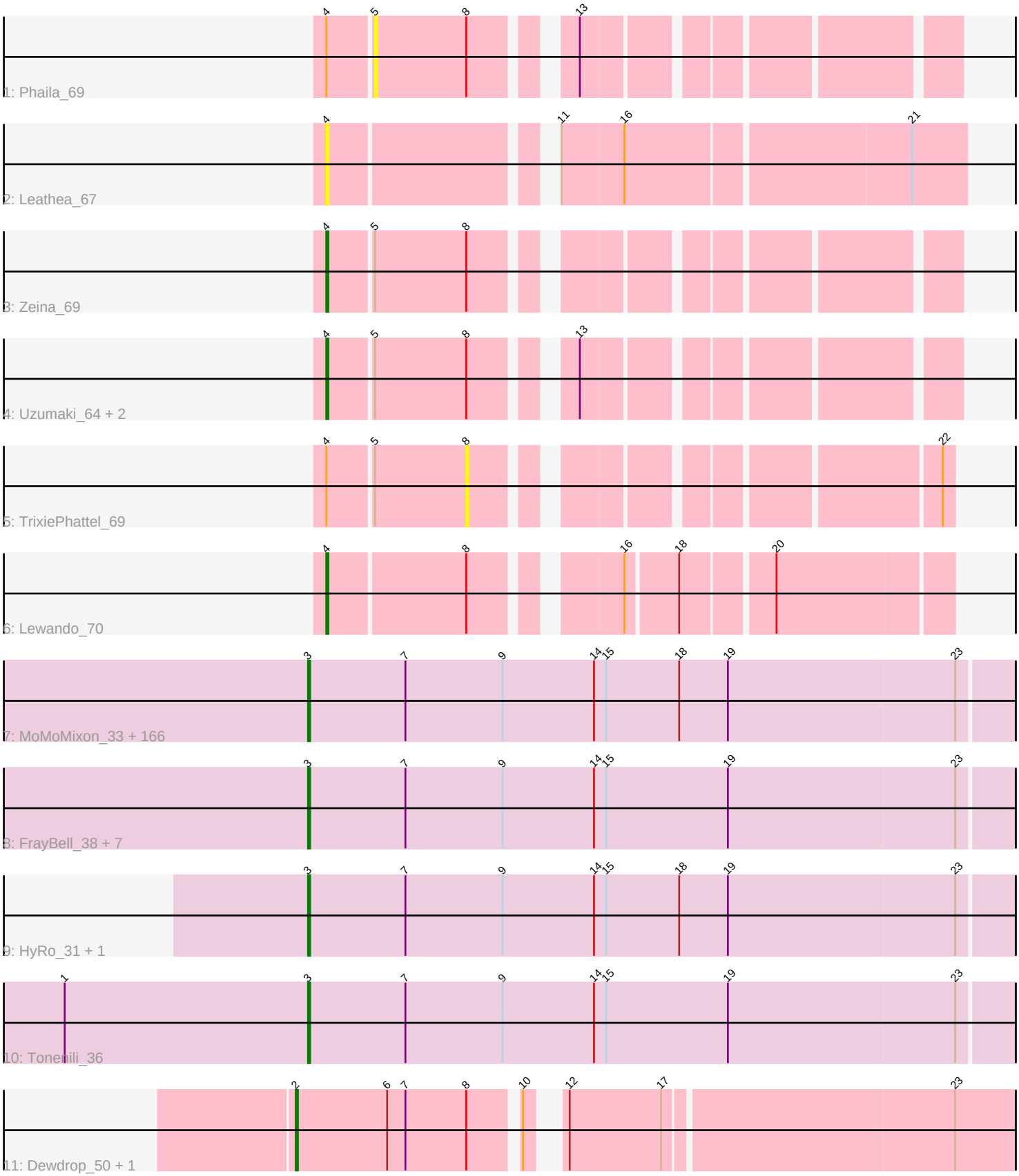
Pham 193761


1: Phaila_69
2: Leathea_67
3: Zeina_69
4: Uzumaki_64 + 2
5: TrixiePhattel_69
6: Lewando_70
7: MoMoMixon_33 + 166
8: FrayBell_38 + 7
9: HyRo_31 + 1
10: Tonemili_36
11: Dewdrop_50 + 1

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 193761 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193761 has 188 members, 21 are drafts.

Phages represented in each track:
• Track 1 : Phaila_69
• Track 2 : Leathea_67
• Track 3 : Zeina_69
• Track 4 : Uzumaki_64, GantcherGoblin_65, Argan_64
• Track 5 : TrixiePhattel_69
• Track 6 : Lewando_70
• Track 7 : MoMoMixon_33, Issimir_32, Matsumoto_31, Gizmo_34, Astraea_33, Blackbrain_30, Rahel_32, JayJay_33, Darko_31, Maby2021_33, Catera_30, LifeSavor_33, Essence_31, Caravan_30, Pio_35, ArcherS7_31, Grungle_25, Drazdys_32, Mangeria_35, McWolfish_31, Ewok_32, Phlegm_34, DTDevon_33, Napoleon13_31, YemiJoy2021_33, Phox_31, Bangla1971_31, Kboogie_32, Asterius_30, Specks_37, Lee7_31, ET08_27, Pleione_34, Fludd_31, Tortoise16_31, InigoMontoya_33, Morizzled23_31, Adlitam_32, JustHall_31, Bonray_32, Ading_32, Shrimp_32, ChickenPhender_31, Amataga_32, EmToTheThree_35, Bigswole_38, PurduePete_31, Koguma_28, Izajani_33, CindyLou_32, InterFolia_39, Turret_30, Rizal_30, Shnickers_32, ChaylaJr_31, NedWong_33, SilverDipper_33, CharlieB_32, Tyke_34, Zalkecks_34, Trinitium_31, Bxz1_32, Iota_29, Pier_34, JigglyPuff_32, SrishMeg2525_31, LRRHood_29, Daffodil_34, TinyTim_32, Cactojaque_29, Bread_33, SmallFry_32, Phusco_32, Halldule_28, EggyFarm_36, Littleton_32, Concombre_31, Yucca_32, Spud_34, Atlantean_32, Shaqnato_28, Janiyra_32, Norm_32, Khaleesi_31, Sauce_33, IkeLoa_28, ParkTD_31, ErnieJ_33, MikeLiesIn_32, Burrough_32, Sprinklers_32, Ronan_27, Lukilu_25, LolaVinca_35, FoxtrotP1_32, ShiaLabeouf_32, ValleyTerrace_32, Chomp_32, Gamgam_32, Derek_33, Basquiat_31, Capablanca_34, BigCity_36, JulietS_27, Delilah_32, Breeniome_32, YoungMoneyMata_32, Jessibeth14_31, Momo_31, Jedediah_32, BananaFence_33, Gabriel_32, Loanshark_32, NoodleTree_31, EmmaElysia_30, Babyland_31, Erdmann_33, EasyJones_31, Kamryn_32, Blackdragon_27, Nidhogg_33, Guwapp_32, Dandelion_36, Patter_32, Cali_32, FudgeTart_33, Spec_30, RoMag_27, Melpomini_31, Latch_32, Audrick_34, StubbySaigey_31, DrPhinkDaddy_32, Demodog_30, Sebata_32, Willis_32, Pivoine_32, Jemmno_32, Bipolarisk_31, Naval22_34, JPickles_30, Yassified_29, Nappy_33, Grasshills_36, Salacia_34, BadAgartude_33, Wally_31, Naija_32, Mikro_30, Quasimodo_32, QBert_30, McGee_31, BeanWater_28, Ngannou_30, ScottMcG_32, ZygoTaiga_32, Teardrop_31, Ghost_32, BackyardAgain_29, Zeenon_34, Megamind_32, Ava3_33, StephanieG_32, NuevoMundo_35, Chargie21_31, Jaygup_32, Roots515_32
• Track 8 : FrayBell_38, Dietrick_27, Tainan_37, DirtMonster_31, Blubba_26, LordLeafolot_37, Domi_27, I3_34

