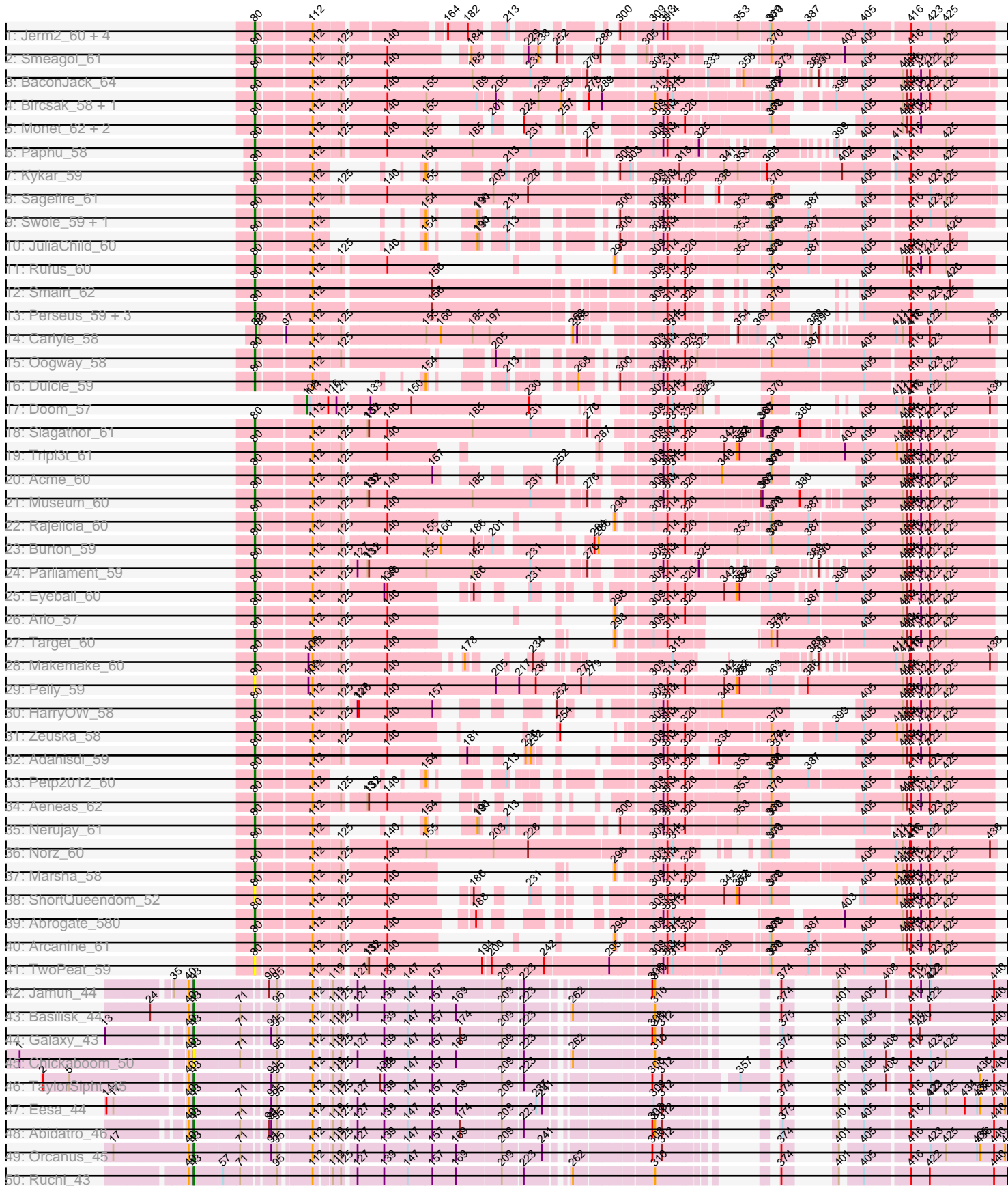
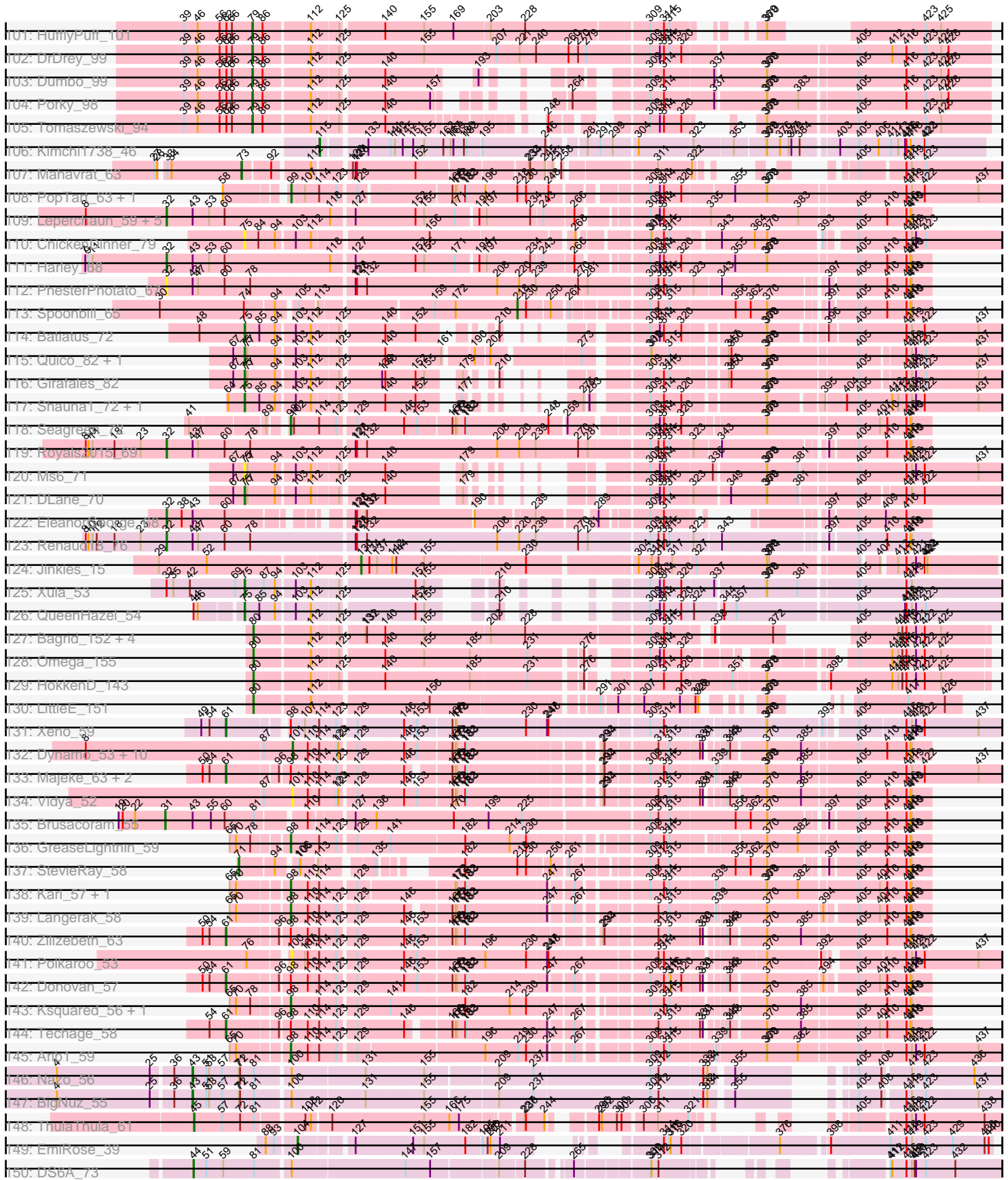


Pham 160127



Pham 160127



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 160127 Report

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

Pham number 160127 has 230 members, 24 are drafts.

Phages represented in each track:

- Track 1 : Jerm2_60, Rohr_60, Bob3_58, BigMau_61, HermioneGrange_60
- Track 2 : Smeagol_61
- Track 3 : BaconJack_64
- Track 4 : Bircsak_58, Gompeii16_58
- Track 5 : Monet_62, Treddle_60, Edtherson_58
- Track 6 : Paphu_58
- Track 7 : Kykar_59
- Track 8 : Sagefire_61
- Track 9 : Swole_59, Tote_55
- Track 10 : JuliaChild_60
- Track 11 : Rufus_60
- Track 12 : Smairt_62
- Track 13 : Perseus_59, Hami1_51, Mule_57, PhrostyMug_59
- Track 14 : Carlyle_58
- Track 15 : Oogway_58
- Track 16 : Dulcie_59
- Track 17 : Doom_57
- Track 18 : Slagathor_61
- Track 19 : Tripl3t_61
- Track 20 : Acme_60
- Track 21 : Museum_60
- Track 22 : Rajelicia_60
- Track 23 : Burton_59
- Track 24 : Parliament_59
- Track 25 : Eyeball_60
- Track 26 : Arlo_57
- Track 27 : Target_60
- Track 28 : Makemake_60
- Track 29 : Pelly_59
- Track 30 : HarryOW_58
- Track 31 : Zeuska_58
- Track 32 : Adahisdi_59
- Track 33 : Petp2012_60
- Track 34 : Aeneas_62
- Track 35 : Nerujay_61
- Track 36 : Norz_60
- Track 37 : Marsha_58

- Track 38 : ShortQueendom_52
- Track 39 : Abrogate_580
- Track 40 : Arcanine_61
- Track 41 : TwoPeat_59
- Track 42 : Jamun_44
- Track 43 : Basilisk_44
- Track 44 : Galaxy_43
- Track 45 : Chickaboom_50
- Track 46 : TaylorSipht_45
- Track 47 : Eesa_44
- Track 48 : Abidatro_46
- Track 49 : Orcanus_45
- Track 50 : Ruchi_43
- Track 51 : Brynnie_43
- Track 52 : Vulpecula_43
- Track 53 : Daob_47
- Track 54 : Coral_45, Cote_47
- Track 55 : HannahPhantana_53
- Track 56 : Kepler_47
- Track 57 : Melons_47
- Track 58 : Amelia_45
- Track 59 : Kuleana_47
- Track 60 : Lunar_47
- Track 61 : LittleTokyo_45
- Track 62 : Polka_45
- Track 63 : Andrew_48
- Track 64 : RedFox_47
- Track 65 : Leona_46
- Track 66 : Juno112_47
- Track 67 : PhluffyCoco_47
- Track 68 : Renna12_46
- Track 69 : KHumphrey_46
- Track 70 : Wocket_66
- Track 71 : Clown_11
- Track 72 : Bench_102, Lilizi_100
- Track 73 : Bruin_96, Misfit_100, Terminus_102
- Track 74 : Miniwave_94, Hopey_100, Stark_100, CrystalP_98, Phaux_101, Maxxinista_101, Thresher_101, ShamWow_99, SophKB_96, Henry_96, RiverMonster_99, BilboSwaggins_98, Paperbeatsrock_98, Hoonter_102, Policronamos_102, Elph10_99, Filch_101, Toto_97, OrionPax_98, NoSleep_100, Phrux_96
- Track 75 : Lilpickle_98, ChosenOne_99, Elite2014_98
- Track 76 : ShereKhan_97, Kanye_96
- Track 77 : Moldemort_102, Simpliphy_98, MadamMonkfish_99
- Track 78 : Nala_101, PhatBacter_102, MPhalcon_100, FireRed_102, Palpatine_100
- Track 79 : Pat3_96
- Track 80 : Contagion_95, Mosby_95, Sassay_94, Willez_94
- Track 81 : Cjw1_100
- Track 82 : Ukulele_94
- Track 83 : Dusk_96, Mindy_98, Sotrice96_100, ABCat_96, TeardropMSU_95, Tuco_100, BadStone_96
- Track 84 : Pharsalus_96
- Track 85 : BugsBunny_98

- Track 86 : ChotaBhai_99
- Track 87 : Buck_100
- Track 88 : Teaspoon_96
- Track 89 : Eureka_98, Goku_98
- Track 90 : Cookies_96
- Track 91 : BaboJay_99
- Track 92 : Rimmer_97
- Track 93 : Cactus_103
- Track 94 : Quallification_100
- Track 95 : HanKaySha_100
- Track 96 : SirDuracell_99
- Track 97 : Emmina_99
- Track 98 : Goldilocks_102
- Track 99 : Murphy_99
- Track 100 : Amao_99
- Track 101 : HufflyPuff_101
- Track 102 : DrDrey_99
- Track 103 : Dumbo_99
- Track 104 : Porky_98
- Track 105 : Tomaszewski_94
- Track 106 : Kimchi1738_46
- Track 107 : Mahavrat_63
- Track 108 : PopTart_63, SassyB_63
- Track 109 : Leperchaun_59, JoeyJr_62, PHappiness_62, Polka14_65, Daenerys_61, RitaG_62
- Track 110 : ChickenDinner_79
- Track 111 : Harley_68
- Track 112 : PhesterPhotato_67
- Track 113 : Spoonbill_65
- Track 114 : Batiatus_72
- Track 115 : Quico_82, Florinda_85
- Track 116 : Girafales_82
- Track 117 : Shauna1_72, Phanphagia_71
- Track 118 : Seagreen_72
- Track 119 : Royals2015_69
- Track 120 : Ms6_71
- Track 121 : DLane_70
- Track 122 : EleanorGeorge_68
- Track 123 : Renaud18_76
- Track 124 : Jinkies_15
- Track 125 : Xula_53
- Track 126 : QueenHazel_54
- Track 127 : Bagrid_152, Duke13_147, BAKA_151, Klein_148, EricMillard_143
- Track 128 : Omega_155
- Track 129 : HokkenD_143
- Track 130 : LittleE_151
- Track 131 : Xeno_59
- Track 132 : Dynamo_53, Malithi_53, Camster_54, Pygmy_57, Shipwreck_57, Phineas_55, Bogie_57, HUHilltop_55, Jebeks_54, Necropolis_52, Sonah_54
- Track 133 : Majeke_63, Phegasus_63, Mangethe_63
- Track 134 : Vidya_52
- Track 135 : Brusacoram_55
- Track 136 : GreaseLightnin_59

- Track 137 : StevieRay_58
- Track 138 : Kari_57, Fishburne_57
- Track 139 : Langerak_58
- Track 140 : Zilizebeth_63
- Track 141 : Polkaroo_53
- Track 142 : Donovan_57
- Track 143 : Ksquared_56, Bunnies_58
- Track 144 : Techage_58
- Track 145 : Arib1_59
- Track 146 : Nazo_56
- Track 147 : BigNuz_55
- Track 148 : ThulaThula_61
- Track 149 : EmiRose_39
- Track 150 : DS6A_73

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

The start number called the most often in the published annotations is 79, it was called in 66 of the 206 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABCat_96, Amao_99, BaboJay_99, BadStone_96, Bench_102, BilboSwaggins_98, Bruin_96, Buck_100, BugsBunny_98, ChosenOne_99, ChotaBhai_99, Contagion_95, Cookies_96, CrystalP_98, DrDrey_99, Dumbo_99, Dusk_96, Elite2014_98, Elph10_99, Eureka_98, Filch_101, FireRed_102, Goku_98, Goldilocks_102, HanKaySha_100, Henry_96, Hoonter_102, Hopey_100, HufflyPuff_101, Kanye_96, Lilizi_100, Lilpickle_98, MPhalcon_100, MadamMonkfish_99, Maxxinista_101, Mindy_98, Miniwave_94, Misfit_100, Moldemort_102, Mosby_95, Murphy_99, Nala_101, NoSleep_100, OrionPax_98, Palpatine_100, Paperbeatsrock_98, Pat3_96, Pharsalus_96, PhatBacter_102, Phaux_101, Phrux_96, Policronamos_102, Porky_98, Quallification_100, Rimmer_97, RiverMonster_99, Sassay_94, ShamWow_99, ShereKhan_97, Simpliphy_98, SirDuracell_99, SophKB_96, Sotrice96_100, Stark_100, TeardropMSU_95, Terminus_102, Thresher_101, Tomaszewski_94, Toto_97, Tuco_100, Willez_94,

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

- Emmina_99, Teaspoon_96,

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

- Abidatro_46, Abrogate_580, Acme_60, Adahisdi_59, Aeneas_62, Amelia_45, Andrew_48, Arcanine_61, Arib1_59, Arlo_57, BAKA_151, BaconJack_64, Bagrid_152, Basilisk_44, Batiatus_72, BigMau_61, BigNuz_55, Bircsak_58, Bob3_58, Bogie_57, Brusacoram_55, Brynnie_43, Bunnies_58, Burton_59, Cactus_103, Camster_54, Carlyle_58, Chickaboom_50, ChickenDinner_79, Cjw1_100, Clown_11, Coral_45, Cote_47, DLane_70, DS6A_73, Daenerys_61, Daob_47, Donovan_57, Doom_57, Duke13_147, Dulcie_59, Dynamo_53, Edtherson_58, Eesa_44, EleanorGeorge_68, EmiRose_39, EricMillard_143, Eyeball_60, Fishburne_57, Florinda_85, Galaxy_43, Girafales_82, Gompeii16_58, GreaseLightnin_59, HUHilltop_55, Hami1_51, HannahPhantana_53, Harley_68, HarryOW_58, HermioneGrange_60, HokkenD_143, Jamun_44, Jebeks_54, Jerm2_60, Jinkies_15,

JoeyJr_62, JuliaChild_60, Juno112_47, KHumphrey_46, Kari_57, Kepler_47, Kimchi1738_46, Klein_148, Ksquared_56, Kuleana_47, Kykar_59, Langerak_58, Leona_46, Leperchaun_59, LittleE_151, LittleTokyo_45, Lunar_47, Mahavrat_63, Majeke_63, Makemake_60, Malithi_53, Mangethe_63, Marsha_58, Melons_47, Monet_62, Ms6_71, Mule_57, Museum_60, Nazo_56, Necropolis_52, Nerujay_61, Norz_60, Omega_155, Oogway_58, Orcanus_45, PHappiness_62, Paphu_58, Parliament_59, Pelly_59, Perseus_59, Petp2012_60, Phanphagia_71, Phegasus_63, PhesterPhotato_67, Phineas_55, PhluffyCoco_47, PhrostyMug_59, Polka14_65, Polka_45, Polkaroo_53, PopTart_63, Pygmy_57, QueenHazel_54, Quico_82, Rajelicia_60, RedFox_47, Renaud18_76, Renna12_46, RitaG_62, Rohr_60, Royals2015_69, Ruchi_43, Rufus_60, Sagefire_61, SassyB_63, Seagreen_72, Shauna1_72, Shipwreck_57, ShortQueendom_52, Slagathor_61, Smairt_62, Smeagol_61, Sonah_54, Spoonbill_65, StevieRay_58, Swole_59, Target_60, TaylorSipt_45, Techage_58, ThulaThula_61, Tote_55, Treddle_60, Tripl3t_61, TwoPeat_59, Ukulele_94, Vidya_52, Vulpecula_43, Wocket_66, Xeno_59, Xula_53, Zeuska_58, Zilizebeth_63,

Summary by start number:

Start 31:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Brusacoram_55 (P1),

Start 32:

- Found in 12 of 230 (5.2%) of genes in pham
- Manual Annotations of this start: 10 of 206
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Daenerys_61 (F1), EleanorGeorge_68 (F1), Harley_68 (F1), JoeyJr_62 (F1), Leperchaun_59 (F1), PHappiness_62 (F1), PhesterPhotato_67 (F1), Polka14_65 (F1), Renaud18_76 (F4), RitaG_62 (F1), Royals2015_69 (F1),

Start 40:

- Found in 18 of 230 (7.8%) of genes in pham
- Manual Annotations of this start: 2 of 206
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Daob_47 (AS2), Lunar_47 (AS2),

Start 43:

- Found in 44 of 230 (19.1%) of genes in pham
- Manual Annotations of this start: 24 of 206
- Called 65.9% of time when present
- Phage (with cluster) where this start called: Abidatro_46 (AS1), Amelia_45 (AS2), Andrew_48 (AS3), Basilisk_44 (AS1), BigNuz_55 (P4), Brynnie_43 (AS1), Chickaboom_50 (AS1), Coral_45 (AS2), Cote_47 (AS2), Eesa_44 (AS1), Galaxy_43 (AS1), HannahPhantana_53 (AS2), Jamun_44 (AS1), Juno112_47 (AS3), KHumphrey_46 (AS3), Kepler_47 (AS2), Leona_46 (AS3), LittleTokyo_45 (AS2), Melons_47 (AS2), Nazo_56 (P4), Orcanus_45 (AS1), PhluffyCoco_47 (AS3), Polka_45 (AS2), RedFox_47 (AS3), Renna12_46 (AS3), Ruchi_43 (AS1), TaylorSipt_45 (AS1), Vulpecula_43 (AS1), Wocket_66 (CV),

Start 44:

- Found in 2 of 230 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 50.0% of time when present
- Phage (with cluster) where this start called: DS6A_73 (singleton),

Start 45:

- Found in 2 of 230 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kuleana_47 (AS2), ThulaThula_61 (P5),

Start 61:

- Found in 7 of 230 (3.0%) of genes in pham
- Manual Annotations of this start: 7 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Donovan_57 (P1), Majeke_63 (P1), Mangethe_63 (P1), Phegasus_63 (P1), Techage_58 (P1), Xeno_59 (N), Zilizebeth_63 (P1),

Start 66:

