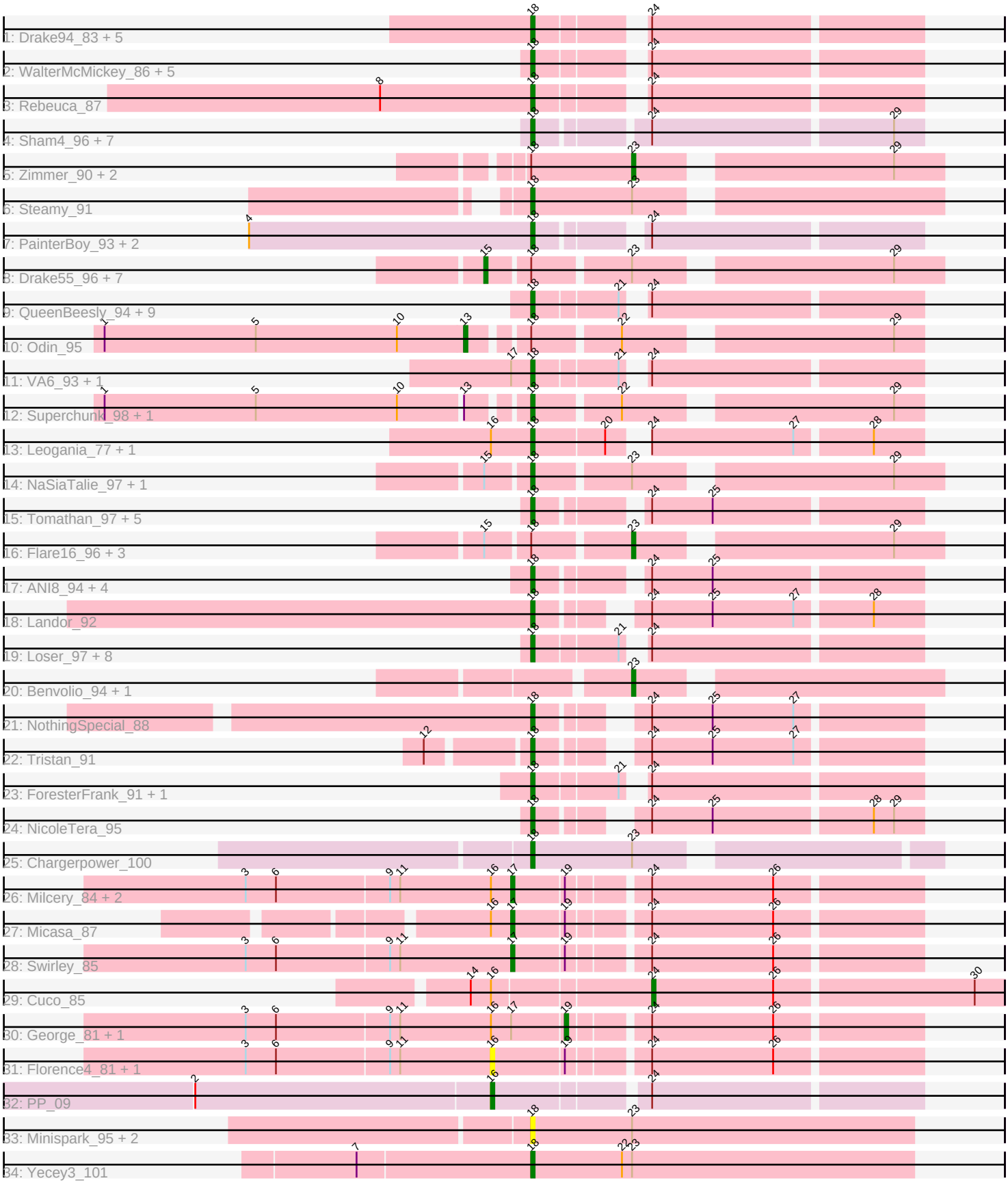
Pham 347449


1: Drake94_83 + 5
2: WalterMcMickey_86 + 5
3: Rebeuca_87
4: Sham4_96 + 7
5: Zimmer_90 + 2
6: Steamy_91
7: PainterBoy_93 + 2
8: Drake55_96 + 7
9: QueenBeesly_94 + 9
10: Odin_95
11: VA6_93 + 1
12: Superchunk_98 + 1
13: Leogania_77 + 1
14: NaSiaTalie_97 + 1
15: Tomathan_97 + 5
16: Flare16_96 + 3
17: ANI8_94 + 4
18: Landor_92
19: Loser_97 + 8
20: Benvolio_94 + 1
21: NothingSpecial_88
22: Tristan_91
23: ForesterFrank_91 + 1
24: NicoleTera_95
25: Chargerpower_100
26: Milcery_84 + 2
27: Micasa_87
28: Swirley_85
29: Cuco_85
30: George_81 + 1
31: Florence4_81 + 1
32: PP_09
33: Minispark_95 + 2
34: Yecey3_101

