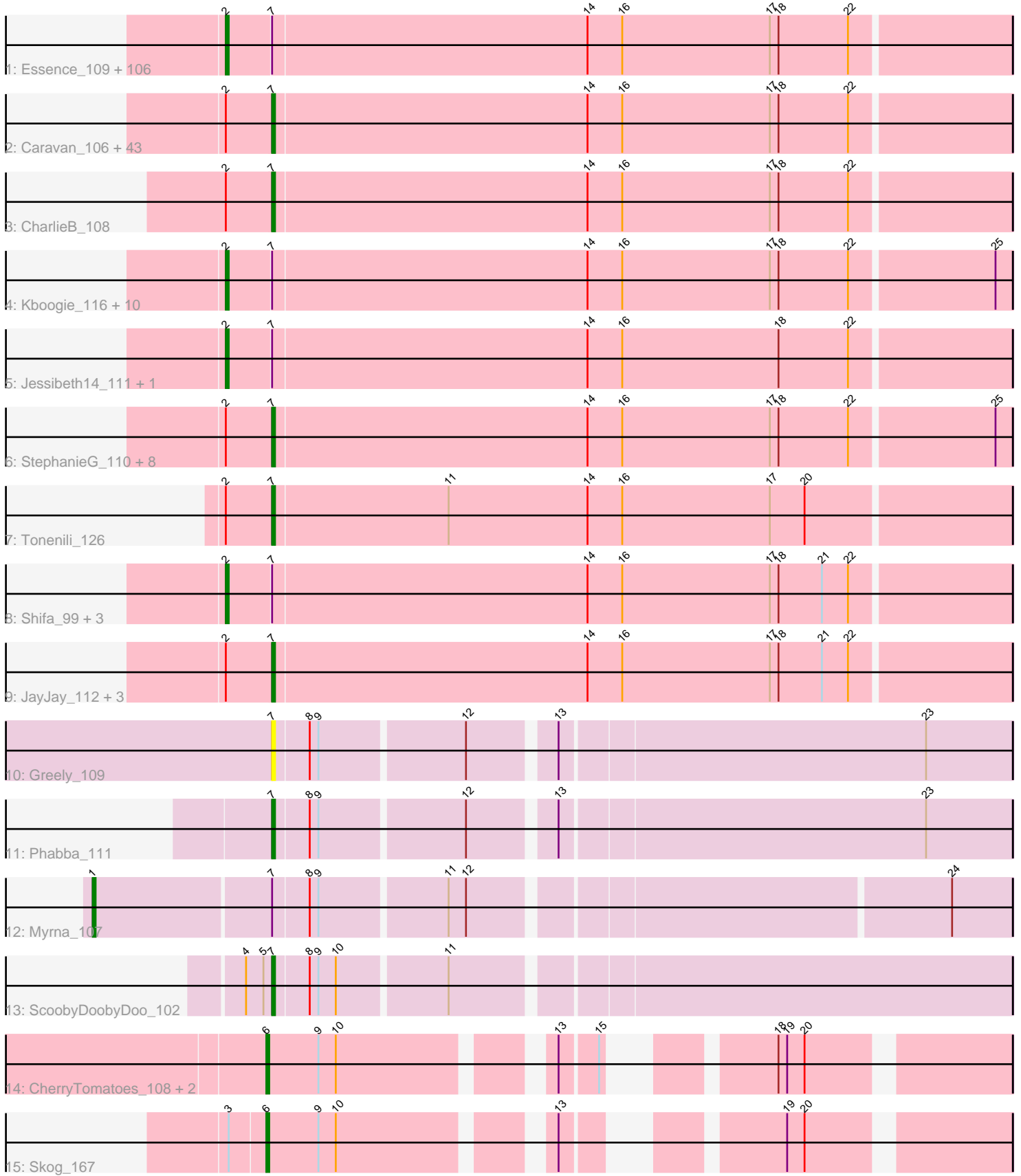


Pham 163367



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 163367 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163367 has 191 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Essence_109, I3_117, Colt_103, ValleyTerrace_112, Bipolarisk_111, BadAgartude_108, Naija_111, FudgeTart_110, LRRHood_105, Audrick_114, YemiJoy2021_113, Basquiat_108, CindyLou_113, ShiaLabeouf_111, Ewok_113, Rizal_107, Khaleesi_111, Delilah_112, EasyJones_114, NedWong_113, ArcherS7_111, Pivoine_111, Melpomini_106, Shaqnato_105, DTDevon_112, Grasshills_118, SrishMeg2525_111, ErnieJ_106, Loanshark_111, Megamind_111, Erdmann_112, DirtMonster_106, Yassified_109, Derek_111, Quasimodo_113, EggyFarm_119, LolaVinca_112, ET08_100, Gizmo_116, Sauce_112, Shelob_114, Ading_112, Rahel_111, BackyardAgain_109, Mangeria_112, Patter_112, Amataga_112, Maby2021_112, Cali_107, Napoleon13_108, Capablanca_114, TinyTim_112, ZygoTaiga_110, Breeniome_111, Burrough_112, Pier_116, Atlantean_111, MikeLiesIn_113, Cane17_102, Bonray_112, Flabslab_106, JustHall_109, Zeenon_113, Nidhogg_113, DrPhinkDaddy_111, SmallFry_112, Jedediah_115, Ngannou_108, Specks_117, Koguma_109, Adlitam_112, Latch_112, Ava3_113, IkeLoa_105, JulietS_106, Shnickers_112, Norm_113, Chargie21_108, Phusco_112, ParkTD_113, EmmaElysia_112, Roots515_110, FrayBell_117, BigCity_119, Phox_109, Fludd_112, Tyke_112, Lukilu_102, Spud_111, Zalkecks_113, McWolfish_110, PurduePete_112, Pio_116, QBert_106, Iota_107, BeanWater_104, LifeSavor_110, Yucca_111, Babyland_113, Teardrop_111, Gabriel_112, FoxtrotP1_112, Darko_112, JPickles_109, SilverDipper_113, Concombre_117, Daffodil_117
- Track 2 : Caravan_106, LordLeafolot_115, Dietrick_104, Gamgam_112, Jaygup_112, Drazdys_110, InterFolia_118, Naval22_116, Delylah_115, Sebata_112, Bigswole_115, Astraea_108, Halldule_105, Spec_107, Mikro_109, Issimir_110, Shrimp_112, Matsumoto_108, Blubba_103, Momo_111, MoMoMixon_112, Janiyra_114, Phlegm_114, Nappy_114, Rabinovish_109, YoungMoneyMata_113, Guwapp_111, Bread_111, Grungle_99, Morizzled23_112, Jemmno_112, Sprinklers_108, BananaFence_111, Pleione_115, Salacia_116, Ronan_106, Lee7_109, NuevoMundo_117, InigoMontoya_113, Bangla1971_113, Bxz1_109, Izajani_112, Willis_113, Ghost_110
- Track 3 : CharlieB_108
- Track 4 : Kboogie_116, ChaylaJr_107, ChickenPhender_108, RoMag_107, Kamryn_112, McGee_114, Blackbrain_107, StubbySaigey_115, Tortoise16_109, Wally_111, Turret_107
- Track 5 : Jessibeth14_111, Stubby_104
- Track 6 : StephanieG_110, Trinitium_109, ScottMcG_108, Asterius_108, Littleton_112, Chomp_109, Catera_108, NoodleTree_119, Cactojaque_107

- Track 7 : Tonenili_126
- Track 8 : Shifa_99, Pinkcreek_103, EmToTheThree_114, Dandelion_117
- Track 9 : JayJay_112, HyRo_102, LinStu_110, Alice_104
- Track 10 : Greely_109
- Track 11 : Phabba_111
- Track 12 : Myrna_107
- Track 13 : ScoobyDoobyDoo_102
- Track 14 : CherryTomatoes_108, Pupper_104, SCentae_103
- Track 15 : Skog_167

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

The start number called the most often in the published annotations is 2, it was called in 119 of the 173 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ading_112, Adlitam_112, Amataga_112, ArcherS7_111, Atlantean_111, Audrick_114, Ava3_113, Babyland_113, BackyardAgain_109, BadAgartude_108, Basquiat_108, BeanWater_104, BigCity_119, Bipolarisk_111, Blackbrain_107, Bonray_112, Breeniome_111, Burrough_112, Cali_107, Cane17_102, Capablanca_114, Chargie21_108, ChaylaJr_107, ChickenPhender_108, CindyLou_113, Colt_103, Concombre_117, DTDevon_112, Daffodil_117, Dandelion_117, Darko_112, Delilah_112, Derek_111, DirtMonster_106, DrPhinkDaddy_111, ET08_100, EasyJones_114, EggyFarm_119, EmToTheThree_114, EmmaElysia_112, Erdmann_112, ErnieJ_106, Essence_109, Ewok_113, Flabslab_106, Fludd_112, FoxtrotP1_112, FrayBell_117, FudgeTart_110, Gabriel_112, Gizmo_116, Grasshills_118, I3_117, IkeLoa_105, Iota_107, JPickles_109, Jedediah_115, Jessibeth14_111, JulietS_106, JustHall_109, Kamryn_112, Kboogie_116, Khaleesi_111, Koguma_109, LRRHood_105, Latch_112, LifeSavor_110, Loanshark_111, LolaVinca_112, Lukilu_102, Maby2021_112, Mangeria_112, McGee_114, McWolfish_110, Megamind_111, Melpomini_106, MikeLiesIn_113, Naija_111, Napoleon13_108, NedWong_113, Ngannou_108, Nidhogg_113, Norm_113, ParkTD_113, Patter_112, Phox_109, Phusco_112, Pier_116, Pinkcreek_103, Pio_116, Pivoine_111, PurduePete_112, QBert_106, Quasimodo_113, Rahel_111, Rizal_107, RoMag_107, Roots515_110, Sauce_112, Shaqnato_105, Shelob_114, ShiaLabeouf_111, Shifa_99, Shnickers_112, SilverDipper_113, SmallFry_112, Specks_117, Spud_111, SrishMeg2525_111, StubbySaigey_115, Stubby_104, Teardrop_111, TinyTim_112, Tortoise16_109, Turret_107, Tyke_112, ValleyTerrace_112, Wally_111, Yassified_109, YemiJoy2021_113, Yucca_111, Zalkecks_113, Zeenon_113, ZygoTaiga_110,

