Pham 290768

Pham 290768

51: Midas2_42 + 1
52: Lev2_42 + 6
53: Florence1_41 + 1
54: DroogsArmy_46 + 1
55: PP_51
56: HildeR_45
57: Roary_47 + 8
58: NearlyHeadless_46 + 1
59: Stephig9_47
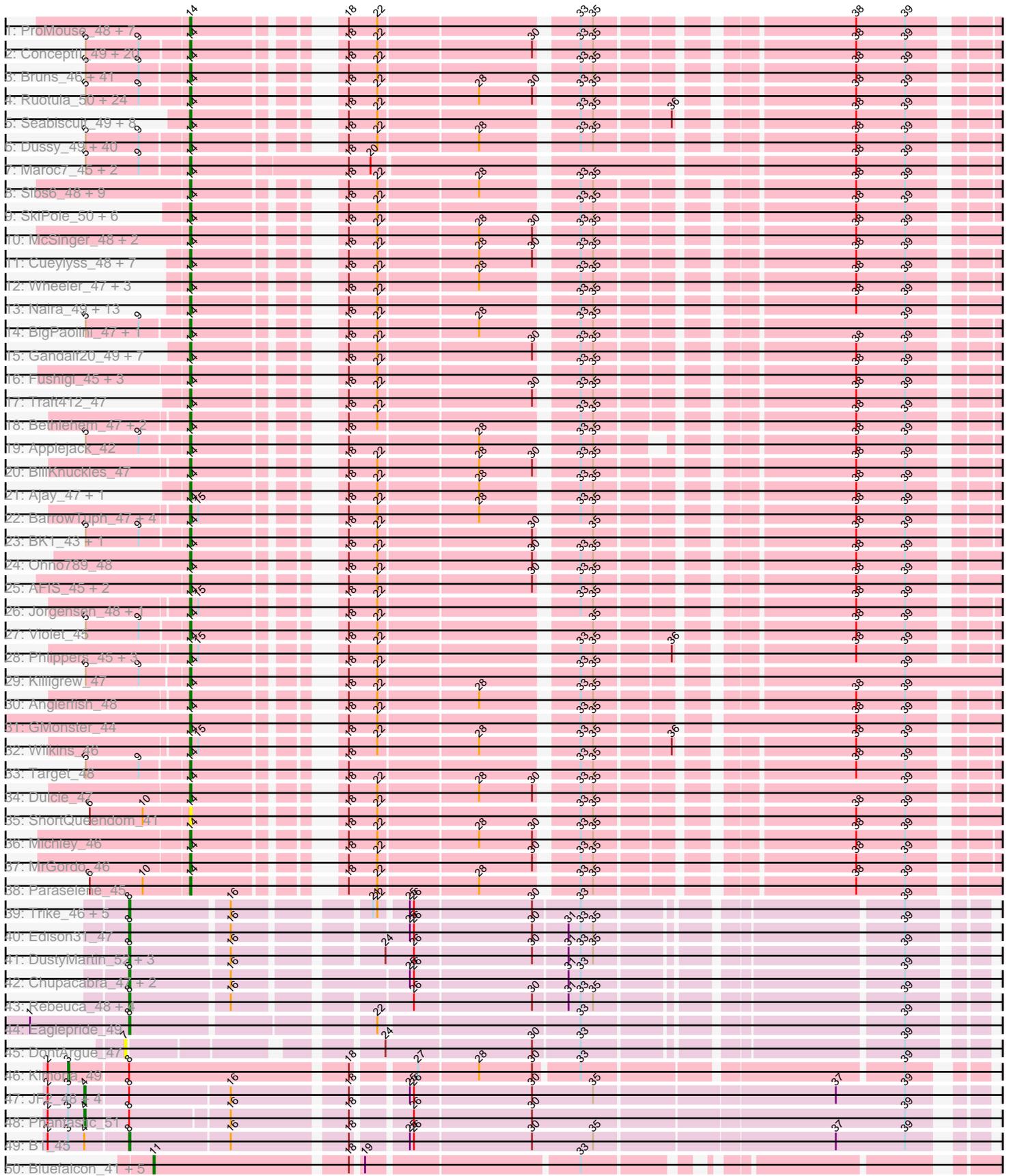
Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 290768 Report

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

Pham number 290768 has 307 members, 34 are drafts.

Phages represented in each track:
• Track 1 : ProMouse_48, Espresso_47, Barriga_48, Raid_48, MilleFeuille_44, Blesser_46, Sunshine924_48, Nhonho_48
• Track 2 : ConceptII_49, GrecoEtereo_48, Bxb1_43, NEHalo_45, Jasper_49, Sandaddy_46, Zephyr_47, Sumter_44, CartmannCramer_46, Dreamboat_49, Sorpresa_46, Solon_46, QTRlifeCrisis_47, HarryOW_46, DrFeelGood_45, DD5_46, GageAP_48, Lockley_46, Sanya_45, PherrisBueller_47, Pinto_47
• Track 3 : Bruns_46, Aldrich_47, Kugel_48, Gachnar_47, Thor_45, KBG_49, Forsytheast_47, Moose_47, Sagefire_50, SwissCheese_49, Beatrix_47, DirtDevil_48, Alvin_47, EnzoK_46, Lesedi_44, Seanderson_49, Zeeculate_45, StrongArm_47, Corvo_48, Bexan_46, Niza_50, SarFire_45, Alsfro_51, Pippin_49, GroundGoblin_48, CatBus_47, PowerRanger_48, Fajezeel_49, Froghopper_45, Chanagan_44, Makemake_47, KikiBouba_48, LilBib_47, Greg_49, Monet_50, Scowl_48, MPlant7149_46, Noxious_47, MaryBeth_47, Ringer_48, Hermia_48, MetalQZJ_46
• Track 4 : Ruotula_50, ILeeKay_51, Blackflame_46, Perseus_47, Inyanga_44, Crispicous1_45, Doom_47, JackSparrow_48, Gompeii16_46, Marge_47, Rufus_48, Petruchio_47, Aeneas_49, Marsha_47, Mkhuseli_46, PhrostyMug_46, PacerPaul_47, Bircsak_46, Mule_44, Iqorha_44, Agaliana_43, Rubeus_47, Smairt_49, Francis47_46, ChristmasHams_43
• Track 5 : Seabiscuit_49, Tasp14_48, Bigchungi_46, DreamCatcher_50, KSSJEB_46, Snazzy_45, Dynamix_48, Lamina13_47, PinkPlastic_46
• Track 6 : Dussy_49, Marcell_45, PattyP_48, JuliaChild_48, Arlo_45, Acme_49, KyMonks1A_49, Kykar_47, Slagathor_49, Bob3_45, Lopton_48, BigMau_48, Arcanine_48, StewieG_46, Abbyshoes_50, Treddle_48, BPBiebs31_48, TheloniousMonk_48, Pepe_44, Tote_43, Tripl3t_47, Rhynn_46, Rajelicia_48, Bigfoot_43, Ciao_47, Abrogate_460, Pita2_50, Edtherson_47, Mryolo_45, Rohr_48, Kenmech_51, TwoPeat_48, RidgeCB_47, Jerm2_48, Zeuska_46, Whitspit_45, Swole_48, HermioneGrange_47, Hami1_41, Watermelon_48, PSullivan_47
• Track 7 : Maroc7_45, Fascinus_43, Gyzlar_43
• Track 8 : Sibs6_48, Carlyle_46, Blue_47, Burton_47, Rutherferd_49, PascalRango_48, Museum_48, Petp2012_48, Molly_48, Paphu_45
• Track 9 : SkiPole_50, Buttons_45, Oogway_44, Adahisdi_46, Magnito_44, Turj99_44, STLscum_48
• Track 10 : McSinger_48, Euphoria_45, Papez_50
• Track 11 : Cueylyss_48, CactusRose_44, Puppet_48, Graduation_50, Gwendoluna_50, HanShotFirst_46, LunarLander_48, Bones_47
• Track 12 : Wheeler_47, Ashballer_48, Briton15_49, JC27_48

- Track 13 : Naira_49, Trouble_49, Eyeball_48, Hope4ever_49, Nerujay_49, BluSpix_45, Fenn_49, IgnatiusPatJac_47, McGuire_48, Squee_47, Atkinbua_49, Smeagol_48, Homines_39, Ichabod_49
- Track 14 : BigPaolini_47, Licorice_50
- Track 15 : Gandalf20_49, Switzer_48, Manatee_48, Kanely_48, U2_46, BeesKnees_48, Marco3_49, Magnar_46
- Track 16 : Fushigi_45, Dexes_47, Pelly_46, Big3_46
- Track 17 : Traft412_47
- Track 18 : Bethlehem_47, Pari_48, Altman_49
- Track 19 : Applejack_42
- Track 20 : BillKnuckles_47
- Track 21 : Ajay_47, Peterson_50
- Track 22 : BarrowTuph_47, Payneful_46, Levia_44, PhineBark_46, Marchy_41
- Track 23 : BK1_43, A6_43
- Track 24 : Ohno789_48
- Track 25 : AFIS_45, SpikeBT_47, BaconJack_50
- Track 26 : Jorgensen_48, Norz_47
- Track 27 : Violet_45
- Track 28 : Phlippers_45, Parliament_46, Teodoridan_45, Topgun_46
- Track 29 : Killigrew_47
- Track 30 : Anglerfish_48
- Track 31 : GMonster_44
- Track 32 : Wilkins_46
- Track 33 : Target_48
- Track 34 : Dulcie_47
- Track 35 : ShortQueendom_41
- Track 36 : Michley_46
- Track 37 : MrGordo_46
- Track 38 : Paraselene_45
- Track 39 : Trike_46, Poompha_47, Drake94_46, KittenMittens_45, Severus_46, PeaceMeal1_46
- Track 40 : Edison31_47
- Track 41 : DustyMartin_52, RhynO_49, Shapes_52, Rowdy_52
- Track 42 : Chupacabra_47, OKCentral2016_47, Goose_48
- Track 43 : Rebeuca_48, Kristoff_48, Topanga_46, WalterMcMickey_46, Twister_46
- Track 44 : Eaglepride_49
- Track 45 : DontArgue_47
- Track 46 : Kimona_49
- Track 47 : JF2_48, MK4_50, JF4_48, Isca_49, Rockstar_50
- Track 48 : Phantastic_51
- Track 49 : B1_45
- Track 50 : Bluefalcon_41, SydNat_44, MarysWell_41, Ghoulboy_44, Theia_40, Zolita_43
- Track 51 : Midas2_42, Coog_42
- Track 52 : Lev2_42, Tiger_41, Jovo_42, Dublin_41, Conspiracy_42, AgentM_41, ForGetIt_42
- Track 53 : Florence1_41, Twigg_43
- Track 54 : DroogsArmy_45, Timshel_47
- Track 55 : PP_51
- Track 56 : HINdeR_45
- Track 57 : Roary_47, Smeadley_47, Caitlin_45, Astro_46, Dixon_46, Danforth_46, Groundhog_45, Phillis_48, Expelliarmus_46
- Track 58 : NearlyHeadless_46, Saintus_41

• Track 59 : Stephig9_47

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

The start number called the most often in the published annotations is 14, it was called in 218 of the 273 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• A6_43, AFIS_45, Abbyshoes_50, Abrogate_460, Acme_49, Adahisdi_46, Aeneas_49, Agaliana_43, Ajay_47, Aldrich_47, Alsfro_51, Altman_49, Alvin_47, Anglerfish_48, Applejack_42, Arcanine_48, Arlo_45, Ashballer_48, Atkinbua_49, BK1_43, BPBiebs31_48, BaconJack_50, Barriga_48, BarrowTuph_47, Beatrix_47, BeesKnees_48, Bethlehem_47, Bexan_46, Big3_46, BigMau_48, BigPaolini_47, Bigchungi_46, Bigfoot_43, BillKnuckles_47, Bircsak_46, Blackflame_46, Blesser_46, BluSpix_45, Blue_47, Bob3_45, Bones_47, Briton15_49, Bruns_46, Burton_47, Buttons_45, Bxb1_43, CactusRose_44, Carlyle_46, CartmannCramer_46, CatBus_47, Chanagan_44, ChristmasHams_43, Ciao_47, ConceptII_49, Corvo_48, Crispicous1_45, Cueylyss_48, DD5_46, Dexes_47, DirtDevil_48, Doom_47, DrFeelGood_45, DreamCatcher_50, Dreamboat_49, Dulcie_47, Dussy_49, Dynamix_48, Edtherson_47, EnzoK_46, Espresso_47, Euphoria_45, Eyeball_48, Fajezeel_49, Fascinus_43, Fenn_49, Forsytheast_47, Francis47_46, Froghopper_45, Fushigi_45, GMonster_44, Gachnar_47, GageAP_48, Gandalf20_49, Gompeii16_46, Graduation_50, GrecoEtereo_48, Greg_49, GroundGoblin_48, Gwendoluna_50, Gyzlar_43, Hami1_41, HanShotFirst_46, HarryOW_46, Hermia_48, HermioneGrange_47, Homines_39, Hope4ever_49, ILeeKay_51, Ichabod_49, IgnatiusPatJac_47, Inyanga_44, Iqorha_44, JC27_48, JackSparrow_48, Jasper_49, Jerm2_48, Jorgensen_48, JuliaChild_48, KBG_49, KSSJEB_46, Kanely_48, Kenmech_51, KikiBouba_48, Killigrew_47, Kugel_48, KyMonks1A_49, Kykar_47, Lamina13_47, Lesedi_44, Levia_44, Licorice_50, LilBib_47, Lockley_46, Lopton_48, LunarLander_48, MPlant7149_46, Magnar_46, Magnito_44, Makemake_47, Manatee_48, Marcell_45, Marchy_41, Marco3_49, Marge_47, Maroc7_45, Marsha_47, MaryBeth_47, McGuire_48, McSinger_48, MetalQZJ_46, Michley_46, MilleFeuille_44, Mkhuseli_46, Molly_48, Monet_50, Moose_47, MrGordo_46, Mryolo_45, Mule_44, Museum_48, NEHalo_45, Naira_49, Nerujay_49, Nhonho_48, Niza_50, Norz_47, Noxious_47, Ohno789_48, Oogway_44, PSullivan_47, PacerPaul_47, Papez_50, Paphu_45, Paraselene_45, Pari_48, Parliament_46, PascalRango_48, PattyP_48, Payneful_46, Pelly_46, Pepe_44, Perseus_47, Peterson_50, Petp2012_48, Petruchio_47, PherrisBueller_47, PhineBark_46, Phlippers_45, PhrostyMug_46, PinkPlastic_46, Pinto_47, Pippin_49, Pita2_50, PowerRanger_48, ProMouse_48, Puppet_48, QTRlifeCrisis_47, Raid_48, Rajelicia_48, Rhynn_46, RidgeCB_47, Ringer_48, Rohr_48, Rubeus_47, Rufus_48, Ruotula_50, Rutherferd_49, STLscum_48, Sagefire_50, Sandaddy_46, Sanya_45, SarFire_45, Scowl_48, Seabiscuit_49, Seanderson_49, ShortQueendom_41, Sibs6_48, SkiPole_50, Slagathor_49, Smairt_49, Smeagol_48, Snazzy_45, Solon_46, Sorpresa_46, SpikeBT_47, Squee_47, StewieG_46, StrongArm_47, Sumter_44, Sunshine924_48, SwissCheese_49, Switzer_48, Swole_48, Target_48, Tasp14_48, Teodoridan_45, TheloniousMonk_48, Thor_45, Topgun_46, Tote_43, Traft412_47, Treddle_48, Tripl3t_47, Trouble_49, Turj99_44, TwoPeat_48, U2_46, Violet_45, Watermelon_48, Wheeler_47, Whitspit_45, Wilkins_46, Zeeculate_45, Zephyr_47, Zeuska_46,

