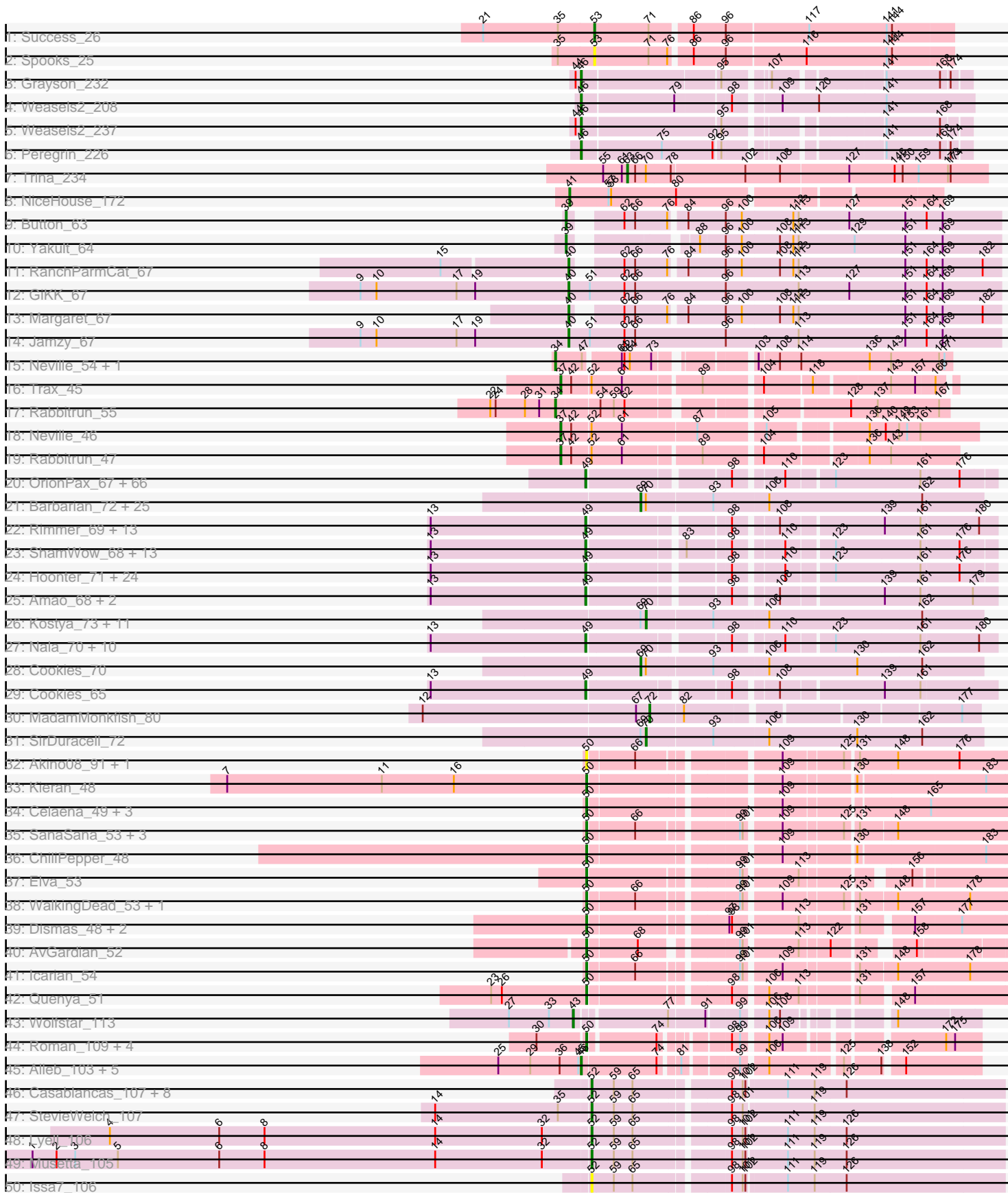
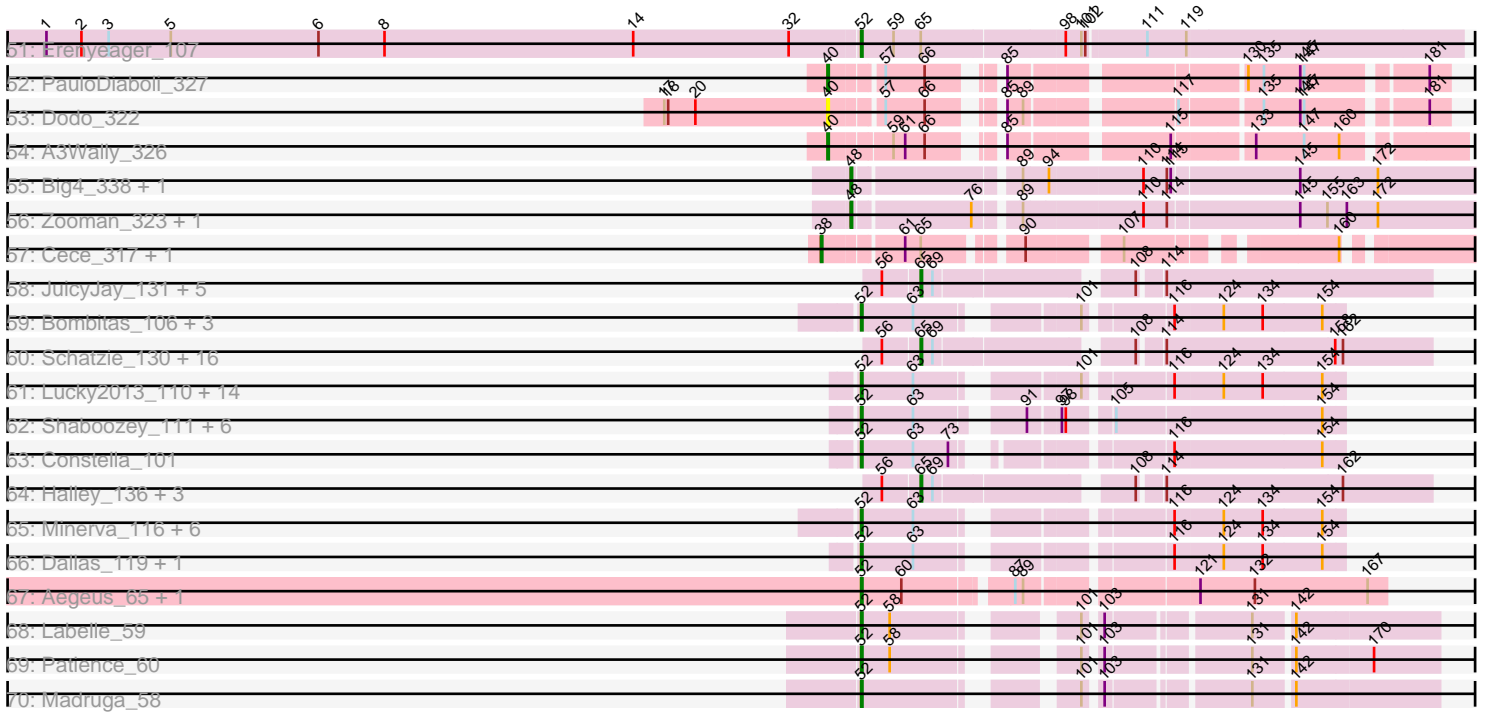


Pham 224213



Pham 224213



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 224213 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224213 has 320 members, 30 are drafts.

Phages represented in each track:

- Track 1 : Success_26
- Track 2 : Spooks_25
- Track 3 : Grayson_232
- Track 4 : Weasels2_208
- Track 5 : Weasels2_237
- Track 6 : Peregrin_226
- Track 7 : Trina_234
- Track 8 : NiceHouse_172
- Track 9 : Button_63
- Track 10 : Yakult_64
- Track 11 : RanchParmCat_67
- Track 12 : GiKK_67
- Track 13 : Margaret_67
- Track 14 : Jamzy_67
- Track 15 : Neville_54, Trax_53
- Track 16 : Trax_45
- Track 17 : Rabbitrun_55
- Track 18 : Neville_46
- Track 19 : Rabbitrun_47
- Track 20 : OrionPax_67, NelitzaMV_66, Highbury_67, Lilac_70, Daikon_70, Czyszczonek_69, Lilpickle_67, Marshmallow_66, Miniwave_63, Dumbo_68, Manda_68, Phaux_70, Pumpkin_71, Ukulele_63, Cactus_71, BigBubba_68, IHOP_66, xkcd_71, Kostya_68, Gator_66, Quallification_69, SophKB_65, Eureka_66, Thresher_70, Kanye_65, Filch_69, Tuco_69, NoSleep_69, Murica_71, 244_69, Elite2014_67, Hopeny_68, ChosenOne_68, Dusk_65, Murphy_68, PhatBacter_72, Elph10_68, Goku_66, Balomoji_68, Pharsalus_65, Maxxinista_70, BadStone_65, Icee_69, HufflyPuff_71, Phrux_65, Phaja_66, Stark_69, Cjw1_68, HanKaySha_68, Sotrice96_69, DrDrey_68, Tarkin_67, BugsBunny_68, Rakim_69, Paperbeatsrock_67, Policronamos_71, Simpliphy_67, Palpatine_70, RiverMonster_68, TeardropMSU_64, Saints25_67, ABCat_65, Flypotenuse_64, StellaBean_66, Myrale_68, Xandras_67, ShereKhan_67
- Track 21 : Barbarian_72, ShamWow_73, SophKB_70, Mindy_72, Adnama_77, Pharsalus_70, Dusk_70, Gator_71, TBrady12_76, Moldemort_76, Tarkin_72, Toto_71, BadStone_70, Asriel_72, Phaja_71, IHOP_71, ABCat_70, ShereKhan_72, DrDrey_73, Tuco_74, Henry_71, Paperbeatsrock_72, Quallification_74, Kanye_70, Miniwave_68, Traaww1_69

- Track 22 : Rimmer_69, YassJohnny_65, Glexan_67, Tomaszewski_63, FoghornLeghorn_62, Buck_69, Harella_68, StormChicken_70, Sassay_63, Bask21_68, Petra64142_72, SirDuracell_67, DoctorDiddles_67, Willez_63
- Track 23 : ShamWow_68, BilboSwaggins_67, Barbarian_67, Traaww1_64, Mindy_67, Easy2Say_69, Adnama_72, Toto_66, CrystalP_67, Asriel_67, Moldemort_71, Stank_71, Wiggin_70, Henry_66
- Track 24 : Hoonter_71, MadamMonkfish_68, TBrady12_71, Teaspoon_69, GoldenSpark_72, GooberAzure_71, Youngblood_71, Goldilocks_71, AmericanBeauty_72, Lilizi_69, FairyPath_68, Bench_71, Command613_70, Gemini_73, BaboJay_65, Inca_65, JeTaime_68, Gage_70, Thimble_70, Porky_67, Kimchi_72, Emmina_68, StolenFromERC_71, Holt_73, Argent26_72
- Track 25 : Amao_68, Pat3_66, ChotaBhai_68
- Track 26 : Kostya_73, Amao_73, NelitzaMV_71, Goldilocks_76, Command613_75, CrystalP_72, FairyPath_73, Nimrod_74, Wiggin_75, Teaspoon_74, StellaBean_71, BilboSwaggins_72
- Track 27 : Nala_70, Contagion_64, MPhalcon_69, Becksu_67, Terminus_71, Bruin_65, MISSy_69, FireRed_72, Misfit_69, Nimrod_69, Mosby_64
- Track 28 : Cookies_70
- Track 29 : Cookies_65
- Track 30 : MadamMonkfish_80
- Track 31 : SirDuracell_72
- Track 32 : Akino08_91, Loviatar_90
- Track 33 : Kieran_48
- Track 34 : Celaena_49, Bachaco_49, Katzastrophic_50, FlameThrower_48
- Track 35 : SanaSana_53, BabyYoda_51, DirtyBubble_50, Stromboli_51
- Track 36 : ChiliPepper_48
- Track 37 : Elva_53
- Track 38 : WalkingDead_53, Stoor_51
- Track 39 : Dismas_48, Sharkboy_49, Rona_48
- Track 40 : AvGardian_52
- Track 41 : Icarian_54
- Track 42 : Quenya_51
- Track 43 : Wolfstar_113
- Track 44 : Roman_109, DejaVu_108, Pavlo_108, PhillyPhilly_105, Hubbs_107
- Track 45 : Alleb_103, OlinDD_107, Tandem_107, Hortus1_107, Pioneer3_107, Platte_106
- Track 46 : Casablanclas_107, DustyDino_110, HollowPurple_107, Yuma_105, Fork_103, Welcome_109, Necrophoxinus_109, ASegato_105, RunningBrook_108
- Track 47 : StevieWelch_107
- Track 48 : Lyell_106
- Track 49 : Musetta_105
- Track 50 : Issa7_106
- Track 51 : Erenyeager_107
- Track 52 : PauloDiaboli_327
- Track 53 : Dodo_322
- Track 54 : A3Wally_326
- Track 55 : Big4_338, Big4_12
- Track 56 : Zooman_323, Zooman_10
- Track 57 : Cece_317, Cece_15
- Track 58 : JuicyJay_131, Bobby_126, Marleymoo_119, NihilNomen_136, Beem_136, Bombitas_122
- Track 59 : Bombitas_106, Schatzie_113, Yeet_109, Odette_120

- Track 60 : Schatzie_130, Klein_131, Odette_138, Hughesyang_134, Redno2_126, Dove_120, Duke13_129, Yeet_128, Minerva_133, Phoebus_135, Wanda_133, Bagrid_135, HokkenD_126, EricMillard_126, DmpstrDiver_134, Zelink_129, ThreeRngTarjay_130
- Track 61 : Lucky2013_110, Beem_120, Courthouse_108, NihilNomen_120, Ariel_113, Phoebus_119, Redno2_112, Porcelain_113, HokkenD_108, Squint_111, Superphikiman_110, Dove_104, MiaZeal_113, Rearden_107, JuicyJay_115
- Track 62 : Shaboozey_111, Gonephishing_107, LittleE_118, Hannaconda_104, Nekros_115, Omega_124, KashFlow_110
- Track 63 : Constella_101
- Track 64 : Halley_136, Thibault_119, Dallas_135, Ejimix_128
- Track 65 : Minerva_116, DmpstrDiver_119, Halley_121, Bagrid_119, Pound_108, Hughesyang_118, Ejimix_113
- Track 66 : Dallas_119, Thibault_99
- Track 67 : Aegeus_65, Baudelaire_65
- Track 68 : Labelle_59
- Track 69 : Patience_60
- Track 70 : Madrugua_58

