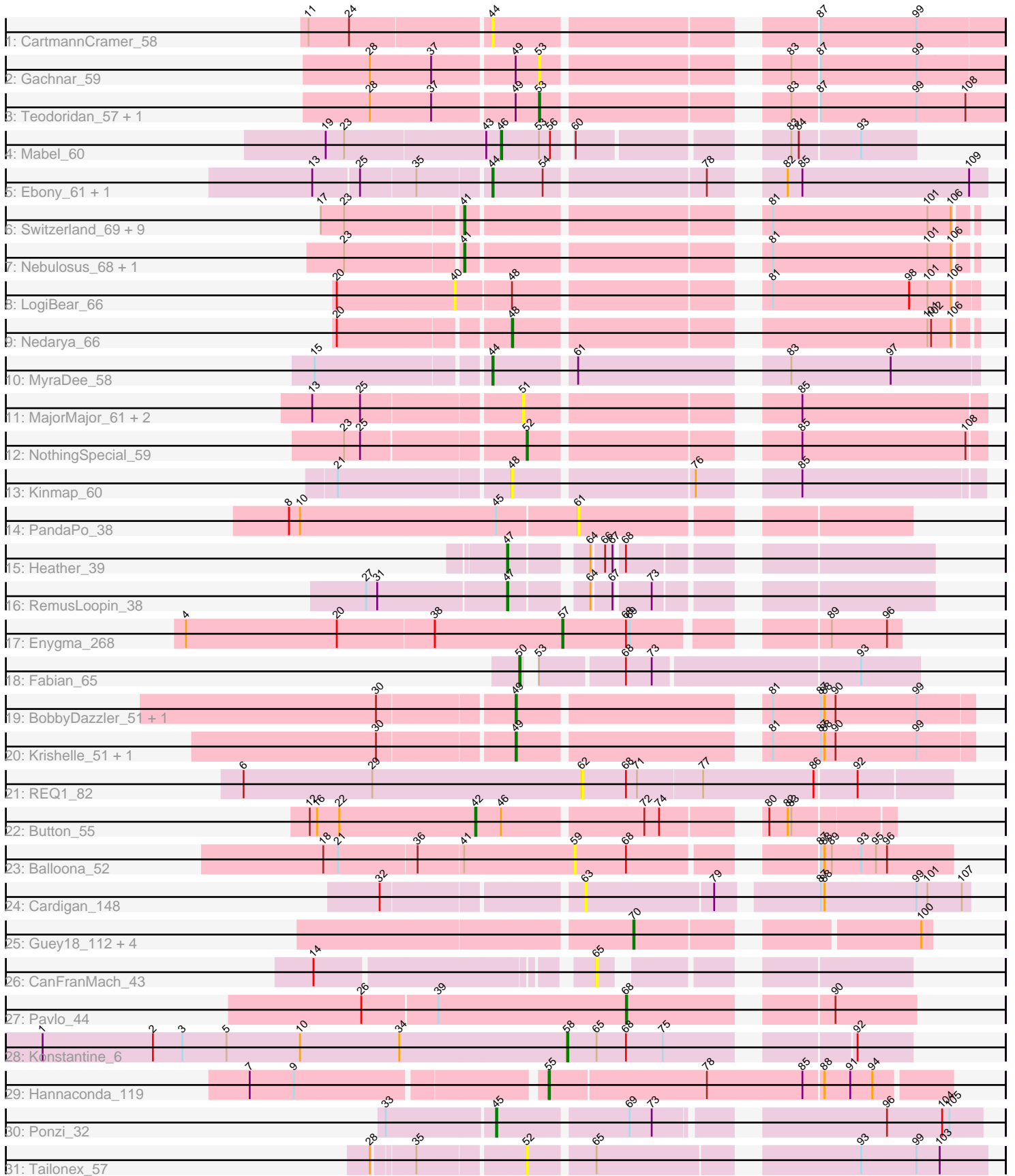


Pham 311685



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 311685 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311685 has 51 members, 15 are drafts.

