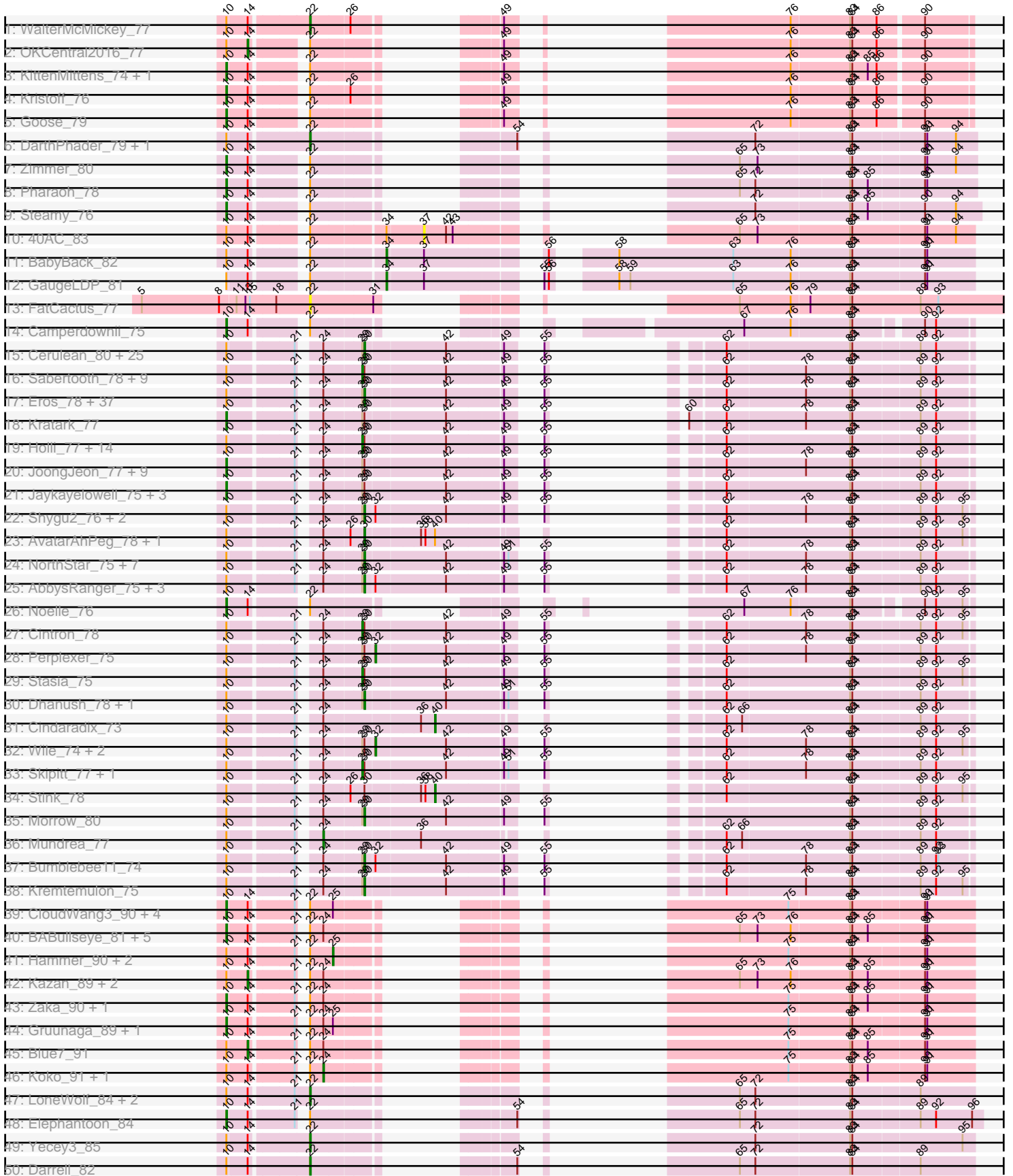
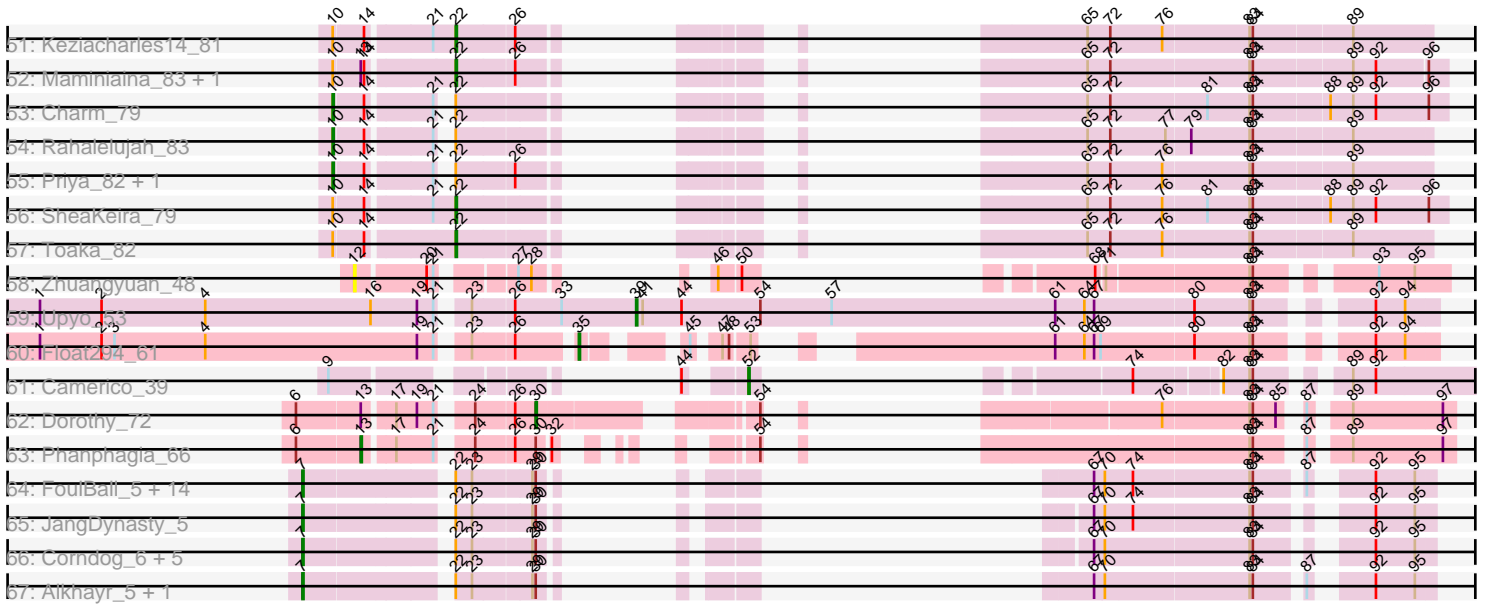


Pham 221115



Pham 221115



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 221115 Report

This analysis was run 03/28/25 on database version 593.

Pham number 221115 has 223 members, 8 are drafts.

Phages represented in each track:

- Track 1 : WalterMcMickey\_77
- Track 2 : OKCentral2016\_77
- Track 3 : KittenMittens\_74, Drake94\_75
- Track 4 : Kristoff\_76
- Track 5 : Goose\_79
- Track 6 : DarthPhader\_79, Refuge\_81
- Track 7 : Zimmer\_80
- Track 8 : Pharaoh\_78
- Track 9 : Steamy\_76
- Track 10 : 40AC\_83
- Track 11 : BabyBack\_82
- Track 12 : GaugeLDP\_81
- Track 13 : FatCactus\_77
- Track 14 : Camperdownii\_75
- Track 15 : Cerulean\_80, Deano\_75, TiroTheta9\_77, Caelakin\_76, LochMonster\_79, Kamy\_77, Eagle\_77, Iracema64\_78, ChampagnePapi\_81, Spino\_77, Shaka\_76, Lunsford\_78, BellusTerra\_79, Roosevelt\_76, Abdiel\_77, SheldonCooper\_78, Taquarus\_77, Phelipe\_79, CentreCat\_78, Citius\_78, Phontbonne\_78, SenorClean\_73, Nebs\_79, Medusa\_77, Ulysses\_77, Druantia\_77
- Track 16 : Sabertooth\_78, Koan\_73, Pumbaa\_78, Mazhar510\_78, Connomayer\_78, Polymorphads\_79, Koreni\_77, LHTSCC\_80, Tinybot\_77, TygerBlood\_78
- Track 17 : Eros\_78, DirtyDunning\_77, Iceman\_76, MeeZee\_77, Obama12\_79, OKaNui\_77, Maverick\_77, Happiness\_77, Peaches\_76, Burger\_76, Phacado\_78, Huxley\_67, Millski\_77, PeterPeter\_78, Avle17\_78, Broseidon\_78, Datway\_75, Lorenzo\_78, Cocoaberry\_78, ICleared\_77, Anyyong\_77, Alberto7\_79, Wander\_78, Relief\_77, Kye\_78, Arturo\_75, Commander\_76, LittleGuy\_78, Scamp\_78, HamSlice\_74, Nemo27\_77, LappelDuVide\_78, Gadost\_78, Eapen\_78, Houdini22\_77, NotAPhaseMom\_77, Phighter1804\_78, Xena\_74
- Track 18 : Kratak\_77
- Track 19 : Holli\_77, Kingmustik0402\_78, Blackmoor\_77, Maxo\_80, Ohfah\_79, JetBlade\_79, Nyxis\_77, Bartimeaus\_78, TroyPia\_79, Sparxx\_79, BangNhom\_75, YoSam321\_78, Baby16\_78, Rosa24\_74, Eurydice\_79
- Track 20 : JoongJeon\_77, Clarenza\_77, BubbleTrouble\_77, KFPoly\_77, Albee\_78, Thanksgivukkah\_77, Palestino\_77, LittleB\_78, Eris\_77, Funston\_77
- Track 21 : Jaykayelowell\_75, Florean\_78, Bruiser\_77, TinaFeyge\_76
- Track 22 : Shygu2\_76, Morpher26\_75, Cici\_75
- Track 23 : AvatarAhPeg\_78, Miramae\_78

- Track 24 : NorthStar\_75, Romney\_77, Melvin\_80, Wilbur\_78, Pipcraft\_74, Ruin\_78, Lemur\_78, Flux\_79
- Track 25 : AbbysRanger\_75, Badger\_74, PetiteSangsue\_75, Backyardigan\_73
- Track 26 : Noelle\_76
- Track 27 : Cintron\_78
- Track 28 : Perplexer\_75
- Track 29 : Stasia\_75
- Track 30 : Dhanush\_78, Chaph\_78
- Track 31 : Cindaradix\_73
- Track 32 : Wile\_74, Wizard007\_75, Katalie136\_75
- Track 33 : Skipitt\_77, Bombshell\_78
- Track 34 : Stink\_78
- Track 35 : Morrow\_80
- Track 36 : Mundrea\_77
- Track 37 : Bumblebee11\_74
- Track 38 : Kremtemulon\_75
- Track 39 : CloudWang3\_90, Roksolana\_90, Hexamo\_89, Rifter\_90, Artemis2UCLA\_89
- Track 40 : BABullseye\_81, Dorothea\_88, Hoot\_83, Jordennis\_86, Isiphiwo\_84, JewelBug\_80
- Track 41 : Hammer\_90, ToneTone\_87, Tucker\_90
- Track 42 : Kazan\_89, SmellyB\_88, Cookiedough\_88
- Track 43 : Zaka\_90, Wiks\_89
- Track 44 : Gruunaga\_89, Gladiator\_86
- Track 45 : Blue7\_91
- Track 46 : Koko\_91, Yokurt\_89
- Track 47 : LoneWolf\_84, Vanisoa\_79, Arissanae\_79
- Track 48 : Elephantoon\_84
- Track 49 : Yecey3\_85
- Track 50 : Darrell\_82
- Track 51 : Keziacharles14\_81
- Track 52 : Maminiaina\_83, BogosyJay\_83
- Track 53 : Charm\_79
- Track 54 : Rahalelujah\_83
- Track 55 : Priya\_82, Spouty\_82
- Track 56 : SheaKeira\_79
- Track 57 : Toaka\_82
- Track 58 : Zhuangyuan\_48
- Track 59 : Upyo\_53
- Track 60 : Float294\_61
- Track 61 : Camerico\_39
- Track 62 : Dorothy\_72
- Track 63 : Phanphagia\_66
- Track 64 : FoulBall\_5, Mori\_5, Familton\_6, Vorrrps\_5, Schuy\_5, Ryadel\_7, Idergollasper\_5, Shida\_5, TelAviv\_5, Blessica\_5, Krili\_5, MadKillah\_5, NiebruSaylor\_5, Catdawg\_5, SchoolBus\_5
- Track 65 : JangDynasty\_5
- Track 66 : Corndog\_6, Dylan\_6, YungJamal\_6, Firecracker\_5, Smooch\_6, Zakhe101\_6
- Track 67 : Alkhayr\_5, Winget\_5

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

The start number called the most often in the published annotations is 30, it was called in 85 of the 215 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger\_75, Abdiel\_77, Alberto7\_79, Annyong\_77, Arturo\_75, AvatarAhPeg\_78, Avle17\_78, Backyardigan\_73, Badger\_74, BellusTerra\_79, Broseidon\_78, Bumblebee11\_74, Burger\_76, Caelakin\_76, CentreCat\_78, Cerulean\_80, ChampagnePapi\_81, Chaph\_78, Cici\_75, Citius\_78, Cocoaberry\_78, Commander\_76, Datway\_75, Deano\_75, Dhanush\_78, DirtyDunning\_77, Dorothy\_72, Druantia\_77, Eagle\_77, Eapen\_78, Eros\_78, Flux\_79, Gadost\_78, HamSlice\_74, Happiness\_77, Houdini22\_77, Huxley\_67, ICleared\_77, Iceman\_76, Iracema64\_78, Kampy\_77, Kremtemulon\_75, Kyee\_78, LappelDuVide\_78, Lemur\_78, LittleGuy\_78, LochMonster\_79, Lorenzo\_78, Lunsford\_78, Maverick\_77, Medusa\_77, MeeZee\_77, Melvin\_80, Millski\_77, Miramae\_78, Morpher26\_75, Morrow\_80, Nebs\_79, Nemo27\_77, NorthStar\_75, NotAPhaseMom\_77, OKaNui\_77, Obama12\_79, Peaches\_76, PeterPeter\_78, PetiteSangsue\_75, Phacado\_78, Phelipe\_79, Phighter1804\_78, Phontbonne\_78, Pipcraft\_74, Relief\_77, Romney\_77, Roosevelt\_76, Ruin\_78, Scamp\_78, SeniorClean\_73, Shaka\_76, SheldonCooper\_78, Shygu2\_76, Spino\_77, Taquarus\_77, TiroTheta9\_77, Ulysses\_77, Wander\_78, Wilbur\_78, Xena\_74,

