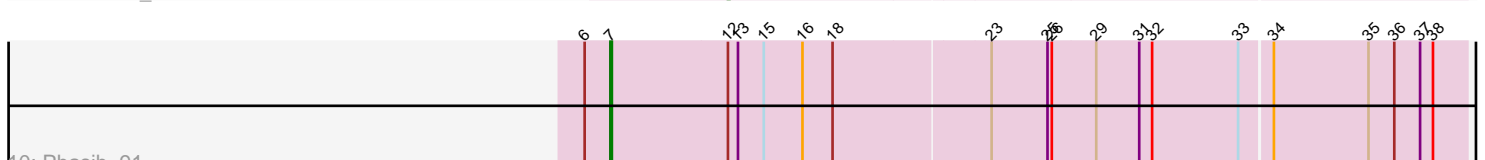
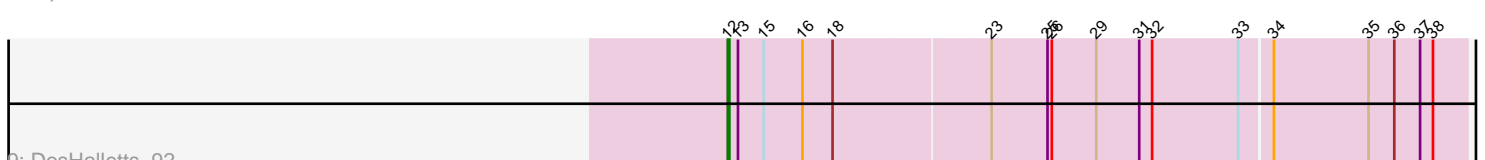
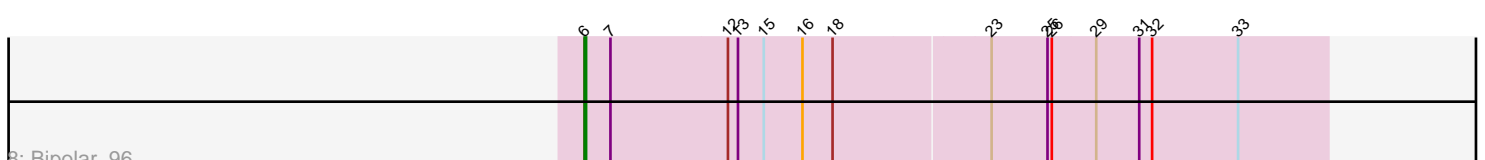
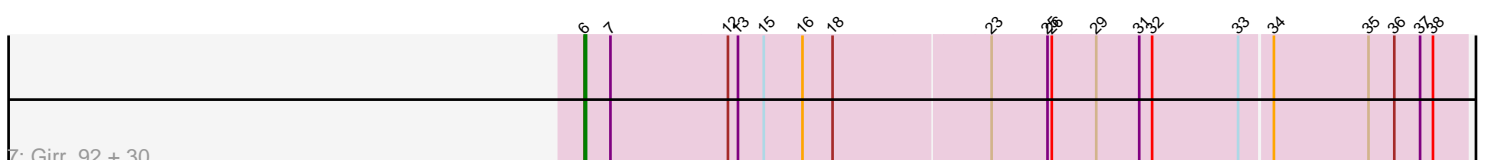
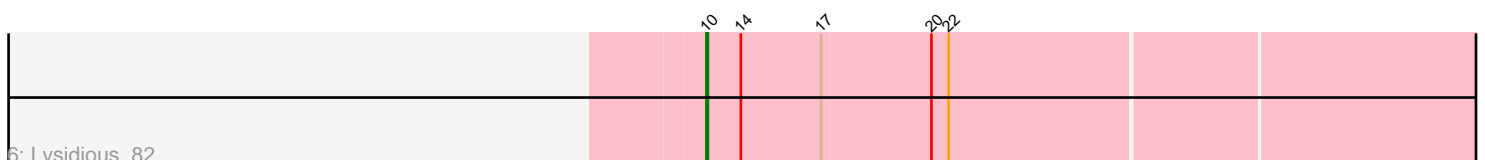
