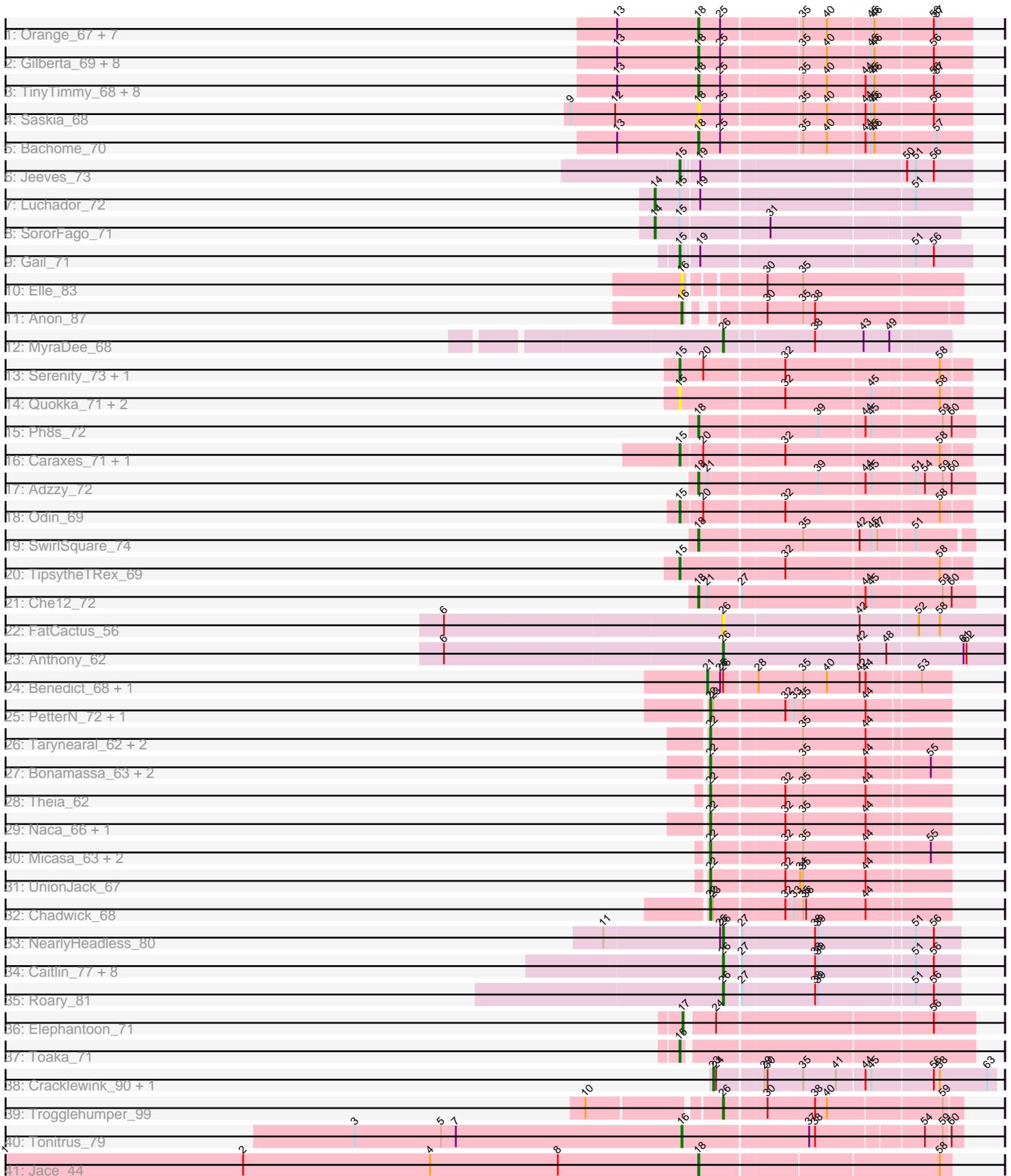# Pham 291059

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 291059 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291059 has 86 members, 13 are drafts.