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

Genes that do not have the "Most Annotated" start:
• AgentM_41, Astro_46, B1_45, Bluefalcon_41, Caitlin_45, Chupacabra_47, Conspiracy_42, Coog_42, Danforth_46, Dixon_46, DontArgue_47, Drake94_46, DroogsArmy_45, Dublin_41, DustyMartin_52, Eaglepride_49, Edison31_47, Expelliarmus_46, Florence1_41, ForGetIt_42, Ghoulboy_44, Goose_48, Groundhog_45, HINdeR_45, Isca_49, JF2_48, JF4_48, Jovo_42, Kimona_49, KittenMittens_45, Kristoff_48, Lev2_42, MK4_50, MarysWell_41, Midas2_42, NearlyHeadless_46, OKCentral2016_47, PP_51, PeaceMeal1_46, Phantastic_51, Phillis_48, Poompha_47, Rebeuca_48, RhynO_49, Roary_47, Rockstar_50, Rowdy_52, Saintus_41, Severus_46, Shapes_52, Smeadley_47, Stephig9_47, SydNat_44, Theia_40, Tiger_41, Timshel_47, Topanga_46, Trike_46, Twigg_43, Twister_46, WalterMcMickey_46, Zolita_43,

Summary by start number:

Start 3:
• Found in 9 of 307 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 273
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Kimona_49 (A19),

Start 4:
• Found in 7 of 307 (2.3%) of genes in pham
• Manual Annotations of this start: 6 of 273
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Isca_49 (A3), JF2_48 (A3), JF4_48 (A3), MK4_50 (A3), Phantastic_51 (A3), Rockstar_50 (A3),

Start 7:
• Found in 1 of 307 (0.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DontArgue_47 (A10),

Start 8:
• Found in 30 of 307 (9.8%) of genes in pham
• Manual Annotations of this start: 19 of 273
• Called 73.3% of time when present
• Phage (with cluster) where this start called: B1_45 (A3), Chupacabra_47 (A10), Drake94_46 (A10), DustyMartin_52 (A10), Eaglepride_49 (A10), Edison31_47 (A10), Goose_48 (A10), KittenMittens_45 (A10), Kristoff_48 (A10), OKCentral2016_47 (A10), PP_51 (A7), PeaceMeal1_46 (A10), Poompha_47 (A10), Rebeuca_48 (A10), RhynO_49 (A10), Rowdy_52 (A10), Severus_46 (A10), Shapes_52 (A10), Topanga_46 (A10), Trike_46 (A10), Twister_46 (A10), WalterMcMickey_46 (A10),

Start 11:
• Found in 17 of 307 (5.5%) of genes in pham
• Manual Annotations of this start: 15 of 273
• Called 88.2% of time when present

• Phage (with cluster) where this start called: AgentM_41 (A5), Bluefalcon_41 (A5), Conspiracy_42 (A5), Coog_42 (A5), Dublin_41 (A5), ForGetIt_42 (A5), Ghoulboy_44 (A5), Jovo_42 (A5), Lev2_42 (A5), MarysWell_41 (A5), Midas2_42 (A5), SydNat_44 (A5), Theia_40 (A5), Tiger_41 (A5), Zolita_43 (A5),

Start 12:
• Found in 12 of 307 (3.9%) of genes in pham
• Manual Annotations of this start: 11 of 273
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Astro_46 (A8), Caitlin_45 (A8), Danforth_46 (A8), Dixon_46 (A8), Expelliarmus_46 (A8), Groundhog_45 (A8), NearlyHeadless_46 (A8), Phillis_48 (A8), Roary_47 (A8), Saintus_41 (A8), Smeadley_47 (A8), Stephig9_47 (A8),

Start 13:
• Found in 3 of 307 (1.0%) of genes in pham
• Manual Annotations of this start: 3 of 273
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DroogsArmy_45 (A7), HINdeR_45 (A7), Timshel_47 (A7),

Start 14:
• Found in 245 of 307 (79.8%) of genes in pham
• Manual Annotations of this start: 218 of 273
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A6_43 (A1), AFIS_45 (A1), Abbyshoes_50 (A1), Abrogate_460 (A1), Acme_49 (A1), Adahisdi_46 (A1), Aeneas_49 (A1), Agaliana_43 (A1), Ajay_47 (A1), Aldrich_47 (A1), Alsfro_51 (A1), Altman_49 (A1), Alvin_47 (A1), Anglerfish_48 (A1), Applejack_42 (A1), Arcanine_48 (A1), Arlo_45 (A1), Ashballer_48 (A1), Atkinbua_49 (A1), BK1_43 (A1), BPBiebs31_48 (A1), BaconJack_50 (A1), Barriga_48 (A1), BarrowTuph_47 (A1), Beatrix_47 (A1), BeesKnees_48 (A1), Bethlehem_47 (A1), Bexan_46 (A1), Big3_46 (A1), BigMau_48 (A1), BigPaolini_47 (A1), Bigchungi_46 (A1), Bigfoot_43 (A1), BillKnuckles_47 (A1), Bircsak_46 (A1), Blackflame_46 (A1), Blesser_46 (A1), BluSpix_45 (A1), Blue_47 (A1), Bob3_45 (A1), Bones_47 (A1), Briton15_49 (A1), Bruns_46 (A1), Burton_47 (A1), Buttons_45 (A1), Bxb1_43 (A1), CactusRose_44 (A1), Carlyle_46 (A1), CartmannCramer_46 (A1), CatBus_47 (A1), Chanagan_44 (A1), ChristmasHams_43 (A1), Ciao_47 (A1), ConceptII_49 (A1), Corvo_48 (A1), Crispicous1_45 (A1), Cueylyss_48 (A1), DD5_46 (A1), Dexes_47 (A1), DirtDevil_48 (A1), Doom_47 (A1), DrFeelGood_45 (A1), DreamCatcher_50 (A1), Dreamboat_49 (A1), Dulcie_47 (A1), Dussy_49 (A1), Dynamix_48 (A1), Edtherson_47 (A1), EnzoK_46 (A1), Espresso_47 (A1), Euphoria_45 (A1), Eyeball_48 (A1), Fajezeel_49 (A1), Fascinus_43 (A1), Fenn_49 (A1), Forsytheast_47 (A1), Francis47_46 (A1), Froghopper_45 (A1), Fushigi_45 (A1), GMonster_44 (A1), Gachnar_47 (A1), GageAP_48 (A1), Gandalf20_49 (A1), Gompeii16_46 (A1), Graduation_50 (A1), GrecoEtereo_48 (A1), Greg_49 (A1), GroundGoblin_48 (A1), Gwendoluna_50 (A1), Gyzlar_43 (A1), Hami1_41 (A1), HanShotFirst_46 (A1), HarryOW_46 (A1), Hermia_48 (A1), HermioneGrange_47 (A1), Homines_39 (A1), Hope4ever_49 (A1), ILeeKay_51 (A1), Ichabod_49 (A1), IgnatiusPatJac_47 (A1), Inyanga_44 (A1), Iqorha_44 (A1), JC27_48 (A1), JackSparrow_48 (A1), Jasper_49 (A1), Jerm2_48 (A1), Jorgensen_48 (A1), JuliaChild_48 (A1), KBG_49 (A1), KSSJEB_46 (A1), Kanely_48 (A1), Kenmech_51 (A1), KikiBouba_48 (A1), Killigrew_47 (A1), Kugel_48 (A1), KyMonks1A_49 (A1), Kykar_47 (A1), Lamina13_47 (A1), Lesedi_44 (A1),

Levia_44 (A1), Licorice_50 (A1), LilBib_47 (A1), Lockley_46 (A1), Lopton_48 (A1), LunarLander_48 (A1), MPlant7149_46 (A1), Magnar_46 (A1), Magnito_44 (A1), Makemake_47 (A1), Manatee_48 (A1), Marcell_45 (A1), Marchy_41 (A1), Marco3_49 (A1), Marge_47 (A1), Maroc7_45 (A1), Marsha_47 (A1), MaryBeth_47 (A1), McGuire_48 (A1), McSinger_48 (A1), MetalQZJ_46 (A1), Michley_46 (A1), MilleFeuille_44 (A1), Mkhuseli_46 (A1), Molly_48 (A1), Monet_50 (A1), Moose_47 (A1), MrGordo_46 (A1), Mryolo_45 (A1), Mule_44 (A1), Museum_48 (A1), NEHalo_45 (A1), Naira_49 (A1), Nerujay_49 (A1), Nhonho_48 (A1), Niza_50 (A1), Norz_47 (A1), Noxious_47 (A1), Ohno789_48 (A1), Oogway_44 (A1), PSullivan_47 (A1), PacerPaul_47 (A1), Papez_50 (A1), Paphu_45 (A1), Paraselene_45 (A1), Pari_48 (A1), Parliament_46 (A1), PascalRango_48 (A1), PattyP_48 (A1), Payneful_46 (A1), Pelly_46 (A1), Pepe_44 (A1), Perseus_47 (A1), Peterson_50 (A1), Petp2012_48 (A1), Petruchio_47 (A1), PherrisBueller_47 (A1), PhineBark_46 (A1), Phlippers_45 (A1), PhrostyMug_46 (A1), PinkPlastic_46 (A1), Pinto_47 (A1), Pippin_49 (A1), Pita2_50 (A1), PowerRanger_48 (A1), ProMouse_48 (A1), Puppet_48 (A1), QTRlifeCrisis_47 (A1), Raid_48 (A1), Rajelicia_48 (A1), Rhynn_46 (A1), RidgeCB_47 (A1), Ringer_48 (A1), Rohr_48 (A1), Rubeus_47 (A1), Rufus_48 (A1), Ruotula_50 (A1), Rutherferd_49 (A1), STLscum_48 (A1), Sagefire_50 (A1), Sandaddy_46 (A1), Sanya_45 (A1), SarFire_45 (A1), Scowl_48 (A1), Seabiscuit_49 (A1), Seanderson_49 (A1), ShortQueendom_41 (A1), Sibs6_48 (A1), SkiPole_50 (A1), Slagathor_49 (A1), Smairt_49 (A1), Smeagol_48 (A1), Snazzy_45 (A1), Solon_46 (A1), Sorpresa_46 (A1), SpikeBT_47 (A1), Squee_47 (A1), StewieG_46 (A1), StrongArm_47 (A1), Sumter_44 (A1), Sunshine924_48 (A1), SwissCheese_49 (A1), Switzer_48 (A1), Swole_48 (A1), Target_48 (A1), Tasp14_48 (A1), Teodoridan_45 (A1), TheloniousMonk_48 (A1), Thor_45 (A1), Topgun_46 (A1), Tote_43 (A1), Traft412_47 (A1), Treddle_48 (A1), Tripl3t_47 (A1), Trouble_49 (A1), Turj99_44 (A1), TwoPeat_48 (A1), U2_46 (A1), Violet_45 (A1), Watermelon_48 (A1), Wheeler_47 (A1), Whitspit_45 (A1), Wilkins_46 (A1), Zeeculate_45 (A1), Zephyr_47 (A1), Zeuska_46 (A1),

Start 18:
• Found in 285 of 307 (92.8%) of genes in pham
• No Manual Annotations of this start.
• Called 0.7% of time when present
• Phage (with cluster) where this start called: Florence1_41 (A5), Twigg_43 (A5),

Summary by clusters:

There are 7 clusters represented in this pham: A10, A19, A1, A3, A5, A7, A8,

Info for manual annotations of cluster A1:
•Start number 14 was manually annotated 218 times for cluster A1.

Info for manual annotations of cluster A10:
•Start number 8 was manually annotated 17 times for cluster A10.

Info for manual annotations of cluster A19:
•Start number 3 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A3:
•Start number 4 was manually annotated 6 times for cluster A3.
•Start number 8 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A5:
•Start number 11 was manually annotated 15 times for cluster A5.

Info for manual annotations of cluster A7:
•Start number 8 was manually annotated 1 time for cluster A7.
•Start number 13 was manually annotated 3 times for cluster A7.

Info for manual annotations of cluster A8:
•Start number 12 was manually annotated 11 times for cluster A8.

Gene Information:

Gene: A6_43 Start: 34340, Stop: 33849, Start Num: 14
Candidate Starts for A6_43:
(5, 34412), (9, 34373), (Start: 14 @34340 has 218 MA's), (18, 34259), (22, 34238), (30, 34130), (35, 34097), (38, 33938), (39, 33902),

Gene: AFIS_45 Start: 35135, Stop: 34641, Start Num: 14
Candidate Starts for AFIS_45:
(Start: 14 @35135 has 218 MA's), (18, 35054), (22, 35033), (30, 34925), (33, 34901), (35, 34892), (38, 34733), (39, 34697),

Gene: Abbyshoes_50 Start: 35780, Stop: 35289, Start Num: 14
Candidate Starts for Abbyshoes_50:
(5, 35852), (9, 35813), (Start: 14 @35780 has 218 MA's), (18, 35699), (22, 35678), (28, 35609), (33, 35546), (35, 35537), (38, 35378), (39, 35342),

Gene: Abrogate_460 Start: 35795, Stop: 35316, Start Num: 14
Candidate Starts for Abrogate_460:
(5, 35867), (9, 35828), (Start: 14 @35795 has 218 MA's), (18, 35714), (22, 35693), (28, 35624), (33, 35561), (35, 35552), (38, 35405), (39, 35369),

Gene: Acme_49 Start: 35657, Stop: 35166, Start Num: 14
Candidate Starts for Acme_49:
(5, 35729), (9, 35690), (Start: 14 @35657 has 218 MA's), (18, 35576), (22, 35555), (28, 35486), (33, 35423), (35, 35414), (38, 35255), (39, 35219),

Gene: Adahisdi_46 Start: 35135, Stop: 34644, Start Num: 14
Candidate Starts for Adahisdi_46:
(Start: 14 @35135 has 218 MA's), (18, 35054), (22, 35033), (33, 34901), (35, 34892), (38, 34733), (39, 34697),

Gene: Aeneas_49 Start: 35748, Stop: 35269, Start Num: 14
Candidate Starts for Aeneas_49:
(5, 35820), (9, 35781), (Start: 14 @35748 has 218 MA's), (18, 35667), (22, 35646), (28, 35577), (30, 35538), (33, 35514), (35, 35505), (38, 35358), (39, 35322),

Gene: Agaliana_43 Start: 32395, Stop: 31904, Start Num: 14
Candidate Starts for Agaliana_43:
(5, 32467), (9, 32428), (Start: 14 @32395 has 218 MA's), (18, 32314), (22, 32293), (28, 32224), (30, 32185), (33, 32161), (35, 32152), (38, 31993), (39, 31957),

