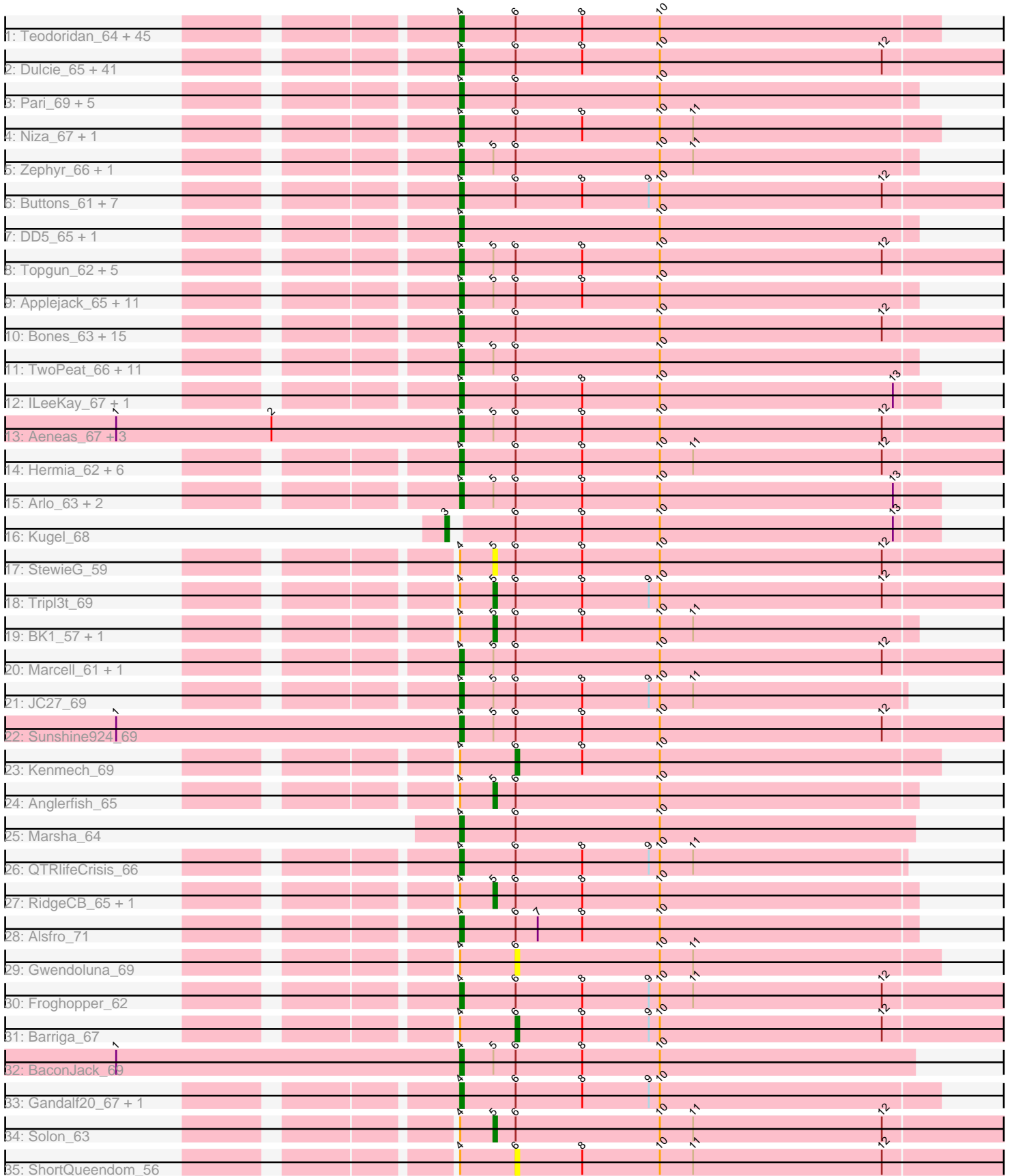


Pham 169736



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 169736 Report

This analysis was run 07/09/24 on database version 566.

Pham number 169736 has 194 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Teodoridan_64, Gompeii16_65, DrFeelGood_63, Ohno789_66, Ashballer_68, Sumter_61, JuliaChild_66, Ichabod_69, MrGordo_68, Rufus_67, Fenn_71, Abrogate_650, PSullivan_63, Swole_64, Dussy_66, Sibs6_67, GrecoEtereo_64, Pita2_66, Squee_68, Papez_67, Zeeculate_64, Museum_67, Mryolo_63, Briton15_69, Ringer_68, Bircsak_65, Bob3_66, Manatee_65, BluSpix_63, Michley_69, Scowl_66, Ruotula_71, Thor_64, Tote_61, KBG_66, Abbyshoes_67, Naira_70, SarFire_64, Kykar_66, IgnatiusPatJac_65, Bruns_67, Rubeus_64, Molly_66, MPlant7149_65, HanShotFirst_66, Nerujay_70
- Track 2 : Dulcie_65, Smeagol_67, Homines_56, Fajezeel_65, Rohr_66, Gyzlar_60, Payneful_60, Peterson_68, Pinto_65, Licorice_65, BeesKnees_67, Sagefire_66, Adahisdi_64, Doom_62, HarryOW_62, Treddle_65, Killigrew_63, Acme_66, BigPaolini_61, Chanagan_58, LilBib_64, Lesedi_61, Ajay_64, PinkPlastic_64, Zeuska_70, Jerm2_66, Sorpresa_61, KSSJEB_64, Watermelon_64, Paphu_64, JackSparrow_68, Tasp14_68, PascalRango_62, Marchy_55, McGuire_65, Dynamix_66, Sandaddy_62, Parliament_66, Greg_65, Fushigi_60, DreamCatcher_67, Alvin_64
- Track 3 : Pari_69, PacerPaul_65, Sanya_61, Francis47_64, Switzer_66, TheloniousMonk_69
- Track 4 : Niza_67, Magnito_66
- Track 5 : Zephyr_66, Petp2012_68
- Track 6 : Buttons_61, GageAP_66, NEHalo_62, AFIS_61, SpikeBT_63, Oogway_63, Violet_62, Crispicous1_62
- Track 7 : DD5_65, Lockley_64
- Track 8 : Topgun_62, Cueylyss_64, Rutherferd_66, Big3_65, Wilkins_63, Seanderson_67
- Track 9 : Applejack_65, Burton_66, Hope4ever_66, Atkinbua_68, SkiPole_73, BillKnuckles_62, Dexes_65, Turj99_63, STLscum_74, Euphoria_64, Petruccio_67, Traft412_68
- Track 10 : Bones_63, KyMonks1A_69, Monet_67, Edtherson_63, Marge_61, Eyeball_66, Moose_66, Perseus_63, MaryBeth_62, SwissCheese_68, Lopton_65, Wheeler_67, MetalQZJ_61, Corvo_65, Forsytheast_66, Norz_64
- Track 11 : TwoPeat_66, HermioneGrange_67, Slagathor_67, Kanely_66, Beatrix_64, Rajelicia_65, Altman_67, StrongArm_63, Agaliana_60, Bexan_62, BigMau_67, Arcanine_67
- Track 12 : ILeeKay_67, Nhonho_64
- Track 13 : Aeneas_67, Smairt_66, PhrostyMug_64, Mule_61

- Track 14 : Hermia_62, Magnar_64, Pippin_64, Ciao_62, Snazzy_62, Lamina13_68, Bxb1_58
- Track 15 : Arlo_63, BPBiebs31_68, ConceptII_69
- Track 16 : Kugel_68
- Track 17 : StewieG_59
- Track 18 : Tripl3t_69
- Track 19 : BK1_57, A6_57
- Track 20 : Marcell_61, Trouble_65
- Track 21 : JC27_69
- Track 22 : Sunshine924_69
- Track 23 : Kenmech_69
- Track 24 : Anglerfish_65
- Track 25 : Marsha_64
- Track 26 : QTRlifeCrisis_66
- Track 27 : RidgeCB_65, Pepe_63
- Track 28 : Alsfro_71
- Track 29 : Gwendoluna_69
- Track 30 : Froghopper_62
- Track 31 : Barriga_67
- Track 32 : BaconJack_69
- Track 33 : Gandalf20_67, Espresso_62
- Track 34 : Solon_63
- Track 35 : ShortQueendom_56