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

The start number called the most often in the published annotations is 49, it was called in 125 of the 290 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_69, ABCat_65, Adnama_72, Amao_68, AmericanBeauty_72, Argent26_72, Asriel_67, BaboJay_65, BadStone_65, Balomoji_68, Barbarian_67, Bask21_68, Becksu_67, Bench_71, BigBubba_68, BilboSwaggins_67, Bruin_65, Buck_69, BugsBunny_68, Cactus_71, ChosenOne_68, ChotaBhai_68, Cjw1_68, Command613_70, Contagion_64, Cookies_65, CrystalP_67, Czystoczon1_69, Daikon_70, DoctorDiddles_67, DrDrey_68, Dumbo_68, Dusk_65, Easy2Say_69, Elite2014_67, Elph10_68, Emmina_68, Eureka_66, FairyPath_68, Filch_69, FireRed_72, Flypotenuse_64, FoghornLeghorn_62, Gage_70, Gator_66, Gemini_73, Glexan_67, Goku_66, GoldenSpark_72, Goldilocks_71, GooberAzure_71, HanKaySha_68, Harella_68, Henry_66, Highbury_67, Holt_73, Hoonter_71, Hopey_68, HufflyPuff_71, IHOP_66, Icee_69, Inca_65, JeTaime_68, Kanye_65, Kimchi_72, Kostya_68, Lilac_70, Lilizi_69, Lilpickle_67, MISSy_69, MPhalcon_69, MadamMonkfish_68, Manda_68, Marshmallow_66, Maxxinista_70, Mindy_67, Miniwave_63, Misfit_69, Moldemort_71, Mosby_64, Murica_71, Murphy_68, Myrale_68, Nala_70, NelitzaMV_66, Nimrod_69, NoSleep_69, OrionPax_67, Palpatine_70, Paperbeatsrock_67, Pat3_66, Petra64142_72, Phaja_66, Pharsalus_65, PhatBacter_72, Phaux_70, Phrux_65, Policronamos_71, Porky_67, Pumpkin_71, Quallification_69, Rakim_69, Rimmer_69, RiverMonster_68, Saints25_67, Sassay_63, ShamWow_68, ShereKhan_67, Simpliphy_67, SirDuracell_67, SophKB_65, Sotrice96_69, Stank_71, Stark_69, StellaBean_66, StolenFromERC_71, StormChicken_70, TBrady12_71, Tarkin_67, TeardropMSU_64, Teaspoon_69, Terminus_71, Thimble_70, Thresher_70, Tomaszewski_63, Toto_66, Traaww1_64, Tuco_69, Ukulele_63, Wiggin_70, Willez_63, Xandras_67, YassJohnny_65, Youngblood_71, xkcd_71,

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

-

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

- A3Wally_326, ABCat_70, ASegato_105, Adnama_77, Aegeus_65, Akino08_91, Alleb_103, Amao_73, Ariel_113, Asriel_72, AvGardian_52, BabyYoda_51, Bachaco_49, BadStone_70, Bagrid_119, Bagrid_135, Barbarian_72, Baudelaire_65, Beem_120, Beem_136, Big4_12, Big4_338, BilboSwaggins_72, Bobby_126, Bombitas_106, Bombitas_122, Button_63, Casablanacas_107, Cece_15, Cece_317, Celaena_49, ChiliPepper_48, Command613_75, Constella_101, Cookies_70, Courthouse_108, CrystalP_72, Dallas_119, Dallas_135, DejaVu_108, DirtyBubble_50, Dismas_48, DmpstrDiver_119, DmpstrDiver_134, Dodo_322, Dove_104, Dove_120, DrDrey_73, Duke13_129, Dusk_70, DustyDino_110, Ejimix_113, Ejimix_128, Elva_53, Erenyeager_107, EricMillard_126, FairyPath_73, FlameThrower_48, Fork_103, Gator_71, GiKK_67, Goldilocks_76, Gonephishing_107, Grayson_232, Halley_121, Halley_136, Hannaconda_104, Henry_71, HokkenD_108, HokkenD_126, HollowPurple_107, Hortus1_107, Hubbs_107, Hughesyang_118, Hughesyang_134, IHOP_71, Icarian_54, Issa7_106, Jamzy_67, JuicyJay_115, JuicyJay_131, Kanye_70, KashFlow_110, Katzastrophic_50, Kieran_48, Klein_131, Kostya_73, Labelle_59, LittleE_118, Loviatar_90, Lucky2013_110, Lyell_106, MadamMonkfish_80, Madruga_58, Margaret_67, Marleymoo_119, MiaZeal_113, Mindy_72, Minerva_116, Minerva_133, Miniwave_68, Moldemort_76, Musetta_105, Necrophoxinus_109, Nekros_115, NelitzaMV_71, Neville_46, Neville_54, NiceHouse_172, NihilNomen_120, NihilNomen_136, Nimrod_74, Odette_120, Odette_138, OlinDD_107, Omega_124, Paperbeatsrock_72, Patience_60, PauloDiaboli_327, Pavlo_108, Peregrin_226, Phaja_71, Pharsalus_70, PhillyPhilly_105, Phoebus_119, Phoebus_135, Pioneer3_107, Platte_106, Porcelain_113, Pound_108, Qualification_74, Quenya_51, Rabbitrun_47, Rabbitrun_55, RanchParmCat_67, Rearden_107, Redno2_112, Redno2_126, Roman_109, Rona_48, RunningBrook_108, SanaSana_53, Schatzie_113, Schatzie_130, Shaboozey_111, ShamWow_73, Sharkboy_49, ShereKhan_72, SirDuracell_72, SophKB_70, Spooks_25, Squint_111, StellaBean_71, StevieWelch_107, Stoor_51, Stromboli_51, Success_26, Superphikiman_110, TBrady12_76, Tandem_107, Tarkin_72, Teaspoon_74, Thibault_119, Thibault_99, ThreeRngTarjay_130, Toto_71, Traaww1_69, Trax_45, Trax_53, Trina_234, Tuco_74, WalkingDead_53, Wanda_133, Weasels2_208, Weasels2_237, Welcome_109, Wiggin_75, Wolfstar_113, Yakult_64, Yeet_109, Yeet_128, Yuma_105, Zelink_129, Zooman_10, Zooman_323,

Summary by start number:

Start 34:

- Found in 3 of 320 (0.9%) of genes in pham
- Manual Annotations of this start: 3 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Neville_54 (DU2), Rabbitrun_55 (DU2), Trax_53 (DU2),

Start 37:

- Found in 3 of 320 (0.9%) of genes in pham
- Manual Annotations of this start: 3 of 290
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Neville_46 (DU2), Rabbitrun_47 (DU2), Trax_45 (DU2),

Start 38:

- Found in 2 of 320 (0.6%) of genes in pham
- Manual Annotations of this start: 2 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece_15 (GD3), Cece_317 (GD3),

Start 39:

- Found in 2 of 320 (0.6%) of genes in pham
- Manual Annotations of this start: 2 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Button_63 (CT), Yakult_64 (CT),

Start 40:

- Found in 7 of 320 (2.2%) of genes in pham
- Manual Annotations of this start: 6 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_326 (GD1), Dodo_322 (GD1), GiKK_67 (CT), Jamzy_67 (CT), Margaret_67 (CT), PauloDiaboli_327 (GD1), RanchParmCat_67 (CT),

Start 41:

- Found in 1 of 320 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NiceHouse_172 (CE),

Start 43:

- Found in 1 of 320 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wolfstar_113 (ED),

Start 46:

- Found in 10 of 320 (3.1%) of genes in pham
- Manual Annotations of this start: 10 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alleb_103 (ED1), Grayson_232 (CB), Hortus1_107 (ED1), OlinDD_107 (ED1), Peregrin_226 (CB), Pioneer3_107 (ED1), Platte_106 (ED1), Tandem_107 (ED1), Weasels2_208 (CB), Weasels2_237 (CB),

Start 48:

- Found in 4 of 320 (1.2%) of genes in pham
- Manual Annotations of this start: 4 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Big4_12 (GD2), Big4_338 (GD2), Zooman_10 (GD2), Zooman_323 (GD2),

Start 49:

- Found in 135 of 320 (42.2%) of genes in pham
- Manual Annotations of this start: 125 of 290

- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244_69 (E), ABCat_65 (E), Adnama_72 (E), Amao_68 (E), AmericanBeauty_72 (E), Argent26_72 (E), Asriel_67 (E), BaboJay_65 (E), BadStone_65 (E), Balomoji_68 (E), Barbarian_67 (E), Bask21_68 (E), Becksu_67 (E), Bench_71 (E), BigBubba_68 (E), BilboSwaggins_67 (E), Bruin_65 (E), Buck_69 (E), BugsBunny_68 (E), Cactus_71 (E), ChosenOne_68 (E), ChotaBhai_68 (E), Cjw1_68 (E), Command613_70 (E), Contagion_64 (E), Cookies_65 (E), CrystalP_67 (E), Czyszczonek_69 (E), Daikon_70 (E), DoctorDiddles_67 (E), DrDrey_68 (E), Dumbo_68 (E), Dusk_65 (E), Easy2Say_69 (E), Elite2014_67 (E), Elph10_68 (E), Emmina_68 (E), Eureka_66 (E), FairyPath_68 (E), Filch_69 (E), FireRed_72 (E), Flypotenuse_64 (E), FoghornLeghorn_62 (E), Gage_70 (E), Gator_66 (E), Gemini_73 (E), Glexan_67 (E), Goku_66 (E), GoldenSpark_72 (E), Goldilocks_71 (E), GooberAzure_71 (E), HanKaySha_68 (E), Harella_68 (E), Henry_66 (E), Highbury_67 (E), Holt_73 (E), Hoonter_71 (E), Hopey_68 (E), HufflyPuff_71 (E), IHOP_66 (E), Icee_69 (E), Inca_65 (E), JeTaime_68 (E), Kanye_65 (E), Kimchi_72 (E), Kostya_68 (E), Lilac_70 (E), Lilizi_69 (E), Lilpickle_67 (E), MISSy_69 (E), MPhalcon_69 (E), MadamMonkfish_68 (E), Manda_68 (E), Marshmallow_66 (E), Maxxinista_70 (E), Mindy_67 (E), Miniwave_63 (E), Misfit_69 (E), Moldemort_71 (E), Mosby_64 (E), Murica_71 (E), Murphy_68 (E), Myrale_68 (E), Nala_70 (E), NelitzaMV_66 (E), Nimrod_69 (E), NoSleep_69 (E), OrionPax_67 (E), Palpatine_70 (E), Paperbeatsrock_67 (E), Pat3_66 (E), Petra64142_72 (E), Phaja_66 (E), Pharsalus_65 (E), PhatBacter_72 (E), Phaux_70 (E), Phrux_65 (E), Policronamos_71 (E), Porky_67 (E), Pumpkin_71 (E), Quallification_69 (E), Rakim_69 (E), Rimmer_69 (E), RiverMonster_68 (E), Saints25_67 (E), Sassay_63 (E), ShamWow_68 (E), ShereKhan_67 (E), Simpliphy_67 (E), SirDuracell_67 (E), SophKB_65 (E), Sotrice96_69 (E), Stank_71 (E), Stark_69 (E), StellaBean_66 (E), StolenFromERC_71 (E), StormChicken_70 (E), TBrady12_71 (E), Tarkin_67 (E), TeardropMSU_64 (E), Teaspoon_69 (E), Terminus_71 (E), Thimble_70 (E), Thresher_70 (E), Tomaszewski_63 (E), Toto_66 (E), Traaww1_64 (E), Tuco_69 (E), Ukulele_63 (E), Wiggin_70 (E), Willez_63 (E), Xandras_67 (E), YassJohnny_65 (E), Youngblood_71 (E), xkcd_71 (E),

Start 50:

- Found in 26 of 320 (8.1%) of genes in pham
- Manual Annotations of this start: 23 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Akino08_91 (EB), AvGardian_52 (EB), BabyYoda_51 (EB), Bachaco_49 (EB), Celaena_49 (EB), ChiliPepper_48 (EB), DejaVu_108 (ED1), DirtyBubble_50 (EB), Dismas_48 (EB), Elva_53 (EB), FlameThrower_48 (EB), Hubbs_107 (ED1), Icarian_54 (EB), Katzastrophic_50 (EB), Kieran_48 (EB), Loviatar_90 (EB), Pavlo_108 (ED1), PhillyPhilly_105 (ED1), Quenya_51 (EB), Roman_109 (ED1), Rona_48 (EB), SanaSana_53 (EB), Sharkboy_49 (EB), Stoor_51 (EB), Stromboli_51 (EB), WalkingDead_53 (EB),

Start 52:

- Found in 58 of 320 (18.1%) of genes in pham
- Manual Annotations of this start: 46 of 290
- Called 94.8% of time when present
- Phage (with cluster) where this start called: ASegato_105 (ED2), Aegeus_65 (L5), Ariel_113 (J), Bagrid_119 (J), Baudelaire_65 (L5), Beem_120 (J), Bombitas_106 (J), Casablanacas_107 (ED2), Constella_101 (J), Courthouse_108 (J), Dallas_119 (J), DmpstrDiver_119 (J), Dove_104 (J), DustyDino_110 (ED2), Ejimix_113 (J), Erenyeager_107 (ED2), Fork_103 (ED2), Gonephishing_107 (J), Halley_121 (J),

Hannaconda_104 (J), HokkenD_108 (J), HollowPurple_107 (ED2), Hughesyang_118 (J), Issa7_106 (ED2), JuicyJay_115 (J), KashFlow_110 (J), Labelle_59 (U), LittleE_118 (J), Lucky2013_110 (J), Lyell_106 (ED2), Madruga_58 (U), MiaZeal_113 (J), Minerva_116 (J), Musetta_105 (ED2), Necrophoxinus_109 (ED2), Nekros_115 (J), NihilNomen_120 (J), Odette_120 (J), Omega_124 (J), Patience_60 (U), Phoebus_119 (J), Porcelain_113 (J), Pound_108 (J), Rearden_107 (J), Redno2_112 (J), RunningBrook_108 (ED2), Schatzie_113 (J), Shaboozey_111 (J), Squint_111 (J), StevieWelch_107 (ED2), Superphikiman_110 (J), Thibault_99 (J), Welcome_109 (ED2), Yeet_109 (J), Yuma_105 (ED2),

Start 53:

- Found in 2 of 320 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spooks_25 (BT), Success_26 (BT),

Start 63:

- Found in 37 of 320 (11.6%) of genes in pham
- Manual Annotations of this start: 1 of 290
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Trina_234 (CE),

Start 65:

- Found in 43 of 320 (13.4%) of genes in pham
- Manual Annotations of this start: 24 of 290
- Called 62.8% of time when present
- Phage (with cluster) where this start called: Bagrid_135 (J), Beem_136 (J), Bobby_126 (J), Bombitas_122 (J), Dallas_135 (J), DmpstrDiver_134 (J), Dove_120 (J), Duke13_129 (J), Ejimix_128 (J), EricMillard_126 (J), Halley_136 (J), HokkenD_126 (J), Hughesyang_134 (J), JuicyJay_131 (J), Klein_131 (J), Marleymoo_119 (J), Minerva_133 (J), NihilNomen_136 (J), Odette_138 (J), Phoebus_135 (J), Redno2_126 (J), Schatzie_130 (J), Thibault_119 (J), ThreeRngTarjay_130 (J), Wanda_133 (J), Yeet_128 (J), Zelink_129 (J),

Start 69:

- Found in 67 of 320 (20.9%) of genes in pham
- Manual Annotations of this start: 27 of 290
- Called 40.3% of time when present
- Phage (with cluster) where this start called: ABCat_70 (E), Adnama_77 (E), Asriel_72 (E), BadStone_70 (E), Barbarian_72 (E), Cookies_70 (E), DrDrey_73 (E), Dusk_70 (E), Gator_71 (E), Henry_71 (E), IHOP_71 (E), Kanye_70 (E), Mindy_72 (E), Miniwave_68 (E), Moldemort_76 (E), Paperbeatsrock_72 (E), Phaja_71 (E), Pharsalus_70 (E), Quallification_74 (E), ShamWow_73 (E), ShereKhan_72 (E), SophKB_70 (E), TBrady12_76 (E), Tarkin_72 (E), Toto_71 (E), Traaww1_69 (E), Tuco_74 (E),

Start 70:

- Found in 41 of 320 (12.8%) of genes in pham
- Manual Annotations of this start: 10 of 290
- Called 31.7% of time when present
- Phage (with cluster) where this start called: Amao_73 (E), BilboSwaggins_72 (E), Command613_75 (E), CrystalP_72 (E), FairyPath_73 (E), Goldilocks_76 (E), Kostya_73 (E), NelitzaMV_71 (E), Nimrod_74 (E), SirDuracell_72 (E), StellaBean_71

(E), Teaspoon_74 (E), Wiggin_75 (E),

Start 72:

- Found in 1 of 320 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 290
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MadamMonkfish_80 (E),

Summary by clusters:

There are 16 clusters represented in this pham: GD1, GD2, GD3, E, CB, J, L5, EB, ED2, ED1, U, CE, BT, ED, DU2, CT,

Info for manual annotations of cluster BT:

- Start number 53 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster CB:

- Start number 46 was manually annotated 4 times for cluster CB.