Phages represented in each track:
• Track 1 : Orange_67, Bowtie_69, Sham4_68, Timothy_68, Munch_68, Flaverint_69, Lucivia_69, Aneem_69
• Track 2 : Gilberta_69, Et2Brutus_67, Mabel_68, MaCh_68, Salz_67, Fibonacci_68, Mulciber_67, Snape_68, Ebony_68
• Track 3 : TinyTimmy_68, Bud_67, Hutc2_67, Insomnia_69, Joselito_69, Petersenfast_66, Jabith_69, Kimba_67, Wolpertinger_66
• Track 4 : Saskia_68
• Track 5 : Bachome_70
• Track 6 : Jeeves_73
• Track 7 : Luchador_72
• Track 8 : SororFago_71
• Track 9 : Gail_71
• Track 10 : Elle_83
• Track 11 : Anon_87
• Track 12 : MyraDee_68
• Track 13 : Serenity_73, Jsquared_73
• Track 14 : Quokka_71, Bradman_72, MajorMajor_71
• Track 15 : Ph8s_72
• Track 16 : Caraxes_71, Superchunk_70
• Track 17 : Adzzy_72
• Track 18 : Odin_69
• Track 19 : SwirlSquare_74
• Track 20 : TipsytheTRex_69
• Track 21 : Che12_72
• Track 22 : FatCactus_56
• Track 23 : Anthony_62
• Track 24 : Benedict_68, Airmid_67
• Track 25 : PetterN_72, Scorpia_68
• Track 26 : Tarynearal_62, Florence4_62, Florence1_60
• Track 27 : Bonamassa_63, George_60, Milcery_63
• Track 28 : Theia_62
• Track 29 : Naca_66, ElTiger69_69
• Track 30 : Micasa_63, MarysWell_63, Dublin_63
• Track 31 : UnionJack_67
• Track 32 : Chadwick_68
• Track 33 : NearlyHeadless_80

• Track 34 : Caitlin_77, Saintus_75, Danforth_80, Expelliarmus_76, Stephig9_78, Astro_79, Groundhog_77, Dixon_78, Smeadley_79
• Track 35 : Roary_81
• Track 36 : Elephantoon_71
• Track 37 : Toaka_71
• Track 38 : Cracklewink_90, Bipper_89
• Track 39 : Trogglehumper_99
• Track 40 : Tonitrus_79
• Track 41 : Jace_44

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

The start number called the most often in the published annotations is 18, it was called in 29 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adzzy_72, Aneem_69, Bachome_70, Bowtie_69, Bud_67, Che12_72, Ebony_68, Et2Brutus_67, Fibonacci_68, Flaverint_69, Gilberta_69, Hutc2_67, Insomnia_69, Jabith_69, Jace_44, Joselito_69, Kimba_67, Lucivia_69, MaCh_68, Mabel_68, Mulciber_67, Munch_68, Orange_67, Petersenfast_66, Ph8s_72, Salz_67, Saskia_68, Sham4_68, Snape_68, SwirlSquare_74, Timothy_68, TinyTimmy_68, Wolpertinger_66,

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

Genes that do not have the "Most Annotated" start:
• Airmid_67, Anon_87, Anthony_62, Astro_79, Benedict_68, Bipper_89, Bonamassa_63, Bradman_72, Caitlin_77, Caraxes_71, Chadwick_68, Cracklewink_90, Danforth_80, Dixon_78, Dublin_63, ElTiger69_69, Elephantoon_71, Elle_83, Expelliarmus_76, FatCactus_56, Florence1_60, Florence4_62, Gail_71, George_60, Groundhog_77, Jeeves_73, Jsquared_73, Luchador_72, MajorMajor_71, MarysWell_63, Micasa_63, Milcery_63, MyraDee_68, Naca_66, NearlyHeadless_80, Odin_69, PetterN_72, Quokka_71, Roary_81, Saintus_75, Scorpia_68, Serenity_73, Smeadley_79, SororFago_71, Stephig9_78, Superchunk_70, Tarynearal_62, Theia_62, TipsytheTRex_69, Toaka_71, Tonitrus_79, Trogglehumper_99, UnionJack_67,

Summary by start number:

Start 14:
• Found in 2 of 86 (2.3%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Luchador_72 (A14), SororFago_71 (A14),

Start 15:
• Found in 14 of 86 (16.3%) of genes in pham
• Manual Annotations of this start: 8 of 73

• Called 85.7% of time when present
• Phage (with cluster) where this start called: Bradman_72 (A2), Caraxes_71 (A2), Gail_71 (A14), Jeeves_73 (A14), Jsquared_73 (A2), MajorMajor_71 (A2), Odin_69 (A2), Quokka_71 (A2), Serenity_73 (A2), Superchunk_70 (A2), TipsytheTRex_69 (A2), Toaka_71 (A9),

Start 16:
• Found in 3 of 86 (3.5%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anon_87 (A15), Elle_83 (A15), Tonitrus_79 (singleton),

Start 17:
• Found in 1 of 86 (1.2%) 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: Elephantoon_71 (A9),