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

- Albee\_78, Alkhayr\_5, Baby16\_78, BangNhom\_75, Bartimeaus\_78, Blackmoor\_77, Blessica\_5, Bombshell\_78, Bruiser\_77, BubbleTrouble\_77, Catdawg\_5, Cintron\_78, Clarenza\_77, Connomayer\_78, Corndog\_6, Dylan\_6, Eris\_77, Eurydice\_79, Familton\_6, Firecracker\_5, Florean\_78, FoulBall\_5, Funston\_77, Holli\_77, Idergollasper\_5, JangDynasty\_5, Jaykayelowell\_75, JetBlade\_79, JoongJeon\_77, KFPoly\_77, Katalie136\_75, Kingmustik0402\_78, Koan\_73, Koreni\_77, Kratark\_77, Krili\_5, LHTSCC\_80, LittleB\_78, MadKillah\_5, Maxo\_80, Mazhar510\_78, Mori\_5, NiebruSaylor\_5, Nyxis\_77, Ohfah\_79, Palestino\_77, Perplexer\_75, Phanphagia\_66, Polymorphads\_79, Pumbaa\_78, Rosa24\_74, Ryadel\_7, Sabertooth\_78, SchoolBus\_5, Schuy\_5, Shida\_5, Skipitt\_77, Smooch\_6, Sparxx\_79, Stasia\_75, Stink\_78, TelAviv\_5, Thanksgivukkah\_77, TinaFeyge\_76, Tinybot\_77, TroyPia\_79, TygerBlood\_78, Vorrps\_5, Wile\_74, Winget\_5, Wizard007\_75, YoSam321\_78, YungJamal\_6, Zakhe101\_6,

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

- 40AC\_83, Arissanae\_79, Artemis2UCLA\_89, BABullseye\_81, BabyBack\_82, Blue7\_91, BogosyJay\_83, Camerico\_39, Camperdownii\_75, Charm\_79, Cindaradix\_73, CloudWang3\_90, Cookiedough\_88, Darrell\_82, DARTHPhader\_79, Dorothea\_88, Drake94\_75, Elephantoon\_84, FatCactus\_77, Float294\_61, GaugeLDP\_81, Gladiator\_86, Goose\_79, Gruunaga\_89, Hammer\_90, Hexamo\_89, Hoot\_83, Isiphiwo\_84, JewelBug\_80, Jordennis\_86, Kazan\_89, Keziacharles14\_81, KittenMittens\_74, Koko\_91, Kristoff\_76, LoneWolf\_84, Maminiaiina\_83, Mundrea\_77, Noelle\_76, OKCentral2016\_77, Pharaoh\_78, Priya\_82, Rahalelujah\_83, Refuge\_81, Rifter\_90, Roksolana\_90, SheaKeira\_79, SmellyB\_88, Spouty\_82, Steamy\_76, Toaka\_82, ToneTone\_87, Tucker\_90, Upyo\_53, Vanisoa\_79, WalterMcMickey\_77, Wiks\_89, Yecey3\_85, Yokurt\_89, Zaka\_90, Zhuangyuan\_48, Zimmer\_80,

**Summary by start number:**

Start 7:

- Found in 24 of 223 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 23 of 215
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alkhayr\_5 (O), Blessica\_5 (O), Catdawg\_5 (O), Corndog\_6 (O), Dylan\_6 (O), Familton\_6 (O), Firecracker\_5 (O), FoulBall\_5 (O), Idergollasper\_5 (O), JangDynasty\_5 (O), Krili\_5 (O), MadKillah\_5 (O), Mori\_5 (O), NiebruSaylor\_5 (O), Ryadel\_7 (O), SchoolBus\_5 (O), Schuy\_5 (O), Shida\_5 (O), Smooch\_6 (O), TelAviv\_5 (O), Vorrrps\_5 (O), Winget\_5 (O), YungJamal\_6 (O), Zakhe101\_6 (O),

Start 10:

- Found in 192 of 223 ( 86.1% ) of genes in pham
- Manual Annotations of this start: 44 of 215
- Called 22.9% of time when present
- Phage (with cluster) where this start called: Albee\_78 (A4), Artemis2UCLA\_89 (A6), BABullseye\_81 (A6), Bruiser\_77 (A4), BubbleTrouble\_77 (A4), Camperdownii\_75 (A4), Charm\_79 (A9), Clarenza\_77 (A4), CloudWang3\_90 (A6), Dorothea\_88 (A6), Drake94\_75 (A10), Elephantoon\_84 (A9), Eris\_77 (A4), Florean\_78 (A4), Funston\_77 (A4), Gladiator\_86 (A6), Goose\_79 (A10), Gruunaga\_89 (A6), Hexamo\_89 (A6), Hoot\_83 (A6), Isiphiwo\_84 (A6), Jaykayelowell\_75 (A4), JewelBug\_80 (A6), JoongJeon\_77 (A4), Jordennis\_86 (A6), KFPoly\_77 (A4), KittenMittens\_74 (A10), Kratark\_77 (A4), Kristoff\_76 (A10), LittleB\_78 (A4), Noelle\_76 (A4), Palestino\_77 (A4), Pharaoh\_78 (A12), Priya\_82 (A9), Rahalelujah\_83 (A9), Rifter\_90 (A6), Roksolana\_90 (A6), Spouty\_82 (A9), Steamy\_76 (A12), Thanksgivukkah\_77 (A4), TinaFeyge\_76 (A4), Wiks\_89 (A6), Zaka\_90 (A6), Zimmer\_80 (A12),

Start 12:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zhuangyuan\_48 (AS2),

Start 13:

- Found in 5 of 223 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 215
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Phanphagia\_66 (F1),

Start 14:

- Found in 55 of 223 ( 24.7% ) of genes in pham
- Manual Annotations of this start: 5 of 215
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Blue7\_91 (A6), Cookiedough\_88 (A6), Kazan\_89 (A6), OKCentral2016\_77 (A10), SmellyB\_88 (A6),

Start 22:

- Found in 80 of 223 ( 35.9% ) of genes in pham
- Manual Annotations of this start: 13 of 215
- Called 17.5% of time when present
- Phage (with cluster) where this start called: Arissanee\_79 (A9), BogosyJay\_83 (A9), Darrell\_82 (A9), DarthPhader\_79 (A12), FatCactus\_77 (A20), Keziacharles14\_81

(A9), LoneWolf\_84 (A9), Maminiaina\_83 (A9), Refuge\_81 (A12), SheaKeira\_79 (A9), Toaka\_82 (A9), Vanisoa\_79 (A9), WalterMcMickey\_77 (A10), Yecey3\_85 (A9),

Start 24:

- Found in 155 of 223 ( 69.5% ) of genes in pham
- Manual Annotations of this start: 3 of 215
- Called 1.9% of time when present
- Phage (with cluster) where this start called: Koko\_91 (A6), Mundrea\_77 (A4), Yokurt\_89 (A6),

Start 25:

- Found in 10 of 223 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 3 of 215
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Hammer\_90 (A6), ToneTone\_87 (A6), Tucker\_90 (A6),

Start 29:

- Found in 156 of 223 ( 70.0% ) of genes in pham
- Manual Annotations of this start: 27 of 215
- Called 18.6% of time when present
- Phage (with cluster) where this start called: Baby16\_78 (A4), BangNhom\_75 (A4), Bartimeaus\_78 (A4), Blackmoor\_77 (A4), Bombshell\_78 (A4), Cintron\_78 (A4), Connomayer\_78 (A4), Eurydice\_79 (A4), Holli\_77 (A4), JetBlade\_79 (A4), Kingmustik0402\_78 (A4), Koan\_73 (A4), Koreni\_77 (A4), LHTSCC\_80 (A4), Maxo\_80 (A4), Mazhar510\_78 (A4), Nyxis\_77 (A4), Ohfah\_79 (A4), Polymorphads\_79 (A4), Pumbaa\_78 (A4), Rosa24\_74 (A4), Sabertooth\_78 (A4), Skipitt\_77 (A4), Sparxx\_79 (A4), Stasia\_75 (A4), Tinybot\_77 (A4), TroyPia\_79 (A4), TygerBlood\_78 (A4), YoSam321\_78 (A4),

Start 30:

- Found in 161 of 223 ( 72.2% ) of genes in pham
- Manual Annotations of this start: 85 of 215
- Called 54.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger\_75 (A4), Abdiel\_77 (A4), Alberto7\_79 (A4), Annyong\_77 (A4), Arturo\_75 (A4), AvatarAhPeg\_78 (A4), Avle17\_78 (A4), Backyardigan\_73 (A4), Badger\_74 (A4), BellusTerra\_79 (A4), Broseidon\_78 (A4), Bumblebee11\_74 (A4), Burger\_76 (A4), Caelakin\_76 (A4), CentreCat\_78 (A4), Cerulean\_80 (A4), ChampagnePapi\_81 (A4), Chaph\_78 (A4), Cici\_75 (A4), Citius\_78 (A4), Cocoaberry\_78 (A4), Commander\_76 (A4), Datway\_75 (A4), Deano\_75 (A4), Dhanush\_78 (A4), DirtyDunning\_77 (A4), Dorothy\_72 (F1), Druantia\_77 (A4), Eagle\_77 (A4), Eapen\_78 (A4), Eros\_78 (A4), Flux\_79 (A4), Gadost\_78 (A4), HamSlice\_74 (A4), Happiness\_77 (A4), Houdini22\_77 (A4), Huxley\_67 (A4), ICleared\_77 (A4), Iceman\_76 (A4), Iracema64\_78 (A4), Kampy\_77 (A4), Kremtemulon\_75 (A4), Kyee\_78 (A4), LappelDuVide\_78 (A4), Lemur\_78 (A4), LittleGuy\_78 (A4), LochMonster\_79 (A4), Lorenzo\_78 (A4), Lunsford\_78 (A4), Maverick\_77 (A4), Medusa\_77 (A4), MeeZee\_77 (A4), Melvin\_80 (A4), Millski\_77 (A4), Miramae\_78 (A4), Morpher26\_75 (A4), Morrow\_80 (A4), Nebs\_79 (A4), Nemo27\_77 (A4), NorthStar\_75 (A4), NotAPhaseMom\_77 (A4), OKaNui\_77 (A4), Obama12\_79 (A4), Peaches\_76 (A4), PeterPeter\_78 (A4), PetiteSangsue\_75 (A4), Phacado\_78 (A4), Phelipe\_79 (A4), Phighter1804\_78 (A4), Phontbonne\_78 (A4), Pipcraft\_74 (A4), Relief\_77 (A4), Romney\_77 (A4), Roosevelt\_76 (A4), Ruin\_78 (A4), Scamp\_78 (A4), SeniorClean\_73 (A4), Shaka\_76 (A4), SheldonCooper\_78 (A4),

Shygu2\_76 (A4), Spino\_77 (A4), Taquarus\_77 (A4), TiroTheta9\_77 (A4), Ulysses\_77 (A4), Wander\_78 (A4), Wilbur\_78 (A4), Xena\_74 (A4),

Start 32:

- Found in 13 of 223 ( 5.8% ) of genes in pham
- Manual Annotations of this start: 4 of 215
- Called 30.8% of time when present
- Phage (with cluster) where this start called: Katalie136\_75 (A4), Perplexer\_75 (A4), Wile\_74 (A4), Wizard007\_75 (A4),

Start 34:

- Found in 3 of 223 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 215
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BabyBack\_82 (A2), GaugeLDP\_81 (A2),

Start 35:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 215
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Float294\_61 (CR3),

Start 37:

- Found in 3 of 223 ( 1.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: 40AC\_83 (A17),

Start 39:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 215
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Upyo\_53 (CD),

Start 40:

- Found in 4 of 223 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 2 of 215
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cindaradix\_73 (A4), Stink\_78 (A4),

Start 52:

- Found in 1 of 223 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 215
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico\_39 (DF),

### **Summary by clusters:**

There are 14 clusters represented in this pham: A20, AS2, A17, A10, A12, DF, CR3, O, CD, A2, A4, F1, A6, A9,

Info for manual annotations of cluster A10:

- Start number 10 was manually annotated 4 times for cluster A10.



- Start number 14 was manually annotated 1 time for cluster A10.
- Start number 22 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A12:

- Start number 10 was manually annotated 3 times for cluster A12.
- Start number 22 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A2:

- Start number 34 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A4:

- Start number 10 was manually annotated 17 times for cluster A4.
- Start number 24 was manually annotated 1 time for cluster A4.
- Start number 29 was manually annotated 27 times for cluster A4.
- Start number 30 was manually annotated 84 times for cluster A4.
- Start number 32 was manually annotated 4 times for cluster A4.
- Start number 40 was manually annotated 2 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 10 was manually annotated 15 times for cluster A6.
- Start number 14 was manually annotated 4 times for cluster A6.
- Start number 24 was manually annotated 2 times for cluster A6.
- Start number 25 was manually annotated 3 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 10 was manually annotated 5 times for cluster A9.
- Start number 22 was manually annotated 10 times for cluster A9.

Info for manual annotations of cluster CD:

- Start number 39 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CR3:

- Start number 35 was manually annotated 1 time for cluster CR3.

Info for manual annotations of cluster DF:

- Start number 52 was manually annotated 1 time for cluster DF.

