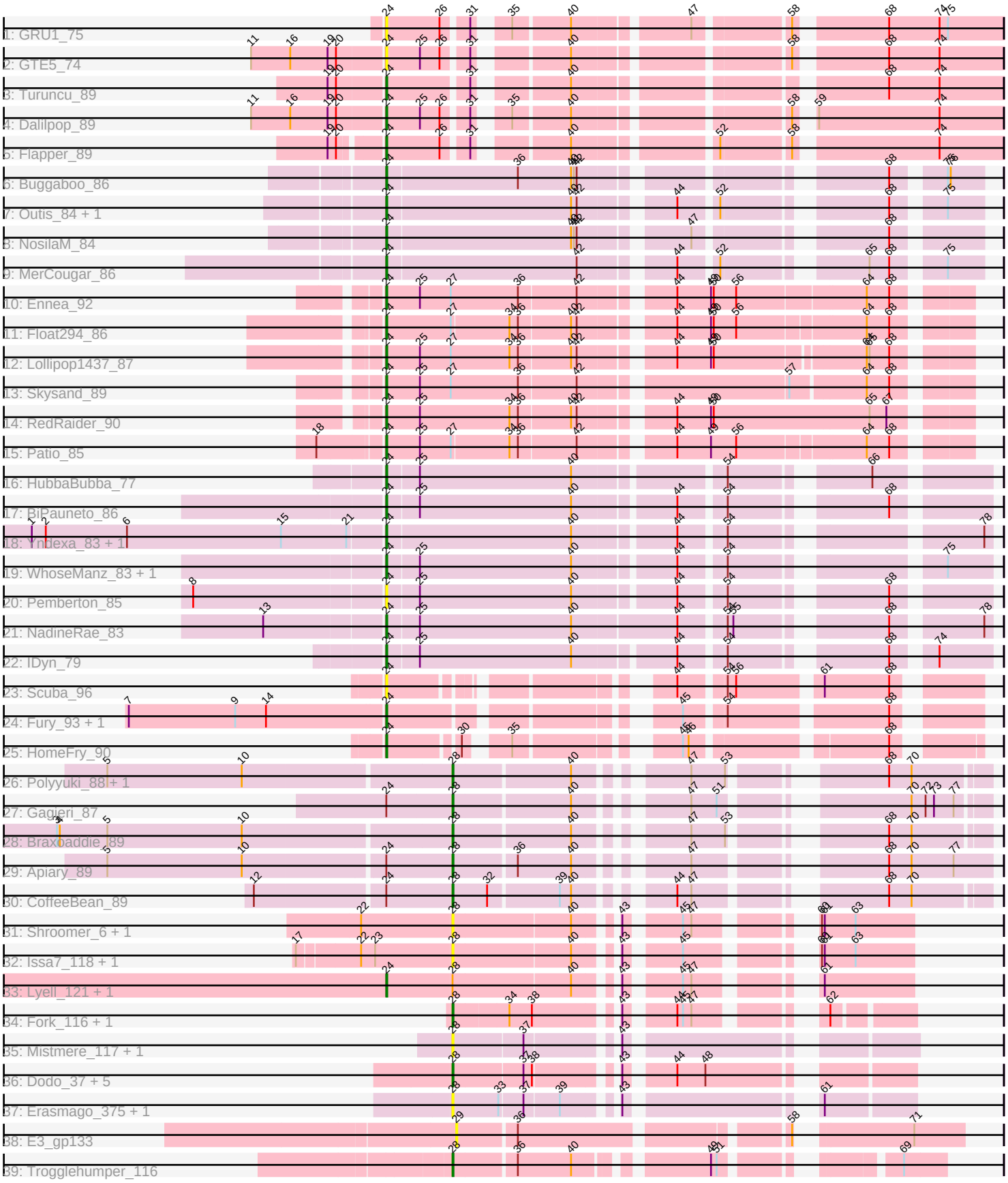
Pham 301431


1: GRU1_75
2: GTE5_74
3: Turuncu_89
4: Dalilpop_89
5: Flapper_89
6: Buggaboo_86
7: Outis_84 + 1
8: NosilaM_84
9: MerCougar_86
10: Ennea_92
11: Float294_86
12: Lollipop1437_87
13: Skysand_89
14: RedRaider_90
15: Patio_85
16: HubbaBubba_77
17: BiPauneto_86
18: Yndexa_83 + 1
19: WhoseManz_83 + 1
20: Pemberton_85
21: NadineRae_83
22: IDyn_79
23: Scuba_96
24: Fury_93 + 1
25: HomeFry_90
26: Polyyuki_88 + 1
27: Gagieri_87
28: Braxbaddie_89
29: Apiary_89
30: CoffeeBean_89
31: Shroomer_6 + 1
32: Issa7_118 + 1
33: Lyell_121 + 1
34: Fork_116 + 1
35: Mistmere_117 + 1
36: Dodo_37 + 5
37: Erasmago_375 + 1
38: E3_gp133
39: Trogglehumper_116

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 301431 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301431 has 55 members, 13 are drafts.

Phages represented in each track:
- Track 1 : GRU1_75
- Track 2 : GTE5_74
- Track 3 : Turuncu_89
- Track 4 : Dalilpop_89
- Track 5 : Flapper_89
- Track 6 : Buggaboo_86
- Track 7 : Outis_84, StarStruck_84
- Track 8 : NosilaM_84
- Track 9 : MerCougar_86
- Track 10 : Ennea_92
- Track 11 : Float294_86
- Track 12 : Lollipop1437_87
- Track 13 : Skysand_89
- Track 14 : RedRaider_90
- Track 15 : Patio_85
- Track 16 : HubbaBubba_77
- Track 17 : BiPauneto_86
- Track 18 : Yndexa_83, Sukkupi_83
- Track 19 : WhoseManz_83, Marietta_83
- Track 20 : Pemberton_85
- Track 21 : NadineRae_83
- Track 22 : IDyn_79
- Track 23 : Scuba_96
- Track 24 : Fury_93, Pleakley_93
