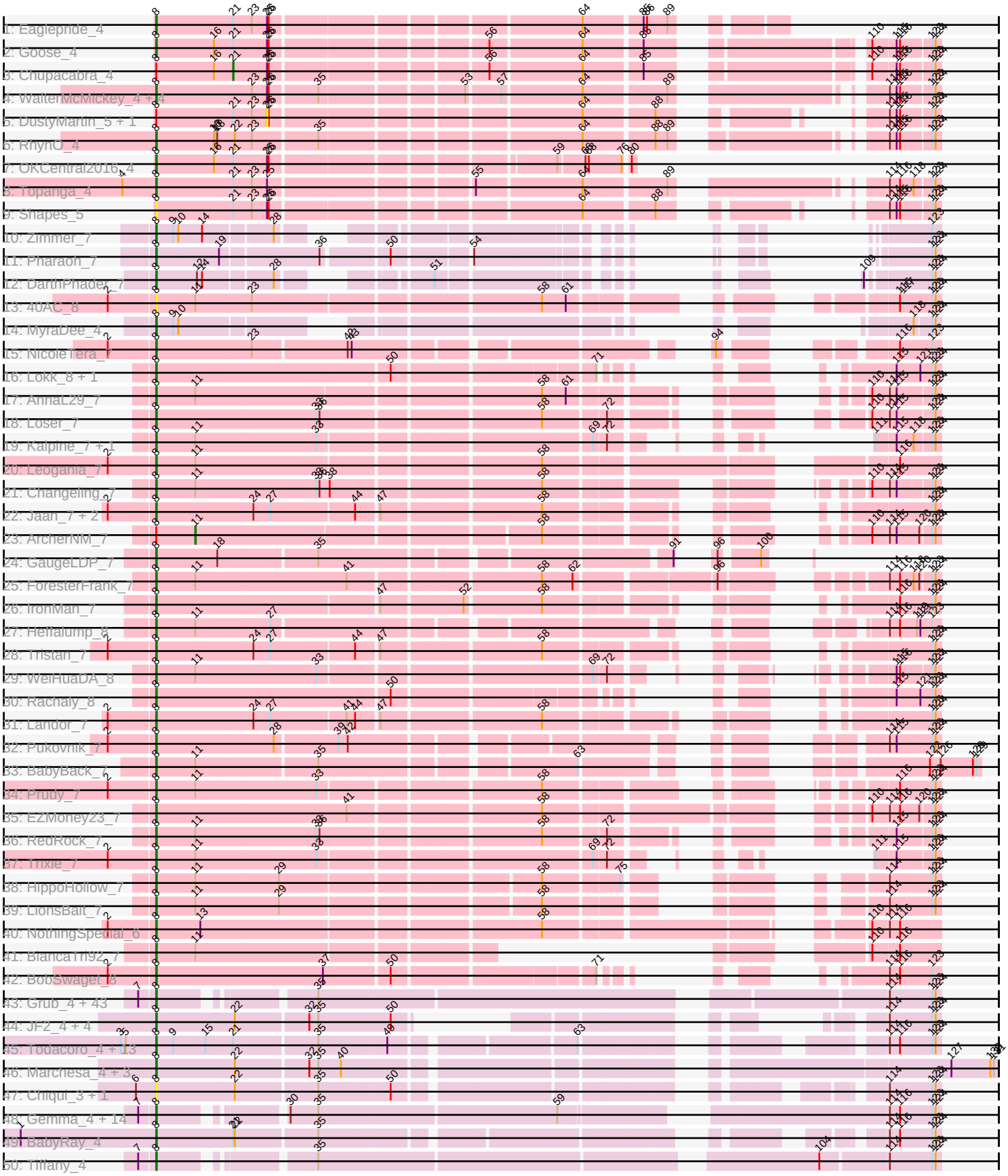
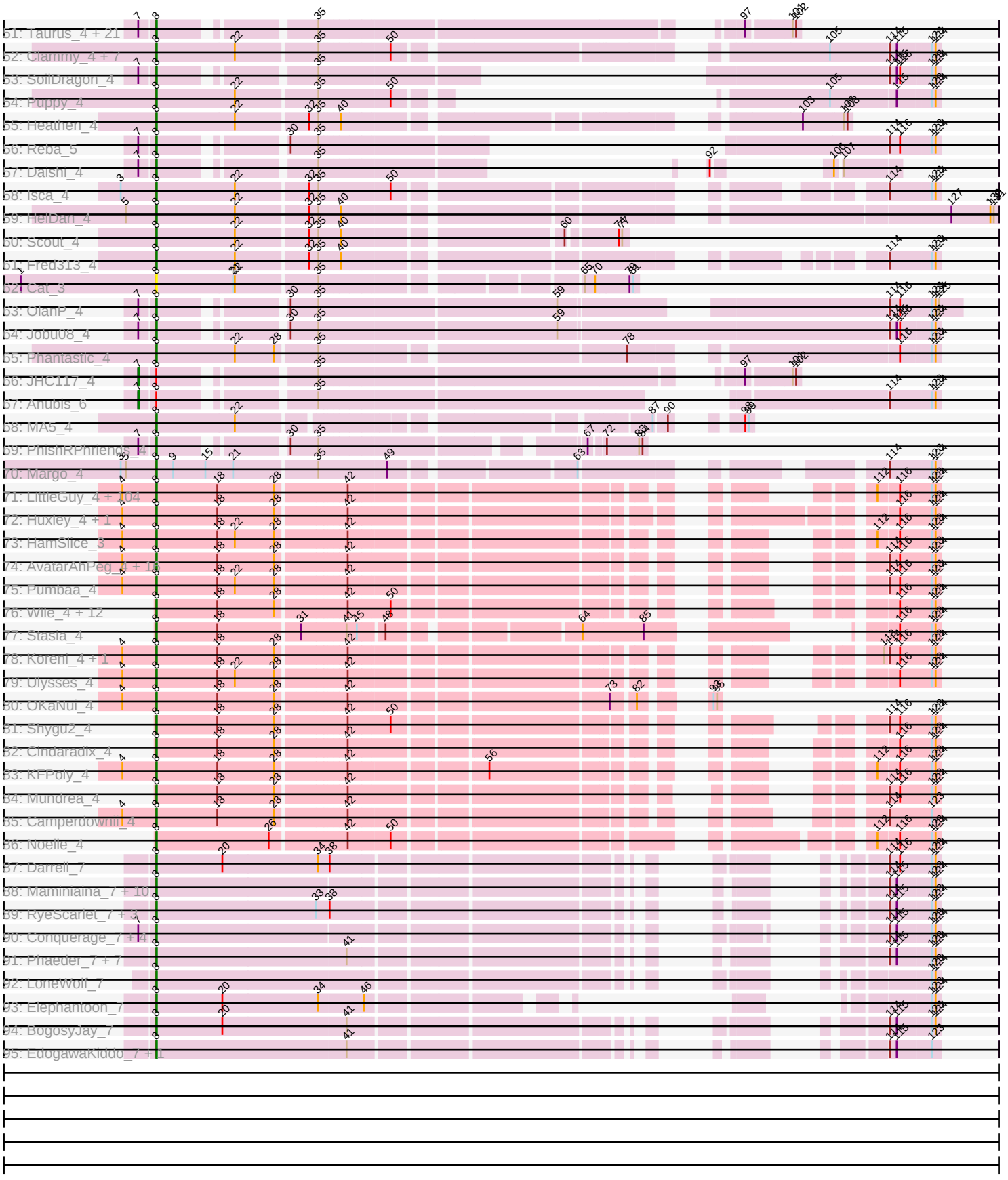
Pham 347125


1: Eaglepride_4
2: Goose_4
3: Chupacabra_4
4: WalterMcMickey_4 + 4
5: DustyMartin_5 + 1
6: RhynO_4
7: OKCentral2016_4
8: Topanga_4
9: Shapes_5
10: Zimmer_7
11: Pharaon_7
12: DarthPhader_7
13: 40AC_8
14: MyraDee_4
15: NicoleTera_7
16: Lokk_8 + 1
17: AnnaL29_7
18: Loser_7
19: Kalpine_7 + 1
20: Leogania_7
21: Changeling_7
22: Jaan_7 + 2
23: ArcherNM_7
24: GaugeLDP_7
25: ForesterFrank_7
26: IronMan_7
27: Hellalump_8
28: Tristan_7
29: WeiHuaDA_8
30: Rachaly_8
31: Landor_7
32: Pukovnik_7
33: BabyBack_7
34: Prudy_7
35: EZMoney23_7
36: RedRock_7
37: Trixie_7
38: HippoHollow_7
39: LionsBait_7
40: NothingSpecial_6
41: BiancaTM92_7
42: BobSwaget_8
43: Grub_4 + 43
44: JF2_4 + 4
45: Todacoro_4 + 13
46: Marchesa_4 + 3
47: Chiqui_3 + 1
48: Gemma_4 + 14
49: BabyRay_4
50: Tiffany_4

Pham 347125


51: Taurus_4 + 21
52: Clammy_4 + 7
53: SoilDragon_4
54: Puppy_4
55: Heathen_4
56: Reba_5
57: Daishi_4
58: Isca_4
59: HeiDan_4
60: Scout_4
61: Fred313_4
62: Cat_3
63: OlanP_4
64: Jobud8_4
65: Phantastic_4
66: JHC117_4
67: Anubis_6
68: MA5_4
69: PhishRPhriends_4
70: Margo_4
71: LittleGuy_4 + 104
72: Huxley_4 + 1
73: HamSlice_3
74: AvatarAnPeg_4 + 18
75: Pumbaa_4
76: Wife_4 + 12
77: Stasia_4
78: Koreni_4 + 1
79: Ulysses_4
80: OKaNui_4
81: Shygu2_4
82: Cindaradix_4
83: KFPoly_4
84: Mundrea_4
85: Camperdownii_4
86: Noelle_4
87: Darrell_7
88: Maminiaina_7 + 10
89: RyeScarlet_7 + 3
90: Conquerage_7 + 4
91: Phaeder_7 + 7
92: LoneWolf_7
93: Elephantoon_7
94: BogosyJay_7
95: EdogawaKiddo_7 + 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 347125 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347125 has 369 members, 21 are drafts.

