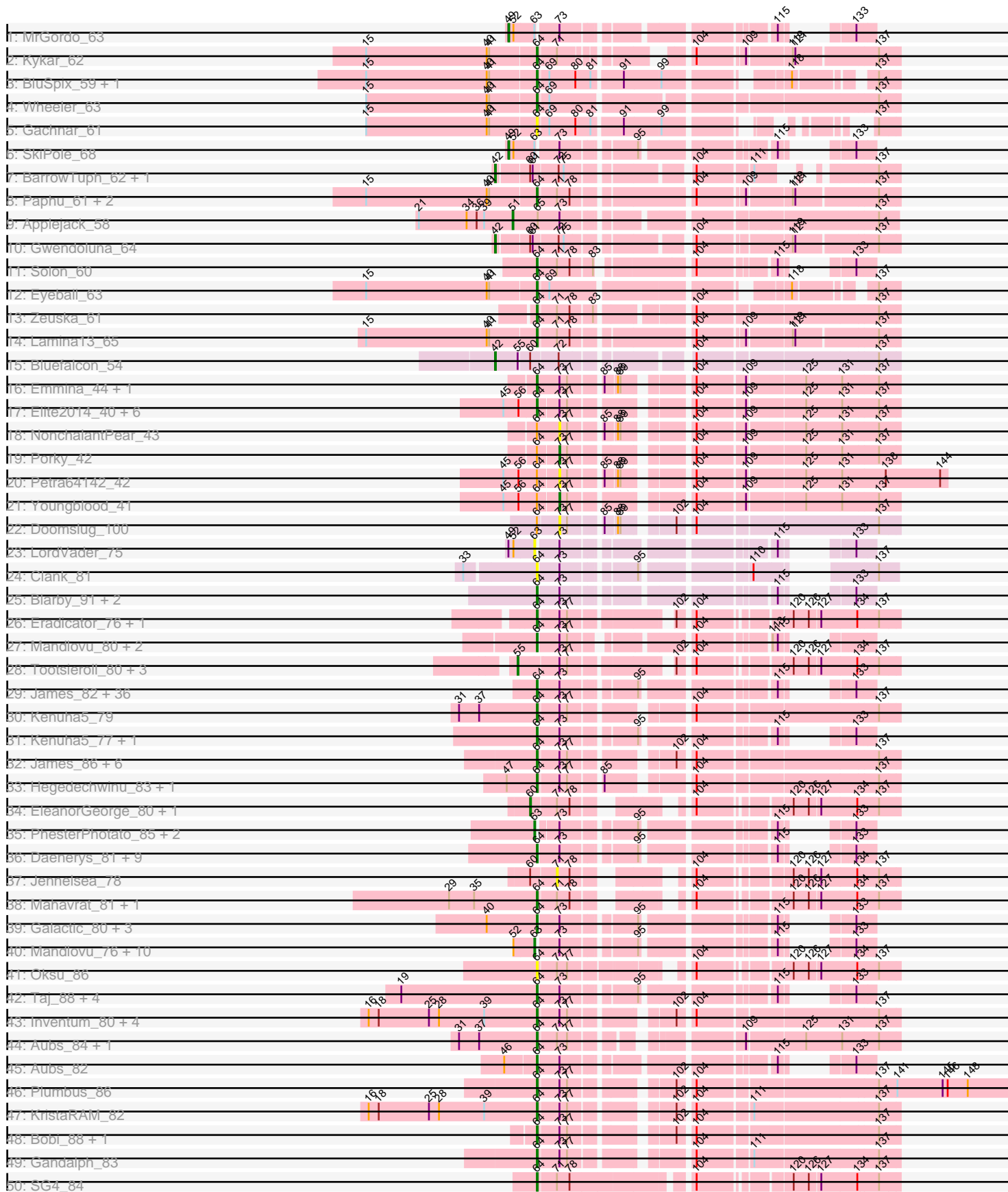
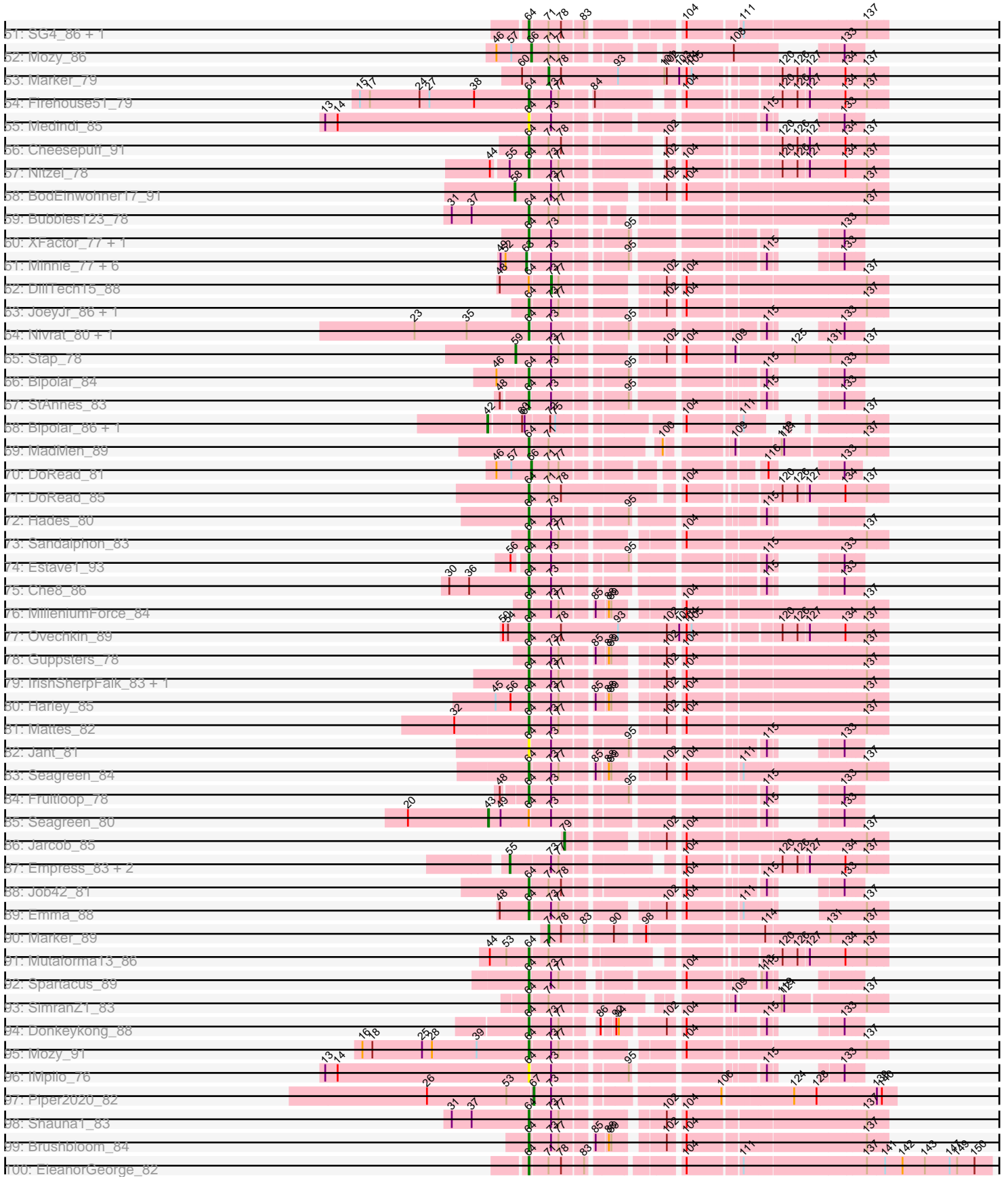


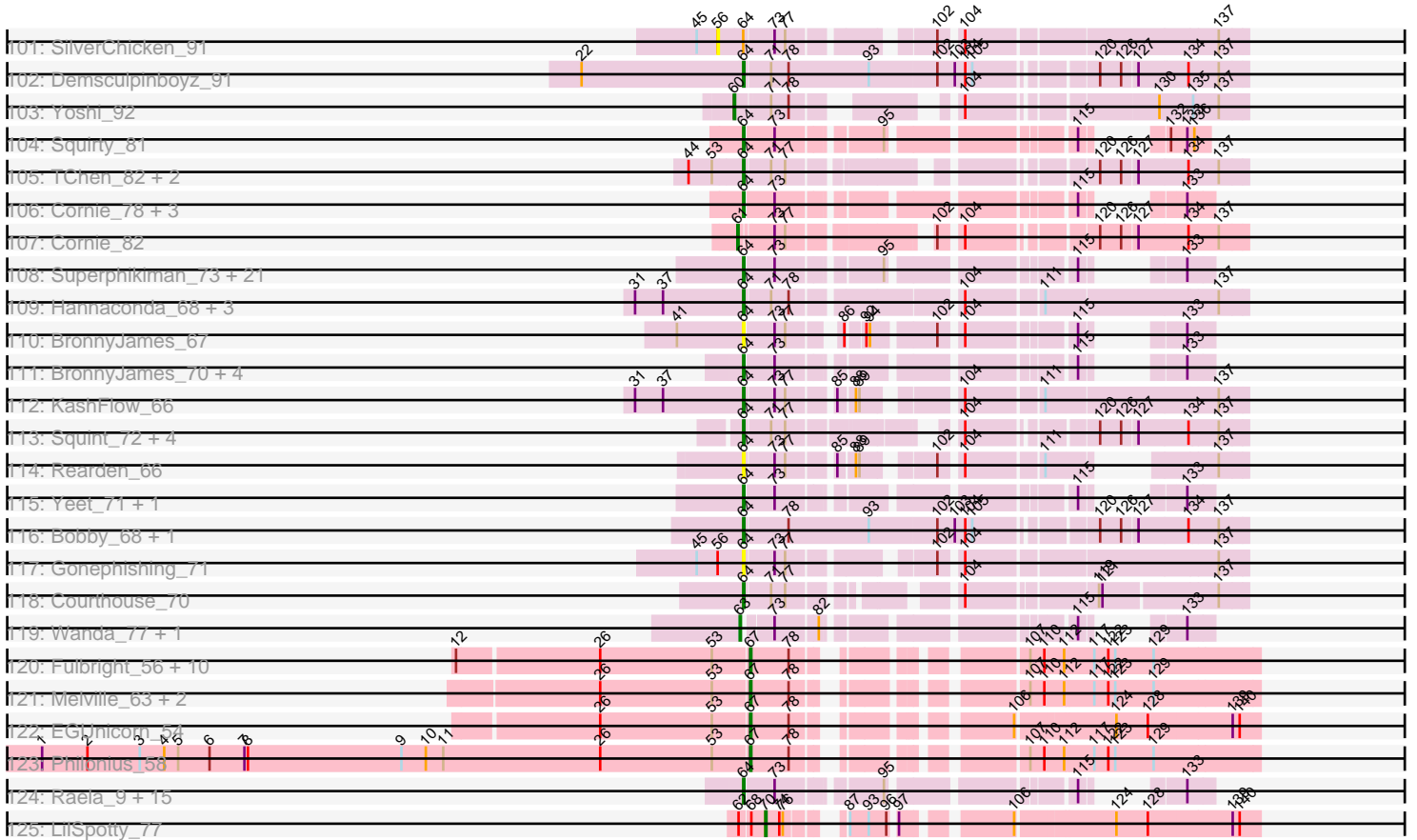
Pham 294374



Pham 294374



Pham 294374



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 294374 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294374 has 305 members, 38 are drafts.

Phages represented in each track:

- Track 1 : MrGordo_63
- Track 2 : Kykar_62
- Track 3 : BluSpix_59, IgnatiusPatJac_61
- Track 4 : Wheeler_63
- Track 5 : Gachnar_61
- Track 6 : SkiPole_68
- Track 7 : BarrowTuph_62, Teodoridan_59
- Track 8 : Paphu_61, Tasp14_65, Parliament_63
- Track 9 : Applejack_58
- Track 10 : Gwendoluna_64
- Track 11 : Solon_60
- Track 12 : Eyeball_63
- Track 13 : Zeuska_61
- Track 14 : Lamina13_65
- Track 15 : Bluefalcon_54
- Track 16 : Emmina_44, Teaspoon_45
- Track 17 : Elite2014_40, Buck_40, ChosenOne_41, Rimmer_40, TeamEdward_41, Lilpickle_40, StormChicken_41
- Track 18 : NonchalantPear_43
- Track 19 : Porky_42
- Track 20 : Petra64142_42
- Track 21 : Youngblood_41
- Track 22 : Doomslug_100
- Track 23 : LordVader_75
- Track 24 : Clank_81
- Track 25 : Blarby_91, Jabbawokkie_91, Zapner_90
- Track 26 : Eradicator_76, Violac_87
- Track 27 : Mandlovu_80, Hlubikazi_80, Strokeseat_80
- Track 28 : Tootsieroll_80, Polka14_89, KingMidas_84, Scottish_83
- Track 29 : James_82, Boomer_85, LunaBlu_84, Ms6_82, DirtMcgirt_80, Flathead_81, SG4_81, Burwell21_76, Mozy_88, Llij_77, Clifton_74, Lorde_81, OlympiaSaint_81, Lucia_81, Enby_82, Eish_84, KristaRAM_79, Rockne_82, Harley_80, UncleRicky_80, Drago_78, Latretium_82, Enzomatic_90, NewHope4_84, Polo2Bam_89, Philus_84, Jarcob_81, SeaLumen_86, DRBy19_85, Violac_83, Ogotogo_87, Rita_88, Marker_87, PMC_78, Avani_90, Phatniss_78, Mova_80
- Track 30 : Kenuha5_79
- Track 31 : Kenuha5_77, Gandalph_79

- Track 32 : James_86, Phanphagia_84, Flathead_85, ShiLan_85, OlympiaSaint_85, Moonbeam_83, Spoonbill_81
- Track 33 : Hegedechwinu_83, JalFarm20_90
- Track 34 : EleanorGeorge_80, Zizzle_86
- Track 35 : PhesterPhotato_85, Omega_79, LittleE_77
- Track 36 : Daenerys_81, Deb65_75, RitaG_82, Nimbo_74, Geralt_75, PHappiness_82, OldBen_79, MilleniumForce_82, Leperchaun_80, JoeyJr_82
- Track 37 : Jennelsea_78
- Track 38 : Mahavrat_81, Grimmer_95
- Track 39 : Galactic_80, MadMen_87, Nibley_65, Kumao_59
- Track 40 : Mandlovu_76, Brookers_76, Cerasum_75, Sarma624_80, Coco12_78, PopTart_73, VRedHorse_86, BigPhil_74, SassyB_73, Hlubikazi_76, Strokeseat_76
- Track 41 : Oksu_86
- Track 42 : Taj_88, Tweety_82, Wee_87, DeadP_82, Donkeykong_86
- Track 43 : Inventum_80, RedBird_83, Ramsey_86, Dorothy_83, Sassafras_83
- Track 44 : Aubs_84, Donkeykong_90
- Track 45 : Aubs_82
- Track 46 : Plumbus_86
- Track 47 : KristaRAM_82
- Track 48 : Bobi_88, DaWorst_83
- Track 49 : Gandalph_83
- Track 50 : SG4_84
- Track 51 : SG4_86, Whatsapiecost_76
- Track 52 : Mozy_86
- Track 53 : Marker_79
- Track 54 : Firehouse51_79
- Track 55 : Medindi_85
- Track 56 : Cheesepuff_91
- Track 57 : Nitzel_78
- Track 58 : BodEinwohner17_91
- Track 59 : Bubbles123_78
- Track 60 : XFactor_77, DLane_83
- Track 61 : Minnie_77, Soul22_82, IrishSherpFalk_81, Bubbles123_76, Pepe_59, Sandalphon_75, WillSterrel_80
- Track 62 : DillTech15_88
- Track 63 : JoeyJr_86, Leperchaun_84
- Track 64 : Nivrat_80, LilMoolah_82
- Track 65 : Stap_78
- Track 66 : Bipolar_84
- Track 67 : StAnnes_83
- Track 68 : Bipolar_86, Doug_82
- Track 69 : MadMen_89
- Track 70 : DoRead_81
- Track 71 : DoRead_85
- Track 72 : Hades_80
- Track 73 : Sandalphon_83
- Track 74 : Estave1_93
- Track 75 : Che8_86
- Track 76 : MilleniumForce_84
- Track 77 : Ovechkin_89
- Track 78 : Guppsters_78
- Track 79 : IrishSherpFalk_83, WillSterrel_82
- Track 80 : Harley_85

