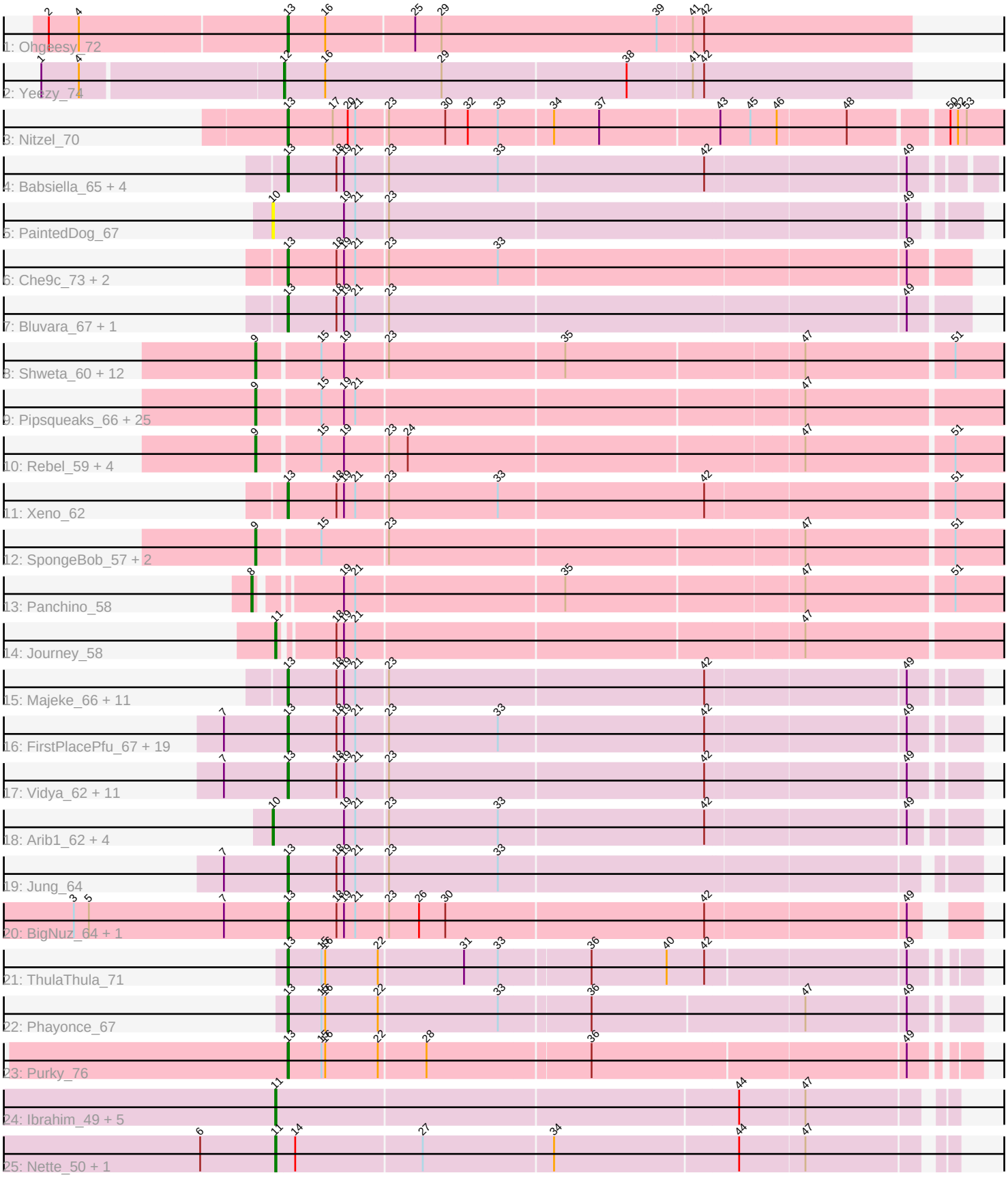
Pham 347388


1: Ohgeesy_72
2: Yeezy_74
3: Nitzel_70
4: Babsiella_65 + 4
5: PaintedDog_67
6: Che9c_73 + 2
7: Bluvara_67 + 1
8: Shweta_60 + 12
9: Pipsqueaks_66 + 25
10: Rebel_59 + 4
11: Xeno_62
12: SpongeBob_57 + 2
13: Panchino_58
14: Journey_58
15: Majeke_66 + 11
16: FirstPlacePfu_67 + 19
17: Vidya_62 + 11
18: Arib1_62 + 4
19: Jung_64
20: BigNuz_64 + 1
21: ThulaThula_71
22: Phayonce_67
23: Purky_76
24: Ibrahim_49 + 5
25: Nette_50 + 1

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 347388 Report

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

Pham number 347388 has 127 members, 11 are drafts.

Phages represented in each track:
• Track 1 : Ohgeesy_72
• Track 2 : Yeezy_74
• Track 3 : Nitzel_70
• Track 4 : Babsiella_65, Bunnies_69, Brujita_64, Ksquared_67, Langerak_63
• Track 5 : PaintedDog_67
• Track 6 : Che9c_73, Xavia_65, Stuck_74
• Track 7 : Bluvara_67, Sbash_78
• Track 8 : Shweta_60, Redi_62, ShrimpFriedEgg_62, Raymond7_55, Impisi_63, Spinach_61, BabeRuth_62, Purgamenstris_62, Nenae_62, Hanako_61, Phrann_61, Andies_59, PhancyPhin_62
• Track 9 : Pipsqueaks_66, Smurph_65, Xerxes_65, SkinnyPete_62, Aggie_61, Carcharodon_65, Silvy_61, EGUnicorn_60, Bosection6_60, Magsby_64, Chewbacca_68, Schnauzer_66, Philonius_65, Silvafighter_67, Fulbright_63, Scitech_60, Tessdabest_66, Parmesanjohn_65, Tapioca_63, Duplicity_63, Cubone_68, Charlie_62, Phloss_63, Melville_70, Tortoise12_65, Gex_66
• Track 10 : Rebel_59, Butters_61, Rubeelu_61, MichelleMyBell_63, Kevin1_64
• Track 11 : Xeno_62
• Track 12 : SpongeBob_57, Snekmaggedon_57, Jamie19_57
• Track 13 : Panchino_58
• Track 14 : Journey_58
• Track 15 : Majeke_66, Island3_65, QueenHazel_60, Etoile_62, Donovan_63, Chubbello_62, Phegasus_66, Kari_63, HC_60, Fishburne_62, Xula_59, Mangethe_66
• Track 16 : FirstPlacePfu_67, StevieRay_68, Megiddo_63, Bogie_66, HUHilltop_66, Zilizebeth_69, Thespis_65, Atcoo_65, Juniormint_61, Brusacoram_65, BronnyJr_60, Polkaroo_65, Shipwreck_66, Necropolis_61, PeanutPie_68, Dynamo_63, Pygmy_67, Bhagsy_69, GreaseLightnin_68, Phineas_64
• Track 17 : Vidya_62, Willsammy_65, Jebeks_64, Gavriela_63, CactusJack_64, Malithi_63, Phalm_64, Camster_64, Sonah_64, StressBall_63, Glaske_63, KilKor_64
• Track 18 : Arib1_62, GaloreK_64, Techage_64, Venti_61, Bartholomew_59
• Track 19 : Jung_64
• Track 20 : BigNuz_64, Nazo_65
• Track 21 : ThulaThula_71
• Track 22 : Phayonce_67
• Track 23 : Purky_76
• Track 24 : Ibrahim_49, Bernal13_49, Whitty_48, ZenTime222_48, RonRayGun_49, Nairb_48

