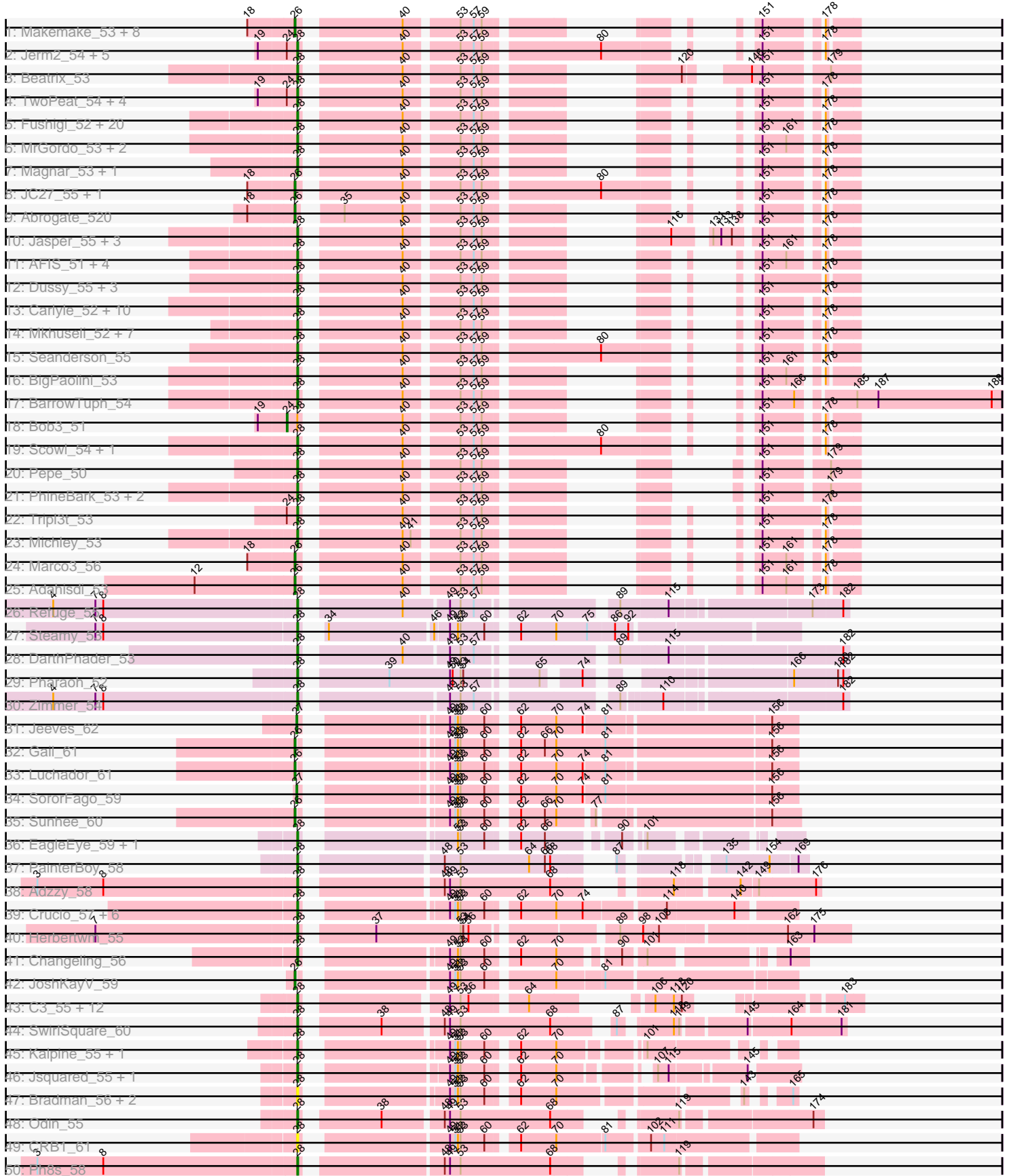
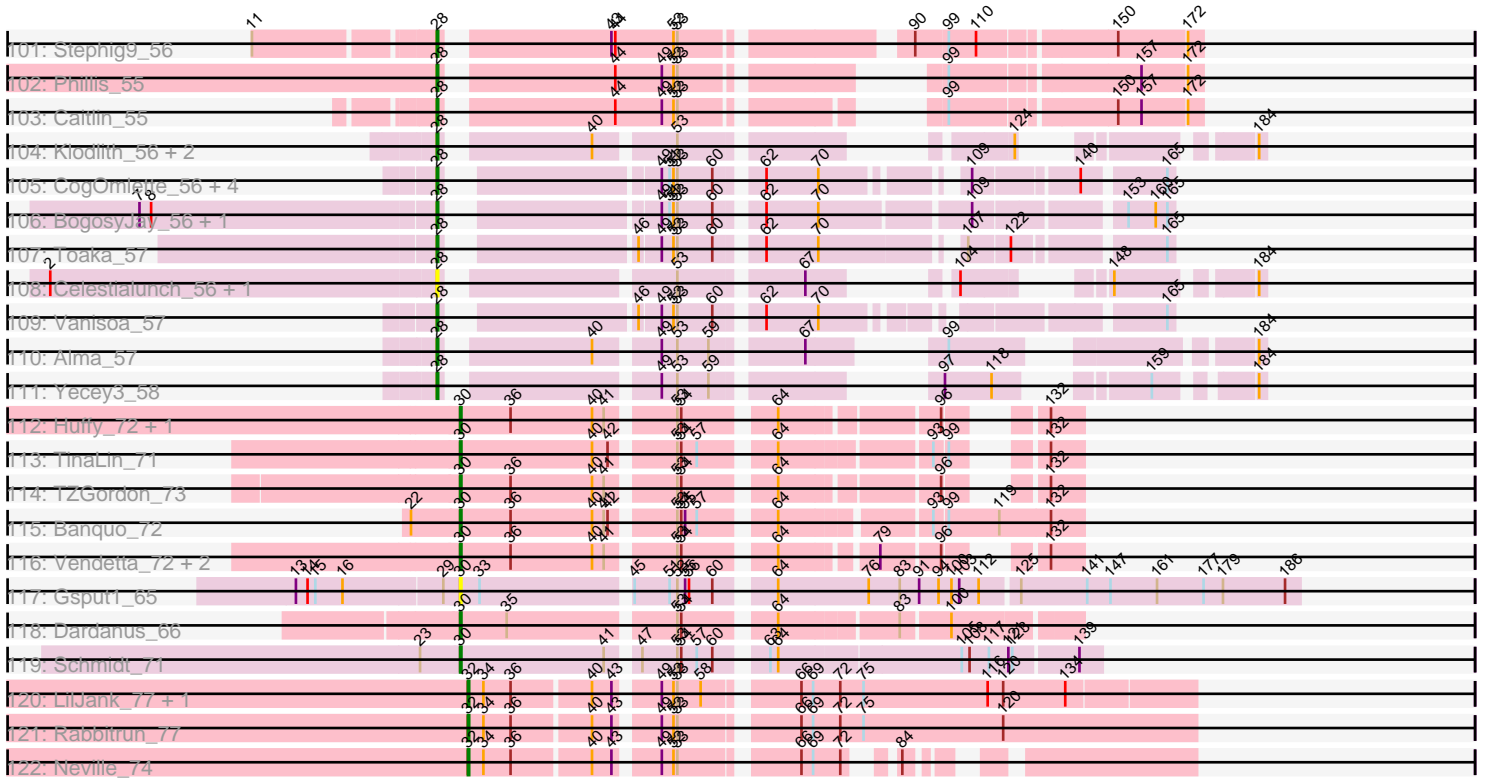


Pham 311163



Pham 311163



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 311163 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311163 has 293 members, 30 are drafts.

Phages represented in each track:

- Track 1 : Makemake_53, Smairt_55, Perseus_53, Zeeculate_51, Violet_51, Aeneas_55, PhrostyMug_52, Pelly_53, Mule_50
- Track 2 : Jerm2_54, PSullivan_53, Rohr_54, BigMau_54, Pita2_56, HermioneGrange_53
- Track 3 : Beatrix_53
- Track 4 : TwoPeat_54, Arlo_51, Rufus_54, Bruns_52, Sibs6_55
- Track 5 : Fushigi_52, Inyanga_50, BluSpix_52, PacerPaul_53, IgnatiusPatJac_54, Ajay_55, Francis47_52, MPlant7149_52, Trouble_56, Gompeii16_52, DrFeelGood_51, Applejack_48, Alvin_53, Bones_54, Agaliana_49, Hami1_47, Bircsak_52, ChristmasHams_49, Iqorha_50, Frogopper_51, Acme_55
- Track 6 : MrGordo_53, Rutherferd_55, Big3_53
- Track 7 : Magnar_53, Blue_53
- Track 8 : JC27_55, Ashballer_55
- Track 9 : Abrogate_520
- Track 10 : Jasper_55, PherrisBueller_53, Dreamboat_55, Petruccio_53
- Track 11 : AFIS_51, Lesedi_50, SpikeBT_53, Crispicous1_51, GageAP_54
- Track 12 : Dussy_55, Abbyshoes_56, Espresso_53, Kenmech_57
- Track 13 : Carlyle_52, Wheeler_54, Rhynn_52, Manatee_55, Chanagan_50, Euphoria_51, Anglerfish_55, Payneful_53, Marchy_48, Zeuska_52, Niza_56
- Track 14 : Mkhuseli_52, LunarLander_55, Monet_56, Graduation_57, Eyeball_55, Treddle_54, Edtherson_53, Cueylyss_55
- Track 15 : Seanderson_55
- Track 16 : BigPaolini_53
- Track 17 : BarrowTuph_54
- Track 18 : Bob3_51
- Track 19 : Scowl_54, Barriga_54
- Track 20 : Pepe_50
- Track 21 : PhineBark_53, Teodoridan_52, Levia_51
- Track 22 : Tripl3t_53
- Track 23 : Michley_53
- Track 24 : Marco3_56
- Track 25 : Adahisdi_53
- Track 26 : Refuge_55
- Track 27 : Steamy_53
- Track 28 : DarthPhader_53
- Track 29 : Pharaoh_52
- Track 30 : Zimmer_54

- Track 31 : Jeeves_62
- Track 32 : Gail_61
- Track 33 : Luchador_61
- Track 34 : SororFago_59
- Track 35 : Sunhee_60
- Track 36 : EagleEye_59, Lucyedi_58
- Track 37 : PainterBoy_58
- Track 38 : Adzzy_58
- Track 39 : Crucio_57, SemperFi_58, Georgie2_58, FiringLine_57, SweetiePie_57, SnapTap_57, QueenBeesly_57
- Track 40 : Herbertwm_55
- Track 41 : Changeling_56
- Track 42 : JoshKayV_59
- Track 43 : C3_55, AN9_60, D29_55, D32_58, DBQu4n_59, Travvers_59, Naji_59, Kerberos_59, Duplo_59, Pomar16_59, ANI8_60, VC3_60, StarStuff_59
- Track 44 : SwirlSquare_60
- Track 45 : Kalpine_55, Trixie_55
- Track 46 : Jsquared_55, Serenity_57
- Track 47 : Bradman_56, MajorMajor_56, Quokka_55
- Track 48 : Odin_55
- Track 49 : CRB1_61
- Track 50 : Ph8s_58
- Track 51 : Power_56
- Track 52 : Rachaly_56, Lokk_54
- Track 53 : Miko_54
- Track 54 : Tomathan_59
- Track 55 : MissWhite_56
- Track 56 : Journey13_51
- Track 57 : Caraxes_57, Superchunk_55
- Track 58 : Che12_58
- Track 59 : Colin_57
- Track 60 : Trooper_58
- Track 61 : QueenB2_56, Heffalump_56
- Track 62 : TipsytheTRex_53
- Track 63 : Koduck_58
- Track 64 : LadyBird_62
- Track 65 : Fameo_57
- Track 66 : L5_55
- Track 67 : WeiHuaDA_59
- Track 68 : FatCactus_48
- Track 69 : Anthony_52
- Track 70 : Jabiru_51
- Track 71 : Midas2_48, Coog_48, Micasa_50
- Track 72 : Bluefalcon_48, SydNat_52, Ghoulboy_52, Zolita_51
- Track 73 : George_47, Milcery_49
- Track 74 : EITiger69_52, Airmid_50
- Track 75 : Tiger_48, Aragog_48, Phlorence_47, Conspiracy_49, AgentM_48, Jovo_49, PickleBack_49, Lev2_49, Archetta_48, ForGetIt_49, Discoknowium_47
- Track 76 : Dublin_49, MarysWell_49
- Track 77 : LittleCherry_49, Bonamassa_49, Florence1_47
- Track 78 : PetterN_54, Chadwick_53
- Track 79 : HuhtaEnerson15_49
- Track 80 : Florence4_49

- Track 81 : Scorpia_54
- Track 82 : UnionJack_51
- Track 83 : Cuco_49
- Track 84 : Naca_50
- Track 85 : Prinasha11_49
- Track 86 : Theia_48
- Track 87 : Benedict_53
- Track 88 : Zulu_60, Artemis2UCLA_59, ToneTone_56, BennyP_59, Wiks_58, Koko_60, Helmet_61, Garak_61, Jeffabunny_59, Temprado_60, Zaka_59, Tucker_59, Indra_62, BlessJoy_59, Lilbunny_58, WunderPhul_59, Yokurt_59, CloudWang3_59, Hexamo_59
- Track 89 : Isiphiwo_56, DaVinci_57, Chartreuse_57
- Track 90 : Gruunaga_59, Blue7_60, Gladiator_56
- Track 91 : Candra_58, SmellyB_58, SuperCallie99_57, GreedyLawyer_58, Kipper29_58, McFly_58, Kazan_59, EricB_58, Neeharika16_57, Cookiedough_58, Newrala_58, Polyphemus_60, VohminGhazi_58, Pmask_58, Hoot_53
- Track 92 : Jordennis_58, Dorothea_58
- Track 93 : SuperAwesome_58
- Track 94 : Priamo_60, DelvinSonDorr_57
- Track 95 : Blinn1_61
- Track 96 : Hammer_59, Roksolana_60, Rifter_59
- Track 97 : JewelBug_59
- Track 98 : BABullseye_52
- Track 99 : Smeadley_56, Expelliarmus_54
- Track 100 : Dixon_55
- Track 101 : Stephig9_56
- Track 102 : Phillis_55
- Track 103 : Caitlin_55
- Track 104 : Klodlith_56, Charm_55, DreamTeam1_55
- Track 105 : CogOmlette_56, WorldCup_56, Rahalelujah_57, Bellris_56, Minispark_56
- Track 106 : BogosyJay_56, Maminiaina_56
- Track 107 : Toaka_57
- Track 108 : Celestiallunch_56, MegTheThird_56
- Track 109 : Vanisoa_57
- Track 110 : Alma_57
- Track 111 : Yecey3_58
- Track 112 : Huffy_72, DinoDaryn_72
- Track 113 : TinaLin_71
- Track 114 : TZGordon_73
- Track 115 : Banquo_72
- Track 116 : Vendetta_72, Goib_72, Splinter_72
- Track 117 : Gspat1_65
- Track 118 : Dardanus_66
- Track 119 : Schmidt_71
- Track 120 : LilJank_77, Trax_77
- Track 121 : Rabbitrun_77
- Track 122 : Neville_74

