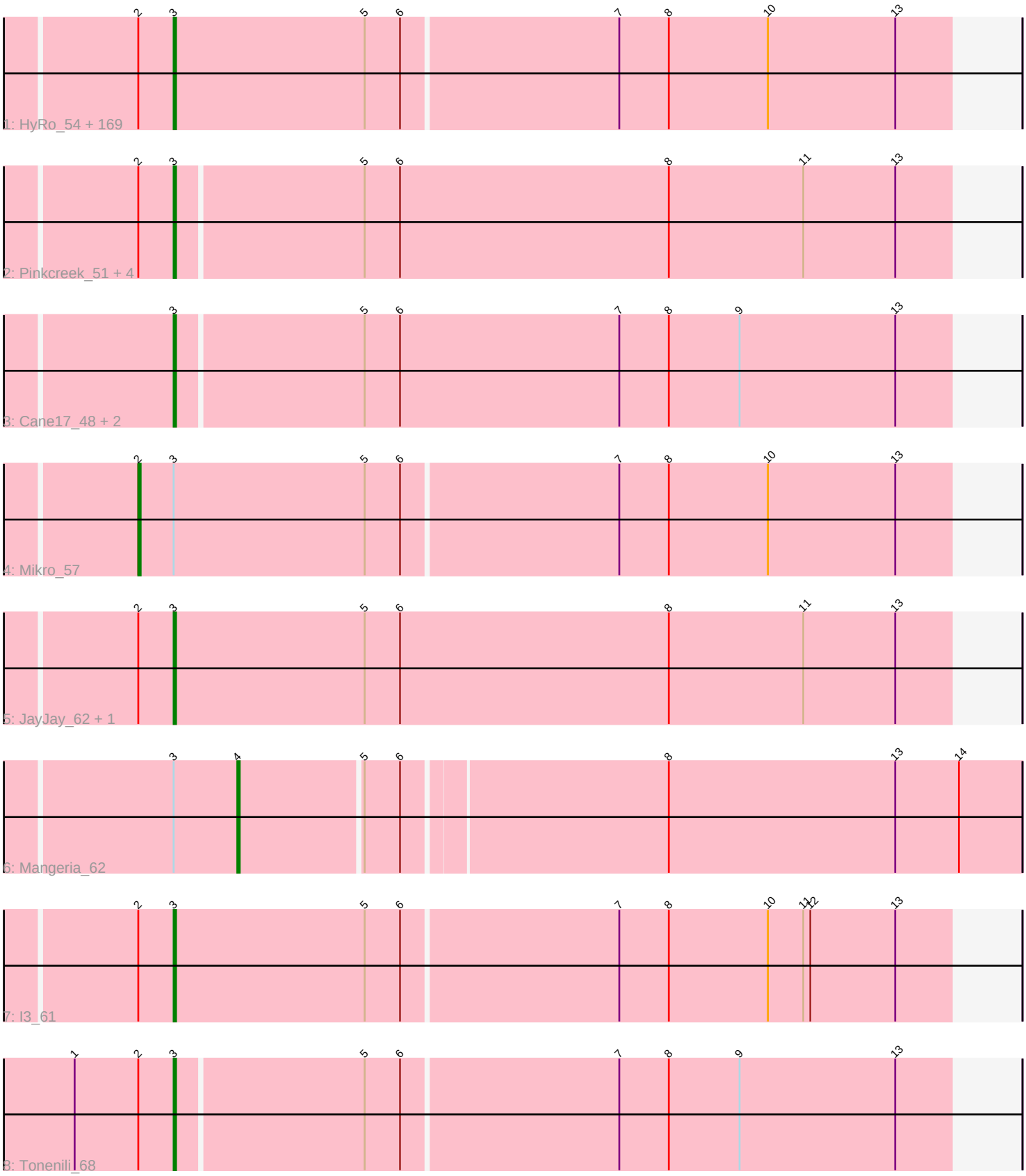
Pham 505


2
3
5
6
7
8
10
13
1: HyRo_54 + 169
2
3
5
6
8
11
13
2: Pinkcreek_51 + 4
3
5
6
7
8
9
13
3: Cane17_48 + 2
2
3
5
6
7
8
10
13
4: Mikro_57
2
3
5
6
8
11
13
5: JayJay_62 + 1
3
4
5
6
8
13
14
6: Mangeria_62
2
3
5
6
7
8
10
11
12
13
7: I3_61
1
2
3
5
6
7
8
9
13
8: Tonenili_68

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 505 Report

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

Pham number 505 has 184 members, 17 are drafts.

Phages represented in each track:
• Track 1 : HyRo_54, Gabriel_60, Nappy_61, FudgeTart_60, Trinitium_54, Jessibeth14_57, Daffodil_61, Salacia_61, Bangla1971_59, Sprinklers_55, StephanieG_59, ArcherS7_58, DrPhinkDaddy_58, Darko_58, BadAgartude_58, Wally_57, Breeniome_60, Jemmno_58, Maby2021_59, ZygoTaiga_59, ChaylaJr_54, Momo_57, Sebata_61, Drazdys_58, Ghost_58, Pivoine_57, LolaVinca_62, Phusco_58, Littleton_58, Spud_59, EasyJones_61, McGee_57, Bread_59, SmallFry_58, Delilah_59, LinStu_60, Shaqnato_53, BeanWater_52, Janiyra_60, Teardrop_58, Naval22_65, BigCity_64, Jaygup_58, Norm_59, Latch_58, ErnieJ_58, Yucca_59, Iota_53, Erdmann_60, ChickenPhender_54, MoMoMixon_59, Willis_59, Basquiat_54, Lukilu_52, Issimir_58, BananaFence_60, Chomp_56, DirtMonster_55, Matsumoto_57, McWolfish_57, Gamgam_58, Catera_57, Phox_57, Koguma_55, LordLeafolot_64, Bxz1_59, Audrick_60, PurduePete_58, EmmaElysia_57, Grasshills_64, Flabslab_55, Gizmo_60, Fludd_58, YoungMoneyMata_58, Tortoise16_56, Pio_63, Grungle_50, Burrough_59, Ading_58, Adlitam_58, Shelob_61, Cactojaque_53, Phlegm_60, Sauce_60, Capablanca_60, Pier_61, Lee7_57, SilverDipper_59, JPickles_56, Atlantean_57, Loanshark_59, Shnickers_58, Rizal_57, Blackdragon_55, BackyardAgain_56, Pleione_61, Naija_57, RoMag_53, Kboogie_59, Bigswole_65, EmToTheThree_62, Ava3_60, CharlieB_56, SrishMeg2525_58, Patter_58, Ngannou_53, Chargie21_54, Izajani_60, TinyTim_59, Morizzled23_61, FoxtrotP1_59, Megamind_58, Zeenon_61, Babyland_57, IkeLoa_53, Halldule_53, Zalkecks_60, NedWong_60, CindyLou_59, Roots515_58, Khaleesi_58, Blackbrain_53, StubbySaigey_58, LRRHood_55, InterFolia_67, NuevoMundo_64, Spec_56, JulietS_53, Delylah_59, InigoMontoya_59, Specks_64, Essence_57, Caravan_55, MikeLiesIn_59, DTDevon_59, ET08_50, ShiaLabeouf_58, Ewok_59, Quasimodo_58, Rahel_59, Derek_59, QBert_53, LifeSavor_58, EggyFarm_64, Concombre_64, ScottMcG_57, ValleyTerrace_58, Shrimp_59, Napoleon13_56, NoodleTree_59, Jedediah_59, Ronan_53, FrayBell_65, Shifa_52, Asterius_56, Turret_53, YemiJoy2021_59, Bipolarisk_58, Bonray_59, Dietrick_52, Nidhogg_59, Cali_56, Kamryn_58, Amataga_58, Guwapp_57, Melpomini_54, Tyke_60, JustHall_54, ParkTD_58, Yassified_56
• Track 2 : Pinkcreek_51, Stubby_54, Alice_53, Astraea_60, Rabinovish_58
• Track 3 : Cane17_48, Colt_50, Blubba_48
• Track 4 : Mikro_57
• Track 5 : JayJay_62, Dandelion_64
• Track 6 : Mangeria_62
• Track 7 : I3_61
• Track 8 : Tonenili_68

