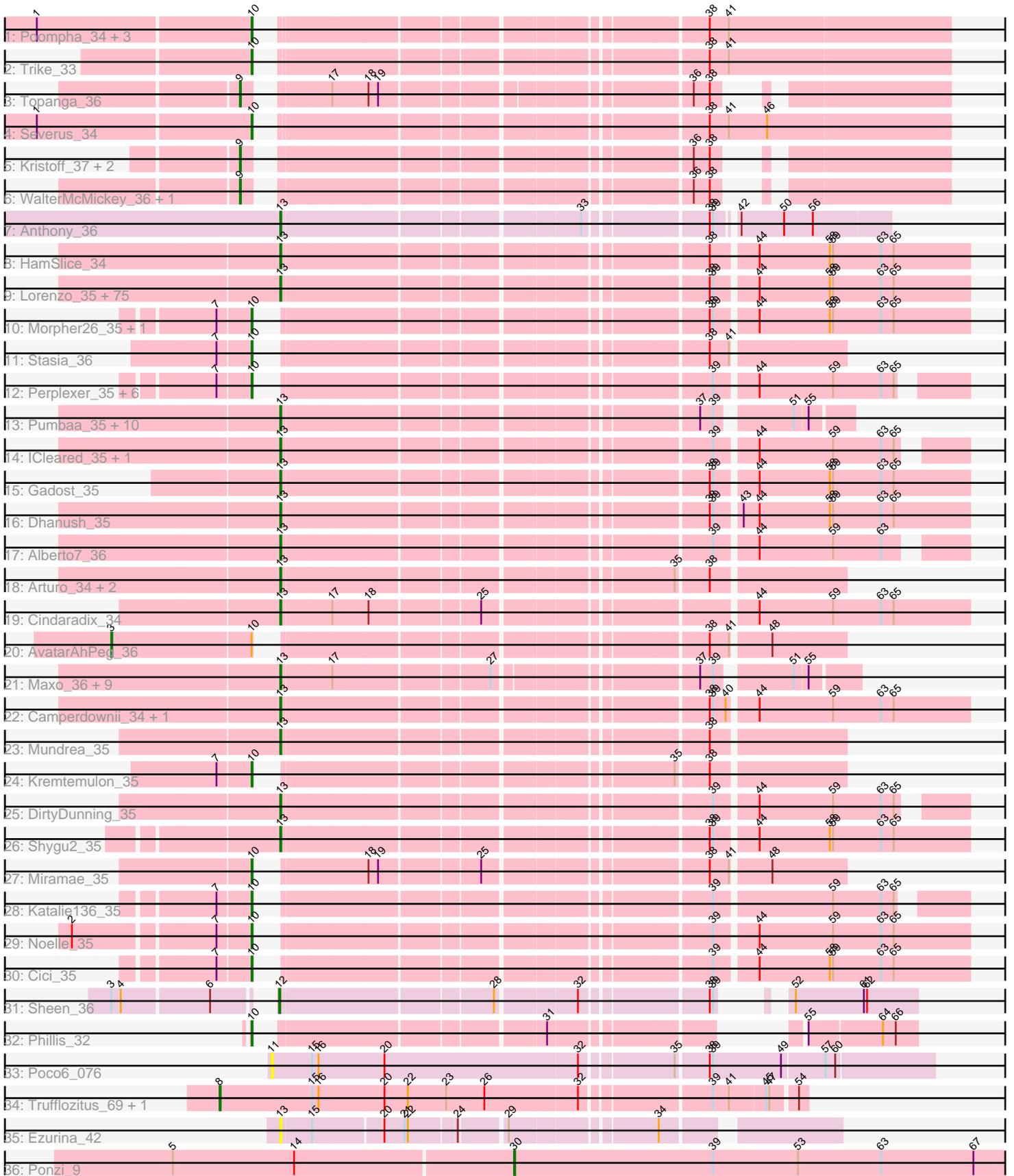


Pham 290917



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 290917 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290917 has 148 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Poompha\_34, Drake94\_34, PeaceMeal1\_34, KittenMittens\_33
- Track 2 : Trike\_33
- Track 3 : Topanga\_36
- Track 4 : Severus\_34
- Track 5 : Kristoff\_37, Rebeuca\_37, Edison31\_36
- Track 6 : WalterMcMickey\_36, Twister\_36
- Track 7 : Anthony\_36
- Track 8 : HamSlice\_34
- Track 9 : Lorenzo\_35, Cocoaberry\_35, Florean\_35, Eapen\_35, Wizard007\_35, Bartimeaus\_35, Avle17\_35, Wilbur\_35, Taquarus\_35, Bruiser\_34, Relief\_35, Kyee\_35, Holli\_35, CentreCat\_35, Baby16\_35, Funston\_35, Ruin\_35, TygerBlood\_35, NotAPhaseMom\_35, Scamp\_35, Phighter1804\_35, Albee\_35, Nemo27\_35, LappelDuVide\_35, Citius\_35, Flux\_35, Lemur\_35, Lunsford\_36, Caelakin\_35, SeniorClean\_35, LittleB\_35, Mazhar510\_35, Eris\_34, Sultana\_35, Annyong\_35, Chaph\_35, Druantia\_35, Pipcraft\_35, Wander\_35, Bombshell\_35, TiroTheta9\_35, Sabertooth\_35, MeeZee\_35, Thanksgivukkah\_35, Blackmoor\_35, LochMonster\_35, Skipitt\_35, Kingmustik0402\_35, Iceman\_36, Maverick\_35, Houdini22\_35, Happiness\_35, NorthStar\_35, Phacado\_35, Koan\_35, JoongJeon\_35, Burger\_34, Eros\_35, Peaches\_35, Romney\_35, Millski\_34, BubbleTrouble\_35, Clarenza\_35, Jaykayelowell\_35, PeterPeter\_35, Deano\_35, Shaka\_35, Palestino\_34, YoSam321\_35, Mayonnaise\_35, Roosevelt\_35, JetBlade\_35, Connomayer\_35, Broseidon\_35, Spino\_35, KFPoly\_35
- Track 10 : Morpher26\_35, Wile\_35
- Track 11 : Stasia\_36
- Track 12 : Perplexer\_35, PetiteSangsue\_35, Badger\_35, Backyardigan\_35, Datway\_35, Xena\_35, AbbysRanger\_35
- Track 13 : Pumbaa\_35, TinaFeyge\_36, LittleGuy\_35, Commander\_36, TroyPia\_36, Ulysses\_34, Medusa\_36, Phontbonne\_35, Melvin\_37, Nyxis\_35, Phelipe\_36
- Track 14 : ICleared\_35, Koreni\_34
- Track 15 : Gadost\_35
- Track 16 : Dhanush\_35
- Track 17 : Alberto7\_36
- Track 18 : Arturo\_34, Kratak\_35, Iracema64\_36
- Track 19 : Cindaradix\_34
- Track 20 : AvatarAhPeg\_36
- Track 21 : Maxo\_36, BellusTerra\_36, Eurydice\_36, Nebs\_36, Sparxx\_36, Ohfah\_36, Eagle\_35, Abdiel\_35, Morrow\_36, Polymorphads\_36