• Track 9 : HyRo_31, Shifa_29
• Track 10 : Tonenili_36
• Track 11 : Dewdrop_50, Leaf_50

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

The start number called the most often in the published annotations is 3, it was called in 160 of the 167 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ading_32, Adlitam_32, Amataga_32, ArcherS7_31, Asterius_30, Astraea_33, Atlantean_32, Audrick_34, Ava3_33, Babyland_31, BackyardAgain_29, BadAgartude_33, BananaFence_33, Bangla1971_31, Basquiat_31, BeanWater_28, BigCity_36, Bigswole_38, Bipolarisk_31, Blackbrain_30, Blackdragon_27, Blubba_26, Bonray_32, Bread_33, Breeniome_32, Burrough_32, Bxz1_32, Cactojaque_29, Cali_32, Capablanca_34, Caravan_30, Catera_30, Chargie21_31, CharlieB_32, ChaylaJr_31, ChickenPhender_31, Chomp_32, CindyLou_32, Concombre_31, DTDevon_33, Daffodil_34, Dandelion_36, Darko_31, Delilah_32, Demodog_30, Derek_33, Dietrick_27, DirtMonster_31, Domi_27, DrPhinkDaddy_32, Drazdys_32, ET08_27, EasyJones_31, EggyFarm_36, EmToTheThree_35, EmmaElysia_30, Erdmann_33, ErnieJ_33, Essence_31, Ewok_32, Fludd_31, FoxtrotP1_32, FrayBell_38, FudgeTart_33, Gabriel_32, Gamgam_32, Ghost_32, Gizmo_34, Grasshills_36, Grungle_25, Guwapp_32, Halldule_28, HyRo_31, I3_34, IkeLoa_28, InigoMontoya_33, InterFolia_39, Iota_29, Issimir_32, Izajani_33, JPickles_30, Janiyra_32, JayJay_33, Jaygup_32, Jedediah_32, Jemmno_32, Jessibeth14_31, JigglyPuff_32, JulietS_27, JustHall_31, Kamryn_32, Kboogie_32, Khaleesi_31, Koguma_28, LRRHood_29, Latch_32, Lee7_31, LifeSavor_33, Littleton_32, Loanshark_32, LolaVinca_35, LordLeafolot_37, Lukilu_25, Maby2021_33, Mangeria_35, Matsumoto_31, McGee_31, McWolfish_31, Megamind_32, Melpomini_31, MikeLiesIn_32, Mikro_30, MoMoMixon_33, Momo_31, Morizzled23_31, Naija_32, Napoleon13_31, Nappy_33, Naval22_34, NedWong_33, Ngannou_30, Nidhogg_33, NoodleTree_31, Norm_32, NuevoMundo_35, ParkTD_31, Patter_32, Phlegm_34, Phox_31, Phusco_32, Pier_34, Pio_35, Pivoine_32, Pleione_34, PurduePete_31, QBert_30, Quasimodo_32, Rahel_32, Rizal_30, RoMag_27, Ronan_27, Roots515_32, Salacia_34, Sauce_33, ScottMcG_32, Sebata_32, Shaqnato_28, ShiaLabeouf_32, Shifa_29, Shnickers_32, Shrimp_32, SilverDipper_33, SmallFry_32, Spec_30, Specks_37, Sprinklers_32, Spud_34, SrishMeg2525_31, StephanieG_32, StubbySaigey_31, Tainan_37, Teardrop_31, TinyTim_32, Tonenili_36, Tortoise16_31, Trinitium_31, Turret_30, Tyke_34, ValleyTerrace_32, Wally_31, Willis_32, Yassified_29, YemiJoy2021_33, YoungMoneyMata_32, Yucca_32, Zalkecks_34, Zeenon_34, ZygoTaiga_32,

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

Genes that do not have the "Most Annotated" start:
• Argan_64, Dewdrop_50, GantcherGoblin_65, Leaf_50, Leathea_67, Lewando_70, Phaila_69, TrixiePhattel_69, Uzumaki_64, Zeina_69,

Summary by start number:

Start 2:
• Found in 2 of 188 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Dewdrop_50 (GC), Leaf_50 (GC),

Start 3:
• Found in 178 of 188 (94.7%) of genes in pham
• Manual Annotations of this start: 160 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ading_32 (C1), Adlitam_32 (C1), Amataga_32 (C1), ArcherS7_31 (C1), Asterius_30 (C1), Astraea_33 (C1), Atlantean_32 (C1), Audrick_34 (C1), Ava3_33 (C1), Babyland_31 (C1), BackyardAgain_29 (C1), BadAgartude_33 (C1), BananaFence_33 (C1), Bangla1971_31 (C1), Basquiat_31 (C1), BeanWater_28 (C1), BigCity_36 (C1), Bigswole_38 (C1), Bipolarisk_31 (C1), Blackbrain_30 (C1), Blackdragon_27 (C1), Blubba_26 (C1), Bonray_32 (C1), Bread_33 (C1), Breeniome_32 (C1), Burrough_32 (C1), Bxz1_32 (C1), Cactojaque_29 (C1), Cali_32 (C1), Capablanca_34 (C1), Caravan_30 (C1), Catera_30 (C1), Chargie21_31 (C1), CharlieB_32 (C1), ChaylaJr_31 (C1), ChickenPhender_31 (C1), Chomp_32 (C1), CindyLou_32 (C1), Concombre_31 (C1), DTDevon_33 (C1), Daffodil_34 (C1), Dandelion_36 (C1), Darko_31 (C1), Delilah_32 (C1), Demodog_30 (C1), Derek_33 (C1), Dietrick_27 (C1), DirtMonster_31 (C1), Domi_27 (C1), DrPhinkDaddy_32 (C1), Drazdys_32 (C1), ET08_27 (C1), EasyJones_31 (C1), EggyFarm_36 (C1), EmToTheThree_35 (C1), EmmaElysia_30 (C1), Erdmann_33 (C1), ErnieJ_33 (C1), Essence_31 (C1), Ewok_32 (C1), Fludd_31 (C1), FoxtrotP1_32 (C1), FrayBell_38 (C1), FudgeTart_33 (C1), Gabriel_32 (C1), Gamgam_32 (C1), Ghost_32 (C1), Gizmo_34 (C1), Grasshills_36 (C1), Grungle_25 (C1), Guwapp_32 (C1), Halldule_28 (C1), HyRo_31 (C1), I3_34 (C1), IkeLoa_28 (C1), InigoMontoya_33 (C1), InterFolia_39 (C1), Iota_29 (C1), Issimir_32 (C1), Izajani_33 (C1), JPickles_30 (C1), Janiyra_32 (C1), JayJay_33 (C1), Jaygup_32 (C1), Jedediah_32 (C1), Jemmno_32 (C1), Jessibeth14_31 (C1), JigglyPuff_32 (C1), JulietS_27 (C1), JustHall_31 (C1), Kamryn_32 (C1), Kboogie_32 (C1), Khaleesi_31 (C1), Koguma_28 (C1), LRRHood_29 (C1), Latch_32 (C1), Lee7_31 (C1), LifeSavor_33 (C1), Littleton_32 (C1), Loanshark_32 (C1), LolaVinca_35 (C1), LordLeafolot_37 (C1), Lukilu_25 (C1), Maby2021_33 (C1), Mangeria_35 (C1), Matsumoto_31 (C1), McGee_31 (C1), McWolfish_31 (C1), Megamind_32 (C1), Melpomini_31 (C1), MikeLiesIn_32 (C1), Mikro_30 (C1), MoMoMixon_33 (C1), Momo_31 (C1), Morizzled23_31 (C1), Naija_32 (C1), Napoleon13_31 (C1), Nappy_33 (C1), Naval22_34 (C1), NedWong_33 (C1), Ngannou_30 (C1), Nidhogg_33 (C1), NoodleTree_31 (C1), Norm_32 (C1), NuevoMundo_35 (C1), ParkTD_31 (C1), Patter_32 (C1), Phlegm_34 (C1), Phox_31 (C1), Phusco_32 (C1), Pier_34 (C1), Pio_35 (C1), Pivoine_32 (C1), Pleione_34 (C1), PurduePete_31 (C1), QBert_30 (C1), Quasimodo_32 (C1), Rahel_32 (C1), Rizal_30 (C1), RoMag_27 (C1), Ronan_27 (C1), Roots515_32 (C1), Salacia_34 (C1), Sauce_33 (C1), ScottMcG_32 (C1), Sebata_32 (C1), Shaqnato_28 (C1), ShiaLabeouf_32 (C1), Shifa_29 (C1), Shnickers_32 (C1), Shrimp_32 (C1), SilverDipper_33 (C1), SmallFry_32 (C1), Spec_30 (C1), Specks_37 (C1), Sprinklers_32 (C1), Spud_34 (C1), SrishMeg2525_31 (C1), StephanieG_32 (C1), StubbySaigey_31 (C1), Tainan_37 (C1), Teardrop_31 (C1), TinyTim_32 (C1), Tonenili_36 (C1), Tortoise16_31 (C1), Trinitium_31 (C1), Turret_30 (C1), Tyke_34 (C1), ValleyTerrace_32 (C1), Wally_31 (C1), Willis_32 (C1), Yassified_29 (C1), YemiJoy2021_33 (C1), YoungMoneyMata_32 (C1), Yucca_32 (C1), Zalkecks_34

