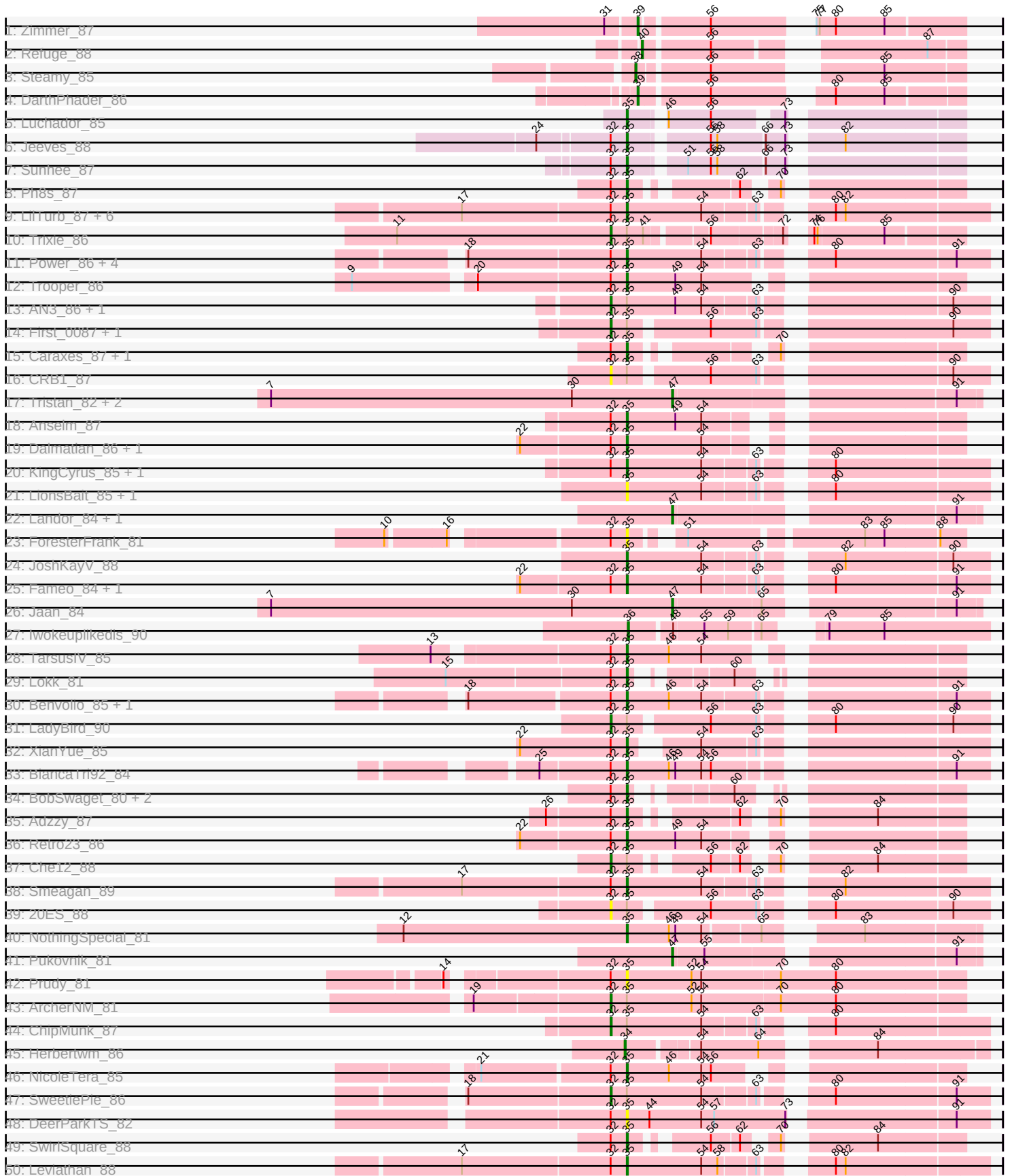