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

- Alice_104, Asterius_108, Astraea_108, BananaFence_111, Bangla1971_113, Bigswole_115, Blubba_103, Bread_111, Bxz1_109, Cactojaque_107, Caravan_106, Catera_108, CharlieB_108, Chomp_109, Delylah_115, Dietrick_104, Drazdys_110, Gangam_112, Ghost_110, Grungle_99, Guwapp_111, Halldule_105, HyRo_102, InigoMontoya_113, InterFolia_118, Issimir_110, Izajani_112, Janiyra_114, JayJay_112, Jaygup_112, Jemmno_112, Lee7_109, LinStu_110, Littleton_112, LordLeafolot_115, Matsumoto_108, Mikro_109, MoMoMixon_112, Momo_111, Morizzled23_112, Nappy_114, Naval22_116, NoodleTree_119, NuevoMundo_117,

Phlegm_114, Pleione_115, Rabinovish_109, Ronan_106, Salacia_116, ScottMcG_108, Sebata_112, Shrimp_112, Spec_107, Sprinklers_108, StephanieG_110, Tonenili_126, Trinitium_109, Willis_113, YoungMoneyMata_113,

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

- CherryTomatoes_108, Greely_109, Myrna_107, Phabba_111, Pupper_104, SCentae_103, ScoobyDoobyDoo_102, Skog_167,

Summary by start number:

Start 1:

- Found in 1 of 191 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna_107 (C2),

Start 2:

- Found in 183 of 191 (95.8%) of genes in pham
- Manual Annotations of this start: 119 of 173
- Called 67.8% of time when present
- Phage (with cluster) where this start called: Ading_112 (C1), Adlitam_112 (C1), Amataga_112 (C1), ArcherS7_111 (C1), Atlantean_111 (C1), Audrick_114 (C1), Ava3_113 (C1), Babyland_113 (C1), BackyardAgain_109 (C1), BadAgartude_108 (C1), Basquiat_108 (C1), BeanWater_104 (C1), BigCity_119 (C1), Bipolarisk_111 (C1), Blackbrain_107 (C1), Bonray_112 (C1), Breeniome_111 (C1), Burrough_112 (C1), Cali_107 (C1), Cane17_102 (C1), Capablanca_114 (C1), Chargie21_108 (C1), ChaylaJr_107 (C1), ChickenPhender_108 (C1), CindyLou_113 (C1), Colt_103 (C1), Concombre_117 (C1), DTDevon_112 (C1), Daffodil_117 (C1), Dandelion_117 (C1), Darko_112 (C1), Delilah_112 (C1), Derek_111 (C1), DirtMonster_106 (C1), DrPhinkDaddy_111 (C1), ET08_100 (C1), EasyJones_114 (C1), EggyFarm_119 (C1), EmToTheThree_114 (C1), EmmaElysia_112 (C1), Erdmann_112 (C1), ErnieJ_106 (C1), Essence_109 (C1), Ewok_113 (C1), Flabslab_106 (C1), Fludd_112 (C1), FoxtrotP1_112 (C1), FrayBell_117 (C1), FudgeTart_110 (C1), Gabriel_112 (C1), Gizmo_116 (C1), Grasshills_118 (C1), I3_117 (C1), IkeLoa_105 (C1), Iota_107 (C1), JPickles_109 (C1), Jedediah_115 (C1), Jessibeth14_111 (C1), JulietS_106 (C1), JustHall_109 (C1), Kamryn_112 (C1), Kboogie_116 (C1), Khaleesi_111 (C1), Koguma_109 (C1), LRRHood_105 (C1), Latch_112 (C1), LifeSavor_110 (C1), Loanshark_111 (C1), LolaVinca_112 (C1), Lukilu_102 (C1), Maby2021_112 (C1), Mangeria_112 (C1), McGee_114 (C1), McWolfish_110 (C1), Megamind_111 (C1), Melpomini_106 (C1), MikeLiesIn_113 (C1), Naija_111 (C1), Napoleon13_108 (C1), NedWong_113 (C1), Ngannou_108 (C1), Nidhogg_113 (C1), Norm_113 (C1), ParkTD_113 (C1), Patter_112 (C1), Phox_109 (C1), Phusco_112 (C1), Pier_116 (C1), Pinkcreek_103 (C1), Pio_116 (C1), Pivoine_111 (C1), PurduePete_112 (C1), QBert_106 (C1), Quasimodo_113 (C1), Rahel_111 (C1), Rizal_107 (C1), RoMag_107 (C1), Roots515_110 (C1), Sauce_112 (C1), Shaqnato_105 (C1), Shelob_114 (C1), ShiaLabeouf_111 (C1), Shifa_99 (C1), Shnickers_112 (C1), SilverDipper_113 (C1), SmallFry_112 (C1), Specks_117 (C1), Spud_111 (C1), SrishMeg2525_111 (C1), StubbySaigey_115 (C1), Stubby_104 (C1), Teardrop_111 (C1), TinyTim_112 (C1), Tortoise16_109 (C1), Turret_107 (C1), Tyke_112 (C1), ValleyTerrace_112 (C1), Wally_111 (C1), Yassified_109 (C1), YemiJoy2021_113 (C1), Yucca_111 (C1), Zalkecks_113 (C1), Zeenon_113 (C1), ZygoTaiga_110 (C1),

Start 6:

- Found in 4 of 191 (2.1%) of genes in pham
- Manual Annotations of this start: 3 of 173
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes_108 (DO), Pupper_104 (DO), SCentae_103 (DO), Skog_167 (DO),

Start 7:

- Found in 187 of 191 (97.9%) of genes in pham
- Manual Annotations of this start: 50 of 173
- Called 33.2% of time when present
- Phage (with cluster) where this start called: Alice_104 (C1), Asterius_108 (C1), Astraea_108 (C1), BananaFence_111 (C1), Bangla1971_113 (C1), Bigswole_115 (C1), Blubba_103 (C1), Bread_111 (C1), Bxz1_109 (C1), Cactojaque_107 (C1), Caravan_106 (C1), Catera_108 (C1), CharlieB_108 (C1), Chomp_109 (C1), Delylah_115 (C1), Dietrick_104 (C1), Drazdys_110 (C1), Gamgam_112 (C1), Ghost_110 (C1), Greely_109 (C2), Grungle_99 (C1), Guwapp_111 (C1), Halldule_105 (C1), HyRo_102 (C1), InigoMontoya_113 (C1), InterFolia_118 (C1), Issimir_110 (C1), Izajani_112 (C1), Janiyra_114 (C1), JayJay_112 (C1), Jaygup_112 (C1), Jemmno_112 (C1), Lee7_109 (C1), LinStu_110 (C1), Littleton_112 (C1), LordLeafolot_115 (C1), Matsumoto_108 (C1), Mikro_109 (C1), MoMoMixon_112 (C1), Momo_111 (C1), Morizzled23_112 (C1), Nappy_114 (C1), Naval22_116 (C1), NoodleTree_119 (C1), NuevoMundo_117 (C1), Phabba_111 (C2), Phlegm_114 (C1), Pleione_115 (C1), Rabinovish_109 (C1), Ronan_106 (C1), Salacia_116 (C1), ScoobyDoobyDoo_102 (C2), ScottMcG_108 (C1), Sebata_112 (C1), Shrimp_112 (C1), Spec_107 (C1), Sprinklers_108 (C1), StephanieG_110 (C1), Tonenili_126 (C1), Trinitium_109 (C1), Willis_113 (C1), YoungMoneyMata_113 (C1),

Summary by clusters:

There are 3 clusters represented in this pham: DO, C1, C2,

Info for manual annotations of cluster C1:

- Start number 2 was manually annotated 119 times for cluster C1.
- Start number 7 was manually annotated 48 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 1 was manually annotated 1 time for cluster C2.
- Start number 7 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster DO:

- Start number 6 was manually annotated 3 times for cluster DO.