(C1), Zeenon_34 (C1), ZygoTaiga_32 (C1),

Start 4:
• Found in 8 of 188 (4.3%) of genes in pham
• Manual Annotations of this start: 5 of 167
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Argan_64 (AU6), GantcherGoblin_65 (AU6), Leathea_67 (AU6), Lewando_70 (AU6), Uzumaki_64 (AU6), Zeina_69 (AU6),

Start 5:
• Found in 6 of 188 (3.2%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Phaila_69 (AU6),

Start 8:
• Found in 9 of 188 (4.8%) of genes in pham
• No Manual Annotations of this start.
• Called 11.1% of time when present
• Phage (with cluster) where this start called: TrixiePhattel_69 (AU6),

Summary by clusters:

There are 3 clusters represented in this pham: C1, GC, AU6,

Info for manual annotations of cluster AU6:
•Start number 4 was manually annotated 5 times for cluster AU6.

Info for manual annotations of cluster C1:
•Start number 3 was manually annotated 160 times for cluster C1.

Info for manual annotations of cluster GC:
•Start number 2 was manually annotated 2 times for cluster GC.

Gene Information:

Gene: Ading_32 Start: 10352, Stop: 10702, Start Num: 3
Candidate Starts for Ading_32:
(Start: 3 @10352 has 160 MA's), (7, 10400), (9, 10448), (14, 10493), (15, 10499), (18, 10535), (19, 10559), (23, 10670),

Gene: Adlitam_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Adlitam_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Amataga_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Amataga_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: ArcherS7_31 Start: 10363, Stop: 10713, Start Num: 3
Candidate Starts for ArcherS7_31:
(Start: 3 @10363 has 160 MA's), (7, 10411), (9, 10459), (14, 10504), (15, 10510), (18, 10546), (19, 10570), (23, 10681),

Gene: Argan_64 Start: 42700, Stop: 42966, Start Num: 4
Candidate Starts for Argan_64:
(Start: 4 @42700 has 5 MA's), (5, 42721), (8, 42766), (13, 42805),

Gene: Asterius_30 Start: 10638, Stop: 10988, Start Num: 3
Candidate Starts for Asterius_30:
(Start: 3 @10638 has 160 MA's), (7, 10686), (9, 10734), (14, 10779), (15, 10785), (18, 10821), (19, 10845), (23, 10956),

Gene: Astraea_33 Start: 10543, Stop: 10893, Start Num: 3
Candidate Starts for Astraea_33:
(Start: 3 @10543 has 160 MA's), (7, 10591), (9, 10639), (14, 10684), (15, 10690), (18, 10726), (19, 10750), (23, 10861),

Gene: Atlantean_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Atlantean_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Audrick_34 Start: 10352, Stop: 10702, Start Num: 3
Candidate Starts for Audrick_34:
(Start: 3 @10352 has 160 MA's), (7, 10400), (9, 10448), (14, 10493), (15, 10499), (18, 10535), (19, 10559), (23, 10670),

Gene: Ava3_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Ava3_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Babyland_31 Start: 9811, Stop: 10161, Start Num: 3
Candidate Starts for Babyland_31:
(Start: 3 @9811 has 160 MA's), (7, 9859), (9, 9907), (14, 9952), (15, 9958), (18, 9994), (19, 10018), (23, 10129),

Gene: BackyardAgain_29 Start: 9792, Stop: 10142, Start Num: 3
Candidate Starts for BackyardAgain_29:
(Start: 3 @9792 has 160 MA's), (7, 9840), (9, 9888), (14, 9933), (15, 9939), (18, 9975), (19, 9999), (23, 10110),

Gene: BadAgartude_33 Start: 11005, Stop: 11355, Start Num: 3
Candidate Starts for BadAgartude_33:
(Start: 3 @11005 has 160 MA's), (7, 11053), (9, 11101), (14, 11146), (15, 11152), (18, 11188), (19, 11212), (23, 11323),

Gene: BananaFence_33 Start: 10802, Stop: 11152, Start Num: 3
Candidate Starts for BananaFence_33:
(Start: 3 @10802 has 160 MA's), (7, 10850), (9, 10898), (14, 10943), (15, 10949), (18, 10985), (19, 11009), (23, 11120),

Gene: Bangla1971_31 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Bangla1971_31:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Basquiat_31 Start: 9792, Stop: 10142, Start Num: 3
Candidate Starts for Basquiat_31:
(Start: 3 @9792 has 160 MA's), (7, 9840), (9, 9888), (14, 9933), (15, 9939), (18, 9975), (19, 9999), (23, 10110),

Gene: BeanWater_28 Start: 10762, Stop: 11112, Start Num: 3
Candidate Starts for BeanWater_28:
(Start: 3 @10762 has 160 MA's), (7, 10810), (9, 10858), (14, 10903), (15, 10909), (18, 10945), (19, 10969), (23, 11080),

Gene: BigCity_36 Start: 11898, Stop: 12248, Start Num: 3
Candidate Starts for BigCity_36:
(Start: 3 @11898 has 160 MA's), (7, 11946), (9, 11994), (14, 12039), (15, 12045), (18, 12081), (19, 12105), (23, 12216),

Gene: Bigswole_38 Start: 12708, Stop: 13058, Start Num: 3
Candidate Starts for Bigswole_38:
(Start: 3 @12708 has 160 MA's), (7, 12756), (9, 12804), (14, 12849), (15, 12855), (18, 12891), (19, 12915), (23, 13026),

Gene: Bipolarisk_31 Start: 10629, Stop: 10979, Start Num: 3
Candidate Starts for Bipolarisk_31:
(Start: 3 @10629 has 160 MA's), (7, 10677), (9, 10725), (14, 10770), (15, 10776), (18, 10812), (19, 10836), (23, 10947),

Gene: Blackbrain_30 Start: 9608, Stop: 9958, Start Num: 3
Candidate Starts for Blackbrain_30:
(Start: 3 @9608 has 160 MA's), (7, 9656), (9, 9704), (14, 9749), (15, 9755), (18, 9791), (19, 9815), (23, 9926),

Gene: Blackdragon_27 Start: 9394, Stop: 9744, Start Num: 3
Candidate Starts for Blackdragon_27:
(Start: 3 @9394 has 160 MA's), (7, 9442), (9, 9490), (14, 9535), (15, 9541), (18, 9577), (19, 9601), (23, 9712),

Gene: Blubba_26 Start: 9089, Stop: 9439, Start Num: 3
Candidate Starts for Blubba_26:
(Start: 3 @9089 has 160 MA's), (7, 9137), (9, 9185), (14, 9230), (15, 9236), (19, 9296), (23, 9407),