- Track 25 : HomeFry_90
- Track 26 : Polyyuki_88, Maselop_89
- Track 27 : Gagieri_87
- Track 28 : Braxoaddie_89
- Track 29 : Apiary_89
- Track 30 : CoffeeBean_89
- Track 31 : Shroomer_6, Shroomer_125
- Track 32 : Issa7_118, Issa7_4
- Track 33 : Lyell_121, Lyell_6
- Track 34 : Fork_116, Fork_4
- Track 35 : Mistmere_117, Mistmere_5
- Track 36 : Dodo_37, PauloDiaboli_36, A3Wally_36, A3Wally_389, PauloDiaboli_391, Dodo_383

• Track 37 : Erasmago_375, Erasmago_37
• Track 38 : E3_gp133
• Track 39 : Trogglehumper_116

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

The start number called the most often in the published annotations is 24, it was called in 27 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• BiPauneto_86, Buggaboo_86, Dalilpop_89, Ennea_92, Flapper_89, Float294_86, Fury_93, GRU1_75, GTE5_74, HomeFry_90, HubbaBubba_77, IDyn_79, Lollipop1437_87, Lyell_121, Lyell_6, Marietta_83, MerCougar_86, NadineRae_83, NosilaM_84, Outis_84, Patio_85, Pemberton_85, Pleakley_93, RedRaider_90, Scuba_96, Skysand_89, StarStruck_84, Sukkupi_83, Turuncu_89, WhoseManz_83, Yndexa_83,

Genes that have the "Most Annotated" start but do not call it:
• Apiary_89, CoffeeBean_89, Gagieri_87,

Genes that do not have the "Most Annotated" start:
• A3Wally_36, A3Wally_389, Braxoaddie_89, Dodo_37, Dodo_383, E3_gp133, Erasmago_37, Erasmago_375, Fork_116, Fork_4, Issa7_118, Issa7_4, Maselop_89, Mistmere_117, Mistmere_5, PauloDiaboli_36, PauloDiaboli_391, Polyyuki_88, Shroomer_125, Shroomer_6, Trogglehumper_116,