Phages represented in each track:

- Track 1 : CartmannCramer\_58
- Track 2 : Gachnar\_59
- Track 3 : Teodoridan\_57, IgnatiusPatJac\_59
- Track 4 : Mabel\_60
- Track 5 : Ebony\_61, Salz\_60
- Track 6 : Switzerland\_69, Battleship\_72, MinecraftSteve\_70, ShayRa\_70, Anaysia\_70, LastResort\_68, JSwag\_69, Strosahl\_70, Remus\_70, ReMo\_68
- Track 7 : Nebulosus\_68, Epsocamisio\_67
- Track 8 : LogiBear\_66
- Track 9 : Nedarya\_66
- Track 10 : MyraDee\_58
- Track 11 : MajorMajor\_61, Bradman\_61, Quokka\_60
- Track 12 : NothingSpecial\_59
- Track 13 : Kinmap\_60
- Track 14 : PandaPo\_38
- Track 15 : Heather\_39
- Track 16 : RemusLoopin\_38
- Track 17 : Enygma\_268
- Track 18 : Fabian\_65
- Track 19 : BobbyDazzler\_51, Yoncess\_50
- Track 20 : Krishelle\_51, RER2\_44
- Track 21 : REQ1\_82
- Track 22 : Button\_55
- Track 23 : Balloona\_52
- Track 24 : Cardigan\_148
- Track 25 : Guey18\_112, Volt\_111, Fryberger\_107, Ronaldo\_109, Ziko\_110
- Track 26 : CanFranMach\_43
- Track 27 : Pavlo\_44
- Track 28 : Konstantine\_6
- Track 29 : Hannaconda\_119
- Track 30 : Ponzi\_32
- Track 31 : Tailonex\_57

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

The start number called the most often in the published annotations is 41, it was called in 12 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anaysia\_70, Battleship\_72, Epsocamisio\_67, JSwag\_69, LastResort\_68, MinecraftSteve\_70, Nebulosus\_68, ReMo\_68, Remus\_70, ShayRa\_70, Strosahl\_70, Switzerland\_69,

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

- Balloona\_52,

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

- BobbyDazzler\_51, Bradman\_61, Button\_55, CanFranMach\_43, Cardigan\_148, CartmannCramer\_58, Ebony\_61, Enygma\_268, Fabian\_65, Fryberger\_107, Gachnar\_59, Guey18\_112, Hannaconda\_119, Heather\_39, IgnatiusPatJac\_59, Kinmap\_60, Konstantine\_6, Krishelle\_51, LogiBear\_66, Mabel\_60, MajorMajor\_61, MyraDee\_58, Nedarya\_66, NothingSpecial\_59, PandaPo\_38, Pavlo\_44, Ponzi\_32, Quokka\_60, REQ1\_82, RER2\_44, RemusLoopin\_38, Ronaldo\_109, Salz\_60, Tailonex\_57, Teodoridan\_57, Volt\_111, Yoncess\_50, Ziko\_110,

### Summary by start number:

Start 40:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LogiBear\_66 (A15),

Start 41:

- Found in 13 of 51 ( 25.5% ) of genes in pham
- Manual Annotations of this start: 12 of 36
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Anaysia\_70 (A15), Battleship\_72 (A15), Epsocamisio\_67 (A15), JSwag\_69 (A15), LastResort\_68 (A15), MinecraftSteve\_70 (A15), Nebulosus\_68 (A15), ReMo\_68 (A15), Remus\_70 (A15), ShayRa\_70 (A15), Strosahl\_70 (A15), Switzerland\_69 (A15),

Start 42:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Button\_55 (CT),

Start 44:

- Found in 4 of 51 ( 7.8% ) of genes in pham
- Manual Annotations of this start: 3 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CartmannCramer\_58 (A1), Ebony\_61 (A11), MyraDee\_58 (A18), Salz\_60 (A11),

Start 45:

- Found in 2 of 51 ( 3.9% ) of genes in pham

- Manual Annotations of this start: 1 of 36
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Ponzi\_32 (singleton),

Start 46:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Mabel\_60 (A11),

Start 47:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 2 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Heather\_39 (BB2), RemusLoopin\_38 (BB2),

Start 48:

- Found in 3 of 51 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Kinmap\_60 (A21), Nedarya\_66 (A15),

Start 49:

- Found in 7 of 51 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 3 of 36
- Called 57.1% of time when present
- Phage (with cluster) where this start called: BobbyDazzler\_51 (CA), Krishelle\_51 (CA), RER2\_44 (CA), Yoncess\_50 (CA),