Gene: AgentM_41 Start: 32065, Stop: 31532, Start Num: 11
Candidate Starts for AgentM_41:
(Start: 11 @32065 has 15 MA's), (18, 31933), (19, 31927), (33, 31783),

Gene: Ajay_47 Start: 35453, Stop: 34962, Start Num: 14
Candidate Starts for Ajay_47:
(Start: 14 @35453 has 218 MA's), (18, 35372), (22, 35351), (28, 35282), (33, 35219), (35, 35210), (38, 35051), (39, 35015),

Gene: Aldrich_47 Start: 36148, Stop: 35657, Start Num: 14
Candidate Starts for Aldrich_47:
(5, 36220), (9, 36181), (Start: 14 @36148 has 218 MA's), (18, 36067), (22, 36046), (33, 35914), (35, 35905), (38, 35746), (39, 35710),

Gene: Alsfro_51 Start: 35855, Stop: 35364, Start Num: 14
Candidate Starts for Alsfro_51:
(5, 35927), (9, 35888), (Start: 14 @35855 has 218 MA's), (18, 35774), (22, 35753), (33, 35621), (35, 35612), (38, 35453), (39, 35417),

Gene: Altman_49 Start: 36087, Stop: 35596, Start Num: 14
Candidate Starts for Altman_49:
(Start: 14 @36087 has 218 MA's), (18, 36006), (22, 35985), (33, 35853), (35, 35844), (38, 35685), (39, 35649),

Gene: Alvin_47 Start: 36107, Stop: 35616, Start Num: 14
Candidate Starts for Alvin_47:
(5, 36179), (9, 36140), (Start: 14 @36107 has 218 MA's), (18, 36026), (22, 36005), (33, 35873), (35, 35864), (38, 35705), (39, 35669),

Gene: Anglerfish_48 Start: 35637, Stop: 35146, Start Num: 14
Candidate Starts for Anglerfish_48:
(Start: 14 @35637 has 218 MA's), (18, 35556), (22, 35535), (28, 35466), (33, 35403), (35, 35394), (38, 35235), (39, 35199),

Gene: Applejack_42 Start: 32017, Stop: 31538, Start Num: 14
Candidate Starts for Applejack_42:
(5, 32089), (9, 32050), (Start: 14 @32017 has 218 MA's), (18, 31936), (28, 31846), (33, 31783), (35, 31774), (38, 31627), (39, 31591),

Gene: Arcanine_48 Start: 35327, Stop: 34836, Start Num: 14
Candidate Starts for Arcanine_48:
(5, 35399), (9, 35360), (Start: 14 @35327 has 218 MA's), (18, 35246), (22, 35225), (28, 35156), (33, 35093), (35, 35084), (38, 34925), (39, 34889),

Gene: Arlo_45 Start: 34984, Stop: 34493, Start Num: 14
Candidate Starts for Arlo_45:
(5, 35056), (9, 35017), (Start: 14 @34984 has 218 MA's), (18, 34903), (22, 34882), (28, 34813), (33, 34750), (35, 34741), (38, 34582), (39, 34546),

Gene: Ashballer_48 Start: 36113, Stop: 35622, Start Num: 14
Candidate Starts for Ashballer_48:

(Start: 14 @36113 has 218 MA's), (18, 36032), (22, 36011), (28, 35942), (33, 35879), (35, 35870), (38, 35711), (39, 35675),

Gene: Astro_46 Start: 31898, Stop: 31377, Start Num: 12
Candidate Starts for Astro_46:
(Start: 12 @31898 has 11 MA's), (18, 31781), (29, 31682), (33, 31631), (34, 31625), (41, 31400),

Gene: Atkinbua_49 Start: 35740, Stop: 35249, Start Num: 14
Candidate Starts for Atkinbua_49:
(Start: 14 @35740 has 218 MA's), (18, 35659), (22, 35638), (33, 35506), (35, 35497), (38, 35338), (39, 35302),

Gene: B1_45 Start: 31865, Stop: 31290, Start Num: 8
Candidate Starts for B1_45:
(2, 31922), (Start: 3 @31907 has 1 MA's), (Start: 4 @31895 has 6 MA's), (Start: 8 @31865 has 19 MA's), (16, 31793), (18, 31715), (25, 31682), (26, 31679), (30, 31595), (35, 31550), (37, 31382), (39, 31331),

Gene: BK1_43 Start: 34340, Stop: 33849, Start Num: 14
Candidate Starts for BK1_43:
(5, 34412), (9, 34373), (Start: 14 @34340 has 218 MA's), (18, 34259), (22, 34238), (30, 34130), (35, 34097), (38, 33938), (39, 33902),

Gene: BPBiebs31_48 Start: 35699, Stop: 35208, Start Num: 14
Candidate Starts for BPBiebs31_48:
(5, 35771), (9, 35732), (Start: 14 @35699 has 218 MA's), (18, 35618), (22, 35597), (28, 35528), (33, 35465), (35, 35456), (38, 35297), (39, 35261),

Gene: BaconJack_50 Start: 36404, Stop: 35910, Start Num: 14
Candidate Starts for BaconJack_50:
(Start: 14 @36404 has 218 MA's), (18, 36323), (22, 36302), (30, 36194), (33, 36170), (35, 36161), (38, 35999), (39, 35963),

Gene: Barriga_48 Start: 35242, Stop: 34751, Start Num: 14
Candidate Starts for Barriga_48:
(Start: 14 @35242 has 218 MA's), (18, 35161), (22, 35140), (33, 35008), (35, 34999), (38, 34840), (39, 34804),

Gene: BarrowTuph_47 Start: 35604, Stop: 35113, Start Num: 14
Candidate Starts for BarrowTuph_47:
(Start: 14 @35604 has 218 MA's), (15, 35598), (18, 35523), (22, 35502), (28, 35433), (33, 35370), (35, 35361), (38, 35202), (39, 35166),

Gene: Beatrix_47 Start: 36955, Stop: 36464, Start Num: 14
Candidate Starts for Beatrix_47:
(5, 37027), (9, 36988), (Start: 14 @36955 has 218 MA's), (18, 36874), (22, 36853), (33, 36721), (35, 36712), (38, 36553), (39, 36517),

Gene: BeesKnees_48 Start: 35448, Stop: 34954, Start Num: 14
Candidate Starts for BeesKnees_48:
(Start: 14 @35448 has 218 MA's), (18, 35367), (22, 35346), (30, 35238), (33, 35214), (35, 35205), (38, 35046), (39, 35010),

Gene: Bethlehem_47 Start: 36106, Stop: 35615, Start Num: 14
Candidate Starts for Bethlehem_47:
(Start: 14 @36106 has 218 MA's), (18, 36025), (22, 36004), (33, 35872), (35, 35863), (38, 35704), (39, 35668),

Gene: Bexan_46 Start: 36633, Stop: 36142, Start Num: 14
Candidate Starts for Bexan_46:
(5, 36705), (9, 36666), (Start: 14 @36633 has 218 MA's), (18, 36552), (22, 36531), (33, 36399), (35, 36390), (38, 36231), (39, 36195),

Gene: Big3_46 Start: 35559, Stop: 35068, Start Num: 14
Candidate Starts for Big3_46:
(Start: 14 @35559 has 218 MA's), (18, 35478), (22, 35457), (33, 35325), (35, 35316), (38, 35157), (39, 35121),

Gene: BigMau_48 Start: 35214, Stop: 34723, Start Num: 14
Candidate Starts for BigMau_48:
(5, 35286), (9, 35247), (Start: 14 @35214 has 218 MA's), (18, 35133), (22, 35112), (28, 35043), (33, 34980), (35, 34971), (38, 34812), (39, 34776),

Gene: BigPaolini_47 Start: 34397, Stop: 33906, Start Num: 14
Candidate Starts for BigPaolini_47:
(5, 34469), (9, 34430), (Start: 14 @34397 has 218 MA's), (18, 34316), (22, 34295), (28, 34226), (33, 34163), (35, 34154), (39, 33959),

Gene: Bigchungi_46 Start: 34701, Stop: 34207, Start Num: 14
Candidate Starts for Bigchungi_46:
(Start: 14 @34701 has 218 MA's), (18, 34620), (22, 34599), (33, 34467), (35, 34458), (36, 34407), (38, 34299), (39, 34263),

Gene: Bigfoot_43 Start: 34618, Stop: 34127, Start Num: 14
Candidate Starts for Bigfoot_43:
(5, 34690), (9, 34651), (Start: 14 @34618 has 218 MA's), (18, 34537), (22, 34516), (28, 34447), (33, 34384), (35, 34375), (38, 34216), (39, 34180),

Gene: BillKnuckles_47 Start: 36158, Stop: 35667, Start Num: 14
Candidate Starts for BillKnuckles_47:
(Start: 14 @36158 has 218 MA's), (18, 36077), (22, 36056), (28, 35987), (30, 35948), (33, 35924), (35, 35915), (38, 35756), (39, 35720),

Gene: Bircsak_46 Start: 35971, Stop: 35480, Start Num: 14
Candidate Starts for Bircsak_46:
(5, 36043), (9, 36004), (Start: 14 @35971 has 218 MA's), (18, 35890), (22, 35869), (28, 35800), (30, 35761), (33, 35737), (35, 35728), (38, 35569), (39, 35533),

Gene: Blackflame_46 Start: 34678, Stop: 34196, Start Num: 14
Candidate Starts for Blackflame_46:
(5, 34750), (9, 34711), (Start: 14 @34678 has 218 MA's), (18, 34597), (22, 34576), (28, 34507), (30, 34468), (33, 34444), (35, 34435), (38, 34288), (39, 34252),

Gene: Blesser_46 Start: 35576, Stop: 35085, Start Num: 14
Candidate Starts for Blesser_46:

(Start: 14 @35576 has 218 MA's), (18, 35495), (22, 35474), (33, 35342), (35, 35333), (38, 35174), (39, 35138),

Gene: BluSpix_45 Start: 31820, Stop: 31326, Start Num: 14
Candidate Starts for BluSpix_45:
(Start: 14 @31820 has 218 MA's), (18, 31739), (22, 31718), (33, 31586), (35, 31577), (38, 31418), (39, 31382),

Gene: Blue_47 Start: 35881, Stop: 35390, Start Num: 14
Candidate Starts for Blue_47:
(Start: 14 @35881 has 218 MA's), (18, 35800), (22, 35779), (28, 35710), (33, 35647), (35, 35638), (38, 35479), (39, 35443),

Gene: Bluefalcon_41 Start: 32577, Stop: 32050, Start Num: 11
Candidate Starts for Bluefalcon_41:
(Start: 11 @32577 has 15 MA's), (18, 32442), (19, 32436), (33, 32292),

Gene: Bob3_45 Start: 34564, Stop: 34073, Start Num: 14
Candidate Starts for Bob3_45:
(5, 34636), (9, 34597), (Start: 14 @34564 has 218 MA's), (18, 34483), (22, 34462), (28, 34393), (33, 34330), (35, 34321), (38, 34162), (39, 34126),

Gene: Bones_47 Start: 35893, Stop: 35402, Start Num: 14
Candidate Starts for Bones_47:
(Start: 14 @35893 has 218 MA's), (18, 35812), (22, 35791), (28, 35722), (30, 35683), (33, 35659), (35, 35650), (38, 35491), (39, 35455),

Gene: Briton15_49 Start: 35674, Stop: 35183, Start Num: 14
Candidate Starts for Briton15_49:
(Start: 14 @35674 has 218 MA's), (18, 35593), (22, 35572), (28, 35503), (33, 35440), (35, 35431), (38, 35272), (39, 35236),

Gene: Bruns_46 Start: 35176, Stop: 34685, Start Num: 14
Candidate Starts for Bruns_46:
(5, 35248), (9, 35209), (Start: 14 @35176 has 218 MA's), (18, 35095), (22, 35074), (33, 34942), (35, 34933), (38, 34774), (39, 34738),

Gene: Burton_47 Start: 35109, Stop: 34618, Start Num: 14
Candidate Starts for Burton_47:
(Start: 14 @35109 has 218 MA's), (18, 35028), (22, 35007), (28, 34938), (33, 34875), (35, 34866), (38, 34707), (39, 34671),

Gene: Buttons_45 Start: 33856, Stop: 33365, Start Num: 14
Candidate Starts for Buttons_45:
(Start: 14 @33856 has 218 MA's), (18, 33775), (22, 33754), (33, 33622), (35, 33613), (38, 33454), (39, 33418),

Gene: Bxb1_43 Start: 34921, Stop: 34430, Start Num: 14
Candidate Starts for Bxb1_43:
(5, 34993), (9, 34954), (Start: 14 @34921 has 218 MA's), (18, 34840), (22, 34819), (30, 34711), (33, 34687), (35, 34678), (38, 34519), (39, 34483),

Gene: CactusRose_44 Start: 34746, Stop: 34255, Start Num: 14

Candidate Starts for CactusRose_44:
(Start: 14 @34746 has 218 MA's), (18, 34665), (22, 34644), (28, 34575), (30, 34536), (33, 34512), (35, 34503), (38, 34344), (39, 34308),

Gene: Caitlin_45 Start: 31891, Stop: 31370, Start Num: 12
Candidate Starts for Caitlin_45:
(Start: 12 @31891 has 11 MA's), (18, 31774), (29, 31675), (33, 31624), (34, 31618), (41, 31393),

Gene: Carlyle_46 Start: 33607, Stop: 33113, Start Num: 14
Candidate Starts for Carlyle_46:
(Start: 14 @33607 has 218 MA's), (18, 33526), (22, 33505), (28, 33436), (33, 33373), (35, 33364), (38, 33205), (39, 33169),

Gene: CartmannCramer_46 Start: 37464, Stop: 36973, Start Num: 14
Candidate Starts for CartmannCramer_46:
(5, 37536), (9, 37497), (Start: 14 @37464 has 218 MA's), (18, 37383), (22, 37362), (30, 37254), (33, 37230), (35, 37221), (38, 37062), (39, 37026),

Gene: CatBus_47 Start: 36340, Stop: 35849, Start Num: 14
Candidate Starts for CatBus_47:
(5, 36412), (9, 36373), (Start: 14 @36340 has 218 MA's), (18, 36259), (22, 36238), (33, 36106), (35, 36097), (38, 35938), (39, 35902),

Gene: Chanagan_44 Start: 34413, Stop: 33922, Start Num: 14
Candidate Starts for Chanagan_44:
(5, 34485), (9, 34446), (Start: 14 @34413 has 218 MA's), (18, 34332), (22, 34311), (33, 34179), (35, 34170), (38, 34011), (39, 33975),

Gene: ChristmasHams_43 Start: 32869, Stop: 32378, Start Num: 14
Candidate Starts for ChristmasHams_43:
(5, 32941), (9, 32902), (Start: 14 @32869 has 218 MA's), (18, 32788), (22, 32767), (28, 32698), (30, 32659), (33, 32635), (35, 32626), (38, 32467), (39, 32431),

Gene: Chupacabra_47 Start: 33046, Stop: 32486, Start Num: 8
Candidate Starts for Chupacabra_47:
(Start: 8 @33046 has 19 MA's), (16, 32974), (25, 32860), (26, 32857), (31, 32749), (33, 32740), (39, 32533),