Info for manual annotations of cluster F1:

- Start number 13 was manually annotated 1 time for cluster F1.
- Start number 30 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster O:

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

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

Gene: 40AC\_83 Start: 49035, Stop: 48499, Start Num: 37

Candidate Starts for 40AC\_83:

(Start: 10 @49257 has 44 MA's), (Start: 14 @49233 has 5 MA's), (Start: 22 @49176 has 13 MA's), (Start: 34 @49083 has 2 MA's), (37, 49035), (42, 49005), (43, 48996), (65, 48810), (73, 48786), (83, 48663), (84, 48660), (90, 48564), (91, 48561), (94, 48522),

Gene: AbbysRanger\_75 Start: 46560, Stop: 45976, Start Num: 30

Candidate Starts for AbbysRanger\_75:

(Start: 10 @46710 has 44 MA's), (21, 46632), (Start: 24 @46611 has 3 MA's), (Start: 29 @46563 has 27 MA's), (Start: 30 @46560 has 85 MA's), (Start: 32 @46548 has 4 MA's), (42, 46455), (49, 46383), (55, 46365), (62, 46299), (78, 46194), (83, 46134), (84, 46131), (89, 46044), (92, 46023),

Gene: Abdiel\_77 Start: 46760, Stop: 46176, Start Num: 30

Candidate Starts for Abdiel\_77:

(Start: 10 @46910 has 44 MA's), (21, 46832), (Start: 24 @46811 has 3 MA's), (Start: 29 @46763 has 27 MA's), (Start: 30 @46760 has 85 MA's), (42, 46655), (49, 46583), (55, 46565), (62, 46499), (83, 46334), (84, 46331), (89, 46244), (92, 46223),

Gene: Albee\_78 Start: 46898, Stop: 46164, Start Num: 10

Candidate Starts for Albee\_78:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Alberto7\_79 Start: 47085, Stop: 46501, Start Num: 30

Candidate Starts for Alberto7\_79:

(Start: 10 @47235 has 44 MA's), (21, 47157), (Start: 24 @47136 has 3 MA's), (Start: 29 @47088 has 27 MA's), (Start: 30 @47085 has 85 MA's), (42, 46980), (49, 46908), (55, 46890), (62, 46824), (78, 46719), (83, 46659), (84, 46656), (89, 46569), (92, 46548),

Gene: Alkhayr\_5 Start: 1855, Stop: 1286, Start Num: 7

Candidate Starts for Alkhayr\_5:

(Start: 7 @1855 has 23 MA's), (Start: 22 @1738 has 13 MA's), (23, 1723), (Start: 29 @1672 has 27 MA's), (Start: 30 @1669 has 85 MA's), (67, 1555), (70, 1546), (83, 1417), (84, 1414), (87, 1378), (92, 1339), (95, 1303),

Gene: Annyong\_77 Start: 46793, Stop: 46209, Start Num: 30

Candidate Starts for Annyong\_77:

(Start: 10 @46943 has 44 MA's), (21, 46865), (Start: 24 @46844 has 3 MA's), (Start: 29 @46796 has 27 MA's), (Start: 30 @46793 has 85 MA's), (42, 46688), (49, 46616), (55, 46598), (62, 46532), (78, 46427), (83, 46367), (84, 46364), (89, 46277), (92, 46256),

Gene: Arissanae\_79 Start: 46740, Stop: 46174, Start Num: 22

Candidate Starts for Arissanae\_79:

(Start: 10 @46821 has 44 MA's), (Start: 14 @46797 has 5 MA's), (21, 46743), (Start: 22 @46740 has 13 MA's), (65, 46482), (72, 46461), (83, 46335), (84, 46332), (89, 46245),

Gene: Artemis2UCLA\_89 Start: 47205, Stop: 46558, Start Num: 10

Candidate Starts for Artemis2UCLA\_89:

(Start: 10 @47205 has 44 MA's), (Start: 14 @47181 has 5 MA's), (21, 47127), (Start: 22 @47124 has 13 MA's), (Start: 25 @47094 has 3 MA's), (75, 46800), (83, 46719), (84, 46716), (90, 46623), (91, 46620),

Gene: Arturo\_75 Start: 46876, Stop: 46292, Start Num: 30

Candidate Starts for Arturo\_75:

(Start: 10 @47026 has 44 MA's), (21, 46948), (Start: 24 @46927 has 3 MA's), (Start: 29 @46879 has 27 MA's), (Start: 30 @46876 has 85 MA's), (42, 46771), (49, 46699), (55, 46681), (62, 46615), (78, 46510), (83, 46450), (84, 46447), (89, 46360), (92, 46339),

Gene: AvatarAhPeg\_78 Start: 46909, Stop: 46328, Start Num: 30

Candidate Starts for AvatarAhPeg\_78:

(Start: 10 @47059 has 44 MA's), (21, 46981), (Start: 24 @46960 has 3 MA's), (26, 46927), (Start: 30 @46909 has 85 MA's), (36, 46840), (38, 46834), (Start: 40 @46822 has 2 MA's), (62, 46651), (83, 46486), (84, 46483), (89, 46396), (92, 46375), (95, 46339),

Gene: Avle17\_78 Start: 46742, Stop: 46158, Start Num: 30

Candidate Starts for Avle17\_78:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: BABullseye\_81 Start: 45537, Stop: 44887, Start Num: 10

Candidate Starts for BABullseye\_81:

(Start: 10 @45537 has 44 MA's), (Start: 14 @45513 has 5 MA's), (21, 45459), (Start: 22 @45456 has 13 MA's), (Start: 24 @45438 has 3 MA's), (65, 45198), (73, 45174), (76, 45129), (83, 45051), (84, 45048), (85, 45027), (90, 44952), (91, 44949),

Gene: Baby16\_78 Start: 46762, Stop: 46175, Start Num: 29

Candidate Starts for Baby16\_78:

(Start: 10 @46909 has 44 MA's), (21, 46831), (Start: 24 @46810 has 3 MA's), (Start: 29 @46762 has 27 MA's), (Start: 30 @46759 has 85 MA's), (42, 46654), (49, 46582), (55, 46564), (62, 46498), (83, 46333), (84, 46330), (89, 46243), (92, 46222),

Gene: BabyBack\_82 Start: 48998, Stop: 48291, Start Num: 34

Candidate Starts for BabyBack\_82:

(Start: 10 @49172 has 44 MA's), (Start: 14 @49148 has 5 MA's), (Start: 22 @49091 has 13 MA's), (Start: 34 @48998 has 2 MA's), (37, 48950), (56, 48821), (58, 48764), (63, 48611), (76, 48533), (83, 48455), (84, 48452), (90, 48356), (91, 48353),

Gene: Backyardigan\_73 Start: 46576, Stop: 45992, Start Num: 30

Candidate Starts for Backyardigan\_73:

(Start: 10 @46726 has 44 MA's), (21, 46648), (Start: 24 @46627 has 3 MA's), (Start: 29 @46579 has 27 MA's), (Start: 30 @46576 has 85 MA's), (Start: 32 @46564 has 4 MA's), (42, 46471), (49, 46399), (55, 46381), (62, 46315), (78, 46210), (83, 46150), (84, 46147), (89, 46060), (92, 46039),

Gene: Badger\_74 Start: 46542, Stop: 45958, Start Num: 30

Candidate Starts for Badger\_74:

(Start: 10 @46692 has 44 MA's), (21, 46614), (Start: 24 @46593 has 3 MA's), (Start: 29 @46545 has 27 MA's), (Start: 30 @46542 has 85 MA's), (Start: 32 @46530 has 4 MA's), (42, 46437), (49, 46365), (55, 46347), (62, 46281), (78, 46176), (83, 46116), (84, 46113), (89, 46026), (92, 46005),

Gene: BangNhom\_75 Start: 47188, Stop: 46601, Start Num: 29

Candidate Starts for BangNhom\_75:

(Start: 10 @47335 has 44 MA's), (21, 47257), (Start: 24 @47236 has 3 MA's), (Start: 29 @47188 has 27 MA's), (Start: 30 @47185 has 85 MA's), (42, 47080), (49, 47008), (55, 46990), (62, 46924), (83, 46759), (84, 46756), (89, 46669), (92, 46648),

Gene: Bartimeaus\_78 Start: 46753, Stop: 46166, Start Num: 29

Candidate Starts for Bartimeaus\_78:

(Start: 10 @46900 has 44 MA's), (21, 46822), (Start: 24 @46801 has 3 MA's), (Start: 29 @46753 has 27 MA's), (Start: 30 @46750 has 85 MA's), (42, 46645), (49, 46573), (55, 46555), (62, 46489), (83, 46324), (84, 46321), (89, 46234), (92, 46213),

Gene: BellusTerra\_79 Start: 46789, Stop: 46205, Start Num: 30

Candidate Starts for BellusTerra\_79:

(Start: 10 @46939 has 44 MA's), (21, 46861), (Start: 24 @46840 has 3 MA's), (Start: 29 @46792 has 27 MA's), (Start: 30 @46789 has 85 MA's), (42, 46684), (49, 46612), (55, 46594), (62, 46528), (83, 46363), (84, 46360), (89, 46273), (92, 46252),

Gene: Blackmoor\_77 Start: 46753, Stop: 46166, Start Num: 29

Candidate Starts for Blackmoor\_77:

(Start: 10 @46900 has 44 MA's), (21, 46822), (Start: 24 @46801 has 3 MA's), (Start: 29 @46753 has 27 MA's), (Start: 30 @46750 has 85 MA's), (42, 46645), (49, 46573), (55, 46555), (62, 46489), (83, 46324), (84, 46321), (89, 46234), (92, 46213),

Gene: Blessica\_5 Start: 1714, Stop: 1145, Start Num: 7

Candidate Starts for Blessica\_5:

(Start: 7 @1714 has 23 MA's), (Start: 22 @1597 has 13 MA's), (23, 1582), (Start: 29 @1531 has 27 MA's), (Start: 30 @1528 has 85 MA's), (67, 1414), (70, 1405), (74, 1381), (83, 1276), (84, 1273), (87, 1237), (92, 1198), (95, 1162),

Gene: Blue7\_91 Start: 47412, Stop: 46786, Start Num: 14

Candidate Starts for Blue7\_91:

(Start: 10 @47436 has 44 MA's), (Start: 14 @47412 has 5 MA's), (21, 47358), (Start: 22 @47355 has 13 MA's), (Start: 24 @47337 has 3 MA's), (75, 47031), (83, 46950), (84, 46947), (85, 46926), (90, 46851), (91, 46848),

Gene: BogosyJay\_83 Start: 46896, Stop: 46318, Start Num: 22

Candidate Starts for BogosyJay\_83:

(Start: 10 @46977 has 44 MA's), (Start: 13 @46956 has 1 MA's), (Start: 14 @46953 has 5 MA's), (Start: 22 @46896 has 13 MA's), (26, 46845), (65, 46638), (72, 46617), (83, 46491), (84, 46488), (89, 46401), (92, 46380), (96, 46335),

Gene: Bombshell\_78 Start: 46748, Stop: 46161, Start Num: 29

Candidate Starts for Bombshell\_78:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (51, 46562), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Broseidon\_78 Start: 46751, Stop: 46167, Start Num: 30

Candidate Starts for Broseidon\_78:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (55, 46556), (62, 46490), (78, 46385), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: Bruiser\_77 Start: 46898, Stop: 46164, Start Num: 10

Candidate Starts for Bruiser\_77:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: BubbleTrouble\_77 Start: 46925, Stop: 46191, Start Num: 10

Candidate Starts for BubbleTrouble\_77:

(Start: 10 @46925 has 44 MA's), (21, 46847), (Start: 24 @46826 has 3 MA's), (Start: 29 @46778 has 27 MA's), (Start: 30 @46775 has 85 MA's), (42, 46670), (49, 46598), (55, 46580), (62, 46514), (78, 46409), (83, 46349), (84, 46346), (89, 46259), (92, 46238),

Gene: Bumblebee11\_74 Start: 46542, Stop: 45958, Start Num: 30

Candidate Starts for Bumblebee11\_74:

(Start: 10 @46692 has 44 MA's), (21, 46614), (Start: 24 @46593 has 3 MA's), (Start: 29 @46545 has 27 MA's), (Start: 30 @46542 has 85 MA's), (Start: 32 @46530 has 4 MA's), (42, 46437), (49, 46365), (55, 46347), (62, 46281), (78, 46176), (83, 46116), (84, 46113), (89, 46026), (92, 46005), (93, 46002),

Gene: Burger\_76 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for Burger\_76:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Caelakin\_76 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for Caelakin\_76:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Camerico\_39 Start: 42850, Stop: 43254, Start Num: 52

Candidate Starts for Camerico\_39:

(9, 42643), (44, 42814), (Start: 52 @42850 has 1 MA's), (74, 42979), (82, 43048), (83, 43072), (84, 43075), (89, 43135), (92, 43156),

Gene: Camperdownii\_75 Start: 46323, Stop: 45583, Start Num: 10

Candidate Starts for Camperdownii\_75:

(Start: 10 @46323 has 44 MA's), (Start: 14 @46299 has 5 MA's), (Start: 22 @46242 has 13 MA's), (67, 45870), (76, 45807), (83, 45729), (84, 45726), (90, 45645), (92, 45630),

Gene: Catdawg\_5 Start: 1764, Stop: 1195, Start Num: 7

Candidate Starts for Catdawg\_5:

(Start: 7 @1764 has 23 MA's), (Start: 22 @1647 has 13 MA's), (23, 1632), (Start: 29 @1581 has 27 MA's), (Start: 30 @1578 has 85 MA's), (67, 1464), (70, 1455), (74, 1431), (83, 1326), (84, 1323), (87, 1287), (92, 1248), (95, 1212),

Gene: CentreCat\_78 Start: 46788, Stop: 46204, Start Num: 30

Candidate Starts for CentreCat\_78:

(Start: 10 @46938 has 44 MA's), (21, 46860), (Start: 24 @46839 has 3 MA's), (Start: 29 @46791 has 27 MA's), (Start: 30 @46788 has 85 MA's), (42, 46683), (49, 46611), (55, 46593), (62, 46527), (83, 46362), (84, 46359), (89, 46272), (92, 46251),

Gene: Cerulean\_80 Start: 47186, Stop: 46602, Start Num: 30

Candidate Starts for Cerulean\_80:

(Start: 10 @47336 has 44 MA's), (21, 47258), (Start: 24 @47237 has 3 MA's), (Start: 29 @47189 has 27 MA's), (Start: 30 @47186 has 85 MA's), (42, 47081), (49, 47009), (55, 46991), (62, 46925), (83, 46760), (84, 46757), (89, 46670), (92, 46649),

Gene: ChampagnePapi\_81 Start: 47188, Stop: 46604, Start Num: 30

Candidate Starts for ChampagnePapi\_81:

(Start: 10 @47338 has 44 MA's), (21, 47260), (Start: 24 @47239 has 3 MA's), (Start: 29 @47191 has 27 MA's), (Start: 30 @47188 has 85 MA's), (42, 47083), (49, 47011), (55, 46993), (62, 46927), (83, 46762), (84, 46759), (89, 46672), (92, 46651),