Start 18:
• Found in 33 of 86 (38.4%) of genes in pham
• Manual Annotations of this start: 29 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adzzy_72 (A2), Aneem_69 (A11), Bachome_70 (A11), Bowtie_69 (A11), Bud_67 (A11), Che12_72 (A2), Ebony_68 (A11), Et2Brutus_67 (A11), Fibonacci_68 (A11), Flaverint_69 (A11), Gilberta_69 (A11), Hutc2_67 (A11), Insomnia_69 (A11), Jabith_69 (A11), Jace_44 (singleton), Joselito_69 (A11), Kimba_67 (A11), Lucivia_69 (A11), MaCh_68 (A11), Mabel_68 (A11), Mulciber_67 (A11), Munch_68 (A11), Orange_67 (A11), Petersenfast_66 (A11), Ph8s_72 (A2), Salz_67 (A11), Saskia_68 (A11), Sham4_68 (A11), Snape_68 (A11), SwirlSquare_74 (A2), Timothy_68 (A11), TinyTimmy_68 (A11), Wolpertinger_66 (A11),

Start 21:
• Found in 4 of 86 (4.7%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Airmid_67 (A5), Benedict_68 (A5),

Start 22:
• Found in 16 of 86 (18.6%) of genes in pham
• Manual Annotations of this start: 14 of 73
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bonamassa_63 (A5), Chadwick_68 (A5), Dublin_63 (A5), ElTiger69_69 (A5), Florence1_60 (A5), Florence4_62 (A5), George_60 (A5), MarysWell_63 (A5), Micasa_63 (A5), Milcery_63 (A5), Naca_66 (A5), PetterN_72 (A5), Scorpia_68 (A5), Tarynearal_62 (A5), Theia_62 (A5), UnionJack_67 (A5),

Start 23:
• Found in 5 of 86 (5.8%) of genes in pham
• Manual Annotations of this start: 2 of 73
• Called 40.0% of time when present

• Phage (with cluster) where this start called: Bipper_89 (Y), Cracklewink_90 (Y),

Start 26:
• Found in 17 of 86 (19.8%) of genes in pham
• Manual Annotations of this start: 13 of 73
• Called 88.2% of time when present
• Phage (with cluster) where this start called: Anthony_62 (A20), Astro_79 (A8), Caitlin_77 (A8), Danforth_80 (A8), Dixon_78 (A8), Expelliarmus_76 (A8), FatCactus_56 (A20), Groundhog_77 (A8), MyraDee_68 (A18), NearlyHeadless_80 (A8), Roary_81 (A8), Saintus_75 (A8), Smeadley_79 (A8), Stephig9_78 (A8), Trogglehumper_99 (singleton),

Summary by clusters:

There are 11 clusters represented in this pham: A15, A14, singleton, A11, A9, A18, A20, A2, A5, Y, A8,

Info for manual annotations of cluster A11:
•Start number 18 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A14:
•Start number 14 was manually annotated 2 times for cluster A14.
•Start number 15 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A15:
•Start number 16 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A18:
•Start number 26 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:
•Start number 15 was manually annotated 5 times for cluster A2.
•Start number 18 was manually annotated 4 times for cluster A2.

Info for manual annotations of cluster A20:
•Start number 26 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A5:
•Start number 21 was manually annotated 2 times for cluster A5.
•Start number 22 was manually annotated 14 times for cluster A5.

Info for manual annotations of cluster A8:
•Start number 26 was manually annotated 10 times for cluster A8.

Info for manual annotations of cluster A9:
•Start number 15 was manually annotated 1 time for cluster A9.
•Start number 17 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster Y:
•Start number 23 was manually annotated 2 times for cluster Y.

Gene Information:

Gene: Adzzy_72 Start: 41570, Stop: 41304, Start Num: 18
Candidate Starts for Adzzy_72:
(Start: 18 @41570 has 29 MA's), (Start: 21 @41561 has 2 MA's), (39, 41456), (44, 41411), (45, 41405), (51, 41363), (54, 41354), (59, 41336), (60, 41327),

Gene: Airmid_67 Start: 42203, Stop: 41970, Start Num: 21
Candidate Starts for Airmid_67:
(Start: 21 @42203 has 2 MA's), (25, 42191), (Start: 26 @42188 has 13 MA's), (28, 42158), (35, 42113), (40, 42089), (42, 42056), (44, 42050), (53, 41999),

Gene: Aneem_69 Start: 41746, Stop: 41486, Start Num: 18
Candidate Starts for Aneem_69:
(13, 41827), (Start: 18 @41746 has 29 MA's), (25, 41725), (35, 41650), (40, 41626), (45, 41584), (46, 41581), (56, 41524), (57, 41521),

