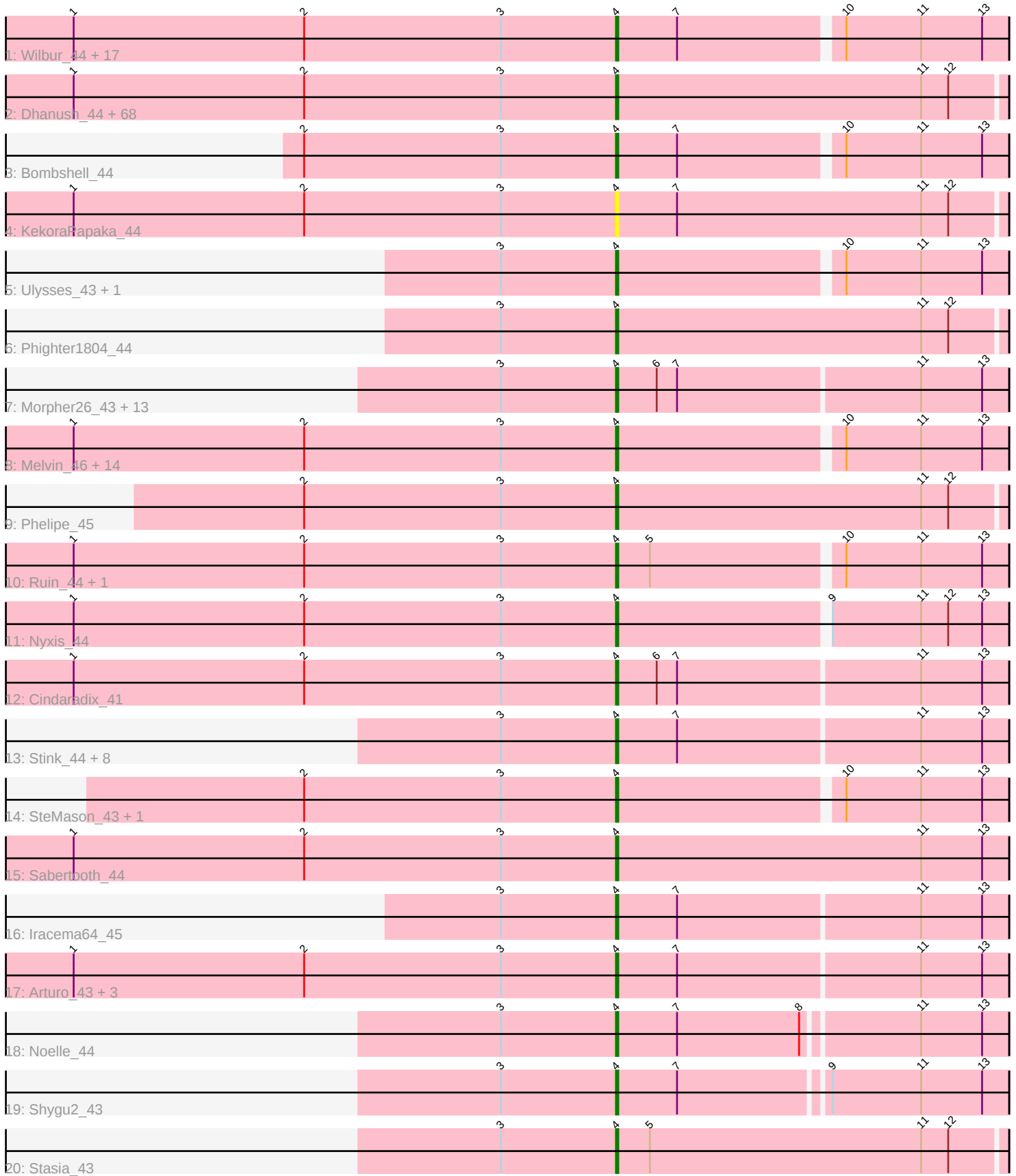


# Pham 269287



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 269287 Report

This analysis was run 02/07/26 on database version 634.