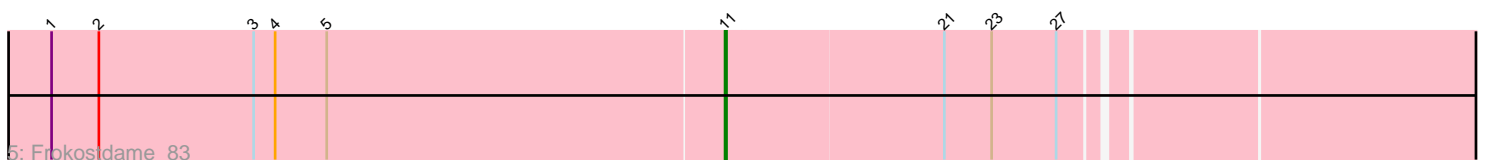
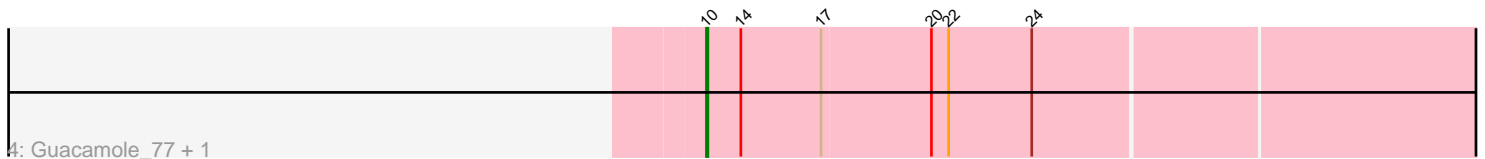
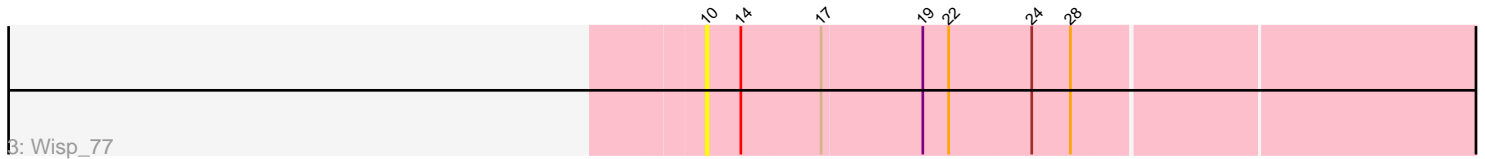
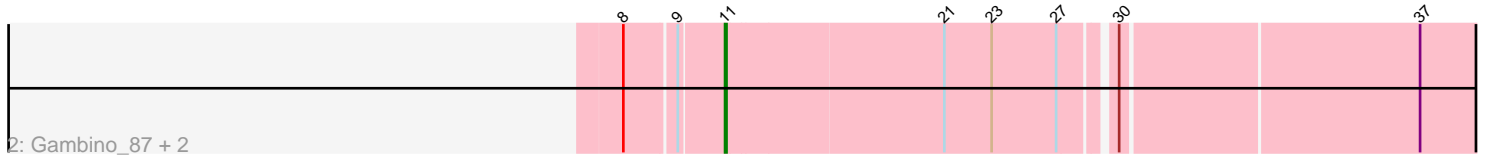
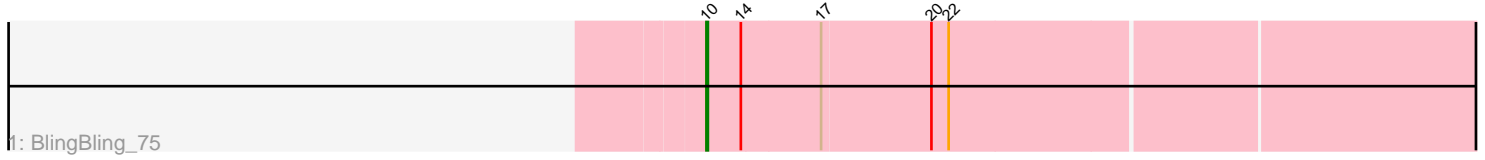