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 347449 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347449 has 103 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Drake94_83, Goose_87, PeaceMeal1_83, KittenMittens_81, Poompha_84, OKCentral2016_85
• Track 2 : WalterMcMickey_86, Twister_87, Edison31_73, Salz_96, Topanga_76, Hutc2_97
• Track 3 : Rebeuca_87
• Track 4 : Sham4_96, TinyTimmy_97, Kimba_96, Insomnia_99, Wolpertinger_98, Petersenfast_95, MaCh_99, Flaverint_100
• Track 5 : Zimmer_90, DarthPhader_91, Refuge_91
• Track 6 : Steamy_91
• Track 7 : PainterBoy_93, Lucyedi_94, EagleEye_96
• Track 8 : Drake55_96, Centaur_97, Sknot_97, Equemioh13_96, WideWale_97, MiculUcigas_96, Updawg_97, Terrific_98
• Track 9 : QueenBeesly_94, SnapTap_94, Jerm_95, QueenB2_93, Retro23_95, Georgie2_96, Bugsy_84, Dignity_96, Crucio_94, SweetiePie_94
• Track 10 : Odin_95
• Track 11 : VA6_93, AN3_93
• Track 12 : Superchunk_98, Caraxes_98
• Track 13 : Leogania_77, BiancaTri92_90
• Track 14 : NaSiaTalie_97, Gratitude_96
• Track 15 : Tomathan_97, Naji_86, Duplo_98, Travvers_97, DBQu4n_97, D32_85
• Track 16 : Flare16_96, Baehexic_96, HarryHoudini_95, Piro94_94
• Track 17 : ANI8_94, VC3_93, C3_87, AN9_94, Kerberos_97
• Track 18 : Landor_92
• Track 19 : Loser_97, Lokk_89, AnnaL29_96, Colin_94, BobSwaget_88, Miko_90, Prudy_92, Rachaly_91, RedRock_95
• Track 20 : Benvolio_94, Echild_99
• Track 21 : NothingSpecial_88
• Track 22 : Tristan_91
• Track 23 : ForesterFrank_91, ArcherNM_90
• Track 24 : NicoleTera_95
• Track 25 : Chargerpower_100
• Track 26 : Milcery_84, LittleCherry_84, Prinashe11_87
• Track 27 : Micasa_87
• Track 28 : Swirley_85
• Track 29 : Cuco_85
• Track 30 : George_81, Tarynearal_87
• Track 31 : Florence4_81, Florence1_83

• Track 32 : PP_09
• Track 33 : Minispark_95, CogOmlette_95, WorldCup_96
• Track 34 : Yecey3_101

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 70 of the 97 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AN3_93, AN9_94, ANI8_94, AnnaL29_96, ArcherNM_90, BiancaTri92_90, BobSwaget_88, Bugsy_84, C3_87, Caraxes_98, Chargerpower_100, CogOmlette_95, Colin_94, Crucio_94, D32_85, DBQu4n_97, Dignity_96, Drake94_83, Duplo_98, EagleEye_96, Edison31_73, Flaverint_100, ForesterFrank_91, Georgie2_96, Goose_87, Gratitude_96, Hutc2_97, Insomnia_99, Jerm_95, Kerberos_97, Kimba_96, KittenMittens_81, Landor_92, Leogania_77, Lokk_89, Loser_97, Lucyedi_94, MaCh_99, Miko_90, Minispark_95, NaSiaTalie_97, Naji_86, NicoleTera_95, NothingSpecial_88, OKCentral2016_85, PainterBoy_93, PeaceMeal1_83, Petersenfast_95, Poompha_84, Prudy_92, QueenB2_93, QueenBeesly_94, Rachaly_91, Rebeuca_87, RedRock_95, Retro23_95, Salz_96, Sham4_96, SnapTap_94, Steamy_91, Superchunk_98, SweetiePie_94, TinyTimmy_97, Tomathan_97, Topanga_76, Travvers_97, Tristan_91, Twister_87, VA6_93, VC3_93, WalterMcMickey_86, Wolpertinger_98, WorldCup_96, Yecey3_101,

Genes that have the "Most Annotated" start but do not call it:
• Baehexic_96, Centaur_97, DarthPhader_91, Drake55_96, Equemioh13_96, Flare16_96, HarryHoudini_95, MiculUcigas_96, Odin_95, Piro94_94, Refuge_91, Sknot_97, Terrific_98, Updawg_97, WideWale_97, Zimmer_90,

Genes that do not have the "Most Annotated" start:
• Benvolio_94, Cuco_85, Echild_99, Florence1_83, Florence4_81, George_81, LittleCherry_84, Micasa_87, Milcery_84, PP_09, Prinashe11_87, Swirley_85, Tarynearal_87,

Summary by start number:

Start 13:
• Found in 3 of 103 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 97
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Odin_95 (A2),

Start 15:
• Found in 14 of 103 (13.6%) of genes in pham
• Manual Annotations of this start: 8 of 97
• Called 57.1% of time when present
• Phage (with cluster) where this start called: Centaur_97 (A2), Drake55_96 (A2), Equemioh13_96 (A2), MiculUcigas_96 (A2), Sknot_97 (A2), Terrific_98 (A2), Updawg_97 (A2), WideWale_97 (A2),

Start 16:
• Found in 12 of 103 (11.7%) of genes in pham
• Manual Annotations of this start: 1 of 97
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Florence1_83 (A5), Florence4_81 (A5), PP_09 (A7),

Start 17:
• Found in 9 of 103 (8.7%) of genes in pham
• Manual Annotations of this start: 5 of 97
• Called 55.6% of time when present
• Phage (with cluster) where this start called: LittleCherry_84 (A5), Micasa_87 (A5), Milcery_84 (A5), Prinashe11_87 (A5), Swirley_85 (A5),