- Found in 73 of 230 (31.7%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Emmina_99 (E), Teaspoon_96 (E),

Start 71:

- Found in 30 of 230 (13.0%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 3.3% of time when present
- Phage (with cluster) where this start called: StevieRay_58 (P1),

Start 73:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mahavrat_63 (F1),

Start 75:

- Found in 11 of 230 (4.8%) of genes in pham
- Manual Annotations of this start: 9 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Batiatus_72 (F1), ChickenDinner_79 (F1), DLane_70 (F1), Florinda_85 (F1), Girafales_82 (F1), Ms6_71 (F1), Phanphagia_71 (F1), QueenHazel_54 (I1), Quico_82 (F1), Shauna1_72 (F1), Xula_53 (I1),

Start 79:

- Found in 73 of 230 (31.7%) of genes in pham
- Manual Annotations of this start: 66 of 206
- Called 97.3% of time when present
- Phage (with cluster) where this start called: ABCat_96 (E), Amao_99 (E), BaboJay_99 (E), BadStone_96 (E), Bench_102 (E), BilboSwaggins_98 (E), Bruin_96

(E), Buck_100 (E), BugsBunny_98 (E), ChosenOne_99 (E), ChotaBhai_99 (E), Contagion_95 (E), Cookies_96 (E), CrystalP_98 (E), DrDrey_99 (E), Dumbo_99 (E), Dusk_96 (E), Elite2014_98 (E), Elph10_99 (E), Eureka_98 (E), Filch_101 (E), FireRed_102 (E), Goku_98 (E), Goldilocks_102 (E), HanKaySha_100 (E), Henry_96 (E), Hoonter_102 (E), Hopey_100 (E), HufflyPuff_101 (E), Kanye_96 (E), Lilizi_100 (E), Lilpickle_98 (E), MPhalcon_100 (E), MadamMonkfish_99 (E), Maxxinista_101 (E), Mindy_98 (E), Miniwave_94 (E), Misfit_100 (E), Moldemort_102 (E), Mosby_95 (E), Murphy_99 (E), Nala_101 (E), NoSleep_100 (E), OrionPax_98 (E), Palpatine_100 (E), Paperbeatsrock_98 (E), Pat3_96 (E), Pharsalus_96 (E), PhatBacter_102 (E), Phaux_101 (E), Phrux_96 (E), Policronamos_102 (E), Porky_98 (E), Quallification_100 (E), Rimmer_97 (E), RiverMonster_99 (E), Sassay_94 (E), ShamWow_99 (E), ShereKhan_97 (E), Simpliphy_98 (E), SirDuracell_99 (E), SophKB_96 (E), Sotrice96_100 (E), Stark_100 (E), TeardropMSU_95 (E), Terminus_102 (E), Thresher_101 (E), Tomaszewski_94 (E), Toto_97 (E), Tuco_100 (E), Willez_94 (E),

Start 80:

- Found in 58 of 230 (25.2%) of genes in pham
- Manual Annotations of this start: 52 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abrogate_580 (A1), Acme_60 (A1), Adahisdi_59 (A1), Aeneas_62 (A1), Arcanine_61 (A1), Arlo_57 (A1), BAKA_151 (J), BaconJack_64 (A1), Bagrid_152 (J), BigMau_61 (A1), Bircsak_58 (A1), Bob3_58 (A1), Burton_59 (A1), Duke13_147 (J), Dulcie_59 (A1), Edtherson_58 (A1), EricMillard_143 (J), Eyeball_60 (A1), Gompeii16_58 (A1), Hami1_51 (A1), HarryOW_58 (A1), HermioneGrange_60 (A1), HokkenD_143 (J), Jerm2_60 (A1), JuliaChild_60 (A1), Klein_148 (J), Kykar_59 (A1), LittleE_151 (J), Makemake_60 (A1), Marsha_58 (A1), Monet_62 (A1), Mule_57 (A1), Museum_60 (A1), Nerujay_61 (A1), Norz_60 (A1), Omega_155 (J), Oogway_58 (A1), Paphu_58 (A1), Parliament_59 (A1), Pelly_59 (A1), Perseus_59 (A1), Petp2012_60 (A1), PhrostyMug_59 (A1), Rajelicia_60 (A1), Rohr_60 (A1), Rufus_60 (A1), Sagefire_61 (A1), ShortQueendom_52 (A1), Slagathor_61 (A1), Smairt_62 (A1), Smeagol_61 (A1), Swole_59 (A1), Target_60 (A1), Tote_55 (A1), Treddle_60 (A1), Tripi3t_61 (A1), TwoPeat_59 (A1), Zeuska_58 (A1),

Start 81:

- Found in 7 of 230 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Clown_11 (DC2),

Start 82:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Carlyle_58 (A1),

Start 98:

- Found in 16 of 230 (7.0%) of genes in pham
- Manual Annotations of this start: 7 of 206
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Arib1_59 (P1), Bunnies_58 (P1), Fishburne_57 (P1), GreaseLightnin_59 (P1), Kari_57 (P1), Ksquared_56 (P1),

Langerak_58 (P1), Seagreen_72 (F1),

Start 99:

- Found in 2 of 230 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PopTart_63 (F1), SassyB_63 (F1),

Start 100:

- Found in 4 of 230 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Polkaroo_53 (P1),

Start 101:

- Found in 12 of 230 (5.2%) of genes in pham
- Manual Annotations of this start: 10 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bogie_57 (P1), Camster_54 (P1), Dynamo_53 (P1), HUHilltop_55 (P1), Jebeks_54 (P1), Malithi_53 (P1), Necropolis_52 (P1), Phineas_55 (P1), Pygmy_57 (P1), Shipwreck_57 (P1), Sonah_54 (P1), Vidya_52 (P1),

Start 104:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EmiRose_39 (singleton),

Start 108:

- Found in 2 of 230 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Doom_57 (A1),

Start 112:

- Found in 175 of 230 (76.1%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 0.6% of time when present
- Phage (with cluster) where this start called: Ukulele_94 (E),

Start 115:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimchi1738_46 (EN),

Start 130:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jinkies_15 (FL),

Start 148:

- Found in 1 of 230 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cactus_103 (E),

Start 218:

- Found in 4 of 230 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Spoonbill_65 (F1),

Start 309:

- Found in 166 of 230 (72.2%) of genes in pham
- Manual Annotations of this start: 1 of 206
- Called 0.6% of time when present
- Phage (with cluster) where this start called: Cjw1_100 (E),

Summary by clusters:

There are 18 clusters represented in this pham: AS3, F1, AS1, P1, E, P4, AS2, I1, FL, J, singleton, N, A1, EN, F4, DC2, CV, P5,

Info for manual annotations of cluster A1:

- Start number 80 was manually annotated 45 times for cluster A1.
- Start number 82 was manually annotated 1 time for cluster A1.
- Start number 108 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster AS1:

- Start number 43 was manually annotated 10 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 40 was manually annotated 2 times for cluster AS2.
- Start number 43 was manually annotated 7 times for cluster AS2.
- Start number 45 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 43 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster CV:

- Start number 43 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster DC2:

- Start number 81 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster E:

- Start number 66 was manually annotated 1 time for cluster E.
- Start number 79 was manually annotated 66 times for cluster E.
- Start number 112 was manually annotated 1 time for cluster E.
- Start number 148 was manually annotated 1 time for cluster E.
- Start number 309 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster EN:

- Start number 115 was manually annotated 1 time for cluster EN.

Info for manual annotations of cluster F1:

- Start number 32 was manually annotated 9 times for cluster F1.
- Start number 73 was manually annotated 1 time for cluster F1.
- Start number 75 was manually annotated 7 times for cluster F1.
- Start number 98 was manually annotated 1 time for cluster F1.
- Start number 99 was manually annotated 2 times for cluster F1.
- Start number 218 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F4:

- Start number 32 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FL:

- Start number 130 was manually annotated 1 time for cluster FL.

Info for manual annotations of cluster I1:

- Start number 75 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster J:

- Start number 80 was manually annotated 7 times for cluster J.

Info for manual annotations of cluster N:

- Start number 61 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:

- Start number 31 was manually annotated 1 time for cluster P1.
- Start number 61 was manually annotated 6 times for cluster P1.
- Start number 71 was manually annotated 1 time for cluster P1.
- Start number 98 was manually annotated 6 times for cluster P1.
- Start number 101 was manually annotated 10 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 43 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 45 was manually annotated 1 time for cluster P5.

Gene Information:

Gene: ABCat_96 Start: 59011, Stop: 60231, Start Num: 79

Candidate Starts for ABCat_96:

(39, 58864), (46, 58894), (56, 58942), (62, 58957), (Start: 66 @58969 has 1 MA's), (Start: 79 @59011 has 66 MA's), (86, 59029), (Start: 112 @59125 has 1 MA's), (125, 59170), (140, 59254), (165, 59377), (204, 59422), (222, 59434), (Start: 309 @59539 has 1 MA's), (313, 59560), (314, 59569), (315, 59581), (320, 59605), (405, 59950), (412, 60022), (416, 60052), (423, 60094), (425, 60127), (428, 60142),

Gene: Abidatro_46 Start: 30256, Stop: 31575, Start Num: 43

Candidate Starts for Abidatro_46:

(Start: 40 @30247 has 2 MA's), (Start: 43 @30256 has 24 MA's), (Start: 71 @30352 has 1 MA's), (90, 30397), (91, 30400), (95, 30412), (Start: 112 @30466 has 1 MA's), (119, 30490), (125, 30505), (127, 30526), (139, 30583), (147, 30631), (157, 30682), (174, 30742), (209, 30823), (223, 30862), (308, 31078), (310, 31084), (312, 31099), (375, 31216), (401, 31252), (405, 31285), (416, 31372), (440, 31549),

Gene: Abrogate_580 Start: 41848, Stop: 40691, Start Num: 80

Candidate Starts for Abrogate_580:

(Start: 80 @41848 has 52 MA's), (Start: 112 @41740 has 1 MA's), (125, 41695), (140, 41611), (188, 41470), (Start: 309 @41263 has 1 MA's), (313, 41242), (314, 41233), (315, 41221), (403, 41011), (413, 40885), (414, 40876), (416, 40867), (421, 40846), (422, 40828), (425, 40792),

Gene: Acme_60 Start: 40412, Stop: 39288, Start Num: 80

Candidate Starts for Acme_60:

(Start: 80 @40412 has 52 MA's), (Start: 112 @40304 has 1 MA's), (125, 40259), (157, 40082), (252, 39965), (Start: 309 @39854 has 1 MA's), (313, 39833), (314, 39824), (315, 39812), (340, 39725), (369, 39623), (370, 39620), (405, 39566), (413, 39482), (414, 39473), (416, 39464), (421, 39443), (422, 39425), (425, 39389),

Gene: Adahisdi_59 Start: 41482, Stop: 40421, Start Num: 80

Candidate Starts for Adahisdi_59:

(Start: 80 @41482 has 52 MA's), (Start: 112 @41374 has 1 MA's), (125, 41329), (140, 41245), (181, 41122), (226, 41077), (232, 41065), (Start: 309 @40960 has 1 MA's), (313, 40939), (314, 40930), (320, 40894), (338, 40852), (370, 40753), (372, 40741), (405, 40699), (413, 40615), (414, 40606), (416, 40597), (421, 40576), (422, 40558),

Gene: Aeneas_62 Start: 42219, Stop: 41128, Start Num: 80

Candidate Starts for Aeneas_62:

(Start: 80 @42219 has 52 MA's), (Start: 112 @42111 has 1 MA's), (125, 42066), (131, 42024), (132, 42021), (140, 41982), (Start: 309 @41694 has 1 MA's), (313, 41673), (314, 41664), (320, 41628), (353, 41526), (370, 41460), (405, 41406), (413, 41322), (414, 41313), (416, 41304), (421, 41283), (422, 41265), (425, 41229),

Gene: Amao_99 Start: 58453, Stop: 59655, Start Num: 79

Candidate Starts for Amao_99:

(39, 58306), (46, 58336), (56, 58384), (62, 58399), (Start: 66 @58411 has 1 MA's), (Start: 79 @58453 has 66 MA's), (86, 58471), (Start: 112 @58567 has 1 MA's), (125, 58612), (140, 58696), (155, 58777), (Start: 309 @58984 has 1 MA's), (315, 59026), (383, 59260), (405, 59374), (423, 59518), (425, 59551),

Gene: Amelia_45 Start: 28531, Stop: 29934, Start Num: 43

Candidate Starts for Amelia_45:

(3, 28270), (15, 28396), (Start: 43 @28531 has 24 MA's), (51, 28561), (57, 28591), (63, 28603), (Start: 71 @28627 has 1 MA's), (91, 28675), (Start: 112 @28741 has 1 MA's), (119, 28765), (125, 28780), (139, 28858), (147, 28906), (157, 28957), (174, 29017), (209, 29098), (223, 29137), (300, 29296), (308, 29353), (310, 29359), (315, 29398), (356, 29506), (359, 29521), (374, 29572), (405, 29644), (416, 29731), (422, 29770), (423, 29773), (433, 29839), (440, 29908),

Gene: Andrew_48 Start: 29461, Stop: 30864, Start Num: 43

Candidate Starts for Andrew_48:

(Start: 43 @29461 has 24 MA's), (68, 29548), (Start: 71 @29557 has 1 MA's), (91, 29605), (95, 29617), (Start: 112 @29671 has 1 MA's), (119, 29695), (125, 29710), (132, 29755), (139, 29788), (147, 29836), (149, 29842), (157, 29887), (209, 30028), (235, 30091), (296, 30205), (300, 30226),

(308, 30283), (Start: 309 @30286 has 1 MA's), (356, 30436), (359, 30451), (365, 30481), (374, 30502), (411, 30628), (416, 30661), (421, 30682), (422, 30700), (427, 30748), (440, 30838), (442, 30859),

Gene: Arcanine_61 Start: 41436, Stop: 40348, Start Num: 80

Candidate Starts for Arcanine_61:

(Start: 80 @41436 has 52 MA's), (Start: 112 @41328 has 1 MA's), (125, 41283), (140, 41199), (298, 41076), (Start: 309 @41022 has 1 MA's), (314, 40992), (315, 40980), (320, 40956), (369, 40815), (370, 40812), (387, 40734), (405, 40626), (413, 40542), (414, 40533), (416, 40524), (421, 40503), (422, 40485), (425, 40449),

Gene: Arib1_59 Start: 37790, Stop: 39160, Start Num: 98

Candidate Starts for Arib1_59:

(65, 37688), (70, 37697), (Start: 98 @37790 has 7 MA's), (110, 37826), (114, 37850), (123, 37886), (129, 37919), (196, 38165), (219, 38228), (230, 38246), (247, 38288), (267, 38330), (Start: 309 @38453 has 1 MA's), (314, 38483), (315, 38495), (339, 38582), (369, 38684), (370, 38687), (382, 38750), (405, 38867), (416, 38954), (419, 38966), (421, 38975), (422, 38993), (437, 39110),

Gene: Arlo_57 Start: 39819, Stop: 38818, Start Num: 80

Candidate Starts for Arlo_57:

(Start: 80 @39819 has 52 MA's), (Start: 112 @39711 has 1 MA's), (125, 39666), (140, 39582), (298, 39459), (Start: 309 @39405 has 1 MA's), (314, 39375), (320, 39339), (387, 39204), (405, 39096), (413, 39012), (414, 39003), (421, 38973), (422, 38955), (425, 38919),

Gene: BAKA_151 Start: 79379, Stop: 80692, Start Num: 80

Candidate Starts for BAKA_151:

(Start: 80 @79379 has 52 MA's), (Start: 112 @79487 has 1 MA's), (125, 79532), (131, 79574), (132, 79577), (140, 79616), (155, 79697), (203, 79835), (228, 79907), (Start: 309 @80153 has 1 MA's), (314, 80183), (315, 80195), (338, 80261), (372, 80372), (405, 80414), (413, 80498), (414, 80507), (416, 80516), (421, 80537), (422, 80555), (425, 80591),

Gene: BaboJay_99 Start: 59202, Stop: 60419, Start Num: 79

Candidate Starts for BaboJay_99:

(39, 59055), (46, 59085), (56, 59133), (62, 59148), (Start: 66 @59160 has 1 MA's), (Start: 79 @59202 has 66 MA's), (86, 59220), (Start: 112 @59316 has 1 MA's), (125, 59361), (140, 59445), (193, 59568), (255, 59613), (268, 59625), (312, 59748), (314, 59760), (315, 59772), (423, 60282), (425, 60315), (428, 60330),

Gene: BaconJack_64 Start: 43186, Stop: 41879, Start Num: 80

Candidate Starts for BaconJack_64:

(Start: 80 @43186 has 52 MA's), (Start: 112 @43078 has 1 MA's), (125, 43033), (140, 42949), (185, 42769), (231, 42652), (276, 42550), (Start: 309 @42463 has 1 MA's), (314, 42433), (333, 42364), (358, 42316), (373, 42265), (389, 42214), (390, 42211), (405, 42157), (413, 42073), (414, 42064), (416, 42055), (421, 42034), (422, 42016), (425, 41980),

Gene: BadStone_96 Start: 58580, Stop: 59800, Start Num: 79

Candidate Starts for BadStone_96:

(39, 58433), (46, 58463), (56, 58511), (62, 58526), (Start: 66 @58538 has 1 MA's), (Start: 79 @58580 has 66 MA's), (86, 58598), (Start: 112 @58694 has 1 MA's), (125, 58739), (140, 58823), (165, 58946), (204, 58991), (222, 59003), (Start: 309 @59108 has 1 MA's), (313, 59129), (314, 59138), (315, 59150), (320, 59174), (405, 59519), (412, 59591), (416, 59621), (423, 59663), (425, 59696), (428, 59711),

Gene: Bagrid_152 Start: 80074, Stop: 81387, Start Num: 80

Candidate Starts for Bagrid_152:

(Start: 80 @80074 has 52 MA's), (Start: 112 @80182 has 1 MA's), (125, 80227), (131, 80269), (132, 80272), (140, 80311), (155, 80392), (203, 80530), (228, 80602), (Start: 309 @80848 has 1 MA's), (314, 80878), (315, 80890), (338, 80956), (372, 81067), (405, 81109), (413, 81193), (414, 81202), (416, 81211), (421, 81232), (422, 81250), (425, 81286),

Gene: Basilisk_44 Start: 29453, Stop: 30772, Start Num: 43

Candidate Starts for Basilisk_44:

(24, 29360), (Start: 40 @29444 has 2 MA's), (Start: 43 @29453 has 24 MA's), (Start: 71 @29549 has 1 MA's), (95, 29609), (Start: 112 @29663 has 1 MA's), (119, 29687), (125, 29702), (127, 29723), (139, 29780), (147, 29828), (157, 29879), (169, 29930), (209, 30020), (223, 30059), (262, 30131), (310, 30281), (374, 30410), (401, 30449), (405, 30482), (416, 30569), (422, 30608), (440, 30746),

Gene: Batiatus_72 Start: 45517, Stop: 46752, Start Num: 75

Candidate Starts for Batiatus_72:

(48, 45418), (Start: 75 @45517 has 9 MA's), (85, 45547), (94, 45577), (103, 45613), (Start: 112 @45646 has 1 MA's), (125, 45691), (140, 45775), (152, 45838), (210, 45931), (Start: 309 @46072 has 1 MA's), (313, 46093), (314, 46102), (320, 46138), (369, 46282), (370, 46285), (396, 46387), (405, 46444), (416, 46546), (419, 46558), (422, 46585), (437, 46702),

Gene: Bench_102 Start: 58996, Stop: 60420, Start Num: 79

Candidate Starts for Bench_102:

(39, 58849), (46, 58879), (56, 58927), (62, 58942), (Start: 66 @58954 has 1 MA's), (Start: 79 @58996 has 66 MA's), (86, 59014), (Start: 112 @59110 has 1 MA's), (125, 59155), (140, 59239), (155, 59320), (193, 59419), (251, 59536), (293, 59638), (Start: 309 @59725 has 1 MA's), (313, 59746), (314, 59755), (320, 59791), (337, 59854), (369, 59956), (370, 59959), (383, 60022), (416, 60241), (423, 60283), (425, 60316), (428, 60331),

Gene: BigMau_61 Start: 40528, Stop: 39233, Start Num: 80

Candidate Starts for BigMau_61:

(Start: 80 @40528 has 52 MA's), (Start: 112 @40420 has 1 MA's), (164, 40198), (182, 40156), (213, 40093), (300, 39970), (Start: 309 @39916 has 1 MA's), (313, 39895), (314, 39886), (353, 39748), (369, 39685), (370, 39682), (387, 39604), (405, 39496), (416, 39409), (423, 39367), (425, 39334),

Gene: BigNuz_55 Start: 38221, Stop: 39756, Start Num: 43

Candidate Starts for BigNuz_55:

(4, 37939), (25, 38140), (36, 38182), (Start: 43 @38221 has 24 MA's), (51, 38248), (53, 38254), (57, 38278), (Start: 71 @38314 has 1 MA's), (72, 38317), (Start: 81 @38347 has 1 MA's), (100, 38413), (131, 38563), (155, 38686), (209, 38824), (237, 38896), (Start: 309 @39142 has 1 MA's), (312, 39160), (332, 39250), (334, 39259), (355, 39301), (405, 39466), (408, 39511), (416, 39553), (419, 39565), (423, 39595), (437, 39709),