Info for manual annotations of cluster CE:

- Start number 41 was manually annotated 1 time for cluster CE.
- Start number 63 was manually annotated 1 time for cluster CE.

Info for manual annotations of cluster CT:

- Start number 39 was manually annotated 2 times for cluster CT.
- Start number 40 was manually annotated 4 times for cluster CT.

Info for manual annotations of cluster DU2:

- Start number 34 was manually annotated 3 times for cluster DU2.
- Start number 37 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster E:

- Start number 49 was manually annotated 125 times for cluster E.
- Start number 69 was manually annotated 27 times for cluster E.
- Start number 70 was manually annotated 10 times for cluster E.
- Start number 72 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster EB:

- Start number 50 was manually annotated 18 times for cluster EB.

Info for manual annotations of cluster ED:

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

Info for manual annotations of cluster ED1:

- Start number 46 was manually annotated 6 times for cluster ED1.
- Start number 50 was manually annotated 5 times for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 52 was manually annotated 11 times for cluster ED2.

Info for manual annotations of cluster GD1:

- Start number 40 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 48 was manually annotated 4 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 38 was manually annotated 2 times for cluster GD3.

Info for manual annotations of cluster J:

- Start number 52 was manually annotated 30 times for cluster J.
- Start number 65 was manually annotated 24 times for cluster J.

Info for manual annotations of cluster L5:

- Start number 52 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster U:

- Start number 52 was manually annotated 3 times for cluster U.

Gene Information:

Gene: 244_69 Start: 45158, Stop: 45568, Start Num: 49

Candidate Starts for 244_69:

(Start: 49 @45158 has 125 MA's), (98, 45299), (110, 45347), (123, 45395), (161, 45488), (176, 45530),

Gene: A3Wally_326 Start: 170993, Stop: 171403, Start Num: 40

Candidate Starts for A3Wally_326:

(Start: 40 @170993 has 6 MA's), (59, 171035), (61, 171044), (66, 171059), (85, 171095), (115, 171203), (133, 171257), (147, 171293), (160, 171320),

Gene: ABCat_70 Start: 47769, Stop: 48146, Start Num: 69

Candidate Starts for ABCat_70:

(Start: 69 @47769 has 27 MA's), (Start: 70 @47775 has 10 MA's), (93, 47847), (106, 47907), (162, 48078),

Gene: ABCat_65 Start: 45505, Stop: 45915, Start Num: 49

Candidate Starts for ABCat_65:

(Start: 49 @45505 has 125 MA's), (98, 45646), (110, 45694), (123, 45742), (161, 45835), (176, 45877),

Gene: ASegato_105 Start: 56034, Stop: 55597, Start Num: 52

Candidate Starts for ASegato_105:

(Start: 52 @56034 has 46 MA's), (59, 56010), (Start: 65 @55989 has 24 MA's), (98, 55893), (101, 55881), (102, 55878), (111, 55836), (119, 55806), (126, 55773),

Gene: Adnama_72 Start: 45528, Stop: 45938, Start Num: 49

Candidate Starts for Adnama_72:

(13, 45354), (Start: 49 @45528 has 125 MA's), (83, 45624), (98, 45669), (110, 45717), (123, 45765), (161, 45858), (176, 45900),

Gene: Adnama_77 Start: 47795, Stop: 48172, Start Num: 69

Candidate Starts for Adnama_77:

(Start: 69 @47795 has 27 MA's), (Start: 70 @47801 has 10 MA's), (93, 47873), (106, 47933), (162, 48104),

Gene: Aegeus_65 Start: 44400, Stop: 44765, Start Num: 52

Candidate Starts for Aegeus_65:

(Start: 52 @44400 has 46 MA's), (60, 44430), (87, 44502), (89, 44508), (121, 44622), (132, 44664), (167, 44751),

Gene: Akino08_91 Start: 36189, Stop: 36629, Start Num: 50

Candidate Starts for Akino08_91:

(Start: 50 @36189 has 23 MA's), (66, 36237), (109, 36375), (125, 36438), (131, 36450), (148, 36492), (176, 36561),

Gene: Alleb_103 Start: 57500, Stop: 57114, Start Num: 46

Candidate Starts for Alleb_103:

(25, 57593), (29, 57557), (36, 57524), (45, 57503), (Start: 46 @57500 has 10 MA's), (74, 57419), (81, 57401), (99, 57347), (106, 57323), (125, 57251), (138, 57215), (152, 57197),

Gene: Amao_68 Start: 44913, Stop: 45326, Start Num: 49

Candidate Starts for Amao_68:

(13, 44739), (Start: 49 @44913 has 125 MA's), (98, 45054), (108, 45096), (139, 45204), (161, 45243), (179, 45300),

Gene: Amao_73 Start: 47195, Stop: 47566, Start Num: 70

Candidate Starts for Amao_73:

(Start: 69 @47189 has 27 MA's), (Start: 70 @47195 has 10 MA's), (93, 47267), (106, 47327), (162, 47498),

Gene: AmericanBeauty_72 Start: 45671, Stop: 46081, Start Num: 49

Candidate Starts for AmericanBeauty_72:

(13, 45497), (Start: 49 @45671 has 125 MA's), (98, 45812), (110, 45860), (123, 45908), (161, 46001), (176, 46043),

Gene: Argent26_72 Start: 45309, Stop: 45719, Start Num: 49

Candidate Starts for Argent26_72:

(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639), (176, 45681),

Gene: Ariel_113 Start: 61833, Stop: 62153, Start Num: 52

Candidate Starts for Ariel_113:

(Start: 52 @61833 has 46 MA's), (Start: 63 @61872 has 1 MA's), (101, 61971), (116, 62028), (124, 62064), (134, 62094), (154, 62139),

Gene: Asriel_67 Start: 43865, Stop: 44275, Start Num: 49

Candidate Starts for Asriel_67:

(13, 43691), (Start: 49 @43865 has 125 MA's), (83, 43961), (98, 44006), (110, 44054), (123, 44102), (161, 44195), (176, 44237),

Gene: Asriel_72 Start: 46132, Stop: 46509, Start Num: 69

Candidate Starts for Asriel_72:

(Start: 69 @46132 has 27 MA's), (Start: 70 @46138 has 10 MA's), (93, 46210), (106, 46270), (162, 46441),

Gene: AvGardian_52 Start: 34737, Stop: 35147, Start Num: 50

Candidate Starts for AvGardian_52:

(Start: 50 @34737 has 23 MA's), (68, 34788), (99, 34878), (101, 34881), (113, 34935), (122, 34965), (158, 35037),

Gene: BaboJay_65 Start: 44702, Stop: 45112, Start Num: 49

Candidate Starts for BaboJay_65:

(13, 44528), (Start: 49 @44702 has 125 MA's), (98, 44843), (110, 44891), (123, 44939), (161, 45032), (176, 45074),

Gene: BabyYoda_51 Start: 35131, Stop: 35568, Start Num: 50

Candidate Starts for BabyYoda_51:

(Start: 50 @35131 has 23 MA's), (66, 35179), (99, 35278), (101, 35281), (109, 35317), (125, 35380), (131, 35392), (148, 35431),

Gene: Bachaco_49 Start: 35861, Stop: 36301, Start Num: 50

Candidate Starts for Bachaco_49:

(Start: 50 @35861 has 23 MA's), (109, 36050), (165, 36200),

Gene: BadStone_65 Start: 45074, Stop: 45484, Start Num: 49

Candidate Starts for BadStone_65:

(Start: 49 @45074 has 125 MA's), (98, 45215), (110, 45263), (123, 45311), (161, 45404), (176, 45446),

Gene: BadStone_70 Start: 47338, Stop: 47715, Start Num: 69

Candidate Starts for BadStone_70:

(Start: 69 @47338 has 27 MA's), (Start: 70 @47344 has 10 MA's), (93, 47416), (106, 47476), (162, 47647),

Gene: Bagrid_135 Start: 72784, Stop: 73143, Start Num: 65

Candidate Starts for Bagrid_135:

(56, 72757), (Start: 65 @72784 has 24 MA's), (Start: 69 @72793 has 27 MA's), (108, 72925), (114, 72940), (158, 73069), (162, 73075),

Gene: Bagrid_119 Start: 66108, Stop: 66428, Start Num: 52

Candidate Starts for Bagrid_119:

(Start: 52 @66108 has 46 MA's), (Start: 63 @66147 has 1 MA's), (116, 66303), (124, 66339), (134, 66369), (154, 66414),

Gene: Balomoji_68 Start: 45635, Stop: 46045, Start Num: 49

Candidate Starts for Balomoji_68:

(Start: 49 @45635 has 125 MA's), (98, 45776), (110, 45824), (123, 45872), (161, 45965), (176, 46007),

Gene: Barbarian_72 Start: 46132, Stop: 46509, Start Num: 69

Candidate Starts for Barbarian_72:

(Start: 69 @46132 has 27 MA's), (Start: 70 @46138 has 10 MA's), (93, 46210), (106, 46270), (162, 46441),

Gene: Barbarian_67 Start: 43865, Stop: 44275, Start Num: 49

Candidate Starts for Barbarian_67:

(13, 43691), (Start: 49 @43865 has 125 MA's), (83, 43961), (98, 44006), (110, 44054), (123, 44102), (161, 44195), (176, 44237),

Gene: Bask21_68 Start: 44476, Stop: 44889, Start Num: 49

Candidate Starts for Bask21_68:

(13, 44302), (Start: 49 @44476 has 125 MA's), (98, 44617), (108, 44659), (139, 44767), (161, 44806), (180, 44869),

Gene: Baudelaire_65 Start: 44400, Stop: 44765, Start Num: 52

Candidate Starts for Baudelaire_65:

(Start: 52 @44400 has 46 MA's), (60, 44430), (87, 44502), (89, 44508), (121, 44622), (132, 44664), (167, 44751),

Gene: Becksu_67 Start: 45704, Stop: 46117, Start Num: 49

Candidate Starts for Becksu_67:

(13, 45530), (Start: 49 @45704 has 125 MA's), (98, 45845), (110, 45893), (123, 45941), (161, 46034), (180, 46097),

Gene: Beem_120 Start: 67476, Stop: 67796, Start Num: 52

Candidate Starts for Beem_120:

(Start: 52 @67476 has 46 MA's), (Start: 63 @67515 has 1 MA's), (101, 67614), (116, 67671), (124, 67707), (134, 67737), (154, 67782),

Gene: Beem_136 Start: 74259, Stop: 74618, Start Num: 65

Candidate Starts for Beem_136:

(56, 74232), (Start: 65 @74259 has 24 MA's), (Start: 69 @74268 has 27 MA's), (108, 74400), (114, 74415),

Gene: Bench_71 Start: 45175, Stop: 45585, Start Num: 49

Candidate Starts for Bench_71:

(13, 45001), (Start: 49 @45175 has 125 MA's), (98, 45316), (110, 45364), (123, 45412), (161, 45505), (176, 45547),

Gene: Big4_338 Start: 180229, Stop: 180705, Start Num: 48

Candidate Starts for Big4_338:

(Start: 48 @180229 has 4 MA's), (89, 180340), (94, 180358), (110, 180427), (114, 180445), (115, 180448), (145, 180541), (172, 180601),

Gene: Big4_12 Start: 5535, Stop: 6011, Start Num: 48

Candidate Starts for Big4_12:

(Start: 48 @5535 has 4 MA's), (89, 5646), (94, 5664), (110, 5733), (114, 5751), (115, 5754), (145, 5847), (172, 5907),

Gene: BigBubba_68 Start: 44884, Stop: 45294, Start Num: 49

Candidate Starts for BigBubba_68:

(Start: 49 @44884 has 125 MA's), (98, 45025), (110, 45073), (123, 45121), (161, 45214), (176, 45256),

Gene: BilboSwaggins_67 Start: 45513, Stop: 45923, Start Num: 49

Candidate Starts for BilboSwaggins_67:

(13, 45339), (Start: 49 @45513 has 125 MA's), (83, 45609), (98, 45654), (110, 45702), (123, 45750), (161, 45843), (176, 45885),

Gene: BilboSwaggins_72 Start: 47783, Stop: 48154, Start Num: 70

Candidate Starts for BilboSwaggins_72:

(Start: 69 @47777 has 27 MA's), (Start: 70 @47783 has 10 MA's), (93, 47855), (106, 47915), (162, 48086),

Gene: Bobby_126 Start: 74360, Stop: 74719, Start Num: 65

Candidate Starts for Bobby_126:

(56, 74333), (Start: 65 @74360 has 24 MA's), (Start: 69 @74369 has 27 MA's), (108, 74501), (114, 74516),

Gene: Bombitas_106 Start: 63398, Stop: 63718, Start Num: 52

Candidate Starts for Bombitas_106:

(Start: 52 @63398 has 46 MA's), (Start: 63 @63437 has 1 MA's), (101, 63536), (116, 63593), (124, 63629), (134, 63659), (154, 63704),

Gene: Bombitas_122 Start: 71670, Stop: 72029, Start Num: 65

Candidate Starts for Bombitas_122:

(56, 71643), (Start: 65 @71670 has 24 MA's), (Start: 69 @71679 has 27 MA's), (108, 71811), (114, 71826),

Gene: Bruin_65 Start: 44048, Stop: 44461, Start Num: 49

Candidate Starts for Bruin_65:

(13, 43874), (Start: 49 @44048 has 125 MA's), (98, 44189), (110, 44237), (123, 44285), (161, 44378), (180, 44441),

Gene: Buck_69 Start: 45756, Stop: 46169, Start Num: 49

Candidate Starts for Buck_69:

(13, 45582), (Start: 49 @45756 has 125 MA's), (98, 45897), (108, 45939), (139, 46047), (161, 46086), (180, 46149),

Gene: BugsBunny_68 Start: 45583, Stop: 45993, Start Num: 49

Candidate Starts for BugsBunny_68:

(Start: 49 @45583 has 125 MA's), (98, 45724), (110, 45772), (123, 45820), (161, 45913), (176, 45955),

Gene: Button_63 Start: 43199, Stop: 43654, Start Num: 39

Candidate Starts for Button_63:

(Start: 39 @43199 has 2 MA's), (62, 43241), (66, 43253), (76, 43289), (84, 43304), (96, 43346), (100, 43364), (112, 43421), (113, 43427), (127, 43484), (151, 43547), (164, 43571), (169, 43589),

Gene: Cactus_71 Start: 44529, Stop: 44939, Start Num: 49

Candidate Starts for Cactus_71:

(Start: 49 @44529 has 125 MA's), (98, 44670), (110, 44718), (123, 44766), (161, 44859), (176, 44901),

Gene: Casablanacas_107 Start: 55664, Stop: 55227, Start Num: 52

Candidate Starts for Casablanacas_107:

(Start: 52 @55664 has 46 MA's), (59, 55640), (Start: 65 @55619 has 24 MA's), (98, 55523), (101, 55511), (102, 55508), (111, 55466), (119, 55436), (126, 55403),

Gene: Cece_317 Start: 173852, Stop: 174274, Start Num: 38

Candidate Starts for Cece_317:

(Start: 38 @173852 has 2 MA's), (61, 173906), (Start: 65 @173918 has 24 MA's), (90, 173978), (107, 174041), (160, 174176),

Gene: Cece_15 Start: 5418, Stop: 5840, Start Num: 38

Candidate Starts for Cece_15:

(Start: 38 @5418 has 2 MA's), (61, 5472), (Start: 65 @5484 has 24 MA's), (90, 5544), (107, 5607), (160, 5742),

Gene: Celaena_49 Start: 35623, Stop: 36063, Start Num: 50

Candidate Starts for Celaena_49:
(Start: 50 @35623 has 23 MA's), (109, 35812), (165, 35962),

Gene: ChiliPepper_48 Start: 34921, Stop: 35364, Start Num: 50
Candidate Starts for ChiliPepper_48:
(Start: 50 @34921 has 23 MA's), (109, 35110), (130, 35182), (183, 35320),

Gene: ChosenOne_68 Start: 44532, Stop: 44942, Start Num: 49
Candidate Starts for ChosenOne_68:
(Start: 49 @44532 has 125 MA's), (98, 44673), (110, 44721), (123, 44769), (161, 44862), (176, 44904),

Gene: ChotaBhai_68 Start: 44844, Stop: 45257, Start Num: 49
Candidate Starts for ChotaBhai_68:
(13, 44670), (Start: 49 @44844 has 125 MA's), (98, 44985), (108, 45027), (139, 45135), (161, 45174),
(179, 45231),

Gene: Cjw1_68 Start: 46229, Stop: 46639, Start Num: 49
Candidate Starts for Cjw1_68:
(Start: 49 @46229 has 125 MA's), (98, 46370), (110, 46418), (123, 46466), (161, 46559), (176, 46601),

Gene: Command613_75 Start: 47838, Stop: 48209, Start Num: 70
Candidate Starts for Command613_75:
(Start: 69 @47832 has 27 MA's), (Start: 70 @47838 has 10 MA's), (93, 47910), (106, 47970), (162,
48141),

Gene: Command613_70 Start: 45568, Stop: 45978, Start Num: 49
Candidate Starts for Command613_70:
(13, 45394), (Start: 49 @45568 has 125 MA's), (98, 45709), (110, 45757), (123, 45805), (161, 45898),
(176, 45940),

Gene: Constella_101 Start: 60252, Stop: 60566, Start Num: 52
Candidate Starts for Constella_101:
(Start: 52 @60252 has 46 MA's), (Start: 63 @60291 has 1 MA's), (73, 60318), (116, 60441), (154,
60552),

Gene: Contagion_64 Start: 44329, Stop: 44742, Start Num: 49
Candidate Starts for Contagion_64:
(13, 44155), (Start: 49 @44329 has 125 MA's), (98, 44470), (110, 44518), (123, 44566), (161, 44659),
(180, 44722),

Gene: Cookies_70 Start: 46974, Stop: 47351, Start Num: 69
Candidate Starts for Cookies_70:
(Start: 69 @46974 has 27 MA's), (Start: 70 @46980 has 10 MA's), (93, 47052), (106, 47112), (130,
47211), (162, 47283),

Gene: Cookies_65 Start: 44698, Stop: 45111, Start Num: 49
Candidate Starts for Cookies_65:
(13, 44524), (Start: 49 @44698 has 125 MA's), (98, 44839), (108, 44881), (139, 44989), (161, 45028),

Gene: Courthouse_108 Start: 61433, Stop: 61753, Start Num: 52
Candidate Starts for Courthouse_108:
(Start: 52 @61433 has 46 MA's), (Start: 63 @61472 has 1 MA's), (101, 61571), (116, 61628), (124,
61664), (134, 61694), (154, 61739),

Gene: CrystalP_67 Start: 45513, Stop: 45923, Start Num: 49

Candidate Starts for CrystalP_67:

(13, 45339), (Start: 49 @45513 has 125 MA's), (83, 45609), (98, 45654), (110, 45702), (123, 45750), (161, 45843), (176, 45885),

Gene: CrystalP_72 Start: 47783, Stop: 48154, Start Num: 70

Candidate Starts for CrystalP_72:

(Start: 69 @47777 has 27 MA's), (Start: 70 @47783 has 10 MA's), (93, 47855), (106, 47915), (162, 48086),

Gene: Czyszczo1_69 Start: 45038, Stop: 45448, Start Num: 49

Candidate Starts for Czyszczo1_69:

(Start: 49 @45038 has 125 MA's), (98, 45179), (110, 45227), (123, 45275), (161, 45368), (176, 45410),

Gene: Daikon_70 Start: 45656, Stop: 46066, Start Num: 49

Candidate Starts for Daikon_70:

(Start: 49 @45656 has 125 MA's), (98, 45797), (110, 45845), (123, 45893), (161, 45986), (176, 46028),

Gene: Dallas_119 Start: 66991, Stop: 67311, Start Num: 52

Candidate Starts for Dallas_119:

(Start: 52 @66991 has 46 MA's), (Start: 63 @67030 has 1 MA's), (116, 67186), (124, 67222), (134, 67252), (154, 67297),

Gene: Dallas_135 Start: 73726, Stop: 74085, Start Num: 65

Candidate Starts for Dallas_135:

(56, 73699), (Start: 65 @73726 has 24 MA's), (Start: 69 @73735 has 27 MA's), (108, 73867), (114, 73882), (162, 74017),

Gene: DejaVu_108 Start: 57205, Stop: 56840, Start Num: 50

Candidate Starts for DejaVu_108:

(30, 57256), (Start: 50 @57205 has 23 MA's), (74, 57136), (98, 57076), (99, 57067), (106, 57043), (109, 57028), (172, 56878), (175, 56869),

Gene: DirtyBubble_50 Start: 34799, Stop: 35236, Start Num: 50

Candidate Starts for DirtyBubble_50:

(Start: 50 @34799 has 23 MA's), (66, 34847), (99, 34946), (101, 34949), (109, 34985), (125, 35048), (131, 35060), (148, 35099),

Gene: Dismas_48 Start: 34843, Stop: 35286, Start Num: 50

Candidate Starts for Dismas_48:

(Start: 50 @34843 has 23 MA's), (97, 34978), (98, 34981), (113, 35047), (131, 35104), (157, 35155), (177, 35206),

Gene: DmpstrDiver_119 Start: 66397, Stop: 66717, Start Num: 52

Candidate Starts for DmpstrDiver_119:

(Start: 52 @66397 has 46 MA's), (Start: 63 @66436 has 1 MA's), (116, 66592), (124, 66628), (134, 66658), (154, 66703),

Gene: DmpstrDiver_134 Start: 73073, Stop: 73432, Start Num: 65

Candidate Starts for DmpstrDiver_134:

(56, 73046), (Start: 65 @73073 has 24 MA's), (Start: 69 @73082 has 27 MA's), (108, 73214), (114, 73229), (158, 73358), (162, 73364),

Gene: DoctorDiddles_67 Start: 44888, Stop: 45301, Start Num: 49

Candidate Starts for DoctorDiddles_67:

(13, 44714), (Start: 49 @44888 has 125 MA's), (98, 45029), (108, 45071), (139, 45179), (161, 45218), (180, 45281),

Gene: Dodo_322 Start: 170077, Stop: 170469, Start Num: 40

Candidate Starts for Dodo_322:

(17, 169951), (18, 169954), (20, 169975), (Start: 40 @170077 has 6 MA's), (57, 170110), (66, 170140), (85, 170176), (89, 170188), (117, 170287), (135, 170344), (145, 170371), (147, 170374), (181, 170455),

Gene: Dove_120 Start: 68672, Stop: 69031, Start Num: 65

Candidate Starts for Dove_120:

(56, 68645), (Start: 65 @68672 has 24 MA's), (Start: 69 @68681 has 27 MA's), (108, 68813), (114, 68828), (158, 68957), (162, 68963),

Gene: Dove_104 Start: 61905, Stop: 62225, Start Num: 52

Candidate Starts for Dove_104:

(Start: 52 @61905 has 46 MA's), (Start: 63 @61944 has 1 MA's), (101, 62043), (116, 62100), (124, 62136), (134, 62166), (154, 62211),

Gene: DrDrey_68 Start: 45954, Stop: 46364, Start Num: 49

Candidate Starts for DrDrey_68:

(Start: 49 @45954 has 125 MA's), (98, 46095), (110, 46143), (123, 46191), (161, 46284), (176, 46326),

Gene: DrDrey_73 Start: 48218, Stop: 48595, Start Num: 69

Candidate Starts for DrDrey_73:

(Start: 69 @48218 has 27 MA's), (Start: 70 @48224 has 10 MA's), (93, 48296), (106, 48356), (162, 48527),

Gene: Duke13_129 Start: 70374, Stop: 70733, Start Num: 65

Candidate Starts for Duke13_129:

(56, 70347), (Start: 65 @70374 has 24 MA's), (Start: 69 @70383 has 27 MA's), (108, 70515), (114, 70530), (158, 70659), (162, 70665),

Gene: Dumbo_68 Start: 44437, Stop: 44847, Start Num: 49

Candidate Starts for Dumbo_68:

(Start: 49 @44437 has 125 MA's), (98, 44578), (110, 44626), (123, 44674), (161, 44767), (176, 44809),

Gene: Dusk_70 Start: 46998, Stop: 47375, Start Num: 69

Candidate Starts for Dusk_70:

(Start: 69 @46998 has 27 MA's), (Start: 70 @47004 has 10 MA's), (93, 47076), (106, 47136), (162, 47307),

Gene: Dusk_65 Start: 44734, Stop: 45144, Start Num: 49

Candidate Starts for Dusk_65:

(Start: 49 @44734 has 125 MA's), (98, 44875), (110, 44923), (123, 44971), (161, 45064), (176, 45106),

Gene: DustyDino_110 Start: 56887, Stop: 56450, Start Num: 52

Candidate Starts for DustyDino_110:

(Start: 52 @56887 has 46 MA's), (59, 56863), (Start: 65 @56842 has 24 MA's), (98, 56746), (101, 56734), (102, 56731), (111, 56689), (119, 56659), (126, 56626),

Gene: Easy2Say_69 Start: 45975, Stop: 46385, Start Num: 49

Candidate Starts for Easy2Say_69:

(13, 45801), (Start: 49 @45975 has 125 MA's), (83, 46071), (98, 46116), (110, 46164), (123, 46212), (161, 46305), (176, 46347),

Gene: Ejimix_113 Start: 67525, Stop: 67845, Start Num: 52

Candidate Starts for Ejimix_113:

(Start: 52 @67525 has 46 MA's), (Start: 63 @67564 has 1 MA's), (116, 67720), (124, 67756), (134, 67786), (154, 67831),

Gene: Ejimix_128 Start: 73794, Stop: 74153, Start Num: 65

Candidate Starts for Ejimix_128:

(56, 73767), (Start: 65 @73794 has 24 MA's), (Start: 69 @73803 has 27 MA's), (108, 73935), (114, 73950), (162, 74085),

Gene: Elite2014_67 Start: 44531, Stop: 44941, Start Num: 49

Candidate Starts for Elite2014_67:

(Start: 49 @44531 has 125 MA's), (98, 44672), (110, 44720), (123, 44768), (161, 44861), (176, 44903),

Gene: Elph10_68 Start: 44536, Stop: 44946, Start Num: 49

Candidate Starts for Elph10_68:

(Start: 49 @44536 has 125 MA's), (98, 44677), (110, 44725), (123, 44773), (161, 44866), (176, 44908),

Gene: Elva_53 Start: 35217, Stop: 35639, Start Num: 50

Candidate Starts for Elva_53:

(Start: 50 @35217 has 23 MA's), (99, 35367), (101, 35370), (113, 35424), (156, 35523),

Gene: Emmina_68 Start: 44438, Stop: 44848, Start Num: 49

Candidate Starts for Emmina_68:

(13, 44264), (Start: 49 @44438 has 125 MA's), (98, 44579), (110, 44627), (123, 44675), (161, 44768), (176, 44810),

Gene: Erenyeager_107 Start: 55997, Stop: 55551, Start Num: 52

Candidate Starts for Erenyeager_107:

(1, 56621), (2, 56594), (3, 56573), (5, 56525), (6, 56411), (8, 56360), (14, 56168), (32, 56048), (Start: 52 @55997 has 46 MA's), (59, 55973), (Start: 65 @55952 has 24 MA's), (98, 55847), (101, 55835), (102, 55832), (111, 55790), (119, 55760),

Gene: EricMillard_126 Start: 72298, Stop: 72657, Start Num: 65

Candidate Starts for EricMillard_126:

(56, 72271), (Start: 65 @72298 has 24 MA's), (Start: 69 @72307 has 27 MA's), (108, 72439), (114, 72454), (158, 72583), (162, 72589),

Gene: Eureka_66 Start: 45002, Stop: 45412, Start Num: 49

Candidate Starts for Eureka_66:

(Start: 49 @45002 has 125 MA's), (98, 45143), (110, 45191), (123, 45239), (161, 45332), (176, 45374),

Gene: FairyPath_68 Start: 45647, Stop: 46057, Start Num: 49

Candidate Starts for FairyPath_68:

(13, 45473), (Start: 49 @45647 has 125 MA's), (98, 45788), (110, 45836), (123, 45884), (161, 45977), (176, 46019),

Gene: FairyPath_73 Start: 47917, Stop: 48288, Start Num: 70

Candidate Starts for FairyPath_73:

(Start: 69 @47911 has 27 MA's), (Start: 70 @47917 has 10 MA's), (93, 47989), (106, 48049), (162, 48220),

Gene: Filch_69 Start: 44463, Stop: 44873, Start Num: 49

Candidate Starts for Filch_69:

(Start: 49 @44463 has 125 MA's), (98, 44604), (110, 44652), (123, 44700), (161, 44793), (176, 44835),

Gene: FireRed_72 Start: 46025, Stop: 46438, Start Num: 49

Candidate Starts for FireRed_72:

(13, 45851), (Start: 49 @46025 has 125 MA's), (98, 46166), (110, 46214), (123, 46262), (161, 46355), (180, 46418),

Gene: FlameThrower_48 Start: 34660, Stop: 35100, Start Num: 50

Candidate Starts for FlameThrower_48:

(Start: 50 @34660 has 23 MA's), (109, 34849), (165, 34999),

Gene: Flypotenuse_64 Start: 44519, Stop: 44929, Start Num: 49

Candidate Starts for Flypotenuse_64:

(Start: 49 @44519 has 125 MA's), (98, 44660), (110, 44708), (123, 44756), (161, 44849), (176, 44891),

Gene: FoghornLeghorn_62 Start: 43529, Stop: 43942, Start Num: 49

Candidate Starts for FoghornLeghorn_62:

(13, 43355), (Start: 49 @43529 has 125 MA's), (98, 43670), (108, 43712), (139, 43820), (161, 43859), (180, 43922),

Gene: Fork_103 Start: 55912, Stop: 55475, Start Num: 52

Candidate Starts for Fork_103:

(Start: 52 @55912 has 46 MA's), (59, 55888), (Start: 65 @55867 has 24 MA's), (98, 55771), (101, 55759), (102, 55756), (111, 55714), (119, 55684), (126, 55651),

Gene: Gage_70 Start: 45309, Stop: 45719, Start Num: 49

Candidate Starts for Gage_70:

(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639), (176, 45681),

Gene: Gator_66 Start: 45365, Stop: 45775, Start Num: 49

Candidate Starts for Gator_66:

(Start: 49 @45365 has 125 MA's), (98, 45506), (110, 45554), (123, 45602), (161, 45695), (176, 45737),

