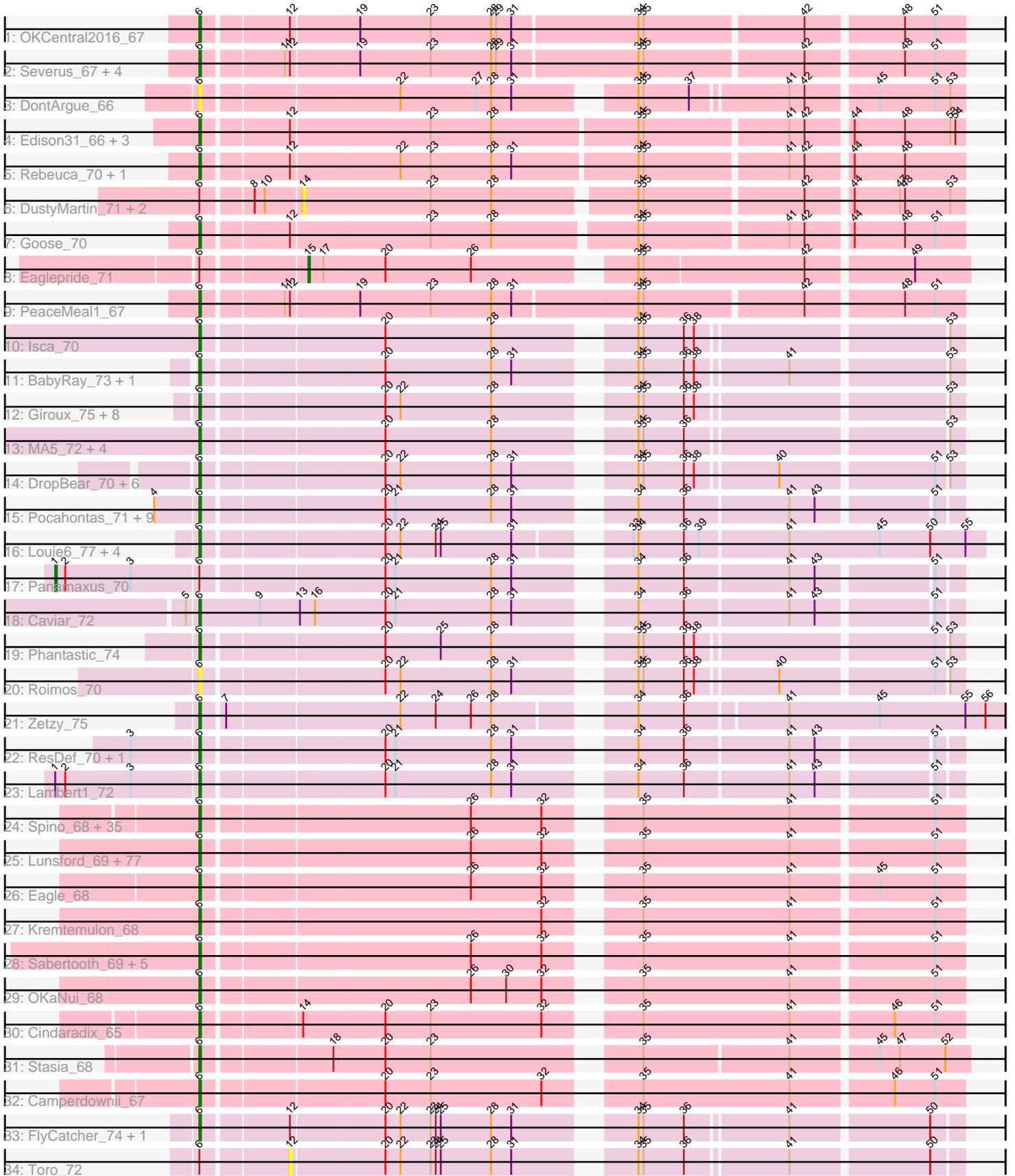# Pham 283502

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 283502 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283502 has 195 members, 20 are drafts.

Phages represented in each track:
• Track 1 : OKCentral2016_67
• Track 2 : Severus_67, Chupacabra_67, Poompha_66, Drake94_67, KittenMittens_66
• Track 3 : DontArgue_66
• Track 4 : Edison31_66, WalterMcMickey_68, Twister_68, Topanga_66
• Track 5 : Rebeuca_70, Kristoff_68
• Track 6 : DustyMartin_71, Shapes_71, Rowdy_71
• Track 7 : Goose_70
• Track 8 : Eaglepride_71
• Track 9 : PeaceMeal1_67
• Track 10 : Isca_70
• Track 11 : BabyRay_73, Zarafa_70
• Track 12 : Giroux_75, Pistachio_72, SaturnRing_72, Idleandcovert_73, BlueBird_75, Bugatti_72, Clammy_72, TNguyen7_73, Puppy_73
• Track 13 : MA5_72, JF4_70, Rockstar_71, B1_64, JF2_70
• Track 14 : DropBear_70, Marchesa_70, HelDan_72, Scout_71, Heathen_72, Kachowdy_70, Fred313_70
• Track 15 : Pocahontas_71, Veracruz_69, Noella_72, Texage_70, QuinnKiro_71, Margo_72, Norbert_68, Popcicle_72, Hookmount_72, Todacoro_72
• Track 16 : Louie6_77, BuzzBuzz_72, KADY_75, Wooldri_80, TinyPebbles_77
• Track 17 : Panamaxus_70
• Track 18 : Caviar_72
• Track 19 : Phantastic_74
• Track 20 : Roimos_70
• Track 21 : Zetzy_75
• Track 22 : ResDef_70, EtoileNova_70
• Track 23 : Lambert1_72
• Track 24 : Spino_68, Phighter1804_69, Eris_68, Maverick_68, Iracema64_69, Funston_68, Phacado_69, LochMonster_70, DirtyDunning_68, Houdini22_68, PeterPeter_69, Avle17_69, ChampagnePapi_71, Kratark_68, Mazhar510_69, JoongJeon_68, Happiness_68, Mayonnaise_66, BangNhom_67, LHTSCC_71, Kyee_69, NotAPhaseMom_68, Cerulean_70, Palestino_68, JetBlade_69, SheldonCooper_69, Cocoaberry_69, Tinybot_68, Nemo27_68, Gadost_69, Ulysses_68, Sultana_69, Obama12_70, Wander_69, Rosa24_66, MeeZee_68
• Track 25 : Lunsford_69, Kingmustik0402_69, Medusa_69, Kampy_68, Phontbonne_69, Blackmoor_68, Lorenzo_69, Skipitt_68, Eros_69, Morrow_70, LeoAvram_68, Shaka_67, Huxley_66, Iceman_68, KekoraPapaka_66, Clarenza_68,

Koan_66, Burger_67, Peaches_67, NorthStar_67, Eurydice_70, Pumbaa_69, Koreni_68, SenorClean_70, Ohfah_70, Eapen_69, Jaykayelowell_66, TinaFeyge_67, Phelipe_70, Deano_66, Abdiel_69, Cintron_69, Bruiser_68, Taquarus_68, Alberto7_70, Roosevelt_67, Dhanush_69, TroyPia_70, KFPoly_68, Nyxis_68, Connomayer_69, TiroTheta9_68, Commander_67, Polymorphads_69, SteMason_65, Melvin_71, Bartimeaus_69, Ruin_69, BubbleTrouble_68, Scamp_69, Florean_69, ICleared_68, Wilbur_69, LittleB_69, Bombshell_69, Baby16_69, Millski_68, Relief_68, Romney_68, Annyong_68, Maxo_70, CentreCat_69, Druantia_68, Albee_69, TygerBlood_69, LittleGuy_69, Holli_68, LappelDuVide_69, BellusTerra_70, Citius_69, Arturo_66, Nebs_70, Thanksgivukkah_68, Chaph_69, Lemur_69, RockieBear_66, Flux_69, Caelakin_68
• Track 26 : Eagle_68
• Track 27 : Kremtemulon_68
• Track 28 : Sabertooth_69, Sparxx_70, HamSlice_65, Broseidon_69, YoSam321_69, Pipcraft_66
• Track 29 : OKaNui_68
• Track 30 : Cindaradix_65
• Track 31 : Stasia_68
• Track 32 : Camperdownii_67
• Track 33 : FlyCatcher_74, Sheen_73
• Track 34 : Toro_72