Gene: BilboSwaggins_98 Start: 58977, Stop: 60200, Start Num: 79

Candidate Starts for BilboSwaggins_98:

(39, 58830), (46, 58860), (56, 58908), (62, 58923), (Start: 66 @58935 has 1 MA's), (Start: 79 @58977 has 66 MA's), (86, 58995), (Start: 112 @59091 has 1 MA's), (125, 59136), (140, 59220), (193, 59343), (255, 59388), (263, 59400), (Start: 309 @59505 has 1 MA's), (313, 59526), (314, 59535), (320, 59571), (337, 59634), (369, 59736), (370, 59739), (383, 59802), (416, 60021), (423, 60063), (425, 60096), (428, 60111),

Gene: Bircsak_58 Start: 41982, Stop: 40606, Start Num: 80

Candidate Starts for Bircsak_58:

(Start: 80 @41982 has 52 MA's), (Start: 112 @41874 has 1 MA's), (125, 41829), (140, 41745), (155, 41664), (189, 41559), (205, 41523), (239, 41454), (256, 41406), (278, 41373), (289, 41346), (310, 41250), (314, 41223), (315, 41211), (369, 41046), (370, 41043), (399, 40941), (405, 40884), (413, 40800), (414, 40791), (416, 40782), (421, 40761), (422, 40743), (425, 40707),

Gene: Bob3_58 Start: 39785, Stop: 38499, Start Num: 80

Candidate Starts for Bob3_58:

(Start: 80 @39785 has 52 MA's), (Start: 112 @39677 has 1 MA's), (164, 39455), (182, 39413), (213, 39350), (300, 39227), (Start: 309 @39173 has 1 MA's), (313, 39152), (314, 39143), (353, 39014), (369, 38951), (370, 38948), (387, 38870), (405, 38762), (416, 38675), (423, 38633), (425, 38600),

Gene: Bogie_57 Start: 38391, Stop: 39584, Start Num: 101

Candidate Starts for Bogie_57:

(8, 37956), (87, 38328), (Start: 101 @38391 has 10 MA's), (110, 38424), (114, 38448), (123, 38484), (124, 38487), (129, 38517), (146, 38607), (153, 38634), (168, 38697), (172, 38703), (173, 38706), (182, 38724), (183, 38727), (293, 38970), (294, 38973), (312, 39075), (315, 39099), (330, 39156), (331, 39162), (345, 39192), (348, 39198), (370, 39264), (385, 39327), (405, 39441), (410, 39501), (416, 39534), (418, 39543), (419, 39546),

Gene: Bruin_96 Start: 57875, Stop: 58906, Start Num: 79

Candidate Starts for Bruin_96:

(39, 57728), (46, 57758), (56, 57806), (62, 57821), (Start: 66 @57833 has 1 MA's), (Start: 79 @57875 has 66 MA's), (86, 57893), (Start: 112 @57989 has 1 MA's), (125, 58034), (140, 58118), (Start: 309 @58322 has 1 MA's), (314, 58352), (320, 58388), (405, 58625), (416, 58727), (423, 58769), (425, 58802), (428, 58817),

Gene: Brusacoram_55 Start: 36850, Stop: 38346, Start Num: 31

Candidate Starts for Brusacoram_55:

(19, 36748), (20, 36757), (22, 36784), (Start: 31 @36850 has 1 MA's), (Start: 43 @36910 has 24 MA's), (55, 36949), (60, 36979), (Start: 81 @37036 has 1 MA's), (110, 37123), (127, 37201), (136, 37246), (170, 37408), (199, 37483), (225, 37555), (Start: 309 @37801 has 1 MA's), (312, 37819), (315, 37843), (356, 37978), (362, 38008), (370, 38044), (397, 38146), (405, 38203), (410, 38263), (416, 38296), (418, 38305), (419, 38308),

Gene: Brynnie_43 Start: 29310, Stop: 30629, Start Num: 43

Candidate Starts for Brynnie_43:

(Start: 40 @29301 has 2 MA's), (Start: 43 @29310 has 24 MA's), (Start: 71 @29406 has 1 MA's), (95, 29466), (Start: 112 @29520 has 1 MA's), (119, 29544), (125, 29559), (127, 29580), (139, 29637), (147, 29685), (157, 29736), (169, 29787), (209, 29877), (223, 29916), (262, 29988), (310, 30138), (374, 30267), (401, 30306), (405, 30339), (416, 30426), (422, 30465), (440, 30603),

Gene: Buck_100 Start: 59565, Stop: 60743, Start Num: 79

Candidate Starts for Buck_100:

(39, 59418), (46, 59448), (56, 59496), (62, 59511), (Start: 66 @59523 has 1 MA's), (Start: 79 @59565 has 66 MA's), (86, 59583), (Start: 112 @59679 has 1 MA's), (125, 59724), (140, 59808), (193, 59931), (255, 59976), (263, 59988), (Start: 309 @60093 has 1 MA's), (313, 60114), (314, 60123), (320, 60159), (369, 60300), (370, 60303), (400, 60405), (405, 60462), (416, 60564), (423, 60606), (425, 60639), (428, 60654),

Gene: BugsBunny_98 Start: 58975, Stop: 60219, Start Num: 79

Candidate Starts for BugsBunny_98:

(39, 58828), (46, 58858), (56, 58906), (62, 58921), (Start: 66 @58933 has 1 MA's), (Start: 79 @58975 has 66 MA's), (86, 58993), (Start: 112 @59089 has 1 MA's), (125, 59134), (140, 59218), (193, 59341),

(272, 59428), (275, 59434), (Start: 309 @59524 has 1 MA's), (313, 59545), (314, 59554), (320, 59590), (337, 59653), (369, 59755), (370, 59758), (383, 59821), (416, 60040), (423, 60082), (425, 60115), (428, 60130),

Gene: Bunnies_58 Start: 38503, Stop: 39714, Start Num: 98

Candidate Starts for Bunnies_58:

(65, 38401), (70, 38410), (78, 38437), (Start: 98 @38503 has 7 MA's), (114, 38563), (123, 38599), (129, 38632), (141, 38698), (182, 38848), (214, 38938), (230, 38971), (Start: 309 @39178 has 1 MA's), (314, 39208), (315, 39220), (370, 39394), (385, 39457), (405, 39571), (410, 39631), (416, 39664), (418, 39673), (419, 39676),

Gene: Burton_59 Start: 41590, Stop: 40172, Start Num: 80

Candidate Starts for Burton_59:

(Start: 80 @41590 has 52 MA's), (Start: 112 @41482 has 1 MA's), (125, 41437), (140, 41353), (155, 41272), (160, 41242), (186, 41173), (201, 41140), (284, 40978), (286, 40969), (314, 40840), (320, 40804), (353, 40702), (369, 40639), (370, 40636), (387, 40558), (405, 40450), (413, 40366), (414, 40357), (416, 40348), (421, 40327), (422, 40309), (425, 40273),

Gene: Cactus_103 Start: 58228, Stop: 59160, Start Num: 148

Candidate Starts for Cactus_103:

(Start: 148 @58228 has 1 MA's), (165, 58306), (204, 58351), (222, 58363), (Start: 309 @58468 has 1 MA's), (313, 58489), (314, 58498), (315, 58510), (320, 58534), (405, 58879), (412, 58951), (416, 58981), (423, 59023), (425, 59056), (428, 59071),

Gene: Camster_54 Start: 36147, Stop: 37340, Start Num: 101

Candidate Starts for Camster_54:

(8, 35712), (87, 36084), (Start: 101 @36147 has 10 MA's), (110, 36180), (114, 36204), (123, 36240), (124, 36243), (129, 36273), (146, 36363), (153, 36390), (168, 36453), (172, 36459), (173, 36462), (182, 36480), (183, 36483), (293, 36726), (294, 36729), (312, 36831), (315, 36855), (330, 36912), (331, 36918), (345, 36948), (348, 36954), (370, 37020), (385, 37083), (405, 37197), (410, 37257), (416, 37290), (418, 37299), (419, 37302),

Gene: Carlyle_58 Start: 38683, Stop: 37388, Start Num: 82

Candidate Starts for Carlyle_58:

(Start: 82 @38683 has 1 MA's), (83, 38677), (97, 38635), (Start: 112 @38578 has 1 MA's), (125, 38533), (155, 38368), (160, 38338), (185, 38269), (197, 38236), (262, 38074), (265, 38065), (314, 37936), (315, 37924), (354, 37822), (363, 37795), (389, 37729), (390, 37726), (411, 37603), (413, 37588), (415, 37573), (416, 37570), (422, 37531), (438, 37402),

Gene: Chickaboom_50 Start: 30037, Stop: 31356, Start Num: 43

Candidate Starts for Chickaboom_50:

(1, 29689), (Start: 40 @30028 has 2 MA's), (Start: 43 @30037 has 24 MA's), (Start: 71 @30133 has 1 MA's), (95, 30193), (Start: 112 @30247 has 1 MA's), (119, 30271), (125, 30286), (127, 30307), (139, 30364), (147, 30412), (157, 30463), (169, 30514), (209, 30604), (223, 30643), (262, 30715), (310, 30865), (374, 30994), (401, 31033), (405, 31066), (408, 31111), (416, 31153), (423, 31195), (425, 31228), (440, 31330),

Gene: ChickenDinner_79 Start: 46995, Stop: 48449, Start Num: 75

Candidate Starts for ChickenDinner_79:

(Start: 75 @46995 has 9 MA's), (84, 47025), (94, 47055), (103, 47091), (Start: 112 @47124 has 1 MA's), (156, 47355), (268, 47634), (Start: 309 @47754 has 1 MA's), (310, 47757), (314, 47784), (315, 47796), (343, 47886), (364, 47958), (370, 47985), (393, 48087), (405, 48144), (416, 48246), (419, 48258), (421, 48267), (423, 48288),

Gene: ChosenOne_99 Start: 58035, Stop: 59108, Start Num: 79

Candidate Starts for ChosenOne_99:

(39, 57888), (46, 57918), (56, 57966), (62, 57981), (Start: 66 @57993 has 1 MA's), (Start: 79 @58035 has 66 MA's), (86, 58053), (Start: 112 @58149 has 1 MA's), (125, 58194), (140, 58278), (193, 58401), (Start: 309 @58455 has 1 MA's), (314, 58485), (320, 58521), (370, 58668), (400, 58770), (416, 58929), (423, 58971), (425, 59004), (428, 59019),

Gene: ChotaBhai_99 Start: 58278, Stop: 59519, Start Num: 79

Candidate Starts for ChotaBhai_99:

(39, 58131), (46, 58161), (56, 58209), (62, 58224), (Start: 66 @58236 has 1 MA's), (Start: 79 @58278 has 66 MA's), (86, 58296), (Start: 112 @58392 has 1 MA's), (125, 58437), (140, 58521), (193, 58644), (269, 58731), (271, 58737), (Start: 309 @58827 has 1 MA's), (314, 58857), (315, 58869), (337, 58956), (370, 59061), (383, 59124), (405, 59238), (423, 59382), (425, 59415),

Gene: Cjw1_100 Start: 60418, Stop: 61113, Start Num: 309

Candidate Starts for Cjw1_100:

(Start: 309 @60418 has 1 MA's), (313, 60439), (314, 60448), (320, 60484), (337, 60547), (369, 60649), (370, 60652), (383, 60715), (416, 60934), (423, 60976), (425, 61009), (428, 61024),

Gene: Clown_11 Start: 6462, Stop: 7739, Start Num: 81

Candidate Starts for Clown_11:

(Start: 81 @6462 has 1 MA's), (Start: 98 @6525 has 7 MA's), (117, 6591), (149, 6762), (155, 6795), (215, 6921), (282, 7068), (292, 7092), (319, 7215), (346, 7284), (360, 7317), (361, 7329), (378, 7404), (411, 7503), (413, 7518), (416, 7536), (423, 7578), (439, 7710),

Gene: Contagion_95 Start: 58156, Stop: 59268, Start Num: 79

Candidate Starts for Contagion_95:

(39, 58009), (46, 58039), (56, 58087), (62, 58102), (Start: 66 @58114 has 1 MA's), (Start: 79 @58156 has 66 MA's), (86, 58174), (Start: 112 @58270 has 1 MA's), (125, 58315), (140, 58399), (192, 58522), (212, 58567), (253, 58579), (Start: 309 @58684 has 1 MA's), (314, 58714), (320, 58750), (405, 58987), (416, 59089), (423, 59131), (425, 59164), (428, 59179),

Gene: Cookies_96 Start: 58135, Stop: 59445, Start Num: 79

Candidate Starts for Cookies_96:

(39, 57988), (46, 58018), (56, 58066), (62, 58081), (Start: 66 @58093 has 1 MA's), (Start: 79 @58135 has 66 MA's), (86, 58153), (Start: 112 @58249 has 1 MA's), (125, 58294), (140, 58378), (163, 58495), (187, 58549), (198, 58576), (283, 58753), (Start: 309 @58861 has 1 MA's), (313, 58882), (314, 58891), (320, 58927), (369, 58981), (370, 58984), (405, 59164), (423, 59308), (425, 59341),

Gene: Coral_45 Start: 28399, Stop: 29802, Start Num: 43

Candidate Starts for Coral_45:

(Start: 40 @28390 has 2 MA's), (Start: 43 @28399 has 24 MA's), (57, 28459), (68, 28486), (Start: 71 @28495 has 1 MA's), (91, 28543), (95, 28555), (Start: 112 @28609 has 1 MA's), (119, 28633), (122, 28642), (125, 28648), (131, 28690), (139, 28726), (147, 28774), (157, 28825), (174, 28885), (209, 28966), (223, 29005), (300, 29164), (308, 29221), (310, 29227), (315, 29266), (356, 29374), (359, 29389), (374, 29440), (405, 29512), (416, 29599), (422, 29638), (423, 29641), (433, 29707), (440, 29776),

Gene: Cote_47 Start: 28876, Stop: 30279, Start Num: 43

Candidate Starts for Cote_47:

(Start: 40 @28867 has 2 MA's), (Start: 43 @28876 has 24 MA's), (57, 28936), (68, 28963), (Start: 71 @28972 has 1 MA's), (91, 29020), (95, 29032), (Start: 112 @29086 has 1 MA's), (119, 29110), (122,

29119), (125, 29125), (131, 29167), (139, 29203), (147, 29251), (157, 29302), (174, 29362), (209, 29443), (223, 29482), (300, 29641), (308, 29698), (310, 29704), (315, 29743), (356, 29851), (359, 29866), (374, 29917), (405, 29989), (416, 30076), (422, 30115), (423, 30118), (433, 30184), (440, 30253),

Gene: CrystalP_98 Start: 58977, Stop: 60200, Start Num: 79

Candidate Starts for CrystalP_98:

(39, 58830), (46, 58860), (56, 58908), (62, 58923), (Start: 66 @58935 has 1 MA's), (Start: 79 @58977 has 66 MA's), (86, 58995), (Start: 112 @59091 has 1 MA's), (125, 59136), (140, 59220), (193, 59343), (255, 59388), (263, 59400), (Start: 309 @59505 has 1 MA's), (313, 59526), (314, 59535), (320, 59571), (337, 59634), (369, 59736), (370, 59739), (383, 59802), (416, 60021), (423, 60063), (425, 60096), (428, 60111),

Gene: DLane_70 Start: 45071, Stop: 46330, Start Num: 75

Candidate Starts for DLane_70:

(67, 45047), (Start: 75 @45071 has 9 MA's), (77, 45077), (94, 45131), (103, 45167), (Start: 112 @45200 has 1 MA's), (125, 45245), (140, 45329), (179, 45455), (Start: 309 @45626 has 1 MA's), (313, 45647), (314, 45656), (315, 45668), (323, 45713), (349, 45785), (369, 45854), (370, 45857), (381, 45920), (405, 46037), (416, 46124), (419, 46136), (422, 46163),

Gene: DS6A_73 Start: 47459, Stop: 48829, Start Num: 44

Candidate Starts for DS6A_73:

(Start: 44 @47459 has 1 MA's), (51, 47483), (59, 47516), (Start: 81 @47582 has 1 MA's), (100, 47648), (147, 47882), (157, 47933), (209, 48065), (228, 48113), (265, 48188), (Start: 309 @48323 has 1 MA's), (310, 48326), (312, 48341), (411, 48593), (412, 48596), (416, 48626), (419, 48638), (420, 48644), (421, 48647), (423, 48668), (432, 48731),

Gene: Daenerys_61 Start: 41682, Stop: 43196, Start Num: 32

Candidate Starts for Daenerys_61:

(8, 41505), (Start: 32 @41682 has 10 MA's), (Start: 43 @41739 has 24 MA's), (53, 41775), (60, 41808), (118, 42030), (127, 42072), (152, 42198), (155, 42216), (171, 42276), (194, 42318), (197, 42330), (234, 42423), (243, 42447), (266, 42507), (Start: 309 @42630 has 1 MA's), (313, 42651), (314, 42660), (335, 42753), (383, 42933), (405, 43053), (410, 43113), (416, 43146), (418, 43155), (419, 43158),

Gene: Daob_47 Start: 28875, Stop: 30287, Start Num: 40

Candidate Starts for Daob_47:

(Start: 40 @28875 has 2 MA's), (Start: 43 @28884 has 24 MA's), (57, 28944), (68, 28971), (Start: 71 @28980 has 1 MA's), (91, 29028), (Start: 112 @29094 has 1 MA's), (119, 29118), (122, 29127), (125, 29133), (131, 29175), (139, 29211), (147, 29259), (157, 29310), (174, 29370), (209, 29451), (223, 29490), (300, 29649), (308, 29706), (310, 29712), (315, 29751), (356, 29859), (359, 29874), (374, 29925), (405, 29997), (416, 30084), (422, 30123), (433, 30192), (440, 30261),

Gene: Donovan_57 Start: 37840, Stop: 39126, Start Num: 61

Candidate Starts for Donovan_57:

(50, 37789), (54, 37804), (Start: 61 @37840 has 7 MA's), (96, 37933), (Start: 98 @37951 has 7 MA's), (110, 37987), (114, 38011), (123, 38047), (129, 38080), (146, 38170), (153, 38197), (168, 38260), (172, 38266), (173, 38269), (182, 38287), (183, 38290), (247, 38452), (267, 38494), (Start: 309 @38617 has 1 MA's), (314, 38647), (315, 38659), (316, 38662), (320, 38683), (330, 38716), (331, 38722), (345, 38752), (348, 38758), (370, 38824), (394, 38926), (405, 38983), (407, 39028), (410, 39043), (416, 39076), (418, 39085), (419, 39088),

Gene: Doom_57 Start: 40834, Stop: 39845, Start Num: 108

Candidate Starts for Doom_57:

(Start: 108 @40834 has 1 MA's), (111, 40828), (116, 40798), (121, 40786), (133, 40729), (150, 40645), (230, 40408), (Start: 309 @40312 has 1 MA's), (314, 40282), (315, 40270), (323, 40225), (329, 40213), (370, 40183), (411, 40060), (413, 40045), (415, 40030), (416, 40027), (422, 39988), (438, 39859),

Gene: DrDrey_99 Start: 59457, Stop: 60938, Start Num: 79

Candidate Starts for DrDrey_99:

(39, 59310), (46, 59340), (56, 59388), (62, 59403), (Start: 66 @59415 has 1 MA's), (Start: 79 @59457 has 66 MA's), (86, 59475), (Start: 112 @59571 has 1 MA's), (125, 59616), (155, 59781), (207, 59931), (221, 59979), (240, 60015), (260, 60084), (270, 60105), (279, 60123), (Start: 309 @60246 has 1 MA's), (313, 60267), (314, 60276), (315, 60288), (320, 60312), (405, 60657), (412, 60729), (416, 60759), (423, 60801), (425, 60834), (428, 60849),

Gene: Duke13_147 Start: 77664, Stop: 78977, Start Num: 80

Candidate Starts for Duke13_147:

(Start: 80 @77664 has 52 MA's), (Start: 112 @77772 has 1 MA's), (125, 77817), (131, 77859), (132, 77862), (140, 77901), (155, 77982), (203, 78120), (228, 78192), (Start: 309 @78438 has 1 MA's), (314, 78468), (315, 78480), (338, 78546), (372, 78657), (405, 78699), (413, 78783), (414, 78792), (416, 78801), (421, 78822), (422, 78840), (425, 78876),

Gene: Dulcie_59 Start: 40714, Stop: 39728, Start Num: 80

Candidate Starts for Dulcie_59:

(Start: 80 @40714 has 52 MA's), (Start: 112 @40606 has 1 MA's), (154, 40561), (213, 40477), (268, 40396), (300, 40354), (Start: 309 @40300 has 1 MA's), (313, 40279), (314, 40270), (320, 40234), (405, 39991), (416, 39904), (423, 39862), (425, 39829),

Gene: Dumbo_99 Start: 58258, Stop: 59496, Start Num: 79

Candidate Starts for Dumbo_99:

(39, 58111), (46, 58141), (56, 58189), (62, 58204), (Start: 66 @58216 has 1 MA's), (Start: 79 @58258 has 66 MA's), (86, 58276), (Start: 112 @58372 has 1 MA's), (125, 58417), (140, 58501), (193, 58624), (Start: 309 @58795 has 1 MA's), (314, 58825), (337, 58924), (369, 59026), (370, 59029), (405, 59215), (416, 59317), (423, 59359), (425, 59392), (428, 59407),