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 165 of the 167 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Ading_58, Adlitam_58, Alice_53, Amataga_58, ArcherS7_58, Asterius_56, Astraea_60, Atlantean_57, Audrick_60, Ava3_60, Babyland_57, BackyardAgain_56, BadAgartude_58, BananaFence_60, Bangla1971_59, Basquiat_54, BeanWater_52, BigCity_64, Bigswole_65, Bipolarisk_58, Blackbrain_53, Blackdragon_55, Blubba_48, Bonray_59, Bread_59, Breeniome_60, Burrough_59, Bxz1_59, Cactojaque_53, Cali_56, Cane17_48, Capablanca_60, Caravan_55, Catera_57, Chargie21_54, CharlieB_56, ChaylaJr_54, ChickenPhender_54, Chomp_56, CindyLou_59, Colt_50, Concombre_64, DTDevon_59, Daffodil_61, Dandelion_64, Darko_58, Delilah_59, Delylah_59, Derek_59, Dietrick_52, DirtMonster_55, DrPhinkDaddy_58, Drazdys_58, ET08_50, EasyJones_61, EggyFarm_64, EmToTheThree_62, EmmaElysia_57, Erdmann_60, ErnieJ_58, Essence_57, Ewok_59, Flabslab_55, Fludd_58, FoxtrotP1_59, FrayBell_65, FudgeTart_60, Gabriel_60, Gamgam_58, Ghost_58, Gizmo_60, Grasshills_64, Grungle_50, Guwapp_57, Halldule_53, HyRo_54, I3_61, IkeLoa_53, InigoMontoya_59, InterFolia_67, Iota_53, Issimir_58, Izajani_60, JPickles_56, Janiyra_60, JayJay_62, Jaygup_58, Jedediah_59, Jemmno_58, Jessibeth14_57, JulietS_53, JustHall_54, Kamryn_58, Kboogie_59, Khaleesi_58, Koguma_55, LRRHood_55, Latch_58, Lee7_57, LifeSavor_58, LinStu_60, Littleton_58, Loanshark_59, LolaVinca_62, LordLeafolot_64, Lukilu_52, Maby2021_59, Matsumoto_57, McGee_57, McWolfish_57, Megamind_58, Melpomini_54, MikeLiesIn_59, MoMoMixon_59, Momo_57, Morizzled23_61, Naija_57, Napoleon13_56, Nappy_61, Naval22_65, NedWong_60, Ngannou_53, Nidhogg_59, NoodleTree_59, Norm_59, NuevoMundo_64, ParkTD_58, Patter_58, Phlegm_60, Phox_57, Phusco_58, Pier_61, Pinkcreek_51, Pio_63, Pivoine_57, Pleione_61, PurduePete_58, QBert_53, Quasimodo_58, Rabinovish_58, Rahel_59, Rizal_57, RoMag_53, Ronan_53, Roots515_58, Salacia_61, Sauce_60, ScottMcG_57, Sebata_61, Shaqnato_53, Shelob_61, ShiaLabeouf_58, Shifa_52, Shnickers_58, Shrimp_59, SilverDipper_59, SmallFry_58, Spec_56, Specks_64, Sprinklers_55, Spud_59, SrishMeg2525_58, StephanieG_59, StubbySaigey_58, Stubby_54, Teardrop_58, TinyTim_59, Tonenili_68, Tortoise16_56, Trinitium_54, Turret_53, Tyke_60, ValleyTerrace_58, Wally_57, Willis_59, Yassified_56, YemiJoy2021_59, YoungMoneyMata_58, Yucca_59, Zalkecks_60, Zeenon_61, ZygoTaiga_59,

Genes that have the "Most Annotated" start but do not call it:
• Mangeria_62, Mikro_57,

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

Summary by start number:

Start 2:
• Found in 180 of 184 (97.8%) of genes in pham

• Manual Annotations of this start: 1 of 167
• Called 0.6% of time when present
• Phage (with cluster) where this start called: Mikro_57 (C1),

Start 3:
• Found in 184 of 184 (100.0%) of genes in pham
• Manual Annotations of this start: 165 of 167
• Called 98.9% of time when present
• Phage (with cluster) where this start called: Ading_58 (C1), Adlitam_58 (C1), Alice_53 (C1), Amataga_58 (C1), ArcherS7_58 (C1), Asterius_56 (C1), Astraea_60 (C1), Atlantean_57 (C1), Audrick_60 (C1), Ava3_60 (C1), Babyland_57 (C1), BackyardAgain_56 (C1), BadAgartude_58 (C1), BananaFence_60 (C1), Bangla1971_59 (C1), Basquiat_54 (C1), BeanWater_52 (C1), BigCity_64 (C1), Bigswole_65 (C1), Bipolarisk_58 (C1), Blackbrain_53 (C1), Blackdragon_55 (C1), Blubba_48 (C1), Bonray_59 (C1), Bread_59 (C1), Breeniome_60 (C1), Burrough_59 (C1), Bxz1_59 (C1), Cactojaque_53 (C1), Cali_56 (C1), Cane17_48 (C1), Capablanca_60 (C1), Caravan_55 (C1), Catera_57 (C1), Chargie21_54 (C1), CharlieB_56 (C1), ChaylaJr_54 (C1), ChickenPhender_54 (C1), Chomp_56 (C1), CindyLou_59 (C1), Colt_50 (C1), Concombre_64 (C1), DTDevon_59 (C1), Daffodil_61 (C1), Dandelion_64 (C1), Darko_58 (C1), Delilah_59 (C1), Delylah_59 (C1), Derek_59 (C1), Dietrick_52 (C1), DirtMonster_55 (C1), DrPhinkDaddy_58 (C1), Drazdys_58 (C1), ET08_50 (C1), EasyJones_61 (C1), EggyFarm_64 (C1), EmToTheThree_62 (C1), EmmaElysia_57 (C1), Erdmann_60 (C1), ErnieJ_58 (C1), Essence_57 (C1), Ewok_59 (C1), Flabslab_55 (C1), Fludd_58 (C1), FoxtrotP1_59 (C1), FrayBell_65 (C1), FudgeTart_60 (C1), Gabriel_60 (C1), Gamgam_58 (C1), Ghost_58 (C1), Gizmo_60 (C1), Grasshills_64 (C1), Grungle_50 (C1), Guwapp_57 (C1), Halldule_53 (C1), HyRo_54 (C1), I3_61 (C1), IkeLoa_53 (C1), InigoMontoya_59 (C1), InterFolia_67 (C1), Iota_53 (C1), Issimir_58 (C1), Izajani_60 (C1), JPickles_56 (C1), Janiyra_60 (C1), JayJay_62 (C1), Jaygup_58 (C1), Jedediah_59 (C1), Jemmno_58 (C1), Jessibeth14_57 (C1), JulietS_53 (C1), JustHall_54 (C1), Kamryn_58 (C1), Kboogie_59 (C1), Khaleesi_58 (C1), Koguma_55 (C1), LRRHood_55 (C1), Latch_58 (C1), Lee7_57 (C1), LifeSavor_58 (C1), LinStu_60 (C1), Littleton_58 (C1), Loanshark_59 (C1), LolaVinca_62 (C1), LordLeafolot_64 (C1), Lukilu_52 (C1), Maby2021_59 (C1), Matsumoto_57 (C1), McGee_57 (C1), McWolfish_57 (C1), Megamind_58 (C1), Melpomini_54 (C1), MikeLiesIn_59 (C1), MoMoMixon_59 (C1), Momo_57 (C1), Morizzled23_61 (C1), Naija_57 (C1), Napoleon13_56 (C1), Nappy_61 (C1), Naval22_65 (C1), NedWong_60 (C1), Ngannou_53 (C1), Nidhogg_59 (C1), NoodleTree_59 (C1), Norm_59 (C1), NuevoMundo_64 (C1), ParkTD_58 (C1), Patter_58 (C1), Phlegm_60 (C1), Phox_57 (C1), Phusco_58 (C1), Pier_61 (C1), Pinkcreek_51 (C1), Pio_63 (C1), Pivoine_57 (C1), Pleione_61 (C1), PurduePete_58 (C1), QBert_53 (C1), Quasimodo_58 (C1), Rabinovish_58 (C1), Rahel_59 (C1), Rizal_57 (C1), RoMag_53 (C1), Ronan_53 (C1), Roots515_58 (C1), Salacia_61 (C1), Sauce_60 (C1), ScottMcG_57 (C1), Sebata_61 (C1), Shaqnato_53 (C1), Shelob_61 (C1), ShiaLabeouf_58 (C1), Shifa_52 (C1), Shnickers_58 (C1), Shrimp_59 (C1), SilverDipper_59 (C1), SmallFry_58 (C1), Spec_56 (C1), Specks_64 (C1), Sprinklers_55 (C1), Spud_59 (C1), SrishMeg2525_58 (C1), StephanieG_59 (C1), StubbySaigey_58 (C1), Stubby_54 (C1), Teardrop_58 (C1), TinyTim_59 (C1), Tonenili_68 (C1), Tortoise16_56 (C1), Trinitium_54 (C1), Turret_53 (C1), Tyke_60 (C1), ValleyTerrace_58 (C1), Wally_57 (C1), Willis_59 (C1), Yassified_56 (C1), YemiJoy2021_59 (C1), YoungMoneyMata_58 (C1), Yucca_59 (C1), Zalkecks_60 (C1), Zeenon_61 (C1), ZygoTaiga_59 (C1),

Start 4:
• Found in 1 of 184 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 167
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mangeria_62 (C1),

Summary by clusters:

There is one cluster represented in this pham: C1

Info for manual annotations of cluster C1:
•Start number 2 was manually annotated 1 time for cluster C1.
•Start number 3 was manually annotated 165 times for cluster C1.
•Start number 4 was manually annotated 1 time for cluster C1.

