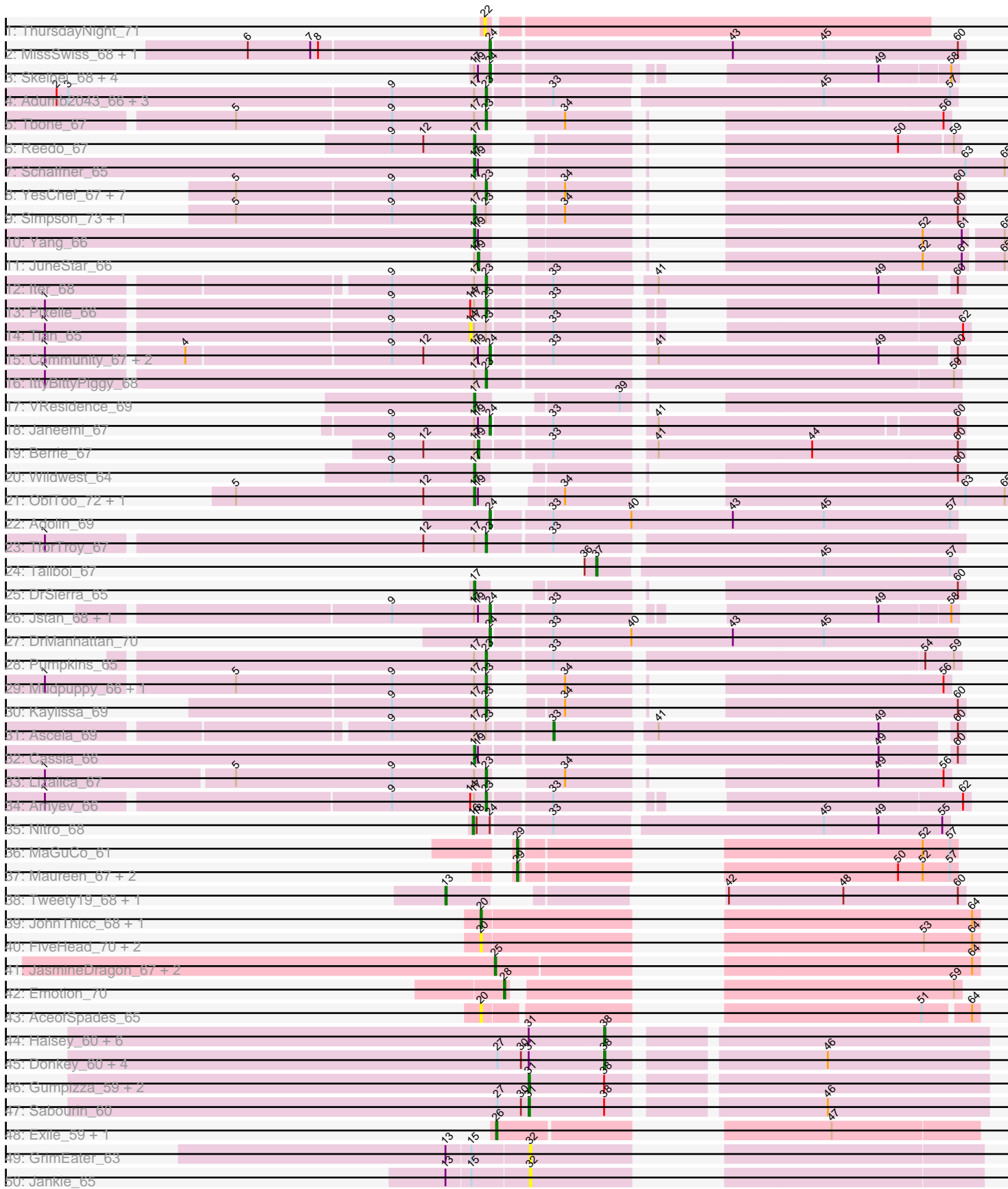


Pham 294607





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 294607 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294607 has 95 members, 22 are drafts.

Phages represented in each track:

- Track 1 : ThursdayNight\_71
- Track 2 : MissSwiss\_68, PandaPo\_68
- Track 3 : Skelbel\_68, Eraser\_67, Asa16\_67, London\_67, Niobe\_67
- Track 4 : Adumb2043\_66, AEgle\_65, Turab\_66, Amploria\_67
- Track 5 : Tbone\_67
- Track 6 : Reedo\_67
- Track 7 : Schaffner\_65
- Track 8 : YesChef\_67, Flutur\_67, Lego\_67, Joemato\_69, AGrandiflora\_69, Cyan\_68, Tutumahutu\_69, Powerpuff\_69
- Track 9 : Simpson\_73, JohnDoe\_68
- Track 10 : Yang\_66
- Track 11 : JuneStar\_66
- Track 12 : lter\_68
- Track 13 : Pixelle\_66
- Track 14 : Tian\_65
- Track 15 : Community\_67, Tuck\_67, Phives\_68
- Track 16 : IttyBittyPiggy\_68
- Track 17 : VResidence\_69
- Track 18 : Janeemi\_67
- Track 19 : Berrie\_67
- Track 20 : Wildwest\_64
- Track 21 : ObiToo\_72, Crewmate\_72
- Track 22 : Adolin\_69
- Track 23 : TforTroy\_67
- Track 24 : Tallboi\_67
- Track 25 : DrSierra\_65
- Track 26 : Jstan\_68, Elezi\_66
- Track 27 : DrManhattan\_70
- Track 28 : Pumpkins\_65
- Track 29 : Mudpuppy\_66, Warda\_68
- Track 30 : Kaylissa\_69
- Track 31 : Ascela\_69
- Track 32 : Cassia\_66
- Track 33 : Lizalica\_67
- Track 34 : Amyev\_66
- Track 35 : Nitro\_68
- Track 36 : MaGuCo\_61

