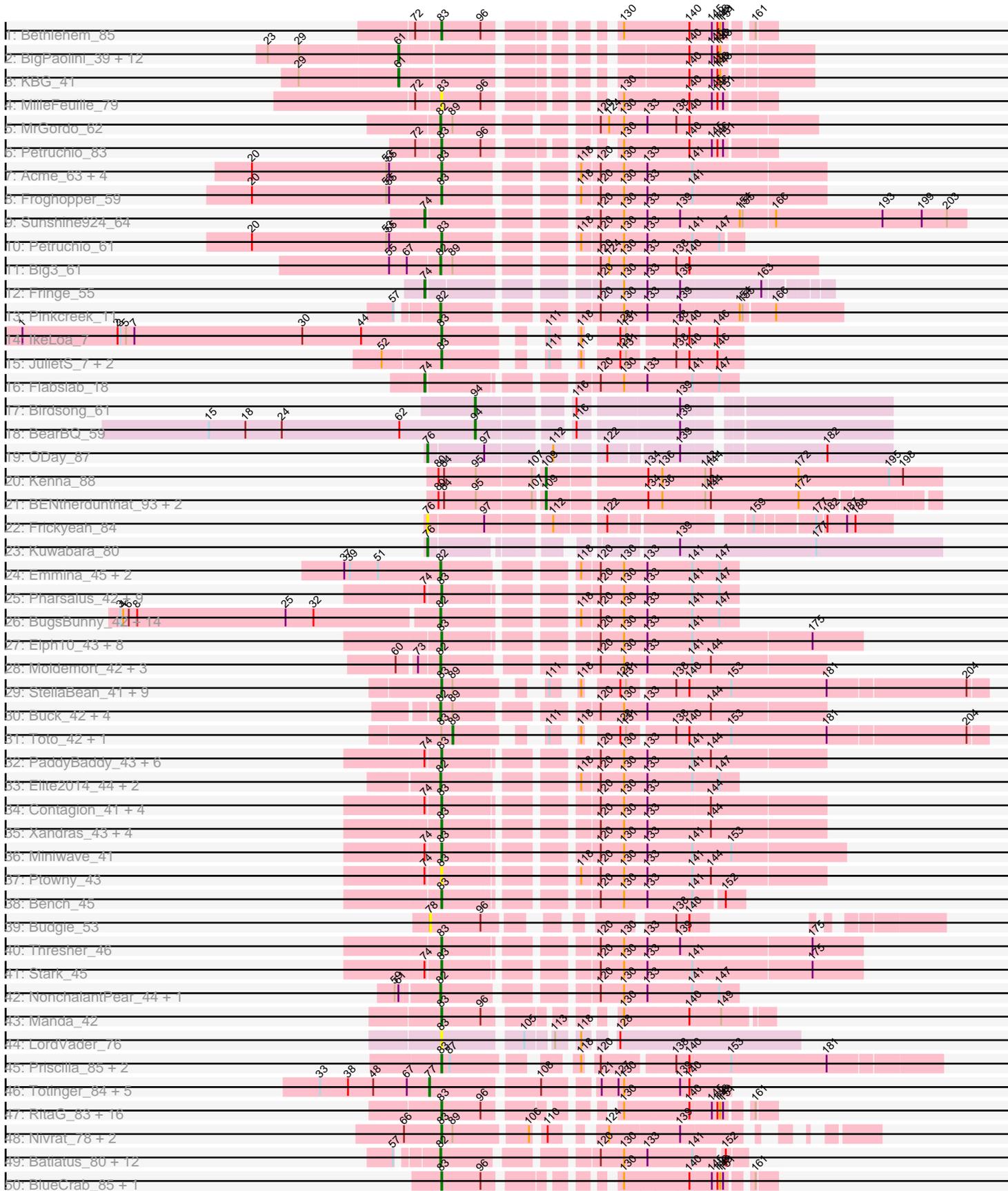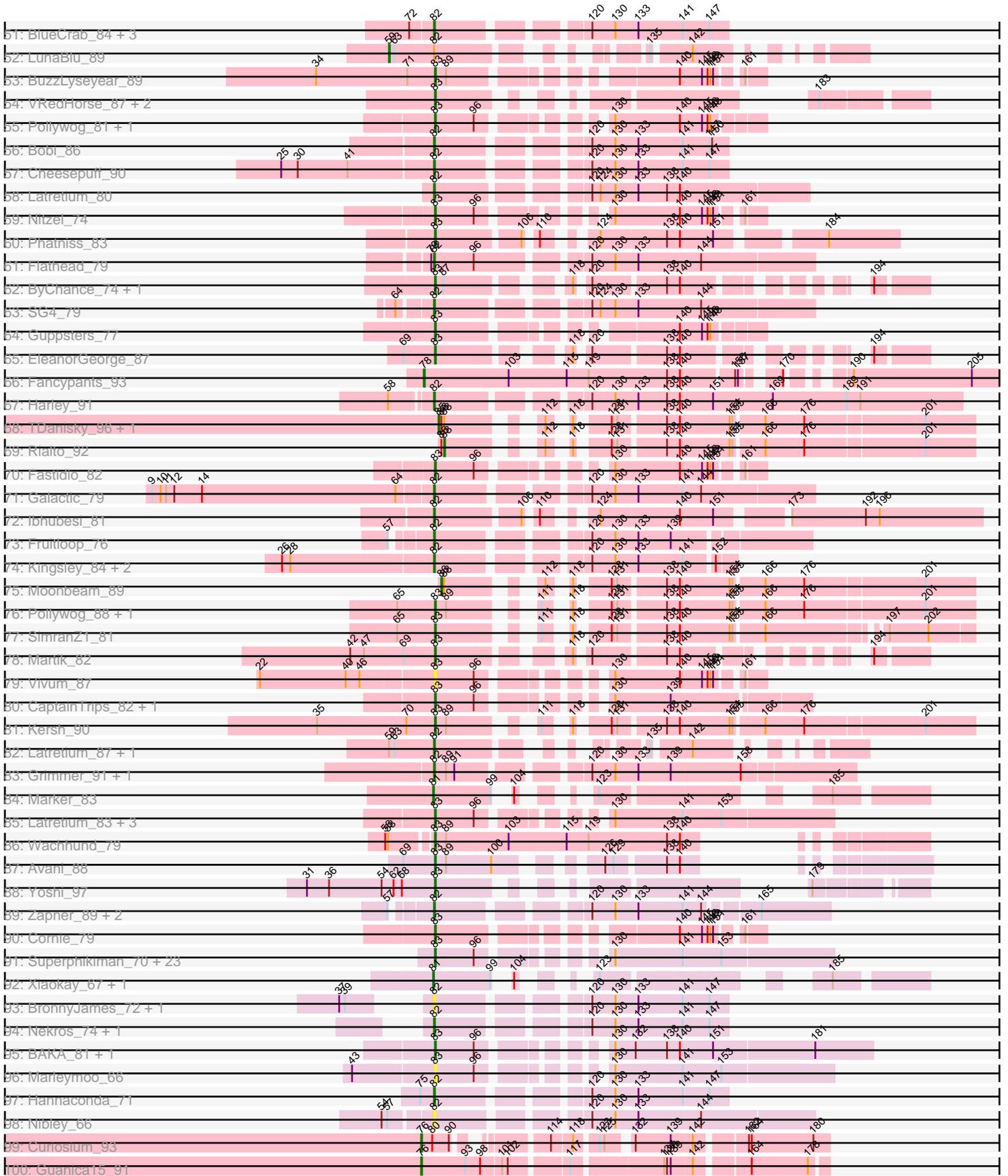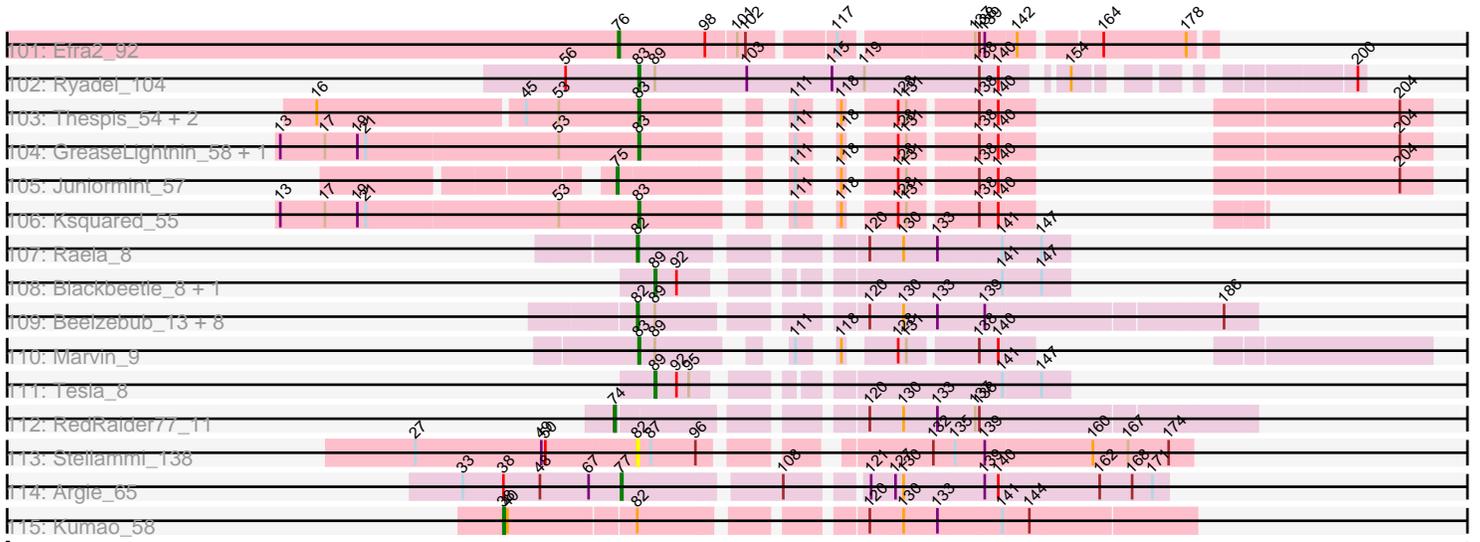# Pham 283421

Pham 283421

Pham 283421

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 283421 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283421 has 298 members, 32 are drafts.

Phages represented in each track:
• Track 1 : Bethlehem_85
• Track 2 : BigPaolini_39, ILeeKay_42, Cueylyss_40, LunarLander_41, Eyeball_40, Graduation_42, Doom_40, Licorice_42, Wilkins_39, Topgun_39, Phlippers_38, Puppet_40, Smairt_41
• Track 3 : KBG_41
• Track 4 : MilleFeuille_79
• Track 5 : MrGordo_62
• Track 6 : Petruchio_83
• Track 7 : Acme_63, Lesedi_57, Fajezeel_62, Bxb1_55, Greg_62
• Track 8 : Froghopper_59
• Track 9 : Sunshine924_64
• Track 10 : Petruchio_61
• Track 11 : Big3_61
• Track 12 : Fringe_55
• Track 13 : Pinkcreek_11
• Track 14 : IkeLoa_7
• Track 15 : JulietS_7, QBert_7, RoMag_6
• Track 16 : Flabslab_18
• Track 17 : Birdsong_61
• Track 18 : BearBQ_59
• Track 19 : ODay_87
• Track 20 : Kenna_88
• Track 21 : BENtherdunthat_93, CheeseTouch_100, BotCity_96
• Track 22 : Frickyeah_84
• Track 23 : Kuwabara_80
• Track 24 : Emmina_45, Teaspoon_46, Porky_43
• Track 25 : Pharsalus_42, Paperbeatsrock_43, SophKB_41, Dusk_42, BadStone_42, Dumbo_44, Tarkin_43, Easy2Say_45, NelitzaMV_41, Henry_43
• Track 26 : BugsBunny_42, Kostya_42, Misfit_43, Phaux_43, Petra64142_46, xkcd_45, Palpatine_44, FireRed_44, HufflyPuff_43, Nimrod_44, Greep_45, Terminus_43, Murica_43, PhatBacter_44, Policronamos_44
• Track 27 : Elph10_43, NoSleep_45, Murphy_45, Lilac_46, Cjw1_44, Lilizi_43, Maxxinista_45, Czyszczon1_44, RiverMonster_44
• Track 28 : Moldemort_42, MadamMonkfish_42, Bogg_42, AmericanBeauty_43
• Track 29 : StellaBean_41, ABCat_41, CrystalP_43, Inca_40, BilboSwaggins_42, IHOP_41, Tuco_44, Myrale_43, ShamWow_43, Phaja_41

- Track 30 : Buck_42, StormChicken_43, Rimmer_42, TeamEdward_43, Youngblood_43
- Track 31 : Toto_42, Marshmallow_42
- Track 32 : PaddyBaddy_43, DrDrey_44, Phrux_42, 244_45, Hopey_44, ShereKhan_42, HanKaySha_43
- Track 33 : Elite2014_44, Lilpickle_44, ChosenOne_45
- Track 34 : Contagion_41, Cookies_41, Mosby_40, TeardropMSU_40, Tomaszewski_40
- Track 35 : Xandras_43, JeTaime_44, OrionPax_43, Filch_44, Pumpkin_45
- Track 36 : Miniwave_41
- Track 37 : Ptowny_43
- Track 38 : Bench_45
- Track 39 : Budgie_53
- Track 40 : Thresher_46
- Track 41 : Stark_45
- Track 42 : NonchalantPear_44, Ukulele_41
- Track 43 : Manda_42
- Track 44 : LordVader_76
- Track 45 : Priscilla_85, Koella_77, NormanBulbieJr_83
- Track 46 : Totinger_84, LittleShirley_88, GigiOuiOui_76, Starcevich_82, Peridot_86, Vivum_84
- Track 47 : RitaG_83, Deb65_76, PHappiness_83, Zerg_83, Nimbo_75, DotProduct_77, Daenerys_82, Hamulus_81, StAnnes_84, Geralt_76, Fruitloop_79, Filuzino_83, Leperchaun_81, Sandalphon_76, Minnie_78, JoeyJr_83, OldBen_80
- Track 48 : Nivrat_78, Che8_85, LilMoolah_80
- Track 49 : Batiatus_80, Ardmore_66, Ms6_80, DLane_82, XFactor_76, ScottMcG_17, Chuckly_78, Shifa_12, HyRo_13, Stubby_16, Manda_44, Eureka_42, Goku_42
- Track 50 : BlueCrab_85, Pacc40_79
- Track 51 : BlueCrab_84, Pacc40_78, Akhila_77, MilanaBonita_76
- Track 52 : LunaBlu_89
- Track 53 : BuzzLyseyear_89
- Track 54 : VRedHorse_87, Estave1_94, Avani_91
- Track 55 : Pollywog_81, MilleniumForce_83
- Track 56 : Bobi_86
- Track 57 : Cheesepuff_90
- Track 58 : Latretium_80
- Track 59 : Nitzel_74
- Track 60 : Phatniss_83
- Track 61 : Flathead_79
- Track 62 : ByChance_74, ShowerHandel_83
- Track 63 : SG4_79
- Track 64 : Guppsters_77
- Track 65 : EleanorGeorge_87
- Track 66 : Fancypants_93
- Track 67 : Harley_91
- Track 68 : TDanisky_96, Sparkdehlily_95
- Track 69 : Rialto_92
- Track 70 : Fastidio_82
- Track 71 : Galactic_79
- Track 72 : Ibhubesi_81
- Track 73 : Fruitloop_76
- Track 74 : Kingsley_84, Phanphagia_79, Shauna1_80