Gene: Ciao_47 Start: 35564, Stop: 35061, Start Num: 14
Candidate Starts for Ciao_47:
(5, 35636), (9, 35597), (Start: 14 @35564 has 218 MA's), (18, 35483), (22, 35462), (28, 35393), (33, 35330), (35, 35321), (38, 35153), (39, 35117),

Gene: ConceptII_49 Start: 36256, Stop: 35765, Start Num: 14
Candidate Starts for ConceptII_49:
(5, 36328), (9, 36289), (Start: 14 @36256 has 218 MA's), (18, 36175), (22, 36154), (30, 36046), (33, 36022), (35, 36013), (38, 35854), (39, 35818),

Gene: Conspiracy_42 Start: 32307, Stop: 31774, Start Num: 11
Candidate Starts for Conspiracy_42:
(Start: 11 @32307 has 15 MA's), (18, 32175), (19, 32169), (33, 32025),

Gene: Coog_42 Start: 32408, Stop: 31872, Start Num: 11

Candidate Starts for Coog_42:
(Start: 11 @32408 has 15 MA's), (18, 32273), (19, 32267), (33, 32123), (41, 31895),

Gene: Corvo_48 Start: 36116, Stop: 35625, Start Num: 14
Candidate Starts for Corvo_48:
(5, 36188), (9, 36149), (Start: 14 @36116 has 218 MA's), (18, 36035), (22, 36014), (33, 35882), (35, 35873), (38, 35714), (39, 35678),

Gene: Crispicous1_45 Start: 34739, Stop: 34248, Start Num: 14
Candidate Starts for Crispicous1_45:
(5, 34811), (9, 34772), (Start: 14 @34739 has 218 MA's), (18, 34658), (22, 34637), (28, 34568), (30, 34529), (33, 34505), (35, 34496), (38, 34337), (39, 34301),

Gene: Cueylyss_48 Start: 37026, Stop: 36535, Start Num: 14
Candidate Starts for Cueylyss_48:
(Start: 14 @37026 has 218 MA's), (18, 36945), (22, 36924), (28, 36855), (30, 36816), (33, 36792), (35, 36783), (38, 36624), (39, 36588),

Gene: DD5_46 Start: 36122, Stop: 35631, Start Num: 14
Candidate Starts for DD5_46:
(5, 36194), (9, 36155), (Start: 14 @36122 has 218 MA's), (18, 36041), (22, 36020), (30, 35912), (33, 35888), (35, 35879), (38, 35720), (39, 35684),

Gene: Danforth_46 Start: 31927, Stop: 31406, Start Num: 12
Candidate Starts for Danforth_46:
(Start: 12 @31927 has 11 MA's), (18, 31810), (29, 31711), (33, 31660), (34, 31654), (41, 31429),

Gene: Dexes_47 Start: 36156, Stop: 35665, Start Num: 14
Candidate Starts for Dexes_47:
(Start: 14 @36156 has 218 MA's), (18, 36075), (22, 36054), (33, 35922), (35, 35913), (38, 35754), (39, 35718),

Gene: DirtDevil_48 Start: 36148, Stop: 35657, Start Num: 14
Candidate Starts for DirtDevil_48:
(5, 36220), (9, 36181), (Start: 14 @36148 has 218 MA's), (18, 36067), (22, 36046), (33, 35914), (35, 35905), (38, 35746), (39, 35710),

Gene: Dixon_46 Start: 31800, Stop: 31279, Start Num: 12
Candidate Starts for Dixon_46:
(Start: 12 @31800 has 11 MA's), (18, 31683), (29, 31584), (33, 31533), (34, 31527), (41, 31302),

Gene: DontArgue_47 Start: 32271, Stop: 31723, Start Num: 7
Candidate Starts for DontArgue_47:
(7, 32271), (24, 32115), (30, 32010), (33, 31977), (39, 31770),

Gene: Doom_47 Start: 35900, Stop: 35409, Start Num: 14
Candidate Starts for Doom_47:
(5, 35972), (9, 35933), (Start: 14 @35900 has 218 MA's), (18, 35819), (22, 35798), (28, 35729), (30, 35690), (33, 35666), (35, 35657), (38, 35498), (39, 35462),

Gene: DrFeelGood_45 Start: 35584, Stop: 35093, Start Num: 14
Candidate Starts for DrFeelGood_45:

(5, 35656), (9, 35617), (Start: 14 @35584 has 218 MA's), (18, 35503), (22, 35482), (30, 35374), (33, 35350), (35, 35341), (38, 35182), (39, 35146),

Gene: Drake94_46 Start: 32305, Stop: 31757, Start Num: 8
Candidate Starts for Drake94_46:
(Start: 8 @32305 has 19 MA's), (16, 32236), (21, 32152), (22, 32149), (25, 32131), (26, 32128), (30, 32044), (33, 32011), (39, 31804),

Gene: DreamCatcher_50 Start: 36623, Stop: 36132, Start Num: 14
Candidate Starts for DreamCatcher_50:
(Start: 14 @36623 has 218 MA's), (18, 36542), (22, 36521), (33, 36389), (35, 36380), (36, 36329), (38, 36221), (39, 36185),

Gene: Dreamboat_49 Start: 35340, Stop: 34837, Start Num: 14
Candidate Starts for Dreamboat_49:
(5, 35412), (9, 35373), (Start: 14 @35340 has 218 MA's), (18, 35259), (22, 35238), (30, 35130), (33, 35106), (35, 35097), (38, 34929), (39, 34893),

Gene: DroogsArmy_45 Start: 34322, Stop: 33822, Start Num: 13
Candidate Starts for DroogsArmy_45:
(Start: 13 @34322 has 3 MA's), (18, 34217), (30, 34097), (33, 34067), (39, 33869),

Gene: Dublin_41 Start: 32129, Stop: 31593, Start Num: 11
Candidate Starts for Dublin_41:
(Start: 11 @32129 has 15 MA's), (18, 31994), (19, 31988), (33, 31844),

Gene: Dulcie_47 Start: 35420, Stop: 34929, Start Num: 14
Candidate Starts for Dulcie_47:
(Start: 14 @35420 has 218 MA's), (18, 35339), (22, 35318), (28, 35249), (30, 35210), (33, 35186), (35, 35177), (39, 34982),

Gene: Dussy_49 Start: 35800, Stop: 35309, Start Num: 14
Candidate Starts for Dussy_49:
(5, 35872), (9, 35833), (Start: 14 @35800 has 218 MA's), (18, 35719), (22, 35698), (28, 35629), (33, 35566), (35, 35557), (38, 35398), (39, 35362),

Gene: DustyMartin_52 Start: 33124, Stop: 32570, Start Num: 8
Candidate Starts for DustyMartin_52:
(Start: 8 @33124 has 19 MA's), (16, 33055), (24, 32962), (26, 32941), (30, 32857), (31, 32833), (33, 32824), (35, 32815), (39, 32617),

Gene: Dynamix_48 Start: 35419, Stop: 34928, Start Num: 14
Candidate Starts for Dynamix_48:
(Start: 14 @35419 has 218 MA's), (18, 35338), (22, 35317), (33, 35185), (35, 35176), (36, 35125), (38, 35017), (39, 34981),

Gene: Eaglepride_49 Start: 33105, Stop: 32554, Start Num: 8
Candidate Starts for Eaglepride_49:
(1, 33174), (Start: 8 @33105 has 19 MA's), (22, 32946), (33, 32808), (39, 32601),

Gene: Edison31_47 Start: 33061, Stop: 32510, Start Num: 8
Candidate Starts for Edison31_47:

(Start: 8 @33061 has 19 MA's), (16, 32992), (25, 32884), (26, 32881), (30, 32797), (31, 32773), (33, 32764), (35, 32755), (39, 32557),

Gene: Edtherson_47 Start: 36064, Stop: 35573, Start Num: 14
Candidate Starts for Edtherson_47:
(5, 36136), (9, 36097), (Start: 14 @36064 has 218 MA's), (18, 35983), (22, 35962), (28, 35893), (33, 35830), (35, 35821), (38, 35662), (39, 35626),

Gene: EnzoK_46 Start: 33390, Stop: 32899, Start Num: 14
Candidate Starts for EnzoK_46:
(5, 33462), (9, 33423), (Start: 14 @33390 has 218 MA's), (18, 33309), (22, 33288), (33, 33156), (35, 33147), (38, 32988), (39, 32952),

Gene: Espresso_47 Start: 35666, Stop: 35175, Start Num: 14
Candidate Starts for Espresso_47:
(Start: 14 @35666 has 218 MA's), (18, 35585), (22, 35564), (33, 35432), (35, 35423), (38, 35264), (39, 35228),

Gene: Euphoria_45 Start: 34917, Stop: 34426, Start Num: 14
Candidate Starts for Euphoria_45:
(Start: 14 @34917 has 218 MA's), (18, 34836), (22, 34815), (28, 34746), (30, 34707), (33, 34683), (35, 34674), (38, 34515), (39, 34479),

Gene: Expelliarmus_46 Start: 31956, Stop: 31435, Start Num: 12
Candidate Starts for Expelliarmus_46:
(Start: 12 @31956 has 11 MA's), (18, 31839), (29, 31740), (33, 31689), (34, 31683), (41, 31458),

Gene: Eyeball_48 Start: 35803, Stop: 35312, Start Num: 14
Candidate Starts for Eyeball_48:
(Start: 14 @35803 has 218 MA's), (18, 35722), (22, 35701), (33, 35569), (35, 35560), (38, 35401), (39, 35365),

Gene: Fajezeel_49 Start: 35913, Stop: 35422, Start Num: 14
Candidate Starts for Fajezeel_49:
(5, 35985), (9, 35946), (Start: 14 @35913 has 218 MA's), (18, 35832), (22, 35811), (33, 35679), (35, 35670), (38, 35511), (39, 35475),

Gene: Fascinus_43 Start: 34815, Stop: 34276, Start Num: 14
Candidate Starts for Fascinus_43:
(5, 34887), (9, 34848), (Start: 14 @34815 has 218 MA's), (18, 34704), (20, 34689), (38, 34365), (39, 34329),

Gene: Fenn_49 Start: 37378, Stop: 36884, Start Num: 14
Candidate Starts for Fenn_49:
(Start: 14 @37378 has 218 MA's), (18, 37297), (22, 37276), (33, 37144), (35, 37135), (38, 36976), (39, 36940),

Gene: Florence1_41 Start: 31832, Stop: 31440, Start Num: 18
Candidate Starts for Florence1_41:
(Start: 11 @31967 has 15 MA's), (18, 31832), (19, 31826), (33, 31682), (40, 31481), (41, 31463),

Gene: ForGetIt_42 Start: 32332, Stop: 31799, Start Num: 11
Candidate Starts for ForGetIt_42:

(Start: 11 @32332 has 15 MA's), (18, 32200), (19, 32194), (33, 32050),

Gene: Forsytheast_47 Start: 35394, Stop: 34903, Start Num: 14
Candidate Starts for Forsytheast_47:
(5, 35466), (9, 35427), (Start: 14 @35394 has 218 MA's), (18, 35313), (22, 35292), (33, 35160), (35, 35151), (38, 34992), (39, 34956),

Gene: Francis47_46 Start: 36239, Stop: 35748, Start Num: 14
Candidate Starts for Francis47_46:
(5, 36311), (9, 36272), (Start: 14 @36239 has 218 MA's), (18, 36158), (22, 36137), (28, 36068), (30, 36029), (33, 36005), (35, 35996), (38, 35837), (39, 35801),

Gene: Froghopper_45 Start: 34909, Stop: 34418, Start Num: 14
Candidate Starts for Froghopper_45:
(5, 34981), (9, 34942), (Start: 14 @34909 has 218 MA's), (18, 34828), (22, 34807), (33, 34675), (35, 34666), (38, 34507), (39, 34471),

Gene: Fushigi_45 Start: 33557, Stop: 33066, Start Num: 14
Candidate Starts for Fushigi_45:
(Start: 14 @33557 has 218 MA's), (18, 33476), (22, 33455), (33, 33323), (35, 33314), (38, 33155), (39, 33119),

Gene: GMonster_44 Start: 34237, Stop: 33734, Start Num: 14
Candidate Starts for GMonster_44:
(Start: 14 @34237 has 218 MA's), (18, 34156), (22, 34135), (33, 34003), (35, 33994), (38, 33826), (39, 33790),

Gene: Gachnar_47 Start: 34995, Stop: 34504, Start Num: 14
Candidate Starts for Gachnar_47:
(5, 35067), (9, 35028), (Start: 14 @34995 has 218 MA's), (18, 34914), (22, 34893), (33, 34761), (35, 34752), (38, 34593), (39, 34557),

Gene: GageAP_48 Start: 35709, Stop: 35215, Start Num: 14
Candidate Starts for GageAP_48:
(5, 35781), (9, 35742), (Start: 14 @35709 has 218 MA's), (18, 35628), (22, 35607), (30, 35499), (33, 35475), (35, 35466), (38, 35307), (39, 35271),

Gene: Gandalf20_49 Start: 36393, Stop: 35902, Start Num: 14
Candidate Starts for Gandalf20_49:
(Start: 14 @36393 has 218 MA's), (18, 36312), (22, 36291), (30, 36183), (33, 36159), (35, 36150), (38, 35991), (39, 35955),

Gene: Ghoulboy_44 Start: 33072, Stop: 32536, Start Num: 11
Candidate Starts for Ghoulboy_44:
(Start: 11 @33072 has 15 MA's), (18, 32937), (19, 32931), (33, 32787),

Gene: Gompeii16_46 Start: 35972, Stop: 35481, Start Num: 14
Candidate Starts for Gompeii16_46:
(5, 36044), (9, 36005), (Start: 14 @35972 has 218 MA's), (18, 35891), (22, 35870), (28, 35801), (30, 35762), (33, 35738), (35, 35729), (38, 35570), (39, 35534),

Gene: Goose_48 Start: 32859, Stop: 32299, Start Num: 8
Candidate Starts for Goose_48:

(Start: 8 @32859 has 19 MA's), (16, 32787), (25, 32673), (26, 32670), (31, 32562), (33, 32553), (39, 32346),

Gene: Graduation_50 Start: 37122, Stop: 36631, Start Num: 14
Candidate Starts for Graduation_50:
(Start: 14 @37122 has 218 MA's), (18, 37041), (22, 37020), (28, 36951), (30, 36912), (33, 36888), (35, 36879), (38, 36720), (39, 36684),

Gene: GrecoEtereo_48 Start: 35721, Stop: 35230, Start Num: 14
Candidate Starts for GrecoEtereo_48:
(5, 35793), (9, 35754), (Start: 14 @35721 has 218 MA's), (18, 35640), (22, 35619), (30, 35511), (33, 35487), (35, 35478), (38, 35319), (39, 35283),

Gene: Greg_49 Start: 35913, Stop: 35422, Start Num: 14
Candidate Starts for Greg_49:
(5, 35985), (9, 35946), (Start: 14 @35913 has 218 MA's), (18, 35832), (22, 35811), (33, 35679), (35, 35670), (38, 35511), (39, 35475),

Gene: GroundGoblin_48 Start: 36290, Stop: 35799, Start Num: 14
Candidate Starts for GroundGoblin_48:
(5, 36362), (9, 36323), (Start: 14 @36290 has 218 MA's), (18, 36209), (22, 36188), (33, 36056), (35, 36047), (38, 35888), (39, 35852),