Pham number 269287 has 146 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Wilbur\_44, Avle17\_44, Relief\_43, Jaykayelowell\_42, JoongJeon\_43, JetBlade\_44, Kremtemulon\_44, KFPoly\_43, Wander\_44, Romney\_44, Lunsford\_45, Iceman\_44, Shaka\_44, Eapen\_44, Kingmustik0402\_44, Phontbonne\_44, LittleGuy\_44, PeterPeter\_44
- Track 2 : Dhanush\_44, Pipcraft\_42, Albee\_44, Nebs\_45, NotAPhaseMom\_44, Sultana\_44, Mazhar510\_44, CentreCat\_44, Mayonnaise\_43, TygerBlood\_44, HamSlice\_43, Maxo\_45, Lemur\_44, TroyPia\_45, Caelakin\_44, RockieBear\_43, LittleB\_44, SenorClean\_44, Morrow\_45, BellusTerra\_45, Medusa\_44, Bruiser\_43, Connomayer\_44, Phacado\_44, Blackmoor\_44, Scamp\_44, Clarenza\_43, Wizard007\_44, Camperdownii\_42, LeoAvram\_44, Houdini22\_44, Bartimeaus\_44, Ohfah\_45, Chaph\_44, Peaches\_44, Koan\_42, Burger\_42, Eagle\_44, Druantia\_44, NorthStar\_43, Eros\_44, Sparxx\_45, Holli\_43, Deano\_43, Citius\_44, Baby16\_44, LappelDuVide\_44, BubbleTrouble\_43, Huxley\_44, LochMonster\_45, Eris\_43, Maverick\_44, Kyee\_44, TinaFeyge\_44, Kampy\_44, Gadost\_44, Abdiel\_44, Broseidon\_44, Funston\_43, Commander\_44, Koreni\_43, Lorenzo\_44, Polymorphads\_45, Florean\_44, Cocoaberry\_44, Roosevelt\_43, Nemo27\_44, Taquarus\_44, Spino\_43
- Track 3 : Bombshell\_44
- Track 4 : KekoraPapaka\_44
- Track 5 : Ulysses\_43, Alberto7\_45
- Track 6 : Phighter1804\_44
- Track 7 : Morpher26\_43, Cici\_43, Xena\_42, Datway\_43, Bumblebee11\_42, AbbysRanger\_43, Mundrea\_43, Backyardigan\_42, Achebe\_42, Wile\_43, Badger\_42, PetiteSangsue\_43, Katalie136\_43, Perplexer\_43
- Track 8 : Melvin\_46, Rosa24\_43, Millski\_43, Cintron\_43, Annyong\_44, Eurydice\_45, Thanksgivukkah\_43, MeeZee\_44, Tinybot\_43, Flux\_44, OKaNui\_44, ICleared\_44, Pumbaa\_44, YoSam321\_44, Skipitt\_43
- Track 9 : Felipe\_45
- Track 10 : Ruin\_44, Palestino\_43
- Track 11 : Nyxis\_44
- Track 12 : Cindaradix\_41
- Track 13 : Stink\_44, BangNhom\_45, Cerulean\_45, SheldonCooper\_46, Obama12\_45, AvatarAhPeg\_43, LHTSCC\_46, ChampagnePapi\_46, Miramae\_43
- Track 14 : SteMason\_43, TiroTheta9\_44
- Track 15 : Sabertooth\_44
- Track 16 : Iracema64\_45
- Track 17 : Arturo\_43, DirtyDunning\_43, Happiness\_43, Kratark\_44

- Track 18 : Noelle\_44
- Track 19 : Shygu2\_43
- Track 20 : Stasia\_43

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

The start number called the most often in the published annotations is 4, it was called in 141 of the 141 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_43, Abdiel\_44, Achebe\_42, Albee\_44, Alberto7\_45, Annyong\_44, Arturo\_43, AvatarAhPeg\_43, Avle17\_44, Baby16\_44, Backyardigan\_42, Badger\_42, BangNhom\_45, Bartimeaus\_44, BellusTerra\_45, Blackmoor\_44, Bombshell\_44, Broseidon\_44, Bruiser\_43, BubbleTrouble\_43, Bumblebee11\_42, Burger\_42, Caelakin\_44, Camperdownii\_42, CentreCat\_44, Cerulean\_45, ChampagnePapi\_46, Chaph\_44, Cici\_43, Cindaradix\_41, Cintron\_43, Citius\_44, Clarenza\_43, CocoaBerry\_44, Commander\_44, Connomayer\_44, Datway\_43, Deano\_43, Dhanush\_44, DirtyDunning\_43, Druantia\_44, Eagle\_44, Eapen\_44, Eris\_43, Eros\_44, Eurydice\_45, Florean\_44, Flux\_44, Funston\_43, Gadost\_44, HamSlice\_43, Happiness\_43, Holli\_43, Houdini22\_44, Huxley\_44, ICleared\_44, Iceman\_44, Iracema64\_45, Jaykayelowell\_42, JetBlade\_44, JoongJeon\_43, KFPoly\_43, Kamy\_44, Katalie136\_43, KekoraPapaka\_44, Kingmustik0402\_44, Koan\_42, Koreni\_43, Kratak\_44, Kremtemulon\_44, Kyee\_44, LHTSCC\_46, LappelDuVide\_44, Lemur\_44, LeoAvram\_44, LittleB\_44, LittleGuy\_44, LochMonster\_45, Lorenzo\_44, Lunsford\_45, Maverick\_44, Maxo\_45, Mayonnaise\_43, Mazhar510\_44, Medusa\_44, MeeZee\_44, Melvin\_46, Millski\_43, Miramae\_43, Morpher26\_43, Morrow\_45, Mundrea\_43, Nebs\_45, Nemo27\_44, Noelle\_44, NorthStar\_43, NotAPhaseMom\_44, Nyxis\_44, OKaNui\_44, Obama12\_45, Ohfah\_45, Palestino\_43, Peaches\_44, Perplexer\_43, PeterPeter\_44, PetiteSangsue\_43, Phacado\_44, Felipe\_45, Phighter1804\_44, Phontbonne\_44, Pipcraft\_42, Polymorphads\_45, Pumbaa\_44, Relief\_43, RockieBear\_43, Romney\_44, Roosevelt\_43, Rosa24\_43, Ruin\_44, Sabertooth\_44, Scamp\_44, SenorClean\_44, Shaka\_44, SheldonCooper\_46, Shygu2\_43, Skipitt\_43, Sparxx\_45, Spino\_43, Stasia\_43, SteMason\_43, Stink\_44, Sultana\_44, Taquarus\_44, Thanksgivukkah\_43, TinaFeyge\_44, Tinybot\_43, TiroTheta9\_44, TroyPia\_45, TygerBlood\_44, Ulysses\_43, Wander\_44, Wilbur\_44, Wile\_43, Wizard007\_44, Xena\_42, YoSam321\_44,

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

- 

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

- 

### **Summary by start number:**

Start 4:

- Found in 146 of 146 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 141 of 141
- Called 100.0% of time when present

