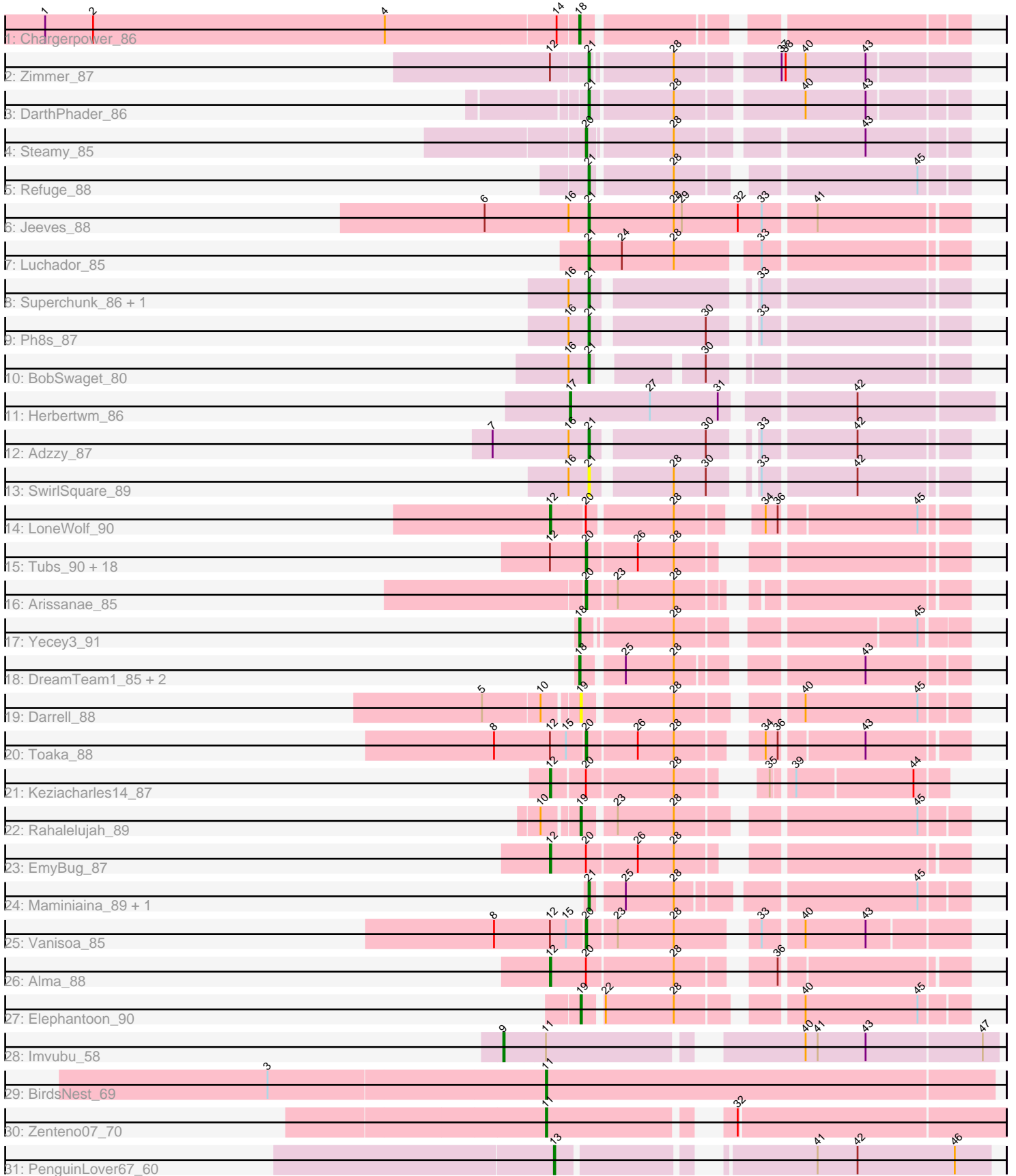


Pham 171511



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 171511 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171511 has 53 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_86
- Track 2 : Zimmer\_87
- Track 3 : DarthPhader\_86
- Track 4 : Steamy\_85
- Track 5 : Refuge\_88
- Track 6 : Jeeves\_88
- Track 7 : Luchador\_85
- Track 8 : Superchunk\_86, Caraxes\_87
- Track 9 : Ph8s\_87
- Track 10 : BobSwaget\_80
- Track 11 : Herbertwm\_86
- Track 12 : Adzzy\_87
- Track 13 : SwirlSquare\_89
- Track 14 : LoneWolf\_90
- Track 15 : Tubs\_90, Ugenie5\_77, Eidsmoe\_88, Beemo\_90, Conquerage\_88, Phaeder\_90, Catalina\_92, HortumSL17\_91, Phonnegut\_90, Qobbit\_88, Myxus\_90, PackMan\_85, ExplosioNervosa\_88, Priya\_88, Pioneer\_90, Aliter\_83, Scherzo\_88, Fayely\_88, Spouty\_85
- Track 16 : Arissanae\_85
- Track 17 : Yecey3\_91
- Track 18 : DreamTeam1\_85, SheaKeira\_85, Charm\_85
- Track 19 : Darrell\_88
- Track 20 : Toaka\_88
- Track 21 : Keziacharles14\_87
- Track 22 : Rahalelujah\_89
- Track 23 : EmyBug\_87
- Track 24 : Maminiaina\_89, BogosyJay\_89
- Track 25 : Vanisoa\_85
- Track 26 : Alma\_88
- Track 27 : Elephantoon\_90
- Track 28 : Imvubu\_58
- Track 29 : BirdsNest\_69
- Track 30 : Zenteno07\_70
- Track 31 : PenguinLover67\_60

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

The start number called the most often in the published annotations is 20, it was called in 22 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aliter\_83, Arissanae\_85, Beemo\_90, Catalina\_92, Conquerage\_88, Eidsmoe\_88, ExplosioNervosa\_88, Fayely\_88, HortumSL17\_91, Myxus\_90, PackMan\_85, Phaeder\_90, Phonnegut\_90, Pioneer\_90, Priya\_88, Qobbit\_88, Scherzo\_88, Spouty\_85, Steamy\_85, Toaka\_88, Tubs\_90, Ugenie5\_77, Vanisoa\_85,