Gene Information:

Gene: Ading_112 Start: 57327, Stop: 57593, Start Num: 2

Candidate Starts for Ading_112:

(Start: 2 @57327 has 119 MA's), (Start: 7 @57342 has 50 MA's), (14, 57450), (16, 57462), (17, 57513), (18, 57516), (22, 57540),

Gene: Adlitam_112 Start: 57344, Stop: 57610, Start Num: 2

Candidate Starts for Adlitam_112:

(Start: 2 @57344 has 119 MA's), (Start: 7 @57359 has 50 MA's), (14, 57467), (16, 57479), (17, 57530), (18, 57533), (22, 57557),

Gene: Alice_104 Start: 56637, Stop: 56888, Start Num: 7

Candidate Starts for Alice_104:

(Start: 2 @56622 has 119 MA's), (Start: 7 @56637 has 50 MA's), (14, 56745), (16, 56757), (17, 56808), (18, 56811), (21, 56826), (22, 56835),

Gene: Amataga_112 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for Amataga_112:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: ArcherS7_111 Start: 56907, Stop: 57173, Start Num: 2

Candidate Starts for ArcherS7_111:

(Start: 2 @56907 has 119 MA's), (Start: 7 @56922 has 50 MA's), (14, 57030), (16, 57042), (17, 57093), (18, 57096), (22, 57120),

Gene: Asterius_108 Start: 57598, Stop: 57849, Start Num: 7

Candidate Starts for Asterius_108:

(Start: 2 @57583 has 119 MA's), (Start: 7 @57598 has 50 MA's), (14, 57706), (16, 57718), (17, 57769), (18, 57772), (22, 57796), (25, 57844),

Gene: Astraea_108 Start: 56373, Stop: 56624, Start Num: 7

Candidate Starts for Astraea_108:

(Start: 2 @56358 has 119 MA's), (Start: 7 @56373 has 50 MA's), (14, 56481), (16, 56493), (17, 56544), (18, 56547), (22, 56571),

Gene: Atlantean_111 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for Atlantean_111:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Audrick_114 Start: 56568, Stop: 56834, Start Num: 2

Candidate Starts for Audrick_114:

(Start: 2 @56568 has 119 MA's), (Start: 7 @56583 has 50 MA's), (14, 56691), (16, 56703), (17, 56754), (18, 56757), (22, 56781),

Gene: Ava3_113 Start: 57502, Stop: 57768, Start Num: 2

Candidate Starts for Ava3_113:

(Start: 2 @57502 has 119 MA's), (Start: 7 @57517 has 50 MA's), (14, 57625), (16, 57637), (17, 57688), (18, 57691), (22, 57715),

Gene: Babyland_113 Start: 56677, Stop: 56943, Start Num: 2

Candidate Starts for Babyland_113:

(Start: 2 @56677 has 119 MA's), (Start: 7 @56692 has 50 MA's), (14, 56800), (16, 56812), (17, 56863), (18, 56866), (22, 56890),

Gene: BackyardAgain_109 Start: 56505, Stop: 56771, Start Num: 2

Candidate Starts for BackyardAgain_109:

(Start: 2 @56505 has 119 MA's), (Start: 7 @56520 has 50 MA's), (14, 56628), (16, 56640), (17, 56691), (18, 56694), (22, 56718),

Gene: BadAgartude_108 Start: 57794, Stop: 58060, Start Num: 2
Candidate Starts for BadAgartude_108:
(Start: 2 @57794 has 119 MA's), (Start: 7 @57809 has 50 MA's), (14, 57917), (16, 57929), (17, 57980), (18, 57983), (22, 58007),

Gene: BananaFence_111 Start: 57773, Stop: 58024, Start Num: 7
Candidate Starts for BananaFence_111:
(Start: 2 @57758 has 119 MA's), (Start: 7 @57773 has 50 MA's), (14, 57881), (16, 57893), (17, 57944), (18, 57947), (22, 57971),

Gene: Bangla1971_113 Start: 57052, Stop: 57303, Start Num: 7
Candidate Starts for Bangla1971_113:
(Start: 2 @57037 has 119 MA's), (Start: 7 @57052 has 50 MA's), (14, 57160), (16, 57172), (17, 57223), (18, 57226), (22, 57250),

Gene: Basquiat_108 Start: 56221, Stop: 56487, Start Num: 2
Candidate Starts for Basquiat_108:
(Start: 2 @56221 has 119 MA's), (Start: 7 @56236 has 50 MA's), (14, 56344), (16, 56356), (17, 56407), (18, 56410), (22, 56434),

Gene: BeanWater_104 Start: 57356, Stop: 57622, Start Num: 2
Candidate Starts for BeanWater_104:
(Start: 2 @57356 has 119 MA's), (Start: 7 @57371 has 50 MA's), (14, 57479), (16, 57491), (17, 57542), (18, 57545), (22, 57569),

Gene: BigCity_119 Start: 60018, Stop: 60284, Start Num: 2
Candidate Starts for BigCity_119:
(Start: 2 @60018 has 119 MA's), (Start: 7 @60033 has 50 MA's), (14, 60141), (16, 60153), (17, 60204), (18, 60207), (22, 60231),

Gene: Bigswole_115 Start: 59318, Stop: 59569, Start Num: 7
Candidate Starts for Bigswole_115:
(Start: 2 @59303 has 119 MA's), (Start: 7 @59318 has 50 MA's), (14, 59426), (16, 59438), (17, 59489), (18, 59492), (22, 59516),

Gene: Bipolarisk_111 Start: 57760, Stop: 58026, Start Num: 2
Candidate Starts for Bipolarisk_111:
(Start: 2 @57760 has 119 MA's), (Start: 7 @57775 has 50 MA's), (14, 57883), (16, 57895), (17, 57946), (18, 57949), (22, 57973),

Gene: Blackbrain_107 Start: 56052, Stop: 56318, Start Num: 2
Candidate Starts for Blackbrain_107:
(Start: 2 @56052 has 119 MA's), (Start: 7 @56067 has 50 MA's), (14, 56175), (16, 56187), (17, 56238), (18, 56241), (22, 56265), (25, 56313),

Gene: Blubba_103 Start: 57806, Stop: 58057, Start Num: 7
Candidate Starts for Blubba_103:
(Start: 2 @57791 has 119 MA's), (Start: 7 @57806 has 50 MA's), (14, 57914), (16, 57926), (17, 57977), (18, 57980), (22, 58004),

Gene: Bonray_112 Start: 57933, Stop: 58199, Start Num: 2
Candidate Starts for Bonray_112:

(Start: 2 @57933 has 119 MA's), (Start: 7 @57948 has 50 MA's), (14, 58056), (16, 58068), (17, 58119), (18, 58122), (22, 58146),

Gene: Bread_111 Start: 57603, Stop: 57854, Start Num: 7

Candidate Starts for Bread_111:

(Start: 2 @57588 has 119 MA's), (Start: 7 @57603 has 50 MA's), (14, 57711), (16, 57723), (17, 57774), (18, 57777), (22, 57801),

Gene: Breeniome_111 Start: 55936, Stop: 56202, Start Num: 2

Candidate Starts for Breeniome_111:

(Start: 2 @55936 has 119 MA's), (Start: 7 @55951 has 50 MA's), (14, 56059), (16, 56071), (17, 56122), (18, 56125), (22, 56149),

Gene: Burrough_112 Start: 58087, Stop: 58353, Start Num: 2

Candidate Starts for Burrough_112:

(Start: 2 @58087 has 119 MA's), (Start: 7 @58102 has 50 MA's), (14, 58210), (16, 58222), (17, 58273), (18, 58276), (22, 58300),

Gene: Bxz1_109 Start: 59305, Stop: 59556, Start Num: 7

Candidate Starts for Bxz1_109:

(Start: 2 @59290 has 119 MA's), (Start: 7 @59305 has 50 MA's), (14, 59413), (16, 59425), (17, 59476), (18, 59479), (22, 59503),

Gene: Cactojaque_107 Start: 56174, Stop: 56425, Start Num: 7

Candidate Starts for Cactojaque_107:

(Start: 2 @56159 has 119 MA's), (Start: 7 @56174 has 50 MA's), (14, 56282), (16, 56294), (17, 56345), (18, 56348), (22, 56372), (25, 56420),

Gene: Cali_107 Start: 58089, Stop: 58355, Start Num: 2

Candidate Starts for Cali_107:

(Start: 2 @58089 has 119 MA's), (Start: 7 @58104 has 50 MA's), (14, 58212), (16, 58224), (17, 58275), (18, 58278), (22, 58302),

Gene: Cane17_102 Start: 57849, Stop: 58115, Start Num: 2

Candidate Starts for Cane17_102:

(Start: 2 @57849 has 119 MA's), (Start: 7 @57864 has 50 MA's), (14, 57972), (16, 57984), (17, 58035), (18, 58038), (22, 58062),

Gene: Capablanca_114 Start: 58339, Stop: 58605, Start Num: 2

Candidate Starts for Capablanca_114:

(Start: 2 @58339 has 119 MA's), (Start: 7 @58354 has 50 MA's), (14, 58462), (16, 58474), (17, 58525), (18, 58528), (22, 58552),

Gene: Caravan_106 Start: 57461, Stop: 57712, Start Num: 7

Candidate Starts for Caravan_106:

(Start: 2 @57446 has 119 MA's), (Start: 7 @57461 has 50 MA's), (14, 57569), (16, 57581), (17, 57632), (18, 57635), (22, 57659),

Gene: Catera_108 Start: 56378, Stop: 56629, Start Num: 7

Candidate Starts for Catera_108:

(Start: 2 @56363 has 119 MA's), (Start: 7 @56378 has 50 MA's), (14, 56486), (16, 56498), (17, 56549), (18, 56552), (22, 56576), (25, 56624),

Gene: Chargie21_108 Start: 56221, Stop: 56487, Start Num: 2

Candidate Starts for Chargie21_108:

(Start: 2 @56221 has 119 MA's), (Start: 7 @56236 has 50 MA's), (14, 56344), (16, 56356), (17, 56407), (18, 56410), (22, 56434),