Gene: Anon_87 Start: 47141, Stop: 46893, Start Num: 16
Candidate Starts for Anon_87:
(Start: 16 @47141 has 2 MA's), (30, 47084), (35, 47048), (38, 47036),

Gene: Anthony_62 Start: 39800, Stop: 39519, Start Num: 26
Candidate Starts for Anthony_62:
(6, 40076), (Start: 26 @39800 has 13 MA's), (42, 39662), (48, 39635), (61, 39560), (62, 39557),

Gene: Astro_79 Start: 43758, Stop: 43531, Start Num: 26
Candidate Starts for Astro_79:
(Start: 26 @43758 has 13 MA's), (27, 43743), (38, 43671), (39, 43668), (51, 43575), (56, 43557),

Gene: Bachome_70 Start: 41742, Stop: 41482, Start Num: 18
Candidate Starts for Bachome_70:
(13, 41823), (Start: 18 @41742 has 29 MA's), (25, 41721), (35, 41646), (40, 41622), (44, 41586), (45, 41580), (46, 41577), (57, 41517),

Gene: Benedict_68 Start: 41935, Stop: 41702, Start Num: 21
Candidate Starts for Benedict_68:
(Start: 21 @41935 has 2 MA's), (25, 41923), (Start: 26 @41920 has 13 MA's), (28, 41890), (35, 41845), (40, 41821), (42, 41788), (44, 41782), (53, 41731),

Gene: Bipper_89 Start: 57383, Stop: 57655, Start Num: 23
Candidate Starts for Bipper_89:
(Start: 23 @57383 has 2 MA's), (24, 57386), (29, 57428), (30, 57431), (35, 57467), (41, 57500), (44, 57527), (45, 57533), (56, 57593), (58, 57599), (63, 57647),

Gene: Bonamassa_63 Start: 41386, Stop: 41156, Start Num: 22
Candidate Starts for Bonamassa_63:
(Start: 22 @41386 has 14 MA's), (35, 41299), (44, 41236), (55, 41176),

Gene: Bowtie_69 Start: 41753, Stop: 41493, Start Num: 18
Candidate Starts for Bowtie_69:
(13, 41834), (Start: 18 @41753 has 29 MA's), (25, 41732), (35, 41657), (40, 41633), (45, 41591), (46, 41588), (56, 41531), (57, 41528),

Gene: Bradman_72 Start: 42151, Stop: 41876, Start Num: 15
Candidate Starts for Bradman_72:
(Start: 15 @42151 has 8 MA's), (32, 42052), (45, 41968), (58, 41905),

Gene: Bud_67 Start: 41300, Stop: 41040, Start Num: 18
Candidate Starts for Bud_67:
(13, 41381), (Start: 18 @41300 has 29 MA's), (25, 41279), (35, 41204), (40, 41180), (44, 41144), (45, 41138), (46, 41135), (56, 41078), (57, 41075),

Gene: Caitlin_77 Start: 43450, Stop: 43223, Start Num: 26
Candidate Starts for Caitlin_77:
(Start: 26 @43450 has 13 MA's), (27, 43435), (38, 43363), (39, 43360), (51, 43267), (56, 43249),

Gene: Caraxes_71 Start: 41338, Stop: 41066, Start Num: 15
Candidate Starts for Caraxes_71:
(Start: 15 @41338 has 8 MA's), (20, 41317), (32, 41242), (58, 41095),

Gene: Chadwick_68 Start: 41682, Stop: 41452, Start Num: 22
Candidate Starts for Chadwick_68:
(Start: 22 @41682 has 14 MA's), (Start: 23 @41679 has 2 MA's), (32, 41613), (33, 41604), (35, 41595), (36, 41592), (44, 41532),

Gene: Che12_72 Start: 41454, Stop: 41188, Start Num: 18
Candidate Starts for Che12_72:
(Start: 18 @41454 has 29 MA's), (Start: 21 @41445 has 2 MA's), (27, 41415), (44, 41295), (45, 41289), (59, 41220), (60, 41211),

Gene: Cracklewink_90 Start: 56578, Stop: 56850, Start Num: 23
Candidate Starts for Cracklewink_90:
(Start: 23 @56578 has 2 MA's), (24, 56581), (29, 56623), (30, 56626), (35, 56662), (41, 56695), (44, 56722), (45, 56728), (56, 56788), (58, 56794), (63, 56842),

Gene: Danforth_80 Start: 43835, Stop: 43608, Start Num: 26
Candidate Starts for Danforth_80:
(Start: 26 @43835 has 13 MA's), (27, 43820), (38, 43748), (39, 43745), (51, 43652), (56, 43634),