- Track 75 : Moonbeam_89
- Track 76 : Pollywog_88, Rearden_72
- Track 77 : SimranZ1_81
- Track 78 : Martik_82
- Track 79 : Vivum_87
- Track 80 : CaptainTrips_82, MinionDave_78
- Track 81 : Kersh_90
- Track 82 : Latretium_87, Dante_84
- Track 83 : Grimmer_91, Mahavrat_77
- Track 84 : Marker_83
- Track 85 : Latretium_83, Wanda_76, Minerva_78, Klein_72
- Track 86 : Wachhund_79
- Track 87 : Avani_88
- Track 88 : Yoshi_97
- Track 89 : Zapner_89, Blarby_90, Jabbawokkie_90
- Track 90 : Cornie_79
- Track 91 : Superphikiman_70, HokkenD_65, Kalah2_67, Ejimix_72, MiaZeal_73, JuicyJay_71, Phoebus_75, Halley_74, Beem_72, Quallification_42, Zelink_70, DmpstrDiver_72, Dallas_71, Odette_71, FairyPath_41, Porcelain_72, ThreeRngTarjay_70, NihilNomen_73, Schatzie_67, Redno2_69, Lucky2013_70, Squint_73, Hughesyang_71, Ariel_72
- Track 92 : Xiaokay_67, Constella_63
- Track 93 : BronnyJames_72, Shaboozey_71
- Track 94 : Nekros_74, Phalconet_77
- Track 95 : BAKA_81, Duke13_79
- Track 96 : Marleymoo_66
- Track 97 : Hannaconda_71
- Track 98 : Nibley_66
- Track 99 : Curiosium_93
- Track 100 : Guanica15_91
- Track 101 : Efra2_92
- Track 102 : Ryadel_104
- Track 103 : Thespis_54, Brusacoram_54, Atcoo_54
- Track 104 : GreaseLightnin_58, StevieRay_57
- Track 105 : Juniormint_57
- Track 106 : Ksquared_55
- Track 107 : Raela_8
- Track 108 : Blackbeetle_8, Poise_8
- Track 109 : Beelzebub_13, Corazon_10, FeliMaine_11, Lilbit_11, LittleLaf_10, Clarkson_11, JoieB_11, Pringar_10, Huphlepuff_11
- Track 110 : Marvin_9
- Track 111 : Tesla_8
- Track 112 : RedRaider77_11
- Track 113 : Stellammi_138
- Track 114 : Argie_65
- Track 115 : Kumao_58

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

The start number called the most often in the published annotations is 83, it was called in 147 of the 266 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 244_45, ABCat_41, Acme_63, Ariel_72, Atcoo_54, Avani_88, Avani_91, BAKA_81, BadStone_42, Beem_72, Bench_45, Bethlehem_85, BilboSwaggins_42, BlueCrab_85, Brusacoram_54, BuzzLyseyear_89, Bxb1_55, ByChance_74, CaptainTrips_82, Che8_85, Cjw1_44, Contagion_41, Cookies_41, Cornie_79, CrystalP_43, Czyszczon1_44, Daenerys_82, Dallas_71, Deb65_76, DmpstrDiver_72, DotProduct_77, DrDrey_44, Duke13_79, Dumbo_44, Dusk_42, Easy2Say_45, Ejimix_72, EleanorGeorge_87, Elph10_43, Estave1_94, FairyPath_41, Fajezeel_62, Fastidio_82, Filch_44, Filuzino_83, Froghopper_59, Fruitloop_79, Geralt_76, GreaseLightnin_58, Greg_62, Guppsters_77, Halley_74, Hamulus_81, HanKaySha_43, Henry_43, HokkenD_65, Hopey_44, Hughesyang_71, IHOP_41, IkeLoa_7, Inca_40, JeTaime_44, JoeyJr_83, JuicyJay_71, JulietS_7, Kalah2_67, Kersh_90, Klein_72, Koella_77, Ksquared_55, Latretium_83, Leperchaun_81, Lesedi_57, LilMoolah_80, Lilac_46, Lilizi_43, LordVader_76, Lucky2013_70, Manda_42, Marleymoo_66, Martik_82, Marvin_9, Maxxinista_45, MiaZeal_73, MilleFeuille_79, MilleniumForce_83, Minerva_78, MinionDave_78, Miniwave_41, Minnie_78, Mosby_40, Murphy_45, Myrale_43, NelitzaMV_41, NihilNomen_73, Nimbo_75, Nitzel_74, Nivrat_78, NoSleep_45, NormanBulbieJr_83, Odette_71, OldBen_80, OrionPax_43, PHappiness_83, Pacc40_79, PaddyBaddy_43, Paperbeatsrock_43, Petruchio_61, Petruchio_83, Phaja_41, Pharsalus_42, Phatniss_83, Phoebus_75, Phrux_42, Pollywog_81, Pollywog_88, Porcelain_72, Priscilla_85, Ptowny_43, Pumpkin_45, QBert_7, Quallification_42, Rearden_72, Redno2_69, RitaG_83, RiverMonster_44, RoMag_6, Ryadel_104, Sandalphon_76, Schatzie_67, ShamWow_43, ShereKhan_42, ShowerHandel_83, SimranZ1_81, SophKB_41, Squint_73, StAnnes_84, Stark_45, StellaBean_41, StevieRay_57, Superphikiman_70, Tarkin_43, TeardropMSU_40, Thespis_54, ThreeRngTarjay_70, Thresher_46, Tomaszewski_40, Tuco_44, VRedHorse_87, Vivum_87, Wachhund_79, Wanda_76, Xandras_43, Yoshi_97, Zelink_70, Zerg_83,

Genes that have the "Most Annotated" start but do not call it:
• Marshmallow_42, Toto_42,

Genes that do not have the "Most Annotated" start:
• Akhila_77, AmericanBeauty_43, Ardmore_66, Argie_65, BENtherdunthat_93, Batiatus_80, BearBQ_59, Beelzebub_13, Big3_61, BigPaolini_39, Birdsong_61, Blackbeetle_8, Blarby_90, BlueCrab_84, Bobi_86, Bogg_42, BotCity_96, BronnyJames_72, Buck_42, Budgie_53, BugsBunny_42, CheeseTouch_100, Cheesepuff_90, ChosenOne_45, Chuckly_78, Clarkson_11, Constella_63, Corazon_10, Cueylyss_40, Curiosium_93, DLane_82, Dante_84, Doom_40, Efra2_92, Elite2014_44, Emmina_45, Eureka_42, Eyeball_40, Fancypants_93, FeliMaine_11, FireRed_44, Flabslab_18, Flathead_79, Frickyeah_84, Fringe_55, Fruitloop_76, Galactic_79, GigiOuiOui_76, Goku_42, Graduation_42, Greep_45, Grimmer_91, Guanica15_91, Hannaconda_71, Harley_91, HufflyPuff_43, Huphlepuff_11, HyRo_13, ILeeKay_42, Ibhubesi_81, Jabbawokkie_90, JoieB_11, Juniormint_57, KBG_41, Kenna_88, Kingsley_84, Kostya_42, Kumao_58, Kuwabara_80, Latretium_80, Latretium_87, Licorice_42, Lilbit_11, Lilpickle_44, LittleLaf_10, LittleShirley_88, LunaBlu_89, LunarLander_41, MadamMonkfish_42, Mahavrat_77, Manda_44, Marker_83, MilanaBonita_76, Misfit_43, Moldemort_42, Moonbeam_89, MrGordo_62, Ms6_80, Murica_43, Nekros_74, Nibley_66, Nimrod_44, NonchalantPear_44, ODay_87, Pacc40_78, Palpatine_44, Peridot_86,

Petra64142_46, Phalconet_77, Phanphagia_79, PhatBacter_44, Phaux_43,
Phlippers_38, Pinkcreek_11, Poise_8, Policronamos_44, Porky_43, Pringar_10,
Puppet_40, Raela_8, RedRaider77_11, Rialto_92, Rimmer_42, SG4_79,
ScottMcG_17, Shaboozey_71, Shauna1_80, Shifa_12, Smairt_41, Sparkdehlily_95,
Starcevich_82, Stellammi_138, StormChicken_43, Stubby_16, Sunshine924_64,
TDanisky_96, TeamEdward_43, Teaspoon_46, Terminus_43, Tesla_8, Topgun_39,
Totinger_84, Ukulele_41, Vivum_84, Wilkins_39, XFactor_76, Xiaokay_67,
Youngblood_43, Zapner_89, xkcd_45,

Summary by start number:

Start 38:
• Found in 8 of 298 (2.7%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Kumao_58 (singleton),

Start 59:
• Found in 5 of 298 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 20.0% of time when present
• Phage (with cluster) where this start called: LunaBlu_89 (F1),

Start 61:
• Found in 16 of 298 (5.4%) of genes in pham
• Manual Annotations of this start: 12 of 266
• Called 87.5% of time when present
• Phage (with cluster) where this start called: BigPaolini_39 (A1), Cueylyss_40 (A1),
Doom_40 (A1), Eyeball_40 (A1), Graduation_42 (A1), ILeeKay_42 (A1), KBG_41
(A1), Licorice_42 (A1), LunarLander_41 (A1), Phlippers_38 (A1), Puppet_40 (A1),
Smairt_41 (A1), Topgun_39 (A1), Wilkins_39 (A1),

Start 74:
• Found in 29 of 298 (9.7%) of genes in pham
• Manual Annotations of this start: 4 of 266
• Called 13.8% of time when present
• Phage (with cluster) where this start called: Flabslab_18 (C1), Fringe_55 (B1),
RedRaider77_11 (S), Sunshine924_64 (A1),

Start 75:
• Found in 2 of 298 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Juniormint_57 (P1),

Start 76:
• Found in 6 of 298 (2.0%) of genes in pham
• Manual Annotations of this start: 5 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Curiosium_93 (K1), Efra2_92 (K1),
Frickyeah_84 (DN1), Guanica15_91 (K1), Kuwabara_80 (DN4), ODay_87 (DN),

Start 77:

• Found in 7 of 298 (2.3%) of genes in pham
• Manual Annotations of this start: 5 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Argie_65 (W), GigiOuiOui_76 (F1), LittleShirley_88 (F1), Peridot_86 (F1), Starcevich_82 (F1), Totinger_84 (F1), Vivum_84 (F1),

Start 78:
• Found in 2 of 298 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Budgie_53 (E), Fancypants_93 (F1),

Start 81:
• Found in 3 of 298 (1.0%) of genes in pham
• Manual Annotations of this start: 2 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Constella_63 (J), Marker_83 (F1), Xiaokay_67 (J),

Start 82:
• Found in 90 of 298 (30.2%) of genes in pham
• Manual Annotations of this start: 72 of 266
• Called 97.8% of time when present
• Phage (with cluster) where this start called: Akhila_77 (F1), AmericanBeauty_43 (E), Ardmore_66 (F1), Batiatus_80 (F1), Beelzebub_13 (S), Big3_61 (A1), Blarby_90 (F), BlueCrab_84 (F1), Bobi_86 (F1), Bogg_42 (E), BronnyJames_72 (J), Buck_42 (E), BugsBunny_42 (E), Cheesepuff_90 (F1), ChosenOne_45 (E), Chuckly_78 (F1), Clarkson_11 (S), Corazon_10 (S), DLane_82 (F1), Dante_84 (F1), Elite2014_44 (E), Emmina_45 (E), Eureka_42 (E), FeliMaine_11 (S), FireRed_44 (E), Flathead_79 (F1), Fruitloop_76 (F1), Galactic_79 (F1), Goku_42 (E), Greep_45 (E), Grimmer_91 (F1), Hannaconda_71 (J), Harley_91 (F1), HufflyPuff_43 (E), Huphlepuff_11 (S), HyRo_13 (C1), Ibhubesi_81 (F1), Jabbawokkie_90 (F2), JoieB_11 (S), Kingsley_84 (F1), Kostya_42 (E), Latretium_80 (F1), Latretium_87 (F1), Lilbit_11 (S), Lilpickle_44 (E), LittleLaf_10 (S), MadamMonkfish_42 (E), Mahavrat_77 (F1), Manda_44 (E), MilanaBonita_76 (F1), Misfit_43 (E), Moldemort_42 (E), MrGordo_62 (A1), Ms6_80 (F1), Murica_43 (E), Nekros_74 (J), Nibley_66 (J), Nimrod_44 (E), NonchalantPear_44 (E), Pacc40_78 (F1), Palpatine_44 (E), Petra64142_46 (E), Phalconet_77 (F1), Phanphagia_79 (F1), PhatBacter_44 (E), Phaux_43 (E), Pinkcreek_11 (C1), Policronamos_44 (E), Porky_43 (E), Pringar_10 (S), Raela_8 (S), Rimmer_42 (E), SG4_79 (F1), ScottMcG_17 (C1), Shaboozey_71 (J), Shauna1_80 (F1), Shifa_12 (C1), Stellammi_138 (UNK), StormChicken_43 (E), Stubby_16 (C1), TeamEdward_43 (E), Teaspoon_46 (E), Terminus_43 (E), Ukulele_41 (E), XFactor_76 (F1), Youngblood_43 (E), Zapner_89 (F2), xkcd_45 (E),

Start 83:
• Found in 158 of 298 (53.0%) of genes in pham
• Manual Annotations of this start: 147 of 266
• Called 98.7% of time when present
• Phage (with cluster) where this start called: 244_45 (E), ABCat_41 (E), Acme_63 (A1), Ariel_72 (J), Atcoo_54 (P1), Avani_88 (F2), Avani_91 (F2), BAKA_81 (J), BadStone_42 (E), Beem_72 (J), Bench_45 (E), Bethlehem_85 (A1), BilboSwaggins_42 (E), BlueCrab_85 (F1), Brusacoram_54 (P1), BuzzLyseyear_89

(F1), Bxb1_55 (A1), ByChance_74 (F1), CaptainTrips_82 (F1), Che8_85 (F1), Cjw1_44 (E), Contagion_41 (E), Cookies_41 (E), Cornie_79 (F5), CrystalP_43 (E), Czyszczon1_44 (E), Daenerys_82 (F1), Dallas_71 (J), Deb65_76 (F1), DmpstrDiver_72 (J), DotProduct_77 (F1), DrDrey_44 (E), Duke13_79 (J), Dumbo_44 (E), Dusk_42 (E), Easy2Say_45 (E), Ejimix_72 (J), EleanorGeorge_87 (F1), Elph10_43 (E), Estave1_94 (F1), FairyPath_41 (E), Fajezeel_62 (A1), Fastidio_82 (F1), Filch_44 (E), Filuzino_83 (F1), Froghopper_59 (A1), Fruitloop_79 (F1), Geralt_76 (F1), GreaseLightnin_58 (P1), Greg_62 (A1), Guppsters_77 (F1), Halley_74 (J), Hamulus_81 (F1), HanKaySha_43 (E), Henry_43 (E), HokkenD_65 (J), Hopey_44 (E), Hughesyang_71 (J), IHOP_41 (E), IkeLoa_7 (C1), Inca_40 (E), JeTaime_44 (E), JoeyJr_83 (F1), JuicyJay_71 (J), JulietS_7 (C1), Kalah2_67 (J), Kersh_90 (F1), Klein_72 (J), Koella_77 (F1), Ksquared_55 (P1), Latretium_83 (F1), Leperchaun_81 (F1), Lesedi_57 (A1), LilMoolah_80 (F1), Lilac_46 (E), Lilizi_43 (E), LordVader_76 (F), Lucky2013_70 (J), Manda_42 (E), Marleymoo_66 (J), Martik_82 (F1), Marvin_9 (S), Maxxinista_45 (E), MiaZeal_73 (J), MilleFeuille_79 (A1), MilleniumForce_83 (F1), Minerva_78 (J), MinionDave_78 (F1), Miniwave_41 (E), Minnie_78 (F1), Mosby_40 (E), Murphy_45 (E), Myrale_43 (E), NelitzaMV_41 (E), NihilNomen_73 (J), Nimbo_75 (F1), Nitzel_74 (F1), Nivrat_78 (F1), NoSleep_45 (E), NormanBulbieJr_83 (F1), Odette_71 (J), OldBen_80 (F1), OrionPax_43 (E), PHappiness_83 (F1), Pacc40_79 (F1), PaddyBaddy_43 (E), Paperbeatsrock_43 (E), Petruchio_61 (A1), Petruchio_83 (A1), Phaja_41 (E), Pharsalus_42 (E), Phatniss_83 (F1), Phoebus_75 (J), Phrux_42 (E), Pollywog_81 (F1), Pollywog_88 (F1), Porcelain_72 (J), Priscilla_85 (F1), Ptowny_43 (E), Pumpkin_45 (E), QBert_7 (C1), Quallification_42 (E), Rearden_72 (J), Redno2_69 (J), RitaG_83 (F1), RiverMonster_44 (E), RoMag_6 (C1), Ryadel_104 (O), Sandalphon_76 (F1), Schatzie_67 (J), ShamWow_43 (E), ShereKhan_42 (E), ShowerHandel_83 (F1), SimranZ1_81 (F1), SophKB_41 (E), Squint_73 (J), StAnnes_84 (F1), Stark_45 (E), StellaBean_41 (E), StevieRay_57 (P1), Superphikiman_70 (J), Tarkin_43 (E), TeardropMSU_40 (E), Thespis_54 (P1), ThreeRngTarjay_70 (J), Thresher_46 (E), Tomaszewski_40 (E), Tuco_44 (E), VRedHorse_87 (F1), Vivum_87 (F1), Wachhund_79 (F1), Wanda_76 (J), Xandras_43 (E), Yoshi_97 (F2), Zelink_70 (J), Zerg_83 (F1),