- Track 22 : Camperdownii\_34, Cintron\_35
- Track 23 : Mundrea\_35
- Track 24 : Kremtemulon\_35
- Track 25 : DirtyDunning\_35
- Track 26 : Shygu2\_35
- Track 27 : Miramae\_35
- Track 28 : Katalie136\_35
- Track 29 : Noelle\_35
- Track 30 : Cici\_35
- Track 31 : Sheen\_36
- Track 32 : Phillis\_32
- Track 33 : Poco6\_076
- Track 34 : Trufflozitus\_69, JulesRay\_65
- Track 35 : Ezurina\_42
- Track 36 : Ponzi\_9

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

The start number called the most often in the published annotations is 13, it was called in 113 of the 145 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abdiel\_35, Albee\_35, Alberto7\_36, Annyong\_35, Anthony\_36, Arturo\_34, Avle17\_35, Baby16\_35, Bartimeaus\_35, BellusTerra\_36, Blackmoor\_35, Bombshell\_35, Broseidon\_35, Bruiser\_34, BubbleTrouble\_35, Burger\_34, Caelakin\_35, Camperdownii\_34, CentreCat\_35, Chaph\_35, Cindaradix\_34, Cintron\_35, Citius\_35, Clarenza\_35, Cocoaberry\_35, Commander\_36, Connomayer\_35, Deano\_35, Dhanush\_35, DirtyDunning\_35, Druantia\_35, Eagle\_35, Eapen\_35, Eris\_34, Eros\_35, Eurydice\_36, Ezurina\_42, Floean\_35, Flux\_35, Funston\_35, Gadost\_35, HamSlice\_34, Happiness\_35, Holli\_35, Houdini22\_35, ICleared\_35, Iceman\_36, Iracema64\_36, Jaykayelowell\_35, JetBlade\_35, JoongJeon\_35, KFPoly\_35, Kingmustik0402\_35, Koan\_35, Koreni\_34, Kratark\_35, Kyee\_35, LappelDuVide\_35, Lemur\_35, LittleB\_35, LittleGuy\_35, LochMonster\_35, Lorenzo\_35, Lunsford\_36, Maverick\_35, Maxo\_36, Mayonnaise\_35, Mazhar510\_35, Medusa\_36, MeeZee\_35, Melvin\_37, Millski\_34, Morrow\_36, Mundrea\_35, Nebs\_36, Nemo27\_35, NorthStar\_35, NotAPhaseMom\_35, Nyxis\_35, Ohfah\_36, Palestino\_34, Peaches\_35, PeterPeter\_35, Phacado\_35, Phelipe\_36, Phighter1804\_35, Phontbonne\_35, Pipcraft\_35, Polymorphads\_36, Pumbaa\_35, Relief\_35, Romney\_35, Roosevelt\_35, Ruin\_35, Sabertooth\_35, Scamp\_35, SeniorClean\_35, Shaka\_35, Shygu2\_35, Skipitt\_35, Sparxx\_36, Spino\_35, Sultana\_35, Taquarus\_35, Thanksgivukkah\_35, TinaFeyge\_36, TiroTheta9\_35, TroyPia\_36, TygerBlood\_35, Ulysses\_34, Wander\_35, Wilbur\_35, Wizard007\_35, YoSam321\_35,

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

- 

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

- AbbysRanger\_35, AvatarAhPeg\_36, Backyardigan\_35, Badger\_35, Cici\_35, Datway\_35, Drake94\_34, Edison31\_36, JulesRay\_65, Katalie136\_35, KittenMittens\_33, Kremtemulon\_35, Kristoff\_37, Miramae\_35, Morpher26\_35,

Noelle\_35, PeaceMeal1\_34, Perplexer\_35, PetiteSangsue\_35, Phillis\_32, Poco6\_076, Ponzi\_9, Poompha\_34, Rebeuca\_37, Severus\_34, Sheen\_36, Stasia\_36, Topanga\_36, Trike\_33, Trufflozitus\_69, Twister\_36, WalterMcMickey\_36, Wile\_35, Xena\_35,

### Summary by start number:

#### Start 3:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 145
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AvatarAhPeg\_36 (A4),

#### Start 8:

- Found in 2 of 148 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 145
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JulesRay\_65 (DJ), Trufflozitus\_69 (DJ),

#### Start 9:

- Found in 6 of 148 ( 4.1% ) of genes in pham
- Manual Annotations of this start: 6 of 145
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Edison31\_36 (A10), Kristoff\_37 (A10), Rebeuca\_37 (A10), Topanga\_36 (A10), Twister\_36 (A10), WalterMcMickey\_36 (A10),

