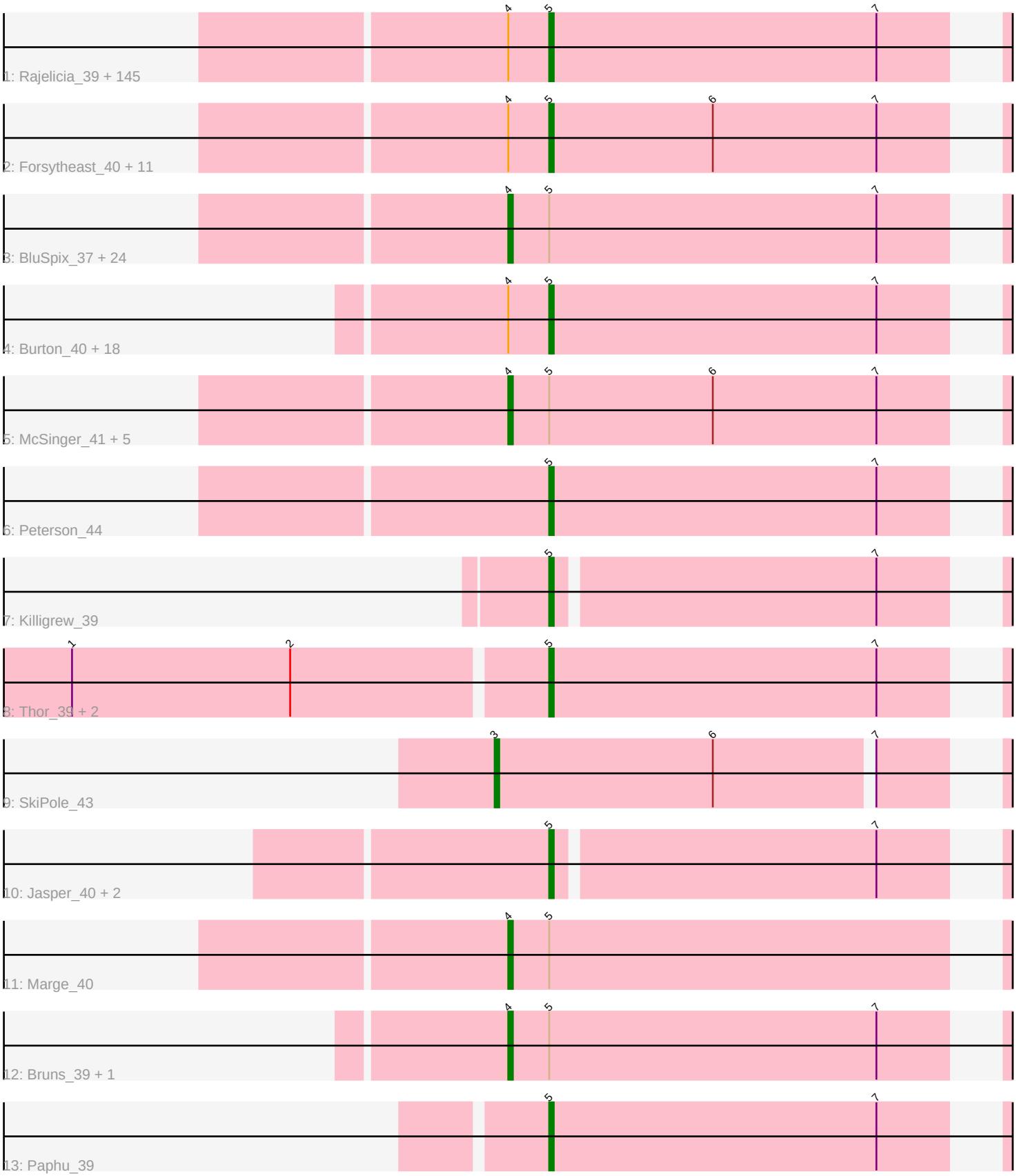
Pham 347250


1: Rajelicia_39 + 145
2: Forsytheast_40 + 11
3: BluSpix_37 + 24
4: Burton_40 + 18
5: McSinger_41 + 5
6: Peterson_44
7: Killigrew_39
8: Thor_39 + 2
9: SkiPole_43
10: Jasper_40 + 2
11: Marge_40
12: Bruns_39 + 1
13: Paphu_39

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 347250 Report

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

Pham number 347250 has 221 members, 12 are drafts.

Phages represented in each track:
• Track 1 : Rajelicia_39, Seabiscuit_41, Kugel_42, Crispicous1_39, Marcell_39, Michley_39, Tasp14_41, GrecoEtereo_41, ILeeKay_43, Naira_41, Wheeler_41, Carlyle_40, Fajezeel_42, Cueylyss_41, JC27_41, Seanderson_42, Gachnar_41, DirtDevil_41, Greg_42, PattyP_41, Blue_40, Bexan_38, U2_39, Sanya_40, PinkPlastic_38, Traft412_41, Snazzy_38, PascalRango_40, Trouble_41, BillKnuckles_40, Mryolo_38, Jorgensen_40, Paraselene_38, Inyanga_38, Sandaddy_40, Kykar_40, Makemake_40, Blesser_39, Eyeball_41, Arcanine_39, Parliament_39, SpikeBT_41, McGuire_40, EnzoK_39, MPlant7149_39, Ashballer_42, StewieG_38, Pinto_41, JuliaChild_41, AFIS_39, Puppet_41, Gwendoluna_42, Pepe_37, Switzer_40, Perseus_41, Ruotula_42, Nerujay_42, KikiBouba_42, Norz_41, Hope4ever_41, DrFeelGood_39, Lopton_41, Doom_41, Rufus_41, Manatee_40, Gyzlar_37, DreamCatcher_42, Scowl_40, Fenn_41, Lesedi_38, Pippin_42, Rubeus_40, Abbyshoes_43, Bob3_38, Swole_41, GroundGoblin_41, Slagathor_40, Adahisdi_40, Treddle_42, Buttons_39, Barriga_40, Sibs6_41, CatBus_41, PowerRanger_41, BeesKnees_40, TheloniousMonk_41, Oogway_38, BaconJack_43, Papez_42, Tripl3t_40, Pelly_40, Squee_40, KyMonks1A_43, Anglerfish_41, Zephyr_40, Dulcie_39, Acme_43, HarryOW_39, Petruchio_40, Ichabod_40, Sunshine924_41, Ajay_40, Rhynn_39, Ciao_40, Dynamix_40, Lamina13_40, Sorpresa_40, GMonster_38, PSullivan_40, Target_41, QTRlifeCrisis_41, Applejack_36, CartmannCramer_40, NEHalo_39, Edtherson_41, Pita2_43, Hami1_35, Whitspit_38, Briton15_41, DD5_40, Abrogate_400, Tote_36, Beatrix_39, RidgeCB_40, Ringer_41, Noxious_42, Licorice_43, Gandalf20_41, Arlo_38, Nhonho_40, LunarLander_42, StrongArm_39, MaryBeth_40, Hermia_42, IgnatiusPatJac_39, Atkinbua_41, GageAP_41, Topgun_40, Lockley_40, Smairt_42, MetalQZJ_40, STLscum_41, Kenmech_44, Aldrich_41, Phlippers_39, PherrisBueller_40
• Track 2 : Forsytheast_40, ConceptII_42, SwissCheese_42, Marchy_35, Raid_40, BarrowTuph_40, Corvo_41, PhineBark_39, Moose_40, Kanely_41, Levia_37, Payneful_40
• Track 3 : BluSpix_37, Bethlehem_39, Dussy_42, Euphoria_39, Bxb1_37, BigPaolini_40, Alsfro_44, Graduation_43, Fushigi_38, HanShotFirst_39, A6_37, Dexes_40, Aeneas_42, Mkhuseli_40, Pari_40, BK1_37, Rutherferd_42, Iqorha_38, PhrostyMug_40, Monet_44, Espresso_40, Zeuska_40, Mule_38, Solon_40, Watermelon_42
• Track 4 : Burton_40, Zeeculate_39, Museum_41, Magnito_38, BigMau_41, JackSparrow_42, Petp2012_41, Bigchungi_39, Niza_42, Molly_41, ShortQueendom_36, LilBib_40, Big3_39, TwoPeat_40, Rohr_41, Jerm2_41,

Marco3_41, HermioneGrange_40, Turj99_38
• Track 5 : McSinger_41, Chanagan_38, Blackflame_40, Altman_42, Violet_38, Teodoridan_38
• Track 6 : Peterson_44
• Track 7 : Killigrew_39
• Track 8 : Thor_39, SarFire_39, Smeagol_41
• Track 9 : SkiPole_43
• Track 10 : Jasper_40, ProMouse_39, Dreamboat_40
• Track 11 : Marge_40
• Track 12 : Bruns_39, MrGordo_39
• Track 13 : Paphu_39