# Pham 198186



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 198186 Report

This analysis was run 01/18/25 on database version 583.

Pham number 198186 has 43 members, 4 are drafts.

Phages represented in each track:

- Track 1 : BlingBling\_75
- Track 2 : Gambino\_87, Azula\_85, MissRona\_85
- Track 3 : Wisp\_77
- Track 4 : Guacamole\_77, JasperJr\_77
- Track 5 : Frokostdame\_83
- Track 6 : Lysidious\_82
- Track 7 : Girr\_92, Cornie\_91, Llij\_90, Aubs\_94, Leozinho\_91, Plumbus\_94, Renaud18\_103, ShroomBoi\_92, Karhdo\_89, Bobi\_97, JalFarm20\_104, Ruby\_90, SG4\_95, Brushbloom\_101, Totinger\_97, MisterCuddles\_93, Alexphander\_95, Fancypants\_100, Donkeykong\_101, Krakatau\_87, Marker\_99, Spartacus\_101, Blarby\_102, Eradicator\_87, Rialto\_99, Jabbawokkie\_101, Zapner\_101, Oksu\_97, Gandalph\_94, SuperGrey\_95, Avani\_100
- Track 8 : Bipolar\_96
- Track 9 : DosHalletts\_92
- Track 10 : Phasih\_91

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

The start number called the most often in the published annotations is 6, it was called in 29 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander\_95, Aubs\_94, Avani\_100, Bipolar\_96, Blarby\_102, Bobi\_97, Brushbloom\_101, Cornie\_91, Donkeykong\_101, Eradicator\_87, Fancypants\_100, Gandalph\_94, Girr\_92, Jabbawokkie\_101, JalFarm20\_104, Karhdo\_89, Krakatau\_87, Leozinho\_91, Llij\_90, Marker\_99, MisterCuddles\_93, Oksu\_97, Plumbus\_94, Renaud18\_103, Rialto\_99, Ruby\_90, SG4\_95, ShroomBoi\_92, Spartacus\_101, SuperGrey\_95, Totinger\_97, Zapner\_101,

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

- Phasih\_91,

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

- Azula\_85, BlingBling\_75, DosHalletts\_92, Frokostdame\_83, Gambino\_87, Guacamole\_77, JasperJr\_77, Lysidious\_82, MissRona\_85, Wisp\_77,

### Summary by start number:

#### Start 6:

- Found in 33 of 43 ( 76.7% ) of genes in pham
- Manual Annotations of this start: 29 of 39
- Called 97.0% of time when present
- Phage (with cluster) where this start called: Alexphander\_95 (F1), Aubs\_94 (F1), Avani\_100 (F2), Bipolar\_96 (F1), Blarby\_102 (F), Bobi\_97 (F1), Brushbloom\_101 (F1), Cornie\_91 (F5), Donkeykong\_101 (F1), Eradicator\_87 (F1), Fancypants\_100 (F1), Gandolph\_94 (F1), Girr\_92 (F1), Jabbawokkie\_101 (F2), JalFarm20\_104 (F1), Karhdo\_89 (F1), Krakatau\_87 (F1), Leozinho\_91 (F1), Lij\_90 (F1), Marker\_99 (F1), MisterCuddles\_93 (F1), Oksu\_97 (F1), Plumbus\_94 (F1), Renaud18\_103 (F4), Rialto\_99 (F1), Ruby\_90 (F1), SG4\_95 (F1), ShroomBoi\_92 (F1), Spartacus\_101 (F1), SuperGrey\_95 (F1), Totinger\_97 (F1), Zapner\_101 (F2),

#### Start 7:

- Found in 33 of 43 ( 76.7% ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Phasih\_91 (F1),

#### Start 10:

- Found in 5 of 43 ( 11.6% ) of genes in pham
- Manual Annotations of this start: 4 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlingBling\_75 (CV), Guacamole\_77 (CV), JasperJr\_77 (CV), Lysidious\_82 (CV), Wisp\_77 (CV),

#### Start 11:

- Found in 4 of 43 ( 9.3% ) of genes in pham
- Manual Annotations of this start: 4 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Azula\_85 (CV), Frokostdame\_83 (CV), Gambino\_87 (CV), MissRona\_85 (CV),

#### Start 12:

- Found in 34 of 43 ( 79.1% ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 2.9% of time when present
- Phage (with cluster) where this start called: DosHalletts\_92 (F1),

### Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, F4, F5, F, CV,

Info for manual annotations of cluster CV:

- Start number 10 was manually annotated 4 times for cluster CV.
- Start number 11 was manually annotated 4 times for cluster CV.

Info for manual annotations of cluster F1:

- Start number 6 was manually annotated 24 times for cluster F1.
- Start number 7 was manually annotated 1 time for cluster F1.
- Start number 12 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 6 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 6 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 6 was manually annotated 1 time for cluster F5.