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

The start number called the most often in the published annotations is 28, it was called in 228 of the 263 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AFIS_51, AN9_60, ANI8_60, Abbysshoes_56, Acme_55, Adzzy_58, Agaliana_49, AgentM_48, Airmid_50, Ajay_55, Alma_57, Alvin_53, Anglerfish_55, Applejack_48, Aragog_48, Archetta_48, Arlo_51, Artemis2UCLA_59, BABullseye_52, Barriga_54, BarrowTuph_54, Beatrix_53, Bellris_56, Benedict_53, BennyP_59, Big3_53, BigMau_54, BigPaolini_53, Bircsak_52, BlessJoy_59, Blinn1_61, BluSpix_52, Blue7_60, Blue_53, Bluefalcon_48, BogosyJay_56, Bonamassa_49, Bones_54, Bradman_56, Bruns_52, C3_55, CRB1_61, Caitlin_55, Candra_58, Caraxes_57, Carlyle_52, Celestialunch_56, Chadwick_53, Chanagan_50, Changeling_56, Charm_55, Chartreuse_57, Che12_58, ChristmasHams_49, CloudWang3_59, CogOmlette_56, Colin_57, Conspiracy_49, Coog_48, Cookiedough_58, Crispicous1_51, Crucio_57, Cuco_49, Cueyllyss_55, D29_55, D32_58, DBQu4n_59, DaVinci_57, DarthPhader_53, DelvinSonDorr_57, Discoknowium_47, Dixon_55, Dorothea_58, DrFeelGood_51, DreamTeam1_55, Dreamboat_55, Dublin_49, Duplo_59, Dussy_55, EagleEye_59, Edtherson_53, ElTiger69_52, EricB_58, Espresso_53, Euphoria_51, Expelliarmus_54, Eyeball_55, Fameo_57, FiringLine_57, Florence1_47, ForGetIt_49, Francis47_52, Froghopper_51, Fushigi_52, GageAP_54, Garak_61, George_47, Georgie2_58, Ghoulboy_52, Gladiator_56, Gompeii16_52, Graduation_57, GreedyLawyer_58, Gruunaga_59, Hami1_47, Hammer_59, Heffalump_56, Helmet_61, Herbertwm_55, HermioneGrange_53, Hexamo_59, Hoot_53, HuhtaEnerson15_49, IgnatiusPatJac_54, Indra_62, Inyanga_50, Iqorha_50, Isiphiwo_56, Jabiru_51, Jasper_55, Jeffabunny_59, Jerm2_54, JewelBug_59, Jordennis_58, Journey13_51, Jovo_49, Jsquared_55, Kalpine_55, Kazan_59, Kenmech_57, Kerberos_59, Kipper29_58, Klodlith_56, Koduck_58, Koko_60, L5_55, LadyBird_62, Lesedi_50, Lev2_49, Levia_51, Lilbunny_58, LittleCherry_49, Lokk_54, Lucyedi_58, LunarLander_55, MPlant7149_52, Magnar_53, MajorMajor_56, Maminiaina_56, Manatee_55, Marchy_48, MarysWell_49, McFly_58, MegTheThird_56, Micasa_50, Michley_53, Midas2_48, Miko_54, Milcery_49, Minispark_56, MissWhite_56, Mkhusei_52, Monet_56, MrGordo_53, Naca_50, Naji_59, Neeharika16_57, Newrala_58, Niza_56, Odin_55, PSullivan_53, PacerPaul_53, PainterBoy_58, Payneful_53, Pepe_50, Petruchio_53, PetterN_54, Ph8s_58, Pharaoh_52, PherrisBueller_53, Phillis_55, PhineBark_53, Phlorence_47, PickleBack_49, Pita2_56, Pmask_58, Polyphemus_60, Pomar16_59, Power_56, Priamo_60, Prinash11_49, QueenB2_56, QueenBeesly_57, Quokka_55, Rachaly_56, Rahalelujah_57, Refuge_55, Rhynn_52, Rifter_59, Rohr_54, Roksolana_60, Rufus_54, Rutherferd_55, Scorpia_54, Scowl_54, Seanderson_55, SemperFi_58, Serenity_57, Sibs6_55, Smeadley_56, SmellyB_58, SnapTap_57, SpikeBT_53, StarStuff_59, Steamy_53, Stephig9_56, SuperAwesome_58, SuperCallie99_57, Superchunk_55, SweetiePie_57, SwirlSquare_60, SydNat_52, Temprado_60, Teodoridan_52, Theia_48, Tiger_48, TipsytheTRex_53, Toaka_57, Tomathan_59, ToneTone_56, Travvers_59, Treddle_54, Tripl3t_53, Trixie_55, Trooper_58, Trouble_56, Tucker_59, TwoPeat_54, UnionJack_51, VC3_60, Vanisoa_57, VohminGhazi_58, WeiHuaDA_59, Wheeler_54, Wiks_58, WorldCup_56, WunderPhul_59, Yecey3_58, Yokurt_59, Zaka_59, Zeuska_52, Zimmer_54, Zolita_51, Zulu_60,

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

- Bob3_51, Florence4_49,

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

- Abrogate_520, Adahisdi_53, Aeneas_55, Anthony_52, Ashballer_55, Banquo_72, Dardanus_66, DinoDaryn_72, FatCactus_48, Gail_61, Goib_72, Gspu1_65, Huffy_72, JC27_55, Jeeves_62, JoshKayV_59, LilJank_77, Luchador_61, Makemake_53, Marco3_56, Mule_50, Neville_74, Pelly_53, Perseus_53, PhrostyMug_52, Rabbitrun_77, Schmidt_71, Smairt_55, SororFago_59, Splinter_72, Sunhee_60, TZGordon_73, TinaLin_71, Trax_77, Vendetta_72, Violet_51, Zeeculate_51,

Summary by start number:

Start 21:

- Found in 8 of 293 (2.7%) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Florence4_49 (A5),

Start 24:

- Found in 13 of 293 (4.4%) of genes in pham
- Manual Annotations of this start: 1 of 263
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Bob3_51 (A1),

Start 26:

- Found in 18 of 293 (6.1%) of genes in pham
- Manual Annotations of this start: 18 of 263
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abrogate_520 (A1), Adahisdi_53 (A1), Aeneas_55 (A1), Ashballer_55 (A1), Gail_61 (A14), JC27_55 (A1), JoshKayV_59 (A2), Luchador_61 (A14), Makemake_53 (A1), Marco3_56 (A1), Mule_50 (A1), Pelly_53 (A1), Perseus_53 (A1), PhrostyMug_52 (A1), Smairt_55 (A1), Sunhee_60 (A14), Violet_51 (A1), Zeeculate_51 (A1),

Start 27:

- Found in 2 of 293 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 263
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jeeves_62 (A14), SororFago_59 (A14),

Start 28:

- Found in 256 of 293 (87.4%) of genes in pham
- Manual Annotations of this start: 228 of 263
- Called 99.2% of time when present
- Phage (with cluster) where this start called: AFIS_51 (A1), AN9_60 (A2), ANI8_60 (A2), Abbyshoes_56 (A1), Acme_55 (A1), Adzzy_58 (A2), Agaliana_49 (A1), AgentM_48 (A5), Airmid_50 (A5), Ajay_55 (A1), Alma_57 (A9), Alvin_53 (A1), Anglerfish_55 (A1), Applejack_48 (A1), Aragog_48 (A5), Archetta_48 (A5), Arlo_51 (A1), Artemis2UCLA_59 (A6), BABullseye_52 (A6), Barriga_54 (A1), BarrowTuph_54 (A1), Beatrix_53 (A1), Bellris_56 (A9), Benedict_53 (A5), BennyP_59 (A6), Big3_53 (A1), BigMau_54 (A1), BigPaolini_53 (A1), Bircsak_52 (A1), BlessJoy_59 (A6), Blinn1_61 (A6), BluSpix_52 (A1), Blue7_60 (A6), Blue_53 (A1), Bluefalcon_48 (A5), BogosyJay_56 (A9), Bonamassa_49 (A5), Bones_54 (A1), Bradman_56 (A2), Bruns_52 (A1), C3_55 (A2), CRB1_61 (A2), Caitlin_55 (A8), Candra_58 (A6),

Caraxes_57 (A2), Carlyle_52 (A1), Celestiallunch_56 (A9), Chadwick_53 (A5), Chanagan_50 (A1), Changeling_56 (A2), Charm_55 (A9), Chartreuse_57 (A6), Che12_58 (A2), ChristmasHams_49 (A1), CloudWang3_59 (A6), CogOmlette_56 (A9), Colin_57 (A2), Conspiracy_49 (A5), Coog_48 (A5), Cookiedough_58 (A6), Crispicious1_51 (A1), Crucio_57 (A2), Cuco_49 (A5), Cueylyss_55 (A1), D29_55 (A2), D32_58 (A2), DBQu4n_59 (A2), DaVinci_57 (A6), DarthPhader_53 (A12), DelvinSonDorr_57 (A6), Discoknowium_47 (A5), Dixon_55 (A8), Dorothea_58 (A6), DrFeelGood_51 (A1), DreamTeam1_55 (A9), Dreamboat_55 (A1), Dublin_49 (A5), Duplo_59 (A2), Dussy_55 (A1), EagleEye_59 (A16), Edtherson_53 (A1), EITiger69_52 (A5), EricB_58 (A6), Espresso_53 (A1), Euphoria_51 (A1), Expelliarmus_54 (A8), Eyeball_55 (A1), Fameo_57 (A2), FiringLine_57 (A2), Florence1_47 (A5), ForGetIt_49 (A5), Francis47_52 (A1), Froghopper_51 (A1), Fushigi_52 (A1), GageAP_54 (A1), Garak_61 (A6), George_47 (A5), Georgie2_58 (A2), Ghoulyboy_52 (A5), Gladiator_56 (A6), Gompeii16_52 (A1), Graduation_57 (A1), GreedyLawyer_58 (A6), Gruunaga_59 (A6), Hami1_47 (A1), Hammer_59 (A6), Heffalump_56 (A2), Helmet_61 (A6), Herbertwm_55 (A2), HermioneGrange_53 (A1), Hexamo_59 (A6), Hoot_53 (A6), HuhtaEnerson15_49 (A5), IgnatiusPatJac_54 (A1), Indra_62 (A6), Inyanga_50 (A1), Iqorha_50 (A1), Isiphiwo_56 (A6), Jabiru_51 (A5), Jasper_55 (A1), Jeffabunny_59 (A6), Jerm2_54 (A1), JewelBug_59 (A6), Jordennis_58 (A6), Journey13_51 (A2), Jovo_49 (A5), Jsquared_55 (A2), Kalpine_55 (A2), Kazan_59 (A6), Kenmech_57 (A1), Kerberos_59 (A2), Kipper29_58 (A6), Klodlith_56 (A9), Koduck_58 (A2), Koko_60 (A6), L5_55 (A2), LadyBird_62 (A2), Lesedi_50 (A1), Lev2_49 (A5), Levia_51 (A1), Lilbunny_58 (A6), LittleCherry_49 (A5), Lokk_54 (A2), Lucyedi_58 (A16), LunarLander_55 (A1), MPlant7149_52 (A1), Magnar_53 (A1), MajorMajor_56 (A2), Maminaiaina_56 (A9), Manatee_55 (A1), Marchy_48 (A1), MarysWell_49 (A5), McFly_58 (A6), MegTheThird_56 (A9), Micasa_50 (A5), Michley_53 (A1), Midas2_48 (A5), Miko_54 (A2), Milcery_49 (A5), Minispark_56 (A9), MissWhite_56 (A2), Mkhuseleli_52 (A1), Monet_56 (A1), MrGordo_53 (A1), Naca_50 (A5), Naji_59 (A2), Neeharika16_57 (A6), Newrala_58 (A6), Niza_56 (A1), Odin_55 (A2), PSullivan_53 (A1), PacerPaul_53 (A1), PainterBoy_58 (A16), Payneful_53 (A1), Pepe_50 (A1), Petruchio_53 (A1), PetterN_54 (A5), Ph8s_58 (A2), Pharaoh_52 (A12), PherrisBueller_53 (A1), Phillis_55 (A8), PhineBark_53 (A1), Phlorence_47 (A5), PickleBack_49 (A5), Pita2_56 (A1), Pmask_58 (A6), Polyphemus_60 (A6), Pomar16_59 (A2), Power_56 (A2), Priamo_60 (A6), Prinashe11_49 (A5), QueenB2_56 (A2), QueenBeesly_57 (A2), Quokka_55 (A2), Rachaly_56 (A2), Rahalelujah_57 (A9), Refuge_55 (A12), Rhynn_52 (A1), Rifter_59 (A6), Rohr_54 (A1), Roksolana_60 (A6), Rufus_54 (A1), Rutherford_55 (A1), Scorpia_54 (A5), Scowl_54 (A1), Seanderson_55 (A1), SemperFi_58 (A2), Serenity_57 (A2), Sibs6_55 (A1), Smeadley_56 (A8), SmellyB_58 (A6), SnapTap_57 (A2), SpikeBT_53 (A1), StarStuff_59 (A2), Steamy_53 (A12), Stephig9_56 (A8), SuperAwesome_58 (A6), SuperCallie99_57 (A6), Superchunk_55 (A2), SweetiePie_57 (A2), SwirlSquare_60 (A2), SydNat_52 (A5), Temprado_60 (A6), Teodoridan_52 (A1), Theia_48 (A5), Tiger_48 (A5), TipsytheTRex_53 (A2), Toaka_57 (A9), Tomathan_59 (A2), ToneTone_56 (A6), Travvers_59 (A2), Treddle_54 (A1), Tripl3t_53 (A1), Trixie_55 (A2), Trooper_58 (A2), Trouble_56 (A1), Tucker_59 (A6), TwoPeat_54 (A1), UnionJack_51 (A5), VC3_60 (A2), Vanisoa_57 (A9), VohminGhazi_58 (A6), WeiHuaDA_59 (A2), Wheeler_54 (A1), Wiks_58 (A6), WorldCup_56 (A9), WunderPhul_59 (A6), Yecy3_58 (A9), Yokurt_59 (A6), Zaka_59 (A6), Zeuska_52 (A1), Zimmer_54 (A12), Zolita_51 (A5), Zulu_60 (A6),

Start 30:

- Found in 11 of 293 (3.8%) of genes in pham
- Manual Annotations of this start: 10 of 263

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo_72 (CU1), Dardanus_66 (CU3), DinoDaryn_72 (CU1), Goib_72 (CU1), Gsp1_65 (CU2), Huff_72 (CU1), Schmidt_71 (CU4), Splinter_72 (CU1), TZGordon_73 (CU1), TinaLin_71 (CU1), Vendetta_72 (CU1),

Start 31:

- Found in 2 of 293 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 263
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony_52 (A20), FatCactus_48 (A20),

Start 32:

- Found in 4 of 293 (1.4%) of genes in pham
- Manual Annotations of this start: 3 of 263
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilJank_77 (DU2), Neville_74 (DU2), Rabbitrun_77 (DU2), Trax_77 (DU2),

Summary by clusters:

There are 15 clusters represented in this pham: A20, A14, CU4, CU3, CU2, CU1, A12, A1, A2, A5, A6, A9, A8, DU2, A16,

Info for manual annotations of cluster A1:

- Start number 24 was manually annotated 1 time for cluster A1.
- Start number 26 was manually annotated 14 times for cluster A1.
- Start number 28 was manually annotated 75 times for cluster A1.

