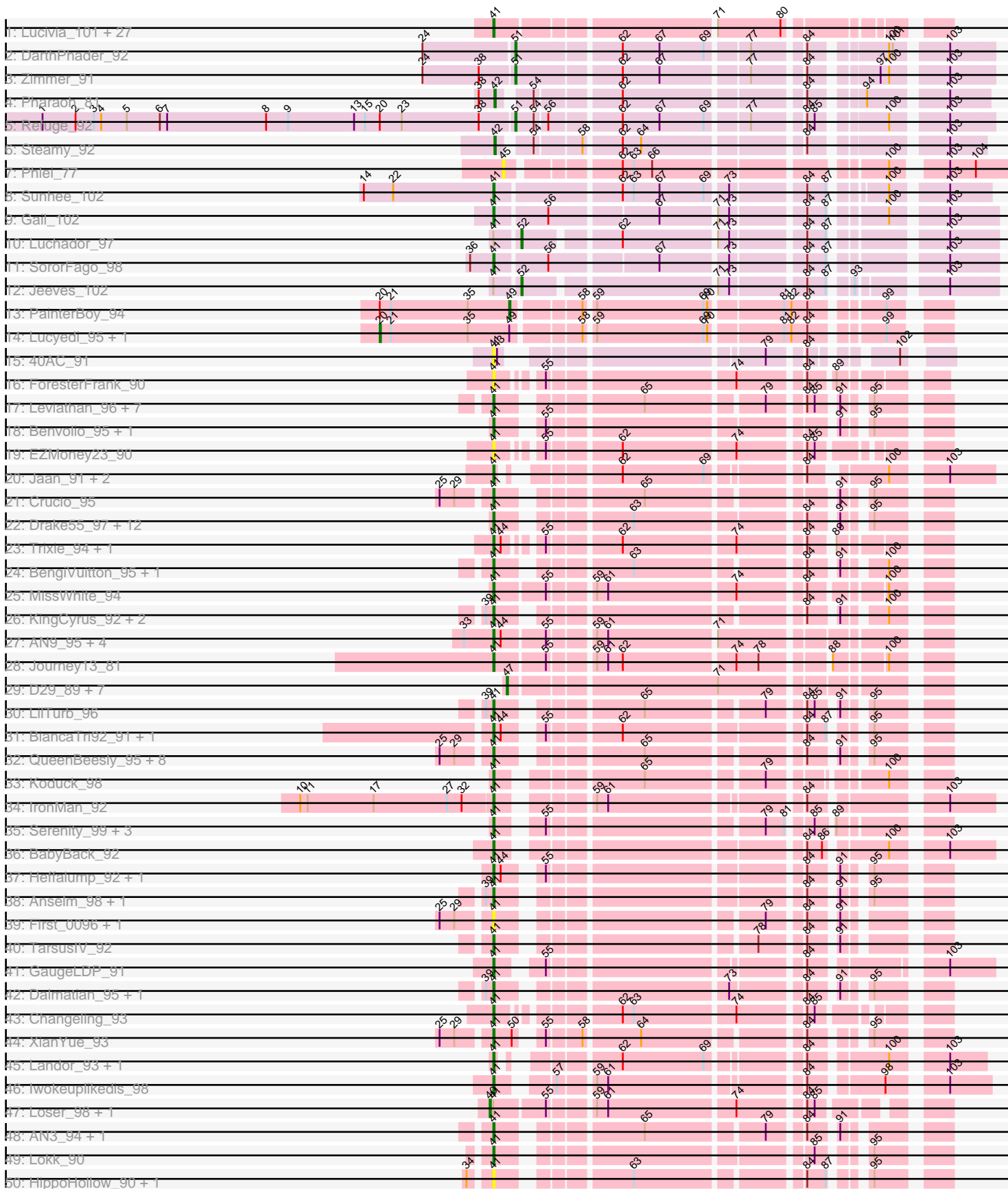


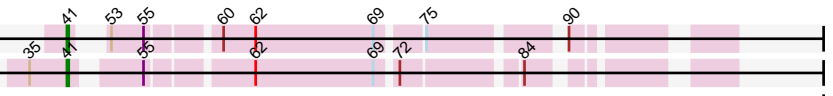
Pham 306087



Pham 306087

U1: Yecey3_102

U2: Elephantoon_98



A series of horizontal lines for writing, with a dashed vertical line on the right side.

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 306087 Report

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

Pham number 306087 has 268 members, 43 are drafts.

Phages represented in each track:

- Track 1 : Lucivia_101, Timothy_100, Orange_100, Jabith_100, Munch_98, Joselito_98, Sham4_97, TinyTimmy_98, Kimba_97, Salz_97, Flaverint_101, Ebony_99, Mulciber_99, Bud_92, Et2Brutus_101, MaCh_100, Snape_100, Aneem_100, Wolpertinger_100, Petersenfast_94, Mabel_100, Gilberta_98, Bowtie_96, Insomnia_100, Hutc2_98, Fibonacci_100, Bachome_97, Saskia_98
- Track 2 : DarthPhader_92
- Track 3 : Zimmer_91
- Track 4 : Pharaoh_81
- Track 5 : Refuge_92
- Track 6 : Steamy_92
- Track 7 : Phlei_77
- Track 8 : Sunhee_102
- Track 9 : Gail_102
- Track 10 : Luchador_97
- Track 11 : SororFago_98
- Track 12 : Jeeves_102
- Track 13 : PainterBoy_94
- Track 14 : Lucyedi_95, EagleEye_97
- Track 15 : 40AC_91
- Track 16 : ForesterFrank_90
- Track 17 : Leviathan_96, AbbyPaige_97, Whabigail7_93, Turbido_95, Buggy_85, Jerm_96, Agape74_97, Dignity_97
- Track 18 : Benvolio_95, Echild_100
- Track 19 : EZMoney23_90
- Track 20 : Jaan_91, Phaded_88, Tristan_92
- Track 21 : Crucio_95
- Track 22 : Drake55_97, Piro94_95, Centaur_98, Sknot_98, NaSiaTalie_98, Flare16_97, Baehexic_97, Equemioh13_97, WideWale_98, MiculUcigas_97, HarryHoudini_96, Gratitude_95, Updawg_98
- Track 23 : Trixie_94, WeiHuaDA_96
- Track 24 : BengiVuitton_95, Deloris_95
- Track 25 : MissWhite_94
- Track 26 : KingCyrus_92, EvilGenius_94, ChipMunk_95
- Track 27 : AN9_95, Kerberos_98, VC3_94, ANI8_95, C3_88
- Track 28 : Journey13_81
- Track 29 : D29_89, Naji_87, Duplo_99, Travvers_98, Pomar16_98, DBQu4n_98, StarStuff_98, D32_86

- Track 30 : LilTurb_96
- Track 31 : BiancaTri92_91, Leogania_78
- Track 32 : QueenBeesly_95, SnapTap_95, FiringLine_95, Malec_93, Georgie2_97, SemperFi_95, Larenn_93, Power_95, SweetiePie_95
- Track 33 : Koduck_98
- Track 34 : IronMan_92
- Track 35 : Serenity_99, Quokka_99, MajorMajor_94, Bradman_100
- Track 36 : BabyBack_92
- Track 37 : Heffalump_92, QueenB2_94
- Track 38 : Anselm_98, DudeLittle_94
- Track 39 : First_0096, 20ES_97
- Track 40 : TarsusIV_92
- Track 41 : GaugeLDP_91
- Track 42 : Dalmatian_95, Retro23_96
- Track 43 : Changeling_93
- Track 44 : XianYue_93
- Track 45 : Landor_93, Bactobuster_87
- Track 46 : Iwokeuplikedis_98
- Track 47 : Loser_98, AnnaL29_97
- Track 48 : AN3_94, VA6_94
- Track 49 : Lokk_90
- Track 50 : HippoHollow_90, LionsBait_92
- Track 51 : Prudy_90
- Track 52 : LadyBird_97, CRB1_95
- Track 53 : Acolyte_91
- Track 54 : Fameo_94
- Track 55 : Odin_96
- Track 56 : L5_89
- Track 57 : Caraxes_100, Superchunk_99
- Track 58 : ArcherNM_91
- Track 59 : Kalpine_98
- Track 60 : Tomathan_98
- Track 61 : Terrific_99
- Track 62 : NothingSpecial_89
- Track 63 : SwirlSquare_99
- Track 64 : Colin_94
- Track 65 : Che12_101
- Track 66 : Adzzy_99
- Track 67 : BobSwaget_89, Rachaly_92
- Track 68 : Smeagan_97
- Track 69 : JoshKayV_98
- Track 70 : Jsquared_102
- Track 71 : Herbertwm_90
- Track 72 : RedRock_96
- Track 73 : TipsytheTRex_94
- Track 74 : Pukovnik_89
- Track 75 : DeerParkTS_89
- Track 76 : Ph8s_100
- Track 77 : NicoleTera_96
- Track 78 : Miko_91
- Track 79 : Trooper_95
- Track 80 : Chargerpower_101

- Track 81 : Newrala_102, Zulu_104, Neeharika16_99, EricB_100, DaVinci_100, Hexamo_105, Chartreuse_102, ToneTone_99, Yokurt_102, CloudWang3_106, Wiks_103, Helmet_107, Candra_100, Artemis2UCLA_105, Lilbunny_99, SmellyB_103, Jeffabunny_94, BennyP_105, Cookiedough_101, Hoot_98, Garak_104, GreedyLawyer_91, Roksolana_106, WunderPhul_92, BlessJoy_104, VohminGhazi_103, Indra_105, Isiphiwo_99, Temprado_104, Kazan_104, Tucker_104, BABullseye_96, McFly_102, Zaka_104
- Track 82 : JewelBug_94, DelvinSonDorr_97, Dorothea_102, Polyphemus_93, Jordennis_99, Kipper29_101
- Track 83 : Priamo_101
- Track 84 : Pmask_100
- Track 85 : Gladiator_99, Gruunaga_104, Hammer_104, Koko_105, Rifter_104
- Track 86 : SuperAwesome_102
- Track 87 : Blue7_105
- Track 88 : Blinn1_100
- Track 89 : SuperCallie99_97
- Track 90 : Ayanochan_96, Qobbit_97, Aliter_93, Scherzo_98, Phonnegut_100, Alma_97, Fayely_96, Onglai_97, ExplosioNervosa_96, Tubs_100, Conquerage_97, Sachima_95, EmyBug_96, Phaeder_100, Priya_97, Pioneer_100, Spouty_97, Jiawan_97, Eidsmoe_97, Beemo_100, Catalina_102, Lilleskat_96, Myxus_100, HortumSL17_101, Halex_98, PackMan_94, RyeScarlet_100, Hanray_97, Ugenie5_86, EdogawaKiddo_98
- Track 91 : BogosyJay_98, Maminiaina_98
- Track 92 : Minispark_96, Rahalelujah_98, CogOmlette_96, WorldCup_97, Bellris_96
- Track 93 : DreamTeam1_95
- Track 94 : Keziacharles14_94
- Track 95 : Darrell_97
- Track 96 : Klodlith_95, Charm_94
- Track 97 : SheaKeira_94
- Track 98 : Arissanae_95
- Track 99 : Celestiallunch_92, MegTheThird_93
- Track 100 : LoneWolf_99
- Track 101 : Yecey3_102
- Track 102 : Elephantoon_98

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

The start number called the most often in the published annotations is 41, it was called in 194 of the 225 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES_97, 40AC_91, AN3_94, AN9_95, ANI8_95, AbbyPaige_97, Adzzy_99, Agape74_97, Aliter_93, Alma_97, Aneem_100, Anselm_98, ArcherNM_91, Arissanae_95, Artemis2UCLA_105, Ayanochan_96, BABullseye_96, BabyBack_92, Bachome_97, Bactobuster_87, Baehexic_97, Beemo_100, Bellris_96, BengiVuitton_95, BennyP_105, Benvolio_95, BiancaTri92_91, BlessJoy_104, Blinn1_100, BobSwaget_89, BogosyJay_98, Bowtie_96, Bradman_100, Bud_92, Buggy_85, C3_88, CRB1_95, Candra_100, Caraxes_100, Catalina_102, Celestiallunch_92, Centaur_98, Changeling_93, Charm_94, Chartreuse_102, Che12_101, ChipMunk_95, CloudWang3_106, CogOmlette_96, Colin_94,