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

The start number called the most often in the published annotations is 5, it was called in 178 of the 209 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AFIS_39, Abbyshoes_43, Abrogate_400, Acme_43, Adahisdi_40, Ajay_40, Aldrich_41, Anglerfish_41, Applejack_36, Arcanine_39, Arlo_38, Ashballer_42, Atkinbua_41, BaconJack_43, Barriga_40, BarrowTuph_40, Beatrix_39, BeesKnees_40, Bexan_38, Big3_39, BigMau_41, Bigchungi_39, BillKnuckles_40, Blesser_39, Blue_40, Bob3_38, Briton15_41, Burton_40, Buttons_39, Carlyle_40, CartmannCramer_40, CatBus_41, Ciao_40, ConceptII_42, Corvo_41, Crispicous1_39, Cueylyss_41, DD5_40, DirtDevil_41, Doom_41, DrFeelGood_39, DreamCatcher_42, Dreamboat_40, Dulcie_39, Dynamix_40, Edtherson_41, EnzoK_39, Eyeball_41, Fajezeel_42, Fenn_41, Forsytheast_40, GMonster_38, Gachnar_41, GageAP_41, Gandalf20_41, GrecoEtereo_41, Greg_42, GroundGoblin_41, Gwendoluna_42, Gyzlar_37, Hami1_35, HarryOW_39, Hermia_42, HermioneGrange_40, Hope4ever_41, ILeeKay_43, Ichabod_40, IgnatiusPatJac_39, Inyanga_38, JC27_41, JackSparrow_42, Jasper_40, Jerm2_41, Jorgensen_40, JuliaChild_41, Kanely_41, Kenmech_44, KikiBouba_42, Killigrew_39, Kugel_42, KyMonks1A_43, Kykar_40, Lamina13_40, Lesedi_38, Levia_37, Licorice_43, LilBib_40, Lockley_40, Lopton_41, LunarLander_42, MPlant7149_39, Magnito_38, Makemake_40, Manatee_40, Marcell_39, Marchy_35, Marco3_41, MaryBeth_40, McGuire_40, MetalQZJ_40, Michley_39, Molly_41, Moose_40, Mryolo_38, Museum_41, NEHalo_39, Naira_41, Nerujay_42, Nhonho_40, Niza_42, Norz_41, Noxious_42, Oogway_38, PSullivan_40, Papez_42, Paphu_39, Paraselene_38, Parliament_39, PascalRango_40, PattyP_41, Payneful_40, Pelly_40, Pepe_37, Perseus_41, Peterson_44, Petp2012_41, Petruchio_40, PherrisBueller_40, PhineBark_39, Phlippers_39, PinkPlastic_38, Pinto_41, Pippin_42, Pita2_43, PowerRanger_41, ProMouse_39, Puppet_41, QTRlifeCrisis_41, Raid_40, Rajelicia_39, Rhynn_39, RidgeCB_40, Ringer_41, Rohr_41, Rubeus_40, Rufus_41, Ruotula_42, STLscum_41, Sandaddy_40, Sanya_40, SarFire_39, Scowl_40, Seabiscuit_41, Seanderson_42, ShortQueendom_36, Sibs6_41, Slagathor_40, Smairt_42, Smeagol_41, Snazzy_38, Sorpresa_40, SpikeBT_41, Squee_40, StewieG_38, StrongArm_39, Sunshine924_41, SwissCheese_42, Switzer_40, Swole_41, Target_41, Tasp14_41, TheloniousMonk_41, Thor_39, Topgun_40, Tote_36, Traft412_41, Treddle_42, Tripl3t_40, Trouble_41, Turj99_38, TwoPeat_40, U2_39, Wheeler_41, Whitspit_38, Zeeculate_39, Zephyr_40,

Genes that have the "Most Annotated" start but do not call it:
• A6_37, Aeneas_42, Alsfro_44, Altman_42, BK1_37, Bethlehem_39, BigPaolini_40, Blackflame_40, BluSpix_37, Bruns_39, Bxb1_37, Chanagan_38, Dexes_40, Dussy_42, Espresso_40, Euphoria_39, Fushigi_38, Graduation_43, HanShotFirst_39, Iqorha_38, Marge_40, McSinger_41, Mkhuseli_40, Monet_44, MrGordo_39, Mule_38, Pari_40, PhrostyMug_40, Rutherferd_42, Solon_40, Teodoridan_38, Violet_38, Watermelon_42, Zeuska_40,

Genes that do not have the "Most Annotated" start:
• SkiPole_43,

Summary by start number:

Start 3:
• Found in 1 of 221 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 209
• Called 100.0% of time when present
• Phage (with cluster) where this start called: SkiPole_43 (A1),

Start 4:
• Found in 211 of 221 (95.5%) of genes in pham
• Manual Annotations of this start: 30 of 209
• Called 16.1% of time when present
• Phage (with cluster) where this start called: A6_37 (A1), Aeneas_42 (A1), Alsfro_44 (A1), Altman_42 (A1), BK1_37 (A1), Bethlehem_39 (A1), BigPaolini_40 (A1), Blackflame_40 (A1), BluSpix_37 (A1), Bruns_39 (A1), Bxb1_37 (A1), Chanagan_38 (A1), Dexes_40 (A1), Dussy_42 (A1), Espresso_40 (A1), Euphoria_39 (A1), Fushigi_38 (A1), Graduation_43 (A1), HanShotFirst_39 (A1), Iqorha_38 (A1), Marge_40 (A1), McSinger_41 (A1), Mkhuseli_40 (A1), Monet_44 (A1), MrGordo_39 (A1), Mule_38 (A1), Pari_40 (A1), PhrostyMug_40 (A1), Rutherferd_42 (A1), Solon_40 (A1), Teodoridan_38 (A1), Violet_38 (A1), Watermelon_42 (A1), Zeuska_40 (A1),

Start 5:
• Found in 220 of 221 (99.5%) of genes in pham
• Manual Annotations of this start: 178 of 209
• Called 84.5% of time when present
• Phage (with cluster) where this start called: AFIS_39 (A1), Abbyshoes_43 (A1), Abrogate_400 (A1), Acme_43 (A1), Adahisdi_40 (A1), Ajay_40 (A1), Aldrich_41 (A1), Anglerfish_41 (A1), Applejack_36 (A1), Arcanine_39 (A1), Arlo_38 (A1), Ashballer_42 (A1), Atkinbua_41 (A1), BaconJack_43 (A1), Barriga_40 (A1), BarrowTuph_40 (A1), Beatrix_39 (A1), BeesKnees_40 (A1), Bexan_38 (A1), Big3_39 (A1), BigMau_41 (A1), Bigchungi_39 (A1), BillKnuckles_40 (A1), Blesser_39 (A1), Blue_40 (A1), Bob3_38 (A1), Briton15_41 (A1), Burton_40 (A1), Buttons_39 (A1), Carlyle_40 (A1), CartmannCramer_40 (A1), CatBus_41 (A1), Ciao_40 (A1), ConceptII_42 (A1), Corvo_41 (A1), Crispicous1_39 (A1), Cueylyss_41 (A1), DD5_40 (A1), DirtDevil_41 (A1), Doom_41 (A1), DrFeelGood_39 (A1), DreamCatcher_42 (A1), Dreamboat_40 (A1), Dulcie_39 (A1), Dynamix_40 (A1), Edtherson_41 (A1), EnzoK_39 (A1), Eyeball_41 (A1), Fajezeel_42 (A1), Fenn_41 (A1), Forsytheast_40 (A1), GMonster_38 (A1), Gachnar_41 (A1), GageAP_41 (A1), Gandalf20_41 (A1), GrecoEtereo_41 (A1), Greg_42 (A1), GroundGoblin_41 (A1), Gwendoluna_42 (A1), Gyzlar_37 (A1), Hami1_35 (A1), HarryOW_39 (A1), Hermia_42 (A1),