Gene: Chaph\_78 Start: 46759, Stop: 46175, Start Num: 30

Candidate Starts for Chaph\_78:

(Start: 10 @46909 has 44 MA's), (21, 46831), (Start: 24 @46810 has 3 MA's), (Start: 29 @46762 has 27 MA's), (Start: 30 @46759 has 85 MA's), (42, 46654), (49, 46582), (51, 46576), (55, 46564), (62, 46498), (83, 46333), (84, 46330), (89, 46243), (92, 46222),

Gene: Charm\_79 Start: 46368, Stop: 45709, Start Num: 10

Candidate Starts for Charm\_79:

(Start: 10 @46368 has 44 MA's), (Start: 14 @46344 has 5 MA's), (21, 46290), (Start: 22 @46287 has 13 MA's), (65, 46029), (72, 46008), (81, 45921), (83, 45882), (84, 45879), (88, 45813), (89, 45792), (92, 45771), (96, 45726),

Gene: Cici\_75 Start: 46555, Stop: 45971, Start Num: 30

Candidate Starts for Cici\_75:

(Start: 10 @46705 has 44 MA's), (21, 46627), (Start: 24 @46606 has 3 MA's), (Start: 29 @46558 has 27 MA's), (Start: 30 @46555 has 85 MA's), (Start: 32 @46543 has 4 MA's), (42, 46450), (49, 46378), (55, 46360), (62, 46294), (78, 46189), (83, 46129), (84, 46126), (89, 46039), (92, 46018), (95, 45982),

Gene: Cindaradix\_73 Start: 46788, Stop: 46300, Start Num: 40

Candidate Starts for Cindaradix\_73:

(Start: 10 @47025 has 44 MA's), (21, 46947), (Start: 24 @46926 has 3 MA's), (36, 46806), (Start: 40 @46788 has 2 MA's), (62, 46623), (66, 46602), (83, 46458), (84, 46455), (89, 46368), (92, 46347),

Gene: Cintron\_78 Start: 46867, Stop: 46280, Start Num: 29

Candidate Starts for Cintron\_78:

(Start: 10 @47014 has 44 MA's), (21, 46936), (Start: 24 @46915 has 3 MA's), (Start: 29 @46867 has 27 MA's), (Start: 30 @46864 has 85 MA's), (42, 46759), (49, 46687), (55, 46669), (62, 46603), (78, 46498), (83, 46438), (84, 46435), (89, 46348), (92, 46327), (95, 46291),

Gene: Citius\_78 Start: 46769, Stop: 46185, Start Num: 30

Candidate Starts for Citius\_78:

(Start: 10 @46919 has 44 MA's), (21, 46841), (Start: 24 @46820 has 3 MA's), (Start: 29 @46772 has 27 MA's), (Start: 30 @46769 has 85 MA's), (42, 46664), (49, 46592), (55, 46574), (62, 46508), (83, 46343), (84, 46340), (89, 46253), (92, 46232),

Gene: Clarenza\_77 Start: 46895, Stop: 46161, Start Num: 10

Candidate Starts for Clarenza\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: CloudWang3\_90 Start: 47734, Stop: 47087, Start Num: 10

Candidate Starts for CloudWang3\_90:

(Start: 10 @47734 has 44 MA's), (Start: 14 @47710 has 5 MA's), (21, 47656), (Start: 22 @47653 has 13 MA's), (Start: 25 @47623 has 3 MA's), (75, 47329), (83, 47248), (84, 47245), (90, 47152), (91, 47149),

Gene: Cocoaberry\_78 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for Cocoaberry\_78:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: Commander\_76 Start: 46746, Stop: 46162, Start Num: 30

Candidate Starts for Commander\_76:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (55, 46551), (62, 46485), (78, 46380), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: Connomayer\_78 Start: 46751, Stop: 46164, Start Num: 29

Candidate Starts for Connomayer\_78:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Cookie dough\_88 Start: 47826, Stop: 47200, Start Num: 14

Candidate Starts for Cookie dough\_88:

(Start: 10 @47850 has 44 MA's), (Start: 14 @47826 has 5 MA's), (21, 47772), (Start: 22 @47769 has 13 MA's), (Start: 24 @47751 has 3 MA's), (65, 47511), (73, 47487), (76, 47442), (83, 47364), (84, 47361), (85, 47340), (90, 47265), (91, 47262),

Gene: Corndog\_6 Start: 2141, Stop: 1578, Start Num: 7

Candidate Starts for Corndog\_6:

(Start: 7 @2141 has 23 MA's), (Start: 22 @2024 has 13 MA's), (23, 2009), (Start: 29 @1958 has 27 MA's), (Start: 30 @1955 has 85 MA's), (67, 1847), (70, 1838), (83, 1709), (84, 1706), (92, 1631), (95, 1595),

Gene: Darrell\_82 Start: 46051, Stop: 45485, Start Num: 22

Candidate Starts for Darrell\_82:

(Start: 10 @46132 has 44 MA's), (Start: 14 @46108 has 5 MA's), (Start: 22 @46051 has 13 MA's), (54, 45898), (65, 45793), (72, 45772), (83, 45646), (84, 45643), (89, 45556),

Gene: DarthPhader\_79 Start: 47620, Stop: 47048, Start Num: 22

Candidate Starts for DarthPhader\_79:

(Start: 10 @47701 has 44 MA's), (Start: 14 @47677 has 5 MA's), (Start: 22 @47620 has 13 MA's), (54, 47464), (72, 47338), (83, 47212), (84, 47209), (90, 47116), (91, 47113), (94, 47074),

Gene: Datway\_75 Start: 46559, Stop: 45975, Start Num: 30

Candidate Starts for Datway\_75:

(Start: 10 @46709 has 44 MA's), (21, 46631), (Start: 24 @46610 has 3 MA's), (Start: 29 @46562 has 27 MA's), (Start: 30 @46559 has 85 MA's), (42, 46454), (49, 46382), (55, 46364), (62, 46298), (78, 46193), (83, 46133), (84, 46130), (89, 46043), (92, 46022),

Gene: Deano\_75 Start: 46756, Stop: 46172, Start Num: 30

Candidate Starts for Deano\_75:

(Start: 10 @46906 has 44 MA's), (21, 46828), (Start: 24 @46807 has 3 MA's), (Start: 29 @46759 has 27 MA's), (Start: 30 @46756 has 85 MA's), (42, 46651), (49, 46579), (55, 46561), (62, 46495), (83, 46330), (84, 46327), (89, 46240), (92, 46219),

Gene: Dhanush\_78 Start: 46751, Stop: 46167, Start Num: 30

Candidate Starts for Dhanush\_78:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (51, 46568), (55, 46556), (62, 46490), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: DirtyDunning\_77 Start: 46760, Stop: 46176, Start Num: 30

Candidate Starts for DirtyDunning\_77:

(Start: 10 @46910 has 44 MA's), (21, 46832), (Start: 24 @46811 has 3 MA's), (Start: 29 @46763 has 27 MA's), (Start: 30 @46760 has 85 MA's), (42, 46655), (49, 46583), (55, 46565), (62, 46499), (78, 46394), (83, 46334), (84, 46331), (89, 46244), (92, 46223),

Gene: Dorothea\_88 Start: 47842, Stop: 47192, Start Num: 10

Candidate Starts for Dorothea\_88:

(Start: 10 @47842 has 44 MA's), (Start: 14 @47818 has 5 MA's), (21, 47764), (Start: 22 @47761 has 13 MA's), (Start: 24 @47743 has 3 MA's), (65, 47503), (73, 47479), (76, 47434), (83, 47356), (84, 47353), (85, 47332), (90, 47257), (91, 47254),

Gene: Dorothy\_72 Start: 44809, Stop: 45360, Start Num: 30

Candidate Starts for Dorothy\_72:

(6, 44623), (Start: 13 @44680 has 1 MA's), (17, 44704), (19, 44722), (21, 44737), (Start: 24 @44758 has 3 MA's), (26, 44791), (Start: 30 @44809 has 85 MA's), (54, 44968), (76, 45130), (83, 45208), (84, 45211), (85, 45232), (87, 45241), (89, 45268), (97, 45349),

Gene: Drake94\_75 Start: 45844, Stop: 45209, Start Num: 10

Candidate Starts for Drake94\_75:

(Start: 10 @45844 has 44 MA's), (Start: 14 @45820 has 5 MA's), (Start: 22 @45763 has 13 MA's), (49, 45628), (76, 45439), (83, 45361), (84, 45358), (85, 45337), (86, 45325), (90, 45271),

Gene: Druantia\_77 Start: 46751, Stop: 46167, Start Num: 30

Candidate Starts for Druantia\_77:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (55, 46556), (62, 46490), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: Dylan\_6 Start: 2163, Stop: 1594, Start Num: 7

Candidate Starts for Dylan\_6:

(Start: 7 @2163 has 23 MA's), (Start: 22 @2046 has 13 MA's), (23, 2031), (Start: 29 @1980 has 27 MA's), (Start: 30 @1977 has 85 MA's), (67, 1863), (70, 1854), (83, 1725), (84, 1722), (92, 1647), (95, 1611),

Gene: Eagle\_77 Start: 46810, Stop: 46226, Start Num: 30

Candidate Starts for Eagle\_77:

(Start: 10 @46960 has 44 MA's), (21, 46882), (Start: 24 @46861 has 3 MA's), (Start: 29 @46813 has 27 MA's), (Start: 30 @46810 has 85 MA's), (42, 46705), (49, 46633), (55, 46615), (62, 46549), (83, 46384), (84, 46381), (89, 46294), (92, 46273),

Gene: Eapen\_78 Start: 46743, Stop: 46159, Start Num: 30

Candidate Starts for Eapen\_78:

(Start: 10 @46893 has 44 MA's), (21, 46815), (Start: 24 @46794 has 3 MA's), (Start: 29 @46746 has 27 MA's), (Start: 30 @46743 has 85 MA's), (42, 46638), (49, 46566), (55, 46548), (62, 46482), (78, 46377), (83, 46317), (84, 46314), (89, 46227), (92, 46206),

Gene: Elephantoon\_84 Start: 46848, Stop: 46192, Start Num: 10

Candidate Starts for Elephantoon\_84:



(Start: 10 @46848 has 44 MA's), (Start: 14 @46824 has 5 MA's), (21, 46770), (Start: 22 @46767 has 13 MA's), (54, 46614), (65, 46509), (72, 46488), (83, 46362), (84, 46359), (89, 46272), (92, 46251), (96, 46206),

Gene: Eris\_77 Start: 46910, Stop: 46176, Start Num: 10

Candidate Starts for Eris\_77:

(Start: 10 @46910 has 44 MA's), (21, 46832), (Start: 24 @46811 has 3 MA's), (Start: 29 @46763 has 27 MA's), (Start: 30 @46760 has 85 MA's), (42, 46655), (49, 46583), (55, 46565), (62, 46499), (78, 46394), (83, 46334), (84, 46331), (89, 46244), (92, 46223),

Gene: Eros\_78 Start: 46750, Stop: 46166, Start Num: 30

Candidate Starts for Eros\_78:

(Start: 10 @46900 has 44 MA's), (21, 46822), (Start: 24 @46801 has 3 MA's), (Start: 29 @46753 has 27 MA's), (Start: 30 @46750 has 85 MA's), (42, 46645), (49, 46573), (55, 46555), (62, 46489), (78, 46384), (83, 46324), (84, 46321), (89, 46234), (92, 46213),

Gene: Eurydice\_79 Start: 46788, Stop: 46201, Start Num: 29

Candidate Starts for Eurydice\_79:

(Start: 10 @46935 has 44 MA's), (21, 46857), (Start: 24 @46836 has 3 MA's), (Start: 29 @46788 has 27 MA's), (Start: 30 @46785 has 85 MA's), (42, 46680), (49, 46608), (55, 46590), (62, 46524), (83, 46359), (84, 46356), (89, 46269), (92, 46248),

Gene: Familton\_6 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Familton\_6:

(Start: 7 @1765 has 23 MA's), (Start: 22 @1648 has 13 MA's), (23, 1633), (Start: 29 @1582 has 27 MA's), (Start: 30 @1579 has 85 MA's), (67, 1465), (70, 1456), (74, 1432), (83, 1327), (84, 1324), (87, 1288), (92, 1249), (95, 1213),

Gene: FatCactus\_77 Start: 46761, Stop: 46126, Start Num: 22

Candidate Starts for FatCactus\_77:

(5, 46983), (8, 46878), (11, 46857), (Start: 13 @46845 has 1 MA's), (15, 46839), (18, 46806), (Start: 22 @46761 has 13 MA's), (31, 46677), (65, 46497), (76, 46428), (79, 46404), (83, 46350), (84, 46347), (89, 46254), (93, 46230),

Gene: Firecracker\_5 Start: 1850, Stop: 1287, Start Num: 7

Candidate Starts for Firecracker\_5:

(Start: 7 @1850 has 23 MA's), (Start: 22 @1733 has 13 MA's), (23, 1718), (Start: 29 @1667 has 27 MA's), (Start: 30 @1664 has 85 MA's), (67, 1556), (70, 1547), (83, 1418), (84, 1415), (92, 1340), (95, 1304),

Gene: Float294\_61 Start: 49716, Stop: 49099, Start Num: 35

Candidate Starts for Float294\_61:

(1, 50178), (2, 50121), (3, 50109), (4, 50025), (19, 49830), (21, 49815), (23, 49797), (26, 49761), (Start: 35 @49716 has 1 MA's), (45, 49653), (47, 49638), (48, 49632), (53, 49617), (61, 49413), (64, 49386), (67, 49377), (69, 49371), (80, 49287), (83, 49236), (84, 49233), (92, 49155), (94, 49128),

Gene: Florean\_78 Start: 46897, Stop: 46163, Start Num: 10

Candidate Starts for Florean\_78:

(Start: 10 @46897 has 44 MA's), (21, 46819), (Start: 24 @46798 has 3 MA's), (Start: 29 @46750 has 27 MA's), (Start: 30 @46747 has 85 MA's), (42, 46642), (49, 46570), (55, 46552), (62, 46486), (83, 46321), (84, 46318), (89, 46231), (92, 46210),

Gene: Flux\_79 Start: 46746, Stop: 46162, Start Num: 30

Candidate Starts for Flux\_79:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (51, 46563), (55, 46551), (62, 46485), (78, 46380), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: FoulBall\_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for FoulBall\_5:

(Start: 7 @1765 has 23 MA's), (Start: 22 @1648 has 13 MA's), (23, 1633), (Start: 29 @1582 has 27 MA's), (Start: 30 @1579 has 85 MA's), (67, 1465), (70, 1456), (74, 1432), (83, 1327), (84, 1324), (87, 1288), (92, 1249), (95, 1213),

Gene: Funston\_77 Start: 46895, Stop: 46161, Start Num: 10

Candidate Starts for Funston\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Gadost\_78 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for Gadost\_78:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: GaugeLDP\_81 Start: 48551, Stop: 47844, Start Num: 34

Candidate Starts for GaugeLDP\_81:

(Start: 10 @48725 has 44 MA's), (Start: 14 @48701 has 5 MA's), (Start: 22 @48644 has 13 MA's), (Start: 34 @48551 has 2 MA's), (37, 48503), (55, 48380), (56, 48374), (58, 48317), (59, 48302), (63, 48164), (76, 48086), (83, 48008), (84, 48005), (90, 47909), (91, 47906),

Gene: Gladiator\_86 Start: 47390, Stop: 46743, Start Num: 10

Candidate Starts for Gladiator\_86:

(Start: 10 @47390 has 44 MA's), (Start: 14 @47366 has 5 MA's), (21, 47312), (Start: 22 @47309 has 13 MA's), (Start: 24 @47291 has 3 MA's), (Start: 25 @47279 has 3 MA's), (75, 46985), (83, 46904), (84, 46901), (90, 46808), (91, 46805),

Gene: Goose\_79 Start: 46498, Stop: 45863, Start Num: 10

Candidate Starts for Goose\_79:

(Start: 10 @46498 has 44 MA's), (Start: 14 @46474 has 5 MA's), (Start: 22 @46417 has 13 MA's), (49, 46282), (76, 46093), (83, 46015), (84, 46012), (86, 45979), (90, 45925),

Gene: Gruunaga\_89 Start: 47345, Stop: 46698, Start Num: 10

Candidate Starts for Gruunaga\_89:

(Start: 10 @47345 has 44 MA's), (Start: 14 @47321 has 5 MA's), (21, 47267), (Start: 22 @47264 has 13 MA's), (Start: 24 @47246 has 3 MA's), (Start: 25 @47234 has 3 MA's), (75, 46940), (83, 46859), (84, 46856), (90, 46763), (91, 46760),

Gene: HamSlice\_74 Start: 46747, Stop: 46163, Start Num: 30

Candidate Starts for HamSlice\_74:

(Start: 10 @46897 has 44 MA's), (21, 46819), (Start: 24 @46798 has 3 MA's), (Start: 29 @46750 has 27 MA's), (Start: 30 @46747 has 85 MA's), (42, 46642), (49, 46570), (55, 46552), (62, 46486), (78, 46381), (83, 46321), (84, 46318), (89, 46231), (92, 46210),

Gene: Hammer\_90 Start: 46941, Stop: 46405, Start Num: 25

Candidate Starts for Hammer\_90:

(Start: 10 @47052 has 44 MA's), (Start: 14 @47028 has 5 MA's), (21, 46974), (Start: 22 @46971 has 13 MA's), (Start: 25 @46941 has 3 MA's), (75, 46647), (83, 46566), (84, 46563), (90, 46470), (91, 46467),

Gene: Happiness\_77 Start: 46771, Stop: 46187, Start Num: 30

Candidate Starts for Happiness\_77:

(Start: 10 @46921 has 44 MA's), (21, 46843), (Start: 24 @46822 has 3 MA's), (Start: 29 @46774 has 27 MA's), (Start: 30 @46771 has 85 MA's), (42, 46666), (49, 46594), (55, 46576), (62, 46510), (78, 46405), (83, 46345), (84, 46342), (89, 46255), (92, 46234),

Gene: Hexamo\_89 Start: 47220, Stop: 46573, Start Num: 10

Candidate Starts for Hexamo\_89:

(Start: 10 @47220 has 44 MA's), (Start: 14 @47196 has 5 MA's), (21, 47142), (Start: 22 @47139 has 13 MA's), (Start: 25 @47109 has 3 MA's), (75, 46815), (83, 46734), (84, 46731), (90, 46638), (91, 46635),

Gene: Holli\_77 Start: 46541, Stop: 45954, Start Num: 29

Candidate Starts for Holli\_77:

(Start: 10 @46688 has 44 MA's), (21, 46610), (Start: 24 @46589 has 3 MA's), (Start: 29 @46541 has 27 MA's), (Start: 30 @46538 has 85 MA's), (42, 46433), (49, 46361), (55, 46343), (62, 46277), (83, 46112), (84, 46109), (89, 46022), (92, 46001),

Gene: Hoot\_83 Start: 45056, Stop: 44406, Start Num: 10

Candidate Starts for Hoot\_83:

(Start: 10 @45056 has 44 MA's), (Start: 14 @45032 has 5 MA's), (21, 44978), (Start: 22 @44975 has 13 MA's), (Start: 24 @44957 has 3 MA's), (65, 44717), (73, 44693), (76, 44648), (83, 44570), (84, 44567), (85, 44546), (90, 44471), (91, 44468),

Gene: Houdini22\_77 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for Houdini22\_77:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: Huxley\_67 Start: 44641, Stop: 44057, Start Num: 30

Candidate Starts for Huxley\_67:

(Start: 10 @44791 has 44 MA's), (21, 44713), (Start: 24 @44692 has 3 MA's), (Start: 29 @44644 has 27 MA's), (Start: 30 @44641 has 85 MA's), (42, 44536), (49, 44464), (55, 44446), (62, 44380), (78, 44275), (83, 44215), (84, 44212), (89, 44125), (92, 44104),

Gene: ICleared\_77 Start: 46816, Stop: 46232, Start Num: 30

Candidate Starts for ICleared\_77:

(Start: 10 @46966 has 44 MA's), (21, 46888), (Start: 24 @46867 has 3 MA's), (Start: 29 @46819 has 27 MA's), (Start: 30 @46816 has 85 MA's), (42, 46711), (49, 46639), (55, 46621), (62, 46555), (78, 46450), (83, 46390), (84, 46387), (89, 46300), (92, 46279),

Gene: Iceman\_76 Start: 47038, Stop: 46454, Start Num: 30

Candidate Starts for Iceman\_76:

(Start: 10 @47188 has 44 MA's), (21, 47110), (Start: 24 @47089 has 3 MA's), (Start: 29 @47041 has 27 MA's), (Start: 30 @47038 has 85 MA's), (42, 46933), (49, 46861), (55, 46843), (62, 46777), (78, 46672), (83, 46612), (84, 46609), (89, 46522), (92, 46501),

Gene: Idergollasper\_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Idergollasper\_5:

(Start: 7 @1765 has 23 MA's), (Start: 22 @1648 has 13 MA's), (23, 1633), (Start: 29 @1582 has 27 MA's), (Start: 30 @1579 has 85 MA's), (67, 1465), (70, 1456), (74, 1432), (83, 1327), (84, 1324), (87, 1288), (92, 1249), (95, 1213),

Gene: Iracema64\_78 Start: 47012, Stop: 46428, Start Num: 30

Candidate Starts for Iracema64\_78:

(Start: 10 @47162 has 44 MA's), (21, 47084), (Start: 24 @47063 has 3 MA's), (Start: 29 @47015 has 27 MA's), (Start: 30 @47012 has 85 MA's), (42, 46907), (49, 46835), (55, 46817), (62, 46751), (83, 46586), (84, 46583), (89, 46496), (92, 46475),

Gene: Isiphiwo\_84 Start: 46767, Stop: 46117, Start Num: 10

Candidate Starts for Isiphiwo\_84:

(Start: 10 @46767 has 44 MA's), (Start: 14 @46743 has 5 MA's), (21, 46689), (Start: 22 @46686 has 13 MA's), (Start: 24 @46668 has 3 MA's), (65, 46428), (73, 46404), (76, 46359), (83, 46281), (84, 46278), (85, 46257), (90, 46182), (91, 46179),

Gene: JangDynasty\_5 Start: 1854, Stop: 1291, Start Num: 7

Candidate Starts for JangDynasty\_5:

(Start: 7 @1854 has 23 MA's), (Start: 22 @1737 has 13 MA's), (23, 1722), (Start: 29 @1671 has 27 MA's), (Start: 30 @1668 has 85 MA's), (67, 1560), (70, 1551), (74, 1527), (83, 1422), (84, 1419), (92, 1344), (95, 1308),

Gene: Jaykayelowell\_75 Start: 46891, Stop: 46157, Start Num: 10

Candidate Starts for Jaykayelowell\_75:

(Start: 10 @46891 has 44 MA's), (21, 46813), (Start: 24 @46792 has 3 MA's), (Start: 29 @46744 has 27 MA's), (Start: 30 @46741 has 85 MA's), (42, 46636), (49, 46564), (55, 46546), (62, 46480), (83, 46315), (84, 46312), (89, 46225), (92, 46204),

Gene: JetBlade\_79 Start: 46779, Stop: 46192, Start Num: 29

Candidate Starts for JetBlade\_79:

(Start: 10 @46926 has 44 MA's), (21, 46848), (Start: 24 @46827 has 3 MA's), (Start: 29 @46779 has 27 MA's), (Start: 30 @46776 has 85 MA's), (42, 46671), (49, 46599), (55, 46581), (62, 46515), (83, 46350), (84, 46347), (89, 46260), (92, 46239),

Gene: JewelBug\_80 Start: 45535, Stop: 44885, Start Num: 10

Candidate Starts for JewelBug\_80:

(Start: 10 @45535 has 44 MA's), (Start: 14 @45511 has 5 MA's), (21, 45457), (Start: 22 @45454 has 13 MA's), (Start: 24 @45436 has 3 MA's), (65, 45196), (73, 45172), (76, 45127), (83, 45049), (84, 45046), (85, 45025), (90, 44950), (91, 44947),

Gene: JoongJeon\_77 Start: 46892, Stop: 46158, Start Num: 10

Candidate Starts for JoongJeon\_77:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: Jordennis\_86 Start: 47439, Stop: 46789, Start Num: 10

Candidate Starts for Jordennis\_86:

(Start: 10 @47439 has 44 MA's), (Start: 14 @47415 has 5 MA's), (21, 47361), (Start: 22 @47358 has 13 MA's), (Start: 24 @47340 has 3 MA's), (65, 47100), (73, 47076), (76, 47031), (83, 46953), (84, 46950), (85, 46929), (90, 46854), (91, 46851),

Gene: KFPoly\_77 Start: 46892, Stop: 46158, Start Num: 10

Candidate Starts for KFPoly\_77:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: Kampy\_77 Start: 46751, Stop: 46167, Start Num: 30

Candidate Starts for Kampy\_77:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (55, 46556), (62, 46490), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: Katalie136\_75 Start: 46530, Stop: 45958, Start Num: 32

Candidate Starts for Katalie136\_75:

(Start: 10 @46692 has 44 MA's), (21, 46614), (Start: 24 @46593 has 3 MA's), (Start: 29 @46545 has 27 MA's), (Start: 30 @46542 has 85 MA's), (Start: 32 @46530 has 4 MA's), (42, 46437), (49, 46365), (55, 46347), (62, 46281), (78, 46176), (83, 46116), (84, 46113), (89, 46026), (92, 46005), (95, 45969),

Gene: Kazan\_89 Start: 47187, Stop: 46561, Start Num: 14

Candidate Starts for Kazan\_89:

(Start: 10 @47211 has 44 MA's), (Start: 14 @47187 has 5 MA's), (21, 47133), (Start: 22 @47130 has 13 MA's), (Start: 24 @47112 has 3 MA's), (65, 46872), (73, 46848), (76, 46803), (83, 46725), (84, 46722), (85, 46701), (90, 46626), (91, 46623),

Gene: Keziacharles14\_81 Start: 47447, Stop: 46881, Start Num: 22

Candidate Starts for Keziacharles14\_81:

(Start: 10 @47528 has 44 MA's), (Start: 14 @47504 has 5 MA's), (21, 47450), (Start: 22 @47447 has 13 MA's), (26, 47396), (65, 47189), (72, 47168), (76, 47120), (83, 47042), (84, 47039), (89, 46952),

Gene: Kingmustik0402\_78 Start: 46740, Stop: 46153, Start Num: 29

Candidate Starts for Kingmustik0402\_78:

(Start: 10 @46887 has 44 MA's), (21, 46809), (Start: 24 @46788 has 3 MA's), (Start: 29 @46740 has 27 MA's), (Start: 30 @46737 has 85 MA's), (42, 46632), (49, 46560), (55, 46542), (62, 46476), (83, 46311), (84, 46308), (89, 46221), (92, 46200),

Gene: KittenMittens\_74 Start: 45854, Stop: 45219, Start Num: 10

Candidate Starts for KittenMittens\_74:

(Start: 10 @45854 has 44 MA's), (Start: 14 @45830 has 5 MA's), (Start: 22 @45773 has 13 MA's), (49, 45638), (76, 45449), (83, 45371), (84, 45368), (85, 45347), (86, 45335), (90, 45281),

Gene: Koan\_73 Start: 46751, Stop: 46164, Start Num: 29

Candidate Starts for Koan\_73:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Koko\_91 Start: 47970, Stop: 47419, Start Num: 24

Candidate Starts for Koko\_91:

(Start: 10 @48069 has 44 MA's), (Start: 14 @48045 has 5 MA's), (21, 47991), (Start: 22 @47988 has 13 MA's), (Start: 24 @47970 has 3 MA's), (75, 47664), (83, 47583), (84, 47580), (85, 47559), (90, 47484), (91, 47481),

Gene: Koreni\_77 Start: 46432, Stop: 45845, Start Num: 29

Candidate Starts for Koreni\_77:

(Start: 10 @46579 has 44 MA's), (21, 46501), (Start: 24 @46480 has 3 MA's), (Start: 29 @46432 has 27 MA's), (Start: 30 @46429 has 85 MA's), (42, 46324), (49, 46252), (55, 46234), (62, 46168), (78, 46063), (83, 46003), (84, 46000), (89, 45913), (92, 45892),

Gene: Kratark\_77 Start: 46932, Stop: 46198, Start Num: 10

Candidate Starts for Kratark\_77:

(Start: 10 @46932 has 44 MA's), (21, 46854), (Start: 24 @46833 has 3 MA's), (Start: 29 @46785 has 27 MA's), (Start: 30 @46782 has 85 MA's), (42, 46677), (49, 46605), (55, 46587), (60, 46566), (62, 46521), (78, 46416), (83, 46356), (84, 46353), (89, 46266), (92, 46245),