- Track 37 : Maureen\_67, IUFootball\_67, Liebe\_67
- Track 38 : Tweety19\_68, Sneak\_67
- Track 39 : JohnThicc\_68, VroomVroom\_64
- Track 40 : FiveHead\_70, Origami\_67, LadyAstra\_68
- Track 41 : JasmineDragon\_67, ShakeltOph\_67, MiniMommy\_67
- Track 42 : Emotion\_70
- Track 43 : AceofSpades\_65
- Track 44 : Halsey\_60, Ashes\_60, RockScotty\_59, Mysterium\_59, SpecialK\_60, Moss\_60, Beaupre\_59
- Track 45 : Donkey\_60, Kalimba\_60, Cappuccino\_60, Gambol\_61, Sooty\_60
- Track 46 : Gumpizza\_59, Giorgio\_59, Stuu\_60
- Track 47 : Sabourin\_60
- Track 48 : Exile\_59, Soondubu\_61
- Track 49 : GrimEater\_63
- Track 50 : Jankie\_65
- Track 51 : CallinAllBarbz\_60
- Track 52 : BaileyBlu\_59
- Track 53 : LisoBros\_61

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

The start number called the most often in the published annotations is 23, it was called in 18 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle\_65, AGrandiflora\_69, Adumb2043\_66, Amploria\_67, Amyev\_66, Cyan\_68, Flutur\_67, Iter\_68, IttyBittyPiggy\_68, Joemato\_69, Kaylissa\_69, Lego\_67, Lizalica\_67, Mudpuppy\_66, Pixelle\_66, Powerpuff\_69, Pumpkins\_65, Tbone\_67, TforTroy\_67, Turab\_66, Tutumahutu\_69, Warda\_68, YesChef\_67,

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

- Ascela\_69, JohnDoe\_68, Simpson\_73, Tian\_65,

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

- AceofSpades\_65, Adolin\_69, Asa16\_67, Ashes\_60, BaileyBlu\_59, Beaupre\_59, Berrie\_67, CallinAllBarbz\_60, Cappuccino\_60, Cassia\_66, Community\_67, Crewmate\_72, Donkey\_60, DrManhattan\_70, DrSierra\_65, Elezi\_66, Emotion\_70, Eraser\_67, Exile\_59, FiveHead\_70, Gambol\_61, Giorgio\_59, GrimEater\_63, Gumpizza\_59, Halsey\_60, IUFootball\_67, Janeemi\_67, Jankie\_65, JasmineDragon\_67, JohnThicc\_68, Jstan\_68, JuneStar\_66, Kalimba\_60, LadyAstra\_68, Liebe\_67, LisoBros\_61, London\_67, MaGuCo\_61, Maureen\_67, MiniMommy\_67, MissSwiss\_68, Moss\_60, Mysterium\_59, Niobe\_67, Nitro\_68, ObiToo\_72, Origami\_67, PandaPo\_68, Phives\_68, Reedo\_67, RockScotty\_59, Sabourin\_60, Schaffner\_65, ShakeltOph\_67, Skelbel\_68, Sneak\_67, Soondubu\_61, Sooty\_60, SpecialK\_60, Stuu\_60, Tallboi\_67, ThursdayNight\_71, Tuck\_67, Tweety19\_68, VResidence\_69, VroomVroom\_64, Wildwest\_64, Yang\_66,

**Summary by start number:**

Start 13:

- Found in 6 of 95 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 2 of 73
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sneak\_67 (AZ3), Tweety19\_68 (AZ3),

#### Start 14:

- Found in 3 of 95 ( 3.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Tian\_65 (AZ1),

#### Start 16:

- Found in 1 of 95 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nitro\_68 (AZ1),

#### Start 17:

- Found in 50 of 95 ( 52.6% ) of genes in pham
- Manual Annotations of this start: 10 of 73
- Called 22.0% of time when present
- Phage (with cluster) where this start called: Cassia\_66 (AZ1), Crewmate\_72 (AZ1), DrSierra\_65 (AZ1), JohnDoe\_68 (AZ1), ObiToo\_72 (AZ1), Reedo\_67 (AZ1), Schaffner\_65 (AZ1), Simpson\_73 (AZ1), VResidence\_69 (AZ1), Wildwest\_64 (AZ1), Yang\_66 (AZ1),

#### Start 19:

- Found in 18 of 95 ( 18.9% ) of genes in pham
- Manual Annotations of this start: 2 of 73
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Berrie\_67 (AZ1), JuneStar\_66 (AZ1),

#### Start 20:

- Found in 6 of 95 ( 6.3% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AceofSpades\_65 (AZ4), FiveHead\_70 (AZ4), JohnThicc\_68 (AZ4), LadyAstra\_68 (AZ4), Origami\_67 (AZ4), VroomVroom\_64 (AZ4),