Phages represented in each track:
- Track 1 : Eaglepride_4
- Track 2 : Goose_4
- Track 3 : Chupacabra_4
- Track 4 : WalterMcMickey_4, Twister_4, Rebeuca_5, Edison31_4, Kristoff_5
- Track 5 : DustyMartin_5, Rowdy_5
- Track 6 : RhynO_4
- Track 7 : OKCentral2016_4
- Track 8 : Topanga_4
- Track 9 : Shapes_5
- Track 10 : Zimmer_7
- Track 11 : Pharaoh_7
- Track 12 : DarthPhader_7
- Track 13 : 40AC_8
- Track 14 : MyraDee_4
- Track 15 : NicoleTera_7
- Track 16 : Lokk_8, Miko_8
- Track 17 : AnnaL29_7
- Track 18 : Loser_7
- Track 19 : Kalpine_7, Colin_7
- Track 20 : Leogania_7
- Track 21 : Changeling_7
- Track 22 : Jaan_7, Phaded_7, Bactobuster_7
- Track 23 : ArcherNM_7
- Track 24 : GaugeLDP_7
- Track 25 : ForesterFrank_7
- Track 26 : IronMan_7
- Track 27 : Heffalump_8
- Track 28 : Tristan_7
- Track 29 : WeiHuaDA_8
- Track 30 : Rachaly_8
- Track 31 : Landor_7
- Track 32 : Pukovnik_7
- Track 33 : BabyBack_7
- Track 34 : Prudy_7
- Track 35 : EZMoney23_7
- Track 36 : RedRock_7
- Track 37 : Trixie_7

• Track 38 : HippoHollow_7
• Track 39 : LionsBait_7
• Track 40 : NothingSpecial_6
• Track 41 : BiancaTri92_7
• Track 42 : BobSwaget_8
• Track 43 : Grub_4, Grif_4, Phoxy_4, BreSam8_4, Snickers_4, Louie6_4, Dieselweasel_4, MuchMore_6, TinyPebbles_4, AugsMagnumOpus_6, Soshari_6, Spike509_4, Methuselah_4, Vix_4, Sabia_4, Microwolf_4, Lowa_4, Aglet_4, GingkoMaracino_4, Stagni_4, StepMih_4, MadMarie_4, Ollie_4, Mainiac_4, LarryKay_4, DaHudson_4, Zetzy_4, PGHhamlin_6, MarQuardt_4, GtownJaz_4, Misomonster_6, SoYo_4, Watson_4, Malinsilva_6, KADY_5, Bxz2_4, BuzzBuzz_3, Lilith_4, Pembroke_4, AgronaGT15_4, Farber_4, Rummer_4, Wooldri_6, HashRod_5
• Track 44 : JF2_4, MK4_4, Rockstar_4, B1_03, JF4_4
• Track 45 : Todacoro_4, Popcicle_4, Veracruz_3, Texage_3, QuinnKiro_3, Pocahontas_4, ResDef_4, Hookmount_4, Panamaxus_4, Noella_4, Caviar_4, Norbert_3, EtoileNova_3, Lambert1_4
• Track 46 : Marchesa_4, DropBear_4, Kachowdy_4, Zarafa_4
• Track 47 : Chiqui_3, BabyJohn_3
• Track 48 : Gemma_4, Kalnoky_5, PurpleHaze_4, Manu_5, Pawn_4, Kalb97_5, JeppNRM_5, ClownCar_4, Groupthink_5, HaveUMetTed_5, Marius_5, Phranny_5, Calvinny_4, Heliosoles_4, ACFishhook_4
• Track 49 : BabyRay_4
• Track 50 : Tiffany_4
• Track 51 : Taurus_4, JenCasNa_4, Cullens_4, PotatoSplit_5, MoneyMay_4, Fernando_4, LBerry_4, Bigflo_4, Phoebe_4, Grum1_4, Colbster_4, EpicPhail_4, Marie_4, Beauxregard13_4, Penny1_4, Sabinator_4, P28Green_4, Montavir_3, Croquant_5, LugYA_6, Hercules11_4, Gwennie_4
• Track 52 : Clammy_4, Bugatti_4, TNguyen7_4, Idleandcovert_3, SaturnRing_3, BlueBird_4, Giroux_4, Roimos_4
• Track 53 : SoilDragon_4
• Track 54 : Puppy_4
• Track 55 : Heathen_4
• Track 56 : Reba_5
• Track 57 : Daishi_4
• Track 58 : Isca_4
• Track 59 : HelDan_4
• Track 60 : Scout_4
• Track 61 : Fred313_4
• Track 62 : Cat_3
• Track 63 : OlanP_4
• Track 64 : Jobu08_4
• Track 65 : Phantastic_4
• Track 66 : JHC117_4
• Track 67 : Anubis_6
• Track 68 : MA5_4
• Track 69 : PhishRPhriends_4
• Track 70 : Margo_4
• Track 71 : LittleGuy_4, Kampy_4, Lorenzo_4, TroyPia_4, Ohfah_4, Sultana_4, SteMason_4, Sabertooth_4, Clarenza_4, CentreCat_4, Ruin_4, Kratark_4, Maxo_4, Florean_4, Connomayer_4, Holli_4, Nyxis_4, JoongJeon_4, Phacado_4, Eros_4, Albee_4, Bombshell_4, Maverick_4, LittleB_4, BellusTerra_4, Phelipe_4, Peaches_4, ICleared_4, Taquarus_4, Avle17_4, TiroTheta9_4, MeeZee_4, LeoAvram_4, Millski_4, Commander_4, JetBlade_4, Eagle_3, Buckaroo_3, TygerBlood_4, Relief_4,

Eapen_4, Gadost_4, NorthStar_4, Rocksand_4, Baby16_4, Wilbur_4, Kingmustik0402_4, Mayonnaise_4, Pipcraft_4, Iceman_4, Polymorphads_4, Medusa_4, Palestino_4, Melvin_4, Phontbonne_4, YoSam321_4, Citius_4, Sparxx_4, Caelakin_4, KekoraPapaka_3, Arturo_3, Kyee_4, Cocoaberry_4, TinaFeyge_4, Koan_4, Bartimeaus_4, LappelDuVide_4, Roosevelt_4, Spino_4, Funston_4, Northrop_4, RockieBear_4, Wizard007_4, Dhanush_4, Bruiser_4, SenorClean_4, Blackmoor_4, Junimo_3, Scamp_4, PeterPeter_4, Lunsford_4, Houdini22_4, Nemo27_4, Broseidon_4, BubbleTrouble_4, Jaykayelowell_4, Lemur_4, Romney_4, Nebs_4, NotAPhaseMom_4, Shaka_4, Skipitt_4, Eris_4, Chaph_4, Druantia_4, Flux_4, Skadoosh_4, Eurydice_4, Thanksgivukkah_4, Morrow_4, Burger_3, Deano_4, Mazhar510_4, Abdiel_4, Wander_4
• Track 72 : Huxley_4, Annyong_4
• Track 73 : HamSlice_3
• Track 74 : AvatarAhPeg_4, Cintron_4, SheldonCooper_4, Phighter1804_4, Iracema64_4, Obama12_4, LHTSCC_4, Stink_4, Rosa24_3, DirtyDunning_4, LochMonster_4, ChampagnePapi_4, Tinybot_3, Cerulean_4, Miramae_4, Happiness_4, BangNhom_3
• Track 75 : Pumbaa_4
• Track 76 : Wile_4, Badger_4, PetiteSangsue_4, Cici_4, Katalie136_4, Perplexer_4, Xena_4, Datway_4, Morpher26_4, Achebe_4, Backyardigan_4, AbbysRanger_4, Bumblebee11_4
• Track 77 : Stasia_4
• Track 78 : Koreni_4, Alberto7_4
• Track 79 : Ulysses_4
• Track 80 : OKaNui_4
• Track 81 : Shygu2_4
• Track 82 : Cindaradix_4
• Track 83 : KFPoly_4
• Track 84 : Mundrea_4
• Track 85 : Camperdownii_4
• Track 86 : Noelle_4
• Track 87 : Darrell_7
• Track 88 : Maminiaina_7, Ugenie5_5, ExplosioNervosa_7, Scherzo_7, Alma_7, EmyBug_7, Pioneer_7, Beemo_7, Phonnegut_7, Fayely_7, Ayanochan_7
• Track 89 : RyeScarlet_7, Hanray_7, Jiawan_7, Holex_7
• Track 90 : Conquerage_7, Eidsmoe_7, Qobbit_7, Priya_7, Spouty_7
• Track 91 : Phaeder_7, HortumSL17_7, Tubs_7, Aliter_7, Myxus_7, Catalina_7, Lilleskat_7, PackMan_7
• Track 92 : LoneWolf_7
• Track 93 : Elephantoon_7
• Track 94 : BogosyJay_7
• Track 95 : EdogawaKiddo_7, Sachima_7

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

The start number called the most often in the published annotations is 8, it was called in 344 of the 348 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• 40AC_8, ACFishhook_4, AbbysRanger_4, Abdiel_4, Achebe_4, Aglet_4, AgronaGT15_4, Albee_4, Alberto7_4, Aliter_7, Alma_7, AnnaL29_7, Annyong_4, Arturo_3, AugsMagnumOpus_6, AvatarAhPeg_4, Avle17_4, Ayanochan_7, B1_03, Baby16_4, BabyBack_7, BabyJohn_3, BabyRay_4, Backyardigan_4, Bactobuster_7, Badger_4, BangNhom_3, Bartimeaus_4, Beauxregard13_4, Beemo_7, BellusTerra_4, BiancaTri92_7, Bigflo_4, Blackmoor_4, BlueBird_4, BobSwaget_8, BogosyJay_7, Bombshell_4, BreSam8_4, Broseidon_4, Bruiser_4, BubbleTrouble_4, Buckaroo_3, Bugatti_4, Bumblebee11_4, Burger_3, BuzzBuzz_3, Bxz2_4, Caelakin_4, Calvinny_4, Camperdownii_4, Cat_3, Catalina_7, Caviar_4, CentreCat_4, Cerulean_4, ChampagnePapi_4, Changeling_7, Chaph_4, Chiqui_3, Cici_4, Cindaradix_4, Cintron_4, Citius_4, Clammy_4, Clarenza_4, ClownCar_4, Cocoaberry_4, Colbster_4, Colin_7, Commander_4, Connomayer_4, Conquerage_7, Croquant_5, Cullens_4, DaHudson_4, Daishi_4, Darrell_7, DarthPhader_7, Datway_4, Deano_4, Dhanush_4, Dieselweasel_4, DirtyDunning_4, DropBear_4, Druantia_4, EZMoney23_7, Eagle_3, Eaglepride_4, Eapen_4, Edison31_4, EdogawaKiddo_7, Eidsmoe_7, Elephantoon_7, EmyBug_7, EpicPhail_4, Eris_4, Eros_4, EtoileNova_3, Eurydice_4, ExplosioNervosa_7, Farber_4, Fayely_7, Fernando_4, Florean_4, Flux_4, ForesterFrank_7, Fred313_4, Funston_4, Gadost_4, GaugeLDP_7, Gemma_4, GingkoMaracino_4, Giroux_4, Goose_4, Grif_4, Groupthink_5, Grub_4, Grum1_4, GtownJaz_4, Gwennie_4, HamSlice_3, Hanray_7, Happiness_4, HashRod_5, HaveUMetTed_5, Heathen_4, Heffalump_8, HelDan_4, Heliosoles_4, Hercules11_4, HippoHollow_7, Holex_7, Holli_4, Hookmount_4, HortumSL17_7, Houdini22_4, Huxley_4, ICleared_4, Iceman_4, Idleandcovert_3, Iracema64_4, IronMan_7, Isca_4, JF2_4, JF4_4, Jaan_7, Jaykayelowell_4, JenCasNa_4, JeppNRM_5, JetBlade_4, Jiawan_7, Jobu08_4, JoongJeon_4, Junimo_3, KADY_5, KFPoly_4, Kachowdy_4, Kalb97_5, Kalnoky_5, Kalpine_7, Kampy_4, Katalie136_4, KekoraPapaka_3, Kingmustik0402_4, Koan_4, Koreni_4, Kratark_4, Kristoff_5, Kyee_4, LBerry_4, LHTSCC_4, Lambert1_4, Landor_7, LappelDuVide_4, LarryKay_4, Lemur_4, LeoAvram_4, Leogania_7, Lilith_4, Lilleskat_7, LionsBait_7, LittleB_4, LittleGuy_4, LochMonster_4, Lokk_8, LoneWolf_7, Lorenzo_4, Loser_7, Louie6_4, Lowa_4, LugYA_6, Lunsford_4, MA5_4, MK4_4, MadMarie_4, Mainiac_4, Malinsilva_6, Maminiaina_7, Manu_5, MarQuardt_4, Marchesa_4, Margo_4, Marie_4, Marius_5, Maverick_4, Maxo_4, Mayonnaise_4, Mazhar510_4, Medusa_4, MeeZee_4, Melvin_4, Methuselah_4, Microwolf_4, Miko_8, Millski_4, Miramae_4, Misomonster_6, MoneyMay_4, Montavir_3, Morpher26_4, Morrow_4, MuchMore_6, Mundrea_4, MyraDee_4, Myxus_7, Nebs_4, Nemo27_4, NicoleTera_7, Noella_4, Noelle_4, Norbert_3, NorthStar_4, Northrop_4, NotAPhaseMom_4, NothingSpecial_6, Nyxis_4, OKCentral2016_4, OKaNui_4, Obama12_4, Ohfah_4, OlanP_4, Ollie_4, P28Green_4, PGHhamlin_6, PackMan_7, Palestino_4, Panamaxus_4, Pawn_4, Peaches_4, Pembroke_4, Penny1_4, Perplexer_4, PeterPeter_4, PetiteSangsue_4, Phacado_4, Phaded_7, Phaeder_7, Phantastic_4, Pharaoh_7, Phelipe_4, Phighter1804_4, PhishRPhriends_4, Phoebe_4, Phonnegut_7, Phontbonne_4, Phoxy_4, Phranny_5, Pioneer_7, Pipcraft_4, Pocahontas_4, Polymorphads_4, Popcicle_4, PotatoSplit_5, Priya_7, Prudy_7, Pukovnik_7, Pumbaa_4, Puppy_4, PurpleHaze_4, Qobbit_7, QuinnKiro_3, Rachaly_8, Reba_5, Rebeuca_5, RedRock_7, Relief_4, ResDef_4, RhynO_4, RockieBear_4, Rocksand_4, Rockstar_4, Roimos_4, Romney_4, Roosevelt_4, Rosa24_3, Ruin_4, Rummer_4, RyeScarlet_7, Sabertooth_4, Sabia_4, Sabinator_4, Sachima_7, SaturnRing_3, Scamp_4, Scherzo_7, Scout_4, SenorClean_4, Shaka_4, Shapes_5, SheldonCooper_4, Shygu2_4, Skadoosh_4, Skipitt_4, Snickers_4, SoYo_4, SoilDragon_4, Soshari_6, Sparxx_4, Spike509_4, Spino_4, Spouty_7, Stagni_4, Stasia_4, SteMason_4, StepMih_4, Stink_4, Sultana_4, TNguyen7_4, Taquarus_4, Taurus_4, Texage_3, Thanksgivukkah_4, Tiffany_4, TinaFeyge_4,