Conquerage_97, Cookiedough_101, Crucio_95, DaVinci_100, Dalmatian_95, Darrell_97, DeerParkTS_89, Deloris_95, DelvinSonDorr_97, Dignity_97, Dorothea_102, Drake55_97, DreamTeam1_95, DudeLittle_94, EZMoney23_90, Ebony_99, Echild_100, EdogawaKiddo_98, Eidsmoe_97, Elephanto_98, EmyBug_96, Equemioh13_97, EricB_100, Et2Brutus_101, EvilGenius_94, ExplosioNervosa_96, Fayely_96, Fibonacci_100, FiringLine_95, First_0096, Flare16_97, Flaverint_101, ForesterFrank_90, Gail_102, Garak_104, GaugeLDP_91, Georgie2_97, Gilberta_98, Gladiator_99, Gratitude_95, GreedyLawyer_91, Gruunaga_104, Hammer_104, Hanray_97, HarryHoudini_96, Heffalump_92, Helmet_107, Hexamo_105, HippoHollow_90, Holes_98, Hoot_98, HortumSL17_101, Hut2_98, Indra_105, Insomnia_100, IronMan_92, Isiphiwo_99, Iwokeuplikedis_98, Jaan_91, Jabith_100, Jeffabunny_94, Jerm_96, JewelBug_94, Jiawan_97, Jordennis_99, Joselito_98, Journey13_81, Jsquared_102, Kalpine_98, Kazan_104, Kerberos_98, Keziacharles14_94, Kimba_97, KingCyrus_92, Kipper29_101, Klodlith_95, Koduck_98, Koko_105, L5_89, LadyBird_97, Landor_93, Larenn_93, Leogania_78, Leviathan_96, LiITurb_96, Lilbunny_99, Lilleskat_96, LionsBait_92, Lokk_90, LoneWolf_99, Lucivia_101, MaCh_100, Mabel_100, MajorMajor_94, Malec_93, Maminiaina_98, McFly_102, MegTheThird_93, MiculUcigas_97, Miko_91, Minispark_96, MissWhite_94, Mulciber_99, Munch_98, Myxus_100, NaSiaTalie_98, Neeharika16_99, Newrala_102, NicoleTera_96, Onglai_97, Orange_100, PackMan_94, Petersenfast_94, Phaded_88, Phaeder_100, Phonnegut_100, Pioneer_100, Piro94_95, Pmask_100, Polyphemus_93, Power_95, Priamo_101, Priya_97, Prudy_90, Pukovnik_89, Qobbit_97, QueenB2_94, QueenBeesly_95, Quokka_99, Rachaly_92, Rahalelujah_98, RedRock_96, Retro23_96, Rifter_104, Roksolana_106, RyeScarlet_100, Sachima_95, Salz_97, Saskia_98, Scherzo_98, SemperFi_95, Serenity_99, Sham4_97, SheaKeira_94, Sknot_98, Smeagan_97, SmellyB_103, SnapTap_95, Snape_100, SororFago_98, Spouty_97, Sunhee_102, SuperCallie99_97, Superchunk_99, SweetiePie_95, SwirlSquare_99, TarsusIV_92, Temprado_104, Terrific_99, Timothy_100, TinyTimmy_98, TipsytheTRex_94, ToneTone_99, Tristan_92, Trixie_94, Tubs_100, Tucker_104, Turbido_95, Ugenie5_86, Updawg_98, VA6_94, VC3_94, VohminGhazi_103, WeiHuaDA_96, Whabigail7_93, WideWale_98, Wiks_103, Wolpertinger_100, WorldCup_97, WunderPhul_92, XianYue_93, Yecy3_102, Yokurt_102, Zaka_104, Zulu_104,

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

- AnnaL29_97, Blue7_105, Fameo_94, Jeeves_102, JoshKayV_98, Loser_98, Luchador_97, Odin_96, Ph8s_100, SuperAwesome_102, Trooper_95,

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

- Acolyte_91, Chargerpower_101, D29_89, D32_86, DBQu4n_98, DarthPhader_92, Duplo_99, EagleEye_97, Herbertwm_90, Lucyedi_95, Naji_87, NothingSpecial_89, PainterBoy_94, Pharaoh_81, Phlei_77, Pomar16_98, Refuge_92, StarStuff_98, Steamy_92, Tomathan_98, Travvers_98, Zimmer_91,

Summary by start number:

Start 20:

- Found in 4 of 268 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 50.0% of time when present
- Phage (with cluster) where this start called: EagleEye_97 (A16), Lucyedi_95 (A16),

Start 37:

- Found in 1 of 268 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chargerpower_101 (A2),

Start 38:

- Found in 19 of 268 (7.1%) of genes in pham
- Manual Annotations of this start: 3 of 225
- Called 15.8% of time when present
- Phage (with cluster) where this start called: Blue7_105 (A6), NothingSpecial_89 (A2), SuperAwesome_102 (A6),

Start 39:

- Found in 13 of 268 (4.9%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Trooper_95 (A2),

Start 40:

- Found in 2 of 268 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnnaL29_97 (A2), Loser_98 (A2),

Start 41:

- Found in 246 of 268 (91.8%) of genes in pham
- Manual Annotations of this start: 194 of 225
- Called 95.5% of time when present
- Phage (with cluster) where this start called: 20ES_97 (A2), 40AC_91 (A17), AN3_94 (A2), AN9_95 (A2), ANI8_95 (A2), AbbyPaige_97 (A2), Adzzy_99 (A2), Agape74_97 (A2), Aliter_93 (A9), Alma_97 (A9), Aneem_100 (A11), Anselm_98 (A2), ArcherNM_91 (A2), Arissanae_95 (A9), Artemis2UCLA_105 (A6), Ayanochan_96 (A9), BABullseye_96 (A6), BabyBack_92 (A2), Bachome_97 (A11), Bactobuster_87 (A2), Baehexic_97 (A2), Beemo_100 (A9), Bellris_96 (A9), BengiVuitton_95 (A2), BennyP_105 (A6), Benvolio_95 (A2), BiancaTri92_91 (A2), BlessJoy_104 (A6), Blinn1_100 (A6), BobSwaget_89 (A2), BogosyJay_98 (A9), Bowtie_96 (A11), Bradman_100 (A2), Bud_92 (A11), Buggy_85 (A2), C3_88 (A2), CRB1_95 (A2), Candra_100 (A6), Caraxes_100 (A2), Catalina_102 (A9), Celestialunch_92 (A9), Centaur_98 (A2), Changeling_93 (A2), Charm_94 (A9), Chartreuse_102 (A6), Che12_101 (A2), ChipMunk_95 (A2), CloudWang3_106 (A6), CogOmlette_96 (A9), Colin_94 (A2), Conquerage_97 (A9), Cookiedough_101 (A6), Crucio_95 (A2), DaVinci_100 (A6), Dalmatian_95 (A2), Darrell_97 (A9), DeerParkTS_89 (A2), Deloris_95 (A2), DelvinSonDorr_97 (A6), Dignity_97 (A2), Dorothea_102 (A6), Drake55_97 (A2), DreamTeam1_95 (A9), DudeLittle_94 (A2), EZMoney23_90 (A2), Ebony_99 (A11), Echild_100 (A2), EdogawaKiddo_98 (A9), Eidsmoe_97 (A9), Elephantoon_98 (A9), EmyBug_96 (A9), Equemioh13_97 (A2), EricB_100 (A6), Et2Brutus_101 (A11), EvilGenius_94 (A2), ExplosioNervosa_96 (A9), Fayely_96 (A9), Fibonacci_100 (A11), FiringLine_95 (A2), First_0096 (A2), Flare16_97 (A2), Flaverint_101 (A11), ForesterFrank_90 (A2), Gail_102 (A14), Garak_104 (A6), GaugeLDP_91 (A2), Georgie2_97 (A2), Gilberta_98 (A11), Gladiator_99 (A6), Gratitude_95 (A2), GreedyLawyer_91 (A6), Gruunaga_104 (A6), Hammer_104 (A6), Hanray_97 (A9), HarryHoudini_96 (A2), Heffalump_92 (A2), Helmet_107 (A6), Hexamo_105 (A6), HippoHollow_90 (A2), Holec_98 (A9), Hoot_98 (A6),

HortumSL17_101 (A9), Hutc2_98 (A11), Indra_105 (A6), Insomnia_100 (A11), IronMan_92 (A2), Isiphiwo_99 (A6), Iwokeuplikedis_98 (A2), Jaan_91 (A2), Jabith_100 (A11), Jeffabunny_94 (A6), Jerm_96 (A2), JewelBug_94 (A6), Jiawan_97 (A9), Jordennis_99 (A6), Joselito_98 (A11), Journey13_81 (A2), Jsquared_102 (A2), Kalpine_98 (A2), Kazan_104 (A6), Kerberos_98 (A2), Keziacharles14_94 (A9), Kimba_97 (A11), KingCyrus_92 (A2), Kipper29_101 (A6), Klodlith_95 (A9), Koduck_98 (A2), Koko_105 (A6), L5_89 (A2), LadyBird_97 (A2), Landor_93 (A2), Larenn_93 (A2), Leogania_78 (A2), Leviathan_96 (A2), LilTurb_96 (A2), Lilbunny_99 (A6), Lilleskat_96 (A9), LionsBait_92 (A2), Lokk_90 (A2), LoneWolf_99 (A9), Lucivia_101 (A11), MaCh_100 (A11), Mabel_100 (A11), MajorMajor_94 (A2), Malec_93 (A2), Maminiaina_98 (A9), McFly_102 (A6), MegTheThird_93 (A9), MiculUcigas_97 (A2), Miko_91 (A2), Minispark_96 (A9), MissWhite_94 (A2), Mulciber_99 (A11), Munch_98 (A11), Myxus_100 (A9), NaSiaTalie_98 (A2), Neeharika16_99 (A6), Newrala_102 (A6), NicoleTera_96 (A2), Onglai_97 (A9), Orange_100 (A11), PackMan_94 (A9), Petersenfast_94 (A11), Phaded_88 (A2), Phaeder_100 (A9), Phonnegut_100 (A9), Pioneer_100 (A9), Piro94_95 (A2), Pmask_100 (A6), Polyphemus_93 (A6), Power_95 (A2), Priamo_101 (A6), Priya_97 (A9), Prudy_90 (A2), Pukovnik_89 (A2), Qobbit_97 (A9), QueenB2_94 (A2), QueenBeesly_95 (A2), Quokka_99 (A2), Rachaly_92 (A2), Rahalelujah_98 (A9), RedRock_96 (A2), Retro23_96 (A2), Rifter_104 (A6), Roksolana_106 (A6), RyeScarlet_100 (A9), Sachima_95 (A9), Salz_97 (A11), Saskia_98 (A11), Scherzo_98 (A9), SemperFi_95 (A2), Serenity_99 (A2), Sham4_97 (A11), SheaKeira_94 (A9), Sknot_98 (A2), Smeagan_97 (A2), SmellyB_103 (A6), SnapTap_95 (A2), Snape_100 (A11), SororFago_98 (A14), Spouty_97 (A9), Sunhee_102 (A14), SuperCallie99_97 (A6), Superchunk_99 (A2), SweetiePie_95 (A2), SwirlSquare_99 (A2), TarsusIV_92 (A2), Temprado_104 (A6), Terrific_99 (A2), Timothy_100 (A11), TinyTimmy_98 (A11), TipsytheTRex_94 (A2), ToneTone_99 (A6), Tristan_92 (A2), Trixie_94 (A2), Tubs_100 (A9), Tucker_104 (A6), Turbido_95 (A2), Ugenie5_86 (A9), Updawg_98 (A2), VA6_94 (A2), VC3_94 (A2), VohminGhazi_103 (A6), WeiHuaDA_96 (A2), Whabigail7_93 (A2), WideWale_98 (A2), Wiks_103 (A6), Wolpertinger_100 (A11), WorldCup_97 (A9), WunderPhul_92 (A6), XianYue_93 (A2), Yecey3_102 (A9), Yokurt_102 (A6), Zaka_104 (A6), Zulu_104 (A6),

Start 42:

- Found in 2 of 268 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pharaoh_81 (A12), Steamy_92 (A12),

Start 44:

- Found in 15 of 268 (5.6%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Fameo_94 (A2), JoshKayV_98 (A2),

Start 45:

- Found in 2 of 268 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acolyte_91 (A2), Phlei_77 (A13),

Start 47:

- Found in 9 of 268 (3.4%) of genes in pham
- Manual Annotations of this start: 8 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: D29_89 (A2), D32_86 (A2), DBQu4n_98 (A2), Duplo_99 (A2), Naji_87 (A2), Pomar16_98 (A2), StarStuff_98 (A2), Tomathan_98 (A2), Travvers_98 (A2),

Start 49:

- Found in 4 of 268 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Herbertwm_90 (A2), PainterBoy_94 (A16),

Start 51:

- Found in 3 of 268 (1.1%) of genes in pham
- Manual Annotations of this start: 3 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader_92 (A12), Refuge_92 (A12), Zimmer_91 (A12),

Start 52:

- Found in 2 of 268 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jeeves_102 (A14), Luchador_97 (A14),

Start 55:

- Found in 100 of 268 (37.3%) of genes in pham
- Manual Annotations of this start: 2 of 225
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Odin_96 (A2), Ph8s_100 (A2),

Summary by clusters:

There are 10 clusters represented in this pham: A14, A17, A16, A11, A13, A12, A22, A2, A6, A9,

Info for manual annotations of cluster A11:

- Start number 41 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 42 was manually annotated 2 times for cluster A12.
- Start number 51 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 41 was manually annotated 3 times for cluster A14.
- Start number 52 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A16:

- Start number 20 was manually annotated 2 times for cluster A16.
- Start number 49 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:

- Start number 38 was manually annotated 1 time for cluster A2.
- Start number 39 was manually annotated 1 time for cluster A2.
- Start number 40 was manually annotated 2 times for cluster A2.
- Start number 41 was manually annotated 88 times for cluster A2.
- Start number 44 was manually annotated 2 times for cluster A2.
- Start number 45 was manually annotated 1 time for cluster A2.
- Start number 47 was manually annotated 8 times for cluster A2.
- Start number 49 was manually annotated 1 time for cluster A2.
- Start number 55 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A22:

- Start number 37 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A6:

- Start number 38 was manually annotated 2 times for cluster A6.
- Start number 41 was manually annotated 46 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 41 was manually annotated 33 times for cluster A9.