Gene: Gator_71 Start: 47629, Stop: 48006, Start Num: 69

Candidate Starts for Gator_71:

(Start: 69 @47629 has 27 MA's), (Start: 70 @47635 has 10 MA's), (93, 47707), (106, 47767), (162, 47938),

Gene: Gemini_73 Start: 45826, Stop: 46236, Start Num: 49

Candidate Starts for Gemini_73:

(13, 45652), (Start: 49 @45826 has 125 MA's), (98, 45967), (110, 46015), (123, 46063), (161, 46156), (176, 46198),

Gene: GiKK_67 Start: 44458, Stop: 44943, Start Num: 40

Candidate Starts for GiKK_67:

(9, 44224), (10, 44242), (17, 44332), (19, 44353), (Start: 40 @44458 has 6 MA's), (51, 44482), (62, 44521), (66, 44533), (96, 44635), (113, 44716), (127, 44773), (151, 44836), (164, 44860), (169, 44878),

Gene: Glexan_67 Start: 45646, Stop: 46059, Start Num: 49

Candidate Starts for Glexan_67:

(13, 45472), (Start: 49 @45646 has 125 MA's), (98, 45787), (108, 45829), (139, 45937), (161, 45976), (180, 46039),

Gene: Goku_66 Start: 44731, Stop: 45141, Start Num: 49

Candidate Starts for Goku_66:

(Start: 49 @44731 has 125 MA's), (98, 44872), (110, 44920), (123, 44968), (161, 45061), (176, 45103),

Gene: GoldenSpark_72 Start: 45309, Stop: 45719, Start Num: 49

Candidate Starts for GoldenSpark_72:

(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639), (176, 45681),

Gene: Goldilocks_76 Start: 47080, Stop: 47451, Start Num: 70

Candidate Starts for Goldilocks_76:

(Start: 69 @47074 has 27 MA's), (Start: 70 @47080 has 10 MA's), (93, 47152), (106, 47212), (162, 47383),

Gene: Goldilocks_71 Start: 44810, Stop: 45220, Start Num: 49

Candidate Starts for Goldilocks_71:

(13, 44636), (Start: 49 @44810 has 125 MA's), (98, 44951), (110, 44999), (123, 45047), (161, 45140), (176, 45182),

Gene: Gonephishing_107 Start: 60857, Stop: 61180, Start Num: 52

Candidate Starts for Gonephishing_107:

(Start: 52 @60857 has 46 MA's), (Start: 63 @60896 has 1 MA's), (91, 60962), (97, 60983), (98, 60986), (105, 61013), (154, 61166),

Gene: GooberAzure_71 Start: 45309, Stop: 45719, Start Num: 49

Candidate Starts for GooberAzure_71:

(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639), (176, 45681),

Gene: Grayson_232 Start: 113102, Stop: 113485, Start Num: 46

Candidate Starts for Grayson_232:

(44, 113096), (Start: 46 @113102 has 10 MA's), (95, 113249), (107, 113288), (141, 113396), (168, 113456), (174, 113465),

Gene: Halley_136 Start: 74110, Stop: 74469, Start Num: 65

Candidate Starts for Halley_136:

(56, 74083), (Start: 65 @74110 has 24 MA's), (Start: 69 @74119 has 27 MA's), (108, 74251), (114, 74266), (162, 74401),

Gene: Halley_121 Start: 67841, Stop: 68161, Start Num: 52

Candidate Starts for Halley_121:

(Start: 52 @67841 has 46 MA's), (Start: 63 @67880 has 1 MA's), (116, 68036), (124, 68072), (134, 68102), (154, 68147),

Gene: HanKaySha_68 Start: 44616, Stop: 45026, Start Num: 49
Candidate Starts for HanKaySha_68:
(Start: 49 @44616 has 125 MA's), (98, 44757), (110, 44805), (123, 44853), (161, 44946), (176, 44988),

Gene: Hannaconda_104 Start: 59803, Stop: 60126, Start Num: 52
Candidate Starts for Hannaconda_104:
(Start: 52 @59803 has 46 MA's), (Start: 63 @59842 has 1 MA's), (91, 59908), (97, 59929), (98, 59932),
(105, 59959), (154, 60112),

Gene: Harella_68 Start: 46162, Stop: 46575, Start Num: 49
Candidate Starts for Harella_68:
(13, 45988), (Start: 49 @46162 has 125 MA's), (98, 46303), (108, 46345), (139, 46453), (161, 46492),
(180, 46555),

Gene: Henry_71 Start: 47217, Stop: 47594, Start Num: 69
Candidate Starts for Henry_71:
(Start: 69 @47217 has 27 MA's), (Start: 70 @47223 has 10 MA's), (93, 47295), (106, 47355), (162,
47526),

Gene: Henry_66 Start: 44953, Stop: 45363, Start Num: 49
Candidate Starts for Henry_66:
(13, 44779), (Start: 49 @44953 has 125 MA's), (83, 45049), (98, 45094), (110, 45142), (123, 45190),
(161, 45283), (176, 45325),

Gene: Highbury_67 Start: 44604, Stop: 45014, Start Num: 49
Candidate Starts for Highbury_67:
(Start: 49 @44604 has 125 MA's), (98, 44745), (110, 44793), (123, 44841), (161, 44934), (176, 44976),

Gene: HokkenD_108 Start: 64913, Stop: 65233, Start Num: 52
Candidate Starts for HokkenD_108:
(Start: 52 @64913 has 46 MA's), (Start: 63 @64952 has 1 MA's), (101, 65051), (116, 65108), (124,
65144), (134, 65174), (154, 65219),

Gene: HokkenD_126 Start: 72994, Stop: 73353, Start Num: 65
Candidate Starts for HokkenD_126:
(56, 72967), (Start: 65 @72994 has 24 MA's), (Start: 69 @73003 has 27 MA's), (108, 73135), (114,
73150), (158, 73279), (162, 73285),

Gene: HollowPurple_107 Start: 56575, Stop: 56138, Start Num: 52
Candidate Starts for HollowPurple_107:
(Start: 52 @56575 has 46 MA's), (59, 56551), (Start: 65 @56530 has 24 MA's), (98, 56434), (101,
56422), (102, 56419), (111, 56377), (119, 56347), (126, 56314),

Gene: Holt_73 Start: 45723, Stop: 46133, Start Num: 49
Candidate Starts for Holt_73:
(13, 45549), (Start: 49 @45723 has 125 MA's), (98, 45864), (110, 45912), (123, 45960), (161, 46053),
(176, 46095),

Gene: Hoonter_71 Start: 45309, Stop: 45719, Start Num: 49
Candidate Starts for Hoonter_71:
(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639),
(176, 45681),

Gene: Hokey_68 Start: 45148, Stop: 45558, Start Num: 49
Candidate Starts for Hokey_68:
(Start: 49 @45148 has 125 MA's), (98, 45289), (110, 45337), (123, 45385), (161, 45478), (176, 45520),

Gene: Hortus1_107 Start: 58256, Stop: 57870, Start Num: 46
Candidate Starts for Hortus1_107:
(25, 58349), (29, 58313), (36, 58280), (45, 58259), (Start: 46 @58256 has 10 MA's), (74, 58175), (81, 58157), (99, 58103), (106, 58079), (125, 58007), (138, 57971), (152, 57953),

Gene: Hubbs_107 Start: 57469, Stop: 57104, Start Num: 50
Candidate Starts for Hubbs_107:
(30, 57520), (Start: 50 @57469 has 23 MA's), (74, 57400), (98, 57340), (99, 57331), (106, 57307), (109, 57292), (172, 57142), (175, 57133),

Gene: HufflyPuff_71 Start: 45981, Stop: 46391, Start Num: 49
Candidate Starts for HufflyPuff_71:
(Start: 49 @45981 has 125 MA's), (98, 46122), (110, 46170), (123, 46218), (161, 46311), (176, 46353),

Gene: Hughesyang_134 Start: 73880, Stop: 74239, Start Num: 65
Candidate Starts for Hughesyang_134:
(56, 73853), (Start: 65 @73880 has 24 MA's), (Start: 69 @73889 has 27 MA's), (108, 74021), (114, 74036), (158, 74165), (162, 74171),

Gene: Hughesyang_118 Start: 67297, Stop: 67617, Start Num: 52
Candidate Starts for Hughesyang_118:
(Start: 52 @67297 has 46 MA's), (Start: 63 @67336 has 1 MA's), (116, 67492), (124, 67528), (134, 67558), (154, 67603),

Gene: IHOP_66 Start: 45077, Stop: 45487, Start Num: 49
Candidate Starts for IHOP_66:
(Start: 49 @45077 has 125 MA's), (98, 45218), (110, 45266), (123, 45314), (161, 45407), (176, 45449),

Gene: IHOP_71 Start: 47341, Stop: 47718, Start Num: 69
Candidate Starts for IHOP_71:
(Start: 69 @47341 has 27 MA's), (Start: 70 @47347 has 10 MA's), (93, 47419), (106, 47479), (162, 47650),

Gene: Icarian_54 Start: 35804, Stop: 36241, Start Num: 50
Candidate Starts for Icarian_54:
(Start: 50 @35804 has 23 MA's), (66, 35852), (99, 35951), (101, 35954), (109, 35990), (131, 36065), (148, 36104), (178, 36185),

Gene: Icee_69 Start: 44976, Stop: 45386, Start Num: 49
Candidate Starts for Icee_69:
(Start: 49 @44976 has 125 MA's), (98, 45117), (110, 45165), (123, 45213), (161, 45306), (176, 45348),

Gene: Inca_65 Start: 43602, Stop: 44012, Start Num: 49
Candidate Starts for Inca_65:
(13, 43428), (Start: 49 @43602 has 125 MA's), (98, 43743), (110, 43791), (123, 43839), (161, 43932), (176, 43974),

Gene: Issa7_106 Start: 55958, Stop: 55521, Start Num: 52
Candidate Starts for Issa7_106:

(Start: 52 @55958 has 46 MA's), (59, 55934), (Start: 65 @55913 has 24 MA's), (98, 55817), (101, 55805), (102, 55802), (111, 55760), (119, 55730), (126, 55697),

Gene: Jamzy_67 Start: 44194, Stop: 44679, Start Num: 40

Candidate Starts for Jamzy_67:

(9, 43960), (10, 43978), (17, 44068), (19, 44089), (Start: 40 @44194 has 6 MA's), (51, 44218), (62, 44257), (66, 44269), (96, 44371), (113, 44452), (151, 44572), (164, 44596), (169, 44614),

Gene: JeTaime_68 Start: 45800, Stop: 46210, Start Num: 49

Candidate Starts for JeTaime_68:

(13, 45626), (Start: 49 @45800 has 125 MA's), (98, 45941), (110, 45989), (123, 46037), (161, 46130), (176, 46172),

Gene: JuicyJay_131 Start: 75395, Stop: 75754, Start Num: 65

Candidate Starts for JuicyJay_131:

(56, 75368), (Start: 65 @75395 has 24 MA's), (Start: 69 @75404 has 27 MA's), (108, 75536), (114, 75551),

Gene: JuicyJay_115 Start: 68611, Stop: 68931, Start Num: 52

Candidate Starts for JuicyJay_115:

(Start: 52 @68611 has 46 MA's), (Start: 63 @68650 has 1 MA's), (101, 68749), (116, 68806), (124, 68842), (134, 68872), (154, 68917),

Gene: Kanye_65 Start: 44658, Stop: 45068, Start Num: 49

Candidate Starts for Kanye_65:

(Start: 49 @44658 has 125 MA's), (98, 44799), (110, 44847), (123, 44895), (161, 44988), (176, 45030),

Gene: Kanye_70 Start: 46922, Stop: 47299, Start Num: 69

Candidate Starts for Kanye_70:

(Start: 69 @46922 has 27 MA's), (Start: 70 @46928 has 10 MA's), (93, 47000), (106, 47060), (162, 47231),

Gene: KashFlow_110 Start: 62308, Stop: 62631, Start Num: 52

Candidate Starts for KashFlow_110:

(Start: 52 @62308 has 46 MA's), (Start: 63 @62347 has 1 MA's), (91, 62413), (97, 62434), (98, 62437), (105, 62464), (154, 62617),

Gene: Katzastrophic_50 Start: 35170, Stop: 35610, Start Num: 50

Candidate Starts for Katzastrophic_50:

(Start: 50 @35170 has 23 MA's), (109, 35359), (165, 35509),

Gene: Kieran_48 Start: 34884, Stop: 35327, Start Num: 50

Candidate Starts for Kieran_48:

(7, 34482), (11, 34656), (16, 34737), (Start: 50 @34884 has 23 MA's), (109, 35073), (130, 35145), (183, 35283),

Gene: Kimchi_72 Start: 45312, Stop: 45722, Start Num: 49

Candidate Starts for Kimchi_72:

(13, 45138), (Start: 49 @45312 has 125 MA's), (98, 45453), (110, 45501), (123, 45549), (161, 45642), (176, 45684),

Gene: Klein_131 Start: 71031, Stop: 71390, Start Num: 65

Candidate Starts for Klein_131:

(56, 71004), (Start: 65 @71031 has 24 MA's), (Start: 69 @71040 has 27 MA's), (108, 71172), (114, 71187), (158, 71316), (162, 71322),

Gene: Kostya_73 Start: 47446, Stop: 47817, Start Num: 70

Candidate Starts for Kostya_73:

(Start: 69 @47440 has 27 MA's), (Start: 70 @47446 has 10 MA's), (93, 47518), (106, 47578), (162, 47749),

Gene: Kostya_68 Start: 45176, Stop: 45586, Start Num: 49

Candidate Starts for Kostya_68:

(Start: 49 @45176 has 125 MA's), (98, 45317), (110, 45365), (123, 45413), (161, 45506), (176, 45548),

Gene: Labelle_59 Start: 43035, Stop: 43403, Start Num: 52

Candidate Starts for Labelle_59:

(Start: 52 @43035 has 46 MA's), (58, 43056), (101, 43164), (103, 43173), (131, 43269), (142, 43296),

Gene: Lilac_70 Start: 44933, Stop: 45343, Start Num: 49

Candidate Starts for Lilac_70:

(Start: 49 @44933 has 125 MA's), (98, 45074), (110, 45122), (123, 45170), (161, 45263), (176, 45305),

Gene: Lilizi_69 Start: 44646, Stop: 45056, Start Num: 49

Candidate Starts for Lilizi_69:

(13, 44472), (Start: 49 @44646 has 125 MA's), (98, 44787), (110, 44835), (123, 44883), (161, 44976), (176, 45018),

Gene: Lilpickle_67 Start: 44531, Stop: 44941, Start Num: 49

Candidate Starts for Lilpickle_67:

(Start: 49 @44531 has 125 MA's), (98, 44672), (110, 44720), (123, 44768), (161, 44861), (176, 44903),

Gene: LittleE_118 Start: 65723, Stop: 66046, Start Num: 52

Candidate Starts for LittleE_118:

(Start: 52 @65723 has 46 MA's), (Start: 63 @65762 has 1 MA's), (91, 65828), (97, 65849), (98, 65852), (105, 65879), (154, 66032),

Gene: Loviatar_90 Start: 36204, Stop: 36644, Start Num: 50

Candidate Starts for Loviatar_90:

(Start: 50 @36204 has 23 MA's), (66, 36252), (109, 36390), (125, 36453), (131, 36465), (148, 36507), (176, 36576),

Gene: Lucky2013_110 Start: 61874, Stop: 62194, Start Num: 52

Candidate Starts for Lucky2013_110:

(Start: 52 @61874 has 46 MA's), (Start: 63 @61913 has 1 MA's), (101, 62012), (116, 62069), (124, 62105), (134, 62135), (154, 62180),