Start 50:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fabian\_65 (BF),

Start 51:

- Found in 3 of 51 ( 5.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bradman\_61 (A2), MajorMajor\_61 (A2), Quokka\_60 (A2),

Start 52:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NothingSpecial\_59 (A2), Tailonex\_57 (singleton),

Start 53:

- Found in 5 of 51 ( 9.8% ) of genes in pham
- Manual Annotations of this start: 1 of 36

- Called 60.0% of time when present
- Phage (with cluster) where this start called: Gachnar\_59 (A1), IgnatiusPatJac\_59 (A1), Teodoridan\_57 (A1),

Start 55:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hannaconda\_119 (J),

Start 57:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Enygma\_268 (BE2),

Start 58:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Konstantine\_6 (H1),

Start 59:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Balloona\_52 (CT),

Start 61:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: PandaPo\_38 (AZ1),

Start 62:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: REQ1\_82 (CF),

Start 63:

- Found in 1 of 51 ( 2.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan\_148 (DD),

Start 65:

- Found in 3 of 51 ( 5.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: CanFranMach\_43 (EB),

Start 68:

- Found in 7 of 51 ( 13.7% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Pavlo\_44 (ED1),

Start 70:

- Found in 5 of 51 ( 9.8% ) of genes in pham
- Manual Annotations of this start: 5 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_107 (DP), Guey18\_112 (DP), Ronaldo\_109 (DP), Volt\_111 (DP), Ziko\_110 (DP),

### **Summary by clusters:**

There are 20 clusters represented in this pham: A15, A21, singleton, H1, A11, BB2, ED1, A18, DD, J, CF, EB, A1, BF, A2, BE2, AZ1, CA, DP, CT,

Info for manual annotations of cluster A1:

- Start number 53 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster A11:

- Start number 44 was manually annotated 2 times for cluster A11.
- Start number 46 was manually annotated 1 time for cluster A11.

Info for manual annotations of cluster A15:

- Start number 41 was manually annotated 12 times for cluster A15.
- Start number 48 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A18:

- Start number 44 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 52 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster BB2:

- Start number 47 was manually annotated 2 times for cluster BB2.

Info for manual annotations of cluster BE2:

- Start number 57 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BF:

- Start number 50 was manually annotated 1 time for cluster BF.

Info for manual annotations of cluster CA:

- Start number 49 was manually annotated 3 times for cluster CA.

Info for manual annotations of cluster CT:

- Start number 42 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster DP:

- Start number 70 was manually annotated 5 times for cluster DP.

Info for manual annotations of cluster ED1:

- Start number 68 was manually annotated 1 time for cluster ED1.

Info for manual annotations of cluster H1:

- Start number 58 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster J:

- Start number 55 was manually annotated 1 time for cluster J.

### **Gene Information:**

Gene: Anaysia\_70 Start: 39921, Stop: 39553, Start Num: 41

Candidate Starts for Anaysia\_70:

(17, 40029), (23, 40011), (Start: 41 @39921 has 12 MA's), (81, 39711), (101, 39585), (106, 39567),

Gene: Balloona\_52 Start: 38168, Stop: 37893, Start Num: 59

Candidate Starts for Balloona\_52:

(18, 38369), (21, 38357), (36, 38294), (Start: 41 @38258 has 12 MA's), (59, 38168), (Start: 68 @38126 has 1 MA's), (87, 38000), (88, 37997), (89, 37991), (93, 37967), (95, 37955), (96, 37946),

Gene: Battleship\_72 Start: 40127, Stop: 39759, Start Num: 41

Candidate Starts for Battleship\_72:

(17, 40235), (23, 40217), (Start: 41 @40127 has 12 MA's), (81, 39917), (101, 39791), (106, 39773),

Gene: BobbyDazzler\_51 Start: 36743, Stop: 36405, Start Num: 49

Candidate Starts for BobbyDazzler\_51:

(30, 36845), (Start: 49 @36743 has 3 MA's), (81, 36566), (87, 36527), (88, 36524), (90, 36515), (99, 36449),

Gene: Bradman\_61 Start: 38947, Stop: 38609, Start Num: 51

Candidate Starts for Bradman\_61:

(13, 39106), (25, 39067), (51, 38947), (85, 38755),

Gene: Button\_55 Start: 37507, Stop: 37208, Start Num: 42

Candidate Starts for Button\_55:

(12, 37642), (16, 37636), (22, 37618), (Start: 42 @37507 has 1 MA's), (Start: 46 @37486 has 1 MA's), (72, 37378), (74, 37366), (80, 37303), (82, 37288), (83, 37285),

Gene: CanFranMach\_43 Start: 29715, Stop: 29924, Start Num: 65

Candidate Starts for CanFranMach\_43:

(14, 29517), (65, 29715),

Gene: Cardigan\_148 Start: 81042, Stop: 81335, Start Num: 63

Candidate Starts for Cardigan\_148:

(32, 80895), (63, 81042), (79, 81144), (87, 81216), (88, 81219), (99, 81294), (101, 81303), (107, 81330),

Gene: CartmannCramer\_58 Start: 42140, Stop: 41766, Start Num: 44  
Candidate Starts for CartmannCramer\_58:  
(11, 42278), (24, 42245), (Start: 44 @42140 has 3 MA's), (87, 41912), (99, 41834),

Gene: Ebony\_61 Start: 38810, Stop: 38445, Start Num: 44  
Candidate Starts for Ebony\_61:  
(13, 38942), (25, 38906), (35, 38864), (Start: 44 @38810 has 3 MA's), (54, 38771), (78, 38648), (82, 38606), (85, 38594), (109, 38459),

Gene: Enygma\_268 Start: 121650, Stop: 121411, Start Num: 57  
Candidate Starts for Enygma\_268:  
(4, 121953), (20, 121830), (38, 121752), (Start: 57 @121650 has 1 MA's), (Start: 68 @121599 has 1 MA's), (69, 121596), (89, 121467), (96, 121422),

Gene: Epsocamisio\_67 Start: 39456, Stop: 39088, Start Num: 41  
Candidate Starts for Epsocamisio\_67:  
(23, 39546), (Start: 41 @39456 has 12 MA's), (81, 39246), (101, 39120), (106, 39102),

Gene: Fabian\_65 Start: 36190, Stop: 36489, Start Num: 50  
Candidate Starts for Fabian\_65:  
(Start: 50 @36190 has 1 MA's), (Start: 53 @36193 has 1 MA's), (Start: 68 @36259 has 1 MA's), (73, 36280), (93, 36442),

Gene: Fryberger\_107 Start: 52902, Stop: 53111, Start Num: 70  
Candidate Starts for Fryberger\_107:  
(Start: 70 @52902 has 5 MA's), (100, 53103),

Gene: Gachnar\_59 Start: 40593, Stop: 40255, Start Num: 53  
Candidate Starts for Gachnar\_59:  
(28, 40719), (37, 40671), (Start: 49 @40611 has 3 MA's), (Start: 53 @40593 has 1 MA's), (83, 40422), (87, 40401), (99, 40323),

Gene: Guey18\_112 Start: 54225, Stop: 54434, Start Num: 70  
Candidate Starts for Guey18\_112:  
(Start: 70 @54225 has 5 MA's), (100, 54426),

Gene: Hannaconda\_119 Start: 67166, Stop: 67480, Start Num: 55  
Candidate Starts for Hannaconda\_119:  
(7, 66944), (9, 66980), (Start: 55 @67166 has 1 MA's), (78, 67289), (85, 67367), (88, 67382), (91, 67403), (94, 67421),

Gene: Heather\_39 Start: 31344, Stop: 31631, Start Num: 47  
Candidate Starts for Heather\_39:  
(Start: 47 @31344 has 2 MA's), (64, 31395), (66, 31404), (67, 31410), (Start: 68 @31416 has 1 MA's),

Gene: IgnatiusPatJac\_59 Start: 40122, Stop: 39781, Start Num: 53  
Candidate Starts for IgnatiusPatJac\_59:  
(28, 40248), (37, 40200), (Start: 49 @40140 has 3 MA's), (Start: 53 @40122 has 1 MA's), (83, 39951), (87, 39930), (99, 39852), (108, 39813),

Gene: JSwag\_69 Start: 39645, Stop: 39277, Start Num: 41  
Candidate Starts for JSwag\_69:  
(17, 39753), (23, 39735), (Start: 41 @39645 has 12 MA's), (81, 39435), (101, 39309), (106, 39291),