- Phage (with cluster) where this start called: AbbysRanger\_43 (A4), Abdiel\_44 (A4), Achebe\_42 (A4), Albee\_44 (A4), Alberto7\_45 (A4), Annyong\_44 (A4), Arturo\_43 (A4), AvatarAhPeg\_43 (A4), Avle17\_44 (A4), Baby16\_44 (A4), Backyardigan\_42 (A4), Badger\_42 (A4), BangNhom\_45 (A4), Bartimeaus\_44 (A4), BellusTerra\_45 (A4), Blackmoor\_44 (A4), Bombshell\_44 (A4), Broseidon\_44 (A4), Bruiser\_43 (A4), BubbleTrouble\_43 (A4), Bumblebee11\_42 (A4), Burger\_42 (A4), Caelakin\_44 (A4), Camperdownii\_42 (A4), CentreCat\_44 (A4), Cerulean\_45 (A4), ChampagnePapi\_46 (A4), Chaph\_44 (A4), Cici\_43 (A4), Cindaradix\_41 (A4), Cintron\_43 (A4), Citius\_44 (A4), Clarenza\_43 (A4), CocoaBerry\_44 (A4), Commander\_44 (A4), Connomayer\_44 (A4), Datway\_43 (A4), Deano\_43 (A4), Dhanush\_44 (A4), DirtyDunning\_43 (A4), Druantia\_44 (A4), Eagle\_44 (A4), Eapen\_44 (A4), Eris\_43 (A4), Eros\_44 (A4), Eurydice\_45 (A4), Florean\_44 (A4), Flux\_44 (A4), Funston\_43 (A4), Gadost\_44 (A4), HamSlice\_43 (A4), Happiness\_43 (A4), Holli\_43 (A4), Houdini22\_44 (A4), Huxley\_44 (A4), ICleared\_44 (A4), Iceman\_44 (A4), Iracema64\_45 (A4), Jaykayelowell\_42 (A4), JetBlade\_44 (A4), JoongJeon\_43 (A4), KFPoly\_43 (A4), Kamy\_44 (A4), Katalie136\_43 (A4), KekoraPapaka\_44 (A4), Kingmustik0402\_44 (A4), Koan\_42 (A4), Koreni\_43 (A4), Kratak\_44 (A4), Kremtemulon\_44 (A4), Kyee\_44 (A4), LHTSCC\_46 (A4), LappelDuVide\_44 (A4), Lemur\_44 (A4), LeoAvram\_44 (A4), LittleB\_44 (A4), LittleGuy\_44 (A4), LochMonster\_45 (A4), Lorenzo\_44 (A4), Lunsford\_45 (A4), Maverick\_44 (A4), Maxo\_45 (A4), Mayonnaise\_43 (A4), Mazhar510\_44 (A4), Medusa\_44 (A4), MeeZee\_44 (A4), Melvin\_46 (A4), Millski\_43 (A4), Miramae\_43 (A4), Morpher26\_43 (A4), Morrow\_45 (A4), Mundrea\_43 (A4), Nebs\_45 (A4), Nemo27\_44 (A4), Noelle\_44 (A4), NorthStar\_43 (A4), NotAPhaseMom\_44 (A4), Nyxis\_44 (A4), OKaNui\_44 (A4), Obama12\_45 (A4), Ohfah\_45 (A4), Palestino\_43 (A4), Peaches\_44 (A4), Perplexer\_43 (A4), PeterPeter\_44 (A4), PetiteSangsue\_43 (A4), Phacado\_44 (A4), Phelipe\_45 (A4), Phighter1804\_44 (A4), Phontbonne\_44 (A4), Pipcraft\_42 (A4), Polymorphads\_45 (A4), Pumbaa\_44 (A4), Relief\_43 (A4), RockieBear\_43 (A4), Romney\_44 (A4), Roosevelt\_43 (A4), Rosa24\_43 (A4), Ruin\_44 (A4), Sabertooth\_44 (A4), Scamp\_44 (A4), SenorClean\_44 (A4), Shaka\_44 (A4), SheldonCooper\_46 (A4), Shygu2\_43 (A4), Skipitt\_43 (A4), Sparxx\_45 (A4), Spino\_43 (A4), Stasia\_43 (A4), SteMason\_43 (A4), Stink\_44 (A4), Sultana\_44 (A4), Taquarus\_44 (A4), Thanksgivukkah\_43 (A4), TinaFeyge\_44 (A4), Tinybot\_43 (A4), TiroTheta9\_44 (A4), TroyPia\_45 (A4), TygerBlood\_44 (A4), Ulysses\_43 (A4), Wander\_44 (A4), Wilbur\_44 (A4), Wile\_43 (A4), Wizard007\_44 (A4), Xena\_42 (A4), YoSam321\_44 (A4),

## Summary by clusters:

There is one cluster represented in this pham: A4

Info for manual annotations of cluster A4:

- Start number 4 was manually annotated 141 times for cluster A4.