- Track 81 : Mattes_82
- Track 82 : Jant_81
- Track 83 : Seagreen_84
- Track 84 : Fruitloop_78
- Track 85 : Seagreen_80
- Track 86 : Jarcob_85
- Track 87 : Empress_83, Doomphist_88, Poenanya_88
- Track 88 : Job42_81
- Track 89 : Emma_88
- Track 90 : Marker_89
- Track 91 : Mutaforma13_86
- Track 92 : Spartacus_89
- Track 93 : SimranZ1_83
- Track 94 : Donkeykong_88
- Track 95 : Mozy_91
- Track 96 : IMpilo_76
- Track 97 : Piper2020_82
- Track 98 : Shauna1_83
- Track 99 : Brushbloom_84
- Track 100 : EleanorGeorge_82
- Track 101 : SilverChicken_91
- Track 102 : Demsculpinboyz_91
- Track 103 : Yoshi_92
- Track 104 : Squirty_81
- Track 105 : TChen_82, ShroomBoi_82, LunaStella_80
- Track 106 : Cornie_78, CaptainTrips_81, MinionDave_77, Rearden_68
- Track 107 : Cornie_82
- Track 108 : Superphikiman_73, Bagrid_74, Kalah2_70, Ejimix_75, DmpstrDiver_75, Squint_76, Beem_75, JuicyJay_74, NihilNomen_76, Phoebus_78, Zelink_73, EricMillard_74, Ariel_75, HokkenD_68, ThreeRngTarjay_73, Dallas_74, Porcelain_75, MiaZeal_76, Odette_74, Halley_77, Schatzie_70, Hughesyang_74
- Track 109 : Hannaconda_68, BronnyJames_65, Shaboozey_64, SuperGrey_84
- Track 110 : BronnyJames_67
- Track 111 : BronnyJames_70, Hannaconda_70, Phalconet_78, Kingsley_85, Shaboozey_69
- Track 112 : KashFlow_66
- Track 113 : Squint_72, Porcelain_71, Ariel_71, MiaZeal_72, Phoebus_74
- Track 114 : Rearden_66
- Track 115 : Yeet_71, Courthouse_72
- Track 116 : Bobby_68, Hidrated_66
- Track 117 : Gonephishing_71
- Track 118 : Courthouse_70
- Track 119 : Wanda_77, Klein_73
- Track 120 : Fulbright_56, Carcharodon_58, Magsby_58, Parmesanjohn_58, Tessdabest_58, Gex_59, Smurph_58, Xerxes_58, Schnauzer_59, Phloss_56, Pipsqueaks_59
- Track 121 : Melville_63, Silvafighter_59, Duplicity_56
- Track 122 : EGUnicorn_54
- Track 123 : Philonius_58
- Track 124 : Raela_9, Blackbeetle_9, Batiatus_81, Poise_9, Okabe_77, DotProduct_76, Tesla_9, Ardmore_67, Hamulus_80, Phanphagia_80, Nekros_72, MilanaBonita_77, Filuzino_82, Manda_43, Akhila_78, Shauna1_81
- Track 125 : LilSpotty_77

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

The start number called the most often in the published annotations is 64, it was called in 197 of the 267 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila_78, Ardmore_67, Ariel_71, Ariel_75, Aubs_82, Aubs_84, Avani_90, Bagrid_74, Batiatus_81, Beem_75, Bipolar_84, Blackbeetle_9, Blarby_91, BluSpix_59, Bobby_68, Bobi_88, Boomer_85, BronnyJames_65, BronnyJames_67, BronnyJames_70, Brushbloom_84, Bubbles123_78, Buck_40, Burwell21_76, CaptainTrips_81, Che8_86, CheesePuff_91, ChosenOne_41, Clank_81, Clifton_74, Cornie_78, Courthouse_70, Courthouse_72, DLane_83, DRBy19_85, DaWorst_83, Daenerys_81, Dallas_74, DeadP_82, Deb65_75, Demsculpinboyz_91, DirtMcGirt_80, DmpstrDiver_75, DoRead_85, Donkeykong_86, Donkeykong_88, Donkeykong_90, Dorothy_83, DotProduct_76, Drago_78, Eish_84, Ejimix_75, EleanorGeorge_82, Elite2014_40, Emma_88, Emmina_44, Enby_82, Enzomatic_90, Eradicator_76, EricMillard_74, Estave1_93, Eyeball_63, Filuzino_82, Firehouse51_79, Flathead_81, Flathead_85, Fruitloop_78, Gachnar_61, Galactic_80, Gandolph_79, Gandolph_83, Geralt_75, Gonephishing_71, Grimmer_95, Guppsters_78, Hades_80, Halley_77, Hamulus_80, Hannaconda_68, Hannaconda_70, Harley_80, Harley_85, Hegedechwinu_83, Hidrated_66, Hlubikazi_80, HokkenD_68, Hughesyang_74, IMpilo_76, IgnatiusPatJac_61, Inventum_80, IrishSherpFalk_83, Jabbawokkie_91, JalFarm20_90, James_82, James_86, Jant_81, Jarcob_81, Job42_81, JoeyJr_82, JoeyJr_86, JuicyJay_74, Kalah2_70, KashFlow_66, Kenuha5_77, Kenuha5_79, Kingsley_85, KristaRAM_79, KristaRAM_82, Kumao_59, Kykar_62, Lamina13_65, Latretium_82, Leperchaun_80, Leperchaun_84, LilMoolah_82, LilPickle_40, Llij_77, Lorde_81, Lucia_81, LunaBlu_84, LunaStella_80, MadMen_87, MadMen_89, Mahavrat_81, Manda_43, Mandlovu_80, Marker_87, Mattes_82, Medindi_85, MiaZeal_72, MiaZeal_76, MilanaBonita_77, MilleniumForce_82, MilleniumForce_84, MinionDave_77, Moonbeam_83, Mova_80, Mozy_88, Mozy_91, Ms6_82, Mutaforma13_86, Nekros_72, NewHope4_84, Nibley_65, NihilNomen_76, Nimbo_74, Nitzel_78, Nivrat_80, Odette_74, Ogopogo_87, Okabe_77, Oksu_86, OldBen_79, OlympiaSaint_81, OlympiaSaint_85, Ovechkin_89, PHappiness_82, PMC_78, Paphu_61, Parliament_63, Phalconet_78, Phanphagia_80, Phanphagia_84, Phatniss_78, Philus_84, Phoebus_74, Phoebus_78, Plumbus_86, Poise_9, Polo2Bam_89, Porcelain_71, Porcelain_75, Raela_9, Ramsey_86, Rearden_66, Rearden_68, RedBird_83, Rimmer_40, RitaG_82, Rita_88, Rockne_82, SG4_81, SG4_84, SG4_86, Sandalphon_83, Sassafras_83, Schatzie_70, SeaLumen_86, Seagreen_84, Shaboozey_64, Shaboozey_69, Shauna1_81, Shauna1_83, ShiLan_85, ShroomBoi_82, SimranZ1_83, Solon_60, Spartacus_89, Spoonbill_81, Squint_72, Squint_76, Squirty_81, StAnnes_83, StormChicken_41, Strokeseat_80, SuperGrey_84, Superphikiman_73, TChen_82, Taj_88, Tasp14_65, TeamEdward_41, Teaspoon_45, Tesla_9, ThreeRngTarjay_73, Tweety_82, UncleRicky_80, Violac_83, Violac_87, Wee_87, Whatsapiecost_76, Wheeler_63, WillSterrel_82, XFactor_77, Yeet_71, Zapner_90, Zelink_73, Zeuska_61,

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

- DillTech15_88, Doomslug_100, NonchalantPear_43, Petra64142_42, Porky_42, Seagreen_80, SilverChicken_91, Youngblood_41,

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

- Applejack_58, BarrowTuph_62, BigPhil_74, Bipolar_86, Bluefalcon_54, BodEinwohner17_91, Brookers_76, Bubbles123_76, Carcharodon_58, Cerasum_75, Coco12_78, Cornie_82, DoRead_81, Doomphist_88, Doug_82, Duplicity_56, EGunicorn_54, EleanorGeorge_80, Empress_83, Fulbright_56, Gex_59, Gwendoluna_64, Hlubikazi_76, IrishSherpFalk_81, Jarcob_85, Jennelsea_78, KingMidas_84, Klein_73, LilSpotty_77, LittleE_77, LordVader_75, Magsby_58, Mandlovu_76, Marker_79, Marker_89, Melville_63, Minnie_77, Mozy_86, MrGordo_63, Omega_79, Parmesanjohn_58, Pepe_59, PhesterPotato_85, Philonius_58, Phloss_56, Piper2020_82, Pipsqueaks_59, Poenanya_88, Polka14_89, PopTart_73, Sandalphon_75, Sarma624_80, SassyB_73, Schnauzer_59, Scottish_83, Silvafighter_59, SkiPole_68, Smurph_58, Soul22_82, Stap_78, Strokeseat_76, Teodoridan_59, Tessdabest_58, Tootsieroll_80, VRedHorse_86, Wanda_77, WillSterrel_80, Xerxes_58, Yoshi_92, Zizzle_86,

Summary by start number:

Start 42:

- Found in 6 of 305 (2.0%) of genes in pham
- Manual Annotations of this start: 5 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BarrowTuph_62 (A1), Bipolar_86 (F1), Bluefalcon_54 (A5), Doug_82 (F1), Gwendoluna_64 (A1), Teodoridan_59 (A1),

Start 43:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Seagreen_80 (F1),

Start 49:

- Found in 11 of 305 (3.6%) of genes in pham
- Manual Annotations of this start: 2 of 267
- Called 18.2% of time when present
- Phage (with cluster) where this start called: MrGordo_63 (A1), SkiPole_68 (A1),

Start 51:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejack_58 (A1),

Start 55:

- Found in 9 of 305 (3.0%) of genes in pham
- Manual Annotations of this start: 7 of 267
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Doomphist_88 (F1), Empress_83 (F1), KingMidas_84 (F1), Poenanya_88 (F1), Polka14_89 (F1), Scottish_83 (F1), Tootsieroll_80 (F1),

Start 56:

- Found in 13 of 305 (4.3%) of genes in pham

- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: SilverChicken_91 (F2),

Start 58:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_91 (F1),

Start 59:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stap_78 (F1),

Start 60:

- Found in 11 of 305 (3.6%) of genes in pham
- Manual Annotations of this start: 3 of 267
- Called 27.3% of time when present
- Phage (with cluster) where this start called: EleanorGeorge_80 (F1), Yoshi_92 (F2), Zizzle_86 (F1),

Start 61:

- Found in 6 of 305 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Cornie_82 (F5),

Start 63:

- Found in 26 of 305 (8.5%) of genes in pham
- Manual Annotations of this start: 23 of 267
- Called 92.3% of time when present
- Phage (with cluster) where this start called: BigPhil_74 (F1), Brookers_76 (F1), Bubbles123_76 (F1), Cerasum_75 (F1), Coco12_78 (F1), Hlubikazi_76 (F1), IrishSherpFalk_81 (F1), Klein_73 (J), LittleE_77 (J), LordVader_75 (F), Mandlovu_76 (F1), Minnie_77 (F1), Omega_79 (J), Pepe_59 (A1), PhesterPotato_85 (F1), PopTart_73 (F1), Sandalphon_75 (F1), Sarma624_80 (F1), SassyB_73 (F1), Soul22_82 (F2), Strokeseat_76 (F1), VRedHorse_86 (F1), Wanda_77 (J), WillSterrel_80 (F1),

Start 64:

- Found in 235 of 305 (77.0%) of genes in pham
- Manual Annotations of this start: 197 of 267
- Called 96.6% of time when present
- Phage (with cluster) where this start called: Akhila_78 (F1), Ardmore_67 (F1), Ariel_71 (J), Ariel_75 (J), Aubs_82 (F1), Aubs_84 (F1), Avani_90 (F2), Bagrid_74 (J), Batiatus_81 (F1), Beem_75 (J), Bipolar_84 (F1), Blackbeetle_9 (S), Blarby_91 (F), BluSpix_59 (A1), Bobby_68 (J), Bobi_88 (F1), Boomer_85 (F1), BronnyJames_65 (J), BronnyJames_67 (J), BronnyJames_70 (J), Brushbloom_84 (F1), Bubbles123_78 (F1), Buck_40 (E), Burwell21_76 (F1), CaptainTrips_81 (F1), Che8_86 (F1), Cheesepuff_91 (F1), ChosenOne_41 (E), Clank_81 (F), Clifton_74 (F1), Cornie_78 (F5), Courthouse_70 (J), Courthouse_72 (J), DLane_83 (F1), DRBy19_85 (F1),

DaWorst_83 (F1), Daenerys_81 (F1), Dallas_74 (J), DeadP_82 (F1), Deb65_75 (F1), Demsculpinboyz_91 (F2), DirtMcgirt_80 (F1), DmpstrDiver_75 (J), DoRead_85 (F1), Donkeykong_86 (F1), Donkeykong_88 (F1), Donkeykong_90 (F1), Dorothy_83 (F1), DotProduct_76 (F1), Drago_78 (F1), Eish_84 (F1), Ejimix_75 (J), EleanorGeorge_82 (F1), Elite2014_40 (E), Emma_88 (F1), Emmina_44 (E), Enby_82 (F1), Enzomatic_90 (F1), Eradicator_76 (F1), EricMillard_74 (J), Estave1_93 (F1), Eyeball_63 (A1), Filuzino_82 (F1), Firehouse51_79 (F1), Flathead_81 (F1), Flathead_85 (F1), Fruitloop_78 (F1), Gachnar_61 (A1), Galactic_80 (F1), Gandalph_79 (F1), Gandalph_83 (F1), Geralt_75 (F1), Gonephishing_71 (J), Grimmer_95 (F1), Guppsters_78 (F1), Hades_80 (F1), Halley_77 (J), Hamulus_80 (F1), Hannaconda_68 (J), Hannaconda_70 (J), Harley_80 (F1), Harley_85 (F1), Hegedechwinu_83 (F1), Hidrated_66 (J), Hlubikazi_80 (F1), HokkenD_68 (J), Hughesyang_74 (J), IMpilo_76 (F1), IgnatiusPatJac_61 (A1), Inventum_80 (F1), IrishSherpFalk_83 (F1), Jabbawokkie_91 (F2), JalFarm20_90 (F1), James_82 (F1), James_86 (F1), Jant_81 (F1), Jarcob_81 (F1), Job42_81 (F1), JoeyJr_82 (F1), JoeyJr_86 (F1), JuicyJay_74 (J), Kalah2_70 (J), KashFlow_66 (J), Kenuha5_77 (F1), Kenuha5_79 (F1), Kingsley_85 (F1), KristaRAM_79 (F1), KristaRAM_82 (F1), Kumao_59 (singleton), Kykar_62 (A1), Lamina13_65 (A1), Latretium_82 (F1), Leperchaun_80 (F1), Leperchaun_84 (F1), LilMoolah_82 (F1), Lilpickle_40 (E), Llij_77 (F1), Lorde_81 (F1), Lucia_81 (F1), LunaBlu_84 (F1), LunaStella_80 (F4), MadMen_87 (F1), MadMen_89 (F1), Mahavrat_81 (F1), Manda_43 (E), Mandlovu_80 (F1), Marker_87 (F1), Mattes_82 (F1), Medindi_85 (F1), MiaZeal_72 (J), MiaZeal_76 (J), MilanaBonita_77 (F1), MilleniumForce_82 (F1), MilleniumForce_84 (F1), MinionDave_77 (F1), Moonbeam_83 (F1), Mova_80 (F1), Mozy_88 (F1), Mozy_91 (F1), Ms6_82 (F1), Mutaforma13_86 (F1), Nekros_72 (J), NewHope4_84 (F1), Nibley_65 (J), NihilNomen_76 (J), Nimbo_74 (F1), Nitzel_78 (F1), Nivrat_80 (F1), Odette_74 (J), Ogopogo_87 (F1), Okabe_77 (F8), Oksu_86 (F1), OldBen_79 (F1), OlympiaSaint_81 (F1), OlympiaSaint_85 (F1), Ovechkin_89 (F1), PHappiness_82 (F1), PMC_78 (F1), Paphu_61 (A1), Parliament_63 (A1), Phalconet_78 (F1), Phanphagia_80 (F1), Phanphagia_84 (F1), Phatniss_78 (F1), Philus_84 (F1), Phoebus_74 (J), Phoebus_78 (J), Plumbus_86 (F1), Poise_9 (S), Polo2Bam_89 (F1), Porcelain_71 (J), Porcelain_75 (J), Raela_9 (S), Ramsey_86 (F1), Rearden_66 (J), Rearden_68 (J), RedBird_83 (F1), Rimmer_40 (E), RitaG_82 (F1), Rita_88 (F1), Rockne_82 (F1), SG4_81 (F1), SG4_84 (F1), SG4_86 (F1), Sandalphon_83 (F1), Sassafras_83 (F1), Schatzie_70 (J), SeaLumen_86 (F1), Seagreen_84 (F1), Shaboozey_64 (J), Shaboozey_69 (J), Shauna1_81 (F1), Shauna1_83 (F1), ShiLan_85 (F1), ShroomBoi_82 (F1), SimranZ1_83 (F1), Solon_60 (A1), Spartacus_89 (F1), Spoonbill_81 (F1), Squint_72 (J), Squint_76 (J), Squirty_81 (F3), StAnnes_83 (F1), StormChicken_41 (E), Strokeseat_80 (F1), SuperGrey_84 (F1), Superphikiman_73 (J), TChen_82 (F4), Taj_88 (F1), Tasp14_65 (A1), TeamEdward_41 (E), Teaspoon_45 (E), Tesla_9 (S), ThreeRngTarjay_73 (J), Tweety_82 (F1), UncleRicky_80 (F1), Violac_83 (F1), Violac_87 (F1), Wee_87 (F1), Whatsapiecost_76 (F1), Wheeler_63 (A1), WillSterrel_82 (F1), XFactor_77 (F1), Yeet_71 (J), Zapner_90 (F2), Zelink_73 (J), Zeuska_61 (A1),