### **Gene Information:**

Gene: Alexphander\_95 Start: 53183, Stop: 53785, Start Num: 6

Candidate Starts for Alexphander\_95:

(Start: 6 @53183 has 29 MA's), (Start: 7 @53201 has 1 MA's), (Start: 12 @53282 has 1 MA's), (13, 53288), (15, 53306), (16, 53333), (18, 53354), (23, 53459), (25, 53498), (26, 53501), (29, 53531), (31, 53561), (32, 53570), (33, 53630), (34, 53651), (35, 53717), (36, 53735), (37, 53753), (38, 53762),

Gene: Aubs\_94 Start: 53791, Stop: 54417, Start Num: 6

Candidate Starts for Aubs\_94:

(Start: 6 @53791 has 29 MA's), (Start: 7 @53809 has 1 MA's), (Start: 12 @53890 has 1 MA's), (13, 53896), (15, 53914), (16, 53941), (18, 53962), (23, 54067), (25, 54106), (26, 54109), (29, 54139), (31, 54169), (32, 54178), (33, 54238), (34, 54259), (35, 54325), (36, 54343), (37, 54361), (38, 54370),

Gene: Avani\_100 Start: 50003, Stop: 50605, Start Num: 6

Candidate Starts for Avani\_100:

(Start: 6 @50003 has 29 MA's), (Start: 7 @50021 has 1 MA's), (Start: 12 @50102 has 1 MA's), (13, 50108), (15, 50126), (16, 50153), (18, 50174), (23, 50279), (25, 50318), (26, 50321), (29, 50351), (31, 50381), (32, 50390), (33, 50450), (34, 50471), (35, 50537), (36, 50555), (37, 50573), (38, 50582),

Gene: Azula\_85 Start: 52425, Stop: 52931, Start Num: 11

Candidate Starts for Azula\_85:

(8, 52362), (9, 52395), (Start: 11 @52425 has 4 MA's), (21, 52572), (23, 52605), (27, 52650), (30, 52680), (37, 52881),

Gene: Bipolar\_96 Start: 54266, Stop: 54775, Start Num: 6

Candidate Starts for Bipolar\_96:

(Start: 6 @54266 has 29 MA's), (Start: 7 @54284 has 1 MA's), (Start: 12 @54365 has 1 MA's), (13, 54371), (15, 54389), (16, 54416), (18, 54437), (23, 54542), (25, 54581), (26, 54584), (29, 54614), (31, 54644), (32, 54653), (33, 54713),

Gene: Blarby\_102 Start: 50830, Stop: 51432, Start Num: 6

Candidate Starts for Blarby\_102:

(Start: 6 @50830 has 29 MA's), (Start: 7 @50848 has 1 MA's), (Start: 12 @50929 has 1 MA's), (13, 50935), (15, 50953), (16, 50980), (18, 51001), (23, 51106), (25, 51145), (26, 51148), (29, 51178), (31, 51208), (32, 51217), (33, 51277), (34, 51298), (35, 51364), (36, 51382), (37, 51400), (38, 51409),

Gene: BlingBling\_75 Start: 47632, Stop: 48156, Start Num: 10

Candidate Starts for BlingBling\_75:

(Start: 10 @47632 has 4 MA's), (14, 47656), (17, 47710), (20, 47785), (22, 47797),

Gene: Bobi\_97 Start: 53974, Stop: 54576, Start Num: 6

Candidate Starts for Bobi\_97:

(Start: 6 @53974 has 29 MA's), (Start: 7 @53992 has 1 MA's), (Start: 12 @54073 has 1 MA's), (13, 54079), (15, 54097), (16, 54124), (18, 54145), (23, 54250), (25, 54289), (26, 54292), (29, 54322), (31, 54352), (32, 54361), (33, 54421), (34, 54442), (35, 54508), (36, 54526), (37, 54544), (38, 54553),

Gene: Brushbloom\_101 Start: 53544, Stop: 54146, Start Num: 6

Candidate Starts for Brushbloom\_101:

(Start: 6 @53544 has 29 MA's), (Start: 7 @53562 has 1 MA's), (Start: 12 @53643 has 1 MA's), (13, 53649), (15, 53667), (16, 53694), (18, 53715), (23, 53820), (25, 53859), (26, 53862), (29, 53892), (31, 53922), (32, 53931), (33, 53991), (34, 54012), (35, 54078), (36, 54096), (37, 54114), (38, 54123),