Start 85:
• Found in 2 of 298 (0.7%) of genes in pham
• Manual Annotations of this start: 2 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sparkdehlily_95 (F1), TDanisky_96 (F1),

Start 86:
• Found in 4 of 298 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Moonbeam_89 (F1),

Start 88:
• Found in 4 of 298 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 266
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Rialto_92 (F1),

Start 89:
• Found in 44 of 298 (14.8%) of genes in pham

• Manual Annotations of this start: 5 of 266
• Called 11.4% of time when present
• Phage (with cluster) where this start called: Blackbeetle_8 (S), Marshmallow_42 (E), Poise_8 (S), Tesla_8 (S), Toto_42 (E),

Start 94:
• Found in 2 of 298 (0.7%) of genes in pham
• Manual Annotations of this start: 2 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BearBQ_59 (DN), Birdsong_61 (DN),

Start 109:
• Found in 4 of 298 (1.3%) of genes in pham
• Manual Annotations of this start: 4 of 266
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BENtherdunthat_93 (DN1), BotCity_96 (DN), CheeseTouch_100 (DN1), Kenna_88 (DN1),

Summary by clusters:

There are 19 clusters represented in this pham: DN, F1, F2, P1, E, F5, F, J, singleton, O, A1, DN4, S, DN1, B1, W, C1, UNK, K1,

Info for manual annotations of cluster A1:
•Start number 61 was manually annotated 12 times for cluster A1.
•Start number 74 was manually annotated 1 time for cluster A1.
•Start number 82 was manually annotated 2 times for cluster A1.
•Start number 83 was manually annotated 9 times for cluster A1.

Info for manual annotations of cluster B1:
•Start number 74 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster C1:
•Start number 74 was manually annotated 1 time for cluster C1.
•Start number 82 was manually annotated 5 times for cluster C1.
•Start number 83 was manually annotated 4 times for cluster C1.

Info for manual annotations of cluster DN:
•Start number 76 was manually annotated 1 time for cluster DN.
•Start number 94 was manually annotated 2 times for cluster DN.
•Start number 109 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 109 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster DN4:
•Start number 76 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster E:
•Start number 82 was manually annotated 28 times for cluster E.
•Start number 83 was manually annotated 51 times for cluster E.
•Start number 89 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:
•Start number 59 was manually annotated 1 time for cluster F1.
•Start number 77 was manually annotated 4 times for cluster F1.
•Start number 78 was manually annotated 1 time for cluster F1.
•Start number 81 was manually annotated 1 time for cluster F1.
•Start number 82 was manually annotated 24 times for cluster F1.
•Start number 83 was manually annotated 45 times for cluster F1.
•Start number 85 was manually annotated 2 times for cluster F1.
•Start number 86 was manually annotated 1 time for cluster F1.
•Start number 88 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:
•Start number 82 was manually annotated 2 times for cluster F2.
•Start number 83 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F5:
•Start number 83 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:
•Start number 81 was manually annotated 1 time for cluster J.
•Start number 82 was manually annotated 1 time for cluster J.
•Start number 83 was manually annotated 26 times for cluster J.

Info for manual annotations of cluster K1:
•Start number 76 was manually annotated 3 times for cluster K1.

Info for manual annotations of cluster O:
•Start number 83 was manually annotated 1 time for cluster O.

Info for manual annotations of cluster P1:
•Start number 75 was manually annotated 1 time for cluster P1.
•Start number 83 was manually annotated 6 times for cluster P1.

Info for manual annotations of cluster S:
•Start number 74 was manually annotated 1 time for cluster S.
•Start number 82 was manually annotated 10 times for cluster S.
•Start number 83 was manually annotated 1 time for cluster S.
•Start number 89 was manually annotated 3 times for cluster S.

Info for manual annotations of cluster W:
•Start number 77 was manually annotated 1 time for cluster W.

Gene Information:

Gene: 244_45 Start: 35533, Stop: 35168, Start Num: 83
Candidate Starts for 244_45:
(Start: 74 @35548 has 4 MA's), (Start: 83 @35533 has 147 MA's), (120, 35398), (130, 35374), (133, 35350), (141, 35305), (144, 35287),

Gene: ABCat_41 Start: 35824, Stop: 35336, Start Num: 83
Candidate Starts for ABCat_41:
(Start: 83 @35824 has 147 MA's), (Start: 89 @35812 has 5 MA's), (111, 35749), (118, 35734), (128, 35707), (131, 35701), (138, 35656), (140, 35644), (153, 35602), (181, 35500), (204, 35356),

Gene: Acme_63 Start: 41329, Stop: 40964, Start Num: 83
Candidate Starts for Acme_63:
(20, 41530), (53, 41386), (55, 41383), (Start: 83 @41329 has 147 MA's), (118, 41212), (120, 41194), (130, 41170), (133, 41146), (141, 41101),

Gene: Akhila_77 Start: 47736, Stop: 48011, Start Num: 82
Candidate Starts for Akhila_77:
(72, 47712), (Start: 82 @47736 has 72 MA's), (120, 47871), (130, 47895), (133, 47919), (141, 47964), (147, 47991),

Gene: AmericanBeauty_43 Start: 35021, Stop: 34656, Start Num: 82
Candidate Starts for AmericanBeauty_43:
(60, 35060), (73, 35042), (Start: 82 @35021 has 72 MA's), (120, 34886), (130, 34862), (133, 34838), (141, 34793), (144, 34775),

Gene: Ardmore_66 Start: 43412, Stop: 43687, Start Num: 82
Candidate Starts for Ardmore_66:
(57, 43376), (Start: 82 @43412 has 72 MA's), (120, 43547), (130, 43571), (133, 43595), (141, 43640), (152, 43667),

Gene: Argie_65 Start: 48661, Stop: 49026, Start Num: 77
Candidate Starts for Argie_65:
(33, 48544), (Start: 38 @48574 has 1 MA's), (48, 48601), (67, 48637), (Start: 77 @48661 has 5 MA's), (108, 48766), (121, 48814), (127, 48832), (130, 48838), (139, 48895), (140, 48904), (162, 48976), (168, 49000), (171, 49015),

Gene: Ariel_72 Start: 46298, Stop: 45933, Start Num: 83
Candidate Starts for Ariel_72:
(Start: 83 @46298 has 147 MA's), (96, 46256), (130, 46160), (141, 46091), (153, 46052),

Gene: Atcoo_54 Start: 36879, Stop: 37241, Start Num: 83
Candidate Starts for Atcoo_54:
(16, 36651), (45, 36798), (53, 36822), (Start: 83 @36879 has 147 MA's), (111, 36954), (118, 36969), (128, 36996), (131, 37002), (138, 37047), (140, 37059), (204, 37218),

Gene: Avani_88 Start: 46792, Stop: 47127, Start Num: 83
Candidate Starts for Avani_88:
(69, 46759), (Start: 83 @46792 has 147 MA's), (Start: 89 @46804 has 5 MA's), (100, 46852), (126, 46927), (129, 46936), (138, 46984), (140, 46996),

Gene: Avani_91 Start: 47610, Stop: 47966, Start Num: 83
Candidate Starts for Avani_91:
(Start: 83 @47610 has 147 MA's), (183, 47862),

Gene: BAKA_81 Start: 52347, Stop: 51940, Start Num: 83
Candidate Starts for BAKA_81:
(Start: 83 @52347 has 147 MA's), (96, 52305), (130, 52209), (132, 52188), (138, 52155), (140, 52143), (151, 52110), (181, 52002),

Gene: BENtherdunthat_93 Start: 50252, Stop: 50641, Start Num: 109
Candidate Starts for BENtherdunthat_93:
(80, 50147), (84, 50153), (95, 50186), (107, 50243), (Start: 109 @50252 has 4 MA's), (134, 50351), (136, 50366), (143, 50408), (144, 50414), (172, 50507),

Gene: BadStone_42 Start: 35749, Stop: 35474, Start Num: 83
Candidate Starts for BadStone_42:
(Start: 74 @35764 has 4 MA's), (Start: 83 @35749 has 147 MA's), (120, 35614), (130, 35590), (133, 35566), (141, 35521), (147, 35494),

Gene: Batiatus_80 Start: 48821, Stop: 49096, Start Num: 82
Candidate Starts for Batiatus_80:
(57, 48785), (Start: 82 @48821 has 72 MA's), (120, 48956), (130, 48980), (133, 49004), (141, 49049), (152, 49076),

Gene: BearBQ_59 Start: 40143, Stop: 40532, Start Num: 94
Candidate Starts for BearBQ_59:
(15, 39858), (18, 39897), (24, 39936), (62, 40062), (Start: 94 @40143 has 2 MA's), (116, 40230), (139, 40329),

Gene: Beelzebub_13 Start: 3753, Stop: 4160, Start Num: 82
Candidate Starts for Beelzebub_13:
(Start: 82 @3753 has 72 MA's), (Start: 89 @3765 has 5 MA's), (120, 3891), (130, 3915), (133, 3939), (139, 3972), (186, 4137),

Gene: Beem_72 Start: 50575, Stop: 50210, Start Num: 83
Candidate Starts for Beem_72:
(Start: 83 @50575 has 147 MA's), (96, 50533), (130, 50437), (141, 50368), (153, 50329),

Gene: Bench_45 Start: 35386, Stop: 35111, Start Num: 83
Candidate Starts for Bench_45:
(Start: 83 @35386 has 147 MA's), (120, 35251), (130, 35227), (133, 35203), (141, 35158), (152, 35131),

Gene: Bethlehem_85 Start: 50979, Stop: 50701, Start Num: 83
Candidate Starts for Bethlehem_85:
(72, 51003), (Start: 83 @50979 has 147 MA's), (96, 50937), (130, 50841), (140, 50775), (145, 50754), (146, 50748), (148, 50745), (151, 50742), (161, 50721),

Gene: Big3_61 Start: 41706, Stop: 41350, Start Num: 82
Candidate Starts for Big3_61:
(55, 41754), (67, 41736), (Start: 82 @41706 has 72 MA's), (Start: 89 @41694 has 5 MA's), (120, 41568), (124, 41559), (130, 41544), (133, 41520), (138, 41490), (140, 41478),

Gene: BigPaolini_39 Start: 30429, Stop: 30067, Start Num: 61
Candidate Starts for BigPaolini_39:
(23, 30567), (29, 30534), (Start: 61 @30429 has 12 MA's), (140, 30186), (145, 30165), (146, 30159), (148, 30156),

Gene: BilboSwaggins_42 Start: 35832, Stop: 35344, Start Num: 83
Candidate Starts for BilboSwaggins_42:

(Start: 83 @35832 has 147 MA's), (Start: 89 @35820 has 5 MA's), (111, 35757), (118, 35742), (128, 35715), (131, 35709), (138, 35664), (140, 35652), (153, 35610), (181, 35508), (204, 35364),

Gene: Birdsong_61 Start: 38810, Stop: 39199, Start Num: 94
Candidate Starts for Birdsong_61:
(Start: 94 @38810 has 2 MA's), (116, 38897), (139, 38996),

Gene: Blackbeetle_8 Start: 2539, Stop: 2790, Start Num: 89
Candidate Starts for Blackbeetle_8:
(Start: 89 @2539 has 5 MA's), (92, 2554), (141, 2743), (147, 2770),

Gene: Blarby_90 Start: 47520, Stop: 47888, Start Num: 82
Candidate Starts for Blarby_90:
(57, 47484), (Start: 82 @47520 has 72 MA's), (120, 47655), (130, 47679), (133, 47703), (141, 47748), (144, 47766), (165, 47814),

Gene: BlueCrab_85 Start: 50477, Stop: 50755, Start Num: 83
Candidate Starts for BlueCrab_85:
(Start: 83 @50477 has 147 MA's), (96, 50519), (130, 50615), (140, 50681), (145, 50702), (146, 50708), (148, 50711), (151, 50714), (161, 50735),

Gene: BlueCrab_84 Start: 50205, Stop: 50480, Start Num: 82
Candidate Starts for BlueCrab_84:
(72, 50181), (Start: 82 @50205 has 72 MA's), (120, 50340), (130, 50364), (133, 50388), (141, 50433), (147, 50460),

Gene: Bobi_86 Start: 50927, Stop: 51202, Start Num: 82
Candidate Starts for Bobi_86:
(Start: 82 @50927 has 72 MA's), (120, 51062), (130, 51086), (133, 51110), (141, 51155), (147, 51182), (150, 51185),

Gene: Bogg_42 Start: 34449, Stop: 34084, Start Num: 82
Candidate Starts for Bogg_42:
(60, 34488), (73, 34470), (Start: 82 @34449 has 72 MA's), (120, 34314), (130, 34290), (133, 34266), (141, 34221), (144, 34203),

Gene: BotCity_96 Start: 51781, Stop: 52170, Start Num: 109
Candidate Starts for BotCity_96:
(80, 51676), (84, 51682), (95, 51715), (107, 51772), (Start: 109 @51781 has 4 MA's), (134, 51880), (136, 51895), (143, 51937), (144, 51943), (172, 52036),

Gene: BronnyJames_72 Start: 46237, Stop: 45962, Start Num: 82
Candidate Starts for BronnyJames_72:
(37, 46285), (39, 46279), (Start: 82 @46237 has 72 MA's), (120, 46102), (130, 46078), (133, 46054), (141, 46009), (147, 45982),

Gene: Brusacoram_54 Start: 36385, Stop: 36747, Start Num: 83
Candidate Starts for Brusacoram_54:
(16, 36157), (45, 36304), (53, 36328), (Start: 83 @36385 has 147 MA's), (111, 36460), (118, 36475), (128, 36502), (131, 36508), (138, 36553), (140, 36565), (204, 36724),

Gene: Buck_42 Start: 35321, Stop: 34953, Start Num: 82
Candidate Starts for Buck_42:

(Start: 82 @35321 has 72 MA's), (Start: 89 @35309 has 5 MA's), (120, 35183), (130, 35159), (133, 35135), (144, 35072),

Gene: Budgie_53 Start: 36596, Stop: 36261, Start Num: 78
Candidate Starts for Budgie_53:
(Start: 78 @36596 has 1 MA's), (96, 36542), (138, 36404), (140, 36392),

Gene: BugsBunny_42 Start: 35155, Stop: 34877, Start Num: 82
Candidate Starts for BugsBunny_42:
(3, 35491), (4, 35488), (6, 35482), (8, 35473), (25, 35314), (32, 35284), (Start: 82 @35155 has 72 MA's), (118, 35035), (120, 35017), (130, 34993), (133, 34969), (141, 34924), (147, 34897),