Gene Information:

Gene: Ading_58 Start: 17532, Stop: 17858, Start Num: 3
Candidate Starts for Ading_58:
(Start: 2 @17517 has 1 MA's), (Start: 3 @17532 has 165 MA's), (5, 17613), (6, 17628), (7, 17718), (8, 17739), (10, 17781), (13, 17835),

Gene: Adlitam_58 Start: 17549, Stop: 17875, Start Num: 3
Candidate Starts for Adlitam_58:
(Start: 2 @17534 has 1 MA's), (Start: 3 @17549 has 165 MA's), (5, 17630), (6, 17645), (7, 17735), (8, 17756), (10, 17798), (13, 17852),

Gene: Alice_53 Start: 17602, Stop: 17928, Start Num: 3
Candidate Starts for Alice_53:
(Start: 2 @17587 has 1 MA's), (Start: 3 @17602 has 165 MA's), (5, 17680), (6, 17695), (8, 17809), (11, 17866), (13, 17905),

Gene: Amataga_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Amataga_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: ArcherS7_58 Start: 17916, Stop: 18242, Start Num: 3
Candidate Starts for ArcherS7_58:
(Start: 2 @17901 has 1 MA's), (Start: 3 @17916 has 165 MA's), (5, 17997), (6, 18012), (7, 18102), (8, 18123), (10, 18165), (13, 18219),

Gene: Asterius_56 Start: 18011, Stop: 18337, Start Num: 3
Candidate Starts for Asterius_56:
(Start: 2 @17996 has 1 MA's), (Start: 3 @18011 has 165 MA's), (5, 18092), (6, 18107), (7, 18197), (8, 18218), (10, 18260), (13, 18314),

Gene: Astraea_60 Start: 19005, Stop: 19331, Start Num: 3
Candidate Starts for Astraea_60:
(Start: 2 @18990 has 1 MA's), (Start: 3 @19005 has 165 MA's), (5, 19083), (6, 19098), (8, 19212), (11, 19269), (13, 19308),

Gene: Atlantean_57 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Atlantean_57:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Audrick_60 Start: 17532, Stop: 17858, Start Num: 3
Candidate Starts for Audrick_60:
(Start: 2 @17517 has 1 MA's), (Start: 3 @17532 has 165 MA's), (5, 17613), (6, 17628), (7, 17718), (8, 17739), (10, 17781), (13, 17835),

Gene: Ava3_60 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Ava3_60:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Babyland_57 Start: 16991, Stop: 17317, Start Num: 3
Candidate Starts for Babyland_57:
(Start: 2 @16976 has 1 MA's), (Start: 3 @16991 has 165 MA's), (5, 17072), (6, 17087), (7, 17177), (8, 17198), (10, 17240), (13, 17294),

Gene: BackyardAgain_56 Start: 17484, Stop: 17810, Start Num: 3
Candidate Starts for BackyardAgain_56:
(Start: 2 @17469 has 1 MA's), (Start: 3 @17484 has 165 MA's), (5, 17565), (6, 17580), (7, 17670), (8, 17691), (10, 17733), (13, 17787),

Gene: BadAgartude_58 Start: 19471, Stop: 19797, Start Num: 3
Candidate Starts for BadAgartude_58:
(Start: 2 @19456 has 1 MA's), (Start: 3 @19471 has 165 MA's), (5, 19552), (6, 19567), (7, 19657), (8, 19678), (10, 19720), (13, 19774),

Gene: BananaFence_60 Start: 18491, Stop: 18817, Start Num: 3
Candidate Starts for BananaFence_60:
(Start: 2 @18476 has 1 MA's), (Start: 3 @18491 has 165 MA's), (5, 18572), (6, 18587), (7, 18677), (8, 18698), (10, 18740), (13, 18794),

Gene: Bangla1971_59 Start: 18046, Stop: 18372, Start Num: 3
Candidate Starts for Bangla1971_59:
(Start: 2 @18031 has 1 MA's), (Start: 3 @18046 has 165 MA's), (5, 18127), (6, 18142), (7, 18232), (8, 18253), (10, 18295), (13, 18349),

Gene: Basquiat_54 Start: 16977, Stop: 17303, Start Num: 3
Candidate Starts for Basquiat_54:
(Start: 2 @16962 has 1 MA's), (Start: 3 @16977 has 165 MA's), (5, 17058), (6, 17073), (7, 17163), (8, 17184), (10, 17226), (13, 17280),

Gene: BeanWater_52 Start: 18020, Stop: 18346, Start Num: 3
Candidate Starts for BeanWater_52:
(Start: 2 @18005 has 1 MA's), (Start: 3 @18020 has 165 MA's), (5, 18101), (6, 18116), (7, 18206), (8, 18227), (10, 18269), (13, 18323),

Gene: BigCity_64 Start: 19814, Stop: 20140, Start Num: 3
Candidate Starts for BigCity_64:

(Start: 2 @19799 has 1 MA's), (Start: 3 @19814 has 165 MA's), (5, 19895), (6, 19910), (7, 20000), (8, 20021), (10, 20063), (13, 20117),

Gene: Bigswole_65 Start: 20848, Stop: 21174, Start Num: 3
Candidate Starts for Bigswole_65:
(Start: 2 @20833 has 1 MA's), (Start: 3 @20848 has 165 MA's), (5, 20929), (6, 20944), (7, 21034), (8, 21055), (10, 21097), (13, 21151),

Gene: Bipolarisk_58 Start: 18318, Stop: 18644, Start Num: 3
Candidate Starts for Bipolarisk_58:
(Start: 2 @18303 has 1 MA's), (Start: 3 @18318 has 165 MA's), (5, 18399), (6, 18414), (7, 18504), (8, 18525), (10, 18567), (13, 18621),

Gene: Blackbrain_53 Start: 16794, Stop: 17120, Start Num: 3
Candidate Starts for Blackbrain_53:
(Start: 2 @16779 has 1 MA's), (Start: 3 @16794 has 165 MA's), (5, 16875), (6, 16890), (7, 16980), (8, 17001), (10, 17043), (13, 17097),

Gene: Blackdragon_55 Start: 17939, Stop: 18265, Start Num: 3
Candidate Starts for Blackdragon_55:
(Start: 2 @17924 has 1 MA's), (Start: 3 @17939 has 165 MA's), (5, 18020), (6, 18035), (7, 18125), (8, 18146), (10, 18188), (13, 18242),

Gene: Blubba_48 Start: 15838, Stop: 16164, Start Num: 3
Candidate Starts for Blubba_48:
(Start: 3 @15838 has 165 MA's), (5, 15916), (6, 15931), (7, 16024), (8, 16045), (9, 16075), (13, 16141),

Gene: Bonray_59 Start: 18595, Stop: 18921, Start Num: 3
Candidate Starts for Bonray_59:
(Start: 2 @18580 has 1 MA's), (Start: 3 @18595 has 165 MA's), (5, 18676), (6, 18691), (7, 18781), (8, 18802), (10, 18844), (13, 18898),

Gene: Bread_59 Start: 18288, Stop: 18614, Start Num: 3
Candidate Starts for Bread_59:
(Start: 2 @18273 has 1 MA's), (Start: 3 @18288 has 165 MA's), (5, 18369), (6, 18384), (7, 18474), (8, 18495), (10, 18537), (13, 18591),

Gene: Breeniome_60 Start: 17795, Stop: 18121, Start Num: 3
Candidate Starts for Breeniome_60:
(Start: 2 @17780 has 1 MA's), (Start: 3 @17795 has 165 MA's), (5, 17876), (6, 17891), (7, 17981), (8, 18002), (10, 18044), (13, 18098),

Gene: Burrough_59 Start: 18321, Stop: 18647, Start Num: 3
Candidate Starts for Burrough_59:
(Start: 2 @18306 has 1 MA's), (Start: 3 @18321 has 165 MA's), (5, 18402), (6, 18417), (7, 18507), (8, 18528), (10, 18570), (13, 18624),

Gene: Bxz1_59 Start: 19372, Stop: 19698, Start Num: 3
Candidate Starts for Bxz1_59:
(Start: 2 @19357 has 1 MA's), (Start: 3 @19372 has 165 MA's), (5, 19453), (6, 19468), (7, 19558), (8, 19579), (10, 19621), (13, 19675),

Gene: Cactojaque_53 Start: 16901, Stop: 17227, Start Num: 3
Candidate Starts for Cactojaque_53:
(Start: 2 @16886 has 1 MA's), (Start: 3 @16901 has 165 MA's), (5, 16982), (6, 16997), (7, 17087), (8, 17108), (10, 17150), (13, 17204),

Gene: Cali_56 Start: 19257, Stop: 19583, Start Num: 3
Candidate Starts for Cali_56:
(Start: 2 @19242 has 1 MA's), (Start: 3 @19257 has 165 MA's), (5, 19338), (6, 19353), (7, 19443), (8, 19464), (10, 19506), (13, 19560),

Gene: Cane17_48 Start: 15556, Stop: 15882, Start Num: 3
Candidate Starts for Cane17_48:
(Start: 3 @15556 has 165 MA's), (5, 15634), (6, 15649), (7, 15742), (8, 15763), (9, 15793), (13, 15859),