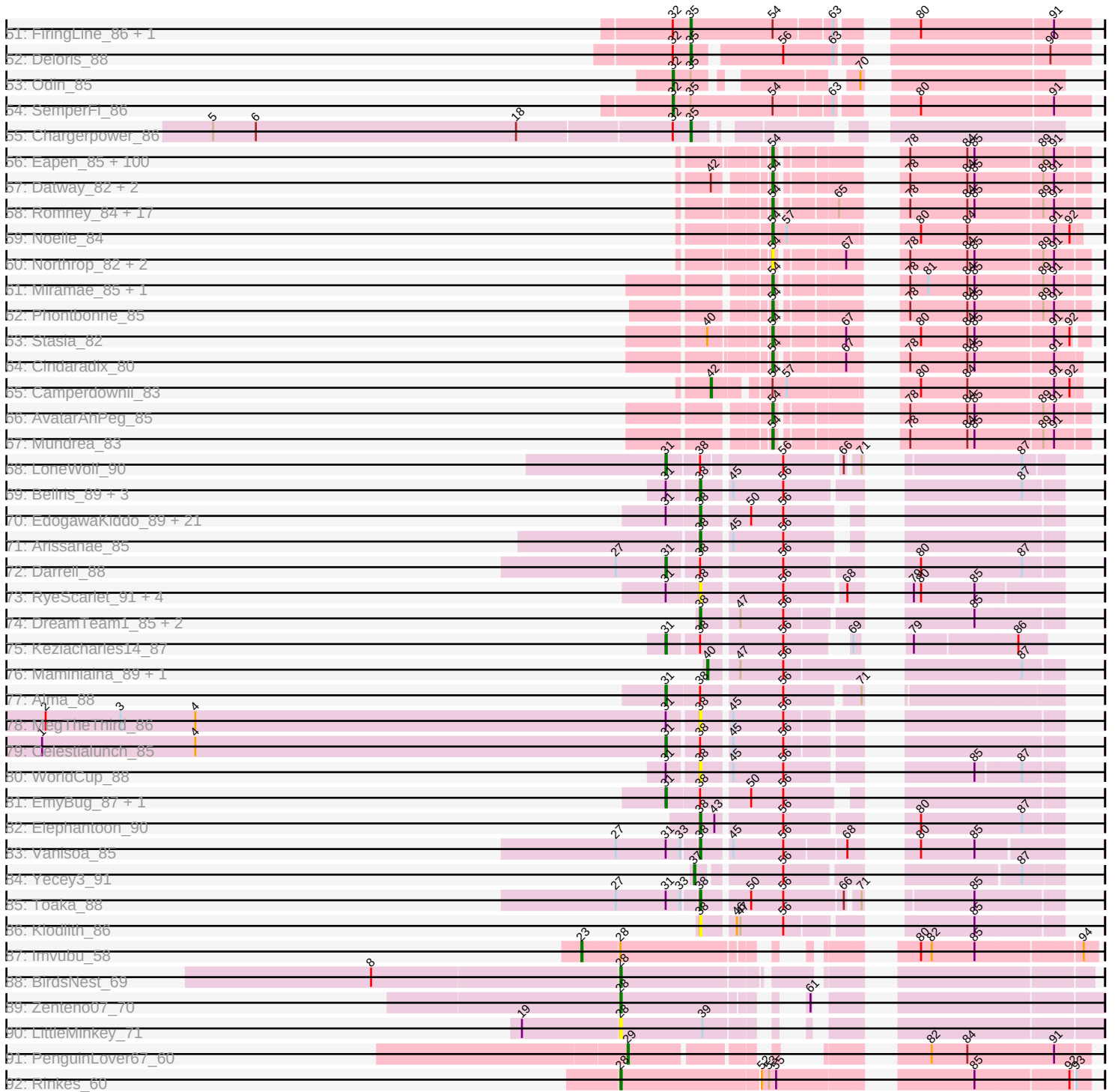