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

The start number called the most often in the published annotations is 6, it was called in 173 of the 175 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abdiel_69, Albee_69, Alberto7_70, Annyong_68, Arturo_66, Avle17_69, B1_64, Baby16_69, BabyRay_73, BangNhom_67, Bartimeaus_69, BellusTerra_70, Blackmoor_68, BlueBird_75, Bombshell_69, Broseidon_69, Bruiser_68, BubbleTrouble_68, Bugatti_72, Burger_67, BuzzBuzz_72, Caelakin_68, Camperdownii_67, Caviar_72, CentreCat_69, Cerulean_70, ChampagnePapi_71, Chaph_69, Chupacabra_67, Cindaradix_65, Cintron_69, Citius_69, Clammy_72, Clarenza_68, Cocoaberry_69, Commander_67, Connomayer_69, Deano_66, Dhanush_69, DirtyDunning_68, DontArgue_66, Drake94_67, DropBear_70, Druantia_68, Eagle_68, Eapen_69, Edison31_66, Eris_68, Eros_69, EtoileNova_70, Eurydice_70, Florean_69, Flux_69, FlyCatcher_74, Fred313_70, Funston_68, Gadost_69, Giroux_75, Goose_70, HamSlice_65, Happiness_68, Heathen_72, HelDan_72, Holli_68, Hookmount_72, Houdini22_68, Huxley_66, ICleared_68, Iceman_68, Idleandcovert_73, Iracema64_69, Isca_70, JF2_70, JF4_70, Jaykayelowell_66, JetBlade_69, JoongJeon_68, KADY_75, KFPoly_68, Kachowdy_70, Kampy_68, KekoraPapaka_66, Kingmustik0402_69, KittenMittens_66, Koan_66, Koreni_68, Kratark_68, Kremtemulon_68, Kristoff_68, Kyee_69, LHTSCC_71, Lambert1_72, LappelDuVide_69, Lemur_69, LeoAvram_68, LittleB_69, LittleGuy_69, LochMonster_70, Lorenzo_69, Louie6_77, Lunsford_69, MA5_72, Marchesa_70, Margo_72, Maverick_68, Maxo_70, Mayonnaise_66, Mazhar510_69, Medusa_69, MeeZee_68, Melvin_71, Millski_68, Morrow_70, Nebs_70, Nemo27_68, Noella_72, Norbert_68, NorthStar_67, NotAPhaseMom_68, Nyxis_68, OKCentral2016_67, OKaNui_68, Obama12_70, Ohfah_70, Palestino_68,

PeaceMeal1_67, Peaches_67, PeterPeter_69, Phacado_69, Phantastic_74, Phelipe_70, Phighter1804_69, Phontbonne_69, Pipcraft_66, Pistachio_72, Pocahontas_71, Polymorphads_69, Poompha_66, Popcicle_72, Pumbaa_69, Puppy_73, QuinnKiro_71, Rebeuca_70, Relief_68, ResDef_70, RockieBear_66, Rockstar_71, Roimos_70, Romney_68, Roosevelt_67, Rosa24_66, Ruin_69, Sabertooth_69, SaturnRing_72, Scamp_69, Scout_71, SenorClean_70, Severus_67, Shaka_67, Sheen_73, SheldonCooper_69, Skipitt_68, Sparxx_70, Spino_68, Stasia_68, SteMason_65, Sultana_69, TNguyen7_73, Taquarus_68, Texage_70, Thanksgivukkah_68, TinaFeyge_67, TinyPebbles_77, Tinybot_68, TiroTheta9_68, Todacoro_72, Topanga_66, TroyPia_70, Twister_68, TygerBlood_69, Ulysses_68, Veracruz_69, WalterMcMickey_68, Wander_69, Wilbur_69, Wooldri_80, YoSam321_69, Zarafa_70, Zetzy_75,

Genes that have the "Most Annotated" start but do not call it:
• DustyMartin_71, Eaglepride_71, Panamaxus_70, Rowdy_71, Shapes_71, Toro_72,

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

Summary by start number:

Start 1:
• Found in 2 of 195 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 175
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Panamaxus_70 (A3),

Start 6:
• Found in 195 of 195 (100.0%) of genes in pham
• Manual Annotations of this start: 173 of 175
• Called 96.9% of time when present
• Phage (with cluster) where this start called: Abdiel_69 (A4), Albee_69 (A4), Alberto7_70 (A4), Annyong_68 (A4), Arturo_66 (A4), Avle17_69 (A4), B1_64 (A3), Baby16_69 (A4), BabyRay_73 (A3), BangNhom_67 (A4), Bartimeaus_69 (A4), BellusTerra_70 (A4), Blackmoor_68 (A4), BlueBird_75 (A3), Bombshell_69 (A4), Broseidon_69 (A4), Bruiser_68 (A4), BubbleTrouble_68 (A4), Bugatti_72 (A3), Burger_67 (A4), BuzzBuzz_72 (A3), Caelakin_68 (A4), Camperdownii_67 (A4), Caviar_72 (A3), CentreCat_69 (A4), Cerulean_70 (A4), ChampagnePapi_71 (A4), Chaph_69 (A4), Chupacabra_67 (A10), Cindaradix_65 (A4), Cintron_69 (A4), Citius_69 (A4), Clammy_72 (A3), Clarenza_68 (A4), Cocoaberry_69 (A4), Commander_67 (A4), Connomayer_69 (A4), Deano_66 (A4), Dhanush_69 (A4), DirtyDunning_68 (A4), DontArgue_66 (A10), Drake94_67 (A10), DropBear_70 (A3), Druantia_68 (A4), Eagle_68 (A4), Eapen_69 (A4), Edison31_66 (A10), Eris_68 (A4), Eros_69 (A4), EtoileNova_70 (A3), Eurydice_70 (A4), Florean_69 (A4), Flux_69 (A4), FlyCatcher_74 (A7), Fred313_70 (A3), Funston_68 (A4), Gadost_69 (A4), Giroux_75 (A3), Goose_70 (A10), HamSlice_65 (A4), Happiness_68 (A4), Heathen_72 (A3), HelDan_72 (A3), Holli_68 (A4), Hookmount_72 (A3), Houdini22_68 (A4), Huxley_66 (A4), ICleared_68 (A4), Iceman_68 (A4), Idleandcovert_73 (A3), Iracema64_69 (A4), Isca_70 (A3), JF2_70 (A3), JF4_70 (A3), Jaykayelowell_66 (A4), JetBlade_69 (A4), JoongJeon_68 (A4), KADY_75 (A3), KFPoly_68 (A4), Kachowdy_70 (A3), Kampy_68 (A4), KekoraPapaka_66 (A4), Kingmustik0402_69 (A4), KittenMittens_66 (A10), Koan_66 (A4), Koreni_68 (A4), Kratark_68 (A4), Kremtemulon_68 (A4), Kristoff_68 (A10), Kyee_69 (A4), LHTSCC_71 (A4), Lambert1_72 (A3), LappelDuVide_69 (A4),