Gene: Dixon_78 Start: 43317, Stop: 43090, Start Num: 26
Candidate Starts for Dixon_78:
(Start: 26 @43317 has 13 MA's), (27, 43302), (38, 43230), (39, 43227), (51, 43134), (56, 43116),

Gene: Dublin_63 Start: 41343, Stop: 41113, Start Num: 22
Candidate Starts for Dublin_63:
(Start: 22 @41343 has 14 MA's), (32, 41274), (35, 41256), (44, 41193), (55, 41133),

Gene: Ebony_68 Start: 41317, Stop: 41057, Start Num: 18
Candidate Starts for Ebony_68:
(13, 41398), (Start: 18 @41317 has 29 MA's), (25, 41296), (35, 41221), (40, 41197), (45, 41155), (46, 41152), (56, 41095),

Gene: ElTiger69_69 Start: 42424, Stop: 42194, Start Num: 22
Candidate Starts for ElTiger69_69:
(Start: 22 @42424 has 14 MA's), (32, 42355), (35, 42337), (44, 42274),

Gene: Elephantoon_71 Start: 42028, Stop: 41756, Start Num: 17
Candidate Starts for Elephantoon_71:
(Start: 17 @42028 has 1 MA's), (24, 42004), (56, 41797),

Gene: Elle_83 Start: 46131, Stop: 45871, Start Num: 16
Candidate Starts for Elle_83:
(Start: 16 @46131 has 2 MA's), (30, 46065), (35, 46029),

Gene: Et2Brutus_67 Start: 41280, Stop: 41020, Start Num: 18
Candidate Starts for Et2Brutus_67:
(13, 41361), (Start: 18 @41280 has 29 MA's), (25, 41259), (35, 41184), (40, 41160), (45, 41118), (46, 41115), (56, 41058),

Gene: Expelliarmus_76 Start: 43531, Stop: 43304, Start Num: 26
Candidate Starts for Expelliarmus_76:
(Start: 26 @43531 has 13 MA's), (27, 43516), (38, 43444), (39, 43441), (51, 43348), (56, 43330),

Gene: FatCactus_56 Start: 38730, Stop: 38452, Start Num: 26
Candidate Starts for FatCactus_56:
(6, 39006), (Start: 26 @38730 has 13 MA's), (42, 38595), (52, 38538), (58, 38517),

Gene: Fibonacci_68 Start: 41286, Stop: 41026, Start Num: 18
Candidate Starts for Fibonacci_68:
(13, 41367), (Start: 18 @41286 has 29 MA's), (25, 41265), (35, 41190), (40, 41166), (45, 41124), (46, 41121), (56, 41064),

Gene: Flaverint_69 Start: 41744, Stop: 41484, Start Num: 18
Candidate Starts for Flaverint_69:
(13, 41825), (Start: 18 @41744 has 29 MA's), (25, 41723), (35, 41648), (40, 41624), (45, 41582), (46, 41579), (56, 41522), (57, 41519),

Gene: Florence1_60 Start: 40898, Stop: 40668, Start Num: 22
Candidate Starts for Florence1_60:
(Start: 22 @40898 has 14 MA's), (35, 40811), (44, 40748),

Gene: Florence4_62 Start: 40898, Stop: 40668, Start Num: 22
Candidate Starts for Florence4_62:
(Start: 22 @40898 has 14 MA's), (35, 40811), (44, 40748),

Gene: Gail_71 Start: 43173, Stop: 42898, Start Num: 15
Candidate Starts for Gail_71:
(Start: 15 @43173 has 8 MA's), (19, 43158), (51, 42954), (56, 42936),

Gene: George_60 Start: 41130, Stop: 40900, Start Num: 22
Candidate Starts for George_60:
(Start: 22 @41130 has 14 MA's), (35, 41043), (44, 40980), (55, 40920),

Gene: Gilberta_69 Start: 41737, Stop: 41477, Start Num: 18
Candidate Starts for Gilberta_69:
(13, 41818), (Start: 18 @41737 has 29 MA's), (25, 41716), (35, 41641), (40, 41617), (45, 41575), (46, 41572), (56, 41515),

Gene: Groundhog_77 Start: 43587, Stop: 43366, Start Num: 26

Candidate Starts for Groundhog_77:
(Start: 26 @43587 has 13 MA's), (27, 43572), (38, 43500), (39, 43497), (51, 43404), (56, 43386),