Gene: Bonray_32 Start: 10906, Stop: 11256, Start Num: 3
Candidate Starts for Bonray_32:
(Start: 3 @10906 has 160 MA's), (7, 10954), (9, 11002), (14, 11047), (15, 11053), (18, 11089), (19, 11113), (23, 11224),

Gene: Bread_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Bread_33:

(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Breeniome_32 Start: 9801, Stop: 10151, Start Num: 3
Candidate Starts for Breeniome_32:
(Start: 3 @9801 has 160 MA's), (7, 9849), (9, 9897), (14, 9942), (15, 9948), (18, 9984), (19, 10008), (23, 10119),

Gene: Burrough_32 Start: 10629, Stop: 10979, Start Num: 3
Candidate Starts for Burrough_32:
(Start: 3 @10629 has 160 MA's), (7, 10677), (9, 10725), (14, 10770), (15, 10776), (18, 10812), (19, 10836), (23, 10947),

Gene: Bxz1_32 Start: 11378, Stop: 11728, Start Num: 3
Candidate Starts for Bxz1_32:
(Start: 3 @11378 has 160 MA's), (7, 11426), (9, 11474), (14, 11519), (15, 11525), (18, 11561), (19, 11585), (23, 11696),

Gene: Cactojaque_29 Start: 9497, Stop: 9847, Start Num: 3
Candidate Starts for Cactojaque_29:
(Start: 3 @9497 has 160 MA's), (7, 9545), (9, 9593), (14, 9638), (15, 9644), (18, 9680), (19, 9704), (23, 9815),

Gene: Cali_32 Start: 11939, Stop: 12289, Start Num: 3
Candidate Starts for Cali_32:
(Start: 3 @11939 has 160 MA's), (7, 11987), (9, 12035), (14, 12080), (15, 12086), (18, 12122), (19, 12146), (23, 12257),

Gene: Capablanca_34 Start: 11498, Stop: 11848, Start Num: 3
Candidate Starts for Capablanca_34:
(Start: 3 @11498 has 160 MA's), (7, 11546), (9, 11594), (14, 11639), (15, 11645), (18, 11681), (19, 11705), (23, 11816),

Gene: Caravan_30 Start: 10188, Stop: 10538, Start Num: 3
Candidate Starts for Caravan_30:
(Start: 3 @10188 has 160 MA's), (7, 10236), (9, 10284), (14, 10329), (15, 10335), (18, 10371), (19, 10395), (23, 10506),

Gene: Catera_30 Start: 9796, Stop: 10146, Start Num: 3
Candidate Starts for Catera_30:
(Start: 3 @9796 has 160 MA's), (7, 9844), (9, 9892), (14, 9937), (15, 9943), (18, 9979), (19, 10003), (23, 10114),

Gene: Chargie21_31 Start: 9792, Stop: 10142, Start Num: 3
Candidate Starts for Chargie21_31:
(Start: 3 @9792 has 160 MA's), (7, 9840), (9, 9888), (14, 9933), (15, 9939), (18, 9975), (19, 9999), (23, 10110),

Gene: CharlieB_32 Start: 9937, Stop: 10287, Start Num: 3
Candidate Starts for CharlieB_32:
(Start: 3 @9937 has 160 MA's), (7, 9985), (9, 10033), (14, 10078), (15, 10084), (18, 10120), (19, 10144), (23, 10255),

Gene: ChaylaJr_31 Start: 9879, Stop: 10229, Start Num: 3
Candidate Starts for ChaylaJr_31:
(Start: 3 @9879 has 160 MA's), (7, 9927), (9, 9975), (14, 10020), (15, 10026), (18, 10062), (19, 10086), (23, 10197),

Gene: ChickenPhender_31 Start: 9837, Stop: 10187, Start Num: 3
Candidate Starts for ChickenPhender_31:
(Start: 3 @9837 has 160 MA's), (7, 9885), (9, 9933), (14, 9978), (15, 9984), (18, 10020), (19, 10044), (23, 10155),

Gene: Chomp_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Chomp_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: CindyLou_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for CindyLou_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Concombre_31 Start: 11144, Stop: 11494, Start Num: 3
Candidate Starts for Concombre_31:
(Start: 3 @11144 has 160 MA's), (7, 11192), (9, 11240), (14, 11285), (15, 11291), (18, 11327), (19, 11351), (23, 11462),

Gene: DTDevon_33 Start: 11537, Stop: 11887, Start Num: 3
Candidate Starts for DTDevon_33:
(Start: 3 @11537 has 160 MA's), (7, 11585), (9, 11633), (14, 11678), (15, 11684), (18, 11720), (19, 11744), (23, 11855),

Gene: Daffodil_34 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Daffodil_34:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Dandelion_36 Start: 12233, Stop: 12583, Start Num: 3
Candidate Starts for Dandelion_36:
(Start: 3 @12233 has 160 MA's), (7, 12281), (9, 12329), (14, 12374), (15, 12380), (18, 12416), (19, 12440), (23, 12551),

Gene: Darko_31 Start: 10771, Stop: 11121, Start Num: 3
Candidate Starts for Darko_31:
(Start: 3 @10771 has 160 MA's), (7, 10819), (9, 10867), (14, 10912), (15, 10918), (18, 10954), (19, 10978), (23, 11089),

Gene: Delilah_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Delilah_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Demodog_30 Start: 11144, Stop: 11494, Start Num: 3
Candidate Starts for Demodog_30:

(Start: 3 @11144 has 160 MA's), (7, 11192), (9, 11240), (14, 11285), (15, 11291), (18, 11327), (19, 11351), (23, 11462),

Gene: Derek_33 Start: 10330, Stop: 10680, Start Num: 3
Candidate Starts for Derek_33:
(Start: 3 @10330 has 160 MA's), (7, 10378), (9, 10426), (14, 10471), (15, 10477), (18, 10513), (19, 10537), (23, 10648),

Gene: Dewdrop_50 Start: 22009, Stop: 22341, Start Num: 2
Candidate Starts for Dewdrop_50:
(Start: 2 @22009 has 2 MA's), (6, 22054), (7, 22063), (8, 22093), (10, 22114), (12, 22123), (17, 22168), (23, 22306),

Gene: Dietrick_27 Start: 9565, Stop: 9915, Start Num: 3
Candidate Starts for Dietrick_27:
(Start: 3 @9565 has 160 MA's), (7, 9613), (9, 9661), (14, 9706), (15, 9712), (19, 9772), (23, 9883),

Gene: DirtMonster_31 Start: 11456, Stop: 11806, Start Num: 3
Candidate Starts for DirtMonster_31:
(Start: 3 @11456 has 160 MA's), (7, 11504), (9, 11552), (14, 11597), (15, 11603), (19, 11663), (23, 11774),

Gene: Domi_27 Start: 10190, Stop: 10540, Start Num: 3
Candidate Starts for Domi_27:
(Start: 3 @10190 has 160 MA's), (7, 10238), (9, 10286), (14, 10331), (15, 10337), (19, 10397), (23, 10508),

Gene: DrPhinkDaddy_32 Start: 10915, Stop: 11265, Start Num: 3
Candidate Starts for DrPhinkDaddy_32:
(Start: 3 @10915 has 160 MA's), (7, 10963), (9, 11011), (14, 11056), (15, 11062), (18, 11098), (19, 11122), (23, 11233),

Gene: Drazdys_32 Start: 10703, Stop: 11053, Start Num: 3
Candidate Starts for Drazdys_32:
(Start: 3 @10703 has 160 MA's), (7, 10751), (9, 10799), (14, 10844), (15, 10850), (18, 10886), (19, 10910), (23, 11021),

Gene: ET08_27 Start: 10374, Stop: 10724, Start Num: 3
Candidate Starts for ET08_27:
(Start: 3 @10374 has 160 MA's), (7, 10422), (9, 10470), (14, 10515), (15, 10521), (18, 10557), (19, 10581), (23, 10692),