Gene: Capablanca_60 Start: 18678, Stop: 19004, Start Num: 3
Candidate Starts for Capablanca_60:
(Start: 2 @18663 has 1 MA's), (Start: 3 @18678 has 165 MA's), (5, 18759), (6, 18774), (7, 18864), (8, 18885), (10, 18927), (13, 18981),

Gene: Caravan_55 Start: 17662, Stop: 17988, Start Num: 3
Candidate Starts for Caravan_55:
(Start: 2 @17647 has 1 MA's), (Start: 3 @17662 has 165 MA's), (5, 17743), (6, 17758), (7, 17848), (8, 17869), (10, 17911), (13, 17965),

Gene: Catera_57 Start: 17488, Stop: 17814, Start Num: 3
Candidate Starts for Catera_57:
(Start: 2 @17473 has 1 MA's), (Start: 3 @17488 has 165 MA's), (5, 17569), (6, 17584), (7, 17674), (8, 17695), (10, 17737), (13, 17791),

Gene: Chargie21_54 Start: 16977, Stop: 17303, Start Num: 3
Candidate Starts for Chargie21_54:
(Start: 2 @16962 has 1 MA's), (Start: 3 @16977 has 165 MA's), (5, 17058), (6, 17073), (7, 17163), (8, 17184), (10, 17226), (13, 17280),

Gene: CharlieB_56 Start: 17255, Stop: 17581, Start Num: 3
Candidate Starts for CharlieB_56:
(Start: 2 @17240 has 1 MA's), (Start: 3 @17255 has 165 MA's), (5, 17336), (6, 17351), (7, 17441), (8, 17462), (10, 17504), (13, 17558),

Gene: ChaylaJr_54 Start: 17067, Stop: 17393, Start Num: 3
Candidate Starts for ChaylaJr_54:
(Start: 2 @17052 has 1 MA's), (Start: 3 @17067 has 165 MA's), (5, 17148), (6, 17163), (7, 17253), (8, 17274), (10, 17316), (13, 17370),

Gene: ChickenPhender_54 Start: 17026, Stop: 17352, Start Num: 3
Candidate Starts for ChickenPhender_54:
(Start: 2 @17011 has 1 MA's), (Start: 3 @17026 has 165 MA's), (5, 17107), (6, 17122), (7, 17212), (8, 17233), (10, 17275), (13, 17329),

Gene: Chomp_56 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Chomp_56:

(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: CindyLou_59 Start: 18078, Stop: 18404, Start Num: 3
Candidate Starts for CindyLou_59:
(Start: 2 @18063 has 1 MA's), (Start: 3 @18078 has 165 MA's), (5, 18159), (6, 18174), (7, 18264), (8, 18285), (10, 18327), (13, 18381),

Gene: Colt_50 Start: 16423, Stop: 16749, Start Num: 3
Candidate Starts for Colt_50:
(Start: 3 @16423 has 165 MA's), (5, 16501), (6, 16516), (7, 16609), (8, 16630), (9, 16660), (13, 16726),

Gene: Concombre_64 Start: 20495, Stop: 20821, Start Num: 3
Candidate Starts for Concombre_64:
(Start: 2 @20480 has 1 MA's), (Start: 3 @20495 has 165 MA's), (5, 20576), (6, 20591), (7, 20681), (8, 20702), (10, 20744), (13, 20798),

Gene: DTDevon_59 Start: 18717, Stop: 19043, Start Num: 3
Candidate Starts for DTDevon_59:
(Start: 2 @18702 has 1 MA's), (Start: 3 @18717 has 165 MA's), (5, 18798), (6, 18813), (7, 18903), (8, 18924), (10, 18966), (13, 19020),

Gene: Daffodil_61 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Daffodil_61:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Dandelion_64 Start: 20392, Stop: 20721, Start Num: 3
Candidate Starts for Dandelion_64:
(Start: 2 @20377 has 1 MA's), (Start: 3 @20392 has 165 MA's), (5, 20473), (6, 20488), (8, 20602), (11, 20659), (13, 20698),

Gene: Darko_58 Start: 18460, Stop: 18786, Start Num: 3
Candidate Starts for Darko_58:
(Start: 2 @18445 has 1 MA's), (Start: 3 @18460 has 165 MA's), (5, 18541), (6, 18556), (7, 18646), (8, 18667), (10, 18709), (13, 18763),

Gene: Delilah_59 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Delilah_59:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Delylah_59 Start: 18385, Stop: 18711, Start Num: 3
Candidate Starts for Delylah_59:
(Start: 2 @18370 has 1 MA's), (Start: 3 @18385 has 165 MA's), (5, 18466), (6, 18481), (7, 18571), (8, 18592), (10, 18634), (13, 18688),

Gene: Derek_59 Start: 17884, Stop: 18210, Start Num: 3
Candidate Starts for Derek_59:
(Start: 2 @17869 has 1 MA's), (Start: 3 @17884 has 165 MA's), (5, 17965), (6, 17980), (7, 18070), (8, 18091), (10, 18133), (13, 18187),

Gene: Dietrick_52 Start: 16726, Stop: 17052, Start Num: 3
Candidate Starts for Dietrick_52:
(Start: 2 @16711 has 1 MA's), (Start: 3 @16726 has 165 MA's), (5, 16807), (6, 16822), (7, 16912), (8, 16933), (10, 16975), (13, 17029),

Gene: DirtMonster_55 Start: 18523, Stop: 18849, Start Num: 3
Candidate Starts for DirtMonster_55:
(Start: 2 @18508 has 1 MA's), (Start: 3 @18523 has 165 MA's), (5, 18604), (6, 18619), (7, 18709), (8, 18730), (10, 18772), (13, 18826),

Gene: DrPhinkDaddy_58 Start: 18659, Stop: 18985, Start Num: 3
Candidate Starts for DrPhinkDaddy_58:
(Start: 2 @18644 has 1 MA's), (Start: 3 @18659 has 165 MA's), (5, 18740), (6, 18755), (7, 18845), (8, 18866), (10, 18908), (13, 18962),

Gene: Drazdys_58 Start: 18390, Stop: 18716, Start Num: 3
Candidate Starts for Drazdys_58:
(Start: 2 @18375 has 1 MA's), (Start: 3 @18390 has 165 MA's), (5, 18471), (6, 18486), (7, 18576), (8, 18597), (10, 18639), (13, 18693),

Gene: ET08_50 Start: 17123, Stop: 17449, Start Num: 3
Candidate Starts for ET08_50:
(Start: 2 @17108 has 1 MA's), (Start: 3 @17123 has 165 MA's), (5, 17204), (6, 17219), (7, 17309), (8, 17330), (10, 17372), (13, 17426),

Gene: EasyJones_61 Start: 18686, Stop: 19012, Start Num: 3
Candidate Starts for EasyJones_61:
(Start: 2 @18671 has 1 MA's), (Start: 3 @18686 has 165 MA's), (5, 18767), (6, 18782), (7, 18872), (8, 18893), (10, 18935), (13, 18989),

Gene: EggyFarm_64 Start: 19814, Stop: 20140, Start Num: 3
Candidate Starts for EggyFarm_64:
(Start: 2 @19799 has 1 MA's), (Start: 3 @19814 has 165 MA's), (5, 19895), (6, 19910), (7, 20000), (8, 20021), (10, 20063), (13, 20117),

Gene: EmToTheThree_62 Start: 20021, Stop: 20347, Start Num: 3
Candidate Starts for EmToTheThree_62:
(Start: 2 @20006 has 1 MA's), (Start: 3 @20021 has 165 MA's), (5, 20102), (6, 20117), (7, 20207), (8, 20228), (10, 20270), (13, 20324),

Gene: EmmaElysia_57 Start: 17123, Stop: 17449, Start Num: 3
Candidate Starts for EmmaElysia_57:
(Start: 2 @17108 has 1 MA's), (Start: 3 @17123 has 165 MA's), (5, 17204), (6, 17219), (7, 17309), (8, 17330), (10, 17372), (13, 17426),

Gene: Erdmann_60 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Erdmann_60:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: ErnieJ_58 Start: 17896, Stop: 18222, Start Num: 3
Candidate Starts for ErnieJ_58:

(Start: 2 @17881 has 1 MA's), (Start: 3 @17896 has 165 MA's), (5, 17977), (6, 17992), (7, 18082), (8, 18103), (10, 18145), (13, 18199),

Gene: Essence_57 Start: 17407, Stop: 17733, Start Num: 3
Candidate Starts for Essence_57:
(Start: 2 @17392 has 1 MA's), (Start: 3 @17407 has 165 MA's), (5, 17488), (6, 17503), (7, 17593), (8, 17614), (10, 17656), (13, 17710),

Gene: Ewok_59 Start: 18610, Stop: 18936, Start Num: 3
Candidate Starts for Ewok_59:
(Start: 2 @18595 has 1 MA's), (Start: 3 @18610 has 165 MA's), (5, 18691), (6, 18706), (7, 18796), (8, 18817), (10, 18859), (13, 18913),