Start 18:
• Found in 90 of 103 (87.4%) of genes in pham
• Manual Annotations of this start: 70 of 97
• Called 82.2% of time when present
• Phage (with cluster) where this start called: AN3_93 (A2), AN9_94 (A2), ANI8_94 (A2), AnnaL29_96 (A2), ArcherNM_90 (A2), BiancaTri92_90 (A2), BobSwaget_88 (A2), Bugsy_84 (A2), C3_87 (A2), Caraxes_98 (A2), Chargerpower_100 (A22), CogOmlette_95 (A9), Colin_94 (A2), Crucio_94 (A2), D32_85 (A2), DBQu4n_97 (A2), Dignity_96 (A2), Drake94_83 (A10), Duplo_98 (A2), EagleEye_96 (A16), Edison31_73 (A10), Flaverint_100 (A11), ForesterFrank_91 (A2), Georgie2_96 (A2), Goose_87 (A10), Gratitude_96 (A2), Hutc2_97 (A11), Insomnia_99 (A11), Jerm_95 (A2), Kerberos_97 (A2), Kimba_96 (A11), KittenMittens_81 (A10), Landor_92 (A2), Leogania_77 (A2), Lokk_89 (A2), Loser_97 (A2), Lucyedi_94 (A16), MaCh_99 (A11), Miko_90 (A2), Minispark_95 (A9), NaSiaTalie_97 (A2), Naji_86 (A2), NicoleTera_95 (A2), NothingSpecial_88 (A2), OKCentral2016_85 (A10), PainterBoy_93 (A16), PeaceMeal1_83 (A10), Petersenfast_95 (A11), Poompha_84 (A10), Prudy_92 (A2), QueenB2_93 (A2), QueenBeesly_94 (A2), Rachaly_91 (A2), Rebeuca_87 (A10), RedRock_95 (A2), Retro23_95 (A2), Salz_96 (A11), Sham4_96 (A11), SnapTap_94 (A2), Steamy_91 (A12), Superchunk_98 (A2), SweetiePie_94 (A2), TinyTimmy_97 (A11), Tomathan_97 (A2), Topanga_76 (A10), Travvers_97 (A2), Tristan_91 (A2), Twister_87 (A10), VA6_93 (A2), VC3_93 (A2), WalterMcMickey_86 (A10), Wolpertinger_98 (A11), WorldCup_96 (A9), Yecey3_101 (A9),

Start 19:
• Found in 9 of 103 (8.7%) of genes in pham
• Manual Annotations of this start: 2 of 97
• Called 22.2% of time when present
• Phage (with cluster) where this start called: George_81 (A5), Tarynearal_87 (A5),

Start 23:
• Found in 25 of 103 (24.3%) of genes in pham
• Manual Annotations of this start: 9 of 97
• Called 36.0% of time when present
• Phage (with cluster) where this start called: Baehexic_96 (A2), Benvolio_94 (A2), DarthPhader_91 (A12), Echild_99 (A2), Flare16_96 (A2), HarryHoudini_95 (A2), Piro94_94 (A2), Refuge_91 (A12), Zimmer_90 (A12),

Start 24:

• Found in 75 of 103 (72.8%) of genes in pham
• Manual Annotations of this start: 1 of 97
• Called 1.3% of time when present
• Phage (with cluster) where this start called: Cuco_85 (A5),

Summary by clusters:

There are 9 clusters represented in this pham: A22, A16, A11, A10, A12, A2, A5, A7, A9,

Info for manual annotations of cluster A10:
•Start number 18 was manually annotated 11 times for cluster A10.

Info for manual annotations of cluster A11:
•Start number 18 was manually annotated 10 times for cluster A11.

Info for manual annotations of cluster A12:
•Start number 18 was manually annotated 1 time for cluster A12.
•Start number 23 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A16:
•Start number 18 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:
•Start number 13 was manually annotated 1 time for cluster A2.
•Start number 15 was manually annotated 8 times for cluster A2.
•Start number 18 was manually annotated 43 times for cluster A2.
•Start number 23 was manually annotated 6 times for cluster A2.

Info for manual annotations of cluster A22:
•Start number 18 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A5:
•Start number 17 was manually annotated 5 times for cluster A5.
•Start number 19 was manually annotated 2 times for cluster A5.
•Start number 24 was manually annotated 1 time for cluster A5.

Info for manual annotations of cluster A7:
•Start number 16 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A9:
•Start number 18 was manually annotated 1 time for cluster A9.