HermioneGrange_40 (A1), Hope4ever_41 (A1), ILeeKay_43 (A1), Ichabod_40 (A1), IgnatiusPatJac_39 (A1), Inyanga_38 (A1), JC27_41 (A1), JackSparrow_42 (A1), Jasper_40 (A1), Jerm2_41 (A1), Jorgensen_40 (A1), JuliaChild_41 (A1), Kanely_41 (A1), Kenmech_44 (A1), KikiBouba_42 (A1), Killigrew_39 (A1), Kugel_42 (A1), KyMonks1A_43 (A1), Kykar_40 (A1), Lamina13_40 (A1), Lesedi_38 (A1), Levia_37 (A1), Licorice_43 (A1), LilBib_40 (A1), Lockley_40 (A1), Lopton_41 (A1), LunarLander_42 (A1), MPlant7149_39 (A1), Magnito_38 (A1), Makemake_40 (A1), Manatee_40 (A1), Marcell_39 (A1), Marchy_35 (A1), Marco3_41 (A1), MaryBeth_40 (A1), McGuire_40 (A1), MetalQZJ_40 (A1), Michley_39 (A1), Molly_41 (A1), Moose_40 (A1), Mryolo_38 (A1), Museum_41 (A1), NEHalo_39 (A1), Naira_41 (A1), Nerujay_42 (A1), Nhonho_40 (A1), Niza_42 (A1), Norz_41 (A1), Noxious_42 (A1), Oogway_38 (A1), PSullivan_40 (A1), Papez_42 (A1), Paphu_39 (A1), Paraselene_38 (A1), Parliament_39 (A1), PascalRango_40 (A1), PattyP_41 (A1), Payneful_40 (A1), Pelly_40 (A1), Pepe_37 (A1), Perseus_41 (A1), Peterson_44 (A1), Petp2012_41 (A1), Petruchio_40 (A1), PherrisBueller_40 (A1), PhineBark_39 (A1), Phlippers_39 (A1), PinkPlastic_38 (A1), Pinto_41 (A1), Pippin_42 (A1), Pita2_43 (A1), PowerRanger_41 (A1), ProMouse_39 (A1), Puppet_41 (A1), QTRlifeCrisis_41 (A1), Raid_40 (A1), Rajelicia_39 (A1), Rhynn_39 (A1), RidgeCB_40 (A1), Ringer_41 (A1), Rohr_41 (A1), Rubeus_40 (A1), Rufus_41 (A1), Ruotula_42 (A1), STLscum_41 (A1), Sandaddy_40 (A1), Sanya_40 (A1), SarFire_39 (A1), Scowl_40 (A1), Seabiscuit_41 (A1), Seanderson_42 (A1), ShortQueendom_36 (A1), Sibs6_41 (A1), Slagathor_40 (A1), Smairt_42 (A1), Smeagol_41 (A1), Snazzy_38 (A1), Sorpresa_40 (A1), SpikeBT_41 (A1), Squee_40 (A1), StewieG_38 (A1), StrongArm_39 (A1), Sunshine924_41 (A1), SwissCheese_42 (A1), Switzer_40 (A1), Swole_41 (A1), Target_41 (A1), Tasp14_41 (A1), TheloniousMonk_41 (A1), Thor_39 (A1), Topgun_40 (A1), Tote_36 (A1), Traft412_41 (A1), Treddle_42 (A1), Tripl3t_40 (A1), Trouble_41 (A1), Turj99_38 (A1), TwoPeat_40 (A1), U2_39 (A1), Wheeler_41 (A1), Whitspit_38 (A1), Zeeculate_39 (A1), Zephyr_40 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:
•Start number 3 was manually annotated 1 time for cluster A1.
•Start number 4 was manually annotated 30 times for cluster A1.
•Start number 5 was manually annotated 178 times for cluster A1.

Gene Information:

Gene: A6_37 Start: 30984, Stop: 30805, Start Num: 4
Candidate Starts for A6_37:
(Start: 4 @30984 has 30 MA's), (Start: 5 @30975 has 178 MA's), (7, 30903),

Gene: AFIS_39 Start: 31765, Stop: 31595, Start Num: 5
Candidate Starts for AFIS_39:
(Start: 4 @31774 has 30 MA's), (Start: 5 @31765 has 178 MA's), (7, 31693),

Gene: Abbyshoes_43 Start: 32174, Stop: 32004, Start Num: 5
Candidate Starts for Abbyshoes_43:
(Start: 4 @32183 has 30 MA's), (Start: 5 @32174 has 178 MA's), (7, 32102),

Gene: Abrogate_400 Start: 32452, Stop: 32282, Start Num: 5
Candidate Starts for Abrogate_400:
(Start: 4 @32461 has 30 MA's), (Start: 5 @32452 has 178 MA's), (7, 32380),

Gene: Acme_43 Start: 32292, Stop: 32122, Start Num: 5
Candidate Starts for Acme_43:
(Start: 4 @32301 has 30 MA's), (Start: 5 @32292 has 178 MA's), (7, 32220),

Gene: Adahisdi_40 Start: 31815, Stop: 31645, Start Num: 5
Candidate Starts for Adahisdi_40:
(Start: 4 @31824 has 30 MA's), (Start: 5 @31815 has 178 MA's), (7, 31743),

Gene: Aeneas_42 Start: 31975, Stop: 31796, Start Num: 4
Candidate Starts for Aeneas_42:
(Start: 4 @31975 has 30 MA's), (Start: 5 @31966 has 178 MA's), (7, 31894),

Gene: Ajay_40 Start: 31606, Stop: 31436, Start Num: 5
Candidate Starts for Ajay_40:
(Start: 4 @31615 has 30 MA's), (Start: 5 @31606 has 178 MA's), (7, 31534),

Gene: Aldrich_41 Start: 32778, Stop: 32608, Start Num: 5
Candidate Starts for Aldrich_41:
(Start: 4 @32787 has 30 MA's), (Start: 5 @32778 has 178 MA's), (7, 32706),

Gene: Alsfro_44 Start: 32364, Stop: 32185, Start Num: 4
Candidate Starts for Alsfro_44:
(Start: 4 @32364 has 30 MA's), (Start: 5 @32355 has 178 MA's), (7, 32283),

Gene: Altman_42 Start: 32620, Stop: 32441, Start Num: 4
Candidate Starts for Altman_42:
(Start: 4 @32620 has 30 MA's), (Start: 5 @32611 has 178 MA's), (6, 32575), (7, 32539),

Gene: Anglerfish_41 Start: 31868, Stop: 31698, Start Num: 5
Candidate Starts for Anglerfish_41:
(Start: 4 @31877 has 30 MA's), (Start: 5 @31868 has 178 MA's), (7, 31796),

Gene: Applejack_36 Start: 28682, Stop: 28512, Start Num: 5
Candidate Starts for Applejack_36:
(Start: 4 @28691 has 30 MA's), (Start: 5 @28682 has 178 MA's), (7, 28610),

Gene: Arcanine_39 Start: 30988, Stop: 30818, Start Num: 5
Candidate Starts for Arcanine_39:
(Start: 4 @30997 has 30 MA's), (Start: 5 @30988 has 178 MA's), (7, 30916),

Gene: Arlo_38 Start: 31496, Stop: 31326, Start Num: 5
Candidate Starts for Arlo_38:
(Start: 4 @31505 has 30 MA's), (Start: 5 @31496 has 178 MA's), (7, 31424),

Gene: Ashballer_42 Start: 32748, Stop: 32578, Start Num: 5
Candidate Starts for Ashballer_42:
(Start: 4 @32757 has 30 MA's), (Start: 5 @32748 has 178 MA's), (7, 32676),

Gene: Atkinbua_41 Start: 31944, Stop: 31774, Start Num: 5
Candidate Starts for Atkinbua_41:
(Start: 4 @31953 has 30 MA's), (Start: 5 @31944 has 178 MA's), (7, 31872),

Gene: BK1_37 Start: 30984, Stop: 30805, Start Num: 4
Candidate Starts for BK1_37:
(Start: 4 @30984 has 30 MA's), (Start: 5 @30975 has 178 MA's), (7, 30903),

Gene: BaconJack_43 Start: 32721, Stop: 32551, Start Num: 5
Candidate Starts for BaconJack_43:
(Start: 4 @32730 has 30 MA's), (Start: 5 @32721 has 178 MA's), (7, 32649),

Gene: Barriga_40 Start: 31470, Stop: 31300, Start Num: 5
Candidate Starts for Barriga_40:
(Start: 4 @31479 has 30 MA's), (Start: 5 @31470 has 178 MA's), (7, 31398),

Gene: BarrowTuph_40 Start: 31925, Stop: 31755, Start Num: 5
Candidate Starts for BarrowTuph_40:
(Start: 4 @31934 has 30 MA's), (Start: 5 @31925 has 178 MA's), (6, 31889), (7, 31853),

Gene: Beatrix_39 Start: 32941, Stop: 32771, Start Num: 5
Candidate Starts for Beatrix_39:
(Start: 4 @32950 has 30 MA's), (Start: 5 @32941 has 178 MA's), (7, 32869),

Gene: BeesKnees_40 Start: 31526, Stop: 31356, Start Num: 5
Candidate Starts for BeesKnees_40:
(Start: 4 @31535 has 30 MA's), (Start: 5 @31526 has 178 MA's), (7, 31454),

Gene: Bethlehem_39 Start: 32238, Stop: 32059, Start Num: 4
Candidate Starts for Bethlehem_39:
(Start: 4 @32238 has 30 MA's), (Start: 5 @32229 has 178 MA's), (7, 32157),

Gene: Bexan_38 Start: 32629, Stop: 32459, Start Num: 5
Candidate Starts for Bexan_38:
(Start: 4 @32638 has 30 MA's), (Start: 5 @32629 has 178 MA's), (7, 32557),

Gene: Big3_39 Start: 32107, Stop: 31937, Start Num: 5
Candidate Starts for Big3_39:
(Start: 4 @32116 has 30 MA's), (Start: 5 @32107 has 178 MA's), (7, 32035),

Gene: BigMau_41 Start: 31603, Stop: 31433, Start Num: 5
Candidate Starts for BigMau_41:
(Start: 4 @31612 has 30 MA's), (Start: 5 @31603 has 178 MA's), (7, 31531),

Gene: BigPaolini_40 Start: 30608, Stop: 30429, Start Num: 4
Candidate Starts for BigPaolini_40:
(Start: 4 @30608 has 30 MA's), (Start: 5 @30599 has 178 MA's), (7, 30527),

Gene: Bigchungi_39 Start: 31219, Stop: 31049, Start Num: 5
Candidate Starts for Bigchungi_39:
(Start: 4 @31228 has 30 MA's), (Start: 5 @31219 has 178 MA's), (7, 31147),

Gene: BillKnuckles_40 Start: 32329, Stop: 32159, Start Num: 5

Candidate Starts for BillKnuckles_40:
(Start: 4 @32338 has 30 MA's), (Start: 5 @32329 has 178 MA's), (7, 32257),