Gene: Groundhog_45 Start: 31854, Stop: 31342, Start Num: 12
Candidate Starts for Groundhog_45:
(Start: 12 @31854 has 11 MA's), (18, 31737), (29, 31638), (33, 31587), (34, 31581), (41, 31365),

Gene: Gwendoluna_50 Start: 37558, Stop: 37067, Start Num: 14
Candidate Starts for Gwendoluna_50:
(Start: 14 @37558 has 218 MA's), (18, 37477), (22, 37456), (28, 37387), (30, 37348), (33, 37324), (35, 37315), (38, 37156), (39, 37120),

Gene: Gyzlar_43 Start: 33635, Stop: 33096, Start Num: 14
Candidate Starts for Gyzlar_43:
(5, 33707), (9, 33668), (Start: 14 @33635 has 218 MA's), (18, 33524), (20, 33509), (38, 33185), (39, 33149),

Gene: HINdeR_45 Start: 34149, Stop: 33646, Start Num: 13
Candidate Starts for HINdeR_45:
(2, 34242), (Start: 3 @34227 has 1 MA's), (Start: 8 @34182 has 19 MA's), (Start: 13 @34149 has 3 MA's), (18, 34044), (27, 34005), (33, 33894), (39, 33693),

Gene: Hami1_41 Start: 30016, Stop: 29537, Start Num: 14
Candidate Starts for Hami1_41:
(5, 30088), (9, 30049), (Start: 14 @30016 has 218 MA's), (18, 29935), (22, 29914), (28, 29845), (33, 29782), (35, 29773), (38, 29626), (39, 29590),

Gene: HanShotFirst_46 Start: 34746, Stop: 34255, Start Num: 14
Candidate Starts for HanShotFirst_46:
(Start: 14 @34746 has 218 MA's), (18, 34665), (22, 34644), (28, 34575), (30, 34536), (33, 34512), (35, 34503), (38, 34344), (39, 34308),

Gene: HarryOW_46 Start: 34893, Stop: 34402, Start Num: 14

Candidate Starts for HarryOW_46:
(5, 34965), (9, 34926), (Start: 14 @34893 has 218 MA's), (18, 34812), (22, 34791), (30, 34683), (33, 34659), (35, 34650), (38, 34491), (39, 34455),

Gene: Hermia_48 Start: 36340, Stop: 35849, Start Num: 14
Candidate Starts for Hermia_48:
(5, 36412), (9, 36373), (Start: 14 @36340 has 218 MA's), (18, 36259), (22, 36238), (33, 36106), (35, 36097), (38, 35938), (39, 35902),

Gene: HermioneGrange_47 Start: 35708, Stop: 35217, Start Num: 14
Candidate Starts for HermioneGrange_47:
(5, 35780), (9, 35741), (Start: 14 @35708 has 218 MA's), (18, 35627), (22, 35606), (28, 35537), (33, 35474), (35, 35465), (38, 35306), (39, 35270),

Gene: Homines_39 Start: 31549, Stop: 31058, Start Num: 14
Candidate Starts for Homines_39:
(Start: 14 @31549 has 218 MA's), (18, 31468), (22, 31447), (33, 31315), (35, 31306), (38, 31147), (39, 31111),

Gene: Hope4ever_49 Start: 36165, Stop: 35674, Start Num: 14
Candidate Starts for Hope4ever_49:
(Start: 14 @36165 has 218 MA's), (18, 36084), (22, 36063), (33, 35931), (35, 35922), (38, 35763), (39, 35727),

Gene: ILeeKay_51 Start: 36502, Stop: 36011, Start Num: 14
Candidate Starts for ILeeKay_51:
(5, 36574), (9, 36535), (Start: 14 @36502 has 218 MA's), (18, 36421), (22, 36400), (28, 36331), (30, 36292), (33, 36268), (35, 36259), (38, 36100), (39, 36064),

Gene: Ichabod_49 Start: 35764, Stop: 35270, Start Num: 14
Candidate Starts for Ichabod_49:
(Start: 14 @35764 has 218 MA's), (18, 35683), (22, 35662), (33, 35530), (35, 35521), (38, 35362), (39, 35326),

Gene: IgnatiusPatJac_47 Start: 35765, Stop: 35271, Start Num: 14
Candidate Starts for IgnatiusPatJac_47:
(Start: 14 @35765 has 218 MA's), (18, 35684), (22, 35663), (33, 35531), (35, 35522), (38, 35363), (39, 35327),

Gene: Inyanga_44 Start: 34362, Stop: 33871, Start Num: 14
Candidate Starts for Inyanga_44:
(5, 34434), (9, 34395), (Start: 14 @34362 has 218 MA's), (18, 34281), (22, 34260), (28, 34191), (30, 34152), (33, 34128), (35, 34119), (38, 33960), (39, 33924),

Gene: Iqorha_44 Start: 34361, Stop: 33870, Start Num: 14
Candidate Starts for Iqorha_44:
(5, 34433), (9, 34394), (Start: 14 @34361 has 218 MA's), (18, 34280), (22, 34259), (28, 34190), (30, 34151), (33, 34127), (35, 34118), (38, 33959), (39, 33923),

Gene: Isca_49 Start: 33194, Stop: 32589, Start Num: 4
Candidate Starts for Isca_49:
(2, 33221), (Start: 3 @33206 has 1 MA's), (Start: 4 @33194 has 6 MA's), (Start: 8 @33164 has 19 MA's), (16, 33092), (18, 33014), (25, 32981), (26, 32978), (30, 32894), (35, 32849), (37, 32681), (39,

32630),

Gene: JC27_48 Start: 35809, Stop: 35318, Start Num: 14
Candidate Starts for JC27_48:
(Start: 14 @35809 has 218 MA's), (18, 35728), (22, 35707), (28, 35638), (33, 35575), (35, 35566), (38, 35407), (39, 35371),

Gene: JF2_48 Start: 31895, Stop: 31290, Start Num: 4
Candidate Starts for JF2_48:
(2, 31922), (Start: 3 @31907 has 1 MA's), (Start: 4 @31895 has 6 MA's), (Start: 8 @31865 has 19 MA's), (16, 31793), (18, 31715), (25, 31682), (26, 31679), (30, 31595), (35, 31550), (37, 31382), (39, 31331),

Gene: JF4_48 Start: 31895, Stop: 31290, Start Num: 4
Candidate Starts for JF4_48:
(2, 31922), (Start: 3 @31907 has 1 MA's), (Start: 4 @31895 has 6 MA's), (Start: 8 @31865 has 19 MA's), (16, 31793), (18, 31715), (25, 31682), (26, 31679), (30, 31595), (35, 31550), (37, 31382), (39, 31331),

Gene: JackSparrow_48 Start: 35944, Stop: 35465, Start Num: 14
Candidate Starts for JackSparrow_48:
(5, 36016), (9, 35977), (Start: 14 @35944 has 218 MA's), (18, 35863), (22, 35842), (28, 35773), (30, 35734), (33, 35710), (35, 35701), (38, 35554), (39, 35518),

Gene: Jasper_49 Start: 35226, Stop: 34723, Start Num: 14
Candidate Starts for Jasper_49:
(5, 35298), (9, 35259), (Start: 14 @35226 has 218 MA's), (18, 35145), (22, 35124), (30, 35016), (33, 34992), (35, 34983), (38, 34815), (39, 34779),

Gene: Jerm2_48 Start: 35963, Stop: 35472, Start Num: 14
Candidate Starts for Jerm2_48:
(5, 36035), (9, 35996), (Start: 14 @35963 has 218 MA's), (18, 35882), (22, 35861), (28, 35792), (33, 35729), (35, 35720), (38, 35561), (39, 35525),

Gene: Jorgensen_48 Start: 35503, Stop: 35012, Start Num: 14
Candidate Starts for Jorgensen_48:
(Start: 14 @35503 has 218 MA's), (15, 35497), (18, 35422), (22, 35401), (33, 35269), (35, 35260), (38, 35101), (39, 35065),

Gene: Jovo_42 Start: 32588, Stop: 32055, Start Num: 11
Candidate Starts for Jovo_42:
(Start: 11 @32588 has 15 MA's), (18, 32456), (19, 32450), (33, 32306),

Gene: JuliaChild_48 Start: 35588, Stop: 35097, Start Num: 14
Candidate Starts for JuliaChild_48:
(5, 35660), (9, 35621), (Start: 14 @35588 has 218 MA's), (18, 35507), (22, 35486), (28, 35417), (33, 35354), (35, 35345), (38, 35186), (39, 35150),

Gene: KBG_49 Start: 36909, Stop: 36418, Start Num: 14
Candidate Starts for KBG_49:
(5, 36981), (9, 36942), (Start: 14 @36909 has 218 MA's), (18, 36828), (22, 36807), (33, 36675), (35, 36666), (38, 36507), (39, 36471),

Gene: KSSJEB_46 Start: 35208, Stop: 34714, Start Num: 14
Candidate Starts for KSSJEB_46:
(Start: 14 @35208 has 218 MA's), (18, 35127), (22, 35106), (33, 34974), (35, 34965), (36, 34914), (38, 34806), (39, 34770),

Gene: Kanely_48 Start: 35863, Stop: 35372, Start Num: 14
Candidate Starts for Kanely_48:
(Start: 14 @35863 has 218 MA's), (18, 35782), (22, 35761), (30, 35653), (33, 35629), (35, 35620), (38, 35461), (39, 35425),

Gene: Kenmech_51 Start: 36926, Stop: 36435, Start Num: 14
Candidate Starts for Kenmech_51:
(5, 36998), (9, 36959), (Start: 14 @36926 has 218 MA's), (18, 36845), (22, 36824), (28, 36755), (33, 36692), (35, 36683), (38, 36524), (39, 36488),

Gene: KikiBouba_48 Start: 36149, Stop: 35658, Start Num: 14
Candidate Starts for KikiBouba_48:
(5, 36221), (9, 36182), (Start: 14 @36149 has 218 MA's), (18, 36068), (22, 36047), (33, 35915), (35, 35906), (38, 35747), (39, 35711),

Gene: Killigrew_47 Start: 35642, Stop: 35133, Start Num: 14
Candidate Starts for Killigrew_47:
(5, 35714), (9, 35675), (Start: 14 @35642 has 218 MA's), (18, 35561), (22, 35540), (33, 35408), (35, 35399), (39, 35204),

Gene: Kimona_49 Start: 32039, Stop: 31437, Start Num: 3
Candidate Starts for Kimona_49:
(2, 32054), (Start: 3 @32039 has 1 MA's), (Start: 8 @31997 has 19 MA's), (18, 31844), (27, 31805), (28, 31763), (30, 31724), (33, 31694), (39, 31478),

Gene: KittenMittens_45 Start: 32313, Stop: 31765, Start Num: 8
Candidate Starts for KittenMittens_45:
(Start: 8 @32313 has 19 MA's), (16, 32244), (21, 32160), (22, 32157), (25, 32139), (26, 32136), (30, 32052), (33, 32019), (39, 31812),

Gene: Kristoff_48 Start: 33413, Stop: 32862, Start Num: 8
Candidate Starts for Kristoff_48:
(Start: 8 @33413 has 19 MA's), (16, 33344), (26, 33233), (30, 33149), (31, 33125), (33, 33116), (35, 33107), (39, 32909),

Gene: Kugel_48 Start: 35883, Stop: 35392, Start Num: 14
Candidate Starts for Kugel_48:
(5, 35955), (9, 35916), (Start: 14 @35883 has 218 MA's), (18, 35802), (22, 35781), (33, 35649), (35, 35640), (38, 35481), (39, 35445),

Gene: KyMonks1A_49 Start: 35782, Stop: 35288, Start Num: 14
Candidate Starts for KyMonks1A_49:
(5, 35854), (9, 35815), (Start: 14 @35782 has 218 MA's), (18, 35701), (22, 35680), (28, 35611), (33, 35548), (35, 35539), (38, 35377), (39, 35341),

Gene: Kykar_47 Start: 35565, Stop: 35086, Start Num: 14
Candidate Starts for Kykar_47:

(5, 35637), (9, 35598), (Start: 14 @35565 has 218 MA's), (18, 35484), (22, 35463), (28, 35394), (33, 35331), (35, 35322), (38, 35175), (39, 35139),

Gene: Lamina13_47 Start: 35176, Stop: 34685, Start Num: 14
Candidate Starts for Lamina13_47:
(Start: 14 @35176 has 218 MA's), (18, 35095), (22, 35074), (33, 34942), (35, 34933), (36, 34882), (38, 34774), (39, 34738),

Gene: Lesedi_44 Start: 34760, Stop: 34239, Start Num: 14
Candidate Starts for Lesedi_44:
(5, 34832), (9, 34793), (Start: 14 @34760 has 218 MA's), (18, 34649), (22, 34628), (33, 34496), (35, 34487), (38, 34328), (39, 34292),

Gene: Lev2_42 Start: 32220, Stop: 31687, Start Num: 11
Candidate Starts for Lev2_42:
(Start: 11 @32220 has 15 MA's), (18, 32088), (19, 32082), (33, 31938),

Gene: Levia_44 Start: 35213, Stop: 34734, Start Num: 14
Candidate Starts for Levia_44:
(Start: 14 @35213 has 218 MA's), (15, 35207), (18, 35132), (22, 35111), (28, 35042), (33, 34979), (35, 34970), (38, 34823), (39, 34787),

Gene: Licorice_50 Start: 36999, Stop: 36508, Start Num: 14
Candidate Starts for Licorice_50:
(5, 37071), (9, 37032), (Start: 14 @36999 has 218 MA's), (18, 36918), (22, 36897), (28, 36828), (33, 36765), (35, 36756), (39, 36561),

Gene: LilBib_47 Start: 36057, Stop: 35566, Start Num: 14
Candidate Starts for LilBib_47:
(5, 36129), (9, 36090), (Start: 14 @36057 has 218 MA's), (18, 35976), (22, 35955), (33, 35823), (35, 35814), (38, 35655), (39, 35619),

Gene: Lockley_46 Start: 35284, Stop: 34793, Start Num: 14
Candidate Starts for Lockley_46:
(5, 35356), (9, 35317), (Start: 14 @35284 has 218 MA's), (18, 35203), (22, 35182), (30, 35074), (33, 35050), (35, 35041), (38, 34882), (39, 34846),

Gene: Lopton_48 Start: 36884, Stop: 36393, Start Num: 14
Candidate Starts for Lopton_48:
(5, 36956), (9, 36917), (Start: 14 @36884 has 218 MA's), (18, 36803), (22, 36782), (28, 36713), (33, 36650), (35, 36641), (38, 36482), (39, 36446),

Gene: LunarLander_48 Start: 35695, Stop: 35204, Start Num: 14
Candidate Starts for LunarLander_48:
(Start: 14 @35695 has 218 MA's), (18, 35614), (22, 35593), (28, 35524), (30, 35485), (33, 35461), (35, 35452), (38, 35293), (39, 35257),