Gene: Dusk_96 Start: 58240, Stop: 59460, Start Num: 79

Candidate Starts for Dusk_96:

(39, 58093), (46, 58123), (56, 58171), (62, 58186), (Start: 66 @58198 has 1 MA's), (Start: 79 @58240 has 66 MA's), (86, 58258), (Start: 112 @58354 has 1 MA's), (125, 58399), (140, 58483), (165, 58606), (204, 58651), (222, 58663), (Start: 309 @58768 has 1 MA's), (313, 58789), (314, 58798), (315, 58810), (320, 58834), (405, 59179), (412, 59251), (416, 59281), (423, 59323), (425, 59356), (428, 59371),

Gene: Dynamo_53 Start: 36425, Stop: 37618, Start Num: 101

Candidate Starts for Dynamo_53:

(8, 35990), (87, 36362), (Start: 101 @36425 has 10 MA's), (110, 36458), (114, 36482), (123, 36518), (124, 36521), (129, 36551), (146, 36641), (153, 36668), (168, 36731), (172, 36737), (173, 36740), (182, 36758), (183, 36761), (293, 37004), (294, 37007), (312, 37109), (315, 37133), (330, 37190), (331, 37196), (345, 37226), (348, 37232), (370, 37298), (385, 37361), (405, 37475), (410, 37535), (416, 37568), (418, 37577), (419, 37580),

Gene: Edtherson_58 Start: 40825, Stop: 39680, Start Num: 80

Candidate Starts for Edtherson_58:

(Start: 80 @40825 has 52 MA's), (Start: 112 @40717 has 1 MA's), (125, 40672), (140, 40588), (155, 40507), (201, 40429), (224, 40405), (257, 40354), (Start: 309 @40240 has 1 MA's), (313, 40219), (314, 40210), (320, 40174), (369, 40015), (370, 40012), (405, 39958), (413, 39874), (414, 39865), (416, 39856), (421, 39835),

Gene: Eesa_44 Start: 30907, Stop: 32226, Start Num: 43

Candidate Starts for Eesa_44:

(14, 30748), (17, 30763), (Start: 40 @30898 has 2 MA's), (Start: 43 @30907 has 24 MA's), (Start: 71 @31003 has 1 MA's), (91, 31051), (95, 31063), (Start: 112 @31117 has 1 MA's), (119, 31141), (125, 31156), (127, 31177), (139, 31234), (147, 31282), (157, 31333), (169, 31384), (209, 31474), (237, 31540), (241, 31552), (Start: 309 @31732 has 1 MA's), (312, 31750), (374, 31864), (401, 31903), (405, 31936), (416, 32023), (422, 32062), (423, 32065), (425, 32098), (434, 32137), (435, 32164), (436, 32170), (440, 32200), (442, 32221),

Gene: EleanorGeorge_68 Start: 43670, Stop: 44953, Start Num: 32

Candidate Starts for EleanorGeorge_68:

(Start: 32 @43670 has 10 MA's), (38, 43703), (Start: 43 @43727 has 24 MA's), (60, 43796), (127, 43979), (128, 43982), (131, 44000), (132, 44003), (190, 44222), (239, 44339), (289, 44441), (Start: 309 @44528 has 1 MA's), (314, 44558), (397, 44753), (405, 44810), (409, 44867), (416, 44903),

Gene: Elite2014_98 Start: 58034, Stop: 59107, Start Num: 79

Candidate Starts for Elite2014_98:

(39, 57887), (46, 57917), (56, 57965), (62, 57980), (Start: 66 @57992 has 1 MA's), (Start: 79 @58034 has 66 MA's), (86, 58052), (Start: 112 @58148 has 1 MA's), (125, 58193), (140, 58277), (193, 58400), (Start: 309 @58454 has 1 MA's), (314, 58484), (320, 58520), (370, 58667), (400, 58769), (416, 58928), (423, 58970), (425, 59003), (428, 59018),

Gene: Elph10_99 Start: 57919, Stop: 59142, Start Num: 79

Candidate Starts for Elph10_99:

(39, 57772), (46, 57802), (56, 57850), (62, 57865), (Start: 66 @57877 has 1 MA's), (Start: 79 @57919 has 66 MA's), (86, 57937), (Start: 112 @58033 has 1 MA's), (125, 58078), (140, 58162), (193, 58285), (255, 58330), (263, 58342), (Start: 309 @58447 has 1 MA's), (313, 58468), (314, 58477), (320, 58513), (337, 58576), (369, 58678), (370, 58681), (383, 58744), (416, 58963), (423, 59005), (425, 59038), (428, 59053),

Gene: EmiRose_39 Start: 33923, Stop: 32721, Start Num: 104

Candidate Starts for EmiRose_39:

(88, 33983), (93, 33965), (Start: 104 @33923 has 1 MA's), (127, 33830), (151, 33713), (155, 33692), (182, 33608), (195, 33575), (198, 33569), (202, 33563), (211, 33542), (314, 33368), (315, 33356), (316, 33353), (320, 33332), (376, 33152), (398, 33065), (411, 32939), (416, 32906), (419, 32894), (423, 32864), (429, 32807), (438, 32738), (440, 32729),

Gene: Emmina_99 Start: 57618, Stop: 58883, Start Num: 66

Candidate Starts for Emmina_99:

(39, 57513), (46, 57543), (56, 57591), (62, 57606), (Start: 66 @57618 has 1 MA's), (Start: 79 @57660 has 66 MA's), (86, 57678), (Start: 112 @57774 has 1 MA's), (125, 57819), (140, 57903), (193, 58026), (255, 58071), (263, 58083), (Start: 309 @58188 has 1 MA's), (313, 58209), (314, 58218), (320, 58254), (337, 58317), (369, 58419), (370, 58422), (383, 58485), (416, 58704), (423, 58746), (425, 58779), (428, 58794),

Gene: EricMillard_143 Start: 79016, Stop: 80329, Start Num: 80

Candidate Starts for EricMillard_143:

(Start: 80 @79016 has 52 MA's), (Start: 112 @79124 has 1 MA's), (125, 79169), (131, 79211), (132, 79214), (140, 79253), (155, 79334), (203, 79472), (228, 79544), (Start: 309 @79790 has 1 MA's), (314, 79820), (315, 79832), (338, 79898), (372, 80009), (405, 80051), (413, 80135), (414, 80144), (416, 80153), (421, 80174), (422, 80192), (425, 80228),

Gene: Eureka_98 Start: 58947, Stop: 60071, Start Num: 79

Candidate Starts for Eureka_98:

(39, 58800), (46, 58830), (56, 58878), (62, 58893), (Start: 66 @58905 has 1 MA's), (Start: 79 @58947 has 66 MA's), (86, 58965), (Start: 112 @59061 has 1 MA's), (125, 59106), (255, 59355), (Start: 309 @59475 has 1 MA's), (314, 59505), (315, 59517), (320, 59541), (323, 59562), (344, 59619), (370, 59709), (405, 59790), (416, 59892), (423, 59934), (425, 59967), (428, 59982),

Gene: Eyeball_60 Start: 40995, Stop: 39775, Start Num: 80

Candidate Starts for Eyeball_60:

(Start: 80 @40995 has 52 MA's), (Start: 112 @40887 has 1 MA's), (125, 40842), (139, 40764), (140, 40758), (186, 40635), (231, 40599), (Start: 309 @40452 has 1 MA's), (314, 40422), (320, 40386), (342, 40308), (352, 40281), (356, 40275), (369, 40215), (399, 40110), (405, 40053), (413, 39969), (414, 39960), (416, 39951), (421, 39930), (422, 39912), (425, 39876),

Gene: Filch_101 Start: 58232, Stop: 59455, Start Num: 79

Candidate Starts for Filch_101:

(39, 58085), (46, 58115), (56, 58163), (62, 58178), (Start: 66 @58190 has 1 MA's), (Start: 79 @58232 has 66 MA's), (86, 58250), (Start: 112 @58346 has 1 MA's), (125, 58391), (140, 58475), (193, 58598), (255, 58643), (263, 58655), (Start: 309 @58760 has 1 MA's), (313, 58781), (314, 58790), (320, 58826), (337, 58889), (369, 58991), (370, 58994), (383, 59057), (416, 59276), (423, 59318), (425, 59351), (428, 59366),

Gene: FireRed_102 Start: 59115, Stop: 60347, Start Num: 79

Candidate Starts for FireRed_102:

(39, 58968), (46, 58998), (56, 59046), (62, 59061), (Start: 66 @59073 has 1 MA's), (Start: 79 @59115 has 66 MA's), (86, 59133), (Start: 112 @59229 has 1 MA's), (125, 59274), (140, 59358), (193, 59481), (277, 59565), (314, 59682), (320, 59718), (337, 59781), (369, 59883), (370, 59886), (383, 59949), (416, 60168), (423, 60210), (425, 60243), (428, 60258),

Gene: Fishburne_57 Start: 37732, Stop: 38952, Start Num: 98

Candidate Starts for Fishburne_57:

(65, 37630), (70, 37639), (Start: 98 @37732 has 7 MA's), (110, 37768), (114, 37792), (129, 37861), (172, 38044), (173, 38047), (182, 38065), (183, 38068), (247, 38230), (267, 38272), (Start: 309 @38395 has 1 MA's), (314, 38425), (315, 38437), (339, 38524), (369, 38626), (370, 38629), (382, 38692), (405, 38809), (407, 38854), (410, 38869), (416, 38902), (418, 38911), (419, 38914),

Gene: Florinda_85 Start: 47777, Stop: 49225, Start Num: 75

Candidate Starts for Florinda_85:

(67, 47753), (Start: 75 @47777 has 9 MA's), (77, 47783), (94, 47837), (103, 47873), (Start: 112 @47906 has 1 MA's), (125, 47951), (140, 48035), (161, 48152), (190, 48206), (202, 48233), (273, 48410), (Start: 309 @48518 has 1 MA's), (310, 48521), (315, 48560), (347, 48662), (350, 48668), (369, 48743), (370, 48746), (405, 48932), (416, 49019), (419, 49031), (421, 49040), (423, 49061), (437, 49175),

Gene: Galaxy_43 Start: 28676, Stop: 29995, Start Num: 43

Candidate Starts for Galaxy_43:

(13, 28526), (Start: 40 @28667 has 2 MA's), (Start: 43 @28676 has 24 MA's), (Start: 71 @28772 has 1 MA's), (91, 28820), (95, 28832), (Start: 112 @28886 has 1 MA's), (119, 28910), (125, 28925), (139,

29003), (147, 29051), (157, 29102), (174, 29162), (209, 29243), (223, 29282), (308, 29498), (310, 29504), (312, 29519), (375, 29636), (401, 29672), (405, 29705), (416, 29792), (420, 29810), (440, 29969),

Gene: Girafales_82 Start: 47568, Stop: 48830, Start Num: 75

Candidate Starts for Girafales_82:

(67, 47544), (Start: 75 @47568 has 9 MA's), (77, 47574), (94, 47628), (103, 47664), (Start: 112 @47697 has 1 MA's), (125, 47742), (139, 47820), (140, 47826), (152, 47889), (155, 47907), (179, 47952), (210, 47982), (Start: 309 @48123 has 1 MA's), (314, 48153), (315, 48165), (347, 48267), (350, 48273), (369, 48348), (370, 48351), (405, 48537), (416, 48624), (419, 48636), (421, 48645), (423, 48666), (437, 48780),

Gene: Goku_98 Start: 58676, Stop: 59800, Start Num: 79

Candidate Starts for Goku_98:

(39, 58529), (46, 58559), (56, 58607), (62, 58622), (Start: 66 @58634 has 1 MA's), (Start: 79 @58676 has 66 MA's), (86, 58694), (Start: 112 @58790 has 1 MA's), (125, 58835), (255, 59084), (Start: 309 @59204 has 1 MA's), (314, 59234), (315, 59246), (320, 59270), (323, 59291), (344, 59348), (370, 59438), (405, 59519), (416, 59621), (423, 59663), (425, 59696), (428, 59711),

Gene: Goldilocks_102 Start: 57898, Stop: 59382, Start Num: 79

Candidate Starts for Goldilocks_102:

(39, 57751), (46, 57781), (56, 57829), (62, 57844), (Start: 66 @57856 has 1 MA's), (Start: 79 @57898 has 66 MA's), (86, 57916), (Start: 112 @58012 has 1 MA's), (125, 58057), (140, 58141), (207, 58372), (221, 58420), (240, 58456), (270, 58546), (279, 58564), (Start: 309 @58687 has 1 MA's), (313, 58708), (314, 58717), (320, 58753), (369, 58912), (370, 58915), (416, 59203), (423, 59245), (425, 59278), (428, 59293),

Gene: Gompeii16_58 Start: 41983, Stop: 40607, Start Num: 80

Candidate Starts for Gompeii16_58:

(Start: 80 @41983 has 52 MA's), (Start: 112 @41875 has 1 MA's), (125, 41830), (140, 41746), (155, 41665), (189, 41560), (205, 41524), (239, 41455), (256, 41407), (278, 41374), (289, 41347), (310, 41251), (314, 41224), (315, 41212), (369, 41047), (370, 41044), (399, 40942), (405, 40885), (413, 40801), (414, 40792), (416, 40783), (421, 40762), (422, 40744), (425, 40708),

Gene: GreaseLightnin_59 Start: 38734, Stop: 39948, Start Num: 98

Candidate Starts for GreaseLightnin_59:

(65, 38632), (70, 38641), (78, 38668), (Start: 98 @38734 has 7 MA's), (114, 38794), (123, 38830), (129, 38863), (141, 38929), (182, 39079), (214, 39169), (230, 39202), (Start: 309 @39409 has 1 MA's), (314, 39439), (315, 39451), (370, 39625), (382, 39688), (405, 39805), (410, 39865), (416, 39898), (418, 39907), (419, 39910),

Gene: HUHilltop_55 Start: 36648, Stop: 37841, Start Num: 101

Candidate Starts for HUHilltop_55:

(8, 36213), (87, 36585), (Start: 101 @36648 has 10 MA's), (110, 36681), (114, 36705), (123, 36741), (124, 36744), (129, 36774), (146, 36864), (153, 36891), (168, 36954), (172, 36960), (173, 36963), (182, 36981), (183, 36984), (293, 37227), (294, 37230), (312, 37332), (315, 37356), (330, 37413), (331, 37419), (345, 37449), (348, 37455), (370, 37521), (385, 37584), (405, 37698), (410, 37758), (416, 37791), (418, 37800), (419, 37803),

Gene: Hami1_51 Start: 36085, Stop: 34859, Start Num: 80

Candidate Starts for Hami1_51:

(Start: 80 @36085 has 52 MA's), (Start: 112 @35977 has 1 MA's), (156, 35746), (Start: 309 @35344 has 1 MA's), (314, 35314), (320, 35278), (370, 35191), (405, 35137), (416, 35035), (423, 34993), (425,

34960),

Gene: HanKaySha_100 Start: 58428, Stop: 59852, Start Num: 79

Candidate Starts for HanKaySha_100:

(39, 58281), (46, 58311), (56, 58359), (62, 58374), (Start: 66 @58386 has 1 MA's), (Start: 79 @58428 has 66 MA's), (86, 58446), (Start: 112 @58542 has 1 MA's), (125, 58587), (140, 58671), (193, 58851), (251, 58968), (291, 59070), (Start: 309 @59157 has 1 MA's), (314, 59187), (369, 59382), (370, 59385), (416, 59673), (423, 59715), (425, 59748), (428, 59763),

Gene: HannahPhantana_53 Start: 28526, Stop: 29929, Start Num: 43

Candidate Starts for HannahPhantana_53:

(3, 28265), (15, 28391), (Start: 43 @28526 has 24 MA's), (51, 28556), (57, 28586), (68, 28613), (Start: 71 @28622 has 1 MA's), (91, 28670), (95, 28682), (Start: 112 @28736 has 1 MA's), (119, 28760), (122, 28769), (125, 28775), (131, 28817), (139, 28853), (147, 28901), (157, 28952), (174, 29012), (209, 29093), (223, 29132), (300, 29291), (308, 29348), (310, 29354), (315, 29393), (356, 29501), (359, 29516), (374, 29567), (405, 29639), (416, 29726), (422, 29765), (423, 29768), (433, 29834), (440, 29903),

Gene: Harley_68 Start: 43294, Stop: 44805, Start Num: 32

Candidate Starts for Harley_68:

(7, 43117), (9, 43123), (11, 43132), (Start: 32 @43294 has 10 MA's), (Start: 43 @43351 has 24 MA's), (53, 43387), (60, 43420), (118, 43642), (127, 43684), (152, 43810), (155, 43828), (171, 43888), (194, 43930), (197, 43942), (234, 44035), (243, 44059), (266, 44119), (Start: 309 @44242 has 1 MA's), (313, 44263), (314, 44272), (320, 44308), (355, 44410), (369, 44473), (370, 44476), (405, 44662), (410, 44722), (416, 44755), (418, 44764), (419, 44767),

Gene: HarryOW_58 Start: 40127, Stop: 39003, Start Num: 80

Candidate Starts for HarryOW_58:

(Start: 80 @40127 has 52 MA's), (Start: 112 @40019 has 1 MA's), (125, 39974), (127, 39953), (128, 39950), (140, 39890), (157, 39797), (252, 39680), (Start: 309 @39569 has 1 MA's), (313, 39548), (314, 39539), (340, 39440), (405, 39281), (413, 39197), (414, 39188), (416, 39179), (421, 39158), (422, 39140), (425, 39104),

Gene: Henry_96 Start: 58282, Stop: 59505, Start Num: 79

Candidate Starts for Henry_96:

(39, 58135), (46, 58165), (56, 58213), (62, 58228), (Start: 66 @58240 has 1 MA's), (Start: 79 @58282 has 66 MA's), (86, 58300), (Start: 112 @58396 has 1 MA's), (125, 58441), (140, 58525), (193, 58648), (255, 58693), (263, 58705), (Start: 309 @58810 has 1 MA's), (313, 58831), (314, 58840), (320, 58876), (337, 58939), (369, 59041), (370, 59044), (383, 59107), (416, 59326), (423, 59368), (425, 59401), (428, 59416),

Gene: HermioneGrange_60 Start: 41022, Stop: 39727, Start Num: 80

Candidate Starts for HermioneGrange_60:

(Start: 80 @41022 has 52 MA's), (Start: 112 @40914 has 1 MA's), (164, 40692), (182, 40650), (213, 40587), (300, 40464), (Start: 309 @40410 has 1 MA's), (313, 40389), (314, 40380), (353, 40242), (369, 40179), (370, 40176), (387, 40098), (405, 39990), (416, 39903), (423, 39861), (425, 39828),

Gene: HokkenD_143 Start: 79820, Stop: 81232, Start Num: 80

Candidate Starts for HokkenD_143:

(Start: 80 @79820 has 52 MA's), (Start: 112 @79928 has 1 MA's), (125, 79973), (140, 80057), (185, 80237), (231, 80354), (276, 80456), (Start: 309 @80543 has 1 MA's), (314, 80573), (320, 80609), (351, 80711), (369, 80774), (370, 80777), (398, 80894), (412, 81026), (413, 81038), (414, 81047), (416, 81056), (421, 81077), (422, 81095), (425, 81131),

Gene: Hoonter_102 Start: 58733, Stop: 59956, Start Num: 79

Candidate Starts for Hoonter_102:

(39, 58586), (46, 58616), (56, 58664), (62, 58679), (Start: 66 @58691 has 1 MA's), (Start: 79 @58733 has 66 MA's), (86, 58751), (Start: 112 @58847 has 1 MA's), (125, 58892), (140, 58976), (193, 59099), (255, 59144), (263, 59156), (Start: 309 @59261 has 1 MA's), (313, 59282), (314, 59291), (320, 59327), (337, 59390), (369, 59492), (370, 59495), (383, 59558), (416, 59777), (423, 59819), (425, 59852), (428, 59867),

Gene: Hokey_100 Start: 59239, Stop: 60462, Start Num: 79

Candidate Starts for Hokey_100:

(39, 59092), (46, 59122), (56, 59170), (62, 59185), (Start: 66 @59197 has 1 MA's), (Start: 79 @59239 has 66 MA's), (86, 59257), (Start: 112 @59353 has 1 MA's), (125, 59398), (140, 59482), (193, 59605), (255, 59650), (263, 59662), (Start: 309 @59767 has 1 MA's), (313, 59788), (314, 59797), (320, 59833), (337, 59896), (369, 59998), (370, 60001), (383, 60064), (416, 60283), (423, 60325), (425, 60358), (428, 60373),

Gene: HufflyPuff_101 Start: 59323, Stop: 60573, Start Num: 79

Candidate Starts for HufflyPuff_101:

(39, 59176), (46, 59206), (56, 59254), (62, 59269), (Start: 66 @59281 has 1 MA's), (Start: 79 @59323 has 66 MA's), (86, 59341), (Start: 112 @59437 has 1 MA's), (125, 59482), (140, 59566), (155, 59647), (169, 59710), (203, 59785), (228, 59857), (Start: 309 @60103 has 1 MA's), (314, 60133), (315, 60145), (369, 60235), (370, 60238), (423, 60436), (425, 60469),

Gene: Jamun_44 Start: 30191, Stop: 31510, Start Num: 43

Candidate Starts for Jamun_44:

(35, 30158), (Start: 40 @30182 has 2 MA's), (Start: 43 @30191 has 24 MA's), (90, 30332), (95, 30347), (Start: 112 @30401 has 1 MA's), (119, 30425), (127, 30461), (139, 30518), (147, 30566), (157, 30617), (209, 30758), (223, 30797), (308, 31013), (310, 31019), (374, 31148), (401, 31187), (408, 31265), (416, 31307), (421, 31328), (422, 31346), (423, 31349), (440, 31484),

Gene: Jebeks_54 Start: 35945, Stop: 37138, Start Num: 101

Candidate Starts for Jebeks_54:

(8, 35510), (87, 35882), (Start: 101 @35945 has 10 MA's), (110, 35978), (114, 36002), (123, 36038), (124, 36041), (129, 36071), (146, 36161), (153, 36188), (168, 36251), (172, 36257), (173, 36260), (182, 36278), (183, 36281), (293, 36524), (294, 36527), (312, 36629), (315, 36653), (330, 36710), (331, 36716), (345, 36746), (348, 36752), (370, 36818), (385, 36881), (405, 36995), (410, 37055), (416, 37088), (418, 37097), (419, 37100),

Gene: Jerm2_60 Start: 41277, Stop: 39982, Start Num: 80

Candidate Starts for Jerm2_60:

(Start: 80 @41277 has 52 MA's), (Start: 112 @41169 has 1 MA's), (164, 40947), (182, 40905), (213, 40842), (300, 40719), (Start: 309 @40665 has 1 MA's), (313, 40644), (314, 40635), (353, 40497), (369, 40434), (370, 40431), (387, 40353), (405, 40245), (416, 40158), (423, 40116), (425, 40083),

Gene: Jinkies_15 Start: 10934, Stop: 12199, Start Num: 130

Candidate Starts for Jinkies_15:

(29, 10538), (52, 10643), (Start: 130 @10934 has 1 MA's), (134, 10952), (137, 10967), (142, 11000), (144, 11009), (155, 11066), (230, 11270), (304, 11486), (310, 11513), (312, 11528), (317, 11558), (327, 11603), (369, 11747), (370, 11750), (371, 11753), (405, 11930), (407, 11963), (413, 11987), (416, 12005), (421, 12026), (422, 12044), (423, 12047), (424, 12050),

Gene: JoeyJr_62 Start: 41850, Stop: 43364, Start Num: 32

Candidate Starts for JoeyJr_62:

(8, 41673), (Start: 32 @41850 has 10 MA's), (Start: 43 @41907 has 24 MA's), (53, 41943), (60, 41976), (118, 42198), (127, 42240), (152, 42366), (155, 42384), (171, 42444), (194, 42486), (197, 42498), (234, 42591), (243, 42615), (266, 42675), (Start: 309 @42798 has 1 MA's), (313, 42819), (314, 42828), (335, 42921), (383, 43101), (405, 43221), (410, 43281), (416, 43314), (418, 43323), (419, 43326),

Gene: JuliaChild_60 Start: 40762, Stop: 39722, Start Num: 80

Candidate Starts for JuliaChild_60:

(Start: 80 @40762 has 52 MA's), (Start: 112 @40654 has 1 MA's), (154, 40609), (190, 40567), (191, 40564), (213, 40525), (300, 40402), (Start: 309 @40348 has 1 MA's), (313, 40327), (314, 40318), (353, 40180), (369, 40117), (370, 40114), (387, 40036), (405, 39928), (416, 39841), (426, 39757),

Gene: Juno112_47 Start: 29586, Stop: 30989, Start Num: 43

Candidate Starts for Juno112_47:

(Start: 43 @29586 has 24 MA's), (68, 29673), (Start: 71 @29682 has 1 MA's), (91, 29730), (95, 29742), (Start: 112 @29796 has 1 MA's), (119, 29820), (139, 29913), (147, 29961), (149, 29967), (155, 30000), (157, 30012), (200, 30135), (209, 30153), (300, 30351), (308, 30408), (310, 30414), (356, 30561), (359, 30576), (365, 30606), (374, 30627), (408, 30744), (411, 30753), (416, 30786), (422, 30825), (423, 30828), (427, 30873), (433, 30894), (440, 30963), (442, 30984),

Gene: KHumphrey_46 Start: 29474, Stop: 30877, Start Num: 43

Candidate Starts for KHumphrey_46:

(Start: 43 @29474 has 24 MA's), (68, 29561), (Start: 71 @29570 has 1 MA's), (91, 29618), (95, 29630), (Start: 112 @29684 has 1 MA's), (119, 29708), (139, 29801), (147, 29849), (149, 29855), (155, 29888), (157, 29900), (200, 30023), (209, 30041), (300, 30239), (308, 30296), (310, 30302), (356, 30449), (359, 30464), (365, 30494), (374, 30515), (408, 30632), (411, 30641), (416, 30674), (422, 30713), (423, 30716), (427, 30761), (433, 30782), (440, 30851),

Gene: Kanye_96 Start: 58485, Stop: 59714, Start Num: 79

Candidate Starts for Kanye_96:

(39, 58338), (46, 58368), (56, 58416), (62, 58431), (Start: 66 @58443 has 1 MA's), (Start: 79 @58485 has 66 MA's), (86, 58503), (Start: 112 @58599 has 1 MA's), (125, 58644), (140, 58728), (193, 58851), (255, 58896), (263, 58908), (Start: 309 @59013 has 1 MA's), (313, 59034), (314, 59043), (320, 59079), (357, 59181), (369, 59244), (370, 59247), (388, 59325), (405, 59433), (416, 59535), (423, 59577), (425, 59610), (428, 59625),

Gene: Kari_57 Start: 37729, Stop: 38949, Start Num: 98

Candidate Starts for Kari_57:

(65, 37627), (70, 37636), (Start: 98 @37729 has 7 MA's), (110, 37765), (114, 37789), (129, 37858), (172, 38041), (173, 38044), (182, 38062), (183, 38065), (247, 38227), (267, 38269), (Start: 309 @38392 has 1 MA's), (314, 38422), (315, 38434), (339, 38521), (369, 38623), (370, 38626), (382, 38689), (405, 38806), (407, 38851), (410, 38866), (416, 38899), (418, 38908), (419, 38911),

Gene: Kepler_47 Start: 29294, Stop: 30697, Start Num: 43

Candidate Starts for Kepler_47:

(Start: 40 @29285 has 2 MA's), (Start: 43 @29294 has 24 MA's), (57, 29354), (68, 29381), (Start: 71 @29390 has 1 MA's), (91, 29438), (95, 29450), (Start: 112 @29504 has 1 MA's), (119, 29528), (122, 29537), (125, 29543), (131, 29585), (139, 29621), (147, 29669), (157, 29720), (174, 29780), (209, 29861), (223, 29900), (300, 30059), (308, 30116), (310, 30122), (315, 30161), (356, 30269), (359, 30284), (374, 30335), (405, 30407), (416, 30494), (422, 30533), (433, 30602), (440, 30671),

Gene: Kimchi1738_46 Start: 42717, Stop: 41416, Start Num: 115

Candidate Starts for Kimchi1738_46:

(Start: 115 @42717 has 1 MA's), (133, 42636), (141, 42591), (143, 42582), (145, 42567), (151, 42546), (155, 42522), (162, 42483), (167, 42468), (169, 42462), (180, 42441), (183, 42435), (195, 42405), (246, 42276), (281, 42213), (291, 42186), (299, 42159), (304, 42117), (323, 42006), (353, 41928), (369, 41868), (370, 41865), (376, 41838), (377, 41820), (379, 41814), (384, 41796), (403, 41727), (405, 41685), (406, 41643), (411, 41616), (413, 41601), (415, 41586), (416, 41583), (418, 41574), (422, 41544), (423, 41541),

Gene: Klein_148 Start: 78154, Stop: 79467, Start Num: 80

Candidate Starts for Klein_148:

(Start: 80 @78154 has 52 MA's), (Start: 112 @78262 has 1 MA's), (125, 78307), (131, 78349), (132, 78352), (140, 78391), (155, 78472), (203, 78610), (228, 78682), (Start: 309 @78928 has 1 MA's), (314, 78958), (315, 78970), (338, 79036), (372, 79147), (405, 79189), (413, 79273), (414, 79282), (416, 79291), (421, 79312), (422, 79330), (425, 79366),

Gene: Ksquared_56 Start: 38503, Stop: 39714, Start Num: 98

Candidate Starts for Ksquared_56:

(65, 38401), (70, 38410), (78, 38437), (Start: 98 @38503 has 7 MA's), (114, 38563), (123, 38599), (129, 38632), (141, 38698), (182, 38848), (214, 38938), (230, 38971), (Start: 309 @39178 has 1 MA's), (314, 39208), (315, 39220), (370, 39394), (385, 39457), (405, 39571), (410, 39631), (416, 39664), (418, 39673), (419, 39676),

Gene: Kuleana_47 Start: 28864, Stop: 30267, Start Num: 45

Candidate Starts for Kuleana_47:

(37, 28849), (Start: 43 @28861 has 24 MA's), (Start: 45 @28864 has 2 MA's), (57, 28921), (Start: 71 @28957 has 1 MA's), (95, 29017), (Start: 112 @29071 has 1 MA's), (122, 29104), (125, 29110), (139, 29188), (147, 29236), (157, 29287), (174, 29347), (209, 29428), (300, 29629), (308, 29686), (310, 29692), (312, 29707), (356, 29839), (359, 29854), (374, 29905), (375, 29908), (401, 29944), (405, 29977), (411, 30031), (416, 30064), (418, 30073), (421, 30085), (423, 30106), (440, 30241), (441, 30250),

Gene: Kykar_59 Start: 40569, Stop: 39463, Start Num: 80

Candidate Starts for Kykar_59:

(Start: 80 @40569 has 52 MA's), (Start: 112 @40461 has 1 MA's), (154, 40416), (213, 40332), (300, 40209), (303, 40194), (318, 40101), (341, 40008), (353, 39978), (368, 39921), (402, 39768), (405, 39726), (411, 39672), (416, 39639), (425, 39564),

Gene: Langerak_58 Start: 37748, Stop: 38929, Start Num: 98

Candidate Starts for Langerak_58:

(65, 37646), (70, 37655), (Start: 98 @37748 has 7 MA's), (110, 37784), (114, 37808), (123, 37844), (129, 37877), (146, 37967), (168, 38036), (172, 38042), (173, 38045), (182, 38063), (183, 38066), (247, 38228), (267, 38270), (312, 38411), (315, 38435), (339, 38522), (370, 38627), (394, 38729), (405, 38786), (407, 38831), (410, 38846), (416, 38879), (418, 38888), (419, 38891),

Gene: Leona_46 Start: 29662, Stop: 31065, Start Num: 43

Candidate Starts for Leona_46:

(Start: 40 @29653 has 2 MA's), (Start: 43 @29662 has 24 MA's), (68, 29749), (Start: 71 @29758 has 1 MA's), (91, 29806), (95, 29818), (Start: 112 @29872 has 1 MA's), (119, 29896), (125, 29911), (132, 29956), (139, 29989), (147, 30037), (149, 30043), (155, 30076), (157, 30088), (209, 30229), (300, 30427), (308, 30484), (356, 30637), (359, 30652), (365, 30682), (374, 30703), (408, 30820), (411, 30829), (416, 30862), (427, 30949), (433, 30970), (440, 31039), (442, 31060),

Gene: Leperchaun_59 Start: 41080, Stop: 42594, Start Num: 32

Candidate Starts for Leperchaun_59:

(8, 40903), (Start: 32 @41080 has 10 MA's), (Start: 43 @41137 has 24 MA's), (53, 41173), (60, 41206), (118, 41428), (127, 41470), (152, 41596), (155, 41614), (171, 41674), (194, 41716), (197, 41728), (234, 41821), (243, 41845), (266, 41905), (Start: 309 @42028 has 1 MA's), (313, 42049), (314, 42058), (335, 42151), (383, 42331), (405, 42451), (410, 42511), (416, 42544), (418, 42553), (419, 42556),

Gene: Lilizi_100 Start: 58467, Stop: 59891, Start Num: 79

Candidate Starts for Lilizi_100:

(39, 58320), (46, 58350), (56, 58398), (62, 58413), (Start: 66 @58425 has 1 MA's), (Start: 79 @58467 has 66 MA's), (86, 58485), (Start: 112 @58581 has 1 MA's), (125, 58626), (140, 58710), (155, 58791), (193, 58890), (251, 59007), (293, 59109), (Start: 309 @59196 has 1 MA's), (313, 59217), (314, 59226), (320, 59262), (337, 59325), (369, 59427), (370, 59430), (383, 59493), (416, 59712), (423, 59754), (425, 59787), (428, 59802),

Gene: Lilpickle_98 Start: 58034, Stop: 59107, Start Num: 79

Candidate Starts for Lilpickle_98:

(39, 57887), (46, 57917), (56, 57965), (62, 57980), (Start: 66 @57992 has 1 MA's), (Start: 79 @58034 has 66 MA's), (86, 58052), (Start: 112 @58148 has 1 MA's), (125, 58193), (140, 58277), (193, 58400), (Start: 309 @58454 has 1 MA's), (314, 58484), (320, 58520), (370, 58667), (400, 58769), (416, 58928), (423, 58970), (425, 59003), (428, 59018),

Gene: LittleE_151 Start: 79162, Stop: 80334, Start Num: 80

Candidate Starts for LittleE_151:

(Start: 80 @79162 has 52 MA's), (Start: 112 @79270 has 1 MA's), (156, 79501), (291, 79819), (301, 79849), (307, 79885), (319, 79963), (326, 79990), (328, 79996), (369, 80056), (370, 80059), (405, 80113), (417, 80221), (426, 80299),

Gene: LittleTokyo_45 Start: 28365, Stop: 29681, Start Num: 43

Candidate Starts for LittleTokyo_45:

(Start: 43 @28365 has 24 MA's), (68, 28452), (Start: 71 @28461 has 1 MA's), (91, 28509), (95, 28521), (Start: 112 @28575 has 1 MA's), (119, 28599), (125, 28614), (139, 28692), (147, 28740), (149, 28746), (157, 28791), (209, 28932), (262, 29043), (300, 29133), (308, 29190), (315, 29235), (374, 29316), (408, 29436), (416, 29478), (421, 29499), (423, 29520), (433, 29586), (440, 29655),

Gene: Lunar_47 Start: 29201, Stop: 30613, Start Num: 40

Candidate Starts for Lunar_47:

(Start: 40 @29201 has 2 MA's), (Start: 43 @29210 has 24 MA's), (57, 29270), (68, 29297), (Start: 71 @29306 has 1 MA's), (91, 29354), (95, 29366), (Start: 112 @29420 has 1 MA's), (119, 29444), (122, 29453), (125, 29459), (131, 29501), (139, 29537), (147, 29585), (157, 29636), (174, 29696), (209, 29777), (223, 29816), (300, 29975), (308, 30032), (310, 30038), (315, 30077), (356, 30185), (359, 30200), (374, 30251), (405, 30323), (416, 30410), (422, 30449), (440, 30587),

Gene: MPhalcon_100 Start: 58576, Stop: 59808, Start Num: 79

Candidate Starts for MPhalcon_100:

(39, 58429), (46, 58459), (56, 58507), (62, 58522), (Start: 66 @58534 has 1 MA's), (Start: 79 @58576 has 66 MA's), (86, 58594), (Start: 112 @58690 has 1 MA's), (125, 58735), (140, 58819), (193, 58942), (277, 59026), (314, 59143), (320, 59179), (337, 59242), (369, 59344), (370, 59347), (383, 59410), (416, 59629), (423, 59671), (425, 59704), (428, 59719),

Gene: MadamMonkfish_99 Start: 58082, Stop: 59314, Start Num: 79

Candidate Starts for MadamMonkfish_99:

(39, 57935), (46, 57965), (56, 58013), (62, 58028), (Start: 66 @58040 has 1 MA's), (Start: 79 @58082 has 66 MA's), (86, 58100), (Start: 112 @58196 has 1 MA's), (125, 58241), (140, 58325), (176, 58448), (Start: 309 @58619 has 1 MA's), (314, 58649), (369, 58844), (370, 58847), (416, 59135), (423, 59177), (425, 59210), (428, 59225),

Gene: Mahavrat_63 Start: 41784, Stop: 43019, Start Num: 73

Candidate Starts for Mahavrat_63:

(27, 41607), (28, 41613), (33, 41622), (34, 41631), (Start: 73 @41784 has 1 MA's), (92, 41841), (Start: 112 @41910 has 1 MA's), (126, 41970), (127, 41976), (128, 41979), (152, 42102), (233, 42324), (234, 42327), (245, 42357), (251, 42369), (258, 42372), (311, 42543), (322, 42609), (405, 42729), (416, 42816), (419, 42828), (423, 42858),

Gene: Majeke_63 Start: 39197, Stop: 40675, Start Num: 61

Candidate Starts for Majeke_63:

(50, 39146), (54, 39161), (Start: 61 @39197 has 7 MA's), (96, 39290), (Start: 98 @39308 has 7 MA's), (110, 39344), (114, 39368), (123, 39404), (129, 39437), (146, 39527), (168, 39596), (172, 39602), (173, 39605), (182, 39623), (183, 39626), (293, 39869), (294, 39872), (Start: 309 @39956 has 1 MA's), (314, 39986), (315, 39998), (339, 40085), (369, 40187), (370, 40190), (385, 40253), (405, 40367), (416, 40469), (419, 40481), (422, 40508), (437, 40625),

Gene: Makemake_60 Start: 41383, Stop: 40385, Start Num: 80

Candidate Starts for Makemake_60:

(Start: 80 @41383 has 52 MA's), (109, 41284), (Start: 112 @41275 has 1 MA's), (125, 41230), (140, 41146), (178, 41023), (234, 40981), (315, 40816), (389, 40726), (390, 40723), (411, 40600), (413, 40585), (415, 40570), (416, 40567), (422, 40528), (438, 40399),

Gene: Malithi_53 Start: 35858, Stop: 37051, Start Num: 101

Candidate Starts for Malithi_53:

(8, 35423), (87, 35795), (Start: 101 @35858 has 10 MA's), (110, 35891), (114, 35915), (123, 35951), (124, 35954), (129, 35984), (146, 36074), (153, 36101), (168, 36164), (172, 36170), (173, 36173), (182, 36191), (183, 36194), (293, 36437), (294, 36440), (312, 36542), (315, 36566), (330, 36623), (331, 36629), (345, 36659), (348, 36665), (370, 36731), (385, 36794), (405, 36908), (410, 36968), (416, 37001), (418, 37010), (419, 37013),

Gene: Mangethe_63 Start: 39197, Stop: 40675, Start Num: 61

Candidate Starts for Mangethe_63:

(50, 39146), (54, 39161), (Start: 61 @39197 has 7 MA's), (96, 39290), (Start: 98 @39308 has 7 MA's), (110, 39344), (114, 39368), (123, 39404), (129, 39437), (146, 39527), (168, 39596), (172, 39602), (173, 39605), (182, 39623), (183, 39626), (293, 39869), (294, 39872), (Start: 309 @39956 has 1 MA's), (314, 39986), (315, 39998), (339, 40085), (369, 40187), (370, 40190), (385, 40253), (405, 40367), (416, 40469), (419, 40481), (422, 40508), (437, 40625),

Gene: Marsha_58 Start: 41423, Stop: 40422, Start Num: 80

Candidate Starts for Marsha_58:

(Start: 80 @41423 has 52 MA's), (Start: 112 @41315 has 1 MA's), (125, 41270), (140, 41186), (298, 41063), (Start: 309 @41009 has 1 MA's), (313, 40988), (314, 40979), (320, 40943), (405, 40700), (412, 40628), (413, 40616), (414, 40607), (416, 40598), (421, 40577), (422, 40559), (425, 40523),

Gene: Maxxinista_101 Start: 58568, Stop: 59791, Start Num: 79

Candidate Starts for Maxxinista_101:

(39, 58421), (46, 58451), (56, 58499), (62, 58514), (Start: 66 @58526 has 1 MA's), (Start: 79 @58568 has 66 MA's), (86, 58586), (Start: 112 @58682 has 1 MA's), (125, 58727), (140, 58811), (193, 58934), (255, 58979), (263, 58991), (Start: 309 @59096 has 1 MA's), (313, 59117), (314, 59126), (320,

59162), (337, 59225), (369, 59327), (370, 59330), (383, 59393), (416, 59612), (423, 59654), (425, 59687), (428, 59702),

Gene: Melons_47 Start: 29024, Stop: 30427, Start Num: 43

Candidate Starts for Melons_47:

(26, 28961), (Start: 40 @29015 has 2 MA's), (Start: 43 @29024 has 24 MA's), (57, 29084), (68, 29111), (Start: 71 @29120 has 1 MA's), (91, 29168), (Start: 112 @29234 has 1 MA's), (119, 29258), (122, 29267), (125, 29273), (131, 29315), (139, 29351), (147, 29399), (157, 29450), (174, 29510), (209, 29591), (223, 29630), (300, 29789), (308, 29846), (310, 29852), (315, 29891), (356, 29999), (359, 30014), (374, 30065), (405, 30137), (416, 30224), (422, 30263), (433, 30332), (440, 30401),

Gene: Mindy_98 Start: 57904, Stop: 59124, Start Num: 79

Candidate Starts for Mindy_98:

(39, 57757), (46, 57787), (56, 57835), (62, 57850), (Start: 66 @57862 has 1 MA's), (Start: 79 @57904 has 66 MA's), (86, 57922), (Start: 112 @58018 has 1 MA's), (125, 58063), (140, 58147), (165, 58270), (204, 58315), (222, 58327), (Start: 309 @58432 has 1 MA's), (313, 58453), (314, 58462), (315, 58474), (320, 58498), (405, 58843), (412, 58915), (416, 58945), (423, 58987), (425, 59020), (428, 59035),

Gene: Miniwave_94 Start: 58078, Stop: 59301, Start Num: 79

Candidate Starts for Miniwave_94:

(39, 57931), (46, 57961), (56, 58009), (62, 58024), (Start: 66 @58036 has 1 MA's), (Start: 79 @58078 has 66 MA's), (86, 58096), (Start: 112 @58192 has 1 MA's), (125, 58237), (140, 58321), (193, 58444), (255, 58489), (263, 58501), (Start: 309 @58606 has 1 MA's), (313, 58627), (314, 58636), (320, 58672), (337, 58735), (369, 58837), (370, 58840), (383, 58903), (416, 59122), (423, 59164), (425, 59197), (428, 59212),

Gene: Misfit_100 Start: 59873, Stop: 60904, Start Num: 79

Candidate Starts for Misfit_100:

(39, 59726), (46, 59756), (56, 59804), (62, 59819), (Start: 66 @59831 has 1 MA's), (Start: 79 @59873 has 66 MA's), (86, 59891), (Start: 112 @59987 has 1 MA's), (125, 60032), (140, 60116), (Start: 309 @60320 has 1 MA's), (314, 60350), (320, 60386), (405, 60623), (416, 60725), (423, 60767), (425, 60800), (428, 60815),

Gene: Moldemort_102 Start: 58540, Stop: 59772, Start Num: 79

Candidate Starts for Moldemort_102:

(39, 58393), (46, 58423), (56, 58471), (62, 58486), (Start: 66 @58498 has 1 MA's), (Start: 79 @58540 has 66 MA's), (86, 58558), (Start: 112 @58654 has 1 MA's), (125, 58699), (140, 58783), (176, 58906), (Start: 309 @59077 has 1 MA's), (314, 59107), (369, 59302), (370, 59305), (416, 59593), (423, 59635), (425, 59668), (428, 59683),

Gene: Monet_62 Start: 42192, Stop: 41047, Start Num: 80

Candidate Starts for Monet_62:

(Start: 80 @42192 has 52 MA's), (Start: 112 @42084 has 1 MA's), (125, 42039), (140, 41955), (155, 41874), (201, 41796), (224, 41772), (257, 41721), (Start: 309 @41607 has 1 MA's), (313, 41586), (314, 41577), (320, 41541), (369, 41382), (370, 41379), (405, 41325), (413, 41241), (414, 41232), (416, 41223), (421, 41202),

Gene: Mosby_95 Start: 58156, Stop: 59268, Start Num: 79

Candidate Starts for Mosby_95:

(39, 58009), (46, 58039), (56, 58087), (62, 58102), (Start: 66 @58114 has 1 MA's), (Start: 79 @58156 has 66 MA's), (86, 58174), (Start: 112 @58270 has 1 MA's), (125, 58315), (140, 58399), (192, 58522), (212, 58567), (253, 58579), (Start: 309 @58684 has 1 MA's), (314, 58714), (320, 58750), (405,

58987), (416, 59089), (423, 59131), (425, 59164), (428, 59179),

Gene: Ms6_71 Start: 41300, Stop: 42577, Start Num: 75

Candidate Starts for Ms6_71:

(67, 41276), (Start: 75 @41300 has 9 MA's), (77, 41306), (94, 41360), (103, 41396), (Start: 112 @41429 has 1 MA's), (125, 41474), (140, 41558), (179, 41684), (Start: 309 @41855 has 1 MA's), (313, 41876), (314, 41885), (336, 41984), (369, 42086), (370, 42089), (381, 42152), (405, 42269), (416, 42371), (419, 42383), (421, 42392), (422, 42410), (437, 42527),

Gene: Mule_57 Start: 39640, Stop: 38414, Start Num: 80

Candidate Starts for Mule_57:

(Start: 80 @39640 has 52 MA's), (Start: 112 @39532 has 1 MA's), (156, 39301), (Start: 309 @38899 has 1 MA's), (314, 38869), (320, 38833), (370, 38746), (405, 38692), (416, 38590), (423, 38548), (425, 38515),

Gene: Murphy_99 Start: 58919, Stop: 60163, Start Num: 79

Candidate Starts for Murphy_99:

(39, 58772), (46, 58802), (56, 58850), (62, 58865), (Start: 66 @58877 has 1 MA's), (Start: 79 @58919 has 66 MA's), (86, 58937), (Start: 112 @59033 has 1 MA's), (125, 59078), (140, 59162), (176, 59285), (280, 59372), (283, 59378), (Start: 309 @59468 has 1 MA's), (313, 59489), (314, 59498), (369, 59693), (370, 59696), (416, 59984), (423, 60026), (425, 60059), (428, 60074),

Gene: Museum_60 Start: 41508, Stop: 40111, Start Num: 80

Candidate Starts for Museum_60:

(Start: 80 @41508 has 52 MA's), (Start: 112 @41400 has 1 MA's), (125, 41355), (131, 41313), (132, 41310), (140, 41271), (185, 41091), (231, 40974), (276, 40872), (Start: 309 @40785 has 1 MA's), (313, 40764), (314, 40755), (320, 40719), (366, 40578), (367, 40575), (380, 40497), (405, 40389), (413, 40305), (414, 40296), (416, 40287), (421, 40266), (422, 40248), (425, 40212),

Gene: Nala_101 Start: 59085, Stop: 60317, Start Num: 79

Candidate Starts for Nala_101:

(39, 58938), (46, 58968), (56, 59016), (62, 59031), (Start: 66 @59043 has 1 MA's), (Start: 79 @59085 has 66 MA's), (86, 59103), (Start: 112 @59199 has 1 MA's), (125, 59244), (140, 59328), (193, 59451), (277, 59535), (314, 59652), (320, 59688), (337, 59751), (369, 59853), (370, 59856), (383, 59919), (416, 60138), (423, 60180), (425, 60213), (428, 60228),

Gene: Nazo_56 Start: 38421, Stop: 39956, Start Num: 43

Candidate Starts for Nazo_56:

(4, 38139), (25, 38340), (36, 38382), (Start: 43 @38421 has 24 MA's), (51, 38448), (53, 38454), (57, 38478), (Start: 71 @38514 has 1 MA's), (72, 38517), (Start: 81 @38547 has 1 MA's), (100, 38613), (131, 38763), (155, 38886), (209, 39024), (237, 39096), (Start: 309 @39342 has 1 MA's), (312, 39360), (332, 39450), (334, 39459), (355, 39501), (405, 39666), (408, 39711), (419, 39765), (423, 39795), (436, 39900),

Gene: Necropolis_52 Start: 36014, Stop: 37207, Start Num: 101

Candidate Starts for Necropolis_52:

(8, 35579), (87, 35951), (Start: 101 @36014 has 10 MA's), (110, 36047), (114, 36071), (123, 36107), (124, 36110), (129, 36140), (146, 36230), (153, 36257), (168, 36320), (172, 36326), (173, 36329), (182, 36347), (183, 36350), (293, 36593), (294, 36596), (312, 36698), (315, 36722), (330, 36779), (331, 36785), (345, 36815), (348, 36821), (370, 36887), (385, 36950), (405, 37064), (410, 37124), (416, 37157), (418, 37166), (419, 37169),

Gene: Nerujay_61 Start: 41557, Stop: 40460, Start Num: 80

Candidate Starts for Nerujay_61:

(Start: 80 @41557 has 52 MA's), (Start: 112 @41449 has 1 MA's), (154, 41404), (190, 41362), (191, 41359), (213, 41320), (300, 41197), (Start: 309 @41143 has 1 MA's), (313, 41122), (314, 41113), (320, 41077), (353, 40975), (369, 40912), (370, 40909), (405, 40723), (416, 40636), (423, 40594), (425, 40561),

Gene: NoSleep_100 Start: 58101, Stop: 59324, Start Num: 79

Candidate Starts for NoSleep_100:

(39, 57954), (46, 57984), (56, 58032), (62, 58047), (Start: 66 @58059 has 1 MA's), (Start: 79 @58101 has 66 MA's), (86, 58119), (Start: 112 @58215 has 1 MA's), (125, 58260), (140, 58344), (193, 58467), (255, 58512), (263, 58524), (Start: 309 @58629 has 1 MA's), (313, 58650), (314, 58659), (320, 58695), (337, 58758), (369, 58860), (370, 58863), (383, 58926), (416, 59145), (423, 59187), (425, 59220), (428, 59235),

Gene: Norz_60 Start: 42653, Stop: 41406, Start Num: 80

Candidate Starts for Norz_60:

(Start: 80 @42653 has 52 MA's), (Start: 112 @42545 has 1 MA's), (125, 42500), (140, 42416), (155, 42335), (203, 42197), (228, 42125), (Start: 309 @41879 has 1 MA's), (314, 41849), (315, 41837), (369, 41747), (370, 41744), (411, 41621), (413, 41606), (415, 41591), (416, 41588), (422, 41549), (438, 41420),

Gene: Omega_155 Start: 80246, Stop: 81556, Start Num: 80

Candidate Starts for Omega_155:

(Start: 80 @80246 has 52 MA's), (Start: 112 @80354 has 1 MA's), (125, 80399), (140, 80483), (155, 80564), (185, 80663), (231, 80780), (276, 80882), (Start: 309 @80969 has 1 MA's), (313, 80990), (314, 80999), (320, 81035), (405, 81278), (412, 81350), (413, 81362), (414, 81371), (416, 81380), (421, 81401), (422, 81419), (425, 81455),

Gene: Oogway_58 Start: 41069, Stop: 39816, Start Num: 80

Candidate Starts for Oogway_58:

(Start: 80 @41069 has 52 MA's), (Start: 112 @40961 has 1 MA's), (125, 40916), (205, 40691), (Start: 309 @40499 has 1 MA's), (313, 40478), (314, 40469), (320, 40433), (323, 40412), (370, 40265), (387, 40187), (405, 40079), (416, 39992), (423, 39950),

Gene: Orcanus_45 Start: 30565, Stop: 31884, Start Num: 43

Candidate Starts for Orcanus_45:

(17, 30397), (Start: 40 @30556 has 2 MA's), (Start: 43 @30565 has 24 MA's), (Start: 71 @30661 has 1 MA's), (91, 30709), (95, 30721), (Start: 112 @30775 has 1 MA's), (119, 30799), (125, 30814), (127, 30835), (139, 30892), (147, 30940), (157, 30991), (169, 31042), (209, 31132), (241, 31210), (308, 31387), (312, 31408), (374, 31522), (401, 31561), (405, 31594), (416, 31681), (423, 31723), (425, 31756), (435, 31822), (436, 31828), (440, 31858), (442, 31879),

Gene: OrionPax_98 Start: 58173, Stop: 59396, Start Num: 79

Candidate Starts for OrionPax_98:

(39, 58026), (46, 58056), (56, 58104), (62, 58119), (Start: 66 @58131 has 1 MA's), (Start: 79 @58173 has 66 MA's), (86, 58191), (Start: 112 @58287 has 1 MA's), (125, 58332), (140, 58416), (193, 58539), (255, 58584), (263, 58596), (Start: 309 @58701 has 1 MA's), (313, 58722), (314, 58731), (320, 58767), (337, 58830), (369, 58932), (370, 58935), (383, 58998), (416, 59217), (423, 59259), (425, 59292), (428, 59307),

Gene: PHappiness_62 Start: 41626, Stop: 43140, Start Num: 32

Candidate Starts for PHappiness_62:

(8, 41449), (Start: 32 @41626 has 10 MA's), (Start: 43 @41683 has 24 MA's), (53, 41719), (60, 41752), (118, 41974), (127, 42016), (152, 42142), (155, 42160), (171, 42220), (194, 42262), (197, 42274), (234, 42367), (243, 42391), (266, 42451), (Start: 309 @42574 has 1 MA's), (313, 42595), (314, 42604), (335, 42697), (383, 42877), (405, 42997), (410, 43057), (416, 43090), (418, 43099), (419, 43102),

Gene: Palpatine_100 Start: 59370, Stop: 60602, Start Num: 79

Candidate Starts for Palpatine_100:

(39, 59223), (46, 59253), (56, 59301), (62, 59316), (Start: 66 @59328 has 1 MA's), (Start: 79 @59370 has 66 MA's), (86, 59388), (Start: 112 @59484 has 1 MA's), (125, 59529), (140, 59613), (193, 59736), (277, 59820), (314, 59937), (320, 59973), (337, 60036), (369, 60138), (370, 60141), (383, 60204), (416, 60423), (423, 60465), (425, 60498), (428, 60513),

Gene: Paperbeatsrock_98 Start: 58756, Stop: 59979, Start Num: 79

Candidate Starts for Paperbeatsrock_98:

(39, 58609), (46, 58639), (56, 58687), (62, 58702), (Start: 66 @58714 has 1 MA's), (Start: 79 @58756 has 66 MA's), (86, 58774), (Start: 112 @58870 has 1 MA's), (125, 58915), (140, 58999), (193, 59122), (255, 59167), (263, 59179), (Start: 309 @59284 has 1 MA's), (313, 59305), (314, 59314), (320, 59350), (337, 59413), (369, 59515), (370, 59518), (383, 59581), (416, 59800), (423, 59842), (425, 59875), (428, 59890),

Gene: Paphu_58 Start: 40715, Stop: 39447, Start Num: 80

Candidate Starts for Paphu_58:

(Start: 80 @40715 has 52 MA's), (Start: 112 @40607 has 1 MA's), (125, 40562), (140, 40478), (155, 40397), (185, 40298), (231, 40181), (276, 40079), (Start: 309 @39992 has 1 MA's), (313, 39971), (314, 39962), (325, 39905), (399, 39752), (405, 39710), (411, 39656), (416, 39623), (425, 39548),

Gene: Parliament_59 Start: 41358, Stop: 40075, Start Num: 80

Candidate Starts for Parliament_59:

(Start: 80 @41358 has 52 MA's), (Start: 112 @41250 has 1 MA's), (125, 41205), (127, 41184), (131, 41163), (132, 41160), (155, 41040), (185, 40941), (231, 40824), (276, 40722), (Start: 309 @40635 has 1 MA's), (313, 40614), (314, 40605), (325, 40548), (389, 40410), (390, 40407), (405, 40353), (413, 40269), (414, 40260), (416, 40251), (421, 40230), (422, 40212), (425, 40176),

Gene: Pat3_96 Start: 57279, Stop: 58496, Start Num: 79

Candidate Starts for Pat3_96:

(39, 57132), (46, 57162), (56, 57210), (62, 57225), (Start: 66 @57237 has 1 MA's), (Start: 79 @57279 has 66 MA's), (86, 57297), (Start: 112 @57393 has 1 MA's), (125, 57438), (140, 57522), (193, 57645), (255, 57690), (268, 57702), (312, 57825), (314, 57837), (315, 57849), (423, 58359), (425, 58392),

Gene: Pelly_59 Start: 41496, Stop: 40015, Start Num: 80

Candidate Starts for Pelly_59:

(Start: 80 @41496 has 52 MA's), (109, 41397), (Start: 112 @41388 has 1 MA's), (125, 41343), (140, 41259), (205, 41028), (217, 40980), (236, 40944), (270, 40854), (279, 40836), (Start: 309 @40713 has 1 MA's), (314, 40683), (320, 40647), (342, 40569), (352, 40542), (356, 40536), (369, 40476), (386, 40410), (413, 40209), (414, 40200), (416, 40191), (421, 40170), (422, 40152), (425, 40116),

Gene: Perseus_59 Start: 42045, Stop: 40819, Start Num: 80

Candidate Starts for Perseus_59:

(Start: 80 @42045 has 52 MA's), (Start: 112 @41937 has 1 MA's), (156, 41706), (Start: 309 @41304 has 1 MA's), (314, 41274), (320, 41238), (370, 41151), (405, 41097), (416, 40995), (423, 40953), (425, 40920),

Gene: Petp2012_60 Start: 41977, Stop: 40853, Start Num: 80

Candidate Starts for Petp2012_60:

(Start: 80 @41977 has 52 MA's), (Start: 112 @41869 has 1 MA's), (154, 41824), (213, 41740), (Start: 309 @41536 has 1 MA's), (314, 41506), (320, 41470), (353, 41368), (369, 41305), (370, 41302), (387, 41224), (405, 41116), (416, 41029), (423, 40987), (425, 40954),

Gene: Phanphagia_71 Start: 45375, Stop: 46631, Start Num: 75

Candidate Starts for Phanphagia_71:

(64, 45342), (Start: 75 @45375 has 9 MA's), (85, 45405), (94, 45435), (103, 45471), (Start: 112 @45504 has 1 MA's), (125, 45549), (140, 45633), (152, 45696), (177, 45756), (275, 45843), (283, 45849), (Start: 309 @45939 has 1 MA's), (314, 45969), (320, 46005), (369, 46149), (370, 46152), (395, 46254), (404, 46296), (405, 46323), (412, 46395), (413, 46407), (416, 46425), (419, 46437), (421, 46446), (422, 46464), (437, 46581),

Gene: Pharsalus_96 Start: 58556, Stop: 59674, Start Num: 79

Candidate Starts for Pharsalus_96:

(39, 58409), (46, 58439), (56, 58487), (62, 58502), (Start: 66 @58514 has 1 MA's), (Start: 79 @58556 has 66 MA's), (86, 58574), (Start: 112 @58670 has 1 MA's), (125, 58715), (140, 58799), (193, 58922), (Start: 309 @58976 has 1 MA's), (314, 59006), (320, 59042), (357, 59144), (369, 59207), (370, 59210), (388, 59288), (405, 59396), (412, 59468), (417, 59504), (426, 59582), (431, 59603),

Gene: PhatBacter_102 Start: 59115, Stop: 60347, Start Num: 79

Candidate Starts for PhatBacter_102:

(39, 58968), (46, 58998), (56, 59046), (62, 59061), (Start: 66 @59073 has 1 MA's), (Start: 79 @59115 has 66 MA's), (86, 59133), (Start: 112 @59229 has 1 MA's), (125, 59274), (140, 59358), (193, 59481), (277, 59565), (314, 59682), (320, 59718), (337, 59781), (369, 59883), (370, 59886), (383, 59949), (416, 60168), (423, 60210), (425, 60243), (428, 60258),

Gene: Phaux_101 Start: 59684, Stop: 60907, Start Num: 79

Candidate Starts for Phaux_101:

(39, 59537), (46, 59567), (56, 59615), (62, 59630), (Start: 66 @59642 has 1 MA's), (Start: 79 @59684 has 66 MA's), (86, 59702), (Start: 112 @59798 has 1 MA's), (125, 59843), (140, 59927), (193, 60050), (255, 60095), (263, 60107), (Start: 309 @60212 has 1 MA's), (313, 60233), (314, 60242), (320, 60278), (337, 60341), (369, 60443), (370, 60446), (383, 60509), (416, 60728), (423, 60770), (425, 60803), (428, 60818),

Gene: Phegasus_63 Start: 39164, Stop: 40642, Start Num: 61

Candidate Starts for Phegasus_63:

(50, 39113), (54, 39128), (Start: 61 @39164 has 7 MA's), (96, 39257), (Start: 98 @39275 has 7 MA's), (110, 39311), (114, 39335), (123, 39371), (129, 39404), (146, 39494), (168, 39563), (172, 39569), (173, 39572), (182, 39590), (183, 39593), (293, 39836), (294, 39839), (Start: 309 @39923 has 1 MA's), (314, 39953), (315, 39965), (339, 40052), (369, 40154), (370, 40157), (385, 40220), (405, 40334), (416, 40436), (419, 40448), (422, 40475), (437, 40592),

Gene: PhesterPhotato_67 Start: 41796, Stop: 43328, Start Num: 32

Candidate Starts for PhesterPhotato_67:

(Start: 32 @41796 has 10 MA's), (Start: 43 @41853 has 24 MA's), (47, 41865), (60, 41922), (78, 41976), (127, 42189), (128, 42192), (132, 42213), (208, 42483), (220, 42531), (239, 42567), (270, 42657), (281, 42675), (Start: 309 @42798 has 1 MA's), (312, 42816), (314, 42828), (315, 42840), (323, 42885), (343, 42933), (397, 43128), (405, 43185), (410, 43245), (416, 43278), (418, 43287), (419, 43290),

Gene: Phineas_55 Start: 36983, Stop: 38176, Start Num: 101

Candidate Starts for Phineas_55:

(8, 36548), (87, 36920), (Start: 101 @36983 has 10 MA's), (110, 37016), (114, 37040), (123, 37076), (124, 37079), (129, 37109), (146, 37199), (153, 37226), (168, 37289), (172, 37295), (173, 37298), (182, 37316), (183, 37319), (293, 37562), (294, 37565), (312, 37667), (315, 37691), (330, 37748), (331, 37754), (345, 37784), (348, 37790), (370, 37856), (385, 37919), (405, 38033), (410, 38093), (416, 38126), (418, 38135), (419, 38138),