#### Start 10:

- Found in 23 of 148 ( 15.5% ) of genes in pham
- Manual Annotations of this start: 22 of 145
- Called 95.7% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_35 (A4), Backyardigan\_35 (A4), Badger\_35 (A4), Cici\_35 (A4), Datway\_35 (A4), Drake94\_34 (A10), Katalie136\_35 (A4), KittenMittens\_33 (A10), Kremtemulon\_35 (A4), Miramae\_35 (A4), Morpher26\_35 (A4), Noelle\_35 (A4), PeaceMeal1\_34 (A10), Perplexer\_35 (A4), PetiteSangsue\_35 (A4), Phillis\_32 (A8), Poompha\_34 (A10), Severus\_34 (A10), Stasia\_36 (A4), Trike\_33 (A10), Wile\_35 (A4), Xena\_35 (A4),

#### Start 11:

- Found in 1 of 148 ( 0.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Poco6\_076 (CC),

#### Start 12:

- Found in 1 of 148 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 145
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sheen\_36 (A7),

#### Start 13:

- Found in 114 of 148 ( 77.0% ) of genes in pham
- Manual Annotations of this start: 113 of 145
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Abdiel\_35 (A4), Albee\_35 (A4), Alberto7\_36 (A4), Annyong\_35 (A4), Anthony\_36 (A20), Arturo\_34 (A4), Avle17\_35 (A4), Baby16\_35 (A4), Bartimeaus\_35 (A4), BellusTerra\_36 (A4), Blackmoor\_35 (A4), Bombshell\_35 (A4), Broseidon\_35 (A4), Bruiser\_34 (A4), BubbleTrouble\_35 (A4), Burger\_34 (A4), Caelakin\_35 (A4), Camperdownii\_34 (A4), CentreCat\_35 (A4), Chaph\_35 (A4), Cindaradix\_34 (A4), Cintron\_35 (A4), Citius\_35 (A4), Clarenza\_35 (A4), Cocoaberry\_35 (A4), Commander\_36 (A4), Connomayer\_35 (A4), Deano\_35 (A4), Dhanush\_35 (A4), DirtyDunning\_35 (A4), Druantia\_35 (A4), Eagle\_35 (A4), Eapen\_35 (A4), Eris\_34 (A4), Eros\_35 (A4), Eurydice\_36 (A4), Ezurina\_42 (FR), Florean\_35 (A4), Flux\_35 (A4), Funston\_35 (A4), Gadost\_35 (A4), HamSlice\_34 (A4), Happiness\_35 (A4), Holli\_35 (A4), Houdini22\_35 (A4), ICleared\_35 (A4), Iceman\_36 (A4), Iracema64\_36 (A4), Jaykayelowell\_35 (A4), JetBlade\_35 (A4), JoongJeon\_35 (A4), KFPoly\_35 (A4), Kingmustik0402\_35 (A4), Koan\_35 (A4), Koreni\_34 (A4), Kratark\_35 (A4), Kyee\_35 (A4), LappelDuVide\_35 (A4), Lemur\_35 (A4), LittleB\_35 (A4), LittleGuy\_35 (A4), LochMonster\_35 (A4), Lorenzo\_35 (A4), Lunsford\_36 (A4), Maverick\_35 (A4), Maxo\_36 (A4), Mayonnaise\_35 (A4), Mazhar510\_35 (A4), Medusa\_36 (A4), MeeZee\_35 (A4), Melvin\_37 (A4), Millski\_34 (A4), Morrow\_36 (A4), Mundrea\_35 (A4), Nebs\_36 (A4), Nemo27\_35 (A4), NorthStar\_35 (A4), NotAPhaseMom\_35 (A4), Nyxis\_35 (A4), Ohfah\_36 (A4), Palestino\_34 (A4), Peaches\_35 (A4), PeterPeter\_35 (A4), Phacado\_35 (A4), Phelipe\_36 (A4), Phighter1804\_35 (A4), Phontbonne\_35 (A4), Pipcraft\_35 (A4), Polymorphads\_36 (A4), Pumbaa\_35 (A4), Relief\_35 (A4), Romney\_35 (A4), Roosevelt\_35 (A4), Ruin\_35 (A4), Sabertooth\_35 (A4), Scamp\_35 (A4), SeniorClean\_35 (A4), Shaka\_35 (A4), Shygu2\_35 (A4), Skipitt\_35 (A4), Sparxx\_36 (A4), Spino\_35 (A4), Sultana\_35 (A4), Taquarus\_35 (A4), Thanksgivukkah\_35 (A4), TinaFeyge\_36 (A4), TiroTheta9\_35 (A4), TroyPia\_36 (A4), TygerBlood\_35 (A4), Ulysses\_34 (A4), Wander\_35 (A4), Wilbur\_35 (A4), Wizard007\_35 (A4), YoSam321\_35 (A4),

Start 30:

- Found in 1 of 148 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 145
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ponzi\_9 (singleton),

### Summary by clusters:

There are 9 clusters represented in this pham: A20, FR, DJ, A10, CC, singleton, A4, A7, A8,

Info for manual annotations of cluster A10:

- Start number 9 was manually annotated 6 times for cluster A10.
- Start number 10 was manually annotated 6 times for cluster A10.

Info for manual annotations of cluster A20:

- Start number 13 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A4:

- Start number 3 was manually annotated 1 time for cluster A4.
- Start number 10 was manually annotated 15 times for cluster A4.
- Start number 13 was manually annotated 112 times for cluster A4.

Info for manual annotations of cluster A7:

- Start number 12 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A8:

- Start number 10 was manually annotated 1 time for cluster A8.

Info for manual annotations of cluster DJ:

- Start number 8 was manually annotated 1 time for cluster DJ.