Gene: Kremtemulon\_75 Start: 46628, Stop: 46044, Start Num: 30

Candidate Starts for Kremtemulon\_75:

(Start: 10 @46778 has 44 MA's), (21, 46700), (Start: 24 @46679 has 3 MA's), (Start: 29 @46631 has 27 MA's), (Start: 30 @46628 has 85 MA's), (42, 46523), (49, 46451), (55, 46433), (62, 46367), (78, 46262), (83, 46202), (84, 46199), (89, 46112), (92, 46091), (95, 46055),

Gene: Krili\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Krili\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: Kristoff\_76 Start: 47122, Stop: 46487, Start Num: 10

Candidate Starts for Kristoff\_76:

(Start: 10 @47122 has 44 MA's), (Start: 14 @47098 has 5 MA's), (Start: 22 @47041 has 13 MA's), (26, 46990), (49, 46906), (76, 46717), (83, 46639), (84, 46636), (86, 46603), (90, 46549),

Gene: Kyee\_78 Start: 46743, Stop: 46159, Start Num: 30

Candidate Starts for Kyee\_78:

(Start: 10 @46893 has 44 MA's), (21, 46815), (Start: 24 @46794 has 3 MA's), (Start: 29 @46746 has 27 MA's), (Start: 30 @46743 has 85 MA's), (42, 46638), (49, 46566), (55, 46548), (62, 46482), (78, 46377), (83, 46317), (84, 46314), (89, 46227), (92, 46206),

Gene: LHTSCC\_80 Start: 47191, Stop: 46604, Start Num: 29

Candidate Starts for LHTSCC\_80:

(Start: 10 @47338 has 44 MA's), (21, 47260), (Start: 24 @47239 has 3 MA's), (Start: 29 @47191 has 27 MA's), (Start: 30 @47188 has 85 MA's), (42, 47083), (49, 47011), (55, 46993), (62, 46927), (78, 46822), (83, 46762), (84, 46759), (89, 46672), (92, 46651),

Gene: LappelDuVide\_78 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for LappelDuVide\_78:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Lemur\_78 Start: 46745, Stop: 46161, Start Num: 30

Candidate Starts for Lemur\_78:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (51, 46562), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: LittleB\_78 Start: 46899, Stop: 46165, Start Num: 10

Candidate Starts for LittleB\_78:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: LittleGuy\_78 Start: 46633, Stop: 46049, Start Num: 30

Candidate Starts for LittleGuy\_78:

(Start: 10 @46783 has 44 MA's), (21, 46705), (Start: 24 @46684 has 3 MA's), (Start: 29 @46636 has 27 MA's), (Start: 30 @46633 has 85 MA's), (42, 46528), (49, 46456), (55, 46438), (62, 46372), (78, 46267), (83, 46207), (84, 46204), (89, 46117), (92, 46096),

Gene: LochMonster\_79 Start: 46985, Stop: 46401, Start Num: 30

Candidate Starts for LochMonster\_79:

(Start: 10 @47135 has 44 MA's), (21, 47057), (Start: 24 @47036 has 3 MA's), (Start: 29 @46988 has 27 MA's), (Start: 30 @46985 has 85 MA's), (42, 46880), (49, 46808), (55, 46790), (62, 46724), (83, 46559), (84, 46556), (89, 46469), (92, 46448),

Gene: LoneWolf\_84 Start: 46963, Stop: 46397, Start Num: 22

Candidate Starts for LoneWolf\_84:

(Start: 10 @47044 has 44 MA's), (Start: 14 @47020 has 5 MA's), (21, 46966), (Start: 22 @46963 has 13 MA's), (65, 46705), (72, 46684), (83, 46558), (84, 46555), (89, 46468),

Gene: Lorenzo\_78 Start: 46746, Stop: 46162, Start Num: 30

Candidate Starts for Lorenzo\_78:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (55, 46551), (62, 46485), (78, 46380), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: Lunsford\_78 Start: 46741, Stop: 46157, Start Num: 30

Candidate Starts for Lunsford\_78:

(Start: 10 @46891 has 44 MA's), (21, 46813), (Start: 24 @46792 has 3 MA's), (Start: 29 @46744 has 27 MA's), (Start: 30 @46741 has 85 MA's), (42, 46636), (49, 46564), (55, 46546), (62, 46480), (83, 46315), (84, 46312), (89, 46225), (92, 46204),

Gene: MadKillah\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for MadKillah\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: Maminiaina\_83 Start: 46878, Stop: 46300, Start Num: 22

Candidate Starts for Maminiaina\_83:

(Start: 10 @46959 has 44 MA's), (Start: 13 @46938 has 1 MA's), (Start: 14 @46935 has 5 MA's), (Start: 22 @46878 has 13 MA's), (26, 46827), (65, 46620), (72, 46599), (83, 46473), (84, 46470), (89, 46383), (92, 46362), (96, 46317),

Gene: Maverick\_77 Start: 46745, Stop: 46161, Start Num: 30

Candidate Starts for Maverick\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Maxo\_80 Start: 46754, Stop: 46167, Start Num: 29

Candidate Starts for Maxo\_80:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (55, 46556), (62, 46490), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: Mazhar510\_78 Start: 46749, Stop: 46162, Start Num: 29

Candidate Starts for Mazhar510\_78:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (55, 46551), (62, 46485), (78, 46380), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: Medusa\_77 Start: 46761, Stop: 46177, Start Num: 30

Candidate Starts for Medusa\_77:

(Start: 10 @46911 has 44 MA's), (21, 46833), (Start: 24 @46812 has 3 MA's), (Start: 29 @46764 has 27 MA's), (Start: 30 @46761 has 85 MA's), (42, 46656), (49, 46584), (55, 46566), (62, 46500), (83, 46335), (84, 46332), (89, 46245), (92, 46224),

Gene: MeeZee\_77 Start: 46742, Stop: 46158, Start Num: 30

Candidate Starts for MeeZee\_77:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: Melvin\_80 Start: 46743, Stop: 46159, Start Num: 30

Candidate Starts for Melvin\_80:

(Start: 10 @46893 has 44 MA's), (21, 46815), (Start: 24 @46794 has 3 MA's), (Start: 29 @46746 has 27 MA's), (Start: 30 @46743 has 85 MA's), (42, 46638), (49, 46566), (51, 46560), (55, 46548), (62, 46482), (78, 46377), (83, 46317), (84, 46314), (89, 46227), (92, 46206),

Gene: Millski\_77 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for Millski\_77:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: Miramae\_78 Start: 46572, Stop: 45991, Start Num: 30

Candidate Starts for Miramae\_78:

(Start: 10 @46722 has 44 MA's), (21, 46644), (Start: 24 @46623 has 3 MA's), (26, 46590), (Start: 30 @46572 has 85 MA's), (36, 46503), (38, 46497), (Start: 40 @46485 has 2 MA's), (62, 46314), (83, 46149), (84, 46146), (89, 46059), (92, 46038), (95, 46002),

Gene: Mori\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Mori\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: Morpher26\_75 Start: 46563, Stop: 45979, Start Num: 30

Candidate Starts for Morpher26\_75:

(Start: 10 @46713 has 44 MA's), (21, 46635), (Start: 24 @46614 has 3 MA's), (Start: 29 @46566 has 27 MA's), (Start: 30 @46563 has 85 MA's), (Start: 32 @46551 has 4 MA's), (42, 46458), (49, 46386), (55, 46368), (62, 46302), (78, 46197), (83, 46137), (84, 46134), (89, 46047), (92, 46026), (95, 45990),



Gene: Morrow\_80 Start: 46788, Stop: 46204, Start Num: 30

Candidate Starts for Morrow\_80:

(Start: 10 @46938 has 44 MA's), (21, 46860), (Start: 24 @46839 has 3 MA's), (Start: 29 @46791 has 27 MA's), (Start: 30 @46788 has 85 MA's), (42, 46683), (49, 46611), (55, 46593), (83, 46362), (84, 46359), (89, 46272), (92, 46251),

Gene: Mundrea\_77 Start: 46850, Stop: 46224, Start Num: 24

Candidate Starts for Mundrea\_77:

(Start: 10 @46949 has 44 MA's), (21, 46871), (Start: 24 @46850 has 3 MA's), (36, 46730), (62, 46547), (66, 46526), (83, 46382), (84, 46379), (89, 46292), (92, 46271),

Gene: Nebs\_79 Start: 46788, Stop: 46204, Start Num: 30

Candidate Starts for Nebs\_79:

(Start: 10 @46938 has 44 MA's), (21, 46860), (Start: 24 @46839 has 3 MA's), (Start: 29 @46791 has 27 MA's), (Start: 30 @46788 has 85 MA's), (42, 46683), (49, 46611), (55, 46593), (62, 46527), (83, 46362), (84, 46359), (89, 46272), (92, 46251),

Gene: Nemo27\_77 Start: 46744, Stop: 46160, Start Num: 30

Candidate Starts for Nemo27\_77:

(Start: 10 @46894 has 44 MA's), (21, 46816), (Start: 24 @46795 has 3 MA's), (Start: 29 @46747 has 27 MA's), (Start: 30 @46744 has 85 MA's), (42, 46639), (49, 46567), (55, 46549), (62, 46483), (78, 46378), (83, 46318), (84, 46315), (89, 46228), (92, 46207),

Gene: NiebruSaylor\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for NiebruSaylor\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: Noelle\_76 Start: 46925, Stop: 46305, Start Num: 10

Candidate Starts for Noelle\_76:

(Start: 10 @46925 has 44 MA's), (Start: 14 @46901 has 5 MA's), (Start: 22 @46844 has 13 MA's), (67, 46592), (76, 46529), (83, 46451), (84, 46448), (90, 46367), (92, 46352), (95, 46316),

Gene: NorthStar\_75 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for NorthStar\_75:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (51, 46565), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: NotAPhaseMom\_77 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for NotAPhaseMom\_77:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: Nyxis\_77 Start: 46630, Stop: 46043, Start Num: 29

Candidate Starts for Nyxis\_77:

(Start: 10 @46777 has 44 MA's), (21, 46699), (Start: 24 @46678 has 3 MA's), (Start: 29 @46630 has 27 MA's), (Start: 30 @46627 has 85 MA's), (42, 46522), (49, 46450), (55, 46432), (62, 46366), (83, 46201), (84, 46198), (89, 46111), (92, 46090),

Gene: OKCentral2016\_77 Start: 45901, Stop: 45290, Start Num: 14

Candidate Starts for OKCentral2016\_77:

(Start: 10 @45925 has 44 MA's), (Start: 14 @45901 has 5 MA's), (Start: 22 @45844 has 13 MA's), (49, 45709), (76, 45520), (83, 45442), (84, 45439), (86, 45406), (90, 45352),

Gene: OKaNui\_77 Start: 46799, Stop: 46215, Start Num: 30

Candidate Starts for OKaNui\_77:

(Start: 10 @46949 has 44 MA's), (21, 46871), (Start: 24 @46850 has 3 MA's), (Start: 29 @46802 has 27 MA's), (Start: 30 @46799 has 85 MA's), (42, 46694), (49, 46622), (55, 46604), (62, 46538), (78, 46433), (83, 46373), (84, 46370), (89, 46283), (92, 46262),

Gene: Obama12\_79 Start: 47172, Stop: 46588, Start Num: 30

Candidate Starts for Obama12\_79:

(Start: 10 @47322 has 44 MA's), (21, 47244), (Start: 24 @47223 has 3 MA's), (Start: 29 @47175 has 27 MA's), (Start: 30 @47172 has 85 MA's), (42, 47067), (49, 46995), (55, 46977), (62, 46911), (78, 46806), (83, 46746), (84, 46743), (89, 46656), (92, 46635),

Gene: Ohfah\_79 Start: 46791, Stop: 46204, Start Num: 29

Candidate Starts for Ohfah\_79:

(Start: 10 @46938 has 44 MA's), (21, 46860), (Start: 24 @46839 has 3 MA's), (Start: 29 @46791 has 27 MA's), (Start: 30 @46788 has 85 MA's), (42, 46683), (49, 46611), (55, 46593), (62, 46527), (83, 46362), (84, 46359), (89, 46272), (92, 46251),

Gene: Palestino\_77 Start: 46895, Stop: 46161, Start Num: 10

Candidate Starts for Palestino\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Peaches\_76 Start: 46747, Stop: 46163, Start Num: 30

Candidate Starts for Peaches\_76:

(Start: 10 @46897 has 44 MA's), (21, 46819), (Start: 24 @46798 has 3 MA's), (Start: 29 @46750 has 27 MA's), (Start: 30 @46747 has 85 MA's), (42, 46642), (49, 46570), (55, 46552), (62, 46486), (78, 46381), (83, 46321), (84, 46318), (89, 46231), (92, 46210),

Gene: Perplexer\_75 Start: 46531, Stop: 45959, Start Num: 32

Candidate Starts for Perplexer\_75:

(Start: 10 @46693 has 44 MA's), (21, 46615), (Start: 24 @46594 has 3 MA's), (Start: 29 @46546 has 27 MA's), (Start: 30 @46543 has 85 MA's), (Start: 32 @46531 has 4 MA's), (42, 46438), (49, 46366), (55, 46348), (62, 46282), (78, 46177), (83, 46117), (84, 46114), (89, 46027), (92, 46006),

Gene: PeterPeter\_78 Start: 46742, Stop: 46158, Start Num: 30

Candidate Starts for PeterPeter\_78:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: PetiteSangsue\_75 Start: 46546, Stop: 45962, Start Num: 30

Candidate Starts for PetiteSangsue\_75:

(Start: 10 @46696 has 44 MA's), (21, 46618), (Start: 24 @46597 has 3 MA's), (Start: 29 @46549 has 27 MA's), (Start: 30 @46546 has 85 MA's), (Start: 32 @46534 has 4 MA's), (42, 46441), (49, 46369), (55, 46351), (62, 46285), (78, 46180), (83, 46120), (84, 46117), (89, 46030), (92, 46009),

Gene: Phacado\_78 Start: 46744, Stop: 46160, Start Num: 30

Candidate Starts for Phacado\_78:

(Start: 10 @46894 has 44 MA's), (21, 46816), (Start: 24 @46795 has 3 MA's), (Start: 29 @46747 has 27 MA's), (Start: 30 @46744 has 85 MA's), (42, 46639), (49, 46567), (55, 46549), (62, 46483), (78, 46378), (83, 46318), (84, 46315), (89, 46228), (92, 46207),