Gene Information:

Gene: AN3_93 Start: 49491, Stop: 49387, Start Num: 18
Candidate Starts for AN3_93:
(Start: 17 @49497 has 5 MA's), (Start: 18 @49491 has 70 MA's), (21, 49467), (Start: 24 @49464 has 1 MA's),

Gene: AN9_94 Start: 49621, Stop: 49517, Start Num: 18

Candidate Starts for AN9_94:
(Start: 18 @49621 has 70 MA's), (Start: 24 @49594 has 1 MA's), (25, 49576),

Gene: ANI8_94 Start: 49621, Stop: 49517, Start Num: 18
Candidate Starts for ANI8_94:
(Start: 18 @49621 has 70 MA's), (Start: 24 @49594 has 1 MA's), (25, 49576),

Gene: AnnaL29_96 Start: 51737, Stop: 51633, Start Num: 18
Candidate Starts for AnnaL29_96:
(Start: 18 @51737 has 70 MA's), (21, 51713), (Start: 24 @51710 has 1 MA's),

Gene: ArcherNM_90 Start: 51024, Stop: 50920, Start Num: 18
Candidate Starts for ArcherNM_90:
(Start: 18 @51024 has 70 MA's), (21, 51000), (Start: 24 @50997 has 1 MA's),

Gene: Baehexic_96 Start: 51625, Stop: 51542, Start Num: 23
Candidate Starts for Baehexic_96:
(Start: 15 @51664 has 8 MA's), (Start: 18 @51652 has 70 MA's), (Start: 23 @51625 has 9 MA's), (29, 51556),

Gene: Benvolio_94 Start: 51606, Stop: 51523, Start Num: 23
Candidate Starts for Benvolio_94:
(Start: 23 @51606 has 9 MA's),

Gene: BiancaTri92_90 Start: 50689, Stop: 50585, Start Num: 18
Candidate Starts for BiancaTri92_90:
(Start: 16 @50701 has 1 MA's), (Start: 18 @50689 has 70 MA's), (20, 50668), (Start: 24 @50662 has 1 MA's), (27, 50620), (28, 50599),

Gene: BobSwaget_88 Start: 48834, Stop: 48730, Start Num: 18
Candidate Starts for BobSwaget_88:
(Start: 18 @48834 has 70 MA's), (21, 48810), (Start: 24 @48807 has 1 MA's),

Gene: Bugsy_84 Start: 48373, Stop: 48269, Start Num: 18
Candidate Starts for Bugsy_84:
(Start: 18 @48373 has 70 MA's), (21, 48349), (Start: 24 @48346 has 1 MA's),

Gene: C3_87 Start: 49621, Stop: 49517, Start Num: 18
Candidate Starts for C3_87:
(Start: 18 @49621 has 70 MA's), (Start: 24 @49594 has 1 MA's), (25, 49576),

Gene: Caraxes_98 Start: 51262, Stop: 51158, Start Num: 18
Candidate Starts for Caraxes_98:
(1, 51382), (5, 51337), (10, 51295), (Start: 13 @51277 has 1 MA's), (Start: 18 @51262 has 70 MA's), (22, 51238), (29, 51166),

Gene: Centaur_97 Start: 51531, Stop: 51409, Start Num: 15
Candidate Starts for Centaur_97:
(Start: 15 @51531 has 8 MA's), (Start: 18 @51519 has 70 MA's), (Start: 23 @51492 has 9 MA's), (29, 51423),

Gene: Chargerpower_100 Start: 51126, Stop: 51016, Start Num: 18
Candidate Starts for Chargerpower_100:

(Start: 18 @51126 has 70 MA's), (Start: 23 @51096 has 9 MA's),

Gene: CogOmlette_95 Start: 51035, Stop: 50922, Start Num: 18
Candidate Starts for CogOmlette_95:
(Start: 18 @51035 has 70 MA's), (Start: 23 @51005 has 9 MA's),

Gene: Colin_94 Start: 51994, Stop: 51890, Start Num: 18
Candidate Starts for Colin_94:
(Start: 18 @51994 has 70 MA's), (21, 51970), (Start: 24 @51967 has 1 MA's),

Gene: Crucio_94 Start: 51711, Stop: 51607, Start Num: 18
Candidate Starts for Crucio_94:
(Start: 18 @51711 has 70 MA's), (21, 51687), (Start: 24 @51684 has 1 MA's),

Gene: Cuco_85 Start: 49160, Stop: 49059, Start Num: 24
Candidate Starts for Cuco_85:
(14, 49211), (Start: 16 @49205 has 1 MA's), (Start: 24 @49160 has 1 MA's), (26, 49124), (30, 49067),

Gene: D32_85 Start: 47615, Stop: 47511, Start Num: 18
Candidate Starts for D32_85:
(Start: 18 @47615 has 70 MA's), (Start: 24 @47588 has 1 MA's), (25, 47570),

Gene: DBQu4n_97 Start: 51230, Stop: 51126, Start Num: 18
Candidate Starts for DBQu4n_97:
(Start: 18 @51230 has 70 MA's), (Start: 24 @51203 has 1 MA's), (25, 51185),

Gene: DarthPhader_91 Start: 51639, Stop: 51556, Start Num: 23
Candidate Starts for DarthPhader_91:
(Start: 18 @51669 has 70 MA's), (Start: 23 @51639 has 9 MA's), (29, 51570),

Gene: Dignity_96 Start: 51741, Stop: 51637, Start Num: 18
Candidate Starts for Dignity_96:
(Start: 18 @51741 has 70 MA's), (21, 51717), (Start: 24 @51714 has 1 MA's),

Gene: Drake55_96 Start: 51249, Stop: 51127, Start Num: 15
Candidate Starts for Drake55_96:
(Start: 15 @51249 has 8 MA's), (Start: 18 @51237 has 70 MA's), (Start: 23 @51210 has 9 MA's), (29, 51141),

Gene: Drake94_83 Start: 48766, Stop: 48662, Start Num: 18
Candidate Starts for Drake94_83:
(Start: 18 @48766 has 70 MA's), (Start: 24 @48739 has 1 MA's),