#### Start 22:

- Found in 1 of 95 ( 1.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ThursdayNight\_71 (AZ),

#### Start 23:

- Found in 27 of 95 ( 28.4% ) of genes in pham
- Manual Annotations of this start: 18 of 73
- Called 85.2% of time when present
- Phage (with cluster) where this start called: AEgle\_65 (AZ1), AGrandiflora\_69 (AZ1), Adumb2043\_66 (AZ1), Amploria\_67 (AZ1), Amyev\_66 (AZ1), Cyan\_68 (AZ1), Flutur\_67 (AZ), Iter\_68 (AZ1), IttyBittyPiggy\_68 (AZ1), Joemato\_69 (AZ1),

Kaylissa\_69 (AZ1), Lego\_67 (AZ1), Lizalica\_67 (AZ1), Mudpuppy\_66 (AZ1), Pixelle\_66 (AZ1), Powerpuff\_69 (AZ1), Pumpkins\_65 (AZ1), Tbone\_67 (AZ1), TforTroy\_67 (AZ1), Turab\_66 (AZ1), Tutumahutu\_69 (AZ1), Warda\_68 (AZ1), YesChef\_67 (AZ1),

Start 24:

- Found in 16 of 95 ( 16.8% ) of genes in pham
- Manual Annotations of this start: 11 of 73
- Called 93.8% of time when present
- Phage (with cluster) where this start called: Adolin\_69 (AZ1), Asa16\_67 (AZ1), Community\_67 (AZ1), DrManhattan\_70 (AZ1), Elezi\_66 (AZ1), Eraser\_67 (AZ1), Janeemi\_67 (AZ1), Jstan\_68 (AZ1), London\_67 (AZ1), MissSwiss\_68 (AZ1), Niobe\_67 (AZ1), PandaPo\_68 (AZ1), Phives\_68 (AZ1), Skelbel\_68 (AZ1), Tuck\_67 (AZ1),

Start 25:

- Found in 3 of 95 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 3 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JasmineDragon\_67 (AZ4), MiniMommy\_67 (AZ4), ShakeltOph\_67 (AZ4),

Start 26:

- Found in 2 of 95 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Exile\_59 (AZ6), Soondubu\_61 (AZ6),

Start 28:

- Found in 1 of 95 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion\_70 (AZ4),

Start 29:

- Found in 4 of 95 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 3 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: IUFootball\_67 (AZ2), Liebe\_67 (AZ2), MaGuCo\_61 (AZ2), Maureen\_67 (AZ2),

Start 31:

- Found in 18 of 95 ( 18.9% ) of genes in pham
- Manual Annotations of this start: 6 of 73
- Called 33.3% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_59 (FP), CallinAllBarbz\_60 (FP), Giorgio\_59 (AZ5), Gumpizza\_59 (AZ5), Sabourin\_60 (AZ5), Stuu\_60 (AZ5),

Start 32:

- Found in 3 of 95 ( 3.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: GrimEater\_63 (FP), Jankie\_65 (FP), LisoBros\_61 (UNK),

Start 33:

- Found in 21 of 95 ( 22.1% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 4.8% of time when present
- Phage (with cluster) where this start called: Ascela\_69 (AZ1),

Start 37:

- Found in 1 of 95 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tallboi\_67 (AZ1),

Start 38:

- Found in 16 of 95 ( 16.8% ) of genes in pham
- Manual Annotations of this start: 12 of 73
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Ashes\_60 (AZ5), Beaupre\_59 (AZ5), Cappuccino\_60 (AZ5), Donkey\_60 (AZ5), Gambol\_61 (AZ5), Halsey\_60 (AZ5), Kalimba\_60 (AZ5), Moss\_60 (AZ5), Mysterium\_59 (AZ5), RockScotty\_59 (AZ5), Sooty\_60 (AZ5), SpecialK\_60 (AZ5),

### **Summary by clusters:**

There are 9 clusters represented in this pham: FP, AZ, UNK, AZ1, AZ2, AZ3, AZ4, AZ5, AZ6,

Info for manual annotations of cluster AZ1:

- Start number 16 was manually annotated 1 time for cluster AZ1.
- Start number 17 was manually annotated 10 times for cluster AZ1.
- Start number 19 was manually annotated 2 times for cluster AZ1.
- Start number 23 was manually annotated 18 times for cluster AZ1.
- Start number 24 was manually annotated 11 times for cluster AZ1.
- Start number 33 was manually annotated 1 time for cluster AZ1.
- Start number 37 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 29 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 13 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 20 was manually annotated 1 time for cluster AZ4.
- Start number 25 was manually annotated 3 times for cluster AZ4.
- Start number 28 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 31 was manually annotated 4 times for cluster AZ5.
- Start number 38 was manually annotated 12 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

•Start number 26 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster FP:

•Start number 31 was manually annotated 2 times for cluster FP.