## Gene Information:

Gene: AbbysRanger\_43 Start: 29686, Stop: 29516, Start Num: 4

Candidate Starts for AbbysRanger\_43:

(3, 29737), (Start: 4 @29686 has 141 MA's), (6, 29668), (7, 29659), (11, 29554), (13, 29527),

Gene: Abdiel\_44 Start: 29724, Stop: 29554, Start Num: 4

Candidate Starts for Abdiel\_44:

(1, 29964), (2, 29862), (3, 29775), (Start: 4 @29724 has 141 MA's), (11, 29589), (12, 29577),

Gene: Achebe\_42 Start: 29669, Stop: 29499, Start Num: 4

Candidate Starts for Achebe\_42:

(3, 29720), (Start: 4 @29669 has 141 MA's), (6, 29651), (7, 29642), (11, 29537), (13, 29510),

Gene: Albee\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Albee\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Alberto7\_45 Start: 30060, Stop: 29893, Start Num: 4

Candidate Starts for Alberto7\_45:

(3, 30111), (Start: 4 @30060 has 141 MA's), (10, 29964), (11, 29931), (13, 29904),

Gene: Annyong\_44 Start: 29768, Stop: 29601, Start Num: 4

Candidate Starts for Annyong\_44:

(1, 30008), (2, 29906), (3, 29819), (Start: 4 @29768 has 141 MA's), (10, 29672), (11, 29639), (13, 29612),

Gene: Arturo\_43 Start: 29979, Stop: 29809, Start Num: 4

Candidate Starts for Arturo\_43:

(1, 30219), (2, 30117), (3, 30030), (Start: 4 @29979 has 141 MA's), (7, 29952), (11, 29847), (13, 29820),

Gene: AvatarAhPeg\_43 Start: 30198, Stop: 30028, Start Num: 4

Candidate Starts for AvatarAhPeg\_43:

(3, 30249), (Start: 4 @30198 has 141 MA's), (7, 30171), (11, 30066), (13, 30039),

Gene: Avle17\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Avle17\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: Baby16\_44 Start: 29734, Stop: 29564, Start Num: 4

Candidate Starts for Baby16\_44:

(1, 29974), (2, 29872), (3, 29785), (Start: 4 @29734 has 141 MA's), (11, 29599), (12, 29587),

Gene: Backyardigan\_42 Start: 29702, Stop: 29532, Start Num: 4

Candidate Starts for Backyardigan\_42:

(3, 29753), (Start: 4 @29702 has 141 MA's), (6, 29684), (7, 29675), (11, 29570), (13, 29543),

Gene: Badger\_42 Start: 29670, Stop: 29500, Start Num: 4

Candidate Starts for Badger\_42:

(3, 29721), (Start: 4 @29670 has 141 MA's), (6, 29652), (7, 29643), (11, 29538), (13, 29511),

Gene: BangNhom\_45 Start: 30145, Stop: 29975, Start Num: 4

Candidate Starts for BangNhom\_45:

(3, 30196), (Start: 4 @30145 has 141 MA's), (7, 30118), (11, 30013), (13, 29986),

Gene: Bartimeaus\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Bartimeaus\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: BellusTerra\_45 Start: 29724, Stop: 29554, Start Num: 4

Candidate Starts for BellusTerra\_45:

(1, 29964), (2, 29862), (3, 29775), (Start: 4 @29724 has 141 MA's), (11, 29589), (12, 29577),

Gene: Blackmoor\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Blackmoor\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Bombshell\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Bombshell\_44:

(2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: Broseidon\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Broseidon\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Bruiser\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Bruiser\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: BubbleTrouble\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for BubbleTrouble\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Bumblebee11\_42 Start: 29672, Stop: 29502, Start Num: 4

Candidate Starts for Bumblebee11\_42:

(3, 29723), (Start: 4 @29672 has 141 MA's), (6, 29654), (7, 29645), (11, 29540), (13, 29513),

Gene: Burger\_42 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Burger\_42:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Caelakin\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Caelakin\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Camperdownii\_42 Start: 29396, Stop: 29226, Start Num: 4

Candidate Starts for Camperdownii\_42:

(1, 29636), (2, 29534), (3, 29447), (Start: 4 @29396 has 141 MA's), (11, 29261), (12, 29249),

Gene: CentreCat\_44 Start: 29726, Stop: 29556, Start Num: 4

Candidate Starts for CentreCat\_44:

(1, 29966), (2, 29864), (3, 29777), (Start: 4 @29726 has 141 MA's), (11, 29591), (12, 29579),

Gene: Cerulean\_45 Start: 30146, Stop: 29976, Start Num: 4

Candidate Starts for Cerulean\_45:

(3, 30197), (Start: 4 @30146 has 141 MA's), (7, 30119), (11, 30014), (13, 29987),

Gene: ChampagnePapi\_46 Start: 30145, Stop: 29975, Start Num: 4

Candidate Starts for ChampagnePapi\_46:

(3, 30196), (Start: 4 @30145 has 141 MA's), (7, 30118), (11, 30013), (13, 29986),

Gene: Chaph\_44 Start: 29734, Stop: 29564, Start Num: 4

Candidate Starts for Chaph\_44:

(1, 29974), (2, 29872), (3, 29785), (Start: 4 @29734 has 141 MA's), (11, 29599), (12, 29587),

Gene: Cici\_43 Start: 29687, Stop: 29517, Start Num: 4

Candidate Starts for Cici\_43:

(3, 29738), (Start: 4 @29687 has 141 MA's), (6, 29669), (7, 29660), (11, 29555), (13, 29528),

Gene: Cindaradix\_41 Start: 29312, Stop: 29142, Start Num: 4

Candidate Starts for Cindaradix\_41:

(1, 29552), (2, 29450), (3, 29363), (Start: 4 @29312 has 141 MA's), (6, 29294), (7, 29285), (11, 29180), (13, 29153),

Gene: Cintron\_43 Start: 29703, Stop: 29536, Start Num: 4

Candidate Starts for Cintron\_43:

(1, 29943), (2, 29841), (3, 29754), (Start: 4 @29703 has 141 MA's), (10, 29607), (11, 29574), (13, 29547),