Gene: Duplo_98 Start: 51287, Stop: 51183, Start Num: 18
Candidate Starts for Duplo_98:
(Start: 18 @51287 has 70 MA's), (Start: 24 @51260 has 1 MA's), (25, 51242),

Gene: EagleEye_96 Start: 51407, Stop: 51303, Start Num: 18
Candidate Starts for EagleEye_96:
(4, 51491), (Start: 18 @51407 has 70 MA's), (Start: 24 @51380 has 1 MA's),

Gene: Echild_99 Start: 51630, Stop: 51547, Start Num: 23
Candidate Starts for Echild_99:

(Start: 23 @51630 has 9 MA's),

Gene: Edison31_73 Start: 45753, Stop: 45649, Start Num: 18
Candidate Starts for Edison31_73:
(Start: 18 @45753 has 70 MA's), (Start: 24 @45726 has 1 MA's),

Gene: Equemioh13_96 Start: 51572, Stop: 51450, Start Num: 15
Candidate Starts for Equemioh13_96:
(Start: 15 @51572 has 8 MA's), (Start: 18 @51560 has 70 MA's), (Start: 23 @51533 has 9 MA's), (29, 51464),

Gene: Flare16_96 Start: 51348, Stop: 51265, Start Num: 23
Candidate Starts for Flare16_96:
(Start: 15 @51387 has 8 MA's), (Start: 18 @51375 has 70 MA's), (Start: 23 @51348 has 9 MA's), (29, 51279),

Gene: Flaverint_100 Start: 51095, Stop: 50988, Start Num: 18
Candidate Starts for Flaverint_100:
(Start: 18 @51095 has 70 MA's), (Start: 24 @51065 has 1 MA's), (29, 50996),

Gene: Florence1_83 Start: 48106, Stop: 47987, Start Num: 16
Candidate Starts for Florence1_83:
(3, 48178), (6, 48169), (9, 48136), (11, 48133), (Start: 16 @48106 has 1 MA's), (Start: 19 @48085 has 2 MA's), (Start: 24 @48064 has 1 MA's), (26, 48028),

Gene: Florence4_81 Start: 47171, Stop: 47052, Start Num: 16
Candidate Starts for Florence4_81:
(3, 47243), (6, 47234), (9, 47201), (11, 47198), (Start: 16 @47171 has 1 MA's), (Start: 19 @47150 has 2 MA's), (Start: 24 @47129 has 1 MA's), (26, 47093),

Gene: ForesterFrank_91 Start: 50952, Stop: 50848, Start Num: 18
Candidate Starts for ForesterFrank_91:
(Start: 18 @50952 has 70 MA's), (21, 50928), (Start: 24 @50925 has 1 MA's),

Gene: George_81 Start: 49646, Stop: 49548, Start Num: 19
Candidate Starts for George_81:
(3, 49739), (6, 49730), (9, 49697), (11, 49694), (Start: 16 @49667 has 1 MA's), (Start: 17 @49661 has 5 MA's), (Start: 19 @49646 has 2 MA's), (Start: 24 @49625 has 1 MA's), (26, 49589),

Gene: Georgie2_96 Start: 51855, Stop: 51751, Start Num: 18
Candidate Starts for Georgie2_96:
(Start: 18 @51855 has 70 MA's), (21, 51831), (Start: 24 @51828 has 1 MA's),

Gene: Goose_87 Start: 49419, Stop: 49315, Start Num: 18
Candidate Starts for Goose_87:
(Start: 18 @49419 has 70 MA's), (Start: 24 @49392 has 1 MA's),

Gene: Gratitude_96 Start: 51560, Stop: 51450, Start Num: 18
Candidate Starts for Gratitude_96:
(Start: 15 @51572 has 8 MA's), (Start: 18 @51560 has 70 MA's), (Start: 23 @51533 has 9 MA's), (29, 51464),

Gene: HarryHoudini_95 Start: 51214, Stop: 51131, Start Num: 23

Candidate Starts for HarryHoudini_95:
(Start: 15 @51253 has 8 MA's), (Start: 18 @51241 has 70 MA's), (Start: 23 @51214 has 9 MA's), (29, 51145),

Gene: Hutc2_97 Start: 49903, Stop: 49796, Start Num: 18
Candidate Starts for Hutc2_97:
(Start: 18 @49903 has 70 MA's), (Start: 24 @49873 has 1 MA's),

Gene: Insomnia_99 Start: 51129, Stop: 51022, Start Num: 18
Candidate Starts for Insomnia_99:
(Start: 18 @51129 has 70 MA's), (Start: 24 @51099 has 1 MA's), (29, 51030),

Gene: Jerm_95 Start: 51599, Stop: 51495, Start Num: 18
Candidate Starts for Jerm_95:
(Start: 18 @51599 has 70 MA's), (21, 51575), (Start: 24 @51572 has 1 MA's),

Gene: Kerberos_97 Start: 51250, Stop: 51146, Start Num: 18
Candidate Starts for Kerberos_97:
(Start: 18 @51250 has 70 MA's), (Start: 24 @51223 has 1 MA's), (25, 51205),

Gene: Kimba_96 Start: 50153, Stop: 50046, Start Num: 18
Candidate Starts for Kimba_96:
(Start: 18 @50153 has 70 MA's), (Start: 24 @50123 has 1 MA's), (29, 50054),