### **Gene Information:**

Gene: AEgle\_65 Start: 41928, Stop: 42272, Start Num: 23

Candidate Starts for AEgle\_65:

(2, 41601), (3, 41610), (9, 41856), (Start: 17 @41919 has 10 MA's), (Start: 23 @41928 has 18 MA's), (Start: 33 @41973 has 1 MA's), (45, 42171), (57, 42267),

Gene: AGrandiflora\_69 Start: 42827, Stop: 43090, Start Num: 23

Candidate Starts for AGrandiflora\_69:

(5, 42638), (9, 42755), (Start: 17 @42818 has 10 MA's), (Start: 23 @42827 has 18 MA's), (34, 42857), (60, 43085),

Gene: AceofSpades\_65 Start: 42194, Stop: 42490, Start Num: 20

Candidate Starts for AceofSpades\_65:

(Start: 20 @42194 has 1 MA's), (51, 42452), (64, 42485),

Gene: Adolin\_69 Start: 41878, Stop: 42228, Start Num: 24

Candidate Starts for Adolin\_69:

(Start: 24 @41878 has 11 MA's), (Start: 33 @41920 has 1 MA's), (40, 41980), (43, 42058), (45, 42127), (57, 42223),

Gene: Adumb2043\_66 Start: 41952, Stop: 42296, Start Num: 23

Candidate Starts for Adumb2043\_66:

(2, 41625), (3, 41634), (9, 41880), (Start: 17 @41943 has 10 MA's), (Start: 23 @41952 has 18 MA's), (Start: 33 @41997 has 1 MA's), (45, 42195), (57, 42291),

Gene: Amploria\_67 Start: 42132, Stop: 42476, Start Num: 23

Candidate Starts for Amploria\_67:

(2, 41805), (3, 41814), (9, 42060), (Start: 17 @42123 has 10 MA's), (Start: 23 @42132 has 18 MA's), (Start: 33 @42177 has 1 MA's), (45, 42375), (57, 42471),

Gene: Amyev\_66 Start: 43156, Stop: 43452, Start Num: 23

Candidate Starts for Amyev\_66:

(1, 42829), (9, 43084), (14, 43144), (Start: 17 @43147 has 10 MA's), (Start: 23 @43156 has 18 MA's), (Start: 33 @43201 has 1 MA's), (62, 43447),

Gene: Asa16\_67 Start: 42516, Stop: 42797, Start Num: 24

Candidate Starts for Asa16\_67:

(Start: 17 @42504 has 10 MA's), (Start: 19 @42507 has 2 MA's), (Start: 24 @42516 has 11 MA's), (49, 42744), (58, 42792),

Gene: Ascela\_69 Start: 43040, Stop: 43333, Start Num: 33

Candidate Starts for Ascela\_69:

(9, 42923), (Start: 17 @42986 has 10 MA's), (Start: 23 @42995 has 18 MA's), (Start: 33 @43040 has 1 MA's), (41, 43112), (49, 43280), (60, 43328),

Gene: Ashes\_60 Start: 38817, Stop: 39089, Start Num: 38

Candidate Starts for Ashes\_60:

(Start: 31 @38760 has 6 MA's), (Start: 38 @38817 has 12 MA's),

Gene: BaileyBlu\_59 Start: 39085, Stop: 39360, Start Num: 31

Candidate Starts for BaileyBlu\_59:

(9, 38989), (10, 38992), (11, 39001), (Start: 13 @39028 has 2 MA's), (Start: 17 @39046 has 10 MA's), (Start: 31 @39085 has 6 MA's), (35, 39118),

Gene: Beaupre\_59 Start: 38627, Stop: 38899, Start Num: 38

Candidate Starts for Beaupre\_59:

(Start: 31 @38570 has 6 MA's), (Start: 38 @38627 has 12 MA's),

Gene: Berrie\_67 Start: 42601, Stop: 42954, Start Num: 19

Candidate Starts for Berrie\_67:

(9, 42535), (12, 42559), (Start: 17 @42598 has 10 MA's), (Start: 19 @42601 has 2 MA's), (Start: 33 @42652 has 1 MA's), (41, 42721), (44, 42838), (60, 42949),

Gene: CallinAllBarbz\_60 Start: 39859, Stop: 40101, Start Num: 31

Candidate Starts for CallinAllBarbz\_60:

(11, 39775), (Start: 13 @39802 has 2 MA's), (21, 39826), (Start: 31 @39859 has 6 MA's), (35, 39892),

Gene: Cappuccino\_60 Start: 38667, Stop: 38939, Start Num: 38

Candidate Starts for Cappuccino\_60:

(27, 38586), (30, 38604), (Start: 31 @38610 has 6 MA's), (Start: 38 @38667 has 12 MA's), (46, 38817),

Gene: Cassia\_66 Start: 42270, Stop: 42614, Start Num: 17

Candidate Starts for Cassia\_66:

(Start: 17 @42270 has 10 MA's), (Start: 19 @42273 has 2 MA's), (49, 42561), (60, 42609),

Gene: Community\_67 Start: 42884, Stop: 43216, Start Num: 24

Candidate Starts for Community\_67:

(1, 42557), (4, 42656), (9, 42809), (12, 42833), (Start: 17 @42872 has 10 MA's), (Start: 19 @42875 has 2 MA's), (Start: 24 @42884 has 11 MA's), (Start: 33 @42926 has 1 MA's), (41, 42995), (49, 43163), (60, 43211),

Gene: Crewmate\_72 Start: 43229, Stop: 43537, Start Num: 17

Candidate Starts for Crewmate\_72:

(5, 43046), (12, 43190), (Start: 17 @43229 has 10 MA's), (Start: 19 @43232 has 2 MA's), (34, 43268), (63, 43502), (65, 43532),