Gene: Citius\_44 Start: 29744, Stop: 29574, Start Num: 4

Candidate Starts for Citius\_44:

(1, 29984), (2, 29882), (3, 29795), (Start: 4 @29744 has 141 MA's), (11, 29609), (12, 29597),

Gene: Clarenza\_43 Start: 29720, Stop: 29550, Start Num: 4

Candidate Starts for Clarenza\_43:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (11, 29585), (12, 29573),

Gene: Cocoaberry\_44 Start: 29727, Stop: 29557, Start Num: 4

Candidate Starts for Cocoaberry\_44:

(1, 29967), (2, 29865), (3, 29778), (Start: 4 @29727 has 141 MA's), (11, 29592), (12, 29580),

Gene: Commander\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Commander\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Connomayer\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Connomayer\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Datway\_43 Start: 29658, Stop: 29488, Start Num: 4

Candidate Starts for Datway\_43:

(3, 29709), (Start: 4 @29658 has 141 MA's), (6, 29640), (7, 29631), (11, 29526), (13, 29499),

Gene: Deano\_43 Start: 29731, Stop: 29561, Start Num: 4

Candidate Starts for Deano\_43:

(1, 29971), (2, 29869), (3, 29782), (Start: 4 @29731 has 141 MA's), (11, 29596), (12, 29584),

Gene: Dhanush\_44 Start: 29726, Stop: 29556, Start Num: 4

Candidate Starts for Dhanush\_44:

(1, 29966), (2, 29864), (3, 29777), (Start: 4 @29726 has 141 MA's), (11, 29591), (12, 29579),

Gene: DirtyDunning\_43 Start: 29720, Stop: 29550, Start Num: 4

Candidate Starts for DirtyDunning\_43:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (11, 29588), (13, 29561),

Gene: Druantia\_44 Start: 29726, Stop: 29556, Start Num: 4

Candidate Starts for Druantia\_44:

(1, 29966), (2, 29864), (3, 29777), (Start: 4 @29726 has 141 MA's), (11, 29591), (12, 29579),

Gene: Eagle\_44 Start: 29748, Stop: 29578, Start Num: 4

Candidate Starts for Eagle\_44:

(1, 29988), (2, 29886), (3, 29799), (Start: 4 @29748 has 141 MA's), (11, 29613), (12, 29601),

Gene: Eapen\_44 Start: 29718, Stop: 29551, Start Num: 4

Candidate Starts for Eapen\_44:

(1, 29958), (2, 29856), (3, 29769), (Start: 4 @29718 has 141 MA's), (7, 29691), (10, 29622), (11, 29589), (13, 29562),

Gene: Eris\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Eris\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Eros\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Eros\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Eurydice\_45 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Eurydice\_45:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (10, 29624), (11, 29591), (13, 29564),

Gene: Florean\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Florean\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Flux\_44 Start: 29722, Stop: 29555, Start Num: 4

Candidate Starts for Flux\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (10, 29626), (11, 29593), (13, 29566),

Gene: Funston\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Funston\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Gadost\_44 Start: 29727, Stop: 29557, Start Num: 4

Candidate Starts for Gadost\_44:

(1, 29967), (2, 29865), (3, 29778), (Start: 4 @29727 has 141 MA's), (11, 29592), (12, 29580),

Gene: HamSlice\_43 Start: 29721, Stop: 29551, Start Num: 4

Candidate Starts for HamSlice\_43:

(1, 29961), (2, 29859), (3, 29772), (Start: 4 @29721 has 141 MA's), (11, 29586), (12, 29574),

Gene: Happiness\_43 Start: 29728, Stop: 29558, Start Num: 4

Candidate Starts for Happiness\_43:

(1, 29968), (2, 29866), (3, 29779), (Start: 4 @29728 has 141 MA's), (7, 29701), (11, 29596), (13, 29569),

Gene: Holli\_43 Start: 29513, Stop: 29343, Start Num: 4

Candidate Starts for Holli\_43:

(1, 29753), (2, 29651), (3, 29564), (Start: 4 @29513 has 141 MA's), (11, 29378), (12, 29366),

Gene: Houdini22\_44 Start: 29727, Stop: 29557, Start Num: 4

Candidate Starts for Houdini22\_44:

(1, 29967), (2, 29865), (3, 29778), (Start: 4 @29727 has 141 MA's), (11, 29592), (12, 29580),

Gene: Huxley\_44 Start: 29784, Stop: 29614, Start Num: 4

Candidate Starts for Huxley\_44:

(1, 30024), (2, 29922), (3, 29835), (Start: 4 @29784 has 141 MA's), (11, 29649), (12, 29637),

Gene: ICleared\_44 Start: 29752, Stop: 29585, Start Num: 4

Candidate Starts for ICleared\_44:

(1, 29992), (2, 29890), (3, 29803), (Start: 4 @29752 has 141 MA's), (10, 29656), (11, 29623), (13, 29596),

Gene: Iceman\_44 Start: 30009, Stop: 29842, Start Num: 4

Candidate Starts for Iceman\_44:

(1, 30249), (2, 30147), (3, 30060), (Start: 4 @30009 has 141 MA's), (7, 29982), (10, 29913), (11, 29880), (13, 29853),

Gene: Iracema64\_45 Start: 29987, Stop: 29817, Start Num: 4

Candidate Starts for Iracema64\_45:

(3, 30038), (Start: 4 @29987 has 141 MA's), (7, 29960), (11, 29855), (13, 29828),