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

The start number called the most often in the published annotations is 4, it was called in 172 of the 182 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_61, Abbyshoes_67, Abrogate_650, Acme_66, Adahisdi_64, Aeneas_67, Agaliana_60, Ajay_64, Alsfro_71, Altman_67, Alvin_64, Applejack_65, Arcanine_67, Arlo_63, Ashballer_68, Atkinbua_68, BPBiebs31_68, BaconJack_69, Beatrix_64, BeesKnees_67, Bexan_62, Big3_65, BigMau_67, BigPaolini_61, BillKnuckles_62, Bircsak_65, BluSpix_63, Bob3_66, Bones_63, Briton15_69, Bruns_67, Burton_66, Buttons_61, Bxb1_58, Chanagan_58, Ciao_62, ConceptII_69, Corvo_65, Crispicious1_62, Cueylyss_64, DD5_65, Dexes_65, Doom_62, DrFeelGood_63, DreamCatcher_67, Dulcie_65, Dussy_66, Dynamix_66, Edtherson_63, Espresso_62, Euphoria_64, Eyeball_66, Fajezeel_65, Fenn_71, Forsytheast_66, Francis47_64, Froghopper_62, Fushigi_60, GageAP_66, Gandalf20_67, Gompeii16_65, GrecoEtereo_64, Greg_65, Gyzlar_60, HanShotFirst_66, HarryOW_62, Hermia_62, HermioneGrange_67, Homines_56, Hope4ever_66, ILeeKay_67, Ichabod_69, IgnatiusPatJac_65, JC27_69, JackSparrow_68, Jerm2_66, JuliaChild_66, KBG_66, KSSJEB_64, Kanely_66, Killigrew_63, KyMonks1A_69, Kykar_66, Lamina13_68, Lesedi_61, Licorice_65, LilBib_64, Lockley_64, Lopton_65, MPlant7149_65, Magnar_64, Magnito_66, Manatee_65, Marcell_61, Marchy_55, Marge_61, Marsha_64, MaryBeth_62, McGuire_65, MetalQZJ_61, Michley_69, Molly_66, Monet_67, Moose_66, MrGordo_68, Mryolo_63, Mule_61, Museum_67, NEHalo_62, Naira_70, Nerujay_70, Nhonho_64, Niza_67, Norz_64, Ohno789_66, Oogway_63, PSullivan_63, PacerPaul_65, Papez_67, Paphu_64, Pari_69, Parliament_66,

PascalRango_62, Payneful_60, Perseus_63, Peterson_68, Petp2012_68, Petruccio_67, PhrostyMug_64, PinkPlastic_64, Pinto_65, Pippin_64, Pita2_66, QTRLifeCrisis_66, Rajelicia_65, Ringer_68, Rohr_66, Rubeus_64, Rufus_67, Ruotula_71, Rutherford_66, STLscum_74, Sagefire_66, Sandaddy_62, Sanya_61, SarFire_64, Scowl_66, Seanderson_67, Sibs6_67, SkiPole_73, Slagathor_67, Smairt_66, Smeagol_67, Snazzy_62, Sorpresa_61, SpikeBT_63, Squee_68, StrongArm_63, Sumter_61, Sunshine924_69, SwissCheese_68, Switzer_66, Swole_64, Tasp14_68, Teodoridan_64, TheloniousMonk_69, Thor_64, Topgun_62, Tote_61, Traft412_68, Treddle_65, Trouble_65, Turj99_63, TwoPeat_66, Violet_62, Watermelon_64, Wheeler_67, Wilkins_63, Zeeculate_64, Zephyr_66, Zeuska_70,

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

- A6_57, Anglerfish_65, BK1_57, Barriga_67, Gwendoluna_69, Kenmech_69, Pepe_63, RidgeCB_65, ShortQueendom_56, Solon_63, StewieG_59, Trip13t_69,

Genes that do not have the "Most Annotated" start:

- Kugel_68,

Summary by start number:

Start 3:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 182
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kugel_68 (A1),

Start 4:

- Found in 193 of 194 (99.5%) of genes in pham
- Manual Annotations of this start: 172 of 182
- Called 93.8% of time when present
- Phage (with cluster) where this start called: AFIS_61 (A1), Abbyshoes_67 (A1), Abrogate_650 (A1), Acme_66 (A1), Adahisdi_64 (A1), Aeneas_67 (A1), Agaliana_60 (A1), Ajay_64 (A1), Alsfro_71 (A1), Altman_67 (A1), Alvin_64 (A1), Applejack_65 (A1), Arcanine_67 (A1), Arlo_63 (A1), Ashballer_68 (A1), Atkinbua_68 (A1), BPBiabs31_68 (A1), BaconJack_69 (A1), Beatrix_64 (A1), BeesKnees_67 (A1), Bexan_62 (A1), Big3_65 (A1), BigMau_67 (A1), BigPaolini_61 (A1), BillKnuckles_62 (A1), Bircsak_65 (A1), BluSpix_63 (A1), Bob3_66 (A1), Bones_63 (A1), Briton15_69 (A1), Bruns_67 (A1), Burton_66 (A1), Buttons_61 (A1), Bxb1_58 (A1), Chanagan_58 (A1), Ciao_62 (A1), Conceptll_69 (A1), Corvo_65 (A1), Crispicous1_62 (A1), Cueyllyss_64 (A1), DD5_65 (A1), Dexes_65 (A1), Doom_62 (A1), DrFeelGood_63 (A1), DreamCatcher_67 (A1), Dulcie_65 (A1), Dussy_66 (A1), Dynamix_66 (A1), Edtherson_63 (A1), Espresso_62 (A1), Euphoria_64 (A1), Eyeball_66 (A1), Fajezeel_65 (A1), Fenn_71 (A1), Forsytheast_66 (A1), Francis47_64 (A1), FrogHopper_62 (A1), Fushigi_60 (A1), GageAP_66 (A1), Gandalf20_67 (A1), Gompeii16_65 (A1), GrecoEtereo_64 (A1), Greg_65 (A1), Gyzlar_60 (A1), HanShotFirst_66 (A1), HarryOW_62 (A1), Hermia_62 (A1), HermioneGrange_67 (A1), Homines_56 (A1), Hope4ever_66 (A1), ILeeKay_67 (A1), Ichabod_69 (A1), IgnatiusPatJac_65 (A1), JC27_69 (A1), JackSparrow_68 (A1), Jerm2_66 (A1), JuliaChild_66 (A1), KBG_66 (A1), KSSJEB_64 (A1), Kanely_66 (A1), Killigrew_63 (A1), KyMonks1A_69 (A1), Kykar_66 (A1), Lamina13_68 (A1), Lesedi_61 (A1), Licorice_65 (A1), LilBib_64 (A1), Lockley_64 (A1), Lopton_65 (A1), MPlant7149_65 (A1), Magnar_64 (A1), Magnito_66 (A1), Manatee_65 (A1), Marcell_61 (A1), Marchy_55 (A1), Marge_61 (A1), Marsha_64 (A1), MaryBeth_62 (A1), McGuire_65

(A1), MetalQZJ_61 (A1), Michley_69 (A1), Molly_66 (A1), Monet_67 (A1), Moose_66 (A1), MrGordo_68 (A1), Mryolo_63 (A1), Mule_61 (A1), Museum_67 (A1), NEHalo_62 (A1), Naira_70 (A1), Nerujay_70 (A1), Nhonho_64 (A1), Niza_67 (A1), Norz_64 (A1), Ohno789_66 (A1), Oogway_63 (A1), PSullivan_63 (A1), PacerPaul_65 (A1), Papez_67 (A1), Paphu_64 (A1), Pari_69 (A1), Parliament_66 (A1), PascalRango_62 (A1), Payneful_60 (A1), Perseus_63 (A1), Peterson_68 (A1), Petp2012_68 (A1), Petruchio_67 (A1), PhrostyMug_64 (A1), PinkPlastic_64 (A1), Pinto_65 (A1), Pippin_64 (A1), Pita2_66 (A1), QTRlifeCrisis_66 (A1), Rajelicia_65 (A1), Ringer_68 (A1), Rohr_66 (A1), Rubeus_64 (A1), Rufus_67 (A1), Ruotula_71 (A1), Rutherford_66 (A1), STLscum_74 (A1), Sagefire_66 (A1), Sandaddy_62 (A1), Sanya_61 (A1), SarFire_64 (A1), Scowl_66 (A1), Seanderson_67 (A1), Sibs6_67 (A1), SkiPole_73 (A1), Slagathor_67 (A1), Smairt_66 (A1), Smeagol_67 (A1), Snazzy_62 (A1), Sorpresa_61 (A1), SpikeBT_63 (A1), Squee_68 (A1), StrongArm_63 (A1), Sumter_61 (A1), Sunshine924_69 (A1), SwissCheese_68 (A1), Switzer_66 (A1), Swole_64 (A1), Tasp14_68 (A1), Teodoridan_64 (A1), TheloniousMonk_69 (A1), Thor_64 (A1), Topgun_62 (A1), Tote_61 (A1), Traft412_68 (A1), Treddle_65 (A1), Trouble_65 (A1), Turj99_63 (A1), TwoPeat_66 (A1), Violet_62 (A1), Watermelon_64 (A1), Wheeler_67 (A1), Wilkins_63 (A1), Zeeculate_64 (A1), Zephyr_66 (A1), Zeuska_70 (A1),

Start 5:

- Found in 52 of 194 (26.8%) of genes in pham
- Manual Annotations of this start: 7 of 182
- Called 15.4% of time when present
- Phage (with cluster) where this start called: A6_57 (A1), Anglerfish_65 (A1), BK1_57 (A1), Pepe_63 (A1), RidgeCB_65 (A1), Solon_63 (A1), StewieG_59 (A1), Trip13t_69 (A1),

Start 6:

- Found in 192 of 194 (99.0%) of genes in pham
- Manual Annotations of this start: 2 of 182
- Called 2.1% of time when present
- Phage (with cluster) where this start called: Barriga_67 (A1), Gwendoluna_69 (A1), Kenmech_69 (A1), ShortQueendom_56 (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 172 times for cluster A1.
- Start number 5 was manually annotated 7 times for cluster A1.
- Start number 6 was manually annotated 2 times for cluster A1.