• Track 25 : Nette_50, Mendokysei_47

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

The start number called the most often in the published annotations is 13, it was called in 58 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Atcoo_65, Babsiella_65, Bhagsy_69, BigNuz_64, Bluvara_67, Bogie_66, BronnyJr_60, Brujita_64, Brusacoram_65, Bunnies_69, CactusJack_64, Camster_64, Che9c_73, Chubbello_62, Donovan_63, Dynamo_63, Etoile_62, FirstPlacePfu_67, Fishburne_62, Gavriela_63, Glaske_63, GreaseLightnin_68, HC_60, HUHilltop_66, Island3_65, Jebeks_64, Jung_64, Juniormint_61, Kari_63, KilKor_64, Ksquared_67, Langerak_63, Majeke_66, Malithi_63, Mangethe_66, Megiddo_63, Nazo_65, Necropolis_61, Nitzel_70, Ohgeesy_72, PeanutPie_68, Phalm_64, Phayonce_67, Phegasus_66, Phineas_64, Polkaroo_65, Purky_76, Pygmy_67, QueenHazel_60, Sbash_78, Shipwreck_66, Sonah_64, StevieRay_68, StressBall_63, Stuck_74, Thespis_65, ThulaThula_71, Vidya_62, Willsammy_65, Xavia_65, Xeno_62, Xula_59, Zilizebeth_69,

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

Genes that do not have the "Most Annotated" start:
• Aggie_61, Andies_59, Arib1_62, BabeRuth_62, Bartholomew_59, Bernal13_49, Bosection6_60, Butters_61, Carcharodon_65, Charlie_62, Chewbacca_68, Cubone_68, Duplicity_63, EGUnicorn_60, Fulbright_63, GaloreK_64, Gex_66, Hanako_61, Ibrahim_49, Impisi_63, Jamie19_57, Journey_58, Kevin1_64, Magsby_64, Melville_70, Mendokysei_47, MichelleMyBell_63, Nairb_48, Nenae_62, Nette_50, PaintedDog_67, Panchino_58, Parmesanjohn_65, PhancyPhin_62, Philonius_65, Phloss_63, Phrann_61, Pipsqueaks_66, Purgamenstris_62, Raymond7_55, Rebel_59, Redi_62, RonRayGun_49, Rubeelu_61, Schnauzer_66, Scitech_60, ShrimpFriedEgg_62, Shweta_60, Silvafighter_67, Silvy_61, SkinnyPete_62, Smurph_65, Snekmaggedon_57, Spinach_61, SpongeBob_57, Tapioca_63, Techage_64, Tessdabest_66, Tortoise12_65, Venti_61, Whitty_48, Xerxes_65, Yeezy_74, ZenTime222_48,

Summary by start number:

Start 8:
• Found in 1 of 127 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Panchino_58 (N),

Start 9:
• Found in 47 of 127 (37.0%) of genes in pham
• Manual Annotations of this start: 44 of 116
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Aggie_61 (N), Andies_59 (N), BabeRuth_62 (N), Bosection6_60 (N), Butters_61 (N), Carcharodon_65 (N), Charlie_62 (N), Chewbacca_68 (N), Cubone_68 (N), Duplicity_63 (N), EGUnicorn_60 (N), Fulbright_63 (N), Gex_66 (N), Hanako_61 (N), Impisi_63 (N), Jamie19_57 (N), Kevin1_64 (N), Magsby_64 (N), Melville_70 (N), MichelleMyBell_63 (N), Nenae_62 (N), Parmesanjohn_65 (N), PhancyPhin_62 (N), Philonius_65 (N), Phloss_63 (N), Phrann_61 (N), Pipsqueaks_66 (N), Purgamenstris_62 (N), Raymond7_55 (N), Rebel_59 (N), Redi_62 (N), Rubeelu_61 (N), Schnauzer_66 (N), Scitech_60 (N), ShrimpFriedEgg_62 (N), Shweta_60 (N), Silvafighter_67 (N), Silvy_61 (N), SkinnyPete_62 (N), Smurph_65 (N), Snekmaggedon_57 (N), Spinach_61 (N), SpongeBob_57 (N), Tapioca_63 (N), Tessdabest_66 (N), Tortoise12_65 (N), Xerxes_65 (N),

Start 10:
• Found in 6 of 127 (4.7%) of genes in pham
• Manual Annotations of this start: 4 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arib1_62 (P1), Bartholomew_59 (P1), GaloreK_64 (P1), PaintedDog_67 (I1), Techage_64 (P1), Venti_61 (P1),

Start 11:
• Found in 9 of 127 (7.1%) of genes in pham
• Manual Annotations of this start: 8 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bernal13_49 (T), Ibrahim_49 (T), Journey_58 (N), Mendokysei_47 (T), Nairb_48 (T), Nette_50 (T), RonRayGun_49 (T), Whitty_48 (T), ZenTime222_48 (T),

Start 12:
• Found in 1 of 127 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yeezy_74 (CZ3),