Gene: Jaykayelowell\_42 Start: 29716, Stop: 29549, Start Num: 4

Candidate Starts for Jaykayelowell\_42:

(1, 29956), (2, 29854), (3, 29767), (Start: 4 @29716 has 141 MA's), (7, 29689), (10, 29620), (11, 29587), (13, 29560),

Gene: JetBlade\_44 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for JetBlade\_44:

(1, 29957), (2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (7, 29690), (10, 29621), (11, 29588), (13, 29561),

Gene: JoongJeon\_43 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for JoongJeon\_43:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: KFPoly\_43 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for KFPoly\_43:

(1, 29957), (2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (7, 29690), (10, 29621), (11, 29588), (13, 29561),

Gene: Kampy\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Kampy\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Katalie136\_43 Start: 29672, Stop: 29502, Start Num: 4

Candidate Starts for Katalie136\_43:

(3, 29723), (Start: 4 @29672 has 141 MA's), (6, 29654), (7, 29645), (11, 29540), (13, 29513),

Gene: KekoraPapaka\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for KekoraPapaka\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (7, 29696), (11, 29588), (12, 29576),

Gene: Kingmustik0402\_44 Start: 29712, Stop: 29545, Start Num: 4

Candidate Starts for Kingmustik0402\_44:

(1, 29952), (2, 29850), (3, 29763), (Start: 4 @29712 has 141 MA's), (7, 29685), (10, 29616), (11, 29583), (13, 29556),

Gene: Koan\_42 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Koan\_42:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Koreni\_43 Start: 29404, Stop: 29234, Start Num: 4

Candidate Starts for Koreni\_43:

(1, 29644), (2, 29542), (3, 29455), (Start: 4 @29404 has 141 MA's), (11, 29269), (12, 29257),

Gene: Kratak\_44 Start: 29862, Stop: 29692, Start Num: 4

Candidate Starts for Kratak\_44:

(1, 30102), (2, 30000), (3, 29913), (Start: 4 @29862 has 141 MA's), (7, 29835), (11, 29730), (13, 29703),

Gene: Kremtemulon\_44 Start: 29674, Stop: 29507, Start Num: 4

Candidate Starts for Kremtemulon\_44:

(1, 29914), (2, 29812), (3, 29725), (Start: 4 @29674 has 141 MA's), (7, 29647), (10, 29578), (11, 29545), (13, 29518),

Gene: Kyee\_44 Start: 29721, Stop: 29551, Start Num: 4

Candidate Starts for Kyee\_44:

(1, 29961), (2, 29859), (3, 29772), (Start: 4 @29721 has 141 MA's), (11, 29586), (12, 29574),

Gene: LHTSCC\_46 Start: 30145, Stop: 29975, Start Num: 4

Candidate Starts for LHTSCC\_46:

(3, 30196), (Start: 4 @30145 has 141 MA's), (7, 30118), (11, 30013), (13, 29986),

Gene: LappelDuVide\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for LappelDuVide\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Lemur\_44 Start: 29720, Stop: 29550, Start Num: 4

Candidate Starts for Lemur\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (11, 29585), (12, 29573),

Gene: LeoAvram\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for LeoAvram\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: LittleB\_44 Start: 29724, Stop: 29554, Start Num: 4

Candidate Starts for LittleB\_44:

(1, 29964), (2, 29862), (3, 29775), (Start: 4 @29724 has 141 MA's), (11, 29589), (12, 29577),

Gene: LittleGuy\_44 Start: 29619, Stop: 29452, Start Num: 4

Candidate Starts for LittleGuy\_44:

(1, 29859), (2, 29757), (3, 29670), (Start: 4 @29619 has 141 MA's), (7, 29592), (10, 29523), (11, 29490), (13, 29463),

Gene: LochMonster\_45 Start: 29959, Stop: 29789, Start Num: 4

Candidate Starts for LochMonster\_45:

(1, 30199), (2, 30097), (3, 30010), (Start: 4 @29959 has 141 MA's), (11, 29824), (12, 29812),

Gene: Lorenzo\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Lorenzo\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Lunsford\_45 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for Lunsford\_45:

(1, 29957), (2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (7, 29690), (10, 29621), (11, 29588), (13, 29561),

Gene: Maverick\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Maverick\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Maxo\_45 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Maxo\_45:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Mayonnaise\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Mayonnaise\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Mazhar510\_44 Start: 29724, Stop: 29554, Start Num: 4

Candidate Starts for Mazhar510\_44:

(1, 29964), (2, 29862), (3, 29775), (Start: 4 @29724 has 141 MA's), (11, 29589), (12, 29577),

Gene: Medusa\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Medusa\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: MeeZee\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for MeeZee\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (10, 29624), (11, 29591), (13, 29564),

Gene: Melvin\_46 Start: 29718, Stop: 29551, Start Num: 4

Candidate Starts for Melvin\_46:

(1, 29958), (2, 29856), (3, 29769), (Start: 4 @29718 has 141 MA's), (10, 29622), (11, 29589), (13, 29562),

Gene: Millski\_43 Start: 29724, Stop: 29557, Start Num: 4

Candidate Starts for Millski\_43:

(1, 29964), (2, 29862), (3, 29775), (Start: 4 @29724 has 141 MA's), (10, 29628), (11, 29595), (13, 29568),

Gene: Miramae\_43 Start: 29860, Stop: 29690, Start Num: 4

Candidate Starts for Miramae\_43:

(3, 29911), (Start: 4 @29860 has 141 MA's), (7, 29833), (11, 29728), (13, 29701),