Gene: EasyJones_31 Start: 9542, Stop: 9892, Start Num: 3
Candidate Starts for EasyJones_31:
(Start: 3 @9542 has 160 MA's), (7, 9590), (9, 9638), (14, 9683), (15, 9689), (18, 9725), (19, 9749), (23, 9860),

Gene: EggyFarm_36 Start: 11898, Stop: 12248, Start Num: 3
Candidate Starts for EggyFarm_36:
(Start: 3 @11898 has 160 MA's), (7, 11946), (9, 11994), (14, 12039), (15, 12045), (18, 12081), (19, 12105), (23, 12216),

Gene: EmToTheThree_35 Start: 12332, Stop: 12682, Start Num: 3

Candidate Starts for EmToTheThree_35:
(Start: 3 @12332 has 160 MA's), (7, 12380), (9, 12428), (14, 12473), (15, 12479), (18, 12515), (19, 12539), (23, 12650),

Gene: EmmaElysia_30 Start: 9557, Stop: 9907, Start Num: 3
Candidate Starts for EmmaElysia_30:
(Start: 3 @9557 has 160 MA's), (7, 9605), (9, 9653), (14, 9698), (15, 9704), (18, 9740), (19, 9764), (23, 9875),

Gene: Erdmann_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Erdmann_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: ErnieJ_33 Start: 10738, Stop: 11088, Start Num: 3
Candidate Starts for ErnieJ_33:
(Start: 3 @10738 has 160 MA's), (7, 10786), (9, 10834), (14, 10879), (15, 10885), (18, 10921), (19, 10945), (23, 11056),

Gene: Essence_31 Start: 10092, Stop: 10442, Start Num: 3
Candidate Starts for Essence_31:
(Start: 3 @10092 has 160 MA's), (7, 10140), (9, 10188), (14, 10233), (15, 10239), (18, 10275), (19, 10299), (23, 10410),

Gene: Ewok_32 Start: 10921, Stop: 11271, Start Num: 3
Candidate Starts for Ewok_32:
(Start: 3 @10921 has 160 MA's), (7, 10969), (9, 11017), (14, 11062), (15, 11068), (18, 11104), (19, 11128), (23, 11239),

Gene: Fludd_31 Start: 9793, Stop: 10143, Start Num: 3
Candidate Starts for Fludd_31:
(Start: 3 @9793 has 160 MA's), (7, 9841), (9, 9889), (14, 9934), (15, 9940), (18, 9976), (19, 10000), (23, 10111),

Gene: FoxtrotP1_32 Start: 11246, Stop: 11596, Start Num: 3
Candidate Starts for FoxtrotP1_32:
(Start: 3 @11246 has 160 MA's), (7, 11294), (9, 11342), (14, 11387), (15, 11393), (18, 11429), (19, 11453), (23, 11564),

Gene: FrayBell_38 Start: 12486, Stop: 12836, Start Num: 3
Candidate Starts for FrayBell_38:
(Start: 3 @12486 has 160 MA's), (7, 12534), (9, 12582), (14, 12627), (15, 12633), (19, 12693), (23, 12804),

Gene: FudgeTart_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for FudgeTart_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Gabriel_32 Start: 9792, Stop: 10142, Start Num: 3
Candidate Starts for Gabriel_32:
(Start: 3 @9792 has 160 MA's), (7, 9840), (9, 9888), (14, 9933), (15, 9939), (18, 9975), (19, 9999), (23, 10110),

Gene: Gamgam_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Gamgam_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: GantcherGoblin_65 Start: 42756, Stop: 43022, Start Num: 4
Candidate Starts for GantcherGoblin_65:
(Start: 4 @42756 has 5 MA's), (5, 42777), (8, 42822), (13, 42861),

Gene: Ghost_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Ghost_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Gizmo_34 Start: 10920, Stop: 11270, Start Num: 3
Candidate Starts for Gizmo_34:
(Start: 3 @10920 has 160 MA's), (7, 10968), (9, 11016), (14, 11061), (15, 11067), (18, 11103), (19, 11127), (23, 11238),

Gene: Grasshills_36 Start: 11898, Stop: 12248, Start Num: 3
Candidate Starts for Grasshills_36:
(Start: 3 @11898 has 160 MA's), (7, 11946), (9, 11994), (14, 12039), (15, 12045), (18, 12081), (19, 12105), (23, 12216),

Gene: Grungle_25 Start: 8489, Stop: 8839, Start Num: 3
Candidate Starts for Grungle_25:
(Start: 3 @8489 has 160 MA's), (7, 8537), (9, 8585), (14, 8630), (15, 8636), (18, 8672), (19, 8696), (23, 8807),

Gene: Guwapp_32 Start: 10330, Stop: 10680, Start Num: 3
Candidate Starts for Guwapp_32:
(Start: 3 @10330 has 160 MA's), (7, 10378), (9, 10426), (14, 10471), (15, 10477), (18, 10513), (19, 10537), (23, 10648),

Gene: Halldule_28 Start: 9159, Stop: 9509, Start Num: 3
Candidate Starts for Halldule_28:
(Start: 3 @9159 has 160 MA's), (7, 9207), (9, 9255), (14, 9300), (15, 9306), (18, 9342), (19, 9366), (23, 9477),

Gene: HyRo_31 Start: 11105, Stop: 11455, Start Num: 3
Candidate Starts for HyRo_31:
(Start: 3 @11105 has 160 MA's), (7, 11153), (9, 11201), (14, 11246), (15, 11252), (18, 11288), (19, 11312), (23, 11423),

Gene: I3_34 Start: 11467, Stop: 11817, Start Num: 3
Candidate Starts for I3_34:
(Start: 3 @11467 has 160 MA's), (7, 11515), (9, 11563), (14, 11608), (15, 11614), (19, 11674), (23, 11785),

Gene: IkeLoa_28 Start: 10216, Stop: 10566, Start Num: 3
Candidate Starts for IkeLoa_28:

(Start: 3 @10216 has 160 MA's), (7, 10264), (9, 10312), (14, 10357), (15, 10363), (18, 10399), (19, 10423), (23, 10534),

Gene: InigoMontoya_33 Start: 10334, Stop: 10684, Start Num: 3
Candidate Starts for InigoMontoya_33:
(Start: 3 @10334 has 160 MA's), (7, 10382), (9, 10430), (14, 10475), (15, 10481), (18, 10517), (19, 10541), (23, 10652),

Gene: InterFolia_39 Start: 13024, Stop: 13374, Start Num: 3
Candidate Starts for InterFolia_39:
(Start: 3 @13024 has 160 MA's), (7, 13072), (9, 13120), (14, 13165), (15, 13171), (18, 13207), (19, 13231), (23, 13342),

Gene: Iota_29 Start: 10453, Stop: 10803, Start Num: 3
Candidate Starts for Iota_29:
(Start: 3 @10453 has 160 MA's), (7, 10501), (9, 10549), (14, 10594), (15, 10600), (18, 10636), (19, 10660), (23, 10771),

Gene: Issimir_32 Start: 10913, Stop: 11263, Start Num: 3
Candidate Starts for Issimir_32:
(Start: 3 @10913 has 160 MA's), (7, 10961), (9, 11009), (14, 11054), (15, 11060), (18, 11096), (19, 11120), (23, 11231),

Gene: Izajani_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Izajani_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: JPickles_30 Start: 9567, Stop: 9917, Start Num: 3
Candidate Starts for JPickles_30:
(Start: 3 @9567 has 160 MA's), (7, 9615), (9, 9663), (14, 9708), (15, 9714), (18, 9750), (19, 9774), (23, 9885),

Gene: Janiyra_32 Start: 10352, Stop: 10702, Start Num: 3
Candidate Starts for Janiyra_32:
(Start: 3 @10352 has 160 MA's), (7, 10400), (9, 10448), (14, 10493), (15, 10499), (18, 10535), (19, 10559), (23, 10670),