Lemur_69 (A4), LeoAvram_68 (A4), LittleB_69 (A4), LittleGuy_69 (A4),
LochMonster_70 (A4), Lorenzo_69 (A4), Louie6_77 (A3), Lunsford_69 (A4), MA5_72
(A3), Marchesa_70 (A3), Margo_72 (A3), Maverick_68 (A4), Maxo_70 (A4),
Mayonnaise_66 (A4), Mazhar510_69 (A4), Medusa_69 (A4), MeeZee_68 (A4),
Melvin_71 (A4), Millski_68 (A4), Morrow_70 (A4), Nebs_70 (A4), Nemo27_68 (A4),
Noella_72 (A3), Norbert_68 (A3), NorthStar_67 (A4), NotAPhaseMom_68 (A4),
Nyxis_68 (A4), OKCentral2016_67 (A10), OKaNui_68 (A4), Obama12_70 (A4),
Ohfah_70 (A4), Palestino_68 (A4), PeaceMeal1_67 (A10), Peaches_67 (A4),
PeterPeter_69 (A4), Phacado_69 (A4), Phantastic_74 (A3), Phelipe_70 (A4),
Phighter1804_69 (A4), Phontbonne_69 (A4), Pipcraft_66 (A4), Pistachio_72 (A3),
Pocahontas_71 (A3), Polymorphads_69 (A4), Poompha_66 (A10), Popcicle_72 (A3),
Pumbaa_69 (A4), Puppy_73 (A3), QuinnKiro_71 (A3), Rebeuca_70 (A10), Relief_68
(A4), ResDef_70 (A3), RockieBear_66 (A4), Rockstar_71 (A3), Roimos_70 (A3),
Romney_68 (A4), Roosevelt_67 (A4), Rosa24_66 (A4), Ruin_69 (A4), Sabertooth_69
(A4), SaturnRing_72 (A3), Scamp_69 (A4), Scout_71 (A3), SenorClean_70 (A4),
Severus_67 (A10), Shaka_67 (A4), Sheen_73 (A7), SheldonCooper_69 (A4),
Skipitt_68 (A4), Sparxx_70 (A4), Spino_68 (A4), Stasia_68 (A4), SteMason_65 (A4),
Sultana_69 (A4), TNguyen7_73 (A3), Taquarus_68 (A4), Texage_70 (A3),
Thanksgivukkah_68 (A4), TinaFeyge_67 (A4), TinyPebbles_77 (A3), Tinybot_68 (A4),
TiroTheta9_68 (A4), Todacoro_72 (A3), Topanga_66 (A10), TroyPia_70 (A4),
Twister_68 (A10), TygerBlood_69 (A4), Ulysses_68 (A4), Veracruz_69 (A3),
WalterMcMickey_68 (A10), Wander_69 (A4), Wilbur_69 (A4), Wooldri_80 (A3),
YoSam321_69 (A4), Zarafa_70 (A3), Zetzy_75 (A3),

Start 12:
• Found in 17 of 195 (8.7%) of genes in pham
• No Manual Annotations of this start.
• Called 5.9% of time when present
• Phage (with cluster) where this start called: Toro_72 (A7),

Start 14:
• Found in 4 of 195 (2.1%) of genes in pham
• No Manual Annotations of this start.
• Called 75.0% of time when present
• Phage (with cluster) where this start called: DustyMartin_71 (A10), Rowdy_71 (A10),
Shapes_71 (A10),

Start 15:
• Found in 1 of 195 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 175
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Eaglepride_71 (A10),

Summary by clusters:

There are 4 clusters represented in this pham: A3, A4, A7, A10,

Info for manual annotations of cluster A10:
•Start number 6 was manually annotated 14 times for cluster A10.
•Start number 15 was manually annotated 1 time for cluster A10.

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

•Start number 6 was manually annotated 37 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 6 was manually annotated 121 times for cluster A4.

Info for manual annotations of cluster A7:
•Start number 6 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: Abdiel_69 Start: 43590, Stop: 43168, Start Num: 6
Candidate Starts for Abdiel_69:
(Start: 6 @43590 has 173 MA's), (26, 43437), (32, 43395), (35, 43353), (41, 43266), (51, 43185),

Gene: Albee_69 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Albee_69:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Alberto7_70 Start: 43914, Stop: 43492, Start Num: 6
Candidate Starts for Alberto7_70:
(Start: 6 @43914 has 173 MA's), (26, 43761), (32, 43719), (35, 43677), (41, 43590), (51, 43509),

Gene: Annyong_68 Start: 43622, Stop: 43200, Start Num: 6
Candidate Starts for Annyong_68:
(Start: 6 @43622 has 173 MA's), (26, 43469), (32, 43427), (35, 43385), (41, 43298), (51, 43217),

Gene: Arturo_66 Start: 43704, Stop: 43282, Start Num: 6
Candidate Starts for Arturo_66:
(Start: 6 @43704 has 173 MA's), (26, 43551), (32, 43509), (35, 43467), (41, 43380), (51, 43299),

Gene: Avle17_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Avle17_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: B1_64 Start: 42264, Stop: 41851, Start Num: 6
Candidate Starts for B1_64:
(Start: 6 @42264 has 173 MA's), (20, 42162), (28, 42099), (34, 42030), (35, 42027), (36, 42003), (53, 41859),

Gene: Baby16_69 Start: 43588, Stop: 43166, Start Num: 6
Candidate Starts for Baby16_69:
(Start: 6 @43588 has 173 MA's), (26, 43435), (32, 43393), (35, 43351), (41, 43264), (51, 43183),

Gene: BabyRay_73 Start: 44020, Stop: 43607, Start Num: 6
Candidate Starts for BabyRay_73:
(Start: 6 @44020 has 173 MA's), (20, 43918), (28, 43855), (31, 43843), (34, 43786), (35, 43783), (36, 43759), (38, 43753), (41, 43702), (53, 43615),

Gene: BangNhom_67 Start: 44016, Stop: 43594, Start Num: 6
Candidate Starts for BangNhom_67:
(Start: 6 @44016 has 173 MA's), (26, 43863), (32, 43821), (35, 43779), (41, 43692), (51, 43611),

Gene: Bartimeaus_69 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Bartimeaus_69:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: BellusTerra_70 Start: 43617, Stop: 43195, Start Num: 6
Candidate Starts for BellusTerra_70:
(Start: 6 @43617 has 173 MA's), (26, 43464), (32, 43422), (35, 43380), (41, 43293), (51, 43212),

Gene: Blackmoor_68 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Blackmoor_68:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: BlueBird_75 Start: 44091, Stop: 43678, Start Num: 6
Candidate Starts for BlueBird_75:
(Start: 6 @44091 has 173 MA's), (20, 43989), (22, 43980), (28, 43926), (34, 43857), (35, 43854), (36, 43830), (38, 43824), (53, 43686),

Gene: Bombshell_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Bombshell_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Broseidon_69 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Broseidon_69:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: Bruiser_68 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Bruiser_68:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: BubbleTrouble_68 Start: 43604, Stop: 43182, Start Num: 6
Candidate Starts for BubbleTrouble_68:
(Start: 6 @43604 has 173 MA's), (26, 43451), (32, 43409), (35, 43367), (41, 43280), (51, 43199),

Gene: Bugatti_72 Start: 44091, Stop: 43678, Start Num: 6
Candidate Starts for Bugatti_72:
(Start: 6 @44091 has 173 MA's), (20, 43989), (22, 43980), (28, 43926), (34, 43857), (35, 43854), (36, 43830), (38, 43824), (53, 43686),

Gene: Burger_67 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Burger_67:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: BuzzBuzz_72 Start: 44508, Stop: 44074, Start Num: 6
Candidate Starts for BuzzBuzz_72:
(Start: 6 @44508 has 173 MA's), (20, 44406), (22, 44397), (24, 44376), (25, 44373), (31, 44331), (33, 44280), (34, 44277), (36, 44250), (39, 44241), (41, 44190), (45, 44136), (50, 44106), (55, 44085),

Gene: Caelakin_68 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Caelakin_68:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Camperdownii_67 Start: 43251, Stop: 42829, Start Num: 6

Candidate Starts for Camperdownii_67:
(Start: 6 @43251 has 173 MA's), (20, 43149), (23, 43122), (32, 43056), (35, 43014), (41, 42927), (46, 42870), (51, 42846),

Gene: Caviar_72 Start: 44057, Stop: 43635, Start Num: 6
Candidate Starts for Caviar_72:
(5, 44063), (Start: 6 @44057 has 173 MA's), (9, 44021), (13, 43997), (16, 43988), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: CentreCat_69 Start: 43616, Stop: 43194, Start Num: 6
Candidate Starts for CentreCat_69:
(Start: 6 @43616 has 173 MA's), (26, 43463), (32, 43421), (35, 43379), (41, 43292), (51, 43211),

Gene: Cerulean_70 Start: 44017, Stop: 43595, Start Num: 6
Candidate Starts for Cerulean_70:
(Start: 6 @44017 has 173 MA's), (26, 43864), (32, 43822), (35, 43780), (41, 43693), (51, 43612),

Gene: ChampagnePapi_71 Start: 44016, Stop: 43594, Start Num: 6
Candidate Starts for ChampagnePapi_71:
(Start: 6 @44016 has 173 MA's), (26, 43863), (32, 43821), (35, 43779), (41, 43692), (51, 43611),

Gene: Chaph_69 Start: 43588, Stop: 43166, Start Num: 6
Candidate Starts for Chaph_69:
(Start: 6 @43588 has 173 MA's), (26, 43435), (32, 43393), (35, 43351), (41, 43264), (51, 43183),