Gene Information:

Gene: 20ES_97 Start: 51864, Stop: 51574, Start Num: 41

Candidate Starts for 20ES_97:

(25, 51900), (29, 51888), (Start: 41 @51864 has 194 MA's), (79, 51681), (84, 51657), (91, 51639),

Gene: 40AC_91 Start: 52143, Stop: 51862, Start Num: 41

Candidate Starts for 40AC_91:

(Start: 41 @52143 has 194 MA's), (43, 52140), (79, 51966), (84, 51942), (102, 51891),

Gene: AN3_94 Start: 49778, Stop: 49488, Start Num: 41

Candidate Starts for AN3_94:

(Start: 41 @49778 has 194 MA's), (65, 49682), (79, 49595), (84, 49571), (91, 49553),

Gene: AN9_95 Start: 49945, Stop: 49628, Start Num: 41

Candidate Starts for AN9_95:

(33, 49969), (Start: 41 @49945 has 194 MA's), (Start: 44 @49939 has 2 MA's), (Start: 55 @49906 has 2 MA's), (59, 49876), (61, 49867), (71, 49783),

Gene: ANI8_95 Start: 49945, Stop: 49628, Start Num: 41

Candidate Starts for ANI8_95:

(33, 49969), (Start: 41 @49945 has 194 MA's), (Start: 44 @49939 has 2 MA's), (Start: 55 @49906 has 2 MA's), (59, 49876), (61, 49867), (71, 49783),

Gene: AbbyPaige_97 Start: 51958, Stop: 51668, Start Num: 41

Candidate Starts for AbbyPaige_97:

(Start: 41 @51958 has 194 MA's), (65, 51862), (79, 51775), (84, 51751), (85, 51745), (91, 51733), (95, 51718),

Gene: Acolyte_91 Start: 51451, Stop: 51122, Start Num: 45

Candidate Starts for Acolyte_91:

(Start: 39 @51463 has 1 MA's), (Start: 45 @51451 has 1 MA's), (59, 51394), (61, 51385), (62, 51373), (84, 51241), (104, 51142),

Gene: Adzzy_99 Start: 51234, Stop: 50908, Start Num: 41

Candidate Starts for Adzzy_99:

(19, 51327), (Start: 41 @51234 has 194 MA's), (Start: 55 @51216 has 2 MA's), (85, 51027), (96, 50988), (100, 50979), (103, 50943),

Gene: Agape74_97 Start: 51931, Stop: 51641, Start Num: 41

Candidate Starts for Agape74_97:

(Start: 41 @51931 has 194 MA's), (65, 51835), (79, 51748), (84, 51724), (85, 51718), (91, 51706), (95, 51691),

Gene: Aliter_93 Start: 49003, Stop: 48707, Start Num: 41

Candidate Starts for Aliter_93:

(Start: 41 @49003 has 194 MA's), (62, 48925), (64, 48910), (69, 48859), (84, 48793),

Gene: Alma_97 Start: 51713, Stop: 51417, Start Num: 41

Candidate Starts for Alma_97:

(Start: 41 @51713 has 194 MA's), (62, 51635), (64, 51620), (69, 51569), (84, 51503),

Gene: Aneem_100 Start: 51418, Stop: 51101, Start Num: 41

Candidate Starts for Aneem_100:

(Start: 41 @51418 has 194 MA's), (71, 51256), (80, 51205),

Gene: AnnaL29_97 Start: 52055, Stop: 51741, Start Num: 40

Candidate Starts for AnnaL29_97:

(Start: 40 @52055 has 2 MA's), (Start: 41 @52052 has 194 MA's), (Start: 55 @52013 has 2 MA's), (59, 51983), (61, 51974), (74, 51875), (84, 51827), (85, 51821),

Gene: Anselm_98 Start: 52336, Stop: 52043, Start Num: 41

Candidate Starts for Anselm_98:

(Start: 39 @52342 has 1 MA's), (Start: 41 @52336 has 194 MA's), (84, 52126), (91, 52108), (95, 52093),

Gene: ArcherNM_91 Start: 51333, Stop: 51034, Start Num: 41

Candidate Starts for ArcherNM_91:

(Start: 39 @51339 has 1 MA's), (Start: 41 @51333 has 194 MA's), (65, 51237), (74, 51168), (84, 51120), (89, 51102),

Gene: Arissanae_95 Start: 51941, Stop: 51645, Start Num: 41

Candidate Starts for Arissanae_95:

(Start: 41 @51941 has 194 MA's), (Start: 55 @51914 has 2 MA's), (62, 51863), (64, 51848), (68, 51821), (69, 51797), (84, 51731), (92, 51713),

Gene: Artemis2UCLA_105 Start: 51118, Stop: 50786, Start Num: 41

Candidate Starts for Artemis2UCLA_105:

(Start: 41 @51118 has 194 MA's), (Start: 55 @51091 has 2 MA's), (79, 50935), (87, 50896), (100, 50857), (103, 50821),

Gene: Ayanochan_96 Start: 51504, Stop: 51208, Start Num: 41
Candidate Starts for Ayanochan_96:
(Start: 41 @51504 has 194 MA's), (62, 51426), (64, 51411), (69, 51360), (84, 51294),

Gene: BABullseye_96 Start: 49256, Stop: 48924, Start Num: 41
Candidate Starts for BABullseye_96:
(Start: 41 @49256 has 194 MA's), (Start: 55 @49229 has 2 MA's), (79, 49073), (87, 49034), (100, 48995), (103, 48959),

Gene: BabyBack_92 Start: 52424, Stop: 52089, Start Num: 41
Candidate Starts for BabyBack_92:
(Start: 41 @52424 has 194 MA's), (84, 52214), (86, 52202), (100, 52160), (103, 52124),

Gene: Bachome_97 Start: 50466, Stop: 50149, Start Num: 41
Candidate Starts for Bachome_97:
(Start: 41 @50466 has 194 MA's), (71, 50304), (80, 50253),

Gene: Bactobuster_87 Start: 50956, Stop: 50639, Start Num: 41
Candidate Starts for Bactobuster_87:
(Start: 41 @50956 has 194 MA's), (62, 50887), (69, 50821), (84, 50758), (100, 50704), (103, 50668),

Gene: Baehexic_97 Start: 51948, Stop: 51655, Start Num: 41
Candidate Starts for Baehexic_97:
(Start: 41 @51948 has 194 MA's), (63, 51861), (84, 51738), (91, 51720), (95, 51705),

Gene: Beemo_100 Start: 51834, Stop: 51538, Start Num: 41
Candidate Starts for Beemo_100:
(Start: 41 @51834 has 194 MA's), (62, 51756), (64, 51741), (69, 51690), (84, 51624),

Gene: Bellris_96 Start: 51412, Stop: 51041, Start Num: 41
Candidate Starts for Bellris_96:
(Start: 41 @51412 has 194 MA's), (48, 51400), (62, 51316), (71, 51244), (75, 51229), (83, 51190), (101, 51121), (103, 51079),

Gene: BengiVuitton_95 Start: 51703, Stop: 51413, Start Num: 41
Candidate Starts for BengiVuitton_95:
(Start: 41 @51703 has 194 MA's), (63, 51616), (84, 51496), (91, 51478), (100, 51451),

Gene: BennyP_105 Start: 51102, Stop: 50770, Start Num: 41
Candidate Starts for BennyP_105:
(Start: 41 @51102 has 194 MA's), (Start: 55 @51075 has 2 MA's), (79, 50919), (87, 50880), (100, 50841), (103, 50805),

Gene: Benvolio_95 Start: 51929, Stop: 51636, Start Num: 41
Candidate Starts for Benvolio_95:
(Start: 41 @51929 has 194 MA's), (Start: 55 @51902 has 2 MA's), (91, 51701), (95, 51686),

Gene: BiancaTri92_91 Start: 50985, Stop: 50692, Start Num: 41
Candidate Starts for BiancaTri92_91:
(Start: 41 @50985 has 194 MA's), (Start: 44 @50979 has 2 MA's), (Start: 55 @50958 has 2 MA's), (62, 50907), (84, 50775), (87, 50760), (95, 50742),

Gene: BlessJoy_104 Start: 51315, Stop: 50983, Start Num: 41

Candidate Starts for BlessJoy_104:

(Start: 41 @51315 has 194 MA's), (Start: 55 @51288 has 2 MA's), (79, 51132), (87, 51093), (100, 51054), (103, 51018),

Gene: Blinn1_100 Start: 50561, Stop: 50217, Start Num: 41

Candidate Starts for Blinn1_100:

(23, 50633), (28, 50594), (Start: 41 @50561 has 194 MA's), (Start: 55 @50534 has 2 MA's), (65, 50465), (79, 50378), (87, 50339), (97, 50309), (103, 50252),

Gene: Blue7_105 Start: 51037, Stop: 50693, Start Num: 38

Candidate Starts for Blue7_105:

(Start: 38 @51037 has 3 MA's), (Start: 41 @51025 has 194 MA's), (Start: 55 @50998 has 2 MA's), (79, 50842), (85, 50812), (100, 50764), (103, 50728),

Gene: BobSwaget_89 Start: 49131, Stop: 48838, Start Num: 41

Candidate Starts for BobSwaget_89:

(31, 49152), (Start: 41 @49131 has 194 MA's), (85, 48915), (95, 48888),

Gene: BogosyJay_98 Start: 51847, Stop: 51551, Start Num: 41

Candidate Starts for BogosyJay_98:

(Start: 41 @51847 has 194 MA's), (Start: 55 @51817 has 2 MA's), (62, 51766), (64, 51751), (69, 51700), (84, 51634),

Gene: Bowtie_96 Start: 50025, Stop: 49708, Start Num: 41

Candidate Starts for Bowtie_96:

(Start: 41 @50025 has 194 MA's), (71, 49863), (80, 49812),

Gene: Bradman_100 Start: 51499, Stop: 51200, Start Num: 41

Candidate Starts for Bradman_100:

(Start: 41 @51499 has 194 MA's), (Start: 55 @51472 has 2 MA's), (79, 51316), (81, 51301), (85, 51286), (89, 51274),

Gene: Bud_92 Start: 50124, Stop: 49807, Start Num: 41

Candidate Starts for Bud_92:

(Start: 41 @50124 has 194 MA's), (71, 49962), (80, 49911),

Gene: Buggy_85 Start: 48670, Stop: 48380, Start Num: 41

Candidate Starts for Buggy_85:

(Start: 41 @48670 has 194 MA's), (65, 48574), (79, 48487), (84, 48463), (85, 48457), (91, 48445), (95, 48430),

Gene: C3_88 Start: 49945, Stop: 49628, Start Num: 41

Candidate Starts for C3_88:

(33, 49969), (Start: 41 @49945 has 194 MA's), (Start: 44 @49939 has 2 MA's), (Start: 55 @49906 has 2 MA's), (59, 49876), (61, 49867), (71, 49783),

Gene: CRB1_95 Start: 51714, Stop: 51424, Start Num: 41

Candidate Starts for CRB1_95:

(34, 51729), (Start: 41 @51714 has 194 MA's), (Start: 55 @51687 has 2 MA's), (65, 51618), (84, 51507), (91, 51489),