Gene: Hutc2_67 Start: 41286, Stop: 41026, Start Num: 18
Candidate Starts for Hutc2_67:
(13, 41367), (Start: 18 @41286 has 29 MA's), (25, 41265), (35, 41190), (40, 41166), (44, 41130), (45, 41124), (46, 41121), (56, 41064), (57, 41061),

Gene: Insomnia_69 Start: 41725, Stop: 41465, Start Num: 18
Candidate Starts for Insomnia_69:
(13, 41806), (Start: 18 @41725 has 29 MA's), (25, 41704), (35, 41629), (40, 41605), (44, 41569), (45, 41563), (46, 41560), (56, 41503), (57, 41500),

Gene: Jabith_69 Start: 41742, Stop: 41482, Start Num: 18
Candidate Starts for Jabith_69:
(13, 41823), (Start: 18 @41742 has 29 MA's), (25, 41721), (35, 41646), (40, 41622), (44, 41586), (45, 41580), (46, 41577), (56, 41520), (57, 41517),

Gene: Jace_44 Start: 31248, Stop: 31490, Start Num: 18
Candidate Starts for Jace_44:
(1, 30549), (2, 30789), (4, 30978), (8, 31107), (Start: 18 @31248 has 29 MA's), (58, 31479),

Gene: Jeeves_73 Start: 42154, Stop: 41879, Start Num: 15
Candidate Starts for Jeeves_73:
(Start: 15 @42154 has 8 MA's), (19, 42139), (50, 41944), (51, 41935), (56, 41917),

Gene: Joselito_69 Start: 41762, Stop: 41502, Start Num: 18
Candidate Starts for Joselito_69:
(13, 41843), (Start: 18 @41762 has 29 MA's), (25, 41741), (35, 41666), (40, 41642), (44, 41606), (45, 41600), (46, 41597), (56, 41540), (57, 41537),

Gene: Jsquared_73 Start: 42281, Stop: 42006, Start Num: 15
Candidate Starts for Jsquared_73:
(Start: 15 @42281 has 8 MA's), (20, 42257), (32, 42182), (58, 42035),

Gene: Kimba_67 Start: 41262, Stop: 41002, Start Num: 18
Candidate Starts for Kimba_67:
(13, 41343), (Start: 18 @41262 has 29 MA's), (25, 41241), (35, 41166), (40, 41142), (44, 41106), (45, 41100), (46, 41097), (56, 41040), (57, 41037),

Gene: Luchador_72 Start: 43662, Stop: 43360, Start Num: 14
Candidate Starts for Luchador_72:
(Start: 14 @43662 has 2 MA's), (Start: 15 @43638 has 8 MA's), (19, 43620), (51, 43416),

Gene: Lucivia_69 Start: 41795, Stop: 41535, Start Num: 18
Candidate Starts for Lucivia_69:
(13, 41876), (Start: 18 @41795 has 29 MA's), (25, 41774), (35, 41699), (40, 41675), (45, 41633), (46, 41630), (56, 41573), (57, 41570),

Gene: MaCh_68 Start: 41741, Stop: 41481, Start Num: 18
Candidate Starts for MaCh_68:
(13, 41822), (Start: 18 @41741 has 29 MA's), (25, 41720), (35, 41645), (40, 41621), (45, 41579), (46, 41576), (56, 41519),

Gene: Mabel_68 Start: 41742, Stop: 41482, Start Num: 18
Candidate Starts for Mabel_68:
(13, 41823), (Start: 18 @41742 has 29 MA's), (25, 41721), (35, 41646), (40, 41622), (45, 41580), (46, 41577), (56, 41520),

Gene: MajorMajor_71 Start: 42151, Stop: 41876, Start Num: 15
Candidate Starts for MajorMajor_71:
(Start: 15 @42151 has 8 MA's), (32, 42052), (45, 41968), (58, 41905),

Gene: MarysWell_63 Start: 41586, Stop: 41356, Start Num: 22
Candidate Starts for MarysWell_63:
(Start: 22 @41586 has 14 MA's), (32, 41517), (35, 41499), (44, 41436), (55, 41376),

Gene: Micasa_63 Start: 41308, Stop: 41078, Start Num: 22
Candidate Starts for Micasa_63:
(Start: 22 @41308 has 14 MA's), (32, 41239), (35, 41221), (44, 41158), (55, 41098),

Gene: Milcery_63 Start: 41098, Stop: 40868, Start Num: 22
Candidate Starts for Milcery_63:
(Start: 22 @41098 has 14 MA's), (35, 41011), (44, 40948), (55, 40888),

Gene: Mulciber_67 Start: 41283, Stop: 41023, Start Num: 18
Candidate Starts for Mulciber_67:
(13, 41364), (Start: 18 @41283 has 29 MA's), (25, 41262), (35, 41187), (40, 41163), (45, 41121), (46, 41118), (56, 41061),