Gene: Phanphagia\_66 Start: 43660, Stop: 44277, Start Num: 13

Candidate Starts for Phanphagia\_66:

(6, 43603), (Start: 13 @43660 has 1 MA's), (17, 43684), (21, 43717), (Start: 24 @43738 has 3 MA's), (26, 43771), (Start: 30 @43789 has 85 MA's), (Start: 32 @43798 has 4 MA's), (54, 43876), (83, 44125), (84, 44128), (87, 44158), (89, 44185), (97, 44266),

Gene: Pharaoh\_78 Start: 47942, Stop: 47292, Start Num: 10

Candidate Starts for Pharaoh\_78:

(Start: 10 @47942 has 44 MA's), (Start: 14 @47918 has 5 MA's), (Start: 22 @47861 has 13 MA's), (65, 47600), (72, 47579), (83, 47456), (84, 47453), (85, 47432), (90, 47360), (91, 47357),

Gene: Phelipe\_79 Start: 46788, Stop: 46204, Start Num: 30

Candidate Starts for Phelipe\_79:

(Start: 10 @46938 has 44 MA's), (21, 46860), (Start: 24 @46839 has 3 MA's), (Start: 29 @46791 has 27 MA's), (Start: 30 @46788 has 85 MA's), (42, 46683), (49, 46611), (55, 46593), (62, 46527), (83, 46362), (84, 46359), (89, 46272), (92, 46251),

Gene: Phighter1804\_78 Start: 46809, Stop: 46225, Start Num: 30

Candidate Starts for Phighter1804\_78:

(Start: 10 @46959 has 44 MA's), (21, 46881), (Start: 24 @46860 has 3 MA's), (Start: 29 @46812 has 27 MA's), (Start: 30 @46809 has 85 MA's), (42, 46704), (49, 46632), (55, 46614), (62, 46548), (78, 46443), (83, 46383), (84, 46380), (89, 46293), (92, 46272),

Gene: Phontbonne\_78 Start: 46643, Stop: 46059, Start Num: 30

Candidate Starts for Phontbonne\_78:

(Start: 10 @46793 has 44 MA's), (21, 46715), (Start: 24 @46694 has 3 MA's), (Start: 29 @46646 has 27 MA's), (Start: 30 @46643 has 85 MA's), (42, 46538), (49, 46466), (55, 46448), (62, 46382), (83, 46217), (84, 46214), (89, 46127), (92, 46106),

Gene: Pipcraft\_74 Start: 46749, Stop: 46165, Start Num: 30

Candidate Starts for Pipcraft\_74:

(Start: 10 @46899 has 44 MA's), (21, 46821), (Start: 24 @46800 has 3 MA's), (Start: 29 @46752 has 27 MA's), (Start: 30 @46749 has 85 MA's), (42, 46644), (49, 46572), (51, 46566), (55, 46554), (62, 46488), (78, 46383), (83, 46323), (84, 46320), (89, 46233), (92, 46212),

Gene: Polymorphads\_79 Start: 46772, Stop: 46185, Start Num: 29

Candidate Starts for Polymorphads\_79:

(Start: 10 @46919 has 44 MA's), (21, 46841), (Start: 24 @46820 has 3 MA's), (Start: 29 @46772 has 27 MA's), (Start: 30 @46769 has 85 MA's), (42, 46664), (49, 46592), (55, 46574), (62, 46508), (78, 46403), (83, 46343), (84, 46340), (89, 46253), (92, 46232),

Gene: Priya\_82 Start: 46693, Stop: 46046, Start Num: 10

Candidate Starts for Priya\_82:

(Start: 10 @46693 has 44 MA's), (Start: 14 @46669 has 5 MA's), (21, 46615), (Start: 22 @46612 has 13 MA's), (26, 46561), (65, 46354), (72, 46333), (76, 46285), (83, 46207), (84, 46204), (89, 46117),

Gene: Pumbaa\_78 Start: 46696, Stop: 46109, Start Num: 29

Candidate Starts for Pumbaa\_78:

(Start: 10 @46843 has 44 MA's), (21, 46765), (Start: 24 @46744 has 3 MA's), (Start: 29 @46696 has 27 MA's), (Start: 30 @46693 has 85 MA's), (42, 46588), (49, 46516), (55, 46498), (62, 46432), (78, 46327), (83, 46267), (84, 46264), (89, 46177), (92, 46156),

Gene: Rahalelujah\_83 Start: 46456, Stop: 45809, Start Num: 10

Candidate Starts for Rahalelujah\_83:

(Start: 10 @46456 has 44 MA's), (Start: 14 @46432 has 5 MA's), (21, 46378), (Start: 22 @46375 has 13 MA's), (65, 46117), (72, 46096), (77, 46045), (79, 46024), (83, 45970), (84, 45967), (89, 45880),

Gene: Refuge\_81 Start: 48475, Stop: 47903, Start Num: 22

Candidate Starts for Refuge\_81:

(Start: 10 @48556 has 44 MA's), (Start: 14 @48532 has 5 MA's), (Start: 22 @48475 has 13 MA's), (54, 48319), (72, 48193), (83, 48067), (84, 48064), (90, 47971), (91, 47968), (94, 47929),

Gene: Relief\_77 Start: 46745, Stop: 46161, Start Num: 30

Candidate Starts for Relief\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Rifter\_90 Start: 46847, Stop: 46200, Start Num: 10

Candidate Starts for Rifter\_90:

(Start: 10 @46847 has 44 MA's), (Start: 14 @46823 has 5 MA's), (21, 46769), (Start: 22 @46766 has 13 MA's), (Start: 25 @46736 has 3 MA's), (75, 46442), (83, 46361), (84, 46358), (90, 46265), (91, 46262),

Gene: Roksolana\_90 Start: 47563, Stop: 46916, Start Num: 10

Candidate Starts for Roksolana\_90:

(Start: 10 @47563 has 44 MA's), (Start: 14 @47539 has 5 MA's), (21, 47485), (Start: 22 @47482 has 13 MA's), (Start: 25 @47452 has 3 MA's), (75, 47158), (83, 47077), (84, 47074), (90, 46981), (91, 46978),

Gene: Romney\_77 Start: 46745, Stop: 46161, Start Num: 30

Candidate Starts for Romney\_77:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (51, 46562), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Roosevelt\_76 Start: 46750, Stop: 46166, Start Num: 30

Candidate Starts for Roosevelt\_76:

(Start: 10 @46900 has 44 MA's), (21, 46822), (Start: 24 @46801 has 3 MA's), (Start: 29 @46753 has 27 MA's), (Start: 30 @46750 has 85 MA's), (42, 46645), (49, 46573), (55, 46555), (62, 46489), (83, 46324), (84, 46321), (89, 46234), (92, 46213),

Gene: Rosa24\_74 Start: 46779, Stop: 46192, Start Num: 29

Candidate Starts for Rosa24\_74:

(Start: 10 @46926 has 44 MA's), (21, 46848), (Start: 24 @46827 has 3 MA's), (Start: 29 @46779 has 27 MA's), (Start: 30 @46776 has 85 MA's), (42, 46671), (49, 46599), (55, 46581), (62, 46515), (83, 46350), (84, 46347), (89, 46260), (92, 46239),

Gene: Ruin\_78 Start: 46741, Stop: 46157, Start Num: 30

Candidate Starts for Ruin\_78:

(Start: 10 @46891 has 44 MA's), (21, 46813), (Start: 24 @46792 has 3 MA's), (Start: 29 @46744 has 27 MA's), (Start: 30 @46741 has 85 MA's), (42, 46636), (49, 46564), (51, 46558), (55, 46546), (62, 46480), (78, 46375), (83, 46315), (84, 46312), (89, 46225), (92, 46204),

Gene: Ryadel\_7 Start: 2296, Stop: 1727, Start Num: 7

Candidate Starts for Ryadel\_7:

(Start: 7 @2296 has 23 MA's), (Start: 22 @2179 has 13 MA's), (23, 2164), (Start: 29 @2113 has 27 MA's), (Start: 30 @2110 has 85 MA's), (67, 1996), (70, 1987), (74, 1963), (83, 1858), (84, 1855), (87, 1819), (92, 1780), (95, 1744),

Gene: Sabertooth\_78 Start: 46756, Stop: 46169, Start Num: 29

Candidate Starts for Sabertooth\_78:

(Start: 10 @46903 has 44 MA's), (21, 46825), (Start: 24 @46804 has 3 MA's), (Start: 29 @46756 has 27 MA's), (Start: 30 @46753 has 85 MA's), (42, 46648), (49, 46576), (55, 46558), (62, 46492), (78, 46387), (83, 46327), (84, 46324), (89, 46237), (92, 46216),

Gene: Scamp\_78 Start: 46750, Stop: 46166, Start Num: 30

Candidate Starts for Scamp\_78:

(Start: 10 @46900 has 44 MA's), (21, 46822), (Start: 24 @46801 has 3 MA's), (Start: 29 @46753 has 27 MA's), (Start: 30 @46750 has 85 MA's), (42, 46645), (49, 46573), (55, 46555), (62, 46489), (78, 46384), (83, 46324), (84, 46321), (89, 46234), (92, 46213),

Gene: SchoolBus\_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for SchoolBus\_5:

(Start: 7 @1765 has 23 MA's), (Start: 22 @1648 has 13 MA's), (23, 1633), (Start: 29 @1582 has 27 MA's), (Start: 30 @1579 has 85 MA's), (67, 1465), (70, 1456), (74, 1432), (83, 1327), (84, 1324), (87, 1288), (92, 1249), (95, 1213),

Gene: Schuy\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Schuy\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: SenorClean\_73 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for SenorClean\_73:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Shaka\_76 Start: 46746, Stop: 46162, Start Num: 30

Candidate Starts for Shaka\_76:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (55, 46551), (62, 46485), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: SheaKeira\_79 Start: 46163, Stop: 45585, Start Num: 22

Candidate Starts for SheaKeira\_79:

(Start: 10 @46244 has 44 MA's), (Start: 14 @46220 has 5 MA's), (21, 46166), (Start: 22 @46163 has 13 MA's), (65, 45905), (72, 45884), (76, 45836), (81, 45797), (83, 45758), (84, 45755), (88, 45689), (89, 45668), (92, 45647), (96, 45602),

Gene: SheldonCooper\_78 Start: 47186, Stop: 46602, Start Num: 30

Candidate Starts for SheldonCooper\_78:

(Start: 10 @47336 has 44 MA's), (21, 47258), (Start: 24 @47237 has 3 MA's), (Start: 29 @47189 has 27 MA's), (Start: 30 @47186 has 85 MA's), (42, 47081), (49, 47009), (55, 46991), (62, 46925), (83, 46760), (84, 46757), (89, 46670), (92, 46649),

Gene: Shida\_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Shida\_5:

(Start: 7 @1765 has 23 MA's), (Start: 22 @1648 has 13 MA's), (23, 1633), (Start: 29 @1582 has 27 MA's), (Start: 30 @1579 has 85 MA's), (67, 1465), (70, 1456), (74, 1432), (83, 1327), (84, 1324), (87, 1288), (92, 1249), (95, 1213),

Gene: Shygu2\_76 Start: 46692, Stop: 46108, Start Num: 30

Candidate Starts for Shygu2\_76:

(Start: 10 @46842 has 44 MA's), (21, 46764), (Start: 24 @46743 has 3 MA's), (Start: 29 @46695 has 27 MA's), (Start: 30 @46692 has 85 MA's), (Start: 32 @46680 has 4 MA's), (42, 46587), (49, 46515), (55, 46497), (62, 46431), (78, 46326), (83, 46266), (84, 46263), (89, 46176), (92, 46155), (95, 46119),

Gene: Skipitt\_77 Start: 46745, Stop: 46158, Start Num: 29

Candidate Starts for Skipitt\_77:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (51, 46559), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: SmellyB\_88 Start: 47181, Stop: 46555, Start Num: 14

Candidate Starts for SmellyB\_88:

(Start: 10 @47205 has 44 MA's), (Start: 14 @47181 has 5 MA's), (21, 47127), (Start: 22 @47124 has 13 MA's), (Start: 24 @47106 has 3 MA's), (65, 46866), (73, 46842), (76, 46797), (83, 46719), (84, 46716), (85, 46695), (90, 46620), (91, 46617),

Gene: Smooch\_6 Start: 2139, Stop: 1576, Start Num: 7

Candidate Starts for Smooch\_6:

(Start: 7 @2139 has 23 MA's), (Start: 22 @2022 has 13 MA's), (23, 2007), (Start: 29 @1956 has 27 MA's), (Start: 30 @1953 has 85 MA's), (67, 1845), (70, 1836), (83, 1707), (84, 1704), (92, 1629), (95, 1593),

Gene: Sparxx\_79 Start: 46747, Stop: 46160, Start Num: 29

Candidate Starts for Sparxx\_79:

(Start: 10 @46894 has 44 MA's), (21, 46816), (Start: 24 @46795 has 3 MA's), (Start: 29 @46747 has 27 MA's), (Start: 30 @46744 has 85 MA's), (42, 46639), (49, 46567), (55, 46549), (62, 46483), (83, 46318), (84, 46315), (89, 46228), (92, 46207),

Gene: Spino\_77 Start: 46748, Stop: 46164, Start Num: 30

Candidate Starts for Spino\_77:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Spouty\_82 Start: 46692, Stop: 46045, Start Num: 10

Candidate Starts for Spouty\_82:

(Start: 10 @46692 has 44 MA's), (Start: 14 @46668 has 5 MA's), (21, 46614), (Start: 22 @46611 has 13 MA's), (26, 46560), (65, 46353), (72, 46332), (76, 46284), (83, 46206), (84, 46203), (89, 46116),

Gene: Stasia\_75 Start: 46708, Stop: 46121, Start Num: 29

Candidate Starts for Stasia\_75:

(Start: 10 @46855 has 44 MA's), (21, 46777), (Start: 24 @46756 has 3 MA's), (Start: 29 @46708 has 27 MA's), (Start: 30 @46705 has 85 MA's), (42, 46600), (49, 46528), (55, 46510), (62, 46444), (83, 46279), (84, 46276), (89, 46189), (92, 46168), (95, 46132),

Gene: Steamy\_76 Start: 47037, Stop: 46378, Start Num: 10

Candidate Starts for Steamy\_76:

(Start: 10 @47037 has 44 MA's), (Start: 14 @47013 has 5 MA's), (Start: 22 @46956 has 13 MA's), (72, 46674), (83, 46548), (84, 46545), (85, 46524), (90, 46452), (94, 46410),

Gene: Stink\_78 Start: 46793, Stop: 46299, Start Num: 40

Candidate Starts for Stink\_78:

(Start: 10 @47030 has 44 MA's), (21, 46952), (Start: 24 @46931 has 3 MA's), (26, 46898), (Start: 30 @46880 has 85 MA's), (36, 46811), (38, 46805), (Start: 40 @46793 has 2 MA's), (62, 46622), (83, 46457), (84, 46454), (89, 46367), (92, 46346), (95, 46310),

Gene: Taquarus\_77 Start: 46751, Stop: 46167, Start Num: 30

Candidate Starts for Taquarus\_77:

(Start: 10 @46901 has 44 MA's), (21, 46823), (Start: 24 @46802 has 3 MA's), (Start: 29 @46754 has 27 MA's), (Start: 30 @46751 has 85 MA's), (42, 46646), (49, 46574), (55, 46556), (62, 46490), (83, 46325), (84, 46322), (89, 46235), (92, 46214),

Gene: TelAviv\_5 Start: 1762, Stop: 1193, Start Num: 7

Candidate Starts for TelAviv\_5:

(Start: 7 @1762 has 23 MA's), (Start: 22 @1645 has 13 MA's), (23, 1630), (Start: 29 @1579 has 27 MA's), (Start: 30 @1576 has 85 MA's), (67, 1462), (70, 1453), (74, 1429), (83, 1324), (84, 1321), (87, 1285), (92, 1246), (95, 1210),

Gene: Thanksgivukkah\_77 Start: 46896, Stop: 46162, Start Num: 10

Candidate Starts for Thanksgivukkah\_77:

(Start: 10 @46896 has 44 MA's), (21, 46818), (Start: 24 @46797 has 3 MA's), (Start: 29 @46749 has 27 MA's), (Start: 30 @46746 has 85 MA's), (42, 46641), (49, 46569), (55, 46551), (62, 46485), (78, 46380), (83, 46320), (84, 46317), (89, 46230), (92, 46209),

Gene: TinaFeyge\_76 Start: 46893, Stop: 46159, Start Num: 10

Candidate Starts for TinaFeyge\_76:

(Start: 10 @46893 has 44 MA's), (21, 46815), (Start: 24 @46794 has 3 MA's), (Start: 29 @46746 has 27 MA's), (Start: 30 @46743 has 85 MA's), (42, 46638), (49, 46566), (55, 46548), (62, 46482), (83, 46317), (84, 46314), (89, 46227), (92, 46206),

Gene: Tinybot\_77 Start: 46778, Stop: 46191, Start Num: 29

Candidate Starts for Tinybot\_77:

(Start: 10 @46925 has 44 MA's), (21, 46847), (Start: 24 @46826 has 3 MA's), (Start: 29 @46778 has 27 MA's), (Start: 30 @46775 has 85 MA's), (42, 46670), (49, 46598), (55, 46580), (62, 46514), (78, 46409), (83, 46349), (84, 46346), (89, 46259), (92, 46238),

Gene: TiroTheta9\_77 Start: 46742, Stop: 46158, Start Num: 30

Candidate Starts for TiroTheta9\_77:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: Toaka\_82 Start: 46732, Stop: 46166, Start Num: 22

Candidate Starts for Toaka\_82:

(Start: 10 @46813 has 44 MA's), (Start: 14 @46789 has 5 MA's), (Start: 22 @46732 has 13 MA's), (65, 46474), (72, 46453), (76, 46405), (83, 46327), (84, 46324), (89, 46237),

Gene: ToneTone\_87 Start: 47116, Stop: 46580, Start Num: 25

Candidate Starts for ToneTone\_87:

(Start: 10 @47227 has 44 MA's), (Start: 14 @47203 has 5 MA's), (21, 47149), (Start: 22 @47146 has 13 MA's), (Start: 25 @47116 has 3 MA's), (75, 46822), (83, 46741), (84, 46738), (90, 46645), (91, 46642),

Gene: TroyPia\_79 Start: 46786, Stop: 46199, Start Num: 29

Candidate Starts for TroyPia\_79:

(Start: 10 @46933 has 44 MA's), (21, 46855), (Start: 24 @46834 has 3 MA's), (Start: 29 @46786 has 27 MA's), (Start: 30 @46783 has 85 MA's), (42, 46678), (49, 46606), (55, 46588), (62, 46522), (83, 46357), (84, 46354), (89, 46267), (92, 46246),

Gene: Tucker\_90 Start: 47319, Stop: 46783, Start Num: 25

Candidate Starts for Tucker\_90:

(Start: 10 @47430 has 44 MA's), (Start: 14 @47406 has 5 MA's), (21, 47352), (Start: 22 @47349 has 13 MA's), (Start: 25 @47319 has 3 MA's), (75, 47025), (83, 46944), (84, 46941), (90, 46848), (91, 46845),

Gene: TygerBlood\_78 Start: 46751, Stop: 46164, Start Num: 29

Candidate Starts for TygerBlood\_78:

(Start: 10 @46898 has 44 MA's), (21, 46820), (Start: 24 @46799 has 3 MA's), (Start: 29 @46751 has 27 MA's), (Start: 30 @46748 has 85 MA's), (42, 46643), (49, 46571), (55, 46553), (62, 46487), (78, 46382), (83, 46322), (84, 46319), (89, 46232), (92, 46211),

Gene: Ulysses\_77 Start: 46431, Stop: 45847, Start Num: 30

Candidate Starts for Ulysses\_77:

(Start: 10 @46581 has 44 MA's), (21, 46503), (Start: 24 @46482 has 3 MA's), (Start: 29 @46434 has 27 MA's), (Start: 30 @46431 has 85 MA's), (42, 46326), (49, 46254), (55, 46236), (62, 46170), (83, 46005), (84, 46002), (89, 45915), (92, 45894),

Gene: Upyo\_53 Start: 39312, Stop: 38611, Start Num: 39

Candidate Starts for Upyo\_53:

(1, 39840), (2, 39783), (4, 39687), (16, 39534), (19, 39492), (21, 39477), (23, 39459), (26, 39423), (33, 39381), (Start: 39 @39312 has 1 MA's), (41, 39306), (44, 39270), (54, 39198), (57, 39132), (61, 38925), (64, 38898), (67, 38889), (80, 38799), (83, 38748), (84, 38745), (92, 38667), (94, 38640),

Gene: Vanisoa\_79 Start: 47062, Stop: 46496, Start Num: 22

Candidate Starts for Vanisoa\_79:

(Start: 10 @47143 has 44 MA's), (Start: 14 @47119 has 5 MA's), (21, 47065), (Start: 22 @47062 has 13 MA's), (65, 46804), (72, 46783), (83, 46657), (84, 46654), (89, 46567),

Gene: Vorrrps\_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Vorrrps\_5:

(Start: 7 @1716 has 23 MA's), (Start: 22 @1599 has 13 MA's), (23, 1584), (Start: 29 @1533 has 27 MA's), (Start: 30 @1530 has 85 MA's), (67, 1416), (70, 1407), (74, 1383), (83, 1278), (84, 1275), (87, 1239), (92, 1200), (95, 1164),

Gene: WalterMcMickey\_77 Start: 46600, Stop: 46046, Start Num: 22

Candidate Starts for WalterMcMickey\_77:



(Start: 10 @46681 has 44 MA's), (Start: 14 @46657 has 5 MA's), (Start: 22 @46600 has 13 MA's), (26, 46549), (49, 46465), (76, 46276), (83, 46198), (84, 46195), (86, 46162), (90, 46108),

Gene: Wander\_78 Start: 46742, Stop: 46158, Start Num: 30

Candidate Starts for Wander\_78:

(Start: 10 @46892 has 44 MA's), (21, 46814), (Start: 24 @46793 has 3 MA's), (Start: 29 @46745 has 27 MA's), (Start: 30 @46742 has 85 MA's), (42, 46637), (49, 46565), (55, 46547), (62, 46481), (78, 46376), (83, 46316), (84, 46313), (89, 46226), (92, 46205),

Gene: Wiks\_89 Start: 47310, Stop: 46660, Start Num: 10

Candidate Starts for Wiks\_89:

(Start: 10 @47310 has 44 MA's), (Start: 14 @47286 has 5 MA's), (21, 47232), (Start: 22 @47229 has 13 MA's), (Start: 24 @47211 has 3 MA's), (75, 46905), (83, 46824), (84, 46821), (85, 46800), (90, 46725), (91, 46722),

Gene: Wilbur\_78 Start: 46745, Stop: 46161, Start Num: 30

Candidate Starts for Wilbur\_78:

(Start: 10 @46895 has 44 MA's), (21, 46817), (Start: 24 @46796 has 3 MA's), (Start: 29 @46748 has 27 MA's), (Start: 30 @46745 has 85 MA's), (42, 46640), (49, 46568), (51, 46562), (55, 46550), (62, 46484), (78, 46379), (83, 46319), (84, 46316), (89, 46229), (92, 46208),

Gene: Wile\_74 Start: 46560, Stop: 45988, Start Num: 32

Candidate Starts for Wile\_74:

(Start: 10 @46722 has 44 MA's), (21, 46644), (Start: 24 @46623 has 3 MA's), (Start: 29 @46575 has 27 MA's), (Start: 30 @46572 has 85 MA's), (Start: 32 @46560 has 4 MA's), (42, 46467), (49, 46395), (55, 46377), (62, 46311), (78, 46206), (83, 46146), (84, 46143), (89, 46056), (92, 46035), (95, 45999),

Gene: Winget\_5 Start: 1850, Stop: 1287, Start Num: 7

Candidate Starts for Winget\_5:

(Start: 7 @1850 has 23 MA's), (Start: 22 @1733 has 13 MA's), (23, 1718), (Start: 29 @1667 has 27 MA's), (Start: 30 @1664 has 85 MA's), (67, 1556), (70, 1547), (83, 1418), (84, 1415), (87, 1379), (92, 1340), (95, 1304),

Gene: Wizard007\_75 Start: 46286, Stop: 45714, Start Num: 32

Candidate Starts for Wizard007\_75:

(Start: 10 @46448 has 44 MA's), (21, 46370), (Start: 24 @46349 has 3 MA's), (Start: 29 @46301 has 27 MA's), (Start: 30 @46298 has 85 MA's), (Start: 32 @46286 has 4 MA's), (42, 46193), (49, 46121), (55, 46103), (62, 46037), (78, 45932), (83, 45872), (84, 45869), (89, 45782), (92, 45761), (95, 45725),

Gene: Xena\_74 Start: 46567, Stop: 45983, Start Num: 30

Candidate Starts for Xena\_74:

(Start: 10 @46717 has 44 MA's), (21, 46639), (Start: 24 @46618 has 3 MA's), (Start: 29 @46570 has 27 MA's), (Start: 30 @46567 has 85 MA's), (42, 46462), (49, 46390), (55, 46372), (62, 46306), (78, 46201), (83, 46141), (84, 46138), (89, 46051), (92, 46030),

Gene: Yecey3\_85 Start: 46628, Stop: 46062, Start Num: 22

Candidate Starts for Yecey3\_85:

(Start: 10 @46709 has 44 MA's), (Start: 14 @46685 has 5 MA's), (Start: 22 @46628 has 13 MA's), (72, 46349), (83, 46223), (84, 46220), (95, 46076),

Gene: YoSam321\_78 Start: 46746, Stop: 46159, Start Num: 29

Candidate Starts for YoSam321\_78:

(Start: 10 @46893 has 44 MA's), (21, 46815), (Start: 24 @46794 has 3 MA's), (Start: 29 @46746 has 27 MA's), (Start: 30 @46743 has 85 MA's), (42, 46638), (49, 46566), (55, 46548), (62, 46482), (83, 46317), (84, 46314), (89, 46227), (92, 46206),

Gene: Yokurt\_89 Start: 47211, Stop: 46660, Start Num: 24

Candidate Starts for Yokurt\_89:

(Start: 10 @47310 has 44 MA's), (Start: 14 @47286 has 5 MA's), (21, 47232), (Start: 22 @47229 has 13 MA's), (Start: 24 @47211 has 3 MA's), (75, 46905), (83, 46824), (84, 46821), (85, 46800), (90, 46725), (91, 46722),

Gene: YungJamal\_6 Start: 2139, Stop: 1576, Start Num: 7

Candidate Starts for YungJamal\_6:

(Start: 7 @2139 has 23 MA's), (Start: 22 @2022 has 13 MA's), (23, 2007), (Start: 29 @1956 has 27 MA's), (Start: 30 @1953 has 85 MA's), (67, 1845), (70, 1836), (83, 1707), (84, 1704), (92, 1629), (95, 1593),

Gene: Zaka\_90 Start: 47310, Stop: 46660, Start Num: 10

Candidate Starts for Zaka\_90:

(Start: 10 @47310 has 44 MA's), (Start: 14 @47286 has 5 MA's), (21, 47232), (Start: 22 @47229 has 13 MA's), (Start: 24 @47211 has 3 MA's), (75, 46905), (83, 46824), (84, 46821), (85, 46800), (90, 46725), (91, 46722),

Gene: Zakhe101\_6 Start: 2163, Stop: 1594, Start Num: 7

Candidate Starts for Zakhe101\_6:

(Start: 7 @2163 has 23 MA's), (Start: 22 @2046 has 13 MA's), (23, 2031), (Start: 29 @1980 has 27 MA's), (Start: 30 @1977 has 85 MA's), (67, 1863), (70, 1854), (83, 1725), (84, 1722), (92, 1647), (95, 1611),

Gene: Zhuangyuan\_48 Start: 27978, Stop: 28547, Start Num: 12

Candidate Starts for Zhuangyuan\_48:

(12, 27978), (20, 28038), (21, 28044), (27, 28098), (28, 28110), (46, 28143), (50, 28161), (68, 28263), (71, 28269), (83, 28395), (84, 28398), (93, 28482), (95, 28515),

Gene: Zimmer\_80 Start: 47793, Stop: 47140, Start Num: 10

Candidate Starts for Zimmer\_80:

(Start: 10 @47793 has 44 MA's), (Start: 14 @47769 has 5 MA's), (Start: 22 @47712 has 13 MA's), (65, 47451), (73, 47427), (83, 47304), (84, 47301), (90, 47208), (91, 47205), (94, 47166),