Gene: Lyell_106 Start: 55834, Stop: 55397, Start Num: 52

Candidate Starts for Lyell_106:

(4, 56371), (6, 56248), (8, 56197), (14, 56005), (32, 55885), (Start: 52 @55834 has 46 MA's), (59, 55810), (Start: 65 @55789 has 24 MA's), (98, 55693), (101, 55681), (102, 55678), (111, 55636), (119, 55606), (126, 55573),

Gene: MISSy_69 Start: 45034, Stop: 45447, Start Num: 49

Candidate Starts for MISSy_69:

(13, 44860), (Start: 49 @45034 has 125 MA's), (98, 45175), (110, 45223), (123, 45271), (161, 45364), (180, 45427),

Gene: MPhalcon_69 Start: 45027, Stop: 45440, Start Num: 49

Candidate Starts for MPhalcon_69:

(13, 44853), (Start: 49 @45027 has 125 MA's), (98, 45168), (110, 45216), (123, 45264), (161, 45357), (180, 45420),

Gene: MadamMonkfish_68 Start: 44255, Stop: 44665, Start Num: 49

Candidate Starts for MadamMonkfish_68:

(13, 44081), (Start: 49 @44255 has 125 MA's), (98, 44396), (110, 44444), (123, 44492), (161, 44585), (176, 44627),

Gene: MadamMonkfish_80 Start: 48896, Stop: 49234, Start Num: 72

Candidate Starts for MadamMonkfish_80:

(12, 48644), (67, 48881), (Start: 72 @48896 has 1 MA's), (82, 48932), (177, 49214),

Gene: Madruga_58 Start: 42688, Stop: 43056, Start Num: 52

Candidate Starts for Madruga_58:

(Start: 52 @42688 has 46 MA's), (101, 42817), (103, 42826), (131, 42922), (142, 42949),

Gene: Manda_68 Start: 45536, Stop: 45946, Start Num: 49

Candidate Starts for Manda_68:

(Start: 49 @45536 has 125 MA's), (98, 45677), (110, 45725), (123, 45773), (161, 45866), (176, 45908),

Gene: Margaret_67 Start: 43929, Stop: 44381, Start Num: 40

Candidate Starts for Margaret_67:

(Start: 40 @43929 has 6 MA's), (62, 43968), (66, 43980), (76, 44016), (84, 44031), (96, 44073), (100, 44091), (108, 44133), (112, 44148), (113, 44154), (151, 44274), (164, 44298), (169, 44316), (182, 44361),

Gene: Marleymoo_119 Start: 70106, Stop: 70465, Start Num: 65

Candidate Starts for Marleymoo_119:

(56, 70079), (Start: 65 @70106 has 24 MA's), (Start: 69 @70115 has 27 MA's), (108, 70247), (114, 70262),

Gene: Marshmallow_66 Start: 45804, Stop: 46214, Start Num: 49

Candidate Starts for Marshmallow_66:

(Start: 49 @45804 has 125 MA's), (98, 45945), (110, 45993), (123, 46041), (161, 46134), (176, 46176),

Gene: Maxxinista_70 Start: 44906, Stop: 45316, Start Num: 49

Candidate Starts for Maxxinista_70:

(Start: 49 @44906 has 125 MA's), (98, 45047), (110, 45095), (123, 45143), (161, 45236), (176, 45278),

Gene: MiaZeal_113 Start: 62505, Stop: 62825, Start Num: 52

Candidate Starts for MiaZeal_113:

(Start: 52 @62505 has 46 MA's), (Start: 63 @62544 has 1 MA's), (101, 62643), (116, 62700), (124, 62736), (134, 62766), (154, 62811),

Gene: Mindy_67 Start: 44119, Stop: 44529, Start Num: 49

Candidate Starts for Mindy_67:

(13, 43945), (Start: 49 @44119 has 125 MA's), (83, 44215), (98, 44260), (110, 44308), (123, 44356), (161, 44449), (176, 44491),

Gene: Mindy_72 Start: 46383, Stop: 46760, Start Num: 69

Candidate Starts for Mindy_72:

(Start: 69 @46383 has 27 MA's), (Start: 70 @46389 has 10 MA's), (93, 46461), (106, 46521), (162, 46692),

Gene: Minerva_116 Start: 65898, Stop: 66218, Start Num: 52

Candidate Starts for Minerva_116:

(Start: 52 @65898 has 46 MA's), (Start: 63 @65937 has 1 MA's), (116, 66093), (124, 66129), (134, 66159), (154, 66204),

Gene: Minerva_133 Start: 72481, Stop: 72840, Start Num: 65

Candidate Starts for Minerva_133:

(56, 72454), (Start: 65 @72481 has 24 MA's), (Start: 69 @72490 has 27 MA's), (108, 72622), (114, 72637), (158, 72766), (162, 72772),

Gene: Miniwave_63 Start: 44572, Stop: 44982, Start Num: 49

Candidate Starts for Miniwave_63:

(Start: 49 @44572 has 125 MA's), (98, 44713), (110, 44761), (123, 44809), (161, 44902), (176, 44944),

Gene: Miniwave_68 Start: 46836, Stop: 47213, Start Num: 69

Candidate Starts for Miniwave_68:

(Start: 69 @46836 has 27 MA's), (Start: 70 @46842 has 10 MA's), (93, 46914), (106, 46974), (162, 47145),

Gene: Misfit_69 Start: 46046, Stop: 46459, Start Num: 49

Candidate Starts for Misfit_69:

(13, 45872), (Start: 49 @46046 has 125 MA's), (98, 46187), (110, 46235), (123, 46283), (161, 46376), (180, 46439),

Gene: Moldemort_76 Start: 47395, Stop: 47772, Start Num: 69

Candidate Starts for Moldemort_76:

(Start: 69 @47395 has 27 MA's), (Start: 70 @47401 has 10 MA's), (93, 47473), (106, 47533), (162, 47704),

Gene: Moldemort_71 Start: 45128, Stop: 45538, Start Num: 49

Candidate Starts for Moldemort_71:

(13, 44954), (Start: 49 @45128 has 125 MA's), (83, 45224), (98, 45269), (110, 45317), (123, 45365), (161, 45458), (176, 45500),

Gene: Mosby_64 Start: 44329, Stop: 44742, Start Num: 49

Candidate Starts for Mosby_64:

(13, 44155), (Start: 49 @44329 has 125 MA's), (98, 44470), (110, 44518), (123, 44566), (161, 44659), (180, 44722),

Gene: Murica_71 Start: 45981, Stop: 46391, Start Num: 49

Candidate Starts for Murica_71:

(Start: 49 @45981 has 125 MA's), (98, 46122), (110, 46170), (123, 46218), (161, 46311), (176, 46353),

Gene: Murphy_68 Start: 45418, Stop: 45828, Start Num: 49

Candidate Starts for Murphy_68:

(Start: 49 @45418 has 125 MA's), (98, 45559), (110, 45607), (123, 45655), (161, 45748), (176, 45790),

Gene: Musetta_105 Start: 56187, Stop: 55750, Start Num: 52

Candidate Starts for Musetta_105:

(1, 56811), (2, 56784), (3, 56763), (5, 56715), (6, 56601), (8, 56550), (14, 56358), (32, 56238), (Start: 52 @56187 has 46 MA's), (59, 56163), (Start: 65 @56142 has 24 MA's), (98, 56046), (101, 56034), (102, 56031), (111, 55989), (119, 55959), (126, 55926),

Gene: Myrale_68 Start: 45669, Stop: 46079, Start Num: 49

Candidate Starts for Myrale_68:

(Start: 49 @45669 has 125 MA's), (98, 45810), (110, 45858), (123, 45906), (161, 45999), (176, 46041),

Gene: Nala_70 Start: 45539, Stop: 45952, Start Num: 49

Candidate Starts for Nala_70:

(13, 45365), (Start: 49 @45539 has 125 MA's), (98, 45680), (110, 45728), (123, 45776), (161, 45869), (180, 45932),

Gene: Necrophoxinus_109 Start: 56843, Stop: 56406, Start Num: 52

Candidate Starts for Necrophoxinus_109:

(Start: 52 @56843 has 46 MA's), (59, 56819), (Start: 65 @56798 has 24 MA's), (98, 56702), (101, 56690), (102, 56687), (111, 56645), (119, 56615), (126, 56582),

Gene: Nekros_115 Start: 65028, Stop: 65351, Start Num: 52

Candidate Starts for Nekros_115:

(Start: 52 @65028 has 46 MA's), (Start: 63 @65067 has 1 MA's), (91, 65133), (97, 65154), (98, 65157), (105, 65184), (154, 65337),

Gene: NelitzaMV_66 Start: 44618, Stop: 45028, Start Num: 49

Candidate Starts for NelitzaMV_66:

(Start: 49 @44618 has 125 MA's), (98, 44759), (110, 44807), (123, 44855), (161, 44948), (176, 44990),

Gene: NelitzaMV_71 Start: 46888, Stop: 47259, Start Num: 70

Candidate Starts for NelitzaMV_71:

(Start: 69 @46882 has 27 MA's), (Start: 70 @46888 has 10 MA's), (93, 46960), (106, 47020), (162, 47191),

Gene: Neville_54 Start: 37372, Stop: 37770, Start Num: 34

Candidate Starts for Neville_54:

(Start: 34 @37372 has 3 MA's), (47, 37402), (61, 37438), (62, 37441), (64, 37447), (73, 37471), (103, 37558), (108, 37579), (114, 37603), (136, 37678), (143, 37702), (167, 37756), (171, 37762),

Gene: Neville_46 Start: 34837, Stop: 35271, Start Num: 37

Candidate Starts for Neville_46:

(Start: 37 @34837 has 3 MA's), (42, 34849), (Start: 52 @34867 has 46 MA's), (61, 34900), (87, 34981), (105, 35050), (136, 35149), (140, 35167), (149, 35182), (153, 35191), (161, 35206),

Gene: NiceHouse_172 Start: 98331, Stop: 98723, Start Num: 41

Candidate Starts for NiceHouse_172:

(Start: 41 @98331 has 1 MA's), (57, 98373), (58, 98376), (80, 98448),

Gene: NihilNomen_136 Start: 73340, Stop: 73699, Start Num: 65

Candidate Starts for NihilNomen_136:

(56, 73313), (Start: 65 @73340 has 24 MA's), (Start: 69 @73349 has 27 MA's), (108, 73481), (114, 73496),

Gene: NihilNomen_120 Start: 66563, Stop: 66883, Start Num: 52
Candidate Starts for NihilNomen_120:
(Start: 52 @66563 has 46 MA's), (Start: 63 @66602 has 1 MA's), (101, 66701), (116, 66758), (124, 66794), (134, 66824), (154, 66869),

Gene: Nimrod_74 Start: 48509, Stop: 48880, Start Num: 70
Candidate Starts for Nimrod_74:
(Start: 69 @48503 has 27 MA's), (Start: 70 @48509 has 10 MA's), (93, 48581), (106, 48641), (162, 48812),

Gene: Nimrod_69 Start: 46236, Stop: 46649, Start Num: 49
Candidate Starts for Nimrod_69:
(13, 46062), (Start: 49 @46236 has 125 MA's), (98, 46377), (110, 46425), (123, 46473), (161, 46566), (180, 46629),

Gene: NoSleep_69 Start: 44876, Stop: 45286, Start Num: 49
Candidate Starts for NoSleep_69:
(Start: 49 @44876 has 125 MA's), (98, 45017), (110, 45065), (123, 45113), (161, 45206), (176, 45248),

Gene: Odette_138 Start: 74911, Stop: 75270, Start Num: 65
Candidate Starts for Odette_138:
(56, 74884), (Start: 65 @74911 has 24 MA's), (Start: 69 @74920 has 27 MA's), (108, 75052), (114, 75067), (158, 75196), (162, 75202),

Gene: Odette_120 Start: 66457, Stop: 66777, Start Num: 52
Candidate Starts for Odette_120:
(Start: 52 @66457 has 46 MA's), (Start: 63 @66496 has 1 MA's), (101, 66595), (116, 66652), (124, 66688), (134, 66718), (154, 66763),

Gene: OlinDD_107 Start: 58261, Stop: 57875, Start Num: 46
Candidate Starts for OlinDD_107:
(25, 58354), (29, 58318), (36, 58285), (45, 58264), (Start: 46 @58261 has 10 MA's), (74, 58180), (81, 58162), (99, 58108), (106, 58084), (125, 58012), (138, 57976), (152, 57958),

Gene: Omega_124 Start: 66872, Stop: 67195, Start Num: 52
Candidate Starts for Omega_124:
(Start: 52 @66872 has 46 MA's), (Start: 63 @66911 has 1 MA's), (91, 66977), (97, 66998), (98, 67001), (105, 67028), (154, 67181),

Gene: OrionPax_67 Start: 44624, Stop: 45034, Start Num: 49
Candidate Starts for OrionPax_67:
(Start: 49 @44624 has 125 MA's), (98, 44765), (110, 44813), (123, 44861), (161, 44954), (176, 44996),

Gene: Palpatine_70 Start: 46008, Stop: 46418, Start Num: 49
Candidate Starts for Palpatine_70:
(Start: 49 @46008 has 125 MA's), (98, 46149), (110, 46197), (123, 46245), (161, 46338), (176, 46380),

Gene: Paperbeatsrock_67 Start: 45250, Stop: 45660, Start Num: 49
Candidate Starts for Paperbeatsrock_67:
(Start: 49 @45250 has 125 MA's), (98, 45391), (110, 45439), (123, 45487), (161, 45580), (176, 45622),

Gene: Paperbeatsrock_72 Start: 47514, Stop: 47891, Start Num: 69
Candidate Starts for Paperbeatsrock_72:

(Start: 69 @47514 has 27 MA's), (Start: 70 @47520 has 10 MA's), (93, 47592), (106, 47652), (162, 47823),

Gene: Pat3_66 Start: 43773, Stop: 44186, Start Num: 49

Candidate Starts for Pat3_66:

(13, 43599), (Start: 49 @43773 has 125 MA's), (98, 43914), (108, 43956), (139, 44064), (161, 44103), (179, 44160),

Gene: Patience_60 Start: 43583, Stop: 43951, Start Num: 52

Candidate Starts for Patience_60:

(Start: 52 @43583 has 46 MA's), (58, 43604), (101, 43712), (103, 43721), (131, 43817), (142, 43844), (170, 43901),

Gene: PauloDiaboli_327 Start: 168500, Stop: 168892, Start Num: 40

Candidate Starts for PauloDiaboli_327:

(Start: 40 @168500 has 6 MA's), (57, 168533), (66, 168563), (85, 168599), (130, 168755), (135, 168767), (145, 168794), (147, 168797), (181, 168878),

Gene: Pavlo_108 Start: 57864, Stop: 57499, Start Num: 50

Candidate Starts for Pavlo_108:

(30, 57915), (Start: 50 @57864 has 23 MA's), (74, 57795), (98, 57735), (99, 57726), (106, 57702), (109, 57687), (172, 57537), (175, 57528),

Gene: Peregrin_226 Start: 113095, Stop: 113481, Start Num: 46

Candidate Starts for Peregrin_226:

(Start: 46 @113095 has 10 MA's), (75, 113182), (92, 113239), (95, 113245), (141, 113392), (168, 113452), (174, 113461),

Gene: Petra64142_72 Start: 46472, Stop: 46885, Start Num: 49

Candidate Starts for Petra64142_72:

(13, 46298), (Start: 49 @46472 has 125 MA's), (98, 46613), (108, 46655), (139, 46763), (161, 46802), (180, 46865),