Gene Information:

Gene: A6_57 Start: 40014, Stop: 39901, Start Num: 5

Candidate Starts for A6_57:

(Start: 4 @40023 has 172 MA's), (Start: 5 @40014 has 7 MA's), (Start: 6 @40008 has 2 MA's), (8, 39990), (10, 39969), (11, 39960),

Gene: AFIS_61 Start: 41478, Stop: 41332, Start Num: 4

Candidate Starts for AFIS_61:

(Start: 4 @41478 has 172 MA's), (Start: 6 @41463 has 2 MA's), (8, 41445), (9, 41427), (10, 41424), (12, 41364),

Gene: Abbysshoes_67 Start: 42982, Stop: 42854, Start Num: 4

Candidate Starts for Abbysshoes_67:

(Start: 4 @42982 has 172 MA's), (Start: 6 @42967 has 2 MA's), (8, 42949), (10, 42928),

Gene: Abrogate_650 Start: 44071, Stop: 43949, Start Num: 4

Candidate Starts for Abrogate_650:

(Start: 4 @44071 has 172 MA's), (Start: 6 @44056 has 2 MA's), (8, 44038), (10, 44017),

Gene: Acme_66 Start: 42534, Stop: 42388, Start Num: 4

Candidate Starts for Acme_66:

(Start: 4 @42534 has 172 MA's), (Start: 6 @42519 has 2 MA's), (8, 42501), (10, 42480), (12, 42420),

Gene: Adahisdi_64 Start: 43478, Stop: 43332, Start Num: 4

Candidate Starts for Adahisdi_64:

(Start: 4 @43478 has 172 MA's), (Start: 6 @43463 has 2 MA's), (8, 43445), (10, 43424), (12, 43364),

Gene: Aeneas_67 Start: 44036, Stop: 43890, Start Num: 4

Candidate Starts for Aeneas_67:

(1, 44129), (2, 44087), (Start: 4 @44036 has 172 MA's), (Start: 5 @44027 has 7 MA's), (Start: 6 @44021 has 2 MA's), (8, 44003), (10, 43982), (12, 43922),

Gene: Agaliana_60 Start: 39357, Stop: 39235, Start Num: 4

Candidate Starts for Agaliana_60:

(Start: 4 @39357 has 172 MA's), (Start: 5 @39348 has 7 MA's), (Start: 6 @39342 has 2 MA's), (10, 39303),

Gene: Ajay_64 Start: 42424, Stop: 42278, Start Num: 4

Candidate Starts for Ajay_64:

(Start: 4 @42424 has 172 MA's), (Start: 6 @42409 has 2 MA's), (8, 42391), (10, 42370), (12, 42310),

Gene: Alsfro_71 Start: 42875, Stop: 42753, Start Num: 4

Candidate Starts for Alsfro_71:

(Start: 4 @42875 has 172 MA's), (Start: 6 @42860 has 2 MA's), (7, 42854), (8, 42842), (10, 42821),

Gene: Altman_67 Start: 42513, Stop: 42391, Start Num: 4

Candidate Starts for Altman_67:

(Start: 4 @42513 has 172 MA's), (Start: 5 @42504 has 7 MA's), (Start: 6 @42498 has 2 MA's), (10, 42459),

Gene: Alvin_64 Start: 42306, Stop: 42160, Start Num: 4

Candidate Starts for Alvin_64:

(Start: 4 @42306 has 172 MA's), (Start: 6 @42291 has 2 MA's), (8, 42273), (10, 42252), (12, 42192),

Gene: Anglerfish_65 Start: 42676, Stop: 42563, Start Num: 5

Candidate Starts for Anglerfish_65:

(Start: 4 @42685 has 172 MA's), (Start: 5 @42676 has 7 MA's), (Start: 6 @42670 has 2 MA's), (10, 42631),

Gene: Applejack_65 Start: 41083, Stop: 40961, Start Num: 4
Candidate Starts for Applejack_65:
(Start: 4 @41083 has 172 MA's), (Start: 5 @41074 has 7 MA's), (Start: 6 @41068 has 2 MA's), (8, 41050), (10, 41029),

Gene: Arcanine_67 Start: 43409, Stop: 43287, Start Num: 4
Candidate Starts for Arcanine_67:
(Start: 4 @43409 has 172 MA's), (Start: 5 @43400 has 7 MA's), (Start: 6 @43394 has 2 MA's), (10, 43355),

Gene: Arlo_63 Start: 42000, Stop: 41872, Start Num: 4
Candidate Starts for Arlo_63:
(Start: 4 @42000 has 172 MA's), (Start: 5 @41991 has 7 MA's), (Start: 6 @41985 has 2 MA's), (8, 41967), (10, 41946), (13, 41883),

Gene: Ashballer_68 Start: 43159, Stop: 43037, Start Num: 4
Candidate Starts for Ashballer_68:
(Start: 4 @43159 has 172 MA's), (Start: 6 @43144 has 2 MA's), (8, 43126), (10, 43105),

Gene: Atkinbua_68 Start: 42384, Stop: 42256, Start Num: 4
Candidate Starts for Atkinbua_68:
(Start: 4 @42384 has 172 MA's), (Start: 5 @42375 has 7 MA's), (Start: 6 @42369 has 2 MA's), (8, 42351), (10, 42330),

Gene: BK1_57 Start: 40014, Stop: 39901, Start Num: 5
Candidate Starts for BK1_57:
(Start: 4 @40023 has 172 MA's), (Start: 5 @40014 has 7 MA's), (Start: 6 @40008 has 2 MA's), (8, 39990), (10, 39969), (11, 39960),

Gene: BPBiebs31_68 Start: 43106, Stop: 42978, Start Num: 4
Candidate Starts for BPBiebs31_68:
(Start: 4 @43106 has 172 MA's), (Start: 5 @43097 has 7 MA's), (Start: 6 @43091 has 2 MA's), (8, 43073), (10, 43052), (13, 42989),

Gene: BaconJack_69 Start: 45126, Stop: 45004, Start Num: 4
Candidate Starts for BaconJack_69:
(1, 45219), (Start: 4 @45126 has 172 MA's), (Start: 5 @45117 has 7 MA's), (Start: 6 @45111 has 2 MA's), (8, 45093), (10, 45072),

Gene: Barriga_67 Start: 41147, Stop: 41016, Start Num: 6
Candidate Starts for Barriga_67:
(Start: 4 @41162 has 172 MA's), (Start: 6 @41147 has 2 MA's), (8, 41129), (9, 41111), (10, 41108), (12, 41048),

Gene: Beatrix_64 Start: 43246, Stop: 43124, Start Num: 4
Candidate Starts for Beatrix_64:
(Start: 4 @43246 has 172 MA's), (Start: 5 @43237 has 7 MA's), (Start: 6 @43231 has 2 MA's), (10, 43192),

Gene: BeesKnees_67 Start: 41713, Stop: 41567, Start Num: 4
Candidate Starts for BeesKnees_67:
(Start: 4 @41713 has 172 MA's), (Start: 6 @41698 has 2 MA's), (8, 41680), (10, 41659), (12, 41599),

Gene: Bexan_62 Start: 43025, Stop: 42903, Start Num: 4
Candidate Starts for Bexan_62:
(Start: 4 @43025 has 172 MA's), (Start: 5 @43016 has 7 MA's), (Start: 6 @43010 has 2 MA's), (10, 42971),

Gene: Big3_65 Start: 43493, Stop: 43347, Start Num: 4
Candidate Starts for Big3_65:
(Start: 4 @43493 has 172 MA's), (Start: 5 @43484 has 7 MA's), (Start: 6 @43478 has 2 MA's), (8, 43460), (10, 43439), (12, 43379),

Gene: BigMau_67 Start: 42914, Stop: 42792, Start Num: 4
Candidate Starts for BigMau_67:
(Start: 4 @42914 has 172 MA's), (Start: 5 @42905 has 7 MA's), (Start: 6 @42899 has 2 MA's), (10, 42860),

Gene: BigPaolini_61 Start: 40150, Stop: 40004, Start Num: 4
Candidate Starts for BigPaolini_61:
(Start: 4 @40150 has 172 MA's), (Start: 6 @40135 has 2 MA's), (8, 40117), (10, 40096), (12, 40036),

Gene: BillKnuckles_62 Start: 43545, Stop: 43423, Start Num: 4
Candidate Starts for BillKnuckles_62:
(Start: 4 @43545 has 172 MA's), (Start: 5 @43536 has 7 MA's), (Start: 6 @43530 has 2 MA's), (8, 43512), (10, 43491),

Gene: Bircsak_65 Start: 44274, Stop: 44149, Start Num: 4
Candidate Starts for Bircsak_65:
(Start: 4 @44274 has 172 MA's), (Start: 6 @44259 has 2 MA's), (8, 44241), (10, 44220),