Gene: CharlieB_108 Start: 56508, Stop: 56759, Start Num: 7

Candidate Starts for CharlieB_108:

(Start: 2 @56493 has 119 MA's), (Start: 7 @56508 has 50 MA's), (14, 56616), (16, 56628), (17, 56679), (18, 56682), (22, 56706),

Gene: ChaylaJr_107 Start: 55985, Stop: 56251, Start Num: 2

Candidate Starts for ChaylaJr_107:

(Start: 2 @55985 has 119 MA's), (Start: 7 @56000 has 50 MA's), (14, 56108), (16, 56120), (17, 56171), (18, 56174), (22, 56198), (25, 56246),

Gene: CherryTomatoes_108 Start: 60626, Stop: 60835, Start Num: 6

Candidate Starts for CherryTomatoes_108:

(Start: 6 @60626 has 3 MA's), (9, 60644), (10, 60650), (13, 60713), (15, 60725), (18, 60764), (19, 60767), (20, 60773),

Gene: ChickenPhender_108 Start: 56288, Stop: 56554, Start Num: 2

Candidate Starts for ChickenPhender_108:

(Start: 2 @56288 has 119 MA's), (Start: 7 @56303 has 50 MA's), (14, 56411), (16, 56423), (17, 56474), (18, 56477), (22, 56501), (25, 56549),

Gene: Chomp_109 Start: 57893, Stop: 58144, Start Num: 7

Candidate Starts for Chomp_109:

(Start: 2 @57878 has 119 MA's), (Start: 7 @57893 has 50 MA's), (14, 58001), (16, 58013), (17, 58064), (18, 58067), (22, 58091), (25, 58139),

Gene: CindyLou_113 Start: 57918, Stop: 58184, Start Num: 2

Candidate Starts for CindyLou_113:

(Start: 2 @57918 has 119 MA's), (Start: 7 @57933 has 50 MA's), (14, 58041), (16, 58053), (17, 58104), (18, 58107), (22, 58131),

Gene: Colt_103 Start: 58445, Stop: 58711, Start Num: 2

Candidate Starts for Colt_103:

(Start: 2 @58445 has 119 MA's), (Start: 7 @58460 has 50 MA's), (14, 58568), (16, 58580), (17, 58631), (18, 58634), (22, 58658),

Gene: Concombre_117 Start: 60251, Stop: 60517, Start Num: 2

Candidate Starts for Concombre_117:

(Start: 2 @60251 has 119 MA's), (Start: 7 @60266 has 50 MA's), (14, 60374), (16, 60386), (17, 60437), (18, 60440), (22, 60464),

Gene: DTDevon_112 Start: 58129, Stop: 58395, Start Num: 2

Candidate Starts for DTDevon_112:

(Start: 2 @58129 has 119 MA's), (Start: 7 @58144 has 50 MA's), (14, 58252), (16, 58264), (17, 58315), (18, 58318), (22, 58342),

Gene: Daffodil_117 Start: 58060, Stop: 58326, Start Num: 2

Candidate Starts for Daffodil_117:

(Start: 2 @58060 has 119 MA's), (Start: 7 @58075 has 50 MA's), (14, 58183), (16, 58195), (17, 58246), (18, 58249), (22, 58273),

Gene: Dandelion_117 Start: 60242, Stop: 60508, Start Num: 2

Candidate Starts for Dandelion_117:

(Start: 2 @60242 has 119 MA's), (Start: 7 @60257 has 50 MA's), (14, 60365), (16, 60377), (17, 60428), (18, 60431), (21, 60446), (22, 60455),

Gene: Darko_112 Start: 57762, Stop: 58028, Start Num: 2

Candidate Starts for Darko_112:

(Start: 2 @57762 has 119 MA's), (Start: 7 @57777 has 50 MA's), (14, 57885), (16, 57897), (17, 57948), (18, 57951), (22, 57975),

Gene: Delilah_112 Start: 58214, Stop: 58480, Start Num: 2

Candidate Starts for Delilah_112:

(Start: 2 @58214 has 119 MA's), (Start: 7 @58229 has 50 MA's), (14, 58337), (16, 58349), (17, 58400), (18, 58403), (22, 58427),

Gene: Delylah_115 Start: 57768, Stop: 58019, Start Num: 7

Candidate Starts for Delylah_115:

(Start: 2 @57753 has 119 MA's), (Start: 7 @57768 has 50 MA's), (14, 57876), (16, 57888), (17, 57939), (18, 57942), (22, 57966),

Gene: Derek_111 Start: 57679, Stop: 57945, Start Num: 2

Candidate Starts for Derek_111:

(Start: 2 @57679 has 119 MA's), (Start: 7 @57694 has 50 MA's), (14, 57802), (16, 57814), (17, 57865), (18, 57868), (22, 57892),

Gene: Dietrick_104 Start: 55770, Stop: 56021, Start Num: 7

Candidate Starts for Dietrick_104:

(Start: 2 @55755 has 119 MA's), (Start: 7 @55770 has 50 MA's), (14, 55878), (16, 55890), (17, 55941), (18, 55944), (22, 55968),

Gene: DirtMonster_106 Start: 57013, Stop: 57279, Start Num: 2

Candidate Starts for DirtMonster_106:

(Start: 2 @57013 has 119 MA's), (Start: 7 @57028 has 50 MA's), (14, 57136), (16, 57148), (17, 57199), (18, 57202), (22, 57226),

Gene: DrPhinkDaddy_111 Start: 58282, Stop: 58548, Start Num: 2

Candidate Starts for DrPhinkDaddy_111:

(Start: 2 @58282 has 119 MA's), (Start: 7 @58297 has 50 MA's), (14, 58405), (16, 58417), (17, 58468), (18, 58471), (22, 58495),

Gene: Drazdys_110 Start: 56758, Stop: 57009, Start Num: 7

Candidate Starts for Drazdys_110:

(Start: 2 @56743 has 119 MA's), (Start: 7 @56758 has 50 MA's), (14, 56866), (16, 56878), (17, 56929), (18, 56932), (22, 56956),

Gene: ET08_100 Start: 56743, Stop: 57009, Start Num: 2

Candidate Starts for ET08_100:

(Start: 2 @56743 has 119 MA's), (Start: 7 @56758 has 50 MA's), (14, 56866), (16, 56878), (17, 56929), (18, 56932), (22, 56956),

Gene: EasyJones_114 Start: 56885, Stop: 57151, Start Num: 2
Candidate Starts for EasyJones_114:
(Start: 2 @56885 has 119 MA's), (Start: 7 @56900 has 50 MA's), (14, 57008), (16, 57020), (17, 57071), (18, 57074), (22, 57098),

Gene: EggyFarm_119 Start: 60018, Stop: 60284, Start Num: 2
Candidate Starts for EggyFarm_119:
(Start: 2 @60018 has 119 MA's), (Start: 7 @60033 has 50 MA's), (14, 60141), (16, 60153), (17, 60204), (18, 60207), (22, 60231),

Gene: EmToTheThree_114 Start: 59022, Stop: 59288, Start Num: 2
Candidate Starts for EmToTheThree_114:
(Start: 2 @59022 has 119 MA's), (Start: 7 @59037 has 50 MA's), (14, 59145), (16, 59157), (17, 59208), (18, 59211), (21, 59226), (22, 59235),

Gene: EmmaElysia_112 Start: 56808, Stop: 57074, Start Num: 2
Candidate Starts for EmmaElysia_112:
(Start: 2 @56808 has 119 MA's), (Start: 7 @56823 has 50 MA's), (14, 56931), (16, 56943), (17, 56994), (18, 56997), (22, 57021),

Gene: Erdmann_112 Start: 58061, Stop: 58327, Start Num: 2
Candidate Starts for Erdmann_112:
(Start: 2 @58061 has 119 MA's), (Start: 7 @58076 has 50 MA's), (14, 58184), (16, 58196), (17, 58247), (18, 58250), (22, 58274),

Gene: ErnieJ_106 Start: 56016, Stop: 56282, Start Num: 2
Candidate Starts for ErnieJ_106:
(Start: 2 @56016 has 119 MA's), (Start: 7 @56031 has 50 MA's), (14, 56139), (16, 56151), (17, 56202), (18, 56205), (22, 56229),

Gene: Essence_109 Start: 56909, Stop: 57175, Start Num: 2
Candidate Starts for Essence_109:
(Start: 2 @56909 has 119 MA's), (Start: 7 @56924 has 50 MA's), (14, 57032), (16, 57044), (17, 57095), (18, 57098), (22, 57122),

Gene: Ewok_113 Start: 57448, Stop: 57714, Start Num: 2
Candidate Starts for Ewok_113:
(Start: 2 @57448 has 119 MA's), (Start: 7 @57463 has 50 MA's), (14, 57571), (16, 57583), (17, 57634), (18, 57637), (22, 57661),

Gene: Flabslab_106 Start: 55140, Stop: 55406, Start Num: 2
Candidate Starts for Flabslab_106:
(Start: 2 @55140 has 119 MA's), (Start: 7 @55155 has 50 MA's), (14, 55263), (16, 55275), (17, 55326), (18, 55329), (22, 55353),

Gene: Fludd_112 Start: 56656, Stop: 56922, Start Num: 2
Candidate Starts for Fludd_112:
(Start: 2 @56656 has 119 MA's), (Start: 7 @56671 has 50 MA's), (14, 56779), (16, 56791), (17, 56842), (18, 56845), (22, 56869),