TinyPebbles_4, Tinybot_3, TiroTheta9_4, Todacoro_4, Topanga_4, Tristan_7, Trixie_7, TroyPia_4, Tubs_7, Twister_4, TygerBlood_4, Ugenie5_5, Ulysses_4, Veracruz_3, Vix_4, WalterMcMickey_4, Wander_4, Watson_4, WeiHuaDA_8, Wilbur_4, Wile_4, Wizard007_4, Wooldri_6, Xena_4, YoSam321_4, Zarafa_4, Zetzy_4, Zimmer_7,

Genes that have the "Most Annotated" start but do not call it:
• Anubis_6, ArcherNM_7, Chupacabra_4, DustyMartin_5, JHC117_4, Rowdy_5,

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

Summary by start number:

Start 7:
• Found in 95 of 369 (25.7%) of genes in pham
• Manual Annotations of this start: 2 of 348
• Called 2.1% of time when present
• Phage (with cluster) where this start called: Anubis_6 (A3), JHC117_4 (A3),

Start 8:
• Found in 369 of 369 (100.0%) of genes in pham
• Manual Annotations of this start: 344 of 348
• Called 98.4% of time when present
• Phage (with cluster) where this start called: 40AC_8 (A17), ACFishhook_4 (A3), AbbysRanger_4 (A4), Abdiel_4 (A4), Achebe_4 (A4), Aglet_4 (A3), AgronaGT15_4 (A3), Albee_4 (A4), Alberto7_4 (A4), Aliter_7 (A9), Alma_7 (A9), AnnaL29_7 (A2), Annyong_4 (A4), Arturo_3 (A4), AugsMagnumOpus_6 (A3), AvatarAhPeg_4 (A4), Avle17_4 (A4), Ayanochan_7 (A9), B1_03 (A3), Baby16_4 (A4), BabyBack_7 (A2), BabyJohn_3 (A3), BabyRay_4 (A3), Backyardigan_4 (A4), Bactobuster_7 (A2), Badger_4 (A4), BangNhom_3 (A4), Bartimeaus_4 (A4), Beauxregard13_4 (A3), Beemo_7 (A9), BellusTerra_4 (A4), BiancaTri92_7 (A2), Bigflo_4 (A3), Blackmoor_4 (A4), BlueBird_4 (A3), BobSwaget_8 (A2), BogosyJay_7 (A9), Bombshell_4 (A4), BreSam8_4 (A3), Broseidon_4 (A4), Bruiser_4 (A4), BubbleTrouble_4 (A4), Buckaroo_3 (A4), Bugatti_4 (A3), Bumblebee11_4 (A4), Burger_3 (A4), BuzzBuzz_3 (A3), Bxz2_4 (A3), Caelakin_4 (A4), Calvinny_4 (A3), Camperdownii_4 (A4), Cat_3 (A3), Catalina_7 (A9), Caviar_4 (A3), CentreCat_4 (A4), Cerulean_4 (A4), ChampagnePapi_4 (A4), Changeling_7 (A2), Chaph_4 (A4), Chiqui_3 (A3), Cici_4 (A4), Cindaradix_4 (A4), Cintron_4 (A4), Citius_4 (A4), Clammy_4 (A3), Clarenza_4 (A4), ClownCar_4 (A3), Cocoaberry_4 (A4), Colbster_4 (A3), Colin_7 (A2), Commander_4 (A4), Connomayer_4 (A4), Conquerage_7 (A9), Croquant_5 (A3), Cullens_4 (A3), DaHudson_4 (A3), Daishi_4 (A3), Darrell_7 (A9), DarthPhader_7 (A12), Datway_4 (A4), Deano_4 (A4), Dhanush_4 (A4), Dieselweasel_4 (A3), DirtyDunning_4 (A4), DropBear_4 (A3), Druantia_4 (A4), EZMoney23_7 (A2), Eagle_3 (A4), Eaglepride_4 (A10), Eapen_4 (A4), Edison31_4 (A10), EdogawaKiddo_7 (A9), Eidsmoe_7 (A9), Elephantoon_7 (A9), EmyBug_7 (A9), EpicPhail_4 (A3), Eris_4 (A4), Eros_4 (A4), EtoileNova_3 (A3), Eurydice_4 (A4), ExplosioNervosa_7 (A9), Farber_4 (A3), Fayely_7 (A9), Fernando_4 (A3), Florean_4 (A4), Flux_4 (A4), ForesterFrank_7 (A2), Fred313_4 (A3), Funston_4 (A4), Gadost_4 (A4), GaugeLDP_7 (A2), Gemma_4 (A3), GingkoMaracino_4 (A3), Giroux_4 (A3), Goose_4 (A10), Grif_4 (A3), Groupthink_5 (A3), Grub_4 (A3), Grum1_4 (A3), GtownJaz_4 (A3), Gwennie_4 (A3), HamSlice_3 (A4), Hanray_7 (A9), Happiness_4 (A4), HashRod_5 (A3), HaveUMetTed_5 (A3), Heathen_4 (A3), Heffalump_8 (A2),

HelDan_4 (A3), Heliosoles_4 (A3), Hercules11_4 (A3), HippoHollow_7 (A2), Holex_7 (A9), Holli_4 (A4), Hookmount_4 (A3), HortumSL17_7 (A9), Houdini22_4 (A4), Huxley_4 (A4), ICleared_4 (A4), Iceman_4 (A4), Idleandcovert_3 (A3), Iracema64_4 (A4), IronMan_7 (A2), Isca_4 (A3), JF2_4 (A3), JF4_4 (A3), Jaan_7 (A2), Jaykayelowell_4 (A4), JenCasNa_4 (A3), JeppNRM_5 (A3), JetBlade_4 (A4), Jiawan_7 (A9), Jobu08_4 (A3), JoongJeon_4 (A4), Junimo_3 (A4), KADY_5 (A3), KFPoly_4 (A4), Kachowdy_4 (A3), Kalb97_5 (A3), Kalnoky_5 (A3), Kalpine_7 (A2), Kampy_4 (A4), Katalie136_4 (A4), KekoraPapaka_3 (A4), Kingmustik0402_4 (A4), Koan_4 (A4), Koreni_4 (A4), Kratark_4 (A4), Kristoff_5 (A10), Kyee_4 (A4), LBerry_4 (A3), LHTSCC_4 (A4), Lambert1_4 (A3), Landor_7 (A2), LappelDuVide_4 (A4), LarryKay_4 (A3), Lemur_4 (A4), LeoAvram_4 (A4), Leogania_7 (A2), Lilith_4 (A3), Lilleskat_7 (A9), LionsBait_7 (A2), LittleB_4 (A4), LittleGuy_4 (A4), LochMonster_4 (A4), Lokk_8 (A2), LoneWolf_7 (A9), Lorenzo_4 (A4), Loser_7 (A2), Louie6_4 (A3), Lowa_4 (A3), LugYA_6 (A3), Lunsford_4 (A4), MA5_4 (A3), MK4_4 (A3), MadMarie_4 (A3), Mainiac_4 (A3), Malinsilva_6 (A3), Maminiaina_7 (A9), Manu_5 (A3), MarQuardt_4 (A3), Marchesa_4 (A3), Margo_4 (A3), Marie_4 (A3), Marius_5 (A3), Maverick_4 (A4), Maxo_4 (A4), Mayonnaise_4 (A4), Mazhar510_4 (A4), Medusa_4 (A4), MeeZee_4 (A4), Melvin_4 (A4), Methuselah_4 (A3), Microwolf_4 (A3), Miko_8 (A2), Millski_4 (A4), Miramae_4 (A4), Misomonster_6 (A3), MoneyMay_4 (A3), Montavir_3 (A3), Morpher26_4 (A4), Morrow_4 (A4), MuchMore_6 (A3), Mundrea_4 (A4), MyraDee_4 (A18), Myxus_7 (A9), Nebs_4 (A4), Nemo27_4 (A4), NicoleTera_7 (A2), Noella_4 (A3), Noelle_4 (A4), Norbert_3 (A3), NorthStar_4 (A4), Northrop_4 (A4), NotAPhaseMom_4 (A4), NothingSpecial_6 (A2), Nyxis_4 (A4), OKCentral2016_4 (A10), OKaNui_4 (A4), Obama12_4 (A4), Ohfah_4 (A4), OlanP_4 (A3), Ollie_4 (A3), P28Green_4 (A3), PGHhamlin_6 (A3), PackMan_7 (A9), Palestino_4 (A4), Panamaxus_4 (A3), Pawn_4 (A3), Peaches_4 (A4), Pembroke_4 (A3), Penny1_4 (A3), Perplexer_4 (A4), PeterPeter_4 (A4), PetiteSangsue_4 (A4), Phacado_4 (A4), Phaded_7 (A2), Phaeder_7 (A9), Phantastic_4 (A3), Pharaoh_7 (A12), Phelipe_4 (A4), Phighter1804_4 (A4), PhishRPhriends_4 (A3), Phoebe_4 (A3), Phonnegut_7 (A9), Phontbonne_4 (A4), Phoxy_4 (A3), Phranny_5 (A3), Pioneer_7 (A9), Pipcraft_4 (A4), Pocahontas_4 (A3), Polymorphads_4 (A4), Popcicle_4 (A3), PotatoSplit_5 (A3), Priya_7 (A9), Prudy_7 (A2), Pukovnik_7 (A2), Pumbaa_4 (A4), Puppy_4 (A3), PurpleHaze_4 (A3), Qobbit_7 (A9), QuinnKiro_3 (A3), Rachaly_8 (A2), Reba_5 (A3), Rebeuca_5 (A10), RedRock_7 (A2), Relief_4 (A4), ResDef_4 (A3), RhynO_4 (A10), RockieBear_4 (A4), Rocksand_4 (A4), Rockstar_4 (A3), Roimos_4 (A3), Romney_4 (A4), Roosevelt_4 (A4), Rosa24_3 (A4), Ruin_4 (A4), Rummer_4 (A3), RyeScarlet_7 (A9), Sabertooth_4 (A4), Sabia_4 (A3), Sabinator_4 (A3), Sachima_7 (A9), SaturnRing_3 (A3), Scamp_4 (A4), Scherzo_7 (A9), Scout_4 (A3), SenorClean_4 (A4), Shaka_4 (A4), Shapes_5 (A10), SheldonCooper_4 (A4), Shygu2_4 (A4), Skadoosh_4 (A4), Skipitt_4 (A4), Snickers_4 (A3), SoYo_4 (A3), SoilDragon_4 (A3), Soshari_6 (A3), Sparxx_4 (A4), Spike509_4 (A3), Spino_4 (A4), Spouty_7 (A9), Stagni_4 (A3), Stasia_4 (A4), SteMason_4 (A4), StepMih_4 (A3), Stink_4 (A4), Sultana_4 (A4), TNguyen7_4 (A3), Taquarus_4 (A4), Taurus_4 (A3), Texage_3 (A3), Thanksgivukkah_4 (A4), Tiffany_4 (A3), TinaFeyge_4 (A4), TinyPebbles_4 (A3), Tinybot_3 (A4), TiroTheta9_4 (A4), Todacoro_4 (A3), Topanga_4 (A10), Tristan_7 (A2), Trixie_7 (A2), TroyPia_4 (A4), Tubs_7 (A9), Twister_4 (A10), TygerBlood_4 (A4), Ugenie5_5 (A9), Ulysses_4 (A4), Veracruz_3 (A3), Vix_4 (A3), WalterMcMickey_4 (A10), Wander_4 (A4), Watson_4 (A3), WeiHuaDA_8 (A2), Wilbur_4 (A4), Wile_4 (A4), Wizard007_4 (A4), Wooldri_6 (A3), Xena_4 (A4), YoSam321_4 (A4), Zarafa_4 (A3), Zetzy_4 (A3), Zimmer_7 (A12),