Gene: BluSpix_63 Start: 38129, Stop: 38007, Start Num: 4
Candidate Starts for BluSpix_63:
(Start: 4 @38129 has 172 MA's), (Start: 6 @38114 has 2 MA's), (8, 38096), (10, 38075),

Gene: Bob3_66 Start: 42184, Stop: 42065, Start Num: 4
Candidate Starts for Bob3_66:
(Start: 4 @42184 has 172 MA's), (Start: 6 @42169 has 2 MA's), (8, 42151), (10, 42130),

Gene: Bones_63 Start: 43200, Stop: 43054, Start Num: 4
Candidate Starts for Bones_63:
(Start: 4 @43200 has 172 MA's), (Start: 6 @43185 has 2 MA's), (10, 43146), (12, 43086),

Gene: Briton15_69 Start: 43988, Stop: 43869, Start Num: 4
Candidate Starts for Briton15_69:
(Start: 4 @43988 has 172 MA's), (Start: 6 @43973 has 2 MA's), (8, 43955), (10, 43934),

Gene: Bruns_67 Start: 42125, Stop: 42003, Start Num: 4
Candidate Starts for Bruns_67:
(Start: 4 @42125 has 172 MA's), (Start: 6 @42110 has 2 MA's), (8, 42092), (10, 42071),

Gene: Burton_66 Start: 43947, Stop: 43825, Start Num: 4
Candidate Starts for Burton_66:
(Start: 4 @43947 has 172 MA's), (Start: 5 @43938 has 7 MA's), (Start: 6 @43932 has 2 MA's), (8, 43914), (10, 43893),

Gene: Buttons_61 Start: 39664, Stop: 39518, Start Num: 4

Candidate Starts for Buttons_61:

(Start: 4 @39664 has 172 MA's), (Start: 6 @39649 has 2 MA's), (8, 39631), (9, 39613), (10, 39610), (12, 39550),

Gene: Bxb1_58 Start: 40777, Stop: 40631, Start Num: 4

Candidate Starts for Bxb1_58:

(Start: 4 @40777 has 172 MA's), (Start: 6 @40762 has 2 MA's), (8, 40744), (10, 40723), (11, 40714), (12, 40663),

Gene: Chanagan_58 Start: 39758, Stop: 39612, Start Num: 4

Candidate Starts for Chanagan_58:

(Start: 4 @39758 has 172 MA's), (Start: 6 @39743 has 2 MA's), (8, 39725), (10, 39704), (12, 39644),

Gene: Ciao_62 Start: 41122, Stop: 40976, Start Num: 4

Candidate Starts for Ciao_62:

(Start: 4 @41122 has 172 MA's), (Start: 6 @41107 has 2 MA's), (8, 41089), (10, 41068), (11, 41059), (12, 41008),

Gene: ConceptII_69 Start: 43741, Stop: 43613, Start Num: 4

Candidate Starts for ConceptII_69:

(Start: 4 @43741 has 172 MA's), (Start: 5 @43732 has 7 MA's), (Start: 6 @43726 has 2 MA's), (8, 43708), (10, 43687), (13, 43624),

Gene: Corvo_65 Start: 43053, Stop: 42907, Start Num: 4

Candidate Starts for Corvo_65:

(Start: 4 @43053 has 172 MA's), (Start: 6 @43038 has 2 MA's), (10, 42999), (12, 42939),

Gene: Crispicous1_62 Start: 41464, Stop: 41318, Start Num: 4

Candidate Starts for Crispicous1_62:

(Start: 4 @41464 has 172 MA's), (Start: 6 @41449 has 2 MA's), (8, 41431), (9, 41413), (10, 41410), (12, 41350),

Gene: Cueyllyss_64 Start: 43400, Stop: 43254, Start Num: 4

Candidate Starts for Cueyllyss_64:

(Start: 4 @43400 has 172 MA's), (Start: 5 @43391 has 7 MA's), (Start: 6 @43385 has 2 MA's), (8, 43367), (10, 43346), (12, 43286),

Gene: DD5_65 Start: 43288, Stop: 43166, Start Num: 4

Candidate Starts for DD5_65:

(Start: 4 @43288 has 172 MA's), (10, 43234),

Gene: Dexes_65 Start: 43009, Stop: 42890, Start Num: 4

Candidate Starts for Dexes_65:

(Start: 4 @43009 has 172 MA's), (Start: 5 @43000 has 7 MA's), (Start: 6 @42994 has 2 MA's), (8, 42976), (10, 42955),

Gene: Doom_62 Start: 42609, Stop: 42463, Start Num: 4

Candidate Starts for Doom_62:

(Start: 4 @42609 has 172 MA's), (Start: 6 @42594 has 2 MA's), (8, 42576), (10, 42555), (12, 42495),

Gene: DrFeelGood_63 Start: 41543, Stop: 41424, Start Num: 4

Candidate Starts for DrFeelGood_63:

(Start: 4 @41543 has 172 MA's), (Start: 6 @41528 has 2 MA's), (8, 41510), (10, 41489),

Gene: DreamCatcher_67 Start: 42693, Stop: 42547, Start Num: 4

Candidate Starts for DreamCatcher_67:

(Start: 4 @42693 has 172 MA's), (Start: 6 @42678 has 2 MA's), (8, 42660), (10, 42639), (12, 42579),

Gene: Dulcie_65 Start: 44018, Stop: 43872, Start Num: 4

Candidate Starts for Dulcie_65:

(Start: 4 @44018 has 172 MA's), (Start: 6 @44003 has 2 MA's), (8, 43985), (10, 43964), (12, 43904),

Gene: Dussy_66 Start: 43002, Stop: 42874, Start Num: 4

Candidate Starts for Dussy_66:

(Start: 4 @43002 has 172 MA's), (Start: 6 @42987 has 2 MA's), (8, 42969), (10, 42948),

Gene: Dynamix_66 Start: 41617, Stop: 41471, Start Num: 4

Candidate Starts for Dynamix_66:

(Start: 4 @41617 has 172 MA's), (Start: 6 @41602 has 2 MA's), (8, 41584), (10, 41563), (12, 41503),

Gene: Edtherson_63 Start: 42603, Stop: 42457, Start Num: 4

Candidate Starts for Edtherson_63:

(Start: 4 @42603 has 172 MA's), (Start: 6 @42588 has 2 MA's), (10, 42549), (12, 42489),

Gene: Espresso_62 Start: 42227, Stop: 42099, Start Num: 4

Candidate Starts for Espresso_62:

(Start: 4 @42227 has 172 MA's), (Start: 6 @42212 has 2 MA's), (8, 42194), (9, 42176), (10, 42173),

Gene: Euphoria_64 Start: 42069, Stop: 41950, Start Num: 4

Candidate Starts for Euphoria_64:

(Start: 4 @42069 has 172 MA's), (Start: 5 @42060 has 7 MA's), (Start: 6 @42054 has 2 MA's), (8, 42036), (10, 42015),

Gene: Eyeball_66 Start: 43108, Stop: 42962, Start Num: 4

Candidate Starts for Eyeball_66:

(Start: 4 @43108 has 172 MA's), (Start: 6 @43093 has 2 MA's), (10, 43054), (12, 42994),

Gene: Fajezeel_65 Start: 41824, Stop: 41678, Start Num: 4

Candidate Starts for Fajezeel_65:

(Start: 4 @41824 has 172 MA's), (Start: 6 @41809 has 2 MA's), (8, 41791), (10, 41770), (12, 41710),

Gene: Fenn_71 Start: 44460, Stop: 44344, Start Num: 4

Candidate Starts for Fenn_71:

(Start: 4 @44460 has 172 MA's), (Start: 6 @44445 has 2 MA's), (8, 44427), (10, 44406),

Gene: Forsytheast_66 Start: 42122, Stop: 41976, Start Num: 4

Candidate Starts for Forsytheast_66:

(Start: 4 @42122 has 172 MA's), (Start: 6 @42107 has 2 MA's), (10, 42068), (12, 42008),

Gene: Francis47_64 Start: 43201, Stop: 43079, Start Num: 4

Candidate Starts for Francis47_64:

(Start: 4 @43201 has 172 MA's), (Start: 6 @43186 has 2 MA's), (10, 43147),

Gene: Froghopper_62 Start: 41181, Stop: 41035, Start Num: 4

Candidate Starts for Froghopper_62:

(Start: 4 @41181 has 172 MA's), (Start: 6 @41166 has 2 MA's), (8, 41148), (9, 41130), (10, 41127), (11, 41118), (12, 41067),

Gene: Fushigi_60 Start: 40144, Stop: 39998, Start Num: 4

Candidate Starts for Fushigi_60:

(Start: 4 @40144 has 172 MA's), (Start: 6 @40129 has 2 MA's), (8, 40111), (10, 40090), (12, 40030),

Gene: GageAP_66 Start: 43145, Stop: 42999, Start Num: 4

Candidate Starts for GageAP_66:

(Start: 4 @43145 has 172 MA's), (Start: 6 @43130 has 2 MA's), (8, 43112), (9, 43094), (10, 43091), (12, 43031),