Summary by start number:

Start 24:
• Found in 34 of 55 (61.8%) of genes in pham
• Manual Annotations of this start: 27 of 42
• Called 91.2% of time when present
• Phage (with cluster) where this start called: BiPauneto_86 (CR4), Buggaboo_86 (CR2), Dalilpop_89 (CR1), Ennea_92 (CR3), Flapper_89 (CR1), Float294_86 (CR3), Fury_93 (CR5), GRU1_75 (CR1), GTE5_74 (CR1), HomeFry_90 (CR5), HubbaBubba_77 (CR4), IDyn_79 (CR4), Lollipop1437_87 (CR3), Lyell_121 (ED2), Lyell_6 (ED2), Marietta_83 (CR4), MerCougar_86 (CR2), NadineRae_83 (CR4), NosilaM_84 (CR2), Outis_84 (CR2), Patio_85 (CR3), Pemberton_85 (CR4), Pleakley_93 (CR5), RedRaider_90 (CR3), Scuba_96 (CR5), Skysand_89 (CR3), StarStruck_84 (CR2), Sukkupi_83 (CR4), Turuncu_89 (CR1), WhoseManz_83 (CR4), Yndexa_83 (CR4),

Start 28:
• Found in 25 of 55 (45.5%) of genes in pham
• Manual Annotations of this start: 15 of 42
• Called 92.0% of time when present
• Phage (with cluster) where this start called: A3Wally_36 (GD1), A3Wally_389 (GD1), Apiary_89 (CR6), Braxoaddie_89 (CR6), CoffeeBean_89 (CR6), Dodo_37 (GD1), Dodo_383 (GD1), Erasmago_37 (GD2), Erasmago_375 (GD2), Fork_116 (ED2), Fork_4 (ED2), Gagieri_87 (CR6), Issa7_118 (ED2), Issa7_4 (ED2), Maselop_89

(CR6), Mistmere_117 (ED3), Mistmere_5 (ED3), PauloDiaboli_36 (GD1), PauloDiaboli_391 (GD1), Polyyuki_88 (CR6), Shroomer_125 (ED2), Shroomer_6 (ED2), Trogglehumper_116 (singleton),

Start 29:
• Found in 1 of 55 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: E3_gp133 (singleton),

Summary by clusters:

There are 11 clusters represented in this pham: CR2, CR3, singleton, CR1, CR6, CR4, CR5, GD2, ED2, ED3, GD1,

Info for manual annotations of cluster CR1:
•Start number 24 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 24 was manually annotated 5 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 24 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 24 was manually annotated 8 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 24 was manually annotated 3 times for cluster CR5.

Info for manual annotations of cluster CR6:
•Start number 28 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster ED2:
•Start number 24 was manually annotated 2 times for cluster ED2.
•Start number 28 was manually annotated 2 times for cluster ED2.

Info for manual annotations of cluster GD1:
•Start number 28 was manually annotated 6 times for cluster GD1.

Gene Information:

Gene: A3Wally_36 Start: 12363, Stop: 12773, Start Num: 28
Candidate Starts for A3Wally_36:
(Start: 28 @12363 has 15 MA's), (37, 12435), (38, 12444), (43, 12516), (44, 12558), (48, 12588),

Gene: A3Wally_389 Start: 191584, Stop: 191994, Start Num: 28
Candidate Starts for A3Wally_389:

(Start: 28 @191584 has 15 MA's), (37, 191656), (38, 191665), (43, 191737), (44, 191779), (48, 191809),

Gene: Apiary_89 Start: 62187, Stop: 62666, Start Num: 28
Candidate Starts for Apiary_89:
(5, 61830), (10, 61974), (Start: 24 @62118 has 27 MA's), (Start: 28 @62187 has 15 MA's), (36, 62250), (40, 62307), (47, 62397), (68, 62556), (70, 62580), (77, 62625),