Gene: FoxtrotP1_112 Start: 59231, Stop: 59497, Start Num: 2
Candidate Starts for FoxtrotP1_112:

(Start: 2 @59231 has 119 MA's), (Start: 7 @59246 has 50 MA's), (14, 59354), (16, 59366), (17, 59417), (18, 59420), (22, 59444),

Gene: FrayBell_117 Start: 58395, Stop: 58661, Start Num: 2

Candidate Starts for FrayBell_117:

(Start: 2 @58395 has 119 MA's), (Start: 7 @58410 has 50 MA's), (14, 58518), (16, 58530), (17, 58581), (18, 58584), (22, 58608),

Gene: FudgeTart_110 Start: 57090, Stop: 57356, Start Num: 2

Candidate Starts for FudgeTart_110:

(Start: 2 @57090 has 119 MA's), (Start: 7 @57105 has 50 MA's), (14, 57213), (16, 57225), (17, 57276), (18, 57279), (22, 57303),

Gene: Gabriel_112 Start: 56315, Stop: 56581, Start Num: 2

Candidate Starts for Gabriel_112:

(Start: 2 @56315 has 119 MA's), (Start: 7 @56330 has 50 MA's), (14, 56438), (16, 56450), (17, 56501), (18, 56504), (22, 56528),

Gene: Gamgam_112 Start: 56604, Stop: 56855, Start Num: 7

Candidate Starts for Gamgam_112:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Ghost_110 Start: 56604, Stop: 56855, Start Num: 7

Candidate Starts for Ghost_110:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Gizmo_116 Start: 59211, Stop: 59477, Start Num: 2

Candidate Starts for Gizmo_116:

(Start: 2 @59211 has 119 MA's), (Start: 7 @59226 has 50 MA's), (14, 59334), (16, 59346), (17, 59397), (18, 59400), (22, 59424),

Gene: Grasshills_118 Start: 60018, Stop: 60284, Start Num: 2

Candidate Starts for Grasshills_118:

(Start: 2 @60018 has 119 MA's), (Start: 7 @60033 has 50 MA's), (14, 60141), (16, 60153), (17, 60204), (18, 60207), (22, 60231),

Gene: Greely_109 Start: 55472, Stop: 55714, Start Num: 7

Candidate Starts for Greely_109:

(Start: 7 @55472 has 50 MA's), (8, 55484), (9, 55487), (12, 55535), (13, 55562), (23, 55685),

Gene: Grungle_99 Start: 54348, Stop: 54599, Start Num: 7

Candidate Starts for Grungle_99:

(Start: 2 @54333 has 119 MA's), (Start: 7 @54348 has 50 MA's), (14, 54456), (16, 54468), (17, 54519), (18, 54522), (22, 54546),

Gene: Guwapp_111 Start: 56495, Stop: 56746, Start Num: 7

Candidate Starts for Guwapp_111:

(Start: 2 @56480 has 119 MA's), (Start: 7 @56495 has 50 MA's), (14, 56603), (16, 56615), (17, 56666), (18, 56669), (22, 56693),

Gene: Halldule_105 Start: 55374, Stop: 55625, Start Num: 7

Candidate Starts for Halldule_105:

(Start: 2 @55359 has 119 MA's), (Start: 7 @55374 has 50 MA's), (14, 55482), (16, 55494), (17, 55545), (18, 55548), (22, 55572),

Gene: HyRo_102 Start: 56601, Stop: 56852, Start Num: 7

Candidate Starts for HyRo_102:

(Start: 2 @56586 has 119 MA's), (Start: 7 @56601 has 50 MA's), (14, 56709), (16, 56721), (17, 56772), (18, 56775), (21, 56790), (22, 56799),

Gene: l3_117 Start: 58546, Stop: 58812, Start Num: 2

Candidate Starts for l3_117:

(Start: 2 @58546 has 119 MA's), (Start: 7 @58561 has 50 MA's), (14, 58669), (16, 58681), (17, 58732), (18, 58735), (22, 58759),

Gene: IkeLoa_105 Start: 56415, Stop: 56681, Start Num: 2

Candidate Starts for IkeLoa_105:

(Start: 2 @56415 has 119 MA's), (Start: 7 @56430 has 50 MA's), (14, 56538), (16, 56550), (17, 56601), (18, 56604), (22, 56628),

Gene: InigoMontoya_113 Start: 56565, Stop: 56816, Start Num: 7

Candidate Starts for InigoMontoya_113:

(Start: 2 @56550 has 119 MA's), (Start: 7 @56565 has 50 MA's), (14, 56673), (16, 56685), (17, 56736), (18, 56739), (22, 56763),

Gene: InterFolia_118 Start: 59345, Stop: 59596, Start Num: 7

Candidate Starts for InterFolia_118:

(Start: 2 @59330 has 119 MA's), (Start: 7 @59345 has 50 MA's), (14, 59453), (16, 59465), (17, 59516), (18, 59519), (22, 59543),

Gene: Iota_107 Start: 57026, Stop: 57292, Start Num: 2

Candidate Starts for Iota_107:

(Start: 2 @57026 has 119 MA's), (Start: 7 @57041 has 50 MA's), (14, 57149), (16, 57161), (17, 57212), (18, 57215), (22, 57239),

Gene: Issimir_110 Start: 58050, Stop: 58301, Start Num: 7

Candidate Starts for Issimir_110:

(Start: 2 @58035 has 119 MA's), (Start: 7 @58050 has 50 MA's), (14, 58158), (16, 58170), (17, 58221), (18, 58224), (22, 58248),

Gene: Izajani_112 Start: 58256, Stop: 58507, Start Num: 7

Candidate Starts for Izajani_112:

(Start: 2 @58241 has 119 MA's), (Start: 7 @58256 has 50 MA's), (14, 58364), (16, 58376), (17, 58427), (18, 58430), (22, 58454),

Gene: JPickles_109 Start: 55820, Stop: 56086, Start Num: 2

Candidate Starts for JPickles_109:

(Start: 2 @55820 has 119 MA's), (Start: 7 @55835 has 50 MA's), (14, 55943), (16, 55955), (17, 56006), (18, 56009), (22, 56033),

Gene: Janiyra_114 Start: 57531, Stop: 57782, Start Num: 7

Candidate Starts for Janiyra_114:

(Start: 2 @57516 has 119 MA's), (Start: 7 @57531 has 50 MA's), (14, 57639), (16, 57651), (17, 57702), (18, 57705), (22, 57729),

Gene: JayJay_112 Start: 59041, Stop: 59292, Start Num: 7

Candidate Starts for JayJay_112:

(Start: 2 @59026 has 119 MA's), (Start: 7 @59041 has 50 MA's), (14, 59149), (16, 59161), (17, 59212), (18, 59215), (21, 59230), (22, 59239),

Gene: Jaygup_112 Start: 57360, Stop: 57611, Start Num: 7

Candidate Starts for Jaygup_112:

(Start: 2 @57345 has 119 MA's), (Start: 7 @57360 has 50 MA's), (14, 57468), (16, 57480), (17, 57531), (18, 57534), (22, 57558),

Gene: Jedediah_115 Start: 57878, Stop: 58144, Start Num: 2

Candidate Starts for Jedediah_115:

(Start: 2 @57878 has 119 MA's), (Start: 7 @57893 has 50 MA's), (14, 58001), (16, 58013), (17, 58064), (18, 58067), (22, 58091),

Gene: Jemmno_112 Start: 57340, Stop: 57591, Start Num: 7

Candidate Starts for Jemmno_112:

(Start: 2 @57325 has 119 MA's), (Start: 7 @57340 has 50 MA's), (14, 57448), (16, 57460), (17, 57511), (18, 57514), (22, 57538),

Gene: Jessibeth14_111 Start: 57847, Stop: 58113, Start Num: 2

Candidate Starts for Jessibeth14_111:

(Start: 2 @57847 has 119 MA's), (Start: 7 @57862 has 50 MA's), (14, 57970), (16, 57982), (18, 58036), (22, 58060),

Gene: JulietS_106 Start: 55212, Stop: 55478, Start Num: 2

Candidate Starts for JulietS_106:

(Start: 2 @55212 has 119 MA's), (Start: 7 @55227 has 50 MA's), (14, 55335), (16, 55347), (17, 55398), (18, 55401), (22, 55425),

Gene: JustHall_109 Start: 57384, Stop: 57650, Start Num: 2

Candidate Starts for JustHall_109:

(Start: 2 @57384 has 119 MA's), (Start: 7 @57399 has 50 MA's), (14, 57507), (16, 57519), (17, 57570), (18, 57573), (22, 57597),

Gene: Kamryn_112 Start: 58662, Stop: 58928, Start Num: 2

Candidate Starts for Kamryn_112:

(Start: 2 @58662 has 119 MA's), (Start: 7 @58677 has 50 MA's), (14, 58785), (16, 58797), (17, 58848), (18, 58851), (22, 58875), (25, 58923),

Gene: Kboogie_116 Start: 57018, Stop: 57284, Start Num: 2

Candidate Starts for Kboogie_116:

(Start: 2 @57018 has 119 MA's), (Start: 7 @57033 has 50 MA's), (14, 57141), (16, 57153), (17, 57204), (18, 57207), (22, 57231), (25, 57279),

Gene: Khaleesi_111 Start: 57960, Stop: 58226, Start Num: 2

Candidate Starts for Khaleesi_111:

(Start: 2 @57960 has 119 MA's), (Start: 7 @57975 has 50 MA's), (14, 58083), (16, 58095), (17, 58146), (18, 58149), (22, 58173),