Gene: Blackflame_40 Start: 31312, Stop: 31133, Start Num: 4
Candidate Starts for Blackflame_40:
(Start: 4 @31312 has 30 MA's), (Start: 5 @31303 has 178 MA's), (6, 31267), (7, 31231),

Gene: Blesser_39 Start: 32002, Stop: 31832, Start Num: 5
Candidate Starts for Blesser_39:
(Start: 4 @32011 has 30 MA's), (Start: 5 @32002 has 178 MA's), (7, 31930),

Gene: BluSpix_37 Start: 27712, Stop: 27533, Start Num: 4
Candidate Starts for BluSpix_37:
(Start: 4 @27712 has 30 MA's), (Start: 5 @27703 has 178 MA's), (7, 27631),

Gene: Blue_40 Start: 32387, Stop: 32217, Start Num: 5
Candidate Starts for Blue_40:
(Start: 4 @32396 has 30 MA's), (Start: 5 @32387 has 178 MA's), (7, 32315),

Gene: Bob3_38 Start: 30953, Stop: 30783, Start Num: 5
Candidate Starts for Bob3_38:
(Start: 4 @30962 has 30 MA's), (Start: 5 @30953 has 178 MA's), (7, 30881),

Gene: Briton15_41 Start: 31779, Stop: 31609, Start Num: 5
Candidate Starts for Briton15_41:
(Start: 4 @31788 has 30 MA's), (Start: 5 @31779 has 178 MA's), (7, 31707),

Gene: Bruns_39 Start: 31694, Stop: 31509, Start Num: 4
Candidate Starts for Bruns_39:
(Start: 4 @31694 has 30 MA's), (Start: 5 @31685 has 178 MA's), (7, 31613),

Gene: Burton_40 Start: 31523, Stop: 31353, Start Num: 5
Candidate Starts for Burton_40:
(Start: 4 @31532 has 30 MA's), (Start: 5 @31523 has 178 MA's), (7, 31451),

Gene: Buttons_39 Start: 30491, Stop: 30321, Start Num: 5
Candidate Starts for Buttons_39:
(Start: 4 @30500 has 30 MA's), (Start: 5 @30491 has 178 MA's), (7, 30419),

Gene: Bxb1_37 Start: 31562, Stop: 31383, Start Num: 4
Candidate Starts for Bxb1_37:
(Start: 4 @31562 has 30 MA's), (Start: 5 @31553 has 178 MA's), (7, 31481),

Gene: Carlyle_40 Start: 30235, Stop: 30065, Start Num: 5
Candidate Starts for Carlyle_40:
(Start: 4 @30244 has 30 MA's), (Start: 5 @30235 has 178 MA's), (7, 30163),

Gene: CartmannCramer_40 Start: 34096, Stop: 33926, Start Num: 5
Candidate Starts for CartmannCramer_40:
(Start: 4 @34105 has 30 MA's), (Start: 5 @34096 has 178 MA's), (7, 34024),

Gene: CatBus_41 Start: 32970, Stop: 32800, Start Num: 5
Candidate Starts for CatBus_41:

(Start: 4 @32979 has 30 MA's), (Start: 5 @32970 has 178 MA's), (7, 32898),

Gene: Chanagan_38 Start: 31084, Stop: 30905, Start Num: 4
Candidate Starts for Chanagan_38:
(Start: 4 @31084 has 30 MA's), (Start: 5 @31075 has 178 MA's), (6, 31039), (7, 31003),

Gene: Ciao_40 Start: 31748, Stop: 31578, Start Num: 5
Candidate Starts for Ciao_40:
(Start: 4 @31757 has 30 MA's), (Start: 5 @31748 has 178 MA's), (7, 31676),

Gene: ConceptII_42 Start: 32765, Stop: 32595, Start Num: 5
Candidate Starts for ConceptII_42:
(Start: 4 @32774 has 30 MA's), (Start: 5 @32765 has 178 MA's), (6, 32729), (7, 32693),

Gene: Corvo_41 Start: 32625, Stop: 32455, Start Num: 5
Candidate Starts for Corvo_41:
(Start: 4 @32634 has 30 MA's), (Start: 5 @32625 has 178 MA's), (6, 32589), (7, 32553),

Gene: Crispicous1_39 Start: 31389, Stop: 31219, Start Num: 5
Candidate Starts for Crispicous1_39:
(Start: 4 @31398 has 30 MA's), (Start: 5 @31389 has 178 MA's), (7, 31317),

Gene: Cueylyss_41 Start: 32327, Stop: 32157, Start Num: 5
Candidate Starts for Cueylyss_41:
(Start: 4 @32336 has 30 MA's), (Start: 5 @32327 has 178 MA's), (7, 32255),

Gene: DD5_40 Start: 32631, Stop: 32461, Start Num: 5
Candidate Starts for DD5_40:
(Start: 4 @32640 has 30 MA's), (Start: 5 @32631 has 178 MA's), (7, 32559),

Gene: Dexes_40 Start: 32374, Stop: 32195, Start Num: 4
Candidate Starts for Dexes_40:
(Start: 4 @32374 has 30 MA's), (Start: 5 @32365 has 178 MA's), (7, 32293),

Gene: DirtDevil_41 Start: 32778, Stop: 32608, Start Num: 5
Candidate Starts for DirtDevil_41:
(Start: 4 @32787 has 30 MA's), (Start: 5 @32778 has 178 MA's), (7, 32706),

Gene: Doom_41 Start: 32520, Stop: 32350, Start Num: 5
Candidate Starts for Doom_41:
(Start: 4 @32529 has 30 MA's), (Start: 5 @32520 has 178 MA's), (7, 32448),

Gene: DrFeelGood_39 Start: 32261, Stop: 32091, Start Num: 5
Candidate Starts for DrFeelGood_39:
(Start: 4 @32270 has 30 MA's), (Start: 5 @32261 has 178 MA's), (7, 32189),

Gene: DreamCatcher_42 Start: 32827, Stop: 32657, Start Num: 5
Candidate Starts for DreamCatcher_42:
(Start: 4 @32836 has 30 MA's), (Start: 5 @32827 has 178 MA's), (7, 32755),

Gene: Dreamboat_40 Start: 31450, Stop: 31283, Start Num: 5
Candidate Starts for Dreamboat_40:
(Start: 5 @31450 has 178 MA's), (7, 31381),

Gene: Dulcie_39 Start: 31502, Stop: 31332, Start Num: 5
Candidate Starts for Dulcie_39:
(Start: 4 @31511 has 30 MA's), (Start: 5 @31502 has 178 MA's), (7, 31430),

Gene: Dussy_42 Start: 32203, Stop: 32024, Start Num: 4
Candidate Starts for Dussy_42:
(Start: 4 @32203 has 30 MA's), (Start: 5 @32194 has 178 MA's), (7, 32122),

Gene: Dynamix_40 Start: 31512, Stop: 31342, Start Num: 5
Candidate Starts for Dynamix_40:
(Start: 4 @31521 has 30 MA's), (Start: 5 @31512 has 178 MA's), (7, 31440),

Gene: Edtherson_41 Start: 32705, Stop: 32535, Start Num: 5
Candidate Starts for Edtherson_41:
(Start: 4 @32714 has 30 MA's), (Start: 5 @32705 has 178 MA's), (7, 32633),

Gene: EnzoK_39 Start: 29800, Stop: 29630, Start Num: 5
Candidate Starts for EnzoK_39:
(Start: 4 @29809 has 30 MA's), (Start: 5 @29800 has 178 MA's), (7, 29728),

Gene: Espresso_40 Start: 32091, Stop: 31912, Start Num: 4
Candidate Starts for Espresso_40:
(Start: 4 @32091 has 30 MA's), (Start: 5 @32082 has 178 MA's), (7, 32010),

Gene: Euphoria_39 Start: 31555, Stop: 31376, Start Num: 4
Candidate Starts for Euphoria_39:
(Start: 4 @31555 has 30 MA's), (Start: 5 @31546 has 178 MA's), (7, 31474),

Gene: Eyeball_41 Start: 31997, Stop: 31827, Start Num: 5
Candidate Starts for Eyeball_41:
(Start: 4 @32006 has 30 MA's), (Start: 5 @31997 has 178 MA's), (7, 31925),

Gene: Fajezeel_42 Start: 32121, Stop: 31951, Start Num: 5
Candidate Starts for Fajezeel_42:
(Start: 4 @32130 has 30 MA's), (Start: 5 @32121 has 178 MA's), (7, 32049),

Gene: Fenn_41 Start: 33445, Stop: 33275, Start Num: 5
Candidate Starts for Fenn_41:
(Start: 4 @33454 has 30 MA's), (Start: 5 @33445 has 178 MA's), (7, 33373),

Gene: Forsytheast_40 Start: 31903, Stop: 31733, Start Num: 5
Candidate Starts for Forsytheast_40:
(Start: 4 @31912 has 30 MA's), (Start: 5 @31903 has 178 MA's), (6, 31867), (7, 31831),

Gene: Fushigi_38 Start: 29740, Stop: 29561, Start Num: 4
Candidate Starts for Fushigi_38:
(Start: 4 @29740 has 30 MA's), (Start: 5 @29731 has 178 MA's), (7, 29659),