Gene: BiPauneto_86 Start: 61366, Stop: 61935, Start Num: 24
Candidate Starts for BiPauneto_86:
(Start: 24 @61366 has 27 MA's), (25, 61399), (40, 61561), (44, 61660), (54, 61702), (68, 61843),

Gene: Braxoaddie_89 Start: 62185, Stop: 62655, Start Num: 28
Candidate Starts for Braxoaddie_89:
(3, 61774), (4, 61777), (5, 61828), (10, 61972), (Start: 28 @62185 has 15 MA's), (40, 62305), (47, 62395), (53, 62431), (68, 62554), (70, 62578),

Gene: Buggaboo_86 Start: 63771, Stop: 64322, Start Num: 24
Candidate Starts for Buggaboo_86:
(Start: 24 @63771 has 27 MA's), (36, 63909), (40, 63966), (41, 63969), (42, 63972), (68, 64239), (75, 64284), (76, 64287),

Gene: CoffeeBean_89 Start: 62131, Stop: 62601, Start Num: 28
Candidate Starts for CoffeeBean_89:
(12, 61930), (Start: 24 @62062 has 27 MA's), (Start: 28 @62131 has 15 MA's), (32, 62167), (39, 62239), (40, 62251), (44, 62326), (47, 62341), (68, 62500), (70, 62524),

Gene: Dalilpop_89 Start: 63669, Stop: 64238, Start Num: 24
Candidate Starts for Dalilpop_89:
(11, 63531), (16, 63573), (19, 63612), (20, 63621), (Start: 24 @63669 has 27 MA's), (25, 63705), (26, 63726), (31, 63750), (35, 63774), (40, 63831), (58, 64032), (59, 64041), (74, 64170),

Gene: Dodo_37 Start: 12210, Stop: 12620, Start Num: 28
Candidate Starts for Dodo_37:
(Start: 28 @12210 has 15 MA's), (37, 12282), (38, 12291), (43, 12363), (44, 12405), (48, 12435),

Gene: Dodo_383 Start: 190410, Stop: 190820, Start Num: 28
Candidate Starts for Dodo_383:
(Start: 28 @190410 has 15 MA's), (37, 190482), (38, 190491), (43, 190563), (44, 190605), (48, 190635),

Gene: E3_gp133 Start: 88048, Stop: 88518, Start Num: 29
Candidate Starts for E3_gp133:
(29, 88048), (36, 88108), (58, 88366), (71, 88465),

Gene: Ennea_92 Start: 63889, Stop: 64464, Start Num: 24
Candidate Starts for Ennea_92:
(Start: 24 @63889 has 27 MA's), (25, 63925), (27, 63958), (36, 64030), (42, 64090), (44, 64174), (49, 64210), (50, 64213), (56, 64237), (64, 64369), (68, 64393),

Gene: Erasmago_375 Start: 188148, Stop: 188558, Start Num: 28
Candidate Starts for Erasmago_375:

(Start: 28 @188148 has 15 MA's), (33, 188196), (37, 188220), (39, 188256), (43, 188301), (61, 188466),

Gene: Erasmago_37 Start: 13639, Stop: 14049, Start Num: 28
Candidate Starts for Erasmago_37:
(Start: 28 @13639 has 15 MA's), (33, 13687), (37, 13711), (39, 13747), (43, 13792), (61, 13957),

Gene: Flapper_89 Start: 63538, Stop: 64107, Start Num: 24
Candidate Starts for Flapper_89:
(19, 63490), (20, 63499), (Start: 24 @63538 has 27 MA's), (26, 63595), (31, 63619), (40, 63700), (52, 63832), (58, 63901), (74, 64039),

Gene: Float294_86 Start: 63789, Stop: 64358, Start Num: 24
Candidate Starts for Float294_86:
(Start: 24 @63789 has 27 MA's), (27, 63858), (34, 63918), (36, 63927), (40, 63981), (42, 63987), (44, 64071), (49, 64107), (50, 64110), (56, 64134), (64, 64263), (68, 64287),