Gene: Flabslab_55 Start: 17629, Stop: 17955, Start Num: 3
Candidate Starts for Flabslab_55:
(Start: 2 @17614 has 1 MA's), (Start: 3 @17629 has 165 MA's), (5, 17710), (6, 17725), (7, 17815), (8, 17836), (10, 17878), (13, 17932),

Gene: Fludd_58 Start: 17482, Stop: 17808, Start Num: 3
Candidate Starts for Fludd_58:
(Start: 2 @17467 has 1 MA's), (Start: 3 @17482 has 165 MA's), (5, 17563), (6, 17578), (7, 17668), (8, 17689), (10, 17731), (13, 17785),

Gene: FoxtrotP1_59 Start: 18935, Stop: 19261, Start Num: 3
Candidate Starts for FoxtrotP1_59:
(Start: 2 @18920 has 1 MA's), (Start: 3 @18935 has 165 MA's), (5, 19016), (6, 19031), (7, 19121), (8, 19142), (10, 19184), (13, 19238),

Gene: FrayBell_65 Start: 20121, Stop: 20447, Start Num: 3
Candidate Starts for FrayBell_65:
(Start: 2 @20106 has 1 MA's), (Start: 3 @20121 has 165 MA's), (5, 20202), (6, 20217), (7, 20307), (8, 20328), (10, 20370), (13, 20424),

Gene: FudgeTart_60 Start: 18471, Stop: 18797, Start Num: 3
Candidate Starts for FudgeTart_60:
(Start: 2 @18456 has 1 MA's), (Start: 3 @18471 has 165 MA's), (5, 18552), (6, 18567), (7, 18657), (8, 18678), (10, 18720), (13, 18774),

Gene: Gabriel_60 Start: 17786, Stop: 18112, Start Num: 3
Candidate Starts for Gabriel_60:
(Start: 2 @17771 has 1 MA's), (Start: 3 @17786 has 165 MA's), (5, 17867), (6, 17882), (7, 17972), (8, 17993), (10, 18035), (13, 18089),

Gene: Gamgam_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Gamgam_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Ghost_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Ghost_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Gizmo_60 Start: 18290, Stop: 18616, Start Num: 3
Candidate Starts for Gizmo_60:
(Start: 2 @18275 has 1 MA's), (Start: 3 @18290 has 165 MA's), (5, 18371), (6, 18386), (7, 18476), (8, 18497), (10, 18539), (13, 18593),

Gene: Grasshills_64 Start: 19814, Stop: 20140, Start Num: 3
Candidate Starts for Grasshills_64:
(Start: 2 @19799 has 1 MA's), (Start: 3 @19814 has 165 MA's), (5, 19895), (6, 19910), (7, 20000), (8, 20021), (10, 20063), (13, 20117),

Gene: Grungle_50 Start: 16205, Stop: 16531, Start Num: 3
Candidate Starts for Grungle_50:
(Start: 2 @16190 has 1 MA's), (Start: 3 @16205 has 165 MA's), (5, 16286), (6, 16301), (7, 16391), (8, 16412), (10, 16454), (13, 16508),

Gene: Guwapp_57 Start: 17648, Stop: 17974, Start Num: 3
Candidate Starts for Guwapp_57:
(Start: 2 @17633 has 1 MA's), (Start: 3 @17648 has 165 MA's), (5, 17729), (6, 17744), (7, 17834), (8, 17855), (10, 17897), (13, 17951),

Gene: Halldule_53 Start: 16657, Stop: 16983, Start Num: 3
Candidate Starts for Halldule_53:
(Start: 2 @16642 has 1 MA's), (Start: 3 @16657 has 165 MA's), (5, 16738), (6, 16753), (7, 16843), (8, 16864), (10, 16906), (13, 16960),

Gene: HyRo_54 Start: 18015, Stop: 18341, Start Num: 3
Candidate Starts for HyRo_54:
(Start: 2 @18000 has 1 MA's), (Start: 3 @18015 has 165 MA's), (5, 18096), (6, 18111), (7, 18201), (8, 18222), (10, 18264), (13, 18318),

Gene: I3_61 Start: 18346, Stop: 18672, Start Num: 3
Candidate Starts for I3_61:
(Start: 2 @18331 has 1 MA's), (Start: 3 @18346 has 165 MA's), (5, 18427), (6, 18442), (7, 18532), (8, 18553), (10, 18595), (11, 18610), (12, 18613), (13, 18649),

Gene: IkeLoa_53 Start: 17413, Stop: 17739, Start Num: 3
Candidate Starts for IkeLoa_53:
(Start: 2 @17398 has 1 MA's), (Start: 3 @17413 has 165 MA's), (5, 17494), (6, 17509), (7, 17599), (8, 17620), (10, 17662), (13, 17716),

Gene: InigoMontoya_59 Start: 17514, Stop: 17840, Start Num: 3
Candidate Starts for InigoMontoya_59:
(Start: 2 @17499 has 1 MA's), (Start: 3 @17514 has 165 MA's), (5, 17595), (6, 17610), (7, 17700), (8, 17721), (10, 17763), (13, 17817),

Gene: InterFolia_67 Start: 21179, Stop: 21505, Start Num: 3
Candidate Starts for InterFolia_67:
(Start: 2 @21164 has 1 MA's), (Start: 3 @21179 has 165 MA's), (5, 21260), (6, 21275), (7, 21365), (8, 21386), (10, 21428), (13, 21482),

Gene: Iota_53 Start: 17711, Stop: 18037, Start Num: 3
Candidate Starts for Iota_53:

(Start: 2 @17696 has 1 MA's), (Start: 3 @17711 has 165 MA's), (5, 17792), (6, 17807), (7, 17897), (8, 17918), (10, 17960), (13, 18014),

Gene: Issimir_58 Start: 18550, Stop: 18876, Start Num: 3
Candidate Starts for Issimir_58:
(Start: 2 @18535 has 1 MA's), (Start: 3 @18550 has 165 MA's), (5, 18631), (6, 18646), (7, 18736), (8, 18757), (10, 18799), (13, 18853),

Gene: Izajani_60 Start: 18623, Stop: 18949, Start Num: 3
Candidate Starts for Izajani_60:
(Start: 2 @18608 has 1 MA's), (Start: 3 @18623 has 165 MA's), (5, 18704), (6, 18719), (7, 18809), (8, 18830), (10, 18872), (13, 18926),

Gene: JPickles_56 Start: 16747, Stop: 17073, Start Num: 3
Candidate Starts for JPickles_56:
(Start: 2 @16732 has 1 MA's), (Start: 3 @16747 has 165 MA's), (5, 16828), (6, 16843), (7, 16933), (8, 16954), (10, 16996), (13, 17050),

Gene: Janiyra_60 Start: 18313, Stop: 18639, Start Num: 3
Candidate Starts for Janiyra_60:
(Start: 2 @18298 has 1 MA's), (Start: 3 @18313 has 165 MA's), (5, 18394), (6, 18409), (7, 18499), (8, 18520), (10, 18562), (13, 18616),

Gene: JayJay_62 Start: 19101, Stop: 19430, Start Num: 3
Candidate Starts for JayJay_62:
(Start: 2 @19086 has 1 MA's), (Start: 3 @19101 has 165 MA's), (5, 19182), (6, 19197), (8, 19311), (11, 19368), (13, 19407),

Gene: Jaygup_58 Start: 17549, Stop: 17875, Start Num: 3
Candidate Starts for Jaygup_58:
(Start: 2 @17534 has 1 MA's), (Start: 3 @17549 has 165 MA's), (5, 17630), (6, 17645), (7, 17735), (8, 17756), (10, 17798), (13, 17852),

Gene: Jedediah_59 Start: 18050, Stop: 18376, Start Num: 3
Candidate Starts for Jedediah_59:
(Start: 2 @18035 has 1 MA's), (Start: 3 @18050 has 165 MA's), (5, 18131), (6, 18146), (7, 18236), (8, 18257), (10, 18299), (13, 18353),

Gene: Jemmno_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Jemmno_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Jessibeth14_57 Start: 18011, Stop: 18337, Start Num: 3
Candidate Starts for Jessibeth14_57:
(Start: 2 @17996 has 1 MA's), (Start: 3 @18011 has 165 MA's), (5, 18092), (6, 18107), (7, 18197), (8, 18218), (10, 18260), (13, 18314),

Gene: JulietS_53 Start: 16508, Stop: 16834, Start Num: 3
Candidate Starts for JulietS_53:
(Start: 2 @16493 has 1 MA's), (Start: 3 @16508 has 165 MA's), (5, 16589), (6, 16604), (7, 16694), (8, 16715), (10, 16757), (13, 16811),

Gene: JustHall_54 Start: 17872, Stop: 18198, Start Num: 3
Candidate Starts for JustHall_54:
(Start: 2 @17857 has 1 MA's), (Start: 3 @17872 has 165 MA's), (5, 17953), (6, 17968), (7, 18058), (8, 18079), (10, 18121), (13, 18175),