Gene: MK4_50 Start: 33179, Stop: 32574, Start Num: 4
Candidate Starts for MK4_50:
(2, 33206), (Start: 3 @33191 has 1 MA's), (Start: 4 @33179 has 6 MA's), (Start: 8 @33149 has 19 MA's), (16, 33077), (18, 32999), (25, 32966), (26, 32963), (30, 32879), (35, 32834), (37, 32666), (39, 32615),

Gene: MPlant7149_46 Start: 34826, Stop: 34335, Start Num: 14
Candidate Starts for MPlant7149_46:
(5, 34898), (9, 34859), (Start: 14 @34826 has 218 MA's), (18, 34745), (22, 34724), (33, 34592), (35, 34583), (38, 34424), (39, 34388),

Gene: Magnar_46 Start: 35936, Stop: 35445, Start Num: 14
Candidate Starts for Magnar_46:
(Start: 14 @35936 has 218 MA's), (18, 35855), (22, 35834), (30, 35726), (33, 35702), (35, 35693), (38, 35534), (39, 35498),

Gene: Magnito_44 Start: 34508, Stop: 34017, Start Num: 14
Candidate Starts for Magnito_44:
(Start: 14 @34508 has 218 MA's), (18, 34427), (22, 34406), (33, 34274), (35, 34265), (38, 34106), (39, 34070),

Gene: Makemake_47 Start: 36354, Stop: 35863, Start Num: 14
Candidate Starts for Makemake_47:
(5, 36426), (9, 36387), (Start: 14 @36354 has 218 MA's), (18, 36273), (22, 36252), (33, 36120), (35, 36111), (38, 35952), (39, 35916),

Gene: Manatee_48 Start: 35062, Stop: 34571, Start Num: 14
Candidate Starts for Manatee_48:
(Start: 14 @35062 has 218 MA's), (18, 34981), (22, 34960), (30, 34852), (33, 34828), (35, 34819), (38, 34660), (39, 34624),

Gene: Marcell_45 Start: 35220, Stop: 34729, Start Num: 14
Candidate Starts for Marcell_45:
(5, 35292), (9, 35253), (Start: 14 @35220 has 218 MA's), (18, 35139), (22, 35118), (28, 35049), (33, 34986), (35, 34977), (38, 34818), (39, 34782),

Gene: Marchy_41 Start: 31968, Stop: 31489, Start Num: 14
Candidate Starts for Marchy_41:
(Start: 14 @31968 has 218 MA's), (15, 31962), (18, 31887), (22, 31866), (28, 31797), (33, 31734), (35, 31725), (38, 31578), (39, 31542),

Gene: Marco3_49 Start: 36322, Stop: 35831, Start Num: 14
Candidate Starts for Marco3_49:
(Start: 14 @36322 has 218 MA's), (18, 36241), (22, 36220), (30, 36112), (33, 36088), (35, 36079), (38, 35920), (39, 35884),

Gene: Marge_47 Start: 36031, Stop: 35540, Start Num: 14
Candidate Starts for Marge_47:
(5, 36103), (9, 36064), (Start: 14 @36031 has 218 MA's), (18, 35950), (22, 35929), (28, 35860), (30, 35821), (33, 35797), (35, 35788), (38, 35629), (39, 35593),

Gene: Maroc7_45 Start: 35124, Stop: 34585, Start Num: 14
Candidate Starts for Maroc7_45:
(5, 35196), (9, 35157), (Start: 14 @35124 has 218 MA's), (18, 35013), (20, 34998), (38, 34674), (39, 34638),

Gene: Marsha_47 Start: 36587, Stop: 36096, Start Num: 14
Candidate Starts for Marsha_47:

(5, 36659), (9, 36620), (Start: 14 @36587 has 218 MA's), (18, 36506), (22, 36485), (28, 36416), (30, 36377), (33, 36353), (35, 36344), (38, 36185), (39, 36149),

Gene: MaryBeth_47 Start: 35493, Stop: 35002, Start Num: 14
Candidate Starts for MaryBeth_47:
(5, 35565), (9, 35526), (Start: 14 @35493 has 218 MA's), (18, 35412), (22, 35391), (33, 35259), (35, 35250), (38, 35091), (39, 35055),

Gene: MarysWell_41 Start: 32408, Stop: 31881, Start Num: 11
Candidate Starts for MarysWell_41:
(Start: 11 @32408 has 15 MA's), (18, 32273), (19, 32267), (33, 32123),

Gene: McGuire_48 Start: 35312, Stop: 34818, Start Num: 14
Candidate Starts for McGuire_48:
(Start: 14 @35312 has 218 MA's), (18, 35231), (22, 35210), (33, 35078), (35, 35069), (38, 34910), (39, 34874),

Gene: McSinger_48 Start: 35833, Stop: 35339, Start Num: 14
Candidate Starts for McSinger_48:
(Start: 14 @35833 has 218 MA's), (18, 35752), (22, 35731), (28, 35662), (30, 35623), (33, 35599), (35, 35590), (38, 35431), (39, 35395),

Gene: MetalQZJ_46 Start: 35493, Stop: 35002, Start Num: 14
Candidate Starts for MetalQZJ_46:
(5, 35565), (9, 35526), (Start: 14 @35493 has 218 MA's), (18, 35412), (22, 35391), (33, 35259), (35, 35250), (38, 35091), (39, 35055),

Gene: Michley_46 Start: 35011, Stop: 34520, Start Num: 14
Candidate Starts for Michley_46:
(Start: 14 @35011 has 218 MA's), (18, 34930), (22, 34909), (28, 34840), (30, 34801), (33, 34777), (35, 34768), (38, 34609), (39, 34573),

Gene: Midas2_42 Start: 32408, Stop: 31872, Start Num: 11
Candidate Starts for Midas2_42:
(Start: 11 @32408 has 15 MA's), (18, 32273), (19, 32267), (33, 32123), (41, 31895),

Gene: MilleFeuille_44 Start: 35591, Stop: 35088, Start Num: 14
Candidate Starts for MilleFeuille_44:
(Start: 14 @35591 has 218 MA's), (18, 35510), (22, 35489), (33, 35357), (35, 35348), (38, 35180), (39, 35144),

Gene: Mkhuseli_46 Start: 34896, Stop: 34405, Start Num: 14
Candidate Starts for Mkhuseli_46:
(5, 34968), (9, 34929), (Start: 14 @34896 has 218 MA's), (18, 34815), (22, 34794), (28, 34725), (30, 34686), (33, 34662), (35, 34653), (38, 34494), (39, 34458),

Gene: Molly_48 Start: 34897, Stop: 34406, Start Num: 14
Candidate Starts for Molly_48:
(Start: 14 @34897 has 218 MA's), (18, 34816), (22, 34795), (28, 34726), (33, 34663), (35, 34654), (38, 34495), (39, 34459),

Gene: Monet_50 Start: 37023, Stop: 36532, Start Num: 14
Candidate Starts for Monet_50:

(5, 37095), (9, 37056), (Start: 14 @37023 has 218 MA's), (18, 36942), (22, 36921), (33, 36789), (35, 36780), (38, 36621), (39, 36585),

Gene: Moose_47 Start: 35394, Stop: 34903, Start Num: 14
Candidate Starts for Moose_47:
(5, 35466), (9, 35427), (Start: 14 @35394 has 218 MA's), (18, 35313), (22, 35292), (33, 35160), (35, 35151), (38, 34992), (39, 34956),

Gene: MrGordo_46 Start: 34805, Stop: 34314, Start Num: 14
Candidate Starts for MrGordo_46:
(Start: 14 @34805 has 218 MA's), (18, 34724), (22, 34703), (30, 34595), (33, 34571), (35, 34562), (38, 34403), (39, 34367),

Gene: Mryolo_45 Start: 34872, Stop: 34381, Start Num: 14
Candidate Starts for Mryolo_45:
(5, 34944), (9, 34905), (Start: 14 @34872 has 218 MA's), (18, 34791), (22, 34770), (28, 34701), (33, 34638), (35, 34629), (38, 34470), (39, 34434),

Gene: Mule_44 Start: 33043, Stop: 32564, Start Num: 14
Candidate Starts for Mule_44:
(5, 33115), (9, 33076), (Start: 14 @33043 has 218 MA's), (18, 32962), (22, 32941), (28, 32872), (30, 32833), (33, 32809), (35, 32800), (38, 32653), (39, 32617),

Gene: Museum_48 Start: 35048, Stop: 34557, Start Num: 14
Candidate Starts for Museum_48:
(Start: 14 @35048 has 218 MA's), (18, 34967), (22, 34946), (28, 34877), (33, 34814), (35, 34805), (38, 34646), (39, 34610),

Gene: NEHalo_45 Start: 34818, Stop: 34324, Start Num: 14
Candidate Starts for NEHalo_45:
(5, 34890), (9, 34851), (Start: 14 @34818 has 218 MA's), (18, 34737), (22, 34716), (30, 34608), (33, 34584), (35, 34575), (38, 34416), (39, 34380),

Gene: Naira_49 Start: 37425, Stop: 36931, Start Num: 14
Candidate Starts for Naira_49:
(Start: 14 @37425 has 218 MA's), (18, 37344), (22, 37323), (33, 37191), (35, 37182), (38, 37023), (39, 36987),

Gene: NearlyHeadless_46 Start: 31699, Stop: 31181, Start Num: 12
Candidate Starts for NearlyHeadless_46:
(Start: 12 @31699 has 11 MA's), (18, 31582), (27, 31543), (29, 31483), (33, 31432), (34, 31426), (41, 31204),

Gene: Nerujay_49 Start: 36116, Stop: 35637, Start Num: 14
Candidate Starts for Nerujay_49:
(Start: 14 @36116 has 218 MA's), (18, 36035), (22, 36014), (33, 35882), (35, 35873), (38, 35726), (39, 35690),

Gene: Nhonho_48 Start: 35986, Stop: 35495, Start Num: 14
Candidate Starts for Nhonho_48:
(Start: 14 @35986 has 218 MA's), (18, 35905), (22, 35884), (33, 35752), (35, 35743), (38, 35584), (39, 35548),

Gene: Niza_50 Start: 36895, Stop: 36404, Start Num: 14
Candidate Starts for Niza_50:
(5, 36967), (9, 36928), (Start: 14 @36895 has 218 MA's), (18, 36814), (22, 36793), (33, 36661), (35, 36652), (38, 36493), (39, 36457),

Gene: Norz_47 Start: 35704, Stop: 35213, Start Num: 14
Candidate Starts for Norz_47:
(Start: 14 @35704 has 218 MA's), (15, 35698), (18, 35623), (22, 35602), (33, 35470), (35, 35461), (38, 35302), (39, 35266),

Gene: Noxious_47 Start: 36340, Stop: 35849, Start Num: 14
Candidate Starts for Noxious_47:
(5, 36412), (9, 36373), (Start: 14 @36340 has 218 MA's), (18, 36259), (22, 36238), (33, 36106), (35, 36097), (38, 35938), (39, 35902),

Gene: OKCentral2016_47 Start: 32762, Stop: 32202, Start Num: 8
Candidate Starts for OKCentral2016_47:
(Start: 8 @32762 has 19 MA's), (16, 32690), (25, 32576), (26, 32573), (31, 32465), (33, 32456), (39, 32249),

Gene: Ohno789_48 Start: 36219, Stop: 35725, Start Num: 14
Candidate Starts for Ohno789_48:
(Start: 14 @36219 has 218 MA's), (18, 36138), (22, 36117), (30, 36009), (33, 35985), (35, 35976), (38, 35817), (39, 35781),

Gene: Oogway_44 Start: 34350, Stop: 33859, Start Num: 14
Candidate Starts for Oogway_44:
(Start: 14 @34350 has 218 MA's), (18, 34269), (22, 34248), (33, 34116), (35, 34107), (38, 33948), (39, 33912),

Gene: PP_51 Start: 36962, Stop: 36378, Start Num: 8
Candidate Starts for PP_51:
(Start: 8 @36962 has 19 MA's), (17, 36830), (23, 36791), (28, 36722), (33, 36653), (37, 36479),

Gene: PSullivan_47 Start: 34862, Stop: 34371, Start Num: 14
Candidate Starts for PSullivan_47:
(5, 34934), (9, 34895), (Start: 14 @34862 has 218 MA's), (18, 34781), (22, 34760), (28, 34691), (33, 34628), (35, 34619), (38, 34460), (39, 34424),

Gene: PacerPaul_47 Start: 35606, Stop: 35115, Start Num: 14
Candidate Starts for PacerPaul_47:
(5, 35678), (9, 35639), (Start: 14 @35606 has 218 MA's), (18, 35525), (22, 35504), (28, 35435), (30, 35396), (33, 35372), (35, 35363), (38, 35204), (39, 35168),

Gene: Papez_50 Start: 37983, Stop: 37492, Start Num: 14
Candidate Starts for Papez_50:
(Start: 14 @37983 has 218 MA's), (18, 37902), (22, 37881), (28, 37812), (30, 37773), (33, 37749), (35, 37740), (38, 37581), (39, 37545),

Gene: Paphu_45 Start: 35117, Stop: 34626, Start Num: 14
Candidate Starts for Paphu_45:
(Start: 14 @35117 has 218 MA's), (18, 35036), (22, 35015), (28, 34946), (33, 34883), (35, 34874), (38, 34715), (39, 34679),

Gene: Paraselene_45 Start: 35484, Stop: 34990, Start Num: 14
Candidate Starts for Paraselene_45:
(6, 35556), (10, 35517), (Start: 14 @35484 has 218 MA's), (18, 35403), (22, 35382), (28, 35313), (33, 35250), (35, 35241), (38, 35082), (39, 35046),

Gene: Pari_48 Start: 35131, Stop: 34640, Start Num: 14
Candidate Starts for Pari_48:
(Start: 14 @35131 has 218 MA's), (18, 35050), (22, 35029), (33, 34897), (35, 34888), (38, 34729), (39, 34693),

Gene: Parliament_46 Start: 35665, Stop: 35174, Start Num: 14
Candidate Starts for Parliament_46:
(Start: 14 @35665 has 218 MA's), (15, 35659), (18, 35584), (22, 35563), (33, 35431), (35, 35422), (36, 35371), (38, 35263), (39, 35227),

Gene: PascalRango_48 Start: 35376, Stop: 34882, Start Num: 14
Candidate Starts for PascalRango_48:
(Start: 14 @35376 has 218 MA's), (18, 35295), (22, 35274), (28, 35205), (33, 35142), (35, 35133), (38, 34974), (39, 34938),

Gene: PattyP_48 Start: 35244, Stop: 34753, Start Num: 14
Candidate Starts for PattyP_48:
(5, 35316), (9, 35277), (Start: 14 @35244 has 218 MA's), (18, 35163), (22, 35142), (28, 35073), (33, 35010), (35, 35001), (38, 34842), (39, 34806),

Gene: Payneful_46 Start: 34685, Stop: 34206, Start Num: 14
Candidate Starts for Payneful_46:
(Start: 14 @34685 has 218 MA's), (15, 34679), (18, 34604), (22, 34583), (28, 34514), (33, 34451), (35, 34442), (38, 34295), (39, 34259),

Gene: PeaceMeal1_46 Start: 32314, Stop: 31766, Start Num: 8
Candidate Starts for PeaceMeal1_46:
(Start: 8 @32314 has 19 MA's), (16, 32245), (21, 32161), (22, 32158), (25, 32140), (26, 32137), (30, 32053), (33, 32020), (39, 31813),