Gene: GMonster_38 Start: 30848, Stop: 30678, Start Num: 5
Candidate Starts for GMonster_38:
(Start: 4 @30857 has 30 MA's), (Start: 5 @30848 has 178 MA's), (7, 30776),

Gene: Gachnar_41 Start: 31620, Stop: 31450, Start Num: 5
Candidate Starts for Gachnar_41:
(Start: 4 @31629 has 30 MA's), (Start: 5 @31620 has 178 MA's), (7, 31548),

Gene: GageAP_41 Start: 31831, Stop: 31661, Start Num: 5
Candidate Starts for GageAP_41:
(Start: 4 @31840 has 30 MA's), (Start: 5 @31831 has 178 MA's), (7, 31759),

Gene: Gandalf20_41 Start: 32600, Stop: 32430, Start Num: 5
Candidate Starts for Gandalf20_41:
(Start: 4 @32609 has 30 MA's), (Start: 5 @32600 has 178 MA's), (7, 32528),

Gene: Graduation_43 Start: 32923, Stop: 32744, Start Num: 4
Candidate Starts for Graduation_43:
(Start: 4 @32923 has 30 MA's), (Start: 5 @32914 has 178 MA's), (7, 32842),

Gene: GrecoEtereo_41 Start: 32242, Stop: 32072, Start Num: 5
Candidate Starts for GrecoEtereo_41:
(Start: 4 @32251 has 30 MA's), (Start: 5 @32242 has 178 MA's), (7, 32170),

Gene: Greg_42 Start: 32121, Stop: 31951, Start Num: 5
Candidate Starts for Greg_42:
(Start: 4 @32130 has 30 MA's), (Start: 5 @32121 has 178 MA's), (7, 32049),

Gene: GroundGoblin_41 Start: 32920, Stop: 32750, Start Num: 5
Candidate Starts for GroundGoblin_41:
(Start: 4 @32929 has 30 MA's), (Start: 5 @32920 has 178 MA's), (7, 32848),

Gene: Gwendoluna_42 Start: 33699, Stop: 33529, Start Num: 5
Candidate Starts for Gwendoluna_42:
(Start: 4 @33708 has 30 MA's), (Start: 5 @33699 has 178 MA's), (7, 33627),

Gene: Gyzlar_37 Start: 30222, Stop: 30052, Start Num: 5
Candidate Starts for Gyzlar_37:
(Start: 4 @30231 has 30 MA's), (Start: 5 @30222 has 178 MA's), (7, 30150),

Gene: Hami1_35 Start: 26660, Stop: 26490, Start Num: 5
Candidate Starts for Hami1_35:
(Start: 4 @26669 has 30 MA's), (Start: 5 @26660 has 178 MA's), (7, 26588),

Gene: HanShotFirst_39 Start: 31264, Stop: 31085, Start Num: 4
Candidate Starts for HanShotFirst_39:
(Start: 4 @31264 has 30 MA's), (Start: 5 @31255 has 178 MA's), (7, 31183),

Gene: HarryOW_39 Start: 31414, Stop: 31244, Start Num: 5
Candidate Starts for HarryOW_39:
(Start: 4 @31423 has 30 MA's), (Start: 5 @31414 has 178 MA's), (7, 31342),

Gene: Hermia_42 Start: 32970, Stop: 32800, Start Num: 5
Candidate Starts for Hermia_42:
(Start: 4 @32979 has 30 MA's), (Start: 5 @32970 has 178 MA's), (7, 32898),

Gene: HermioneGrange_40 Start: 32097, Stop: 31927, Start Num: 5

Candidate Starts for HermioneGrange_40:
(Start: 4 @32106 has 30 MA's), (Start: 5 @32097 has 178 MA's), (7, 32025),

Gene: Hope4ever_41 Start: 32288, Stop: 32118, Start Num: 5
Candidate Starts for Hope4ever_41:
(Start: 4 @32297 has 30 MA's), (Start: 5 @32288 has 178 MA's), (7, 32216),

Gene: ILeeKay_43 Start: 32364, Stop: 32194, Start Num: 5
Candidate Starts for ILeeKay_43:
(Start: 4 @32373 has 30 MA's), (Start: 5 @32364 has 178 MA's), (7, 32292),

Gene: Ichabod_40 Start: 31653, Stop: 31483, Start Num: 5
Candidate Starts for Ichabod_40:
(Start: 4 @31662 has 30 MA's), (Start: 5 @31653 has 178 MA's), (7, 31581),

Gene: IgnatiusPatJac_39 Start: 31648, Stop: 31478, Start Num: 5
Candidate Starts for IgnatiusPatJac_39:
(Start: 4 @31657 has 30 MA's), (Start: 5 @31648 has 178 MA's), (7, 31576),

Gene: Inyanga_38 Start: 30994, Stop: 30824, Start Num: 5
Candidate Starts for Inyanga_38:
(Start: 4 @31003 has 30 MA's), (Start: 5 @30994 has 178 MA's), (7, 30922),

Gene: Iqorha_38 Start: 31002, Stop: 30823, Start Num: 4
Candidate Starts for Iqorha_38:
(Start: 4 @31002 has 30 MA's), (Start: 5 @30993 has 178 MA's), (7, 30921),

Gene: JC27_41 Start: 32318, Stop: 32148, Start Num: 5
Candidate Starts for JC27_41:
(Start: 4 @32327 has 30 MA's), (Start: 5 @32318 has 178 MA's), (7, 32246),

Gene: JackSparrow_42 Start: 32628, Stop: 32458, Start Num: 5
Candidate Starts for JackSparrow_42:
(Start: 4 @32637 has 30 MA's), (Start: 5 @32628 has 178 MA's), (7, 32556),

Gene: Jasper_40 Start: 31336, Stop: 31169, Start Num: 5
Candidate Starts for Jasper_40:
(Start: 5 @31336 has 178 MA's), (7, 31267),

Gene: Jerm2_41 Start: 32352, Stop: 32182, Start Num: 5
Candidate Starts for Jerm2_41:
(Start: 4 @32361 has 30 MA's), (Start: 5 @32352 has 178 MA's), (7, 32280),

Gene: Jorgensen_40 Start: 31743, Stop: 31573, Start Num: 5
Candidate Starts for Jorgensen_40:
(Start: 4 @31752 has 30 MA's), (Start: 5 @31743 has 178 MA's), (7, 31671),

Gene: JuliaChild_41 Start: 32088, Stop: 31918, Start Num: 5
Candidate Starts for JuliaChild_41:
(Start: 4 @32097 has 30 MA's), (Start: 5 @32088 has 178 MA's), (7, 32016),

Gene: Kanely_41 Start: 32387, Stop: 32217, Start Num: 5
Candidate Starts for Kanely_41:

(Start: 4 @32396 has 30 MA's), (Start: 5 @32387 has 178 MA's), (6, 32351), (7, 32315),

Gene: Kenmech_44 Start: 33320, Stop: 33150, Start Num: 5
Candidate Starts for Kenmech_44:
(Start: 4 @33329 has 30 MA's), (Start: 5 @33320 has 178 MA's), (7, 33248),

Gene: KikiBouba_42 Start: 32779, Stop: 32609, Start Num: 5
Candidate Starts for KikiBouba_42:
(Start: 4 @32788 has 30 MA's), (Start: 5 @32779 has 178 MA's), (7, 32707),

Gene: Killigrew_39 Start: 31871, Stop: 31704, Start Num: 5
Candidate Starts for Killigrew_39:
(Start: 5 @31871 has 178 MA's), (7, 31802),

Gene: Kugel_42 Start: 32536, Stop: 32366, Start Num: 5
Candidate Starts for Kugel_42:
(Start: 4 @32545 has 30 MA's), (Start: 5 @32536 has 178 MA's), (7, 32464),

Gene: KyMonks1A_43 Start: 32408, Stop: 32238, Start Num: 5
Candidate Starts for KyMonks1A_43:
(Start: 4 @32417 has 30 MA's), (Start: 5 @32408 has 178 MA's), (7, 32336),

Gene: Kykar_40 Start: 31704, Stop: 31534, Start Num: 5
Candidate Starts for Kykar_40:
(Start: 4 @31713 has 30 MA's), (Start: 5 @31704 has 178 MA's), (7, 31632),

Gene: Lamina13_40 Start: 31497, Stop: 31327, Start Num: 5
Candidate Starts for Lamina13_40:
(Start: 4 @31506 has 30 MA's), (Start: 5 @31497 has 178 MA's), (7, 31425),

Gene: Lesedi_38 Start: 31377, Stop: 31207, Start Num: 5
Candidate Starts for Lesedi_38:
(Start: 4 @31386 has 30 MA's), (Start: 5 @31377 has 178 MA's), (7, 31305),

Gene: Levia_37 Start: 31546, Stop: 31376, Start Num: 5
Candidate Starts for Levia_37:
(Start: 4 @31555 has 30 MA's), (Start: 5 @31546 has 178 MA's), (6, 31510), (7, 31474),

Gene: Licorice_43 Start: 33195, Stop: 33025, Start Num: 5
Candidate Starts for Licorice_43:
(Start: 4 @33204 has 30 MA's), (Start: 5 @33195 has 178 MA's), (7, 33123),