Gene: Chupacabra_67 Start: 43379, Stop: 42948, Start Num: 6
Candidate Starts for Chupacabra_67:
(Start: 6 @43379 has 173 MA's), (11, 43334), (12, 43331), (19, 43292), (23, 43250), (28, 43214), (29, 43211), (31, 43202), (34, 43130), (35, 43127), (42, 43037), (48, 42983), (51, 42965),

Gene: Cindaradix_65 Start: 43479, Stop: 43057, Start Num: 6
Candidate Starts for Cindaradix_65:
(Start: 6 @43479 has 173 MA's), (14, 43425), (20, 43377), (23, 43350), (32, 43284), (35, 43242), (41, 43155), (46, 43098), (51, 43074),

Gene: Cintron_69 Start: 43727, Stop: 43305, Start Num: 6
Candidate Starts for Cintron_69:
(Start: 6 @43727 has 173 MA's), (26, 43574), (32, 43532), (35, 43490), (41, 43403), (51, 43322),

Gene: Citius_69 Start: 43598, Stop: 43176, Start Num: 6
Candidate Starts for Citius_69:
(Start: 6 @43598 has 173 MA's), (26, 43445), (32, 43403), (35, 43361), (41, 43274), (51, 43193),

Gene: Clammy_72 Start: 44091, Stop: 43678, Start Num: 6
Candidate Starts for Clammy_72:
(Start: 6 @44091 has 173 MA's), (20, 43989), (22, 43980), (28, 43926), (34, 43857), (35, 43854), (36, 43830), (38, 43824), (53, 43686),

Gene: Clarenza_68 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Clarenza_68:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Cocoaberry_69 Start: 43581, Stop: 43159, Start Num: 6

Candidate Starts for Cocoaberry_69:
(Start: 6 @43581 has 173 MA's), (26, 43428), (32, 43386), (35, 43344), (41, 43257), (51, 43176),

Gene: Commander_67 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Commander_67:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: Connomayer_69 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Connomayer_69:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Deano_66 Start: 43585, Stop: 43163, Start Num: 6
Candidate Starts for Deano_66:
(Start: 6 @43585 has 173 MA's), (26, 43432), (32, 43390), (35, 43348), (41, 43261), (51, 43180),

Gene: Dhanush_69 Start: 43580, Stop: 43158, Start Num: 6
Candidate Starts for Dhanush_69:
(Start: 6 @43580 has 173 MA's), (26, 43427), (32, 43385), (35, 43343), (41, 43256), (51, 43175),

Gene: DirtyDunning_68 Start: 43592, Stop: 43170, Start Num: 6
Candidate Starts for DirtyDunning_68:
(Start: 6 @43592 has 173 MA's), (26, 43439), (32, 43397), (35, 43355), (41, 43268), (51, 43187),

Gene: DontArgue_66 Start: 42344, Stop: 41928, Start Num: 6
Candidate Starts for DontArgue_66:
(Start: 6 @42344 has 173 MA's), (22, 42233), (27, 42188), (28, 42179), (31, 42167), (34, 42110), (35, 42107), (37, 42080), (41, 42026), (42, 42017), (45, 41978), (51, 41945), (53, 41936),

Gene: Drake94_67 Start: 42510, Stop: 42079, Start Num: 6
Candidate Starts for Drake94_67:
(Start: 6 @42510 has 173 MA's), (11, 42465), (12, 42462), (19, 42423), (23, 42381), (28, 42345), (29, 42342), (31, 42333), (34, 42261), (35, 42258), (42, 42168), (48, 42114), (51, 42096),

Gene: DropBear_70 Start: 44009, Stop: 43596, Start Num: 6
Candidate Starts for DropBear_70:
(Start: 6 @44009 has 173 MA's), (20, 43907), (22, 43898), (28, 43844), (31, 43832), (34, 43775), (35, 43772), (36, 43748), (38, 43742), (40, 43697), (51, 43610), (53, 43604),

Gene: Druantia_68 Start: 43580, Stop: 43158, Start Num: 6
Candidate Starts for Druantia_68:
(Start: 6 @43580 has 173 MA's), (26, 43427), (32, 43385), (35, 43343), (41, 43256), (51, 43175),

Gene: DustyMartin_71 Start: 43468, Stop: 43097, Start Num: 14
Candidate Starts for DustyMartin_71:
(Start: 6 @43522 has 173 MA's), (8, 43495), (10, 43489), (14, 43468), (23, 43393), (28, 43357), (34, 43279), (35, 43276), (42, 43186), (44, 43162), (47, 43135), (48, 43132), (53, 43105),

Gene: Eagle_68 Start: 43638, Stop: 43216, Start Num: 6
Candidate Starts for Eagle_68:
(Start: 6 @43638 has 173 MA's), (26, 43485), (32, 43443), (35, 43401), (41, 43314), (45, 43266), (51, 43233),

Gene: Eaglepride_71 Start: 43434, Stop: 43069, Start Num: 15

Candidate Starts for Eaglepride_71:
(Start: 6 @43491 has 173 MA's), (Start: 15 @43434 has 1 MA's), (17, 43425), (20, 43389), (26, 43338), (34, 43257), (35, 43254), (42, 43161), (49, 43101),

Gene: Eapen_69 Start: 43572, Stop: 43150, Start Num: 6
Candidate Starts for Eapen_69:
(Start: 6 @43572 has 173 MA's), (26, 43419), (32, 43377), (35, 43335), (41, 43248), (51, 43167),

Gene: Edison31_66 Start: 43243, Stop: 42812, Start Num: 6
Candidate Starts for Edison31_66:
(Start: 6 @43243 has 173 MA's), (12, 43195), (23, 43114), (28, 43078), (34, 42994), (35, 42991), (41, 42910), (42, 42901), (44, 42877), (48, 42847), (53, 42820), (54, 42817),

Gene: Eris_68 Start: 43592, Stop: 43170, Start Num: 6
Candidate Starts for Eris_68:
(Start: 6 @43592 has 173 MA's), (26, 43439), (32, 43397), (35, 43355), (41, 43268), (51, 43187),

Gene: Eros_69 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Eros_69:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: EtoileNova_70 Start: 44052, Stop: 43639, Start Num: 6
Candidate Starts for EtoileNova_70:
(3, 44091), (Start: 6 @44052 has 173 MA's), (20, 43950), (21, 43944), (28, 43887), (31, 43875), (34, 43818), (36, 43791), (41, 43731), (43, 43716), (51, 43653),

Gene: Eurydice_70 Start: 43613, Stop: 43191, Start Num: 6
Candidate Starts for Eurydice_70:
(Start: 6 @43613 has 173 MA's), (26, 43460), (32, 43418), (35, 43376), (41, 43289), (51, 43208),

Gene: Florean_69 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Florean_69:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: Flux_69 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Flux_69:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: FlyCatcher_74 Start: 47594, Stop: 47181, Start Num: 6
Candidate Starts for FlyCatcher_74:
(Start: 6 @47594 has 173 MA's), (12, 47546), (20, 47492), (22, 47483), (23, 47465), (24, 47462), (25, 47459), (28, 47429), (31, 47417), (34, 47360), (35, 47357), (36, 47333), (41, 47276), (50, 47198),

Gene: Fred313_70 Start: 43703, Stop: 43290, Start Num: 6
Candidate Starts for Fred313_70:
(Start: 6 @43703 has 173 MA's), (20, 43601), (22, 43592), (28, 43538), (31, 43526), (34, 43469), (35, 43466), (36, 43442), (38, 43436), (40, 43391), (51, 43304), (53, 43298),

Gene: Funston_68 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Funston_68:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Gadost_69 Start: 43581, Stop: 43159, Start Num: 6

Candidate Starts for Gadost_69:
(Start: 6 @43581 has 173 MA's), (26, 43428), (32, 43386), (35, 43344), (41, 43257), (51, 43176),

Gene: Giroux_75 Start: 44090, Stop: 43677, Start Num: 6
Candidate Starts for Giroux_75:
(Start: 6 @44090 has 173 MA's), (20, 43988), (22, 43979), (28, 43925), (34, 43856), (35, 43853), (36, 43829), (38, 43823), (53, 43685),

Gene: Goose_70 Start: 43189, Stop: 42761, Start Num: 6
Candidate Starts for Goose_70:
(Start: 6 @43189 has 173 MA's), (12, 43141), (23, 43060), (28, 43024), (34, 42943), (35, 42940), (41, 42859), (42, 42850), (44, 42826), (48, 42796), (51, 42778),