Start 11:
• Found in 17 of 369 (4.6%) of genes in pham

• Manual Annotations of this start: 1 of 348
• Called 5.9% of time when present
• Phage (with cluster) where this start called: ArcherNM_7 (A2),

Start 21:
• Found in 25 of 369 (6.8%) of genes in pham
• Manual Annotations of this start: 1 of 348
• Called 4.0% of time when present
• Phage (with cluster) where this start called: Chupacabra_4 (A10),

Start 25:
• Found in 13 of 369 (3.5%) of genes in pham
• No Manual Annotations of this start.
• Called 15.4% of time when present
• Phage (with cluster) where this start called: DustyMartin_5 (A10), Rowdy_5 (A10),

Summary by clusters:

There are 8 clusters represented in this pham: A17, A10, A12, A18, A3, A2, A4, A9,

Info for manual annotations of cluster A10:
•Start number 8 was manually annotated 10 times for cluster A10.
•Start number 21 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A12:
•Start number 8 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A18:
•Start number 8 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:
•Start number 8 was manually annotated 31 times for cluster A2.
•Start number 11 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A3:
•Start number 7 was manually annotated 2 times for cluster A3.
•Start number 8 was manually annotated 122 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 8 was manually annotated 143 times for cluster A4.

Info for manual annotations of cluster A9:
•Start number 8 was manually annotated 34 times for cluster A9.

Gene Information:

Gene: 40AC_8 Start: 4152, Stop: 5285, Start Num: 8
Candidate Starts for 40AC_8:
(2, 4071), (Start: 8 @4152 has 344 MA's), (Start: 11 @4221 has 1 MA's), (23, 4320), (58, 4791), (61, 4833), (116, 5217), (117, 5223), (123, 5271), (124, 5277),

Gene: ACFishhook_4 Start: 1685, Stop: 2965, Start Num: 8
Candidate Starts for ACFishhook_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2879), (116, 2897), (123, 2951), (124, 2957),

Gene: AbbysRanger_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for AbbysRanger_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Abdiel_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Abdiel_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Achebe_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Achebe_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Aglet_4 Start: 1681, Stop: 2895, Start Num: 8
Candidate Starts for Aglet_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2809), (123, 2881), (124, 2887),

Gene: AgronaGT15_4 Start: 1682, Stop: 2536, Start Num: 8
Candidate Starts for AgronaGT15_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2450), (123, 2522), (124, 2528),

Gene: Albee_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Albee_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Alberto7_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Alberto7_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (113, 2624), (114, 2630), (116, 2648), (123, 2705), (124, 2711),

Gene: Aliter_7 Start: 4192, Stop: 5163, Start Num: 8
Candidate Starts for Aliter_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5080), (115, 5092), (123, 5149), (124, 5155),

Gene: Alma_7 Start: 4190, Stop: 5221, Start Num: 8
Candidate Starts for Alma_7:
(Start: 8 @4190 has 344 MA's), (114, 5138), (115, 5150), (123, 5207), (124, 5213),

Gene: AnnaL29_7 Start: 4133, Stop: 5236, Start Num: 8
Candidate Starts for AnnaL29_7:
(Start: 8 @4133 has 344 MA's), (Start: 11 @4202 has 1 MA's), (58, 4772), (61, 4814), (110, 5126), (114, 5153), (115, 5165), (123, 5222), (124, 5228),

Gene: Annyong_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Annyong_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (116, 2648), (123, 2705), (124, 2711),

Gene: Anubis_6 Start: 1654, Stop: 2805, Start Num: 7
Candidate Starts for Anubis_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2719), (123, 2791), (124, 2797),

Gene: ArcherNM_7 Start: 4221, Stop: 5246, Start Num: 11
Candidate Starts for ArcherNM_7:
(Start: 8 @4152 has 344 MA's), (Start: 11 @4221 has 1 MA's), (58, 4782), (110, 5136), (114, 5163), (115, 5175), (120, 5214), (123, 5232), (124, 5238),

Gene: Arturo_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Arturo_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: AugsMagnumOpus_6 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for AugsMagnumOpus_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: AvatarAhPeg_4 Start: 1638, Stop: 2714, Start Num: 8
Candidate Starts for AvatarAhPeg_4:
(4, 1578), (Start: 8 @1638 has 344 MA's), (18, 1746), (28, 1842), (42, 1956), (114, 2625), (116, 2643), (123, 2700), (124, 2706),

Gene: Avle17_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Avle17_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Ayanochan_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Ayanochan_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: B1_03 Start: 1608, Stop: 2510, Start Num: 8
Candidate Starts for B1_03:
(Start: 8 @1608 has 344 MA's), (22, 1743), (32, 1866), (35, 1881), (50, 1995), (114, 2424), (123, 2496), (124, 2502),

Gene: Baby16_4 Start: 1645, Stop: 2727, Start Num: 8
Candidate Starts for Baby16_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2620), (116, 2656), (123, 2713), (124, 2719),

Gene: BabyBack_7 Start: 3957, Stop: 5108, Start Num: 8
Candidate Starts for BabyBack_7:

(Start: 8 @3957 has 344 MA's), (Start: 11 @4026 has 1 MA's), (35, 4233), (63, 4629), (122, 5019), (126, 5037), (128, 5094), (129, 5100),

Gene: BabyJohn_3 Start: 1627, Stop: 2763, Start Num: 8
Candidate Starts for BabyJohn_3:
(6, 1591), (Start: 8 @1627 has 344 MA's), (22, 1762), (35, 1900), (50, 2014), (114, 2677), (123, 2749), (124, 2755),

Gene: BabyRay_4 Start: 1650, Stop: 2777, Start Num: 8
Candidate Starts for BabyRay_4:
(1, 1410), (Start: 8 @1650 has 344 MA's), (Start: 21 @1782 has 1 MA's), (22, 1785), (35, 1923), (114, 2691), (116, 2709), (123, 2763), (124, 2769),

Gene: Backyardigan_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Backyardigan_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Bactobuster_7 Start: 3964, Stop: 5064, Start Num: 8
Candidate Starts for Bactobuster_7:
(2, 3883), (Start: 8 @3964 has 344 MA's), (24, 4135), (27, 4165), (44, 4306), (47, 4339), (58, 4603), (123, 5050), (124, 5056),

Gene: Badger_4 Start: 1645, Stop: 2730, Start Num: 8
Candidate Starts for Badger_4:
(Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (50, 2035), (116, 2659), (123, 2716), (124, 2722),

Gene: BangNhom_3 Start: 1642, Stop: 2718, Start Num: 8
Candidate Starts for BangNhom_3:
(4, 1582), (Start: 8 @1642 has 344 MA's), (18, 1750), (28, 1846), (42, 1960), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: Bartimeaus_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Bartimeaus_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Beauxregard13_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Beauxregard13_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Beemo_7 Start: 4193, Stop: 5224, Start Num: 8
Candidate Starts for Beemo_7:
(Start: 8 @4193 has 344 MA's), (114, 5141), (115, 5153), (123, 5210), (124, 5216),

Gene: BellusTerra_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for BellusTerra_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: BiancaTri92_7 Start: 4180, Stop: 5040, Start Num: 8

Candidate Starts for BiancaTri92_7:
(Start: 8 @4180 has 344 MA's), (Start: 11 @4249 has 1 MA's), (110, 4927), (116, 4972),

Gene: Bigflo_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Bigflo_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Blackmoor_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Blackmoor_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: BlueBird_4 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for BlueBird_4:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: BobSwaget_8 Start: 4394, Stop: 5380, Start Num: 8
Candidate Starts for BobSwaget_8:
(2, 4313), (Start: 8 @4394 has 344 MA's), (37, 4688), (50, 4793), (71, 5111), (114, 5294), (116, 5312), (123, 5366),

Gene: BogosyJay_7 Start: 3953, Stop: 5005, Start Num: 8
Candidate Starts for BogosyJay_7:
(Start: 8 @3953 has 344 MA's), (20, 4070), (41, 4286), (114, 4922), (115, 4934), (123, 4991), (124, 4997),

Gene: Bombshell_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Bombshell_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: BreSam8_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for BreSam8_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Broseidon_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Broseidon_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Bruiser_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Bruiser_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: BubbleTrouble_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for BubbleTrouble_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Buckaroo_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Buckaroo_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Bugatti_4 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for Bugatti_4:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: Bumblebee11_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Bumblebee11_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Burger_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Burger_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: BuzzBuzz_3 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for BuzzBuzz_3:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Bxz2_4 Start: 1692, Stop: 2726, Start Num: 8
Candidate Starts for Bxz2_4:
(Start: 7 @1665 has 2 MA's), (Start: 8 @1692 has 344 MA's), (35, 1920), (114, 2640), (123, 2712), (124, 2718),

Gene: Caelakin_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Caelakin_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Calvinny_4 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Calvinny_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Camperdownii_4 Start: 1646, Stop: 2725, Start Num: 8
Candidate Starts for Camperdownii_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (114, 2639), (123, 2711),

Gene: Cat_3 Start: 1650, Stop: 2396, Start Num: 8
Candidate Starts for Cat_3:
(1, 1410), (Start: 8 @1650 has 344 MA's), (Start: 21 @1782 has 1 MA's), (22, 1785), (35, 1923), (65, 2310), (70, 2328), (79, 2382), (81, 2388),