Gene: BuzzLyseyear_89 Start: 52060, Stop: 52338, Start Num: 83
Candidate Starts for BuzzLyseyear_89:
(34, 51934), (71, 52030), (Start: 83 @52060 has 147 MA's), (Start: 89 @52072 has 5 MA's), (140, 52264), (145, 52285), (146, 52291), (148, 52294), (151, 52297), (161, 52318),

Gene: Bxb1_55 Start: 39572, Stop: 39207, Start Num: 83
Candidate Starts for Bxb1_55:
(20, 39773), (53, 39629), (55, 39626), (Start: 83 @39572 has 147 MA's), (118, 39455), (120, 39437), (130, 39413), (133, 39389), (141, 39344),

Gene: ByChance_74 Start: 45038, Stop: 45421, Start Num: 83
Candidate Starts for ByChance_74:
(Start: 83 @45038 has 147 MA's), (87, 45047), (118, 45149), (120, 45158), (138, 45230), (140, 45242), (194, 45368),

Gene: CaptainTrips_82 Start: 48768, Stop: 49100, Start Num: 83
Candidate Starts for CaptainTrips_82:
(Start: 83 @48768 has 147 MA's), (96, 48810), (130, 48906), (139, 48963),

Gene: Che8_85 Start: 49488, Stop: 49877, Start Num: 83
Candidate Starts for Che8_85:
(66, 49449), (Start: 83 @49488 has 147 MA's), (Start: 89 @49500 has 5 MA's), (106, 49572), (110, 49581), (124, 49617), (139, 49689),

Gene: CheeseTouch_100 Start: 49365, Stop: 49754, Start Num: 109
Candidate Starts for CheeseTouch_100:
(80, 49260), (84, 49266), (95, 49299), (107, 49356), (Start: 109 @49365 has 4 MA's), (134, 49464), (136, 49479), (143, 49521), (144, 49527), (172, 49620),

Gene: Cheesepuff_90 Start: 49461, Stop: 49736, Start Num: 82
Candidate Starts for Cheesepuff_90:
(25, 49299), (30, 49317), (41, 49371), (Start: 82 @49461 has 72 MA's), (120, 49596), (130, 49620), (133, 49644), (141, 49689), (147, 49716),

Gene: ChosenOne_45 Start: 34885, Stop: 34610, Start Num: 82
Candidate Starts for ChosenOne_45:
(Start: 82 @34885 has 72 MA's), (118, 34768), (120, 34750), (130, 34726), (133, 34702), (141, 34657), (147, 34630),

Gene: Chuckly_78 Start: 46153, Stop: 46428, Start Num: 82
Candidate Starts for Chuckly_78:

(57, 46117), (Start: 82 @46153 has 72 MA's), (120, 46288), (130, 46312), (133, 46336), (141, 46381), (152, 46408),

Gene: Cjw1_44 Start: 36482, Stop: 36078, Start Num: 83
Candidate Starts for Cjw1_44:
(Start: 83 @36482 has 147 MA's), (120, 36347), (130, 36323), (133, 36299), (141, 36254), (175, 36131),

Gene: Clarkson_11 Start: 3529, Stop: 3936, Start Num: 82
Candidate Starts for Clarkson_11:
(Start: 82 @3529 has 72 MA's), (Start: 89 @3541 has 5 MA's), (120, 3667), (130, 3691), (133, 3715), (139, 3748), (186, 3913),

Gene: Constella_63 Start: 45933, Stop: 45571, Start Num: 81
Candidate Starts for Constella_63:
(Start: 81 @45933 has 2 MA's), (99, 45873), (104, 45870), (123, 45837), (185, 45663),

Gene: Contagion_41 Start: 34707, Stop: 34342, Start Num: 83
Candidate Starts for Contagion_41:
(Start: 74 @34722 has 4 MA's), (Start: 83 @34707 has 147 MA's), (120, 34572), (130, 34548), (133, 34524), (144, 34461),

Gene: Cookies_41 Start: 35072, Stop: 34707, Start Num: 83
Candidate Starts for Cookies_41:
(Start: 74 @35087 has 4 MA's), (Start: 83 @35072 has 147 MA's), (120, 34937), (130, 34913), (133, 34889), (144, 34826),

Gene: Corazon_10 Start: 3482, Stop: 3889, Start Num: 82
Candidate Starts for Corazon_10:
(Start: 82 @3482 has 72 MA's), (Start: 89 @3494 has 5 MA's), (120, 3620), (130, 3644), (133, 3668), (139, 3701), (186, 3866),

Gene: Cornie_79 Start: 47817, Stop: 48095, Start Num: 83
Candidate Starts for Cornie_79:
(Start: 83 @47817 has 147 MA's), (140, 48021), (145, 48042), (146, 48048), (148, 48051), (151, 48054), (161, 48075),

Gene: CrystalP_43 Start: 35832, Stop: 35344, Start Num: 83
Candidate Starts for CrystalP_43:
(Start: 83 @35832 has 147 MA's), (Start: 89 @35820 has 5 MA's), (111, 35757), (118, 35742), (128, 35715), (131, 35709), (138, 35664), (140, 35652), (153, 35610), (181, 35508), (204, 35364),

Gene: Cueylyss_40 Start: 32157, Stop: 31795, Start Num: 61
Candidate Starts for Cueylyss_40:
(23, 32295), (29, 32262), (Start: 61 @32157 has 12 MA's), (140, 31914), (145, 31893), (146, 31887), (148, 31884),

Gene: Curiosium_93 Start: 56159, Stop: 56515, Start Num: 76
Candidate Starts for Curiosium_93:
(Start: 76 @56159 has 5 MA's), (80, 56171), (90, 56189), (114, 56258), (118, 56279), (123, 56300), (125, 56303), (132, 56324), (139, 56360), (142, 56381), (162, 56429), (164, 56432), (180, 56498),

Gene: Czyszczon1_44 Start: 35291, Stop: 34887, Start Num: 83

Candidate Starts for Czyszczon1_44:
(Start: 83 @35291 has 147 MA's), (120, 35156), (130, 35132), (133, 35108), (141, 35063), (175, 34940),

Gene: DLane_82 Start: 50043, Stop: 50318, Start Num: 82
Candidate Starts for DLane_82:
(57, 50007), (Start: 82 @50043 has 72 MA's), (120, 50178), (130, 50202), (133, 50226), (141, 50271), (152, 50298),

Gene: Daenerys_82 Start: 50903, Stop: 51181, Start Num: 83
Candidate Starts for Daenerys_82:
(Start: 83 @50903 has 147 MA's), (96, 50945), (130, 51041), (140, 51107), (145, 51128), (146, 51134), (148, 51137), (151, 51140), (161, 51161),

Gene: Dallas_71 Start: 49496, Stop: 49131, Start Num: 83
Candidate Starts for Dallas_71:
(Start: 83 @49496 has 147 MA's), (96, 49454), (130, 49358), (141, 49289), (153, 49250),

Gene: Dante_84 Start: 51687, Stop: 51980, Start Num: 82
Candidate Starts for Dante_84:
(Start: 59 @51639 has 1 MA's), (63, 51645), (Start: 82 @51687 has 72 MA's), (135, 51831), (142, 51864),

Gene: Deb65_76 Start: 48625, Stop: 48903, Start Num: 83
Candidate Starts for Deb65_76:
(Start: 83 @48625 has 147 MA's), (96, 48667), (130, 48763), (140, 48829), (145, 48850), (146, 48856), (148, 48859), (151, 48862), (161, 48883),

Gene: DmpstrDiver_72 Start: 49923, Stop: 49558, Start Num: 83
Candidate Starts for DmpstrDiver_72:
(Start: 83 @49923 has 147 MA's), (96, 49881), (130, 49785), (141, 49716), (153, 49677),

Gene: Doom_40 Start: 32350, Stop: 31988, Start Num: 61
Candidate Starts for Doom_40:
(23, 32488), (29, 32455), (Start: 61 @32350 has 12 MA's), (140, 32107), (145, 32086), (146, 32080), (148, 32077),

Gene: DotProduct_77 Start: 47382, Stop: 47660, Start Num: 83
Candidate Starts for DotProduct_77:
(Start: 83 @47382 has 147 MA's), (96, 47424), (130, 47520), (140, 47586), (145, 47607), (146, 47613), (148, 47616), (151, 47619), (161, 47640),

Gene: DrDrey_44 Start: 36335, Stop: 35970, Start Num: 83
Candidate Starts for DrDrey_44:
(Start: 74 @36350 has 4 MA's), (Start: 83 @36335 has 147 MA's), (120, 36200), (130, 36176), (133, 36152), (141, 36107), (144, 36089),

Gene: Duke13_79 Start: 51559, Stop: 51152, Start Num: 83
Candidate Starts for Duke13_79:
(Start: 83 @51559 has 147 MA's), (96, 51517), (130, 51421), (132, 51400), (138, 51367), (140, 51355), (151, 51322), (181, 51214),

Gene: Dumbo_44 Start: 35105, Stop: 34830, Start Num: 83

Candidate Starts for Dumbo_44:
(Start: 74 @35120 has 4 MA's), (Start: 83 @35105 has 147 MA's), (120, 34970), (130, 34946), (133, 34922), (141, 34877), (147, 34850),

Gene: Dusk_42 Start: 35409, Stop: 35134, Start Num: 83
Candidate Starts for Dusk_42:
(Start: 74 @35424 has 4 MA's), (Start: 83 @35409 has 147 MA's), (120, 35274), (130, 35250), (133, 35226), (141, 35181), (147, 35154),

Gene: Easy2Say_45 Start: 36649, Stop: 36374, Start Num: 83
Candidate Starts for Easy2Say_45:
(Start: 74 @36664 has 4 MA's), (Start: 83 @36649 has 147 MA's), (120, 36514), (130, 36490), (133, 36466), (141, 36421), (147, 36394),

Gene: Efra2_92 Start: 56100, Stop: 56492, Start Num: 76
Candidate Starts for Efra2_92:
(Start: 76 @56100 has 5 MA's), (98, 56163), (101, 56184), (102, 56190), (117, 56247), (137, 56337), (138, 56340), (139, 56343), (142, 56364), (164, 56415), (178, 56475),

Gene: Ejimix_72 Start: 51361, Stop: 50996, Start Num: 83
Candidate Starts for Ejimix_72:
(Start: 83 @51361 has 147 MA's), (96, 51319), (130, 51223), (141, 51154), (153, 51115),

Gene: EleanorGeorge_87 Start: 51109, Stop: 51492, Start Num: 83
Candidate Starts for EleanorGeorge_87:
(69, 51076), (Start: 83 @51109 has 147 MA's), (118, 51220), (120, 51229), (138, 51301), (140, 51313), (194, 51439),

Gene: Elite2014_44 Start: 34884, Stop: 34609, Start Num: 82
Candidate Starts for Elite2014_44:
(Start: 82 @34884 has 72 MA's), (118, 34767), (120, 34749), (130, 34725), (133, 34701), (141, 34656), (147, 34629),

Gene: Elph10_43 Start: 34783, Stop: 34379, Start Num: 83
Candidate Starts for Elph10_43:
(Start: 83 @34783 has 147 MA's), (120, 34648), (130, 34624), (133, 34600), (141, 34555), (175, 34432),

Gene: Emmina_45 Start: 35184, Stop: 34909, Start Num: 82
Candidate Starts for Emmina_45:
(37, 35286), (39, 35280), (51, 35250), (Start: 82 @35184 has 72 MA's), (118, 35067), (120, 35049), (130, 35025), (133, 35001), (141, 34956), (147, 34929),

Gene: Estave1_94 Start: 53968, Stop: 54324, Start Num: 83
Candidate Starts for Estave1_94:
(Start: 83 @53968 has 147 MA's), (183, 54220),

Gene: Eureka_42 Start: 35560, Stop: 35285, Start Num: 82
Candidate Starts for Eureka_42:
(57, 35596), (Start: 82 @35560 has 72 MA's), (120, 35425), (130, 35401), (133, 35377), (141, 35332), (152, 35305),

Gene: Eyeball_40 Start: 31827, Stop: 31465, Start Num: 61

Candidate Starts for Eyeball_40:
(23, 31965), (29, 31932), (Start: 61 @31827 has 12 MA's), (140, 31584), (145, 31563), (146, 31557),
(148, 31554),

Gene: FairyPath_41 Start: 35211, Stop: 34846, Start Num: 83
Candidate Starts for FairyPath_41:
(Start: 83 @35211 has 147 MA's), (96, 35169), (130, 35073), (141, 35004), (153, 34965),

Gene: Fajezeel_62 Start: 40619, Stop: 40254, Start Num: 83
Candidate Starts for Fajezeel_62:
(20, 40820), (53, 40676), (55, 40673), (Start: 83 @40619 has 147 MA's), (118, 40502), (120, 40484),
(130, 40460), (133, 40436), (141, 40391),

Gene: Fancypants_93 Start: 52418, Stop: 52996, Start Num: 78
Candidate Starts for Fancypants_93:
(Start: 78 @52418 has 1 MA's), (103, 52508), (115, 52571), (119, 52595), (138, 52679), (140, 52691),
(156, 52742), (157, 52745), (170, 52775), (190, 52817), (205, 52943),

Gene: Fastidio_82 Start: 46279, Stop: 46557, Start Num: 83
Candidate Starts for Fastidio_82:
(Start: 83 @46279 has 147 MA's), (96, 46321), (130, 46417), (140, 46483), (145, 46504), (146, 46510),
(148, 46513), (151, 46516), (161, 46537),

Gene: FeliMaine_11 Start: 3530, Stop: 3937, Start Num: 82
Candidate Starts for FeliMaine_11:
(Start: 82 @3530 has 72 MA's), (Start: 89 @3542 has 5 MA's), (120, 3668), (130, 3692), (133, 3716),
(139, 3749), (186, 3914),

Gene: Filch_44 Start: 35012, Stop: 34647, Start Num: 83
Candidate Starts for Filch_44:
(Start: 83 @35012 has 147 MA's), (120, 34877), (130, 34853), (133, 34829), (144, 34766),

Gene: Filuzino_83 Start: 51185, Stop: 51463, Start Num: 83
Candidate Starts for Filuzino_83:
(Start: 83 @51185 has 147 MA's), (96, 51227), (130, 51323), (140, 51389), (145, 51410), (146, 51416),
(148, 51419), (151, 51422), (161, 51443),

Gene: FireRed_44 Start: 35594, Stop: 35316, Start Num: 82
Candidate Starts for FireRed_44:
(3, 35930), (4, 35927), (6, 35921), (8, 35912), (25, 35753), (32, 35723), (Start: 82 @35594 has 72
MA's), (118, 35474), (120, 35456), (130, 35432), (133, 35408), (141, 35363), (147, 35336),

Gene: Flabslab_18 Start: 6033, Stop: 6323, Start Num: 74
Candidate Starts for Flabslab_18:
(Start: 74 @6033 has 4 MA's), (120, 6183), (130, 6207), (133, 6231), (141, 6276), (147, 6303),

Gene: Flathead_79 Start: 48157, Stop: 48534, Start Num: 82
Candidate Starts for Flathead_79:
(79, 48154), (Start: 82 @48157 has 72 MA's), (96, 48199), (120, 48304), (130, 48328), (133, 48352),
(144, 48415),

Gene: Frickyeah_84 Start: 46460, Stop: 46879, Start Num: 76
Candidate Starts for Frickyeah_84:

(Start: 76 @46460 has 5 MA's), (97, 46517), (112, 46580), (122, 46625), (159, 46748), (177, 46802), (182, 46811), (187, 46832), (188, 46841),

Gene: Fringe_55 Start: 47885, Stop: 47511, Start Num: 74
Candidate Starts for Fringe_55:
(Start: 74 @47885 has 4 MA's), (120, 47735), (130, 47711), (133, 47687), (139, 47654), (163, 47573),