Start 66:

- Found in 2 of 305 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DoRead_81 (F1), Mozy_86 (F1),

Start 67:

- Found in 17 of 305 (5.6%) of genes in pham

- Manual Annotations of this start: 16 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Carcharodon_58 (N), Duplicity_56 (N), EGUnicorn_54 (N), Fulbright_56 (N), Gex_59 (N), Magsby_58 (N), Melville_63 (N), Parmesanjohn_58 (N), Philonius_58 (N), Phloss_56 (N), Piper2020_82 (F1), Pipsqueaks_59 (N), Schnauzer_59 (N), Silvafighter_59 (N), Smurph_58 (N), Tessdabest_58 (N), Xerxes_58 (N),

Start 70:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty_77 (singleton),

Start 71:

- Found in 45 of 305 (14.8%) of genes in pham
- Manual Annotations of this start: 2 of 267
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Jennelsea_78 (F1), Marker_79 (F1), Marker_89 (F1),

Start 73:

- Found in 228 of 305 (74.8%) of genes in pham
- Manual Annotations of this start: 3 of 267
- Called 2.6% of time when present
- Phage (with cluster) where this start called: DillTech15_88 (F1), Doomslug_100 (F), NonchalantPear_43 (E), Petra64142_42 (E), Porky_42 (E), Youngblood_41 (E),

Start 79:

- Found in 1 of 305 (0.3%) of genes in pham
- Manual Annotations of this start: 1 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jacob_85 (F1),

Summary by clusters:

There are 14 clusters represented in this pham: F1, F2, F3, E, F5, F, F8, J, singleton, N, A1, S, A5, F4,

Info for manual annotations of cluster A1:

- Start number 42 was manually annotated 2 times for cluster A1.
- Start number 49 was manually annotated 2 times for cluster A1.
- Start number 51 was manually annotated 1 time for cluster A1.
- Start number 63 was manually annotated 1 time for cluster A1.
- Start number 64 was manually annotated 11 times for cluster A1.

Info for manual annotations of cluster A5:

- Start number 42 was manually annotated 1 time for cluster A5.

Info for manual annotations of cluster E:

- Start number 64 was manually annotated 8 times for cluster E.
- Start number 73 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 42 was manually annotated 2 times for cluster F1.
- Start number 43 was manually annotated 1 time for cluster F1.
- Start number 55 was manually annotated 7 times for cluster F1.
- Start number 58 was manually annotated 1 time for cluster F1.
- Start number 59 was manually annotated 1 time for cluster F1.
- Start number 60 was manually annotated 2 times for cluster F1.
- Start number 63 was manually annotated 17 times for cluster F1.
- Start number 64 was manually annotated 133 times for cluster F1.
- Start number 66 was manually annotated 2 times for cluster F1.
- Start number 67 was manually annotated 1 time for cluster F1.
- Start number 71 was manually annotated 2 times for cluster F1.
- Start number 73 was manually annotated 1 time for cluster F1.
- Start number 79 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 60 was manually annotated 1 time for cluster F2.
- Start number 63 was manually annotated 1 time for cluster F2.
- Start number 64 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 64 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 64 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 61 was manually annotated 1 time for cluster F5.
- Start number 64 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 63 was manually annotated 4 times for cluster J.
- Start number 64 was manually annotated 32 times for cluster J.

Info for manual annotations of cluster N:

- Start number 67 was manually annotated 15 times for cluster N.

Info for manual annotations of cluster S:

- Start number 64 was manually annotated 4 times for cluster S.

Gene Information:

Gene: Akhila_78 Start: 48008, Stop: 48292, Start Num: 64

Candidate Starts for Akhila_78:

(Start: 64 @48008 has 197 MA's), (Start: 73 @48032 has 3 MA's), (95, 48107), (115, 48236), (133, 48272),

Gene: Applejack_58 Start: 39182, Stop: 38778, Start Num: 51

Candidate Starts for Applejack_58:

(21, 39293), (34, 39236), (36, 39224), (39, 39215), (Start: 51 @39182 has 1 MA's), (65, 39152), (Start: 73 @39128 has 3 MA's), (137, 38801),

Gene: Ardmore_67 Start: 43684, Stop: 43968, Start Num: 64

Candidate Starts for Ardmore_67:

(Start: 64 @43684 has 197 MA's), (Start: 73 @43708 has 3 MA's), (95, 43783), (115, 43912), (133, 43948),

Gene: Ariel_75 Start: 47349, Stop: 47065, Start Num: 64

Candidate Starts for Ariel_75:

(Start: 64 @47349 has 197 MA's), (Start: 73 @47325 has 3 MA's), (95, 47250), (115, 47121), (133, 47085),

Gene: Ariel_71 Start: 45936, Stop: 45583, Start Num: 64

Candidate Starts for Ariel_71:

(Start: 64 @45936 has 197 MA's), (Start: 71 @45915 has 2 MA's), (77, 45903), (104, 45795), (120, 45702), (126, 45684), (127, 45672), (134, 45630), (137, 45606),

Gene: Aubs_84 Start: 50517, Stop: 50876, Start Num: 64

Candidate Starts for Aubs_84:

(31, 50424), (37, 50448), (Start: 64 @50517 has 197 MA's), (Start: 71 @50538 has 2 MA's), (77, 50550), (109, 50706), (125, 50769), (131, 50811), (137, 50853),

Gene: Aubs_82 Start: 49731, Stop: 50015, Start Num: 64

Candidate Starts for Aubs_82:

(46, 49695), (Start: 64 @49731 has 197 MA's), (Start: 73 @49755 has 3 MA's), (115, 49959), (133, 49995),

Gene: Avani_90 Start: 47333, Stop: 47617, Start Num: 64

Candidate Starts for Avani_90:

(Start: 64 @47333 has 197 MA's), (Start: 73 @47357 has 3 MA's), (95, 47432), (115, 47561), (133, 47597),

Gene: Bagrid_74 Start: 50766, Stop: 50482, Start Num: 64

Candidate Starts for Bagrid_74:

(Start: 64 @50766 has 197 MA's), (Start: 73 @50742 has 3 MA's), (95, 50667), (115, 50538), (133, 50502),

Gene: BarrowTuph_62 Start: 40812, Stop: 40450, Start Num: 42

Candidate Starts for BarrowTuph_62:

(Start: 42 @40812 has 5 MA's), (Start: 60 @40779 has 3 MA's), (Start: 61 @40776 has 1 MA's), (72, 40749), (75, 40743), (104, 40623), (111, 40563), (137, 40473),

Gene: Batiatus_81 Start: 49093, Stop: 49377, Start Num: 64

Candidate Starts for Batiatus_81:

(Start: 64 @49093 has 197 MA's), (Start: 73 @49117 has 3 MA's), (95, 49192), (115, 49321), (133, 49357),

Gene: Beem_75 Start: 51626, Stop: 51342, Start Num: 64

Candidate Starts for Beem_75:

(Start: 64 @51626 has 197 MA's), (Start: 73 @51602 has 3 MA's), (95, 51527), (115, 51398), (133, 51362),

Gene: BigPhil_74 Start: 44927, Stop: 45211, Start Num: 63

Candidate Starts for BigPhil_74:

(52, 44903), (Start: 63 @44927 has 23 MA's), (Start: 73 @44951 has 3 MA's), (95, 45026), (115, 45155), (133, 45191),

Gene: Bipolar_84 Start: 50621, Stop: 50905, Start Num: 64

Candidate Starts for Bipolar_84:

(46, 50585), (Start: 64 @50621 has 197 MA's), (Start: 73 @50645 has 3 MA's), (95, 50720), (115, 50849), (133, 50885),

Gene: Bipolar_86 Start: 51239, Stop: 51601, Start Num: 42

Candidate Starts for Bipolar_86:

(Start: 42 @51239 has 5 MA's), (Start: 60 @51272 has 3 MA's), (Start: 61 @51275 has 1 MA's), (72, 51302), (75, 51308), (104, 51428), (111, 51488), (137, 51578),

Gene: Blackbeetle_9 Start: 2787, Stop: 3071, Start Num: 64

Candidate Starts for Blackbeetle_9:

(Start: 64 @2787 has 197 MA's), (Start: 73 @2811 has 3 MA's), (95, 2886), (115, 3015), (133, 3051),

Gene: Blarby_91 Start: 47885, Stop: 48169, Start Num: 64

Candidate Starts for Blarby_91:

(Start: 64 @47885 has 197 MA's), (Start: 73 @47909 has 3 MA's), (115, 48113), (133, 48149),

Gene: BluSpix_59 Start: 36720, Stop: 36373, Start Num: 64

Candidate Starts for BluSpix_59:

(15, 36921), (40, 36777), (41, 36774), (Start: 64 @36720 has 197 MA's), (69, 36708), (80, 36678), (81, 36660), (91, 36627), (99, 36585), (118, 36471), (137, 36396),

Gene: Bluefalcon_54 Start: 39442, Stop: 39023, Start Num: 42

Candidate Starts for Bluefalcon_54:

(Start: 42 @39442 has 5 MA's), (Start: 55 @39415 has 7 MA's), (Start: 60 @39403 has 3 MA's), (72, 39373), (104, 39247), (137, 39046),

Gene: Bobby_68 Start: 49135, Stop: 48737, Start Num: 64

Candidate Starts for Bobby_68:

(Start: 64 @49135 has 197 MA's), (78, 49099), (93, 49030), (102, 48973), (103, 48958), (104, 48949), (105, 48943), (120, 48856), (126, 48838), (127, 48826), (134, 48784), (137, 48760),

Gene: Bobi_88 Start: 51408, Stop: 51779, Start Num: 64

Candidate Starts for Bobi_88:

(Start: 64 @51408 has 197 MA's), (Start: 73 @51432 has 3 MA's), (77, 51441), (102, 51540), (104, 51555), (137, 51756),

Gene: BodEinwohner17_91 Start: 52011, Stop: 52400, Start Num: 58

Candidate Starts for BodEinwohner17_91:

(Start: 58 @52011 has 1 MA's), (Start: 73 @52053 has 3 MA's), (77, 52062), (102, 52161), (104, 52176), (137, 52377),

Gene: Boomer_85 Start: 49678, Stop: 49962, Start Num: 64

Candidate Starts for Boomer_85:

(Start: 64 @49678 has 197 MA's), (Start: 73 @49702 has 3 MA's), (95, 49777), (115, 49906), (133, 49942),

Gene: BronnyJames_65 Start: 44145, Stop: 43759, Start Num: 64
Candidate Starts for BronnyJames_65:
(31, 44238), (37, 44214), (Start: 64 @44145 has 197 MA's), (Start: 71 @44124 has 2 MA's), (78, 44109), (104, 43983), (111, 43923), (137, 43782),

Gene: BronnyJames_67 Start: 44925, Stop: 44647, Start Num: 64
Candidate Starts for BronnyJames_67:
(41, 44982), (Start: 64 @44925 has 197 MA's), (Start: 73 @44901 has 3 MA's), (77, 44892), (86, 44859), (92, 44847), (94, 44844), (102, 44796), (104, 44781), (115, 44703), (133, 44667),

Gene: BronnyJames_70 Start: 45965, Stop: 45681, Start Num: 64
Candidate Starts for BronnyJames_70:
(Start: 64 @45965 has 197 MA's), (Start: 73 @45941 has 3 MA's), (115, 45737), (133, 45701),

Gene: Brookers_76 Start: 47878, Stop: 48162, Start Num: 63
Candidate Starts for Brookers_76:
(52, 47854), (Start: 63 @47878 has 23 MA's), (Start: 73 @47902 has 3 MA's), (95, 47977), (115, 48106), (133, 48142),

Gene: Brushbloom_84 Start: 50508, Stop: 50876, Start Num: 64
Candidate Starts for Brushbloom_84:
(Start: 64 @50508 has 197 MA's), (Start: 73 @50532 has 3 MA's), (77, 50541), (85, 50574), (88, 50586), (89, 50589), (102, 50637), (104, 50652), (137, 50853),

Gene: Bubbles123_78 Start: 49394, Stop: 49753, Start Num: 64
Candidate Starts for Bubbles123_78:
(31, 49301), (37, 49325), (Start: 64 @49394 has 197 MA's), (Start: 71 @49415 has 2 MA's), (77, 49427), (137, 49730),

Gene: Bubbles123_76 Start: 48608, Stop: 48892, Start Num: 63
Candidate Starts for Bubbles123_76:
(Start: 49 @48578 has 2 MA's), (52, 48584), (Start: 63 @48608 has 23 MA's), (Start: 73 @48632 has 3 MA's), (95, 48707), (115, 48836), (133, 48872),

Gene: Buck_40 Start: 34705, Stop: 34334, Start Num: 64
Candidate Starts for Buck_40:
(45, 34744), (56, 34726), (Start: 64 @34705 has 197 MA's), (Start: 73 @34681 has 3 MA's), (77, 34672), (104, 34558), (109, 34504), (125, 34441), (131, 34399), (137, 34357),

Gene: Burwell21_76 Start: 48586, Stop: 48870, Start Num: 64
Candidate Starts for Burwell21_76:
(Start: 64 @48586 has 197 MA's), (Start: 73 @48610 has 3 MA's), (95, 48685), (115, 48814), (133, 48850),

Gene: CaptainTrips_81 Start: 48491, Stop: 48775, Start Num: 64
Candidate Starts for CaptainTrips_81:
(Start: 64 @48491 has 197 MA's), (Start: 73 @48515 has 3 MA's), (115, 48719), (133, 48755),

Gene: Carcharodon_58 Start: 37518, Stop: 37880, Start Num: 67
Candidate Starts for Carcharodon_58:
(12, 37275), (26, 37392), (53, 37488), (Start: 67 @37518 has 16 MA's), (78, 37551), (107, 37692), (110, 37704), (112, 37719), (117, 37743), (122, 37755), (123, 37761), (129, 37794),

Gene: Cerasum_75 Start: 44945, Stop: 45229, Start Num: 63

Candidate Starts for Cerasum_75:

(52, 44921), (Start: 63 @44945 has 23 MA's), (Start: 73 @44969 has 3 MA's), (95, 45044), (115, 45173), (133, 45209),

Gene: Che8_86 Start: 49874, Stop: 50158, Start Num: 64

Candidate Starts for Che8_86:

(30, 49778), (36, 49802), (Start: 64 @49874 has 197 MA's), (Start: 73 @49898 has 3 MA's), (115, 50102), (133, 50138),

Gene: Cheesepuff_91 Start: 49733, Stop: 50089, Start Num: 64

Candidate Starts for Cheesepuff_91:

(Start: 64 @49733 has 197 MA's), (Start: 71 @49754 has 2 MA's), (78, 49769), (102, 49862), (120, 49970), (126, 49988), (127, 50000), (134, 50042), (137, 50066),

Gene: ChosenOne_41 Start: 33974, Stop: 33603, Start Num: 64

Candidate Starts for ChosenOne_41:

(45, 34013), (56, 33995), (Start: 64 @33974 has 197 MA's), (Start: 73 @33950 has 3 MA's), (77, 33941), (104, 33827), (109, 33773), (125, 33710), (131, 33668), (137, 33626),

Gene: Clank_81 Start: 46862, Stop: 47185, Start Num: 64

Candidate Starts for Clank_81:

(33, 46781), (Start: 64 @46862 has 197 MA's), (Start: 73 @46886 has 3 MA's), (95, 46961), (110, 47072), (137, 47162),

Gene: Clifton_74 Start: 47402, Stop: 47686, Start Num: 64

Candidate Starts for Clifton_74:

(Start: 64 @47402 has 197 MA's), (Start: 73 @47426 has 3 MA's), (95, 47501), (115, 47630), (133, 47666),

Gene: Coco12_78 Start: 49002, Stop: 49286, Start Num: 63

Candidate Starts for Coco12_78:

(52, 48978), (Start: 63 @49002 has 23 MA's), (Start: 73 @49026 has 3 MA's), (95, 49101), (115, 49230), (133, 49266),

Gene: Cornie_78 Start: 47540, Stop: 47824, Start Num: 64

Candidate Starts for Cornie_78:

(Start: 64 @47540 has 197 MA's), (Start: 73 @47564 has 3 MA's), (115, 47768), (133, 47804),

Gene: Cornie_82 Start: 48423, Stop: 48782, Start Num: 61

Candidate Starts for Cornie_82:

(Start: 61 @48423 has 1 MA's), (Start: 73 @48447 has 3 MA's), (77, 48456), (102, 48555), (104, 48570), (120, 48663), (126, 48681), (127, 48693), (134, 48735), (137, 48759),

Gene: Courthouse_72 Start: 46987, Stop: 46703, Start Num: 64

Candidate Starts for Courthouse_72:

(Start: 64 @46987 has 197 MA's), (Start: 73 @46963 has 3 MA's), (115, 46759), (133, 46723),

Gene: Courthouse_70 Start: 46345, Stop: 45986, Start Num: 64

Candidate Starts for Courthouse_70:

(Start: 64 @46345 has 197 MA's), (Start: 71 @46324 has 2 MA's), (77, 46312), (104, 46204), (119, 46105), (121, 46102), (137, 46009),

Gene: DLane_83 Start: 50315, Stop: 50599, Start Num: 64
Candidate Starts for DLane_83:
(Start: 64 @50315 has 197 MA's), (Start: 73 @50339 has 3 MA's), (95, 50414), (133, 50579),

Gene: DRBy19_85 Start: 51131, Stop: 51415, Start Num: 64
Candidate Starts for DRBy19_85:
(Start: 64 @51131 has 197 MA's), (Start: 73 @51155 has 3 MA's), (95, 51230), (115, 51359), (133, 51395),

Gene: DaWorst_83 Start: 48921, Stop: 49292, Start Num: 64
Candidate Starts for DaWorst_83:
(Start: 64 @48921 has 197 MA's), (Start: 73 @48945 has 3 MA's), (77, 48954), (102, 49053), (104, 49068), (137, 49269),

Gene: Daenerys_81 Start: 50626, Stop: 50910, Start Num: 64
Candidate Starts for Daenerys_81:
(Start: 64 @50626 has 197 MA's), (Start: 73 @50650 has 3 MA's), (95, 50725), (115, 50854), (133, 50890),

Gene: Dallas_74 Start: 50547, Stop: 50263, Start Num: 64
Candidate Starts for Dallas_74:
(Start: 64 @50547 has 197 MA's), (Start: 73 @50523 has 3 MA's), (95, 50448), (115, 50319), (133, 50283),

Gene: DeadP_82 Start: 48110, Stop: 48394, Start Num: 64
Candidate Starts for DeadP_82:
(19, 47948), (Start: 64 @48110 has 197 MA's), (Start: 73 @48134 has 3 MA's), (95, 48209), (115, 48338), (133, 48374),

Gene: Deb65_75 Start: 48348, Stop: 48632, Start Num: 64
Candidate Starts for Deb65_75:
(Start: 64 @48348 has 197 MA's), (Start: 73 @48372 has 3 MA's), (95, 48447), (115, 48576), (133, 48612),

Gene: Demsculpinboyz_91 Start: 47365, Stop: 47763, Start Num: 64
Candidate Starts for Demsculpinboyz_91:
(22, 47227), (Start: 64 @47365 has 197 MA's), (Start: 71 @47386 has 2 MA's), (78, 47401), (93, 47470), (102, 47527), (103, 47542), (104, 47551), (105, 47557), (120, 47644), (126, 47662), (127, 47674), (134, 47716), (137, 47740),

Gene: DillTech15_88 Start: 49164, Stop: 49511, Start Num: 73
Candidate Starts for DillTech15_88:
(48, 49107), (Start: 64 @49140 has 197 MA's), (Start: 73 @49164 has 3 MA's), (77, 49173), (102, 49272), (104, 49287), (137, 49488),

Gene: DirtMcgirt_80 Start: 46288, Stop: 46572, Start Num: 64
Candidate Starts for DirtMcgirt_80:
(Start: 64 @46288 has 197 MA's), (Start: 73 @46312 has 3 MA's), (95, 46387), (115, 46516), (133, 46552),

Gene: DmpstrDiver_75 Start: 50974, Stop: 50690, Start Num: 64
Candidate Starts for DmpstrDiver_75:

(Start: 64 @50974 has 197 MA's), (Start: 73 @50950 has 3 MA's), (95, 50875), (115, 50746), (133, 50710),

Gene: DoRead_81 Start: 46952, Stop: 47230, Start Num: 66

Candidate Starts for DoRead_81:

(46, 46910), (57, 46928), (Start: 66 @46952 has 2 MA's), (Start: 71 @46973 has 2 MA's), (77, 46985), (116, 47174), (133, 47210),

Gene: DoRead_85 Start: 48009, Stop: 48383, Start Num: 64

Candidate Starts for DoRead_85:

(Start: 64 @48009 has 197 MA's), (Start: 71 @48030 has 2 MA's), (78, 48045), (104, 48171), (120, 48264), (126, 48282), (127, 48294), (134, 48336), (137, 48360),

Gene: Donkeykong_90 Start: 52122, Stop: 52481, Start Num: 64

Candidate Starts for Donkeykong_90:

(31, 52029), (37, 52053), (Start: 64 @52122 has 197 MA's), (Start: 71 @52143 has 2 MA's), (77, 52155), (109, 52311), (125, 52374), (131, 52416), (137, 52458),

Gene: Donkeykong_86 Start: 50724, Stop: 51008, Start Num: 64

Candidate Starts for Donkeykong_86:

(19, 50562), (Start: 64 @50724 has 197 MA's), (Start: 73 @50748 has 3 MA's), (95, 50823), (115, 50952), (133, 50988),

Gene: Donkeykong_88 Start: 51342, Stop: 51620, Start Num: 64

Candidate Starts for Donkeykong_88:

(Start: 64 @51342 has 197 MA's), (Start: 73 @51366 has 3 MA's), (77, 51375), (86, 51408), (92, 51420), (94, 51423), (102, 51471), (104, 51486), (115, 51564), (133, 51600),

Gene: Doomphist_88 Start: 50710, Stop: 51087, Start Num: 55

Candidate Starts for Doomphist_88:

(Start: 55 @50710 has 7 MA's), (Start: 73 @50752 has 3 MA's), (77, 50761), (104, 50875), (120, 50968), (126, 50986), (127, 50998), (134, 51040), (137, 51064),

Gene: Doomslug_100 Start: 52230, Stop: 52574, Start Num: 73

Candidate Starts for Doomslug_100:

(Start: 64 @52206 has 197 MA's), (Start: 73 @52230 has 3 MA's), (77, 52239), (85, 52272), (88, 52284), (89, 52287), (102, 52335), (104, 52350), (137, 52551),

Gene: Dorothy_83 Start: 51040, Stop: 51411, Start Num: 64

Candidate Starts for Dorothy_83:

(16, 50839), (18, 50851), (25, 50911), (28, 50923), (39, 50977), (Start: 64 @51040 has 197 MA's), (Start: 73 @51064 has 3 MA's), (77, 51073), (102, 51172), (104, 51187), (137, 51388),

Gene: DotProduct_76 Start: 47105, Stop: 47389, Start Num: 64

Candidate Starts for DotProduct_76:

(Start: 64 @47105 has 197 MA's), (Start: 73 @47129 has 3 MA's), (95, 47204), (115, 47333), (133, 47369),

Gene: Doug_82 Start: 50547, Stop: 50909, Start Num: 42

Candidate Starts for Doug_82:

(Start: 42 @50547 has 5 MA's), (Start: 60 @50580 has 3 MA's), (Start: 61 @50583 has 1 MA's), (72, 50610), (75, 50616), (104, 50736), (111, 50796), (137, 50886),

Gene: Drago_78 Start: 46291, Stop: 46575, Start Num: 64

Candidate Starts for Drago_78:

(Start: 64 @46291 has 197 MA's), (Start: 73 @46315 has 3 MA's), (95, 46390), (115, 46519), (133, 46555),

Gene: Duplicity_56 Start: 36775, Stop: 37137, Start Num: 67

Candidate Starts for Duplicity_56:

(26, 36649), (53, 36745), (Start: 67 @36775 has 16 MA's), (78, 36808), (107, 36949), (110, 36961), (112, 36976), (117, 37000), (122, 37012), (123, 37018), (129, 37051),

Gene: EGUunicorn_54 Start: 36355, Stop: 36714, Start Num: 67

Candidate Starts for EGUunicorn_54:

(26, 36229), (53, 36325), (Start: 67 @36355 has 16 MA's), (78, 36388), (106, 36520), (124, 36595), (128, 36622), (139, 36691), (140, 36697),

Gene: Eish_84 Start: 49994, Stop: 50278, Start Num: 64

Candidate Starts for Eish_84:

(Start: 64 @49994 has 197 MA's), (Start: 73 @50018 has 3 MA's), (95, 50093), (115, 50222), (133, 50258),

Gene: Ejimix_75 Start: 52415, Stop: 52131, Start Num: 64

Candidate Starts for Ejimix_75:

(Start: 64 @52415 has 197 MA's), (Start: 73 @52391 has 3 MA's), (95, 52316), (115, 52187), (133, 52151),

Gene: EleanorGeorge_80 Start: 48792, Stop: 49136, Start Num: 60

Candidate Starts for EleanorGeorge_80:

(Start: 60 @48792 has 3 MA's), (Start: 71 @48819 has 2 MA's), (78, 48834), (104, 48924), (120, 49017), (126, 49035), (127, 49047), (134, 49089), (137, 49113),

Gene: EleanorGeorge_82 Start: 49312, Stop: 49815, Start Num: 64

Candidate Starts for EleanorGeorge_82:

(Start: 64 @49312 has 197 MA's), (Start: 71 @49333 has 2 MA's), (78, 49348), (83, 49372), (104, 49465), (111, 49525), (137, 49666), (141, 49687), (142, 49708), (143, 49735), (147, 49765), (149, 49774), (150, 49795),

Gene: Elite2014_40 Start: 33973, Stop: 33602, Start Num: 64

Candidate Starts for Elite2014_40:

(45, 34012), (56, 33994), (Start: 64 @33973 has 197 MA's), (Start: 73 @33949 has 3 MA's), (77, 33940), (104, 33826), (109, 33772), (125, 33709), (131, 33667), (137, 33625),

Gene: Emma_88 Start: 49160, Stop: 49480, Start Num: 64

Candidate Starts for Emma_88:

(48, 49127), (Start: 64 @49160 has 197 MA's), (Start: 73 @49184 has 3 MA's), (77, 49193), (102, 49292), (104, 49307), (111, 49367), (137, 49457),

Gene: Emmina_44 Start: 34912, Stop: 34541, Start Num: 64

Candidate Starts for Emmina_44:

(Start: 64 @34912 has 197 MA's), (Start: 73 @34885 has 3 MA's), (77, 34876), (85, 34843), (88, 34831), (89, 34828), (104, 34765), (109, 34711), (125, 34648), (131, 34606), (137, 34564),

Gene: Empress_83 Start: 49521, Stop: 49898, Start Num: 55

Candidate Starts for Empress_83:

(Start: 55 @49521 has 7 MA's), (Start: 73 @49563 has 3 MA's), (77, 49572), (104, 49686), (120, 49779), (126, 49797), (127, 49809), (134, 49851), (137, 49875),

Gene: Enby_82 Start: 46567, Stop: 46851, Start Num: 64

Candidate Starts for Enby_82:

(Start: 64 @46567 has 197 MA's), (Start: 73 @46591 has 3 MA's), (95, 46666), (115, 46795), (133, 46831),

Gene: Enzomatic_90 Start: 47423, Stop: 47707, Start Num: 64

Candidate Starts for Enzomatic_90:

(Start: 64 @47423 has 197 MA's), (Start: 73 @47447 has 3 MA's), (95, 47522), (115, 47651), (133, 47687),

Gene: Eradicator_76 Start: 47953, Stop: 48312, Start Num: 64

Candidate Starts for Eradicator_76:

(Start: 64 @47953 has 197 MA's), (Start: 73 @47977 has 3 MA's), (77, 47986), (102, 48085), (104, 48100), (120, 48193), (126, 48211), (127, 48223), (134, 48265), (137, 48289),

Gene: EricMillard_74 Start: 51619, Stop: 51335, Start Num: 64

Candidate Starts for EricMillard_74:

(Start: 64 @51619 has 197 MA's), (Start: 73 @51595 has 3 MA's), (95, 51520), (115, 51391), (133, 51355),

Gene: Estave1_93 Start: 53691, Stop: 53975, Start Num: 64

Candidate Starts for Estave1_93:

(56, 53676), (Start: 64 @53691 has 197 MA's), (Start: 73 @53715 has 3 MA's), (95, 53790), (115, 53919), (133, 53955),

Gene: Eyeball_63 Start: 41903, Stop: 41556, Start Num: 64

Candidate Starts for Eyeball_63:

(15, 42104), (40, 41960), (41, 41957), (Start: 64 @41903 has 197 MA's), (69, 41891), (118, 41654), (137, 41579),

Gene: Filuzino_82 Start: 50908, Stop: 51192, Start Num: 64

Candidate Starts for Filuzino_82:

(Start: 64 @50908 has 197 MA's), (Start: 73 @50932 has 3 MA's), (95, 51007), (115, 51136), (133, 51172),

Gene: Firehouse51_79 Start: 50692, Stop: 51051, Start Num: 64

Candidate Starts for Firehouse51_79:

(15, 50491), (17, 50503), (24, 50563), (27, 50575), (38, 50629), (Start: 64 @50692 has 197 MA's), (Start: 73 @50716 has 3 MA's), (77, 50725), (84, 50758), (104, 50839), (120, 50932), (126, 50950), (127, 50962), (134, 51004), (137, 51028),

Gene: Flathead_85 Start: 49803, Stop: 50174, Start Num: 64

Candidate Starts for Flathead_85:

(Start: 64 @49803 has 197 MA's), (Start: 73 @49827 has 3 MA's), (77, 49836), (102, 49935), (104, 49950), (137, 50151),

Gene: Flathead_81 Start: 48740, Stop: 49024, Start Num: 64

Candidate Starts for Flathead_81:

(Start: 64 @48740 has 197 MA's), (Start: 73 @48764 has 3 MA's), (95, 48839), (115, 48968), (133, 49004),

Gene: Fruitloop_78 Start: 48745, Stop: 49029, Start Num: 64

Candidate Starts for Fruitloop_78:

(48, 48718), (Start: 64 @48745 has 197 MA's), (Start: 73 @48769 has 3 MA's), (95, 48844), (115, 48973), (133, 49009),

Gene: Fulbright_56 Start: 36212, Stop: 36574, Start Num: 67

Candidate Starts for Fulbright_56:

(12, 35969), (26, 36086), (53, 36182), (Start: 67 @36212 has 16 MA's), (78, 36245), (107, 36386), (110, 36398), (112, 36413), (117, 36437), (122, 36449), (123, 36455), (129, 36488),

Gene: Gachnar_61 Start: 41094, Stop: 40789, Start Num: 64

Candidate Starts for Gachnar_61:

(15, 41295), (40, 41151), (41, 41148), (Start: 64 @41094 has 197 MA's), (69, 41082), (80, 41052), (81, 41034), (91, 41001), (99, 40959), (137, 40812),

Gene: Galactic_80 Start: 48440, Stop: 48724, Start Num: 64

Candidate Starts for Galactic_80:

(40, 48380), (Start: 64 @48440 has 197 MA's), (Start: 73 @48464 has 3 MA's), (95, 48539), (115, 48668), (133, 48704),

Gene: Gandalph_83 Start: 47074, Stop: 47445, Start Num: 64

Candidate Starts for Gandalph_83:

(Start: 64 @47074 has 197 MA's), (Start: 73 @47098 has 3 MA's), (77, 47107), (104, 47221), (111, 47281), (137, 47422),