Gene: Phaja_66 Start: 45076, Stop: 45486, Start Num: 49

Candidate Starts for Phaja_66:

(Start: 49 @45076 has 125 MA's), (98, 45217), (110, 45265), (123, 45313), (161, 45406), (176, 45448),

Gene: Phaja_71 Start: 47340, Stop: 47717, Start Num: 69

Candidate Starts for Phaja_71:

(Start: 69 @47340 has 27 MA's), (Start: 70 @47346 has 10 MA's), (93, 47418), (106, 47478), (162, 47649),

Gene: Pharsalus_70 Start: 47314, Stop: 47691, Start Num: 69

Candidate Starts for Pharsalus_70:

(Start: 69 @47314 has 27 MA's), (Start: 70 @47320 has 10 MA's), (93, 47392), (106, 47452), (162, 47623),

Gene: Pharsalus_65 Start: 45050, Stop: 45460, Start Num: 49

Candidate Starts for Pharsalus_65:

(Start: 49 @45050 has 125 MA's), (98, 45191), (110, 45239), (123, 45287), (161, 45380), (176, 45422),

Gene: PhatBacter_72 Start: 46025, Stop: 46435, Start Num: 49

Candidate Starts for PhatBacter_72:

(Start: 49 @46025 has 125 MA's), (98, 46166), (110, 46214), (123, 46262), (161, 46355), (176, 46397),

Gene: Phaux_70 Start: 46020, Stop: 46430, Start Num: 49

Candidate Starts for Phaux_70:

(Start: 49 @46020 has 125 MA's), (98, 46161), (110, 46209), (123, 46257), (161, 46350), (176, 46392),

Gene: PhillyPhilly_105 Start: 56853, Stop: 56488, Start Num: 50

Candidate Starts for PhillyPhilly_105:

(30, 56904), (Start: 50 @56853 has 23 MA's), (74, 56784), (98, 56724), (99, 56715), (106, 56691), (109, 56676), (172, 56526), (175, 56517),

Gene: Phoebus_119 Start: 68421, Stop: 68741, Start Num: 52

Candidate Starts for Phoebus_119:

(Start: 52 @68421 has 46 MA's), (Start: 63 @68460 has 1 MA's), (101, 68559), (116, 68616), (124, 68652), (134, 68682), (154, 68727),

Gene: Phoebus_135 Start: 75234, Stop: 75593, Start Num: 65

Candidate Starts for Phoebus_135:

(56, 75207), (Start: 65 @75234 has 24 MA's), (Start: 69 @75243 has 27 MA's), (108, 75375), (114, 75390), (158, 75519), (162, 75525),

Gene: Phrux_65 Start: 44616, Stop: 45026, Start Num: 49

Candidate Starts for Phrux_65:

(Start: 49 @44616 has 125 MA's), (98, 44757), (110, 44805), (123, 44853), (161, 44946), (176, 44988),

Gene: Pioneer3_107 Start: 58059, Stop: 57673, Start Num: 46

Candidate Starts for Pioneer3_107:

(25, 58152), (29, 58116), (36, 58083), (45, 58062), (Start: 46 @58059 has 10 MA's), (74, 57978), (81, 57960), (99, 57906), (106, 57882), (125, 57810), (138, 57774), (152, 57756),

Gene: Platte_106 Start: 57843, Stop: 57457, Start Num: 46

Candidate Starts for Platte_106:

(25, 57936), (29, 57900), (36, 57867), (45, 57846), (Start: 46 @57843 has 10 MA's), (74, 57762), (81, 57744), (99, 57690), (106, 57666), (125, 57594), (138, 57558), (152, 57540),

Gene: Policronamos_71 Start: 46020, Stop: 46430, Start Num: 49

Candidate Starts for Policronamos_71:

(Start: 49 @46020 has 125 MA's), (98, 46161), (110, 46209), (123, 46257), (161, 46350), (176, 46392),

Gene: Porcelain_113 Start: 62820, Stop: 63140, Start Num: 52

Candidate Starts for Porcelain_113:

(Start: 52 @62820 has 46 MA's), (Start: 63 @62859 has 1 MA's), (101, 62958), (116, 63015), (124, 63051), (134, 63081), (154, 63126),

Gene: Porky_67 Start: 44446, Stop: 44856, Start Num: 49

Candidate Starts for Porky_67:

(13, 44272), (Start: 49 @44446 has 125 MA's), (98, 44587), (110, 44635), (123, 44683), (161, 44776), (176, 44818),

Gene: Pound_108 Start: 64917, Stop: 65237, Start Num: 52

Candidate Starts for Pound_108:

(Start: 52 @64917 has 46 MA's), (Start: 63 @64956 has 1 MA's), (116, 65112), (124, 65148), (134, 65178), (154, 65223),

Gene: Pumpkin_71 Start: 45674, Stop: 46084, Start Num: 49

Candidate Starts for Pumpkin_71:

(Start: 49 @45674 has 125 MA's), (98, 45815), (110, 45863), (123, 45911), (161, 46004), (176, 46046),

Gene: Quallification_69 Start: 45658, Stop: 46068, Start Num: 49

Candidate Starts for Quallification_69:

(Start: 49 @45658 has 125 MA's), (98, 45799), (110, 45847), (123, 45895), (161, 45988), (176, 46030),

Gene: Quallification_74 Start: 47922, Stop: 48299, Start Num: 69

Candidate Starts for Quallification_74:

(Start: 69 @47922 has 27 MA's), (Start: 70 @47928 has 10 MA's), (93, 48000), (106, 48060), (162, 48231),

Gene: Quenya_51 Start: 35296, Stop: 35745, Start Num: 50

Candidate Starts for Quenya_51:

(23, 35191), (26, 35203), (Start: 50 @35296 has 23 MA's), (98, 35434), (106, 35467), (113, 35500), (131, 35557), (157, 35608),

Gene: Rabbitrun_55 Start: 37898, Stop: 38293, Start Num: 34

Candidate Starts for Rabbitrun_55:

(22, 37826), (24, 37832), (28, 37865), (31, 37880), (Start: 34 @37898 has 3 MA's), (54, 37943), (59, 37958), (62, 37970), (128, 38183), (137, 38213), (167, 38282),

Gene: Rabbitrun_47 Start: 35261, Stop: 35668, Start Num: 37

Candidate Starts for Rabbitrun_47:

(Start: 37 @35261 has 3 MA's), (42, 35273), (Start: 52 @35291 has 46 MA's), (61, 35324), (89, 35405), (104, 35465), (136, 35570), (143, 35594),

Gene: Rakim_69 Start: 45127, Stop: 45537, Start Num: 49

Candidate Starts for Rakim_69:

(Start: 49 @45127 has 125 MA's), (98, 45268), (110, 45316), (123, 45364), (161, 45457), (176, 45499),

Gene: RanchParmCat_67 Start: 44221, Stop: 44673, Start Num: 40

Candidate Starts for RanchParmCat_67:

(15, 44083), (Start: 40 @44221 has 6 MA's), (62, 44260), (66, 44272), (76, 44308), (84, 44323), (96, 44365), (100, 44383), (108, 44425), (112, 44440), (113, 44446), (151, 44566), (164, 44590), (169, 44608), (182, 44653),

Gene: Rearden_107 Start: 62553, Stop: 62873, Start Num: 52

Candidate Starts for Rearden_107:

(Start: 52 @62553 has 46 MA's), (Start: 63 @62592 has 1 MA's), (101, 62691), (116, 62748), (124, 62784), (134, 62814), (154, 62859),

Gene: Redno2_126 Start: 70622, Stop: 70981, Start Num: 65

Candidate Starts for Redno2_126:

(56, 70595), (Start: 65 @70622 has 24 MA's), (Start: 69 @70631 has 27 MA's), (108, 70763), (114, 70778), (158, 70907), (162, 70913),

Gene: Redno2_112 Start: 64353, Stop: 64673, Start Num: 52

Candidate Starts for Redno2_112:

(Start: 52 @64353 has 46 MA's), (Start: 63 @64392 has 1 MA's), (101, 64491), (116, 64548), (124, 64584), (134, 64614), (154, 64659),

Gene: Rimmer_69 Start: 45366, Stop: 45779, Start Num: 49

Candidate Starts for Rimmer_69:

(13, 45192), (Start: 49 @45366 has 125 MA's), (98, 45507), (108, 45549), (139, 45657), (161, 45696), (180, 45759),

Gene: RiverMonster_68 Start: 45194, Stop: 45604, Start Num: 49

Candidate Starts for RiverMonster_68:

(Start: 49 @45194 has 125 MA's), (98, 45335), (110, 45383), (123, 45431), (161, 45524), (176, 45566),

Gene: Roman_109 Start: 57913, Stop: 57548, Start Num: 50

Candidate Starts for Roman_109:

(30, 57964), (Start: 50 @57913 has 23 MA's), (74, 57844), (98, 57784), (99, 57775), (106, 57751), (109, 57736), (172, 57586), (175, 57577),

Gene: Rona_48 Start: 34834, Stop: 35277, Start Num: 50

Candidate Starts for Rona_48:

(Start: 50 @34834 has 23 MA's), (97, 34969), (98, 34972), (113, 35038), (131, 35095), (157, 35146), (177, 35197),

Gene: RunningBrook_108 Start: 56887, Stop: 56450, Start Num: 52

Candidate Starts for RunningBrook_108:

(Start: 52 @56887 has 46 MA's), (59, 56863), (Start: 65 @56842 has 24 MA's), (98, 56746), (101, 56734), (102, 56731), (111, 56689), (119, 56659), (126, 56626),

Gene: Saints25_67 Start: 44604, Stop: 45014, Start Num: 49

Candidate Starts for Saints25_67:

(Start: 49 @44604 has 125 MA's), (98, 44745), (110, 44793), (123, 44841), (161, 44934), (176, 44976),

Gene: SanaSana_53 Start: 35511, Stop: 35948, Start Num: 50

Candidate Starts for SanaSana_53:

(Start: 50 @35511 has 23 MA's), (66, 35559), (99, 35658), (101, 35661), (109, 35697), (125, 35760), (131, 35772), (148, 35811),

Gene: Sassay_63 Start: 43291, Stop: 43704, Start Num: 49

Candidate Starts for Sassay_63:

(13, 43117), (Start: 49 @43291 has 125 MA's), (98, 43432), (108, 43474), (139, 43582), (161, 43621), (180, 43684),

Gene: Schatzie_130 Start: 73330, Stop: 73689, Start Num: 65

Candidate Starts for Schatzie_130:

(56, 73303), (Start: 65 @73330 has 24 MA's), (Start: 69 @73339 has 27 MA's), (108, 73471), (114, 73486), (158, 73615), (162, 73621),

Gene: Schatzie_113 Start: 65339, Stop: 65659, Start Num: 52

Candidate Starts for Schatzie_113:

(Start: 52 @65339 has 46 MA's), (Start: 63 @65378 has 1 MA's), (101, 65477), (116, 65534), (124, 65570), (134, 65600), (154, 65645),

Gene: Shaboozey_111 Start: 62340, Stop: 62663, Start Num: 52

Candidate Starts for Shaboozey_111:

(Start: 52 @62340 has 46 MA's), (Start: 63 @62379 has 1 MA's), (91, 62445), (97, 62466), (98, 62469), (105, 62496), (154, 62649),

Gene: ShamWow_68 Start: 45513, Stop: 45923, Start Num: 49
Candidate Starts for ShamWow_68:
(13, 45339), (Start: 49 @45513 has 125 MA's), (83, 45609), (98, 45654), (110, 45702), (123, 45750),
(161, 45843), (176, 45885),

Gene: ShamWow_73 Start: 47777, Stop: 48154, Start Num: 69
Candidate Starts for ShamWow_73:
(Start: 69 @47777 has 27 MA's), (Start: 70 @47783 has 10 MA's), (93, 47855), (106, 47915), (162,
48086),

Gene: Sharkboy_49 Start: 34933, Stop: 35376, Start Num: 50
Candidate Starts for Sharkboy_49:
(Start: 50 @34933 has 23 MA's), (97, 35068), (98, 35071), (113, 35137), (131, 35194), (157, 35245),
(177, 35296),

Gene: ShereKhan_72 Start: 47846, Stop: 48223, Start Num: 69
Candidate Starts for ShereKhan_72:
(Start: 69 @47846 has 27 MA's), (Start: 70 @47852 has 10 MA's), (93, 47924), (106, 47984), (162,
48155),

Gene: ShereKhan_67 Start: 45582, Stop: 45992, Start Num: 49
Candidate Starts for ShereKhan_67:
(Start: 49 @45582 has 125 MA's), (98, 45723), (110, 45771), (123, 45819), (161, 45912), (176, 45954),

Gene: Simpliphy_67 Start: 44594, Stop: 45004, Start Num: 49
Candidate Starts for Simpliphy_67:
(Start: 49 @44594 has 125 MA's), (98, 44735), (110, 44783), (123, 44831), (161, 44924), (176, 44966),

Gene: SirDuracell_72 Start: 46147, Stop: 46518, Start Num: 70
Candidate Starts for SirDuracell_72:
(Start: 69 @46141 has 27 MA's), (Start: 70 @46147 has 10 MA's), (93, 46219), (106, 46279), (130,
46378), (162, 46450),

Gene: SirDuracell_67 Start: 43865, Stop: 44278, Start Num: 49
Candidate Starts for SirDuracell_67:
(13, 43691), (Start: 49 @43865 has 125 MA's), (98, 44006), (108, 44048), (139, 44156), (161, 44195),
(180, 44258),

Gene: SophKB_70 Start: 46533, Stop: 46910, Start Num: 69
Candidate Starts for SophKB_70:
(Start: 69 @46533 has 27 MA's), (Start: 70 @46539 has 10 MA's), (93, 46611), (106, 46671), (162,
46842),

Gene: SophKB_65 Start: 44269, Stop: 44679, Start Num: 49
Candidate Starts for SophKB_65:
(Start: 49 @44269 has 125 MA's), (98, 44410), (110, 44458), (123, 44506), (161, 44599), (176, 44641),

Gene: Sotrice96_69 Start: 45272, Stop: 45682, Start Num: 49
Candidate Starts for Sotrice96_69:
(Start: 49 @45272 has 125 MA's), (98, 45413), (110, 45461), (123, 45509), (161, 45602), (176, 45644),

Gene: Spooks_25 Start: 18379, Stop: 17993, Start Num: 53

Candidate Starts for Spooks_25:

(35, 18403), (Start: 53 @18379 has 1 MA's), (71, 18319), (76, 18298), (86, 18277), (96, 18241), (116, 18154), (141, 18064), (144, 18058),

Gene: Squint_111 Start: 62624, Stop: 62944, Start Num: 52

Candidate Starts for Squint_111:

(Start: 52 @62624 has 46 MA's), (Start: 63 @62663 has 1 MA's), (101, 62762), (116, 62819), (124, 62855), (134, 62885), (154, 62930),

Gene: Stank_71 Start: 45527, Stop: 45937, Start Num: 49

Candidate Starts for Stank_71:

(13, 45353), (Start: 49 @45527 has 125 MA's), (83, 45623), (98, 45668), (110, 45716), (123, 45764), (161, 45857), (176, 45899),

Gene: Stark_69 Start: 45077, Stop: 45487, Start Num: 49

Candidate Starts for Stark_69:

(Start: 49 @45077 has 125 MA's), (98, 45218), (110, 45266), (123, 45314), (161, 45407), (176, 45449),

Gene: StellaBean_71 Start: 47107, Stop: 47478, Start Num: 70

Candidate Starts for StellaBean_71:

(Start: 69 @47101 has 27 MA's), (Start: 70 @47107 has 10 MA's), (93, 47179), (106, 47239), (162, 47410),