Gene: Froghopper_59 Start: 39967, Stop: 39602, Start Num: 83
Candidate Starts for Froghopper_59:
(20, 40168), (53, 40024), (55, 40021), (Start: 83 @39967 has 147 MA's), (118, 39850), (120, 39832), (130, 39808), (133, 39784), (141, 39739),

Gene: Fruitloop_76 Start: 48252, Stop: 48602, Start Num: 82
Candidate Starts for Fruitloop_76:
(57, 48216), (Start: 82 @48252 has 72 MA's), (120, 48387), (130, 48411), (133, 48435), (139, 48468),

Gene: Fruitloop_79 Start: 49022, Stop: 49300, Start Num: 83
Candidate Starts for Fruitloop_79:
(Start: 83 @49022 has 147 MA's), (96, 49064), (130, 49160), (140, 49226), (145, 49247), (146, 49253), (148, 49256), (151, 49259), (161, 49280),

Gene: Galactic_79 Start: 48078, Stop: 48443, Start Num: 82
Candidate Starts for Galactic_79:
(9, 47778), (10, 47787), (11, 47793), (12, 47802), (14, 47832), (64, 48042), (Start: 82 @48078 has 72 MA's), (120, 48213), (130, 48237), (133, 48261), (141, 48306), (144, 48324),

Gene: Geralt_76 Start: 48623, Stop: 48901, Start Num: 83
Candidate Starts for Geralt_76:
(Start: 83 @48623 has 147 MA's), (96, 48665), (130, 48761), (140, 48827), (145, 48848), (146, 48854), (148, 48857), (151, 48860), (161, 48881),

Gene: GigiOuiOui_76 Start: 47877, Stop: 48161, Start Num: 77
Candidate Starts for GigiOuiOui_76:
(33, 47760), (Start: 38 @47790 has 1 MA's), (48, 47817), (67, 47853), (Start: 77 @47877 has 5 MA's), (108, 47982), (121, 48030), (127, 48048), (130, 48054), (139, 48111), (140, 48120),

Gene: Goku_42 Start: 35289, Stop: 35014, Start Num: 82
Candidate Starts for Goku_42:
(57, 35325), (Start: 82 @35289 has 72 MA's), (120, 35154), (130, 35130), (133, 35106), (141, 35061), (152, 35034),

Gene: Graduation_42 Start: 32744, Stop: 32382, Start Num: 61
Candidate Starts for Graduation_42:
(23, 32882), (29, 32849), (Start: 61 @32744 has 12 MA's), (140, 32501), (145, 32480), (146, 32474), (148, 32471),

Gene: GreaseLightnin_58 Start: 38269, Stop: 38631, Start Num: 83
Candidate Starts for GreaseLightnin_58:
(13, 38008), (17, 38041), (19, 38065), (21, 38071), (53, 38212), (Start: 83 @38269 has 147 MA's), (111, 38344), (118, 38359), (128, 38386), (131, 38392), (138, 38437), (140, 38449), (204, 38608),

Gene: Greep_45 Start: 35886, Stop: 35608, Start Num: 82
Candidate Starts for Greep_45:

(3, 36222), (4, 36219), (6, 36213), (8, 36204), (25, 36045), (32, 36015), (Start: 82 @35886 has 72 MA's), (118, 35766), (120, 35748), (130, 35724), (133, 35700), (141, 35655), (147, 35628),

Gene: Greg_62 Start: 40619, Stop: 40254, Start Num: 83
Candidate Starts for Greg_62:
(20, 40820), (53, 40676), (55, 40673), (Start: 83 @40619 has 147 MA's), (118, 40502), (120, 40484), (130, 40460), (133, 40436), (141, 40391),

Gene: Grimmer_91 Start: 49019, Stop: 49426, Start Num: 82
Candidate Starts for Grimmer_91:
(Start: 82 @49019 has 72 MA's), (Start: 89 @49031 has 5 MA's), (91, 49040), (120, 49157), (130, 49181), (133, 49205), (139, 49238), (158, 49310),

Gene: Guanica15_91 Start: 55792, Stop: 56184, Start Num: 76
Candidate Starts for Guanica15_91:
(Start: 76 @55792 has 5 MA's), (93, 55840), (98, 55855), (101, 55876), (102, 55882), (117, 55939), (137, 56029), (138, 56032), (139, 56035), (142, 56056), (164, 56107), (178, 56167),

Gene: Guppsters_77 Start: 47008, Stop: 47292, Start Num: 83
Candidate Starts for Guppsters_77:
(Start: 83 @47008 has 147 MA's), (140, 47212), (145, 47233), (146, 47239), (148, 47242),

Gene: Halley_74 Start: 50575, Stop: 50210, Start Num: 83
Candidate Starts for Halley_74:
(Start: 83 @50575 has 147 MA's), (96, 50533), (130, 50437), (141, 50368), (153, 50329),

Gene: Hamulus_81 Start: 48864, Stop: 49142, Start Num: 83
Candidate Starts for Hamulus_81:
(Start: 83 @48864 has 147 MA's), (96, 48906), (130, 49002), (140, 49068), (145, 49089), (146, 49095), (148, 49098), (151, 49101), (161, 49122),

Gene: HanKaySha_43 Start: 34995, Stop: 34630, Start Num: 83
Candidate Starts for HanKaySha_43:
(Start: 74 @35010 has 4 MA's), (Start: 83 @34995 has 147 MA's), (120, 34860), (130, 34836), (133, 34812), (141, 34767), (144, 34749),

Gene: Hannaconda_71 Start: 46308, Stop: 46033, Start Num: 82
Candidate Starts for Hannaconda_71:
(Start: 75 @46323 has 1 MA's), (Start: 82 @46308 has 72 MA's), (120, 46173), (130, 46149), (133, 46125), (141, 46080), (147, 46053),

Gene: Harley_91 Start: 51213, Stop: 51740, Start Num: 82
Candidate Starts for Harley_91:
(58, 51174), (Start: 82 @51213 has 72 MA's), (120, 51351), (130, 51375), (133, 51399), (138, 51429), (140, 51441), (151, 51474), (169, 51537), (189, 51615), (191, 51630),

Gene: Henry_43 Start: 35628, Stop: 35353, Start Num: 83
Candidate Starts for Henry_43:
(Start: 74 @35643 has 4 MA's), (Start: 83 @35628 has 147 MA's), (120, 35493), (130, 35469), (133, 35445), (141, 35400), (147, 35373),

Gene: HokkenD_65 Start: 48844, Stop: 48479, Start Num: 83
Candidate Starts for HokkenD_65:

(Start: 83 @48844 has 147 MA's), (96, 48802), (130, 48706), (141, 48637), (153, 48598),

Gene: Hopey_44 Start: 35530, Stop: 35165, Start Num: 83
Candidate Starts for Hopey_44:
(Start: 74 @35545 has 4 MA's), (Start: 83 @35530 has 147 MA's), (120, 35395), (130, 35371), (133, 35347), (141, 35302), (144, 35284),

Gene: HufflyPuff_43 Start: 35550, Stop: 35272, Start Num: 82
Candidate Starts for HufflyPuff_43:
(3, 35886), (4, 35883), (6, 35877), (8, 35868), (25, 35709), (32, 35679), (Start: 82 @35550 has 72 MA's), (118, 35430), (120, 35412), (130, 35388), (133, 35364), (141, 35319), (147, 35292),

Gene: Hughesyang_71 Start: 50504, Stop: 50139, Start Num: 83
Candidate Starts for Hughesyang_71:
(Start: 83 @50504 has 147 MA's), (96, 50462), (130, 50366), (141, 50297), (153, 50258),

Gene: Huphlepuff_11 Start: 3259, Stop: 3666, Start Num: 82
Candidate Starts for Huphlepuff_11:
(Start: 82 @3259 has 72 MA's), (Start: 89 @3271 has 5 MA's), (120, 3397), (130, 3421), (133, 3445), (139, 3478), (186, 3643),

Gene: HyRo_13 Start: 5432, Stop: 5707, Start Num: 82
Candidate Starts for HyRo_13:
(57, 5396), (Start: 82 @5432 has 72 MA's), (120, 5567), (130, 5591), (133, 5615), (141, 5660), (152, 5687),

Gene: IHOP_41 Start: 35396, Stop: 34908, Start Num: 83
Candidate Starts for IHOP_41:
(Start: 83 @35396 has 147 MA's), (Start: 89 @35384 has 5 MA's), (111, 35321), (118, 35306), (128, 35279), (131, 35273), (138, 35228), (140, 35216), (153, 35174), (181, 35072), (204, 34928),

Gene: ILeeKay_42 Start: 32194, Stop: 31832, Start Num: 61
Candidate Starts for ILeeKay_42:
(23, 32332), (29, 32299), (Start: 61 @32194 has 12 MA's), (140, 31951), (145, 31930), (146, 31924), (148, 31921),

Gene: Ibhubesi_81 Start: 47329, Stop: 47838, Start Num: 82
Candidate Starts for Ibhubesi_81:
(Start: 82 @47329 has 72 MA's), (106, 47413), (110, 47422), (124, 47458), (140, 47539), (151, 47572), (173, 47635), (192, 47713), (196, 47728),

Gene: IkeLoa_7 Start: 3049, Stop: 3285, Start Num: 83
Candidate Starts for IkeLoa_7:
(1, 2605), (2, 2707), (3, 2710), (5, 2716), (7, 2725), (30, 2905), (44, 2968), (Start: 83 @3049 has 147 MA's), (111, 3124), (118, 3139), (128, 3166), (131, 3172), (138, 3217), (140, 3229), (146, 3259),

Gene: Inca_40 Start: 33921, Stop: 33433, Start Num: 83
Candidate Starts for Inca_40:
(Start: 83 @33921 has 147 MA's), (Start: 89 @33909 has 5 MA's), (111, 33846), (118, 33831), (128, 33804), (131, 33798), (138, 33753), (140, 33741), (153, 33699), (181, 33597), (204, 33453),

Gene: Jabbawokkie_90 Start: 47440, Stop: 47808, Start Num: 82
Candidate Starts for Jabbawokkie_90:

(57, 47404), (Start: 82 @47440 has 72 MA's), (120, 47575), (130, 47599), (133, 47623), (141, 47668), (144, 47686), (165, 47734),

Gene: JeTaime_44 Start: 36054, Stop: 35689, Start Num: 83
Candidate Starts for JeTaime_44:
(Start: 83 @36054 has 147 MA's), (120, 35919), (130, 35895), (133, 35871), (144, 35808),

Gene: JoeyJr_83 Start: 50528, Stop: 50806, Start Num: 83
Candidate Starts for JoeyJr_83:
(Start: 83 @50528 has 147 MA's), (96, 50570), (130, 50666), (140, 50732), (145, 50753), (146, 50759), (148, 50762), (151, 50765), (161, 50786),

Gene: JoieB_11 Start: 3478, Stop: 3885, Start Num: 82
Candidate Starts for JoieB_11:
(Start: 82 @3478 has 72 MA's), (Start: 89 @3490 has 5 MA's), (120, 3616), (130, 3640), (133, 3664), (139, 3697), (186, 3862),

Gene: JuicyJay_71 Start: 51709, Stop: 51344, Start Num: 83
Candidate Starts for JuicyJay_71:
(Start: 83 @51709 has 147 MA's), (96, 51667), (130, 51571), (141, 51502), (153, 51463),

Gene: JulietS_7 Start: 2148, Stop: 2384, Start Num: 83
Candidate Starts for JulietS_7:
(52, 2091), (Start: 83 @2148 has 147 MA's), (111, 2223), (118, 2238), (128, 2265), (131, 2271), (138, 2316), (140, 2328), (146, 2358),

Gene: Juniormint_57 Start: 37791, Stop: 38165, Start Num: 75
Candidate Starts for Juniormint_57:
(Start: 75 @37791 has 1 MA's), (111, 37878), (118, 37893), (128, 37920), (131, 37926), (138, 37971), (140, 37983), (204, 38142),

Gene: KBG_41 Start: 33134, Stop: 32772, Start Num: 61
Candidate Starts for KBG_41:
(29, 33239), (Start: 61 @33134 has 12 MA's), (140, 32891), (145, 32870), (146, 32864), (148, 32861),

Gene: Kalah2_67 Start: 49868, Stop: 49503, Start Num: 83
Candidate Starts for Kalah2_67:
(Start: 83 @49868 has 147 MA's), (96, 49826), (130, 49730), (141, 49661), (153, 49622),

Gene: Kenna_88 Start: 49368, Stop: 49775, Start Num: 109
Candidate Starts for Kenna_88:
(80, 49263), (84, 49269), (95, 49302), (107, 49359), (Start: 109 @49368 has 4 MA's), (134, 49467), (136, 49482), (143, 49524), (144, 49530), (172, 49623), (195, 49719), (198, 49734),

Gene: Kersh_90 Start: 52725, Stop: 53210, Start Num: 83
Candidate Starts for Kersh_90:
(35, 52599), (70, 52695), (Start: 83 @52725 has 147 MA's), (Start: 89 @52737 has 5 MA's), (111, 52800), (118, 52815), (128, 52842), (131, 52848), (138, 52893), (140, 52905), (154, 52956), (155, 52959), (166, 52989), (176, 53031), (201, 53157),

Gene: Kingsley_84 Start: 51337, Stop: 51612, Start Num: 82
Candidate Starts for Kingsley_84:

(26, 51175), (28, 51184), (Start: 82 @51337 has 72 MA's), (120, 51472), (130, 51496), (133, 51520), (141, 51565), (152, 51592),

Gene: Klein_72 Start: 49891, Stop: 49526, Start Num: 83
Candidate Starts for Klein_72:
(Start: 83 @49891 has 147 MA's), (96, 49849), (130, 49753), (141, 49684), (153, 49645),

Gene: Koella_77 Start: 46451, Stop: 46915, Start Num: 83
Candidate Starts for Koella_77:
(Start: 83 @46451 has 147 MA's), (87, 46460), (118, 46562), (120, 46571), (138, 46643), (140, 46655), (153, 46697), (181, 46799),

Gene: Kostya_42 Start: 35041, Stop: 34763, Start Num: 82
Candidate Starts for Kostya_42:
(3, 35377), (4, 35374), (6, 35368), (8, 35359), (25, 35200), (32, 35170), (Start: 82 @35041 has 72 MA's), (118, 34921), (120, 34903), (130, 34879), (133, 34855), (141, 34810), (147, 34783),

Gene: Ksquared_55 Start: 38040, Stop: 38279, Start Num: 83
Candidate Starts for Ksquared_55:
(13, 37779), (17, 37812), (19, 37836), (21, 37842), (53, 37983), (Start: 83 @38040 has 147 MA's), (111, 38115), (118, 38130), (128, 38157), (131, 38163), (138, 38208), (140, 38220),

Gene: Kumao_58 Start: 42552, Stop: 43010, Start Num: 38
Candidate Starts for Kumao_58:
(Start: 38 @42552 has 1 MA's), (40, 42555), (Start: 82 @42645 has 72 MA's), (120, 42780), (130, 42804), (133, 42828), (141, 42873), (144, 42891),

Gene: Kuwabara_80 Start: 47595, Stop: 48080, Start Num: 76
Candidate Starts for Kuwabara_80:
(Start: 76 @47595 has 5 MA's), (139, 47805), (177, 47946),

Gene: Latretium_80 Start: 47741, Stop: 48100, Start Num: 82
Candidate Starts for Latretium_80:
(Start: 82 @47741 has 72 MA's), (120, 47879), (124, 47888), (130, 47903), (133, 47927), (138, 47957), (140, 47969),

Gene: Latretium_87 Start: 49978, Stop: 50271, Start Num: 82
Candidate Starts for Latretium_87:
(Start: 59 @49930 has 1 MA's), (63, 49936), (Start: 82 @49978 has 72 MA's), (135, 50122), (142, 50155),

Gene: Latretium_83 Start: 48583, Stop: 48948, Start Num: 83
Candidate Starts for Latretium_83:
(Start: 83 @48583 has 147 MA's), (96, 48625), (130, 48721), (141, 48790), (153, 48829),