Gene: PhluffyCoco_47 Start: 29684, Stop: 31087, Start Num: 43

Candidate Starts for PhluffyCoco_47:

(Start: 43 @29684 has 24 MA's), (68, 29771), (91, 29828), (95, 29840), (Start: 112 @29894 has 1 MA's), (119, 29918), (139, 30011), (147, 30059), (149, 30065), (155, 30098), (157, 30110), (209, 30251), (300, 30449), (308, 30506), (310, 30512), (356, 30659), (359, 30674), (365, 30704), (374, 30725), (408, 30842), (411, 30851), (416, 30884), (422, 30923), (423, 30926), (427, 30971), (433, 30992), (440, 31061), (442, 31082),

Gene: PhrostyMug_59 Start: 41814, Stop: 40588, Start Num: 80

Candidate Starts for PhrostyMug_59:

(Start: 80 @41814 has 52 MA's), (Start: 112 @41706 has 1 MA's), (156, 41475), (Start: 309 @41073 has 1 MA's), (314, 41043), (320, 41007), (370, 40920), (405, 40866), (416, 40764), (423, 40722), (425, 40689),

Gene: Phrux_96 Start: 57960, Stop: 59183, Start Num: 79

Candidate Starts for Phrux_96:

(39, 57813), (46, 57843), (56, 57891), (62, 57906), (Start: 66 @57918 has 1 MA's), (Start: 79 @57960 has 66 MA's), (86, 57978), (Start: 112 @58074 has 1 MA's), (125, 58119), (140, 58203), (193, 58326), (255, 58371), (263, 58383), (Start: 309 @58488 has 1 MA's), (313, 58509), (314, 58518), (320, 58554), (337, 58617), (369, 58719), (370, 58722), (383, 58785), (416, 59004), (423, 59046), (425, 59079), (428, 59094),

Gene: Policronamos_102 Start: 59388, Stop: 60611, Start Num: 79

Candidate Starts for Policronamos_102:

(39, 59241), (46, 59271), (56, 59319), (62, 59334), (Start: 66 @59346 has 1 MA's), (Start: 79 @59388 has 66 MA's), (86, 59406), (Start: 112 @59502 has 1 MA's), (125, 59547), (140, 59631), (193, 59754), (255, 59799), (263, 59811), (Start: 309 @59916 has 1 MA's), (313, 59937), (314, 59946), (320, 59982), (337, 60045), (369, 60147), (370, 60150), (383, 60213), (416, 60432), (423, 60474), (425, 60507), (428, 60522),

Gene: Polka_45 Start: 28380, Stop: 29783, Start Num: 43

Candidate Starts for Polka_45:

(3, 28119), (15, 28245), (Start: 43 @28380 has 24 MA's), (57, 28440), (68, 28467), (Start: 71 @28476 has 1 MA's), (72, 28479), (91, 28524), (95, 28536), (Start: 112 @28590 has 1 MA's), (119, 28614), (125, 28629), (131, 28671), (139, 28707), (147, 28755), (157, 28806), (174, 28866), (209, 28947), (223, 28986), (300, 29145), (308, 29202), (310, 29208), (315, 29247), (356, 29355), (359, 29370), (374, 29421), (405, 29493), (416, 29580), (430, 29682), (440, 29757),

Gene: Polka14_65 Start: 42690, Stop: 44204, Start Num: 32

Candidate Starts for Polka14_65:

(8, 42513), (Start: 32 @42690 has 10 MA's), (Start: 43 @42747 has 24 MA's), (53, 42783), (60, 42816), (118, 43038), (127, 43080), (152, 43206), (155, 43224), (171, 43284), (194, 43326), (197, 43338), (234, 43431), (243, 43455), (266, 43515), (Start: 309 @43638 has 1 MA's), (313, 43659), (314, 43668), (335, 43761), (383, 43941), (405, 44061), (410, 44121), (416, 44154), (418, 44163), (419, 44166),

Gene: Polkaroo_53 Start: 35895, Stop: 37256, Start Num: 100

Candidate Starts for Polkaroo_53:

(76, 35826), (100, 35895), (107, 35922), (110, 35928), (114, 35952), (123, 35988), (129, 36021), (146, 36111), (153, 36138), (196, 36270), (230, 36351), (247, 36393), (248, 36396), (312, 36615), (314, 36627), (370, 36807), (392, 36909), (405, 36966), (416, 37053), (419, 37065), (421, 37074), (422, 37092), (437, 37209),

Gene: PopTart_63 Start: 42020, Stop: 43417, Start Num: 99

Candidate Starts for PopTart_63:

(58, 41912), (Start: 99 @42020 has 2 MA's), (107, 42050), (114, 42080), (123, 42116), (129, 42149), (168, 42326), (172, 42332), (173, 42335), (182, 42353), (183, 42356), (196, 42395), (Start: 218 @42458 has 1 MA's), (230, 42476), (248, 42521), (Start: 309 @42692 has 1 MA's), (313, 42713), (314, 42722), (320, 42758), (355, 42860), (369, 42923), (370, 42926), (416, 43211), (419, 43223), (422, 43250), (437, 43367),

Gene: Porky_98 Start: 57668, Stop: 58927, Start Num: 79

Candidate Starts for Porky_98:

(39, 57521), (46, 57551), (56, 57599), (62, 57614), (Start: 66 @57626 has 1 MA's), (Start: 79 @57668 has 66 MA's), (86, 57686), (Start: 112 @57782 has 1 MA's), (125, 57827), (140, 57911), (157, 58004), (264, 58121), (Start: 309 @58232 has 1 MA's), (314, 58262), (337, 58361), (369, 58463), (370, 58466), (383, 58529), (405, 58646), (416, 58748), (423, 58790), (425, 58823), (428, 58838),

Gene: Pygmy_57 Start: 38447, Stop: 39640, Start Num: 101

Candidate Starts for Pygmy_57:

(8, 38012), (87, 38384), (Start: 101 @38447 has 10 MA's), (110, 38480), (114, 38504), (123, 38540), (124, 38543), (129, 38573), (146, 38663), (153, 38690), (168, 38753), (172, 38759), (173, 38762), (182, 38780), (183, 38783), (293, 39026), (294, 39029), (312, 39131), (315, 39155), (330, 39212), (331, 39218), (345, 39248), (348, 39254), (370, 39320), (385, 39383), (405, 39497), (410, 39557), (416, 39590), (418, 39599), (419, 39602),

Gene: Quallification_100 Start: 59164, Stop: 60393, Start Num: 79

Candidate Starts for Quallification_100:

(39, 59017), (46, 59047), (56, 59095), (62, 59110), (Start: 66 @59122 has 1 MA's), (Start: 79 @59164 has 66 MA's), (86, 59182), (Start: 112 @59278 has 1 MA's), (125, 59323), (140, 59407), (193, 59530), (255, 59575), (263, 59587), (Start: 309 @59692 has 1 MA's), (313, 59713), (314, 59722), (320, 59758), (337, 59821), (369, 59923), (370, 59926), (388, 60004), (405, 60112), (416, 60214), (423, 60256), (425, 60289), (428, 60304),

Gene: QueenHazel_54 Start: 37190, Stop: 38452, Start Num: 75

Candidate Starts for QueenHazel_54:

(Start: 44 @37100 has 1 MA's), (46, 37109), (Start: 75 @37190 has 9 MA's), (85, 37220), (94, 37250), (103, 37286), (Start: 112 @37319 has 1 MA's), (125, 37364), (152, 37511), (155, 37529), (210, 37613), (Start: 309 @37733 has 1 MA's), (313, 37754), (314, 37763), (320, 37799), (324, 37820), (344, 37874), (357, 37901), (405, 38147), (415, 38246), (416, 38249), (419, 38261), (421, 38270), (423, 38291),

Gene: Quico_82 Start: 47597, Stop: 49045, Start Num: 75

Candidate Starts for Quico_82:

(67, 47573), (Start: 75 @47597 has 9 MA's), (77, 47603), (94, 47657), (103, 47693), (Start: 112 @47726 has 1 MA's), (125, 47771), (140, 47855), (161, 47972), (190, 48026), (202, 48053), (273, 48230), (Start: 309 @48338 has 1 MA's), (310, 48341), (315, 48380), (347, 48482), (350, 48488), (369, 48563), (370, 48566), (405, 48752), (416, 48839), (419, 48851), (421, 48860), (423, 48881), (437, 48995),

Gene: Rajelicia_60 Start: 41970, Stop: 40882, Start Num: 80

Candidate Starts for Rajelicia_60:

(Start: 80 @41970 has 52 MA's), (Start: 112 @41862 has 1 MA's), (125, 41817), (140, 41733), (298, 41610), (Start: 309 @41556 has 1 MA's), (314, 41526), (320, 41490), (369, 41349), (370, 41346), (387, 41268), (405, 41160), (413, 41076), (414, 41067), (416, 41058), (421, 41037), (422, 41019), (425, 40983),

Gene: RedFox_47 Start: 29683, Stop: 31086, Start Num: 43

Candidate Starts for RedFox_47:

(Start: 43 @29683 has 24 MA's), (68, 29770), (Start: 71 @29779 has 1 MA's), (91, 29827), (95, 29839), (Start: 112 @29893 has 1 MA's), (119, 29917), (125, 29932), (139, 30010), (147, 30058), (149, 30064), (155, 30097), (157, 30109), (209, 30250), (300, 30448), (308, 30505), (310, 30511), (356, 30658), (359, 30673), (365, 30703), (374, 30724), (375, 30727), (408, 30841), (411, 30850), (416, 30883), (423, 30925), (427, 30970), (433, 30991), (440, 31060), (442, 31081),

Gene: Renaud18_76 Start: 44560, Stop: 46092, Start Num: 32

Candidate Starts for Renaud18_76:

(8, 44383), (10, 44389), (11, 44398), (12, 44407), (18, 44446), (23, 44503), (Start: 32 @44560 has 10 MA's), (Start: 43 @44617 has 24 MA's), (47, 44629), (60, 44686), (78, 44740), (127, 44953), (128, 44956), (132, 44977), (208, 45247), (220, 45295), (239, 45331), (270, 45421), (281, 45439), (Start: 309 @45562 has 1 MA's), (312, 45580), (314, 45592), (315, 45604), (323, 45649), (343, 45697), (397, 45892), (405, 45949), (410, 46009), (416, 46042), (418, 46051), (419, 46054),

Gene: Renna12_46 Start: 29540, Stop: 30943, Start Num: 43

Candidate Starts for Renna12_46:

(Start: 43 @29540 has 24 MA's), (68, 29627), (Start: 71 @29636 has 1 MA's), (91, 29684), (95, 29696), (Start: 112 @29750 has 1 MA's), (119, 29774), (125, 29789), (127, 29810), (132, 29834), (139, 29867), (147, 29915), (149, 29921), (157, 29966), (209, 30107), (300, 30305), (308, 30362), (Start: 309 @30365 has 1 MA's), (356, 30515), (359, 30530), (365, 30560), (374, 30581), (408, 30698), (411, 30707), (413, 30722), (416, 30740), (422, 30779), (427, 30827), (433, 30848), (440, 30917), (442, 30938),

Gene: Rimmer_97 Start: 58390, Stop: 59805, Start Num: 79

Candidate Starts for Rimmer_97:

(39, 58243), (46, 58273), (56, 58321), (62, 58336), (Start: 66 @58348 has 1 MA's), (Start: 79 @58390 has 66 MA's), (86, 58408), (Start: 112 @58504 has 1 MA's), (125, 58549), (140, 58633), (193, 58813), (206, 58846), (283, 59008), (285, 59017), (Start: 309 @59116 has 1 MA's), (314, 59146), (315, 59158), (423, 59668), (425, 59701),

Gene: RitaG_62 Start: 41971, Stop: 43485, Start Num: 32

Candidate Starts for RitaG_62:

(8, 41794), (Start: 32 @41971 has 10 MA's), (Start: 43 @42028 has 24 MA's), (53, 42064), (60, 42097), (118, 42319), (127, 42361), (152, 42487), (155, 42505), (171, 42565), (194, 42607), (197, 42619), (234, 42712), (243, 42736), (266, 42796), (Start: 309 @42919 has 1 MA's), (313, 42940), (314, 42949), (335, 43042), (383, 43222), (405, 43342), (410, 43402), (416, 43435), (418, 43444), (419, 43447),

Gene: RiverMonster_99 Start: 58856, Stop: 60079, Start Num: 79

Candidate Starts for RiverMonster_99:

(39, 58709), (46, 58739), (56, 58787), (62, 58802), (Start: 66 @58814 has 1 MA's), (Start: 79 @58856 has 66 MA's), (86, 58874), (Start: 112 @58970 has 1 MA's), (125, 59015), (140, 59099), (193, 59222), (255, 59267), (263, 59279), (Start: 309 @59384 has 1 MA's), (313, 59405), (314, 59414), (320,

59450), (337, 59513), (369, 59615), (370, 59618), (383, 59681), (416, 59900), (423, 59942), (425, 59975), (428, 59990),

Gene: Rohr_60 Start: 41323, Stop: 40028, Start Num: 80

Candidate Starts for Rohr_60:

(Start: 80 @41323 has 52 MA's), (Start: 112 @41215 has 1 MA's), (164, 40993), (182, 40951), (213, 40888), (300, 40765), (Start: 309 @40711 has 1 MA's), (313, 40690), (314, 40681), (353, 40543), (369, 40480), (370, 40477), (387, 40399), (405, 40291), (416, 40204), (423, 40162), (425, 40129),

Gene: Royals2015_69 Start: 42774, Stop: 44306, Start Num: 32

Candidate Starts for Royals2015_69:

(8, 42597), (10, 42603), (11, 42612), (18, 42660), (23, 42717), (Start: 32 @42774 has 10 MA's), (Start: 43 @42831 has 24 MA's), (47, 42843), (60, 42900), (78, 42954), (127, 43167), (128, 43170), (132, 43191), (208, 43461), (220, 43509), (239, 43545), (270, 43635), (281, 43653), (Start: 309 @43776 has 1 MA's), (312, 43794), (314, 43806), (315, 43818), (323, 43863), (343, 43911), (397, 44106), (405, 44163), (410, 44223), (416, 44256), (418, 44265), (419, 44268),

Gene: Ruchi_43 Start: 29375, Stop: 30694, Start Num: 43

Candidate Starts for Ruchi_43:

(Start: 40 @29366 has 2 MA's), (Start: 43 @29375 has 24 MA's), (57, 29435), (Start: 71 @29471 has 1 MA's), (95, 29531), (Start: 112 @29585 has 1 MA's), (119, 29609), (125, 29624), (127, 29645), (139, 29702), (147, 29750), (157, 29801), (169, 29852), (209, 29942), (223, 29981), (262, 30053), (310, 30203), (374, 30332), (401, 30371), (405, 30404), (416, 30491), (422, 30530), (440, 30668),

Gene: Rufus_60 Start: 40606, Stop: 39494, Start Num: 80

Candidate Starts for Rufus_60:

(Start: 80 @40606 has 52 MA's), (Start: 112 @40498 has 1 MA's), (125, 40453), (140, 40369), (298, 40246), (Start: 309 @40192 has 1 MA's), (314, 40162), (320, 40126), (353, 40024), (369, 39961), (370, 39958), (387, 39880), (405, 39772), (413, 39688), (414, 39679), (416, 39670), (421, 39649), (422, 39631), (425, 39595),

Gene: Sagefire_61 Start: 42000, Stop: 40702, Start Num: 80

Candidate Starts for Sagefire_61:

(Start: 80 @42000 has 52 MA's), (Start: 112 @41892 has 1 MA's), (125, 41847), (140, 41763), (155, 41682), (203, 41544), (228, 41472), (Start: 309 @41226 has 1 MA's), (313, 41205), (314, 41196), (320, 41160), (338, 41118), (370, 41019), (405, 40965), (416, 40878), (423, 40836), (425, 40803),

Gene: Sassay_94 Start: 57118, Stop: 58230, Start Num: 79

Candidate Starts for Sassay_94:

(39, 56971), (46, 57001), (56, 57049), (62, 57064), (Start: 66 @57076 has 1 MA's), (Start: 79 @57118 has 66 MA's), (86, 57136), (Start: 112 @57232 has 1 MA's), (125, 57277), (140, 57361), (192, 57484), (212, 57529), (253, 57541), (Start: 309 @57646 has 1 MA's), (314, 57676), (320, 57712), (405, 57949), (416, 58051), (423, 58093), (425, 58126), (428, 58141),

Gene: SassyB_63 Start: 42020, Stop: 43417, Start Num: 99

Candidate Starts for SassyB_63:

(58, 41912), (Start: 99 @42020 has 2 MA's), (107, 42050), (114, 42080), (123, 42116), (129, 42149), (168, 42326), (172, 42332), (173, 42335), (182, 42353), (183, 42356), (196, 42395), (Start: 218 @42458 has 1 MA's), (230, 42476), (248, 42521), (Start: 309 @42692 has 1 MA's), (313, 42713), (314, 42722), (320, 42758), (355, 42860), (369, 42923), (370, 42926), (416, 43211), (419, 43223), (422, 43250), (437, 43367),

Gene: Seagreen_72 Start: 45196, Stop: 46428, Start Num: 98

Candidate Starts for Seagreen_72:

(41, 45031), (89, 45172), (Start: 98 @45196 has 7 MA's), (102, 45202), (114, 45256), (123, 45292), (129, 45325), (146, 45415), (153, 45442), (168, 45505), (172, 45511), (173, 45514), (182, 45532), (183, 45535), (248, 45700), (259, 45730), (Start: 309 @45871 has 1 MA's), (313, 45892), (314, 45901), (320, 45937), (369, 46096), (370, 46099), (405, 46285), (407, 46330), (410, 46345), (416, 46378), (418, 46387), (419, 46390),

Gene: ShamWow_99 Start: 58977, Stop: 60200, Start Num: 79

Candidate Starts for ShamWow_99:

(39, 58830), (46, 58860), (56, 58908), (62, 58923), (Start: 66 @58935 has 1 MA's), (Start: 79 @58977 has 66 MA's), (86, 58995), (Start: 112 @59091 has 1 MA's), (125, 59136), (140, 59220), (193, 59343), (255, 59388), (263, 59400), (Start: 309 @59505 has 1 MA's), (313, 59526), (314, 59535), (320, 59571), (337, 59634), (369, 59736), (370, 59739), (383, 59802), (416, 60021), (423, 60063), (425, 60096), (428, 60111),

Gene: Shauna1_72 Start: 45625, Stop: 46881, Start Num: 75

Candidate Starts for Shauna1_72:

(64, 45592), (Start: 75 @45625 has 9 MA's), (85, 45655), (94, 45685), (103, 45721), (Start: 112 @45754 has 1 MA's), (125, 45799), (140, 45883), (152, 45946), (177, 46006), (275, 46093), (283, 46099), (Start: 309 @46189 has 1 MA's), (314, 46219), (320, 46255), (369, 46399), (370, 46402), (395, 46504), (404, 46546), (405, 46573), (412, 46645), (413, 46657), (416, 46675), (419, 46687), (421, 46696), (422, 46714), (437, 46831),

Gene: ShereKhan_97 Start: 59410, Stop: 60639, Start Num: 79

Candidate Starts for ShereKhan_97:

(39, 59263), (46, 59293), (56, 59341), (62, 59356), (Start: 66 @59368 has 1 MA's), (Start: 79 @59410 has 66 MA's), (86, 59428), (Start: 112 @59524 has 1 MA's), (125, 59569), (140, 59653), (193, 59776), (255, 59821), (263, 59833), (Start: 309 @59938 has 1 MA's), (313, 59959), (314, 59968), (320, 60004), (357, 60106), (369, 60169), (370, 60172), (388, 60250), (405, 60358), (416, 60460), (423, 60502), (425, 60535), (428, 60550),

Gene: Shipwreck_57 Start: 38422, Stop: 39615, Start Num: 101

Candidate Starts for Shipwreck_57:

(8, 37987), (87, 38359), (Start: 101 @38422 has 10 MA's), (110, 38455), (114, 38479), (123, 38515), (124, 38518), (129, 38548), (146, 38638), (153, 38665), (168, 38728), (172, 38734), (173, 38737), (182, 38755), (183, 38758), (293, 39001), (294, 39004), (312, 39106), (315, 39130), (330, 39187), (331, 39193), (345, 39223), (348, 39229), (370, 39295), (385, 39358), (405, 39472), (410, 39532), (416, 39565), (418, 39574), (419, 39577),

Gene: ShortQueendom_52 Start: 37970, Stop: 36855, Start Num: 80

Candidate Starts for ShortQueendom_52:

(Start: 80 @37970 has 52 MA's), (Start: 112 @37862 has 1 MA's), (125, 37817), (140, 37733), (186, 37610), (231, 37574), (Start: 309 @37427 has 1 MA's), (314, 37397), (320, 37361), (342, 37283), (352, 37256), (356, 37250), (369, 37190), (370, 37187), (405, 37133), (412, 37061), (413, 37049), (414, 37040), (416, 37031), (421, 37010), (422, 36992), (425, 36956),

Gene: Simpliphy_98 Start: 58418, Stop: 59650, Start Num: 79

Candidate Starts for Simpliphy_98:

(39, 58271), (46, 58301), (56, 58349), (62, 58364), (Start: 66 @58376 has 1 MA's), (Start: 79 @58418 has 66 MA's), (86, 58436), (Start: 112 @58532 has 1 MA's), (125, 58577), (140, 58661), (176, 58784), (Start: 309 @58955 has 1 MA's), (314, 58985), (369, 59180), (370, 59183), (416, 59471), (423, 59513), (425, 59546), (428, 59561),