Gene: KittenMittens_81 Start: 48769, Stop: 48665, Start Num: 18
Candidate Starts for KittenMittens_81:
(Start: 18 @48769 has 70 MA's), (Start: 24 @48742 has 1 MA's),

Gene: Landor_92 Start: 52182, Stop: 52081, Start Num: 18
Candidate Starts for Landor_92:
(Start: 18 @52182 has 70 MA's), (Start: 24 @52158 has 1 MA's), (25, 52140), (27, 52116), (28, 52095),

Gene: Leogania_77 Start: 47504, Stop: 47400, Start Num: 18
Candidate Starts for Leogania_77:
(Start: 16 @47516 has 1 MA's), (Start: 18 @47504 has 70 MA's), (20, 47483), (Start: 24 @47477 has 1 MA's), (27, 47435), (28, 47414),

Gene: LittleCherry_84 Start: 48771, Stop: 48658, Start Num: 17
Candidate Starts for LittleCherry_84:
(3, 48849), (6, 48840), (9, 48807), (11, 48804), (Start: 16 @48777 has 1 MA's), (Start: 17 @48771 has 5 MA's), (Start: 19 @48756 has 2 MA's), (Start: 24 @48735 has 1 MA's), (26, 48699),

Gene: Lokk_89 Start: 49455, Stop: 49351, Start Num: 18
Candidate Starts for Lokk_89:
(Start: 18 @49455 has 70 MA's), (21, 49431), (Start: 24 @49428 has 1 MA's),

Gene: Loser_97 Start: 51981, Stop: 51877, Start Num: 18
Candidate Starts for Loser_97:
(Start: 18 @51981 has 70 MA's), (21, 51957), (Start: 24 @51954 has 1 MA's),

Gene: Lucyedi_94 Start: 51420, Stop: 51316, Start Num: 18
Candidate Starts for Lucyedi_94:
(4, 51504), (Start: 18 @51420 has 70 MA's), (Start: 24 @51393 has 1 MA's),

Gene: MaCh_99 Start: 51092, Stop: 50985, Start Num: 18
Candidate Starts for MaCh_99:
(Start: 18 @51092 has 70 MA's), (Start: 24 @51062 has 1 MA's), (29, 50993),

Gene: Micasa_87 Start: 49438, Stop: 49325, Start Num: 17
Candidate Starts for Micasa_87:
(Start: 16 @49444 has 1 MA's), (Start: 17 @49438 has 5 MA's), (Start: 19 @49423 has 2 MA's), (Start: 24 @49402 has 1 MA's), (26, 49366),

Gene: MiculUcigas_96 Start: 51290, Stop: 51168, Start Num: 15
Candidate Starts for MiculUcigas_96:
(Start: 15 @51290 has 8 MA's), (Start: 18 @51278 has 70 MA's), (Start: 23 @51251 has 9 MA's), (29, 51182),

Gene: Miko_90 Start: 50312, Stop: 50208, Start Num: 18
Candidate Starts for Miko_90:
(Start: 18 @50312 has 70 MA's), (21, 50288), (Start: 24 @50285 has 1 MA's),

Gene: Milcery_84 Start: 49067, Stop: 48954, Start Num: 17
Candidate Starts for Milcery_84:
(3, 49145), (6, 49136), (9, 49103), (11, 49100), (Start: 16 @49073 has 1 MA's), (Start: 17 @49067 has 5 MA's), (Start: 19 @49052 has 2 MA's), (Start: 24 @49031 has 1 MA's), (26, 48995),

Gene: Minispark_95 Start: 51032, Stop: 50919, Start Num: 18
Candidate Starts for Minispark_95:
(Start: 18 @51032 has 70 MA's), (Start: 23 @51002 has 9 MA's),

Gene: NaSiaTalie_97 Start: 51439, Stop: 51329, Start Num: 18
Candidate Starts for NaSiaTalie_97:
(Start: 15 @51451 has 8 MA's), (Start: 18 @51439 has 70 MA's), (Start: 23 @51412 has 9 MA's), (29, 51343),

Gene: Naji_86 Start: 47615, Stop: 47511, Start Num: 18
Candidate Starts for Naji_86:
(Start: 18 @47615 has 70 MA's), (Start: 24 @47588 has 1 MA's), (25, 47570),

Gene: NicoleTera_95 Start: 51425, Stop: 51324, Start Num: 18
Candidate Starts for NicoleTera_95:
(Start: 18 @51425 has 70 MA's), (Start: 24 @51401 has 1 MA's), (25, 51383), (28, 51338), (29, 51332),

Gene: NothingSpecial_88 Start: 50971, Stop: 50870, Start Num: 18
Candidate Starts for NothingSpecial_88:
(Start: 18 @50971 has 70 MA's), (Start: 24 @50947 has 1 MA's), (25, 50929), (27, 50905),

Gene: OKCentral2016_85 Start: 48846, Stop: 48742, Start Num: 18
Candidate Starts for OKCentral2016_85:
(Start: 18 @48846 has 70 MA's), (Start: 24 @48819 has 1 MA's),

Gene: Odin_95 Start: 51188, Stop: 51069, Start Num: 13
Candidate Starts for Odin_95:
(1, 51293), (5, 51248), (10, 51206), (Start: 13 @51188 has 1 MA's), (Start: 18 @51173 has 70 MA's), (22, 51149), (29, 51077),