Gene: Catalina_7 Start: 4193, Stop: 5236, Start Num: 8
Candidate Starts for Catalina_7:
(Start: 8 @4193 has 344 MA's), (41, 4526), (114, 5153), (115, 5165), (123, 5222), (124, 5228),

Gene: Caviar_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Caviar_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: CentreCat_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for CentreCat_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Cerulean_4 Start: 1643, Stop: 2719, Start Num: 8
Candidate Starts for Cerulean_4:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (114, 2630), (116, 2648), (123, 2705), (124, 2711),

Gene: ChampagnePapi_4 Start: 1642, Stop: 2718, Start Num: 8
Candidate Starts for ChampagnePapi_4:
(4, 1582), (Start: 8 @1642 has 344 MA's), (18, 1750), (28, 1846), (42, 1960), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: Changeling_7 Start: 4153, Stop: 5271, Start Num: 8
Candidate Starts for Changeling_7:
(Start: 8 @4153 has 344 MA's), (Start: 11 @4222 has 1 MA's), (33, 4435), (36, 4441), (38, 4456), (58, 4798), (110, 5161), (114, 5188), (115, 5200), (123, 5257), (124, 5263),

Gene: Chaph_4 Start: 1645, Stop: 2727, Start Num: 8
Candidate Starts for Chaph_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2620), (116, 2656), (123, 2713), (124, 2719),

Gene: Chiqui_3 Start: 1627, Stop: 2763, Start Num: 8
Candidate Starts for Chiqui_3:
(6, 1591), (Start: 8 @1627 has 344 MA's), (22, 1762), (35, 1900), (50, 2014), (114, 2677), (123, 2749), (124, 2755),

Gene: Chupacabra_4 Start: 1765, Stop: 2814, Start Num: 21
Candidate Starts for Chupacabra_4:
(Start: 8 @1633 has 344 MA's), (16, 1735), (Start: 21 @1765 has 1 MA's), (25, 1825), (26, 1828), (56, 2158), (64, 2314), (85, 2407), (110, 2704), (115, 2743), (116, 2749), (123, 2800), (124, 2806),

Gene: Cici_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Cici_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Cindaradix_4 Start: 1642, Stop: 2718, Start Num: 8
Candidate Starts for Cindaradix_4:
(Start: 8 @1642 has 344 MA's), (18, 1750), (28, 1846), (42, 1960), (116, 2647), (123, 2704), (124, 2710),

Gene: Cintron_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Cintron_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: Citius_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Citius_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Clammy_4 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for Clammy_4:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: Clarenza_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Clarenza_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: ClownCar_4 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for ClownCar_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Cocoaberry_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Cocoaberry_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Colbster_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Colbster_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Colin_7 Start: 4293, Stop: 5243, Start Num: 8
Candidate Starts for Colin_7:
(Start: 8 @4293 has 344 MA's), (Start: 11 @4362 has 1 MA's), (33, 4575), (69, 5013), (72, 5034), (111, 5139), (115, 5172), (118, 5202), (123, 5229), (124, 5235),

Gene: Commander_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Commander_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Connomayer_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Connomayer_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Conquerage_7 Start: 4189, Stop: 5220, Start Num: 8
Candidate Starts for Conquerage_7:
(Start: 7 @4162 has 2 MA's), (Start: 8 @4189 has 344 MA's), (114, 5137), (115, 5149), (123, 5206), (124, 5212),

Gene: Croquant_5 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Croquant_5:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Cullens_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Cullens_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: DaHudson_4 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for DaHudson_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: Daishi_4 Start: 1682, Stop: 2335, Start Num: 8
Candidate Starts for Daishi_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (92, 2192), (106, 2228), (107, 2237),

Gene: Darrell_7 Start: 4069, Stop: 5115, Start Num: 8
Candidate Starts for Darrell_7:
(Start: 8 @4069 has 344 MA's), (20, 4186), (34, 4354), (38, 4372), (114, 5029), (116, 5047), (123, 5101), (124, 5107),

Gene: DarthPhader_7 Start: 4505, Stop: 5314, Start Num: 8
Candidate Starts for DarthPhader_7:
(Start: 8 @4505 has 344 MA's), (12, 4577), (14, 4586), (28, 4697), (51, 4865), (109, 5201), (123, 5300), (124, 5306),

Gene: Datway_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Datway_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Deano_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Deano_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Dhanush_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Dhanush_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Dieselweasel_4 Start: 1681, Stop: 2895, Start Num: 8
Candidate Starts for Dieselweasel_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2809), (123, 2881), (124, 2887),

Gene: DirtyDunning_4 Start: 1643, Stop: 2716, Start Num: 8
Candidate Starts for DirtyDunning_4:

(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (114, 2627), (116, 2645), (123, 2702), (124, 2708),

Gene: DropBear_4 Start: 1605, Stop: 2909, Start Num: 8
Candidate Starts for DropBear_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (127, 2826), (130, 2895), (131, 2901),

Gene: Druantia_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Druantia_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: DustyMartin_5 Start: 1860, Stop: 2750, Start Num: 25
Candidate Starts for DustyMartin_5:
(Start: 8 @1668 has 344 MA's), (Start: 21 @1800 has 1 MA's), (23, 1833), (25, 1860), (26, 1863), (64, 2349), (88, 2463), (114, 2667), (115, 2679), (116, 2685), (123, 2736), (124, 2742),

Gene: EZMoney23_7 Start: 4151, Stop: 5341, Start Num: 8
Candidate Starts for EZMoney23_7:
(Start: 8 @4151 has 344 MA's), (41, 4484), (58, 4796), (110, 5231), (114, 5258), (116, 5276), (120, 5309), (123, 5327), (124, 5333),

Gene: Eagle_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Eagle_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Eaglepride_4 Start: 1666, Stop: 2610, Start Num: 8
Candidate Starts for Eaglepride_4:
(Start: 8 @1666 has 344 MA's), (Start: 21 @1798 has 1 MA's), (23, 1831), (25, 1858), (26, 1861), (64, 2347), (85, 2440), (86, 2446), (89, 2482),

Gene: Eapen_4 Start: 1647, Stop: 2720, Start Num: 8
Candidate Starts for Eapen_4:
(4, 1587), (Start: 8 @1647 has 344 MA's), (18, 1755), (28, 1851), (42, 1965), (112, 2613), (116, 2649), (123, 2706), (124, 2712),

Gene: Edison31_4 Start: 1662, Stop: 2834, Start Num: 8
Candidate Starts for Edison31_4:
(Start: 8 @1662 has 344 MA's), (23, 1827), (25, 1854), (26, 1857), (35, 1935), (53, 2154), (57, 2208), (64, 2343), (89, 2478), (114, 2751), (115, 2763), (116, 2769), (123, 2820), (124, 2826),

Gene: EdogawaKiddo_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for EdogawaKiddo_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221),

Gene: Eidsmoe_7 Start: 4189, Stop: 5220, Start Num: 8
Candidate Starts for Eidsmoe_7:
(Start: 7 @4162 has 2 MA's), (Start: 8 @4189 has 344 MA's), (114, 5137), (115, 5149), (123, 5206), (124, 5212),

Gene: Elephantoon_7 Start: 3947, Stop: 4801, Start Num: 8

Candidate Starts for Elephantoon_7:
(Start: 8 @3947 has 344 MA's), (20, 4064), (34, 4232), (46, 4310), (123, 4787), (124, 4793),

Gene: EmyBug_7 Start: 4189, Stop: 5220, Start Num: 8
Candidate Starts for EmyBug_7:
(Start: 8 @4189 has 344 MA's), (114, 5137), (115, 5149), (123, 5206), (124, 5212),

Gene: EpicPhail_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for EpicPhail_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Eris_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Eris_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Eros_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Eros_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: EtoileNova_3 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for EtoileNova_3:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Eurydice_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Eurydice_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: ExplosioNervosa_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for ExplosioNervosa_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Farber_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for Farber_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Fayely_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Fayely_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Fernando_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Fernando_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Florean_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Florean_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Flux_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Flux_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: ForesterFrank_7 Start: 4143, Stop: 5327, Start Num: 8
Candidate Starts for ForesterFrank_7:
(Start: 8 @4143 has 344 MA's), (Start: 11 @4212 has 1 MA's), (41, 4476), (58, 4788), (62, 4842), (96, 5055), (114, 5244), (116, 5262), (118, 5286), (120, 5295), (123, 5313), (124, 5319),

Gene: Fred313_4 Start: 1605, Stop: 2732, Start Num: 8
Candidate Starts for Fred313_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (114, 2646), (123, 2718), (124, 2724),

Gene: Funston_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Funston_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Gadost_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Gadost_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: GaugeLDP_7 Start: 3954, Stop: 4844, Start Num: 8
Candidate Starts for GaugeLDP_7:
(Start: 8 @3954 has 344 MA's), (18, 4062), (35, 4230), (91, 4761), (96, 4773), (100, 4830),

Gene: Gemma_4 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Gemma_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: GingkoMaracino_4 Start: 1681, Stop: 2805, Start Num: 8
Candidate Starts for GingkoMaracino_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2719), (123, 2791), (124, 2797),

Gene: Giroux_4 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for Giroux_4:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: Goose_4 Start: 1635, Stop: 2816, Start Num: 8
Candidate Starts for Goose_4:
(Start: 8 @1635 has 344 MA's), (16, 1737), (Start: 21 @1767 has 1 MA's), (25, 1827), (26, 1830), (56, 2160), (64, 2316), (85, 2409), (110, 2706), (115, 2745), (116, 2751), (123, 2802), (124, 2808),

Gene: Grif_4 Start: 1681, Stop: 2715, Start Num: 8

Candidate Starts for Grif_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2629), (123, 2701), (124, 2707),

Gene: Groupthink_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Groupthink_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Grub_4 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for Grub_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: Grum1_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Grum1_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: GtownJaz_4 Start: 1681, Stop: 2895, Start Num: 8
Candidate Starts for GtownJaz_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2809), (123, 2881), (124, 2887),

Gene: Gwennie_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Gwennie_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: HamSlice_3 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for HamSlice_3:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (22, 1781), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Hanray_7 Start: 4192, Stop: 5226, Start Num: 8
Candidate Starts for Hanray_7:
(Start: 8 @4192 has 344 MA's), (33, 4474), (38, 4495), (114, 5143), (115, 5155), (123, 5212), (124, 5218),

Gene: Happiness_4 Start: 1644, Stop: 2720, Start Num: 8
Candidate Starts for Happiness_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (114, 2631), (116, 2649), (123, 2706), (124, 2712),

Gene: HashRod_5 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for HashRod_5:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: HaveUMetTed_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for HaveUMetTed_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Heathen_4 Start: 1605, Stop: 2657, Start Num: 8
Candidate Starts for Heathen_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (103, 2574), (107, 2643), (108, 2649),

Gene: Heffalump_8 Start: 4531, Stop: 5598, Start Num: 8
Candidate Starts for Heffalump_8:
(Start: 8 @4531 has 344 MA's), (Start: 11 @4600 has 1 MA's), (27, 4732), (114, 5512), (116, 5530), (119, 5560), (121, 5566), (123, 5584),

Gene: HelDan_4 Start: 1605, Stop: 2909, Start Num: 8
Candidate Starts for HelDan_4:
(5, 1551), (Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (127, 2826), (130, 2895), (131, 2901),

Gene: Heliosoles_4 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Heliosoles_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Hercules11_4 Start: 1681, Stop: 2634, Start Num: 8
Candidate Starts for Hercules11_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2548), (101, 2620), (102, 2626),