### **Gene Information:**

Gene: AbbysRanger\_35 Start: 27851, Stop: 27276, Start Num: 10

Candidate Starts for AbbysRanger\_35:

(7, 27881), (Start: 10 @27851 has 22 MA's), (39, 27488), (44, 27452), (59, 27383), (63, 27338), (65, 27326),

Gene: Abdiel\_35 Start: 27799, Stop: 27323, Start Num: 13

Candidate Starts for Abdiel\_35:

(Start: 13 @27799 has 113 MA's), (17, 27754), (27, 27616), (37, 27451), (39, 27439), (51, 27379), (55, 27367),

Gene: Albee\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Albee\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Alberto7\_36 Start: 28144, Stop: 27569, Start Num: 13

Candidate Starts for Alberto7\_36:

(Start: 13 @28144 has 113 MA's), (39, 27781), (44, 27745), (59, 27676), (63, 27631),

Gene: Annyong\_35 Start: 27805, Stop: 27209, Start Num: 13

Candidate Starts for Annyong\_35:

(Start: 13 @27805 has 113 MA's), (38, 27445), (39, 27442), (44, 27406), (58, 27340), (59, 27337), (63, 27292), (65, 27280),

Gene: Anthony\_36 Start: 26453, Stop: 25938, Start Num: 13

Candidate Starts for Anthony\_36:

(Start: 13 @26453 has 113 MA's), (33, 26195), (38, 26093), (39, 26090), (42, 26075), (50, 26036), (56, 26009),

Gene: Arturo\_34 Start: 27863, Stop: 27384, Start Num: 13

Candidate Starts for Arturo\_34:

(Start: 13 @27863 has 113 MA's), (35, 27530), (38, 27503),

Gene: AvatarAhPeg\_36 Start: 28482, Stop: 27874, Start Num: 3

Candidate Starts for AvatarAhPeg\_36:

(Start: 3 @28482 has 1 MA's), (Start: 10 @28353 has 22 MA's), (38, 27993), (41, 27975), (48, 27942),

Gene: Avle17\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Avle17\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Baby16\_35 Start: 27815, Stop: 27219, Start Num: 13

Candidate Starts for Baby16\_35:

(Start: 13 @27815 has 113 MA's), (38, 27455), (39, 27452), (44, 27416), (58, 27350), (59, 27347), (63, 27302), (65, 27290),

Gene: Backyardigan\_35 Start: 27867, Stop: 27271, Start Num: 10

Candidate Starts for Backyardigan\_35:

(7, 27897), (Start: 10 @27867 has 22 MA's), (39, 27504), (44, 27468), (59, 27399), (63, 27354), (65, 27342),

Gene: Badger\_35 Start: 27835, Stop: 27260, Start Num: 10

Candidate Starts for Badger\_35:

(7, 27865), (Start: 10 @27835 has 22 MA's), (39, 27472), (44, 27436), (59, 27367), (63, 27322), (65, 27310),

Gene: Bartimeaus\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Bartimeaus\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: BellusTerra\_36 Start: 27799, Stop: 27323, Start Num: 13

Candidate Starts for BellusTerra\_36:

(Start: 13 @27799 has 113 MA's), (17, 27754), (27, 27616), (37, 27451), (39, 27439), (51, 27379), (55, 27367),

Gene: Blackmoor\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Blackmoor\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: Bombshell\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Bombshell\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Broseidon\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Broseidon\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: Bruiser\_34 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Bruiser\_34:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: BubbleTrouble\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for BubbleTrouble\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Burger\_34 Start: 27804, Stop: 27208, Start Num: 13  
Candidate Starts for Burger\_34:  
(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Caelakin\_35 Start: 27804, Stop: 27208, Start Num: 13  
Candidate Starts for Caelakin\_35:  
(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Camperdownii\_34 Start: 27498, Stop: 26902, Start Num: 13  
Candidate Starts for Camperdownii\_34:  
(Start: 13 @27498 has 113 MA's), (38, 27138), (39, 27135), (40, 27123), (44, 27099), (59, 27030), (63, 26985), (65, 26973),

Gene: CentreCat\_35 Start: 27807, Stop: 27211, Start Num: 13  
Candidate Starts for CentreCat\_35:  
(Start: 13 @27807 has 113 MA's), (38, 27447), (39, 27444), (44, 27408), (58, 27342), (59, 27339), (63, 27294), (65, 27282),

Gene: Chaph\_35 Start: 27815, Stop: 27219, Start Num: 13  
Candidate Starts for Chaph\_35:  
(Start: 13 @27815 has 113 MA's), (38, 27455), (39, 27452), (44, 27416), (58, 27350), (59, 27347), (63, 27302), (65, 27290),

Gene: Cici\_35 Start: 27852, Stop: 27256, Start Num: 10  
Candidate Starts for Cici\_35:  
(7, 27882), (Start: 10 @27852 has 22 MA's), (39, 27489), (44, 27453), (58, 27387), (59, 27384), (63, 27339), (65, 27327),

Gene: Cindaradix\_34 Start: 27606, Stop: 27010, Start Num: 13  
Candidate Starts for Cindaradix\_34:  
(Start: 13 @27606 has 113 MA's), (17, 27561), (18, 27528), (25, 27432), (44, 27207), (59, 27138), (63, 27093), (65, 27081),

Gene: Cintron\_35 Start: 27870, Stop: 27274, Start Num: 13  
Candidate Starts for Cintron\_35:  
(Start: 13 @27870 has 113 MA's), (38, 27510), (39, 27507), (40, 27495), (44, 27471), (59, 27402), (63, 27357), (65, 27345),

Gene: Citius\_35 Start: 27819, Stop: 27223, Start Num: 13  
Candidate Starts for Citius\_35:  
(Start: 13 @27819 has 113 MA's), (38, 27459), (39, 27456), (44, 27420), (58, 27354), (59, 27351), (63, 27306), (65, 27294),

Gene: Clarenza\_35 Start: 27801, Stop: 27205, Start Num: 13  
Candidate Starts for Clarenza\_35:  
(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: Cocoaberry\_35 Start: 27808, Stop: 27212, Start Num: 13  
Candidate Starts for Cocoaberry\_35:

(Start: 13 @27808 has 113 MA's), (38, 27448), (39, 27445), (44, 27409), (58, 27343), (59, 27340), (63, 27295), (65, 27283),

Gene: Commander\_36 Start: 27803, Stop: 27324, Start Num: 13

Candidate Starts for Commander\_36:

(Start: 13 @27803 has 113 MA's), (37, 27452), (39, 27440), (51, 27380), (55, 27368),

Gene: Connomayer\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Connomayer\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Datway\_35 Start: 27823, Stop: 27227, Start Num: 10

Candidate Starts for Datway\_35:

(7, 27853), (Start: 10 @27823 has 22 MA's), (39, 27460), (44, 27424), (59, 27355), (63, 27310), (65, 27298),

Gene: Deano\_35 Start: 27812, Stop: 27216, Start Num: 13

Candidate Starts for Deano\_35:

(Start: 13 @27812 has 113 MA's), (38, 27452), (39, 27449), (44, 27413), (58, 27347), (59, 27344), (63, 27299), (65, 27287),

Gene: Dhanush\_35 Start: 27807, Stop: 27211, Start Num: 13

Candidate Starts for Dhanush\_35:

(Start: 13 @27807 has 113 MA's), (38, 27447), (39, 27444), (43, 27423), (44, 27408), (58, 27342), (59, 27339), (63, 27294), (65, 27282),

Gene: DirtyDunning\_35 Start: 27843, Stop: 27268, Start Num: 13

Candidate Starts for DirtyDunning\_35:

(Start: 13 @27843 has 113 MA's), (39, 27480), (44, 27444), (59, 27375), (63, 27330), (65, 27318),

Gene: Drake94\_34 Start: 26656, Stop: 26072, Start Num: 10

Candidate Starts for Drake94\_34:

(1, 26851), (Start: 10 @26656 has 22 MA's), (38, 26296), (41, 26278),

Gene: Druantia\_35 Start: 27807, Stop: 27211, Start Num: 13

Candidate Starts for Druantia\_35:

(Start: 13 @27807 has 113 MA's), (38, 27447), (39, 27444), (44, 27408), (58, 27342), (59, 27339), (63, 27294), (65, 27282),

Gene: Eagle\_35 Start: 27823, Stop: 27347, Start Num: 13

Candidate Starts for Eagle\_35:

(Start: 13 @27823 has 113 MA's), (17, 27778), (27, 27640), (37, 27475), (39, 27463), (51, 27403), (55, 27391),

Gene: Eapen\_35 Start: 27802, Stop: 27206, Start Num: 13

Candidate Starts for Eapen\_35:

(Start: 13 @27802 has 113 MA's), (38, 27442), (39, 27439), (44, 27403), (58, 27337), (59, 27334), (63, 27289), (65, 27277),

Gene: Edison31\_36 Start: 28017, Stop: 27478, Start Num: 9

Candidate Starts for Edison31\_36:

(Start: 9 @28017 has 6 MA's), (36, 27660), (38, 27645),

Gene: Eris\_34 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Eris\_34:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Eros\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Eros\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: Eurydice\_36 Start: 27798, Stop: 27322, Start Num: 13

Candidate Starts for Eurydice\_36:

(Start: 13 @27798 has 113 MA's), (17, 27753), (27, 27615), (37, 27450), (39, 27438), (51, 27378), (55, 27366),

Gene: Ezurina\_42 Start: 31024, Stop: 30563, Start Num: 13

Candidate Starts for Ezurina\_42:

(Start: 13 @31024 has 113 MA's), (15, 30997), (20, 30934), (21, 30916), (22, 30913), (24, 30871), (29, 30832), (34, 30709),

Gene: Florean\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for Florean\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Flux\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Flux\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: Funston\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Funston\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Gadost\_35 Start: 27808, Stop: 27212, Start Num: 13

Candidate Starts for Gadost\_35:

(Start: 13 @27808 has 113 MA's), (38, 27448), (39, 27445), (44, 27409), (58, 27343), (59, 27340), (63, 27295), (65, 27283),

Gene: HamSlice\_34 Start: 27802, Stop: 27206, Start Num: 13

Candidate Starts for HamSlice\_34:

(Start: 13 @27802 has 113 MA's), (38, 27442), (44, 27403), (58, 27337), (59, 27334), (63, 27289), (65, 27277),

Gene: Happiness\_35 Start: 27809, Stop: 27213, Start Num: 13

Candidate Starts for Happiness\_35:

(Start: 13 @27809 has 113 MA's), (38, 27449), (39, 27446), (44, 27410), (58, 27344), (59, 27341), (63, 27296), (65, 27284),

Gene: Holli\_35 Start: 27594, Stop: 26998, Start Num: 13

Candidate Starts for Holli\_35:

(Start: 13 @27594 has 113 MA's), (38, 27234), (39, 27231), (44, 27195), (58, 27129), (59, 27126), (63, 27081), (65, 27069),

Gene: Houdini22\_35 Start: 27808, Stop: 27212, Start Num: 13

Candidate Starts for Houdini22\_35:

(Start: 13 @27808 has 113 MA's), (38, 27448), (39, 27445), (44, 27409), (58, 27343), (59, 27340), (63, 27295), (65, 27283),

Gene: ICleared\_35 Start: 27836, Stop: 27261, Start Num: 13

Candidate Starts for ICleared\_35:

(Start: 13 @27836 has 113 MA's), (39, 27473), (44, 27437), (59, 27368), (63, 27323), (65, 27311),

Gene: Iceman\_36 Start: 28093, Stop: 27497, Start Num: 13

Candidate Starts for Iceman\_36:

(Start: 13 @28093 has 113 MA's), (38, 27733), (39, 27730), (44, 27694), (58, 27628), (59, 27625), (63, 27580), (65, 27568),

Gene: Iracema64\_36 Start: 28062, Stop: 27583, Start Num: 13

Candidate Starts for Iracema64\_36:

(Start: 13 @28062 has 113 MA's), (35, 27729), (38, 27702),

Gene: Jaykayelowell\_35 Start: 27800, Stop: 27204, Start Num: 13

Candidate Starts for Jaykayelowell\_35:

(Start: 13 @27800 has 113 MA's), (38, 27440), (39, 27437), (44, 27401), (58, 27335), (59, 27332), (63, 27287), (65, 27275),

Gene: JetBlade\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for JetBlade\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: JoongJeon\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for JoongJeon\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: JulesRay\_65 Start: 46487, Stop: 47002, Start Num: 8

Candidate Starts for JulesRay\_65:

(Start: 8 @46487 has 1 MA's), (15, 46571), (16, 46577), (20, 46637), (22, 46658), (23, 46694), (26, 46730), (32, 46814), (39, 46922), (41, 46937), (45, 46970), (47, 46973), (54, 46994),