Gene: Gandalf20_67 Start: 43512, Stop: 43384, Start Num: 4

Candidate Starts for Gandalf20_67:

(Start: 4 @43512 has 172 MA's), (Start: 6 @43497 has 2 MA's), (8, 43479), (9, 43461), (10, 43458),

Gene: Gompeii16_65 Start: 44275, Stop: 44150, Start Num: 4

Candidate Starts for Gompeii16_65:

(Start: 4 @44275 has 172 MA's), (Start: 6 @44260 has 2 MA's), (8, 44242), (10, 44221),

Gene: GrecoEtereo_64 Start: 41398, Stop: 41279, Start Num: 4

Candidate Starts for GrecoEtereo_64:

(Start: 4 @41398 has 172 MA's), (Start: 6 @41383 has 2 MA's), (8, 41365), (10, 41344),

Gene: Greg_65 Start: 41824, Stop: 41678, Start Num: 4

Candidate Starts for Greg_65:

(Start: 4 @41824 has 172 MA's), (Start: 6 @41809 has 2 MA's), (8, 41791), (10, 41770), (12, 41710),

Gene: Gwendoluna_69 Start: 44324, Stop: 44211, Start Num: 6

Candidate Starts for Gwendoluna_69:

(Start: 4 @44339 has 172 MA's), (Start: 6 @44324 has 2 MA's), (10, 44285), (11, 44276),

Gene: Gyzlar_60 Start: 40094, Stop: 39948, Start Num: 4

Candidate Starts for Gyzlar_60:

(Start: 4 @40094 has 172 MA's), (Start: 6 @40079 has 2 MA's), (8, 40061), (10, 40040), (12, 39980),

Gene: HanShotFirst_66 Start: 43937, Stop: 43818, Start Num: 4

Candidate Starts for HanShotFirst_66:

(Start: 4 @43937 has 172 MA's), (Start: 6 @43922 has 2 MA's), (8, 43904), (10, 43883),

Gene: HarryOW_62 Start: 41905, Stop: 41759, Start Num: 4

Candidate Starts for HarryOW_62:

(Start: 4 @41905 has 172 MA's), (Start: 6 @41890 has 2 MA's), (8, 41872), (10, 41851), (12, 41791),

Gene: Hermia_62 Start: 41903, Stop: 41757, Start Num: 4

Candidate Starts for Hermia_62:

(Start: 4 @41903 has 172 MA's), (Start: 6 @41888 has 2 MA's), (8, 41870), (10, 41849), (11, 41840), (12, 41789),

Gene: HermioneGrange_67 Start: 43408, Stop: 43286, Start Num: 4

Candidate Starts for HermioneGrange_67:

(Start: 4 @43408 has 172 MA's), (Start: 5 @43399 has 7 MA's), (Start: 6 @43393 has 2 MA's), (10, 43354),

Gene: Homines_56 Start: 38233, Stop: 38087, Start Num: 4

Candidate Starts for Homines_56:

(Start: 4 @38233 has 172 MA's), (Start: 6 @38218 has 2 MA's), (8, 38200), (10, 38179), (12, 38119),

Gene: Hope4ever_66 Start: 42392, Stop: 42270, Start Num: 4

Candidate Starts for Hope4ever_66:

(Start: 4 @42392 has 172 MA's), (Start: 5 @42383 has 7 MA's), (Start: 6 @42377 has 2 MA's), (8, 42359), (10, 42338),

Gene: ILeeKay_67 Start: 42289, Stop: 42161, Start Num: 4

Candidate Starts for ILeeKay_67:

(Start: 4 @42289 has 172 MA's), (Start: 6 @42274 has 2 MA's), (8, 42256), (10, 42235), (13, 42172),

Gene: Ichabod_69 Start: 43502, Stop: 43383, Start Num: 4

Candidate Starts for Ichabod_69:

(Start: 4 @43502 has 172 MA's), (Start: 6 @43487 has 2 MA's), (8, 43469), (10, 43448),

Gene: IgnatiusPatJac_65 Start: 42074, Stop: 41952, Start Num: 4

Candidate Starts for IgnatiusPatJac_65:

(Start: 4 @42074 has 172 MA's), (Start: 6 @42059 has 2 MA's), (8, 42041), (10, 42020),

Gene: JC27_69 Start: 43136, Stop: 43017, Start Num: 4

Candidate Starts for JC27_69:

(Start: 4 @43136 has 172 MA's), (Start: 5 @43127 has 7 MA's), (Start: 6 @43121 has 2 MA's), (8, 43103), (9, 43085), (10, 43082), (11, 43073),

Gene: JackSparrow_68 Start: 42619, Stop: 42473, Start Num: 4

Candidate Starts for JackSparrow_68:

(Start: 4 @42619 has 172 MA's), (Start: 6 @42604 has 2 MA's), (8, 42586), (10, 42565), (12, 42505),

Gene: Jerm2_66 Start: 43478, Stop: 43332, Start Num: 4

Candidate Starts for Jerm2_66:

(Start: 4 @43478 has 172 MA's), (Start: 6 @43463 has 2 MA's), (8, 43445), (10, 43424), (12, 43364),

Gene: JuliaChild_66 Start: 42723, Stop: 42604, Start Num: 4

Candidate Starts for JuliaChild_66:

(Start: 4 @42723 has 172 MA's), (Start: 6 @42708 has 2 MA's), (8, 42690), (10, 42669),

Gene: KBG_66 Start: 44255, Stop: 44133, Start Num: 4

Candidate Starts for KBG_66:

(Start: 4 @44255 has 172 MA's), (Start: 6 @44240 has 2 MA's), (8, 44222), (10, 44201),

Gene: KSSJEB_64 Start: 41531, Stop: 41385, Start Num: 4

Candidate Starts for KSSJEB_64:

(Start: 4 @41531 has 172 MA's), (Start: 6 @41516 has 2 MA's), (8, 41498), (10, 41477), (12, 41417),

Gene: Kanely_66 Start: 42290, Stop: 42168, Start Num: 4

Candidate Starts for Kanely_66:

(Start: 4 @42290 has 172 MA's), (Start: 5 @42281 has 7 MA's), (Start: 6 @42275 has 2 MA's), (10, 42236),

Gene: Kenmech_69 Start: 44113, Stop: 44000, Start Num: 6

Candidate Starts for Kenmech_69:

(Start: 4 @44128 has 172 MA's), (Start: 6 @44113 has 2 MA's), (8, 44095), (10, 44074),

Gene: Killigrew_63 Start: 42335, Stop: 42189, Start Num: 4

Candidate Starts for Killigrew_63:

(Start: 4 @42335 has 172 MA's), (Start: 6 @42320 has 2 MA's), (8, 42302), (10, 42281), (12, 42221),

Gene: Kugel_68 Start: 43936, Stop: 43808, Start Num: 3

Candidate Starts for Kugel_68:

(Start: 3 @43936 has 1 MA's), (Start: 6 @43921 has 2 MA's), (8, 43903), (10, 43882), (13, 43819),

Gene: KyMonks1A_69 Start: 42496, Stop: 42350, Start Num: 4

Candidate Starts for KyMonks1A_69:

(Start: 4 @42496 has 172 MA's), (Start: 6 @42481 has 2 MA's), (10, 42442), (12, 42382),

Gene: Kykar_66 Start: 42871, Stop: 42749, Start Num: 4

Candidate Starts for Kykar_66:

(Start: 4 @42871 has 172 MA's), (Start: 6 @42856 has 2 MA's), (8, 42838), (10, 42817),

Gene: Lamina13_68 Start: 43488, Stop: 43342, Start Num: 4

Candidate Starts for Lamina13_68:

(Start: 4 @43488 has 172 MA's), (Start: 6 @43473 has 2 MA's), (8, 43455), (10, 43434), (11, 43425), (12, 43374),

Gene: Lesedi_61 Start: 40563, Stop: 40417, Start Num: 4

Candidate Starts for Lesedi_61:

(Start: 4 @40563 has 172 MA's), (Start: 6 @40548 has 2 MA's), (8, 40530), (10, 40509), (12, 40449),

Gene: Licorice_65 Start: 43597, Stop: 43451, Start Num: 4

Candidate Starts for Licorice_65:

(Start: 4 @43597 has 172 MA's), (Start: 6 @43582 has 2 MA's), (8, 43564), (10, 43543), (12, 43483),

Gene: LilBib_64 Start: 43581, Stop: 43435, Start Num: 4

Candidate Starts for LilBib_64:

(Start: 4 @43581 has 172 MA's), (Start: 6 @43566 has 2 MA's), (8, 43548), (10, 43527), (12, 43467),

Gene: Lockley_64 Start: 42450, Stop: 42328, Start Num: 4

Candidate Starts for Lockley_64:

(Start: 4 @42450 has 172 MA's), (10, 42396),

Gene: Lopton_65 Start: 44150, Stop: 44004, Start Num: 4

Candidate Starts for Lopton_65:

(Start: 4 @44150 has 172 MA's), (Start: 6 @44135 has 2 MA's), (10, 44096), (12, 44036),