Gene: Candra_100 Start: 50964, Stop: 50632, Start Num: 41

Candidate Starts for Candra_100:

(Start: 41 @50964 has 194 MA's), (Start: 55 @50937 has 2 MA's), (79, 50781), (87, 50742), (100, 50703), (103, 50667),

Gene: Caraxes_100 Start: 51590, Stop: 51264, Start Num: 41

Candidate Starts for Caraxes_100:

(Start: 41 @51590 has 194 MA's), (Start: 55 @51572 has 2 MA's), (59, 51542), (84, 51389), (96, 51344), (100, 51335), (103, 51299),

Gene: Catalina_102 Start: 51947, Stop: 51651, Start Num: 41

Candidate Starts for Catalina_102:

(Start: 41 @51947 has 194 MA's), (62, 51869), (64, 51854), (69, 51803), (84, 51737),

Gene: Celestiallunch_92 Start: 51045, Stop: 50695, Start Num: 41

Candidate Starts for Celestiallunch_92:

(Start: 41 @51045 has 194 MA's), (Start: 55 @51018 has 2 MA's), (62, 50967), (75, 50880), (76, 50877), (101, 50775), (103, 50733),

Gene: Centaur_98 Start: 51815, Stop: 51522, Start Num: 41

Candidate Starts for Centaur_98:

(Start: 41 @51815 has 194 MA's), (63, 51728), (84, 51605), (91, 51587), (95, 51572),

Gene: Changeling_93 Start: 51752, Stop: 51453, Start Num: 41

Candidate Starts for Changeling_93:

(Start: 41 @51752 has 194 MA's), (62, 51674), (63, 51665), (74, 51587), (84, 51539), (85, 51533),

Gene: Chargerpower_101 Start: 51440, Stop: 51123, Start Num: 37

Candidate Starts for Chargerpower_101:

(Start: 37 @51440 has 1 MA's), (62, 51347), (64, 51332), (73, 51266), (74, 51260), (84, 51212), (100, 51161),

Gene: Charm_94 Start: 51212, Stop: 50910, Start Num: 41

Candidate Starts for Charm_94:

(Start: 41 @51212 has 194 MA's), (53, 51203), (62, 51134), (64, 51119), (69, 51068), (94, 50966), (100, 50948),

Gene: Chartreuse_102 Start: 50265, Stop: 49933, Start Num: 41

Candidate Starts for Chartreuse_102:

(Start: 41 @50265 has 194 MA's), (Start: 55 @50238 has 2 MA's), (79, 50082), (87, 50043), (100, 50004), (103, 49968),

Gene: Che12_101 Start: 51704, Stop: 51378, Start Num: 41

Candidate Starts for Che12_101:

(26, 51746), (30, 51734), (Start: 41 @51704 has 194 MA's), (Start: 55 @51686 has 2 MA's), (71, 51563), (85, 51497), (96, 51458), (100, 51449), (103, 51413),

Gene: ChipMunk_95 Start: 52668, Stop: 52378, Start Num: 41

Candidate Starts for ChipMunk_95:

(Start: 39 @52674 has 1 MA's), (Start: 41 @52668 has 194 MA's), (84, 52461), (91, 52443), (100, 52416),

Gene: CloudWang3_106 Start: 51647, Stop: 51315, Start Num: 41

Candidate Starts for CloudWang3_106:

(Start: 41 @51647 has 194 MA's), (Start: 55 @51620 has 2 MA's), (79, 51464), (87, 51425), (100, 51386), (103, 51350),

Gene: CogOmlette_96 Start: 51409, Stop: 51038, Start Num: 41

Candidate Starts for CogOmlette_96:

(Start: 41 @51409 has 194 MA's), (48, 51397), (62, 51313), (71, 51241), (75, 51226), (83, 51187), (101, 51118), (103, 51076),

Gene: Colin_94 Start: 52297, Stop: 51998, Start Num: 41

Candidate Starts for Colin_94:

(Start: 41 @52297 has 194 MA's), (Start: 44 @52291 has 2 MA's), (Start: 55 @52270 has 2 MA's), (62, 52219), (74, 52132), (84, 52084), (85, 52078),

Gene: Conquerage_97 Start: 51489, Stop: 51193, Start Num: 41

Candidate Starts for Conquerage_97:

(Start: 41 @51489 has 194 MA's), (62, 51411), (64, 51396), (69, 51345), (84, 51279),

Gene: Cookiedough_101 Start: 51239, Stop: 50907, Start Num: 41

Candidate Starts for Cookiedough_101:

(Start: 41 @51239 has 194 MA's), (Start: 55 @51212 has 2 MA's), (79, 51056), (87, 51017), (100, 50978), (103, 50942),

Gene: Crucio_95 Start: 52008, Stop: 51718, Start Num: 41

Candidate Starts for Crucio_95:

(25, 52044), (29, 52032), (Start: 41 @52008 has 194 MA's), (65, 51912), (91, 51783), (95, 51768),

Gene: D29_89 Start: 47930, Stop: 47619, Start Num: 47

Candidate Starts for D29_89:

(Start: 47 @47930 has 8 MA's), (71, 47774),

Gene: D32_86 Start: 47930, Stop: 47619, Start Num: 47

Candidate Starts for D32_86:

(Start: 47 @47930 has 8 MA's), (71, 47774),

Gene: DBQu4n_98 Start: 51545, Stop: 51234, Start Num: 47

Candidate Starts for DBQu4n_98:

(Start: 47 @51545 has 8 MA's), (71, 51389),

Gene: DaVinci_100 Start: 50319, Stop: 49987, Start Num: 41

Candidate Starts for DaVinci_100:

(Start: 41 @50319 has 194 MA's), (Start: 55 @50292 has 2 MA's), (79, 50136), (87, 50097), (100, 50058), (103, 50022),

Gene: Dalmatian_95 Start: 51637, Stop: 51344, Start Num: 41

Candidate Starts for Dalmatian_95:

(Start: 39 @51643 has 1 MA's), (Start: 41 @51637 has 194 MA's), (73, 51478), (84, 51427), (91, 51409), (95, 51394),

Gene: Darrell_97 Start: 50844, Stop: 50530, Start Num: 41

Candidate Starts for Darrell_97:

(Start: 41 @50844 has 194 MA's), (62, 50748), (64, 50733), (84, 50616), (90, 50601), (92, 50598),

Gene: DarthPhader_92 Start: 52006, Stop: 51671, Start Num: 51

Candidate Starts for DarthPhader_92:

(24, 52078), (Start: 51 @52006 has 3 MA's), (62, 51928), (67, 51898), (69, 51862), (77, 51832), (84, 51796), (100, 51745), (101, 51742), (103, 51706),

Gene: DeerParkTS_89 Start: 50083, Stop: 49790, Start Num: 41

Candidate Starts for DeerParkTS_89:

(Start: 41 @50083 has 194 MA's), (62, 50005), (63, 49996), (95, 49840),

Gene: Deloris_95 Start: 51396, Stop: 51106, Start Num: 41

Candidate Starts for Deloris_95:

(Start: 41 @51396 has 194 MA's), (63, 51309), (84, 51189), (91, 51171), (100, 51144),

Gene: DelvinSonDorr_97 Start: 50721, Stop: 50389, Start Num: 41

Candidate Starts for DelvinSonDorr_97:

(23, 50796), (Start: 38 @50733 has 3 MA's), (Start: 41 @50721 has 194 MA's), (Start: 55 @50694 has 2 MA's), (79, 50538), (87, 50499), (100, 50460), (103, 50424),

Gene: Dignity_97 Start: 52038, Stop: 51748, Start Num: 41

Candidate Starts for Dignity_97:

(Start: 41 @52038 has 194 MA's), (65, 51942), (79, 51855), (84, 51831), (85, 51825), (91, 51813), (95, 51798),

Gene: Dorothea_102 Start: 51419, Stop: 51087, Start Num: 41

Candidate Starts for Dorothea_102:

(23, 51494), (Start: 38 @51431 has 3 MA's), (Start: 41 @51419 has 194 MA's), (Start: 55 @51392 has 2 MA's), (79, 51236), (87, 51197), (100, 51158), (103, 51122),

Gene: Drake55_97 Start: 51533, Stop: 51240, Start Num: 41

Candidate Starts for Drake55_97:

(Start: 41 @51533 has 194 MA's), (63, 51446), (84, 51323), (91, 51305), (95, 51290),

Gene: DreamTeam1_95 Start: 51173, Stop: 50871, Start Num: 41

Candidate Starts for DreamTeam1_95:

(Start: 41 @51173 has 194 MA's), (53, 51164), (62, 51095), (64, 51080), (94, 50927), (100, 50909),

Gene: DudeLittle_94 Start: 51703, Stop: 51410, Start Num: 41

Candidate Starts for DudeLittle_94:

(Start: 39 @51709 has 1 MA's), (Start: 41 @51703 has 194 MA's), (84, 51493), (91, 51475), (95, 51460),

Gene: Duplo_99 Start: 51602, Stop: 51291, Start Num: 47

Candidate Starts for Duplo_99:

(Start: 47 @51602 has 8 MA's), (71, 51446),

Gene: EZMoney23_90 Start: 50589, Stop: 50290, Start Num: 41

Candidate Starts for EZMoney23_90:

(Start: 41 @50589 has 194 MA's), (Start: 55 @50562 has 2 MA's), (62, 50511), (74, 50424), (84, 50376), (85, 50370),

Gene: EagleEye_97 Start: 51822, Stop: 51415, Start Num: 20

Candidate Starts for EagleEye_97:

(Start: 20 @51822 has 2 MA's), (21, 51813), (35, 51750), (Start: 49 @51717 has 2 MA's), (58, 51669), (59, 51663), (69, 51576), (70, 51573), (81, 51519), (82, 51513), (84, 51501), (99, 51453),

Gene: Ebony_99 Start: 50989, Stop: 50672, Start Num: 41
Candidate Starts for Ebony_99:
(Start: 41 @50989 has 194 MA's), (71, 50827), (80, 50776),

Gene: Echild_100 Start: 51953, Stop: 51660, Start Num: 41
Candidate Starts for Echild_100:
(Start: 41 @51953 has 194 MA's), (Start: 55 @51926 has 2 MA's), (91, 51725), (95, 51710),

Gene: EdogawaKiddo_98 Start: 51910, Stop: 51614, Start Num: 41
Candidate Starts for EdogawaKiddo_98:
(Start: 41 @51910 has 194 MA's), (62, 51832), (64, 51817), (69, 51766), (84, 51700),

Gene: Eidsmoe_97 Start: 51482, Stop: 51186, Start Num: 41
Candidate Starts for Eidsmoe_97:
(Start: 41 @51482 has 194 MA's), (62, 51404), (64, 51389), (69, 51338), (84, 51272),

Gene: Elephantoon_98 Start: 51617, Stop: 51318, Start Num: 41
Candidate Starts for Elephantoon_98:
(35, 51638), (Start: 41 @51617 has 194 MA's), (Start: 55 @51587 has 2 MA's), (62, 51536), (69, 51470), (72, 51461), (84, 51404),

Gene: EmyBug_96 Start: 51484, Stop: 51188, Start Num: 41
Candidate Starts for EmyBug_96:
(Start: 41 @51484 has 194 MA's), (62, 51406), (64, 51391), (69, 51340), (84, 51274),

Gene: Equemioh13_97 Start: 51856, Stop: 51563, Start Num: 41
Candidate Starts for Equemioh13_97:
(Start: 41 @51856 has 194 MA's), (63, 51769), (84, 51646), (91, 51628), (95, 51613),

Gene: EricB_100 Start: 50464, Stop: 50132, Start Num: 41
Candidate Starts for EricB_100:
(Start: 41 @50464 has 194 MA's), (Start: 55 @50437 has 2 MA's), (79, 50281), (87, 50242), (100, 50203), (103, 50167),

Gene: Et2Brutus_101 Start: 51334, Stop: 51017, Start Num: 41
Candidate Starts for Et2Brutus_101:
(Start: 41 @51334 has 194 MA's), (71, 51172), (80, 51121),

Gene: EvilGenius_94 Start: 52669, Stop: 52379, Start Num: 41
Candidate Starts for EvilGenius_94:
(Start: 39 @52675 has 1 MA's), (Start: 41 @52669 has 194 MA's), (84, 52462), (91, 52444), (100, 52417),

Gene: ExplosioNervosa_96 Start: 51550, Stop: 51254, Start Num: 41
Candidate Starts for ExplosioNervosa_96:
(Start: 41 @51550 has 194 MA's), (62, 51472), (64, 51457), (69, 51406), (84, 51340),