Gene: Kinmap\_60 Start: 38242, Stop: 37898, Start Num: 48  
Candidate Starts for Kinmap\_60:  
(21, 38374), (Start: 48 @38242 has 1 MA's), (76, 38104), (85, 38041),

Gene: Konstantine\_6 Start: 4385, Stop: 4636, Start Num: 58  
Candidate Starts for Konstantine\_6:  
(1, 3959), (2, 4049), (3, 4073), (5, 4109), (10, 4169), (34, 4250), (Start: 58 @4385 has 1 MA's), (65, 4409), (Start: 68 @4433 has 1 MA's), (75, 4463), (92, 4592),

Gene: Krishelle\_51 Start: 37066, Stop: 36728, Start Num: 49  
Candidate Starts for Krishelle\_51:  
(30, 37168), (Start: 49 @37066 has 3 MA's), (81, 36889), (87, 36850), (88, 36847), (90, 36838), (99, 36772),

Gene: LastResort\_68 Start: 39697, Stop: 39329, Start Num: 41  
Candidate Starts for LastResort\_68:  
(17, 39805), (23, 39787), (Start: 41 @39697 has 12 MA's), (81, 39487), (101, 39361), (106, 39343),

Gene: LogiBear\_66 Start: 39725, Stop: 39345, Start Num: 40  
Candidate Starts for LogiBear\_66:  
(20, 39818), (40, 39725), (Start: 48 @39683 has 1 MA's), (81, 39506), (98, 39395), (101, 39380), (106, 39362),

Gene: Mabel\_60 Start: 38750, Stop: 38463, Start Num: 46  
Candidate Starts for Mabel\_60:  
(19, 38888), (23, 38873), (43, 38762), (Start: 46 @38750 has 1 MA's), (Start: 53 @38720 has 1 MA's), (56, 38711), (60, 38702), (83, 38561), (84, 38555), (93, 38507),

Gene: MajorMajor\_61 Start: 38947, Stop: 38609, Start Num: 51  
Candidate Starts for MajorMajor\_61:  
(13, 39106), (25, 39067), (51, 38947), (85, 38755),

Gene: MinecraftSteve\_70 Start: 39933, Stop: 39565, Start Num: 41  
Candidate Starts for MinecraftSteve\_70:  
(17, 40041), (23, 40023), (Start: 41 @39933 has 12 MA's), (81, 39723), (101, 39597), (106, 39579),

Gene: MyraDee\_58 Start: 36584, Stop: 36225, Start Num: 44  
Candidate Starts for MyraDee\_58:  
(15, 36716), (Start: 44 @36584 has 3 MA's), (61, 36524), (83, 36374), (97, 36293),

Gene: Nebulosus\_68 Start: 39693, Stop: 39325, Start Num: 41  
Candidate Starts for Nebulosus\_68:  
(23, 39783), (Start: 41 @39693 has 12 MA's), (81, 39483), (101, 39357), (106, 39339),

Gene: Nedarya\_66 Start: 39619, Stop: 39284, Start Num: 48  
Candidate Starts for Nedarya\_66:  
(20, 39748), (Start: 48 @39619 has 1 MA's), (101, 39316), (102, 39313), (106, 39298),

Gene: NothingSpecial\_59 Start: 39991, Stop: 39656, Start Num: 52  
Candidate Starts for NothingSpecial\_59:  
(23, 40126), (25, 40114), (Start: 52 @39991 has 1 MA's), (85, 39802), (108, 39670),

Gene: PandaPo\_38 Start: 27626, Stop: 27865, Start Num: 61  
Candidate Starts for PandaPo\_38:  
(8, 27398), (10, 27407), (Start: 45 @27563 has 1 MA's), (61, 27626),

Gene: Pavlo\_44 Start: 22885, Stop: 22676, Start Num: 68  
Candidate Starts for Pavlo\_44:  
(26, 23098), (39, 23038), (Start: 68 @22885 has 1 MA's), (90, 22741),

Gene: Ponzi\_32 Start: 17880, Stop: 17527, Start Num: 45  
Candidate Starts for Ponzi\_32:  
(33, 17964), (Start: 45 @17880 has 1 MA's), (69, 17781), (73, 17763), (96, 17604), (104, 17559), (105, 17553),