Gene: Morpher26\_43 Start: 29693, Stop: 29523, Start Num: 4

Candidate Starts for Morpher26\_43:

(3, 29744), (Start: 4 @29693 has 141 MA's), (6, 29675), (7, 29666), (11, 29561), (13, 29534),

Gene: Morrow\_45 Start: 29729, Stop: 29559, Start Num: 4

Candidate Starts for Morrow\_45:

(1, 29969), (2, 29867), (3, 29780), (Start: 4 @29729 has 141 MA's), (11, 29594), (12, 29582),

Gene: Mundrea\_43 Start: 29680, Stop: 29510, Start Num: 4

Candidate Starts for Mundrea\_43:

(3, 29731), (Start: 4 @29680 has 141 MA's), (6, 29662), (7, 29653), (11, 29548), (13, 29521),

Gene: Nebs\_45 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Nebs\_45:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Nemo27\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Nemo27\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Noelle\_44 Start: 29982, Stop: 29815, Start Num: 4

Candidate Starts for Noelle\_44:

(3, 30033), (Start: 4 @29982 has 141 MA's), (7, 29955), (8, 29901), (11, 29853), (13, 29826),

Gene: NorthStar\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for NorthStar\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: NotAPhaseMom\_44 Start: 29727, Stop: 29557, Start Num: 4

Candidate Starts for NotAPhaseMom\_44:

(1, 29967), (2, 29865), (3, 29778), (Start: 4 @29727 has 141 MA's), (11, 29592), (12, 29580),

Gene: Nyxis\_44 Start: 29613, Stop: 29446, Start Num: 4

Candidate Starts for Nyxis\_44:

(1, 29853), (2, 29751), (3, 29664), (Start: 4 @29613 has 141 MA's), (9, 29523), (11, 29484), (12, 29472), (13, 29457),

Gene: OKaNui\_44 Start: 29773, Stop: 29606, Start Num: 4

Candidate Starts for OKaNui\_44:

(1, 30013), (2, 29911), (3, 29824), (Start: 4 @29773 has 141 MA's), (10, 29677), (11, 29644), (13, 29617),

Gene: Obama12\_45 Start: 30147, Stop: 29977, Start Num: 4

Candidate Starts for Obama12\_45:

(3, 30198), (Start: 4 @30147 has 141 MA's), (7, 30120), (11, 30015), (13, 29988),

Gene: Ohfah\_45 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Ohfah\_45:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Palestino\_43 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Palestino\_43:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (5, 29705), (10, 29624), (11, 29591), (13, 29564),

Gene: Peaches\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Peaches\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Perplexer\_43 Start: 29669, Stop: 29499, Start Num: 4

Candidate Starts for Perplexer\_43:

(3, 29720), (Start: 4 @29669 has 141 MA's), (6, 29651), (7, 29642), (11, 29537), (13, 29510),

Gene: PeterPeter\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for PeterPeter\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: PetiteSangsue\_43 Start: 29672, Stop: 29502, Start Num: 4

Candidate Starts for PetiteSangsue\_43:

(3, 29723), (Start: 4 @29672 has 141 MA's), (6, 29654), (7, 29645), (11, 29540), (13, 29513),

Gene: Phacado\_44 Start: 29722, Stop: 29552, Start Num: 4

Candidate Starts for Phacado\_44:

(1, 29962), (2, 29860), (3, 29773), (Start: 4 @29722 has 141 MA's), (11, 29587), (12, 29575),

Gene: Phelipe\_45 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Phelipe\_45:

(2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Phighter1804\_44 Start: 29765, Stop: 29595, Start Num: 4

Candidate Starts for Phighter1804\_44:

(3, 29816), (Start: 4 @29765 has 141 MA's), (11, 29630), (12, 29618),

Gene: Phontbonne\_44 Start: 29614, Stop: 29447, Start Num: 4

Candidate Starts for Phontbonne\_44:

(1, 29854), (2, 29752), (3, 29665), (Start: 4 @29614 has 141 MA's), (7, 29587), (10, 29518), (11, 29485), (13, 29458),

Gene: Pipcraft\_42 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Pipcraft\_42:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Polymorphads\_45 Start: 29716, Stop: 29546, Start Num: 4

Candidate Starts for Polymorphads\_45:

(1, 29956), (2, 29854), (3, 29767), (Start: 4 @29716 has 141 MA's), (11, 29581), (12, 29569),

Gene: Pumbaa\_44 Start: 29665, Stop: 29498, Start Num: 4

Candidate Starts for Pumbaa\_44:

(1, 29905), (2, 29803), (3, 29716), (Start: 4 @29665 has 141 MA's), (10, 29569), (11, 29536), (13, 29509),

Gene: Relief\_43 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Relief\_43:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: RockieBear\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for RockieBear\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Romney\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Romney\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: Roosevelt\_43 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Roosevelt\_43:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: Rosa24\_43 Start: 29754, Stop: 29587, Start Num: 4

Candidate Starts for Rosa24\_43:

(1, 29994), (2, 29892), (3, 29805), (Start: 4 @29754 has 141 MA's), (10, 29658), (11, 29625), (13, 29598),

Gene: Ruin\_44 Start: 29716, Stop: 29549, Start Num: 4

Candidate Starts for Ruin\_44:

(1, 29956), (2, 29854), (3, 29767), (Start: 4 @29716 has 141 MA's), (5, 29701), (10, 29620), (11, 29587), (13, 29560),

Gene: Sabertooth\_44 Start: 29725, Stop: 29552, Start Num: 4

Candidate Starts for Sabertooth\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (13, 29563),