Gene: JayJay_33 Start: 10883, Stop: 11233, Start Num: 3
Candidate Starts for JayJay_33:
(Start: 3 @10883 has 160 MA's), (7, 10931), (9, 10979), (14, 11024), (15, 11030), (18, 11066), (19, 11090), (23, 11201),

Gene: Jaygup_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Jaygup_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Jedediah_32 Start: 9838, Stop: 10188, Start Num: 3
Candidate Starts for Jedediah_32:
(Start: 3 @9838 has 160 MA's), (7, 9886), (9, 9934), (14, 9979), (15, 9985), (18, 10021), (19, 10045), (23, 10156),

Gene: Jemmno_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Jemmno_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Jessibeth14_31 Start: 10638, Stop: 10988, Start Num: 3
Candidate Starts for Jessibeth14_31:
(Start: 3 @10638 has 160 MA's), (7, 10686), (9, 10734), (14, 10779), (15, 10785), (18, 10821), (19, 10845), (23, 10956),

Gene: JigglyPuff_32 Start: 11194, Stop: 11544, Start Num: 3
Candidate Starts for JigglyPuff_32:
(Start: 3 @11194 has 160 MA's), (7, 11242), (9, 11290), (14, 11335), (15, 11341), (18, 11377), (19, 11401), (23, 11512),

Gene: JulietS_27 Start: 8792, Stop: 9142, Start Num: 3
Candidate Starts for JulietS_27:
(Start: 3 @8792 has 160 MA's), (7, 8840), (9, 8888), (14, 8933), (15, 8939), (18, 8975), (19, 8999), (23, 9110),

Gene: JustHall_31 Start: 10818, Stop: 11168, Start Num: 3
Candidate Starts for JustHall_31:
(Start: 3 @10818 has 160 MA's), (7, 10866), (9, 10914), (14, 10959), (15, 10965), (18, 11001), (19, 11025), (23, 11136),

Gene: Kamryn_32 Start: 10691, Stop: 11041, Start Num: 3
Candidate Starts for Kamryn_32:
(Start: 3 @10691 has 160 MA's), (7, 10739), (9, 10787), (14, 10832), (15, 10838), (18, 10874), (19, 10898), (23, 11009),

Gene: Kboogie_32 Start: 9848, Stop: 10198, Start Num: 3
Candidate Starts for Kboogie_32:
(Start: 3 @9848 has 160 MA's), (7, 9896), (9, 9944), (14, 9989), (15, 9995), (18, 10031), (19, 10055), (23, 10166),

Gene: Khaleesi_31 Start: 10665, Stop: 11015, Start Num: 3
Candidate Starts for Khaleesi_31:
(Start: 3 @10665 has 160 MA's), (7, 10713), (9, 10761), (14, 10806), (15, 10812), (18, 10848), (19, 10872), (23, 10983),

Gene: Koguma_28 Start: 9135, Stop: 9485, Start Num: 3
Candidate Starts for Koguma_28:
(Start: 3 @9135 has 160 MA's), (7, 9183), (9, 9231), (14, 9276), (15, 9282), (18, 9318), (19, 9342), (23, 9453),

Gene: LRRHood_29 Start: 11058, Stop: 11408, Start Num: 3
Candidate Starts for LRRHood_29:
(Start: 3 @11058 has 160 MA's), (7, 11106), (9, 11154), (14, 11199), (15, 11205), (18, 11241), (19, 11265), (23, 11376),

Gene: Latch_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Latch_32:

(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Leaf_50 Start: 22009, Stop: 22341, Start Num: 2
Candidate Starts for Leaf_50:
(Start: 2 @22009 has 2 MA's), (6, 22054), (7, 22063), (8, 22093), (10, 22114), (12, 22123), (17, 22168), (23, 22306),

Gene: Leathea_67 Start: 42633, Stop: 42920, Start Num: 4
Candidate Starts for Leathea_67:
(Start: 4 @42633 has 5 MA's), (11, 42729), (16, 42759), (21, 42894),

Gene: Lee7_31 Start: 10915, Stop: 11265, Start Num: 3
Candidate Starts for Lee7_31:
(Start: 3 @10915 has 160 MA's), (7, 10963), (9, 11011), (14, 11056), (15, 11062), (18, 11098), (19, 11122), (23, 11233),

Gene: Lewando_70 Start: 44452, Stop: 44727, Start Num: 4
Candidate Starts for Lewando_70:
(Start: 4 @44452 has 5 MA's), (8, 44518), (16, 44578), (18, 44602), (20, 44644),

Gene: LifeSavor_33 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for LifeSavor_33:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Littleton_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Littleton_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Loanshark_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Loanshark_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: LolaVinca_35 Start: 12130, Stop: 12480, Start Num: 3
Candidate Starts for LolaVinca_35:
(Start: 3 @12130 has 160 MA's), (7, 12178), (9, 12226), (14, 12271), (15, 12277), (18, 12313), (19, 12337), (23, 12448),

Gene: LordLeafolot_37 Start: 12485, Stop: 12835, Start Num: 3
Candidate Starts for LordLeafolot_37:
(Start: 3 @12485 has 160 MA's), (7, 12533), (9, 12581), (14, 12626), (15, 12632), (19, 12692), (23, 12803),

Gene: Lukilu_25 Start: 9509, Stop: 9859, Start Num: 3
Candidate Starts for Lukilu_25:
(Start: 3 @9509 has 160 MA's), (7, 9557), (9, 9605), (14, 9650), (15, 9656), (18, 9692), (19, 9716), (23, 9827),

Gene: Maby2021_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Maby2021_33:

(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Mangeria_35 Start: 11441, Stop: 11791, Start Num: 3
Candidate Starts for Mangeria_35:
(Start: 3 @11441 has 160 MA's), (7, 11489), (9, 11537), (14, 11582), (15, 11588), (18, 11624), (19, 11648), (23, 11759),

Gene: Matsumoto_31 Start: 10334, Stop: 10684, Start Num: 3
Candidate Starts for Matsumoto_31:
(Start: 3 @10334 has 160 MA's), (7, 10382), (9, 10430), (14, 10475), (15, 10481), (18, 10517), (19, 10541), (23, 10652),

Gene: McGee_31 Start: 9557, Stop: 9907, Start Num: 3
Candidate Starts for McGee_31:
(Start: 3 @9557 has 160 MA's), (7, 9605), (9, 9653), (14, 9698), (15, 9704), (18, 9740), (19, 9764), (23, 9875),

Gene: McWolfish_31 Start: 10665, Stop: 11015, Start Num: 3
Candidate Starts for McWolfish_31:
(Start: 3 @10665 has 160 MA's), (7, 10713), (9, 10761), (14, 10806), (15, 10812), (18, 10848), (19, 10872), (23, 10983),

Gene: Megamind_32 Start: 10903, Stop: 11253, Start Num: 3
Candidate Starts for Megamind_32:
(Start: 3 @10903 has 160 MA's), (7, 10951), (9, 10999), (14, 11044), (15, 11050), (18, 11086), (19, 11110), (23, 11221),

Gene: Melpomini_31 Start: 9775, Stop: 10125, Start Num: 3
Candidate Starts for Melpomini_31:
(Start: 3 @9775 has 160 MA's), (7, 9823), (9, 9871), (14, 9916), (15, 9922), (18, 9958), (19, 9982), (23, 10093),

Gene: MikeLiesIn_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for MikeLiesIn_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Mikro_30 Start: 11404, Stop: 11754, Start Num: 3
Candidate Starts for Mikro_30:
(Start: 3 @11404 has 160 MA's), (7, 11452), (9, 11500), (14, 11545), (15, 11551), (18, 11587), (19, 11611), (23, 11722),

Gene: MoMoMixon_33 Start: 11232, Stop: 11582, Start Num: 3
Candidate Starts for MoMoMixon_33:
(Start: 3 @11232 has 160 MA's), (7, 11280), (9, 11328), (14, 11373), (15, 11379), (18, 11415), (19, 11439), (23, 11550),