Info for manual annotations of cluster A12:

- Start number 28 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 26 was manually annotated 3 times for cluster A14.
- Start number 27 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A16:

- Start number 28 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 26 was manually annotated 1 time for cluster A2.
- Start number 28 was manually annotated 46 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 31 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A5:

- Start number 28 was manually annotated 36 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 28 was manually annotated 48 times for cluster A6.

Info for manual annotations of cluster A8:

- Start number 28 was manually annotated 6 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 28 was manually annotated 9 times for cluster A9.

Info for manual annotations of cluster CU1:

- Start number 30 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 30 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 30 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DU2:

- Start number 32 was manually annotated 3 times for cluster DU2.

Gene Information:

Gene: AFIS_51 Start: 37581, Stop: 37183, Start Num: 28

Candidate Starts for AFIS_51:

(Start: 28 @37581 has 228 MA's), (40, 37482), (53, 37428), (57, 37413), (59, 37404), (151, 37269), (161, 37242), (178, 37215),

Gene: AN9_60 Start: 38397, Stop: 37942, Start Num: 28

Candidate Starts for AN9_60:

(Start: 28 @38397 has 228 MA's), (49, 38256), (53, 38244), (56, 38235), (64, 38181), (106, 38106), (118, 38085), (120, 38076), (183, 37962),

Gene: ANI8_60 Start: 38397, Stop: 37942, Start Num: 28

Candidate Starts for ANI8_60:

(Start: 28 @38397 has 228 MA's), (49, 38256), (53, 38244), (56, 38235), (64, 38181), (106, 38106), (118, 38085), (120, 38076), (183, 37962),

Gene: Abbysshoes_56 Start: 39189, Stop: 38779, Start Num: 28

Candidate Starts for Abbysshoes_56:

(Start: 28 @39189 has 228 MA's), (40, 39090), (53, 39036), (57, 39021), (59, 39012), (151, 38877), (178, 38811),

Gene: Abrogate_520 Start: 39189, Stop: 38791, Start Num: 26

Candidate Starts for Abrogate_520:

(18, 39240), (Start: 26 @39189 has 18 MA's), (35, 39156), (40, 39090), (53, 39036), (57, 39021), (59, 39012), (151, 38877), (178, 38823),

Gene: Acme_55 Start: 38115, Stop: 37717, Start Num: 28

Candidate Starts for Acme_55:

(Start: 28 @38115 has 228 MA's), (40, 38016), (53, 37962), (57, 37947), (59, 37938), (151, 37803), (178, 37749),

Gene: Adahisdi_53 Start: 38922, Stop: 38521, Start Num: 26

Candidate Starts for Adahisdi_53:

(12, 39033), (Start: 26 @38922 has 18 MA's), (40, 38820), (53, 38766), (57, 38751), (59, 38742), (151, 38607), (161, 38580), (178, 38553),

Gene: Adzzy_58 Start: 36978, Stop: 36487, Start Num: 28

Candidate Starts for Adzzy_58:

(3, 37269), (8, 37194), (Start: 28 @36978 has 228 MA's), (48, 36840), (49, 36834), (53, 36822), (68, 36720), (118, 36639), (142, 36573), (149, 36555), (176, 36492),

Gene: Aeneas_55 Start: 39139, Stop: 38738, Start Num: 26

Candidate Starts for Aeneas_55:

(18, 39190), (Start: 26 @39139 has 18 MA's), (40, 39037), (53, 38983), (57, 38968), (59, 38959), (151, 38824), (178, 38770),

Gene: Agaliana_49 Start: 35783, Stop: 35385, Start Num: 28

Candidate Starts for Agaliana_49:

(Start: 28 @35783 has 228 MA's), (40, 35684), (53, 35630), (57, 35615), (59, 35606), (151, 35471), (178, 35417),

Gene: AgentM_48 Start: 36508, Stop: 36041, Start Num: 28

Candidate Starts for AgentM_48:

(Start: 28 @36508 has 228 MA's), (40, 36409), (53, 36355), (54, 36352), (55, 36349), (145, 36112), (167, 36058),

Gene: Airmid_50 Start: 36667, Stop: 36200, Start Num: 28

Candidate Starts for Airmid_50:

(10, 36814), (Start: 28 @36667 has 228 MA's), (40, 36568), (49, 36526), (50, 36523), (53, 36514), (110, 36343), (137, 36292),

Gene: Ajay_55 Start: 39243, Stop: 38845, Start Num: 28

Candidate Starts for Ajay_55:

(Start: 28 @39243 has 228 MA's), (40, 39144), (53, 39090), (57, 39075), (59, 39066), (151, 38931), (178, 38877),

Gene: Alma_57 Start: 38259, Stop: 37786, Start Num: 28

Candidate Starts for Alma_57:

(Start: 28 @38259 has 228 MA's), (40, 38160), (49, 38118), (53, 38106), (59, 38082), (67, 38022), (99, 37971), (184, 37791),

Gene: Alvin_53 Start: 38568, Stop: 38170, Start Num: 28

Candidate Starts for Alvin_53:

(Start: 28 @38568 has 228 MA's), (40, 38469), (53, 38415), (57, 38400), (59, 38391), (151, 38256), (178, 38202),

Gene: Anglerfish_55 Start: 39478, Stop: 38999, Start Num: 28

Candidate Starts for Anglerfish_55:

(Start: 28 @39478 has 228 MA's), (40, 39379), (53, 39325), (57, 39310), (59, 39301), (151, 39085), (178, 39031),

Gene: Anthony_52 Start: 35777, Stop: 35280, Start Num: 31

Candidate Starts for Anthony_52:

(Start: 31 @35777 has 1 MA's), (49, 35636), (52, 35627), (53, 35624), (54, 35621), (113, 35435), (151, 35339), (157, 35324), (170, 35297), (171, 35294),

Gene: Applejack_48 Start: 35405, Stop: 35007, Start Num: 28

Candidate Starts for Applejack_48:

(Start: 28 @35405 has 228 MA's), (40, 35306), (53, 35252), (57, 35237), (59, 35228), (151, 35093), (178, 35039),

Gene: Aragog_48 Start: 36528, Stop: 36061, Start Num: 28

Candidate Starts for Aragog_48:

(Start: 28 @36528 has 228 MA's), (40, 36429), (53, 36375), (54, 36372), (55, 36369), (145, 36132), (167, 36078),

Gene: Archetta_48 Start: 36938, Stop: 36471, Start Num: 28

Candidate Starts for Archetta_48:

(Start: 28 @36938 has 228 MA's), (40, 36839), (53, 36785), (54, 36782), (55, 36779), (145, 36542), (167, 36488),

Gene: Arlo_51 Start: 37427, Stop: 37029, Start Num: 28

Candidate Starts for Arlo_51:

(19, 37469), (Start: 24 @37439 has 1 MA's), (Start: 28 @37427 has 228 MA's), (40, 37328), (53, 37274), (57, 37259), (59, 37250), (151, 37115), (178, 37061),

Gene: Artemis2UCLA_59 Start: 37105, Stop: 36662, Start Num: 28

Candidate Starts for Artemis2UCLA_59:

(Start: 28 @37105 has 228 MA's), (52, 36961), (53, 36958), (60, 36931), (70, 36865), (88, 36805), (110, 36760),

Gene: Ashballer_55 Start: 39002, Stop: 38520, Start Num: 26

Candidate Starts for Ashballer_55:

(18, 39053), (Start: 26 @39002 has 18 MA's), (40, 38900), (53, 38846), (57, 38831), (59, 38822), (80, 38702), (151, 38606), (178, 38552),

Gene: BABullseye_52 Start: 34678, Stop: 34244, Start Num: 28

Candidate Starts for BABullseye_52:

(Start: 28 @34678 has 228 MA's), (52, 34534), (53, 34531), (60, 34504), (62, 34477), (70, 34438), (88, 34378), (110, 34333),

Gene: Banquo_72 Start: 42206, Stop: 42637, Start Num: 30

Candidate Starts for Banquo_72:

(22, 42176), (Start: 30 @42206 has 10 MA's), (36, 42245), (40, 42308), (41, 42317), (42, 42320), (53, 42362), (54, 42365), (55, 42368), (57, 42377), (64, 42425), (93, 42527), (99, 42536), (119, 42575), (132, 42614),

Gene: Barriga_54 Start: 37755, Stop: 37276, Start Num: 28

Candidate Starts for Barriga_54:

(Start: 28 @37755 has 228 MA's), (40, 37656), (53, 37602), (57, 37587), (59, 37578), (80, 37458), (151, 37362), (178, 37308),

Gene: BarrowTuph_54 Start: 38581, Stop: 38015, Start Num: 28

Candidate Starts for BarrowTuph_54:

(Start: 28 @38581 has 228 MA's), (40, 38482), (53, 38428), (57, 38413), (59, 38404), (151, 38269), (166, 38233), (185, 38179), (187, 38155), (188, 38026),

Gene: Beatrix_53 Start: 39461, Stop: 39000, Start Num: 28

Candidate Starts for Beatrix_53:

(Start: 28 @39461 has 228 MA's), (40, 39362), (53, 39308), (57, 39293), (59, 39284), (120, 39155), (146, 39110), (151, 39098), (179, 39032),

Gene: Bellris_56 Start: 37720, Stop: 37262, Start Num: 28

Candidate Starts for Bellris_56:

(Start: 28 @37720 has 228 MA's), (49, 37582), (51, 37576), (52, 37573), (53, 37570), (60, 37543), (62, 37516), (70, 37477), (109, 37396), (140, 37324), (165, 37267),

Gene: Benedict_53 Start: 36915, Stop: 36427, Start Num: 28

Candidate Starts for Benedict_53:

(10, 37062), (Start: 28 @36915 has 228 MA's), (40, 36816), (49, 36774), (50, 36771), (53, 36762), (122, 36558), (126, 36549), (171, 36441),

Gene: BennyP_59 Start: 37175, Stop: 36732, Start Num: 28

Candidate Starts for BennyP_59:

(Start: 28 @37175 has 228 MA's), (52, 37031), (53, 37028), (60, 37001), (70, 36935), (88, 36875), (110, 36830),

Gene: Big3_53 Start: 39260, Stop: 38862, Start Num: 28

Candidate Starts for Big3_53:

(Start: 28 @39260 has 228 MA's), (40, 39161), (53, 39107), (57, 39092), (59, 39083), (151, 38948), (161, 38921), (178, 38894),

Gene: BigMau_54 Start: 37762, Stop: 37283, Start Num: 28

Candidate Starts for BigMau_54:

(19, 37804), (Start: 24 @37774 has 1 MA's), (Start: 28 @37762 has 228 MA's), (40, 37663), (53, 37609), (57, 37594), (59, 37585), (80, 37465), (151, 37369), (178, 37315),

Gene: BigPaolini_53 Start: 36840, Stop: 36442, Start Num: 28

Candidate Starts for BigPaolini_53:

(Start: 28 @36840 has 228 MA's), (40, 36741), (53, 36687), (57, 36672), (59, 36663), (151, 36528), (161, 36501), (178, 36474),

Gene: Bircsak_52 Start: 39359, Stop: 38961, Start Num: 28

Candidate Starts for Bircsak_52:

(Start: 28 @39359 has 228 MA's), (40, 39260), (53, 39206), (57, 39191), (59, 39182), (151, 39047), (178, 38993),

Gene: BlessJoy_59 Start: 37531, Stop: 37088, Start Num: 28

Candidate Starts for BlessJoy_59:

(Start: 28 @37531 has 228 MA's), (52, 37387), (53, 37384), (60, 37357), (70, 37291), (88, 37231), (110, 37186),

Gene: Blinn1_61 Start: 37123, Stop: 36680, Start Num: 28

Candidate Starts for Blinn1_61:

(Start: 28 @37123 has 228 MA's), (52, 36979), (53, 36976), (60, 36949), (70, 36883), (110, 36778),

Gene: BluSpix_52 Start: 34621, Stop: 34223, Start Num: 28

Candidate Starts for BluSpix_52:

(Start: 28 @34621 has 228 MA's), (40, 34522), (53, 34468), (57, 34453), (59, 34444), (151, 34309), (178, 34255),

Gene: Blue_53 Start: 39272, Stop: 38880, Start Num: 28
Candidate Starts for Blue_53:
(Start: 28 @39272 has 228 MA's), (40, 39173), (53, 39119), (57, 39104), (59, 39095), (151, 38960),
(178, 38912),

Gene: Blue7_60 Start: 37199, Stop: 36762, Start Num: 28
Candidate Starts for Blue7_60:
(Start: 28 @37199 has 228 MA's), (52, 37055), (53, 37052), (60, 37025), (70, 36959), (88, 36896),
(110, 36851), (144, 36773),

Gene: Bluefalcon_48 Start: 37083, Stop: 36616, Start Num: 28
Candidate Starts for Bluefalcon_48:
(20, 37119), (Start: 28 @37083 has 228 MA's), (40, 36984), (53, 36930), (54, 36927), (55, 36924), (56,
36921), (145, 36687), (167, 36633),

Gene: Bob3_51 Start: 37043, Stop: 36633, Start Num: 24
Candidate Starts for Bob3_51:
(19, 37073), (Start: 24 @37043 has 1 MA's), (Start: 28 @37031 has 228 MA's), (40, 36932), (53,
36878), (57, 36863), (59, 36854), (151, 36719), (178, 36665),

Gene: BogosyJay_56 Start: 37976, Stop: 37491, Start Num: 28
Candidate Starts for BogosyJay_56:
(7, 38201), (8, 38192), (Start: 28 @37976 has 228 MA's), (49, 37838), (51, 37832), (52, 37829), (53,
37826), (60, 37799), (62, 37772), (70, 37733), (109, 37628), (153, 37526), (160, 37505), (165, 37496),

Gene: Bonamassa_49 Start: 36951, Stop: 36457, Start Num: 28
Candidate Starts for Bonamassa_49:
(21, 36981), (Start: 28 @36951 has 228 MA's), (40, 36852), (49, 36810), (50, 36807), (53, 36798),
(127, 36579), (158, 36501), (171, 36471),

Gene: Bones_54 Start: 38722, Stop: 38324, Start Num: 28
Candidate Starts for Bones_54:
(Start: 28 @38722 has 228 MA's), (40, 38623), (53, 38569), (57, 38554), (59, 38545), (151, 38410),
(178, 38356),

Gene: Bradman_56 Start: 37152, Stop: 36703, Start Num: 28
Candidate Starts for Bradman_56:
(Start: 28 @37152 has 228 MA's), (49, 37014), (51, 37008), (52, 37005), (53, 37002), (60, 36975), (62,
36948), (70, 36909), (143, 36738), (165, 36708),

Gene: Bruns_52 Start: 37599, Stop: 37201, Start Num: 28
Candidate Starts for Bruns_52:
(19, 37641), (Start: 24 @37611 has 1 MA's), (Start: 28 @37599 has 228 MA's), (40, 37500), (53,
37446), (57, 37431), (59, 37422), (151, 37287), (178, 37233),