Gene: Scamp\_44 Start: 29725, Stop: 29555, Start Num: 4

Candidate Starts for Scamp\_44:

(1, 29965), (2, 29863), (3, 29776), (Start: 4 @29725 has 141 MA's), (11, 29590), (12, 29578),

Gene: SenorClean\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for SenorClean\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Shaka\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Shaka\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: SheldonCooper\_46 Start: 30146, Stop: 29976, Start Num: 4

Candidate Starts for SheldonCooper\_46:

(3, 30197), (Start: 4 @30146 has 141 MA's), (7, 30119), (11, 30014), (13, 29987),

Gene: Shygu2\_43 Start: 29672, Stop: 29505, Start Num: 4

Candidate Starts for Shygu2\_43:

(3, 29723), (Start: 4 @29672 has 141 MA's), (7, 29645), (9, 29582), (11, 29543), (13, 29516),

Gene: Skipitt\_43 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for Skipitt\_43:

(1, 29957), (2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (10, 29621), (11, 29588), (13, 29561),

Gene: Sparxx\_45 Start: 29718, Stop: 29548, Start Num: 4

Candidate Starts for Sparxx\_45:

(1, 29958), (2, 29856), (3, 29769), (Start: 4 @29718 has 141 MA's), (11, 29583), (12, 29571),

Gene: Spino\_43 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Spino\_43:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Stasia\_43 Start: 29592, Stop: 29422, Start Num: 4

Candidate Starts for Stasia\_43:

(3, 29643), (Start: 4 @29592 has 141 MA's), (5, 29577), (11, 29457), (12, 29445),

Gene: SteMason\_43 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for SteMason\_43:

(2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (10, 29624), (11, 29591), (13, 29564),

Gene: Stink\_44 Start: 30140, Stop: 29970, Start Num: 4

Candidate Starts for Stink\_44:

(3, 30191), (Start: 4 @30140 has 141 MA's), (7, 30113), (11, 30008), (13, 29981),

Gene: Sultana\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for Sultana\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Taquarus\_44 Start: 29726, Stop: 29556, Start Num: 4

Candidate Starts for Taquarus\_44:

(1, 29966), (2, 29864), (3, 29777), (Start: 4 @29726 has 141 MA's), (11, 29591), (12, 29579),

Gene: Thanksgivukkah\_43 Start: 29721, Stop: 29554, Start Num: 4

Candidate Starts for Thanksgivukkah\_43:

(1, 29961), (2, 29859), (3, 29772), (Start: 4 @29721 has 141 MA's), (10, 29625), (11, 29592), (13, 29565),

Gene: TinaFeyge\_44 Start: 29718, Stop: 29548, Start Num: 4

Candidate Starts for TinaFeyge\_44:

(1, 29958), (2, 29856), (3, 29769), (Start: 4 @29718 has 141 MA's), (11, 29583), (12, 29571),

Gene: Tinybot\_43 Start: 29750, Stop: 29583, Start Num: 4

Candidate Starts for Tinybot\_43:

(1, 29990), (2, 29888), (3, 29801), (Start: 4 @29750 has 141 MA's), (10, 29654), (11, 29621), (13, 29594),

Gene: TiroTheta9\_44 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for TiroTheta9\_44:

(2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (10, 29621), (11, 29588), (13, 29561),

Gene: TroyPia\_45 Start: 29721, Stop: 29551, Start Num: 4

Candidate Starts for TroyPia\_45:

(1, 29961), (2, 29859), (3, 29772), (Start: 4 @29721 has 141 MA's), (11, 29586), (12, 29574),

Gene: TygerBlood\_44 Start: 29723, Stop: 29553, Start Num: 4

Candidate Starts for TygerBlood\_44:

(1, 29963), (2, 29861), (3, 29774), (Start: 4 @29723 has 141 MA's), (11, 29588), (12, 29576),

Gene: Ulysses\_43 Start: 29400, Stop: 29233, Start Num: 4

Candidate Starts for Ulysses\_43:

(3, 29451), (Start: 4 @29400 has 141 MA's), (10, 29304), (11, 29271), (13, 29244),

Gene: Wander\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Wander\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: Wilbur\_44 Start: 29720, Stop: 29553, Start Num: 4

Candidate Starts for Wilbur\_44:

(1, 29960), (2, 29858), (3, 29771), (Start: 4 @29720 has 141 MA's), (7, 29693), (10, 29624), (11, 29591), (13, 29564),

Gene: Wile\_43 Start: 29703, Stop: 29533, Start Num: 4

Candidate Starts for Wile\_43:

(3, 29754), (Start: 4 @29703 has 141 MA's), (6, 29685), (7, 29676), (11, 29571), (13, 29544),

Gene: Wizard007\_44 Start: 29728, Stop: 29558, Start Num: 4

Candidate Starts for Wizard007\_44:

(1, 29968), (2, 29866), (3, 29779), (Start: 4 @29728 has 141 MA's), (11, 29593), (12, 29581),

Gene: Xena\_42 Start: 29669, Stop: 29499, Start Num: 4

Candidate Starts for Xena\_42:

(3, 29720), (Start: 4 @29669 has 141 MA's), (6, 29651), (7, 29642), (11, 29537), (13, 29510),

Gene: YoSam321\_44 Start: 29717, Stop: 29550, Start Num: 4

Candidate Starts for YoSam321\_44:

(1, 29957), (2, 29855), (3, 29768), (Start: 4 @29717 has 141 MA's), (10, 29621), (11, 29588), (13, 29561),