Gene: HippoHollow_7 Start: 4232, Stop: 5308, Start Num: 8
Candidate Starts for HippoHollow_7:
(Start: 8 @4232 has 344 MA's), (Start: 11 @4301 has 1 MA's), (29, 4448), (58, 4862), (75, 4985), (114, 5225), (123, 5294), (124, 5300),

Gene: Holex_7 Start: 4192, Stop: 5226, Start Num: 8
Candidate Starts for Holex_7:
(Start: 8 @4192 has 344 MA's), (33, 4474), (38, 4495), (114, 5143), (115, 5155), (123, 5212), (124, 5218),

Gene: Holli_4 Start: 1645, Stop: 2511, Start Num: 8
Candidate Starts for Holli_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2404), (116, 2440), (123, 2497), (124, 2503),

Gene: Hookmount_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Hookmount_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: HortumSL17_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for HortumSL17_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: Houdini22_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Houdini22_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Huxley_4 Start: 1645, Stop: 2802, Start Num: 8
Candidate Starts for Huxley_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (116, 2731), (123, 2788), (124, 2794),

Gene: ICleared_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for ICleared_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Iceman_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Iceman_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Idleandcovert_3 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for Idleandcovert_3:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: Iracema64_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Iracema64_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: IronMan_7 Start: 3972, Stop: 5072, Start Num: 8
Candidate Starts for IronMan_7:
(Start: 8 @3972 has 344 MA's), (47, 4347), (52, 4482), (58, 4611), (116, 5001), (123, 5058), (124, 5064),

Gene: Isca_4 Start: 1610, Stop: 2746, Start Num: 8
Candidate Starts for Isca_4:
(3, 1547), (Start: 8 @1610 has 344 MA's), (22, 1745), (32, 1868), (35, 1883), (50, 1997), (114, 2660), (123, 2732), (124, 2738),

Gene: JF2_4 Start: 1608, Stop: 2510, Start Num: 8
Candidate Starts for JF2_4:
(Start: 8 @1608 has 344 MA's), (22, 1743), (32, 1866), (35, 1881), (50, 1995), (114, 2424), (123, 2496), (124, 2502),

Gene: JF4_4 Start: 1608, Stop: 2510, Start Num: 8
Candidate Starts for JF4_4:
(Start: 8 @1608 has 344 MA's), (22, 1743), (32, 1866), (35, 1881), (50, 1995), (114, 2424), (123, 2496), (124, 2502),

Gene: JHC117_4 Start: 1654, Stop: 2625, Start Num: 7
Candidate Starts for JHC117_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Jaan_7 Start: 3968, Stop: 5068, Start Num: 8
Candidate Starts for Jaan_7:
(2, 3887), (Start: 8 @3968 has 344 MA's), (24, 4139), (27, 4169), (44, 4310), (47, 4343), (58, 4607), (123, 5054), (124, 5060),

Gene: Jaykayelowell_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Jaykayelowell_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: JenCasNa_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for JenCasNa_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: JeppNRM_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for JeppNRM_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: JetBlade_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for JetBlade_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Jiawan_7 Start: 4192, Stop: 5226, Start Num: 8
Candidate Starts for Jiawan_7:
(Start: 8 @4192 has 344 MA's), (33, 4474), (38, 4495), (114, 5143), (115, 5155), (123, 5212), (124, 5218),

Gene: Jobu08_4 Start: 1681, Stop: 2958, Start Num: 8
Candidate Starts for Jobu08_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (30, 1861), (35, 1909), (59, 2305), (114, 2875), (115, 2887), (116, 2893), (123, 2944), (124, 2950),

Gene: JoongJeon_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for JoongJeon_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Junimo_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Junimo_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: KADY_5 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for KADY_5:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: KFPoly_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for KFPoly_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (56, 2176), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Kachowdy_4 Start: 1605, Stop: 2909, Start Num: 8
Candidate Starts for Kachowdy_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (127, 2826), (130, 2895), (131, 2901),

Gene: Kalb97_5 Start: 1683, Stop: 2882, Start Num: 8
Candidate Starts for Kalb97_5:
(Start: 7 @1656 has 2 MA's), (Start: 8 @1683 has 344 MA's), (30, 1863), (35, 1911), (59, 2307), (114, 2796), (116, 2814), (123, 2868), (124, 2874),

Gene: Kalnoky_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Kalnoky_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Kalpine_7 Start: 4413, Stop: 5363, Start Num: 8
Candidate Starts for Kalpine_7:
(Start: 8 @4413 has 344 MA's), (Start: 11 @4482 has 1 MA's), (33, 4695), (69, 5133), (72, 5154), (111, 5259), (115, 5292), (118, 5322), (123, 5349), (124, 5355),

Gene: Kampy_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Kampy_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Katalie136_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Katalie136_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: KekoraPapaka_3 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for KekoraPapaka_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Kingmustik0402_4 Start: 1646, Stop: 2710, Start Num: 8
Candidate Starts for Kingmustik0402_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2603), (116, 2639), (123, 2696), (124, 2702),

Gene: Koan_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Koan_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Koreni_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Koreni_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (113, 2623), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: Kratark_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Kratark_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Kristoff_5 Start: 1827, Stop: 2999, Start Num: 8
Candidate Starts for Kristoff_5:
(Start: 8 @1827 has 344 MA's), (23, 1992), (25, 2019), (26, 2022), (35, 2100), (53, 2319), (57, 2373), (64, 2508), (89, 2643), (114, 2916), (115, 2928), (116, 2934), (123, 2985), (124, 2991),

Gene: Kyee_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Kyee_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: LBerry_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for LBerry_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: LHTSCC_4 Start: 1642, Stop: 2718, Start Num: 8
Candidate Starts for LHTSCC_4:
(4, 1582), (Start: 8 @1642 has 344 MA's), (18, 1750), (28, 1846), (42, 1960), (114, 2629), (116, 2647), (123, 2704), (124, 2710),

Gene: Lambert1_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Lambert1_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Landor_7 Start: 3970, Stop: 5070, Start Num: 8
Candidate Starts for Landor_7:
(2, 3889), (Start: 8 @3970 has 344 MA's), (24, 4141), (27, 4171), (41, 4297), (44, 4312), (47, 4345), (58, 4609), (123, 5056), (124, 5062),

Gene: LappelDuVide_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for LappelDuVide_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: LarryKay_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for LarryKay_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Lemur_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Lemur_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: LeoAvram_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for LeoAvram_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Leogania_7 Start: 4183, Stop: 5397, Start Num: 8
Candidate Starts for Leogania_7:
(2, 4102), (Start: 8 @4183 has 344 MA's), (Start: 11 @4252 has 1 MA's), (58, 4822), (116, 5329),

Gene: Lilith_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for Lilith_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Lilleskat_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for Lilleskat_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: LionsBait_7 Start: 4226, Stop: 5302, Start Num: 8
Candidate Starts for LionsBait_7:
(Start: 8 @4226 has 344 MA's), (Start: 11 @4295 has 1 MA's), (29, 4442), (58, 4856), (114, 5219), (123, 5288), (124, 5294),

Gene: LittleB_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for LittleB_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: LittleGuy_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for LittleGuy_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: LochMonster_4 Start: 1643, Stop: 2716, Start Num: 8
Candidate Starts for LochMonster_4:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (114, 2627), (116, 2645), (123, 2702), (124, 2708),

Gene: Lokk_8 Start: 4396, Stop: 5382, Start Num: 8
Candidate Starts for Lokk_8:
(Start: 8 @4396 has 344 MA's), (50, 4795), (71, 5113), (115, 5308), (121, 5350), (123, 5368), (124, 5374),

Gene: LoneWolf_7 Start: 3950, Stop: 4993, Start Num: 8
Candidate Starts for LoneWolf_7:
(Start: 8 @3950 has 344 MA's), (123, 4979), (124, 4985),

Gene: Lorenzo_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Lorenzo_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Loser_7 Start: 4131, Stop: 5249, Start Num: 8
Candidate Starts for Loser_7:

(Start: 8 @4131 has 344 MA's), (33, 4413), (36, 4419), (58, 4776), (72, 4878), (110, 5139), (114, 5166), (115, 5178), (123, 5235), (124, 5241),

Gene: Louie6_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Louie6_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Lowa_4 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for Lowa_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: LugYA_6 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for LugYA_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Lunsford_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Lunsford_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: MA5_4 Start: 1622, Stop: 2464, Start Num: 8
Candidate Starts for MA5_4:
(Start: 8 @1622 has 344 MA's), (22, 1757), (87, 2381), (90, 2399), (98, 2450), (99, 2456),

Gene: MK4_4 Start: 1608, Stop: 2744, Start Num: 8
Candidate Starts for MK4_4:
(Start: 8 @1608 has 344 MA's), (22, 1743), (32, 1866), (35, 1881), (50, 1995), (114, 2658), (123, 2730), (124, 2736),

Gene: MadMarie_4 Start: 1682, Stop: 2896, Start Num: 8
Candidate Starts for MadMarie_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2810), (123, 2882), (124, 2888),

Gene: Mainiac_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for Mainiac_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Malinsilva_6 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for Malinsilva_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: Maminiaina_7 Start: 3953, Stop: 4984, Start Num: 8
Candidate Starts for Maminiaina_7:
(Start: 8 @3953 has 344 MA's), (114, 4901), (115, 4913), (123, 4970), (124, 4976),

Gene: Manu_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Manu_5:

(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: MarQuardt_4 Start: 1681, Stop: 2895, Start Num: 8
Candidate Starts for MarQuardt_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2809), (123, 2881), (124, 2887),

Gene: Marchesa_4 Start: 1605, Stop: 2909, Start Num: 8
Candidate Starts for Marchesa_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (127, 2826), (130, 2895), (131, 2901),

Gene: Margo_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Margo_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (123, 2746), (124, 2752),

Gene: Marie_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Marie_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Marius_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Marius_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Maverick_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Maverick_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Maxo_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Maxo_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Mayonnaise_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Mayonnaise_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Mazhar510_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Mazhar510_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Medusa_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Medusa_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: MeeZee_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for MeeZee_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Melvin_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Melvin_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Methuselah_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Methuselah_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Microwolf_4 Start: 1681, Stop: 2895, Start Num: 8
Candidate Starts for Microwolf_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2809), (123, 2881), (124, 2887),

Gene: Miko_8 Start: 4374, Stop: 5360, Start Num: 8
Candidate Starts for Miko_8:
(Start: 8 @4374 has 344 MA's), (50, 4773), (71, 5091), (115, 5286), (121, 5328), (123, 5346), (124, 5352),

Gene: Millski_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Millski_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Miramae_4 Start: 1638, Stop: 2714, Start Num: 8
Candidate Starts for Miramae_4:
(4, 1578), (Start: 8 @1638 has 344 MA's), (18, 1746), (28, 1842), (42, 1956), (114, 2625), (116, 2643), (123, 2700), (124, 2706),

Gene: Misomonster_6 Start: 1681, Stop: 2715, Start Num: 8
Candidate Starts for Misomonster_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2629), (123, 2701), (124, 2707),

Gene: MoneyMay_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for MoneyMay_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Montavir_3 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Montavir_3:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Morpher26_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Morpher26_4:

(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Morrow_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Morrow_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: MuchMore_6 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for MuchMore_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: Mundrea_4 Start: 1642, Stop: 2709, Start Num: 8
Candidate Starts for Mundrea_4:
(Start: 8 @1642 has 344 MA's), (18, 1750), (28, 1846), (42, 1960), (114, 2620), (116, 2638), (123, 2695), (124, 2701),

Gene: MyraDee_4 Start: 1517, Stop: 2386, Start Num: 8
Candidate Starts for MyraDee_4:
(Start: 8 @1517 has 344 MA's), (9, 1547), (10, 1556), (118, 2345), (123, 2372), (124, 2378),