Gene: Gandalph_79 Start: 46011, Stop: 46295, Start Num: 64

Candidate Starts for Gandalph_79:

(Start: 64 @46011 has 197 MA's), (Start: 73 @46035 has 3 MA's), (95, 46110), (115, 46239), (133, 46275),

Gene: Geralt_75 Start: 48346, Stop: 48630, Start Num: 64

Candidate Starts for Geralt_75:

(Start: 64 @48346 has 197 MA's), (Start: 73 @48370 has 3 MA's), (95, 48445), (115, 48574), (133, 48610),

Gene: Gex_59 Start: 37534, Stop: 37896, Start Num: 67

Candidate Starts for Gex_59:

(12, 37291), (26, 37408), (53, 37504), (Start: 67 @37534 has 16 MA's), (78, 37567), (107, 37708), (110, 37720), (112, 37735), (117, 37759), (122, 37771), (123, 37777), (129, 37810),

Gene: Gonephishing_71 Start: 47256, Stop: 46885, Start Num: 64

Candidate Starts for Gonephishing_71:

(45, 47295), (56, 47277), (Start: 64 @47256 has 197 MA's), (Start: 73 @47232 has 3 MA's), (77, 47223), (102, 47124), (104, 47109), (137, 46908),

Gene: Grimmer_95 Start: 50263, Stop: 50601, Start Num: 64

Candidate Starts for Grimmer_95:

(29, 50158), (35, 50188), (Start: 64 @50263 has 197 MA's), (Start: 71 @50284 has 2 MA's), (78, 50299), (104, 50389), (120, 50482), (126, 50500), (127, 50512), (134, 50554), (137, 50578),

Gene: Guppsters_78 Start: 47339, Stop: 47707, Start Num: 64

Candidate Starts for Guppsters_78:

(Start: 64 @47339 has 197 MA's), (Start: 73 @47363 has 3 MA's), (77, 47372), (85, 47405), (88, 47417), (89, 47420), (102, 47468), (104, 47483), (137, 47684),

Gene: Gwendoluna_64 Start: 42781, Stop: 42374, Start Num: 42

Candidate Starts for Gwendoluna_64:

(Start: 42 @42781 has 5 MA's), (Start: 60 @42748 has 3 MA's), (Start: 61 @42745 has 1 MA's), (72, 42718), (75, 42712), (104, 42592), (119, 42493), (121, 42490), (137, 42397),

Gene: Hades_80 Start: 46896, Stop: 47180, Start Num: 64

Candidate Starts for Hades_80:

(Start: 64 @46896 has 197 MA's), (Start: 73 @46920 has 3 MA's), (95, 46995), (115, 47124),

Gene: Halley_77 Start: 51626, Stop: 51342, Start Num: 64

Candidate Starts for Halley_77:

(Start: 64 @51626 has 197 MA's), (Start: 73 @51602 has 3 MA's), (95, 51527), (115, 51398), (133, 51362),

Gene: Hamulus_80 Start: 48587, Stop: 48871, Start Num: 64

Candidate Starts for Hamulus_80:

(Start: 64 @48587 has 197 MA's), (Start: 73 @48611 has 3 MA's), (95, 48686), (115, 48815), (133, 48851),

Gene: Hannaconda_68 Start: 45250, Stop: 44864, Start Num: 64

Candidate Starts for Hannaconda_68:

(31, 45343), (37, 45319), (Start: 64 @45250 has 197 MA's), (Start: 71 @45229 has 2 MA's), (78, 45214), (104, 45088), (111, 45028), (137, 44887),

Gene: Hannaconda_70 Start: 46036, Stop: 45752, Start Num: 64

Candidate Starts for Hannaconda_70:

(Start: 64 @46036 has 197 MA's), (Start: 73 @46012 has 3 MA's), (115, 45808), (133, 45772),

Gene: Harley_80 Start: 48340, Stop: 48624, Start Num: 64

Candidate Starts for Harley_80:

(Start: 64 @48340 has 197 MA's), (Start: 73 @48364 has 3 MA's), (95, 48439), (115, 48568), (133, 48604),

Gene: Harley_85 Start: 49675, Stop: 50043, Start Num: 64

Candidate Starts for Harley_85:

(45, 49636), (56, 49654), (Start: 64 @49675 has 197 MA's), (Start: 73 @49699 has 3 MA's), (77, 49708), (85, 49741), (88, 49753), (89, 49756), (102, 49804), (104, 49819), (137, 50020),

Gene: Hegedechwinu_83 Start: 48330, Stop: 48701, Start Num: 64

Candidate Starts for Hegedechwinu_83:

(47, 48294), (Start: 64 @48330 has 197 MA's), (Start: 73 @48354 has 3 MA's), (77, 48363), (85, 48396), (104, 48477), (137, 48678),

Gene: Hidrated_66 Start: 49459, Stop: 49061, Start Num: 64

Candidate Starts for Hidrated_66:

(Start: 64 @49459 has 197 MA's), (78, 49423), (93, 49354), (102, 49297), (103, 49282), (104, 49273), (105, 49267), (120, 49180), (126, 49162), (127, 49150), (134, 49108), (137, 49084),

Gene: Hlubikazi_80 Start: 47314, Stop: 47595, Start Num: 64

Candidate Starts for Hlubikazi_80:

(Start: 64 @47314 has 197 MA's), (Start: 73 @47338 has 3 MA's), (77, 47347), (104, 47461), (113, 47533), (115, 47539),

Gene: Hlubikazi_76 Start: 46227, Stop: 46511, Start Num: 63

Candidate Starts for Hlubikazi_76:

(52, 46203), (Start: 63 @46227 has 23 MA's), (Start: 73 @46251 has 3 MA's), (95, 46326), (115, 46455), (133, 46491),

Gene: HokkenD_68 Start: 49895, Stop: 49611, Start Num: 64

Candidate Starts for HokkenD_68:

(Start: 64 @49895 has 197 MA's), (Start: 73 @49871 has 3 MA's), (95, 49796), (115, 49667), (133, 49631),

Gene: Hughesyang_74 Start: 51585, Stop: 51301, Start Num: 64

Candidate Starts for Hughesyang_74:

(Start: 64 @51585 has 197 MA's), (Start: 73 @51561 has 3 MA's), (95, 51486), (115, 51357), (133, 51321),

Gene: IMpilo_76 Start: 46638, Stop: 46922, Start Num: 64

Candidate Starts for IMpilo_76:

(13, 46392), (14, 46407), (Start: 64 @46638 has 197 MA's), (Start: 73 @46662 has 3 MA's), (95, 46737), (115, 46866), (133, 46902),

Gene: IgnatiusPatJac_61 Start: 40665, Stop: 40318, Start Num: 64

Candidate Starts for IgnatiusPatJac_61:

(15, 40866), (40, 40722), (41, 40719), (Start: 64 @40665 has 197 MA's), (69, 40653), (80, 40623), (81, 40605), (91, 40572), (99, 40530), (118, 40416), (137, 40341),

Gene: Inventum_80 Start: 49225, Stop: 49596, Start Num: 64

Candidate Starts for Inventum_80:

(16, 49024), (18, 49036), (25, 49096), (28, 49108), (39, 49162), (Start: 64 @49225 has 197 MA's), (Start: 73 @49249 has 3 MA's), (77, 49258), (102, 49357), (104, 49372), (137, 49573),

Gene: IrishSherpFalk_83 Start: 50030, Stop: 50401, Start Num: 64

Candidate Starts for IrishSherpFalk_83:

(Start: 64 @50030 has 197 MA's), (Start: 73 @50054 has 3 MA's), (77, 50063), (102, 50162), (104, 50177), (137, 50378),

Gene: IrishSherpFalk_81 Start: 49331, Stop: 49615, Start Num: 63

Candidate Starts for IrishSherpFalk_81:

(Start: 49 @49301 has 2 MA's), (52, 49307), (Start: 63 @49331 has 23 MA's), (Start: 73 @49355 has 3 MA's), (95, 49430), (115, 49559), (133, 49595),

Gene: Jabbawokkie_91 Start: 47805, Stop: 48089, Start Num: 64

Candidate Starts for Jabbawokkie_91:

(Start: 64 @47805 has 197 MA's), (Start: 73 @47829 has 3 MA's), (115, 48033), (133, 48069),

Gene: JalFarm20_90 Start: 50347, Stop: 50718, Start Num: 64

Candidate Starts for JalFarm20_90:

(47, 50311), (Start: 64 @50347 has 197 MA's), (Start: 73 @50371 has 3 MA's), (77, 50380), (85, 50413), (104, 50494), (137, 50695),

Gene: James_82 Start: 50466, Stop: 50750, Start Num: 64

Candidate Starts for James_82:

(Start: 64 @50466 has 197 MA's), (Start: 73 @50490 has 3 MA's), (95, 50565), (115, 50694), (133, 50730),

Gene: James_86 Start: 51529, Stop: 51900, Start Num: 64

Candidate Starts for James_86:

(Start: 64 @51529 has 197 MA's), (Start: 73 @51553 has 3 MA's), (77, 51562), (102, 51661), (104, 51676), (137, 51877),

Gene: Jant_81 Start: 47386, Stop: 47670, Start Num: 64

Candidate Starts for Jant_81:

(Start: 64 @47386 has 197 MA's), (Start: 73 @47410 has 3 MA's), (95, 47485), (115, 47614), (133, 47650),

Gene: Jarcob_85 Start: 51167, Stop: 51499, Start Num: 79

Candidate Starts for Jarcob_85:

(Start: 79 @51167 has 1 MA's), (102, 51260), (104, 51275), (137, 51476),

Gene: Jarcob_81 Start: 50063, Stop: 50347, Start Num: 64

Candidate Starts for Jarcob_81:

(Start: 64 @50063 has 197 MA's), (Start: 73 @50087 has 3 MA's), (95, 50162), (115, 50291), (133, 50327),

Gene: Jennelsea_78 Start: 48296, Stop: 48613, Start Num: 71

Candidate Starts for Jennelsea_78:

(Start: 60 @48269 has 3 MA's), (Start: 71 @48296 has 2 MA's), (78, 48311), (104, 48401), (120, 48494), (126, 48512), (127, 48524), (134, 48566), (137, 48590),

Gene: Job42_81 Start: 51522, Stop: 51818, Start Num: 64

Candidate Starts for Job42_81:

(Start: 64 @51522 has 197 MA's), (Start: 71 @51543 has 2 MA's), (78, 51558), (104, 51684), (115, 51762), (133, 51798),

Gene: JoeyJr_86 Start: 51134, Stop: 51505, Start Num: 64

Candidate Starts for JoeyJr_86:

(Start: 64 @51134 has 197 MA's), (Start: 73 @51158 has 3 MA's), (77, 51167), (102, 51266), (104, 51281), (137, 51482),

Gene: JoeyJr_82 Start: 50251, Stop: 50535, Start Num: 64

Candidate Starts for JoeyJr_82:

(Start: 64 @50251 has 197 MA's), (Start: 73 @50275 has 3 MA's), (95, 50350), (115, 50479), (133, 50515),

Gene: JuicyJay_74 Start: 52760, Stop: 52476, Start Num: 64

Candidate Starts for JuicyJay_74:

(Start: 64 @52760 has 197 MA's), (Start: 73 @52736 has 3 MA's), (95, 52661), (115, 52532), (133, 52496),

Gene: Kalah2_70 Start: 50919, Stop: 50635, Start Num: 64

Candidate Starts for Kalah2_70:

(Start: 64 @50919 has 197 MA's), (Start: 73 @50895 has 3 MA's), (95, 50820), (115, 50691), (133, 50655),

Gene: KashFlow_66 Start: 45121, Stop: 44753, Start Num: 64

Candidate Starts for KashFlow_66:

(31, 45214), (37, 45190), (Start: 64 @45121 has 197 MA's), (Start: 73 @45097 has 3 MA's), (77, 45088), (85, 45055), (88, 45043), (89, 45040), (104, 44977), (111, 44917), (137, 44776),

Gene: Kenuha5_79 Start: 50155, Stop: 50526, Start Num: 64

Candidate Starts for Kenuha5_79:

(31, 50062), (37, 50086), (Start: 64 @50155 has 197 MA's), (Start: 73 @50179 has 3 MA's), (77, 50188), (104, 50302), (137, 50503),

Gene: Kenuha5_77 Start: 49369, Stop: 49653, Start Num: 64

Candidate Starts for Kenuha5_77:

(Start: 64 @49369 has 197 MA's), (Start: 73 @49393 has 3 MA's), (95, 49468), (115, 49597), (133, 49633),

Gene: KingMidas_84 Start: 49936, Stop: 50313, Start Num: 55

Candidate Starts for KingMidas_84:

(Start: 55 @49936 has 7 MA's), (Start: 73 @49978 has 3 MA's), (77, 49987), (102, 50086), (104, 50101), (120, 50194), (126, 50212), (127, 50224), (134, 50266), (137, 50290),

Gene: Kingsley_85 Start: 51609, Stop: 51893, Start Num: 64

Candidate Starts for Kingsley_85:

(Start: 64 @51609 has 197 MA's), (Start: 73 @51633 has 3 MA's), (115, 51837), (133, 51873),

Gene: Klein_73 Start: 50165, Stop: 49884, Start Num: 63

Candidate Starts for Klein_73:

(Start: 63 @50165 has 23 MA's), (Start: 73 @50144 has 3 MA's), (82, 50111), (115, 49940), (133, 49904),

Gene: KristaRAM_82 Start: 48874, Stop: 49245, Start Num: 64

Candidate Starts for KristaRAM_82:

(16, 48673), (18, 48685), (25, 48745), (28, 48757), (39, 48811), (Start: 64 @48874 has 197 MA's), (Start: 73 @48898 has 3 MA's), (77, 48907), (102, 49006), (104, 49021), (111, 49081), (137, 49222),

Gene: KristaRAM_79 Start: 47927, Stop: 48211, Start Num: 64

Candidate Starts for KristaRAM_79:

(Start: 64 @47927 has 197 MA's), (Start: 73 @47951 has 3 MA's), (95, 48026), (115, 48155), (133, 48191),

Gene: Kumao_59 Start: 43007, Stop: 43291, Start Num: 64

Candidate Starts for Kumao_59:

(40, 42947), (Start: 64 @43007 has 197 MA's), (Start: 73 @43031 has 3 MA's), (95, 43106), (115, 43235), (133, 43271),

Gene: Kykar_62 Start: 41465, Stop: 41115, Start Num: 64

Candidate Starts for Kykar_62:

(15, 41666), (40, 41522), (41, 41519), (Start: 64 @41465 has 197 MA's), (Start: 71 @41444 has 2 MA's), (104, 41333), (109, 41282), (119, 41234), (121, 41231), (137, 41138),

Gene: Lamina13_65 Start: 42283, Stop: 41903, Start Num: 64

Candidate Starts for Lamina13_65:

(15, 42484), (40, 42340), (41, 42337), (Start: 64 @42283 has 197 MA's), (Start: 71 @42262 has 2 MA's), (78, 42247), (104, 42121), (109, 42070), (119, 42022), (121, 42019), (137, 41926),

Gene: Latretium_82 Start: 48306, Stop: 48590, Start Num: 64

Candidate Starts for Latretium_82:

(Start: 64 @48306 has 197 MA's), (Start: 73 @48330 has 3 MA's), (95, 48405), (115, 48534), (133, 48570),

Gene: Leperchaun_84 Start: 50368, Stop: 50739, Start Num: 64

Candidate Starts for Leperchaun_84:

(Start: 64 @50368 has 197 MA's), (Start: 73 @50392 has 3 MA's), (77, 50401), (102, 50500), (104, 50515), (137, 50716),

Gene: Leperchaun_80 Start: 49485, Stop: 49769, Start Num: 64

Candidate Starts for Leperchaun_80:

(Start: 64 @49485 has 197 MA's), (Start: 73 @49509 has 3 MA's), (95, 49584), (115, 49713), (133, 49749),

Gene: LilMoolah_82 Start: 49634, Stop: 49918, Start Num: 64

Candidate Starts for LilMoolah_82:

(23, 49496), (35, 49559), (Start: 64 @49634 has 197 MA's), (Start: 73 @49658 has 3 MA's), (95, 49733), (115, 49862), (133, 49898),

Gene: LilSpotty_77 Start: 45059, Stop: 45403, Start Num: 70

Candidate Starts for LilSpotty_77:

(62, 45041), (68, 45047), (Start: 70 @45059 has 1 MA's), (74, 45071), (76, 45074), (87, 45101), (93, 45116), (96, 45131), (97, 45134), (106, 45209), (124, 45284), (128, 45311), (139, 45380), (140, 45386),