Gene: Munch_68 Start: 41746, Stop: 41486, Start Num: 18
Candidate Starts for Munch_68:
(13, 41827), (Start: 18 @41746 has 29 MA's), (25, 41725), (35, 41650), (40, 41626), (45, 41584), (46, 41581), (56, 41524), (57, 41521),

Gene: MyraDee_68 Start: 40150, Stop: 39935, Start Num: 26
Candidate Starts for MyraDee_68:
(Start: 26 @40150 has 13 MA's), (38, 40063), (43, 40015), (49, 39991),

Gene: Naca_66 Start: 42496, Stop: 42266, Start Num: 22
Candidate Starts for Naca_66:
(Start: 22 @42496 has 14 MA's), (32, 42427), (35, 42409), (44, 42346),

Gene: NearlyHeadless_80 Start: 43601, Stop: 43374, Start Num: 26
Candidate Starts for NearlyHeadless_80:
(11, 43718), (25, 43604), (Start: 26 @43601 has 13 MA's), (27, 43586), (38, 43514), (39, 43511), (51, 43418), (56, 43400),

Gene: Odin_69 Start: 41725, Stop: 41453, Start Num: 15
Candidate Starts for Odin_69:
(Start: 15 @41725 has 8 MA's), (20, 41704), (32, 41629), (58, 41482),

Gene: Orange_67 Start: 41295, Stop: 41035, Start Num: 18
Candidate Starts for Orange_67:
(13, 41376), (Start: 18 @41295 has 29 MA's), (25, 41274), (35, 41199), (40, 41175), (45, 41133), (46, 41130), (56, 41073), (57, 41070),

Gene: Petersenfast_66 Start: 41294, Stop: 41034, Start Num: 18
Candidate Starts for Petersenfast_66:
(13, 41375), (Start: 18 @41294 has 29 MA's), (25, 41273), (35, 41198), (40, 41174), (44, 41138), (45, 41132), (46, 41129), (56, 41072), (57, 41069),

Gene: PetterN_72 Start: 42468, Stop: 42238, Start Num: 22
Candidate Starts for PetterN_72:
(Start: 22 @42468 has 14 MA's), (Start: 23 @42465 has 2 MA's), (32, 42399), (33, 42390), (35, 42381), (44, 42318),

Gene: Ph8s_72 Start: 41787, Stop: 41521, Start Num: 18
Candidate Starts for Ph8s_72:
(Start: 18 @41787 has 29 MA's), (39, 41673), (44, 41628), (45, 41622), (59, 41553), (60, 41544),

Gene: Quokka_71 Start: 42151, Stop: 41876, Start Num: 15
Candidate Starts for Quokka_71:
(Start: 15 @42151 has 8 MA's), (32, 42052), (45, 41968), (58, 41905),

Gene: Roary_81 Start: 43837, Stop: 43610, Start Num: 26
Candidate Starts for Roary_81:
(Start: 26 @43837 has 13 MA's), (27, 43822), (38, 43750), (39, 43747), (51, 43654), (56, 43636),

Gene: Saintus_75 Start: 40485, Stop: 40258, Start Num: 26
Candidate Starts for Saintus_75:
(Start: 26 @40485 has 13 MA's), (27, 40470), (38, 40398), (39, 40395), (51, 40302), (56, 40284),

Gene: Salz_67 Start: 41209, Stop: 40949, Start Num: 18
Candidate Starts for Salz_67:
(13, 41290), (Start: 18 @41209 has 29 MA's), (25, 41188), (35, 41113), (40, 41089), (45, 41047), (46, 41044), (56, 40987),

Gene: Saskia_68 Start: 41293, Stop: 41033, Start Num: 18
Candidate Starts for Saskia_68:
(9, 41422), (12, 41377), (Start: 18 @41293 has 29 MA's), (25, 41272), (35, 41197), (40, 41173), (44, 41137), (45, 41131), (46, 41128), (56, 41071),

Gene: Scorpia_68 Start: 42039, Stop: 41809, Start Num: 22
Candidate Starts for Scorpia_68:
(Start: 22 @42039 has 14 MA's), (Start: 23 @42036 has 2 MA's), (32, 41970), (33, 41961), (35, 41952), (44, 41889),

Gene: Serenity_73 Start: 42348, Stop: 42073, Start Num: 15
Candidate Starts for Serenity_73:
(Start: 15 @42348 has 8 MA's), (20, 42324), (32, 42249), (58, 42102),