Start 13:
• Found in 63 of 127 (49.6%) of genes in pham
• Manual Annotations of this start: 58 of 116
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Atcoo_65 (P1), Babsiella_65 (I1), Bhagsy_69 (P1), BigNuz_64 (P4), Bluvara_67 (I3), Bogie_66 (P1), BronnyJr_60 (P1), Brujita_64 (I1), Brusacoram_65 (P1), Bunnies_69 (P1), CactusJack_64 (P1), Camster_64 (P1), Che9c_73 (I2), Chubbello_62 (P1), Donovan_63 (P1), Dynamo_63 (P1), Etoile_62 (P1), FirstPlacePfu_67 (P1), Fishburne_62 (P1), Gavriela_63 (P1), Glaske_63 (P1), GreaseLightnin_68 (P1), HC_60 (I1), HUHilltop_66 (P1), Island3_65 (I1), Jebeks_64 (P1), Jung_64 (P1), Juniormint_61 (P1), Kari_63 (P1), KilKor_64 (P1), Ksquared_67 (P1), Langerak_63 (P1), Majeke_66 (P1), Malithi_63 (P1), Mangethe_66 (P1), Megiddo_63 (P1), Nazo_65 (P4), Necropolis_61 (P1), Nitzel_70 (F1), Ohgeesy_72 (CZ), PeanutPie_68 (P1), Phalm_64 (P1), Phayonce_67 (P5), Phegasus_66 (P1), Phineas_64 (P1), Polkaroo_65 (P1), Purky_76 (P6), Pygmy_67 (P1), QueenHazel_60 (I1), Sbash_78 (I2), Shipwreck_66 (P1), Sonah_64 (P1), StevieRay_68 (P1), StressBall_63 (P1), Stuck_74 (I2), Thespis_65 (P1), ThulaThula_71 (P5), Vidya_62 (P1), Willsammy_65 (P1), Xavia_65 (P3), Xeno_62 (N), Xula_59 (I1), Zilizebeth_69 (P1),

Summary by clusters:

There are 13 clusters represented in this pham: F1, P1, P6, P4, P5, I1, CZ3, I3, I2, N, CZ, T, P3,

Info for manual annotations of cluster CZ:
•Start number 13 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ3:
•Start number 12 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster F1:
•Start number 13 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster I1:
•Start number 13 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster I2:
•Start number 13 was manually annotated 3 times for cluster I2.

Info for manual annotations of cluster N:
•Start number 8 was manually annotated 1 time for cluster N.
•Start number 9 was manually annotated 44 times for cluster N.
•Start number 11 was manually annotated 1 time for cluster N.
•Start number 13 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:
•Start number 10 was manually annotated 4 times for cluster P1.
•Start number 13 was manually annotated 40 times for cluster P1.

Info for manual annotations of cluster P3:
•Start number 13 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:
•Start number 13 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 13 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:
•Start number 13 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster T:
•Start number 11 was manually annotated 7 times for cluster T.

Gene Information:

Gene: Aggie_61 Start: 41047, Stop: 41649, Start Num: 9
Candidate Starts for Aggie_61:

(Start: 9 @41047 has 44 MA's), (15, 41095), (19, 41113), (21, 41122), (47, 41467),

Gene: Andies_59 Start: 40492, Stop: 41094, Start Num: 9
Candidate Starts for Andies_59:
(Start: 9 @40492 has 44 MA's), (15, 40540), (19, 40558), (23, 40591), (35, 40729), (47, 40912), (51, 41026),

Gene: Arib1_62 Start: 40287, Stop: 40829, Start Num: 10
Candidate Starts for Arib1_62:
(Start: 10 @40287 has 4 MA's), (19, 40344), (21, 40353), (23, 40377), (33, 40464), (42, 40626), (49, 40779),

Gene: Atcoo_65 Start: 43667, Stop: 44197, Start Num: 13
Candidate Starts for Atcoo_65:
(7, 43616), (Start: 13 @43667 has 58 MA's), (18, 43706), (19, 43712), (21, 43721), (23, 43745), (33, 43832), (42, 43994), (49, 44147),

Gene: BabeRuth_62 Start: 39143, Stop: 39745, Start Num: 9
Candidate Starts for BabeRuth_62:
(Start: 9 @39143 has 44 MA's), (15, 39191), (19, 39209), (23, 39242), (35, 39380), (47, 39563), (51, 39677),

Gene: Babsiella_65 Start: 41599, Stop: 42135, Start Num: 13
Candidate Starts for Babsiella_65:
(Start: 13 @41599 has 58 MA's), (18, 41638), (19, 41644), (21, 41653), (23, 41677), (33, 41764), (42, 41926), (49, 42079),

Gene: Bartholomew_59 Start: 39614, Stop: 40162, Start Num: 10
Candidate Starts for Bartholomew_59:
(Start: 10 @39614 has 4 MA's), (19, 39671), (21, 39680), (23, 39704), (33, 39791), (42, 39953), (49, 40106),

Gene: Bernal13_49 Start: 35954, Stop: 36469, Start Num: 11
Candidate Starts for Bernal13_49:
(Start: 11 @35954 has 8 MA's), (44, 36314), (47, 36365),

Gene: Bhagsy_69 Start: 42784, Stop: 43314, Start Num: 13
Candidate Starts for Bhagsy_69:
(7, 42733), (Start: 13 @42784 has 58 MA's), (18, 42823), (19, 42829), (21, 42838), (23, 42862), (33, 42949), (42, 43111), (49, 43264),

Gene: BigNuz_64 Start: 42336, Stop: 42854, Start Num: 13
Candidate Starts for BigNuz_64:
(3, 42165), (5, 42177), (7, 42285), (Start: 13 @42336 has 58 MA's), (18, 42375), (19, 42381), (21, 42390), (23, 42414), (26, 42438), (30, 42459), (42, 42663), (49, 42816),

Gene: Bluvara_67 Start: 44318, Stop: 44842, Start Num: 13
Candidate Starts for Bluvara_67:
(Start: 13 @44318 has 58 MA's), (18, 44357), (19, 44363), (21, 44372), (23, 44396), (49, 44798),

Gene: Bogie_66 Start: 42649, Stop: 43179, Start Num: 13
Candidate Starts for Bogie_66:

(7, 42598), (Start: 13 @42649 has 58 MA's), (18, 42688), (19, 42694), (21, 42703), (23, 42727), (33, 42814), (42, 42976), (49, 43129),

Gene: Bosection6_60 Start: 40096, Stop: 40698, Start Num: 9
Candidate Starts for Bosection6_60:
(Start: 9 @40096 has 44 MA's), (15, 40144), (19, 40162), (21, 40171), (47, 40516),