Gene: LilBib_40 Start: 32462, Stop: 32292, Start Num: 5
Candidate Starts for LilBib_40:
(Start: 4 @32471 has 30 MA's), (Start: 5 @32462 has 178 MA's), (7, 32390),

Gene: Lockley_40 Start: 31793, Stop: 31623, Start Num: 5
Candidate Starts for Lockley_40:
(Start: 4 @31802 has 30 MA's), (Start: 5 @31793 has 178 MA's), (7, 31721),

Gene: Lopton_41 Start: 33294, Stop: 33112, Start Num: 5
Candidate Starts for Lopton_41:
(Start: 4 @33303 has 30 MA's), (Start: 5 @33294 has 178 MA's), (7, 33222),

Gene: LunarLander_42 Start: 32321, Stop: 32151, Start Num: 5
Candidate Starts for LunarLander_42:
(Start: 4 @32330 has 30 MA's), (Start: 5 @32321 has 178 MA's), (7, 32249),

Gene: MPlant7149_39 Start: 31162, Stop: 30992, Start Num: 5
Candidate Starts for MPlant7149_39:
(Start: 4 @31171 has 30 MA's), (Start: 5 @31162 has 178 MA's), (7, 31090),

Gene: Magnito_38 Start: 31167, Stop: 30985, Start Num: 5
Candidate Starts for Magnito_38:
(Start: 4 @31176 has 30 MA's), (Start: 5 @31167 has 178 MA's), (7, 31095),

Gene: Makemake_40 Start: 32809, Stop: 32639, Start Num: 5
Candidate Starts for Makemake_40:
(Start: 4 @32818 has 30 MA's), (Start: 5 @32809 has 178 MA's), (7, 32737),

Gene: Manatee_40 Start: 31188, Stop: 31018, Start Num: 5
Candidate Starts for Manatee_40:
(Start: 4 @31197 has 30 MA's), (Start: 5 @31188 has 178 MA's), (7, 31116),

Gene: Marcell_39 Start: 31852, Stop: 31682, Start Num: 5
Candidate Starts for Marcell_39:
(Start: 4 @31861 has 30 MA's), (Start: 5 @31852 has 178 MA's), (7, 31780),

Gene: Marchy_35 Start: 28627, Stop: 28457, Start Num: 5
Candidate Starts for Marchy_35:
(Start: 4 @28636 has 30 MA's), (Start: 5 @28627 has 178 MA's), (6, 28591), (7, 28555),

Gene: Marco3_41 Start: 32215, Stop: 32045, Start Num: 5
Candidate Starts for Marco3_41:
(Start: 4 @32224 has 30 MA's), (Start: 5 @32215 has 178 MA's), (7, 32143),

Gene: Marge_40 Start: 32249, Stop: 32070, Start Num: 4
Candidate Starts for Marge_40:
(Start: 4 @32249 has 30 MA's), (Start: 5 @32240 has 178 MA's),

Gene: MaryBeth_40 Start: 31842, Stop: 31672, Start Num: 5
Candidate Starts for MaryBeth_40:
(Start: 4 @31851 has 30 MA's), (Start: 5 @31842 has 178 MA's), (7, 31770),

Gene: McGuire_40 Start: 31484, Stop: 31314, Start Num: 5
Candidate Starts for McGuire_40:
(Start: 4 @31493 has 30 MA's), (Start: 5 @31484 has 178 MA's), (7, 31412),

Gene: McSinger_41 Start: 32237, Stop: 32058, Start Num: 4
Candidate Starts for McSinger_41:
(Start: 4 @32237 has 30 MA's), (Start: 5 @32228 has 178 MA's), (6, 32192), (7, 32156),

Gene: MetalQZJ_40 Start: 31842, Stop: 31672, Start Num: 5
Candidate Starts for MetalQZJ_40:
(Start: 4 @31851 has 30 MA's), (Start: 5 @31842 has 178 MA's), (7, 31770),

Gene: Michley_39 Start: 31329, Stop: 31159, Start Num: 5
Candidate Starts for Michley_39:
(Start: 4 @31338 has 30 MA's), (Start: 5 @31329 has 178 MA's), (7, 31257),

Gene: Mkhuseli_40 Start: 31537, Stop: 31358, Start Num: 4
Candidate Starts for Mkhuseli_40:
(Start: 4 @31537 has 30 MA's), (Start: 5 @31528 has 178 MA's), (7, 31456),

Gene: Molly_41 Start: 31396, Stop: 31226, Start Num: 5
Candidate Starts for Molly_41:
(Start: 4 @31405 has 30 MA's), (Start: 5 @31396 has 178 MA's), (7, 31324),

Gene: Monet_44 Start: 33667, Stop: 33488, Start Num: 4
Candidate Starts for Monet_44:
(Start: 4 @33667 has 30 MA's), (Start: 5 @33658 has 178 MA's), (7, 33586),

Gene: Moose_40 Start: 31903, Stop: 31733, Start Num: 5
Candidate Starts for Moose_40:
(Start: 4 @31912 has 30 MA's), (Start: 5 @31903 has 178 MA's), (6, 31867), (7, 31831),

Gene: MrGordo_39 Start: 31201, Stop: 31022, Start Num: 4
Candidate Starts for MrGordo_39:
(Start: 4 @31201 has 30 MA's), (Start: 5 @31192 has 178 MA's), (7, 31120),

Gene: Mryolo_38 Start: 31387, Stop: 31217, Start Num: 5
Candidate Starts for Mryolo_38:
(Start: 4 @31396 has 30 MA's), (Start: 5 @31387 has 178 MA's), (7, 31315),

Gene: Mule_38 Start: 29717, Stop: 29538, Start Num: 4
Candidate Starts for Mule_38:
(Start: 4 @29717 has 30 MA's), (Start: 5 @29708 has 178 MA's), (7, 29636),

Gene: Museum_41 Start: 31462, Stop: 31292, Start Num: 5
Candidate Starts for Museum_41:
(Start: 4 @31471 has 30 MA's), (Start: 5 @31462 has 178 MA's), (7, 31390),

Gene: NEHalo_39 Start: 31421, Stop: 31251, Start Num: 5
Candidate Starts for NEHalo_39:
(Start: 4 @31430 has 30 MA's), (Start: 5 @31421 has 178 MA's), (7, 31349),

Gene: Naira_41 Start: 33492, Stop: 33322, Start Num: 5
Candidate Starts for Naira_41:
(Start: 4 @33501 has 30 MA's), (Start: 5 @33492 has 178 MA's), (7, 33420),

Gene: Nerujay_42 Start: 32529, Stop: 32359, Start Num: 5
Candidate Starts for Nerujay_42:
(Start: 4 @32538 has 30 MA's), (Start: 5 @32529 has 178 MA's), (7, 32457),

Gene: Nhonho_40 Start: 32214, Stop: 32044, Start Num: 5
Candidate Starts for Nhonho_40:
(Start: 4 @32223 has 30 MA's), (Start: 5 @32214 has 178 MA's), (7, 32142),

Gene: Niza_42 Start: 32891, Stop: 32709, Start Num: 5

Candidate Starts for Niza_42:
(Start: 4 @32900 has 30 MA's), (Start: 5 @32891 has 178 MA's), (7, 32819),

Gene: Norz_41 Start: 32339, Stop: 32169, Start Num: 5
Candidate Starts for Norz_41:
(Start: 4 @32348 has 30 MA's), (Start: 5 @32339 has 178 MA's), (7, 32267),

Gene: Noxious_42 Start: 32970, Stop: 32800, Start Num: 5
Candidate Starts for Noxious_42:
(Start: 4 @32979 has 30 MA's), (Start: 5 @32970 has 178 MA's), (7, 32898),

Gene: Oogway_38 Start: 31022, Stop: 30852, Start Num: 5
Candidate Starts for Oogway_38:
(Start: 4 @31031 has 30 MA's), (Start: 5 @31022 has 178 MA's), (7, 30950),

Gene: PSullivan_40 Start: 31416, Stop: 31246, Start Num: 5
Candidate Starts for PSullivan_40:
(Start: 4 @31425 has 30 MA's), (Start: 5 @31416 has 178 MA's), (7, 31344),

Gene: Papez_42 Start: 33553, Stop: 33383, Start Num: 5
Candidate Starts for Papez_42:
(Start: 4 @33562 has 30 MA's), (Start: 5 @33553 has 178 MA's), (7, 33481),

Gene: Paphu_39 Start: 31605, Stop: 31435, Start Num: 5
Candidate Starts for Paphu_39:
(Start: 5 @31605 has 178 MA's), (7, 31533),

Gene: Paraselene_38 Start: 31889, Stop: 31719, Start Num: 5
Candidate Starts for Paraselene_38:
(Start: 4 @31898 has 30 MA's), (Start: 5 @31889 has 178 MA's), (7, 31817),

Gene: Pari_40 Start: 31263, Stop: 31084, Start Num: 4
Candidate Starts for Pari_40:
(Start: 4 @31263 has 30 MA's), (Start: 5 @31254 has 178 MA's), (7, 31182),