Gene: Myxus_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for Myxus_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: Nebs_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Nebs_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Nemo27_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Nemo27_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: NicoleTera_7 Start: 4172, Stop: 5248, Start Num: 8
Candidate Starts for NicoleTera_7:
(2, 4091), (Start: 8 @4172 has 344 MA's), (23, 4340), (42, 4496), (43, 4502), (94, 4988), (116, 5180), (123, 5234),

Gene: Noella_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Noella_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Noelle_4 Start: 1629, Stop: 2783, Start Num: 8
Candidate Starts for Noelle_4:
(Start: 8 @1629 has 344 MA's), (26, 1824), (42, 1947), (50, 2016), (112, 2676), (116, 2712), (123, 2769), (124, 2775),

Gene: Norbert_3 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Norbert_3:

(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: NorthStar_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for NorthStar_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Northrop_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Northrop_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: NotAPhaseMom_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for NotAPhaseMom_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: NothingSpecial_6 Start: 4006, Stop: 5202, Start Num: 8
Candidate Starts for NothingSpecial_6:
(2, 3925), (Start: 8 @4006 has 344 MA's), (13, 4084), (58, 4645), (110, 5089), (114, 5116), (116, 5134),

Gene: Nyxis_4 Start: 1648, Stop: 2721, Start Num: 8
Candidate Starts for Nyxis_4:
(4, 1588), (Start: 8 @1648 has 344 MA's), (18, 1756), (28, 1852), (42, 1966), (112, 2614), (116, 2650), (123, 2707), (124, 2713),

Gene: OKCentral2016_4 Start: 1637, Stop: 2374, Start Num: 8
Candidate Starts for OKCentral2016_4:
(Start: 8 @1637 has 344 MA's), (16, 1739), (Start: 21 @1769 has 1 MA's), (25, 1829), (26, 1832), (59, 2264), (66, 2303), (68, 2309), (76, 2360), (80, 2366),

Gene: OKaNui_4 Start: 1644, Stop: 2483, Start Num: 8
Candidate Starts for OKaNui_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (73, 2376), (82, 2412), (93, 2469), (95, 2475),

Gene: Obama12_4 Start: 1644, Stop: 2720, Start Num: 8
Candidate Starts for Obama12_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (114, 2631), (116, 2649), (123, 2706), (124, 2712),

Gene: Ohfah_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Ohfah_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: OlanP_4 Start: 1864, Stop: 3102, Start Num: 8
Candidate Starts for OlanP_4:
(Start: 7 @1837 has 2 MA's), (Start: 8 @1864 has 344 MA's), (30, 2044), (35, 2092), (59, 2488), (114, 2977), (116, 2995), (123, 3049), (124, 3055), (125, 3061),

Gene: Ollie_4 Start: 1681, Stop: 2805, Start Num: 8

Candidate Starts for Ollie_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2719), (123, 2791), (124, 2797),

Gene: P28Green_4 Start: 1682, Stop: 2626, Start Num: 8
Candidate Starts for P28Green_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (97, 2540), (101, 2612), (102, 2618),

Gene: PGHhamlin_6 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for PGHhamlin_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: PackMan_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for PackMan_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: Palestino_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Palestino_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Panamaxus_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Panamaxus_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Pawn_4 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Pawn_4:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Peaches_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Peaches_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Pembroke_4 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for Pembroke_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: Penny1_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Penny1_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Perplexer_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Perplexer_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: PeterPeter_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for PeterPeter_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: PetiteSangsue_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for PetiteSangsue_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: Phacado_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Phacado_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Phaded_7 Start: 3967, Stop: 5067, Start Num: 8
Candidate Starts for Phaded_7:
(2, 3886), (Start: 8 @3967 has 344 MA's), (24, 4138), (27, 4168), (44, 4309), (47, 4342), (58, 4606), (123, 5053), (124, 5059),

Gene: Phaeder_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for Phaeder_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: Phantastic_4 Start: 1617, Stop: 2831, Start Num: 8
Candidate Starts for Phantastic_4:
(Start: 8 @1617 has 344 MA's), (22, 1752), (28, 1821), (35, 1890), (78, 2376), (116, 2766), (123, 2817), (124, 2823),

Gene: Pharaoh_7 Start: 4476, Stop: 5333, Start Num: 8
Candidate Starts for Pharaoh_7:
(Start: 8 @4476 has 344 MA's), (19, 4584), (36, 4746), (50, 4845), (54, 4968), (123, 5319), (124, 5325),

Gene: Phelipe_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Phelipe_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Phighter1804_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Phighter1804_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (114, 2628), (116, 2646), (123, 2703), (124, 2709),

Gene: PhishRPhriends_4 Start: 1686, Stop: 2396, Start Num: 8
Candidate Starts for PhishRPhriends_4:
(Start: 7 @1659 has 2 MA's), (Start: 8 @1686 has 344 MA's), (30, 1866), (35, 1914), (67, 2310), (72, 2328), (83, 2382), (84, 2388),

Gene: Phoebe_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Phoebe_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Phonnegut_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Phonnegut_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Phontbonne_4 Start: 1643, Stop: 2716, Start Num: 8
Candidate Starts for Phontbonne_4:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (112, 2609), (116, 2645), (123, 2702), (124, 2708),

Gene: Phoxy_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Phoxy_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Phranny_5 Start: 1685, Stop: 2884, Start Num: 8
Candidate Starts for Phranny_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (59, 2309), (114, 2798), (116, 2816), (123, 2870), (124, 2876),

Gene: Pioneer_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Pioneer_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Pipcraft_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Pipcraft_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Pocahontas_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Pocahontas_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Polymorphads_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Polymorphads_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Popcicle_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Popcicle_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: PotatoSplit_5 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for PotatoSplit_5:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Priya_7 Start: 4190, Stop: 5221, Start Num: 8
Candidate Starts for Priya_7:
(Start: 7 @4163 has 2 MA's), (Start: 8 @4190 has 344 MA's), (114, 5138), (115, 5150), (123, 5207), (124, 5213),

Gene: Prudy_7 Start: 4154, Stop: 5263, Start Num: 8
Candidate Starts for Prudy_7:
(2, 4073), (Start: 8 @4154 has 344 MA's), (Start: 11 @4223 has 1 MA's), (33, 4436), (58, 4793), (116, 5192), (123, 5249), (124, 5255),

Gene: Pukovnik_7 Start: 3940, Stop: 5010, Start Num: 8
Candidate Starts for Pukovnik_7:
(2, 3859), (Start: 8 @3940 has 344 MA's), (28, 4147), (39, 4246), (42, 4261), (114, 4927), (115, 4939), (123, 4996), (124, 5002),

Gene: Pumbaa_4 Start: 1643, Stop: 2716, Start Num: 8
Candidate Starts for Pumbaa_4:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (22, 1778), (28, 1847), (42, 1961), (114, 2627), (116, 2645), (123, 2702), (124, 2708),

Gene: Puppy_4 Start: 1612, Stop: 2445, Start Num: 8
Candidate Starts for Puppy_4:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2260), (115, 2374), (123, 2431), (124, 2437),

Gene: PurpleHaze_4 Start: 1684, Stop: 2883, Start Num: 8
Candidate Starts for PurpleHaze_4:
(Start: 7 @1657 has 2 MA's), (Start: 8 @1684 has 344 MA's), (30, 1864), (35, 1912), (59, 2308), (114, 2797), (116, 2815), (123, 2869), (124, 2875),

Gene: Qobbit_7 Start: 4189, Stop: 5220, Start Num: 8
Candidate Starts for Qobbit_7:
(Start: 7 @4162 has 2 MA's), (Start: 8 @4189 has 344 MA's), (114, 5137), (115, 5149), (123, 5206), (124, 5212),

Gene: QuinnKiro_3 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for QuinnKiro_3:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Rachaly_8 Start: 4394, Stop: 5380, Start Num: 8
Candidate Starts for Rachaly_8:
(Start: 8 @4394 has 344 MA's), (50, 4793), (115, 5306), (121, 5348), (123, 5366), (124, 5372),

Gene: Reba_5 Start: 1685, Stop: 2557, Start Num: 8
Candidate Starts for Reba_5:
(Start: 7 @1658 has 2 MA's), (Start: 8 @1685 has 344 MA's), (30, 1865), (35, 1913), (114, 2471), (116, 2489), (123, 2543), (124, 2549),

Gene: Rebeuca_5 Start: 1828, Stop: 3000, Start Num: 8
Candidate Starts for Rebeuca_5:
(Start: 8 @1828 has 344 MA's), (23, 1993), (25, 2020), (26, 2023), (35, 2101), (53, 2320), (57, 2374), (64, 2509), (89, 2644), (114, 2917), (115, 2929), (116, 2935), (123, 2986), (124, 2992),

Gene: RedRock_7 Start: 4133, Stop: 5242, Start Num: 8
Candidate Starts for RedRock_7:
(Start: 8 @4133 has 344 MA's), (Start: 11 @4202 has 1 MA's), (33, 4415), (36, 4421), (58, 4778), (72, 4880), (115, 5171), (123, 5228), (124, 5234),

Gene: Relief_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Relief_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: ResDef_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for ResDef_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: RhynO_4 Start: 1673, Stop: 2839, Start Num: 8
Candidate Starts for RhynO_4:
(Start: 8 @1673 has 344 MA's), (16, 1775), (17, 1778), (18, 1781), (22, 1811), (23, 1841), (35, 1949), (64, 2357), (88, 2471), (89, 2492), (114, 2756), (115, 2768), (116, 2774), (123, 2825), (124, 2831),

Gene: RockieBear_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for RockieBear_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Rocksand_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Rocksand_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Rockstar_4 Start: 1608, Stop: 2744, Start Num: 8
Candidate Starts for Rockstar_4:
(Start: 8 @1608 has 344 MA's), (22, 1743), (32, 1866), (35, 1881), (50, 1995), (114, 2658), (123, 2730), (124, 2736),

Gene: Roimos_4 Start: 1607, Stop: 2821, Start Num: 8
Candidate Starts for Roimos_4:
(Start: 8 @1607 has 344 MA's), (22, 1742), (35, 1880), (50, 1994), (105, 2636), (114, 2738), (115, 2750), (123, 2807), (124, 2813),

Gene: Romney_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Romney_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Roosevelt_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Roosevelt_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Rosa24_3 Start: 1643, Stop: 2716, Start Num: 8
Candidate Starts for Rosa24_3:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (114, 2627), (116, 2645), (123, 2702), (124, 2708),

Gene: Rowdy_5 Start: 1860, Stop: 2750, Start Num: 25
Candidate Starts for Rowdy_5:

(Start: 8 @1668 has 344 MA's), (Start: 21 @1800 has 1 MA's), (23, 1833), (25, 1860), (26, 1863), (64, 2349), (88, 2463), (114, 2667), (115, 2679), (116, 2685), (123, 2736), (124, 2742),

Gene: Ruin_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Ruin_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Rummer_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Rummer_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: RyeScarlet_7 Start: 4192, Stop: 5226, Start Num: 8
Candidate Starts for RyeScarlet_7:
(Start: 8 @4192 has 344 MA's), (33, 4474), (38, 4495), (114, 5143), (115, 5155), (123, 5212), (124, 5218),

Gene: Sabertooth_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Sabertooth_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Sabia_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for Sabia_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Sabinator_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Sabinator_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Sachima_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for Sachima_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221),

Gene: SaturnRing_3 Start: 1612, Stop: 2826, Start Num: 8
Candidate Starts for SaturnRing_3:
(Start: 8 @1612 has 344 MA's), (22, 1747), (35, 1885), (50, 1999), (105, 2641), (114, 2743), (115, 2755), (123, 2812), (124, 2818),