Gene: Cornie\_91 Start: 51566, Stop: 52168, Start Num: 6

Candidate Starts for Cornie\_91:

(Start: 6 @51566 has 29 MA's), (Start: 7 @51584 has 1 MA's), (Start: 12 @51665 has 1 MA's), (13, 51671), (15, 51689), (16, 51716), (18, 51737), (23, 51842), (25, 51881), (26, 51884), (29, 51914), (31, 51944), (32, 51953), (33, 52013), (34, 52034), (35, 52100), (36, 52118), (37, 52136), (38, 52145),

Gene: Donkeykong\_101 Start: 54756, Stop: 55358, Start Num: 6

Candidate Starts for Donkeykong\_101:

(Start: 6 @54756 has 29 MA's), (Start: 7 @54774 has 1 MA's), (Start: 12 @54855 has 1 MA's), (13, 54861), (15, 54879), (16, 54906), (18, 54927), (23, 55032), (25, 55071), (26, 55074), (29, 55104), (31, 55134), (32, 55143), (33, 55203), (34, 55224), (35, 55290), (36, 55308), (37, 55326), (38, 55335),

Gene: DosHalletts\_92 Start: 52860, Stop: 53363, Start Num: 12

Candidate Starts for DosHalletts\_92:

(Start: 12 @52860 has 1 MA's), (13, 52866), (15, 52884), (16, 52911), (18, 52932), (23, 53037), (25, 53076), (26, 53079), (29, 53109), (31, 53139), (32, 53148), (33, 53208), (34, 53229), (35, 53295), (36, 53313), (37, 53331), (38, 53340),

Gene: Eradicator\_87 Start: 50977, Stop: 51579, Start Num: 6

Candidate Starts for Eradicator\_87:

(Start: 6 @50977 has 29 MA's), (Start: 7 @50995 has 1 MA's), (Start: 12 @51076 has 1 MA's), (13, 51082), (15, 51100), (16, 51127), (18, 51148), (23, 51253), (25, 51292), (26, 51295), (29, 51325), (31, 51355), (32, 51364), (33, 51424), (34, 51445), (35, 51511), (36, 51529), (37, 51547), (38, 51556),

Gene: Fancypants\_100 Start: 55080, Stop: 55682, Start Num: 6

Candidate Starts for Fancypants\_100:

(Start: 6 @55080 has 29 MA's), (Start: 7 @55098 has 1 MA's), (Start: 12 @55179 has 1 MA's), (13, 55185), (15, 55203), (16, 55230), (18, 55251), (23, 55356), (25, 55395), (26, 55398), (29, 55428), (31, 55458), (32, 55467), (33, 55527), (34, 55548), (35, 55614), (36, 55632), (37, 55650), (38, 55659),

Gene: Frokostdame\_83 Start: 51333, Stop: 51839, Start Num: 11

Candidate Starts for Frokostdame\_83:

(1, 50868), (2, 50901), (3, 51009), (4, 51024), (5, 51060), (Start: 11 @51333 has 4 MA's), (21, 51480), (23, 51513), (27, 51558),

Gene: Gambino\_87 Start: 52425, Stop: 52931, Start Num: 11

Candidate Starts for Gambino\_87:

(8, 52362), (9, 52395), (Start: 11 @52425 has 4 MA's), (21, 52572), (23, 52605), (27, 52650), (30, 52680), (37, 52881),

Gene: Gandolph\_94 Start: 50047, Stop: 50649, Start Num: 6

Candidate Starts for Gandolph\_94:

(Start: 6 @50047 has 29 MA's), (Start: 7 @50065 has 1 MA's), (Start: 12 @50146 has 1 MA's), (13, 50152), (15, 50170), (16, 50197), (18, 50218), (23, 50323), (25, 50362), (26, 50365), (29, 50395), (31, 50425), (32, 50434), (33, 50494), (34, 50515), (35, 50581), (36, 50599), (37, 50617), (38, 50626),

Gene: Girr\_92 Start: 52791, Stop: 53393, Start Num: 6

Candidate Starts for Girr\_92:

(Start: 6 @52791 has 29 MA's), (Start: 7 @52809 has 1 MA's), (Start: 12 @52890 has 1 MA's), (13, 52896), (15, 52914), (16, 52941), (18, 52962), (23, 53067), (25, 53106), (26, 53109), (29, 53139), (31, 53169), (32, 53178), (33, 53238), (34, 53259), (35, 53325), (36, 53343), (37, 53361), (38, 53370),

Gene: Guacamole\_77 Start: 48781, Stop: 49305, Start Num: 10

Candidate Starts for Guacamole\_77:

(Start: 10 @48781 has 4 MA's), (14, 48805), (17, 48859), (20, 48934), (22, 48946), (24, 49003),

Gene: Jabbawokkie\_101 Start: 50750, Stop: 51352, Start Num: 6

Candidate Starts for Jabbawokkie\_101:

(Start: 6 @50750 has 29 MA's), (Start: 7 @50768 has 1 MA's), (Start: 12 @50849 has 1 MA's), (13, 50855), (15, 50873), (16, 50900), (18, 50921), (23, 51026), (25, 51065), (26, 51068), (29, 51098), (31, 51128), (32, 51137), (33, 51197), (34, 51218), (35, 51284), (36, 51302), (37, 51320), (38, 51329),

Gene: JalFarm20\_104 Start: 54443, Stop: 55045, Start Num: 6

Candidate Starts for JalFarm20\_104:

(Start: 6 @54443 has 29 MA's), (Start: 7 @54461 has 1 MA's), (Start: 12 @54542 has 1 MA's), (13, 54548), (15, 54566), (16, 54593), (18, 54614), (23, 54719), (25, 54758), (26, 54761), (29, 54791), (31, 54821), (32, 54830), (33, 54890), (34, 54911), (35, 54977), (36, 54995), (37, 55013), (38, 55022),

Gene: JasperJr\_77 Start: 48781, Stop: 49305, Start Num: 10

Candidate Starts for JasperJr\_77:

(Start: 10 @48781 has 4 MA's), (14, 48805), (17, 48859), (20, 48934), (22, 48946), (24, 49003),

Gene: Karhdo\_89 Start: 50178, Stop: 50780, Start Num: 6

Candidate Starts for Karhdo\_89:

(Start: 6 @50178 has 29 MA's), (Start: 7 @50196 has 1 MA's), (Start: 12 @50277 has 1 MA's), (13, 50283), (15, 50301), (16, 50328), (18, 50349), (23, 50454), (25, 50493), (26, 50496), (29, 50526), (31, 50556), (32, 50565), (33, 50625), (34, 50646), (35, 50712), (36, 50730), (37, 50748), (38, 50757),

Gene: Krakatau\_87 Start: 48136, Stop: 48738, Start Num: 6

Candidate Starts for Krakatau\_87:

(Start: 6 @48136 has 29 MA's), (Start: 7 @48154 has 1 MA's), (Start: 12 @48235 has 1 MA's), (13, 48241), (15, 48259), (16, 48286), (18, 48307), (23, 48412), (25, 48451), (26, 48454), (29, 48484), (31, 48514), (32, 48523), (33, 48583), (34, 48604), (35, 48670), (36, 48688), (37, 48706), (38, 48715),

Gene: Leozinho\_91 Start: 49823, Stop: 50425, Start Num: 6

Candidate Starts for Leozinho\_91:

(Start: 6 @49823 has 29 MA's), (Start: 7 @49841 has 1 MA's), (Start: 12 @49922 has 1 MA's), (13, 49928), (15, 49946), (16, 49973), (18, 49994), (23, 50099), (25, 50138), (26, 50141), (29, 50171), (31, 50201), (32, 50210), (33, 50270), (34, 50291), (35, 50357), (36, 50375), (37, 50393), (38, 50402),

Gene: Llij\_90 Start: 51368, Stop: 51970, Start Num: 6

Candidate Starts for Llij\_90:

(Start: 6 @51368 has 29 MA's), (Start: 7 @51386 has 1 MA's), (Start: 12 @51467 has 1 MA's), (13, 51473), (15, 51491), (16, 51518), (18, 51539), (23, 51644), (25, 51683), (26, 51686), (29, 51716), (31, 51746), (32, 51755), (33, 51815), (34, 51836), (35, 51902), (36, 51920), (37, 51938), (38, 51947),