Gene: Fameo_94 Start: 51403, Stop: 51116, Start Num: 44
Candidate Starts for Fameo_94:
(Start: 41 @51409 has 194 MA's), (Start: 44 @51403 has 2 MA's), (Start: 55 @51382 has 2 MA's), (84, 51199), (91, 51181), (95, 51166),

Gene: Fayely_96 Start: 51458, Stop: 51162, Start Num: 41
Candidate Starts for Fayely_96:
(Start: 41 @51458 has 194 MA's), (62, 51380), (64, 51365), (69, 51314), (84, 51248),

Gene: Fibonacci_100 Start: 51272, Stop: 50955, Start Num: 41
Candidate Starts for Fibonacci_100:
(Start: 41 @51272 has 194 MA's), (71, 51110), (80, 51059),

Gene: FiringLine_95 Start: 52104, Stop: 51814, Start Num: 41
Candidate Starts for FiringLine_95:
(25, 52140), (29, 52128), (Start: 41 @52104 has 194 MA's), (65, 52008), (84, 51897), (91, 51879), (95, 51864),

Gene: First_0096 Start: 51767, Stop: 51477, Start Num: 41
Candidate Starts for First_0096:
(25, 51803), (29, 51791), (Start: 41 @51767 has 194 MA's), (79, 51584), (84, 51560), (91, 51542),

Gene: Flare16_97 Start: 51671, Stop: 51378, Start Num: 41
Candidate Starts for Flare16_97:
(Start: 41 @51671 has 194 MA's), (63, 51584), (84, 51461), (91, 51443), (95, 51428),

Gene: Flaverint_101 Start: 51416, Stop: 51099, Start Num: 41
Candidate Starts for Flaverint_101:
(Start: 41 @51416 has 194 MA's), (71, 51254), (80, 51203),

Gene: ForesterFrank_90 Start: 51261, Stop: 50962, Start Num: 41
Candidate Starts for ForesterFrank_90:
(Start: 41 @51261 has 194 MA's), (Start: 55 @51234 has 2 MA's), (74, 51096), (84, 51048), (89, 51030),

Gene: Gail_102 Start: 52375, Stop: 52022, Start Num: 41
Candidate Starts for Gail_102:
(Start: 41 @52375 has 194 MA's), (56, 52336), (67, 52255), (71, 52213), (73, 52204), (84, 52150), (87, 52135), (100, 52099), (103, 52060),

Gene: Garak_104 Start: 51265, Stop: 50933, Start Num: 41
Candidate Starts for Garak_104:
(Start: 41 @51265 has 194 MA's), (Start: 55 @51238 has 2 MA's), (79, 51082), (87, 51043), (100, 51004), (103, 50968),

Gene: GaugeLDP_91 Start: 51816, Stop: 51487, Start Num: 41
Candidate Starts for GaugeLDP_91:
(Start: 41 @51816 has 194 MA's), (Start: 55 @51789 has 2 MA's), (84, 51609), (103, 51522),

Gene: Georgie2_97 Start: 52152, Stop: 51862, Start Num: 41
Candidate Starts for Georgie2_97:
(25, 52188), (29, 52176), (Start: 41 @52152 has 194 MA's), (65, 52056), (84, 51945), (91, 51927), (95, 51912),

Gene: Gilberta_98 Start: 50292, Stop: 49975, Start Num: 41
Candidate Starts for Gilberta_98:
(Start: 41 @50292 has 194 MA's), (71, 50130), (80, 50079),

Gene: Gladiator_99 Start: 50976, Stop: 50644, Start Num: 41
Candidate Starts for Gladiator_99:
(Start: 38 @50988 has 3 MA's), (Start: 41 @50976 has 194 MA's), (Start: 55 @50949 has 2 MA's), (79, 50793), (85, 50763), (100, 50715), (103, 50679),

Gene: Gratitude_95 Start: 51856, Stop: 51563, Start Num: 41
Candidate Starts for Gratitude_95:
(Start: 41 @51856 has 194 MA's), (63, 51769), (84, 51646), (91, 51628), (95, 51613),

Gene: GreedyLawyer_91 Start: 50897, Stop: 50565, Start Num: 41
Candidate Starts for GreedyLawyer_91:
(Start: 41 @50897 has 194 MA's), (Start: 55 @50870 has 2 MA's), (79, 50714), (87, 50675), (100, 50636), (103, 50600),

Gene: Gruunaga_104 Start: 50932, Stop: 50600, Start Num: 41
Candidate Starts for Gruunaga_104:
(Start: 38 @50944 has 3 MA's), (Start: 41 @50932 has 194 MA's), (Start: 55 @50905 has 2 MA's), (79, 50749), (85, 50719), (100, 50671), (103, 50635),

Gene: Hammer_104 Start: 50626, Stop: 50297, Start Num: 41
Candidate Starts for Hammer_104:
(Start: 38 @50638 has 3 MA's), (Start: 41 @50626 has 194 MA's), (Start: 55 @50599 has 2 MA's), (79, 50443), (85, 50413), (100, 50368), (103, 50332),

Gene: Hanray_97 Start: 51899, Stop: 51603, Start Num: 41
Candidate Starts for Hanray_97:
(Start: 41 @51899 has 194 MA's), (62, 51821), (64, 51806), (69, 51755), (84, 51689),

Gene: HarryHoudini_96 Start: 51537, Stop: 51244, Start Num: 41
Candidate Starts for HarryHoudini_96:
(Start: 41 @51537 has 194 MA's), (63, 51450), (84, 51327), (91, 51309), (95, 51294),

Gene: Heffalump_92 Start: 51878, Stop: 51585, Start Num: 41
Candidate Starts for Heffalump_92:
(Start: 41 @51878 has 194 MA's), (Start: 44 @51872 has 2 MA's), (Start: 55 @51851 has 2 MA's), (84, 51668), (91, 51650), (95, 51635),

Gene: Helmet_107 Start: 51401, Stop: 51069, Start Num: 41
Candidate Starts for Helmet_107:
(Start: 41 @51401 has 194 MA's), (Start: 55 @51374 has 2 MA's), (79, 51218), (87, 51179), (100, 51140), (103, 51104),

Gene: Herbertwm_90 Start: 50464, Stop: 50207, Start Num: 49
Candidate Starts for Herbertwm_90:
(Start: 49 @50464 has 2 MA's), (57, 50437), (69, 50326), (84, 50254), (85, 50248), (87, 50239),

Gene: Hexamo_105 Start: 51133, Stop: 50801, Start Num: 41
Candidate Starts for Hexamo_105:
(Start: 41 @51133 has 194 MA's), (Start: 55 @51106 has 2 MA's), (79, 50950), (87, 50911), (100, 50872), (103, 50836),

Gene: HippoHollow_90 Start: 52339, Stop: 52049, Start Num: 41
Candidate Starts for HippoHollow_90:

(34, 52354), (Start: 41 @52339 has 194 MA's), (63, 52252), (84, 52132), (87, 52117), (95, 52099),

Gene: Holec_98 Start: 51912, Stop: 51616, Start Num: 41

Candidate Starts for Holec_98:

(Start: 41 @51912 has 194 MA's), (62, 51834), (64, 51819), (69, 51768), (84, 51702),

Gene: Hoot_98 Start: 48781, Stop: 48449, Start Num: 41

Candidate Starts for Hoot_98:

(Start: 41 @48781 has 194 MA's), (Start: 55 @48754 has 2 MA's), (79, 48598), (87, 48559), (100, 48520), (103, 48484),

Gene: HortumSL17_101 Start: 51948, Stop: 51652, Start Num: 41

Candidate Starts for HortumSL17_101:

(Start: 41 @51948 has 194 MA's), (62, 51870), (64, 51855), (69, 51804), (84, 51738),

Gene: Hutc2_98 Start: 50224, Stop: 49907, Start Num: 41

Candidate Starts for Hutc2_98:

(Start: 41 @50224 has 194 MA's), (71, 50062), (80, 50011),

Gene: Indra_105 Start: 51266, Stop: 50934, Start Num: 41

Candidate Starts for Indra_105:

(Start: 41 @51266 has 194 MA's), (Start: 55 @51239 has 2 MA's), (79, 51083), (87, 51044), (100, 51005), (103, 50969),

Gene: Insomnia_100 Start: 51450, Stop: 51133, Start Num: 41

Candidate Starts for Insomnia_100:

(Start: 41 @51450 has 194 MA's), (71, 51288), (80, 51237),

Gene: IronMan_92 Start: 52365, Stop: 52033, Start Num: 41

Candidate Starts for IronMan_92:

(10, 52521), (11, 52515), (17, 52461), (27, 52401), (32, 52389), (Start: 41 @52365 has 194 MA's), (59, 52308), (61, 52299), (84, 52158), (103, 52068),

Gene: Isiphiwo_99 Start: 50683, Stop: 50351, Start Num: 41

Candidate Starts for Isiphiwo_99:

(Start: 41 @50683 has 194 MA's), (Start: 55 @50656 has 2 MA's), (79, 50500), (87, 50461), (100, 50422), (103, 50386),

Gene: Iwokeuplikedis_98 Start: 52088, Stop: 51759, Start Num: 41

Candidate Starts for Iwokeuplikedis_98:

(Start: 41 @52088 has 194 MA's), (57, 52055), (59, 52031), (61, 52022), (84, 51881), (98, 51830), (103, 51791),

Gene: Jaan_91 Start: 51391, Stop: 51071, Start Num: 41

Candidate Starts for Jaan_91:

(Start: 41 @51391 has 194 MA's), (62, 51322), (69, 51256), (84, 51193), (100, 51142), (103, 51106),

Gene: Jabith_100 Start: 51532, Stop: 51215, Start Num: 41

Candidate Starts for Jabith_100:

(Start: 41 @51532 has 194 MA's), (71, 51370), (80, 51319),

Gene: Jeeves_102 Start: 51140, Stop: 50811, Start Num: 52

Candidate Starts for Jeeves_102:

(Start: 41 @51158 has 194 MA's), (Start: 52 @51140 has 2 MA's), (71, 50999), (73, 50990), (84, 50936), (87, 50921), (93, 50909), (103, 50849),

Gene: Jeffabunny_94 Start: 47736, Stop: 47404, Start Num: 41

Candidate Starts for Jeffabunny_94:

(Start: 41 @47736 has 194 MA's), (Start: 55 @47709 has 2 MA's), (79, 47553), (87, 47514), (100, 47475), (103, 47439),

Gene: Jerm_96 Start: 51896, Stop: 51606, Start Num: 41

Candidate Starts for Jerm_96:

(Start: 41 @51896 has 194 MA's), (65, 51800), (79, 51713), (84, 51689), (85, 51683), (91, 51671), (95, 51656),

Gene: JewelBug_94 Start: 49112, Stop: 48780, Start Num: 41

Candidate Starts for JewelBug_94:

(23, 49187), (Start: 38 @49124 has 3 MA's), (Start: 41 @49112 has 194 MA's), (Start: 55 @49085 has 2 MA's), (79, 48929), (87, 48890), (100, 48851), (103, 48815),

Gene: Jiawan_97 Start: 51929, Stop: 51633, Start Num: 41

Candidate Starts for Jiawan_97:

(Start: 41 @51929 has 194 MA's), (62, 51851), (64, 51836), (69, 51785), (84, 51719),

Gene: Jordennis_99 Start: 51016, Stop: 50684, Start Num: 41

Candidate Starts for Jordennis_99:

(23, 51091), (Start: 38 @51028 has 3 MA's), (Start: 41 @51016 has 194 MA's), (Start: 55 @50989 has 2 MA's), (79, 50833), (87, 50794), (100, 50755), (103, 50719),

Gene: Joselito_98 Start: 51170, Stop: 50853, Start Num: 41

Candidate Starts for Joselito_98:

(Start: 41 @51170 has 194 MA's), (71, 51008), (80, 50957),

Gene: JoshKayV_98 Start: 52139, Stop: 51846, Start Num: 44

Candidate Starts for JoshKayV_98:

(Start: 41 @52145 has 194 MA's), (Start: 44 @52139 has 2 MA's), (Start: 55 @52118 has 2 MA's), (74, 51980), (84, 51932), (100, 51884),

Gene: Journey13_81 Start: 47229, Stop: 46915, Start Num: 41

Candidate Starts for Journey13_81:

(Start: 41 @47229 has 194 MA's), (Start: 55 @47190 has 2 MA's), (59, 47160), (61, 47151), (62, 47139), (74, 47052), (78, 47034), (88, 46989), (100, 46953),

Gene: Jsquared_102 Start: 51747, Stop: 51448, Start Num: 41

Candidate Starts for Jsquared_102:

(Start: 41 @51747 has 194 MA's), (65, 51651), (79, 51564), (81, 51549), (85, 51534),