Gene: Fork_116 Start: 60897, Stop: 60511, Start Num: 28
Candidate Starts for Fork_116:
(Start: 28 @60897 has 15 MA's), (34, 60840), (38, 60816), (43, 60741), (44, 60699), (45, 60693), (47, 60684), (62, 60588),

Gene: Fork_4 Start: 1906, Stop: 1520, Start Num: 28
Candidate Starts for Fork_4:
(Start: 28 @1906 has 15 MA's), (34, 1849), (38, 1825), (43, 1750), (44, 1708), (45, 1702), (47, 1693), (62, 1597),

Gene: Fury_93 Start: 61531, Stop: 62052, Start Num: 24
Candidate Starts for Fury_93:
(7, 61261), (9, 61375), (14, 61408), (Start: 24 @61531 has 27 MA's), (45, 61783), (54, 61819), (68, 61975),

Gene: GRU1_75 Start: 55116, Stop: 55685, Start Num: 24
Candidate Starts for GRU1_75:
(Start: 24 @55116 has 27 MA's), (26, 55173), (31, 55197), (35, 55221), (40, 55278), (47, 55389), (58, 55479), (68, 55563), (74, 55617), (75, 55626),

Gene: GTE5_74 Start: 56009, Stop: 56578, Start Num: 24
Candidate Starts for GTE5_74:
(11, 55871), (16, 55913), (19, 55952), (20, 55961), (Start: 24 @56009 has 27 MA's), (25, 56045), (26, 56066), (31, 56090), (40, 56171), (58, 56372), (68, 56456), (74, 56510),

Gene: Gagieri_87 Start: 61764, Stop: 62234, Start Num: 28
Candidate Starts for Gagieri_87:
(Start: 24 @61695 has 27 MA's), (Start: 28 @61764 has 15 MA's), (40, 61884), (47, 61974), (51, 62001), (70, 62157), (72, 62172), (73, 62181), (77, 62202),

Gene: HomeFry_90 Start: 60610, Stop: 61113, Start Num: 24
Candidate Starts for HomeFry_90:
(Start: 24 @60610 has 27 MA's), (30, 60679), (35, 60712), (45, 60850), (46, 60856), (68, 61039),

Gene: HubbaBubba_77 Start: 57693, Stop: 58262, Start Num: 24
Candidate Starts for HubbaBubba_77:

(Start: 24 @57693 has 27 MA's), (25, 57726), (40, 57888), (54, 58029), (66, 58152),

Gene: IDyn_79 Start: 58347, Stop: 58916, Start Num: 24
Candidate Starts for IDyn_79:
(Start: 24 @58347 has 27 MA's), (25, 58380), (40, 58542), (44, 58641), (54, 58683), (68, 58824), (74, 58860),

Gene: Issa7_118 Start: 61084, Stop: 60686, Start Num: 28
Candidate Starts for Issa7_118:
(17, 61243), (22, 61180), (23, 61165), (Start: 28 @61084 has 15 MA's), (40, 60961), (43, 60928), (45, 60880), (60, 60784), (61, 60781), (63, 60748),

Gene: Issa7_4 Start: 1926, Stop: 1528, Start Num: 28
Candidate Starts for Issa7_4:
(17, 2085), (22, 2022), (23, 2007), (Start: 28 @1926 has 15 MA's), (40, 1803), (43, 1770), (45, 1722), (60, 1626), (61, 1623), (63, 1590),

Gene: Lollipop1437_87 Start: 63571, Stop: 64140, Start Num: 24
Candidate Starts for Lollipop1437_87:
(Start: 24 @63571 has 27 MA's), (25, 63607), (27, 63640), (34, 63703), (36, 63712), (40, 63766), (42, 63772), (44, 63856), (49, 63892), (50, 63895), (64, 64045), (65, 64048), (68, 64069),