Gene: Lysidious\_82 Start: 49840, Stop: 50364, Start Num: 10

Candidate Starts for Lysidious\_82:

(Start: 10 @49840 has 4 MA's), (14, 49864), (17, 49918), (20, 49993), (22, 50005),

Gene: Marker\_99 Start: 53540, Stop: 54142, Start Num: 6

Candidate Starts for Marker\_99:

(Start: 6 @53540 has 29 MA's), (Start: 7 @53558 has 1 MA's), (Start: 12 @53639 has 1 MA's), (13, 53645), (15, 53663), (16, 53690), (18, 53711), (23, 53816), (25, 53855), (26, 53858), (29, 53888), (31, 53918), (32, 53927), (33, 53987), (34, 54008), (35, 54074), (36, 54092), (37, 54110), (38, 54119),

Gene: MissRona\_85 Start: 52426, Stop: 52932, Start Num: 11

Candidate Starts for MissRona\_85:

(8, 52363), (9, 52396), (Start: 11 @52426 has 4 MA's), (21, 52573), (23, 52606), (27, 52651), (30, 52681), (37, 52882),

Gene: MisterCuddles\_93 Start: 52791, Stop: 53393, Start Num: 6

Candidate Starts for MisterCuddles\_93:

(Start: 6 @52791 has 29 MA's), (Start: 7 @52809 has 1 MA's), (Start: 12 @52890 has 1 MA's), (13, 52896), (15, 52914), (16, 52941), (18, 52962), (23, 53067), (25, 53106), (26, 53109), (29, 53139), (31, 53169), (32, 53178), (33, 53238), (34, 53259), (35, 53325), (36, 53343), (37, 53361), (38, 53370),

Gene: Oksu\_97 Start: 54545, Stop: 55147, Start Num: 6

Candidate Starts for Oksu\_97:

(Start: 6 @54545 has 29 MA's), (Start: 7 @54563 has 1 MA's), (Start: 12 @54644 has 1 MA's), (13, 54650), (15, 54668), (16, 54695), (18, 54716), (23, 54821), (25, 54860), (26, 54863), (29, 54893), (31, 54923), (32, 54932), (33, 54992), (34, 55013), (35, 55079), (36, 55097), (37, 55115), (38, 55124),

Gene: Phasih\_91 Start: 51164, Stop: 51748, Start Num: 7

Candidate Starts for Phasih\_91:

(Start: 6 @51146 has 29 MA's), (Start: 7 @51164 has 1 MA's), (Start: 12 @51245 has 1 MA's), (13, 51251), (15, 51269), (16, 51296), (18, 51317), (23, 51422), (25, 51461), (26, 51464), (29, 51494), (31, 51524), (32, 51533), (33, 51593), (34, 51614), (35, 51680), (36, 51698), (37, 51716), (38, 51725),

Gene: Plumbus\_94 Start: 50132, Stop: 50734, Start Num: 6

Candidate Starts for Plumbus\_94:

(Start: 6 @50132 has 29 MA's), (Start: 7 @50150 has 1 MA's), (Start: 12 @50231 has 1 MA's), (13, 50237), (15, 50255), (16, 50282), (18, 50303), (23, 50408), (25, 50447), (26, 50450), (29, 50480), (31, 50510), (32, 50519), (33, 50579), (34, 50600), (35, 50666), (36, 50684), (37, 50702), (38, 50711),

Gene: Renaud18\_103 Start: 53095, Stop: 53697, Start Num: 6

Candidate Starts for Renaud18\_103:

(Start: 6 @53095 has 29 MA's), (Start: 7 @53113 has 1 MA's), (Start: 12 @53194 has 1 MA's), (13, 53200), (15, 53218), (16, 53245), (18, 53266), (23, 53371), (25, 53410), (26, 53413), (29, 53443), (31, 53473), (32, 53482), (33, 53542), (34, 53563), (35, 53629), (36, 53647), (37, 53665), (38, 53674),

Gene: Rialto\_99 Start: 53385, Stop: 53987, Start Num: 6

Candidate Starts for Rialto\_99:

(Start: 6 @53385 has 29 MA's), (Start: 7 @53403 has 1 MA's), (Start: 12 @53484 has 1 MA's), (13, 53490), (15, 53508), (16, 53535), (18, 53556), (23, 53661), (25, 53700), (26, 53703), (29, 53733), (31, 53763), (32, 53772), (33, 53832), (34, 53853), (35, 53919), (36, 53937), (37, 53955), (38, 53964),