Gene: Lilpickle_40 Start: 33973, Stop: 33602, Start Num: 64

Candidate Starts for Lilpickle_40:

(45, 34012), (56, 33994), (Start: 64 @33973 has 197 MA's), (Start: 73 @33949 has 3 MA's), (77, 33940), (104, 33826), (109, 33772), (125, 33709), (131, 33667), (137, 33625),

Gene: LittleE_77 Start: 50428, Stop: 50147, Start Num: 63

Candidate Starts for LittleE_77:

(Start: 63 @50428 has 23 MA's), (Start: 73 @50407 has 3 MA's), (95, 50332), (115, 50203), (133, 50167),

Gene: Llij_77 Start: 46445, Stop: 46729, Start Num: 64

Candidate Starts for Llij_77:

(Start: 64 @46445 has 197 MA's), (Start: 73 @46469 has 3 MA's), (95, 46544), (115, 46673), (133, 46709),

Gene: LordVader_75 Start: 44278, Stop: 44562, Start Num: 63

Candidate Starts for LordVader_75:

(Start: 49 @44248 has 2 MA's), (52, 44254), (Start: 63 @44278 has 23 MA's), (Start: 73 @44302 has 3 MA's), (115, 44506), (133, 44542),

Gene: Lorde_81 Start: 45732, Stop: 46016, Start Num: 64

Candidate Starts for Lorde_81:

(Start: 64 @45732 has 197 MA's), (Start: 73 @45756 has 3 MA's), (95, 45831), (115, 45960), (133, 45996),

Gene: Lucia_81 Start: 46580, Stop: 46864, Start Num: 64

Candidate Starts for Lucia_81:

(Start: 64 @46580 has 197 MA's), (Start: 73 @46604 has 3 MA's), (95, 46679), (115, 46808), (133, 46844),

Gene: LunaBlu_84 Start: 49474, Stop: 49758, Start Num: 64

Candidate Starts for LunaBlu_84:

(Start: 64 @49474 has 197 MA's), (Start: 73 @49498 has 3 MA's), (95, 49573), (115, 49702), (133, 49738),

Gene: LunaStella_80 Start: 48469, Stop: 48825, Start Num: 64

Candidate Starts for LunaStella_80:

(44, 48427), (53, 48445), (Start: 64 @48469 has 197 MA's), (Start: 71 @48490 has 2 MA's), (77, 48502), (120, 48706), (126, 48724), (127, 48736), (134, 48778), (137, 48802),

Gene: MadMen_87 Start: 49600, Stop: 49884, Start Num: 64

Candidate Starts for MadMen_87:

(40, 49540), (Start: 64 @49600 has 197 MA's), (Start: 73 @49624 has 3 MA's), (95, 49699), (115, 49828), (133, 49864),

Gene: MadMen_89 Start: 50218, Stop: 50580, Start Num: 64

Candidate Starts for MadMen_89:

(Start: 64 @50218 has 197 MA's), (Start: 71 @50239 has 2 MA's), (100, 50347), (109, 50413), (119, 50461), (121, 50464), (137, 50557),

Gene: Magsby_58 Start: 37535, Stop: 37897, Start Num: 67

Candidate Starts for Magsby_58:

(12, 37292), (26, 37409), (53, 37505), (Start: 67 @37535 has 16 MA's), (78, 37568), (107, 37709), (110, 37721), (112, 37736), (117, 37760), (122, 37772), (123, 37778), (129, 37811),

Gene: Mahavrat_81 Start: 47831, Stop: 48169, Start Num: 64

Candidate Starts for Mahavrat_81:

(29, 47726), (35, 47756), (Start: 64 @47831 has 197 MA's), (Start: 71 @47852 has 2 MA's), (78, 47867), (104, 47957), (120, 48050), (126, 48068), (127, 48080), (134, 48122), (137, 48146),

Gene: Manda_43 Start: 35798, Stop: 35514, Start Num: 64

Candidate Starts for Manda_43:

(Start: 64 @35798 has 197 MA's), (Start: 73 @35774 has 3 MA's), (95, 35699), (115, 35570), (133, 35534),

Gene: Mandlovu_80 Start: 47256, Stop: 47537, Start Num: 64

Candidate Starts for Mandlovu_80:

(Start: 64 @47256 has 197 MA's), (Start: 73 @47280 has 3 MA's), (77, 47289), (104, 47403), (113, 47475), (115, 47481),

Gene: Mandlovu_76 Start: 46169, Stop: 46453, Start Num: 63

Candidate Starts for Mandlovu_76:

(52, 46145), (Start: 63 @46169 has 23 MA's), (Start: 73 @46193 has 3 MA's), (95, 46268), (115, 46397), (133, 46433),

Gene: Marker_79 Start: 47302, Stop: 47679, Start Num: 71

Candidate Starts for Marker_79:

(Start: 60 @47275 has 3 MA's), (Start: 71 @47302 has 2 MA's), (78, 47317), (93, 47386), (101, 47440), (102, 47443), (103, 47458), (104, 47467), (105, 47473), (120, 47560), (126, 47578), (127, 47590),

(134, 47632), (137, 47656),

Gene: Marker_87 Start: 49400, Stop: 49684, Start Num: 64

Candidate Starts for Marker_87:

(Start: 64 @49400 has 197 MA's), (Start: 73 @49424 has 3 MA's), (95, 49499), (115, 49628), (133, 49664),

Gene: Marker_89 Start: 50064, Stop: 50420, Start Num: 71

Candidate Starts for Marker_89:

(Start: 71 @50064 has 2 MA's), (78, 50079), (83, 50103), (90, 50130), (98, 50160), (114, 50280), (131, 50355), (137, 50397),

Gene: Mattes_82 Start: 50261, Stop: 50632, Start Num: 64

Candidate Starts for Mattes_82:

(32, 50174), (Start: 64 @50261 has 197 MA's), (Start: 73 @50285 has 3 MA's), (77, 50294), (102, 50393), (104, 50408), (137, 50609),

Gene: Medindi_85 Start: 50197, Stop: 50481, Start Num: 64

Candidate Starts for Medindi_85:

(13, 49951), (14, 49966), (Start: 64 @50197 has 197 MA's), (Start: 73 @50221 has 3 MA's), (115, 50425), (133, 50461),

Gene: Melville_63 Start: 37089, Stop: 37451, Start Num: 67

Candidate Starts for Melville_63:

(26, 36963), (53, 37059), (Start: 67 @37089 has 16 MA's), (78, 37122), (107, 37263), (110, 37275), (112, 37290), (117, 37314), (122, 37326), (123, 37332), (129, 37365),

Gene: MiaZeal_76 Start: 48021, Stop: 47737, Start Num: 64

Candidate Starts for MiaZeal_76:

(Start: 64 @48021 has 197 MA's), (Start: 73 @47997 has 3 MA's), (95, 47922), (115, 47793), (133, 47757),

Gene: MiaZeal_72 Start: 46608, Stop: 46255, Start Num: 64

Candidate Starts for MiaZeal_72:

(Start: 64 @46608 has 197 MA's), (Start: 71 @46587 has 2 MA's), (77, 46575), (104, 46467), (120, 46374), (126, 46356), (127, 46344), (134, 46302), (137, 46278),

Gene: MilanaBonita_77 Start: 48008, Stop: 48292, Start Num: 64

Candidate Starts for MilanaBonita_77:

(Start: 64 @48008 has 197 MA's), (Start: 73 @48032 has 3 MA's), (95, 48107), (115, 48236), (133, 48272),

Gene: MilleniumForce_84 Start: 50365, Stop: 50733, Start Num: 64

Candidate Starts for MilleniumForce_84:

(Start: 64 @50365 has 197 MA's), (Start: 73 @50389 has 3 MA's), (77, 50398), (85, 50431), (88, 50443), (89, 50446), (104, 50509), (137, 50710),

Gene: MilleniumForce_82 Start: 49757, Stop: 50041, Start Num: 64

Candidate Starts for MilleniumForce_82:

(Start: 64 @49757 has 197 MA's), (Start: 73 @49781 has 3 MA's), (95, 49856), (115, 49985), (133, 50021),

Gene: MinionDave_77 Start: 48491, Stop: 48775, Start Num: 64

Candidate Starts for MinionDave_77:

(Start: 64 @48491 has 197 MA's), (Start: 73 @48515 has 3 MA's), (115, 48719), (133, 48755),

Gene: Minnie_77 Start: 50537, Stop: 50821, Start Num: 63

Candidate Starts for Minnie_77:

(Start: 49 @50507 has 2 MA's), (52, 50513), (Start: 63 @50537 has 23 MA's), (Start: 73 @50561 has 3 MA's), (95, 50636), (115, 50765), (133, 50801),

Gene: Moonbeam_83 Start: 49609, Stop: 49980, Start Num: 64

Candidate Starts for Moonbeam_83:

(Start: 64 @49609 has 197 MA's), (Start: 73 @49633 has 3 MA's), (77, 49642), (102, 49741), (104, 49756), (137, 49957),

Gene: Mova_80 Start: 47852, Stop: 48136, Start Num: 64

Candidate Starts for Mova_80:

(Start: 64 @47852 has 197 MA's), (Start: 73 @47876 has 3 MA's), (95, 47951), (115, 48080), (133, 48116),

Gene: Mozy_86 Start: 47832, Stop: 48131, Start Num: 66

Candidate Starts for Mozy_86:

(46, 47790), (57, 47808), (Start: 66 @47832 has 2 MA's), (Start: 71 @47853 has 2 MA's), (77, 47865), (108, 48033), (133, 48108),

Gene: Mozy_88 Start: 48337, Stop: 48621, Start Num: 64

Candidate Starts for Mozy_88:

(Start: 64 @48337 has 197 MA's), (Start: 73 @48361 has 3 MA's), (95, 48436), (115, 48565), (133, 48601),

Gene: Mozy_91 Start: 49284, Stop: 49655, Start Num: 64

Candidate Starts for Mozy_91:

(16, 49083), (18, 49095), (25, 49155), (28, 49167), (39, 49221), (Start: 64 @49284 has 197 MA's), (Start: 73 @49308 has 3 MA's), (77, 49317), (104, 49431), (137, 49632),

Gene: MrGordo_63 Start: 41253, Stop: 40939, Start Num: 49

Candidate Starts for MrGordo_63:

(Start: 49 @41253 has 2 MA's), (52, 41247), (Start: 63 @41223 has 23 MA's), (Start: 73 @41199 has 3 MA's), (115, 40995), (133, 40959),

Gene: Ms6_82 Start: 45701, Stop: 45985, Start Num: 64

Candidate Starts for Ms6_82:

(Start: 64 @45701 has 197 MA's), (Start: 73 @45725 has 3 MA's), (95, 45800), (115, 45929), (133, 45965),

Gene: Mutaforma13_86 Start: 49538, Stop: 49894, Start Num: 64

Candidate Starts for Mutaforma13_86:

(44, 49496), (53, 49514), (Start: 64 @49538 has 197 MA's), (Start: 71 @49559 has 2 MA's), (120, 49775), (126, 49793), (127, 49805), (134, 49847), (137, 49871),

Gene: Nekros_72 Start: 49247, Stop: 48963, Start Num: 64

Candidate Starts for Nekros_72:

(Start: 64 @49247 has 197 MA's), (Start: 73 @49223 has 3 MA's), (95, 49148), (115, 49019), (133, 48983),

Gene: NewHope4_84 Start: 47569, Stop: 47853, Start Num: 64
Candidate Starts for NewHope4_84:
(Start: 64 @47569 has 197 MA's), (Start: 73 @47593 has 3 MA's), (95, 47668), (115, 47797), (133, 47833),

Gene: Nibley_65 Start: 44964, Stop: 44680, Start Num: 64
Candidate Starts for Nibley_65:
(40, 45024), (Start: 64 @44964 has 197 MA's), (Start: 73 @44940 has 3 MA's), (95, 44865), (115, 44736), (133, 44700),

Gene: NihilNomen_76 Start: 51713, Stop: 51429, Start Num: 64
Candidate Starts for NihilNomen_76:
(Start: 64 @51713 has 197 MA's), (Start: 73 @51689 has 3 MA's), (95, 51614), (115, 51485), (133, 51449),

Gene: Nimbo_74 Start: 48349, Stop: 48633, Start Num: 64
Candidate Starts for Nimbo_74:
(Start: 64 @48349 has 197 MA's), (Start: 73 @48373 has 3 MA's), (95, 48448), (115, 48577), (133, 48613),

Gene: Nitzel_78 Start: 46831, Stop: 47190, Start Num: 64
Candidate Starts for Nitzel_78:
(44, 46792), (Start: 55 @46810 has 7 MA's), (Start: 64 @46831 has 197 MA's), (Start: 73 @46855 has 3 MA's), (77, 46864), (102, 46963), (104, 46978), (120, 47071), (126, 47089), (127, 47101), (134, 47143), (137, 47167),

Gene: Nivrat_80 Start: 49507, Stop: 49791, Start Num: 64
Candidate Starts for Nivrat_80:
(23, 49369), (35, 49432), (Start: 64 @49507 has 197 MA's), (Start: 73 @49531 has 3 MA's), (95, 49606), (115, 49735), (133, 49771),

Gene: NonchalantPear_43 Start: 34888, Stop: 34544, Start Num: 73
Candidate Starts for NonchalantPear_43:
(Start: 64 @34915 has 197 MA's), (Start: 73 @34888 has 3 MA's), (77, 34879), (85, 34846), (88, 34834), (89, 34831), (104, 34768), (109, 34714), (125, 34651), (131, 34609), (137, 34567),

Gene: Odette_74 Start: 50756, Stop: 50472, Start Num: 64
Candidate Starts for Odette_74:
(Start: 64 @50756 has 197 MA's), (Start: 73 @50732 has 3 MA's), (95, 50657), (115, 50528), (133, 50492),

Gene: Ogopogo_87 Start: 48817, Stop: 49101, Start Num: 64
Candidate Starts for Ogopogo_87:
(Start: 64 @48817 has 197 MA's), (Start: 73 @48841 has 3 MA's), (95, 48916), (115, 49045), (133, 49081),

Gene: Okabe_77 Start: 45885, Stop: 46169, Start Num: 64
Candidate Starts for Okabe_77:
(Start: 64 @45885 has 197 MA's), (Start: 73 @45909 has 3 MA's), (95, 45984), (115, 46113), (133, 46149),

Gene: Oksu_86 Start: 50903, Stop: 51256, Start Num: 64
Candidate Starts for Oksu_86:

(Start: 64 @50903 has 197 MA's), (Start: 71 @50924 has 2 MA's), (77, 50936), (104, 51044), (120, 51137), (126, 51155), (127, 51167), (134, 51209), (137, 51233),

Gene: OldBen_79 Start: 49741, Stop: 50025, Start Num: 64

Candidate Starts for OldBen_79:

(Start: 64 @49741 has 197 MA's), (Start: 73 @49765 has 3 MA's), (95, 49840), (115, 49969), (133, 50005),

Gene: OlympiaSaint_85 Start: 50471, Stop: 50842, Start Num: 64

Candidate Starts for OlympiaSaint_85:

(Start: 64 @50471 has 197 MA's), (Start: 73 @50495 has 3 MA's), (77, 50504), (102, 50603), (104, 50618), (137, 50819),

Gene: OlympiaSaint_81 Start: 49408, Stop: 49692, Start Num: 64

Candidate Starts for OlympiaSaint_81:

(Start: 64 @49408 has 197 MA's), (Start: 73 @49432 has 3 MA's), (95, 49507), (115, 49636), (133, 49672),

Gene: Omega_79 Start: 51648, Stop: 51367, Start Num: 63

Candidate Starts for Omega_79:

(Start: 63 @51648 has 23 MA's), (Start: 73 @51627 has 3 MA's), (95, 51552), (115, 51423), (133, 51387),

Gene: Ovechkin_89 Start: 50892, Stop: 51290, Start Num: 64

Candidate Starts for Ovechkin_89:

(50, 50862), (54, 50868), (Start: 64 @50892 has 197 MA's), (78, 50928), (93, 50997), (102, 51054), (103, 51069), (104, 51078), (105, 51084), (120, 51171), (126, 51189), (127, 51201), (134, 51243), (137, 51267),

Gene: PHappiness_82 Start: 50570, Stop: 50854, Start Num: 64

Candidate Starts for PHappiness_82:

(Start: 64 @50570 has 197 MA's), (Start: 73 @50594 has 3 MA's), (95, 50669), (115, 50798), (133, 50834),