Gene: Momo_31 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Momo_31:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Morizzled23_31 Start: 9769, Stop: 10119, Start Num: 3
Candidate Starts for Morizzled23_31:
(Start: 3 @9769 has 160 MA's), (7, 9817), (9, 9865), (14, 9910), (15, 9916), (18, 9952), (19, 9976), (23, 10087),

Gene: Naija_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Naija_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Napoleon13_31 Start: 9788, Stop: 10138, Start Num: 3
Candidate Starts for Napoleon13_31:
(Start: 3 @9788 has 160 MA's), (7, 9836), (9, 9884), (14, 9929), (15, 9935), (18, 9971), (19, 9995), (23, 10106),

Gene: Nappy_33 Start: 11083, Stop: 11433, Start Num: 3
Candidate Starts for Nappy_33:
(Start: 3 @11083 has 160 MA's), (7, 11131), (9, 11179), (14, 11224), (15, 11230), (18, 11266), (19, 11290), (23, 11401),

Gene: Naval22_34 Start: 10958, Stop: 11308, Start Num: 3
Candidate Starts for Naval22_34:
(Start: 3 @10958 has 160 MA's), (7, 11006), (9, 11054), (14, 11099), (15, 11105), (18, 11141), (19, 11165), (23, 11276),

Gene: NedWong_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for NedWong_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Ngannou_30 Start: 9549, Stop: 9899, Start Num: 3
Candidate Starts for Ngannou_30:
(Start: 3 @9549 has 160 MA's), (7, 9597), (9, 9645), (14, 9690), (15, 9696), (18, 9732), (19, 9756), (23, 9867),

Gene: Nidhogg_33 Start: 10982, Stop: 11332, Start Num: 3
Candidate Starts for Nidhogg_33:
(Start: 3 @10982 has 160 MA's), (7, 11030), (9, 11078), (14, 11123), (15, 11129), (18, 11165), (19, 11189), (23, 11300),

Gene: NoodleTree_31 Start: 10680, Stop: 11030, Start Num: 3
Candidate Starts for NoodleTree_31:
(Start: 3 @10680 has 160 MA's), (7, 10728), (9, 10776), (14, 10821), (15, 10827), (18, 10863), (19, 10887), (23, 10998),

Gene: Norm_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Norm_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: NuevoMundo_35 Start: 11972, Stop: 12322, Start Num: 3
Candidate Starts for NuevoMundo_35:

(Start: 3 @11972 has 160 MA's), (7, 12020), (9, 12068), (14, 12113), (15, 12119), (18, 12155), (19, 12179), (23, 12290),

Gene: ParkTD_31 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for ParkTD_31:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Patter_32 Start: 10390, Stop: 10740, Start Num: 3
Candidate Starts for Patter_32:
(Start: 3 @10390 has 160 MA's), (7, 10438), (9, 10486), (14, 10531), (15, 10537), (18, 10573), (19, 10597), (23, 10708),

Gene: Phaila_69 Start: 42904, Stop: 43149, Start Num: 5
Candidate Starts for Phaila_69:
(Start: 4 @42883 has 5 MA's), (5, 42904), (8, 42949), (13, 42988),

Gene: Phlegm_34 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Phlegm_34:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Phox_31 Start: 11082, Stop: 11432, Start Num: 3
Candidate Starts for Phox_31:
(Start: 3 @11082 has 160 MA's), (7, 11130), (9, 11178), (14, 11223), (15, 11229), (18, 11265), (19, 11289), (23, 11400),

Gene: Phusco_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Phusco_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Pier_34 Start: 11076, Stop: 11426, Start Num: 3
Candidate Starts for Pier_34:
(Start: 3 @11076 has 160 MA's), (7, 11124), (9, 11172), (14, 11217), (15, 11223), (18, 11259), (19, 11283), (23, 11394),

Gene: Pio_35 Start: 11767, Stop: 12117, Start Num: 3
Candidate Starts for Pio_35:
(Start: 3 @11767 has 160 MA's), (7, 11815), (9, 11863), (14, 11908), (15, 11914), (18, 11950), (19, 11974), (23, 12085),

Gene: Pivoine_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for Pivoine_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Pleione_34 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Pleione_34:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: PurduePete_31 Start: 10629, Stop: 10979, Start Num: 3

Candidate Starts for PurduePete_31:
(Start: 3 @10629 has 160 MA's), (7, 10677), (9, 10725), (14, 10770), (15, 10776), (18, 10812), (19, 10836), (23, 10947),

Gene: QBert_30 Start: 11082, Stop: 11432, Start Num: 3
Candidate Starts for QBert_30:
(Start: 3 @11082 has 160 MA's), (7, 11130), (9, 11178), (14, 11223), (15, 11229), (18, 11265), (19, 11289), (23, 11400),

Gene: Quasimodo_32 Start: 11333, Stop: 11683, Start Num: 3
Candidate Starts for Quasimodo_32:
(Start: 3 @11333 has 160 MA's), (7, 11381), (9, 11429), (14, 11474), (15, 11480), (18, 11516), (19, 11540), (23, 11651),

Gene: Rahel_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Rahel_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Rizal_30 Start: 9835, Stop: 10185, Start Num: 3
Candidate Starts for Rizal_30:
(Start: 3 @9835 has 160 MA's), (7, 9883), (9, 9931), (14, 9976), (15, 9982), (18, 10018), (19, 10042), (23, 10153),

Gene: RoMag_27 Start: 10167, Stop: 10517, Start Num: 3
Candidate Starts for RoMag_27:
(Start: 3 @10167 has 160 MA's), (7, 10215), (9, 10263), (14, 10308), (15, 10314), (18, 10350), (19, 10374), (23, 10485),

Gene: Ronan_27 Start: 8475, Stop: 8825, Start Num: 3
Candidate Starts for Ronan_27:
(Start: 3 @8475 has 160 MA's), (7, 8523), (9, 8571), (14, 8616), (15, 8622), (18, 8658), (19, 8682), (23, 8793),

Gene: Roots515_32 Start: 10917, Stop: 11267, Start Num: 3
Candidate Starts for Roots515_32:
(Start: 3 @10917 has 160 MA's), (7, 10965), (9, 11013), (14, 11058), (15, 11064), (18, 11100), (19, 11124), (23, 11235),

Gene: Salacia_34 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for Salacia_34:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Sauce_33 Start: 11045, Stop: 11395, Start Num: 3
Candidate Starts for Sauce_33:
(Start: 3 @11045 has 160 MA's), (7, 11093), (9, 11141), (14, 11186), (15, 11192), (18, 11228), (19, 11252), (23, 11363),

Gene: ScottMcG_32 Start: 11225, Stop: 11575, Start Num: 3
Candidate Starts for ScottMcG_32:
(Start: 3 @11225 has 160 MA's), (7, 11273), (9, 11321), (14, 11366), (15, 11372), (18, 11408), (19, 11432), (23, 11543),

Gene: Sebata_32 Start: 11268, Stop: 11618, Start Num: 3
Candidate Starts for Sebata_32:
(Start: 3 @11268 has 160 MA's), (7, 11316), (9, 11364), (14, 11409), (15, 11415), (18, 11451), (19, 11475), (23, 11586),

Gene: Shaqnato_28 Start: 9480, Stop: 9830, Start Num: 3
Candidate Starts for Shaqnato_28:
(Start: 3 @9480 has 160 MA's), (7, 9528), (9, 9576), (14, 9621), (15, 9627), (18, 9663), (19, 9687), (23, 9798),

Gene: ShiaLabeouf_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for ShiaLabeouf_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Shifa_29 Start: 10551, Stop: 10901, Start Num: 3
Candidate Starts for Shifa_29:
(Start: 3 @10551 has 160 MA's), (7, 10599), (9, 10647), (14, 10692), (15, 10698), (18, 10734), (19, 10758), (23, 10869),

Gene: Shnickers_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Shnickers_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Shrimp_32 Start: 10922, Stop: 11272, Start Num: 3
Candidate Starts for Shrimp_32:
(Start: 3 @10922 has 160 MA's), (7, 10970), (9, 11018), (14, 11063), (15, 11069), (18, 11105), (19, 11129), (23, 11240),