Gene: Lyell_121 Start: 61268, Stop: 60801, Start Num: 24
Candidate Starts for Lyell_121:
(Start: 24 @61268 has 27 MA's), (Start: 28 @61199 has 15 MA's), (40, 61076), (43, 61043), (45, 60995), (47, 60986), (61, 60896),

Gene: Lyell_6 Start: 2101, Stop: 1634, Start Num: 24
Candidate Starts for Lyell_6:
(Start: 24 @2101 has 27 MA's), (Start: 28 @2032 has 15 MA's), (40, 1909), (43, 1876), (45, 1828), (47, 1819), (61, 1729),

Gene: Marietta_83 Start: 59020, Stop: 59589, Start Num: 24
Candidate Starts for Marietta_83:
(Start: 24 @59020 has 27 MA's), (25, 59053), (40, 59215), (44, 59314), (54, 59356), (75, 59542),

Gene: Maselop_89 Start: 62196, Stop: 62666, Start Num: 28
Candidate Starts for Maselop_89:
(5, 61839), (10, 61983), (Start: 28 @62196 has 15 MA's), (40, 62316), (47, 62406), (53, 62442), (68, 62565), (70, 62589),

Gene: MerCougar_86 Start: 63955, Stop: 64506, Start Num: 24
Candidate Starts for MerCougar_86:
(Start: 24 @63955 has 27 MA's), (42, 64156), (44, 64240), (52, 64276), (65, 64402), (68, 64423), (75, 64468),

Gene: Mistmere_117 Start: 59358, Stop: 58945, Start Num: 28
Candidate Starts for Mistmere_117:
(Start: 28 @59358 has 15 MA's), (37, 59286), (43, 59205),

Gene: Mistmere_5 Start: 1757, Stop: 1344, Start Num: 28
Candidate Starts for Mistmere_5:
(Start: 28 @1757 has 15 MA's), (37, 1685), (43, 1604),

Gene: NadineRae_83 Start: 58857, Stop: 59435, Start Num: 24
Candidate Starts for NadineRae_83:
(13, 58734), (Start: 24 @58857 has 27 MA's), (25, 58890), (40, 59052), (44, 59160), (54, 59202), (55, 59208), (68, 59343), (78, 59427),

Gene: NosilaM_84 Start: 62812, Stop: 63363, Start Num: 24
Candidate Starts for NosilaM_84:
(Start: 24 @62812 has 27 MA's), (40, 63007), (41, 63010), (42, 63013), (47, 63112), (68, 63280),

Gene: Outis_84 Start: 63228, Stop: 63779, Start Num: 24
Candidate Starts for Outis_84:
(Start: 24 @63228 has 27 MA's), (40, 63423), (42, 63429), (44, 63513), (52, 63549), (68, 63696), (75, 63741),

Gene: Patio_85 Start: 62788, Stop: 63357, Start Num: 24
Candidate Starts for Patio_85:
(18, 62725), (Start: 24 @62788 has 27 MA's), (25, 62824), (27, 62857), (34, 62917), (36, 62926), (42, 62986), (44, 63070), (49, 63106), (56, 63133), (64, 63262), (68, 63286),

Gene: PauloDiaboli_36 Start: 12203, Stop: 12613, Start Num: 28
Candidate Starts for PauloDiaboli_36:
(Start: 28 @12203 has 15 MA's), (37, 12275), (38, 12284), (43, 12356), (44, 12398), (48, 12428),

Gene: PauloDiaboli_391 Start: 188832, Stop: 189242, Start Num: 28
Candidate Starts for PauloDiaboli_391:
(Start: 28 @188832 has 15 MA's), (37, 188904), (38, 188913), (43, 188985), (44, 189027), (48, 189057),

Gene: Pemberton_85 Start: 59267, Stop: 59836, Start Num: 24
Candidate Starts for Pemberton_85:
(8, 59069), (Start: 24 @59267 has 27 MA's), (25, 59300), (40, 59462), (44, 59561), (54, 59603), (68, 59744),