Gene: BronnyJr_60 Start: 41551, Stop: 42087, Start Num: 13
Candidate Starts for BronnyJr_60:
(7, 41500), (Start: 13 @41551 has 58 MA's), (18, 41590), (19, 41596), (21, 41605), (23, 41629), (33, 41716), (42, 41878), (49, 42031),

Gene: Brujita_64 Start: 41657, Stop: 42181, Start Num: 13
Candidate Starts for Brujita_64:
(Start: 13 @41657 has 58 MA's), (18, 41696), (19, 41702), (21, 41711), (23, 41735), (33, 41822), (42, 41984), (49, 42137),

Gene: Brusacoram_65 Start: 42210, Stop: 42740, Start Num: 13
Candidate Starts for Brusacoram_65:
(7, 42159), (Start: 13 @42210 has 58 MA's), (18, 42249), (19, 42255), (21, 42264), (23, 42288), (33, 42375), (42, 42537), (49, 42690),

Gene: Bunnies_69 Start: 43411, Stop: 43941, Start Num: 13
Candidate Starts for Bunnies_69:
(Start: 13 @43411 has 58 MA's), (18, 43450), (19, 43456), (21, 43465), (23, 43489), (33, 43576), (42, 43738), (49, 43891),

Gene: Butters_61 Start: 38432, Stop: 39028, Start Num: 9
Candidate Starts for Butters_61:
(Start: 9 @38432 has 44 MA's), (15, 38480), (19, 38498), (23, 38531), (24, 38546), (47, 38849), (51, 38963),

Gene: CactusJack_64 Start: 42282, Stop: 42812, Start Num: 13
Candidate Starts for CactusJack_64:
(7, 42231), (Start: 13 @42282 has 58 MA's), (18, 42321), (19, 42327), (21, 42336), (23, 42360), (42, 42609), (49, 42762),

Gene: Camster_64 Start: 41110, Stop: 41640, Start Num: 13
Candidate Starts for Camster_64:
(7, 41059), (Start: 13 @41110 has 58 MA's), (18, 41149), (19, 41155), (21, 41164), (23, 41188), (42, 41437), (49, 41590),

Gene: Carcharodon_65 Start: 40394, Stop: 40996, Start Num: 9
Candidate Starts for Carcharodon_65:
(Start: 9 @40394 has 44 MA's), (15, 40442), (19, 40460), (21, 40469), (47, 40814),

Gene: Charlie_62 Start: 39720, Stop: 40322, Start Num: 9
Candidate Starts for Charlie_62:
(Start: 9 @39720 has 44 MA's), (15, 39768), (19, 39786), (21, 39795), (47, 40140),

Gene: Che9c_73 Start: 51368, Stop: 51892, Start Num: 13
Candidate Starts for Che9c_73:

(Start: 13 @51368 has 58 MA's), (18, 51407), (19, 51413), (21, 51422), (23, 51446), (33, 51533), (49, 51848),

Gene: Chewbacca_68 Start: 40289, Stop: 40891, Start Num: 9
Candidate Starts for Chewbacca_68:
(Start: 9 @40289 has 44 MA's), (15, 40337), (19, 40355), (21, 40364), (47, 40709),

Gene: Chubbello_62 Start: 40304, Stop: 40834, Start Num: 13
Candidate Starts for Chubbello_62:
(Start: 13 @40304 has 58 MA's), (18, 40343), (19, 40349), (21, 40358), (23, 40382), (42, 40631), (49, 40784),

Gene: Cubone_68 Start: 41016, Stop: 41618, Start Num: 9
Candidate Starts for Cubone_68:
(Start: 9 @41016 has 44 MA's), (15, 41064), (19, 41082), (21, 41091), (47, 41436),

Gene: Donovan_63 Start: 41244, Stop: 41774, Start Num: 13
Candidate Starts for Donovan_63:
(Start: 13 @41244 has 58 MA's), (18, 41283), (19, 41289), (21, 41298), (23, 41322), (42, 41571), (49, 41724),

Gene: Duplicity_63 Start: 39651, Stop: 40253, Start Num: 9
Candidate Starts for Duplicity_63:
(Start: 9 @39651 has 44 MA's), (15, 39699), (19, 39717), (21, 39726), (47, 40071),

Gene: Dynamo_63 Start: 40683, Stop: 41213, Start Num: 13
Candidate Starts for Dynamo_63:
(7, 40632), (Start: 13 @40683 has 58 MA's), (18, 40722), (19, 40728), (21, 40737), (23, 40761), (33, 40848), (42, 41010), (49, 41163),

Gene: EGUnicorn_60 Start: 38717, Stop: 39319, Start Num: 9
Candidate Starts for EGUnicorn_60:
(Start: 9 @38717 has 44 MA's), (15, 38765), (19, 38783), (21, 38792), (47, 39137),

Gene: Etoile_62 Start: 41070, Stop: 41600, Start Num: 13
Candidate Starts for Etoile_62:
(Start: 13 @41070 has 58 MA's), (18, 41109), (19, 41115), (21, 41124), (23, 41148), (42, 41397), (49, 41550),

Gene: FirstPlacePfu_67 Start: 40276, Stop: 40806, Start Num: 13
Candidate Starts for FirstPlacePfu_67:
(7, 40225), (Start: 13 @40276 has 58 MA's), (18, 40315), (19, 40321), (21, 40330), (23, 40354), (33, 40441), (42, 40603), (49, 40756),

Gene: Fishburne_62 Start: 41070, Stop: 41600, Start Num: 13
Candidate Starts for Fishburne_62:
(Start: 13 @41070 has 58 MA's), (18, 41109), (19, 41115), (21, 41124), (23, 41148), (42, 41397), (49, 41550),

Gene: Fulbright_63 Start: 39088, Stop: 39690, Start Num: 9
Candidate Starts for Fulbright_63:
(Start: 9 @39088 has 44 MA's), (15, 39136), (19, 39154), (21, 39163), (47, 39508),

Gene: GaloreK_64 Start: 41744, Stop: 42286, Start Num: 10
Candidate Starts for GaloreK_64:
(Start: 10 @41744 has 4 MA's), (19, 41801), (21, 41810), (23, 41834), (33, 41921), (42, 42083), (49, 42236),

Gene: Gavriela_63 Start: 41975, Stop: 42505, Start Num: 13
Candidate Starts for Gavriela_63:
(7, 41924), (Start: 13 @41975 has 58 MA's), (18, 42014), (19, 42020), (21, 42029), (23, 42053), (42, 42302), (49, 42455),