Gene: Parliament_39 Start: 32031, Stop: 31861, Start Num: 5
Candidate Starts for Parliament_39:
(Start: 4 @32040 has 30 MA's), (Start: 5 @32031 has 178 MA's), (7, 31959),

Gene: PascalRango_40 Start: 31562, Stop: 31392, Start Num: 5
Candidate Starts for PascalRango_40:
(Start: 4 @31571 has 30 MA's), (Start: 5 @31562 has 178 MA's), (7, 31490),

Gene: PattyP_41 Start: 31752, Stop: 31582, Start Num: 5
Candidate Starts for PattyP_41:
(Start: 4 @31761 has 30 MA's), (Start: 5 @31752 has 178 MA's), (7, 31680),

Gene: Payneful_40 Start: 31344, Stop: 31174, Start Num: 5
Candidate Starts for Payneful_40:
(Start: 4 @31353 has 30 MA's), (Start: 5 @31344 has 178 MA's), (6, 31308), (7, 31272),

Gene: Pelly_40 Start: 32286, Stop: 32116, Start Num: 5
Candidate Starts for Pelly_40:

(Start: 4 @32295 has 30 MA's), (Start: 5 @32286 has 178 MA's), (7, 32214),

Gene: Pepe_37 Start: 30001, Stop: 29831, Start Num: 5
Candidate Starts for Pepe_37:
(Start: 4 @30010 has 30 MA's), (Start: 5 @30001 has 178 MA's), (7, 29929),

Gene: Perseus_41 Start: 32568, Stop: 32398, Start Num: 5
Candidate Starts for Perseus_41:
(Start: 4 @32577 has 30 MA's), (Start: 5 @32568 has 178 MA's), (7, 32496),

Gene: Peterson_44 Start: 34140, Stop: 33970, Start Num: 5
Candidate Starts for Peterson_44:
(Start: 5 @34140 has 178 MA's), (7, 34068),

Gene: Petp2012_41 Start: 32380, Stop: 32210, Start Num: 5
Candidate Starts for Petp2012_41:
(Start: 4 @32389 has 30 MA's), (Start: 5 @32380 has 178 MA's), (7, 32308),

Gene: Petruchio_40 Start: 31734, Stop: 31564, Start Num: 5
Candidate Starts for Petruchio_40:
(Start: 4 @31743 has 30 MA's), (Start: 5 @31734 has 178 MA's), (7, 31662),

Gene: PherrisBueller_40 Start: 31350, Stop: 31180, Start Num: 5
Candidate Starts for PherrisBueller_40:
(Start: 4 @31359 has 30 MA's), (Start: 5 @31350 has 178 MA's), (7, 31278),

Gene: PhineBark_39 Start: 32564, Stop: 32394, Start Num: 5
Candidate Starts for PhineBark_39:
(Start: 4 @32573 has 30 MA's), (Start: 5 @32564 has 178 MA's), (6, 32528), (7, 32492),

Gene: Phlippers_39 Start: 32782, Stop: 32612, Start Num: 5
Candidate Starts for Phlippers_39:
(Start: 4 @32791 has 30 MA's), (Start: 5 @32782 has 178 MA's), (7, 32710),

Gene: PhrostyMug_40 Start: 31873, Stop: 31694, Start Num: 4
Candidate Starts for PhrostyMug_40:
(Start: 4 @31873 has 30 MA's), (Start: 5 @31864 has 178 MA's), (7, 31792),

Gene: PinkPlastic_38 Start: 31264, Stop: 31094, Start Num: 5
Candidate Starts for PinkPlastic_38:
(Start: 4 @31273 has 30 MA's), (Start: 5 @31264 has 178 MA's), (7, 31192),

Gene: Pinto_41 Start: 31696, Stop: 31526, Start Num: 5
Candidate Starts for Pinto_41:
(Start: 4 @31705 has 30 MA's), (Start: 5 @31696 has 178 MA's), (7, 31624),

Gene: Pippin_42 Start: 32165, Stop: 31995, Start Num: 5
Candidate Starts for Pippin_42:
(Start: 4 @32174 has 30 MA's), (Start: 5 @32165 has 178 MA's), (7, 32093),

Gene: Pita2_43 Start: 32913, Stop: 32743, Start Num: 5
Candidate Starts for Pita2_43:
(Start: 4 @32922 has 30 MA's), (Start: 5 @32913 has 178 MA's), (7, 32841),

Gene: PowerRanger_41 Start: 32907, Stop: 32737, Start Num: 5
Candidate Starts for PowerRanger_41:
(Start: 4 @32916 has 30 MA's), (Start: 5 @32907 has 178 MA's), (7, 32835),

Gene: ProMouse_39 Start: 31713, Stop: 31546, Start Num: 5
Candidate Starts for ProMouse_39:
(Start: 5 @31713 has 178 MA's), (7, 31644),

Gene: Puppet_41 Start: 32267, Stop: 32097, Start Num: 5
Candidate Starts for Puppet_41:
(Start: 4 @32276 has 30 MA's), (Start: 5 @32267 has 178 MA's), (7, 32195),

Gene: QTRlifeCrisis_41 Start: 32687, Stop: 32517, Start Num: 5
Candidate Starts for QTRlifeCrisis_41:
(Start: 4 @32696 has 30 MA's), (Start: 5 @32687 has 178 MA's), (7, 32615),

Gene: Raid_40 Start: 32144, Stop: 31965, Start Num: 5
Candidate Starts for Raid_40:
(Start: 4 @32153 has 30 MA's), (Start: 5 @32144 has 178 MA's), (6, 32111), (7, 32075),

Gene: Rajelicia_39 Start: 31650, Stop: 31480, Start Num: 5
Candidate Starts for Rajelicia_39:
(Start: 4 @31659 has 30 MA's), (Start: 5 @31650 has 178 MA's), (7, 31578),

Gene: Rhynn_39 Start: 31665, Stop: 31495, Start Num: 5
Candidate Starts for Rhynn_39:
(Start: 4 @31674 has 30 MA's), (Start: 5 @31665 has 178 MA's), (7, 31593),

Gene: RidgeCB_40 Start: 31700, Stop: 31530, Start Num: 5
Candidate Starts for RidgeCB_40:
(Start: 4 @31709 has 30 MA's), (Start: 5 @31700 has 178 MA's), (7, 31628),

Gene: Ringer_41 Start: 32553, Stop: 32383, Start Num: 5
Candidate Starts for Ringer_41:
(Start: 4 @32562 has 30 MA's), (Start: 5 @32553 has 178 MA's), (7, 32481),

Gene: Rohr_41 Start: 32398, Stop: 32228, Start Num: 5
Candidate Starts for Rohr_41:
(Start: 4 @32407 has 30 MA's), (Start: 5 @32398 has 178 MA's), (7, 32326),

Gene: Rubeus_40 Start: 30178, Stop: 30008, Start Num: 5
Candidate Starts for Rubeus_40:
(Start: 4 @30187 has 30 MA's), (Start: 5 @30178 has 178 MA's), (7, 30106),

Gene: Rufus_41 Start: 32021, Stop: 31851, Start Num: 5
Candidate Starts for Rufus_41:
(Start: 4 @32030 has 30 MA's), (Start: 5 @32021 has 178 MA's), (7, 31949),

Gene: Ruotula_42 Start: 33002, Stop: 32832, Start Num: 5
Candidate Starts for Ruotula_42:
(Start: 4 @33011 has 30 MA's), (Start: 5 @33002 has 178 MA's), (7, 32930),

Gene: Rutherferd_42 Start: 32941, Stop: 32762, Start Num: 4
Candidate Starts for Rutherferd_42:
(Start: 4 @32941 has 30 MA's), (Start: 5 @32932 has 178 MA's), (7, 32860),

Gene: STLscum_41 Start: 32737, Stop: 32531, Start Num: 5
Candidate Starts for STLscum_41:
(Start: 4 @32746 has 30 MA's), (Start: 5 @32737 has 178 MA's), (7, 32665),

Gene: Sandaddy_40 Start: 32305, Stop: 32135, Start Num: 5
Candidate Starts for Sandaddy_40:
(Start: 4 @32314 has 30 MA's), (Start: 5 @32305 has 178 MA's), (7, 32233),

Gene: Sanya_40 Start: 32598, Stop: 32428, Start Num: 5
Candidate Starts for Sanya_40:
(Start: 4 @32607 has 30 MA's), (Start: 5 @32598 has 178 MA's), (7, 32526),

Gene: SarFire_39 Start: 31724, Stop: 31554, Start Num: 5
Candidate Starts for SarFire_39:
(1, 31826), (2, 31778), (Start: 5 @31724 has 178 MA's), (7, 31652),

Gene: Scowl_40 Start: 32373, Stop: 32203, Start Num: 5
Candidate Starts for Scowl_40:
(Start: 4 @32382 has 30 MA's), (Start: 5 @32373 has 178 MA's), (7, 32301),

Gene: Seabiscuit_41 Start: 31495, Stop: 31325, Start Num: 5
Candidate Starts for Seabiscuit_41:
(Start: 4 @31504 has 30 MA's), (Start: 5 @31495 has 178 MA's), (7, 31423),

Gene: Seanderson_42 Start: 32707, Stop: 32537, Start Num: 5
Candidate Starts for Seanderson_42:
(Start: 4 @32716 has 30 MA's), (Start: 5 @32707 has 178 MA's), (7, 32635),