Gene: PP_09 Start: 2269, Stop: 2150, Start Num: 16
Candidate Starts for PP_09:
(2, 2356), (Start: 16 @2269 has 1 MA's), (Start: 24 @2227 has 1 MA's),

Gene: PainterBoy_93 Start: 51131, Stop: 51027, Start Num: 18
Candidate Starts for PainterBoy_93:
(4, 51215), (Start: 18 @51131 has 70 MA's), (Start: 24 @51104 has 1 MA's),

Gene: PeaceMeal1_83 Start: 48773, Stop: 48669, Start Num: 18
Candidate Starts for PeaceMeal1_83:
(Start: 18 @48773 has 70 MA's), (Start: 24 @48746 has 1 MA's),

Gene: Petersenfast_95 Start: 49528, Stop: 49421, Start Num: 18
Candidate Starts for Petersenfast_95:
(Start: 18 @49528 has 70 MA's), (Start: 24 @49498 has 1 MA's), (29, 49429),

Gene: Piro94_94 Start: 51139, Stop: 51056, Start Num: 23
Candidate Starts for Piro94_94:
(Start: 15 @51178 has 8 MA's), (Start: 18 @51166 has 70 MA's), (Start: 23 @51139 has 9 MA's), (29, 51070),

Gene: Poompha_84 Start: 48962, Stop: 48858, Start Num: 18
Candidate Starts for Poompha_84:
(Start: 18 @48962 has 70 MA's), (Start: 24 @48935 has 1 MA's),

Gene: Prinashe11_87 Start: 49334, Stop: 49221, Start Num: 17
Candidate Starts for Prinashe11_87:
(3, 49412), (6, 49403), (9, 49370), (11, 49367), (Start: 16 @49340 has 1 MA's), (Start: 17 @49334 has 5 MA's), (Start: 19 @49319 has 2 MA's), (Start: 24 @49298 has 1 MA's), (26, 49262),

Gene: Prudy_92 Start: 51224, Stop: 51120, Start Num: 18
Candidate Starts for Prudy_92:
(Start: 18 @51224 has 70 MA's), (21, 51200), (Start: 24 @51197 has 1 MA's),

Gene: QueenB2_93 Start: 51229, Stop: 51125, Start Num: 18
Candidate Starts for QueenB2_93:
(Start: 18 @51229 has 70 MA's), (21, 51205), (Start: 24 @51202 has 1 MA's),

Gene: QueenBeesly_94 Start: 51807, Stop: 51703, Start Num: 18
Candidate Starts for QueenBeesly_94:
(Start: 18 @51807 has 70 MA's), (21, 51783), (Start: 24 @51780 has 1 MA's),

Gene: Rachaly_91 Start: 50455, Stop: 50351, Start Num: 18
Candidate Starts for Rachaly_91:
(Start: 18 @50455 has 70 MA's), (21, 50431), (Start: 24 @50428 has 1 MA's),

Gene: Rebeuca_87 Start: 50078, Stop: 49974, Start Num: 18
Candidate Starts for Rebeuca_87:
(8, 50123), (Start: 18 @50078 has 70 MA's), (Start: 24 @50051 has 1 MA's),

Gene: RedRock_95 Start: 51739, Stop: 51635, Start Num: 18
Candidate Starts for RedRock_95:

(Start: 18 @51739 has 70 MA's), (21, 51715), (Start: 24 @51712 has 1 MA's),

Gene: Refuge_91 Start: 51856, Stop: 51773, Start Num: 23
Candidate Starts for Refuge_91:
(Start: 18 @51886 has 70 MA's), (Start: 23 @51856 has 9 MA's), (29, 51787),

Gene: Retro23_95 Start: 51527, Stop: 51423, Start Num: 18
Candidate Starts for Retro23_95:
(Start: 18 @51527 has 70 MA's), (21, 51503), (Start: 24 @51500 has 1 MA's),

Gene: Salz_96 Start: 49825, Stop: 49718, Start Num: 18
Candidate Starts for Salz_96:
(Start: 18 @49825 has 70 MA's), (Start: 24 @49795 has 1 MA's),

Gene: Sham4_96 Start: 49843, Stop: 49736, Start Num: 18
Candidate Starts for Sham4_96:
(Start: 18 @49843 has 70 MA's), (Start: 24 @49813 has 1 MA's), (29, 49744),

Gene: Sknot_97 Start: 51578, Stop: 51456, Start Num: 15
Candidate Starts for Sknot_97:
(Start: 15 @51578 has 8 MA's), (Start: 18 @51566 has 70 MA's), (Start: 23 @51539 has 9 MA's), (29, 51470),

Gene: SnapTap_94 Start: 51510, Stop: 51406, Start Num: 18
Candidate Starts for SnapTap_94:
(Start: 18 @51510 has 70 MA's), (21, 51486), (Start: 24 @51483 has 1 MA's),

Gene: Steamy_91 Start: 51725, Stop: 51612, Start Num: 18
Candidate Starts for Steamy_91:
(Start: 18 @51725 has 70 MA's), (Start: 23 @51695 has 9 MA's),