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

- Alma\_88, EmyBug\_87, Keziacharles14\_87, LoneWolf\_90,

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

- Adzzy\_87, BirdsNest\_69, BobSwaget\_80, BogosyJay\_89, Caraxes\_87, Chargerpower\_86, Charm\_85, Darrell\_88, DARTHPhader\_86, DreamTeam1\_85, Elephantoon\_90, Herbertwm\_86, Imvubu\_58, Jeeves\_88, Luchador\_85, Maminiaina\_89, PenguinLover67\_60, Ph8s\_87, Rahalelujah\_89, Refuge\_88, SheaKeira\_85, Superchunk\_86, SwirlSquare\_89, Yecey3\_91, Zenteno07\_70, Zimmer\_87,

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

Start 9:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu\_58 (B10),

Start 11:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 49
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BirdsNest\_69 (B13), Zenteno07\_70 (B13),

Start 12:

- Found in 26 of 53 ( 49.1% ) of genes in pham
- Manual Annotations of this start: 4 of 49
- Called 15.4% of time when present
- Phage (with cluster) where this start called: Alma\_88 (A9), EmyBug\_87 (A9), Keziacharles14\_87 (A9), LoneWolf\_90 (A9),

Start 13:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67\_60 (B9),

Start 17:

- Found in 1 of 53 ( 1.9% ) of genes in pham

- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm\_86 (A2),

Start 18:

- Found in 5 of 53 ( 9.4% ) of genes in pham
- Manual Annotations of this start: 5 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chargerpower\_86 (A), Charm\_85 (A9), DreamTeam1\_85 (A9), SheaKeira\_85 (A9), Yecey3\_91 (A9),

Start 19:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Darrell\_88 (A9), Elephantoon\_90 (A9), Rahalelujah\_89 (A9),

Start 20:

- Found in 27 of 53 ( 50.9% ) of genes in pham
- Manual Annotations of this start: 22 of 49
- Called 85.2% of time when present
- Phage (with cluster) where this start called: Aliter\_83 (A9), Arissanee\_85 (A9), Beemo\_90 (A9), Catalina\_92 (A9), Conquerage\_88 (A9), Eidsmoe\_88 (A9), ExplosioNervosa\_88 (A9), Fayely\_88 (A9), HortumSL17\_91 (A9), Myxus\_90 (A9), PackMan\_85 (A9), Phaeder\_90 (A9), Phonnegut\_90 (A9), Pioneer\_90 (A9), Priya\_88 (A9), Qobbit\_88 (A9), Scherzo\_88 (A9), Spouty\_85 (A9), Steamy\_85 (A12), Toaka\_88 (A9), Tubs\_90 (A9), Ugenie5\_77 (A9), Vanisoa\_85 (A9),

Start 21:

- Found in 13 of 53 ( 24.5% ) of genes in pham
- Manual Annotations of this start: 11 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adzzy\_87 (A2), BobSwaget\_80 (A2), BogosyJay\_89 (A9), Caraxes\_87 (A2), DarthPhader\_86 (A12), Jeeves\_88 (A14), Luchador\_85 (A14), Maminiaina\_89 (A9), Ph8s\_87 (A2), Refuge\_88 (A12), Superchunk\_86 (A2), SwirlSquare\_89 (A2), Zimmer\_87 (A12),

### Summary by clusters:

There are 8 clusters represented in this pham: A, A14, A12, A2, B13, B10, A9, B9,

Info for manual annotations of cluster A:

- Start number 18 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A12:

- Start number 20 was manually annotated 1 time for cluster A12.
- Start number 21 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 21 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A2:

- Start number 17 was manually annotated 1 time for cluster A2.
- Start number 21 was manually annotated 4 times for cluster A2.

Info for manual annotations of cluster A9:

- Start number 12 was manually annotated 4 times for cluster A9.
- Start number 18 was manually annotated 4 times for cluster A9.
- Start number 19 was manually annotated 2 times for cluster A9.
- Start number 20 was manually annotated 21 times for cluster A9.
- Start number 21 was manually annotated 2 times for cluster A9.

Info for manual annotations of cluster B10:

- Start number 9 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B13:

- Start number 11 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B9:

- Start number 13 was manually annotated 1 time for cluster B9.

### **Gene Information:**

Gene: Adzzy\_87 Start: 47625, Stop: 47383, Start Num: 21

Candidate Starts for Adzzy\_87:

(7, 47697), (16, 47640), (Start: 21 @47625 has 11 MA's), (30, 47547), (33, 47526), (42, 47460),

Gene: Aliter\_83 Start: 46251, Stop: 46006, Start Num: 20

Candidate Starts for Aliter\_83:

(Start: 12 @46278 has 4 MA's), (Start: 20 @46251 has 22 MA's), (26, 46215), (28, 46188),

Gene: Alma\_88 Start: 49120, Stop: 48845, Start Num: 12

Candidate Starts for Alma\_88:

(Start: 12 @49120 has 4 MA's), (Start: 20 @49093 has 22 MA's), (28, 49030), (36, 48973),

Gene: Arissanae\_85 Start: 48962, Stop: 48717, Start Num: 20

Candidate Starts for Arissanae\_85:

(Start: 20 @48962 has 22 MA's), (23, 48941), (28, 48899),

Gene: Beemo\_90 Start: 49084, Stop: 48839, Start Num: 20

Candidate Starts for Beemo\_90:

(Start: 12 @49111 has 4 MA's), (Start: 20 @49084 has 22 MA's), (26, 49048), (28, 49021),

Gene: BirdsNest\_69 Start: 56932, Stop: 56600, Start Num: 11

Candidate Starts for BirdsNest\_69:

(3, 57136), (Start: 11 @56932 has 2 MA's),

Gene: BobSwaget\_80 Start: 46489, Stop: 46259, Start Num: 21

Candidate Starts for BobSwaget\_80:

(16, 46504), (Start: 21 @46489 has 11 MA's), (30, 46426),

Gene: BogosyJay\_89 Start: 49135, Stop: 48884, Start Num: 21

Candidate Starts for BogosyJay\_89:

(Start: 21 @49135 has 11 MA's), (25, 49114), (28, 49078), (45, 48916),

Gene: Caraxes\_87 Start: 47583, Stop: 47341, Start Num: 21

Candidate Starts for Caraxes\_87:

(16, 47598), (Start: 21 @47583 has 11 MA's), (33, 47484),

Gene: Catalina\_92 Start: 49198, Stop: 48953, Start Num: 20

Candidate Starts for Catalina\_92:

(Start: 12 @49225 has 4 MA's), (Start: 20 @49198 has 22 MA's), (26, 49162), (28, 49135),

Gene: Chargerpower\_86 Start: 47145, Stop: 46894, Start Num: 18

Candidate Starts for Chargerpower\_86:

(1, 47541), (2, 47505), (4, 47286), (14, 47160), (Start: 18 @47145 has 5 MA's),

Gene: Charm\_85 Start: 48488, Stop: 48237, Start Num: 18

Candidate Starts for Charm\_85:

(Start: 18 @48488 has 5 MA's), (25, 48461), (28, 48425), (43, 48308),

Gene: Conquerage\_88 Start: 48859, Stop: 48614, Start Num: 20

Candidate Starts for Conquerage\_88:

(Start: 12 @48886 has 4 MA's), (Start: 20 @48859 has 22 MA's), (26, 48823), (28, 48796),

Gene: Darrell\_88 Start: 48293, Stop: 48039, Start Num: 19

Candidate Starts for Darrell\_88:

(5, 48359), (10, 48317), (Start: 19 @48293 has 2 MA's), (28, 48230), (40, 48155), (45, 48071),

Gene: DarthPhader\_86 Start: 50000, Stop: 49740, Start Num: 21

Candidate Starts for DarthPhader\_86:

(Start: 21 @50000 has 11 MA's), (28, 49940), (40, 49853), (43, 49808),

Gene: DreamTeam1\_85 Start: 48336, Stop: 48085, Start Num: 18

Candidate Starts for DreamTeam1\_85:

(Start: 18 @48336 has 5 MA's), (25, 48309), (28, 48273), (43, 48156),

Gene: Eidsmoe\_88 Start: 48852, Stop: 48607, Start Num: 20

Candidate Starts for Eidsmoe\_88:

(Start: 12 @48879 has 4 MA's), (Start: 20 @48852 has 22 MA's), (26, 48816), (28, 48789),

Gene: Elephantoon\_90 Start: 49016, Stop: 48762, Start Num: 19

Candidate Starts for Elephantoon\_90:

(Start: 19 @49016 has 2 MA's), (22, 49004), (28, 48953), (40, 48878), (45, 48794),

Gene: EmyBug\_87 Start: 48881, Stop: 48609, Start Num: 12

Candidate Starts for EmyBug\_87:

(Start: 12 @48881 has 4 MA's), (Start: 20 @48854 has 22 MA's), (26, 48818), (28, 48791),

Gene: ExplosioNervosa\_88 Start: 48920, Stop: 48675, Start Num: 20

Candidate Starts for ExplosioNervosa\_88:

(Start: 12 @48947 has 4 MA's), (Start: 20 @48920 has 22 MA's), (26, 48884), (28, 48857),

Gene: Fayely\_88 Start: 48828, Stop: 48583, Start Num: 20

Candidate Starts for Fayely\_88:

(Start: 12 @48855 has 4 MA's), (Start: 20 @48828 has 22 MA's), (26, 48792), (28, 48765),

Gene: Herbertwm\_86 Start: 49248, Stop: 48952, Start Num: 17  
Candidate Starts for Herbertwm\_86:  
(Start: 17 @49248 has 1 MA's), (27, 49188), (31, 49137), (42, 49050),

Gene: HortumSL17\_91 Start: 49196, Stop: 48951, Start Num: 20  
Candidate Starts for HortumSL17\_91:  
(Start: 12 @49223 has 4 MA's), (Start: 20 @49196 has 22 MA's), (26, 49160), (28, 49133),

