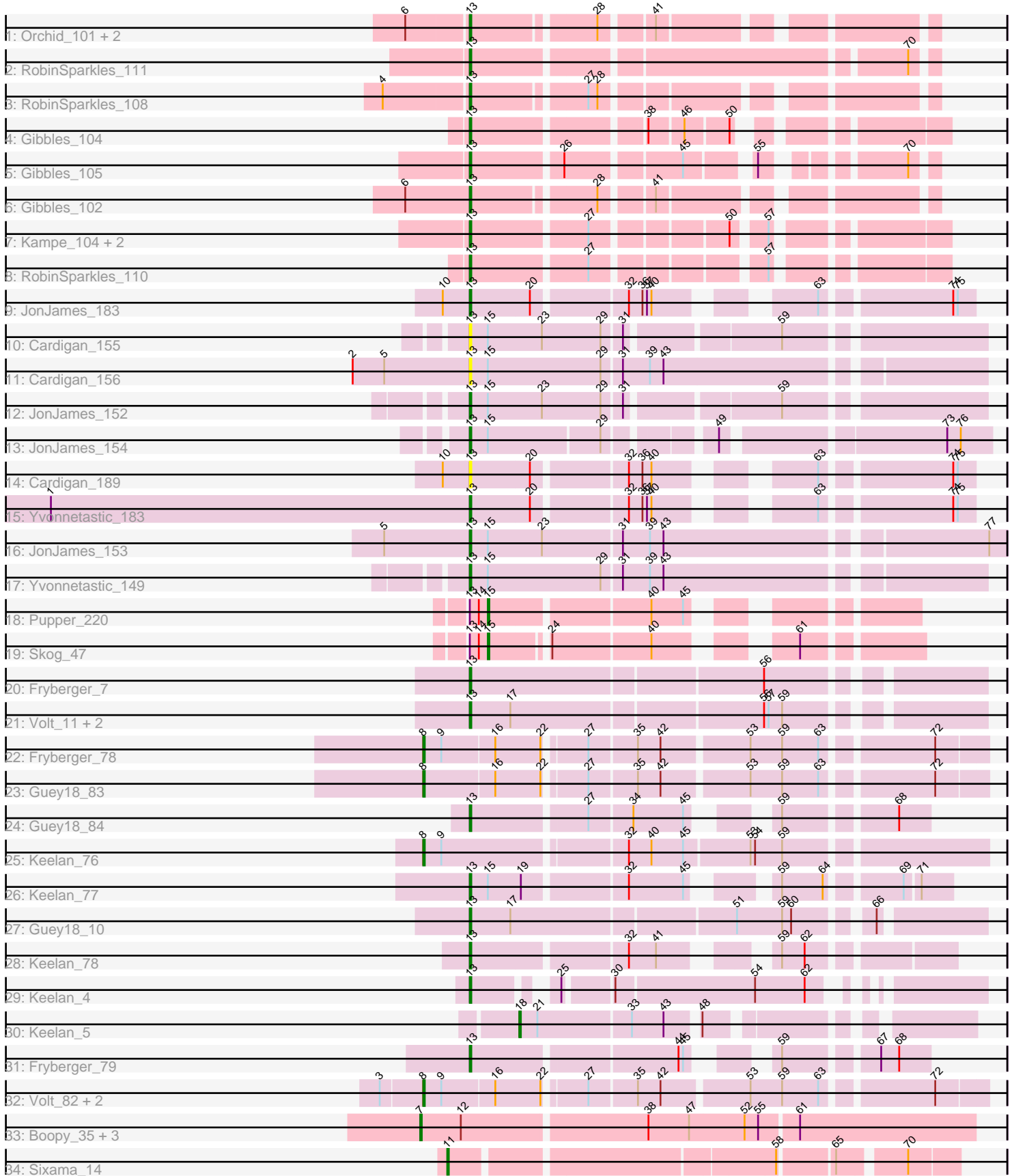


Pham 311741



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 311741 Report

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

Pham number 311741 has 45 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Orchid\_101, Kampe\_102, PatrickStar\_102
- Track 2 : RobinSparkles\_111
- Track 3 : RobinSparkles\_108
- Track 4 : Gibbles\_104
- Track 5 : Gibbles\_105
- Track 6 : Gibbles\_102
- Track 7 : Kampe\_104, PatrickStar\_104, Orchid\_103
- Track 8 : RobinSparkles\_110
- Track 9 : JonJames\_183
- Track 10 : Cardigan\_155
- Track 11 : Cardigan\_156
- Track 12 : JonJames\_152
- Track 13 : JonJames\_154
- Track 14 : Cardigan\_189
- Track 15 : Yvonnetastic\_183
- Track 16 : JonJames\_153
- Track 17 : Yvonnetastic\_149
- Track 18 : Pupper\_220
- Track 19 : Skog\_47
- Track 20 : Fryberger\_7
- Track 21 : Volt\_11, Ziko\_12, Ronaldo\_11
- Track 22 : Fryberger\_78
- Track 23 : Guey18\_83
- Track 24 : Guey18\_84
- Track 25 : Keelan\_76
- Track 26 : Keelan\_77
- Track 27 : Guey18\_10
- Track 28 : Keelan\_78
- Track 29 : Keelan\_4
- Track 30 : Keelan\_5
- Track 31 : Fryberger\_79
- Track 32 : Volt\_82, Ronaldo\_82, Ziko\_82
- Track 33 : Boopy\_35, BlueNGold\_33, Forza\_34, Mareelih\_33
- Track 34 : Sixama\_14

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

The start number called the most often in the published annotations is 13, it was called in 28 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Cardigan\_155, Cardigan\_156, Cardigan\_189, Fryberger\_7, Fryberger\_79, Gibbles\_102, Gibbles\_104, Gibbles\_105, Guey18\_10, Guey18\_84, JonJames\_152, JonJames\_153, JonJames\_154, JonJames\_183, Kampe\_102, Kampe\_104, Keelan\_4, Keelan\_77, Keelan\_78, Orchid\_101, Orchid\_103, PatrickStar\_102, PatrickStar\_104, RobinSparkles\_108, RobinSparkles\_110, RobinSparkles\_111, Ronaldo\_11, Volt\_11, Yvonnetastic\_149, Yvonnetastic\_183, Ziko\_12,

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

- Pupper\_220, Skog\_47,

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