Gene: C3_55 Start: 38397, Stop: 37942, Start Num: 28
Candidate Starts for C3_55:
(Start: 28 @38397 has 228 MA's), (49, 38256), (53, 38244), (56, 38235), (64, 38181), (106, 38106),
(118, 38085), (120, 38076), (183, 37962),

Gene: CRB1_61 Start: 39164, Stop: 38667, Start Num: 28
Candidate Starts for CRB1_61:

(Start: 28 @39164 has 228 MA's), (49, 39023), (51, 39017), (52, 39014), (53, 39011), (60, 38984), (62, 38957), (70, 38918), (81, 38867), (102, 38822), (111, 38807),

Gene: Caitlin_55 Start: 36631, Stop: 36161, Start Num: 28

Candidate Starts for Caitlin_55:

(Start: 28 @36631 has 228 MA's), (44, 36514), (49, 36478), (52, 36469), (53, 36466), (99, 36340), (150, 36223), (157, 36205), (172, 36172),

Gene: Candra_58 Start: 37045, Stop: 36602, Start Num: 28

Candidate Starts for Candra_58:

(Start: 28 @37045 has 228 MA's), (52, 36901), (53, 36898), (60, 36871), (70, 36805), (88, 36745), (110, 36700),

Gene: Caraxes_57 Start: 36675, Stop: 36196, Start Num: 28

Candidate Starts for Caraxes_57:

(8, 36891), (Start: 28 @36675 has 228 MA's), (48, 36513), (49, 36507), (53, 36495), (68, 36393), (110, 36324), (118, 36312), (135, 36270), (165, 36201),

Gene: Carlyle_52 Start: 36053, Stop: 35655, Start Num: 28

Candidate Starts for Carlyle_52:

(Start: 28 @36053 has 228 MA's), (40, 35954), (53, 35900), (57, 35885), (59, 35876), (151, 35741), (178, 35687),

Gene: Celestiallunch_56 Start: 37762, Stop: 37325, Start Num: 28

Candidate Starts for Celestiallunch_56:

(2, 38056), (Start: 28 @37762 has 228 MA's), (53, 37609), (67, 37525), (104, 37480), (148, 37417), (184, 37330),

Gene: Chadwick_53 Start: 36756, Stop: 36268, Start Num: 28

Candidate Starts for Chadwick_53:

(Start: 28 @36756 has 228 MA's), (40, 36657), (49, 36615), (50, 36612), (53, 36603), (56, 36594), (126, 36390), (171, 36282),

Gene: Chanagan_50 Start: 36851, Stop: 36453, Start Num: 28

Candidate Starts for Chanagan_50:

(Start: 28 @36851 has 228 MA's), (40, 36752), (53, 36698), (57, 36683), (59, 36674), (151, 36539), (178, 36485),

Gene: Changeling_56 Start: 38803, Stop: 38336, Start Num: 28

Candidate Starts for Changeling_56:

(Start: 28 @38803 has 228 MA's), (49, 38665), (52, 38656), (53, 38653), (60, 38626), (62, 38599), (70, 38560), (90, 38503), (101, 38482), (163, 38356),

Gene: Charm_55 Start: 37821, Stop: 37384, Start Num: 28

Candidate Starts for Charm_55:

(Start: 28 @37821 has 228 MA's), (40, 37722), (53, 37668), (124, 37500), (184, 37389),

Gene: Chartreuse_57 Start: 36396, Stop: 35962, Start Num: 28

Candidate Starts for Chartreuse_57:

(Start: 28 @36396 has 228 MA's), (52, 36252), (53, 36249), (60, 36222), (70, 36156), (88, 36096), (144, 35973),

Gene: Che12_58 Start: 37116, Stop: 36628, Start Num: 28

Candidate Starts for Che12_58:

(Start: 28 @37116 has 228 MA's), (48, 36975), (49, 36969), (53, 36957), (61, 36906), (68, 36855), (168, 36654), (176, 36633),

Gene: ChristmasHams_49 Start: 36257, Stop: 35859, Start Num: 28

Candidate Starts for ChristmasHams_49:

(Start: 28 @36257 has 228 MA's), (40, 36158), (53, 36104), (57, 36089), (59, 36080), (151, 35945), (178, 35891),

Gene: CloudWang3_59 Start: 37193, Stop: 36750, Start Num: 28

Candidate Starts for CloudWang3_59:

(Start: 28 @37193 has 228 MA's), (52, 37049), (53, 37046), (60, 37019), (70, 36953), (88, 36893), (110, 36848),

Gene: CogOmlette_56 Start: 37717, Stop: 37259, Start Num: 28

Candidate Starts for CogOmlette_56:

(Start: 28 @37717 has 228 MA's), (49, 37579), (51, 37573), (52, 37570), (53, 37567), (60, 37540), (62, 37513), (70, 37474), (109, 37393), (140, 37321), (165, 37264),

Gene: Colin_57 Start: 38509, Stop: 38060, Start Num: 28

Candidate Starts for Colin_57:

(Start: 28 @38509 has 228 MA's), (49, 38374), (51, 38368), (52, 38365), (53, 38362), (60, 38335), (62, 38308), (70, 38269), (78, 38230), (95, 38197), (101, 38188),

Gene: Conspiracy_49 Start: 36750, Stop: 36283, Start Num: 28

Candidate Starts for Conspiracy_49:

(Start: 28 @36750 has 228 MA's), (40, 36651), (53, 36597), (54, 36594), (55, 36591), (145, 36354), (167, 36300),

Gene: Coog_48 Start: 36935, Stop: 36441, Start Num: 28

Candidate Starts for Coog_48:

(Start: 28 @36935 has 228 MA's), (50, 36791), (52, 36785), (53, 36782), (127, 36563), (158, 36485), (171, 36455),

Gene: Cookiedough_58 Start: 37024, Stop: 36581, Start Num: 28

Candidate Starts for Cookiedough_58:

(Start: 28 @37024 has 228 MA's), (52, 36880), (53, 36877), (60, 36850), (70, 36784), (88, 36724), (110, 36679),

Gene: Crispicious1_51 Start: 37176, Stop: 36778, Start Num: 28

Candidate Starts for Crispicious1_51:

(Start: 28 @37176 has 228 MA's), (40, 37077), (53, 37023), (57, 37008), (59, 36999), (151, 36864), (161, 36837), (178, 36810),

Gene: Crucio_57 Start: 38174, Stop: 37680, Start Num: 28

Candidate Starts for Crucio_57:

(Start: 28 @38174 has 228 MA's), (49, 38036), (51, 38030), (52, 38027), (53, 38024), (60, 37997), (62, 37970), (70, 37931), (74, 37901), (114, 37817), (140, 37742),

Gene: Cuco_49 Start: 36807, Stop: 36313, Start Num: 28

Candidate Starts for Cuco_49:

(20, 36843), (Start: 28 @36807 has 228 MA's), (50, 36663), (52, 36657), (53, 36654), (127, 36435), (158, 36357), (171, 36327),

Gene: Cueyllyss_55 Start: 39855, Stop: 39457, Start Num: 28

Candidate Starts for Cueyllyss_55:

(Start: 28 @39855 has 228 MA's), (40, 39756), (53, 39702), (57, 39687), (59, 39678), (151, 39543), (178, 39489),

Gene: D29_55 Start: 38000, Stop: 37545, Start Num: 28

Candidate Starts for D29_55:

(Start: 28 @38000 has 228 MA's), (49, 37859), (53, 37847), (56, 37838), (64, 37784), (106, 37709), (118, 37688), (120, 37679), (183, 37565),

Gene: D32_58 Start: 38000, Stop: 37545, Start Num: 28

Candidate Starts for D32_58:

(Start: 28 @38000 has 228 MA's), (49, 37859), (53, 37847), (56, 37838), (64, 37784), (106, 37709), (118, 37688), (120, 37679), (183, 37565),

Gene: DBQu4n_59 Start: 37981, Stop: 37526, Start Num: 28

Candidate Starts for DBQu4n_59:

(Start: 28 @37981 has 228 MA's), (49, 37840), (53, 37828), (56, 37819), (64, 37765), (106, 37690), (118, 37669), (120, 37660), (183, 37546),

Gene: DaVinci_57 Start: 36450, Stop: 36016, Start Num: 28

Candidate Starts for DaVinci_57:

(Start: 28 @36450 has 228 MA's), (52, 36306), (53, 36303), (60, 36276), (70, 36210), (88, 36150), (144, 36027),

Gene: Dardanus_66 Start: 41025, Stop: 41453, Start Num: 30

Candidate Starts for Dardanus_66:

(Start: 30 @41025 has 10 MA's), (35, 41061), (53, 41181), (54, 41184), (64, 41244), (83, 41328), (100, 41361),

Gene: DarthPhader_53 Start: 38914, Stop: 38369, Start Num: 28

Candidate Starts for DarthPhader_53:

(Start: 28 @38914 has 228 MA's), (40, 38815), (49, 38767), (53, 38755), (57, 38740), (89, 38608), (115, 38557), (182, 38374),

Gene: DelvinSonDorr_57 Start: 37255, Stop: 36821, Start Num: 28

Candidate Starts for DelvinSonDorr_57:

(Start: 28 @37255 has 228 MA's), (52, 37111), (53, 37108), (60, 37081), (70, 37015), (110, 36910), (144, 36832),

Gene: DinoDaryn_72 Start: 42298, Stop: 42690, Start Num: 30

Candidate Starts for DinoDaryn_72:

(Start: 30 @42298 has 10 MA's), (36, 42337), (40, 42400), (41, 42409), (53, 42454), (54, 42457), (64, 42517), (96, 42625), (132, 42667),

Gene: Discoknowium_47 Start: 36417, Stop: 35950, Start Num: 28

Candidate Starts for Discoknowium_47:

(Start: 28 @36417 has 228 MA's), (40, 36318), (53, 36264), (54, 36261), (55, 36258), (145, 36021), (167, 35967),

Gene: Dixon_55 Start: 36492, Stop: 36022, Start Num: 28

Candidate Starts for Dixon_55:

(1, 36777), (11, 36618), (Start: 28 @36492 has 228 MA's), (44, 36375), (49, 36339), (52, 36330), (53, 36327), (99, 36201), (150, 36084), (157, 36066), (172, 36033),

Gene: Dorothea_58 Start: 37019, Stop: 36585, Start Num: 28

Candidate Starts for Dorothea_58:

(Start: 28 @37019 has 228 MA's), (52, 36875), (53, 36872), (60, 36845), (62, 36818), (70, 36779), (88, 36719), (110, 36674), (144, 36596),

Gene: DrFeelGood_51 Start: 38016, Stop: 37618, Start Num: 28

Candidate Starts for DrFeelGood_51:

(Start: 28 @38016 has 228 MA's), (40, 37917), (53, 37863), (57, 37848), (59, 37839), (151, 37704), (178, 37650),

Gene: DreamTeam1_55 Start: 37653, Stop: 37216, Start Num: 28

Candidate Starts for DreamTeam1_55:

(Start: 28 @37653 has 228 MA's), (40, 37554), (53, 37500), (124, 37332), (184, 37221),

Gene: Dreamboat_55 Start: 37826, Stop: 37371, Start Num: 28

Candidate Starts for Dreamboat_55:

(Start: 28 @37826 has 228 MA's), (40, 37727), (53, 37673), (57, 37658), (59, 37649), (116, 37532), (131, 37502), (133, 37493), (138, 37481), (151, 37457), (178, 37403),

Gene: Dublin_49 Start: 36919, Stop: 36452, Start Num: 28

Candidate Starts for Dublin_49:

(20, 36955), (Start: 28 @36919 has 228 MA's), (40, 36820), (53, 36766), (54, 36763), (55, 36760), (145, 36523), (167, 36469),

Gene: Duplo_59 Start: 38037, Stop: 37582, Start Num: 28

Candidate Starts for Duplo_59:

(Start: 28 @38037 has 228 MA's), (49, 37896), (53, 37884), (56, 37875), (64, 37821), (106, 37746), (118, 37725), (120, 37716), (183, 37602),

Gene: Dussy_55 Start: 39209, Stop: 38799, Start Num: 28

Candidate Starts for Dussy_55:

(Start: 28 @39209 has 228 MA's), (40, 39110), (53, 39056), (57, 39041), (59, 39032), (151, 38897), (178, 38831),

Gene: EagleEye_59 Start: 37874, Stop: 37425, Start Num: 28

Candidate Starts for EagleEye_59:

(Start: 28 @37874 has 228 MA's), (52, 37730), (53, 37727), (60, 37700), (62, 37673), (66, 37646), (90, 37577), (101, 37559),

Gene: Edtherson_53 Start: 38507, Stop: 38109, Start Num: 28

Candidate Starts for Edtherson_53:

(Start: 28 @38507 has 228 MA's), (40, 38408), (53, 38354), (57, 38339), (59, 38330), (151, 38195), (178, 38141),

Gene: EITiger69_52 Start: 36876, Stop: 36409, Start Num: 28

Candidate Starts for EITiger69_52:

(10, 37023), (Start: 28 @36876 has 228 MA's), (40, 36777), (49, 36735), (50, 36732), (53, 36723), (110, 36552), (137, 36501),

Gene: EricB_58 Start: 37002, Stop: 36559, Start Num: 28

Candidate Starts for EricB_58:

(Start: 28 @37002 has 228 MA's), (52, 36858), (53, 36855), (60, 36828), (70, 36762), (88, 36702), (110, 36657),

Gene: Espresso_53 Start: 39063, Stop: 38665, Start Num: 28

Candidate Starts for Espresso_53:

(Start: 28 @39063 has 228 MA's), (40, 38964), (53, 38910), (57, 38895), (59, 38886), (151, 38751), (178, 38697),

Gene: Euphoria_51 Start: 38314, Stop: 37916, Start Num: 28

Candidate Starts for Euphoria_51:

(Start: 28 @38314 has 228 MA's), (40, 38215), (53, 38161), (57, 38146), (59, 38137), (151, 38002), (178, 37948),

Gene: Expelliarmus_54 Start: 36696, Stop: 36226, Start Num: 28

Candidate Starts for Expelliarmus_54:

(1, 36981), (11, 36822), (Start: 28 @36696 has 228 MA's), (44, 36579), (49, 36543), (52, 36534), (53, 36531), (99, 36405), (150, 36288), (172, 36237),

Gene: Eyeball_55 Start: 38602, Stop: 38204, Start Num: 28

Candidate Starts for Eyeball_55:

(Start: 28 @38602 has 228 MA's), (40, 38503), (53, 38449), (57, 38434), (59, 38425), (151, 38290), (178, 38236),

Gene: Fameo_57 Start: 38505, Stop: 38011, Start Num: 28

Candidate Starts for Fameo_57:

(Start: 28 @38505 has 228 MA's), (49, 38367), (51, 38361), (52, 38358), (53, 38355), (60, 38328), (62, 38301), (70, 38262), (74, 38232), (81, 38211),

Gene: FatCactus_48 Start: 35445, Stop: 34978, Start Num: 31

Candidate Starts for FatCactus_48:

(22, 35484), (25, 35472), (Start: 31 @35445 has 1 MA's), (53, 35292), (54, 35289), (71, 35199), (103, 35124), (113, 35112), (128, 35079), (135, 35058), (171, 34983),

Gene: FiringLine_57 Start: 38155, Stop: 37661, Start Num: 28

Candidate Starts for FiringLine_57:

(Start: 28 @38155 has 228 MA's), (49, 38017), (51, 38011), (52, 38008), (53, 38005), (60, 37978), (62, 37951), (70, 37912), (74, 37882), (114, 37798), (140, 37723),

Gene: Florence1_47 Start: 36280, Stop: 35786, Start Num: 28

Candidate Starts for Florence1_47:

(21, 36310), (Start: 28 @36280 has 228 MA's), (40, 36181), (49, 36139), (50, 36136), (53, 36127), (127, 35908), (158, 35830), (171, 35800),

Gene: Florence4_49 Start: 36310, Stop: 35786, Start Num: 21

Candidate Starts for Florence4_49:

(21, 36310), (Start: 28 @36280 has 228 MA's), (40, 36181), (49, 36139), (50, 36136), (53, 36127), (127, 35908), (158, 35830), (171, 35800),

Gene: ForGetIt_49 Start: 36775, Stop: 36308, Start Num: 28

Candidate Starts for ForGetIt_49:

(Start: 28 @36775 has 228 MA's), (40, 36676), (53, 36622), (54, 36619), (55, 36616), (145, 36379), (167, 36325),

Gene: Francis47_52 Start: 39627, Stop: 39229, Start Num: 28

Candidate Starts for Francis47_52:

(Start: 28 @39627 has 228 MA's), (40, 39528), (53, 39474), (57, 39459), (59, 39450), (151, 39315), (178, 39261),

Gene: Froghopper_51 Start: 37352, Stop: 36957, Start Num: 28

Candidate Starts for Froghopper_51:

(Start: 28 @37352 has 228 MA's), (40, 37253), (53, 37199), (57, 37184), (59, 37175), (151, 37040), (178, 36986),

Gene: Fushigi_52 Start: 36313, Stop: 35915, Start Num: 28

Candidate Starts for Fushigi_52:

(Start: 28 @36313 has 228 MA's), (40, 36214), (53, 36160), (57, 36145), (59, 36136), (151, 36001), (178, 35947),

Gene: GageAP_54 Start: 39103, Stop: 38705, Start Num: 28

Candidate Starts for GageAP_54:

(Start: 28 @39103 has 228 MA's), (40, 39004), (53, 38950), (57, 38935), (59, 38926), (151, 38791), (161, 38764), (178, 38737),

Gene: Gail_61 Start: 39377, Stop: 38874, Start Num: 26

Candidate Starts for Gail_61:

(Start: 26 @39377 has 18 MA's), (49, 39242), (51, 39236), (52, 39233), (53, 39230), (60, 39203), (62, 39176), (66, 39149), (70, 39137), (81, 39083), (156, 38903),

Gene: Garak_61 Start: 37472, Stop: 37029, Start Num: 28

Candidate Starts for Garak_61:

(Start: 28 @37472 has 228 MA's), (52, 37328), (53, 37325), (60, 37298), (70, 37232), (88, 37172), (110, 37127),

Gene: George_47 Start: 36848, Stop: 36360, Start Num: 28

Candidate Starts for George_47:

(21, 36878), (Start: 28 @36848 has 228 MA's), (40, 36749), (49, 36707), (50, 36704), (53, 36695), (127, 36476),

Gene: Georgie2_58 Start: 38200, Stop: 37706, Start Num: 28

Candidate Starts for Georgie2_58:

(Start: 28 @38200 has 228 MA's), (49, 38062), (51, 38056), (52, 38053), (53, 38050), (60, 38023), (62, 37996), (70, 37957), (74, 37927), (114, 37843), (140, 37768),

Gene: Ghoulboy_52 Start: 37654, Stop: 37187, Start Num: 28

Candidate Starts for Ghoulboy_52:

(20, 37690), (Start: 28 @37654 has 228 MA's), (40, 37555), (53, 37501), (54, 37498), (55, 37495), (56, 37492), (145, 37258), (167, 37204),

Gene: Gladiator_56 Start: 36697, Stop: 36260, Start Num: 28

Candidate Starts for Gladiator_56:

(Start: 28 @36697 has 228 MA's), (52, 36553), (53, 36550), (60, 36523), (70, 36457), (88, 36394), (110, 36349), (144, 36271),

Gene: Goib_72 Start: 43396, Stop: 43785, Start Num: 30

Candidate Starts for Goib_72:

(Start: 30 @43396 has 10 MA's), (36, 43435), (40, 43498), (41, 43507), (53, 43552), (54, 43555), (64, 43615), (79, 43678), (96, 43720), (132, 43762),

Gene: Gompeii16_52 Start: 39360, Stop: 38962, Start Num: 28

Candidate Starts for Gompeii16_52:

(Start: 28 @39360 has 228 MA's), (40, 39261), (53, 39207), (57, 39192), (59, 39183), (151, 39048), (178, 38994),

Gene: Graduation_57 Start: 39927, Stop: 39529, Start Num: 28

Candidate Starts for Graduation_57:

(Start: 28 @39927 has 228 MA's), (40, 39828), (53, 39774), (57, 39759), (59, 39750), (151, 39615), (178, 39561),

Gene: GreedyLawyer_58 Start: 37009, Stop: 36566, Start Num: 28

Candidate Starts for GreedyLawyer_58:

(Start: 28 @37009 has 228 MA's), (52, 36865), (53, 36862), (60, 36835), (70, 36769), (88, 36709), (110, 36664),

Gene: Gruunaga_59 Start: 37396, Stop: 36959, Start Num: 28

Candidate Starts for Gruunaga_59:

(Start: 28 @37396 has 228 MA's), (52, 37252), (53, 37249), (60, 37222), (70, 37156), (88, 37093), (110, 37048), (144, 36970),

Gene: Gspu1_65 Start: 41393, Stop: 42007, Start Num: 30

Candidate Starts for Gspu1_65:

(13, 41279), (14, 41288), (15, 41294), (16, 41315), (29, 41387), (Start: 30 @41393 has 10 MA's), (33, 41408), (45, 41516), (51, 41543), (53, 41549), (55, 41555), (56, 41558), (60, 41576), (64, 41612), (76, 41681), (83, 41705), (91, 41720), (94, 41735), (100, 41744), (103, 41750), (112, 41765), (125, 41792), (141, 41843), (147, 41861), (161, 41897), (177, 41933), (179, 41948), (186, 41996),

Gene: Hami1_47 Start: 33410, Stop: 33012, Start Num: 28

Candidate Starts for Hami1_47:

(Start: 28 @33410 has 228 MA's), (40, 33311), (53, 33257), (57, 33242), (59, 33233), (151, 33098), (178, 33044),

Gene: Hammer_59 Start: 37003, Stop: 36566, Start Num: 28

Candidate Starts for Hammer_59:

(Start: 28 @37003 has 228 MA's), (52, 36859), (53, 36856), (60, 36829), (70, 36763), (110, 36655), (144, 36577),

Gene: Heffalump_56 Start: 38973, Stop: 38479, Start Num: 28

Candidate Starts for Heffalump_56:

(Start: 28 @38973 has 228 MA's), (49, 38835), (51, 38829), (52, 38826), (53, 38823), (60, 38796), (62, 38769), (70, 38730), (74, 38700), (81, 38679), (82, 38673),

Gene: Helmet_61 Start: 37472, Stop: 37029, Start Num: 28

Candidate Starts for Helmet_61:

(Start: 28 @37472 has 228 MA's), (52, 37328), (53, 37325), (60, 37298), (70, 37232), (88, 37172), (110, 37127),

Gene: Herbertwm_55 Start: 37937, Stop: 37377, Start Num: 28

Candidate Starts for Herbertwm_55:

(7, 38162), (Start: 28 @37937 has 228 MA's), (37, 37868), (53, 37772), (54, 37769), (56, 37763), (89, 37625), (98, 37601), (108, 37583), (162, 37448), (175, 37418),

Gene: HermioneGrange_53 Start: 38256, Stop: 37777, Start Num: 28

Candidate Starts for HermioneGrange_53:

(19, 38298), (Start: 24 @38268 has 1 MA's), (Start: 28 @38256 has 228 MA's), (40, 38157), (53, 38103), (57, 38088), (59, 38079), (80, 37959), (151, 37863), (178, 37809),

Gene: Hexamo_59 Start: 37102, Stop: 36659, Start Num: 28

Candidate Starts for Hexamo_59:

(Start: 28 @37102 has 228 MA's), (52, 36958), (53, 36955), (60, 36928), (70, 36862), (88, 36802), (110, 36757),

Gene: Hoot_53 Start: 34860, Stop: 34417, Start Num: 28

Candidate Starts for Hoot_53:

(Start: 28 @34860 has 228 MA's), (52, 34716), (53, 34713), (60, 34686), (70, 34620), (88, 34560), (110, 34515),

Gene: Huffu_72 Start: 42298, Stop: 42690, Start Num: 30

Candidate Starts for Huffu_72:

(Start: 30 @42298 has 10 MA's), (36, 42337), (40, 42400), (41, 42409), (53, 42454), (54, 42457), (64, 42517), (96, 42625), (132, 42667),

Gene: HuhtaEnerson15_49 Start: 36845, Stop: 36351, Start Num: 28

Candidate Starts for HuhtaEnerson15_49:

(9, 37010), (10, 36992), (Start: 28 @36845 has 228 MA's), (40, 36746), (49, 36704), (50, 36701), (53, 36692), (127, 36473), (158, 36395), (171, 36365),

Gene: IgnatiusPatJac_54 Start: 38566, Stop: 38168, Start Num: 28

Candidate Starts for IgnatiusPatJac_54:

(Start: 28 @38566 has 228 MA's), (40, 38467), (53, 38413), (57, 38398), (59, 38389), (151, 38254), (178, 38200),

Gene: Indra_62 Start: 37473, Stop: 37030, Start Num: 28

Candidate Starts for Indra_62:

(Start: 28 @37473 has 228 MA's), (52, 37329), (53, 37326), (60, 37299), (70, 37233), (88, 37173), (110, 37128),

Gene: Inyanga_50 Start: 36800, Stop: 36402, Start Num: 28

Candidate Starts for Inyanga_50:

(Start: 28 @36800 has 228 MA's), (40, 36701), (53, 36647), (57, 36632), (59, 36623), (151, 36488), (178, 36434),

Gene: Iqorha_50 Start: 36799, Stop: 36401, Start Num: 28

Candidate Starts for Iqorha_50:

(Start: 28 @36799 has 228 MA's), (40, 36700), (53, 36646), (57, 36631), (59, 36622), (151, 36487), (178, 36433),

Gene: Isiphiwo_56 Start: 36576, Stop: 36142, Start Num: 28

Candidate Starts for Isiphiwo_56:

(Start: 28 @36576 has 228 MA's), (52, 36432), (53, 36429), (60, 36402), (70, 36336), (88, 36276), (144, 36153),

Gene: JC27_55 Start: 38691, Stop: 38209, Start Num: 26

Candidate Starts for JC27_55:

(18, 38742), (Start: 26 @38691 has 18 MA's), (40, 38589), (53, 38535), (57, 38520), (59, 38511), (80, 38391), (151, 38295), (178, 38241),

Gene: Jabiru_51 Start: 36770, Stop: 36282, Start Num: 28

Candidate Starts for Jabiru_51:

(10, 36917), (Start: 28 @36770 has 228 MA's), (40, 36671), (49, 36629), (50, 36626), (53, 36617), (56, 36608), (122, 36413), (126, 36404), (171, 36296),

Gene: Jasper_55 Start: 37712, Stop: 37257, Start Num: 28

Candidate Starts for Jasper_55:

(Start: 28 @37712 has 228 MA's), (40, 37613), (53, 37559), (57, 37544), (59, 37535), (116, 37418), (131, 37388), (133, 37379), (138, 37367), (151, 37343), (178, 37289),

Gene: Jeeves_62 Start: 38354, Stop: 37857, Start Num: 27

Candidate Starts for Jeeves_62:

(Start: 27 @38354 has 2 MA's), (49, 38219), (51, 38213), (52, 38210), (53, 38207), (60, 38180), (62, 38153), (70, 38114), (74, 38084), (81, 38063), (156, 37886),

Gene: Jeffabunny_59 Start: 37099, Stop: 36656, Start Num: 28

Candidate Starts for Jeffabunny_59:

(Start: 28 @37099 has 228 MA's), (52, 36955), (53, 36952), (60, 36925), (70, 36859), (88, 36799), (110, 36754),

Gene: Jerm2_54 Start: 38511, Stop: 38032, Start Num: 28

Candidate Starts for Jerm2_54:

(19, 38553), (Start: 24 @38523 has 1 MA's), (Start: 28 @38511 has 228 MA's), (40, 38412), (53, 38358), (57, 38343), (59, 38334), (80, 38214), (151, 38118), (178, 38064),

Gene: JewelBug_59 Start: 37215, Stop: 36772, Start Num: 28

Candidate Starts for JewelBug_59:

(Start: 28 @37215 has 228 MA's), (52, 37071), (53, 37068), (60, 37041), (70, 36975), (110, 36870), (119, 36855),

Gene: Jordennis_58 Start: 36696, Stop: 36262, Start Num: 28

Candidate Starts for Jordennis_58:

(Start: 28 @36696 has 228 MA's), (52, 36552), (53, 36549), (60, 36522), (62, 36495), (70, 36456), (88, 36396), (110, 36351), (144, 36273),

Gene: JoshKayV_59 Start: 38828, Stop: 38325, Start Num: 26

Candidate Starts for JoshKayV_59:

(Start: 26 @38828 has 18 MA's), (49, 38687), (51, 38681), (52, 38678), (53, 38675), (60, 38648), (70, 38582), (81, 38531),

Gene: Journey13_51 Start: 36542, Stop: 36054, Start Num: 28

Candidate Starts for Journey13_51:

(Start: 28 @36542 has 228 MA's), (49, 36404), (51, 36398), (52, 36395), (53, 36392), (60, 36365), (66, 36311), (70, 36299), (163, 36071),

Gene: Jovo_49 Start: 37031, Stop: 36564, Start Num: 28

Candidate Starts for Jovo_49:

(Start: 28 @37031 has 228 MA's), (40, 36932), (53, 36878), (54, 36875), (55, 36872), (145, 36635), (167, 36581),

Gene: Jsquared_55 Start: 37136, Stop: 36672, Start Num: 28

Candidate Starts for Jsquared_55:

(Start: 28 @37136 has 228 MA's), (49, 36998), (51, 36992), (52, 36989), (53, 36986), (60, 36959), (62, 36932), (70, 36893), (107, 36812), (115, 36800), (145, 36722),

Gene: Kalpine_55 Start: 38383, Stop: 37931, Start Num: 28

Candidate Starts for Kalpine_55:

(Start: 28 @38383 has 228 MA's), (49, 38245), (51, 38239), (52, 38236), (53, 38233), (60, 38206), (62, 38179), (70, 38140), (101, 38059),

Gene: Kazan_59 Start: 37015, Stop: 36572, Start Num: 28

Candidate Starts for Kazan_59:

(Start: 28 @37015 has 228 MA's), (52, 36871), (53, 36868), (60, 36841), (70, 36775), (88, 36715), (110, 36670),

Gene: Kenmech_57 Start: 40335, Stop: 39925, Start Num: 28

Candidate Starts for Kenmech_57:

(Start: 28 @40335 has 228 MA's), (40, 40236), (53, 40182), (57, 40167), (59, 40158), (151, 40023), (178, 39957),

Gene: Kerberos_59 Start: 37999, Stop: 37544, Start Num: 28

Candidate Starts for Kerberos_59:

(Start: 28 @37999 has 228 MA's), (49, 37858), (53, 37846), (56, 37837), (64, 37783), (106, 37708), (118, 37687), (120, 37678), (183, 37564),

Gene: Kipper29_58 Start: 37028, Stop: 36585, Start Num: 28

Candidate Starts for Kipper29_58:

(Start: 28 @37028 has 228 MA's), (52, 36884), (53, 36881), (60, 36854), (70, 36788), (88, 36728), (110, 36683),

Gene: Klodlith_56 Start: 37715, Stop: 37278, Start Num: 28

Candidate Starts for Klodlith_56:

(Start: 28 @37715 has 228 MA's), (40, 37616), (53, 37562), (124, 37394), (184, 37283),

Gene: Koduck_58 Start: 37415, Stop: 36957, Start Num: 28

Candidate Starts for Koduck_58:

(Start: 28 @37415 has 228 MA's), (49, 37277), (52, 37268), (53, 37265), (60, 37238), (62, 37211), (70, 37172), (115, 37082), (165, 36962),

Gene: Koko_60 Start: 37533, Stop: 37090, Start Num: 28

Candidate Starts for Koko_60:

(Start: 28 @37533 has 228 MA's), (52, 37389), (53, 37386), (60, 37359), (70, 37293), (88, 37233), (110, 37188),

Gene: L5_55 Start: 37502, Stop: 37032, Start Num: 28

Candidate Starts for L5_55:

(Start: 28 @37502 has 228 MA's), (49, 37364), (52, 37355), (53, 37352), (60, 37325), (62, 37298), (70, 37259), (85, 37205), (95, 37184), (110, 37157), (124, 37130), (129, 37115), (152, 37064),

Gene: LadyBird_62 Start: 39099, Stop: 38653, Start Num: 28

Candidate Starts for LadyBird_62:

(Start: 28 @39099 has 228 MA's), (49, 38958), (51, 38952), (52, 38949), (53, 38946), (60, 38919), (62, 38892), (70, 38853),

Gene: Lesedi_50 Start: 37197, Stop: 36799, Start Num: 28

Candidate Starts for Lesedi_50:

(Start: 28 @37197 has 228 MA's), (40, 37098), (53, 37044), (57, 37029), (59, 37020), (151, 36885), (161, 36858), (178, 36831),

Gene: Lev2_49 Start: 36663, Stop: 36196, Start Num: 28

Candidate Starts for Lev2_49:

(Start: 28 @36663 has 228 MA's), (40, 36564), (53, 36510), (54, 36507), (55, 36504), (145, 36267), (167, 36213),

Gene: Levia_51 Start: 38035, Stop: 37625, Start Num: 28

Candidate Starts for Levia_51:

(Start: 28 @38035 has 228 MA's), (40, 37936), (53, 37882), (57, 37867), (59, 37858), (151, 37723), (179, 37657),

Gene: LilJank_77 Start: 48194, Stop: 48715, Start Num: 32

Candidate Starts for LilJank_77:

(Start: 32 @48194 has 3 MA's), (34, 48206), (36, 48227), (40, 48284), (43, 48299), (49, 48326), (52, 48335), (53, 48338), (58, 48356), (66, 48416), (69, 48425), (72, 48446), (75, 48464), (116, 48560), (120, 48572), (134, 48620),

Gene: Lilbunny_58 Start: 37103, Stop: 36660, Start Num: 28

Candidate Starts for Lilbunny_58:

(Start: 28 @37103 has 228 MA's), (52, 36959), (53, 36956), (60, 36929), (70, 36863), (88, 36803), (110, 36758),

Gene: LittleCherry_49 Start: 36865, Stop: 36371, Start Num: 28

Candidate Starts for LittleCherry_49:

(21, 36895), (Start: 28 @36865 has 228 MA's), (40, 36766), (49, 36724), (50, 36721), (53, 36712), (127, 36493), (158, 36415), (171, 36385),

Gene: Lokk_54 Start: 37531, Stop: 37127, Start Num: 28

Candidate Starts for Lokk_54:

(5, 37756), (6, 37747), (Start: 28 @37531 has 228 MA's), (49, 37396), (51, 37390), (52, 37387), (53, 37384), (60, 37357), (62, 37330), (70, 37291), (89, 37261), (124, 37192), (130, 37168),

Gene: Luchador_61 Start: 39939, Stop: 39442, Start Num: 26

Candidate Starts for Luchador_61:

(Start: 26 @39939 has 18 MA's), (49, 39804), (51, 39798), (52, 39795), (53, 39792), (60, 39765), (62, 39738), (70, 39699), (74, 39669), (81, 39648), (156, 39471),

Gene: Lucyedi_58 Start: 38070, Stop: 37621, Start Num: 28

Candidate Starts for Lucyedi_58:

(Start: 28 @38070 has 228 MA's), (52, 37926), (53, 37923), (60, 37896), (62, 37869), (66, 37842), (90, 37773), (101, 37755),

Gene: LunarLander_55 Start: 38494, Stop: 38096, Start Num: 28

Candidate Starts for LunarLander_55:

(Start: 28 @38494 has 228 MA's), (40, 38395), (53, 38341), (57, 38326), (59, 38317), (151, 38182), (178, 38128),

Gene: MPlant7149_52 Start: 37293, Stop: 36895, Start Num: 28

Candidate Starts for MPlant7149_52:

(Start: 28 @37293 has 228 MA's), (40, 37194), (53, 37140), (57, 37125), (59, 37116), (151, 36981), (178, 36927),

Gene: Magnar_53 Start: 38738, Stop: 38340, Start Num: 28

Candidate Starts for Magnar_53:

(Start: 28 @38738 has 228 MA's), (40, 38639), (53, 38585), (57, 38570), (59, 38561), (151, 38426), (178, 38372),

Gene: MajorMajor_56 Start: 37152, Stop: 36703, Start Num: 28

Candidate Starts for MajorMajor_56:

(Start: 28 @37152 has 228 MA's), (49, 37014), (51, 37008), (52, 37005), (53, 37002), (60, 36975), (62, 36948), (70, 36909), (143, 36738), (165, 36708),

Gene: Makemake_53 Start: 38800, Stop: 38399, Start Num: 26

Candidate Starts for Makemake_53:

(18, 38851), (Start: 26 @38800 has 18 MA's), (40, 38698), (53, 38644), (57, 38629), (59, 38620), (151, 38485), (178, 38431),

Gene: Maminiaina_56 Start: 37958, Stop: 37473, Start Num: 28

Candidate Starts for Maminiaina_56:

(7, 38183), (8, 38174), (Start: 28 @37958 has 228 MA's), (49, 37820), (51, 37814), (52, 37811), (53, 37808), (60, 37781), (62, 37754), (70, 37715), (109, 37610), (153, 37508), (160, 37487), (165, 37478),

Gene: Manatee_55 Start: 38824, Stop: 38426, Start Num: 28

Candidate Starts for Manatee_55:

(Start: 28 @38824 has 228 MA's), (40, 38725), (53, 38671), (57, 38656), (59, 38647), (151, 38512), (178, 38458),

Gene: Marchy_48 Start: 35728, Stop: 35330, Start Num: 28

Candidate Starts for Marchy_48:

(Start: 28 @35728 has 228 MA's), (40, 35629), (53, 35575), (57, 35560), (59, 35551), (151, 35416), (178, 35362),

Gene: Marco3_56 Start: 40086, Stop: 39685, Start Num: 26

Candidate Starts for Marco3_56:

(18, 40137), (Start: 26 @40086 has 18 MA's), (40, 39984), (53, 39930), (57, 39915), (59, 39906), (151, 39771), (161, 39744), (178, 39717),

Gene: MarysWell_49 Start: 37162, Stop: 36695, Start Num: 28

Candidate Starts for MarysWell_49:

(20, 37198), (Start: 28 @37162 has 228 MA's), (40, 37063), (53, 37009), (54, 37006), (55, 37003), (145, 36766), (167, 36712),

Gene: McFly_58 Start: 37009, Stop: 36566, Start Num: 28

Candidate Starts for McFly_58:

(Start: 28 @37009 has 228 MA's), (52, 36865), (53, 36862), (60, 36835), (70, 36769), (88, 36709), (110, 36664),

Gene: MegTheThird_56 Start: 37761, Stop: 37324, Start Num: 28
Candidate Starts for MegTheThird_56:
(2, 38055), (Start: 28 @37761 has 228 MA's), (53, 37608), (67, 37524), (104, 37479), (148, 37416),
(184, 37329),

Gene: Micasa_50 Start: 37033, Stop: 36539, Start Num: 28
Candidate Starts for Micasa_50:
(Start: 28 @37033 has 228 MA's), (50, 36889), (52, 36883), (53, 36880), (127, 36661), (158, 36583),
(171, 36553),

Gene: Michley_53 Start: 37767, Stop: 37369, Start Num: 28
Candidate Starts for Michley_53:
(Start: 28 @37767 has 228 MA's), (40, 37668), (41, 37659), (53, 37614), (57, 37599), (59, 37590),
(151, 37455), (178, 37401),

Gene: Midas2_48 Start: 36935, Stop: 36441, Start Num: 28
Candidate Starts for Midas2_48:
(Start: 28 @36935 has 228 MA's), (50, 36791), (52, 36785), (53, 36782), (127, 36563), (158, 36485),
(171, 36455),

Gene: Miko_54 Start: 38309, Stop: 37905, Start Num: 28
Candidate Starts for Miko_54:
(5, 38534), (6, 38525), (Start: 28 @38309 has 228 MA's), (49, 38174), (51, 38168), (52, 38165), (53,
38162), (60, 38135), (62, 38108), (70, 38069), (89, 38039), (96, 38024), (124, 37970), (130, 37946),

Gene: Milcery_49 Start: 36816, Stop: 36328, Start Num: 28
Candidate Starts for Milcery_49:
(21, 36846), (Start: 28 @36816 has 228 MA's), (40, 36717), (49, 36675), (50, 36672), (53, 36663),
(127, 36444),

Gene: Minispark_56 Start: 37714, Stop: 37256, Start Num: 28
Candidate Starts for Minispark_56:
(Start: 28 @37714 has 228 MA's), (49, 37576), (51, 37570), (52, 37567), (53, 37564), (60, 37537), (62,
37510), (70, 37471), (109, 37390), (140, 37318), (165, 37261),

Gene: MissWhite_56 Start: 36656, Stop: 36198, Start Num: 28
Candidate Starts for MissWhite_56:
(Start: 28 @36656 has 228 MA's), (49, 36518), (51, 36512), (52, 36509), (53, 36506), (60, 36479), (70,
36413), (136, 36260), (151, 36236), (155, 36227), (165, 36203),

Gene: Mkhuseli_52 Start: 37334, Stop: 36936, Start Num: 28
Candidate Starts for Mkhuseli_52:
(Start: 28 @37334 has 228 MA's), (40, 37235), (53, 37181), (57, 37166), (59, 37157), (151, 37022),
(178, 36968),

Gene: Monet_56 Start: 39466, Stop: 39068, Start Num: 28
Candidate Starts for Monet_56:
(Start: 28 @39466 has 228 MA's), (40, 39367), (53, 39313), (57, 39298), (59, 39289), (151, 39154),
(178, 39100),

Gene: MrGordo_53 Start: 38500, Stop: 38102, Start Num: 28
Candidate Starts for MrGordo_53:

(Start: 28 @38500 has 228 MA's), (40, 38401), (53, 38347), (57, 38332), (59, 38323), (151, 38188), (161, 38161), (178, 38134),

Gene: Mule_50 Start: 36434, Stop: 36033, Start Num: 26

Candidate Starts for Mule_50:

(18, 36485), (Start: 26 @36434 has 18 MA's), (40, 36332), (53, 36278), (57, 36263), (59, 36254), (151, 36119), (178, 36065),

Gene: Naca_50 Start: 37309, Stop: 36818, Start Num: 28

Candidate Starts for Naca_50:

(10, 37456), (17, 37375), (21, 37339), (Start: 28 @37309 has 228 MA's), (40, 37210), (49, 37168), (50, 37165), (53, 37156), (122, 36952), (126, 36943), (148, 36886), (171, 36832),

Gene: Naji_59 Start: 38000, Stop: 37545, Start Num: 28

Candidate Starts for Naji_59:

(Start: 28 @38000 has 228 MA's), (49, 37859), (53, 37847), (56, 37838), (64, 37784), (106, 37709), (118, 37688), (120, 37679), (183, 37565),

Gene: Neeharika16_57 Start: 36469, Stop: 36026, Start Num: 28

Candidate Starts for Neeharika16_57:

(Start: 28 @36469 has 228 MA's), (52, 36325), (53, 36322), (60, 36295), (70, 36229), (88, 36169), (110, 36124),

Gene: Neville_74 Start: 46925, Stop: 47374, Start Num: 32

Candidate Starts for Neville_74:

(Start: 32 @46925 has 3 MA's), (34, 46937), (36, 46958), (40, 47015), (43, 47030), (49, 47057), (52, 47066), (53, 47069), (66, 47147), (69, 47156), (72, 47177), (84, 47195),

Gene: Newrala_58 Start: 37011, Stop: 36568, Start Num: 28

Candidate Starts for Newrala_58:

(Start: 28 @37011 has 228 MA's), (52, 36867), (53, 36864), (60, 36837), (70, 36771), (88, 36711), (110, 36666),

Gene: Niza_56 Start: 40289, Stop: 39891, Start Num: 28

Candidate Starts for Niza_56:

(Start: 28 @40289 has 228 MA's), (40, 40190), (53, 40136), (57, 40121), (59, 40112), (151, 39977), (178, 39923),

Gene: Odin_55 Start: 37059, Stop: 36571, Start Num: 28

Candidate Starts for Odin_55:

(Start: 28 @37059 has 228 MA's), (38, 36984), (48, 36921), (49, 36915), (53, 36903), (68, 36801), (119, 36714), (174, 36582),

Gene: PSullivan_53 Start: 37380, Stop: 36901, Start Num: 28

Candidate Starts for PSullivan_53:

(19, 37422), (Start: 24 @37392 has 1 MA's), (Start: 28 @37380 has 228 MA's), (40, 37281), (53, 37227), (57, 37212), (59, 37203), (80, 37083), (151, 36987), (178, 36933),

Gene: PacerPaul_53 Start: 38994, Stop: 38596, Start Num: 28

Candidate Starts for PacerPaul_53:

(Start: 28 @38994 has 228 MA's), (40, 38895), (53, 38841), (57, 38826), (59, 38817), (151, 38682), (178, 38628),

