474), (Start: 23 @40516 has 89 MA's), (28, 40561), (41, 40657), (59, 40729), (63, 40747), (65, 40759), (68, 40771),

Gene: YoureAdopted\_57 Start: 40659, Stop: 40925, Start Num: 23

Candidate Starts for YoureAdopted\_57:

(14, 40617), (Start: 23 @40659 has 89 MA's), (41, 40800), (45, 40818), (59, 40872), (63, 40890), (65, 40902), (68, 40914),

Gene: Yuna\_63 Start: 41860, Stop: 42126, Start Num: 22

Candidate Starts for Yuna\_63:

(9, 41767), (Start: 22 @41860 has 2 MA's), (Start: 23 @41863 has 89 MA's), (28, 41908), (32, 41959), (38, 41989), (68, 42115),

Gene: Yunkel11\_61 Start: 40355, Stop: 40621, Start Num: 23

Candidate Starts for Yunkel11\_61:

(3, 40160), (Start: 23 @40355 has 89 MA's), (28, 40400), (41, 40496), (63, 40586), (65, 40598), (68, 40610),

Gene: Zabiza\_54 Start: 36844, Stop: 37110, Start Num: 23

Candidate Starts for Zabiza\_54:

(14, 36802), (Start: 23 @36844 has 89 MA's), (28, 36889), (41, 36985), (59, 37057), (63, 37075), (65, 37087), (68, 37099),

Gene: Zavala\_60 Start: 40815, Stop: 41081, Start Num: 23

Candidate Starts for Zavala\_60:

(14, 40773), (Start: 23 @40815 has 89 MA's), (28, 40860), (41, 40956), (59, 41028), (63, 41046), (65, 41058), (68, 41070),