Gene: Kamryn_58 Start: 18226, Stop: 18552, Start Num: 3
Candidate Starts for Kamryn_58:
(Start: 2 @18211 has 1 MA's), (Start: 3 @18226 has 165 MA's), (5, 18307), (6, 18322), (7, 18412), (8, 18433), (10, 18475), (13, 18529),

Gene: Kboogie_59 Start: 17536, Stop: 17862, Start Num: 3
Candidate Starts for Kboogie_59:
(Start: 2 @17521 has 1 MA's), (Start: 3 @17536 has 165 MA's), (5, 17617), (6, 17632), (7, 17722), (8, 17743), (10, 17785), (13, 17839),

Gene: Khaleesi_58 Start: 18354, Stop: 18680, Start Num: 3
Candidate Starts for Khaleesi_58:
(Start: 2 @18339 has 1 MA's), (Start: 3 @18354 has 165 MA's), (5, 18435), (6, 18450), (7, 18540), (8, 18561), (10, 18603), (13, 18657),

Gene: Koguma_55 Start: 16851, Stop: 17177, Start Num: 3
Candidate Starts for Koguma_55:
(Start: 2 @16836 has 1 MA's), (Start: 3 @16851 has 165 MA's), (5, 16932), (6, 16947), (7, 17037), (8, 17058), (10, 17100), (13, 17154),

Gene: LRRHood_55 Start: 18774, Stop: 19100, Start Num: 3
Candidate Starts for LRRHood_55:
(Start: 2 @18759 has 1 MA's), (Start: 3 @18774 has 165 MA's), (5, 18855), (6, 18870), (7, 18960), (8, 18981), (10, 19023), (13, 19077),

Gene: Latch_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Latch_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Lee7_57 Start: 18285, Stop: 18611, Start Num: 3
Candidate Starts for Lee7_57:
(Start: 2 @18270 has 1 MA's), (Start: 3 @18285 has 165 MA's), (5, 18366), (6, 18381), (7, 18471), (8, 18492), (10, 18534), (13, 18588),

Gene: LifeSavor_58 Start: 17272, Stop: 17598, Start Num: 3
Candidate Starts for LifeSavor_58:
(Start: 2 @17257 has 1 MA's), (Start: 3 @17272 has 165 MA's), (5, 17353), (6, 17368), (7, 17458), (8, 17479), (10, 17521), (13, 17575),

Gene: LinStu_60 Start: 19360, Stop: 19686, Start Num: 3
Candidate Starts for LinStu_60:
(Start: 2 @19345 has 1 MA's), (Start: 3 @19360 has 165 MA's), (5, 19441), (6, 19456), (7, 19546), (8, 19567), (10, 19609), (13, 19663),

Gene: Littleton_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Littleton_58:

(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Loanshark_59 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Loanshark_59:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: LolaVinca_62 Start: 19768, Stop: 20094, Start Num: 3
Candidate Starts for LolaVinca_62:
(Start: 2 @19753 has 1 MA's), (Start: 3 @19768 has 165 MA's), (5, 19849), (6, 19864), (7, 19954), (8, 19975), (10, 20017), (13, 20071),

Gene: LordLeafolot_64 Start: 20120, Stop: 20446, Start Num: 3
Candidate Starts for LordLeafolot_64:
(Start: 2 @20105 has 1 MA's), (Start: 3 @20120 has 165 MA's), (5, 20201), (6, 20216), (7, 20306), (8, 20327), (10, 20369), (13, 20423),

Gene: Lukilu_52 Start: 17976, Stop: 18302, Start Num: 3
Candidate Starts for Lukilu_52:
(Start: 2 @17961 has 1 MA's), (Start: 3 @17976 has 165 MA's), (5, 18057), (6, 18072), (7, 18162), (8, 18183), (10, 18225), (13, 18279),

Gene: Maby2021_59 Start: 18288, Stop: 18614, Start Num: 3
Candidate Starts for Maby2021_59:
(Start: 2 @18273 has 1 MA's), (Start: 3 @18288 has 165 MA's), (5, 18369), (6, 18384), (7, 18474), (8, 18495), (10, 18537), (13, 18591),

Gene: Mangeria_62 Start: 19665, Stop: 19988, Start Num: 4
Candidate Starts for Mangeria_62:
(Start: 3 @19638 has 165 MA's), (Start: 4 @19665 has 1 MA's), (5, 19716), (6, 19731), (8, 19839), (13, 19935), (14, 19962),

Gene: Matsumoto_57 Start: 17514, Stop: 17840, Start Num: 3
Candidate Starts for Matsumoto_57:
(Start: 2 @17499 has 1 MA's), (Start: 3 @17514 has 165 MA's), (5, 17595), (6, 17610), (7, 17700), (8, 17721), (10, 17763), (13, 17817),

Gene: McGee_57 Start: 16737, Stop: 17063, Start Num: 3
Candidate Starts for McGee_57:
(Start: 2 @16722 has 1 MA's), (Start: 3 @16737 has 165 MA's), (5, 16818), (6, 16833), (7, 16923), (8, 16944), (10, 16986), (13, 17040),

Gene: McWolfish_57 Start: 18035, Stop: 18361, Start Num: 3
Candidate Starts for McWolfish_57:
(Start: 2 @18020 has 1 MA's), (Start: 3 @18035 has 165 MA's), (5, 18116), (6, 18131), (7, 18221), (8, 18242), (10, 18284), (13, 18338),

Gene: Megamind_58 Start: 18273, Stop: 18599, Start Num: 3
Candidate Starts for Megamind_58:
(Start: 2 @18258 has 1 MA's), (Start: 3 @18273 has 165 MA's), (5, 18354), (6, 18369), (7, 18459), (8, 18480), (10, 18522), (13, 18576),

Gene: Melpomini_54 Start: 16964, Stop: 17290, Start Num: 3
Candidate Starts for Melpomini_54:
(Start: 2 @16949 has 1 MA's), (Start: 3 @16964 has 165 MA's), (5, 17045), (6, 17060), (7, 17150), (8, 17171), (10, 17213), (13, 17267),

Gene: MikeLiesIn_59 Start: 18620, Stop: 18946, Start Num: 3
Candidate Starts for MikeLiesIn_59:
(Start: 2 @18605 has 1 MA's), (Start: 3 @18620 has 165 MA's), (5, 18701), (6, 18716), (7, 18806), (8, 18827), (10, 18869), (13, 18923),

Gene: Mikro_57 Start: 19079, Stop: 19420, Start Num: 2
Candidate Starts for Mikro_57:
(Start: 2 @19079 has 1 MA's), (Start: 3 @19094 has 165 MA's), (5, 19175), (6, 19190), (7, 19280), (8, 19301), (10, 19343), (13, 19397),

Gene: MoMoMixon_59 Start: 18705, Stop: 19031, Start Num: 3
Candidate Starts for MoMoMixon_59:
(Start: 2 @18690 has 1 MA's), (Start: 3 @18705 has 165 MA's), (5, 18786), (6, 18801), (7, 18891), (8, 18912), (10, 18954), (13, 19008),

Gene: Momo_57 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Momo_57:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Morizzled23_61 Start: 18699, Stop: 19025, Start Num: 3
Candidate Starts for Morizzled23_61:
(Start: 2 @18684 has 1 MA's), (Start: 3 @18699 has 165 MA's), (5, 18780), (6, 18795), (7, 18885), (8, 18906), (10, 18948), (13, 19002),

Gene: Naija_57 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Naija_57:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Napoleon13_56 Start: 16946, Stop: 17272, Start Num: 3
Candidate Starts for Napoleon13_56:
(Start: 2 @16931 has 1 MA's), (Start: 3 @16946 has 165 MA's), (5, 17027), (6, 17042), (7, 17132), (8, 17153), (10, 17195), (13, 17249),

Gene: Nappy_61 Start: 18908, Stop: 19234, Start Num: 3
Candidate Starts for Nappy_61:
(Start: 2 @18893 has 1 MA's), (Start: 3 @18908 has 165 MA's), (5, 18989), (6, 19004), (7, 19094), (8, 19115), (10, 19157), (13, 19211),

Gene: Naval22_65 Start: 19630, Stop: 19956, Start Num: 3
Candidate Starts for Naval22_65:
(Start: 2 @19615 has 1 MA's), (Start: 3 @19630 has 165 MA's), (5, 19711), (6, 19726), (7, 19816), (8, 19837), (10, 19879), (13, 19933),

Gene: NedWong_60 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for NedWong_60:

(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Ngannou_53 Start: 16535, Stop: 16861, Start Num: 3
Candidate Starts for Ngannou_53:
(Start: 2 @16520 has 1 MA's), (Start: 3 @16535 has 165 MA's), (5, 16616), (6, 16631), (7, 16721), (8, 16742), (10, 16784), (13, 16838),

Gene: Nidhogg_59 Start: 18461, Stop: 18787, Start Num: 3
Candidate Starts for Nidhogg_59:
(Start: 2 @18446 has 1 MA's), (Start: 3 @18461 has 165 MA's), (5, 18542), (6, 18557), (7, 18647), (8, 18668), (10, 18710), (13, 18764),