Gene: Scamp_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Scamp_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Scherzo_7 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Scherzo_7:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Scout_4 Start: 1605, Stop: 2342, Start Num: 8
Candidate Starts for Scout_4:

(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (60, 2256), (74, 2328), (77, 2334),

Gene: SenorClean_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for SenorClean_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Shaka_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Shaka_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Shapes_5 Start: 1668, Stop: 2750, Start Num: 8
Candidate Starts for Shapes_5:
(Start: 8 @1668 has 344 MA's), (Start: 21 @1800 has 1 MA's), (23, 1833), (25, 1860), (26, 1863), (64, 2349), (88, 2463), (114, 2667), (115, 2679), (116, 2685), (123, 2736), (124, 2742),

Gene: SheldonCooper_4 Start: 1643, Stop: 2719, Start Num: 8
Candidate Starts for SheldonCooper_4:
(4, 1583), (Start: 8 @1643 has 344 MA's), (18, 1751), (28, 1847), (42, 1961), (114, 2630), (116, 2648), (123, 2705), (124, 2711),

Gene: Shygu2_4 Start: 1644, Stop: 2720, Start Num: 8
Candidate Starts for Shygu2_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (114, 2631), (116, 2649), (123, 2706), (124, 2712),

Gene: Skadoosh_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Skadoosh_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Skipitt_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Skipitt_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Snickers_4 Start: 1681, Stop: 2868, Start Num: 8
Candidate Starts for Snickers_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2782), (123, 2854), (124, 2860),

Gene: SoYo_4 Start: 1681, Stop: 2805, Start Num: 8
Candidate Starts for SoYo_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2719), (123, 2791), (124, 2797),

Gene: SoilDragon_4 Start: 1681, Stop: 2568, Start Num: 8
Candidate Starts for SoilDragon_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2485), (115, 2497), (116, 2503), (123, 2554), (124, 2560),

Gene: Soshari_6 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Soshari_6:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Sparxx_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Sparxx_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Spike509_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for Spike509_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Spino_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Spino_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Spouty_7 Start: 4189, Stop: 5220, Start Num: 8
Candidate Starts for Spouty_7:
(Start: 7 @4162 has 2 MA's), (Start: 8 @4189 has 344 MA's), (114, 5137), (115, 5149), (123, 5206), (124, 5212),

Gene: Stagni_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for Stagni_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Stasia_4 Start: 1647, Stop: 2741, Start Num: 8
Candidate Starts for Stasia_4:
(Start: 8 @1647 has 344 MA's), (18, 1755), (31, 1890), (41, 1968), (45, 1986), (48, 2025), (64, 2316), (85, 2418), (116, 2670), (123, 2727), (124, 2733),

Gene: SteMason_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for SteMason_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: StepMih_4 Start: 1682, Stop: 2887, Start Num: 8
Candidate Starts for StepMih_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2801), (123, 2873), (124, 2879),

Gene: Stink_4 Start: 1639, Stop: 2715, Start Num: 8
Candidate Starts for Stink_4:
(4, 1579), (Start: 8 @1639 has 344 MA's), (18, 1747), (28, 1843), (42, 1957), (114, 2626), (116, 2644), (123, 2701), (124, 2707),

Gene: Sultana_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Sultana_4:

(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: TNguyen7_4 Start: 1610, Stop: 2824, Start Num: 8
Candidate Starts for TNguyen7_4:
(Start: 8 @1610 has 344 MA's), (22, 1745), (35, 1883), (50, 1997), (105, 2639), (114, 2741), (115, 2753), (123, 2810), (124, 2816),

Gene: Taquarus_4 Start: 1648, Stop: 2721, Start Num: 8
Candidate Starts for Taquarus_4:
(4, 1588), (Start: 8 @1648 has 344 MA's), (18, 1756), (28, 1852), (42, 1966), (112, 2614), (116, 2650), (123, 2707), (124, 2713),

Gene: Taurus_4 Start: 1681, Stop: 2625, Start Num: 8
Candidate Starts for Taurus_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (97, 2539), (101, 2611), (102, 2617),

Gene: Texage_3 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Texage_3:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Thanksgivukkah_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Thanksgivukkah_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (28, 1850), (42, 1964), (112, 2612), (116, 2648), (123, 2705), (124, 2711),

Gene: Tiffany_4 Start: 1682, Stop: 2896, Start Num: 8
Candidate Starts for Tiffany_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (104, 2699), (114, 2810), (123, 2882), (124, 2888),

Gene: TinaFeyge_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for TinaFeyge_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: TinyPebbles_4 Start: 1682, Stop: 2716, Start Num: 8
Candidate Starts for TinyPebbles_4:
(Start: 7 @1655 has 2 MA's), (Start: 8 @1682 has 344 MA's), (35, 1910), (114, 2630), (123, 2702), (124, 2708),

Gene: Tinybot_3 Start: 1645, Stop: 2721, Start Num: 8
Candidate Starts for Tinybot_3:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (114, 2632), (116, 2650), (123, 2707), (124, 2713),

Gene: TiroTheta9_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for TiroTheta9_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Todacoro_4 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Todacoro_4:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Topanga_4 Start: 1711, Stop: 2889, Start Num: 8
Candidate Starts for Topanga_4:
(4, 1651), (Start: 8 @1711 has 344 MA's), (Start: 21 @1843 has 1 MA's), (23, 1876), (25, 1903), (55, 2218), (64, 2398), (89, 2533), (114, 2806), (116, 2824), (118, 2848), (123, 2875), (124, 2881),

Gene: Tristan_7 Start: 3974, Stop: 5074, Start Num: 8
Candidate Starts for Tristan_7:
(2, 3893), (Start: 8 @3974 has 344 MA's), (24, 4145), (27, 4175), (44, 4316), (47, 4349), (58, 4613), (123, 5060), (124, 5066),

Gene: Trixie_7 Start: 4278, Stop: 5228, Start Num: 8
Candidate Starts for Trixie_7:
(2, 4197), (Start: 8 @4278 has 344 MA's), (Start: 11 @4347 has 1 MA's), (33, 4560), (69, 4998), (72, 5019), (111, 5124), (115, 5157), (123, 5214), (124, 5220),

Gene: TroyPia_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for TroyPia_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Tubs_7 Start: 4192, Stop: 5235, Start Num: 8
Candidate Starts for Tubs_7:
(Start: 8 @4192 has 344 MA's), (41, 4525), (114, 5152), (115, 5164), (123, 5221), (124, 5227),

Gene: Twister_4 Start: 1661, Stop: 2833, Start Num: 8
Candidate Starts for Twister_4:
(Start: 8 @1661 has 344 MA's), (23, 1826), (25, 1853), (26, 1856), (35, 1934), (53, 2153), (57, 2207), (64, 2342), (89, 2477), (114, 2750), (115, 2762), (116, 2768), (123, 2819), (124, 2825),

Gene: TygerBlood_4 Start: 1647, Stop: 2720, Start Num: 8
Candidate Starts for TygerBlood_4:
(4, 1587), (Start: 8 @1647 has 344 MA's), (18, 1755), (28, 1851), (42, 1965), (112, 2613), (116, 2649), (123, 2706), (124, 2712),

Gene: Ugenie5_5 Start: 4192, Stop: 5223, Start Num: 8
Candidate Starts for Ugenie5_5:
(Start: 8 @4192 has 344 MA's), (114, 5140), (115, 5152), (123, 5209), (124, 5215),

Gene: Ulysses_4 Start: 1646, Stop: 2719, Start Num: 8
Candidate Starts for Ulysses_4:
(4, 1586), (Start: 8 @1646 has 344 MA's), (18, 1754), (22, 1781), (28, 1850), (42, 1964), (116, 2648), (123, 2705), (124, 2711),

Gene: Veracruz_3 Start: 1633, Stop: 2760, Start Num: 8
Candidate Starts for Veracruz_3:
(3, 1570), (5, 1579), (Start: 8 @1633 has 344 MA's), (9, 1663), (15, 1720), (Start: 21 @1765 has 1 MA's), (35, 1906), (49, 2014), (63, 2302), (114, 2674), (116, 2692), (123, 2746), (124, 2752),

Gene: Vix_4 Start: 1681, Stop: 2715, Start Num: 8
Candidate Starts for Vix_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2629), (123, 2701), (124, 2707),

Gene: WalterMcMickey_4 Start: 1661, Stop: 2833, Start Num: 8
Candidate Starts for WalterMcMickey_4:
(Start: 8 @1661 has 344 MA's), (23, 1826), (25, 1853), (26, 1856), (35, 1934), (53, 2153), (57, 2207), (64, 2342), (89, 2477), (114, 2750), (115, 2762), (116, 2768), (123, 2819), (124, 2825),

Gene: Wander_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for Wander_4:
(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Watson_4 Start: 1681, Stop: 2886, Start Num: 8
Candidate Starts for Watson_4:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2800), (123, 2872), (124, 2878),

Gene: WeiHuaDA_8 Start: 4411, Stop: 5442, Start Num: 8
Candidate Starts for WeiHuaDA_8:
(Start: 8 @4411 has 344 MA's), (Start: 11 @4480 has 1 MA's), (33, 4693), (69, 5131), (72, 5152), (115, 5371), (116, 5377), (123, 5428), (124, 5434),

Gene: Wilbur_4 Start: 1644, Stop: 2717, Start Num: 8
Candidate Starts for Wilbur_4:
(4, 1584), (Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (112, 2610), (116, 2646), (123, 2703), (124, 2709),

Gene: Wile_4 Start: 1645, Stop: 2730, Start Num: 8
Candidate Starts for Wile_4:
(Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (50, 2035), (116, 2659), (123, 2716), (124, 2722),

Gene: Wizard007_4 Start: 1647, Stop: 2720, Start Num: 8
Candidate Starts for Wizard007_4:
(4, 1587), (Start: 8 @1647 has 344 MA's), (18, 1755), (28, 1851), (42, 1965), (112, 2613), (116, 2649), (123, 2706), (124, 2712),

Gene: Wooldri_6 Start: 1681, Stop: 2805, Start Num: 8
Candidate Starts for Wooldri_6:
(Start: 7 @1654 has 2 MA's), (Start: 8 @1681 has 344 MA's), (35, 1909), (114, 2719), (123, 2791), (124, 2797),

Gene: Xena_4 Start: 1644, Stop: 2729, Start Num: 8
Candidate Starts for Xena_4:
(Start: 8 @1644 has 344 MA's), (18, 1752), (28, 1848), (42, 1962), (50, 2034), (116, 2658), (123, 2715), (124, 2721),

Gene: YoSam321_4 Start: 1645, Stop: 2718, Start Num: 8
Candidate Starts for YoSam321_4:

(4, 1585), (Start: 8 @1645 has 344 MA's), (18, 1753), (28, 1849), (42, 1963), (112, 2611), (116, 2647), (123, 2704), (124, 2710),

Gene: Zarafa_4 Start: 1605, Stop: 2918, Start Num: 8
Candidate Starts for Zarafa_4:
(Start: 8 @1605 has 344 MA's), (22, 1740), (32, 1863), (35, 1878), (40, 1911), (127, 2835), (130, 2904), (131, 2910),

Gene: Zetzy_4 Start: 1683, Stop: 2717, Start Num: 8
Candidate Starts for Zetzy_4:
(Start: 7 @1656 has 2 MA's), (Start: 8 @1683 has 344 MA's), (35, 1911), (114, 2631), (123, 2703), (124, 2709),

Gene: Zimmer_7 Start: 4514, Stop: 5293, Start Num: 8
Candidate Starts for Zimmer_7:
(Start: 8 @4514 has 344 MA's), (9, 4544), (10, 4553), (14, 4595), (28, 4706), (123, 5279),