Gene: SilverDipper_33 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for SilverDipper_33:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: SmallFry_32 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for SmallFry_32:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Spec_30 Start: 10375, Stop: 10725, Start Num: 3
Candidate Starts for Spec_30:
(Start: 3 @10375 has 160 MA's), (7, 10423), (9, 10471), (14, 10516), (15, 10522), (18, 10558), (19, 10582), (23, 10693),

Gene: Specks_37 Start: 12207, Stop: 12557, Start Num: 3
Candidate Starts for Specks_37:
(Start: 3 @12207 has 160 MA's), (7, 12255), (9, 12303), (14, 12348), (15, 12354), (18, 12390), (19, 12414), (23, 12525),

Gene: Sprinklers_32 Start: 10407, Stop: 10757, Start Num: 3
Candidate Starts for Sprinklers_32:

(Start: 3 @10407 has 160 MA's), (7, 10455), (9, 10503), (14, 10548), (15, 10554), (18, 10590), (19, 10614), (23, 10725),

Gene: Spud_34 Start: 11764, Stop: 12114, Start Num: 3
Candidate Starts for Spud_34:
(Start: 3 @11764 has 160 MA's), (7, 11812), (9, 11860), (14, 11905), (15, 11911), (18, 11947), (19, 11971), (23, 12082),

Gene: SrishMeg2525_31 Start: 10629, Stop: 10979, Start Num: 3
Candidate Starts for SrishMeg2525_31:
(Start: 3 @10629 has 160 MA's), (7, 10677), (9, 10725), (14, 10770), (15, 10776), (18, 10812), (19, 10836), (23, 10947),

Gene: StephanieG_32 Start: 11098, Stop: 11448, Start Num: 3
Candidate Starts for StephanieG_32:
(Start: 3 @11098 has 160 MA's), (7, 11146), (9, 11194), (14, 11239), (15, 11245), (18, 11281), (19, 11305), (23, 11416),

Gene: StubbySaigey_31 Start: 9558, Stop: 9908, Start Num: 3
Candidate Starts for StubbySaigey_31:
(Start: 3 @9558 has 160 MA's), (7, 9606), (9, 9654), (14, 9699), (15, 9705), (18, 9741), (19, 9765), (23, 9876),

Gene: Tainan_37 Start: 12485, Stop: 12835, Start Num: 3
Candidate Starts for Tainan_37:
(Start: 3 @12485 has 160 MA's), (7, 12533), (9, 12581), (14, 12626), (15, 12632), (19, 12692), (23, 12803),

Gene: Teardrop_31 Start: 9834, Stop: 10184, Start Num: 3
Candidate Starts for Teardrop_31:
(Start: 3 @9834 has 160 MA's), (7, 9882), (9, 9930), (14, 9975), (15, 9981), (18, 10017), (19, 10041), (23, 10152),

Gene: TinyTim_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for TinyTim_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: Tonenili_36 Start: 12007, Stop: 12357, Start Num: 3
Candidate Starts for Tonenili_36:
(1, 11887), (Start: 3 @12007 has 160 MA's), (7, 12055), (9, 12103), (14, 12148), (15, 12154), (19, 12214), (23, 12325),

Gene: Tortoise16_31 Start: 10369, Stop: 10719, Start Num: 3
Candidate Starts for Tortoise16_31:
(Start: 3 @10369 has 160 MA's), (7, 10417), (9, 10465), (14, 10510), (15, 10516), (18, 10552), (19, 10576), (23, 10687),

Gene: Trinitium_31 Start: 9823, Stop: 10173, Start Num: 3
Candidate Starts for Trinitium_31:
(Start: 3 @9823 has 160 MA's), (7, 9871), (9, 9919), (14, 9964), (15, 9970), (18, 10006), (19, 10030), (23, 10141),

Gene: TrixiePhattel_69 Start: 43109, Stop: 43309, Start Num: 8
Candidate Starts for TrixiePhattel_69:
(Start: 4 @43043 has 5 MA's), (5, 43064), (8, 43109), (22, 43304),

Gene: Turret_30 Start: 9546, Stop: 9896, Start Num: 3
Candidate Starts for Turret_30:
(Start: 3 @9546 has 160 MA's), (7, 9594), (9, 9642), (14, 9687), (15, 9693), (18, 9729), (19, 9753), (23, 9864),

Gene: Tyke_34 Start: 11781, Stop: 12131, Start Num: 3
Candidate Starts for Tyke_34:
(Start: 3 @11781 has 160 MA's), (7, 11829), (9, 11877), (14, 11922), (15, 11928), (18, 11964), (19, 11988), (23, 12099),

Gene: Uzumaki_64 Start: 42857, Stop: 43123, Start Num: 4
Candidate Starts for Uzumaki_64:
(Start: 4 @42857 has 5 MA's), (5, 42878), (8, 42923), (13, 42962),

Gene: ValleyTerrace_32 Start: 10373, Stop: 10723, Start Num: 3
Candidate Starts for ValleyTerrace_32:
(Start: 3 @10373 has 160 MA's), (7, 10421), (9, 10469), (14, 10514), (15, 10520), (18, 10556), (19, 10580), (23, 10691),

Gene: Wally_31 Start: 9790, Stop: 10140, Start Num: 3
Candidate Starts for Wally_31:
(Start: 3 @9790 has 160 MA's), (7, 9838), (9, 9886), (14, 9931), (15, 9937), (18, 9973), (19, 9997), (23, 10108),

Gene: Willis_32 Start: 10813, Stop: 11163, Start Num: 3
Candidate Starts for Willis_32:
(Start: 3 @10813 has 160 MA's), (7, 10861), (9, 10909), (14, 10954), (15, 10960), (18, 10996), (19, 11020), (23, 11131),

Gene: Yassified_29 Start: 9570, Stop: 9920, Start Num: 3
Candidate Starts for Yassified_29:
(Start: 3 @9570 has 160 MA's), (7, 9618), (9, 9666), (14, 9711), (15, 9717), (18, 9753), (19, 9777), (23, 9888),

Gene: YemiJoy2021_33 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for YemiJoy2021_33:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),

Gene: YoungMoneyMata_32 Start: 10124, Stop: 10474, Start Num: 3
Candidate Starts for YoungMoneyMata_32:
(Start: 3 @10124 has 160 MA's), (7, 10172), (9, 10220), (14, 10265), (15, 10271), (18, 10307), (19, 10331), (23, 10442),

Gene: Yucca_32 Start: 10840, Stop: 11190, Start Num: 3
Candidate Starts for Yucca_32:
(Start: 3 @10840 has 160 MA's), (7, 10888), (9, 10936), (14, 10981), (15, 10987), (18, 11023), (19, 11047), (23, 11158),

Gene: Zalkecks_34 Start: 10922, Stop: 11272, Start Num: 3
Candidate Starts for Zalkecks_34:
(Start: 3 @10922 has 160 MA's), (7, 10970), (9, 11018), (14, 11063), (15, 11069), (18, 11105), (19, 11129), (23, 11240),

Gene: Zeenon_34 Start: 10904, Stop: 11254, Start Num: 3
Candidate Starts for Zeenon_34:
(Start: 3 @10904 has 160 MA's), (7, 10952), (9, 11000), (14, 11045), (15, 11051), (18, 11087), (19, 11111), (23, 11222),

Gene: Zeina_69 Start: 43551, Stop: 43817, Start Num: 4
Candidate Starts for Zeina_69:
(Start: 4 @43551 has 5 MA's), (5, 43572), (8, 43617),

Gene: ZygoTaiga_32 Start: 10918, Stop: 11268, Start Num: 3
Candidate Starts for ZygoTaiga_32:
(Start: 3 @10918 has 160 MA's), (7, 10966), (9, 11014), (14, 11059), (15, 11065), (18, 11101), (19, 11125), (23, 11236),