Gene: HamSlice_65 Start: 43575, Stop: 43153, Start Num: 6
Candidate Starts for HamSlice_65:
(Start: 6 @43575 has 173 MA's), (26, 43422), (32, 43380), (35, 43338), (41, 43251), (51, 43170),

Gene: Happiness_68 Start: 43599, Stop: 43177, Start Num: 6
Candidate Starts for Happiness_68:
(Start: 6 @43599 has 173 MA's), (26, 43446), (32, 43404), (35, 43362), (41, 43275), (51, 43194),

Gene: Heathen_72 Start: 43798, Stop: 43385, Start Num: 6
Candidate Starts for Heathen_72:
(Start: 6 @43798 has 173 MA's), (20, 43696), (22, 43687), (28, 43633), (31, 43621), (34, 43564), (35, 43561), (36, 43537), (38, 43531), (40, 43486), (51, 43399), (53, 43393),

Gene: HelDan_72 Start: 44014, Stop: 43601, Start Num: 6
Candidate Starts for HelDan_72:
(Start: 6 @44014 has 173 MA's), (20, 43912), (22, 43903), (28, 43849), (31, 43837), (34, 43780), (35, 43777), (36, 43753), (38, 43747), (40, 43702), (51, 43615), (53, 43609),

Gene: Holli_68 Start: 43367, Stop: 42945, Start Num: 6
Candidate Starts for Holli_68:
(Start: 6 @43367 has 173 MA's), (26, 43214), (32, 43172), (35, 43130), (41, 43043), (51, 42962),

Gene: Hookmount_72 Start: 44049, Stop: 43636, Start Num: 6
Candidate Starts for Hookmount_72:
(4, 44073), (Start: 6 @44049 has 173 MA's), (20, 43947), (21, 43941), (28, 43884), (31, 43872), (34, 43815), (36, 43788), (41, 43728), (43, 43713), (51, 43650),

Gene: Houdini22_68 Start: 43581, Stop: 43159, Start Num: 6
Candidate Starts for Houdini22_68:
(Start: 6 @43581 has 173 MA's), (26, 43428), (32, 43386), (35, 43344), (41, 43257), (51, 43176),

Gene: Huxley_66 Start: 43641, Stop: 43219, Start Num: 6
Candidate Starts for Huxley_66:
(Start: 6 @43641 has 173 MA's), (26, 43488), (32, 43446), (35, 43404), (41, 43317), (51, 43236),

Gene: ICleared_68 Start: 43645, Stop: 43223, Start Num: 6
Candidate Starts for ICleared_68:
(Start: 6 @43645 has 173 MA's), (26, 43492), (32, 43450), (35, 43408), (41, 43321), (51, 43240),

Gene: Iceman_68 Start: 43866, Stop: 43444, Start Num: 6

Candidate Starts for Iceman_68:
(Start: 6 @43866 has 173 MA's), (26, 43713), (32, 43671), (35, 43629), (41, 43542), (51, 43461),

Gene: Idleandcovert_73 Start: 44091, Stop: 43678, Start Num: 6
Candidate Starts for Idleandcovert_73:
(Start: 6 @44091 has 173 MA's), (20, 43989), (22, 43980), (28, 43926), (34, 43857), (35, 43854), (36, 43830), (38, 43824), (53, 43686),

Gene: Iracema64_69 Start: 43844, Stop: 43422, Start Num: 6
Candidate Starts for Iracema64_69:
(Start: 6 @43844 has 173 MA's), (26, 43691), (32, 43649), (35, 43607), (41, 43520), (51, 43439),

Gene: Isca_70 Start: 43569, Stop: 43156, Start Num: 6
Candidate Starts for Isca_70:
(Start: 6 @43569 has 173 MA's), (20, 43467), (28, 43404), (34, 43335), (35, 43332), (36, 43308), (38, 43302), (53, 43164),

Gene: JF2_70 Start: 42264, Stop: 41851, Start Num: 6
Candidate Starts for JF2_70:
(Start: 6 @42264 has 173 MA's), (20, 42162), (28, 42099), (34, 42030), (35, 42027), (36, 42003), (53, 41859),

Gene: JF4_70 Start: 42264, Stop: 41851, Start Num: 6
Candidate Starts for JF4_70:
(Start: 6 @42264 has 173 MA's), (20, 42162), (28, 42099), (34, 42030), (35, 42027), (36, 42003), (53, 41859),

Gene: Jaykayelowell_66 Start: 43570, Stop: 43148, Start Num: 6
Candidate Starts for Jaykayelowell_66:
(Start: 6 @43570 has 173 MA's), (26, 43417), (32, 43375), (35, 43333), (41, 43246), (51, 43165),

Gene: JetBlade_69 Start: 43607, Stop: 43185, Start Num: 6
Candidate Starts for JetBlade_69:
(Start: 6 @43607 has 173 MA's), (26, 43454), (32, 43412), (35, 43370), (41, 43283), (51, 43202),

Gene: JoongJeon_68 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for JoongJeon_68:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: KADY_75 Start: 44508, Stop: 44074, Start Num: 6
Candidate Starts for KADY_75:
(Start: 6 @44508 has 173 MA's), (20, 44406), (22, 44397), (24, 44376), (25, 44373), (31, 44331), (33, 44280), (34, 44277), (36, 44250), (39, 44241), (41, 44190), (45, 44136), (50, 44106), (55, 44085),

Gene: KFPoly_68 Start: 43571, Stop: 43149, Start Num: 6
Candidate Starts for KFPoly_68:
(Start: 6 @43571 has 173 MA's), (26, 43418), (32, 43376), (35, 43334), (41, 43247), (51, 43166),

Gene: Kachowdy_70 Start: 44050, Stop: 43637, Start Num: 6
Candidate Starts for Kachowdy_70:
(Start: 6 @44050 has 173 MA's), (20, 43948), (22, 43939), (28, 43885), (31, 43873), (34, 43816), (35, 43813), (36, 43789), (38, 43783), (40, 43738), (51, 43651), (53, 43645),

Gene: Kampy_68 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Kampy_68:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: KekoraPapaka_66 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for KekoraPapaka_66:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Kingmustik0402_69 Start: 43566, Stop: 43144, Start Num: 6
Candidate Starts for Kingmustik0402_69:
(Start: 6 @43566 has 173 MA's), (26, 43413), (32, 43371), (35, 43329), (41, 43242), (51, 43161),

Gene: KittenMittens_66 Start: 42518, Stop: 42087, Start Num: 6
Candidate Starts for KittenMittens_66:
(Start: 6 @42518 has 173 MA's), (11, 42473), (12, 42470), (19, 42431), (23, 42389), (28, 42353), (29, 42350), (31, 42341), (34, 42269), (35, 42266), (42, 42176), (48, 42122), (51, 42104),

Gene: Koan_66 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Koan_66:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Koreni_68 Start: 43258, Stop: 42836, Start Num: 6
Candidate Starts for Koreni_68:
(Start: 6 @43258 has 173 MA's), (26, 43105), (32, 43063), (35, 43021), (41, 42934), (51, 42853),

Gene: Kratark_68 Start: 43614, Stop: 43192, Start Num: 6
Candidate Starts for Kratark_68:
(Start: 6 @43614 has 173 MA's), (26, 43461), (32, 43419), (35, 43377), (41, 43290), (51, 43209),

Gene: Kremtemulon_68 Start: 43710, Stop: 43288, Start Num: 6
Candidate Starts for Kremtemulon_68:
(Start: 6 @43710 has 173 MA's), (32, 43515), (35, 43473), (41, 43386), (51, 43305),

Gene: Kristoff_68 Start: 43820, Stop: 43389, Start Num: 6
Candidate Starts for Kristoff_68:
(Start: 6 @43820 has 173 MA's), (12, 43772), (22, 43709), (23, 43691), (28, 43655), (31, 43643), (34, 43571), (35, 43568), (41, 43487), (42, 43478), (44, 43454), (48, 43424),

Gene: Kyee_69 Start: 43575, Stop: 43153, Start Num: 6
Candidate Starts for Kyee_69:
(Start: 6 @43575 has 173 MA's), (26, 43422), (32, 43380), (35, 43338), (41, 43251), (51, 43170),