Gene: Pelly_46 Start: 35645, Stop: 35154, Start Num: 14
Candidate Starts for Pelly_46:
(Start: 14 @35645 has 218 MA's), (18, 35564), (22, 35543), (33, 35411), (35, 35402), (38, 35243), (39, 35207),

Gene: Pepe_44 Start: 33805, Stop: 33314, Start Num: 14
Candidate Starts for Pepe_44:
(5, 33877), (9, 33838), (Start: 14 @33805 has 218 MA's), (18, 33724), (22, 33703), (28, 33634), (33, 33571), (35, 33562), (38, 33403), (39, 33367),

Gene: Perseus_47 Start: 35929, Stop: 35450, Start Num: 14
Candidate Starts for Perseus_47:
(5, 36001), (9, 35962), (Start: 14 @35929 has 218 MA's), (18, 35848), (22, 35827), (28, 35758), (30, 35719), (33, 35695), (35, 35686), (38, 35539), (39, 35503),

Gene: Peterson_50 Start: 37831, Stop: 37337, Start Num: 14
Candidate Starts for Peterson_50:

(Start: 14 @37831 has 218 MA's), (18, 37750), (22, 37729), (28, 37660), (33, 37597), (35, 37588), (38, 37429), (39, 37393),

Gene: Petp2012_48 Start: 35856, Stop: 35365, Start Num: 14
Candidate Starts for Petp2012_48:
(Start: 14 @35856 has 218 MA's), (18, 35775), (22, 35754), (28, 35685), (33, 35622), (35, 35613), (38, 35454), (39, 35418),

Gene: Petruchio_47 Start: 35590, Stop: 35099, Start Num: 14
Candidate Starts for Petruchio_47:
(5, 35662), (9, 35623), (Start: 14 @35590 has 218 MA's), (18, 35509), (22, 35488), (28, 35419), (30, 35380), (33, 35356), (35, 35347), (38, 35188), (39, 35152),

Gene: Phantastic_51 Start: 33380, Stop: 32778, Start Num: 4
Candidate Starts for Phantastic_51:
(2, 33407), (Start: 3 @33392 has 1 MA's), (Start: 4 @33380 has 6 MA's), (Start: 8 @33350 has 19 MA's), (16, 33281), (18, 33203), (26, 33167), (30, 33083), (39, 32819),

Gene: PherrisBueller_47 Start: 34859, Stop: 34356, Start Num: 14
Candidate Starts for PherrisBueller_47:
(5, 34931), (9, 34892), (Start: 14 @34859 has 218 MA's), (18, 34778), (22, 34757), (30, 34649), (33, 34625), (35, 34616), (38, 34448), (39, 34412),

Gene: Phillis_48 Start: 32245, Stop: 31724, Start Num: 12
Candidate Starts for Phillis_48:
(Start: 12 @32245 has 11 MA's), (18, 32128), (29, 32029), (33, 31978), (34, 31972), (41, 31747),

Gene: PhineBark_46 Start: 36231, Stop: 35752, Start Num: 14
Candidate Starts for PhineBark_46:
(Start: 14 @36231 has 218 MA's), (15, 36225), (18, 36150), (22, 36129), (28, 36060), (33, 35997), (35, 35988), (38, 35841), (39, 35805),

Gene: Phlippers_45 Start: 36138, Stop: 35647, Start Num: 14
Candidate Starts for Phlippers_45:
(Start: 14 @36138 has 218 MA's), (15, 36132), (18, 36057), (22, 36036), (33, 35904), (35, 35895), (36, 35844), (38, 35736), (39, 35700),

Gene: PhrostyMug_46 Start: 35208, Stop: 34729, Start Num: 14
Candidate Starts for PhrostyMug_46:
(5, 35280), (9, 35241), (Start: 14 @35208 has 218 MA's), (18, 35127), (22, 35106), (28, 35037), (30, 34998), (33, 34974), (35, 34965), (38, 34818), (39, 34782),

Gene: PinkPlastic_46 Start: 35066, Stop: 34575, Start Num: 14
Candidate Starts for PinkPlastic_46:
(Start: 14 @35066 has 218 MA's), (18, 34985), (22, 34964), (33, 34832), (35, 34823), (36, 34772), (38, 34664), (39, 34628),

Gene: Pinto_47 Start: 35047, Stop: 34556, Start Num: 14
Candidate Starts for Pinto_47:
(5, 35119), (9, 35080), (Start: 14 @35047 has 218 MA's), (18, 34966), (22, 34945), (30, 34837), (33, 34813), (35, 34804), (38, 34645), (39, 34609),

Gene: Pippin_49 Start: 35957, Stop: 35466, Start Num: 14

Candidate Starts for Pippin_49:
(5, 36029), (9, 35990), (Start: 14 @35957 has 218 MA's), (18, 35876), (22, 35855), (33, 35723), (35, 35714), (38, 35555), (39, 35519),

Gene: Pita2_50 Start: 36359, Stop: 35868, Start Num: 14
Candidate Starts for Pita2_50:
(5, 36431), (9, 36392), (Start: 14 @36359 has 218 MA's), (18, 36278), (22, 36257), (28, 36188), (33, 36125), (35, 36116), (38, 35957), (39, 35921),

Gene: Poompha_47 Start: 32312, Stop: 31764, Start Num: 8
Candidate Starts for Poompha_47:
(Start: 8 @32312 has 19 MA's), (16, 32243), (21, 32159), (22, 32156), (25, 32138), (26, 32135), (30, 32051), (33, 32018), (39, 31811),

Gene: PowerRanger_48 Start: 36272, Stop: 35781, Start Num: 14
Candidate Starts for PowerRanger_48:
(5, 36344), (9, 36305), (Start: 14 @36272 has 218 MA's), (18, 36191), (22, 36170), (33, 36038), (35, 36029), (38, 35870), (39, 35834),

Gene: ProMouse_48 Start: 36067, Stop: 35576, Start Num: 14
Candidate Starts for ProMouse_48:
(Start: 14 @36067 has 218 MA's), (18, 35986), (22, 35965), (33, 35833), (35, 35824), (38, 35665), (39, 35629),

Gene: Puppet_48 Start: 36073, Stop: 35582, Start Num: 14
Candidate Starts for Puppet_48:
(Start: 14 @36073 has 218 MA's), (18, 35992), (22, 35971), (28, 35902), (30, 35863), (33, 35839), (35, 35830), (38, 35671), (39, 35635),

Gene: QTRlifeCrisis_47 Start: 36055, Stop: 35564, Start Num: 14
Candidate Starts for QTRlifeCrisis_47:
(5, 36127), (9, 36088), (Start: 14 @36055 has 218 MA's), (18, 35974), (22, 35953), (30, 35845), (33, 35821), (35, 35812), (38, 35653), (39, 35617),

Gene: Raid_48 Start: 35644, Stop: 35153, Start Num: 14
Candidate Starts for Raid_48:
(Start: 14 @35644 has 218 MA's), (18, 35563), (22, 35542), (33, 35410), (35, 35401), (38, 35242), (39, 35206),

Gene: Rajelicia_48 Start: 35989, Stop: 35498, Start Num: 14
Candidate Starts for Rajelicia_48:
(5, 36061), (9, 36022), (Start: 14 @35989 has 218 MA's), (18, 35908), (22, 35887), (28, 35818), (33, 35755), (35, 35746), (38, 35587), (39, 35551),

Gene: Rebeuca_48 Start: 33414, Stop: 32863, Start Num: 8
Candidate Starts for Rebeuca_48:
(Start: 8 @33414 has 19 MA's), (16, 33345), (26, 33234), (30, 33150), (31, 33126), (33, 33117), (35, 33108), (39, 32910),

Gene: RhynO_49 Start: 33216, Stop: 32662, Start Num: 8
Candidate Starts for RhynO_49:
(Start: 8 @33216 has 19 MA's), (16, 33147), (24, 33054), (26, 33033), (30, 32949), (31, 32925), (33, 32916), (35, 32907), (39, 32709),

Gene: Rhynn_46 Start: 35290, Stop: 34811, Start Num: 14
Candidate Starts for Rhynn_46:
(5, 35362), (9, 35323), (Start: 14 @35290 has 218 MA's), (18, 35209), (22, 35188), (28, 35119), (33, 35056), (35, 35047), (38, 34900), (39, 34864),

Gene: RidgeCB_47 Start: 35205, Stop: 34714, Start Num: 14
Candidate Starts for RidgeCB_47:
(5, 35277), (9, 35238), (Start: 14 @35205 has 218 MA's), (18, 35124), (22, 35103), (28, 35034), (33, 34971), (35, 34962), (38, 34803), (39, 34767),

Gene: Ringer_48 Start: 36321, Stop: 35830, Start Num: 14
Candidate Starts for Ringer_48:
(5, 36393), (9, 36354), (Start: 14 @36321 has 218 MA's), (18, 36240), (22, 36219), (33, 36087), (35, 36078), (38, 35919), (39, 35883),

Gene: Roary_47 Start: 31912, Stop: 31391, Start Num: 12
Candidate Starts for Roary_47:
(Start: 12 @31912 has 11 MA's), (18, 31795), (29, 31696), (33, 31645), (34, 31639), (41, 31414),

Gene: Rockstar_50 Start: 33188, Stop: 32583, Start Num: 4
Candidate Starts for Rockstar_50:
(2, 33215), (Start: 3 @33200 has 1 MA's), (Start: 4 @33188 has 6 MA's), (Start: 8 @33158 has 19 MA's), (16, 33086), (18, 33008), (25, 32975), (26, 32972), (30, 32888), (35, 32843), (37, 32675), (39, 32624),

Gene: Rohr_48 Start: 36009, Stop: 35518, Start Num: 14
Candidate Starts for Rohr_48:
(5, 36081), (9, 36042), (Start: 14 @36009 has 218 MA's), (18, 35928), (22, 35907), (28, 35838), (33, 35775), (35, 35766), (38, 35607), (39, 35571),

Gene: Rowdy_52 Start: 33124, Stop: 32570, Start Num: 8
Candidate Starts for Rowdy_52:
(Start: 8 @33124 has 19 MA's), (16, 33055), (24, 32962), (26, 32941), (30, 32857), (31, 32833), (33, 32824), (35, 32815), (39, 32617),

Gene: Rubeus_47 Start: 33866, Stop: 33372, Start Num: 14
Candidate Starts for Rubeus_47:
(5, 33938), (9, 33899), (Start: 14 @33866 has 218 MA's), (18, 33785), (22, 33764), (28, 33695), (30, 33656), (33, 33632), (35, 33623), (38, 33461), (39, 33425),

Gene: Rufus_48 Start: 35636, Stop: 35142, Start Num: 14
Candidate Starts for Rufus_48:
(5, 35708), (9, 35669), (Start: 14 @35636 has 218 MA's), (18, 35555), (22, 35534), (28, 35465), (30, 35426), (33, 35402), (35, 35393), (38, 35231), (39, 35195),

Gene: Ruotula_50 Start: 37126, Stop: 36635, Start Num: 14
Candidate Starts for Ruotula_50:
(5, 37198), (9, 37159), (Start: 14 @37126 has 218 MA's), (18, 37045), (22, 37024), (28, 36955), (30, 36916), (33, 36892), (35, 36883), (38, 36724), (39, 36688),

Gene: Rutherferd_49 Start: 36503, Stop: 36024, Start Num: 14
Candidate Starts for Rutherferd_49:

(Start: 14 @36503 has 218 MA's), (18, 36422), (22, 36401), (28, 36332), (33, 36269), (35, 36260), (38, 36113), (39, 36077),

Gene: STLscum_48 Start: 36506, Stop: 36015, Start Num: 14
Candidate Starts for STLscum_48:
(Start: 14 @36506 has 218 MA's), (18, 36425), (22, 36404), (33, 36272), (35, 36263), (38, 36104), (39, 36068),

Gene: Sagefire_50 Start: 36875, Stop: 36384, Start Num: 14
Candidate Starts for Sagefire_50:
(5, 36947), (9, 36908), (Start: 14 @36875 has 218 MA's), (18, 36794), (22, 36773), (33, 36641), (35, 36632), (38, 36473), (39, 36437),

Gene: Saintus_41 Start: 28634, Stop: 28113, Start Num: 12
Candidate Starts for Saintus_41:
(Start: 12 @28634 has 11 MA's), (18, 28517), (27, 28478), (29, 28418), (33, 28367), (34, 28361), (41, 28136),

Gene: Sandaddy_46 Start: 35676, Stop: 35182, Start Num: 14
Candidate Starts for Sandaddy_46:
(5, 35748), (9, 35709), (Start: 14 @35676 has 218 MA's), (18, 35595), (22, 35574), (30, 35466), (33, 35442), (35, 35433), (38, 35274), (39, 35238),

Gene: Sanya_45 Start: 35975, Stop: 35472, Start Num: 14
Candidate Starts for Sanya_45:
(5, 36047), (9, 36008), (Start: 14 @35975 has 218 MA's), (18, 35894), (22, 35873), (30, 35765), (33, 35741), (35, 35732), (38, 35564), (39, 35528),

Gene: SarFire_45 Start: 35227, Stop: 34736, Start Num: 14
Candidate Starts for SarFire_45:
(5, 35299), (9, 35260), (Start: 14 @35227 has 218 MA's), (18, 35146), (22, 35125), (33, 34993), (35, 34984), (38, 34825), (39, 34789),

Gene: Scowl_48 Start: 36163, Stop: 35660, Start Num: 14
Candidate Starts for Scowl_48:
(5, 36235), (9, 36196), (Start: 14 @36163 has 218 MA's), (18, 36082), (22, 36061), (33, 35929), (35, 35920), (38, 35752), (39, 35716),

Gene: Seabiscuit_49 Start: 35399, Stop: 34908, Start Num: 14
Candidate Starts for Seabiscuit_49:
(Start: 14 @35399 has 218 MA's), (18, 35318), (22, 35297), (33, 35165), (35, 35156), (36, 35105), (38, 34997), (39, 34961),

Gene: Seanderson_49 Start: 36566, Stop: 36075, Start Num: 14
Candidate Starts for Seanderson_49:
(5, 36638), (9, 36599), (Start: 14 @36566 has 218 MA's), (18, 36485), (22, 36464), (33, 36332), (35, 36323), (38, 36164), (39, 36128),

Gene: Severus_46 Start: 32312, Stop: 31764, Start Num: 8
Candidate Starts for Severus_46:
(Start: 8 @32312 has 19 MA's), (16, 32243), (21, 32159), (22, 32156), (25, 32138), (26, 32135), (30, 32051), (33, 32018), (39, 31811),

Gene: Shapes_52 Start: 33124, Stop: 32570, Start Num: 8
Candidate Starts for Shapes_52:
(Start: 8 @33124 has 19 MA's), (16, 33055), (24, 32962), (26, 32941), (30, 32857), (31, 32833), (33, 32824), (35, 32815), (39, 32617),

Gene: ShortQueendom_41 Start: 31740, Stop: 31246, Start Num: 14
Candidate Starts for ShortQueendom_41:
(6, 31812), (10, 31773), (Start: 14 @31740 has 218 MA's), (18, 31659), (22, 31638), (33, 31506), (35, 31497), (38, 31338), (39, 31302),