Gene: Ruby\_90 Start: 52792, Stop: 53394, Start Num: 6

Candidate Starts for Ruby\_90:

(Start: 6 @52792 has 29 MA's), (Start: 7 @52810 has 1 MA's), (Start: 12 @52891 has 1 MA's), (13, 52897), (15, 52915), (16, 52942), (18, 52963), (23, 53068), (25, 53107), (26, 53110), (29, 53140), (31, 53170), (32, 53179), (33, 53239), (34, 53260), (35, 53326), (36, 53344), (37, 53362), (38, 53371),

Gene: SG4\_95 Start: 53628, Stop: 54230, Start Num: 6

Candidate Starts for SG4\_95:

(Start: 6 @53628 has 29 MA's), (Start: 7 @53646 has 1 MA's), (Start: 12 @53727 has 1 MA's), (13, 53733), (15, 53751), (16, 53778), (18, 53799), (23, 53904), (25, 53943), (26, 53946), (29, 53976), (31, 54006), (32, 54015), (33, 54075), (34, 54096), (35, 54162), (36, 54180), (37, 54198), (38, 54207),

Gene: ShroomBoi\_92 Start: 52179, Stop: 52781, Start Num: 6

Candidate Starts for ShroomBoi\_92:

(Start: 6 @52179 has 29 MA's), (Start: 7 @52197 has 1 MA's), (Start: 12 @52278 has 1 MA's), (13, 52284), (15, 52302), (16, 52329), (18, 52350), (23, 52455), (25, 52494), (26, 52497), (29, 52527), (31, 52557), (32, 52566), (33, 52626), (34, 52647), (35, 52713), (36, 52731), (37, 52749), (38, 52758),

Gene: Spartacus\_101 Start: 55500, Stop: 56126, Start Num: 6

Candidate Starts for Spartacus\_101:

(Start: 6 @55500 has 29 MA's), (Start: 7 @55518 has 1 MA's), (Start: 12 @55599 has 1 MA's), (13, 55605), (15, 55623), (16, 55650), (18, 55671), (23, 55776), (25, 55815), (26, 55818), (29, 55848), (31, 55878), (32, 55887), (33, 55947), (34, 55968), (35, 56034), (36, 56052), (37, 56070), (38, 56079),

Gene: SuperGrey\_95 Start: 54630, Stop: 55232, Start Num: 6

Candidate Starts for SuperGrey\_95:

(Start: 6 @54630 has 29 MA's), (Start: 7 @54648 has 1 MA's), (Start: 12 @54729 has 1 MA's), (13, 54735), (15, 54753), (16, 54780), (18, 54801), (23, 54906), (25, 54945), (26, 54948), (29, 54978), (31, 55008), (32, 55017), (33, 55077), (34, 55098), (35, 55164), (36, 55182), (37, 55200), (38, 55209),

Gene: Totinger\_97 Start: 52898, Stop: 53500, Start Num: 6

Candidate Starts for Totinger\_97:

(Start: 6 @52898 has 29 MA's), (Start: 7 @52916 has 1 MA's), (Start: 12 @52997 has 1 MA's), (13, 53003), (15, 53021), (16, 53048), (18, 53069), (23, 53174), (25, 53213), (26, 53216), (29, 53246), (31, 53276), (32, 53285), (33, 53345), (34, 53366), (35, 53432), (36, 53450), (37, 53468), (38, 53477),

Gene: Wisp\_77 Start: 48505, Stop: 49029, Start Num: 10

Candidate Starts for Wisp\_77:

(Start: 10 @48505 has 4 MA's), (14, 48529), (17, 48583), (19, 48652), (22, 48670), (24, 48727), (28, 48754),

Gene: Zapner\_101 Start: 50844, Stop: 51446, Start Num: 6

Candidate Starts for Zapner\_101:

(Start: 6 @50844 has 29 MA's), (Start: 7 @50862 has 1 MA's), (Start: 12 @50943 has 1 MA's), (13, 50949), (15, 50967), (16, 50994), (18, 51015), (23, 51120), (25, 51159), (26, 51162), (29, 51192), (31, 51222), (32, 51231), (33, 51291), (34, 51312), (35, 51378), (36, 51396), (37, 51414), (38, 51423),