Gene: Quokka\_60 Start: 38947, Stop: 38609, Start Num: 51  
Candidate Starts for Quokka\_60:  
(13, 39106), (25, 39067), (51, 38947), (85, 38755),

Gene: REQ1\_82 Start: 49241, Stop: 49534, Start Num: 62  
Candidate Starts for REQ1\_82:  
(6, 48968), (29, 49073), (62, 49241), (Start: 68 @49277 has 1 MA's), (71, 49286), (77, 49337), (86, 49427), (92, 49460),

Gene: RER2\_44 Start: 33569, Stop: 33231, Start Num: 49  
Candidate Starts for RER2\_44:  
(30, 33671), (Start: 49 @33569 has 3 MA's), (81, 33392), (87, 33353), (88, 33350), (90, 33341), (99, 33275),

Gene: ReMo\_68 Start: 39694, Stop: 39326, Start Num: 41  
Candidate Starts for ReMo\_68:  
(17, 39802), (23, 39784), (Start: 41 @39694 has 12 MA's), (81, 39484), (101, 39358), (106, 39340),

Gene: Remus\_70 Start: 39685, Stop: 39317, Start Num: 41  
Candidate Starts for Remus\_70:  
(17, 39793), (23, 39775), (Start: 41 @39685 has 12 MA's), (81, 39475), (101, 39349), (106, 39331),

Gene: RemusLoopin\_38 Start: 31565, Stop: 31852, Start Num: 47  
Candidate Starts for RemusLoopin\_38:  
(27, 31457), (31, 31466), (Start: 47 @31565 has 2 MA's), (64, 31616), (67, 31631), (73, 31658),

Gene: Ronaldo\_109 Start: 53807, Stop: 54016, Start Num: 70  
Candidate Starts for Ronaldo\_109:  
(Start: 70 @53807 has 5 MA's), (100, 54008),

Gene: Salz\_60 Start: 38758, Stop: 38393, Start Num: 44  
Candidate Starts for Salz\_60:  
(13, 38890), (25, 38854), (35, 38812), (Start: 44 @38758 has 3 MA's), (54, 38719), (78, 38596), (82, 38554), (85, 38542), (109, 38407),

Gene: ShayRa\_70 Start: 39881, Stop: 39513, Start Num: 41  
Candidate Starts for ShayRa\_70:  
(17, 39989), (23, 39971), (Start: 41 @39881 has 12 MA's), (81, 39671), (101, 39545), (106, 39527),

Gene: Strosahl\_70 Start: 39685, Stop: 39317, Start Num: 41

Candidate Starts for Strosahl\_70:

(17, 39793), (23, 39775), (Start: 41 @39685 has 12 MA's), (81, 39475), (101, 39349), (106, 39331),

Gene: Switzerland\_69 Start: 40020, Stop: 39652, Start Num: 41

Candidate Starts for Switzerland\_69:

(17, 40128), (23, 40110), (Start: 41 @40020 has 12 MA's), (81, 39810), (101, 39684), (106, 39666),

Gene: Tailonex\_57 Start: 40296, Stop: 39958, Start Num: 52

Candidate Starts for Tailonex\_57:

(28, 40407), (35, 40377), (Start: 52 @40296 has 1 MA's), (65, 40248), (93, 40059), (99, 40014), (103, 39996),

Gene: Teodoridan\_57 Start: 39474, Stop: 39133, Start Num: 53

Candidate Starts for Teodoridan\_57:

(28, 39600), (37, 39552), (Start: 49 @39492 has 3 MA's), (Start: 53 @39474 has 1 MA's), (83, 39303), (87, 39282), (99, 39204), (108, 39165),

Gene: Volt\_111 Start: 53971, Stop: 54180, Start Num: 70

Candidate Starts for Volt\_111:

(Start: 70 @53971 has 5 MA's), (100, 54172),

Gene: Yoncess\_50 Start: 36451, Stop: 36113, Start Num: 49

Candidate Starts for Yoncess\_50:

(30, 36553), (Start: 49 @36451 has 3 MA's), (81, 36274), (87, 36235), (88, 36232), (90, 36223), (99, 36157),

Gene: Ziko\_110 Start: 53813, Stop: 54022, Start Num: 70

Candidate Starts for Ziko\_110:

(Start: 70 @53813 has 5 MA's), (100, 54014),