Gene: Gex_66 Start: 40410, Stop: 41012, Start Num: 9
Candidate Starts for Gex_66:
(Start: 9 @40410 has 44 MA's), (15, 40458), (19, 40476), (21, 40485), (47, 40830),

Gene: Glaske_63 Start: 42282, Stop: 42812, Start Num: 13
Candidate Starts for Glaske_63:
(7, 42231), (Start: 13 @42282 has 58 MA's), (18, 42321), (19, 42327), (21, 42336), (23, 42360), (42, 42609), (49, 42762),

Gene: GreaseLightnin_68 Start: 43064, Stop: 43594, Start Num: 13
Candidate Starts for GreaseLightnin_68:
(7, 43013), (Start: 13 @43064 has 58 MA's), (18, 43103), (19, 43109), (21, 43118), (23, 43142), (33, 43229), (42, 43391), (49, 43544),

Gene: HC_60 Start: 39145, Stop: 39687, Start Num: 13
Candidate Starts for HC_60:
(Start: 13 @39145 has 58 MA's), (18, 39184), (19, 39190), (21, 39199), (23, 39223), (42, 39472), (49, 39625),

Gene: HUHilltop_66 Start: 40906, Stop: 41436, Start Num: 13
Candidate Starts for HUHilltop_66:
(7, 40855), (Start: 13 @40906 has 58 MA's), (18, 40945), (19, 40951), (21, 40960), (23, 40984), (33, 41071), (42, 41233), (49, 41386),

Gene: Hanako_61 Start: 39143, Stop: 39745, Start Num: 9
Candidate Starts for Hanako_61:
(Start: 9 @39143 has 44 MA's), (15, 39191), (19, 39209), (23, 39242), (35, 39380), (47, 39563), (51, 39677),

Gene: Ibrahim_49 Start: 36400, Stop: 36915, Start Num: 11
Candidate Starts for Ibrahim_49:
(Start: 11 @36400 has 8 MA's), (44, 36760), (47, 36811),

Gene: Impisi_63 Start: 38736, Stop: 39338, Start Num: 9
Candidate Starts for Impisi_63:
(Start: 9 @38736 has 44 MA's), (15, 38784), (19, 38802), (23, 38835), (35, 38973), (47, 39156), (51, 39270),

Gene: Island3_65 Start: 41657, Stop: 42181, Start Num: 13
Candidate Starts for Island3_65:
(Start: 13 @41657 has 58 MA's), (18, 41696), (19, 41702), (21, 41711), (23, 41735), (42, 41984), (49, 42137),

Gene: Jamie19_57 Start: 37823, Stop: 38425, Start Num: 9
Candidate Starts for Jamie19_57:
(Start: 9 @37823 has 44 MA's), (15, 37871), (23, 37922), (47, 38243), (51, 38357),

Gene: Jebeks_64 Start: 40203, Stop: 40733, Start Num: 13
Candidate Starts for Jebeks_64:
(7, 40152), (Start: 13 @40203 has 58 MA's), (18, 40242), (19, 40248), (21, 40257), (23, 40281), (42, 40530), (49, 40683),

Gene: Journey_58 Start: 38700, Stop: 39281, Start Num: 11
Candidate Starts for Journey_58:
(Start: 11 @38700 has 8 MA's), (18, 38739), (19, 38745), (21, 38754), (47, 39099),

Gene: Jung_64 Start: 41206, Stop: 41730, Start Num: 13
Candidate Starts for Jung_64:
(7, 41155), (Start: 13 @41206 has 58 MA's), (18, 41245), (19, 41251), (21, 41260), (23, 41284), (33, 41371),

Gene: Juniormint_61 Start: 39659, Stop: 40189, Start Num: 13
Candidate Starts for Juniormint_61:
(7, 39608), (Start: 13 @39659 has 58 MA's), (18, 39698), (19, 39704), (21, 39713), (23, 39737), (33, 39824), (42, 39986), (49, 40139),

Gene: Kari_63 Start: 41067, Stop: 41597, Start Num: 13
Candidate Starts for Kari_63:
(Start: 13 @41067 has 58 MA's), (18, 41106), (19, 41112), (21, 41121), (23, 41145), (42, 41394), (49, 41547),

Gene: Kevin1_64 Start: 38938, Stop: 39537, Start Num: 9
Candidate Starts for Kevin1_64:
(Start: 9 @38938 has 44 MA's), (15, 38986), (19, 39004), (23, 39037), (24, 39052), (47, 39358), (51, 39472),

Gene: KilKor_64 Start: 42975, Stop: 43505, Start Num: 13
Candidate Starts for KilKor_64:
(7, 42924), (Start: 13 @42975 has 58 MA's), (18, 43014), (19, 43020), (21, 43029), (23, 43053), (42, 43302), (49, 43455),

Gene: Ksquared_67 Start: 43288, Stop: 43818, Start Num: 13
Candidate Starts for Ksquared_67:
(Start: 13 @43288 has 58 MA's), (18, 43327), (19, 43333), (21, 43342), (23, 43366), (33, 43453), (42, 43615), (49, 43768),

Gene: Langerak_63 Start: 41047, Stop: 41577, Start Num: 13
Candidate Starts for Langerak_63:
(Start: 13 @41047 has 58 MA's), (18, 41086), (19, 41092), (21, 41101), (23, 41125), (33, 41212), (42, 41374), (49, 41527),

Gene: Magsby_64 Start: 40356, Stop: 40958, Start Num: 9
Candidate Starts for Magsby_64:
(Start: 9 @40356 has 44 MA's), (15, 40404), (19, 40422), (21, 40431), (47, 40776),

Gene: Majeke_66 Start: 41694, Stop: 42224, Start Num: 13

Candidate Starts for Majeke_66:
(Start: 13 @41694 has 58 MA's), (18, 41733), (19, 41739), (21, 41748), (23, 41772), (42, 42021), (49, 42174),

Gene: Malithi_63 Start: 40833, Stop: 41363, Start Num: 13
Candidate Starts for Malithi_63:
(7, 40782), (Start: 13 @40833 has 58 MA's), (18, 40872), (19, 40878), (21, 40887), (23, 40911), (42, 41160), (49, 41313),

Gene: Mangethe_66 Start: 41694, Stop: 42224, Start Num: 13
Candidate Starts for Mangethe_66:
(Start: 13 @41694 has 58 MA's), (18, 41733), (19, 41739), (21, 41748), (23, 41772), (42, 42021), (49, 42174),