Gene: NoodleTree_59 Start: 18531, Stop: 18857, Start Num: 3
Candidate Starts for NoodleTree_59:
(Start: 2 @18516 has 1 MA's), (Start: 3 @18531 has 165 MA's), (5, 18612), (6, 18627), (7, 18717), (8, 18738), (10, 18780), (13, 18834),

Gene: Norm_59 Start: 18608, Stop: 18934, Start Num: 3
Candidate Starts for Norm_59:
(Start: 2 @18593 has 1 MA's), (Start: 3 @18608 has 165 MA's), (5, 18689), (6, 18704), (7, 18794), (8, 18815), (10, 18857), (13, 18911),

Gene: NuevoMundo_64 Start: 19609, Stop: 19935, Start Num: 3
Candidate Starts for NuevoMundo_64:
(Start: 2 @19594 has 1 MA's), (Start: 3 @19609 has 165 MA's), (5, 19690), (6, 19705), (7, 19795), (8, 19816), (10, 19858), (13, 19912),

Gene: ParkTD_58 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for ParkTD_58:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Patter_58 Start: 17570, Stop: 17896, Start Num: 3
Candidate Starts for Patter_58:
(Start: 2 @17555 has 1 MA's), (Start: 3 @17570 has 165 MA's), (5, 17651), (6, 17666), (7, 17756), (8, 17777), (10, 17819), (13, 17873),

Gene: Phlegm_60 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Phlegm_60:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Phox_57 Start: 19456, Stop: 19782, Start Num: 3
Candidate Starts for Phox_57:
(Start: 2 @19441 has 1 MA's), (Start: 3 @19456 has 165 MA's), (5, 19537), (6, 19552), (7, 19642), (8, 19663), (10, 19705), (13, 19759),

Gene: Phusco_58 Start: 18363, Stop: 18689, Start Num: 3
Candidate Starts for Phusco_58:
(Start: 2 @18348 has 1 MA's), (Start: 3 @18363 has 165 MA's), (5, 18444), (6, 18459), (7, 18549), (8, 18570), (10, 18612), (13, 18666),

Gene: Pier_61 Start: 18427, Stop: 18753, Start Num: 3
Candidate Starts for Pier_61:
(Start: 2 @18412 has 1 MA's), (Start: 3 @18427 has 165 MA's), (5, 18508), (6, 18523), (7, 18613), (8, 18634), (10, 18676), (13, 18730),

Gene: Pinkcreek_51 Start: 16909, Stop: 17235, Start Num: 3
Candidate Starts for Pinkcreek_51:
(Start: 2 @16894 has 1 MA's), (Start: 3 @16909 has 165 MA's), (5, 16987), (6, 17002), (8, 17116), (11, 17173), (13, 17212),

Gene: Pio_63 Start: 19761, Stop: 20087, Start Num: 3
Candidate Starts for Pio_63:
(Start: 2 @19746 has 1 MA's), (Start: 3 @19761 has 165 MA's), (5, 19842), (6, 19857), (7, 19947), (8, 19968), (10, 20010), (13, 20064),

Gene: Pivoine_57 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for Pivoine_57:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Pleione_61 Start: 18606, Stop: 18932, Start Num: 3
Candidate Starts for Pleione_61:
(Start: 2 @18591 has 1 MA's), (Start: 3 @18606 has 165 MA's), (5, 18687), (6, 18702), (7, 18792), (8, 18813), (10, 18855), (13, 18909),

Gene: PurduePete_58 Start: 18331, Stop: 18657, Start Num: 3
Candidate Starts for PurduePete_58:
(Start: 2 @18316 has 1 MA's), (Start: 3 @18331 has 165 MA's), (5, 18412), (6, 18427), (7, 18517), (8, 18538), (10, 18580), (13, 18634),

Gene: QBert_53 Start: 18340, Stop: 18666, Start Num: 3
Candidate Starts for QBert_53:
(Start: 2 @18325 has 1 MA's), (Start: 3 @18340 has 165 MA's), (5, 18421), (6, 18436), (7, 18526), (8, 18547), (10, 18589), (13, 18643),

Gene: Quasimodo_58 Start: 18571, Stop: 18897, Start Num: 3
Candidate Starts for Quasimodo_58:
(Start: 2 @18556 has 1 MA's), (Start: 3 @18571 has 165 MA's), (5, 18652), (6, 18667), (7, 18757), (8, 18778), (10, 18820), (13, 18874),

Gene: Rabinovish_58 Start: 19627, Stop: 19953, Start Num: 3
Candidate Starts for Rabinovish_58:
(Start: 2 @19612 has 1 MA's), (Start: 3 @19627 has 165 MA's), (5, 19705), (6, 19720), (8, 19834), (11, 19891), (13, 19930),

Gene: Rahel_59 Start: 17922, Stop: 18248, Start Num: 3
Candidate Starts for Rahel_59:
(Start: 2 @17907 has 1 MA's), (Start: 3 @17922 has 165 MA's), (5, 18003), (6, 18018), (7, 18108), (8, 18129), (10, 18171), (13, 18225),

Gene: Rizal_57 Start: 17524, Stop: 17850, Start Num: 3
Candidate Starts for Rizal_57:

(Start: 2 @17509 has 1 MA's), (Start: 3 @17524 has 165 MA's), (5, 17605), (6, 17620), (7, 17710), (8, 17731), (10, 17773), (13, 17827),

Gene: RoMag_53 Start: 17522, Stop: 17848, Start Num: 3
Candidate Starts for RoMag_53:
(Start: 2 @17507 has 1 MA's), (Start: 3 @17522 has 165 MA's), (5, 17603), (6, 17618), (7, 17708), (8, 17729), (10, 17771), (13, 17825),

Gene: Ronan_53 Start: 16273, Stop: 16599, Start Num: 3
Candidate Starts for Ronan_53:
(Start: 2 @16258 has 1 MA's), (Start: 3 @16273 has 165 MA's), (5, 16354), (6, 16369), (7, 16459), (8, 16480), (10, 16522), (13, 16576),

Gene: Roots515_58 Start: 18408, Stop: 18734, Start Num: 3
Candidate Starts for Roots515_58:
(Start: 2 @18393 has 1 MA's), (Start: 3 @18408 has 165 MA's), (5, 18489), (6, 18504), (7, 18594), (8, 18615), (10, 18657), (13, 18711),

Gene: Salacia_61 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for Salacia_61:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Sauce_60 Start: 18549, Stop: 18875, Start Num: 3
Candidate Starts for Sauce_60:
(Start: 2 @18534 has 1 MA's), (Start: 3 @18549 has 165 MA's), (5, 18630), (6, 18645), (7, 18735), (8, 18756), (10, 18798), (13, 18852),

Gene: ScottMcG_57 Start: 18386, Stop: 18712, Start Num: 3
Candidate Starts for ScottMcG_57:
(Start: 2 @18371 has 1 MA's), (Start: 3 @18386 has 165 MA's), (5, 18467), (6, 18482), (7, 18572), (8, 18593), (10, 18635), (13, 18689),

Gene: Sebata_61 Start: 19479, Stop: 19805, Start Num: 3
Candidate Starts for Sebata_61:
(Start: 2 @19464 has 1 MA's), (Start: 3 @19479 has 165 MA's), (5, 19560), (6, 19575), (7, 19665), (8, 19686), (10, 19728), (13, 19782),

Gene: Shaqnato_53 Start: 17196, Stop: 17522, Start Num: 3
Candidate Starts for Shaqnato_53:
(Start: 2 @17181 has 1 MA's), (Start: 3 @17196 has 165 MA's), (5, 17277), (6, 17292), (7, 17382), (8, 17403), (10, 17445), (13, 17499),

Gene: Shelob_61 Start: 19719, Stop: 20045, Start Num: 3
Candidate Starts for Shelob_61:
(Start: 2 @19704 has 1 MA's), (Start: 3 @19719 has 165 MA's), (5, 19800), (6, 19815), (7, 19905), (8, 19926), (10, 19968), (13, 20022),

Gene: ShiaLabeouf_58 Start: 17990, Stop: 18316, Start Num: 3
Candidate Starts for ShiaLabeouf_58:
(Start: 2 @17975 has 1 MA's), (Start: 3 @17990 has 165 MA's), (5, 18071), (6, 18086), (7, 18176), (8, 18197), (10, 18239), (13, 18293),

Gene: Shifa_52 Start: 17461, Stop: 17787, Start Num: 3
Candidate Starts for Shifa_52:
(Start: 2 @17446 has 1 MA's), (Start: 3 @17461 has 165 MA's), (5, 17542), (6, 17557), (7, 17647), (8, 17668), (10, 17710), (13, 17764),

Gene: Shnickers_58 Start: 17549, Stop: 17875, Start Num: 3
Candidate Starts for Shnickers_58:
(Start: 2 @17534 has 1 MA's), (Start: 3 @17549 has 165 MA's), (5, 17630), (6, 17645), (7, 17735), (8, 17756), (10, 17798), (13, 17852),