Gene: MPlant7149_65 Start: 41296, Stop: 41174, Start Num: 4

Candidate Starts for MPlant7149_65:

(Start: 4 @41296 has 172 MA's), (Start: 6 @41281 has 2 MA's), (8, 41263), (10, 41242),

Gene: Magnar_64 Start: 42369, Stop: 42223, Start Num: 4

Candidate Starts for Magnar_64:

(Start: 4 @42369 has 172 MA's), (Start: 6 @42354 has 2 MA's), (8, 42336), (10, 42315), (11, 42306), (12, 42255),

Gene: Magnito_66 Start: 42565, Stop: 42446, Start Num: 4

Candidate Starts for Magnito_66:

(Start: 4 @42565 has 172 MA's), (Start: 6 @42550 has 2 MA's), (8, 42532), (10, 42511), (11, 42502),

Gene: Manatee_65 Start: 42037, Stop: 41909, Start Num: 4

Candidate Starts for Manatee_65:

(Start: 4 @42037 has 172 MA's), (Start: 6 @42022 has 2 MA's), (8, 42004), (10, 41983),

Gene: Marcell_61 Start: 41076, Stop: 40930, Start Num: 4

Candidate Starts for Marcell_61:

(Start: 4 @41076 has 172 MA's), (Start: 5 @41067 has 7 MA's), (Start: 6 @41061 has 2 MA's), (10, 41022), (12, 40962),

Gene: Marchy_55 Start: 38814, Stop: 38668, Start Num: 4

Candidate Starts for Marchy_55:

(Start: 4 @38814 has 172 MA's), (Start: 6 @38799 has 2 MA's), (8, 38781), (10, 38760), (12, 38700),

Gene: Marge_61 Start: 41606, Stop: 41460, Start Num: 4

Candidate Starts for Marge_61:

(Start: 4 @41606 has 172 MA's), (Start: 6 @41591 has 2 MA's), (10, 41552), (12, 41492),

Gene: Marsha_64 Start: 43363, Stop: 43241, Start Num: 4

Candidate Starts for Marsha_64:

(Start: 4 @43363 has 172 MA's), (Start: 6 @43348 has 2 MA's), (10, 43309),

Gene: MaryBeth_62 Start: 42430, Stop: 42284, Start Num: 4

Candidate Starts for MaryBeth_62:

(Start: 4 @42430 has 172 MA's), (Start: 6 @42415 has 2 MA's), (10, 42376), (12, 42316),

Gene: McGuire_65 Start: 41400, Stop: 41254, Start Num: 4

Candidate Starts for McGuire_65:

(Start: 4 @41400 has 172 MA's), (Start: 6 @41385 has 2 MA's), (8, 41367), (10, 41346), (12, 41286),

Gene: MetalQZJ_61 Start: 42430, Stop: 42284, Start Num: 4

Candidate Starts for MetalQZJ_61:

(Start: 4 @42430 has 172 MA's), (Start: 6 @42415 has 2 MA's), (10, 42376), (12, 42316),

Gene: Michley_69 Start: 42991, Stop: 42869, Start Num: 4

Candidate Starts for Michley_69:

(Start: 4 @42991 has 172 MA's), (Start: 6 @42976 has 2 MA's), (8, 42958), (10, 42937),

Gene: Molly_66 Start: 42673, Stop: 42554, Start Num: 4

Candidate Starts for Molly_66:

(Start: 4 @42673 has 172 MA's), (Start: 6 @42658 has 2 MA's), (8, 42640), (10, 42619),

Gene: Monet_67 Start: 43994, Stop: 43848, Start Num: 4

Candidate Starts for Monet_67:

(Start: 4 @43994 has 172 MA's), (Start: 6 @43979 has 2 MA's), (10, 43940), (12, 43880),

Gene: Moose_66 Start: 42122, Stop: 41976, Start Num: 4

Candidate Starts for Moose_66:

(Start: 4 @42122 has 172 MA's), (Start: 6 @42107 has 2 MA's), (10, 42068), (12, 42008),

Gene: MrGordo_68 Start: 42912, Stop: 42790, Start Num: 4

Candidate Starts for MrGordo_68:

(Start: 4 @42912 has 172 MA's), (Start: 6 @42897 has 2 MA's), (8, 42879), (10, 42858),

Gene: Mryolo_63 Start: 41946, Stop: 41827, Start Num: 4

Candidate Starts for Mryolo_63:

(Start: 4 @41946 has 172 MA's), (Start: 6 @41931 has 2 MA's), (8, 41913), (10, 41892),

Gene: Mule_61 Start: 41409, Stop: 41263, Start Num: 4

Candidate Starts for Mule_61:

(1, 41502), (2, 41460), (Start: 4 @41409 has 172 MA's), (Start: 5 @41400 has 7 MA's), (Start: 6 @41394 has 2 MA's), (8, 41376), (10, 41355), (12, 41295),

Gene: Museum_67 Start: 43892, Stop: 43773, Start Num: 4

Candidate Starts for Museum_67:

(Start: 4 @43892 has 172 MA's), (Start: 6 @43877 has 2 MA's), (8, 43859), (10, 43838),

Gene: NEHalo_62 Start: 42546, Stop: 42400, Start Num: 4

Candidate Starts for NEHalo_62:

(Start: 4 @42546 has 172 MA's), (Start: 6 @42531 has 2 MA's), (8, 42513), (9, 42495), (10, 42492), (12, 42432),

Gene: Naira_70 Start: 44516, Stop: 44400, Start Num: 4

Candidate Starts for Naira_70:

(Start: 4 @44516 has 172 MA's), (Start: 6 @44501 has 2 MA's), (8, 44483), (10, 44462),

Gene: Nerujay_70 Start: 44095, Stop: 43979, Start Num: 4

Candidate Starts for Nerujay_70:

(Start: 4 @44095 has 172 MA's), (Start: 6 @44080 has 2 MA's), (8, 44062), (10, 44041),

Gene: Nhonho_64 Start: 43037, Stop: 42909, Start Num: 4

Candidate Starts for Nhonho_64:

(Start: 4 @43037 has 172 MA's), (Start: 6 @43022 has 2 MA's), (8, 43004), (10, 42983), (13, 42920),

Gene: Niza_67 Start: 44182, Stop: 44054, Start Num: 4

Candidate Starts for Niza_67:

(Start: 4 @44182 has 172 MA's), (Start: 6 @44167 has 2 MA's), (8, 44149), (10, 44128), (11, 44119),

Gene: Norz_64 Start: 44422, Stop: 44276, Start Num: 4

Candidate Starts for Norz_64:

(Start: 4 @44422 has 172 MA's), (Start: 6 @44407 has 2 MA's), (10, 44368), (12, 44308),

Gene: Ohno789_66 Start: 43010, Stop: 42888, Start Num: 4

Candidate Starts for Ohno789_66:

(Start: 4 @43010 has 172 MA's), (Start: 6 @42995 has 2 MA's), (8, 42977), (10, 42956),

Gene: Oogway_63 Start: 43065, Stop: 42919, Start Num: 4

Candidate Starts for Oogway_63:

(Start: 4 @43065 has 172 MA's), (Start: 6 @43050 has 2 MA's), (8, 43032), (9, 43014), (10, 43011), (12, 42951),

Gene: PSullivan_63 Start: 40790, Stop: 40671, Start Num: 4

Candidate Starts for PSullivan_63:

(Start: 4 @40790 has 172 MA's), (Start: 6 @40775 has 2 MA's), (8, 40757), (10, 40736),

Gene: PacerPaul_65 Start: 42568, Stop: 42446, Start Num: 4

Candidate Starts for PacerPaul_65:

(Start: 4 @42568 has 172 MA's), (Start: 6 @42553 has 2 MA's), (10, 42514),

Gene: Papez_67 Start: 43734, Stop: 43612, Start Num: 4

Candidate Starts for Papez_67:

(Start: 4 @43734 has 172 MA's), (Start: 6 @43719 has 2 MA's), (8, 43701), (10, 43680),

Gene: Paphu_64 Start: 42876, Stop: 42730, Start Num: 4

Candidate Starts for Paphu_64:

(Start: 4 @42876 has 172 MA's), (Start: 6 @42861 has 2 MA's), (8, 42843), (10, 42822), (12, 42762),

Gene: Pari_69 Start: 42086, Stop: 41964, Start Num: 4

Candidate Starts for Pari_69:

(Start: 4 @42086 has 172 MA's), (Start: 6 @42071 has 2 MA's), (10, 42032),

Gene: Parliament_66 Start: 44668, Stop: 44522, Start Num: 4

Candidate Starts for Parliament_66:

(Start: 4 @44668 has 172 MA's), (Start: 6 @44653 has 2 MA's), (8, 44635), (10, 44614), (12, 44554),

Gene: PascalRango_62 Start: 41863, Stop: 41717, Start Num: 4

Candidate Starts for PascalRango_62:

(Start: 4 @41863 has 172 MA's), (Start: 6 @41848 has 2 MA's), (8, 41830), (10, 41809), (12, 41749),

Gene: Payneful_60 Start: 41531, Stop: 41385, Start Num: 4

Candidate Starts for Payneful_60:

(Start: 4 @41531 has 172 MA's), (Start: 6 @41516 has 2 MA's), (8, 41498), (10, 41477), (12, 41417),

Gene: Pepe_63 Start: 41355, Stop: 41242, Start Num: 5

Candidate Starts for Pepe_63:

(Start: 4 @41364 has 172 MA's), (Start: 5 @41355 has 7 MA's), (Start: 6 @41349 has 2 MA's), (8, 41331), (10, 41310),

Gene: Perseus_63 Start: 43814, Stop: 43668, Start Num: 4

Candidate Starts for Perseus_63:

(Start: 4 @43814 has 172 MA's), (Start: 6 @43799 has 2 MA's), (10, 43760), (12, 43700),

Gene: Peterson_68 Start: 44680, Stop: 44534, Start Num: 4

Candidate Starts for Peterson_68:

(Start: 4 @44680 has 172 MA's), (Start: 6 @44665 has 2 MA's), (8, 44647), (10, 44626), (12, 44566),

Gene: Petp2012_68 Start: 44379, Stop: 44257, Start Num: 4

Candidate Starts for Petp2012_68:

(Start: 4 @44379 has 172 MA's), (Start: 5 @44370 has 7 MA's), (Start: 6 @44364 has 2 MA's), (10, 44325), (11, 44316),

Gene: Petruccio_67 Start: 42200, Stop: 42078, Start Num: 4

Candidate Starts for Petruccio_67:

(Start: 4 @42200 has 172 MA's), (Start: 5 @42191 has 7 MA's), (Start: 6 @42185 has 2 MA's), (8, 42167), (10, 42146),

Gene: PhrostyMug_64 Start: 43583, Stop: 43437, Start Num: 4

Candidate Starts for PhrostyMug_64:

(1, 43676), (2, 43634), (Start: 4 @43583 has 172 MA's), (Start: 5 @43574 has 7 MA's), (Start: 6 @43568 has 2 MA's), (8, 43550), (10, 43529), (12, 43469),

Gene: PinkPlastic_64 Start: 42136, Stop: 41990, Start Num: 4

Candidate Starts for PinkPlastic_64:

(Start: 4 @42136 has 172 MA's), (Start: 6 @42121 has 2 MA's), (8, 42103), (10, 42082), (12, 42022),

Gene: Pinto_65 Start: 42089, Stop: 41943, Start Num: 4

Candidate Starts for Pinto_65:

(Start: 4 @42089 has 172 MA's), (Start: 6 @42074 has 2 MA's), (8, 42056), (10, 42035), (12, 41975),

Gene: Pippin_64 Start: 41515, Stop: 41369, Start Num: 4

Candidate Starts for Pippin_64:

(Start: 4 @41515 has 172 MA's), (Start: 6 @41500 has 2 MA's), (8, 41482), (10, 41461), (11, 41452), (12, 41401),

Gene: Pita2_66 Start: 42287, Stop: 42168, Start Num: 4

Candidate Starts for Pita2_66:

(Start: 4 @42287 has 172 MA's), (Start: 6 @42272 has 2 MA's), (8, 42254), (10, 42233),

Gene: QTRlifeCrisis_66 Start: 42816, Stop: 42697, Start Num: 4

Candidate Starts for QTRlifeCrisis_66:

(Start: 4 @42816 has 172 MA's), (Start: 6 @42801 has 2 MA's), (8, 42783), (9, 42765), (10, 42762), (11, 42753),

Gene: Rajelicia_65 Start: 43919, Stop: 43797, Start Num: 4

Candidate Starts for Rajelicia_65:

(Start: 4 @43919 has 172 MA's), (Start: 5 @43910 has 7 MA's), (Start: 6 @43904 has 2 MA's), (10, 43865),

Gene: RidgeCB_65 Start: 42227, Stop: 42114, Start Num: 5

Candidate Starts for RidgeCB_65:

(Start: 4 @42236 has 172 MA's), (Start: 5 @42227 has 7 MA's), (Start: 6 @42221 has 2 MA's), (8, 42203), (10, 42182),

Gene: Ringer_68 Start: 44342, Stop: 44220, Start Num: 4

Candidate Starts for Ringer_68:

(Start: 4 @44342 has 172 MA's), (Start: 6 @44327 has 2 MA's), (8, 44309), (10, 44288),

Gene: Rohr_66 Start: 43554, Stop: 43408, Start Num: 4

Candidate Starts for Rohr_66:

(Start: 4 @43554 has 172 MA's), (Start: 6 @43539 has 2 MA's), (8, 43521), (10, 43500), (12, 43440),

Gene: Rubeus_64 Start: 40056, Stop: 39934, Start Num: 4

Candidate Starts for Rubeus_64:

(Start: 4 @40056 has 172 MA's), (Start: 6 @40041 has 2 MA's), (8, 40023), (10, 40002),

Gene: Rufus_67 Start: 42740, Stop: 42618, Start Num: 4

Candidate Starts for Rufus_67:

(Start: 4 @42740 has 172 MA's), (Start: 6 @42725 has 2 MA's), (8, 42707), (10, 42686),

Gene: Ruotula_71 Start: 44843, Stop: 44715, Start Num: 4

Candidate Starts for Ruotula_71:

(Start: 4 @44843 has 172 MA's), (Start: 6 @44828 has 2 MA's), (8, 44810), (10, 44789),

Gene: Rutherferd_66 Start: 43635, Stop: 43489, Start Num: 4

Candidate Starts for Rutherferd_66:

(Start: 4 @43635 has 172 MA's), (Start: 5 @43626 has 7 MA's), (Start: 6 @43620 has 2 MA's), (8, 43602), (10, 43581), (12, 43521),

Gene: STLscum_74 Start: 44557, Stop: 44435, Start Num: 4

Candidate Starts for STLscum_74:

(Start: 4 @44557 has 172 MA's), (Start: 5 @44548 has 7 MA's), (Start: 6 @44542 has 2 MA's), (8, 44524), (10, 44503),

Gene: Sagefire_66 Start: 43769, Stop: 43623, Start Num: 4

Candidate Starts for Sagefire_66:

(Start: 4 @43769 has 172 MA's), (Start: 6 @43754 has 2 MA's), (8, 43736), (10, 43715), (12, 43655),

Gene: Sandaddy_62 Start: 42037, Stop: 41891, Start Num: 4

Candidate Starts for Sandaddy_62:

(Start: 4 @42037 has 172 MA's), (Start: 6 @42022 has 2 MA's), (8, 42004), (10, 41983), (12, 41923),

Gene: Sanya_61 Start: 43296, Stop: 43174, Start Num: 4

Candidate Starts for Sanya_61:

(Start: 4 @43296 has 172 MA's), (Start: 6 @43281 has 2 MA's), (10, 43242),

Gene: SarFire_64 Start: 42283, Stop: 42155, Start Num: 4

Candidate Starts for SarFire_64:

(Start: 4 @42283 has 172 MA's), (Start: 6 @42268 has 2 MA's), (8, 42250), (10, 42229),

Gene: Scowl_66 Start: 42209, Stop: 42087, Start Num: 4

Candidate Starts for Scowl_66:

(Start: 4 @42209 has 172 MA's), (Start: 6 @42194 has 2 MA's), (8, 42176), (10, 42155),

Gene: Seanderson_67 Start: 44663, Stop: 44517, Start Num: 4

Candidate Starts for Seanderson_67:

(Start: 4 @44663 has 172 MA's), (Start: 5 @44654 has 7 MA's), (Start: 6 @44648 has 2 MA's), (8, 44630), (10, 44609), (12, 44549),

Gene: ShortQueendom_56 Start: 39733, Stop: 39602, Start Num: 6

Candidate Starts for ShortQueendom_56:

(Start: 4 @39748 has 172 MA's), (Start: 6 @39733 has 2 MA's), (8, 39715), (10, 39694), (11, 39685), (12, 39634),

Gene: Sibs6_67 Start: 40939, Stop: 40820, Start Num: 4

Candidate Starts for Sibs6_67:

(Start: 4 @40939 has 172 MA's), (Start: 6 @40924 has 2 MA's), (8, 40906), (10, 40885),

Gene: SkiPole_73 Start: 43830, Stop: 43708, Start Num: 4

Candidate Starts for SkiPole_73:

(Start: 4 @43830 has 172 MA's), (Start: 5 @43821 has 7 MA's), (Start: 6 @43815 has 2 MA's), (8, 43797), (10, 43776),

Gene: Slagathor_67 Start: 44305, Stop: 44183, Start Num: 4

Candidate Starts for Slagathor_67:

(Start: 4 @44305 has 172 MA's), (Start: 5 @44296 has 7 MA's), (Start: 6 @44290 has 2 MA's), (10, 44251),

Gene: Smairt_66 Start: 44577, Stop: 44431, Start Num: 4

Candidate Starts for Smairt_66:

(1, 44670), (2, 44628), (Start: 4 @44577 has 172 MA's), (Start: 5 @44568 has 7 MA's), (Start: 6 @44562 has 2 MA's), (8, 44544), (10, 44523), (12, 44463),