Gene: PMC_78 Start: 47902, Stop: 48186, Start Num: 64

Candidate Starts for PMC_78:

(Start: 64 @47902 has 197 MA's), (Start: 73 @47926 has 3 MA's), (95, 48001), (115, 48130), (133, 48166),

Gene: Paphu_61 Start: 41641, Stop: 41261, Start Num: 64

Candidate Starts for Paphu_61:

(15, 41842), (40, 41698), (41, 41695), (Start: 64 @41641 has 197 MA's), (Start: 71 @41620 has 2 MA's), (78, 41605), (104, 41479), (109, 41428), (119, 41380), (121, 41377), (137, 41284),

Gene: Parliament_63 Start: 43433, Stop: 43053, Start Num: 64

Candidate Starts for Parliament_63:

(15, 43634), (40, 43490), (41, 43487), (Start: 64 @43433 has 197 MA's), (Start: 71 @43412 has 2 MA's), (78, 43397), (104, 43271), (109, 43220), (119, 43172), (121, 43169), (137, 43076),

Gene: Parmesanjohn_58 Start: 37538, Stop: 37900, Start Num: 67

Candidate Starts for Parmesanjohn_58:

(12, 37295), (26, 37412), (53, 37508), (Start: 67 @37538 has 16 MA's), (78, 37571), (107, 37712), (110, 37724), (112, 37739), (117, 37763), (122, 37775), (123, 37781), (129, 37814),

Gene: Pepe_59 Start: 39848, Stop: 39564, Start Num: 63

Candidate Starts for Pepe_59:

(Start: 49 @39878 has 2 MA's), (52, 39872), (Start: 63 @39848 has 23 MA's), (Start: 73 @39824 has 3 MA's), (95, 39749), (115, 39620), (133, 39584),

Gene: Petra64142_42 Start: 35106, Stop: 34705, Start Num: 73

Candidate Starts for Petra64142_42:

(45, 35169), (56, 35151), (Start: 64 @35130 has 197 MA's), (Start: 73 @35106 has 3 MA's), (77, 35097), (85, 35064), (88, 35052), (89, 35049), (104, 34986), (109, 34932), (125, 34869), (131, 34827), (138, 34776), (144, 34713),

Gene: Phalconet_78 Start: 48031, Stop: 48315, Start Num: 64

Candidate Starts for Phalconet_78:

(Start: 64 @48031 has 197 MA's), (Start: 73 @48055 has 3 MA's), (115, 48259), (133, 48295),

Gene: Phanphagia_84 Start: 50468, Stop: 50839, Start Num: 64

Candidate Starts for Phanphagia_84:

(Start: 64 @50468 has 197 MA's), (Start: 73 @50492 has 3 MA's), (77, 50501), (102, 50600), (104, 50615), (137, 50816),

Gene: Phanphagia_80 Start: 49405, Stop: 49689, Start Num: 64

Candidate Starts for Phanphagia_80:

(Start: 64 @49405 has 197 MA's), (Start: 73 @49429 has 3 MA's), (95, 49504), (115, 49633), (133, 49669),

Gene: Phatniss_78 Start: 47540, Stop: 47824, Start Num: 64

Candidate Starts for Phatniss_78:

(Start: 64 @47540 has 197 MA's), (Start: 73 @47564 has 3 MA's), (95, 47639), (115, 47768), (133, 47804),

Gene: PhesterPhotato_85 Start: 49202, Stop: 49483, Start Num: 63

Candidate Starts for PhesterPhotato_85:

(Start: 63 @49202 has 23 MA's), (Start: 73 @49223 has 3 MA's), (95, 49298), (115, 49427), (133, 49463),

Gene: Philonius_58 Start: 37703, Stop: 38065, Start Num: 67

Candidate Starts for Philonius_58:

(1, 37097), (2, 37136), (3, 37181), (4, 37202), (5, 37214), (6, 37241), (7, 37271), (8, 37274), (9, 37406), (10, 37427), (11, 37442), (26, 37577), (53, 37673), (Start: 67 @37703 has 16 MA's), (78, 37736), (107, 37877), (110, 37889), (112, 37904), (117, 37928), (122, 37940), (123, 37946), (129, 37979),

Gene: Philus_84 Start: 51107, Stop: 51391, Start Num: 64

Candidate Starts for Philus_84:

(Start: 64 @51107 has 197 MA's), (Start: 73 @51131 has 3 MA's), (95, 51206), (115, 51335), (133, 51371),

Gene: Phloss_56 Start: 36945, Stop: 37307, Start Num: 67

Candidate Starts for Phloss_56:

(12, 36702), (26, 36819), (53, 36915), (Start: 67 @36945 has 16 MA's), (78, 36978), (107, 37119), (110, 37131), (112, 37146), (117, 37170), (122, 37182), (123, 37188), (129, 37221),

Gene: Phoebus_78 Start: 52895, Stop: 52611, Start Num: 64

Candidate Starts for Phoebus_78:

(Start: 64 @52895 has 197 MA's), (Start: 73 @52871 has 3 MA's), (95, 52796), (115, 52667), (133, 52631),

Gene: Phoebus_74 Start: 51482, Stop: 51129, Start Num: 64

Candidate Starts for Phoebus_74:

(Start: 64 @51482 has 197 MA's), (Start: 71 @51461 has 2 MA's), (77, 51449), (104, 51341), (120, 51248), (126, 51230), (127, 51218), (134, 51176), (137, 51152),

Gene: Piper2020_82 Start: 50625, Stop: 51008, Start Num: 67

Candidate Starts for Piper2020_82:

(26, 50499), (53, 50595), (Start: 67 @50625 has 16 MA's), (Start: 73 @50646 has 3 MA's), (106, 50814), (124, 50889), (128, 50916), (139, 50985), (140, 50991),

Gene: Pipsqueaks_59 Start: 37516, Stop: 37878, Start Num: 67

Candidate Starts for Pipsqueaks_59:

(12, 37273), (26, 37390), (53, 37486), (Start: 67 @37516 has 16 MA's), (78, 37549), (107, 37690), (110, 37702), (112, 37717), (117, 37741), (122, 37753), (123, 37759), (129, 37792),

Gene: Plumbus_86 Start: 47486, Stop: 48037, Start Num: 64

Candidate Starts for Plumbus_86:

(Start: 64 @47486 has 197 MA's), (Start: 73 @47510 has 3 MA's), (77, 47519), (102, 47618), (104, 47633), (137, 47834), (141, 47855), (145, 47909), (146, 47915), (148, 47939),

Gene: Poenanya_88 Start: 50710, Stop: 51087, Start Num: 55

Candidate Starts for Poenanya_88:

(Start: 55 @50710 has 7 MA's), (Start: 73 @50752 has 3 MA's), (77, 50761), (104, 50875), (120, 50968), (126, 50986), (127, 50998), (134, 51040), (137, 51064),

Gene: Poise_9 Start: 2787, Stop: 3071, Start Num: 64

Candidate Starts for Poise_9:

(Start: 64 @2787 has 197 MA's), (Start: 73 @2811 has 3 MA's), (95, 2886), (115, 3015), (133, 3051),

Gene: Polka14_89 Start: 51500, Stop: 51877, Start Num: 55

Candidate Starts for Polka14_89:

(Start: 55 @51500 has 7 MA's), (Start: 73 @51542 has 3 MA's), (77, 51551), (102, 51650), (104, 51665), (120, 51758), (126, 51776), (127, 51788), (134, 51830), (137, 51854),

Gene: Polo2Bam_89 Start: 47423, Stop: 47707, Start Num: 64

Candidate Starts for Polo2Bam_89:

(Start: 64 @47423 has 197 MA's), (Start: 73 @47447 has 3 MA's), (95, 47522), (115, 47651), (133, 47687),

Gene: PopTart_73 Start: 46094, Stop: 46378, Start Num: 63

Candidate Starts for PopTart_73:

(52, 46070), (Start: 63 @46094 has 23 MA's), (Start: 73 @46118 has 3 MA's), (95, 46193), (115, 46322), (133, 46358),

Gene: Porcelain_71 Start: 46608, Stop: 46255, Start Num: 64

Candidate Starts for Porcelain_71:

(Start: 64 @46608 has 197 MA's), (Start: 71 @46587 has 2 MA's), (77, 46575), (104, 46467), (120, 46374), (126, 46356), (127, 46344), (134, 46302), (137, 46278),

Gene: Porcelain_75 Start: 48021, Stop: 47737, Start Num: 64

Candidate Starts for Porcelain_75:

(Start: 64 @48021 has 197 MA's), (Start: 73 @47997 has 3 MA's), (95, 47922), (115, 47793), (133, 47757),

Gene: Porky_42 Start: 34896, Stop: 34549, Start Num: 73

Candidate Starts for Porky_42:

(Start: 64 @34920 has 197 MA's), (Start: 73 @34896 has 3 MA's), (77, 34887), (104, 34773), (109, 34719), (125, 34656), (131, 34614), (137, 34572),

Gene: Raela_9 Start: 3191, Stop: 3475, Start Num: 64

Candidate Starts for Raela_9:

(Start: 64 @3191 has 197 MA's), (Start: 73 @3215 has 3 MA's), (95, 3290), (115, 3419), (133, 3455),

Gene: Ramsey_86 Start: 51149, Stop: 51520, Start Num: 64

Candidate Starts for Ramsey_86:

(16, 50948), (18, 50960), (25, 51020), (28, 51032), (39, 51086), (Start: 64 @51149 has 197 MA's), (Start: 73 @51173 has 3 MA's), (77, 51182), (102, 51281), (104, 51296), (137, 51497),

Gene: Rearden_66 Start: 46135, Stop: 45818, Start Num: 64

Candidate Starts for Rearden_66:

(Start: 64 @46135 has 197 MA's), (Start: 73 @46111 has 3 MA's), (77, 46102), (85, 46069), (88, 46057), (89, 46054), (102, 46006), (104, 45991), (111, 45931), (137, 45841),

Gene: Rearden_68 Start: 46777, Stop: 46493, Start Num: 64

Candidate Starts for Rearden_68:

(Start: 64 @46777 has 197 MA's), (Start: 73 @46753 has 3 MA's), (115, 46549), (133, 46513),

Gene: RedBird_83 Start: 50910, Stop: 51281, Start Num: 64

Candidate Starts for RedBird_83:

(16, 50709), (18, 50721), (25, 50781), (28, 50793), (39, 50847), (Start: 64 @50910 has 197 MA's), (Start: 73 @50934 has 3 MA's), (77, 50943), (102, 51042), (104, 51057), (137, 51258),

Gene: Rimmer_40 Start: 34315, Stop: 33944, Start Num: 64

Candidate Starts for Rimmer_40:

(45, 34354), (56, 34336), (Start: 64 @34315 has 197 MA's), (Start: 73 @34291 has 3 MA's), (77, 34282), (104, 34168), (109, 34114), (125, 34051), (131, 34009), (137, 33967),

Gene: Rita_88 Start: 51756, Stop: 52040, Start Num: 64

Candidate Starts for Rita_88:

(Start: 64 @51756 has 197 MA's), (Start: 73 @51780 has 3 MA's), (95, 51855), (115, 51984), (133, 52020),

Gene: RitaG_82 Start: 50372, Stop: 50656, Start Num: 64

Candidate Starts for RitaG_82:

(Start: 64 @50372 has 197 MA's), (Start: 73 @50396 has 3 MA's), (95, 50471), (115, 50600), (133, 50636),

Gene: Rockne_82 Start: 47914, Stop: 48198, Start Num: 64

Candidate Starts for Rockne_82:

(Start: 64 @47914 has 197 MA's), (Start: 73 @47938 has 3 MA's), (95, 48013), (115, 48142), (133, 48178),

Gene: SG4_84 Start: 50324, Stop: 50698, Start Num: 64

Candidate Starts for SG4_84:

(Start: 64 @50324 has 197 MA's), (Start: 71 @50345 has 2 MA's), (78, 50360), (104, 50486), (120, 50579), (126, 50597), (127, 50609), (134, 50651), (137, 50675),

Gene: SG4_86 Start: 50874, Stop: 51251, Start Num: 64

Candidate Starts for SG4_86:

(Start: 64 @50874 has 197 MA's), (Start: 71 @50895 has 2 MA's), (78, 50910), (83, 50934), (104, 51027), (111, 51087), (137, 51228),

Gene: SG4_81 Start: 49453, Stop: 49737, Start Num: 64

Candidate Starts for SG4_81:

(Start: 64 @49453 has 197 MA's), (Start: 73 @49477 has 3 MA's), (95, 49552), (115, 49681), (133, 49717),

Gene: Sandalphon_83 Start: 50748, Stop: 51119, Start Num: 64

Candidate Starts for Sandalphon_83:

(Start: 64 @50748 has 197 MA's), (Start: 73 @50772 has 3 MA's), (77, 50781), (104, 50895), (137, 51096),

Gene: Sandalphon_75 Start: 48522, Stop: 48806, Start Num: 63

Candidate Starts for Sandalphon_75:

(Start: 49 @48492 has 2 MA's), (52, 48498), (Start: 63 @48522 has 23 MA's), (Start: 73 @48546 has 3 MA's), (95, 48621), (115, 48750), (133, 48786),

Gene: Sarma624_80 Start: 45621, Stop: 45905, Start Num: 63

Candidate Starts for Sarma624_80:

(52, 45597), (Start: 63 @45621 has 23 MA's), (Start: 73 @45645 has 3 MA's), (95, 45720), (115, 45849), (133, 45885),

Gene: Sassafras_83 Start: 49224, Stop: 49595, Start Num: 64

Candidate Starts for Sassafras_83:

(16, 49023), (18, 49035), (25, 49095), (28, 49107), (39, 49161), (Start: 64 @49224 has 197 MA's), (Start: 73 @49248 has 3 MA's), (77, 49257), (102, 49356), (104, 49371), (137, 49572),

Gene: SassyB_73 Start: 46094, Stop: 46378, Start Num: 63

Candidate Starts for SassyB_73:

(52, 46070), (Start: 63 @46094 has 23 MA's), (Start: 73 @46118 has 3 MA's), (95, 46193), (115, 46322), (133, 46358),

Gene: Schatzie_70 Start: 50503, Stop: 50219, Start Num: 64

Candidate Starts for Schatzie_70:

(Start: 64 @50503 has 197 MA's), (Start: 73 @50479 has 3 MA's), (95, 50404), (115, 50275), (133, 50239),

Gene: Schnauzer_59 Start: 37538, Stop: 37900, Start Num: 67

Candidate Starts for Schnauzer_59:

(12, 37295), (26, 37412), (53, 37508), (Start: 67 @37538 has 16 MA's), (78, 37571), (107, 37712), (110, 37724), (112, 37739), (117, 37763), (122, 37775), (123, 37781), (129, 37814),

Gene: Scottish_83 Start: 49191, Stop: 49568, Start Num: 55

Candidate Starts for Scottish_83:

(Start: 55 @49191 has 7 MA's), (Start: 73 @49233 has 3 MA's), (77, 49242), (102, 49341), (104, 49356), (120, 49449), (126, 49467), (127, 49479), (134, 49521), (137, 49545),

Gene: SeaLumen_86 Start: 47423, Stop: 47707, Start Num: 64

Candidate Starts for SeaLumen_86:

(Start: 64 @47423 has 197 MA's), (Start: 73 @47447 has 3 MA's), (95, 47522), (115, 47651), (133, 47687),

Gene: Seagreen_84 Start: 50260, Stop: 50628, Start Num: 64

Candidate Starts for Seagreen_84:

(Start: 64 @50260 has 197 MA's), (Start: 73 @50284 has 3 MA's), (77, 50293), (85, 50326), (88, 50338), (89, 50341), (102, 50389), (104, 50404), (111, 50464), (137, 50605),

Gene: Seagreen_80 Start: 49149, Stop: 49481, Start Num: 43

Candidate Starts for Seagreen_80:

(20, 49053), (Start: 43 @49149 has 1 MA's), (Start: 49 @49164 has 2 MA's), (Start: 64 @49197 has 197 MA's), (Start: 73 @49221 has 3 MA's), (115, 49425), (133, 49461),

Gene: Shaboozey_64 Start: 44166, Stop: 43780, Start Num: 64

Candidate Starts for Shaboozey_64:

(31, 44259), (37, 44235), (Start: 64 @44166 has 197 MA's), (Start: 71 @44145 has 2 MA's), (78, 44130), (104, 44004), (111, 43944), (137, 43803),

Gene: Shaboozey_69 Start: 45986, Stop: 45702, Start Num: 64

Candidate Starts for Shaboozey_69:

(Start: 64 @45986 has 197 MA's), (Start: 73 @45962 has 3 MA's), (115, 45758), (133, 45722),