Gene: Shrimp_59 Start: 18611, Stop: 18937, Start Num: 3
Candidate Starts for Shrimp_59:
(Start: 2 @18596 has 1 MA's), (Start: 3 @18611 has 165 MA's), (5, 18692), (6, 18707), (7, 18797), (8, 18818), (10, 18860), (13, 18914),

Gene: SilverDipper_59 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for SilverDipper_59:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: SmallFry_58 Start: 17549, Stop: 17875, Start Num: 3
Candidate Starts for SmallFry_58:
(Start: 2 @17534 has 1 MA's), (Start: 3 @17549 has 165 MA's), (5, 17630), (6, 17645), (7, 17735), (8, 17756), (10, 17798), (13, 17852),

Gene: Spec_56 Start: 17693, Stop: 18019, Start Num: 3
Candidate Starts for Spec_56:
(Start: 2 @17678 has 1 MA's), (Start: 3 @17693 has 165 MA's), (5, 17774), (6, 17789), (7, 17879), (8, 17900), (10, 17942), (13, 17996),

Gene: Specks_64 Start: 20202, Stop: 20528, Start Num: 3
Candidate Starts for Specks_64:
(Start: 2 @20187 has 1 MA's), (Start: 3 @20202 has 165 MA's), (5, 20283), (6, 20298), (7, 20388), (8, 20409), (10, 20451), (13, 20505),

Gene: Sprinklers_55 Start: 17521, Stop: 17847, Start Num: 3
Candidate Starts for Sprinklers_55:
(Start: 2 @17506 has 1 MA's), (Start: 3 @17521 has 165 MA's), (5, 17602), (6, 17617), (7, 17707), (8, 17728), (10, 17770), (13, 17824),

Gene: Spud_59 Start: 18922, Stop: 19248, Start Num: 3
Candidate Starts for Spud_59:
(Start: 2 @18907 has 1 MA's), (Start: 3 @18922 has 165 MA's), (5, 19003), (6, 19018), (7, 19108), (8, 19129), (10, 19171), (13, 19225),

Gene: SrishMeg2525_58 Start: 18318, Stop: 18644, Start Num: 3
Candidate Starts for SrishMeg2525_58:
(Start: 2 @18303 has 1 MA's), (Start: 3 @18318 has 165 MA's), (5, 18399), (6, 18414), (7, 18504), (8, 18525), (10, 18567), (13, 18621),

Gene: StephanieG_59 Start: 18921, Stop: 19247, Start Num: 3
Candidate Starts for StephanieG_59:

(Start: 2 @18906 has 1 MA's), (Start: 3 @18921 has 165 MA's), (5, 19002), (6, 19017), (7, 19107), (8, 19128), (10, 19170), (13, 19224),

Gene: Stubby_54 Start: 18240, Stop: 18566, Start Num: 3
Candidate Starts for Stubby_54:
(Start: 2 @18225 has 1 MA's), (Start: 3 @18240 has 165 MA's), (5, 18318), (6, 18333), (8, 18447), (11, 18504), (13, 18543),

Gene: StubbySaigey_58 Start: 17247, Stop: 17573, Start Num: 3
Candidate Starts for StubbySaigey_58:
(Start: 2 @17232 has 1 MA's), (Start: 3 @17247 has 165 MA's), (5, 17328), (6, 17343), (7, 17433), (8, 17454), (10, 17496), (13, 17550),

Gene: Teardrop_58 Start: 17526, Stop: 17852, Start Num: 3
Candidate Starts for Teardrop_58:
(Start: 2 @17511 has 1 MA's), (Start: 3 @17526 has 165 MA's), (5, 17607), (6, 17622), (7, 17712), (8, 17733), (10, 17775), (13, 17829),

Gene: TinyTim_59 Start: 18607, Stop: 18933, Start Num: 3
Candidate Starts for TinyTim_59:
(Start: 2 @18592 has 1 MA's), (Start: 3 @18607 has 165 MA's), (5, 18688), (6, 18703), (7, 18793), (8, 18814), (10, 18856), (13, 18910),

Gene: Tonenili_68 Start: 20953, Stop: 21276, Start Num: 3
Candidate Starts for Tonenili_68:
(1, 20911), (Start: 2 @20938 has 1 MA's), (Start: 3 @20953 has 165 MA's), (5, 21031), (6, 21046), (7, 21136), (8, 21157), (9, 21187), (13, 21253),

Gene: Tortoise16_56 Start: 18057, Stop: 18383, Start Num: 3
Candidate Starts for Tortoise16_56:
(Start: 2 @18042 has 1 MA's), (Start: 3 @18057 has 165 MA's), (5, 18138), (6, 18153), (7, 18243), (8, 18264), (10, 18306), (13, 18360),

Gene: Trinitium_54 Start: 17011, Stop: 17337, Start Num: 3
Candidate Starts for Trinitium_54:
(Start: 2 @16996 has 1 MA's), (Start: 3 @17011 has 165 MA's), (5, 17092), (6, 17107), (7, 17197), (8, 17218), (10, 17260), (13, 17314),

Gene: Turret_53 Start: 16735, Stop: 17061, Start Num: 3
Candidate Starts for Turret_53:
(Start: 2 @16720 has 1 MA's), (Start: 3 @16735 has 165 MA's), (5, 16816), (6, 16831), (7, 16921), (8, 16942), (10, 16984), (13, 17038),

Gene: Tyke_60 Start: 18961, Stop: 19287, Start Num: 3
Candidate Starts for Tyke_60:
(Start: 2 @18946 has 1 MA's), (Start: 3 @18961 has 165 MA's), (5, 19042), (6, 19057), (7, 19147), (8, 19168), (10, 19210), (13, 19264),

Gene: ValleyTerrace_58 Start: 17553, Stop: 17879, Start Num: 3
Candidate Starts for ValleyTerrace_58:
(Start: 2 @17538 has 1 MA's), (Start: 3 @17553 has 165 MA's), (5, 17634), (6, 17649), (7, 17739), (8, 17760), (10, 17802), (13, 17856),

Gene: Wally_57 Start: 17163, Stop: 17489, Start Num: 3
Candidate Starts for Wally_57:
(Start: 2 @17148 has 1 MA's), (Start: 3 @17163 has 165 MA's), (5, 17244), (6, 17259), (7, 17349), (8, 17370), (10, 17412), (13, 17466),

Gene: Willis_59 Start: 18502, Stop: 18828, Start Num: 3
Candidate Starts for Willis_59:
(Start: 2 @18487 has 1 MA's), (Start: 3 @18502 has 165 MA's), (5, 18583), (6, 18598), (7, 18688), (8, 18709), (10, 18751), (13, 18805),

Gene: Yassified_56 Start: 18033, Stop: 18359, Start Num: 3
Candidate Starts for Yassified_56:
(Start: 2 @18018 has 1 MA's), (Start: 3 @18033 has 165 MA's), (5, 18114), (6, 18129), (7, 18219), (8, 18240), (10, 18282), (13, 18336),

Gene: YemiJoy2021_59 Start: 18288, Stop: 18614, Start Num: 3
Candidate Starts for YemiJoy2021_59:
(Start: 2 @18273 has 1 MA's), (Start: 3 @18288 has 165 MA's), (5, 18369), (6, 18384), (7, 18474), (8, 18495), (10, 18537), (13, 18591),

Gene: YoungMoneyMata_58 Start: 17304, Stop: 17630, Start Num: 3
Candidate Starts for YoungMoneyMata_58:
(Start: 2 @17289 has 1 MA's), (Start: 3 @17304 has 165 MA's), (5, 17385), (6, 17400), (7, 17490), (8, 17511), (10, 17553), (13, 17607),

Gene: Yucca_59 Start: 18529, Stop: 18855, Start Num: 3
Candidate Starts for Yucca_59:
(Start: 2 @18514 has 1 MA's), (Start: 3 @18529 has 165 MA's), (5, 18610), (6, 18625), (7, 18715), (8, 18736), (10, 18778), (13, 18832),

Gene: Zalkecks_60 Start: 18292, Stop: 18618, Start Num: 3
Candidate Starts for Zalkecks_60:
(Start: 2 @18277 has 1 MA's), (Start: 3 @18292 has 165 MA's), (5, 18373), (6, 18388), (7, 18478), (8, 18499), (10, 18541), (13, 18595),

Gene: Zeenon_61 Start: 18594, Stop: 18920, Start Num: 3
Candidate Starts for Zeenon_61:
(Start: 2 @18579 has 1 MA's), (Start: 3 @18594 has 165 MA's), (5, 18675), (6, 18690), (7, 18780), (8, 18801), (10, 18843), (13, 18897),

Gene: ZygoTaiga_59 Start: 18608, Stop: 18934, Start Num: 3
Candidate Starts for ZygoTaiga_59:
(Start: 2 @18593 has 1 MA's), (Start: 3 @18608 has 165 MA's), (5, 18689), (6, 18704), (7, 18794), (8, 18815), (10, 18857), (13, 18911),