Gene: LHTSCC_71 Start: 44016, Stop: 43594, Start Num: 6
Candidate Starts for LHTSCC_71:
(Start: 6 @44016 has 173 MA's), (26, 43863), (32, 43821), (35, 43779), (41, 43692), (51, 43611),

Gene: Lambert1_72 Start: 44048, Stop: 43635, Start Num: 6
Candidate Starts for Lambert1_72:
(Start: 1 @44132 has 1 MA's), (2, 44126), (3, 44087), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: LappelDuVide_69 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for LappelDuVide_69:

(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: Lemur_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Lemur_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: LeoAvram_68 Start: 43607, Stop: 43185, Start Num: 6
Candidate Starts for LeoAvram_68:
(Start: 6 @43607 has 173 MA's), (26, 43454), (32, 43412), (35, 43370), (41, 43283), (51, 43202),

Gene: LittleB_69 Start: 43578, Stop: 43156, Start Num: 6
Candidate Starts for LittleB_69:
(Start: 6 @43578 has 173 MA's), (26, 43425), (32, 43383), (35, 43341), (41, 43254), (51, 43173),

Gene: LittleGuy_69 Start: 43473, Stop: 43051, Start Num: 6
Candidate Starts for LittleGuy_69:
(Start: 6 @43473 has 173 MA's), (26, 43320), (32, 43278), (35, 43236), (41, 43149), (51, 43068),

Gene: LochMonster_70 Start: 43816, Stop: 43394, Start Num: 6
Candidate Starts for LochMonster_70:
(Start: 6 @43816 has 173 MA's), (26, 43663), (32, 43621), (35, 43579), (41, 43492), (51, 43411),

Gene: Lorenzo_69 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Lorenzo_69:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Louie6_77 Start: 44510, Stop: 44076, Start Num: 6
Candidate Starts for Louie6_77:
(Start: 6 @44510 has 173 MA's), (20, 44408), (22, 44399), (24, 44378), (25, 44375), (31, 44333), (33, 44282), (34, 44279), (36, 44252), (39, 44243), (41, 44192), (45, 44138), (50, 44108), (55, 44087),

Gene: Lunsford_69 Start: 43571, Stop: 43149, Start Num: 6
Candidate Starts for Lunsford_69:
(Start: 6 @43571 has 173 MA's), (26, 43418), (32, 43376), (35, 43334), (41, 43247), (51, 43166),

Gene: MA5_72 Start: 43473, Stop: 43060, Start Num: 6
Candidate Starts for MA5_72:
(Start: 6 @43473 has 173 MA's), (20, 43371), (28, 43308), (34, 43239), (35, 43236), (36, 43212), (53, 43068),

Gene: Marchesa_70 Start: 44000, Stop: 43587, Start Num: 6
Candidate Starts for Marchesa_70:
(Start: 6 @44000 has 173 MA's), (20, 43898), (22, 43889), (28, 43835), (31, 43823), (34, 43766), (35, 43763), (36, 43739), (38, 43733), (40, 43688), (51, 43601), (53, 43595),

Gene: Margo_72 Start: 44074, Stop: 43661, Start Num: 6
Candidate Starts for Margo_72:
(4, 44098), (Start: 6 @44074 has 173 MA's), (20, 43972), (21, 43966), (28, 43909), (31, 43897), (34, 43840), (36, 43813), (41, 43753), (43, 43738), (51, 43675),

Gene: Maverick_68 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Maverick_68:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Maxo_70 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Maxo_70:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: Mayonnaise_66 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Mayonnaise_66:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Mazhar510_69 Start: 43578, Stop: 43156, Start Num: 6
Candidate Starts for Mazhar510_69:
(Start: 6 @43578 has 173 MA's), (26, 43425), (32, 43383), (35, 43341), (41, 43254), (51, 43173),

Gene: Medusa_69 Start: 43591, Stop: 43169, Start Num: 6
Candidate Starts for Medusa_69:
(Start: 6 @43591 has 173 MA's), (26, 43438), (32, 43396), (35, 43354), (41, 43267), (51, 43186),

Gene: MeeZee_68 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for MeeZee_68:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Melvin_71 Start: 43572, Stop: 43150, Start Num: 6
Candidate Starts for Melvin_71:
(Start: 6 @43572 has 173 MA's), (26, 43419), (32, 43377), (35, 43335), (41, 43248), (51, 43167),

Gene: Millski_68 Start: 43578, Stop: 43156, Start Num: 6
Candidate Starts for Millski_68:
(Start: 6 @43578 has 173 MA's), (26, 43425), (32, 43383), (35, 43341), (41, 43254), (51, 43173),

Gene: Morrow_70 Start: 43619, Stop: 43197, Start Num: 6
Candidate Starts for Morrow_70:
(Start: 6 @43619 has 173 MA's), (26, 43466), (32, 43424), (35, 43382), (41, 43295), (51, 43214),

Gene: Nebs_70 Start: 43616, Stop: 43194, Start Num: 6
Candidate Starts for Nebs_70:
(Start: 6 @43616 has 173 MA's), (26, 43463), (32, 43421), (35, 43379), (41, 43292), (51, 43211),

Gene: Nemo27_68 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Nemo27_68:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: Noella_72 Start: 44049, Stop: 43636, Start Num: 6
Candidate Starts for Noella_72:
(4, 44073), (Start: 6 @44049 has 173 MA's), (20, 43947), (21, 43941), (28, 43884), (31, 43872), (34, 43815), (36, 43788), (41, 43728), (43, 43713), (51, 43650),

Gene: Norbert_68 Start: 44047, Stop: 43634, Start Num: 6
Candidate Starts for Norbert_68:
(4, 44071), (Start: 6 @44047 has 173 MA's), (20, 43945), (21, 43939), (28, 43882), (31, 43870), (34, 43813), (36, 43786), (41, 43726), (43, 43711), (51, 43648),

Gene: NorthStar_67 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for NorthStar_67:

(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: NotAPhaseMom_68 Start: 43581, Stop: 43159, Start Num: 6
Candidate Starts for NotAPhaseMom_68:
(Start: 6 @43581 has 173 MA's), (26, 43428), (32, 43386), (35, 43344), (41, 43257), (51, 43176),

Gene: Nyxis_68 Start: 43467, Stop: 43045, Start Num: 6
Candidate Starts for Nyxis_68:
(Start: 6 @43467 has 173 MA's), (26, 43314), (32, 43272), (35, 43230), (41, 43143), (51, 43062),

Gene: OKCentral2016_67 Start: 42617, Stop: 42186, Start Num: 6
Candidate Starts for OKCentral2016_67:
(Start: 6 @42617 has 173 MA's), (12, 42569), (19, 42530), (23, 42488), (28, 42452), (29, 42449), (31, 42440), (34, 42368), (35, 42365), (42, 42275), (48, 42221), (51, 42203),

Gene: OKaNui_68 Start: 43627, Stop: 43205, Start Num: 6
Candidate Starts for OKaNui_68:
(Start: 6 @43627 has 173 MA's), (26, 43474), (30, 43453), (32, 43432), (35, 43390), (41, 43303), (51, 43222),

Gene: Obama12_70 Start: 44000, Stop: 43578, Start Num: 6
Candidate Starts for Obama12_70:
(Start: 6 @44000 has 173 MA's), (26, 43847), (32, 43805), (35, 43763), (41, 43676), (51, 43595),

Gene: Ohfah_70 Start: 43616, Stop: 43194, Start Num: 6
Candidate Starts for Ohfah_70:
(Start: 6 @43616 has 173 MA's), (26, 43463), (32, 43421), (35, 43379), (41, 43292), (51, 43211),

Gene: Palestino_68 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Palestino_68:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Panamaxus_70 Start: 44132, Stop: 43635, Start Num: 1
Candidate Starts for Panamaxus_70:
(Start: 1 @44132 has 1 MA's), (2, 44126), (3, 44087), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: PeaceMeal1_67 Start: 42519, Stop: 42088, Start Num: 6
Candidate Starts for PeaceMeal1_67:
(Start: 6 @42519 has 173 MA's), (11, 42474), (12, 42471), (19, 42432), (23, 42390), (28, 42354), (31, 42342), (34, 42270), (35, 42267), (42, 42177), (48, 42123), (51, 42105),