Gene: Leperchaun_81 Start: 49762, Stop: 50040, Start Num: 83
Candidate Starts for Leperchaun_81:
(Start: 83 @49762 has 147 MA's), (96, 49804), (130, 49900), (140, 49966), (145, 49987), (146, 49993), (148, 49996), (151, 49999), (161, 50020),

Gene: Lesedi_57 Start: 39252, Stop: 38887, Start Num: 83
Candidate Starts for Lesedi_57:

(20, 39453), (53, 39309), (55, 39306), (Start: 83 @39252 has 147 MA's), (118, 39135), (120, 39117), (130, 39093), (133, 39069), (141, 39024),

Gene: Licorice_42 Start: 33025, Stop: 32663, Start Num: 61
Candidate Starts for Licorice_42:
(23, 33163), (29, 33130), (Start: 61 @33025 has 12 MA's), (140, 32782), (145, 32761), (146, 32755), (148, 32752),

Gene: LilMoolah_80 Start: 49043, Stop: 49381, Start Num: 83
Candidate Starts for LilMoolah_80:
(66, 49004), (Start: 83 @49043 has 147 MA's), (Start: 89 @49055 has 5 MA's), (106, 49127), (110, 49136), (124, 49172), (139, 49244),

Gene: Lilac_46 Start: 35189, Stop: 34785, Start Num: 83
Candidate Starts for Lilac_46:
(Start: 83 @35189 has 147 MA's), (120, 35054), (130, 35030), (133, 35006), (141, 34961), (175, 34838),

Gene: Lilbit_11 Start: 3530, Stop: 3937, Start Num: 82
Candidate Starts for Lilbit_11:
(Start: 82 @3530 has 72 MA's), (Start: 89 @3542 has 5 MA's), (120, 3668), (130, 3692), (133, 3716), (139, 3749), (186, 3914),

Gene: Lilizi_43 Start: 34863, Stop: 34459, Start Num: 83
Candidate Starts for Lilizi_43:
(Start: 83 @34863 has 147 MA's), (120, 34728), (130, 34704), (133, 34680), (141, 34635), (175, 34512),

Gene: Lilpickle_44 Start: 34884, Stop: 34609, Start Num: 82
Candidate Starts for Lilpickle_44:
(Start: 82 @34884 has 72 MA's), (118, 34767), (120, 34749), (130, 34725), (133, 34701), (141, 34656), (147, 34629),

Gene: LittleLaf_10 Start: 3259, Stop: 3666, Start Num: 82
Candidate Starts for LittleLaf_10:
(Start: 82 @3259 has 72 MA's), (Start: 89 @3271 has 5 MA's), (120, 3397), (130, 3421), (133, 3445), (139, 3478), (186, 3643),

Gene: LittleShirley_88 Start: 49954, Stop: 50238, Start Num: 77
Candidate Starts for LittleShirley_88:
(33, 49837), (Start: 38 @49867 has 1 MA's), (48, 49894), (67, 49930), (Start: 77 @49954 has 5 MA's), (108, 50059), (121, 50107), (127, 50125), (130, 50131), (139, 50188), (140, 50197),

Gene: LordVader_76 Start: 44555, Stop: 44884, Start Num: 83
Candidate Starts for LordVader_76:
(Start: 83 @44555 has 147 MA's), (105, 44630), (113, 44654), (118, 44672), (128, 44696),

Gene: Lucky2013_70 Start: 46314, Stop: 45949, Start Num: 83
Candidate Starts for Lucky2013_70:
(Start: 83 @46314 has 147 MA's), (96, 46272), (130, 46176), (141, 46107), (153, 46068),

Gene: LunaBlu_89 Start: 51072, Stop: 51413, Start Num: 59
Candidate Starts for LunaBlu_89:

(Start: 59 @51072 has 1 MA's), (63, 51078), (Start: 82 @51120 has 72 MA's), (135, 51264), (142, 51297),

Gene: LunarLander_41 Start: 32151, Stop: 31789, Start Num: 61
Candidate Starts for LunarLander_41:
(23, 32289), (29, 32256), (Start: 61 @32151 has 12 MA's), (140, 31908), (145, 31887), (146, 31881), (148, 31878),

Gene: MadamMonkfish_42 Start: 34547, Stop: 34182, Start Num: 82
Candidate Starts for MadamMonkfish_42:
(60, 34586), (73, 34568), (Start: 82 @34547 has 72 MA's), (120, 34412), (130, 34388), (133, 34364), (141, 34319), (144, 34301),

Gene: Mahavrat_77 Start: 46587, Stop: 46994, Start Num: 82
Candidate Starts for Mahavrat_77:
(Start: 82 @46587 has 72 MA's), (Start: 89 @46599 has 5 MA's), (91, 46608), (120, 46725), (130, 46749), (133, 46773), (139, 46806), (158, 46878),

Gene: Manda_44 Start: 36070, Stop: 35795, Start Num: 82
Candidate Starts for Manda_44:
(57, 36106), (Start: 82 @36070 has 72 MA's), (120, 35935), (130, 35911), (133, 35887), (141, 35842), (152, 35815),

Gene: Manda_42 Start: 35521, Stop: 35240, Start Num: 83
Candidate Starts for Manda_42:
(Start: 83 @35521 has 147 MA's), (96, 35479), (130, 35383), (140, 35317), (149, 35287),

Gene: Marker_83 Start: 48420, Stop: 48782, Start Num: 81
Candidate Starts for Marker_83:
(Start: 81 @48420 has 2 MA's), (99, 48480), (104, 48483), (123, 48516), (185, 48690),

Gene: Marleymoo_66 Start: 48687, Stop: 48322, Start Num: 83
Candidate Starts for Marleymoo_66:
(43, 48771), (Start: 83 @48687 has 147 MA's), (96, 48645), (130, 48549), (141, 48480), (153, 48441),

Gene: Marshmallow_42 Start: 35818, Stop: 35342, Start Num: 89
Candidate Starts for Marshmallow_42:
(Start: 83 @35830 has 147 MA's), (Start: 89 @35818 has 5 MA's), (111, 35755), (118, 35740), (128, 35713), (131, 35707), (138, 35662), (140, 35650), (153, 35608), (181, 35506), (204, 35362),

Gene: Martik_82 Start: 51049, Stop: 51432, Start Num: 83
Candidate Starts for Martik_82:
(42, 50959), (47, 50974), (69, 51016), (Start: 83 @51049 has 147 MA's), (118, 51160), (120, 51169), (138, 51241), (140, 51253), (194, 51379),

Gene: Marvin_9 Start: 3241, Stop: 3600, Start Num: 83
Candidate Starts for Marvin_9:
(Start: 83 @3241 has 147 MA's), (Start: 89 @3253 has 5 MA's), (111, 3316), (118, 3331), (128, 3358), (131, 3364), (138, 3409), (140, 3421),

Gene: Maxxinista_45 Start: 35159, Stop: 34755, Start Num: 83
Candidate Starts for Maxxinista_45:

(Start: 83 @35159 has 147 MA's), (120, 35024), (130, 35000), (133, 34976), (141, 34931), (175, 34808),

Gene: MiaZeal_73 Start: 46970, Stop: 46605, Start Num: 83
Candidate Starts for MiaZeal_73:
(Start: 83 @46970 has 147 MA's), (96, 46928), (130, 46832), (141, 46763), (153, 46724),

Gene: MilanaBonita_76 Start: 47736, Stop: 48011, Start Num: 82
Candidate Starts for MilanaBonita_76:
(72, 47712), (Start: 82 @47736 has 72 MA's), (120, 47871), (130, 47895), (133, 47919), (141, 47964), (147, 47991),

Gene: MilleFeuille_79 Start: 47713, Stop: 47426, Start Num: 83
Candidate Starts for MilleFeuille_79:
(72, 47737), (Start: 83 @47713 has 147 MA's), (96, 47671), (130, 47575), (140, 47509), (145, 47488), (146, 47482), (151, 47476),

Gene: MilleniumForce_83 Start: 50034, Stop: 50318, Start Num: 83
Candidate Starts for MilleniumForce_83:
(Start: 83 @50034 has 147 MA's), (96, 50076), (130, 50172), (140, 50238), (145, 50259), (146, 50265), (148, 50268),

Gene: Minerva_78 Start: 51991, Stop: 51626, Start Num: 83
Candidate Starts for Minerva_78:
(Start: 83 @51991 has 147 MA's), (96, 51949), (130, 51853), (141, 51784), (153, 51745),

Gene: MinionDave_78 Start: 48768, Stop: 49100, Start Num: 83
Candidate Starts for MinionDave_78:
(Start: 83 @48768 has 147 MA's), (96, 48810), (130, 48906), (139, 48963),

Gene: Miniwave_41 Start: 35246, Stop: 34860, Start Num: 83
Candidate Starts for Miniwave_41:
(Start: 74 @35261 has 4 MA's), (Start: 83 @35246 has 147 MA's), (120, 35111), (130, 35087), (133, 35063), (141, 35018), (153, 34979),

Gene: Minnie_78 Start: 50814, Stop: 51092, Start Num: 83
Candidate Starts for Minnie_78:
(Start: 83 @50814 has 147 MA's), (96, 50856), (130, 50952), (140, 51018), (145, 51039), (146, 51045), (148, 51048), (151, 51051), (161, 51072),

Gene: Misfit_43 Start: 35615, Stop: 35337, Start Num: 82
Candidate Starts for Misfit_43:
(3, 35951), (4, 35948), (6, 35942), (8, 35933), (25, 35774), (32, 35744), (Start: 82 @35615 has 72 MA's), (118, 35495), (120, 35477), (130, 35453), (133, 35429), (141, 35384), (147, 35357),

Gene: Moldemort_42 Start: 34776, Stop: 34411, Start Num: 82
Candidate Starts for Moldemort_42:
(60, 34815), (73, 34797), (Start: 82 @34776 has 72 MA's), (120, 34641), (130, 34617), (133, 34593), (141, 34548), (144, 34530),

Gene: Moonbeam_89 Start: 51150, Stop: 51629, Start Num: 86
Candidate Starts for Moonbeam_89:

(Start: 86 @51150 has 1 MA's), (Start: 88 @51153 has 1 MA's), (112, 51222), (118, 51234), (128, 51261), (131, 51267), (138, 51312), (140, 51324), (154, 51375), (155, 51378), (166, 51408), (176, 51450), (201, 51576),

Gene: Mosby_40 Start: 34707, Stop: 34342, Start Num: 83
Candidate Starts for Mosby_40:
(Start: 74 @34722 has 4 MA's), (Start: 83 @34707 has 147 MA's), (120, 34572), (130, 34548), (133, 34524), (144, 34461),

Gene: MrGordo_62 Start: 40946, Stop: 40590, Start Num: 82
Candidate Starts for MrGordo_62:
(Start: 82 @40946 has 72 MA's), (Start: 89 @40934 has 5 MA's), (120, 40808), (124, 40799), (130, 40784), (133, 40760), (138, 40730), (140, 40718),

Gene: Ms6_80 Start: 45220, Stop: 45495, Start Num: 82
Candidate Starts for Ms6_80:
(57, 45184), (Start: 82 @45220 has 72 MA's), (120, 45355), (130, 45379), (133, 45403), (141, 45448), (152, 45475),

Gene: Murica_43 Start: 35550, Stop: 35272, Start Num: 82
Candidate Starts for Murica_43:
(3, 35886), (4, 35883), (6, 35877), (8, 35868), (25, 35709), (32, 35679), (Start: 82 @35550 has 72 MA's), (118, 35430), (120, 35412), (130, 35388), (133, 35364), (141, 35319), (147, 35292),

Gene: Murphy_45 Start: 35671, Stop: 35267, Start Num: 83
Candidate Starts for Murphy_45:
(Start: 83 @35671 has 147 MA's), (120, 35536), (130, 35512), (133, 35488), (141, 35443), (175, 35320),

Gene: Myrale_43 Start: 35695, Stop: 35207, Start Num: 83
Candidate Starts for Myrale_43:
(Start: 83 @35695 has 147 MA's), (Start: 89 @35683 has 5 MA's), (111, 35620), (118, 35605), (128, 35578), (131, 35572), (138, 35527), (140, 35515), (153, 35473), (181, 35371), (204, 35227),

Gene: Nekros_74 Start: 49519, Stop: 49244, Start Num: 82
Candidate Starts for Nekros_74:
(Start: 82 @49519 has 72 MA's), (120, 49384), (130, 49360), (133, 49336), (141, 49291), (147, 49264),

Gene: NelitzaMV_41 Start: 34995, Stop: 34720, Start Num: 83
Candidate Starts for NelitzaMV_41:
(Start: 74 @35010 has 4 MA's), (Start: 83 @34995 has 147 MA's), (120, 34860), (130, 34836), (133, 34812), (141, 34767), (147, 34740),

Gene: Nibley_66 Start: 45326, Stop: 44961, Start Num: 82
Candidate Starts for Nibley_66:
(54, 45374), (57, 45368), (Start: 82 @45326 has 72 MA's), (120, 45191), (130, 45167), (133, 45143), (144, 45080),

Gene: NihilNomen_73 Start: 50662, Stop: 50297, Start Num: 83
Candidate Starts for NihilNomen_73:
(Start: 83 @50662 has 147 MA's), (96, 50620), (130, 50524), (141, 50455), (153, 50416),

Gene: Nimbo_75 Start: 48626, Stop: 48904, Start Num: 83

Candidate Starts for Nimbo_75:
(Start: 83 @48626 has 147 MA's), (96, 48668), (130, 48764), (140, 48830), (145, 48851), (146, 48857), (148, 48860), (151, 48863), (161, 48884),

Gene: Nimrod_44 Start: 35808, Stop: 35530, Start Num: 82
Candidate Starts for Nimrod_44:
(3, 36144), (4, 36141), (6, 36135), (8, 36126), (25, 35967), (32, 35937), (Start: 82 @35808 has 72 MA's), (118, 35688), (120, 35670), (130, 35646), (133, 35622), (141, 35577), (147, 35550),

Gene: Nitzel_74 Start: 45944, Stop: 46222, Start Num: 83
Candidate Starts for Nitzel_74:
(Start: 83 @45944 has 147 MA's), (96, 45986), (130, 46082), (140, 46148), (145, 46169), (146, 46175), (148, 46178), (151, 46181), (161, 46202),

Gene: Nivrat_78 Start: 48916, Stop: 49254, Start Num: 83
Candidate Starts for Nivrat_78:
(66, 48877), (Start: 83 @48916 has 147 MA's), (Start: 89 @48928 has 5 MA's), (106, 49000), (110, 49009), (124, 49045), (139, 49117),

Gene: NoSleep_45 Start: 35431, Stop: 35027, Start Num: 83
Candidate Starts for NoSleep_45:
(Start: 83 @35431 has 147 MA's), (120, 35296), (130, 35272), (133, 35248), (141, 35203), (175, 35080),

Gene: NonchalantPear_44 Start: 35187, Stop: 34912, Start Num: 82
Candidate Starts for NonchalantPear_44:
(Start: 59 @35229 has 1 MA's), (Start: 61 @35226 has 12 MA's), (Start: 82 @35187 has 72 MA's), (120, 35052), (130, 35028), (133, 35004), (141, 34959), (147, 34932),

Gene: NormanBulbieJr_83 Start: 50465, Stop: 50929, Start Num: 83
Candidate Starts for NormanBulbieJr_83:
(Start: 83 @50465 has 147 MA's), (87, 50474), (118, 50576), (120, 50585), (138, 50657), (140, 50669), (153, 50711), (181, 50813),

Gene: ODay_87 Start: 48574, Stop: 49005, Start Num: 76
Candidate Starts for ODay_87:
(Start: 76 @48574 has 5 MA's), (97, 48631), (112, 48694), (122, 48739), (139, 48802), (182, 48937),

Gene: Odette_71 Start: 49705, Stop: 49340, Start Num: 83
Candidate Starts for Odette_71:
(Start: 83 @49705 has 147 MA's), (96, 49663), (130, 49567), (141, 49498), (153, 49459),