Gene: Superchunk_98 Start: 51262, Stop: 51158, Start Num: 18
Candidate Starts for Superchunk_98:
(1, 51382), (5, 51337), (10, 51295), (Start: 13 @51277 has 1 MA's), (Start: 18 @51262 has 70 MA's), (22, 51238), (29, 51166),

Gene: SweetiePie_94 Start: 51643, Stop: 51539, Start Num: 18
Candidate Starts for SweetiePie_94:
(Start: 18 @51643 has 70 MA's), (21, 51619), (Start: 24 @51616 has 1 MA's),

Gene: Swirley_85 Start: 47789, Stop: 47676, Start Num: 17
Candidate Starts for Swirley_85:
(3, 47867), (6, 47858), (9, 47825), (11, 47822), (Start: 17 @47789 has 5 MA's), (Start: 19 @47774 has 2 MA's), (Start: 24 @47753 has 1 MA's), (26, 47717),

Gene: Tarynearal_87 Start: 49212, Stop: 49114, Start Num: 19
Candidate Starts for Tarynearal_87:
(3, 49305), (6, 49296), (9, 49263), (11, 49260), (Start: 16 @49233 has 1 MA's), (Start: 17 @49227 has 5 MA's), (Start: 19 @49212 has 2 MA's), (Start: 24 @49191 has 1 MA's), (26, 49155),

Gene: Terrific_98 Start: 51546, Stop: 51424, Start Num: 15
Candidate Starts for Terrific_98:

(Start: 15 @51546 has 8 MA's), (Start: 18 @51534 has 70 MA's), (Start: 23 @51507 has 9 MA's), (29, 51438),

Gene: TinyTimmy_97 Start: 50342, Stop: 50235, Start Num: 18
Candidate Starts for TinyTimmy_97:
(Start: 18 @50342 has 70 MA's), (Start: 24 @50312 has 1 MA's), (29, 50243),

Gene: Tomathan_97 Start: 51364, Stop: 51260, Start Num: 18
Candidate Starts for Tomathan_97:
(Start: 18 @51364 has 70 MA's), (Start: 24 @51337 has 1 MA's), (25, 51319),

Gene: Topanga_76 Start: 46554, Stop: 46450, Start Num: 18
Candidate Starts for Topanga_76:
(Start: 18 @46554 has 70 MA's), (Start: 24 @46527 has 1 MA's),

Gene: Travvers_97 Start: 51281, Stop: 51177, Start Num: 18
Candidate Starts for Travvers_97:
(Start: 18 @51281 has 70 MA's), (Start: 24 @51254 has 1 MA's), (25, 51236),

Gene: Tristan_91 Start: 51981, Stop: 51880, Start Num: 18
Candidate Starts for Tristan_91:
(12, 52008), (Start: 18 @51981 has 70 MA's), (Start: 24 @51957 has 1 MA's), (25, 51939), (27, 51915),

Gene: Twister_87 Start: 49768, Stop: 49664, Start Num: 18
Candidate Starts for Twister_87:
(Start: 18 @49768 has 70 MA's), (Start: 24 @49741 has 1 MA's),

Gene: Updawg_97 Start: 51572, Stop: 51450, Start Num: 15
Candidate Starts for Updawg_97:
(Start: 15 @51572 has 8 MA's), (Start: 18 @51560 has 70 MA's), (Start: 23 @51533 has 9 MA's), (29, 51464),

Gene: VA6_93 Start: 51062, Stop: 50958, Start Num: 18
Candidate Starts for VA6_93:
(Start: 17 @51068 has 5 MA's), (Start: 18 @51062 has 70 MA's), (21, 51038), (Start: 24 @51035 has 1 MA's),

Gene: VC3_93 Start: 49621, Stop: 49517, Start Num: 18
Candidate Starts for VC3_93:
(Start: 18 @49621 has 70 MA's), (Start: 24 @49594 has 1 MA's), (25, 49576),

Gene: WalterMcMickey_86 Start: 49768, Stop: 49664, Start Num: 18
Candidate Starts for WalterMcMickey_86:
(Start: 18 @49768 has 70 MA's), (Start: 24 @49741 has 1 MA's),

Gene: WideWale_97 Start: 51572, Stop: 51450, Start Num: 15
Candidate Starts for WideWale_97:
(Start: 15 @51572 has 8 MA's), (Start: 18 @51560 has 70 MA's), (Start: 23 @51533 has 9 MA's), (29, 51464),

Gene: Wolpertinger_98 Start: 50962, Stop: 50855, Start Num: 18
Candidate Starts for Wolpertinger_98:
(Start: 18 @50962 has 70 MA's), (Start: 24 @50932 has 1 MA's), (29, 50863),

Gene: WorldCup_96 Start: 51133, Stop: 51020, Start Num: 18
Candidate Starts for WorldCup_96:
(Start: 18 @51133 has 70 MA's), (Start: 23 @51103 has 9 MA's),

Gene: Yecey3_101 Start: 51604, Stop: 51491, Start Num: 18
Candidate Starts for Yecey3_101:
(7, 51655), (Start: 18 @51604 has 70 MA's), (22, 51577), (Start: 23 @51574 has 9 MA's),

Gene: Zimmer_90 Start: 51310, Stop: 51227, Start Num: 23
Candidate Starts for Zimmer_90:
(Start: 18 @51340 has 70 MA's), (Start: 23 @51310 has 9 MA's), (29, 51241),