Gene: Imvubu\_58 Start: 54802, Stop: 54467, Start Num: 9  
Candidate Starts for Imvubu\_58:  
(Start: 9 @54802 has 1 MA's), (Start: 11 @54772 has 2 MA's), (40, 54607), (41, 54598), (43, 54562),  
(47, 54478),

Gene: Jeeves\_88 Start: 47130, Stop: 46858, Start Num: 21  
Candidate Starts for Jeeves\_88:  
(6, 47208), (16, 47145), (Start: 21 @47130 has 11 MA's), (28, 47067), (29, 47061), (32, 47019), (33,  
47001), (41, 46965),

Gene: Keziacharles14\_87 Start: 49677, Stop: 49432, Start Num: 12  
Candidate Starts for Keziacharles14\_87:  
(Start: 12 @49677 has 4 MA's), (Start: 20 @49653 has 22 MA's), (28, 49590), (35, 49551), (39,  
49539), (44, 49455),

Gene: LoneWolf\_90 Start: 49212, Stop: 48946, Start Num: 12  
Candidate Starts for LoneWolf\_90:  
(Start: 12 @49212 has 4 MA's), (Start: 20 @49188 has 22 MA's), (28, 49128), (34, 49083), (36,  
49074), (45, 48978),

Gene: Luchador\_85 Start: 48225, Stop: 47965, Start Num: 21  
Candidate Starts for Luchador\_85:  
(Start: 21 @48225 has 11 MA's), (24, 48201), (28, 48162), (33, 48108),

Gene: Maminiaina\_89 Start: 49117, Stop: 48866, Start Num: 21  
Candidate Starts for Maminiaina\_89:  
(Start: 21 @49117 has 11 MA's), (25, 49096), (28, 49060), (45, 48898),

Gene: Myxus\_90 Start: 49196, Stop: 48951, Start Num: 20  
Candidate Starts for Myxus\_90:  
(Start: 12 @49223 has 4 MA's), (Start: 20 @49196 has 22 MA's), (26, 49160), (28, 49133),

Gene: PackMan\_85 Start: 47110, Stop: 46865, Start Num: 20  
Candidate Starts for PackMan\_85:  
(Start: 12 @47137 has 4 MA's), (Start: 20 @47110 has 22 MA's), (26, 47074), (28, 47047),

Gene: PenguinLover67\_60 Start: 56278, Stop: 55991, Start Num: 13  
Candidate Starts for PenguinLover67\_60:  
(Start: 13 @56278 has 1 MA's), (41, 56119), (42, 56089), (46, 56017),

Gene: Ph8s\_87 Start: 47838, Stop: 47596, Start Num: 21  
Candidate Starts for Ph8s\_87:  
(16, 47853), (Start: 21 @47838 has 11 MA's), (30, 47760), (33, 47739),

Gene: Phaeder\_90 Start: 49071, Stop: 48826, Start Num: 20  
Candidate Starts for Phaeder\_90:  
(Start: 12 @49098 has 4 MA's), (Start: 20 @49071 has 22 MA's), (26, 49035), (28, 49008),

Gene: Phonnegut\_90 Start: 49083, Stop: 48838, Start Num: 20  
Candidate Starts for Phonnegut\_90:  
(Start: 12 @49110 has 4 MA's), (Start: 20 @49083 has 22 MA's), (26, 49047), (28, 49020),

Gene: Pioneer\_90 Start: 49083, Stop: 48838, Start Num: 20  
Candidate Starts for Pioneer\_90:  
(Start: 12 @49110 has 4 MA's), (Start: 20 @49083 has 22 MA's), (26, 49047), (28, 49020),

Gene: Priya\_88 Start: 48855, Stop: 48610, Start Num: 20  
Candidate Starts for Priya\_88:  
(Start: 12 @48882 has 4 MA's), (Start: 20 @48855 has 22 MA's), (26, 48819), (28, 48792),

Gene: Qobbit\_88 Start: 48817, Stop: 48572, Start Num: 20  
Candidate Starts for Qobbit\_88:  
(Start: 12 @48844 has 4 MA's), (Start: 20 @48817 has 22 MA's), (26, 48781), (28, 48754),