Gene: KFPoly\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for KFPoly\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: Katalie136\_35 Start: 27837, Stop: 27262, Start Num: 10

Candidate Starts for Katalie136\_35:

(7, 27867), (Start: 10 @27837 has 22 MA's), (39, 27474), (59, 27369), (63, 27324), (65, 27312),

Gene: Kingmustik0402\_35 Start: 27796, Stop: 27200, Start Num: 13

Candidate Starts for Kingmustik0402\_35:

(Start: 13 @27796 has 113 MA's), (38, 27436), (39, 27433), (44, 27397), (58, 27331), (59, 27328), (63, 27283), (65, 27271),

Gene: KittenMittens\_33 Start: 26664, Stop: 26080, Start Num: 10

Candidate Starts for KittenMittens\_33:

(1, 26859), (Start: 10 @26664 has 22 MA's), (38, 26304), (41, 26286),

Gene: Koan\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Koan\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Koreni\_34 Start: 27485, Stop: 26910, Start Num: 13

Candidate Starts for Koreni\_34:

(Start: 13 @27485 has 113 MA's), (39, 27122), (44, 27086), (59, 27017), (63, 26972), (65, 26960),

Gene: Kratak\_35 Start: 27746, Stop: 27267, Start Num: 13

Candidate Starts for Kratak\_35:

(Start: 13 @27746 has 113 MA's), (35, 27413), (38, 27386),

Gene: Kremtemulon\_35 Start: 27796, Stop: 27317, Start Num: 10

Candidate Starts for Kremtemulon\_35:

(7, 27826), (Start: 10 @27796 has 22 MA's), (35, 27463), (38, 27436),

Gene: Kristoff\_37 Start: 28181, Stop: 27642, Start Num: 9

Candidate Starts for Kristoff\_37:

(Start: 9 @28181 has 6 MA's), (36, 27824), (38, 27809),

Gene: Kyee\_35 Start: 27802, Stop: 27206, Start Num: 13

Candidate Starts for Kyee\_35:

(Start: 13 @27802 has 113 MA's), (38, 27442), (39, 27439), (44, 27403), (58, 27337), (59, 27334), (63, 27289), (65, 27277),

Gene: LappelDuVide\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for LappelDuVide\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Lemur\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for Lemur\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: LittleB\_35 Start: 27805, Stop: 27209, Start Num: 13

Candidate Starts for LittleB\_35:

(Start: 13 @27805 has 113 MA's), (38, 27445), (39, 27442), (44, 27406), (58, 27340), (59, 27337), (63, 27292), (65, 27280),

Gene: LittleGuy\_35 Start: 27703, Stop: 27230, Start Num: 13

Candidate Starts for LittleGuy\_35:

(Start: 13 @27703 has 113 MA's), (37, 27352), (39, 27340), (51, 27280), (55, 27268),

Gene: LochMonster\_35 Start: 27843, Stop: 27247, Start Num: 13

Candidate Starts for LochMonster\_35:

(Start: 13 @27843 has 113 MA's), (38, 27483), (39, 27480), (44, 27444), (58, 27378), (59, 27375), (63, 27330), (65, 27318),

Gene: Lorenzo\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Lorenzo\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Lunsford\_36 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for Lunsford\_36:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: Maverick\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Maverick\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Maxo\_36 Start: 27800, Stop: 27324, Start Num: 13

Candidate Starts for Maxo\_36:

(Start: 13 @27800 has 113 MA's), (17, 27755), (27, 27617), (37, 27452), (39, 27440), (51, 27380), (55, 27368),

Gene: Mayonnaise\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Mayonnaise\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Mazhar510\_35 Start: 27805, Stop: 27209, Start Num: 13

Candidate Starts for Mazhar510\_35:

(Start: 13 @27805 has 113 MA's), (38, 27445), (39, 27442), (44, 27406), (58, 27340), (59, 27337), (63, 27292), (65, 27280),

Gene: Medusa\_36 Start: 27803, Stop: 27324, Start Num: 13

Candidate Starts for Medusa\_36:

(Start: 13 @27803 has 113 MA's), (37, 27452), (39, 27440), (51, 27380), (55, 27368),

Gene: MeeZee\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for MeeZee\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Melvin\_37 Start: 27802, Stop: 27323, Start Num: 13

Candidate Starts for Melvin\_37:

(Start: 13 @27802 has 113 MA's), (37, 27451), (39, 27439), (51, 27379), (55, 27367),

Gene: Millski\_34 Start: 27808, Stop: 27212, Start Num: 13

Candidate Starts for Millski\_34:

(Start: 13 @27808 has 113 MA's), (38, 27448), (39, 27445), (44, 27409), (58, 27343), (59, 27340), (63, 27295), (65, 27283),

Gene: Miramae\_35 Start: 28016, Stop: 27537, Start Num: 10

Candidate Starts for Miramae\_35:

(Start: 10 @28016 has 22 MA's), (18, 27938), (19, 27929), (25, 27842), (38, 27656), (41, 27638), (48, 27605),

Gene: Morpher26\_35 Start: 27858, Stop: 27262, Start Num: 10

Candidate Starts for Morpher26\_35:

(7, 27888), (Start: 10 @27858 has 22 MA's), (38, 27498), (39, 27495), (44, 27459), (58, 27393), (59, 27390), (63, 27345), (65, 27333),

Gene: Morrow\_36 Start: 27804, Stop: 27328, Start Num: 13

Candidate Starts for Morrow\_36:

(Start: 13 @27804 has 113 MA's), (17, 27759), (27, 27621), (37, 27456), (39, 27444), (51, 27384), (55, 27372),

Gene: Mundrea\_35 Start: 27726, Stop: 27247, Start Num: 13

Candidate Starts for Mundrea\_35:

(Start: 13 @27726 has 113 MA's), (38, 27366),

Gene: Nebs\_36 Start: 27798, Stop: 27322, Start Num: 13

Candidate Starts for Nebs\_36:

(Start: 13 @27798 has 113 MA's), (17, 27753), (27, 27615), (37, 27450), (39, 27438), (51, 27378), (55, 27366),

Gene: Nemo27\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for Nemo27\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Noelle\_35 Start: 27902, Stop: 27306, Start Num: 10

Candidate Starts for Noelle\_35:

(2, 28055), (7, 27932), (Start: 10 @27902 has 22 MA's), (39, 27539), (44, 27503), (59, 27434), (63, 27389), (65, 27377),

Gene: NorthStar\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for NorthStar\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: NotAPhaseMom\_35 Start: 27808, Stop: 27212, Start Num: 13

Candidate Starts for NotAPhaseMom\_35:

(Start: 13 @27808 has 113 MA's), (38, 27448), (39, 27445), (44, 27409), (58, 27343), (59, 27340), (63, 27295), (65, 27283),

Gene: Nyxis\_35 Start: 27697, Stop: 27224, Start Num: 13

Candidate Starts for Nyxis\_35:

(Start: 13 @27697 has 113 MA's), (37, 27346), (39, 27334), (51, 27274), (55, 27262),

Gene: Ohfah\_36 Start: 27798, Stop: 27322, Start Num: 13

Candidate Starts for Ohfah\_36:

(Start: 13 @27798 has 113 MA's), (17, 27753), (27, 27615), (37, 27450), (39, 27438), (51, 27378), (55, 27366),

Gene: Palestino\_34 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Palestino\_34:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: PeaceMeal1\_34 Start: 26665, Stop: 26081, Start Num: 10

Candidate Starts for PeaceMeal1\_34:

(1, 26860), (Start: 10 @26665 has 22 MA's), (38, 26305), (41, 26287),

Gene: Peaches\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for Peaches\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Perplexer\_35 Start: 27834, Stop: 27259, Start Num: 10

Candidate Starts for Perplexer\_35:

(7, 27864), (Start: 10 @27834 has 22 MA's), (39, 27471), (44, 27435), (59, 27366), (63, 27321), (65, 27309),

Gene: PeterPeter\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for PeterPeter\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: PetiteSangusue\_35 Start: 27837, Stop: 27262, Start Num: 10

Candidate Starts for PetiteSangusue\_35:

(7, 27867), (Start: 10 @27837 has 22 MA's), (39, 27474), (44, 27438), (59, 27369), (63, 27324), (65, 27312),

Gene: Phacado\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for Phacado\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Phelipe\_36 Start: 27804, Stop: 27325, Start Num: 13

Candidate Starts for Phelipe\_36:

(Start: 13 @27804 has 113 MA's), (37, 27453), (39, 27441), (51, 27381), (55, 27369),

Gene: Phighter1804\_35 Start: 27846, Stop: 27250, Start Num: 13

Candidate Starts for Phighter1804\_35:

(Start: 13 @27846 has 113 MA's), (38, 27486), (39, 27483), (44, 27447), (58, 27381), (59, 27378), (63, 27333), (65, 27321),

Gene: Phillis\_32 Start: 26263, Stop: 25784, Start Num: 10

Candidate Starts for Phillis\_32:

(Start: 10 @26263 has 22 MA's), (31, 26032), (55, 25882), (64, 25816), (66, 25804),

Gene: Phontbonne\_35 Start: 27698, Stop: 27225, Start Num: 13

Candidate Starts for Phontbonne\_35:

(Start: 13 @27698 has 113 MA's), (37, 27347), (39, 27335), (51, 27275), (55, 27263),

Gene: Pipcraft\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Pipcraft\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: POCO6\_076 Start: 59210, Stop: 59797, Start Num: 11

Candidate Starts for POCO6\_076:

(11, 59210), (15, 59246), (16, 59252), (20, 59312), (32, 59489), (35, 59567), (38, 59594), (39, 59597), (49, 59660), (57, 59699), (60, 59708),

Gene: Polymorphads\_36 Start: 27797, Stop: 27321, Start Num: 13

Candidate Starts for Polymorphads\_36:

(Start: 13 @27797 has 113 MA's), (17, 27752), (27, 27614), (37, 27449), (39, 27437), (51, 27377), (55, 27365),

Gene: Ponzi\_9 Start: 7221, Stop: 6748, Start Num: 30

Candidate Starts for Ponzi\_9:

(5, 7536), (14, 7422), (Start: 30 @7221 has 1 MA's), (39, 7035), (53, 6957), (63, 6879), (67, 6792),

Gene: Poompha\_34 Start: 26663, Stop: 26079, Start Num: 10

Candidate Starts for Poompha\_34:

(1, 26858), (Start: 10 @26663 has 22 MA's), (38, 26303), (41, 26285),

Gene: Pumbaa\_35 Start: 27749, Stop: 27276, Start Num: 13

Candidate Starts for Pumbaa\_35:

(Start: 13 @27749 has 113 MA's), (37, 27398), (39, 27386), (51, 27326), (55, 27314),

Gene: Rebeuca\_37 Start: 28182, Stop: 27643, Start Num: 9

Candidate Starts for Rebeuca\_37:

(Start: 9 @28182 has 6 MA's), (36, 27825), (38, 27810),

Gene: Relief\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Relief\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Romney\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Romney\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Roosevelt\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Roosevelt\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: Ruin\_35 Start: 27800, Stop: 27204, Start Num: 13

Candidate Starts for Ruin\_35:

(Start: 13 @27800 has 113 MA's), (38, 27440), (39, 27437), (44, 27401), (58, 27335), (59, 27332), (63, 27287), (65, 27275),

Gene: Sabertooth\_35 Start: 27803, Stop: 27207, Start Num: 13

Candidate Starts for Sabertooth\_35:

(Start: 13 @27803 has 113 MA's), (38, 27443), (39, 27440), (44, 27404), (58, 27338), (59, 27335), (63, 27290), (65, 27278),

Gene: Scamp\_35 Start: 27806, Stop: 27210, Start Num: 13

Candidate Starts for Scamp\_35:

(Start: 13 @27806 has 113 MA's), (38, 27446), (39, 27443), (44, 27407), (58, 27341), (59, 27338), (63, 27293), (65, 27281),