Gene: Koguma_109 Start: 55505, Stop: 55771, Start Num: 2

Candidate Starts for Koguma_109:

(Start: 2 @55505 has 119 MA's), (Start: 7 @55520 has 50 MA's), (14, 55628), (16, 55640), (17, 55691), (18, 55694), (22, 55718),

Gene: LRRHood_105 Start: 57303, Stop: 57569, Start Num: 2

Candidate Starts for LRRHood_105:

(Start: 2 @57303 has 119 MA's), (Start: 7 @57318 has 50 MA's), (14, 57426), (16, 57438), (17, 57489), (18, 57492), (22, 57516),

Gene: Latch_112 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for Latch_112:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Lee7_109 Start: 58609, Stop: 58860, Start Num: 7

Candidate Starts for Lee7_109:

(Start: 2 @58594 has 119 MA's), (Start: 7 @58609 has 50 MA's), (14, 58717), (16, 58729), (17, 58780), (18, 58783), (22, 58807),

Gene: LifeSavor_110 Start: 57277, Stop: 57543, Start Num: 2

Candidate Starts for LifeSavor_110:

(Start: 2 @57277 has 119 MA's), (Start: 7 @57292 has 50 MA's), (14, 57400), (16, 57412), (17, 57463), (18, 57466), (22, 57490),

Gene: LinStu_110 Start: 57927, Stop: 58178, Start Num: 7

Candidate Starts for LinStu_110:

(Start: 2 @57912 has 119 MA's), (Start: 7 @57927 has 50 MA's), (14, 58035), (16, 58047), (17, 58098), (18, 58101), (21, 58116), (22, 58125),

Gene: Littleton_112 Start: 57422, Stop: 57673, Start Num: 7

Candidate Starts for Littleton_112:

(Start: 2 @57407 has 119 MA's), (Start: 7 @57422 has 50 MA's), (14, 57530), (16, 57542), (17, 57593), (18, 57596), (22, 57620), (25, 57668),

Gene: Loanshark_111 Start: 57928, Stop: 58194, Start Num: 2

Candidate Starts for Loanshark_111:

(Start: 2 @57928 has 119 MA's), (Start: 7 @57943 has 50 MA's), (14, 58051), (16, 58063), (17, 58114), (18, 58117), (22, 58141),

Gene: LolaVinca_112 Start: 58280, Stop: 58546, Start Num: 2

Candidate Starts for LolaVinca_112:

(Start: 2 @58280 has 119 MA's), (Start: 7 @58295 has 50 MA's), (14, 58403), (16, 58415), (17, 58466), (18, 58469), (22, 58493),

Gene: LordLeafolot_115 Start: 59262, Stop: 59513, Start Num: 7

Candidate Starts for LordLeafolot_115:

(Start: 2 @59247 has 119 MA's), (Start: 7 @59262 has 50 MA's), (14, 59370), (16, 59382), (17, 59433), (18, 59436), (22, 59460),

Gene: Lukilu_102 Start: 57694, Stop: 57960, Start Num: 2

Candidate Starts for Lukilu_102:

(Start: 2 @57694 has 119 MA's), (Start: 7 @57709 has 50 MA's), (14, 57817), (16, 57829), (17, 57880), (18, 57883), (22, 57907),

Gene: Maby2021_112 Start: 58054, Stop: 58320, Start Num: 2
Candidate Starts for Maby2021_112:
(Start: 2 @58054 has 119 MA's), (Start: 7 @58069 has 50 MA's), (14, 58177), (16, 58189), (17, 58240), (18, 58243), (22, 58267),

Gene: Mangeria_112 Start: 58123, Stop: 58389, Start Num: 2
Candidate Starts for Mangeria_112:
(Start: 2 @58123 has 119 MA's), (Start: 7 @58138 has 50 MA's), (14, 58246), (16, 58258), (17, 58309), (18, 58312), (22, 58336),

Gene: Matsumoto_108 Start: 56921, Stop: 57172, Start Num: 7
Candidate Starts for Matsumoto_108:
(Start: 2 @56906 has 119 MA's), (Start: 7 @56921 has 50 MA's), (14, 57029), (16, 57041), (17, 57092), (18, 57095), (22, 57119),

Gene: McGee_114 Start: 56659, Stop: 56925, Start Num: 2
Candidate Starts for McGee_114:
(Start: 2 @56659 has 119 MA's), (Start: 7 @56674 has 50 MA's), (14, 56782), (16, 56794), (17, 56845), (18, 56848), (22, 56872), (25, 56920),

Gene: McWolfish_110 Start: 57843, Stop: 58109, Start Num: 2
Candidate Starts for McWolfish_110:
(Start: 2 @57843 has 119 MA's), (Start: 7 @57858 has 50 MA's), (14, 57966), (16, 57978), (17, 58029), (18, 58032), (22, 58056),

Gene: Megamind_111 Start: 57727, Stop: 57993, Start Num: 2
Candidate Starts for Megamind_111:
(Start: 2 @57727 has 119 MA's), (Start: 7 @57742 has 50 MA's), (14, 57850), (16, 57862), (17, 57913), (18, 57916), (22, 57940),

Gene: Melpomini_106 Start: 55193, Stop: 55459, Start Num: 2
Candidate Starts for Melpomini_106:
(Start: 2 @55193 has 119 MA's), (Start: 7 @55208 has 50 MA's), (14, 55316), (16, 55328), (17, 55379), (18, 55382), (22, 55406),

Gene: MikeLiesIn_113 Start: 58074, Stop: 58340, Start Num: 2
Candidate Starts for MikeLiesIn_113:
(Start: 2 @58074 has 119 MA's), (Start: 7 @58089 has 50 MA's), (14, 58197), (16, 58209), (17, 58260), (18, 58263), (22, 58287),

Gene: Mikro_109 Start: 59312, Stop: 59563, Start Num: 7
Candidate Starts for Mikro_109:
(Start: 2 @59297 has 119 MA's), (Start: 7 @59312 has 50 MA's), (14, 59420), (16, 59432), (17, 59483), (18, 59486), (22, 59510),

Gene: MoMoMixon_112 Start: 57565, Stop: 57816, Start Num: 7
Candidate Starts for MoMoMixon_112:
(Start: 2 @57550 has 119 MA's), (Start: 7 @57565 has 50 MA's), (14, 57673), (16, 57685), (17, 57736), (18, 57739), (22, 57763),

Gene: Momo_111 Start: 56604, Stop: 56855, Start Num: 7
Candidate Starts for Momo_111:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Morizzled23_112 Start: 56969, Stop: 57220, Start Num: 7

Candidate Starts for Morizzled23_112:

(Start: 2 @56954 has 119 MA's), (Start: 7 @56969 has 50 MA's), (14, 57077), (16, 57089), (17, 57140), (18, 57143), (22, 57167),

Gene: Myrna_107 Start: 56367, Stop: 56666, Start Num: 1

Candidate Starts for Myrna_107:

(Start: 1 @56367 has 1 MA's), (Start: 7 @56427 has 50 MA's), (8, 56439), (9, 56442), (11, 56484), (12, 56490), (24, 56646),

Gene: Naija_111 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for Naija_111:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Napoleon13_108 Start: 55631, Stop: 55897, Start Num: 2

Candidate Starts for Napoleon13_108:

(Start: 2 @55631 has 119 MA's), (Start: 7 @55646 has 50 MA's), (14, 55754), (16, 55766), (17, 55817), (18, 55820), (22, 55844),

Gene: Nappy_114 Start: 58999, Stop: 59250, Start Num: 7

Candidate Starts for Nappy_114:

(Start: 2 @58984 has 119 MA's), (Start: 7 @58999 has 50 MA's), (14, 59107), (16, 59119), (17, 59170), (18, 59173), (22, 59197),

Gene: Naval22_116 Start: 59532, Stop: 59783, Start Num: 7

Candidate Starts for Naval22_116:

(Start: 2 @59517 has 119 MA's), (Start: 7 @59532 has 50 MA's), (14, 59640), (16, 59652), (17, 59703), (18, 59706), (22, 59730),

Gene: NedWong_113 Start: 58061, Stop: 58327, Start Num: 2

Candidate Starts for NedWong_113:

(Start: 2 @58061 has 119 MA's), (Start: 7 @58076 has 50 MA's), (14, 58184), (16, 58196), (17, 58247), (18, 58250), (22, 58274),

Gene: Ngannou_108 Start: 55571, Stop: 55837, Start Num: 2

Candidate Starts for Ngannou_108:

(Start: 2 @55571 has 119 MA's), (Start: 7 @55586 has 50 MA's), (14, 55694), (16, 55706), (17, 55757), (18, 55760), (22, 55784),

Gene: Nidhogg_113 Start: 57795, Stop: 58061, Start Num: 2

Candidate Starts for Nidhogg_113:

(Start: 2 @57795 has 119 MA's), (Start: 7 @57810 has 50 MA's), (14, 57918), (16, 57930), (17, 57981), (18, 57984), (22, 58008),

Gene: NoodleTree_119 Start: 58169, Stop: 58420, Start Num: 7

Candidate Starts for NoodleTree_119:

(Start: 2 @58154 has 119 MA's), (Start: 7 @58169 has 50 MA's), (14, 58277), (16, 58289), (17, 58340), (18, 58343), (22, 58367), (25, 58415),

Gene: Norm_113 Start: 58756, Stop: 59022, Start Num: 2

Candidate Starts for Norm_113:

(Start: 2 @58756 has 119 MA's), (Start: 7 @58771 has 50 MA's), (14, 58879), (16, 58891), (17, 58942), (18, 58945), (22, 58969),

Gene: NuevoMundo_117 Start: 60350, Stop: 60601, Start Num: 7

Candidate Starts for NuevoMundo_117:

(Start: 2 @60335 has 119 MA's), (Start: 7 @60350 has 50 MA's), (14, 60458), (16, 60470), (17, 60521), (18, 60524), (22, 60548),

Gene: ParkTD_113 Start: 58057, Stop: 58323, Start Num: 2

Candidate Starts for ParkTD_113:

(Start: 2 @58057 has 119 MA's), (Start: 7 @58072 has 50 MA's), (14, 58180), (16, 58192), (17, 58243), (18, 58246), (22, 58270),

Gene: Patter_112 Start: 56606, Stop: 56872, Start Num: 2

Candidate Starts for Patter_112:

(Start: 2 @56606 has 119 MA's), (Start: 7 @56621 has 50 MA's), (14, 56729), (16, 56741), (17, 56792), (18, 56795), (22, 56819),

Gene: Phabba_111 Start: 55223, Stop: 55465, Start Num: 7

Candidate Starts for Phabba_111:

(Start: 7 @55223 has 50 MA's), (8, 55235), (9, 55238), (12, 55286), (13, 55313), (23, 55436),

Gene: Phlegm_114 Start: 56604, Stop: 56855, Start Num: 7

Candidate Starts for Phlegm_114:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Phox_109 Start: 58337, Stop: 58603, Start Num: 2

Candidate Starts for Phox_109:

(Start: 2 @58337 has 119 MA's), (Start: 7 @58352 has 50 MA's), (14, 58460), (16, 58472), (17, 58523), (18, 58526), (22, 58550),

Gene: Phusco_112 Start: 57354, Stop: 57620, Start Num: 2

Candidate Starts for Phusco_112:

(Start: 2 @57354 has 119 MA's), (Start: 7 @57369 has 50 MA's), (14, 57477), (16, 57489), (17, 57540), (18, 57543), (22, 57567),

Gene: Pier_116 Start: 60343, Stop: 60609, Start Num: 2

Candidate Starts for Pier_116:

(Start: 2 @60343 has 119 MA's), (Start: 7 @60358 has 50 MA's), (14, 60466), (16, 60478), (17, 60529), (18, 60532), (22, 60556),

Gene: Pinkcreek_103 Start: 55678, Stop: 55944, Start Num: 2

Candidate Starts for Pinkcreek_103:

(Start: 2 @55678 has 119 MA's), (Start: 7 @55693 has 50 MA's), (14, 55801), (16, 55813), (17, 55864), (18, 55867), (21, 55882), (22, 55891),

Gene: Pio_116 Start: 59947, Stop: 60213, Start Num: 2

Candidate Starts for Pio_116:

(Start: 2 @59947 has 119 MA's), (Start: 7 @59962 has 50 MA's), (14, 60070), (16, 60082), (17, 60133), (18, 60136), (22, 60160),

Gene: Pivoine_111 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for Pivoine_111:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Pleione_115 Start: 58239, Stop: 58490, Start Num: 7

Candidate Starts for Pleione_115:

(Start: 2 @58224 has 119 MA's), (Start: 7 @58239 has 50 MA's), (14, 58347), (16, 58359), (17, 58410), (18, 58413), (22, 58437),

Gene: Pupper_104 Start: 60747, Stop: 60956, Start Num: 6

Candidate Starts for Pupper_104:

(Start: 6 @60747 has 3 MA's), (9, 60765), (10, 60771), (13, 60834), (15, 60846), (18, 60885), (19, 60888), (20, 60894),

Gene: PurduePete_112 Start: 58481, Stop: 58747, Start Num: 2

Candidate Starts for PurduePete_112:

(Start: 2 @58481 has 119 MA's), (Start: 7 @58496 has 50 MA's), (14, 58604), (16, 58616), (17, 58667), (18, 58670), (22, 58694),

Gene: QBert_106 Start: 57061, Stop: 57327, Start Num: 2

Candidate Starts for QBert_106:

(Start: 2 @57061 has 119 MA's), (Start: 7 @57076 has 50 MA's), (14, 57184), (16, 57196), (17, 57247), (18, 57250), (22, 57274),

Gene: Quasimodo_113 Start: 58016, Stop: 58282, Start Num: 2

Candidate Starts for Quasimodo_113:

(Start: 2 @58016 has 119 MA's), (Start: 7 @58031 has 50 MA's), (14, 58139), (16, 58151), (17, 58202), (18, 58205), (22, 58229),

Gene: Rabinovish_109 Start: 58269, Stop: 58520, Start Num: 7

Candidate Starts for Rabinovish_109:

(Start: 2 @58254 has 119 MA's), (Start: 7 @58269 has 50 MA's), (14, 58377), (16, 58389), (17, 58440), (18, 58443), (22, 58467),

Gene: Rahel_111 Start: 56946, Stop: 57212, Start Num: 2

Candidate Starts for Rahel_111:

(Start: 2 @56946 has 119 MA's), (Start: 7 @56961 has 50 MA's), (14, 57069), (16, 57081), (17, 57132), (18, 57135), (22, 57159),

Gene: Rizal_107 Start: 56094, Stop: 56360, Start Num: 2

Candidate Starts for Rizal_107:

(Start: 2 @56094 has 119 MA's), (Start: 7 @56109 has 50 MA's), (14, 56217), (16, 56229), (17, 56280), (18, 56283), (22, 56307),

Gene: RoMag_107 Start: 57267, Stop: 57533, Start Num: 2

Candidate Starts for RoMag_107:

(Start: 2 @57267 has 119 MA's), (Start: 7 @57282 has 50 MA's), (14, 57390), (16, 57402), (17, 57453), (18, 57456), (22, 57480), (25, 57528),

Gene: Ronan_106 Start: 55232, Stop: 55483, Start Num: 7

Candidate Starts for Ronan_106:

(Start: 2 @55217 has 119 MA's), (Start: 7 @55232 has 50 MA's), (14, 55340), (16, 55352), (17, 55403), (18, 55406), (22, 55430),

Gene: Roots515_110 Start: 58254, Stop: 58520, Start Num: 2

Candidate Starts for Roots515_110:

(Start: 2 @58254 has 119 MA's), (Start: 7 @58269 has 50 MA's), (14, 58377), (16, 58389), (17, 58440), (18, 58443), (22, 58467),

Gene: SCentae_103 Start: 60893, Stop: 61102, Start Num: 6

Candidate Starts for SCentae_103:

(Start: 6 @60893 has 3 MA's), (9, 60911), (10, 60917), (13, 60980), (15, 60992), (18, 61031), (19, 61034), (20, 61040),

Gene: Salacia_116 Start: 58410, Stop: 58661, Start Num: 7

Candidate Starts for Salacia_116:

(Start: 2 @58395 has 119 MA's), (Start: 7 @58410 has 50 MA's), (14, 58518), (16, 58530), (17, 58581), (18, 58584), (22, 58608),

Gene: Sauce_112 Start: 57001, Stop: 57267, Start Num: 2

Candidate Starts for Sauce_112:

(Start: 2 @57001 has 119 MA's), (Start: 7 @57016 has 50 MA's), (14, 57124), (16, 57136), (17, 57187), (18, 57190), (22, 57214),

Gene: ScoobyDoobyDoo_102 Start: 54803, Stop: 55045, Start Num: 7

Candidate Starts for ScoobyDoobyDoo_102:

(4, 54794), (5, 54800), (Start: 7 @54803 has 50 MA's), (8, 54815), (9, 54818), (10, 54824), (11, 54860),

Gene: ScottMcG_108 Start: 57032, Stop: 57283, Start Num: 7

Candidate Starts for ScottMcG_108:

(Start: 2 @57017 has 119 MA's), (Start: 7 @57032 has 50 MA's), (14, 57140), (16, 57152), (17, 57203), (18, 57206), (22, 57230), (25, 57278),

Gene: Sebata_112 Start: 58485, Stop: 58736, Start Num: 7

Candidate Starts for Sebata_112:

(Start: 2 @58470 has 119 MA's), (Start: 7 @58485 has 50 MA's), (14, 58593), (16, 58605), (17, 58656), (18, 58659), (22, 58683),

Gene: Shaqnato_105 Start: 56061, Stop: 56327, Start Num: 2

Candidate Starts for Shaqnato_105:

(Start: 2 @56061 has 119 MA's), (Start: 7 @56076 has 50 MA's), (14, 56184), (16, 56196), (17, 56247), (18, 56250), (22, 56274),

Gene: Shelob_114 Start: 58843, Stop: 59109, Start Num: 2

Candidate Starts for Shelob_114:

(Start: 2 @58843 has 119 MA's), (Start: 7 @58858 has 50 MA's), (14, 58966), (16, 58978), (17, 59029), (18, 59032), (22, 59056),

Gene: ShiaLabeouf_111 Start: 57381, Stop: 57647, Start Num: 2

Candidate Starts for ShiaLabeouf_111:

(Start: 2 @57381 has 119 MA's), (Start: 7 @57396 has 50 MA's), (14, 57504), (16, 57516), (17, 57567), (18, 57570), (22, 57594),

Gene: Shifa_99 Start: 55852, Stop: 56118, Start Num: 2

Candidate Starts for Shifa_99:

(Start: 2 @55852 has 119 MA's), (Start: 7 @55867 has 50 MA's), (14, 55975), (16, 55987), (17, 56038), (18, 56041), (21, 56056), (22, 56065),

Gene: Shnickers_112 Start: 57345, Stop: 57611, Start Num: 2

Candidate Starts for Shnickers_112:

(Start: 2 @57345 has 119 MA's), (Start: 7 @57360 has 50 MA's), (14, 57468), (16, 57480), (17, 57531), (18, 57534), (22, 57558),

Gene: Shrimp_112 Start: 58080, Stop: 58331, Start Num: 7

Candidate Starts for Shrimp_112:

(Start: 2 @58065 has 119 MA's), (Start: 7 @58080 has 50 MA's), (14, 58188), (16, 58200), (17, 58251), (18, 58254), (22, 58278),

Gene: SilverDipper_113 Start: 56589, Stop: 56855, Start Num: 2

Candidate Starts for SilverDipper_113:

(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Skog_167 Start: 91814, Stop: 92023, Start Num: 6

Candidate Starts for Skog_167:

(3, 91802), (Start: 6 @91814 has 3 MA's), (9, 91832), (10, 91838), (13, 91901), (19, 91955), (20, 91961),

Gene: SmallFry_112 Start: 56570, Stop: 56836, Start Num: 2

Candidate Starts for SmallFry_112:

(Start: 2 @56570 has 119 MA's), (Start: 7 @56585 has 50 MA's), (14, 56693), (16, 56705), (17, 56756), (18, 56759), (22, 56783),

Gene: Spec_107 Start: 57125, Stop: 57376, Start Num: 7

Candidate Starts for Spec_107:

(Start: 2 @57110 has 119 MA's), (Start: 7 @57125 has 50 MA's), (14, 57233), (16, 57245), (17, 57296), (18, 57299), (22, 57323),

Gene: Specks_117 Start: 59245, Stop: 59511, Start Num: 2

Candidate Starts for Specks_117:

(Start: 2 @59245 has 119 MA's), (Start: 7 @59260 has 50 MA's), (14, 59368), (16, 59380), (17, 59431), (18, 59434), (22, 59458),

Gene: Sprinklers_108 Start: 56641, Stop: 56892, Start Num: 7

Candidate Starts for Sprinklers_108:

(Start: 2 @56626 has 119 MA's), (Start: 7 @56641 has 50 MA's), (14, 56749), (16, 56761), (17, 56812), (18, 56815), (22, 56839),

Gene: Spud_111 Start: 58141, Stop: 58407, Start Num: 2

Candidate Starts for Spud_111:

(Start: 2 @58141 has 119 MA's), (Start: 7 @58156 has 50 MA's), (14, 58264), (16, 58276), (17, 58327), (18, 58330), (22, 58354),

Gene: SrishMeg2525_111 Start: 58163, Stop: 58429, Start Num: 2

Candidate Starts for SrishMeg2525_111:

(Start: 2 @58163 has 119 MA's), (Start: 7 @58178 has 50 MA's), (14, 58286), (16, 58298), (17, 58349), (18, 58352), (22, 58376),

Gene: StephanieG_110 Start: 58987, Stop: 59238, Start Num: 7

Candidate Starts for StephanieG_110:

(Start: 2 @58972 has 119 MA's), (Start: 7 @58987 has 50 MA's), (14, 59095), (16, 59107), (17, 59158), (18, 59161), (22, 59185), (25, 59233),

Gene: Stubby_104 Start: 56168, Stop: 56434, Start Num: 2

Candidate Starts for Stubby_104:

(Start: 2 @56168 has 119 MA's), (Start: 7 @56183 has 50 MA's), (14, 56291), (16, 56303), (18, 56357), (22, 56381),

Gene: StubbySaigey_115 Start: 56759, Stop: 57025, Start Num: 2

Candidate Starts for StubbySaigey_115:

(Start: 2 @56759 has 119 MA's), (Start: 7 @56774 has 50 MA's), (14, 56882), (16, 56894), (17, 56945), (18, 56948), (22, 56972), (25, 57020),

Gene: Teardrop_111 Start: 56569, Stop: 56835, Start Num: 2

Candidate Starts for Teardrop_111:

(Start: 2 @56569 has 119 MA's), (Start: 7 @56584 has 50 MA's), (14, 56692), (16, 56704), (17, 56755), (18, 56758), (22, 56782),

Gene: TinyTim_112 Start: 57821, Stop: 58087, Start Num: 2

Candidate Starts for TinyTim_112:

(Start: 2 @57821 has 119 MA's), (Start: 7 @57836 has 50 MA's), (14, 57944), (16, 57956), (17, 58007), (18, 58010), (22, 58034),

Gene: Tonenili_126 Start: 61299, Stop: 61550, Start Num: 7

Candidate Starts for Tonenili_126:

(Start: 2 @61284 has 119 MA's), (Start: 7 @61299 has 50 MA's), (11, 61359), (14, 61407), (16, 61419), (17, 61470), (20, 61482),

Gene: Tortoise16_109 Start: 57170, Stop: 57436, Start Num: 2

Candidate Starts for Tortoise16_109:

(Start: 2 @57170 has 119 MA's), (Start: 7 @57185 has 50 MA's), (14, 57293), (16, 57305), (17, 57356), (18, 57359), (22, 57383), (25, 57431),

Gene: Trinitium_109 Start: 56540, Stop: 56791, Start Num: 7

Candidate Starts for Trinitium_109:

(Start: 2 @56525 has 119 MA's), (Start: 7 @56540 has 50 MA's), (14, 56648), (16, 56660), (17, 56711), (18, 56714), (22, 56738), (25, 56786),

Gene: Turret_107 Start: 55970, Stop: 56236, Start Num: 2

Candidate Starts for Turret_107:

(Start: 2 @55970 has 119 MA's), (Start: 7 @55985 has 50 MA's), (14, 56093), (16, 56105), (17, 56156), (18, 56159), (22, 56183), (25, 56231),

Gene: Tyke_112 Start: 58476, Stop: 58742, Start Num: 2

Candidate Starts for Tyke_112:

(Start: 2 @58476 has 119 MA's), (Start: 7 @58491 has 50 MA's), (14, 58599), (16, 58611), (17, 58662), (18, 58665), (22, 58689),

Gene: ValleyTerrace_112 Start: 56589, Stop: 56855, Start Num: 2
Candidate Starts for ValleyTerrace_112:
(Start: 2 @56589 has 119 MA's), (Start: 7 @56604 has 50 MA's), (14, 56712), (16, 56724), (17, 56775), (18, 56778), (22, 56802),

Gene: Wally_111 Start: 56599, Stop: 56865, Start Num: 2
Candidate Starts for Wally_111:
(Start: 2 @56599 has 119 MA's), (Start: 7 @56614 has 50 MA's), (14, 56722), (16, 56734), (17, 56785), (18, 56788), (22, 56812), (25, 56860),

Gene: Willis_113 Start: 57971, Stop: 58222, Start Num: 7
Candidate Starts for Willis_113:
(Start: 2 @57956 has 119 MA's), (Start: 7 @57971 has 50 MA's), (14, 58079), (16, 58091), (17, 58142), (18, 58145), (22, 58169),

Gene: Yassified_109 Start: 56676, Stop: 56942, Start Num: 2
Candidate Starts for Yassified_109:
(Start: 2 @56676 has 119 MA's), (Start: 7 @56691 has 50 MA's), (14, 56799), (16, 56811), (17, 56862), (18, 56865), (22, 56889),

Gene: YemiJoy2021_113 Start: 58058, Stop: 58324, Start Num: 2
Candidate Starts for YemiJoy2021_113:
(Start: 2 @58058 has 119 MA's), (Start: 7 @58073 has 50 MA's), (14, 58181), (16, 58193), (17, 58244), (18, 58247), (22, 58271),

Gene: YoungMoneyMata_113 Start: 57240, Stop: 57491, Start Num: 7
Candidate Starts for YoungMoneyMata_113:
(Start: 2 @57225 has 119 MA's), (Start: 7 @57240 has 50 MA's), (14, 57348), (16, 57360), (17, 57411), (18, 57414), (22, 57438),

Gene: Yucca_111 Start: 57740, Stop: 58006, Start Num: 2
Candidate Starts for Yucca_111:
(Start: 2 @57740 has 119 MA's), (Start: 7 @57755 has 50 MA's), (14, 57863), (16, 57875), (17, 57926), (18, 57929), (22, 57953),

Gene: Zalkecks_113 Start: 57741, Stop: 58007, Start Num: 2
Candidate Starts for Zalkecks_113:
(Start: 2 @57741 has 119 MA's), (Start: 7 @57756 has 50 MA's), (14, 57864), (16, 57876), (17, 57927), (18, 57930), (22, 57954),

Gene: Zeenon_113 Start: 57826, Stop: 58092, Start Num: 2
Candidate Starts for Zeenon_113:
(Start: 2 @57826 has 119 MA's), (Start: 7 @57841 has 50 MA's), (14, 57949), (16, 57961), (17, 58012), (18, 58015), (22, 58039),

Gene: ZygoTaiga_110 Start: 58986, Stop: 59252, Start Num: 2
Candidate Starts for ZygoTaiga_110:
(Start: 2 @58986 has 119 MA's), (Start: 7 @59001 has 50 MA's), (14, 59109), (16, 59121), (17, 59172), (18, 59175), (22, 59199),