Gene: Sibs6_48 Start: 34494, Stop: 34003, Start Num: 14
Candidate Starts for Sibs6_48:
(Start: 14 @34494 has 218 MA's), (18, 34413), (22, 34392), (28, 34323), (33, 34260), (35, 34251), (38, 34092), (39, 34056),

Gene: SkiPole_50 Start: 36227, Stop: 35736, Start Num: 14
Candidate Starts for SkiPole_50:
(Start: 14 @36227 has 218 MA's), (18, 36146), (22, 36125), (33, 35993), (35, 35984), (38, 35825), (39, 35789),

Gene: Slagathor_49 Start: 35914, Stop: 35423, Start Num: 14
Candidate Starts for Slagathor_49:
(5, 35986), (9, 35947), (Start: 14 @35914 has 218 MA's), (18, 35833), (22, 35812), (28, 35743), (33, 35680), (35, 35671), (38, 35512), (39, 35476),

Gene: Smairt_49 Start: 36201, Stop: 35722, Start Num: 14
Candidate Starts for Smairt_49:
(5, 36273), (9, 36234), (Start: 14 @36201 has 218 MA's), (18, 36120), (22, 36099), (28, 36030), (30, 35991), (33, 35967), (35, 35958), (38, 35811), (39, 35775),

Gene: Smeadley_47 Start: 32078, Stop: 31557, Start Num: 12
Candidate Starts for Smeadley_47:
(Start: 12 @32078 has 11 MA's), (18, 31961), (29, 31862), (33, 31811), (34, 31805), (41, 31580),

Gene: Smeagol_48 Start: 36735, Stop: 36244, Start Num: 14
Candidate Starts for Smeagol_48:
(Start: 14 @36735 has 218 MA's), (18, 36654), (22, 36633), (33, 36501), (35, 36492), (38, 36333), (39, 36297),

Gene: Snazzy_45 Start: 34933, Stop: 34439, Start Num: 14
Candidate Starts for Snazzy_45:
(Start: 14 @34933 has 218 MA's), (18, 34852), (22, 34831), (33, 34699), (35, 34690), (36, 34639), (38, 34531), (39, 34495),

Gene: Solon_46 Start: 35558, Stop: 35067, Start Num: 14
Candidate Starts for Solon_46:
(5, 35630), (9, 35591), (Start: 14 @35558 has 218 MA's), (18, 35477), (22, 35456), (30, 35348), (33, 35324), (35, 35315), (38, 35156), (39, 35120),

Gene: Sorpresa_46 Start: 35678, Stop: 35184, Start Num: 14
Candidate Starts for Sorpresa_46:
(5, 35750), (9, 35711), (Start: 14 @35678 has 218 MA's), (18, 35597), (22, 35576), (30, 35468), (33, 35444), (35, 35435), (38, 35276), (39, 35240),

Gene: SpikeBT_47 Start: 35915, Stop: 35421, Start Num: 14
Candidate Starts for SpikeBT_47:
(Start: 14 @35915 has 218 MA's), (18, 35834), (22, 35813), (30, 35705), (33, 35681), (35, 35672), (38, 35513), (39, 35477),

Gene: Squee_47 Start: 35892, Stop: 35398, Start Num: 14
Candidate Starts for Squee_47:
(Start: 14 @35892 has 218 MA's), (18, 35811), (22, 35790), (33, 35658), (35, 35649), (38, 35490), (39, 35454),

Gene: Stephig9_47 Start: 31916, Stop: 31395, Start Num: 12
Candidate Starts for Stephig9_47:
(Start: 12 @31916 has 11 MA's), (18, 31799), (29, 31700), (32, 31652), (33, 31649), (34, 31643), (41, 31418),

Gene: StewieG_46 Start: 33078, Stop: 32599, Start Num: 14
Candidate Starts for StewieG_46:
(5, 33150), (9, 33111), (Start: 14 @33078 has 218 MA's), (18, 32997), (22, 32976), (28, 32907), (33, 32844), (35, 32835), (38, 32688), (39, 32652),

Gene: StrongArm_47 Start: 36761, Stop: 36270, Start Num: 14
Candidate Starts for StrongArm_47:
(5, 36833), (9, 36794), (Start: 14 @36761 has 218 MA's), (18, 36680), (22, 36659), (33, 36527), (35, 36518), (38, 36359), (39, 36323),

Gene: Sumter_44 Start: 35263, Stop: 34772, Start Num: 14
Candidate Starts for Sumter_44:
(5, 35335), (9, 35296), (Start: 14 @35263 has 218 MA's), (18, 35182), (22, 35161), (30, 35053), (33, 35029), (35, 35020), (38, 34861), (39, 34825),

Gene: Sunshine924_48 Start: 35178, Stop: 34687, Start Num: 14
Candidate Starts for Sunshine924_48:
(Start: 14 @35178 has 218 MA's), (18, 35097), (22, 35076), (33, 34944), (35, 34935), (38, 34776), (39, 34740),

Gene: SwissCheese_49 Start: 35894, Stop: 35403, Start Num: 14
Candidate Starts for SwissCheese_49:
(5, 35966), (9, 35927), (Start: 14 @35894 has 218 MA's), (18, 35813), (22, 35792), (33, 35660), (35, 35651), (38, 35492), (39, 35456),

Gene: Switzer_48 Start: 35468, Stop: 34977, Start Num: 14
Candidate Starts for Switzer_48:
(Start: 14 @35468 has 218 MA's), (18, 35387), (22, 35366), (30, 35258), (33, 35234), (35, 35225), (38, 35066), (39, 35030),

Gene: Swole_48 Start: 35063, Stop: 34572, Start Num: 14
Candidate Starts for Swole_48:
(5, 35135), (9, 35096), (Start: 14 @35063 has 218 MA's), (18, 34982), (22, 34961), (28, 34892), (33, 34829), (35, 34820), (38, 34661), (39, 34625),

Gene: SydNat_44 Start: 33081, Stop: 32545, Start Num: 11
Candidate Starts for SydNat_44:

(Start: 11 @33081 has 15 MA's), (18, 32946), (19, 32940), (33, 32796),

Gene: Target_48 Start: 34467, Stop: 33976, Start Num: 14
Candidate Starts for Target_48:
(5, 34539), (9, 34500), (Start: 14 @34467 has 218 MA's), (18, 34386), (33, 34233), (35, 34224), (38, 34065), (39, 34029),

Gene: Tasp14_48 Start: 35800, Stop: 35309, Start Num: 14
Candidate Starts for Tasp14_48:
(Start: 14 @35800 has 218 MA's), (18, 35719), (22, 35698), (33, 35566), (35, 35557), (36, 35506), (38, 35398), (39, 35362),

Gene: Teodoridan_45 Start: 34988, Stop: 34497, Start Num: 14
Candidate Starts for Teodoridan_45:
(Start: 14 @34988 has 218 MA's), (15, 34982), (18, 34907), (22, 34886), (33, 34754), (35, 34745), (36, 34694), (38, 34586), (39, 34550),

Gene: Theia_40 Start: 32347, Stop: 31820, Start Num: 11
Candidate Starts for Theia_40:
(Start: 11 @32347 has 15 MA's), (18, 32212), (19, 32206), (33, 32062),

Gene: TheloniousMonk_48 Start: 36922, Stop: 36431, Start Num: 14
Candidate Starts for TheloniousMonk_48:
(5, 36994), (9, 36955), (Start: 14 @36922 has 218 MA's), (18, 36841), (22, 36820), (28, 36751), (33, 36688), (35, 36679), (38, 36520), (39, 36484),

Gene: Thor_45 Start: 34585, Stop: 34094, Start Num: 14
Candidate Starts for Thor_45:
(5, 34657), (9, 34618), (Start: 14 @34585 has 218 MA's), (18, 34504), (22, 34483), (33, 34351), (35, 34342), (38, 34183), (39, 34147),

Gene: Tiger_41 Start: 31886, Stop: 31353, Start Num: 11
Candidate Starts for Tiger_41:
(Start: 11 @31886 has 15 MA's), (18, 31754), (19, 31748), (33, 31604),

Gene: Timshel_47 Start: 34579, Stop: 34079, Start Num: 13
Candidate Starts for Timshel_47:
(Start: 13 @34579 has 3 MA's), (18, 34474), (30, 34354), (33, 34324), (39, 34126),

Gene: Topanga_46 Start: 33064, Stop: 32513, Start Num: 8
Candidate Starts for Topanga_46:
(Start: 8 @33064 has 19 MA's), (16, 32995), (26, 32884), (30, 32800), (31, 32776), (33, 32767), (35, 32758), (39, 32560),

Gene: Topgun_46 Start: 35080, Stop: 34586, Start Num: 14
Candidate Starts for Topgun_46:
(Start: 14 @35080 has 218 MA's), (15, 35074), (18, 34999), (22, 34978), (33, 34843), (35, 34834), (36, 34783), (38, 34675), (39, 34639),

Gene: Tote_43 Start: 32330, Stop: 31839, Start Num: 14
Candidate Starts for Tote_43:
(5, 32402), (9, 32363), (Start: 14 @32330 has 218 MA's), (18, 32249), (22, 32228), (28, 32159), (33, 32096), (35, 32087), (38, 31928), (39, 31892),

Gene: Traft412_47 Start: 36020, Stop: 35529, Start Num: 14
Candidate Starts for Traft412_47:
(Start: 14 @36020 has 218 MA's), (18, 35939), (22, 35918), (30, 35810), (33, 35786), (35, 35777), (38, 35618), (39, 35582),

Gene: Treddle_48 Start: 36535, Stop: 36044, Start Num: 14
Candidate Starts for Treddle_48:
(5, 36607), (9, 36568), (Start: 14 @36535 has 218 MA's), (18, 36454), (22, 36433), (28, 36364), (33, 36301), (35, 36292), (38, 36133), (39, 36097),

Gene: Trike_46 Start: 32321, Stop: 31773, Start Num: 8
Candidate Starts for Trike_46:
(Start: 8 @32321 has 19 MA's), (16, 32252), (21, 32168), (22, 32165), (25, 32147), (26, 32144), (30, 32060), (33, 32027), (39, 31820),

Gene: Tripl3t_47 Start: 36206, Stop: 35715, Start Num: 14
Candidate Starts for Tripl3t_47:
(5, 36278), (9, 36239), (Start: 14 @36206 has 218 MA's), (18, 36125), (22, 36104), (28, 36035), (33, 35972), (35, 35963), (38, 35804), (39, 35768),

Gene: Trouble_49 Start: 36916, Stop: 36437, Start Num: 14
Candidate Starts for Trouble_49:
(Start: 14 @36916 has 218 MA's), (18, 36835), (22, 36814), (33, 36682), (35, 36673), (38, 36526), (39, 36490),

Gene: Turj99_44 Start: 34778, Stop: 34287, Start Num: 14
Candidate Starts for Turj99_44:
(Start: 14 @34778 has 218 MA's), (18, 34697), (22, 34676), (33, 34544), (35, 34535), (38, 34376), (39, 34340),

Gene: Twigg_43 Start: 32380, Stop: 31988, Start Num: 18
Candidate Starts for Twigg_43:
(Start: 11 @32515 has 15 MA's), (18, 32380), (19, 32374), (33, 32230), (40, 32029), (41, 32011),

Gene: Twister_46 Start: 32975, Stop: 32424, Start Num: 8
Candidate Starts for Twister_46:
(Start: 8 @32975 has 19 MA's), (16, 32906), (26, 32795), (30, 32711), (31, 32687), (33, 32678), (35, 32669), (39, 32471),

Gene: TwoPeat_48 Start: 35654, Stop: 35163, Start Num: 14
Candidate Starts for TwoPeat_48:
(5, 35726), (9, 35687), (Start: 14 @35654 has 218 MA's), (18, 35573), (22, 35552), (28, 35483), (33, 35420), (35, 35411), (38, 35252), (39, 35216),

Gene: U2_46 Start: 35448, Stop: 34957, Start Num: 14
Candidate Starts for U2_46:
(Start: 14 @35448 has 218 MA's), (18, 35367), (22, 35346), (30, 35238), (33, 35214), (35, 35205), (38, 35046), (39, 35010),

Gene: Violet_45 Start: 35592, Stop: 35101, Start Num: 14
Candidate Starts for Violet_45:

(5, 35664), (9, 35625), (Start: 14 @35592 has 218 MA's), (18, 35511), (22, 35490), (35, 35349), (38, 35190), (39, 35154),

Gene: WalterMcMickey_46 Start: 32975, Stop: 32424, Start Num: 8
Candidate Starts for WalterMcMickey_46:
(Start: 8 @32975 has 19 MA's), (16, 32906), (26, 32795), (30, 32711), (31, 32687), (33, 32678), (35, 32669), (39, 32471),

Gene: Watermelon_48 Start: 35984, Stop: 35463, Start Num: 14
Candidate Starts for Watermelon_48:
(5, 36056), (9, 36017), (Start: 14 @35984 has 218 MA's), (18, 35873), (22, 35852), (28, 35783), (33, 35720), (35, 35711), (38, 35552), (39, 35516),

Gene: Wheeler_47 Start: 35662, Stop: 35171, Start Num: 14
Candidate Starts for Wheeler_47:
(Start: 14 @35662 has 218 MA's), (18, 35581), (22, 35560), (28, 35491), (33, 35428), (35, 35419), (38, 35260), (39, 35224),

Gene: Whitspit_45 Start: 33369, Stop: 32890, Start Num: 14
Candidate Starts for Whitspit_45:
(5, 33441), (9, 33402), (Start: 14 @33369 has 218 MA's), (18, 33288), (22, 33267), (28, 33198), (33, 33135), (35, 33126), (38, 32979), (39, 32943),

Gene: Wilkins_46 Start: 35010, Stop: 34519, Start Num: 14
Candidate Starts for Wilkins_46:
(Start: 14 @35010 has 218 MA's), (15, 35004), (18, 34929), (22, 34908), (28, 34839), (33, 34776), (35, 34767), (36, 34716), (38, 34608), (39, 34572),

Gene: Zeeculate_45 Start: 35637, Stop: 35146, Start Num: 14
Candidate Starts for Zeeculate_45:
(5, 35709), (9, 35670), (Start: 14 @35637 has 218 MA's), (18, 35556), (22, 35535), (33, 35403), (35, 35394), (38, 35235), (39, 35199),

Gene: Zephyr_47 Start: 35477, Stop: 34986, Start Num: 14
Candidate Starts for Zephyr_47:
(5, 35549), (9, 35510), (Start: 14 @35477 has 218 MA's), (18, 35396), (22, 35375), (30, 35267), (33, 35243), (35, 35234), (38, 35075), (39, 35039),

Gene: Zeuska_46 Start: 35568, Stop: 35089, Start Num: 14
Candidate Starts for Zeuska_46:
(5, 35640), (9, 35601), (Start: 14 @35568 has 218 MA's), (18, 35487), (22, 35466), (28, 35397), (33, 35334), (35, 35325), (38, 35178), (39, 35142),

Gene: Zolita_43 Start: 33085, Stop: 32549, Start Num: 11
Candidate Starts for Zolita_43:
(Start: 11 @33085 has 15 MA's), (18, 32950), (19, 32944), (33, 32800),