Gene: SenorClean\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for SenorClean\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Severus\_34 Start: 26663, Stop: 26079, Start Num: 10

Candidate Starts for Severus\_34:

(1, 26858), (Start: 10 @26663 has 22 MA's), (38, 26303), (41, 26285), (46, 26249),

Gene: Shaka\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Shaka\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Sheen\_36 Start: 29802, Stop: 29311, Start Num: 12

Candidate Starts for Sheen\_36:

(Start: 3 @29925 has 1 MA's), (4, 29916), (6, 29838), (Start: 12 @29802 has 1 MA's), (28, 29616), (32, 29547), (38, 29442), (39, 29439), (52, 29424), (61, 29361), (62, 29358),

Gene: Shygu2\_35 Start: 27798, Stop: 27202, Start Num: 13

Candidate Starts for Shygu2\_35:

(Start: 13 @27798 has 113 MA's), (38, 27438), (39, 27435), (44, 27399), (58, 27333), (59, 27330), (63, 27285), (65, 27273),

Gene: Skipitt\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for Skipitt\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: Sparxx\_36 Start: 27799, Stop: 27323, Start Num: 13

Candidate Starts for Sparxx\_36:

(Start: 13 @27799 has 113 MA's), (17, 27754), (27, 27616), (37, 27451), (39, 27439), (51, 27379), (55, 27367),

Gene: Spino\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Spino\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Stasia\_36 Start: 28128, Stop: 27649, Start Num: 10

Candidate Starts for Stasia\_36:

(7, 28158), (Start: 10 @28128 has 22 MA's), (38, 27768), (41, 27750),

Gene: Sultana\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Sultana\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Taquarus\_35 Start: 27807, Stop: 27211, Start Num: 13

Candidate Starts for Taquarus\_35:

(Start: 13 @27807 has 113 MA's), (38, 27447), (39, 27444), (44, 27408), (58, 27342), (59, 27339), (63, 27294), (65, 27282),

Gene: Thanksgivukkah\_35 Start: 27805, Stop: 27209, Start Num: 13

Candidate Starts for Thanksgivukkah\_35:

(Start: 13 @27805 has 113 MA's), (38, 27445), (39, 27442), (44, 27406), (58, 27340), (59, 27337), (63, 27292), (65, 27280),

Gene: TinaFeyge\_36 Start: 27799, Stop: 27320, Start Num: 13

Candidate Starts for TinaFeyge\_36:

(Start: 13 @27799 has 113 MA's), (37, 27448), (39, 27436), (51, 27376), (55, 27364),

Gene: TiroTheta9\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for TiroTheta9\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),

Gene: Topanga\_36 Start: 28017, Stop: 27481, Start Num: 9

Candidate Starts for Topanga\_36:

(Start: 9 @28017 has 6 MA's), (17, 27960), (18, 27927), (19, 27918), (36, 27663), (38, 27648),

Gene: Trike\_33 Start: 26496, Stop: 25912, Start Num: 10

Candidate Starts for Trike\_33:

(Start: 10 @26496 has 22 MA's), (38, 26136), (41, 26118),

Gene: TroyPia\_36 Start: 27802, Stop: 27323, Start Num: 13

Candidate Starts for TroyPia\_36:

(Start: 13 @27802 has 113 MA's), (37, 27451), (39, 27439), (51, 27379), (55, 27367),

Gene: Trufflozitus\_69 Start: 46845, Stop: 47360, Start Num: 8

Candidate Starts for Trufflozitus\_69:

(Start: 8 @46845 has 1 MA's), (15, 46929), (16, 46935), (20, 46995), (22, 47016), (23, 47052), (26, 47088), (32, 47172), (39, 47280), (41, 47295), (45, 47328), (47, 47331), (54, 47352),

Gene: Twister\_36 Start: 27928, Stop: 27389, Start Num: 9

Candidate Starts for Twister\_36:

(Start: 9 @27928 has 6 MA's), (36, 27571), (38, 27556),

Gene: TygerBlood\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for TygerBlood\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Ulysses\_34 Start: 27484, Stop: 27011, Start Num: 13

Candidate Starts for Ulysses\_34:

(Start: 13 @27484 has 113 MA's), (37, 27133), (39, 27121), (51, 27061), (55, 27049),

Gene: WalterMcMickey\_36 Start: 27928, Stop: 27389, Start Num: 9

Candidate Starts for WalterMcMickey\_36:

(Start: 9 @27928 has 6 MA's), (36, 27571), (38, 27556),

Gene: Wander\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Wander\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Wilbur\_35 Start: 27804, Stop: 27208, Start Num: 13

Candidate Starts for Wilbur\_35:

(Start: 13 @27804 has 113 MA's), (38, 27444), (39, 27441), (44, 27405), (58, 27339), (59, 27336), (63, 27291), (65, 27279),

Gene: Wile\_35 Start: 27868, Stop: 27272, Start Num: 10

Candidate Starts for Wile\_35:

(7, 27898), (Start: 10 @27868 has 22 MA's), (38, 27508), (39, 27505), (44, 27469), (58, 27403), (59, 27400), (63, 27355), (65, 27343),

Gene: Wizard007\_35 Start: 27809, Stop: 27213, Start Num: 13

Candidate Starts for Wizard007\_35:

(Start: 13 @27809 has 113 MA's), (38, 27449), (39, 27446), (44, 27410), (58, 27344), (59, 27341), (63, 27296), (65, 27284),

Gene: Xena\_35 Start: 27834, Stop: 27259, Start Num: 10

Candidate Starts for Xena\_35:

(7, 27864), (Start: 10 @27834 has 22 MA's), (39, 27471), (44, 27435), (59, 27366), (63, 27321), (65, 27309),

Gene: YoSam321\_35 Start: 27801, Stop: 27205, Start Num: 13

Candidate Starts for YoSam321\_35:

(Start: 13 @27801 has 113 MA's), (38, 27441), (39, 27438), (44, 27402), (58, 27336), (59, 27333), (63, 27288), (65, 27276),