Gene: Megiddo_63 Start: 42843, Stop: 43373, Start Num: 13
Candidate Starts for Megiddo_63:
(7, 42792), (Start: 13 @42843 has 58 MA's), (18, 42882), (19, 42888), (21, 42897), (23, 42921), (33, 43008), (42, 43170), (49, 43323),

Gene: Melville_70 Start: 39965, Stop: 40567, Start Num: 9
Candidate Starts for Melville_70:
(Start: 9 @39965 has 44 MA's), (15, 40013), (19, 40031), (21, 40040), (47, 40385),

Gene: Mendokysei_47 Start: 35526, Stop: 36041, Start Num: 11
Candidate Starts for Mendokysei_47:
(6, 35466), (Start: 11 @35526 has 8 MA's), (14, 35541), (27, 35640), (34, 35742), (44, 35886), (47, 35937),

Gene: MichelleMyBell_63 Start: 38786, Stop: 39388, Start Num: 9
Candidate Starts for MichelleMyBell_63:
(Start: 9 @38786 has 44 MA's), (15, 38834), (19, 38852), (23, 38885), (24, 38900), (47, 39206), (51, 39320),

Gene: Nairb_48 Start: 35954, Stop: 36469, Start Num: 11
Candidate Starts for Nairb_48:
(Start: 11 @35954 has 8 MA's), (44, 36314), (47, 36365),

Gene: Nazo_65 Start: 42521, Stop: 43039, Start Num: 13
Candidate Starts for Nazo_65:
(3, 42350), (5, 42362), (7, 42470), (Start: 13 @42521 has 58 MA's), (18, 42560), (19, 42566), (21, 42575), (23, 42599), (26, 42623), (30, 42644), (42, 42848), (49, 43001),

Gene: Necropolis_61 Start: 40272, Stop: 40802, Start Num: 13
Candidate Starts for Necropolis_61:
(7, 40221), (Start: 13 @40272 has 58 MA's), (18, 40311), (19, 40317), (21, 40326), (23, 40350), (33, 40437), (42, 40599), (49, 40752),

Gene: Nenae_62 Start: 39145, Stop: 39747, Start Num: 9
Candidate Starts for Nenae_62:
(Start: 9 @39145 has 44 MA's), (15, 39193), (19, 39211), (23, 39244), (35, 39382), (47, 39565), (51, 39679),

Gene: Nette_50 Start: 35535, Stop: 36050, Start Num: 11

Candidate Starts for Nette_50:
(6, 35475), (Start: 11 @35535 has 8 MA's), (14, 35550), (27, 35649), (34, 35751), (44, 35895), (47, 35946),

Gene: Nitzel_70 Start: 44595, Stop: 45167, Start Num: 13
Candidate Starts for Nitzel_70:
(Start: 13 @44595 has 58 MA's), (17, 44631), (20, 44643), (21, 44649), (23, 44673), (30, 44718), (32, 44736), (33, 44760), (34, 44802), (37, 44838), (43, 44931), (45, 44955), (46, 44976), (48, 45030), (50, 45102), (52, 45108), (53, 45114),

Gene: Ohgeesy_72 Start: 48265, Stop: 48756, Start Num: 13
Candidate Starts for Ohgeesy_72:
(2, 48079), (4, 48103), (Start: 13 @48265 has 58 MA's), (16, 48295), (25, 48364), (29, 48385), (39, 48556), (41, 48583), (42, 48592),

Gene: PaintedDog_67 Start: 43357, Stop: 43893, Start Num: 10
Candidate Starts for PaintedDog_67:
(Start: 10 @43357 has 4 MA's), (19, 43414), (21, 43423), (23, 43447), (49, 43849),

Gene: Panchino_58 Start: 39928, Stop: 40521, Start Num: 8
Candidate Starts for Panchino_58:
(Start: 8 @39928 has 1 MA's), (19, 39985), (21, 39994), (35, 40156), (47, 40339), (51, 40453),

Gene: Parmesanjohn_65 Start: 40414, Stop: 41016, Start Num: 9
Candidate Starts for Parmesanjohn_65:
(Start: 9 @40414 has 44 MA's), (15, 40462), (19, 40480), (21, 40489), (47, 40834),

Gene: PeanutPie_68 Start: 42787, Stop: 43317, Start Num: 13
Candidate Starts for PeanutPie_68:
(7, 42736), (Start: 13 @42787 has 58 MA's), (18, 42826), (19, 42832), (21, 42841), (23, 42865), (33, 42952), (42, 43114), (49, 43267),

Gene: Phalm_64 Start: 42273, Stop: 42803, Start Num: 13
Candidate Starts for Phalm_64:
(7, 42222), (Start: 13 @42273 has 58 MA's), (18, 42312), (19, 42318), (21, 42327), (23, 42351), (42, 42600), (49, 42753),

Gene: PhancyPhin_62 Start: 39139, Stop: 39741, Start Num: 9
Candidate Starts for PhancyPhin_62:
(Start: 9 @39139 has 44 MA's), (15, 39187), (19, 39205), (23, 39238), (35, 39376), (47, 39559), (51, 39673),

Gene: Phayonce_67 Start: 44806, Stop: 45330, Start Num: 13
Candidate Starts for Phayonce_67:
(Start: 13 @44806 has 58 MA's), (15, 44833), (16, 44836), (22, 44878), (33, 44971), (36, 45040), (47, 45205), (49, 45283),

Gene: Phegasus_66 Start: 41661, Stop: 42191, Start Num: 13
Candidate Starts for Phegasus_66:
(Start: 13 @41661 has 58 MA's), (18, 41700), (19, 41706), (21, 41715), (23, 41739), (42, 41988), (49, 42141),

Gene: Philonius_65 Start: 40579, Stop: 41181, Start Num: 9

Candidate Starts for Philonius_65:
(Start: 9 @40579 has 44 MA's), (15, 40627), (19, 40645), (21, 40654), (47, 40999),

Gene: Phineas_64 Start: 41241, Stop: 41771, Start Num: 13
Candidate Starts for Phineas_64:
(7, 41190), (Start: 13 @41241 has 58 MA's), (18, 41280), (19, 41286), (21, 41295), (23, 41319), (33, 41406), (42, 41568), (49, 41721),

Gene: Phloss_63 Start: 39821, Stop: 40423, Start Num: 9
Candidate Starts for Phloss_63:
(Start: 9 @39821 has 44 MA's), (15, 39869), (19, 39887), (21, 39896), (47, 40241),