Pham 330428





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 330428 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330428 has 270 members, 31 are drafts.

Phages represented in each track:

- Track 1 : Zimmer_87
- Track 2 : Refuge_88
- Track 3 : Steamy_85
- Track 4 : DarthPhader_86
- Track 5 : Luchador_85
- Track 6 : Jeeves_88
- Track 7 : Sunhee_87
- Track 8 : Ph8s_87
- Track 9 : LilTurb_87, Jerm_88, Agape74_88, Whabigail7_85, Turbido_87, Dignity_88, AbbyPaige_88
- Track 10 : Trixie_86
- Track 11 : Power_86, QueenB2_83, SnapTap_86, Georgie2_88, Crucio_86
- Track 12 : Trooper_86
- Track 13 : AN3_86, VA6_86
- Track 14 : First_0087, BengiVuitton_88
- Track 15 : Caraxes_87, Superchunk_86
- Track 16 : CRB1_87
- Track 17 : Tristan_82, Phaded_80, Bactobuster_78
- Track 18 : Anselm_87
- Track 19 : Dalmatian_86, DudeLittle_84
- Track 20 : KingCyrus_85, EvilGenius_86
- Track 21 : LionsBait_85, HippoHollow_83
- Track 22 : Landor_84, IronMan_83
- Track 23 : ForesterFrank_81
- Track 24 : JoshKayV_88
- Track 25 : Fameo_84, Heffalump_83
- Track 26 : Jaan_84
- Track 27 : Iwokeuplikedis_90
- Track 28 : TarsusIV_85
- Track 29 : Lokk_81
- Track 30 : Benvolio_85, Echild_89
- Track 31 : LadyBird_90
- Track 32 : XianYue_85
- Track 33 : BiancaTri92_84
- Track 34 : BobSwaget_80, Rachaly_83, Miko_81
- Track 35 : Adzzy_87
- Track 36 : Retro23_86

- Track 37 : Che12_88
- Track 38 : Smeagan_89
- Track 39 : 20ES_88
- Track 40 : NothingSpecial_81
- Track 41 : Pukovnik_81
- Track 42 : Prudy_81
- Track 43 : ArcherNM_81
- Track 44 : ChipMunk_87
- Track 45 : Herbertwm_86
- Track 46 : NicoleTera_85
- Track 47 : SweetiePie_86
- Track 48 : DeerParkTS_82
- Track 49 : SwirlSquare_88
- Track 50 : Leviathan_88
- Track 51 : FiringLine_86, QueenBeesly_86
- Track 52 : Deloris_88
- Track 53 : Odin_85
- Track 54 : SemperFi_86
- Track 55 : Chargerpower_86
- Track 56 : Eapen_85, Eurydice_86, Happiness_84, Deano_82, Arturo_82, Annyong_84, Chaph_85, LappelDuVide_85, CentreCat_85, Peaches_83, Burger_83, Obama12_86, DirtyDunning_84, Ohfah_86, Huxley_77, Eagle_84, Baby16_85, Citius_85, Flux_86, Funston_84, Thanksgivukkah_84, Broseidon_85, LittleGuy_85, Bombshell_85, Iceman_83, Skadoosh_82, TinaFeyge_83, Kampy_84, Gadost_85, Kyee_85, ChampagnePapi_88, Palestino_84, Kratark_84, Maverick_84, Nemo27_84, Maxo_87, ICleared_84, Koreni_84, Commander_83, NorthStar_82, Florean_85, Roosevelt_83, Taquarus_84, MeeZee_84, Holli_84, Eris_84, Lemur_85, Mazhar510_85, JoongJeon_84, Rosa24_81, Jaykayelowell_82, NotAPhaseMom_84, Caelakin_83, Polymorphads_86, Ulysses_84, Sultana_85, Melvin_87, OKaNui_84, KFPoly_84, Ruin_85, KekoraPapaka_82, Buckaroo_81, Lorenzo_85, Cocoaberry_85, TygerBlood_85, RockieBear_82, Millski_84, Wander_85, TroyPia_86, Connomayer_85, Dhanush_85, Avle17_85, SenorClean_86, Clarenza_84, Pipcraft_81, Houdini22_84, Bruiser_84, BubbleTrouble_84, Shaka_83, Phelipe_85, Alberto7_86, Morrow_87, LHTSCC_88, Medusa_84, Nyxis_84, Blackmoor_84, Phacado_85, HamSlice_81, Koan_82, Sabertooth_85, SteMason_85, TiroTheta9_84, Eros_85, Bartimeaus_85, YoSam321_85, Tinybot_84, BellusTerra_85, Lunsford_85, Iracema64_85, Scamp_85, Nebs_86
- Track 57 : Datway_82, Shygu2_83, Xena_81
- Track 58 : Romney_84, Abdiel_84, Wilbur_85, SheldonCooper_85, Pumbaa_85, LochMonster_86, Sparxx_86, JetBlade_86, Phighter1804_85, Kingmustik0402_85, Spino_84, PeterPeter_85, Cerulean_87, BangNhom_82, Relief_84, LittleB_85, Albee_85, Skipitt_84
- Track 59 : Noelle_84
- Track 60 : Northrop_82, Junimo_81, Rocksand_82
- Track 61 : Miramae_85, Stink_85
- Track 62 : Phontbonne_85
- Track 63 : Stasia_82
- Track 64 : Cindaradix_80
- Track 65 : Camperdownii_83
- Track 66 : AvatarAhPeg_85
- Track 67 : Mundrea_83
- Track 68 : LoneWolf_90
- Track 69 : Bellris_89, Minispark_87, CogOmlette_87, Rahalelujah_89