Gene: StellaBean_66 Start: 44837, Stop: 45247, Start Num: 49

Candidate Starts for StellaBean_66:

(Start: 49 @44837 has 125 MA's), (98, 44978), (110, 45026), (123, 45074), (161, 45167), (176, 45209),

Gene: StevieWelch_107 Start: 56127, Stop: 55690, Start Num: 52

Candidate Starts for StevieWelch_107:

(14, 56298), (35, 56160), (Start: 52 @56127 has 46 MA's), (59, 56103), (Start: 65 @56082 has 24 MA's), (98, 55986), (101, 55974), (119, 55899),

Gene: StolenFromERC_71 Start: 45309, Stop: 45719, Start Num: 49

Candidate Starts for StolenFromERC_71:

(13, 45135), (Start: 49 @45309 has 125 MA's), (98, 45450), (110, 45498), (123, 45546), (161, 45639), (176, 45681),

Gene: Stoor_51 Start: 35304, Stop: 35735, Start Num: 50

Candidate Starts for Stoor_51:

(Start: 50 @35304 has 23 MA's), (66, 35352), (99, 35451), (101, 35454), (109, 35490), (125, 35553), (131, 35565), (148, 35598), (178, 35679),

Gene: StormChicken_70 Start: 45973, Stop: 46386, Start Num: 49

Candidate Starts for StormChicken_70:

(13, 45799), (Start: 49 @45973 has 125 MA's), (98, 46114), (108, 46156), (139, 46264), (161, 46303), (180, 46366),

Gene: Stromboli_51 Start: 35169, Stop: 35606, Start Num: 50

Candidate Starts for Stromboli_51:

(Start: 50 @35169 has 23 MA's), (66, 35217), (99, 35316), (101, 35319), (109, 35355), (125, 35418), (131, 35430), (148, 35469),

Gene: Success_26 Start: 17594, Stop: 17208, Start Num: 53

Candidate Starts for Success_26:

(21, 17702), (35, 17618), (Start: 53 @17594 has 1 MA's), (71, 17534), (86, 17492), (96, 17456), (117, 17366), (141, 17279), (144, 17273),

Gene: Superphikiman_110 Start: 61715, Stop: 62035, Start Num: 52

Candidate Starts for Superphikiman_110:

(Start: 52 @61715 has 46 MA's), (Start: 63 @61754 has 1 MA's), (101, 61853), (116, 61910), (124, 61946), (134, 61976), (154, 62021),

Gene: TBrady12_71 Start: 45011, Stop: 45421, Start Num: 49

Candidate Starts for TBrady12_71:

(13, 44837), (Start: 49 @45011 has 125 MA's), (98, 45152), (110, 45200), (123, 45248), (161, 45341), (176, 45383),

Gene: TBrady12_76 Start: 47275, Stop: 47652, Start Num: 69

Candidate Starts for TBrady12_76:

(Start: 69 @47275 has 27 MA's), (Start: 70 @47281 has 10 MA's), (93, 47353), (106, 47413), (162, 47584),

Gene: Tandem_107 Start: 58139, Stop: 57753, Start Num: 46

Candidate Starts for Tandem_107:

(25, 58232), (29, 58196), (36, 58163), (45, 58142), (Start: 46 @58139 has 10 MA's), (74, 58058), (81, 58040), (99, 57986), (106, 57962), (125, 57890), (138, 57854), (152, 57836),

Gene: Tarkin_72 Start: 47523, Stop: 47900, Start Num: 69

Candidate Starts for Tarkin_72:

(Start: 69 @47523 has 27 MA's), (Start: 70 @47529 has 10 MA's), (93, 47601), (106, 47661), (162, 47832),

Gene: Tarkin_67 Start: 45259, Stop: 45669, Start Num: 49

Candidate Starts for Tarkin_67:

(Start: 49 @45259 has 125 MA's), (98, 45400), (110, 45448), (123, 45496), (161, 45589), (176, 45631),

Gene: TeardropMSU_64 Start: 44259, Stop: 44669, Start Num: 49

Candidate Starts for TeardropMSU_64:

(Start: 49 @44259 has 125 MA's), (98, 44400), (110, 44448), (123, 44496), (161, 44589), (176, 44631),

Gene: Teaspoon_69 Start: 45153, Stop: 45563, Start Num: 49

Candidate Starts for Teaspoon_69:

(13, 44979), (Start: 49 @45153 has 125 MA's), (98, 45294), (110, 45342), (123, 45390), (161, 45483), (176, 45525),

Gene: Teaspoon_74 Start: 47423, Stop: 47794, Start Num: 70

Candidate Starts for Teaspoon_74:

(Start: 69 @47417 has 27 MA's), (Start: 70 @47423 has 10 MA's), (93, 47495), (106, 47555), (162, 47726),

Gene: Terminus_71 Start: 46046, Stop: 46459, Start Num: 49

Candidate Starts for Terminus_71:

(13, 45872), (Start: 49 @46046 has 125 MA's), (98, 46187), (110, 46235), (123, 46283), (161, 46376), (180, 46439),

Gene: Thibault_119 Start: 70544, Stop: 70903, Start Num: 65

Candidate Starts for Thibault_119:

(56, 70517), (Start: 65 @70544 has 24 MA's), (Start: 69 @70553 has 27 MA's), (108, 70685), (114, 70700), (162, 70835),

Gene: Thibault_99 Start: 60528, Stop: 60848, Start Num: 52

Candidate Starts for Thibault_99:

(Start: 52 @60528 has 46 MA's), (Start: 63 @60567 has 1 MA's), (116, 60723), (124, 60759), (134, 60789), (154, 60834),

Gene: Thimble_70 Start: 44491, Stop: 44901, Start Num: 49

Candidate Starts for Thimble_70:

(13, 44317), (Start: 49 @44491 has 125 MA's), (98, 44632), (110, 44680), (123, 44728), (161, 44821), (176, 44863),

Gene: ThreeRngTarjay_130 Start: 73825, Stop: 74184, Start Num: 65

Candidate Starts for ThreeRngTarjay_130:

(56, 73798), (Start: 65 @73825 has 24 MA's), (Start: 69 @73834 has 27 MA's), (108, 73966), (114, 73981), (158, 74110), (162, 74116),

Gene: Thresher_70 Start: 46136, Stop: 46546, Start Num: 49

Candidate Starts for Thresher_70:

(Start: 49 @46136 has 125 MA's), (98, 46277), (110, 46325), (123, 46373), (161, 46466), (176, 46508),

Gene: Tomaszewski_63 Start: 44425, Stop: 44838, Start Num: 49

Candidate Starts for Tomaszewski_63:

(13, 44251), (Start: 49 @44425 has 125 MA's), (98, 44566), (108, 44608), (139, 44716), (161, 44755), (180, 44818),

Gene: Toto_66 Start: 45513, Stop: 45923, Start Num: 49

Candidate Starts for Toto_66:

(13, 45339), (Start: 49 @45513 has 125 MA's), (83, 45609), (98, 45654), (110, 45702), (123, 45750), (161, 45843), (176, 45885),

Gene: Toto_71 Start: 47777, Stop: 48154, Start Num: 69

Candidate Starts for Toto_71:

(Start: 69 @47777 has 27 MA's), (Start: 70 @47783 has 10 MA's), (93, 47855), (106, 47915), (162, 48086),

Gene: Traaww1_64 Start: 44694, Stop: 45104, Start Num: 49

Candidate Starts for Traaww1_64:

(13, 44520), (Start: 49 @44694 has 125 MA's), (83, 44790), (98, 44835), (110, 44883), (123, 44931), (161, 45024), (176, 45066),

Gene: Traaww1_69 Start: 46961, Stop: 47338, Start Num: 69

Candidate Starts for Traaww1_69:

(Start: 69 @46961 has 27 MA's), (Start: 70 @46967 has 10 MA's), (93, 47039), (106, 47099), (162, 47270),

Gene: Trax_45 Start: 35143, Stop: 35541, Start Num: 37

Candidate Starts for Trax_45:

(Start: 37 @35143 has 3 MA's), (42, 35155), (Start: 52 @35173 has 46 MA's), (61, 35206), (89, 35287), (104, 35347), (118, 35398), (143, 35476), (157, 35503), (166, 35524),

Gene: Trax_53 Start: 37657, Stop: 38055, Start Num: 34

Candidate Starts for Trax_53:

(Start: 34 @37657 has 3 MA's), (47, 37687), (61, 37723), (62, 37726), (64, 37732), (73, 37756), (103, 37843), (108, 37864), (114, 37888), (136, 37963), (143, 37987), (167, 38041), (171, 38047),

Gene: Trina_234 Start: 121206, Stop: 121604, Start Num: 63

Candidate Starts for Trina_234:

(55, 121179), (61, 121200), (Start: 63 @121206 has 1 MA's), (66, 121215), (Start: 70 @121227 has 10 MA's), (78, 121254), (102, 121335), (108, 121374), (127, 121449), (146, 121500), (150, 121509), (159, 121527), (173, 121560), (174, 121563),

Gene: Tuco_69 Start: 46021, Stop: 46431, Start Num: 49

Candidate Starts for Tuco_69:

(Start: 49 @46021 has 125 MA's), (98, 46162), (110, 46210), (123, 46258), (161, 46351), (176, 46393),

Gene: Tuco_74 Start: 48285, Stop: 48662, Start Num: 69

Candidate Starts for Tuco_74:

(Start: 69 @48285 has 27 MA's), (Start: 70 @48291 has 10 MA's), (93, 48363), (106, 48423), (162, 48594),

Gene: Ukulele_63 Start: 44407, Stop: 44817, Start Num: 49

Candidate Starts for Ukulele_63:

(Start: 49 @44407 has 125 MA's), (98, 44548), (110, 44596), (123, 44644), (161, 44737), (176, 44779),

Gene: WalkingDead_53 Start: 35918, Stop: 36355, Start Num: 50

Candidate Starts for WalkingDead_53:

(Start: 50 @35918 has 23 MA's), (66, 35966), (99, 36065), (101, 36068), (109, 36104), (125, 36167), (131, 36179), (148, 36218), (178, 36299),

Gene: Wanda_133 Start: 70960, Stop: 71319, Start Num: 65

Candidate Starts for Wanda_133:

(56, 70933), (Start: 65 @70960 has 24 MA's), (Start: 69 @70969 has 27 MA's), (108, 71101), (114, 71116), (158, 71245), (162, 71251),

Gene: Weasels2_208 Start: 107565, Stop: 107978, Start Num: 46

Candidate Starts for Weasels2_208:

(Start: 46 @107565 has 10 MA's), (79, 107664), (98, 107721), (109, 107766), (120, 107805), (141, 107880),

Gene: Weasels2_237 Start: 116136, Stop: 116522, Start Num: 46

Candidate Starts for Weasels2_237:

(44, 116130), (Start: 46 @116136 has 10 MA's), (95, 116286), (141, 116433), (168, 116493),

Gene: Welcome_109 Start: 56727, Stop: 56290, Start Num: 52

Candidate Starts for Welcome_109:

(Start: 52 @56727 has 46 MA's), (59, 56703), (Start: 65 @56682 has 24 MA's), (98, 56586), (101, 56574), (102, 56571), (111, 56529), (119, 56499), (126, 56466),

Gene: Wiggin_75 Start: 47368, Stop: 47739, Start Num: 70

Candidate Starts for Wiggin_75:

(Start: 69 @47362 has 27 MA's), (Start: 70 @47368 has 10 MA's), (93, 47440), (106, 47500), (162, 47671),

Gene: Wiggin_70 Start: 45095, Stop: 45505, Start Num: 49

Candidate Starts for Wiggin_70:

(13, 44921), (Start: 49 @45095 has 125 MA's), (83, 45191), (98, 45236), (110, 45284), (123, 45332), (161, 45425), (176, 45467),

Gene: Willez_63 Start: 43291, Stop: 43704, Start Num: 49

Candidate Starts for Willez_63:

(13, 43117), (Start: 49 @43291 has 125 MA's), (98, 43432), (108, 43474), (139, 43582), (161, 43621), (180, 43684),

Gene: Wolfstar_113 Start: 59574, Stop: 59188, Start Num: 43

Candidate Starts for Wolfstar_113:

(27, 59646), (33, 59601), (Start: 43 @59574 has 1 MA's), (77, 59481), (91, 59442), (99, 59409), (106, 59385), (108, 59373), (148, 59277),

Gene: Xandras_67 Start: 44506, Stop: 44916, Start Num: 49

Candidate Starts for Xandras_67:

(Start: 49 @44506 has 125 MA's), (98, 44647), (110, 44695), (123, 44743), (161, 44836), (176, 44878),

Gene: Yakult_64 Start: 44046, Stop: 44489, Start Num: 39

Candidate Starts for Yakult_64:

(Start: 39 @44046 has 2 MA's), (88, 44154), (96, 44181), (100, 44199), (108, 44241), (112, 44256), (113, 44262), (129, 44325), (151, 44382), (169, 44424),

Gene: YassJohnny_65 Start: 44464, Stop: 44877, Start Num: 49

Candidate Starts for YassJohnny_65:

(13, 44290), (Start: 49 @44464 has 125 MA's), (98, 44605), (108, 44647), (139, 44755), (161, 44794), (180, 44857),

Gene: Yeet_128 Start: 73023, Stop: 73382, Start Num: 65

Candidate Starts for Yeet_128:

(56, 72996), (Start: 65 @73023 has 24 MA's), (Start: 69 @73032 has 27 MA's), (108, 73164), (114, 73179), (158, 73308), (162, 73314),

Gene: Yeet_109 Start: 64277, Stop: 64597, Start Num: 52

Candidate Starts for Yeet_109:

(Start: 52 @64277 has 46 MA's), (Start: 63 @64316 has 1 MA's), (101, 64415), (116, 64472), (124, 64508), (134, 64538), (154, 64583),

Gene: Youngblood_71 Start: 45976, Stop: 46386, Start Num: 49

Candidate Starts for Youngblood_71:

(13, 45802), (Start: 49 @45976 has 125 MA's), (98, 46117), (110, 46165), (123, 46213), (161, 46306), (176, 46348),

Gene: Yuma_105 Start: 55848, Stop: 55411, Start Num: 52

Candidate Starts for Yuma_105:

(Start: 52 @55848 has 46 MA's), (59, 55824), (Start: 65 @55803 has 24 MA's), (98, 55707), (101, 55695), (102, 55692), (111, 55650), (119, 55620), (126, 55587),

Gene: Zelink_129 Start: 73772, Stop: 74131, Start Num: 65

Candidate Starts for Zelink_129:

(56, 73745), (Start: 65 @73772 has 24 MA's), (Start: 69 @73781 has 27 MA's), (108, 73913), (114, 73928), (158, 74057), (162, 74063),

Gene: Zooman_323 Start: 180374, Stop: 180850, Start Num: 48

Candidate Starts for Zooman_323:

(Start: 48 @180374 has 4 MA's), (76, 180458), (89, 180485), (110, 180572), (114, 180590), (145, 180686), (155, 180707), (163, 180722), (172, 180746),

Gene: Zooman_10 Start: 4723, Stop: 5199, Start Num: 48

Candidate Starts for Zooman_10:

(Start: 48 @4723 has 4 MA's), (76, 4807), (89, 4834), (110, 4921), (114, 4939), (145, 5035), (155, 5056), (163, 5071), (172, 5095),

Gene: xkcd_71 Start: 46166, Stop: 46576, Start Num: 49

Candidate Starts for xkcd_71:

(Start: 49 @46166 has 125 MA's), (98, 46307), (110, 46355), (123, 46403), (161, 46496), (176, 46538),