- BlueNGold\_33, Boopy\_35, Forza\_34, Fryberger\_78, Guey18\_83, Keelan\_5, Keelan\_76, Mareelih\_33, Ronaldo\_82, Sixama\_14, Volt\_82, Ziko\_82,

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

Start 7:

- Found in 4 of 45 ( 8.9% ) of genes in pham
- Manual Annotations of this start: 4 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueNGold\_33 (DS), Boopy\_35 (DS), Forza\_34 (DS), Mareelih\_33 (DS),

Start 8:

- Found in 6 of 45 ( 13.3% ) of genes in pham
- Manual Annotations of this start: 6 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger\_78 (DP), Guey18\_83 (DP), Keelan\_76 (DP), Ronaldo\_82 (DP), Volt\_82 (DP), Ziko\_82 (DP),

Start 11:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sixama\_14 (DS),

Start 13:

- Found in 33 of 45 ( 73.3% ) of genes in pham
- Manual Annotations of this start: 28 of 42
- Called 93.9% of time when present
- Phage (with cluster) where this start called: Cardigan\_155 (DD), Cardigan\_156 (DD), Cardigan\_189 (DD), Fryberger\_7 (DP), Fryberger\_79 (DP), Gibbles\_102 (CX), Gibbles\_104 (CX), Gibbles\_105 (CX), Guey18\_10 (DP), Guey18\_84 (DP), JonJames\_152 (DD), JonJames\_153 (DD), JonJames\_154 (DD), JonJames\_183 (DD), Kampe\_102 (CX), Kampe\_104 (CX), Keelan\_4 (DP), Keelan\_77 (DP), Keelan\_78 (DP), Orchid\_101 (CX), Orchid\_103 (CX), PatrickStar\_102 (CX),

PatrickStar\_104 (CX), RobinSparkles\_108 (CX), RobinSparkles\_110 (CX), RobinSparkles\_111 (CX), Ronaldo\_11 (DP), Volt\_11 (DP), Yvonnetastic\_149 (DD), Yvonnetastic\_183 (DD), Ziko\_12 (DP),

Start 15:

- Found in 9 of 45 ( 20.0% ) of genes in pham
- Manual Annotations of this start: 2 of 42
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Pupper\_220 (DO), Skog\_47 (DO),

Start 18:

- Found in 1 of 45 ( 2.2% ) of genes in pham
- Manual Annotations of this start: 1 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keelan\_5 (DP),

### **Summary by clusters:**

There are 5 clusters represented in this pham: DO, DD, CX, DS, DP,

Info for manual annotations of cluster CX:

- Start number 13 was manually annotated 12 times for cluster CX.