Gene: OldBen_80 Start: 50018, Stop: 50296, Start Num: 83
Candidate Starts for OldBen_80:
(Start: 83 @50018 has 147 MA's), (96, 50060), (130, 50156), (140, 50222), (145, 50243), (146, 50249), (148, 50252), (151, 50255), (161, 50276),

Gene: OrionPax_43 Start: 35001, Stop: 34636, Start Num: 83
Candidate Starts for OrionPax_43:
(Start: 83 @35001 has 147 MA's), (120, 34866), (130, 34842), (133, 34818), (144, 34755),

Gene: PHappiness_83 Start: 50847, Stop: 51125, Start Num: 83
Candidate Starts for PHappiness_83:

(Start: 83 @50847 has 147 MA's), (96, 50889), (130, 50985), (140, 51051), (145, 51072), (146, 51078), (148, 51081), (151, 51084), (161, 51105),

Gene: Pacc40_78 Start: 49990, Stop: 50265, Start Num: 82
Candidate Starts for Pacc40_78:
(72, 49966), (Start: 82 @49990 has 72 MA's), (120, 50125), (130, 50149), (133, 50173), (141, 50218), (147, 50245),

Gene: Pacc40_79 Start: 50262, Stop: 50540, Start Num: 83
Candidate Starts for Pacc40_79:
(Start: 83 @50262 has 147 MA's), (96, 50304), (130, 50400), (140, 50466), (145, 50487), (146, 50493), (148, 50496), (151, 50499), (161, 50520),

Gene: PaddyBaddy_43 Start: 35008, Stop: 34643, Start Num: 83
Candidate Starts for PaddyBaddy_43:
(74, 35023 has 4 MA's), (Start: 83 @35008 has 147 MA's), (120, 34873), (130, 34849), (133, 34825), (141, 34780), (144, 34762),

Gene: Palpatine_44 Start: 35580, Stop: 35302, Start Num: 82
Candidate Starts for Palpatine_44:
(3, 35916), (4, 35913), (6, 35907), (8, 35898), (25, 35739), (32, 35709), (Start: 82 @35580 has 72 MA's), (118, 35460), (120, 35442), (130, 35418), (133, 35394), (141, 35349), (147, 35322),

Gene: Paperbeatsrock_43 Start: 35924, Stop: 35649, Start Num: 83
Candidate Starts for Paperbeatsrock_43:
(Start: 74 @35939 has 4 MA's), (Start: 83 @35924 has 147 MA's), (120, 35789), (130, 35765), (133, 35741), (141, 35696), (147, 35669),

Gene: Peridot_86 Start: 49669, Stop: 49953, Start Num: 77
Candidate Starts for Peridot_86:
(33, 49552), (Start: 38 @49582 has 1 MA's), (48, 49609), (67, 49645), (Start: 77 @49669 has 5 MA's), (108, 49774), (121, 49822), (127, 49840), (130, 49846), (139, 49903), (140, 49912),

Gene: Petra64142_46 Start: 36044, Stop: 35766, Start Num: 82
Candidate Starts for Petra64142_46:
(3, 36380), (4, 36377), (6, 36371), (8, 36362), (25, 36203), (32, 36173), (Start: 82 @36044 has 72 MA's), (118, 35924), (120, 35906), (130, 35882), (133, 35858), (141, 35813), (147, 35786),

Gene: Petruchio_83 Start: 47510, Stop: 47223, Start Num: 83
Candidate Starts for Petruchio_83:
(72, 47534), (Start: 83 @47510 has 147 MA's), (96, 47468), (130, 47372), (140, 47306), (145, 47285), (146, 47279), (151, 47273),

Gene: Petruchio_61 Start: 40438, Stop: 40163, Start Num: 83
Candidate Starts for Petruchio_61:
(20, 40639), (53, 40495), (55, 40492), (Start: 83 @40438 has 147 MA's), (118, 40321), (120, 40303), (130, 40279), (133, 40255), (141, 40210), (147, 40183),

Gene: Phaja_41 Start: 35395, Stop: 34907, Start Num: 83
Candidate Starts for Phaja_41:
(Start: 83 @35395 has 147 MA's), (Start: 89 @35383 has 5 MA's), (111, 35320), (118, 35305), (128, 35278), (131, 35272), (138, 35227), (140, 35215), (153, 35173), (181, 35071), (204, 34927),

Gene: Phalconet_77 Start: 47759, Stop: 48034, Start Num: 82
Candidate Starts for Phalconet_77:
(Start: 82 @47759 has 72 MA's), (120, 47894), (130, 47918), (133, 47942), (141, 47987), (147, 48014),

Gene: Phanphagia_79 Start: 49133, Stop: 49408, Start Num: 82
Candidate Starts for Phanphagia_79:
(26, 48971), (28, 48980), (Start: 82 @49133 has 72 MA's), (120, 49268), (130, 49292), (133, 49316), (141, 49361), (152, 49388),

Gene: Pharsalus_42 Start: 35724, Stop: 35449, Start Num: 83
Candidate Starts for Pharsalus_42:
(Start: 74 @35739 has 4 MA's), (Start: 83 @35724 has 147 MA's), (120, 35589), (130, 35565), (133, 35541), (141, 35496), (147, 35469),

Gene: PhatBacter_44 Start: 35594, Stop: 35316, Start Num: 82
Candidate Starts for PhatBacter_44:
(3, 35930), (4, 35927), (6, 35921), (8, 35912), (25, 35753), (32, 35723), (Start: 82 @35594 has 72 MA's), (118, 35474), (120, 35456), (130, 35432), (133, 35408), (141, 35363), (147, 35336),

Gene: Phatniss_83 Start: 49365, Stop: 49781, Start Num: 83
Candidate Starts for Phatniss_83:
(Start: 83 @49365 has 147 MA's), (106, 49449), (110, 49458), (124, 49494), (138, 49563), (140, 49575), (151, 49608), (184, 49707),

Gene: Phaux_43 Start: 35592, Stop: 35314, Start Num: 82
Candidate Starts for Phaux_43:
(3, 35928), (4, 35925), (6, 35919), (8, 35910), (25, 35751), (32, 35721), (Start: 82 @35592 has 72 MA's), (118, 35472), (120, 35454), (130, 35430), (133, 35406), (141, 35361), (147, 35334),

Gene: Phlippers_38 Start: 32612, Stop: 32250, Start Num: 61
Candidate Starts for Phlippers_38:
(23, 32750), (29, 32717), (Start: 61 @32612 has 12 MA's), (140, 32369), (145, 32348), (146, 32342), (148, 32339),

Gene: Phoebus_75 Start: 51844, Stop: 51479, Start Num: 83
Candidate Starts for Phoebus_75:
(Start: 83 @51844 has 147 MA's), (96, 51802), (130, 51706), (141, 51637), (153, 51598),

Gene: Phrux_42 Start: 34994, Stop: 34629, Start Num: 83
Candidate Starts for Phrux_42:
(Start: 74 @35009 has 4 MA's), (Start: 83 @34994 has 147 MA's), (120, 34859), (130, 34835), (133, 34811), (141, 34766), (144, 34748),

Gene: Pinkcreek_11 Start: 4628, Stop: 5008, Start Num: 82
Candidate Starts for Pinkcreek_11:
(57, 4592), (Start: 82 @4628 has 72 MA's), (120, 4763), (130, 4787), (133, 4811), (139, 4844), (154, 4904), (155, 4907), (166, 4937),

Gene: Poise_8 Start: 2539, Stop: 2790, Start Num: 89
Candidate Starts for Poise_8:
(Start: 89 @2539 has 5 MA's), (92, 2554), (141, 2743), (147, 2770),

Gene: Policronamos_44 Start: 35592, Stop: 35314, Start Num: 82

Candidate Starts for Policronamos_44:
(3, 35928), (4, 35925), (6, 35919), (8, 35910), (25, 35751), (32, 35721), (Start: 82 @35592 has 72 MA's), (118, 35472), (120, 35454), (130, 35430), (133, 35406), (141, 35361), (147, 35334),

Gene: Pollywog_81 Start: 49950, Stop: 50234, Start Num: 83
Candidate Starts for Pollywog_81:
(Start: 83 @49950 has 147 MA's), (96, 49992), (130, 50088), (140, 50154), (145, 50175), (146, 50181), (148, 50184),

Gene: Pollywog_88 Start: 51599, Stop: 52084, Start Num: 83
Candidate Starts for Pollywog_88:
(65, 51560), (Start: 83 @51599 has 147 MA's), (Start: 89 @51611 has 5 MA's), (111, 51674), (118, 51689), (128, 51716), (131, 51722), (138, 51767), (140, 51779), (154, 51830), (155, 51833), (166, 51863), (176, 51905), (201, 52031),

Gene: Porcelain_72 Start: 46970, Stop: 46605, Start Num: 83
Candidate Starts for Porcelain_72:
(Start: 83 @46970 has 147 MA's), (96, 46928), (130, 46832), (141, 46763), (153, 46724),

Gene: Porky_43 Start: 35192, Stop: 34917, Start Num: 82
Candidate Starts for Porky_43:
(37, 35294), (39, 35288), (51, 35258), (Start: 82 @35192 has 72 MA's), (118, 35075), (120, 35057), (130, 35033), (133, 35009), (141, 34964), (147, 34937),

Gene: Pringar_10 Start: 3084, Stop: 3491, Start Num: 82
Candidate Starts for Pringar_10:
(Start: 82 @3084 has 72 MA's), (Start: 89 @3096 has 5 MA's), (120, 3222), (130, 3246), (133, 3270), (139, 3303), (186, 3468),

Gene: Priscilla_85 Start: 50563, Stop: 51027, Start Num: 83
Candidate Starts for Priscilla_85:
(Start: 83 @50563 has 147 MA's), (87, 50572), (118, 50674), (120, 50683), (138, 50755), (140, 50767), (153, 50809), (181, 50911),

Gene: Ptowny_43 Start: 34586, Stop: 34221, Start Num: 83
Candidate Starts for Ptowny_43:
(Start: 74 @34601 has 4 MA's), (Start: 83 @34586 has 147 MA's), (118, 34469), (120, 34451), (130, 34427), (133, 34403), (141, 34358), (144, 34340),

Gene: Pumpkin_45 Start: 35920, Stop: 35555, Start Num: 83
Candidate Starts for Pumpkin_45:
(Start: 83 @35920 has 147 MA's), (120, 35785), (130, 35761), (133, 35737), (144, 35674),

Gene: Puppet_40 Start: 32097, Stop: 31735, Start Num: 61
Candidate Starts for Puppet_40:
(23, 32235), (29, 32202), (Start: 61 @32097 has 12 MA's), (140, 31854), (145, 31833), (146, 31827), (148, 31824),

Gene: QBert_7 Start: 3151, Stop: 3387, Start Num: 83
Candidate Starts for QBert_7:
(52, 3094), (Start: 83 @3151 has 147 MA's), (111, 3226), (118, 3241), (128, 3268), (131, 3274), (138, 3319), (140, 3331), (146, 3361),

Gene: Quallification_42 Start: 35222, Stop: 34857, Start Num: 83
Candidate Starts for Quallification_42:
(Start: 83 @35222 has 147 MA's), (96, 35180), (130, 35084), (141, 35015), (153, 34976),

Gene: Raela_8 Start: 2919, Stop: 3194, Start Num: 82
Candidate Starts for Raela_8:
(Start: 82 @2919 has 72 MA's), (120, 3054), (130, 3078), (133, 3102), (141, 3147), (147, 3174),

Gene: Rearden_72 Start: 47623, Stop: 47135, Start Num: 83
Candidate Starts for Rearden_72:
(65, 47662), (Start: 83 @47623 has 147 MA's), (Start: 89 @47611 has 5 MA's), (111, 47548), (118, 47533), (128, 47506), (131, 47500), (138, 47455), (140, 47443), (154, 47392), (155, 47389), (166, 47359), (176, 47317), (201, 47191),

Gene: RedRaider77_11 Start: 3531, Stop: 3950, Start Num: 74
Candidate Starts for RedRaider77_11:
(Start: 74 @3531 has 4 MA's), (120, 3681), (130, 3705), (133, 3729), (137, 3756), (138, 3759),

Gene: Redno2_69 Start: 47458, Stop: 47093, Start Num: 83
Candidate Starts for Redno2_69:
(Start: 83 @47458 has 147 MA's), (96, 47416), (130, 47320), (141, 47251), (153, 47212),

Gene: Rialto_92 Start: 51249, Stop: 51725, Start Num: 88
Candidate Starts for Rialto_92:
(Start: 86 @51246 has 1 MA's), (Start: 88 @51249 has 1 MA's), (112, 51318), (118, 51330), (128, 51357), (131, 51363), (138, 51408), (140, 51420), (154, 51471), (155, 51474), (166, 51504), (176, 51546), (201, 51672),

Gene: Rimmer_42 Start: 34931, Stop: 34563, Start Num: 82
Candidate Starts for Rimmer_42:
(Start: 82 @34931 has 72 MA's), (Start: 89 @34919 has 5 MA's), (120, 34793), (130, 34769), (133, 34745), (144, 34682),

Gene: RitaG_83 Start: 50649, Stop: 50927, Start Num: 83
Candidate Starts for RitaG_83:
(Start: 83 @50649 has 147 MA's), (96, 50691), (130, 50787), (140, 50853), (145, 50874), (146, 50880), (148, 50883), (151, 50886), (161, 50907),

Gene: RiverMonster_44 Start: 35447, Stop: 35043, Start Num: 83
Candidate Starts for RiverMonster_44:
(Start: 83 @35447 has 147 MA's), (120, 35312), (130, 35288), (133, 35264), (141, 35219), (175, 35096),

Gene: RoMag_6 Start: 3000, Stop: 3236, Start Num: 83
Candidate Starts for RoMag_6:
(52, 2943), (Start: 83 @3000 has 147 MA's), (111, 3075), (118, 3090), (128, 3117), (131, 3123), (138, 3168), (140, 3180), (146, 3210),

Gene: Ryadel_104 Start: 63381, Stop: 62932, Start Num: 83
Candidate Starts for Ryadel_104:
(56, 63432), (Start: 83 @63381 has 147 MA's), (Start: 89 @63369 has 5 MA's), (103, 63303), (115, 63240), (119, 63216), (138, 63132), (140, 63120), (154, 63087), (200, 62937),

Gene: SG4_79 Start: 48739, Stop: 49107, Start Num: 82
Candidate Starts for SG4_79:
(64, 48706), (Start: 82 @48739 has 72 MA's), (120, 48877), (124, 48886), (130, 48901), (133, 48925), (144, 48988),

Gene: Sandalphon_76 Start: 48799, Stop: 49077, Start Num: 83
Candidate Starts for Sandalphon_76:
(Start: 83 @48799 has 147 MA's), (96, 48841), (130, 48937), (140, 49003), (145, 49024), (146, 49030), (148, 49033), (151, 49036), (161, 49057),

Gene: Schatzie_67 Start: 49452, Stop: 49087, Start Num: 83
Candidate Starts for Schatzie_67:
(Start: 83 @49452 has 147 MA's), (96, 49410), (130, 49314), (141, 49245), (153, 49206),

Gene: ScottMcG_17 Start: 5737, Stop: 6012, Start Num: 82
Candidate Starts for ScottMcG_17:
(57, 5701), (Start: 82 @5737 has 72 MA's), (120, 5872), (130, 5896), (133, 5920), (141, 5965), (152, 5992),

Gene: Shaboozey_71 Start: 46258, Stop: 45983, Start Num: 82
Candidate Starts for Shaboozey_71:
(37, 46306), (39, 46300), (Start: 82 @46258 has 72 MA's), (120, 46123), (130, 46099), (133, 46075), (141, 46030), (147, 46003),