Gene: Cyan\_68 Start: 42571, Stop: 42834, Start Num: 23

Candidate Starts for Cyan\_68:

(5, 42382), (9, 42499), (Start: 17 @42562 has 10 MA's), (Start: 23 @42571 has 18 MA's), (34, 42601), (60, 42829),

Gene: Donkey\_60 Start: 38657, Stop: 38929, Start Num: 38

Candidate Starts for Donkey\_60:

(27, 38576), (30, 38594), (Start: 31 @38600 has 6 MA's), (Start: 38 @38657 has 12 MA's), (46, 38807),

Gene: DrManhattan\_70 Start: 41432, Stop: 41782, Start Num: 24  
Candidate Starts for DrManhattan\_70:  
(Start: 24 @41432 has 11 MA's), (Start: 33 @41474 has 1 MA's), (40, 41534), (43, 41612), (45, 41681),

Gene: DrSierra\_65 Start: 41681, Stop: 41947, Start Num: 17  
Candidate Starts for DrSierra\_65:  
(Start: 17 @41681 has 10 MA's), (60, 41942),

Gene: Elezi\_66 Start: 42273, Stop: 42554, Start Num: 24  
Candidate Starts for Elezi\_66:  
(9, 42198), (Start: 17 @42261 has 10 MA's), (Start: 19 @42264 has 2 MA's), (Start: 24 @42273 has 11 MA's), (Start: 33 @42315 has 1 MA's), (49, 42501), (58, 42549),

Gene: Emotion\_70 Start: 43720, Stop: 43983, Start Num: 28  
Candidate Starts for Emotion\_70:  
(Start: 28 @43720 has 1 MA's), (59, 43978),

Gene: Eraser\_67 Start: 42523, Stop: 42804, Start Num: 24  
Candidate Starts for Eraser\_67:  
(Start: 17 @42511 has 10 MA's), (Start: 19 @42514 has 2 MA's), (Start: 24 @42523 has 11 MA's), (49, 42751), (58, 42799),

Gene: Exile\_59 Start: 43115, Stop: 43405, Start Num: 26  
Candidate Starts for Exile\_59:  
(Start: 26 @43115 has 1 MA's), (47, 43295),

Gene: FiveHead\_70 Start: 41853, Stop: 42158, Start Num: 20  
Candidate Starts for FiveHead\_70:  
(Start: 20 @41853 has 1 MA's), (53, 42117), (64, 42153),

Gene: Flutur\_67 Start: 42852, Stop: 43115, Start Num: 23  
Candidate Starts for Flutur\_67:  
(5, 42663), (9, 42780), (Start: 17 @42843 has 10 MA's), (Start: 23 @42852 has 18 MA's), (34, 42882), (60, 43110),

Gene: Gambol\_61 Start: 38676, Stop: 38948, Start Num: 38  
Candidate Starts for Gambol\_61:  
(27, 38595), (30, 38613), (Start: 31 @38619 has 6 MA's), (Start: 38 @38676 has 12 MA's), (46, 38826),

Gene: Giorgio\_59 Start: 38553, Stop: 38882, Start Num: 31  
Candidate Starts for Giorgio\_59:  
(Start: 31 @38553 has 6 MA's), (Start: 38 @38610 has 12 MA's),

Gene: GrimEater\_63 Start: 40339, Stop: 40611, Start Num: 32  
Candidate Starts for GrimEater\_63:  
(Start: 13 @40279 has 2 MA's), (15, 40297), (32, 40339),

Gene: Gumpizza\_59 Start: 38509, Stop: 38838, Start Num: 31  
Candidate Starts for Gumpizza\_59:  
(Start: 31 @38509 has 6 MA's), (Start: 38 @38566 has 12 MA's),

Gene: Halsey\_60 Start: 38807, Stop: 39079, Start Num: 38  
Candidate Starts for Halsey\_60:

(Start: 31 @38750 has 6 MA's), (Start: 38 @38807 has 12 MA's),

Gene: IUFootball\_67 Start: 44555, Stop: 44812, Start Num: 29

Candidate Starts for IUFootball\_67:

(Start: 29 @44555 has 3 MA's), (50, 44768), (52, 44786), (57, 44807),

Gene: Iter\_68 Start: 42766, Stop: 43104, Start Num: 23

Candidate Starts for Iter\_68:

(9, 42694), (Start: 17 @42757 has 10 MA's), (Start: 23 @42766 has 18 MA's), (Start: 33 @42811 has 11 MA's), (41, 42883), (49, 43051), (60, 43099),

Gene: IttyBittyPiggy\_68 Start: 41000, Stop: 41344, Start Num: 23

Candidate Starts for IttyBittyPiggy\_68:

(1, 40670), (Start: 17 @40991 has 10 MA's), (Start: 23 @41000 has 18 MA's), (59, 41339),

Gene: Janeemi\_67 Start: 42677, Stop: 43015, Start Num: 24

Candidate Starts for Janeemi\_67:

(9, 42602), (Start: 17 @42665 has 10 MA's), (Start: 19 @42668 has 2 MA's), (Start: 24 @42677 has 11 MA's), (Start: 33 @42719 has 1 MA's), (41, 42788), (60, 43010),

Gene: Jankie\_65 Start: 40521, Stop: 40793, Start Num: 32

Candidate Starts for Jankie\_65:

(Start: 13 @40461 has 2 MA's), (15, 40479), (32, 40521),

Gene: JasmineDragon\_67 Start: 42320, Stop: 42616, Start Num: 25

Candidate Starts for JasmineDragon\_67:

(Start: 25 @42320 has 3 MA's), (64, 42611),

Gene: Joemato\_69 Start: 42748, Stop: 43011, Start Num: 23

Candidate Starts for Joemato\_69:

(5, 42559), (9, 42676), (Start: 17 @42739 has 10 MA's), (Start: 23 @42748 has 18 MA's), (34, 42778), (60, 43006),

Gene: JohnDoe\_68 Start: 42656, Stop: 42928, Start Num: 17

Candidate Starts for JohnDoe\_68:

(5, 42476), (9, 42593), (Start: 17 @42656 has 10 MA's), (Start: 23 @42665 has 18 MA's), (34, 42695), (60, 42923),

Gene: JohnThicc\_68 Start: 41852, Stop: 42160, Start Num: 20

Candidate Starts for JohnThicc\_68:

(Start: 20 @41852 has 1 MA's), (64, 42155),

Gene: Jstan\_68 Start: 42277, Stop: 42558, Start Num: 24

Candidate Starts for Jstan\_68:

(9, 42202), (Start: 17 @42265 has 10 MA's), (Start: 19 @42268 has 2 MA's), (Start: 24 @42277 has 11 MA's), (Start: 33 @42319 has 1 MA's), (49, 42505), (58, 42553),

Gene: JuneStar\_66 Start: 43398, Stop: 43697, Start Num: 19

Candidate Starts for JuneStar\_66:

(Start: 17 @43395 has 10 MA's), (Start: 19 @43398 has 2 MA's), (52, 43635), (61, 43665), (65, 43692),

Gene: Kalimba\_60 Start: 38654, Stop: 38926, Start Num: 38

Candidate Starts for Kalimba\_60:

(27, 38573), (30, 38591), (Start: 31 @38597 has 6 MA's), (Start: 38 @38654 has 12 MA's), (46, 38804),

Gene: Kaylissa\_69 Start: 43024, Stop: 43287, Start Num: 23

Candidate Starts for Kaylissa\_69:

(9, 42952), (Start: 17 @43015 has 10 MA's), (Start: 23 @43024 has 18 MA's), (34, 43054), (60, 43282),

Gene: LadyAstra\_68 Start: 41952, Stop: 42257, Start Num: 20

Candidate Starts for LadyAstra\_68:

(Start: 20 @41952 has 1 MA's), (53, 42216), (64, 42252),

Gene: Lego\_67 Start: 42346, Stop: 42609, Start Num: 23

Candidate Starts for Lego\_67:

(5, 42157), (9, 42274), (Start: 17 @42337 has 10 MA's), (Start: 23 @42346 has 18 MA's), (34, 42376), (60, 42604),

Gene: Liebe\_67 Start: 44554, Stop: 44811, Start Num: 29

Candidate Starts for Liebe\_67:

(Start: 29 @44554 has 3 MA's), (50, 44767), (52, 44785), (57, 44806),

Gene: LisoBros\_61 Start: 43444, Stop: 43713, Start Num: 32

Candidate Starts for LisoBros\_61:

(9, 43339), (11, 43351), (21, 43408), (32, 43444), (34, 43471), (64, 43708),

Gene: Lizalica\_67 Start: 41945, Stop: 42199, Start Num: 23

Candidate Starts for Lizalica\_67:

(1, 41612), (5, 41753), (9, 41873), (Start: 17 @41936 has 10 MA's), (Start: 23 @41945 has 18 MA's), (34, 41978), (49, 42146), (56, 42194),

Gene: London\_67 Start: 42514, Stop: 42795, Start Num: 24

Candidate Starts for London\_67:

(Start: 17 @42502 has 10 MA's), (Start: 19 @42505 has 2 MA's), (Start: 24 @42514 has 11 MA's), (49, 42742), (58, 42790),

Gene: MaGuCo\_61 Start: 42675, Stop: 42932, Start Num: 29

Candidate Starts for MaGuCo\_61:

(Start: 29 @42675 has 3 MA's), (52, 42906), (57, 42927),

Gene: Maureen\_67 Start: 44553, Stop: 44810, Start Num: 29

Candidate Starts for Maureen\_67:

(Start: 29 @44553 has 3 MA's), (50, 44766), (52, 44784), (57, 44805),

Gene: MiniMommy\_67 Start: 42328, Stop: 42624, Start Num: 25

Candidate Starts for MiniMommy\_67:

(Start: 25 @42328 has 3 MA's), (64, 42619),

Gene: MissSwiss\_68 Start: 41433, Stop: 41789, Start Num: 24

Candidate Starts for MissSwiss\_68:

(6, 41250), (7, 41298), (8, 41304), (Start: 24 @41433 has 11 MA's), (43, 41613), (45, 41682), (60, 41784),

Gene: Moss\_60 Start: 38754, Stop: 39026, Start Num: 38

Candidate Starts for Moss\_60:

(Start: 31 @38697 has 6 MA's), (Start: 38 @38754 has 12 MA's),

Gene: Mudpuppy\_66 Start: 42711, Stop: 42965, Start Num: 23

Candidate Starts for Mudpuppy\_66:

(1, 42384), (5, 42522), (9, 42639), (Start: 17 @42702 has 10 MA's), (Start: 23 @42711 has 18 MA's), (34, 42744), (56, 42960),

Gene: Mysterium\_59 Start: 38595, Stop: 38867, Start Num: 38

Candidate Starts for Mysterium\_59:

(Start: 31 @38538 has 6 MA's), (Start: 38 @38595 has 12 MA's),

Gene: Niobe\_67 Start: 42517, Stop: 42798, Start Num: 24

Candidate Starts for Niobe\_67:

(Start: 17 @42505 has 10 MA's), (Start: 19 @42508 has 2 MA's), (Start: 24 @42517 has 11 MA's), (49, 42745), (58, 42793),

Gene: Nitro\_68 Start: 43178, Stop: 43525, Start Num: 16

Candidate Starts for Nitro\_68:

(Start: 16 @43178 has 1 MA's), (18, 43181), (Start: 24 @43190 has 11 MA's), (Start: 33 @43232 has 1 MA's), (45, 43430), (49, 43472), (55, 43520),

Gene: ObiToo\_72 Start: 42845, Stop: 43153, Start Num: 17

Candidate Starts for ObiToo\_72:

(5, 42662), (12, 42806), (Start: 17 @42845 has 10 MA's), (Start: 19 @42848 has 2 MA's), (34, 42884), (63, 43118), (65, 43148),

Gene: Origami\_67 Start: 41744, Stop: 42049, Start Num: 20

Candidate Starts for Origami\_67:

(Start: 20 @41744 has 1 MA's), (53, 42008), (64, 42044),

Gene: PandaPo\_68 Start: 41440, Stop: 41796, Start Num: 24

Candidate Starts for PandaPo\_68:

(6, 41257), (7, 41305), (8, 41311), (Start: 24 @41440 has 11 MA's), (43, 41620), (45, 41689), (60, 41791),

Gene: Phives\_68 Start: 42999, Stop: 43331, Start Num: 24

Candidate Starts for Phives\_68:

(1, 42672), (4, 42771), (9, 42924), (12, 42948), (Start: 17 @42987 has 10 MA's), (Start: 19 @42990 has 2 MA's), (Start: 24 @42999 has 11 MA's), (Start: 33 @43041 has 1 MA's), (41, 43110), (49, 43278), (60, 43326),

Gene: Pixelle\_66 Start: 43257, Stop: 43547, Start Num: 23

Candidate Starts for Pixelle\_66:

(1, 42930), (9, 43185), (14, 43245), (Start: 17 @43248 has 10 MA's), (Start: 23 @43257 has 18 MA's), (Start: 33 @43302 has 1 MA's),

Gene: Powerpuff\_69 Start: 43550, Stop: 43813, Start Num: 23

Candidate Starts for Powerpuff\_69:

(5, 43361), (9, 43478), (Start: 17 @43541 has 10 MA's), (Start: 23 @43550 has 18 MA's), (34, 43580), (60, 43808),

Gene: Pumpkins\_65 Start: 42797, Stop: 43141, Start Num: 23

Candidate Starts for Pumpkins\_65:

(Start: 17 @42788 has 10 MA's), (Start: 23 @42797 has 18 MA's), (Start: 33 @42845 has 1 MA's), (54, 43115), (59, 43136),

Gene: Reedo\_67 Start: 40786, Stop: 41046, Start Num: 17

Candidate Starts for Reedo\_67:

(9, 40723), (12, 40747), (Start: 17 @40786 has 10 MA's), (50, 41002), (59, 41041),

Gene: RockScotty\_59 Start: 38590, Stop: 38862, Start Num: 38

Candidate Starts for RockScotty\_59:

(Start: 31 @38533 has 6 MA's), (Start: 38 @38590 has 12 MA's),

Gene: Sabourin\_60 Start: 38598, Stop: 38927, Start Num: 31

Candidate Starts for Sabourin\_60:

(27, 38574), (30, 38592), (Start: 31 @38598 has 6 MA's), (Start: 38 @38655 has 12 MA's), (46, 38805),

Gene: Schaffner\_65 Start: 42471, Stop: 42779, Start Num: 17

Candidate Starts for Schaffner\_65:

(Start: 17 @42471 has 10 MA's), (Start: 19 @42474 has 2 MA's), (63, 42744), (65, 42774),

Gene: ShakeltOph\_67 Start: 42320, Stop: 42616, Start Num: 25

Candidate Starts for ShakeltOph\_67:

(Start: 25 @42320 has 3 MA's), (64, 42611),

Gene: Simpson\_73 Start: 42743, Stop: 43015, Start Num: 17

Candidate Starts for Simpson\_73:

(5, 42563), (9, 42680), (Start: 17 @42743 has 10 MA's), (Start: 23 @42752 has 18 MA's), (34, 42782), (60, 43010),

Gene: Skelbel\_68 Start: 42517, Stop: 42798, Start Num: 24

Candidate Starts for Skelbel\_68:

(Start: 17 @42505 has 10 MA's), (Start: 19 @42508 has 2 MA's), (Start: 24 @42517 has 11 MA's), (49, 42745), (58, 42793),

Gene: Snek\_67 Start: 39932, Stop: 40216, Start Num: 13

Candidate Starts for Snek\_67:

(Start: 13 @39932 has 2 MA's), (42, 40037), (48, 40124), (60, 40211),

Gene: Soondubu\_61 Start: 44124, Stop: 44414, Start Num: 26

Candidate Starts for Soondubu\_61:

(Start: 26 @44124 has 1 MA's), (47, 44304),

Gene: Sooty\_60 Start: 38669, Stop: 38941, Start Num: 38

Candidate Starts for Sooty\_60:

(27, 38588), (30, 38606), (Start: 31 @38612 has 6 MA's), (Start: 38 @38669 has 12 MA's), (46, 38819),

Gene: SpecialK\_60 Start: 38663, Stop: 38935, Start Num: 38

Candidate Starts for SpecialK\_60:

(Start: 31 @38606 has 6 MA's), (Start: 38 @38663 has 12 MA's),

Gene: Stuu\_60 Start: 38715, Stop: 39044, Start Num: 31

Candidate Starts for Stuu\_60:

(Start: 31 @38715 has 6 MA's), (Start: 38 @38772 has 12 MA's),

Gene: Tallboi\_67 Start: 42522, Stop: 42788, Start Num: 37  
Candidate Starts for Tallboi\_67:  
(36, 42513), (Start: 37 @42522 has 1 MA's), (45, 42687), (57, 42783),

Gene: Tbone\_67 Start: 42998, Stop: 43252, Start Num: 23  
Candidate Starts for Tbone\_67:  
(5, 42809), (9, 42926), (Start: 17 @42989 has 10 MA's), (Start: 23 @42998 has 18 MA's), (34, 43031),  
(56, 43247),

Gene: TforTroy\_67 Start: 42451, Stop: 42801, Start Num: 23  
Candidate Starts for TforTroy\_67:  
(1, 42121), (12, 42403), (Start: 17 @42442 has 10 MA's), (Start: 23 @42451 has 18 MA's), (Start: 33  
@42499 has 1 MA's),

Gene: ThursdayNight\_71 Start: 44398, Stop: 44727, Start Num: 22  
Candidate Starts for ThursdayNight\_71:  
(22, 44398),

Gene: Tian\_65 Start: 43143, Stop: 43451, Start Num: 14  
Candidate Starts for Tian\_65:  
(1, 42828), (9, 43083), (14, 43143), (Start: 17 @43146 has 10 MA's), (Start: 23 @43155 has 18 MA's),  
(Start: 33 @43200 has 1 MA's), (62, 43446),

Gene: Tuck\_67 Start: 42787, Stop: 43119, Start Num: 24  
Candidate Starts for Tuck\_67:  
(1, 42460), (4, 42559), (9, 42712), (12, 42736), (Start: 17 @42775 has 10 MA's), (Start: 19 @42778  
has 2 MA's), (Start: 24 @42787 has 11 MA's), (Start: 33 @42829 has 1 MA's), (41, 42898), (49,  
43066), (60, 43114),

Gene: Turab\_66 Start: 41972, Stop: 42316, Start Num: 23  
Candidate Starts for Turab\_66:  
(2, 41645), (3, 41654), (9, 41900), (Start: 17 @41963 has 10 MA's), (Start: 23 @41972 has 18 MA's),  
(Start: 33 @42017 has 1 MA's), (45, 42215), (57, 42311),

Gene: Tutumahutu\_69 Start: 42593, Stop: 42856, Start Num: 23  
Candidate Starts for Tutumahutu\_69:  
(5, 42404), (9, 42521), (Start: 17 @42584 has 10 MA's), (Start: 23 @42593 has 18 MA's), (34, 42623),  
(60, 42851),

Gene: Tweety19\_68 Start: 39933, Stop: 40217, Start Num: 13  
Candidate Starts for Tweety19\_68:  
(Start: 13 @39933 has 2 MA's), (42, 40038), (48, 40125), (60, 40212),

Gene: VResidence\_69 Start: 40961, Stop: 41224, Start Num: 17  
Candidate Starts for VResidence\_69:  
(Start: 17 @40961 has 10 MA's), (39, 41036),

Gene: VroomVroom\_64 Start: 41876, Stop: 42163, Start Num: 20  
Candidate Starts for VroomVroom\_64:  
(Start: 20 @41876 has 1 MA's), (64, 42158),

Gene: Warda\_68 Start: 42724, Stop: 42978, Start Num: 23  
Candidate Starts for Warda\_68:

(1, 42397), (5, 42535), (9, 42652), (Start: 17 @42715 has 10 MA's), (Start: 23 @42724 has 18 MA's), (34, 42757), (56, 42973),

Gene: Wildwest\_64 Start: 42676, Stop: 42942, Start Num: 17

Candidate Starts for Wildwest\_64:

(9, 42613), (Start: 17 @42676 has 10 MA's), (60, 42937),

Gene: Yang\_66 Start: 42085, Stop: 42387, Start Num: 17

Candidate Starts for Yang\_66:

(Start: 17 @42085 has 10 MA's), (Start: 19 @42088 has 2 MA's), (52, 42325), (61, 42355), (65, 42382),

Gene: YesChef\_67 Start: 42409, Stop: 42672, Start Num: 23

Candidate Starts for YesChef\_67:

(5, 42220), (9, 42337), (Start: 17 @42400 has 10 MA's), (Start: 23 @42409 has 18 MA's), (34, 42439), (60, 42667),