Gene: Rahalelujah\_89 Start: 48618, Stop: 48364, Start Num: 19  
Candidate Starts for Rahalelujah\_89:  
(10, 48642), (Start: 19 @48618 has 2 MA's), (23, 48597), (28, 48555), (45, 48396),

Gene: Refuge\_88 Start: 50832, Stop: 50584, Start Num: 21  
Candidate Starts for Refuge\_88:  
(Start: 21 @50832 has 11 MA's), (28, 50775), (45, 50616),

Gene: Scherzo\_88 Start: 49115, Stop: 48870, Start Num: 20  
Candidate Starts for Scherzo\_88:  
(Start: 12 @49142 has 4 MA's), (Start: 20 @49115 has 22 MA's), (26, 49079), (28, 49052),

Gene: SheaKeira\_85 Start: 48361, Stop: 48110, Start Num: 18  
Candidate Starts for SheaKeira\_85:  
(Start: 18 @48361 has 5 MA's), (25, 48334), (28, 48298), (43, 48181),

Gene: Spouty\_85 Start: 48854, Stop: 48609, Start Num: 20  
Candidate Starts for Spouty\_85:  
(Start: 12 @48881 has 4 MA's), (Start: 20 @48854 has 22 MA's), (26, 48818), (28, 48791),

Gene: Steamy\_85 Start: 49811, Stop: 49554, Start Num: 20  
Candidate Starts for Steamy\_85:  
(Start: 20 @49811 has 22 MA's), (28, 49751), (43, 49625),

Gene: Superchunk\_86 Start: 47583, Stop: 47341, Start Num: 21  
Candidate Starts for Superchunk\_86:  
(16, 47598), (Start: 21 @47583 has 11 MA's), (33, 47484),

Gene: SwirlSquare\_89 Start: 47313, Stop: 47071, Start Num: 21  
Candidate Starts for SwirlSquare\_89:  
(16, 47328), (Start: 21 @47313 has 11 MA's), (28, 47259), (30, 47235), (33, 47214), (42, 47148),

Gene: Toaka\_88 Start: 48957, Stop: 48709, Start Num: 20



Candidate Starts for Toaka\_88:

(8, 49023), (Start: 12 @48981 has 4 MA's), (15, 48969), (Start: 20 @48957 has 22 MA's), (26, 48921), (28, 48894), (34, 48846), (36, 48837), (43, 48780),

Gene: Tubs\_90 Start: 49071, Stop: 48826, Start Num: 20

Candidate Starts for Tubs\_90:

(Start: 12 @49098 has 4 MA's), (Start: 20 @49071 has 22 MA's), (26, 49035), (28, 49008),

Gene: Ugenie5\_77 Start: 46559, Stop: 46314, Start Num: 20

Candidate Starts for Ugenie5\_77:

(Start: 12 @46586 has 4 MA's), (Start: 20 @46559 has 22 MA's), (26, 46523), (28, 46496),

Gene: Vanisoa\_85 Start: 49296, Stop: 49042, Start Num: 20

Candidate Starts for Vanisoa\_85:

(8, 49362), (Start: 12 @49320 has 4 MA's), (15, 49308), (Start: 20 @49296 has 22 MA's), (23, 49275), (28, 49233), (33, 49185), (40, 49158), (43, 49113),

Gene: Yecey3\_91 Start: 48834, Stop: 48583, Start Num: 18

Candidate Starts for Yecey3\_91:

(Start: 18 @48834 has 5 MA's), (28, 48771), (45, 48615),

Gene: Zenteno07\_70 Start: 57108, Stop: 56800, Start Num: 11

Candidate Starts for Zenteno07\_70:

(Start: 11 @57108 has 2 MA's), (32, 56994),

Gene: Zimmer\_87 Start: 50279, Stop: 50019, Start Num: 21

Candidate Starts for Zimmer\_87:

(Start: 12 @50306 has 4 MA's), (Start: 21 @50279 has 11 MA's), (28, 50222), (37, 50153), (38, 50150), (40, 50135), (43, 50090),