Gene: Shauna1_81 Start: 49655, Stop: 49939, Start Num: 64

Candidate Starts for Shauna1_81:

(Start: 64 @49655 has 197 MA's), (Start: 73 @49679 has 3 MA's), (95, 49754), (115, 49883), (133, 49919),

Gene: Shauna1_83 Start: 50441, Stop: 50812, Start Num: 64

Candidate Starts for Shauna1_83:

(31, 50348), (37, 50372), (Start: 64 @50441 has 197 MA's), (Start: 73 @50465 has 3 MA's), (77, 50474), (102, 50573), (104, 50588), (137, 50789),

Gene: ShiLan_85 Start: 51984, Stop: 52355, Start Num: 64

Candidate Starts for ShiLan_85:

(Start: 64 @51984 has 197 MA's), (Start: 73 @52008 has 3 MA's), (77, 52017), (102, 52116), (104, 52131), (137, 52332),

Gene: ShroomBoi_82 Start: 49425, Stop: 49781, Start Num: 64

Candidate Starts for ShroomBoi_82:

(44, 49383), (53, 49401), (Start: 64 @49425 has 197 MA's), (Start: 71 @49446 has 2 MA's), (77, 49458), (120, 49662), (126, 49680), (127, 49692), (134, 49734), (137, 49758),

Gene: Silvafighter_59 Start: 37081, Stop: 37443, Start Num: 67

Candidate Starts for Silvafighter_59:

(26, 36955), (53, 37051), (Start: 67 @37081 has 16 MA's), (78, 37114), (107, 37255), (110, 37267), (112, 37282), (117, 37306), (122, 37318), (123, 37324), (129, 37357),

Gene: SilverChicken_91 Start: 49686, Stop: 50078, Start Num: 56

Candidate Starts for SilverChicken_91:

(45, 49668), (56, 49686), (Start: 64 @49707 has 197 MA's), (Start: 73 @49731 has 3 MA's), (77, 49740), (102, 49839), (104, 49854), (137, 50055),

Gene: SimranZ1_83 Start: 48924, Stop: 49286, Start Num: 64

Candidate Starts for SimranZ1_83:

(Start: 64 @48924 has 197 MA's), (Start: 71 @48945 has 2 MA's), (109, 49119), (119, 49167), (121, 49170), (137, 49263),

Gene: SkiPole_68 Start: 41922, Stop: 41608, Start Num: 49

Candidate Starts for SkiPole_68:

(Start: 49 @41922 has 2 MA's), (52, 41916), (Start: 63 @41892 has 23 MA's), (Start: 73 @41868 has 3 MA's), (95, 41793), (115, 41664), (133, 41628),

Gene: Smurph_58 Start: 37538, Stop: 37900, Start Num: 67

Candidate Starts for Smurph_58:

(12, 37295), (26, 37412), (53, 37508), (Start: 67 @37538 has 16 MA's), (78, 37571), (107, 37712), (110, 37724), (112, 37739), (117, 37763), (122, 37775), (123, 37781), (129, 37814),

Gene: Solon_60 Start: 40387, Stop: 40100, Start Num: 64

Candidate Starts for Solon_60:

(Start: 64 @40387 has 197 MA's), (Start: 71 @40366 has 2 MA's), (78, 40351), (83, 40327), (104, 40234), (115, 40156), (133, 40120),

Gene: Soul22_82 Start: 47187, Stop: 47471, Start Num: 63

Candidate Starts for Soul22_82:

(Start: 49 @47157 has 2 MA's), (52, 47163), (Start: 63 @47187 has 23 MA's), (Start: 73 @47211 has 3 MA's), (95, 47286), (115, 47415), (133, 47451),

Gene: Spartacus_89 Start: 52261, Stop: 52542, Start Num: 64

Candidate Starts for Spartacus_89:

(Start: 64 @52261 has 197 MA's), (Start: 73 @52285 has 3 MA's), (77, 52294), (104, 52408), (113, 52480), (115, 52486),

Gene: Spoonbill_81 Start: 47897, Stop: 48268, Start Num: 64

Candidate Starts for Spoonbill_81:

(Start: 64 @47897 has 197 MA's), (Start: 73 @47921 has 3 MA's), (77, 47930), (102, 48029), (104, 48044), (137, 48245),

Gene: Squint_76 Start: 48140, Stop: 47856, Start Num: 64

Candidate Starts for Squint_76:

(Start: 64 @48140 has 197 MA's), (Start: 73 @48116 has 3 MA's), (95, 48041), (115, 47912), (133, 47876),

Gene: Squint_72 Start: 46727, Stop: 46374, Start Num: 64

Candidate Starts for Squint_72:

(Start: 64 @46727 has 197 MA's), (Start: 71 @46706 has 2 MA's), (77, 46694), (104, 46586), (120, 46493), (126, 46475), (127, 46463), (134, 46421), (137, 46397),

Gene: Squirty_81 Start: 52224, Stop: 52505, Start Num: 64

Candidate Starts for Squirty_81:

(Start: 64 @52224 has 197 MA's), (Start: 73 @52248 has 3 MA's), (95, 52323), (115, 52452), (132, 52476), (133, 52488), (136, 52494),

Gene: StAnnes_83 Start: 50113, Stop: 50397, Start Num: 64
Candidate Starts for StAnnes_83:
(48, 50083), (Start: 64 @50113 has 197 MA's), (Start: 73 @50137 has 3 MA's), (95, 50212), (115, 50341), (133, 50377),

Gene: Stap_78 Start: 46857, Stop: 47246, Start Num: 59
Candidate Starts for Stap_78:
(Start: 59 @46857 has 1 MA's), (Start: 73 @46899 has 3 MA's), (77, 46908), (102, 47007), (104, 47022), (109, 47076), (125, 47139), (131, 47181), (137, 47223),

Gene: StormChicken_41 Start: 34923, Stop: 34552, Start Num: 64
Candidate Starts for StormChicken_41:
(45, 34962), (56, 34944), (Start: 64 @34923 has 197 MA's), (Start: 73 @34899 has 3 MA's), (77, 34890), (104, 34776), (109, 34722), (125, 34659), (131, 34617), (137, 34575),

Gene: Strokeseat_80 Start: 47313, Stop: 47594, Start Num: 64
Candidate Starts for Strokeseat_80:
(Start: 64 @47313 has 197 MA's), (Start: 73 @47337 has 3 MA's), (77, 47346), (104, 47460), (113, 47532), (115, 47538),

Gene: Strokeseat_76 Start: 46226, Stop: 46510, Start Num: 63
Candidate Starts for Strokeseat_76:
(52, 46202), (Start: 63 @46226 has 23 MA's), (Start: 73 @46250 has 3 MA's), (95, 46325), (115, 46454), (133, 46490),

Gene: SuperGrey_84 Start: 51807, Stop: 52193, Start Num: 64
Candidate Starts for SuperGrey_84:
(31, 51714), (37, 51738), (Start: 64 @51807 has 197 MA's), (Start: 71 @51828 has 2 MA's), (78, 51843), (104, 51969), (111, 52029), (137, 52170),

Gene: Superphikiman_73 Start: 47231, Stop: 46947, Start Num: 64
Candidate Starts for Superphikiman_73:
(Start: 64 @47231 has 197 MA's), (Start: 73 @47207 has 3 MA's), (95, 47132), (115, 47003), (133, 46967),

Gene: TChen_82 Start: 50420, Stop: 50776, Start Num: 64
Candidate Starts for TChen_82:
(44, 50378), (53, 50396), (Start: 64 @50420 has 197 MA's), (Start: 71 @50441 has 2 MA's), (77, 50453), (120, 50657), (126, 50675), (127, 50687), (134, 50729), (137, 50753),

Gene: Taj_88 Start: 50947, Stop: 51231, Start Num: 64
Candidate Starts for Taj_88:
(19, 50785), (Start: 64 @50947 has 197 MA's), (Start: 73 @50971 has 3 MA's), (95, 51046), (115, 51175), (133, 51211),

Gene: Tasp14_65 Start: 42922, Stop: 42542, Start Num: 64
Candidate Starts for Tasp14_65:
(15, 43123), (40, 42979), (41, 42976), (Start: 64 @42922 has 197 MA's), (Start: 71 @42901 has 2 MA's), (78, 42886), (104, 42760), (109, 42709), (119, 42661), (121, 42658), (137, 42565),

Gene: TeamEdward_41 Start: 34920, Stop: 34549, Start Num: 64
Candidate Starts for TeamEdward_41:

(45, 34959), (56, 34941), (Start: 64 @34920 has 197 MA's), (Start: 73 @34896 has 3 MA's), (77, 34887), (104, 34773), (109, 34719), (125, 34656), (131, 34614), (137, 34572),

Gene: Teaspoon_45 Start: 35627, Stop: 35256, Start Num: 64

Candidate Starts for Teaspoon_45:

(Start: 64 @35627 has 197 MA's), (Start: 73 @35600 has 3 MA's), (77, 35591), (85, 35558), (88, 35546), (89, 35543), (104, 35480), (109, 35426), (125, 35363), (131, 35321), (137, 35279),

Gene: Teodoridan_59 Start: 40032, Stop: 39670, Start Num: 42

Candidate Starts for Teodoridan_59:

(Start: 42 @40032 has 5 MA's), (Start: 60 @39999 has 3 MA's), (Start: 61 @39996 has 1 MA's), (72, 39969), (75, 39963), (104, 39843), (111, 39783), (137, 39693),

Gene: Tesla_9 Start: 2778, Stop: 3062, Start Num: 64

Candidate Starts for Tesla_9:

(Start: 64 @2778 has 197 MA's), (Start: 73 @2802 has 3 MA's), (95, 2877), (115, 3006), (133, 3042),

Gene: Tessdabest_58 Start: 37671, Stop: 38033, Start Num: 67

Candidate Starts for Tessdabest_58:

(12, 37428), (26, 37545), (53, 37641), (Start: 67 @37671 has 16 MA's), (78, 37704), (107, 37845), (110, 37857), (112, 37872), (117, 37896), (122, 37908), (123, 37914), (129, 37947),

Gene: ThreeRngTarjay_73 Start: 51787, Stop: 51503, Start Num: 64

Candidate Starts for ThreeRngTarjay_73:

(Start: 64 @51787 has 197 MA's), (Start: 73 @51763 has 3 MA's), (95, 51688), (115, 51559), (133, 51523),

Gene: Tootsieroll_80 Start: 50185, Stop: 50562, Start Num: 55

Candidate Starts for Tootsieroll_80:

(Start: 55 @50185 has 7 MA's), (Start: 73 @50227 has 3 MA's), (77, 50236), (102, 50335), (104, 50350), (120, 50443), (126, 50461), (127, 50473), (134, 50515), (137, 50539),

Gene: Tweety_82 Start: 50025, Stop: 50309, Start Num: 64

Candidate Starts for Tweety_82:

(19, 49863), (Start: 64 @50025 has 197 MA's), (Start: 73 @50049 has 3 MA's), (95, 50124), (115, 50253), (133, 50289),

Gene: UncleRicky_80 Start: 47788, Stop: 48072, Start Num: 64

Candidate Starts for UncleRicky_80:

(Start: 64 @47788 has 197 MA's), (Start: 73 @47812 has 3 MA's), (95, 47887), (115, 48016), (133, 48052),

Gene: VRedHorse_86 Start: 47830, Stop: 48114, Start Num: 63

Candidate Starts for VRedHorse_86:

(52, 47806), (Start: 63 @47830 has 23 MA's), (Start: 73 @47854 has 3 MA's), (95, 47929), (115, 48058), (133, 48094),

Gene: Violac_87 Start: 51567, Stop: 51926, Start Num: 64

Candidate Starts for Violac_87:

(Start: 64 @51567 has 197 MA's), (Start: 73 @51591 has 3 MA's), (77, 51600), (102, 51699), (104, 51714), (120, 51807), (126, 51825), (127, 51837), (134, 51879), (137, 51903),

Gene: Violac_83 Start: 50504, Stop: 50788, Start Num: 64

Candidate Starts for Violac_83:

(Start: 64 @50504 has 197 MA's), (Start: 73 @50528 has 3 MA's), (95, 50603), (115, 50732), (133, 50768),

Gene: Wanda_77 Start: 50474, Stop: 50193, Start Num: 63

Candidate Starts for Wanda_77:

(Start: 63 @50474 has 23 MA's), (Start: 73 @50453 has 3 MA's), (82, 50420), (115, 50249), (133, 50213),

Gene: Wee_87 Start: 51023, Stop: 51307, Start Num: 64

Candidate Starts for Wee_87:

(19, 50861), (Start: 64 @51023 has 197 MA's), (Start: 73 @51047 has 3 MA's), (95, 51122), (115, 51251), (133, 51287),

Gene: Whatsapiecost_76 Start: 44789, Stop: 45166, Start Num: 64

Candidate Starts for Whatsapiecost_76:

(Start: 64 @44789 has 197 MA's), (Start: 71 @44810 has 2 MA's), (78, 44825), (83, 44849), (104, 44942), (111, 45002), (137, 45143),

Gene: Wheeler_63 Start: 41547, Stop: 41161, Start Num: 64

Candidate Starts for Wheeler_63:

(15, 41748), (40, 41604), (41, 41601), (Start: 64 @41547 has 197 MA's), (69, 41535), (137, 41184),

Gene: WillSterrel_82 Start: 50063, Stop: 50434, Start Num: 64

Candidate Starts for WillSterrel_82:

(Start: 64 @50063 has 197 MA's), (Start: 73 @50087 has 3 MA's), (77, 50096), (102, 50195), (104, 50210), (137, 50411),

Gene: WillSterrel_80 Start: 49364, Stop: 49648, Start Num: 63

Candidate Starts for WillSterrel_80:

(Start: 49 @49334 has 2 MA's), (52, 49340), (Start: 63 @49364 has 23 MA's), (Start: 73 @49388 has 3 MA's), (95, 49463), (115, 49592), (133, 49628),

Gene: XFactor_77 Start: 48229, Stop: 48513, Start Num: 64

Candidate Starts for XFactor_77:

(Start: 64 @48229 has 197 MA's), (Start: 73 @48253 has 3 MA's), (95, 48328), (133, 48493),

Gene: Xerxes_58 Start: 37535, Stop: 37897, Start Num: 67

Candidate Starts for Xerxes_58:

(12, 37292), (26, 37409), (53, 37505), (Start: 67 @37535 has 16 MA's), (78, 37568), (107, 37709), (110, 37721), (112, 37736), (117, 37760), (122, 37772), (123, 37778), (129, 37811),

Gene: Yeet_71 Start: 50004, Stop: 49720, Start Num: 64

Candidate Starts for Yeet_71:

(Start: 64 @50004 has 197 MA's), (Start: 73 @49980 has 3 MA's), (115, 49776), (133, 49740),

Gene: Yoshi_92 Start: 49392, Stop: 49736, Start Num: 60

Candidate Starts for Yoshi_92:

(Start: 60 @49392 has 3 MA's), (Start: 71 @49419 has 2 MA's), (78, 49434), (104, 49524), (130, 49665), (135, 49692), (137, 49713),

Gene: Youngblood_41 Start: 34902, Stop: 34555, Start Num: 73

Candidate Starts for Youngblood_41:

(45, 34965), (56, 34947), (Start: 64 @34926 has 197 MA's), (Start: 73 @34902 has 3 MA's), (77, 34893), (104, 34779), (109, 34725), (125, 34662), (131, 34620), (137, 34578),

Gene: Zapner_90 Start: 47899, Stop: 48183, Start Num: 64

Candidate Starts for Zapner_90:

(Start: 64 @47899 has 197 MA's), (Start: 73 @47923 has 3 MA's), (115, 48127), (133, 48163),

Gene: Zelink_73 Start: 52099, Stop: 51815, Start Num: 64

Candidate Starts for Zelink_73:

(Start: 64 @52099 has 197 MA's), (Start: 73 @52075 has 3 MA's), (95, 52000), (115, 51871), (133, 51835),

Gene: Zeuska_61 Start: 42220, Stop: 41843, Start Num: 64

Candidate Starts for Zeuska_61:

(Start: 64 @42220 has 197 MA's), (Start: 71 @42199 has 2 MA's), (78, 42184), (83, 42160), (104, 42067), (137, 41866),

Gene: Zizzle_86 Start: 51134, Stop: 51478, Start Num: 60

Candidate Starts for Zizzle_86:

(Start: 60 @51134 has 3 MA's), (Start: 71 @51161 has 2 MA's), (78, 51176), (104, 51266), (120, 51359), (126, 51377), (127, 51389), (134, 51431), (137, 51455),