Gene: Kalpine_98 Start: 52161, Stop: 51862, Start Num: 41

Candidate Starts for Kalpine_98:

(Start: 41 @52161 has 194 MA's), (Start: 44 @52155 has 2 MA's), (Start: 55 @52134 has 2 MA's), (62, 52083), (74, 51996), (84, 51948), (89, 51933), (100, 51900),

Gene: Kazan_104 Start: 50934, Stop: 50602, Start Num: 41

Candidate Starts for Kazan_104:

(Start: 41 @50934 has 194 MA's), (Start: 55 @50907 has 2 MA's), (79, 50751), (87, 50712), (100, 50673), (103, 50637),

Gene: Kerberos_98 Start: 51574, Stop: 51257, Start Num: 41

Candidate Starts for Kerberos_98:

(33, 51598), (Start: 41 @51574 has 194 MA's), (Start: 44 @51568 has 2 MA's), (Start: 55 @51535 has 2 MA's), (59, 51505), (61, 51496), (71, 51412),

Gene: Keziacharles14_94 Start: 52148, Stop: 51786, Start Num: 41

Candidate Starts for Keziacharles14_94:

(Start: 41 @52148 has 194 MA's), (62, 52055), (67, 52025), (71, 51983), (73, 51974), (75, 51968), (83, 51929), (103, 51824),

Gene: Kimba_97 Start: 50474, Stop: 50157, Start Num: 41

Candidate Starts for Kimba_97:

(Start: 41 @50474 has 194 MA's), (71, 50312), (80, 50261),

Gene: KingCyrus_92 Start: 52682, Stop: 52392, Start Num: 41

Candidate Starts for KingCyrus_92:

(Start: 39 @52688 has 1 MA's), (Start: 41 @52682 has 194 MA's), (84, 52475), (91, 52457), (100, 52430),

Gene: Kipper29_101 Start: 50791, Stop: 50459, Start Num: 41

Candidate Starts for Kipper29_101:

(23, 50866), (Start: 38 @50803 has 3 MA's), (Start: 41 @50791 has 194 MA's), (Start: 55 @50764 has 2 MA's), (79, 50608), (87, 50569), (100, 50530), (103, 50494),

Gene: Klodlith_95 Start: 51285, Stop: 50983, Start Num: 41

Candidate Starts for Klodlith_95:

(Start: 41 @51285 has 194 MA's), (53, 51276), (62, 51207), (64, 51192), (69, 51141), (94, 51039), (100, 51021),

Gene: Koduck_98 Start: 51378, Stop: 51082, Start Num: 41

Candidate Starts for Koduck_98:

(Start: 41 @51378 has 194 MA's), (65, 51282), (79, 51195), (100, 51120),

Gene: Koko_105 Start: 51643, Stop: 51314, Start Num: 41

Candidate Starts for Koko_105:

(Start: 38 @51655 has 3 MA's), (Start: 41 @51643 has 194 MA's), (Start: 55 @51616 has 2 MA's), (79, 51460), (85, 51430), (100, 51385), (103, 51349),

Gene: L5_89 Start: 51082, Stop: 50786, Start Num: 41

Candidate Starts for L5_89:

(Start: 41 @51082 has 194 MA's), (65, 50986), (81, 50884), (100, 50824),

Gene: LadyBird_97 Start: 51890, Stop: 51600, Start Num: 41

Candidate Starts for LadyBird_97:

(34, 51905), (Start: 41 @51890 has 194 MA's), (Start: 55 @51863 has 2 MA's), (65, 51794), (84, 51683), (91, 51665),

Gene: Landor_93 Start: 52502, Stop: 52185, Start Num: 41

Candidate Starts for Landor_93:

(Start: 41 @52502 has 194 MA's), (62, 52433), (69, 52367), (84, 52304), (100, 52250), (103, 52214),

Gene: Larenn_93 Start: 51727, Stop: 51437, Start Num: 41
Candidate Starts for Larenn_93:
(25, 51763), (29, 51751), (Start: 41 @51727 has 194 MA's), (65, 51631), (84, 51520), (91, 51502), (95, 51487),

Gene: Leogania_78 Start: 47800, Stop: 47507, Start Num: 41
Candidate Starts for Leogania_78:
(Start: 41 @47800 has 194 MA's), (Start: 44 @47794 has 2 MA's), (Start: 55 @47773 has 2 MA's), (62, 47722), (84, 47590), (87, 47575), (95, 47557),

Gene: Leviathan_96 Start: 51974, Stop: 51684, Start Num: 41
Candidate Starts for Leviathan_96:
(Start: 41 @51974 has 194 MA's), (65, 51878), (79, 51791), (84, 51767), (85, 51761), (91, 51749), (95, 51734),

Gene: LilTurb_96 Start: 51886, Stop: 51596, Start Num: 41
Candidate Starts for LilTurb_96:
(Start: 39 @51892 has 1 MA's), (Start: 41 @51886 has 194 MA's), (65, 51790), (79, 51703), (84, 51679), (85, 51673), (91, 51661), (95, 51646),

Gene: Lilbunny_99 Start: 49513, Stop: 49181, Start Num: 41
Candidate Starts for Lilbunny_99:
(Start: 41 @49513 has 194 MA's), (Start: 55 @49486 has 2 MA's), (79, 49330), (87, 49291), (100, 49252), (103, 49216),

Gene: Lilleskat_96 Start: 51900, Stop: 51604, Start Num: 41
Candidate Starts for Lilleskat_96:
(Start: 41 @51900 has 194 MA's), (62, 51822), (64, 51807), (69, 51756), (84, 51690),

Gene: LionsBait_92 Start: 52277, Stop: 51987, Start Num: 41
Candidate Starts for LionsBait_92:
(34, 52292), (Start: 41 @52277 has 194 MA's), (63, 52190), (84, 52070), (87, 52055), (95, 52037),

Gene: Lokk_90 Start: 49752, Stop: 49459, Start Num: 41
Candidate Starts for Lokk_90:
(Start: 41 @49752 has 194 MA's), (85, 49536), (95, 49509),

Gene: LoneWolf_99 Start: 51833, Stop: 51534, Start Num: 41
Candidate Starts for LoneWolf_99:
(35, 51854), (Start: 41 @51833 has 194 MA's), (Start: 55 @51803 has 2 MA's), (62, 51752), (84, 51620),

Gene: Loser_98 Start: 52299, Stop: 51985, Start Num: 40
Candidate Starts for Loser_98:
(Start: 40 @52299 has 2 MA's), (Start: 41 @52296 has 194 MA's), (Start: 55 @52257 has 2 MA's), (59, 52227), (61, 52218), (74, 52119), (84, 52071), (85, 52065),

Gene: Luchador_97 Start: 52062, Stop: 51730, Start Num: 52
Candidate Starts for Luchador_97:
(Start: 41 @52080 has 194 MA's), (Start: 52 @52062 has 2 MA's), (62, 51993), (71, 51921), (73, 51912), (84, 51858), (87, 51843), (103, 51768),

Gene: Lucivia_101 Start: 51449, Stop: 51132, Start Num: 41
Candidate Starts for Lucivia_101:
(Start: 41 @51449 has 194 MA's), (71, 51287), (80, 51236),

Gene: Lucyedi_95 Start: 51835, Stop: 51428, Start Num: 20
Candidate Starts for Lucyedi_95:
(Start: 20 @51835 has 2 MA's), (21, 51826), (35, 51763), (Start: 49 @51730 has 2 MA's), (58, 51682),
(59, 51676), (69, 51589), (70, 51586), (81, 51532), (82, 51526), (84, 51514), (99, 51466),

Gene: MaCh_100 Start: 51413, Stop: 51096, Start Num: 41
Candidate Starts for MaCh_100:
(Start: 41 @51413 has 194 MA's), (71, 51251), (80, 51200),

Gene: Mabel_100 Start: 51414, Stop: 51097, Start Num: 41
Candidate Starts for Mabel_100:
(Start: 41 @51414 has 194 MA's), (71, 51252), (80, 51201),

Gene: MajorMajor_94 Start: 49791, Stop: 49492, Start Num: 41
Candidate Starts for MajorMajor_94:
(Start: 41 @49791 has 194 MA's), (Start: 55 @49764 has 2 MA's), (79, 49608), (81, 49593), (85,
49578), (89, 49566),

Gene: Malec_93 Start: 52135, Stop: 51845, Start Num: 41
Candidate Starts for Malec_93:
(25, 52171), (29, 52159), (Start: 41 @52135 has 194 MA's), (65, 52039), (84, 51928), (91, 51910), (95,
51895),

Gene: Maminiaina_98 Start: 51829, Stop: 51533, Start Num: 41
Candidate Starts for Maminiaina_98:
(Start: 41 @51829 has 194 MA's), (Start: 55 @51799 has 2 MA's), (62, 51748), (64, 51733), (69,
51682), (84, 51616),

Gene: McFly_102 Start: 51273, Stop: 50941, Start Num: 41
Candidate Starts for McFly_102:
(Start: 41 @51273 has 194 MA's), (Start: 55 @51246 has 2 MA's), (79, 51090), (87, 51051), (100,
51012), (103, 50976),

Gene: MegTheThird_93 Start: 51263, Stop: 50913, Start Num: 41
Candidate Starts for MegTheThird_93:
(Start: 41 @51263 has 194 MA's), (Start: 55 @51236 has 2 MA's), (62, 51185), (75, 51098), (76,
51095), (101, 50993), (103, 50951),

Gene: MiculUcigas_97 Start: 51574, Stop: 51281, Start Num: 41
Candidate Starts for MiculUcigas_97:
(Start: 41 @51574 has 194 MA's), (63, 51487), (84, 51364), (91, 51346), (95, 51331),

Gene: Miko_91 Start: 50615, Stop: 50316, Start Num: 41
Candidate Starts for Miko_91:
(35, 50636), (Start: 41 @50615 has 194 MA's), (62, 50537), (74, 50450), (84, 50402), (100, 50354),

Gene: Minispark_96 Start: 51406, Stop: 51035, Start Num: 41
Candidate Starts for Minispark_96:

(Start: 41 @51406 has 194 MA's), (48, 51394), (62, 51310), (71, 51238), (75, 51223), (83, 51184), (101, 51115), (103, 51073),

Gene: MissWhite_94 Start: 49072, Stop: 48758, Start Num: 41

Candidate Starts for MissWhite_94:

(Start: 41 @49072 has 194 MA's), (Start: 55 @49033 has 2 MA's), (59, 49003), (61, 48994), (74, 48895), (84, 48847), (100, 48796),

Gene: Mulciber_99 Start: 51269, Stop: 50952, Start Num: 41

Candidate Starts for Mulciber_99:

(Start: 41 @51269 has 194 MA's), (71, 51107), (80, 51056),

Gene: Munch_98 Start: 51418, Stop: 51101, Start Num: 41

Candidate Starts for Munch_98:

(Start: 41 @51418 has 194 MA's), (71, 51256), (80, 51205),

Gene: Myxus_100 Start: 51948, Stop: 51652, Start Num: 41

Candidate Starts for Myxus_100:

(Start: 41 @51948 has 194 MA's), (62, 51870), (64, 51855), (69, 51804), (84, 51738),

Gene: NaSiaTalie_98 Start: 51735, Stop: 51442, Start Num: 41

Candidate Starts for NaSiaTalie_98:

(Start: 41 @51735 has 194 MA's), (63, 51648), (84, 51525), (91, 51507), (95, 51492),

Gene: Naji_87 Start: 47930, Stop: 47619, Start Num: 47

Candidate Starts for Naji_87:

(Start: 47 @47930 has 8 MA's), (71, 47774),

Gene: Neeharika16_99 Start: 50690, Stop: 50358, Start Num: 41

Candidate Starts for Neeharika16_99:

(Start: 41 @50690 has 194 MA's), (Start: 55 @50663 has 2 MA's), (79, 50507), (87, 50468), (100, 50429), (103, 50393),

Gene: Newrala_102 Start: 51372, Stop: 51040, Start Num: 41

Candidate Starts for Newrala_102:

(Start: 41 @51372 has 194 MA's), (Start: 55 @51345 has 2 MA's), (79, 51189), (87, 51150), (100, 51111), (103, 51075),

Gene: NicoleTera_96 Start: 51731, Stop: 51429, Start Num: 41

Candidate Starts for NicoleTera_96:

(Start: 39 @51737 has 1 MA's), (Start: 41 @51731 has 194 MA's), (74, 51566), (84, 51518), (85, 51512), (89, 51500),

Gene: NothingSpecial_89 Start: 51297, Stop: 50974, Start Num: 38

Candidate Starts for NothingSpecial_89:

(Start: 38 @51297 has 3 MA's), (Start: 55 @51270 has 2 MA's), (71, 51147), (79, 51111), (84, 51087), (100, 51039), (103, 51003),

Gene: Odin_96 Start: 51483, Stop: 51175, Start Num: 55

Candidate Starts for Odin_96:

(Start: 41 @51501 has 194 MA's), (Start: 55 @51483 has 2 MA's), (59, 51453), (84, 51300), (96, 51255), (100, 51246), (103, 51210),

Gene: Onglai_97 Start: 50101, Stop: 49805, Start Num: 41
Candidate Starts for Onglai_97:
(Start: 41 @50101 has 194 MA's), (62, 50023), (64, 50008), (69, 49957), (84, 49891),

Gene: Orange_100 Start: 50968, Stop: 50651, Start Num: 41
Candidate Starts for Orange_100:
(Start: 41 @50968 has 194 MA's), (71, 50806), (80, 50755),

Gene: PackMan_94 Start: 49862, Stop: 49566, Start Num: 41
Candidate Starts for PackMan_94:
(Start: 41 @49862 has 194 MA's), (62, 49784), (64, 49769), (69, 49718), (84, 49652),

Gene: PainterBoy_94 Start: 51441, Stop: 51139, Start Num: 49
Candidate Starts for PainterBoy_94:
(Start: 20 @51546 has 2 MA's), (21, 51537), (35, 51474), (Start: 49 @51441 has 2 MA's), (58, 51393),
(59, 51387), (69, 51300), (70, 51297), (81, 51243), (82, 51237), (84, 51225), (99, 51177),

Gene: Petersenfast_94 Start: 49849, Stop: 49532, Start Num: 41
Candidate Starts for Petersenfast_94:
(Start: 41 @49849 has 194 MA's), (71, 49687), (80, 49636),

Gene: Ph8s_100 Start: 51547, Stop: 51239, Start Num: 55
Candidate Starts for Ph8s_100:
(16, 51664), (17, 51661), (Start: 41 @51565 has 194 MA's), (Start: 55 @51547 has 2 MA's), (84, 51364), (96, 51319), (98, 51313), (100, 51310), (103, 51274),

Gene: Phaded_88 Start: 52515, Stop: 52198, Start Num: 41
Candidate Starts for Phaded_88:
(Start: 41 @52515 has 194 MA's), (62, 52446), (69, 52380), (84, 52317), (100, 52263), (103, 52227),

Gene: Phaeder_100 Start: 51823, Stop: 51527, Start Num: 41
Candidate Starts for Phaeder_100:
(Start: 41 @51823 has 194 MA's), (62, 51745), (64, 51730), (69, 51679), (84, 51613),

Gene: Pharaoh_81 Start: 49009, Stop: 48674, Start Num: 42
Candidate Starts for Pharaoh_81:
(Start: 38 @49021 has 3 MA's), (Start: 42 @49009 has 2 MA's), (54, 48988), (62, 48928), (84, 48796),
(94, 48763), (103, 48706),

Gene: Phlei_77 Start: 47718, Stop: 47371, Start Num: 45
Candidate Starts for Phlei_77:
(Start: 45 @47718 has 1 MA's), (62, 47640), (63, 47631), (66, 47616), (100, 47454), (103, 47421),
(104, 47400),

Gene: Phonnegut_100 Start: 51833, Stop: 51537, Start Num: 41
Candidate Starts for Phonnegut_100:
(Start: 41 @51833 has 194 MA's), (62, 51755), (64, 51740), (69, 51689), (84, 51623),

Gene: Pioneer_100 Start: 51833, Stop: 51537, Start Num: 41
Candidate Starts for Pioneer_100:
(Start: 41 @51833 has 194 MA's), (62, 51755), (64, 51740), (69, 51689), (84, 51623),

Gene: Piro94_95 Start: 51462, Stop: 51169, Start Num: 41

Candidate Starts for Piro94_95:

(Start: 41 @51462 has 194 MA's), (63, 51375), (84, 51252), (91, 51234), (95, 51219),

Gene: Pmask_100 Start: 51382, Stop: 51050, Start Num: 41

Candidate Starts for Pmask_100:

(Start: 41 @51382 has 194 MA's), (Start: 55 @51355 has 2 MA's), (79, 51199), (100, 51121), (103, 51085),

Gene: Polyphemus_93 Start: 49196, Stop: 48864, Start Num: 41

Candidate Starts for Polyphemus_93:

(23, 49271), (Start: 38 @49208 has 3 MA's), (Start: 41 @49196 has 194 MA's), (Start: 55 @49169 has 2 MA's), (79, 49013), (87, 48974), (100, 48935), (103, 48899),

Gene: Pomar16_98 Start: 51638, Stop: 51327, Start Num: 47

Candidate Starts for Pomar16_98:

(Start: 47 @51638 has 8 MA's), (71, 51482),

Gene: Power_95 Start: 52151, Stop: 51861, Start Num: 41

Candidate Starts for Power_95:

(25, 52187), (29, 52175), (Start: 41 @52151 has 194 MA's), (65, 52055), (84, 51944), (91, 51926), (95, 51911),

Gene: Priamo_101 Start: 50425, Stop: 50093, Start Num: 41

Candidate Starts for Priamo_101:

(18, 50521), (Start: 38 @50437 has 3 MA's), (Start: 41 @50425 has 194 MA's), (Start: 55 @50398 has 2 MA's), (79, 50242), (87, 50203), (100, 50164), (103, 50128),

Gene: Priya_97 Start: 51485, Stop: 51189, Start Num: 41

Candidate Starts for Priya_97:

(Start: 41 @51485 has 194 MA's), (62, 51407), (64, 51392), (69, 51341), (84, 51275),

Gene: Prudy_90 Start: 51527, Stop: 51228, Start Num: 41

Candidate Starts for Prudy_90:

(Start: 39 @51533 has 1 MA's), (Start: 41 @51527 has 194 MA's), (74, 51362), (84, 51314), (89, 51296),

Gene: Pukovnik_89 Start: 51834, Stop: 51508, Start Num: 41

Candidate Starts for Pukovnik_89:

(Start: 41 @51834 has 194 MA's), (57, 51801), (65, 51738), (69, 51690), (84, 51627), (100, 51573), (103, 51537),

Gene: Qobbit_97 Start: 51447, Stop: 51151, Start Num: 41

Candidate Starts for Qobbit_97:

(Start: 41 @51447 has 194 MA's), (62, 51369), (64, 51354), (69, 51303), (84, 51237),

Gene: QueenB2_94 Start: 51529, Stop: 51236, Start Num: 41

Candidate Starts for QueenB2_94:

(Start: 41 @51529 has 194 MA's), (Start: 44 @51523 has 2 MA's), (Start: 55 @51502 has 2 MA's), (84, 51319), (91, 51301), (95, 51286),

Gene: QueenBeesly_95 Start: 52104, Stop: 51814, Start Num: 41

Candidate Starts for QueenBeesly_95:

(25, 52140), (29, 52128), (Start: 41 @52104 has 194 MA's), (65, 52008), (84, 51897), (91, 51879), (95, 51864),

Gene: Quokka_99 Start: 51500, Stop: 51201, Start Num: 41

Candidate Starts for Quokka_99:

(Start: 41 @51500 has 194 MA's), (Start: 55 @51473 has 2 MA's), (79, 51317), (81, 51302), (85, 51287), (89, 51275),

Gene: Rachaly_92 Start: 50752, Stop: 50459, Start Num: 41

Candidate Starts for Rachaly_92:

(31, 50773), (Start: 41 @50752 has 194 MA's), (85, 50536), (95, 50509),

Gene: Rahalelujah_98 Start: 51421, Stop: 51050, Start Num: 41

Candidate Starts for Rahalelujah_98:

(Start: 41 @51421 has 194 MA's), (48, 51409), (62, 51325), (71, 51253), (75, 51238), (83, 51199), (101, 51130), (103, 51088),

Gene: RedRock_96 Start: 52057, Stop: 51743, Start Num: 41

Candidate Starts for RedRock_96:

(Start: 41 @52057 has 194 MA's), (46, 52048), (74, 51880), (84, 51832), (88, 51817),

Gene: Refuge_92 Start: 52220, Stop: 51888, Start Num: 51

Candidate Starts for Refuge_92:

(1, 52604), (2, 52577), (3, 52562), (4, 52556), (5, 52535), (6, 52508), (7, 52502), (8, 52421), (9, 52403), (13, 52349), (15, 52340), (Start: 20 @52328 has 2 MA's), (23, 52310), (Start: 38 @52247 has 3 MA's), (Start: 51 @52220 has 3 MA's), (54, 52205), (56, 52196), (62, 52145), (67, 52115), (69, 52079), (77, 52049), (84, 52013), (85, 52007), (100, 51962), (103, 51923),

Gene: Retro23_96 Start: 51827, Stop: 51534, Start Num: 41

Candidate Starts for Retro23_96:

(Start: 39 @51833 has 1 MA's), (Start: 41 @51827 has 194 MA's), (73, 51668), (84, 51617), (91, 51599), (95, 51584),

Gene: Rifter_104 Start: 50424, Stop: 50092, Start Num: 41

Candidate Starts for Rifter_104:

(Start: 38 @50436 has 3 MA's), (Start: 41 @50424 has 194 MA's), (Start: 55 @50397 has 2 MA's), (79, 50241), (85, 50211), (100, 50163), (103, 50127),

Gene: Roksolana_106 Start: 51476, Stop: 51144, Start Num: 41

Candidate Starts for Roksolana_106:

(Start: 41 @51476 has 194 MA's), (Start: 55 @51449 has 2 MA's), (79, 51293), (87, 51254), (100, 51215), (103, 51179),

Gene: RyeScarlet_100 Start: 51819, Stop: 51523, Start Num: 41

Candidate Starts for RyeScarlet_100:

(Start: 41 @51819 has 194 MA's), (62, 51741), (64, 51726), (69, 51675), (84, 51609),

Gene: Sachima_95 Start: 51847, Stop: 51551, Start Num: 41

Candidate Starts for Sachima_95:

(Start: 41 @51847 has 194 MA's), (62, 51769), (64, 51754), (69, 51703), (84, 51637),

Gene: Salz_97 Start: 50146, Stop: 49829, Start Num: 41

Candidate Starts for Salz_97:

(Start: 41 @50146 has 194 MA's), (71, 49984), (80, 49933),

Gene: Saskia_98 Start: 50637, Stop: 50320, Start Num: 41

Candidate Starts for Saskia_98:

(Start: 41 @50637 has 194 MA's), (71, 50475), (80, 50424),

Gene: Scherzo_98 Start: 51864, Stop: 51568, Start Num: 41

Candidate Starts for Scherzo_98:

(Start: 41 @51864 has 194 MA's), (62, 51786), (64, 51771), (69, 51720), (84, 51654),

Gene: SemperFi_95 Start: 51992, Stop: 51702, Start Num: 41

Candidate Starts for SemperFi_95:

(25, 52028), (29, 52016), (Start: 41 @51992 has 194 MA's), (65, 51896), (84, 51785), (91, 51767), (95, 51752),

Gene: Serenity_99 Start: 50858, Stop: 50559, Start Num: 41

Candidate Starts for Serenity_99:

(Start: 41 @50858 has 194 MA's), (Start: 55 @50831 has 2 MA's), (79, 50675), (81, 50660), (85, 50645), (89, 50633),

Gene: Sham4_97 Start: 50164, Stop: 49847, Start Num: 41

Candidate Starts for Sham4_97:

(Start: 41 @50164 has 194 MA's), (71, 50002), (80, 49951),

Gene: SheaKeira_94 Start: 51085, Stop: 50783, Start Num: 41

Candidate Starts for SheaKeira_94:

(Start: 41 @51085 has 194 MA's), (53, 51076), (62, 51007), (64, 50992), (100, 50821),

Gene: Sknot_98 Start: 51862, Stop: 51569, Start Num: 41

Candidate Starts for Sknot_98:

(Start: 41 @51862 has 194 MA's), (63, 51775), (84, 51652), (91, 51634), (95, 51619),

Gene: Smeagan_97 Start: 52047, Stop: 51745, Start Num: 41

Candidate Starts for Smeagan_97:

(12, 52185), (Start: 41 @52047 has 194 MA's), (Start: 55 @52008 has 2 MA's), (63, 51948), (79, 51852), (84, 51828), (91, 51810), (95, 51795),

Gene: SmellyB_103 Start: 50928, Stop: 50596, Start Num: 41

Candidate Starts for SmellyB_103:

(Start: 41 @50928 has 194 MA's), (Start: 55 @50901 has 2 MA's), (79, 50745), (87, 50706), (100, 50667), (103, 50631),

Gene: SnapTap_95 Start: 51807, Stop: 51517, Start Num: 41

Candidate Starts for SnapTap_95:

(25, 51843), (29, 51831), (Start: 41 @51807 has 194 MA's), (65, 51711), (84, 51600), (91, 51582), (95, 51567),

Gene: Snape_100 Start: 50957, Stop: 50640, Start Num: 41

Candidate Starts for Snape_100:

(Start: 41 @50957 has 194 MA's), (71, 50795), (80, 50744),

Gene: SororFago_98 Start: 52138, Stop: 51785, Start Num: 41

Candidate Starts for SororFago_98:

(36, 52156), (Start: 41 @52138 has 194 MA's), (56, 52099), (67, 52018), (73, 51967), (84, 51913), (87, 51898), (103, 51823),

Gene: Spouty_97 Start: 51484, Stop: 51188, Start Num: 41

Candidate Starts for Spouty_97:

(Start: 41 @51484 has 194 MA's), (62, 51406), (64, 51391), (69, 51340), (84, 51274),

Gene: StarStuff_98 Start: 51600, Stop: 51289, Start Num: 47

Candidate Starts for StarStuff_98:

(Start: 47 @51600 has 8 MA's), (71, 51444),

Gene: Steamy_92 Start: 52060, Stop: 51728, Start Num: 42

Candidate Starts for Steamy_92:

(Start: 42 @52060 has 2 MA's), (54, 52039), (58, 52006), (62, 51979), (64, 51964), (84, 51847), (103, 51757),

Gene: Sunhee_102 Start: 50973, Stop: 50626, Start Num: 41

Candidate Starts for Sunhee_102:

(14, 51078), (22, 51054), (Start: 41 @50973 has 194 MA's), (62, 50880), (63, 50871), (67, 50850), (69, 50814), (73, 50799), (84, 50745), (87, 50730), (100, 50697), (103, 50658),

Gene: SuperAwesome_102 Start: 51433, Stop: 51089, Start Num: 38

Candidate Starts for SuperAwesome_102:

(18, 51517), (Start: 38 @51433 has 3 MA's), (Start: 41 @51421 has 194 MA's), (Start: 55 @51394 has 2 MA's), (79, 51238), (100, 51160), (103, 51124),

Gene: SuperCallie99_97 Start: 50848, Stop: 50516, Start Num: 41

Candidate Starts for SuperCallie99_97:

(Start: 38 @50860 has 3 MA's), (Start: 41 @50848 has 194 MA's), (Start: 55 @50821 has 2 MA's), (79, 50665), (100, 50587), (103, 50551),

Gene: Superchunk_99 Start: 51590, Stop: 51264, Start Num: 41

Candidate Starts for Superchunk_99:

(Start: 41 @51590 has 194 MA's), (Start: 55 @51572 has 2 MA's), (59, 51542), (84, 51389), (96, 51344), (100, 51335), (103, 51299),

Gene: SweetiePie_95 Start: 51940, Stop: 51650, Start Num: 41

Candidate Starts for SweetiePie_95:

(25, 51976), (29, 51964), (Start: 41 @51940 has 194 MA's), (65, 51844), (84, 51733), (91, 51715), (95, 51700),

Gene: SwirlSquare_99 Start: 50946, Stop: 50599, Start Num: 41

Candidate Starts for SwirlSquare_99:

(16, 51045), (17, 51042), (Start: 41 @50946 has 194 MA's), (Start: 55 @50907 has 2 MA's), (69, 50790), (85, 50718), (96, 50679), (103, 50634),

Gene: TarsusIV_92 Start: 51423, Stop: 51133, Start Num: 41

Candidate Starts for TarsusIV_92:

(Start: 41 @51423 has 194 MA's), (78, 51246), (84, 51216), (91, 51198),

Gene: Temprado_104 Start: 51265, Stop: 50933, Start Num: 41

Candidate Starts for Temprado_104:

(Start: 41 @51265 has 194 MA's), (Start: 55 @51238 has 2 MA's), (79, 51082), (87, 51043), (100, 51004), (103, 50968),

Gene: Terrific_99 Start: 51830, Stop: 51537, Start Num: 41

Candidate Starts for Terrific_99:

(Start: 41 @51830 has 194 MA's), (63, 51743), (84, 51620), (91, 51602),

Gene: Timothy_100 Start: 50934, Stop: 50617, Start Num: 41

Candidate Starts for Timothy_100:

(Start: 41 @50934 has 194 MA's), (71, 50772), (80, 50721),

Gene: TinyTimmy_98 Start: 50663, Stop: 50346, Start Num: 41

Candidate Starts for TinyTimmy_98:

(Start: 41 @50663 has 194 MA's), (71, 50501), (80, 50450),

Gene: TipsytheTRex_94 Start: 51132, Stop: 50833, Start Num: 41

Candidate Starts for TipsytheTRex_94:

(Start: 41 @51132 has 194 MA's), (Start: 55 @51105 has 2 MA's), (65, 51036), (79, 50949), (81, 50934), (85, 50919), (89, 50907),

Gene: Tomathan_98 Start: 51679, Stop: 51368, Start Num: 47

Candidate Starts for Tomathan_98:

(Start: 47 @51679 has 8 MA's),

Gene: ToneTone_99 Start: 50816, Stop: 50484, Start Num: 41

Candidate Starts for ToneTone_99:

(Start: 41 @50816 has 194 MA's), (Start: 55 @50789 has 2 MA's), (79, 50633), (87, 50594), (100, 50555), (103, 50519),

Gene: Travvers_98 Start: 51596, Stop: 51285, Start Num: 47

Candidate Starts for Travvers_98:

(Start: 47 @51596 has 8 MA's), (71, 51440),

Gene: Tristan_92 Start: 52303, Stop: 51983, Start Num: 41

Candidate Starts for Tristan_92:

(Start: 41 @52303 has 194 MA's), (62, 52234), (69, 52168), (84, 52105), (100, 52054), (103, 52018),

Gene: Trixie_94 Start: 52346, Stop: 52047, Start Num: 41

Candidate Starts for Trixie_94:

(Start: 41 @52346 has 194 MA's), (Start: 44 @52340 has 2 MA's), (Start: 55 @52319 has 2 MA's), (62, 52268), (74, 52181), (84, 52133), (89, 52118),

Gene: Trooper_95 Start: 51322, Stop: 51023, Start Num: 39

Candidate Starts for Trooper_95:

(Start: 39 @51322 has 1 MA's), (Start: 41 @51316 has 194 MA's), (65, 51220), (69, 51172), (84, 51106), (91, 51088), (95, 51073),

Gene: Tubs_100 Start: 51823, Stop: 51527, Start Num: 41

Candidate Starts for Tubs_100:

(Start: 41 @51823 has 194 MA's), (62, 51745), (64, 51730), (69, 51679), (84, 51613),

Gene: Tucker_104 Start: 51019, Stop: 50687, Start Num: 41

Candidate Starts for Tucker_104:

(Start: 41 @51019 has 194 MA's), (Start: 55 @50992 has 2 MA's), (79, 50836), (87, 50797), (100, 50758), (103, 50722),

Gene: Turbido_95 Start: 51902, Stop: 51612, Start Num: 41

Candidate Starts for Turbido_95:

(Start: 41 @51902 has 194 MA's), (65, 51806), (79, 51719), (84, 51695), (85, 51689), (91, 51677), (95, 51662),

Gene: Ugenie5_86 Start: 49308, Stop: 49012, Start Num: 41

Candidate Starts for Ugenie5_86:

(Start: 41 @49308 has 194 MA's), (62, 49230), (64, 49215), (69, 49164), (84, 49098),

Gene: Updawg_98 Start: 51856, Stop: 51563, Start Num: 41

Candidate Starts for Updawg_98:

(Start: 41 @51856 has 194 MA's), (63, 51769), (84, 51646), (91, 51628), (95, 51613),

Gene: VA6_94 Start: 51349, Stop: 51059, Start Num: 41

Candidate Starts for VA6_94:

(Start: 41 @51349 has 194 MA's), (65, 51253), (79, 51166), (84, 51142), (91, 51124),

Gene: VC3_94 Start: 49945, Stop: 49628, Start Num: 41

Candidate Starts for VC3_94:

(33, 49969), (Start: 41 @49945 has 194 MA's), (Start: 44 @49939 has 2 MA's), (Start: 55 @49906 has 2 MA's), (59, 49876), (61, 49867), (71, 49783),

Gene: VohminGhazi_103 Start: 50929, Stop: 50597, Start Num: 41

Candidate Starts for VohminGhazi_103:

(Start: 41 @50929 has 194 MA's), (Start: 55 @50902 has 2 MA's), (79, 50746), (87, 50707), (100, 50668), (103, 50632),

Gene: WeiHuaDA_96 Start: 52378, Stop: 52079, Start Num: 41

Candidate Starts for WeiHuaDA_96:

(Start: 41 @52378 has 194 MA's), (Start: 44 @52372 has 2 MA's), (Start: 55 @52351 has 2 MA's), (62, 52300), (74, 52213), (84, 52165), (89, 52150),

Gene: Whabigail7_93 Start: 51900, Stop: 51610, Start Num: 41

Candidate Starts for Whabigail7_93:

(Start: 41 @51900 has 194 MA's), (65, 51804), (79, 51717), (84, 51693), (85, 51687), (91, 51675), (95, 51660),

Gene: WideWale_98 Start: 51856, Stop: 51563, Start Num: 41

Candidate Starts for WideWale_98:

(Start: 41 @51856 has 194 MA's), (63, 51769), (84, 51646), (91, 51628), (95, 51613),

Gene: Wiks_103 Start: 50896, Stop: 50564, Start Num: 41

Candidate Starts for Wiks_103:

(Start: 41 @50896 has 194 MA's), (Start: 55 @50869 has 2 MA's), (79, 50713), (87, 50674), (100, 50635), (103, 50599),

Gene: Wolpertinger_100 Start: 51283, Stop: 50966, Start Num: 41

Candidate Starts for Wolpertinger_100:

(Start: 41 @51283 has 194 MA's), (71, 51121), (80, 51070),

Gene: WorldCup_97 Start: 51507, Stop: 51136, Start Num: 41

Candidate Starts for WorldCup_97:

(Start: 41 @51507 has 194 MA's), (48, 51495), (62, 51411), (71, 51339), (75, 51324), (83, 51285), (101, 51216), (103, 51174),

Gene: WunderPhul_92 Start: 47498, Stop: 47166, Start Num: 41

Candidate Starts for WunderPhul_92:

(Start: 41 @47498 has 194 MA's), (Start: 55 @47471 has 2 MA's), (79, 47315), (87, 47276), (100, 47237), (103, 47201),

Gene: XianYue_93 Start: 51675, Stop: 51385, Start Num: 41

Candidate Starts for XianYue_93:

(25, 51711), (29, 51699), (Start: 41 @51675 has 194 MA's), (50, 51660), (Start: 55 @51648 has 2 MA's), (58, 51624), (64, 51582), (84, 51468), (95, 51435),

Gene: Yecey3_102 Start: 51908, Stop: 51612, Start Num: 41

Candidate Starts for Yecey3_102:

(Start: 41 @51908 has 194 MA's), (53, 51902), (Start: 55 @51884 has 2 MA's), (60, 51851), (62, 51833), (69, 51767), (75, 51746), (90, 51683),

Gene: Yokurt_102 Start: 50896, Stop: 50564, Start Num: 41

Candidate Starts for Yokurt_102:

(Start: 41 @50896 has 194 MA's), (Start: 55 @50869 has 2 MA's), (79, 50713), (87, 50674), (100, 50635), (103, 50599),

Gene: Zaka_104 Start: 50896, Stop: 50564, Start Num: 41

Candidate Starts for Zaka_104:

(Start: 41 @50896 has 194 MA's), (Start: 55 @50869 has 2 MA's), (79, 50713), (87, 50674), (100, 50635), (103, 50599),

Gene: Zimmer_91 Start: 51677, Stop: 51342, Start Num: 51

Candidate Starts for Zimmer_91:

(24, 51749), (Start: 38 @51704 has 3 MA's), (Start: 51 @51677 has 3 MA's), (62, 51599), (67, 51569), (77, 51503), (84, 51467), (97, 51422), (100, 51416), (103, 51377),

Gene: Zulu_104 Start: 51273, Stop: 50941, Start Num: 41

Candidate Starts for Zulu_104:

(Start: 41 @51273 has 194 MA's), (Start: 55 @51246 has 2 MA's), (79, 51090), (87, 51051), (100, 51012), (103, 50976),