Gene: Phrann_61 Start: 41688, Stop: 42290, Start Num: 9
Candidate Starts for Phrann_61:
(Start: 9 @41688 has 44 MA's), (15, 41736), (19, 41754), (23, 41787), (35, 41925), (47, 42108), (51, 42222),

Gene: Pipsqueaks_66 Start: 40392, Stop: 40994, Start Num: 9
Candidate Starts for Pipsqueaks_66:
(Start: 9 @40392 has 44 MA's), (15, 40440), (19, 40458), (21, 40467), (47, 40812),

Gene: Polkaroo_65 Start: 42987, Stop: 43517, Start Num: 13
Candidate Starts for Polkaroo_65:
(7, 42936), (Start: 13 @42987 has 58 MA's), (18, 43026), (19, 43032), (21, 43041), (23, 43065), (33, 43152), (42, 43314), (49, 43467),

Gene: Purgamenstris_62 Start: 39143, Stop: 39745, Start Num: 9
Candidate Starts for Purgamenstris_62:
(Start: 9 @39143 has 44 MA's), (15, 39191), (19, 39209), (23, 39242), (35, 39380), (47, 39563), (51, 39677),

Gene: Purky_76 Start: 46764, Stop: 47285, Start Num: 13
Candidate Starts for Purky_76:
(Start: 13 @46764 has 58 MA's), (15, 46791), (16, 46794), (22, 46836), (28, 46872), (36, 46998), (49, 47241),

Gene: Pygmy_67 Start: 42705, Stop: 43235, Start Num: 13
Candidate Starts for Pygmy_67:
(7, 42654), (Start: 13 @42705 has 58 MA's), (18, 42744), (19, 42750), (21, 42759), (23, 42783), (33, 42870), (42, 43032), (49, 43185),

Gene: QueenHazel_60 Start: 40826, Stop: 41356, Start Num: 13
Candidate Starts for QueenHazel_60:
(Start: 13 @40826 has 58 MA's), (18, 40865), (19, 40871), (21, 40880), (23, 40904), (42, 41153), (49, 41306),

Gene: Raymond7_55 Start: 38931, Stop: 39533, Start Num: 9
Candidate Starts for Raymond7_55:
(Start: 9 @38931 has 44 MA's), (15, 38979), (19, 38997), (23, 39030), (35, 39168), (47, 39351), (51, 39465),

Gene: Rebel_59 Start: 37248, Stop: 37847, Start Num: 9
Candidate Starts for Rebel_59:

(Start: 9 @37248 has 44 MA's), (15, 37296), (19, 37314), (23, 37347), (24, 37362), (47, 37668), (51, 37782),

Gene: Redi_62 Start: 39142, Stop: 39744, Start Num: 9
Candidate Starts for Redi_62:
(Start: 9 @39142 has 44 MA's), (15, 39190), (19, 39208), (23, 39241), (35, 39379), (47, 39562), (51, 39676),

Gene: RonRayGun_49 Start: 36400, Stop: 36915, Start Num: 11
Candidate Starts for RonRayGun_49:
(Start: 11 @36400 has 8 MA's), (44, 36760), (47, 36811),

Gene: Rubeelu_61 Start: 38432, Stop: 39028, Start Num: 9
Candidate Starts for Rubeelu_61:
(Start: 9 @38432 has 44 MA's), (15, 38480), (19, 38498), (23, 38531), (24, 38546), (47, 38849), (51, 38963),

Gene: Sbash_78 Start: 50081, Stop: 50605, Start Num: 13
Candidate Starts for Sbash_78:
(Start: 13 @50081 has 58 MA's), (18, 50120), (19, 50126), (21, 50135), (23, 50159), (49, 50561),

Gene: Schnauzer_66 Start: 40414, Stop: 41016, Start Num: 9
Candidate Starts for Schnauzer_66:
(Start: 9 @40414 has 44 MA's), (15, 40462), (19, 40480), (21, 40489), (47, 40834),

Gene: Scitech_60 Start: 39817, Stop: 40419, Start Num: 9
Candidate Starts for Scitech_60:
(Start: 9 @39817 has 44 MA's), (15, 39865), (19, 39883), (21, 39892), (47, 40237),

Gene: Shipwreck_66 Start: 42680, Stop: 43210, Start Num: 13
Candidate Starts for Shipwreck_66:
(7, 42629), (Start: 13 @42680 has 58 MA's), (18, 42719), (19, 42725), (21, 42734), (23, 42758), (33, 42845), (42, 43007), (49, 43160),

Gene: ShrimpFriedEgg_62 Start: 39142, Stop: 39744, Start Num: 9
Candidate Starts for ShrimpFriedEgg_62:
(Start: 9 @39142 has 44 MA's), (15, 39190), (19, 39208), (23, 39241), (35, 39379), (47, 39562), (51, 39676),

Gene: Shweta_60 Start: 39374, Stop: 39976, Start Num: 9
Candidate Starts for Shweta_60:
(Start: 9 @39374 has 44 MA's), (15, 39422), (19, 39440), (23, 39473), (35, 39611), (47, 39794), (51, 39908),

Gene: Silvafighter_67 Start: 39957, Stop: 40559, Start Num: 9
Candidate Starts for Silvafighter_67:
(Start: 9 @39957 has 44 MA's), (15, 40005), (19, 40023), (21, 40032), (47, 40377),

Gene: Silvy_61 Start: 41047, Stop: 41649, Start Num: 9
Candidate Starts for Silvy_61:
(Start: 9 @41047 has 44 MA's), (15, 41095), (19, 41113), (21, 41122), (47, 41467),

Gene: SkinnyPete_62 Start: 40161, Stop: 40763, Start Num: 9

Candidate Starts for SkinnyPete_62:
(Start: 9 @40161 has 44 MA's), (15, 40209), (19, 40227), (21, 40236), (47, 40581),

Gene: Smurph_65 Start: 40414, Stop: 41016, Start Num: 9
Candidate Starts for Smurph_65:
(Start: 9 @40414 has 44 MA's), (15, 40462), (19, 40480), (21, 40489), (47, 40834),

Gene: Snekmaggedon_57 Start: 37823, Stop: 38425, Start Num: 9
Candidate Starts for Snekmaggedon_57:
(Start: 9 @37823 has 44 MA's), (15, 37871), (23, 37922), (47, 38243), (51, 38357),