Gene: SirDuracell_99 Start: 57794, Stop: 59017, Start Num: 79

Candidate Starts for SirDuracell_99:

(39, 57647), (46, 57677), (56, 57725), (62, 57740), (Start: 66 @57752 has 1 MA's), (Start: 79 @57794 has 66 MA's), (86, 57812), (Start: 112 @57908 has 1 MA's), (125, 57953), (140, 58037), (Start: 309 @58325 has 1 MA's), (312, 58343), (314, 58355), (315, 58367), (337, 58454), (370, 58559), (383, 58622), (405, 58736), (423, 58880), (425, 58913),

Gene: Slagathor_61 Start: 42332, Stop: 40935, Start Num: 80

Candidate Starts for Slagathor_61:

(Start: 80 @42332 has 52 MA's), (Start: 112 @42224 has 1 MA's), (125, 42179), (131, 42137), (132, 42134), (140, 42095), (185, 41915), (231, 41798), (276, 41696), (Start: 309 @41609 has 1 MA's), (314, 41579), (315, 41567), (320, 41543), (366, 41402), (367, 41399), (380, 41321), (405, 41213), (413, 41129), (414, 41120), (416, 41111), (421, 41090), (422, 41072), (425, 41036),

Gene: Smairt_62 Start: 42808, Stop: 41627, Start Num: 80

Candidate Starts for Smairt_62:

(Start: 80 @42808 has 52 MA's), (Start: 112 @42700 has 1 MA's), (156, 42469), (Start: 309 @42067 has 1 MA's), (314, 42037), (320, 42001), (370, 41914), (405, 41860), (416, 41758), (426, 41674),

Gene: Smeagol_61 Start: 42155, Stop: 41085, Start Num: 80

Candidate Starts for Smeagol_61:

(Start: 80 @42155 has 52 MA's), (Start: 112 @42047 has 1 MA's), (125, 42002), (140, 41918), (184, 41795), (229, 41741), (238, 41720), (252, 41711), (288, 41675), (305, 41633), (370, 41534), (403, 41405), (405, 41363), (416, 41261), (425, 41186),

Gene: Sonah_54 Start: 36119, Stop: 37312, Start Num: 101

Candidate Starts for Sonah_54:

(8, 35684), (87, 36056), (Start: 101 @36119 has 10 MA's), (110, 36152), (114, 36176), (123, 36212), (124, 36215), (129, 36245), (146, 36335), (153, 36362), (168, 36425), (172, 36431), (173, 36434), (182, 36452), (183, 36455), (293, 36698), (294, 36701), (312, 36803), (315, 36827), (330, 36884), (331, 36890), (345, 36920), (348, 36926), (370, 36992), (385, 37055), (405, 37169), (410, 37229), (416, 37262), (418, 37271), (419, 37274),

Gene: SophKB_96 Start: 57775, Stop: 58998, Start Num: 79

Candidate Starts for SophKB_96:

(39, 57628), (46, 57658), (56, 57706), (62, 57721), (Start: 66 @57733 has 1 MA's), (Start: 79 @57775 has 66 MA's), (86, 57793), (Start: 112 @57889 has 1 MA's), (125, 57934), (140, 58018), (193, 58141), (255, 58186), (263, 58198), (Start: 309 @58303 has 1 MA's), (313, 58324), (314, 58333), (320, 58369), (337, 58432), (369, 58534), (370, 58537), (383, 58600), (416, 58819), (423, 58861), (425, 58894), (428, 58909),

Gene: Sotrice96_100 Start: 58684, Stop: 59904, Start Num: 79

Candidate Starts for Sotrice96_100:

(39, 58537), (46, 58567), (56, 58615), (62, 58630), (Start: 66 @58642 has 1 MA's), (Start: 79 @58684 has 66 MA's), (86, 58702), (Start: 112 @58798 has 1 MA's), (125, 58843), (140, 58927), (165, 59050), (204, 59095), (222, 59107), (Start: 309 @59212 has 1 MA's), (313, 59233), (314, 59242), (315, 59254), (320, 59278), (405, 59623), (412, 59695), (416, 59725), (423, 59767), (425, 59800), (428, 59815),

Gene: Spoonbill_65 Start: 42447, Stop: 43211, Start Num: 218

Candidate Starts for Spoonbill_65:

(30, 41754), (74, 41931), (94, 41988), (105, 42024), (113, 42057), (159, 42279), (172, 42321), (Start: 218 @42447 has 1 MA's), (230, 42465), (250, 42507), (261, 42537), (Start: 309 @42666 has 1 MA's),

(312, 42684), (315, 42708), (356, 42843), (362, 42873), (370, 42909), (397, 43011), (405, 43068), (410, 43128), (416, 43161), (418, 43170), (419, 43173),

Gene: Stark_100 Start: 58739, Stop: 59962, Start Num: 79

Candidate Starts for Stark_100:

(39, 58592), (46, 58622), (56, 58670), (62, 58685), (Start: 66 @58697 has 1 MA's), (Start: 79 @58739 has 66 MA's), (86, 58757), (Start: 112 @58853 has 1 MA's), (125, 58898), (140, 58982), (193, 59105), (255, 59150), (263, 59162), (Start: 309 @59267 has 1 MA's), (313, 59288), (314, 59297), (320, 59333), (337, 59396), (369, 59498), (370, 59501), (383, 59564), (416, 59783), (423, 59825), (425, 59858), (428, 59873),

Gene: StevieRay_58 Start: 38434, Stop: 39633, Start Num: 71

Candidate Starts for StevieRay_58:

(Start: 71 @38434 has 1 MA's), (94, 38497), (105, 38533), (106, 38536), (113, 38566), (135, 38650), (182, 38764), (Start: 218 @38869 has 1 MA's), (230, 38887), (250, 38929), (261, 38959), (Start: 309 @39088 has 1 MA's), (312, 39106), (315, 39130), (356, 39265), (362, 39295), (370, 39331), (397, 39433), (405, 39490), (410, 39550), (416, 39583), (418, 39592), (419, 39595),

Gene: Swole_59 Start: 40236, Stop: 39139, Start Num: 80

Candidate Starts for Swole_59:

(Start: 80 @40236 has 52 MA's), (Start: 112 @40128 has 1 MA's), (154, 40083), (190, 40041), (191, 40038), (213, 39999), (300, 39876), (Start: 309 @39822 has 1 MA's), (313, 39801), (314, 39792), (353, 39654), (369, 39591), (370, 39588), (387, 39510), (405, 39402), (416, 39315), (423, 39273), (425, 39240),

Gene: Target_60 Start: 39423, Stop: 38428, Start Num: 80

Candidate Starts for Target_60:

(Start: 80 @39423 has 52 MA's), (Start: 112 @39315 has 1 MA's), (125, 39270), (140, 39186), (298, 39063), (Start: 309 @39009 has 1 MA's), (314, 38979), (370, 38886), (372, 38874), (405, 38706), (413, 38622), (414, 38613), (416, 38604), (421, 38583), (422, 38565), (425, 38529),

Gene: TaylorSipht_45 Start: 29940, Stop: 31352, Start Num: 43

Candidate Starts for TaylorSipht_45:

(2, 29658), (5, 29715), (Start: 40 @29931 has 2 MA's), (Start: 43 @29940 has 24 MA's), (91, 30084), (95, 30096), (Start: 112 @30150 has 1 MA's), (119, 30174), (125, 30189), (138, 30258), (139, 30267), (147, 30315), (157, 30366), (209, 30507), (223, 30546), (308, 30762), (312, 30783), (357, 30927), (374, 30990), (401, 31029), (405, 31062), (408, 31107), (416, 31149), (423, 31191), (436, 31296), (440, 31326),

Gene: TeardropMSU_95 Start: 57765, Stop: 58985, Start Num: 79

Candidate Starts for TeardropMSU_95:

(39, 57618), (46, 57648), (56, 57696), (62, 57711), (Start: 66 @57723 has 1 MA's), (Start: 79 @57765 has 66 MA's), (86, 57783), (Start: 112 @57879 has 1 MA's), (125, 57924), (140, 58008), (165, 58131), (204, 58176), (222, 58188), (Start: 309 @58293 has 1 MA's), (313, 58314), (314, 58323), (315, 58335), (320, 58359), (405, 58704), (412, 58776), (416, 58806), (423, 58848), (425, 58881), (428, 58896),

Gene: Teaspoon_96 Start: 58575, Stop: 59861, Start Num: 66

Candidate Starts for Teaspoon_96:

(39, 58470), (46, 58500), (56, 58548), (62, 58563), (Start: 66 @58575 has 1 MA's), (Start: 79 @58617 has 66 MA's), (86, 58635), (Start: 112 @58731 has 1 MA's), (125, 58776), (140, 58860), (193, 58983), (272, 59070), (275, 59076), (Start: 309 @59166 has 1 MA's), (313, 59187), (314, 59196), (320, 59232), (337, 59295), (369, 59397), (370, 59400), (383, 59463), (391, 59499), (405, 59580), (416,

59682), (423, 59724), (425, 59757), (428, 59772),

Gene: Techage_58 Start: 37733, Stop: 39016, Start Num: 61

Candidate Starts for Techage_58:

(54, 37697), (Start: 61 @37733 has 7 MA's), (96, 37826), (Start: 98 @37844 has 7 MA's), (110, 37880), (114, 37904), (123, 37940), (129, 37973), (146, 38063), (168, 38132), (172, 38138), (173, 38141), (182, 38159), (183, 38162), (247, 38324), (267, 38366), (312, 38507), (315, 38531), (330, 38588), (331, 38594), (345, 38624), (348, 38630), (370, 38696), (385, 38759), (405, 38873), (407, 38918), (410, 38933), (416, 38966), (418, 38975), (419, 38978),

Gene: Terminus_102 Start: 59873, Stop: 60904, Start Num: 79

Candidate Starts for Terminus_102:

(39, 59726), (46, 59756), (56, 59804), (62, 59819), (Start: 66 @59831 has 1 MA's), (Start: 79 @59873 has 66 MA's), (86, 59891), (Start: 112 @59987 has 1 MA's), (125, 60032), (140, 60116), (Start: 309 @60320 has 1 MA's), (314, 60350), (320, 60386), (405, 60623), (416, 60725), (423, 60767), (425, 60800), (428, 60815),

Gene: Thresher_101 Start: 59519, Stop: 60742, Start Num: 79

Candidate Starts for Thresher_101:

(39, 59372), (46, 59402), (56, 59450), (62, 59465), (Start: 66 @59477 has 1 MA's), (Start: 79 @59519 has 66 MA's), (86, 59537), (Start: 112 @59633 has 1 MA's), (125, 59678), (140, 59762), (193, 59885), (255, 59930), (263, 59942), (Start: 309 @60047 has 1 MA's), (313, 60068), (314, 60077), (320, 60113), (337, 60176), (369, 60278), (370, 60281), (383, 60344), (416, 60563), (423, 60605), (425, 60638), (428, 60653),

Gene: ThulaThula_61 Start: 41045, Stop: 42361, Start Num: 45

Candidate Starts for ThulaThula_61:

(Start: 45 @41045 has 2 MA's), (57, 41102), (72, 41141), (Start: 81 @41171 has 1 MA's), (Start: 108 @41258 has 1 MA's), (Start: 112 @41270 has 1 MA's), (120, 41306), (155, 41501), (166, 41555), (175, 41576), (227, 41684), (230, 41687), (244, 41726), (290, 41783), (292, 41789), (300, 41819), (302, 41825), (306, 41861), (311, 41891), (321, 41954), (405, 42071), (416, 42158), (419, 42170), (421, 42179), (422, 42197), (438, 42326),

Gene: Tomaszewski_94 Start: 58249, Stop: 59442, Start Num: 79

Candidate Starts for Tomaszewski_94:

(39, 58102), (46, 58132), (56, 58180), (62, 58195), (Start: 66 @58207 has 1 MA's), (Start: 79 @58249 has 66 MA's), (86, 58267), (Start: 112 @58363 has 1 MA's), (125, 58408), (140, 58492), (248, 58732), (Start: 309 @58858 has 1 MA's), (313, 58879), (314, 58888), (320, 58924), (369, 58978), (370, 58981), (405, 59161), (423, 59305), (425, 59338),

Gene: Tote_55 Start: 37503, Stop: 36406, Start Num: 80

Candidate Starts for Tote_55:

(Start: 80 @37503 has 52 MA's), (Start: 112 @37395 has 1 MA's), (154, 37350), (190, 37308), (191, 37305), (213, 37266), (300, 37143), (Start: 309 @37089 has 1 MA's), (313, 37068), (314, 37059), (353, 36921), (369, 36858), (370, 36855), (387, 36777), (405, 36669), (416, 36582), (423, 36540), (425, 36507),

Gene: Toto_97 Start: 58977, Stop: 60200, Start Num: 79

Candidate Starts for Toto_97:

(39, 58830), (46, 58860), (56, 58908), (62, 58923), (Start: 66 @58935 has 1 MA's), (Start: 79 @58977 has 66 MA's), (86, 58995), (Start: 112 @59091 has 1 MA's), (125, 59136), (140, 59220), (193, 59343), (255, 59388), (263, 59400), (Start: 309 @59505 has 1 MA's), (313, 59526), (314, 59535), (320, 59571), (337, 59634), (369, 59736), (370, 59739), (383, 59802), (416, 60021), (423, 60063), (425,

60096), (428, 60111),

Gene: Treddle_60 Start: 41704, Stop: 40559, Start Num: 80

Candidate Starts for Treddle_60:

(Start: 80 @41704 has 52 MA's), (Start: 112 @41596 has 1 MA's), (125, 41551), (140, 41467), (155, 41386), (201, 41308), (224, 41284), (257, 41233), (Start: 309 @41119 has 1 MA's), (313, 41098), (314, 41089), (320, 41053), (369, 40894), (370, 40891), (405, 40837), (413, 40753), (414, 40744), (416, 40735), (421, 40714),

Gene: Tripl3t_61 Start: 42636, Stop: 41530, Start Num: 80

Candidate Starts for Tripl3t_61:

(Start: 80 @42636 has 52 MA's), (Start: 112 @42525 has 1 MA's), (125, 42480), (140, 42396), (287, 42273), (Start: 309 @42219 has 1 MA's), (313, 42198), (314, 42189), (320, 42153), (342, 42075), (352, 42048), (356, 42042), (369, 41982), (370, 41979), (403, 41850), (405, 41808), (412, 41736), (413, 41724), (414, 41715), (416, 41706), (421, 41685), (422, 41667), (425, 41631),

Gene: Tuco_100 Start: 59845, Stop: 61065, Start Num: 79

Candidate Starts for Tuco_100:

(39, 59698), (46, 59728), (56, 59776), (62, 59791), (Start: 66 @59803 has 1 MA's), (Start: 79 @59845 has 66 MA's), (86, 59863), (Start: 112 @59959 has 1 MA's), (125, 60004), (140, 60088), (165, 60211), (204, 60256), (222, 60268), (Start: 309 @60373 has 1 MA's), (313, 60394), (314, 60403), (315, 60415), (320, 60439), (405, 60784), (412, 60856), (416, 60886), (423, 60928), (425, 60961), (428, 60976),

Gene: TwoPeat_59 Start: 41088, Stop: 39625, Start Num: 80

Candidate Starts for TwoPeat_59:

(Start: 80 @41088 has 52 MA's), (Start: 112 @40980 has 1 MA's), (125, 40935), (131, 40893), (132, 40890), (140, 40851), (194, 40653), (200, 40638), (242, 40527), (295, 40392), (Start: 309 @40308 has 1 MA's), (313, 40287), (314, 40278), (315, 40266), (339, 40179), (369, 40077), (370, 40074), (387, 39996), (405, 39888), (416, 39801), (423, 39759), (425, 39726),

Gene: Ukulele_94 Start: 58344, Stop: 59462, Start Num: 112

Candidate Starts for Ukulele_94:

(Start: 112 @58344 has 1 MA's), (125, 58389), (140, 58473), (176, 58596), (Start: 309 @58767 has 1 MA's), (314, 58797), (369, 58992), (370, 58995), (416, 59283), (423, 59325), (425, 59358), (428, 59373),

Gene: Vidya_52 Start: 35918, Stop: 37111, Start Num: 101

Candidate Starts for Vidya_52:

(87, 35855), (Start: 101 @35918 has 10 MA's), (110, 35951), (114, 35975), (123, 36011), (124, 36014), (129, 36044), (146, 36134), (153, 36161), (168, 36224), (172, 36230), (173, 36233), (182, 36251), (183, 36254), (293, 36497), (294, 36500), (312, 36602), (315, 36626), (330, 36683), (331, 36689), (345, 36719), (348, 36725), (370, 36791), (385, 36854), (405, 36968), (410, 37028), (416, 37061), (418, 37070), (419, 37073),

Gene: Vulpecula_43 Start: 29052, Stop: 30371, Start Num: 43

Candidate Starts for Vulpecula_43:

(Start: 40 @29043 has 2 MA's), (Start: 43 @29052 has 24 MA's), (Start: 71 @29148 has 1 MA's), (95, 29208), (Start: 112 @29262 has 1 MA's), (119, 29286), (125, 29301), (127, 29322), (139, 29379), (147, 29427), (157, 29478), (169, 29529), (209, 29619), (223, 29658), (262, 29730), (310, 29880), (401, 30048), (405, 30081), (416, 30168), (422, 30207), (440, 30345),

Gene: Willez_94 Start: 57118, Stop: 58230, Start Num: 79

Candidate Starts for Willez_94:

(39, 56971), (46, 57001), (56, 57049), (62, 57064), (Start: 66 @57076 has 1 MA's), (Start: 79 @57118 has 66 MA's), (86, 57136), (Start: 112 @57232 has 1 MA's), (125, 57277), (140, 57361), (192, 57484), (212, 57529), (253, 57541), (Start: 309 @57646 has 1 MA's), (314, 57676), (320, 57712), (405, 57949), (416, 58051), (423, 58093), (425, 58126), (428, 58141),

Gene: Wocket_66 Start: 42075, Stop: 43580, Start Num: 43

Candidate Starts for Wocket_66:

(6, 41838), (10, 41850), (16, 41898), (21, 41946), (Start: 43 @42075 has 24 MA's), (51, 42102), (57, 42132), (63, 42144), (Start: 71 @42168 has 1 MA's), (Start: 81 @42201 has 1 MA's), (97, 42258), (103, 42282), (158, 42576), (209, 42687), (216, 42717), (237, 42759), (249, 42789), (253, 42801), (274, 42858), (297, 42903), (365, 43185), (396, 43248), (413, 43359), (416, 43377), (429, 43476), (436, 43524),

Gene: Xeno_59 Start: 36538, Stop: 38031, Start Num: 61

Candidate Starts for Xeno_59:

(49, 36487), (54, 36502), (Start: 61 @36538 has 7 MA's), (Start: 98 @36637 has 7 MA's), (107, 36667), (114, 36697), (123, 36733), (129, 36766), (146, 36856), (153, 36883), (168, 36946), (172, 36952), (173, 36955), (230, 37096), (247, 37138), (248, 37141), (Start: 309 @37342 has 1 MA's), (314, 37372), (369, 37567), (370, 37570), (393, 37678), (405, 37738), (416, 37825), (419, 37837), (421, 37846), (422, 37864), (437, 37981),

Gene: Xula_53 Start: 36811, Stop: 38073, Start Num: 75

Candidate Starts for Xula_53:

(Start: 32 @36643 has 10 MA's), (35, 36658), (42, 36694), (69, 36793), (Start: 75 @36811 has 9 MA's), (87, 36847), (94, 36871), (103, 36907), (Start: 112 @36940 has 1 MA's), (125, 36985), (152, 37132), (155, 37150), (210, 37234), (Start: 309 @37354 has 1 MA's), (313, 37375), (314, 37384), (320, 37420), (337, 37483), (369, 37585), (370, 37588), (381, 37651), (405, 37768), (416, 37870), (419, 37882),

Gene: Zeuska_58 Start: 41282, Stop: 40221, Start Num: 80

Candidate Starts for Zeuska_58:

(Start: 80 @41282 has 52 MA's), (Start: 112 @41174 has 1 MA's), (125, 41129), (140, 41045), (254, 40922), (Start: 309 @40868 has 1 MA's), (313, 40847), (314, 40838), (320, 40802), (370, 40658), (399, 40556), (405, 40499), (412, 40427), (413, 40415), (414, 40406), (416, 40397), (421, 40376), (422, 40358), (425, 40322),

Gene: Zilizabeth_63 Start: 39188, Stop: 40495, Start Num: 61

Candidate Starts for Zilizabeth_63:

(50, 39137), (54, 39152), (Start: 61 @39188 has 7 MA's), (96, 39281), (Start: 98 @39299 has 7 MA's), (110, 39335), (114, 39359), (123, 39395), (129, 39428), (146, 39518), (153, 39545), (168, 39608), (172, 39614), (173, 39617), (182, 39635), (183, 39638), (293, 39881), (294, 39884), (312, 39986), (315, 40010), (330, 40067), (331, 40073), (345, 40103), (348, 40109), (370, 40175), (385, 40238), (405, 40352), (410, 40412), (416, 40445), (418, 40454), (419, 40457),