Info for manual annotations of cluster DD:

- Start number 13 was manually annotated 6 times for cluster DD.

Info for manual annotations of cluster DO:

- Start number 15 was manually annotated 2 times for cluster DO.

Info for manual annotations of cluster DP:

- Start number 8 was manually annotated 6 times for cluster DP.
- Start number 13 was manually annotated 10 times for cluster DP.
- Start number 18 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster DS:

- Start number 7 was manually annotated 4 times for cluster DS.
- Start number 11 was manually annotated 1 time for cluster DS.

### **Gene Information:**

Gene: BlueNGold\_33 Start: 11811, Stop: 11455, Start Num: 7

Candidate Starts for BlueNGold\_33:

(Start: 7 @11811 has 4 MA's), (12, 11784), (38, 11667), (47, 11640), (52, 11604), (55, 11595), (61, 11571),

Gene: Boopy\_35 Start: 11823, Stop: 11467, Start Num: 7

Candidate Starts for Boopy\_35:

(Start: 7 @11823 has 4 MA's), (12, 11796), (38, 11679), (47, 11652), (52, 11616), (55, 11607), (61, 11583),

Gene: Cardigan\_155 Start: 83851, Stop: 84165, Start Num: 13

Candidate Starts for Cardigan\_155:

(Start: 13 @83851 has 28 MA's), (Start: 15 @83863 has 2 MA's), (23, 83899), (29, 83938), (31, 83950), (59, 84043),

Gene: Cardigan\_156 Start: 84162, Stop: 84485, Start Num: 13

Candidate Starts for Cardigan\_156:

(2, 84084), (5, 84105), (Start: 13 @84162 has 28 MA's), (Start: 15 @84174 has 2 MA's), (29, 84249), (31, 84261), (39, 84279), (43, 84288),

Gene: Cardigan\_189 Start: 93769, Stop: 93488, Start Num: 13

Candidate Starts for Cardigan\_189:

(10, 93784), (Start: 13 @93769 has 28 MA's), (20, 93730), (32, 93673), (36, 93664), (40, 93658), (63, 93580), (74, 93502), (75, 93499),

Gene: Forza\_34 Start: 11739, Stop: 11383, Start Num: 7

Candidate Starts for Forza\_34:

(Start: 7 @11739 has 4 MA's), (12, 11712), (38, 11595), (47, 11568), (52, 11532), (55, 11523), (61, 11499),

Gene: Fryberger\_7 Start: 1604, Stop: 1293, Start Num: 13

Candidate Starts for Fryberger\_7:

(Start: 13 @1604 has 28 MA's), (56, 1418),

Gene: Fryberger\_78 Start: 41510, Stop: 41169, Start Num: 8

Candidate Starts for Fryberger\_78:

(Start: 8 @41510 has 6 MA's), (9, 41498), (16, 41465), (22, 41435), (27, 41411), (35, 41381), (42, 41366), (53, 41312), (59, 41291), (63, 41267), (72, 41201),

Gene: Fryberger\_79 Start: 41758, Stop: 41507, Start Num: 13

Candidate Starts for Fryberger\_79:

(Start: 13 @41758 has 28 MA's), (44, 41629), (45, 41626), (59, 41593), (67, 41539), (68, 41527),

Gene: Gibbles\_104 Start: 73545, Stop: 73285, Start Num: 13

Candidate Starts for Gibbles\_104:

(Start: 13 @73545 has 28 MA's), (38, 73443), (46, 73422), (50, 73395),

Gene: Gibbles\_105 Start: 73790, Stop: 73542, Start Num: 13

Candidate Starts for Gibbles\_105:

(Start: 13 @73790 has 28 MA's), (26, 73733), (45, 73664), (55, 73628), (70, 73556),

Gene: Gibbles\_102 Start: 72919, Stop: 72659, Start Num: 13

Candidate Starts for Gibbles\_102:

(6, 72961), (Start: 13 @72919 has 28 MA's), (28, 72844), (41, 72814),

Gene: Guey18\_83 Start: 42881, Stop: 42540, Start Num: 8

Candidate Starts for Guey18\_83:

(Start: 8 @42881 has 6 MA's), (16, 42836), (22, 42806), (27, 42782), (35, 42752), (42, 42737), (53, 42683), (59, 42662), (63, 42638), (72, 42572),

Gene: Guey18\_84 Start: 43129, Stop: 42878, Start Num: 13

Candidate Starts for Guey18\_84:

(Start: 13 @43129 has 28 MA's), (27, 43057), (34, 43030), (45, 42997), (59, 42964), (68, 42898),

Gene: Guey18\_10 Start: 2298, Stop: 1987, Start Num: 13  
Candidate Starts for Guey18\_10:  
(Start: 13 @2298 has 28 MA's), (17, 2271), (51, 2130), (59, 2100), (60, 2094), (66, 2052),

Gene: JonJames\_183 Start: 94689, Stop: 94408, Start Num: 13  
Candidate Starts for JonJames\_183:  
(10, 94704), (Start: 13 @94689 has 28 MA's), (20, 94650), (32, 94593), (36, 94584), (37, 94581), (40, 94578), (63, 94500), (74, 94422), (75, 94419),

Gene: JonJames\_152 Start: 84680, Stop: 84994, Start Num: 13  
Candidate Starts for JonJames\_152:  
(Start: 13 @84680 has 28 MA's), (Start: 15 @84692 has 2 MA's), (23, 84728), (29, 84767), (31, 84779), (59, 84872),

Gene: JonJames\_154 Start: 85323, Stop: 85631, Start Num: 13  
Candidate Starts for JonJames\_154:  
(Start: 13 @85323 has 28 MA's), (Start: 15 @85335 has 2 MA's), (29, 85407), (49, 85467), (73, 85602), (76, 85611),

Gene: JonJames\_153 Start: 84991, Stop: 85326, Start Num: 13  
Candidate Starts for JonJames\_153:  
(5, 84934), (Start: 13 @84991 has 28 MA's), (Start: 15 @85003 has 2 MA's), (23, 85039), (31, 85090), (39, 85108), (43, 85117), (77, 85315),

Gene: Kampe\_102 Start: 72589, Stop: 72329, Start Num: 13  
Candidate Starts for Kampe\_102:  
(6, 72628), (Start: 13 @72589 has 28 MA's), (28, 72514), (41, 72484),

Gene: Kampe\_104 Start: 73218, Stop: 72952, Start Num: 13  
Candidate Starts for Kampe\_104:  
(Start: 13 @73218 has 28 MA's), (27, 73146), (50, 73068), (57, 73050),

Gene: Keelan\_76 Start: 41390, Stop: 41040, Start Num: 8  
Candidate Starts for Keelan\_76:  
(Start: 8 @41390 has 6 MA's), (9, 41378), (32, 41264), (40, 41249), (45, 41228), (53, 41186), (54, 41183), (59, 41165),

Gene: Keelan\_77 Start: 41653, Stop: 41387, Start Num: 13  
Candidate Starts for Keelan\_77:  
(Start: 13 @41653 has 28 MA's), (Start: 15 @41641 has 2 MA's), (19, 41620), (32, 41557), (45, 41521), (59, 41485), (64, 41458), (69, 41416), (71, 41407),

Gene: Keelan\_78 Start: 41921, Stop: 41655, Start Num: 13  
Candidate Starts for Keelan\_78:  
(Start: 13 @41921 has 28 MA's), (32, 41825), (41, 41807), (59, 41756), (62, 41741),

Gene: Keelan\_4 Start: 977, Stop: 702, Start Num: 13  
Candidate Starts for Keelan\_4:  
(Start: 13 @977 has 28 MA's), (25, 935), (30, 908), (54, 818), (62, 785),

Gene: Keelan\_5 Start: 1224, Stop: 967, Start Num: 18  
Candidate Starts for Keelan\_5:  
(Start: 18 @1224 has 1 MA's), (21, 1212), (33, 1152), (43, 1131), (48, 1113),

Gene: Mareelih\_33 Start: 11268, Stop: 10912, Start Num: 7

Candidate Starts for Mareelih\_33:

(Start: 7 @11268 has 4 MA's), (12, 11241), (38, 11124), (47, 11097), (52, 11061), (55, 11052), (61, 11028),

Gene: Orchid\_101 Start: 72590, Stop: 72330, Start Num: 13

Candidate Starts for Orchid\_101:

(6, 72629), (Start: 13 @72590 has 28 MA's), (28, 72515), (41, 72485),

Gene: Orchid\_103 Start: 73219, Stop: 72953, Start Num: 13

Candidate Starts for Orchid\_103:

(Start: 13 @73219 has 28 MA's), (27, 73147), (50, 73069), (57, 73051),

Gene: PatrickStar\_102 Start: 72589, Stop: 72329, Start Num: 13

Candidate Starts for PatrickStar\_102:

(6, 72628), (Start: 13 @72589 has 28 MA's), (28, 72514), (41, 72484),

Gene: PatrickStar\_104 Start: 73218, Stop: 72952, Start Num: 13

Candidate Starts for PatrickStar\_104:

(Start: 13 @73218 has 28 MA's), (27, 73146), (50, 73068), (57, 73050),

Gene: Pupper\_220 Start: 145511, Stop: 145744, Start Num: 15

Candidate Starts for Pupper\_220:

(Start: 13 @145499 has 28 MA's), (14, 145505), (Start: 15 @145511 has 2 MA's), (40, 145610), (45, 145631),

Gene: RobinSparkles\_111 Start: 74296, Stop: 74018, Start Num: 13

Candidate Starts for RobinSparkles\_111:

(Start: 13 @74296 has 28 MA's), (70, 74032),

Gene: RobinSparkles\_108 Start: 73384, Stop: 73124, Start Num: 13

Candidate Starts for RobinSparkles\_108:

(4, 73438), (Start: 13 @73384 has 28 MA's), (27, 73315), (28, 73309),

Gene: RobinSparkles\_110 Start: 74021, Stop: 73755, Start Num: 13

Candidate Starts for RobinSparkles\_110:

(Start: 13 @74021 has 28 MA's), (27, 73949), (57, 73853),

Gene: Ronaldo\_11 Start: 2730, Stop: 2419, Start Num: 13

Candidate Starts for Ronaldo\_11:

(Start: 13 @2730 has 28 MA's), (17, 2703), (56, 2544), (57, 2541), (59, 2532),

Gene: Ronaldo\_82 Start: 42654, Stop: 42313, Start Num: 8

Candidate Starts for Ronaldo\_82:

(3, 42681), (Start: 8 @42654 has 6 MA's), (9, 42642), (16, 42609), (22, 42579), (27, 42555), (35, 42525), (42, 42510), (53, 42456), (59, 42435), (63, 42411), (72, 42345),

Gene: Sixama\_14 Start: 5658, Stop: 5356, Start Num: 11

Candidate Starts for Sixama\_14:

(Start: 11 @5658 has 1 MA's), (58, 5460), (65, 5427), (70, 5388),

Gene: Skog\_47 Start: 20557, Stop: 20790, Start Num: 15

Candidate Starts for Skog\_47:

(Start: 13 @20545 has 28 MA's), (14, 20551), (Start: 15 @20557 has 2 MA's), (24, 20590), (40, 20653), (61, 20719),

Gene: Volt\_11 Start: 2730, Stop: 2419, Start Num: 13

Candidate Starts for Volt\_11:

(Start: 13 @2730 has 28 MA's), (17, 2703), (56, 2544), (57, 2541), (59, 2532),

Gene: Volt\_82 Start: 42818, Stop: 42477, Start Num: 8

Candidate Starts for Volt\_82:

(3, 42845), (Start: 8 @42818 has 6 MA's), (9, 42806), (16, 42773), (22, 42743), (27, 42719), (35, 42689), (42, 42674), (53, 42620), (59, 42599), (63, 42575), (72, 42509),

Gene: Yvonnetastic\_183 Start: 91588, Stop: 91307, Start Num: 13

Candidate Starts for Yvonnetastic\_183:

(1, 91864), (Start: 13 @91588 has 28 MA's), (20, 91549), (32, 91492), (36, 91483), (37, 91480), (40, 91477), (63, 91399), (74, 91321), (75, 91318),

Gene: Yvonnetastic\_149 Start: 81383, Stop: 81706, Start Num: 13

Candidate Starts for Yvonnetastic\_149:

(Start: 13 @81383 has 28 MA's), (Start: 15 @81395 has 2 MA's), (29, 81470), (31, 81482), (39, 81500), (43, 81509),

Gene: Ziko\_12 Start: 2744, Stop: 2433, Start Num: 13

Candidate Starts for Ziko\_12:

(Start: 13 @2744 has 28 MA's), (17, 2717), (56, 2558), (57, 2555), (59, 2546),

Gene: Ziko\_82 Start: 42640, Stop: 42299, Start Num: 8

Candidate Starts for Ziko\_82:

(3, 42667), (Start: 8 @42640 has 6 MA's), (9, 42628), (16, 42595), (22, 42565), (27, 42541), (35, 42511), (42, 42496), (53, 42442), (59, 42421), (63, 42397), (72, 42331),