Gene: Sonah_64 Start: 40377, Stop: 40907, Start Num: 13
Candidate Starts for Sonah_64:
(7, 40326), (Start: 13 @40377 has 58 MA's), (18, 40416), (19, 40422), (21, 40431), (23, 40455), (42, 40704), (49, 40857),

Gene: Spinach_61 Start: 39142, Stop: 39744, Start Num: 9
Candidate Starts for Spinach_61:
(Start: 9 @39142 has 44 MA's), (15, 39190), (19, 39208), (23, 39241), (35, 39379), (47, 39562), (51, 39676),

Gene: SpongeBob_57 Start: 37823, Stop: 38425, Start Num: 9
Candidate Starts for SpongeBob_57:
(Start: 9 @37823 has 44 MA's), (15, 37871), (23, 37922), (47, 38243), (51, 38357),

Gene: StevieRay_68 Start: 43444, Stop: 43974, Start Num: 13
Candidate Starts for StevieRay_68:
(7, 43393), (Start: 13 @43444 has 58 MA's), (18, 43483), (19, 43489), (21, 43498), (23, 43522), (33, 43609), (42, 43771), (49, 43924),

Gene: StressBall_63 Start: 41975, Stop: 42505, Start Num: 13
Candidate Starts for StressBall_63:
(7, 41924), (Start: 13 @41975 has 58 MA's), (18, 42014), (19, 42020), (21, 42029), (23, 42053), (42, 42302), (49, 42455),

Gene: Stuck_74 Start: 49335, Stop: 49859, Start Num: 13
Candidate Starts for Stuck_74:
(Start: 13 @49335 has 58 MA's), (18, 49374), (19, 49380), (21, 49389), (23, 49413), (33, 49500), (49, 49815),

Gene: Tapioca_63 Start: 40931, Stop: 41533, Start Num: 9
Candidate Starts for Tapioca_63:
(Start: 9 @40931 has 44 MA's), (15, 40979), (19, 40997), (21, 41006), (47, 41351),

Gene: Techage_64 Start: 41242, Stop: 41784, Start Num: 10
Candidate Starts for Techage_64:
(Start: 10 @41242 has 4 MA's), (19, 41299), (21, 41308), (23, 41332), (33, 41419), (42, 41581), (49, 41734),

Gene: Tessdabest_66 Start: 40548, Stop: 41150, Start Num: 9
Candidate Starts for Tessdabest_66:
(Start: 9 @40548 has 44 MA's), (15, 40596), (19, 40614), (21, 40623), (47, 40968),

Gene: Thespis_65 Start: 42210, Stop: 42740, Start Num: 13
Candidate Starts for Thespis_65:
(7, 42159), (Start: 13 @42210 has 58 MA's), (18, 42249), (19, 42255), (21, 42264), (23, 42288), (33, 42375), (42, 42537), (49, 42690),

Gene: ThulaThula_71 Start: 46227, Stop: 46748, Start Num: 13
Candidate Starts for ThulaThula_71:
(Start: 13 @46227 has 58 MA's), (15, 46254), (16, 46257), (22, 46299), (31, 46365), (33, 46392), (36, 46461), (40, 46521), (42, 46551), (49, 46704),

Gene: Tortoise12_65 Start: 39535, Stop: 40137, Start Num: 9
Candidate Starts for Tortoise12_65:
(Start: 9 @39535 has 44 MA's), (15, 39583), (19, 39601), (21, 39610), (47, 39955),

Gene: Venti_61 Start: 39614, Stop: 40162, Start Num: 10
Candidate Starts for Venti_61:
(Start: 10 @39614 has 4 MA's), (19, 39671), (21, 39680), (23, 39704), (33, 39791), (42, 39953), (49, 40106),

Gene: Vidya_62 Start: 40498, Stop: 41028, Start Num: 13
Candidate Starts for Vidya_62:
(7, 40447), (Start: 13 @40498 has 58 MA's), (18, 40537), (19, 40543), (21, 40552), (23, 40576), (42, 40825), (49, 40978),

Gene: Whitty_48 Start: 35955, Stop: 36470, Start Num: 11
Candidate Starts for Whitty_48:
(Start: 11 @35955 has 8 MA's), (44, 36315), (47, 36366),

Gene: Willsammy_65 Start: 42459, Stop: 42989, Start Num: 13
Candidate Starts for Willsammy_65:
(7, 42408), (Start: 13 @42459 has 58 MA's), (18, 42498), (19, 42504), (21, 42513), (23, 42537), (42, 42786), (49, 42939),

Gene: Xavia_65 Start: 46537, Stop: 47067, Start Num: 13
Candidate Starts for Xavia_65:
(Start: 13 @46537 has 58 MA's), (18, 46576), (19, 46582), (21, 46591), (23, 46615), (33, 46702), (49, 47017),

Gene: Xeno_62 Start: 39097, Stop: 39681, Start Num: 13
Candidate Starts for Xeno_62:
(Start: 13 @39097 has 58 MA's), (18, 39136), (19, 39142), (21, 39151), (23, 39175), (33, 39262), (42, 39424), (51, 39613),

Gene: Xerxes_65 Start: 40411, Stop: 41013, Start Num: 9
Candidate Starts for Xerxes_65:
(Start: 9 @40411 has 44 MA's), (15, 40459), (19, 40477), (21, 40486), (47, 40831),

Gene: Xula_59 Start: 40447, Stop: 40989, Start Num: 13
Candidate Starts for Xula_59:
(Start: 13 @40447 has 58 MA's), (18, 40486), (19, 40492), (21, 40501), (23, 40525), (42, 40774), (49, 40927),

Gene: Yeezy_74 Start: 46717, Stop: 47211, Start Num: 12

Candidate Starts for Yeezy_74:
(1, 46531), (4, 46561), (Start: 12 @46717 has 1 MA's), (16, 46750), (29, 46843), (38, 46987), (41, 47038), (42, 47047),

Gene: ZenTime222_48 Start: 35954, Stop: 36469, Start Num: 11
Candidate Starts for ZenTime222_48:
(Start: 11 @35954 has 8 MA's), (44, 36314), (47, 36365),

Gene: Zilizebeth_69 Start: 42019, Stop: 42549, Start Num: 13
Candidate Starts for Zilizebeth_69:
(7, 41968), (Start: 13 @42019 has 58 MA's), (18, 42058), (19, 42064), (21, 42073), (23, 42097), (33, 42184), (42, 42346), (49, 42499),