Gene: ShamWow_43 Start: 35832, Stop: 35344, Start Num: 83
Candidate Starts for ShamWow_43:
(Start: 83 @35832 has 147 MA's), (Start: 89 @35820 has 5 MA's), (111, 35757), (118, 35742), (128, 35715), (131, 35709), (138, 35664), (140, 35652), (153, 35610), (181, 35508), (204, 35364),

Gene: Shauna1_80 Start: 49383, Stop: 49658, Start Num: 82
Candidate Starts for Shauna1_80:
(26, 49221), (28, 49230), (Start: 82 @49383 has 72 MA's), (120, 49518), (130, 49542), (133, 49566), (141, 49611), (152, 49638),

Gene: ShereKhan_42 Start: 35964, Stop: 35599, Start Num: 83
Candidate Starts for ShereKhan_42:
(Start: 74 @35979 has 4 MA's), (Start: 83 @35964 has 147 MA's), (120, 35829), (130, 35805), (133, 35781), (141, 35736), (144, 35718),

Gene: Shifa_12 Start: 4863, Stop: 5138, Start Num: 82
Candidate Starts for Shifa_12:
(57, 4827), (Start: 82 @4863 has 72 MA's), (120, 4998), (130, 5022), (133, 5046), (141, 5091), (152, 5118),

Gene: ShowerHandel_83 Start: 48976, Stop: 49359, Start Num: 83
Candidate Starts for ShowerHandel_83:
(Start: 83 @48976 has 147 MA's), (87, 48985), (118, 49087), (120, 49096), (138, 49168), (140, 49180), (194, 49306),

Gene: SimranZ1_81 Start: 48125, Stop: 48592, Start Num: 83
Candidate Starts for SimranZ1_81:
(65, 48086), (Start: 83 @48125 has 147 MA's), (111, 48200), (118, 48215), (128, 48242), (131, 48248), (138, 48293), (140, 48305), (154, 48356), (155, 48359), (166, 48389), (197, 48503), (202, 48545),

Gene: Smairt_41 Start: 32245, Stop: 31883, Start Num: 61
Candidate Starts for Smairt_41:
(23, 32383), (29, 32350), (Start: 61 @32245 has 12 MA's), (140, 32002), (145, 31981), (146, 31975), (148, 31972),

Gene: SophKB_41 Start: 34943, Stop: 34668, Start Num: 83
Candidate Starts for SophKB_41:
(Start: 74 @34958 has 4 MA's), (Start: 83 @34943 has 147 MA's), (120, 34808), (130, 34784), (133, 34760), (141, 34715), (147, 34688),

Gene: Sparkdehlily_95 Start: 49514, Stop: 49996, Start Num: 85
Candidate Starts for Sparkdehlily_95:
(Start: 85 @49514 has 2 MA's), (Start: 86 @49517 has 1 MA's), (Start: 88 @49520 has 1 MA's), (112, 49589), (118, 49601), (128, 49628), (131, 49634), (138, 49679), (140, 49691), (154, 49742), (155, 49745), (166, 49775), (176, 49817), (201, 49943),

Gene: Squint_73 Start: 47089, Stop: 46724, Start Num: 83
Candidate Starts for Squint_73:
(Start: 83 @47089 has 147 MA's), (96, 47047), (130, 46951), (141, 46882), (153, 46843),

Gene: StAnnes_84 Start: 50390, Stop: 50668, Start Num: 83
Candidate Starts for StAnnes_84:
(Start: 83 @50390 has 147 MA's), (96, 50432), (130, 50528), (140, 50594), (145, 50615), (146, 50621), (148, 50624), (151, 50627), (161, 50648),

Gene: Starcevich_82 Start: 50235, Stop: 50519, Start Num: 77
Candidate Starts for Starcevich_82:
(33, 50118), (Start: 38 @50148 has 1 MA's), (48, 50175), (67, 50211), (Start: 77 @50235 has 5 MA's), (108, 50340), (121, 50388), (127, 50406), (130, 50412), (139, 50469), (140, 50478),

Gene: Stark_45 Start: 35450, Stop: 35046, Start Num: 83
Candidate Starts for Stark_45:
(Start: 74 @35465 has 4 MA's), (Start: 83 @35450 has 147 MA's), (120, 35315), (130, 35291), (133, 35267), (141, 35222), (175, 35099),

Gene: StellaBean_41 Start: 35156, Stop: 34668, Start Num: 83
Candidate Starts for StellaBean_41:
(Start: 83 @35156 has 147 MA's), (Start: 89 @35144 has 5 MA's), (111, 35081), (118, 35066), (128, 35039), (131, 35033), (138, 34988), (140, 34976), (153, 34934), (181, 34832), (204, 34688),

Gene: Stellammi_138 Start: 61513, Stop: 61869, Start Num: 82
Candidate Starts for Stellammi_138:
(27, 61351), (49, 61444), (50, 61447), (Start: 82 @61513 has 72 MA's), (87, 61522), (96, 61555), (132, 61687), (135, 61702), (139, 61723), (160, 61798), (167, 61822), (174, 61852),

Gene: StevieRay_57 Start: 37992, Stop: 38351, Start Num: 83
Candidate Starts for StevieRay_57:
(13, 37731), (17, 37764), (19, 37788), (21, 37794), (53, 37935), (Start: 83 @37992 has 147 MA's), (111, 38067), (118, 38082), (128, 38109), (131, 38115), (138, 38160), (140, 38172), (204, 38328),

Gene: StormChicken_43 Start: 35539, Stop: 35171, Start Num: 82
Candidate Starts for StormChicken_43:

(Start: 82 @35539 has 72 MA's), (Start: 89 @35527 has 5 MA's), (120, 35401), (130, 35377), (133, 35353), (144, 35290),

Gene: Stubby_16 Start: 5996, Stop: 6271, Start Num: 82
Candidate Starts for Stubby_16:
(57, 5960), (Start: 82 @5996 has 72 MA's), (120, 6131), (130, 6155), (133, 6179), (141, 6224), (152, 6251),

Gene: Sunshine924_64 Start: 40630, Stop: 40100, Start Num: 74
Candidate Starts for Sunshine924_64:
(Start: 74 @40630 has 4 MA's), (120, 40477), (130, 40453), (133, 40429), (139, 40396), (154, 40336), (155, 40333), (166, 40303), (193, 40189), (199, 40147), (203, 40120),

Gene: Superphikiman_70 Start: 46180, Stop: 45815, Start Num: 83
Candidate Starts for Superphikiman_70:
(Start: 83 @46180 has 147 MA's), (96, 46138), (130, 46042), (141, 45973), (153, 45934),

Gene: TDanisky_96 Start: 49514, Stop: 49996, Start Num: 85
Candidate Starts for TDanisky_96:
(Start: 85 @49514 has 2 MA's), (Start: 86 @49517 has 1 MA's), (Start: 88 @49520 has 1 MA's), (112, 49589), (118, 49601), (128, 49628), (131, 49634), (138, 49679), (140, 49691), (154, 49742), (155, 49745), (166, 49775), (176, 49817), (201, 49943),

Gene: Tarkin_43 Start: 35933, Stop: 35658, Start Num: 83
Candidate Starts for Tarkin_43:
(Start: 74 @35948 has 4 MA's), (Start: 83 @35933 has 147 MA's), (120, 35798), (130, 35774), (133, 35750), (141, 35705), (147, 35678),

Gene: TeamEdward_43 Start: 35536, Stop: 35168, Start Num: 82
Candidate Starts for TeamEdward_43:
(Start: 82 @35536 has 72 MA's), (Start: 89 @35524 has 5 MA's), (120, 35398), (130, 35374), (133, 35350), (144, 35287),

Gene: TeardropMSU_40 Start: 34933, Stop: 34568, Start Num: 83
Candidate Starts for TeardropMSU_40:
(Start: 74 @34948 has 4 MA's), (Start: 83 @34933 has 147 MA's), (120, 34798), (130, 34774), (133, 34750), (144, 34687),

Gene: Teaspoon_46 Start: 35899, Stop: 35624, Start Num: 82
Candidate Starts for Teaspoon_46:
(37, 36001), (39, 35995), (51, 35965), (Start: 82 @35899 has 72 MA's), (118, 35782), (120, 35764), (130, 35740), (133, 35716), (141, 35671), (147, 35644),

Gene: Terminus_43 Start: 35615, Stop: 35337, Start Num: 82
Candidate Starts for Terminus_43:
(3, 35951), (4, 35948), (6, 35942), (8, 35933), (25, 35774), (32, 35744), (Start: 82 @35615 has 72 MA's), (118, 35495), (120, 35477), (130, 35453), (133, 35429), (141, 35384), (147, 35357),

Gene: Tesla_8 Start: 2530, Stop: 2781, Start Num: 89
Candidate Starts for Tesla_8:
(Start: 89 @2530 has 5 MA's), (92, 2545), (95, 2554), (141, 2734), (147, 2761),

Gene: Thespis_54 Start: 36385, Stop: 36747, Start Num: 83

Candidate Starts for Thespis_54:
(16, 36157), (45, 36304), (53, 36328), (Start: 83 @36385 has 147 MA's), (111, 36460), (118, 36475), (128, 36502), (131, 36508), (138, 36553), (140, 36565), (204, 36724),

Gene: ThreeRngTarjay_70 Start: 50738, Stop: 50373, Start Num: 83
Candidate Starts for ThreeRngTarjay_70:
(Start: 83 @50738 has 147 MA's), (96, 50696), (130, 50600), (141, 50531), (153, 50492),

Gene: Thresher_46 Start: 36685, Stop: 36281, Start Num: 83
Candidate Starts for Thresher_46:
(Start: 83 @36685 has 147 MA's), (120, 36550), (130, 36526), (133, 36502), (139, 36469), (175, 36334),

Gene: Tomaszewski_40 Start: 34800, Stop: 34435, Start Num: 83
Candidate Starts for Tomaszewski_40:
(Start: 74 @34815 has 4 MA's), (Start: 83 @34800 has 147 MA's), (120, 34665), (130, 34641), (133, 34617), (144, 34554),

Gene: Topgun_39 Start: 31551, Stop: 31189, Start Num: 61
Candidate Starts for Topgun_39:
(23, 31689), (29, 31656), (Start: 61 @31551 has 12 MA's), (140, 31308), (145, 31287), (146, 31281), (148, 31278),

Gene: Totinger_84 Start: 49031, Stop: 49315, Start Num: 77
Candidate Starts for Totinger_84:
(33, 48914), (Start: 38 @48944 has 1 MA's), (48, 48971), (67, 49007), (Start: 77 @49031 has 5 MA's), (108, 49136), (121, 49184), (127, 49202), (130, 49208), (139, 49265), (140, 49274),

Gene: Toto_42 Start: 35820, Stop: 35344, Start Num: 89
Candidate Starts for Toto_42:
(Start: 83 @35832 has 147 MA's), (Start: 89 @35820 has 5 MA's), (111, 35757), (118, 35742), (128, 35715), (131, 35709), (138, 35664), (140, 35652), (153, 35610), (181, 35508), (204, 35364),

Gene: Tuco_44 Start: 36340, Stop: 35852, Start Num: 83
Candidate Starts for Tuco_44:
(Start: 83 @36340 has 147 MA's), (Start: 89 @36328 has 5 MA's), (111, 36265), (118, 36250), (128, 36223), (131, 36217), (138, 36172), (140, 36160), (153, 36118), (181, 36016), (204, 35872),

Gene: Ukulele_41 Start: 34868, Stop: 34593, Start Num: 82
Candidate Starts for Ukulele_41:
(Start: 59 @34910 has 1 MA's), (Start: 61 @34907 has 12 MA's), (Start: 82 @34868 has 72 MA's), (120, 34733), (130, 34709), (133, 34685), (141, 34640), (147, 34613),

Gene: VRedHorse_87 Start: 48107, Stop: 48463, Start Num: 83
Candidate Starts for VRedHorse_87:
(Start: 83 @48107 has 147 MA's), (183, 48359),

Gene: Vivum_87 Start: 52067, Stop: 52345, Start Num: 83
Candidate Starts for Vivum_87:
(22, 51884), (40, 51977), (46, 51992), (Start: 83 @52067 has 147 MA's), (96, 52109), (130, 52205), (140, 52271), (145, 52292), (146, 52298), (148, 52301), (151, 52304), (161, 52325),

Gene: Vivum_84 Start: 50921, Stop: 51205, Start Num: 77

Candidate Starts for Vivum_84:
(33, 50804), (Start: 38 @50834 has 1 MA's), (48, 50861), (67, 50897), (Start: 77 @50921 has 5 MA's), (108, 51026), (121, 51074), (127, 51092), (130, 51098), (139, 51155), (140, 51164),

Gene: Wachhund_79 Start: 46376, Stop: 46765, Start Num: 83
Candidate Starts for Wachhund_79:
(56, 46334), (58, 46337), (Start: 83 @46376 has 147 MA's), (Start: 89 @46388 has 5 MA's), (103, 46454), (115, 46517), (119, 46541), (138, 46625), (140, 46637),

Gene: Wanda_76 Start: 50200, Stop: 49835, Start Num: 83
Candidate Starts for Wanda_76:
(Start: 83 @50200 has 147 MA's), (96, 50158), (130, 50062), (141, 49993), (153, 49954),

Gene: Wilkins_39 Start: 31484, Stop: 31122, Start Num: 61
Candidate Starts for Wilkins_39:
(23, 31622), (29, 31589), (Start: 61 @31484 has 12 MA's), (140, 31241), (145, 31220), (146, 31214), (148, 31211),

Gene: XFactor_76 Start: 47957, Stop: 48232, Start Num: 82
Candidate Starts for XFactor_76:
(57, 47921), (Start: 82 @47957 has 72 MA's), (120, 48092), (130, 48116), (133, 48140), (141, 48185), (152, 48212),

Gene: Xandras_43 Start: 35049, Stop: 34684, Start Num: 83
Candidate Starts for Xandras_43:
(Start: 83 @35049 has 147 MA's), (120, 34914), (130, 34890), (133, 34866), (144, 34803),

Gene: Xiaokay_67 Start: 47794, Stop: 47432, Start Num: 81
Candidate Starts for Xiaokay_67:
(Start: 81 @47794 has 2 MA's), (99, 47734), (104, 47731), (123, 47698), (185, 47524),

Gene: Yoshi_97 Start: 50855, Stop: 51199, Start Num: 83
Candidate Starts for Yoshi_97:
(31, 50720), (36, 50744), (54, 50801), (62, 50813), (68, 50822), (Start: 83 @50855 has 147 MA's), (179, 51101),

Gene: Youngblood_43 Start: 35542, Stop: 35174, Start Num: 82
Candidate Starts for Youngblood_43:
(Start: 82 @35542 has 72 MA's), (Start: 89 @35530 has 5 MA's), (120, 35404), (130, 35380), (133, 35356), (144, 35293),

Gene: Zapner_89 Start: 47534, Stop: 47902, Start Num: 82
Candidate Starts for Zapner_89:
(57, 47498), (Start: 82 @47534 has 72 MA's), (120, 47669), (130, 47693), (133, 47717), (141, 47762), (144, 47780), (165, 47828),

Gene: Zelink_70 Start: 51051, Stop: 50686, Start Num: 83
Candidate Starts for Zelink_70:
(Start: 83 @51051 has 147 MA's), (96, 51009), (130, 50913), (141, 50844), (153, 50805),

Gene: Zerg_83 Start: 49449, Stop: 49727, Start Num: 83
Candidate Starts for Zerg_83:

(Start: 83 @49449 has 147 MA's), (96, 49491), (130, 49587), (140, 49653), (145, 49674), (146, 49680), (148, 49683), (151, 49686), (161, 49707),

Gene: xkcd_45 Start: 35735, Stop: 35457, Start Num: 82
Candidate Starts for xkcd_45:
(3, 36071), (4, 36068), (6, 36062), (8, 36053), (25, 35894), (32, 35864), (Start: 82 @35735 has 72 MA's), (118, 35615), (120, 35597), (130, 35573), (133, 35549), (141, 35504), (147, 35477),