Gene: Peaches_67 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Peaches_67:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: PeterPeter_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for PeterPeter_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Phacado_69 Start: 43576, Stop: 43154, Start Num: 6
Candidate Starts for Phacado_69:
(Start: 6 @43576 has 173 MA's), (26, 43423), (32, 43381), (35, 43339), (41, 43252), (51, 43171),

Gene: Phantastic_74 Start: 43731, Stop: 43318, Start Num: 6
Candidate Starts for Phantastic_74:
(Start: 6 @43731 has 173 MA's), (20, 43629), (25, 43596), (28, 43566), (34, 43497), (35, 43494), (36, 43470), (38, 43464), (51, 43332), (53, 43326),

Gene: Phelipe_70 Start: 43616, Stop: 43194, Start Num: 6
Candidate Starts for Phelipe_70:
(Start: 6 @43616 has 173 MA's), (26, 43463), (32, 43421), (35, 43379), (41, 43292), (51, 43211),

Gene: Phighter1804_69 Start: 43641, Stop: 43219, Start Num: 6
Candidate Starts for Phighter1804_69:
(Start: 6 @43641 has 173 MA's), (26, 43488), (32, 43446), (35, 43404), (41, 43317), (51, 43236),

Gene: Phontbonne_69 Start: 43483, Stop: 43061, Start Num: 6
Candidate Starts for Phontbonne_69:
(Start: 6 @43483 has 173 MA's), (26, 43330), (32, 43288), (35, 43246), (41, 43159), (51, 43078),

Gene: Pipcraft_66 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Pipcraft_66:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Pistachio_72 Start: 43638, Stop: 43225, Start Num: 6
Candidate Starts for Pistachio_72:
(Start: 6 @43638 has 173 MA's), (20, 43536), (22, 43527), (28, 43473), (34, 43404), (35, 43401), (36, 43377), (38, 43371), (53, 43233),

Gene: Pocahontas_71 Start: 44045, Stop: 43632, Start Num: 6
Candidate Starts for Pocahontas_71:
(4, 44069), (Start: 6 @44045 has 173 MA's), (20, 43943), (21, 43937), (28, 43880), (31, 43868), (34, 43811), (36, 43784), (41, 43724), (43, 43709), (51, 43646),

Gene: Polymorphads_69 Start: 43597, Stop: 43175, Start Num: 6
Candidate Starts for Polymorphads_69:
(Start: 6 @43597 has 173 MA's), (26, 43444), (32, 43402), (35, 43360), (41, 43273), (51, 43192),

Gene: Poompha_66 Start: 42517, Stop: 42086, Start Num: 6
Candidate Starts for Poompha_66:
(Start: 6 @42517 has 173 MA's), (11, 42472), (12, 42469), (19, 42430), (23, 42388), (28, 42352), (29, 42349), (31, 42340), (34, 42268), (35, 42265), (42, 42175), (48, 42121), (51, 42103),

Gene: Popcicle_72 Start: 44045, Stop: 43632, Start Num: 6
Candidate Starts for Popcicle_72:
(4, 44069), (Start: 6 @44045 has 173 MA's), (20, 43943), (21, 43937), (28, 43880), (31, 43868), (34, 43811), (36, 43784), (41, 43724), (43, 43709), (51, 43646),

Gene: Pumbaa_69 Start: 43522, Stop: 43100, Start Num: 6
Candidate Starts for Pumbaa_69:
(Start: 6 @43522 has 173 MA's), (26, 43369), (32, 43327), (35, 43285), (41, 43198), (51, 43117),

Gene: Puppy_73 Start: 43710, Stop: 43297, Start Num: 6
Candidate Starts for Puppy_73:

(Start: 6 @43710 has 173 MA's), (20, 43608), (22, 43599), (28, 43545), (34, 43476), (35, 43473), (36, 43449), (38, 43443), (53, 43305),

Gene: QuinnKiro_71 Start: 44048, Stop: 43635, Start Num: 6
Candidate Starts for QuinnKiro_71:
(4, 44072), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: Rebeuca_70 Start: 43821, Stop: 43390, Start Num: 6
Candidate Starts for Rebeuca_70:
(Start: 6 @43821 has 173 MA's), (12, 43773), (22, 43710), (23, 43692), (28, 43656), (31, 43644), (34, 43572), (35, 43569), (41, 43488), (42, 43479), (44, 43455), (48, 43425),

Gene: Relief_68 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Relief_68:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: ResDef_70 Start: 44048, Stop: 43635, Start Num: 6
Candidate Starts for ResDef_70:
(3, 44087), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: RockieBear_66 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for RockieBear_66:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Rockstar_71 Start: 43557, Stop: 43144, Start Num: 6
Candidate Starts for Rockstar_71:
(Start: 6 @43557 has 173 MA's), (20, 43455), (28, 43392), (34, 43323), (35, 43320), (36, 43296), (53, 43152),

Gene: Roimos_70 Start: 43930, Stop: 43517, Start Num: 6
Candidate Starts for Roimos_70:
(Start: 6 @43930 has 173 MA's), (20, 43828), (22, 43819), (28, 43765), (31, 43753), (34, 43696), (35, 43693), (36, 43669), (38, 43663), (40, 43618), (51, 43531), (53, 43525),

Gene: Romney_68 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Romney_68:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Roosevelt_67 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Roosevelt_67:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: Rosa24_66 Start: 43608, Stop: 43186, Start Num: 6
Candidate Starts for Rosa24_66:
(Start: 6 @43608 has 173 MA's), (26, 43455), (32, 43413), (35, 43371), (41, 43284), (51, 43203),

Gene: Rowdy_71 Start: 43468, Stop: 43097, Start Num: 14
Candidate Starts for Rowdy_71:
(Start: 6 @43522 has 173 MA's), (8, 43495), (10, 43489), (14, 43468), (23, 43393), (28, 43357), (34, 43279), (35, 43276), (42, 43186), (44, 43162), (47, 43135), (48, 43132), (53, 43105),

Gene: Ruin_69 Start: 43570, Stop: 43148, Start Num: 6
Candidate Starts for Ruin_69:
(Start: 6 @43570 has 173 MA's), (26, 43417), (32, 43375), (35, 43333), (41, 43246), (51, 43165),

Gene: Sabertooth_69 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Sabertooth_69:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: SaturnRing_72 Start: 44091, Stop: 43678, Start Num: 6
Candidate Starts for SaturnRing_72:
(Start: 6 @44091 has 173 MA's), (20, 43989), (22, 43980), (28, 43926), (34, 43857), (35, 43854), (36, 43830), (38, 43824), (53, 43686),

Gene: Scamp_69 Start: 43579, Stop: 43157, Start Num: 6
Candidate Starts for Scamp_69:
(Start: 6 @43579 has 173 MA's), (26, 43426), (32, 43384), (35, 43342), (41, 43255), (51, 43174),

Gene: Scout_71 Start: 43261, Stop: 42848, Start Num: 6
Candidate Starts for Scout_71:
(Start: 6 @43261 has 173 MA's), (20, 43159), (22, 43150), (28, 43096), (31, 43084), (34, 43027), (35, 43024), (36, 43000), (38, 42994), (40, 42949), (51, 42862), (53, 42856),

Gene: SenorClean_70 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for SenorClean_70:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Severus_67 Start: 42517, Stop: 42086, Start Num: 6
Candidate Starts for Severus_67:
(Start: 6 @42517 has 173 MA's), (11, 42472), (12, 42469), (19, 42430), (23, 42388), (28, 42352), (29, 42349), (31, 42340), (34, 42268), (35, 42265), (42, 42175), (48, 42121), (51, 42103),

Gene: Shaka_67 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Shaka_67:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Shapes_71 Start: 43468, Stop: 43097, Start Num: 14
Candidate Starts for Shapes_71:
(Start: 6 @43522 has 173 MA's), (8, 43495), (10, 43489), (14, 43468), (23, 43393), (28, 43357), (34, 43279), (35, 43276), (42, 43186), (44, 43162), (47, 43135), (48, 43132), (53, 43105),

Gene: Sheen_73 Start: 47483, Stop: 47070, Start Num: 6
Candidate Starts for Sheen_73:
(Start: 6 @47483 has 173 MA's), (12, 47435), (20, 47381), (22, 47372), (23, 47354), (24, 47351), (25, 47348), (28, 47318), (31, 47306), (34, 47249), (35, 47246), (36, 47222), (41, 47165), (50, 47087),