Gene: ShortQueendom_36 Start: 28384, Stop: 28214, Start Num: 5
Candidate Starts for ShortQueendom_36:
(Start: 4 @28393 has 30 MA's), (Start: 5 @28384 has 178 MA's), (7, 28312),

Gene: Sibs6_41 Start: 31048, Stop: 30878, Start Num: 5
Candidate Starts for Sibs6_41:
(Start: 4 @31057 has 30 MA's), (Start: 5 @31048 has 178 MA's), (7, 30976),

Gene: SkiPole_43 Start: 32265, Stop: 32086, Start Num: 3
Candidate Starts for SkiPole_43:
(Start: 3 @32265 has 1 MA's), (6, 32217), (7, 32184),

Gene: Slagathor_40 Start: 31575, Stop: 31405, Start Num: 5
Candidate Starts for Slagathor_40:
(Start: 4 @31584 has 30 MA's), (Start: 5 @31575 has 178 MA's), (7, 31503),

Gene: Smairt_42 Start: 32415, Stop: 32245, Start Num: 5
Candidate Starts for Smairt_42:
(Start: 4 @32424 has 30 MA's), (Start: 5 @32415 has 178 MA's), (7, 32343),

Gene: Smeagol_41 Start: 32897, Stop: 32727, Start Num: 5

Candidate Starts for Smeagol_41:
(1, 32999), (2, 32951), (Start: 5 @32897 has 178 MA's), (7, 32825),

Gene: Snazzy_38 Start: 31451, Stop: 31281, Start Num: 5
Candidate Starts for Snazzy_38:
(Start: 4 @31460 has 30 MA's), (Start: 5 @31451 has 178 MA's), (7, 31379),

Gene: Solon_40 Start: 32186, Stop: 32007, Start Num: 4
Candidate Starts for Solon_40:
(Start: 4 @32186 has 30 MA's), (Start: 5 @32177 has 178 MA's), (7, 32105),

Gene: Sorpresa_40 Start: 32307, Stop: 32137, Start Num: 5
Candidate Starts for Sorpresa_40:
(Start: 4 @32316 has 30 MA's), (Start: 5 @32307 has 178 MA's), (7, 32235),

Gene: SpikeBT_41 Start: 32528, Stop: 32358, Start Num: 5
Candidate Starts for SpikeBT_41:
(Start: 4 @32537 has 30 MA's), (Start: 5 @32528 has 178 MA's), (7, 32456),

Gene: Squee_40 Start: 32302, Stop: 32132, Start Num: 5
Candidate Starts for Squee_40:
(Start: 4 @32311 has 30 MA's), (Start: 5 @32302 has 178 MA's), (7, 32230),

Gene: StewieG_38 Start: 29735, Stop: 29565, Start Num: 5
Candidate Starts for StewieG_38:
(Start: 4 @29744 has 30 MA's), (Start: 5 @29735 has 178 MA's), (7, 29663),

Gene: StrongArm_39 Start: 32757, Stop: 32587, Start Num: 5
Candidate Starts for StrongArm_39:
(Start: 4 @32766 has 30 MA's), (Start: 5 @32757 has 178 MA's), (7, 32685),

Gene: Sunshine924_41 Start: 31586, Stop: 31416, Start Num: 5
Candidate Starts for Sunshine924_41:
(Start: 4 @31595 has 30 MA's), (Start: 5 @31586 has 178 MA's), (7, 31514),

Gene: SwissCheese_42 Start: 32403, Stop: 32233, Start Num: 5
Candidate Starts for SwissCheese_42:
(Start: 4 @32412 has 30 MA's), (Start: 5 @32403 has 178 MA's), (6, 32367), (7, 32331),

Gene: Switzer_40 Start: 31591, Stop: 31421, Start Num: 5
Candidate Starts for Switzer_40:
(Start: 4 @31600 has 30 MA's), (Start: 5 @31591 has 178 MA's), (7, 31519),

Gene: Swole_41 Start: 31563, Stop: 31393, Start Num: 5
Candidate Starts for Swole_41:
(Start: 4 @31572 has 30 MA's), (Start: 5 @31563 has 178 MA's), (7, 31491),

Gene: Target_41 Start: 30960, Stop: 30790, Start Num: 5
Candidate Starts for Target_41:
(Start: 4 @30969 has 30 MA's), (Start: 5 @30960 has 178 MA's), (7, 30888),

Gene: Tasp14_41 Start: 32121, Stop: 31951, Start Num: 5
Candidate Starts for Tasp14_41:

(Start: 4 @32130 has 30 MA's), (Start: 5 @32121 has 178 MA's), (7, 32049),

Gene: Teodoridan_38 Start: 31202, Stop: 31023, Start Num: 4
Candidate Starts for Teodoridan_38:
(Start: 4 @31202 has 30 MA's), (Start: 5 @31193 has 178 MA's), (6, 31157), (7, 31121),

Gene: TheloniousMonk_41 Start: 33133, Stop: 32963, Start Num: 5
Candidate Starts for TheloniousMonk_41:
(Start: 4 @33142 has 30 MA's), (Start: 5 @33133 has 178 MA's), (7, 33061),

Gene: Thor_39 Start: 31082, Stop: 30912, Start Num: 5
Candidate Starts for Thor_39:
(1, 31184), (2, 31136), (Start: 5 @31082 has 178 MA's), (7, 31010),

Gene: Topgun_40 Start: 31721, Stop: 31551, Start Num: 5
Candidate Starts for Topgun_40:
(Start: 4 @31730 has 30 MA's), (Start: 5 @31721 has 178 MA's), (7, 31649),

Gene: Tote_36 Start: 28830, Stop: 28660, Start Num: 5
Candidate Starts for Tote_36:
(Start: 4 @28839 has 30 MA's), (Start: 5 @28830 has 178 MA's), (7, 28758),

Gene: Traft412_41 Start: 32653, Stop: 32483, Start Num: 5
Candidate Starts for Traft412_41:
(Start: 4 @32662 has 30 MA's), (Start: 5 @32653 has 178 MA's), (7, 32581),

Gene: Treddle_42 Start: 33176, Stop: 33006, Start Num: 5
Candidate Starts for Treddle_42:
(Start: 4 @33185 has 30 MA's), (Start: 5 @33176 has 178 MA's), (7, 33104),

Gene: Tripl3t_40 Start: 32581, Stop: 32411, Start Num: 5
Candidate Starts for Tripl3t_40:
(Start: 4 @32590 has 30 MA's), (Start: 5 @32581 has 178 MA's), (7, 32509),

Gene: Trouble_41 Start: 32820, Stop: 32650, Start Num: 5
Candidate Starts for Trouble_41:
(Start: 4 @32829 has 30 MA's), (Start: 5 @32820 has 178 MA's), (7, 32748),

Gene: Turj99_38 Start: 31437, Stop: 31255, Start Num: 5
Candidate Starts for Turj99_38:
(Start: 4 @31446 has 30 MA's), (Start: 5 @31437 has 178 MA's), (7, 31365),

Gene: TwoPeat_40 Start: 31881, Stop: 31711, Start Num: 5
Candidate Starts for TwoPeat_40:
(Start: 4 @31890 has 30 MA's), (Start: 5 @31881 has 178 MA's), (7, 31809),

Gene: U2_39 Start: 31574, Stop: 31404, Start Num: 5
Candidate Starts for U2_39:
(Start: 4 @31583 has 30 MA's), (Start: 5 @31574 has 178 MA's), (7, 31502),

Gene: Violet_38 Start: 32008, Stop: 31829, Start Num: 4
Candidate Starts for Violet_38:
(Start: 4 @32008 has 30 MA's), (Start: 5 @31999 has 178 MA's), (6, 31963), (7, 31927),

Gene: Watermelon_42 Start: 32616, Stop: 32437, Start Num: 4
Candidate Starts for Watermelon_42:
(Start: 4 @32616 has 30 MA's), (Start: 5 @32607 has 178 MA's), (7, 32535),

Gene: Wheeler_41 Start: 32297, Stop: 32127, Start Num: 5
Candidate Starts for Wheeler_41:
(Start: 4 @32306 has 30 MA's), (Start: 5 @32297 has 178 MA's), (7, 32225),

Gene: Whitspit_38 Start: 30031, Stop: 29861, Start Num: 5
Candidate Starts for Whitspit_38:
(Start: 4 @30040 has 30 MA's), (Start: 5 @30031 has 178 MA's), (7, 29959),

Gene: Zeeculate_39 Start: 32272, Stop: 32105, Start Num: 5
Candidate Starts for Zeeculate_39:
(Start: 4 @32281 has 30 MA's), (Start: 5 @32272 has 178 MA's), (7, 32203),

Gene: Zephyr_40 Start: 31983, Stop: 31813, Start Num: 5
Candidate Starts for Zephyr_40:
(Start: 4 @31992 has 30 MA's), (Start: 5 @31983 has 178 MA's), (7, 31911),

Gene: Zeuska_40 Start: 32234, Stop: 32055, Start Num: 4
Candidate Starts for Zeuska_40:
(Start: 4 @32234 has 30 MA's), (Start: 5 @32225 has 178 MA's), (7, 32153),