Gene: Sham4_68 Start: 41293, Stop: 41033, Start Num: 18
Candidate Starts for Sham4_68:
(13, 41374), (Start: 18 @41293 has 29 MA's), (25, 41272), (35, 41197), (40, 41173), (45, 41131), (46, 41128), (56, 41071), (57, 41068),

Gene: Smeadley_79 Start: 43653, Stop: 43426, Start Num: 26
Candidate Starts for Smeadley_79:

(Start: 26 @43653 has 13 MA's), (27, 43638), (38, 43566), (39, 43563), (51, 43470), (56, 43452),

Gene: Snape_68 Start: 41285, Stop: 41025, Start Num: 18
Candidate Starts for Snape_68:
(13, 41366), (Start: 18 @41285 has 29 MA's), (25, 41264), (35, 41189), (40, 41165), (45, 41123), (46, 41120), (56, 41063),

Gene: SororFago_71 Start: 43379, Stop: 43092, Start Num: 14
Candidate Starts for SororFago_71:
(Start: 14 @43379 has 2 MA's), (Start: 15 @43355 has 8 MA's), (31, 43274),

Gene: Stephig9_78 Start: 43592, Stop: 43365, Start Num: 26
Candidate Starts for Stephig9_78:
(Start: 26 @43592 has 13 MA's), (27, 43577), (38, 43505), (39, 43502), (51, 43409), (56, 43391),

Gene: Superchunk_70 Start: 41338, Stop: 41066, Start Num: 15
Candidate Starts for Superchunk_70:
(Start: 15 @41338 has 8 MA's), (20, 41317), (32, 41242), (58, 41095),

Gene: SwirlSquare_74 Start: 42056, Stop: 41799, Start Num: 18
Candidate Starts for SwirlSquare_74:
(Start: 18 @42056 has 29 MA's), (35, 41957), (42, 41903), (45, 41891), (47, 41885), (51, 41852),

Gene: Tarynearal_62 Start: 41084, Stop: 40854, Start Num: 22
Candidate Starts for Tarynearal_62:
(Start: 22 @41084 has 14 MA's), (35, 40997), (44, 40934),

Gene: Theia_62 Start: 41570, Stop: 41340, Start Num: 22
Candidate Starts for Theia_62:
(Start: 22 @41570 has 14 MA's), (32, 41501), (35, 41483), (44, 41420),

Gene: Timothy_68 Start: 41262, Stop: 41002, Start Num: 18
Candidate Starts for Timothy_68:
(13, 41343), (Start: 18 @41262 has 29 MA's), (25, 41241), (35, 41166), (40, 41142), (45, 41100), (46, 41097), (56, 41040), (57, 41037),

Gene: TinyTimmy_68 Start: 41255, Stop: 40995, Start Num: 18
Candidate Starts for TinyTimmy_68:
(13, 41336), (Start: 18 @41255 has 29 MA's), (25, 41234), (35, 41159), (40, 41135), (44, 41099), (45, 41093), (46, 41090), (56, 41033), (57, 41030),

Gene: TipsytheTRex_69 Start: 42350, Stop: 42075, Start Num: 15
Candidate Starts for TipsytheTRex_69:
(Start: 15 @42350 has 8 MA's), (32, 42251), (58, 42104),

Gene: Toaka_71 Start: 42411, Stop: 42136, Start Num: 15
Candidate Starts for Toaka_71:
(Start: 15 @42411 has 8 MA's),

Gene: Tonitrus_79 Start: 55218, Stop: 55484, Start Num: 16
Candidate Starts for Tonitrus_79:
(3, 54888), (5, 54975), (7, 54990), (Start: 16 @55218 has 2 MA's), (37, 55341), (38, 55347), (54, 55449), (59, 55467), (60, 55473),

Gene: Trogglehumper_99 Start: 71065, Stop: 70838, Start Num: 26
Candidate Starts for Trogglehumper_99:
(10, 71179), (Start: 26 @71065 has 13 MA's), (30, 71026), (38, 70978), (40, 70966), (59, 70855),

Gene: UnionJack_67 Start: 41521, Stop: 41291, Start Num: 22
Candidate Starts for UnionJack_67:
(Start: 22 @41521 has 14 MA's), (32, 41452), (34, 41437), (35, 41434), (44, 41371),

Gene: Wolpertinger_66 Start: 41294, Stop: 41034, Start Num: 18
Candidate Starts for Wolpertinger_66:
(13, 41375), (Start: 18 @41294 has 29 MA's), (25, 41273), (35, 41198), (40, 41174), (44, 41138), (45, 41132), (46, 41129), (56, 41072), (57, 41069),