Gene: PainterBoy_58 Start: 38029, Stop: 37562, Start Num: 28
Candidate Starts for PainterBoy_58:
(Start: 28 @38029 has 228 MA's), (48, 37891), (53, 37873), (64, 37795), (66, 37777), (68, 37771), (87, 37735), (135, 37648), (154, 37600), (169, 37573),

Gene: Payneful_53 Start: 38445, Stop: 38047, Start Num: 28
Candidate Starts for Payneful_53:
(Start: 28 @38445 has 228 MA's), (40, 38346), (53, 38292), (57, 38277), (59, 38268), (151, 38133), (178, 38079),

Gene: Pelly_53 Start: 38399, Stop: 37998, Start Num: 26
Candidate Starts for Pelly_53:
(18, 38450), (Start: 26 @38399 has 18 MA's), (40, 38297), (53, 38243), (57, 38228), (59, 38219), (151, 38084), (178, 38030),

Gene: Pepe_50 Start: 37214, Stop: 36804, Start Num: 28
Candidate Starts for Pepe_50:
(Start: 28 @37214 has 228 MA's), (40, 37115), (53, 37061), (57, 37046), (59, 37037), (151, 36902), (179, 36836),

Gene: Perseus_53 Start: 39320, Stop: 38919, Start Num: 26
Candidate Starts for Perseus_53:
(18, 39371), (Start: 26 @39320 has 18 MA's), (40, 39218), (53, 39164), (57, 39149), (59, 39140), (151, 39005), (178, 38951),

Gene: Petruccio_53 Start: 38090, Stop: 37635, Start Num: 28
Candidate Starts for Petruccio_53:
(Start: 28 @38090 has 228 MA's), (40, 37991), (53, 37937), (57, 37922), (59, 37913), (116, 37796), (131, 37766), (133, 37757), (138, 37745), (151, 37721), (178, 37667),

Gene: PetterN_54 Start: 36924, Stop: 36436, Start Num: 28
Candidate Starts for PetterN_54:
(Start: 28 @36924 has 228 MA's), (40, 36825), (49, 36783), (50, 36780), (53, 36771), (56, 36762), (126, 36558), (171, 36450),

Gene: Ph8s_58 Start: 37416, Stop: 36925, Start Num: 28
Candidate Starts for Ph8s_58:
(3, 37707), (8, 37632), (Start: 28 @37416 has 228 MA's), (48, 37275), (49, 37269), (53, 37257), (68, 37155), (119, 37068),

Gene: Pharaoh_52 Start: 38002, Stop: 37490, Start Num: 28
Candidate Starts for Pharaoh_52:
(Start: 28 @38002 has 228 MA's), (39, 37918), (49, 37849), (50, 37846), (53, 37837), (54, 37834), (65, 37765), (74, 37732), (166, 37549), (180, 37501), (182, 37495),

Gene: PherrisBueller_53 Start: 37363, Stop: 36890, Start Num: 28
Candidate Starts for PherrisBueller_53:
(Start: 28 @37363 has 228 MA's), (40, 37264), (53, 37210), (57, 37195), (59, 37186), (116, 37069), (131, 37021), (133, 37012), (138, 37000), (151, 36976), (178, 36922),

Gene: Phillis_55 Start: 36641, Stop: 36165, Start Num: 28
Candidate Starts for Phillis_55:

(Start: 28 @36641 has 228 MA's), (44, 36524), (49, 36488), (52, 36479), (53, 36476), (99, 36344), (157, 36209), (172, 36176),

Gene: PhineBark_53 Start: 39053, Stop: 38643, Start Num: 28

Candidate Starts for PhineBark_53:

(Start: 28 @39053 has 228 MA's), (40, 38954), (53, 38900), (57, 38885), (59, 38876), (151, 38741), (179, 38675),

Gene: Phlorence_47 Start: 36408, Stop: 35941, Start Num: 28

Candidate Starts for Phlorence_47:

(Start: 28 @36408 has 228 MA's), (40, 36309), (53, 36255), (54, 36252), (55, 36249), (145, 36012), (167, 35958),

Gene: PhrostyMug_52 Start: 38599, Stop: 38198, Start Num: 26

Candidate Starts for PhrostyMug_52:

(18, 38650), (Start: 26 @38599 has 18 MA's), (40, 38497), (53, 38443), (57, 38428), (59, 38419), (151, 38284), (178, 38230),

Gene: PickleBack_49 Start: 36655, Stop: 36188, Start Num: 28

Candidate Starts for PickleBack_49:

(Start: 28 @36655 has 228 MA's), (40, 36556), (53, 36502), (54, 36499), (55, 36496), (145, 36259), (167, 36205),

Gene: Pita2_56 Start: 38877, Stop: 38398, Start Num: 28

Candidate Starts for Pita2_56:

(19, 38919), (Start: 24 @38889 has 1 MA's), (Start: 28 @38877 has 228 MA's), (40, 38778), (53, 38724), (57, 38709), (59, 38700), (80, 38580), (151, 38484), (178, 38430),

Gene: Pmask_58 Start: 37012, Stop: 36569, Start Num: 28

Candidate Starts for Pmask_58:

(Start: 28 @37012 has 228 MA's), (52, 36868), (53, 36865), (60, 36838), (70, 36772), (88, 36712), (110, 36667),

Gene: Polyphemus_60 Start: 37394, Stop: 36951, Start Num: 28

Candidate Starts for Polyphemus_60:

(Start: 28 @37394 has 228 MA's), (52, 37250), (53, 37247), (60, 37220), (70, 37154), (88, 37094), (110, 37049),

Gene: Pomar16_59 Start: 38040, Stop: 37585, Start Num: 28

Candidate Starts for Pomar16_59:

(Start: 28 @38040 has 228 MA's), (49, 37899), (53, 37887), (56, 37878), (64, 37824), (106, 37749), (118, 37728), (120, 37719), (183, 37605),

Gene: Power_56 Start: 38208, Stop: 37714, Start Num: 28

Candidate Starts for Power_56:

(Start: 28 @38208 has 228 MA's), (49, 38070), (51, 38064), (52, 38061), (53, 38058), (60, 38031), (62, 38004), (70, 37965), (114, 37851), (140, 37776),

Gene: Priamo_60 Start: 36762, Stop: 36328, Start Num: 28

Candidate Starts for Priamo_60:

(Start: 28 @36762 has 228 MA's), (52, 36618), (53, 36615), (60, 36588), (70, 36522), (110, 36417), (144, 36339),

Gene: Prinashe11_49 Start: 36718, Stop: 36230, Start Num: 28

Candidate Starts for Prinashe11_49:

(21, 36748), (Start: 28 @36718 has 228 MA's), (40, 36619), (49, 36577), (50, 36574), (53, 36565), (127, 36346), (167, 36247),

Gene: QueenB2_56 Start: 38186, Stop: 37692, Start Num: 28

Candidate Starts for QueenB2_56:

(Start: 28 @38186 has 228 MA's), (49, 38048), (51, 38042), (52, 38039), (53, 38036), (60, 38009), (62, 37982), (70, 37943), (74, 37913), (81, 37892), (82, 37886),

Gene: QueenBeesly_57 Start: 38155, Stop: 37661, Start Num: 28

Candidate Starts for QueenBeesly_57:

(Start: 28 @38155 has 228 MA's), (49, 38017), (51, 38011), (52, 38008), (53, 38005), (60, 37978), (62, 37951), (70, 37912), (74, 37882), (114, 37798), (140, 37723),

Gene: Quokka_55 Start: 37152, Stop: 36703, Start Num: 28

Candidate Starts for Quokka_55:

(Start: 28 @37152 has 228 MA's), (49, 37014), (51, 37008), (52, 37005), (53, 37002), (60, 36975), (62, 36948), (70, 36909), (143, 36738), (165, 36708),

Gene: Rabbitrun_77 Start: 47112, Stop: 47639, Start Num: 32

Candidate Starts for Rabbitrun_77:

(Start: 32 @47112 has 3 MA's), (34, 47124), (36, 47145), (40, 47202), (43, 47217), (49, 47244), (52, 47253), (53, 47256), (66, 47334), (69, 47343), (72, 47364), (75, 47382), (120, 47490),

Gene: Rachaly_56 Start: 38454, Stop: 38050, Start Num: 28

Candidate Starts for Rachaly_56:

(5, 38679), (6, 38670), (Start: 28 @38454 has 228 MA's), (49, 38319), (51, 38313), (52, 38310), (53, 38307), (60, 38280), (62, 38253), (70, 38214), (89, 38184), (124, 38115), (130, 38091),

Gene: Rahalelujah_57 Start: 37729, Stop: 37271, Start Num: 28

Candidate Starts for Rahalelujah_57:

(Start: 28 @37729 has 228 MA's), (49, 37591), (51, 37585), (52, 37582), (53, 37579), (60, 37552), (62, 37525), (70, 37486), (109, 37405), (140, 37333), (165, 37276),

Gene: Refuge_55 Start: 39270, Stop: 38728, Start Num: 28

Candidate Starts for Refuge_55:

(4, 39543), (7, 39495), (8, 39486), (Start: 28 @39270 has 228 MA's), (40, 39171), (49, 39123), (53, 39111), (57, 39096), (89, 38964), (115, 38913), (173, 38766), (182, 38733),

Gene: Rhynn_52 Start: 37733, Stop: 37335, Start Num: 28

Candidate Starts for Rhynn_52:

(Start: 28 @37733 has 228 MA's), (40, 37634), (53, 37580), (57, 37565), (59, 37556), (151, 37421), (178, 37367),

Gene: Rifter_59 Start: 36599, Stop: 36162, Start Num: 28

Candidate Starts for Rifter_59:

(Start: 28 @36599 has 228 MA's), (52, 36455), (53, 36452), (60, 36425), (70, 36359), (110, 36251), (144, 36173),

Gene: Rohr_54 Start: 38557, Stop: 38078, Start Num: 28

Candidate Starts for Rohr_54:

(19, 38599), (Start: 24 @38569 has 1 MA's), (Start: 28 @38557 has 228 MA's), (40, 38458), (53, 38404), (57, 38389), (59, 38380), (80, 38260), (151, 38164), (178, 38110),

Gene: Roksolana_60 Start: 37433, Stop: 36996, Start Num: 28

Candidate Starts for Roksolana_60:

(Start: 28 @37433 has 228 MA's), (52, 37289), (53, 37286), (60, 37259), (70, 37193), (110, 37085), (144, 37007),

Gene: Rufus_54 Start: 38103, Stop: 37705, Start Num: 28

Candidate Starts for Rufus_54:

(19, 38145), (Start: 24 @38115 has 1 MA's), (Start: 28 @38103 has 228 MA's), (40, 38004), (53, 37950), (57, 37935), (59, 37926), (151, 37791), (178, 37737),

Gene: Rutherferd_55 Start: 38949, Stop: 38551, Start Num: 28

Candidate Starts for Rutherferd_55:

(Start: 28 @38949 has 228 MA's), (40, 38850), (53, 38796), (57, 38781), (59, 38772), (151, 38637), (161, 38610), (178, 38583),

Gene: Schmidt_71 Start: 41509, Stop: 41964, Start Num: 30

Candidate Starts for Schmidt_71:

(23, 41482), (Start: 30 @41509 has 10 MA's), (41, 41620), (47, 41638), (53, 41665), (54, 41668), (57, 41680), (60, 41692), (63, 41722), (64, 41728), (105, 41863), (108, 41869), (117, 41884), (121, 41899), (123, 41902), (139, 41947),

Gene: Scorpia_54 Start: 36983, Stop: 36492, Start Num: 28

Candidate Starts for Scorpia_54:

(Start: 28 @36983 has 228 MA's), (40, 36884), (49, 36842), (50, 36839), (53, 36830), (56, 36821), (122, 36626), (126, 36617), (148, 36560), (171, 36506),

Gene: Scowl_54 Start: 38673, Stop: 38194, Start Num: 28

Candidate Starts for Scowl_54:

(Start: 28 @38673 has 228 MA's), (40, 38574), (53, 38520), (57, 38505), (59, 38496), (80, 38376), (151, 38280), (178, 38226),

Gene: Seanderson_55 Start: 40050, Stop: 39571, Start Num: 28

Candidate Starts for Seanderson_55:

(Start: 28 @40050 has 228 MA's), (40, 39951), (53, 39897), (57, 39882), (59, 39873), (80, 39753), (151, 39657), (178, 39603),

Gene: SemperFi_58 Start: 38423, Stop: 37929, Start Num: 28

Candidate Starts for SemperFi_58:

(Start: 28 @38423 has 228 MA's), (49, 38285), (51, 38279), (52, 38276), (53, 38273), (60, 38246), (62, 38219), (70, 38180), (74, 38150), (114, 38066), (140, 37991),

Gene: Serenity_57 Start: 37359, Stop: 36895, Start Num: 28

Candidate Starts for Serenity_57:

(Start: 28 @37359 has 228 MA's), (49, 37221), (51, 37215), (52, 37212), (53, 37209), (60, 37182), (62, 37155), (70, 37116), (107, 37035), (115, 37023), (145, 36945),

Gene: Sibs6_55 Start: 37137, Stop: 36739, Start Num: 28

Candidate Starts for Sibs6_55:

(19, 37179), (Start: 24 @37149 has 1 MA's), (Start: 28 @37137 has 228 MA's), (40, 37038), (53, 36984), (57, 36969), (59, 36960), (151, 36825), (178, 36771),

Gene: Smairt_55 Start: 39592, Stop: 39191, Start Num: 26

Candidate Starts for Smairt_55:

(18, 39643), (Start: 26 @39592 has 18 MA's), (40, 39490), (53, 39436), (57, 39421), (59, 39412), (151, 39277), (178, 39223),

Gene: Smeadley_56 Start: 36818, Stop: 36348, Start Num: 28

Candidate Starts for Smeadley_56:

(1, 37103), (11, 36944), (Start: 28 @36818 has 228 MA's), (44, 36701), (49, 36665), (52, 36656), (53, 36653), (99, 36527), (150, 36410), (172, 36359),

Gene: SmellyB_58 Start: 37009, Stop: 36566, Start Num: 28

Candidate Starts for SmellyB_58:

(Start: 28 @37009 has 228 MA's), (52, 36865), (53, 36862), (60, 36835), (70, 36769), (88, 36709), (110, 36664),

Gene: SnapTap_57 Start: 38234, Stop: 37740, Start Num: 28

Candidate Starts for SnapTap_57:

(Start: 28 @38234 has 228 MA's), (49, 38096), (51, 38090), (52, 38087), (53, 38084), (60, 38057), (62, 38030), (70, 37991), (74, 37961), (114, 37877), (140, 37802),

Gene: SororFago_59 Start: 39270, Stop: 38767, Start Num: 27

Candidate Starts for SororFago_59:

(Start: 27 @39270 has 2 MA's), (49, 39135), (51, 39129), (52, 39126), (53, 39123), (60, 39096), (62, 39069), (70, 39030), (74, 39000), (81, 38979), (156, 38796),

Gene: SpikeBT_53 Start: 38361, Stop: 37963, Start Num: 28

Candidate Starts for SpikeBT_53:

(Start: 28 @38361 has 228 MA's), (40, 38262), (53, 38208), (57, 38193), (59, 38184), (151, 38049), (161, 38022), (178, 37995),

Gene: Splinter_72 Start: 43380, Stop: 43769, Start Num: 30

Candidate Starts for Splinter_72:

(Start: 30 @43380 has 10 MA's), (36, 43419), (40, 43482), (41, 43491), (53, 43536), (54, 43539), (64, 43599), (79, 43662), (96, 43704), (132, 43746),

Gene: StarStuff_59 Start: 38002, Stop: 37547, Start Num: 28

Candidate Starts for StarStuff_59:

(Start: 28 @38002 has 228 MA's), (49, 37861), (53, 37849), (56, 37840), (64, 37786), (106, 37711), (118, 37690), (120, 37681), (183, 37567),

Gene: Steamy_53 Start: 37734, Stop: 37234, Start Num: 28

Candidate Starts for Steamy_53:

(7, 37959), (8, 37950), (Start: 28 @37734 has 228 MA's), (34, 37725), (46, 37611), (49, 37596), (52, 37587), (53, 37584), (60, 37557), (62, 37530), (70, 37491), (75, 37458), (86, 37428), (92, 37413),

Gene: Stephig9_56 Start: 36929, Stop: 36414, Start Num: 28

Candidate Starts for Stephig9_56:

(11, 37055), (Start: 28 @36929 has 228 MA's), (43, 36815), (44, 36812), (52, 36767), (53, 36764), (90, 36617), (99, 36593), (110, 36572), (150, 36476), (172, 36425),

Gene: Sunhee_60 Start: 37715, Stop: 37224, Start Num: 26

Candidate Starts for Sunhee_60:

(Start: 26 @37715 has 18 MA's), (49, 37577), (51, 37571), (52, 37568), (53, 37565), (60, 37538), (62, 37511), (66, 37484), (70, 37472), (77, 37436), (156, 37256),

Gene: SuperAwesome_58 Start: 37014, Stop: 36580, Start Num: 28

Candidate Starts for SuperAwesome_58:

(Start: 28 @37014 has 228 MA's), (52, 36870), (53, 36867), (60, 36840), (70, 36774), (88, 36714),

Gene: SuperCallie99_57 Start: 36896, Stop: 36453, Start Num: 28

Candidate Starts for SuperCallie99_57:

(Start: 28 @36896 has 228 MA's), (52, 36752), (53, 36749), (60, 36722), (70, 36656), (88, 36596), (110, 36551),

Gene: Superchunk_55 Start: 36675, Stop: 36196, Start Num: 28

Candidate Starts for Superchunk_55:

(8, 36891), (Start: 28 @36675 has 228 MA's), (48, 36513), (49, 36507), (53, 36495), (68, 36393), (110, 36324), (118, 36312), (135, 36270), (165, 36201),

Gene: SweetiePie_57 Start: 38366, Stop: 37872, Start Num: 28

Candidate Starts for SweetiePie_57:

(Start: 28 @38366 has 228 MA's), (49, 38228), (51, 38222), (52, 38219), (53, 38216), (60, 38189), (62, 38162), (70, 38123), (74, 38093), (114, 38009), (140, 37934),

Gene: SwirlSquare_60 Start: 37597, Stop: 37061, Start Num: 28

Candidate Starts for SwirlSquare_60:

(Start: 28 @37597 has 228 MA's), (38, 37522), (48, 37459), (49, 37453), (53, 37441), (68, 37339), (87, 37288), (118, 37240), (119, 37234), (145, 37168), (164, 37123), (181, 37066),

Gene: SydNat_52 Start: 37663, Stop: 37196, Start Num: 28

Candidate Starts for SydNat_52:

(20, 37699), (Start: 28 @37663 has 228 MA's), (40, 37564), (53, 37510), (54, 37507), (55, 37504), (56, 37501), (145, 37267), (167, 37213),

Gene: TZGordon_73 Start: 42265, Stop: 42657, Start Num: 30

Candidate Starts for TZGordon_73:

(Start: 30 @42265 has 10 MA's), (36, 42304), (40, 42367), (41, 42376), (53, 42421), (54, 42424), (64, 42484), (96, 42592), (132, 42634),

Gene: Temprado_60 Start: 37472, Stop: 37029, Start Num: 28

Candidate Starts for Temprado_60:

(Start: 28 @37472 has 228 MA's), (52, 37328), (53, 37325), (60, 37298), (70, 37232), (88, 37172), (110, 37127),

Gene: Teodoridan_52 Start: 37810, Stop: 37400, Start Num: 28

Candidate Starts for Teodoridan_52:

(Start: 28 @37810 has 228 MA's), (40, 37711), (53, 37657), (57, 37642), (59, 37633), (151, 37498), (179, 37432),

Gene: Theia_48 Start: 37140, Stop: 36673, Start Num: 28

Candidate Starts for Theia_48:

(20, 37176), (Start: 28 @37140 has 228 MA's), (40, 37041), (53, 36987), (54, 36984), (55, 36981), (57, 36972), (145, 36744), (167, 36690),

Gene: Tiger_48 Start: 36329, Stop: 35862, Start Num: 28

Candidate Starts for Tiger_48:

(Start: 28 @36329 has 228 MA's), (40, 36230), (53, 36176), (54, 36173), (55, 36170), (145, 35933), (167, 35879),

Gene: TinaLin_71 Start: 41940, Stop: 42335, Start Num: 30

Candidate Starts for TinaLin_71:

(Start: 30 @41940 has 10 MA's), (40, 42042), (42, 42054), (53, 42096), (54, 42099), (57, 42111), (64, 42159), (93, 42264), (99, 42273), (132, 42312),

Gene: TopsytheTRex_53 Start: 37429, Stop: 36965, Start Num: 28

Candidate Starts for TopsytheTRex_53:

(Start: 28 @37429 has 228 MA's), (51, 37285), (52, 37282), (53, 37279), (60, 37252), (62, 37225), (70, 37186), (107, 37105), (115, 37093), (145, 37015),

Gene: Toaka_57 Start: 37937, Stop: 37467, Start Num: 28

Candidate Starts for Toaka_57:

(Start: 28 @37937 has 228 MA's), (46, 37814), (49, 37799), (52, 37790), (53, 37787), (60, 37760), (62, 37733), (70, 37694), (107, 37604), (122, 37574), (165, 37472),

Gene: Tomathan_59 Start: 38049, Stop: 37594, Start Num: 28

Candidate Starts for Tomathan_59:

(Start: 28 @38049 has 228 MA's), (49, 37908), (53, 37896), (56, 37887), (64, 37833), (118, 37737), (120, 37728), (183, 37614),

Gene: ToneTone_56 Start: 37032, Stop: 36589, Start Num: 28

Candidate Starts for ToneTone_56:

(Start: 28 @37032 has 228 MA's), (52, 36888), (53, 36885), (60, 36858), (70, 36792), (88, 36732), (110, 36687),

Gene: Travvers_59 Start: 37999, Stop: 37544, Start Num: 28

Candidate Starts for Travvers_59:

(Start: 28 @37999 has 228 MA's), (49, 37858), (53, 37846), (56, 37837), (64, 37783), (106, 37708), (118, 37687), (120, 37678), (183, 37564),

Gene: Trax_77 Start: 47818, Stop: 48339, Start Num: 32

Candidate Starts for Trax_77:

(Start: 32 @47818 has 3 MA's), (34, 47830), (36, 47851), (40, 47908), (43, 47923), (49, 47950), (52, 47959), (53, 47962), (58, 47980), (66, 48040), (69, 48049), (72, 48070), (75, 48088), (116, 48184), (120, 48196), (134, 48244),

Gene: Treddle_54 Start: 38978, Stop: 38580, Start Num: 28

Candidate Starts for Treddle_54:

(Start: 28 @38978 has 228 MA's), (40, 38879), (53, 38825), (57, 38810), (59, 38801), (151, 38666), (178, 38612),

Gene: Tripl3t_53 Start: 39615, Stop: 39205, Start Num: 28

Candidate Starts for Tripl3t_53:

(Start: 24 @39627 has 1 MA's), (Start: 28 @39615 has 228 MA's), (40, 39516), (53, 39462), (57, 39447), (59, 39438), (151, 39303), (178, 39237),

Gene: Trixie_55 Start: 38251, Stop: 37799, Start Num: 28

Candidate Starts for Trixie_55:

(Start: 28 @38251 has 228 MA's), (49, 38113), (51, 38107), (52, 38104), (53, 38101), (60, 38074), (62, 38047), (70, 38008), (101, 37927),

Gene: Trooper_58 Start: 38528, Stop: 38091, Start Num: 28

Candidate Starts for Trooper_58:

(Start: 28 @38528 has 228 MA's), (49, 38393), (51, 38387), (52, 38384), (53, 38381), (60, 38354), (62, 38327), (70, 38288), (124, 38156), (130, 38132),

Gene: Trouble_56 Start: 39709, Stop: 39311, Start Num: 28

Candidate Starts for Trouble_56:

(Start: 28 @39709 has 228 MA's), (40, 39610), (53, 39556), (57, 39541), (59, 39532), (151, 39397), (178, 39343),

Gene: Tucker_59 Start: 37201, Stop: 36758, Start Num: 28

Candidate Starts for Tucker_59:

(Start: 28 @37201 has 228 MA's), (52, 37057), (53, 37054), (60, 37027), (70, 36961), (88, 36901), (110, 36856),

Gene: TwoPeat_54 Start: 38091, Stop: 37693, Start Num: 28

Candidate Starts for TwoPeat_54:

(19, 38133), (Start: 24 @38103 has 1 MA's), (Start: 28 @38091 has 228 MA's), (40, 37992), (53, 37938), (57, 37923), (59, 37914), (151, 37779), (178, 37725),

Gene: UnionJack_51 Start: 36473, Stop: 35982, Start Num: 28

Candidate Starts for UnionJack_51:

(Start: 28 @36473 has 228 MA's), (40, 36374), (47, 36347), (49, 36332), (50, 36329), (53, 36320), (56, 36311), (73, 36209), (126, 36107), (171, 35996),

Gene: VC3_60 Start: 38397, Stop: 37942, Start Num: 28

Candidate Starts for VC3_60:

(Start: 28 @38397 has 228 MA's), (49, 38256), (53, 38244), (56, 38235), (64, 38181), (106, 38106), (118, 38085), (120, 38076), (183, 37962),

Gene: Vanisoa_57 Start: 39057, Stop: 38596, Start Num: 28

Candidate Starts for Vanisoa_57:

(Start: 28 @39057 has 228 MA's), (46, 38934), (49, 38919), (52, 38910), (53, 38907), (60, 38880), (62, 38853), (70, 38814), (165, 38601),

Gene: Vendetta_72 Start: 43380, Stop: 43769, Start Num: 30

Candidate Starts for Vendetta_72:

(Start: 30 @43380 has 10 MA's), (36, 43419), (40, 43482), (41, 43491), (53, 43536), (54, 43539), (64, 43599), (79, 43662), (96, 43704), (132, 43746),

Gene: Violet_51 Start: 38989, Stop: 38588, Start Num: 26

Candidate Starts for Violet_51:

(18, 39040), (Start: 26 @38989 has 18 MA's), (40, 38887), (53, 38833), (57, 38818), (59, 38809), (151, 38674), (178, 38620),

Gene: VohminGhazi_58 Start: 37010, Stop: 36567, Start Num: 28

Candidate Starts for VohminGhazi_58:

(Start: 28 @37010 has 228 MA's), (52, 36866), (53, 36863), (60, 36836), (70, 36770), (88, 36710), (110, 36665),

Gene: WeiHuaDA_59 Start: 39056, Stop: 38604, Start Num: 28

Candidate Starts for WeiHuaDA_59:

(Start: 28 @39056 has 228 MA's), (49, 38918), (51, 38912), (52, 38909), (53, 38906), (60, 38879), (62, 38852), (70, 38813), (78, 38774), (95, 38741),

Gene: Wheeler_54 Start: 38471, Stop: 38073, Start Num: 28

Candidate Starts for Wheeler_54:

(Start: 28 @38471 has 228 MA's), (40, 38372), (53, 38318), (57, 38303), (59, 38294), (151, 38159), (178, 38105),

Gene: Wiks_58 Start: 37103, Stop: 36660, Start Num: 28

Candidate Starts for Wiks_58:

(Start: 28 @37103 has 228 MA's), (52, 36959), (53, 36956), (60, 36929), (70, 36863), (88, 36803), (110, 36758),

Gene: WorldCup_56 Start: 37723, Stop: 37265, Start Num: 28

Candidate Starts for WorldCup_56:

(Start: 28 @37723 has 228 MA's), (49, 37585), (51, 37579), (52, 37576), (53, 37573), (60, 37546), (62, 37519), (70, 37480), (109, 37399), (140, 37327), (165, 37270),

Gene: WunderPhul_59 Start: 37101, Stop: 36658, Start Num: 28

Candidate Starts for WunderPhul_59:

(Start: 28 @37101 has 228 MA's), (52, 36957), (53, 36954), (60, 36927), (70, 36861), (88, 36801), (110, 36756),

Gene: Yecey3_58 Start: 37824, Stop: 37375, Start Num: 28

Candidate Starts for Yecey3_58:

(Start: 28 @37824 has 228 MA's), (49, 37683), (53, 37671), (59, 37647), (97, 37545), (118, 37509), (159, 37437), (184, 37380),

Gene: Yokurt_59 Start: 37103, Stop: 36660, Start Num: 28

Candidate Starts for Yokurt_59:

(Start: 28 @37103 has 228 MA's), (52, 36959), (53, 36956), (60, 36929), (70, 36863), (88, 36803), (110, 36758),

Gene: Zaka_59 Start: 37103, Stop: 36660, Start Num: 28

Candidate Starts for Zaka_59:

(Start: 28 @37103 has 228 MA's), (52, 36959), (53, 36956), (60, 36929), (70, 36863), (88, 36803), (110, 36758),

Gene: Zeeculate_51 Start: 39028, Stop: 38627, Start Num: 26

Candidate Starts for Zeeculate_51:

(18, 39079), (Start: 26 @39028 has 18 MA's), (40, 38926), (53, 38872), (57, 38857), (59, 38848), (151, 38713), (178, 38659),

Gene: Zeuska_52 Start: 38962, Stop: 38564, Start Num: 28

Candidate Starts for Zeuska_52:

(Start: 28 @38962 has 228 MA's), (40, 38863), (53, 38809), (57, 38794), (59, 38785), (151, 38650), (178, 38596),

Gene: Zimmer_54 Start: 38954, Stop: 38418, Start Num: 28

Candidate Starts for Zimmer_54:

(4, 39227), (7, 39179), (8, 39170), (Start: 28 @38954 has 228 MA's), (49, 38807), (53, 38795), (57, 38780), (89, 38648), (110, 38609), (182, 38423),

Gene: Zolita_51 Start: 37667, Stop: 37200, Start Num: 28

Candidate Starts for Zolita_51:

(20, 37703), (Start: 28 @37667 has 228 MA's), (40, 37568), (53, 37514), (54, 37511), (55, 37508), (56, 37505), (145, 37271), (167, 37217),

Gene: Zulu_60 Start: 37481, Stop: 37038, Start Num: 28

Candidate Starts for Zulu_60:

(Start: 28 @37481 has 228 MA's), (52, 37337), (53, 37334), (60, 37307), (70, 37241), (88, 37181), (110, 37136),