Gene: Pleakley_93 Start: 61532, Stop: 62053, Start Num: 24
Candidate Starts for Pleakley_93:
(7, 61262), (9, 61376), (14, 61409), (Start: 24 @61532 has 27 MA's), (45, 61784), (54, 61820), (68, 61976),

Gene: Polyyuki_88 Start: 62206, Stop: 62676, Start Num: 28
Candidate Starts for Polyyuki_88:
(5, 61849), (10, 61993), (Start: 28 @62206 has 15 MA's), (40, 62326), (47, 62416), (53, 62452), (68, 62575), (70, 62599),

Gene: RedRaider_90 Start: 64988, Stop: 65569, Start Num: 24
Candidate Starts for RedRaider_90:
(Start: 24 @64988 has 27 MA's), (25, 65024), (34, 65120), (36, 65129), (40, 65183), (42, 65189), (44, 65273), (49, 65309), (50, 65312), (65, 65477), (67, 65495),

Gene: Scuba_96 Start: 61876, Stop: 62385, Start Num: 24
Candidate Starts for Scuba_96:
(Start: 24 @61876 has 27 MA's), (44, 62110), (54, 62152), (56, 62161), (61, 62239), (68, 62308),

Gene: Shroomer_6 Start: 1929, Stop: 1531, Start Num: 28
Candidate Starts for Shroomer_6:
(22, 2025), (Start: 28 @1929 has 15 MA's), (40, 1806), (43, 1773), (45, 1725), (47, 1716), (60, 1629), (61, 1626), (63, 1593),

Gene: Shroomer_125 Start: 61992, Stop: 61594, Start Num: 28
Candidate Starts for Shroomer_125:
(22, 62088), (Start: 28 @61992 has 15 MA's), (40, 61869), (43, 61836), (45, 61788), (47, 61779), (60, 61692), (61, 61689), (63, 61656),

Gene: Skysand_89 Start: 63735, Stop: 64307, Start Num: 24
Candidate Starts for Skysand_89:
(Start: 24 @63735 has 27 MA's), (25, 63771), (27, 63804), (36, 63876), (42, 63936), (57, 64137), (64, 64212), (68, 64236),

Gene: StarStruck_84 Start: 63228, Stop: 63779, Start Num: 24
Candidate Starts for StarStruck_84:
(Start: 24 @63228 has 27 MA's), (40, 63423), (42, 63429), (44, 63513), (52, 63549), (68, 63696), (75, 63741),

Gene: Sukkupi_83 Start: 60734, Stop: 61303, Start Num: 24
Candidate Starts for Sukkupi_83:
(1, 60362), (2, 60377), (6, 60464), (15, 60629), (21, 60698), (Start: 24 @60734 has 27 MA's), (40, 60929), (44, 61028), (54, 61070), (78, 61295),

Gene: Trogglehumper_116 Start: 78341, Stop: 77916, Start Num: 28
Candidate Starts for Trogglehumper_116:
(Start: 28 @78341 has 15 MA's), (36, 78278), (40, 78221), (49, 78104), (51, 78098), (69, 77960),

Gene: Turuncu_89 Start: 63164, Stop: 63733, Start Num: 24
Candidate Starts for Turuncu_89:
(19, 63107), (20, 63116), (Start: 24 @63164 has 27 MA's), (31, 63245), (40, 63326), (68, 63611), (74, 63665),

Gene: WhoseManz_83 Start: 58680, Stop: 59249, Start Num: 24
Candidate Starts for WhoseManz_83:
(Start: 24 @58680 has 27 MA's), (25, 58713), (40, 58875), (44, 58974), (54, 59016), (75, 59202),

Gene: Yndexa_83 Start: 60734, Stop: 61303, Start Num: 24
Candidate Starts for Yndexa_83:
(1, 60362), (2, 60377), (6, 60464), (15, 60629), (21, 60698), (Start: 24 @60734 has 27 MA's), (40, 60929), (44, 61028), (54, 61070), (78, 61295),