Gene: SheldonCooper_69 Start: 44017, Stop: 43595, Start Num: 6
Candidate Starts for SheldonCooper_69:
(Start: 6 @44017 has 173 MA's), (26, 43864), (32, 43822), (35, 43780), (41, 43693), (51, 43612),

Gene: Skipitt_68 Start: 43571, Stop: 43149, Start Num: 6
Candidate Starts for Skipitt_68:
(Start: 6 @43571 has 173 MA's), (26, 43418), (32, 43376), (35, 43334), (41, 43247), (51, 43166),

Gene: Sparxx_70 Start: 43572, Stop: 43150, Start Num: 6
Candidate Starts for Sparxx_70:
(Start: 6 @43572 has 173 MA's), (26, 43419), (32, 43377), (35, 43335), (41, 43248), (51, 43167),

Gene: Spino_68 Start: 43580, Stop: 43158, Start Num: 6
Candidate Starts for Spino_68:
(Start: 6 @43580 has 173 MA's), (26, 43427), (32, 43385), (35, 43343), (41, 43256), (51, 43175),

Gene: Stasia_68 Start: 43786, Stop: 43364, Start Num: 6
Candidate Starts for Stasia_68:
(Start: 6 @43786 has 173 MA's), (18, 43714), (20, 43684), (23, 43657), (35, 43549), (41, 43465), (45, 43417), (47, 43405), (52, 43378),

Gene: SteMason_65 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for SteMason_65:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Sultana_69 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for Sultana_69:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: TNguyen7_73 Start: 44051, Stop: 43638, Start Num: 6
Candidate Starts for TNguyen7_73:
(Start: 6 @44051 has 173 MA's), (20, 43949), (22, 43940), (28, 43886), (34, 43817), (35, 43814), (36, 43790), (38, 43784), (53, 43646),

Gene: Taquarus_68 Start: 43580, Stop: 43158, Start Num: 6
Candidate Starts for Taquarus_68:
(Start: 6 @43580 has 173 MA's), (26, 43427), (32, 43385), (35, 43343), (41, 43256), (51, 43175),

Gene: Texage_70 Start: 44049, Stop: 43636, Start Num: 6
Candidate Starts for Texage_70:
(4, 44073), (Start: 6 @44049 has 173 MA's), (20, 43947), (21, 43941), (28, 43884), (31, 43872), (34, 43815), (36, 43788), (41, 43728), (43, 43713), (51, 43650),

Gene: Thanksgivukkah_68 Start: 43575, Stop: 43153, Start Num: 6
Candidate Starts for Thanksgivukkah_68:
(Start: 6 @43575 has 173 MA's), (26, 43422), (32, 43380), (35, 43338), (41, 43251), (51, 43170),

Gene: TinaFeyge_67 Start: 43572, Stop: 43150, Start Num: 6
Candidate Starts for TinaFeyge_67:
(Start: 6 @43572 has 173 MA's), (26, 43419), (32, 43377), (35, 43335), (41, 43248), (51, 43167),

Gene: TinyPebbles_77 Start: 44510, Stop: 44076, Start Num: 6
Candidate Starts for TinyPebbles_77:
(Start: 6 @44510 has 173 MA's), (20, 44408), (22, 44399), (24, 44378), (25, 44375), (31, 44333), (33, 44282), (34, 44279), (36, 44252), (39, 44243), (41, 44192), (45, 44138), (50, 44108), (55, 44087),

Gene: Tinybot_68 Start: 43607, Stop: 43185, Start Num: 6
Candidate Starts for Tinybot_68:
(Start: 6 @43607 has 173 MA's), (26, 43454), (32, 43412), (35, 43370), (41, 43283), (51, 43202),

Gene: TiroTheta9_68 Start: 43571, Stop: 43149, Start Num: 6

Candidate Starts for TiroTheta9_68:
(Start: 6 @43571 has 173 MA's), (26, 43418), (32, 43376), (35, 43334), (41, 43247), (51, 43166),

Gene: Todacoro_72 Start: 44048, Stop: 43635, Start Num: 6
Candidate Starts for Todacoro_72:
(4, 44072), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: Topanga_66 Start: 43246, Stop: 42815, Start Num: 6
Candidate Starts for Topanga_66:
(Start: 6 @43246 has 173 MA's), (12, 43198), (23, 43117), (28, 43081), (34, 42997), (35, 42994), (41, 42913), (42, 42904), (44, 42880), (48, 42850), (53, 42823), (54, 42820),

Gene: Toro_72 Start: 47546, Stop: 47181, Start Num: 12
Candidate Starts for Toro_72:
(Start: 6 @47594 has 173 MA's), (12, 47546), (20, 47492), (22, 47483), (23, 47465), (24, 47462), (25, 47459), (28, 47429), (31, 47417), (34, 47360), (35, 47357), (36, 47333), (41, 47276), (50, 47198),

Gene: TroyPia_70 Start: 43611, Stop: 43189, Start Num: 6
Candidate Starts for TroyPia_70:
(Start: 6 @43611 has 173 MA's), (26, 43458), (32, 43416), (35, 43374), (41, 43287), (51, 43206),

Gene: Twister_68 Start: 43367, Stop: 42936, Start Num: 6
Candidate Starts for Twister_68:
(Start: 6 @43367 has 173 MA's), (12, 43319), (23, 43238), (28, 43202), (34, 43118), (35, 43115), (41, 43034), (42, 43025), (44, 43001), (48, 42971), (53, 42944), (54, 42941),

Gene: TygerBlood_69 Start: 43577, Stop: 43155, Start Num: 6
Candidate Starts for TygerBlood_69:
(Start: 6 @43577 has 173 MA's), (26, 43424), (32, 43382), (35, 43340), (41, 43253), (51, 43172),

Gene: Ulysses_68 Start: 43263, Stop: 42841, Start Num: 6
Candidate Starts for Ulysses_68:
(Start: 6 @43263 has 173 MA's), (26, 43110), (32, 43068), (35, 43026), (41, 42939), (51, 42858),

Gene: Veracruz_69 Start: 44048, Stop: 43635, Start Num: 6
Candidate Starts for Veracruz_69:
(4, 44072), (Start: 6 @44048 has 173 MA's), (20, 43946), (21, 43940), (28, 43883), (31, 43871), (34, 43814), (36, 43787), (41, 43727), (43, 43712), (51, 43649),

Gene: WalterMcMickey_68 Start: 43367, Stop: 42936, Start Num: 6
Candidate Starts for WalterMcMickey_68:
(Start: 6 @43367 has 173 MA's), (12, 43319), (23, 43238), (28, 43202), (34, 43118), (35, 43115), (41, 43034), (42, 43025), (44, 43001), (48, 42971), (53, 42944), (54, 42941),

Gene: Wander_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Wander_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Wilbur_69 Start: 43574, Stop: 43152, Start Num: 6
Candidate Starts for Wilbur_69:
(Start: 6 @43574 has 173 MA's), (26, 43421), (32, 43379), (35, 43337), (41, 43250), (51, 43169),

Gene: Wooldri_80 Start: 44392, Stop: 43958, Start Num: 6
Candidate Starts for Wooldri_80:
(Start: 6 @44392 has 173 MA's), (20, 44290), (22, 44281), (24, 44260), (25, 44257), (31, 44215), (33, 44164), (34, 44161), (36, 44134), (39, 44125), (41, 44074), (45, 44020), (50, 43990), (55, 43969),

Gene: YoSam321_69 Start: 43571, Stop: 43149, Start Num: 6
Candidate Starts for YoSam321_69:
(Start: 6 @43571 has 173 MA's), (26, 43418), (32, 43376), (35, 43334), (41, 43247), (51, 43166),

Gene: Zarafa_70 Start: 44023, Stop: 43610, Start Num: 6
Candidate Starts for Zarafa_70:
(Start: 6 @44023 has 173 MA's), (20, 43921), (28, 43858), (31, 43846), (34, 43789), (35, 43786), (36, 43762), (38, 43756), (41, 43705), (53, 43618),

Gene: Zetzy_75 Start: 44052, Stop: 43609, Start Num: 6
Candidate Starts for Zetzy_75:
(Start: 6 @44052 has 173 MA's), (7, 44040), (22, 43941), (24, 43920), (26, 43899), (28, 43887), (34, 43821), (36, 43794), (41, 43737), (45, 43683), (55, 43632), (56, 43620),