Gene: Smeagol_67 Start: 44063, Stop: 43917, Start Num: 4

Candidate Starts for Smeagol_67:

(Start: 4 @44063 has 172 MA's), (Start: 6 @44048 has 2 MA's), (8, 44030), (10, 44009), (12, 43949),

Gene: Snazzy_62 Start: 41204, Stop: 41058, Start Num: 4

Candidate Starts for Snazzy_62:

(Start: 4 @41204 has 172 MA's), (Start: 6 @41189 has 2 MA's), (8, 41171), (10, 41150), (11, 41141), (12, 41090),

Gene: Solon_63 Start: 41771, Stop: 41634, Start Num: 5

Candidate Starts for Solon_63:

(Start: 4 @41780 has 172 MA's), (Start: 5 @41771 has 7 MA's), (Start: 6 @41765 has 2 MA's), (10, 41726), (11, 41717), (12, 41666),

Gene: Sorpresa_61 Start: 42039, Stop: 41893, Start Num: 4

Candidate Starts for Sorpresa_61:

(Start: 4 @42039 has 172 MA's), (Start: 6 @42024 has 2 MA's), (8, 42006), (10, 41985), (12, 41925),

Gene: SpikeBT_63 Start: 42403, Stop: 42257, Start Num: 4

Candidate Starts for SpikeBT_63:

(Start: 4 @42403 has 172 MA's), (Start: 6 @42388 has 2 MA's), (8, 42370), (9, 42352), (10, 42349), (12, 42289),

Gene: Squee_68 Start: 42436, Stop: 42314, Start Num: 4

Candidate Starts for Squee_68:

(Start: 4 @42436 has 172 MA's), (Start: 6 @42421 has 2 MA's), (8, 42403), (10, 42382),

Gene: StewieG_59 Start: 38578, Stop: 38441, Start Num: 5

Candidate Starts for StewieG_59:

(Start: 4 @38587 has 172 MA's), (Start: 5 @38578 has 7 MA's), (Start: 6 @38572 has 2 MA's), (8, 38554), (10, 38533), (12, 38473),

Gene: StrongArm_63 Start: 43153, Stop: 43031, Start Num: 4

Candidate Starts for StrongArm_63:

(Start: 4 @43153 has 172 MA's), (Start: 5 @43144 has 7 MA's), (Start: 6 @43138 has 2 MA's), (10, 43099),

Gene: Sumter_61 Start: 42394, Stop: 42272, Start Num: 4

Candidate Starts for Sumter_61:

(Start: 4 @42394 has 172 MA's), (Start: 6 @42379 has 2 MA's), (8, 42361), (10, 42340),

Gene: Sunshine924_69 Start: 42853, Stop: 42707, Start Num: 4
Candidate Starts for Sunshine924_69:
(1, 42946), (Start: 4 @42853 has 172 MA's), (Start: 5 @42844 has 7 MA's), (Start: 6 @42838 has 2 MA's), (8, 42820), (10, 42799), (12, 42739),

Gene: SwissCheese_68 Start: 42622, Stop: 42476, Start Num: 4
Candidate Starts for SwissCheese_68:
(Start: 4 @42622 has 172 MA's), (Start: 6 @42607 has 2 MA's), (10, 42568), (12, 42508),

Gene: Switzer_66 Start: 43928, Stop: 43806, Start Num: 4
Candidate Starts for Switzer_66:
(Start: 4 @43928 has 172 MA's), (Start: 6 @43913 has 2 MA's), (10, 43874),

Gene: Swole_64 Start: 42197, Stop: 42078, Start Num: 4
Candidate Starts for Swole_64:
(Start: 4 @42197 has 172 MA's), (Start: 6 @42182 has 2 MA's), (8, 42164), (10, 42143),

Gene: Tasp14_68 Start: 44157, Stop: 44011, Start Num: 4
Candidate Starts for Tasp14_68:
(Start: 4 @44157 has 172 MA's), (Start: 6 @44142 has 2 MA's), (8, 44124), (10, 44103), (12, 44043),

Gene: Teodoridan_64 Start: 41520, Stop: 41392, Start Num: 4
Candidate Starts for Teodoridan_64:
(Start: 4 @41520 has 172 MA's), (Start: 6 @41505 has 2 MA's), (8, 41487), (10, 41466),

Gene: TheloniousMonk_69 Start: 44891, Stop: 44775, Start Num: 4
Candidate Starts for TheloniousMonk_69:
(Start: 4 @44891 has 172 MA's), (Start: 6 @44876 has 2 MA's), (10, 44837),

Gene: Thor_64 Start: 41641, Stop: 41513, Start Num: 4
Candidate Starts for Thor_64:
(Start: 4 @41641 has 172 MA's), (Start: 6 @41626 has 2 MA's), (8, 41608), (10, 41587),

Gene: Topgun_62 Start: 41267, Stop: 41121, Start Num: 4
Candidate Starts for Topgun_62:
(Start: 4 @41267 has 172 MA's), (Start: 5 @41258 has 7 MA's), (Start: 6 @41252 has 2 MA's), (8, 41234), (10, 41213), (12, 41153),

Gene: Tote_61 Start: 39464, Stop: 39345, Start Num: 4
Candidate Starts for Tote_61:
(Start: 4 @39464 has 172 MA's), (Start: 6 @39449 has 2 MA's), (8, 39431), (10, 39410),

Gene: Traft412_68 Start: 43252, Stop: 43130, Start Num: 4
Candidate Starts for Traft412_68:
(Start: 4 @43252 has 172 MA's), (Start: 5 @43243 has 7 MA's), (Start: 6 @43237 has 2 MA's), (8, 43219), (10, 43198),

Gene: Treddle_65 Start: 43506, Stop: 43360, Start Num: 4
Candidate Starts for Treddle_65:
(Start: 4 @43506 has 172 MA's), (Start: 6 @43491 has 2 MA's), (8, 43473), (10, 43452), (12, 43392),

Gene: Tripl3t_69 Start: 44980, Stop: 44843, Start Num: 5

Candidate Starts for Trip13t_69:

(Start: 4 @44989 has 172 MA's), (Start: 5 @44980 has 7 MA's), (Start: 6 @44974 has 2 MA's), (8, 44956), (9, 44938), (10, 44935), (12, 44875),

Gene: Trouble_65 Start: 42607, Stop: 42461, Start Num: 4

Candidate Starts for Trouble_65:

(Start: 4 @42607 has 172 MA's), (Start: 5 @42598 has 7 MA's), (Start: 6 @42592 has 2 MA's), (10, 42553), (12, 42493),

Gene: Turj99_63 Start: 43176, Stop: 43057, Start Num: 4

Candidate Starts for Turj99_63:

(Start: 4 @43176 has 172 MA's), (Start: 5 @43167 has 7 MA's), (Start: 6 @43161 has 2 MA's), (8, 43143), (10, 43122),

Gene: TwoPeat_66 Start: 43028, Stop: 42906, Start Num: 4

Candidate Starts for TwoPeat_66:

(Start: 4 @43028 has 172 MA's), (Start: 5 @43019 has 7 MA's), (Start: 6 @43013 has 2 MA's), (10, 42974),

Gene: Violet_62 Start: 43864, Stop: 43718, Start Num: 4

Candidate Starts for Violet_62:

(Start: 4 @43864 has 172 MA's), (Start: 6 @43849 has 2 MA's), (8, 43831), (9, 43813), (10, 43810), (12, 43750),

Gene: Watermelon_64 Start: 41600, Stop: 41454, Start Num: 4

Candidate Starts for Watermelon_64:

(Start: 4 @41600 has 172 MA's), (Start: 6 @41585 has 2 MA's), (8, 41567), (10, 41546), (12, 41486),

Gene: Wheeler_67 Start: 42867, Stop: 42721, Start Num: 4

Candidate Starts for Wheeler_67:

(Start: 4 @42867 has 172 MA's), (Start: 6 @42852 has 2 MA's), (10, 42813), (12, 42753),

Gene: Wilkins_63 Start: 41197, Stop: 41051, Start Num: 4

Candidate Starts for Wilkins_63:

(Start: 4 @41197 has 172 MA's), (Start: 5 @41188 has 7 MA's), (Start: 6 @41182 has 2 MA's), (8, 41164), (10, 41143), (12, 41083),

Gene: Zeeculate_64 Start: 42837, Stop: 42715, Start Num: 4

Candidate Starts for Zeeculate_64:

(Start: 4 @42837 has 172 MA's), (Start: 6 @42822 has 2 MA's), (8, 42804), (10, 42783),

Gene: Zephyr_66 Start: 41938, Stop: 41816, Start Num: 4

Candidate Starts for Zephyr_66:

(Start: 4 @41938 has 172 MA's), (Start: 5 @41929 has 7 MA's), (Start: 6 @41923 has 2 MA's), (10, 41884), (11, 41875),

Gene: Zeuska_70 Start: 45101, Stop: 44955, Start Num: 4

Candidate Starts for Zeuska_70:

(Start: 4 @45101 has 172 MA's), (Start: 6 @45086 has 2 MA's), (8, 45068), (10, 45047), (12, 44987),