- Track 70 : EdogawaKiddo_89, Scherzo_88, HortumSL17_91, Phonnegut_90, Qobbit_88, Aliter_83, Fayely_88, Tubs_90, Sachima_86, Conquerage_88, Catalina_92, Eidsmoe_88, Beemo_90, Pioneer_90, Ugenie5_77, Myxus_90, ExplosioNervosa_88, Priya_88, Phaeder_90, Lilleskat_87, PackMan_85, Spouty_88
- Track 71 : Arissanae_85
- Track 72 : Darrell_88
- Track 73 : RyeScarlet_91, Jiawan_88, Onglai_88, Halex_89, Hanray_88
- Track 74 : DreamTeam1_85, SheaKeira_85, Charm_85
- Track 75 : Keziacharles14_87
- Track 76 : Maminiaina_89, BogosyJay_89
- Track 77 : Alma_88
- Track 78 : MegTheThird_86
- Track 79 : Celestialunch_85
- Track 80 : WorldCup_88
- Track 81 : EmyBug_87, Ayanochan_87
- Track 82 : Elephantoon_90
- Track 83 : Vanisoa_85
- Track 84 : Yecey3_91
- Track 85 : Toaka_88
- Track 86 : Klodlith_86
- Track 87 : Imvubu_58
- Track 88 : BirdsNest_69
- Track 89 : Zenteno07_70
- Track 90 : LittleMinkey_71
- Track 91 : PenguinLover67_60
- Track 92 : Rinkes_60

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

The start number called the most often in the published annotations is 54, it was called in 125 of the 239 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abdiel_84, Albee_85, Alberto7_86, Annyong_84, Arturo_82, AvatarAhPeg_85, Avle17_85, Baby16_85, BangNhom_82, Bartimeaus_85, BellusTerra_85, Blackmoor_84, Bombshell_85, Broseidon_85, Bruiser_84, BubbleTrouble_84, Buckaroo_81, Burger_83, Caelakin_83, CentreCat_85, Cerulean_87, ChampagnePapi_88, Chaph_85, Cindaradix_80, Citius_85, Clarenza_84, Cocoaberry_85, Commander_83, Connomayer_85, Datway_82, Deano_82, Dhanush_85, DirtyDunning_84, Eagle_84, Eapen_85, Eris_84, Eros_85, Eurydice_86, Florean_85, Flux_86, Funston_84, Gadost_85, HamSlice_81, Happiness_84, Holli_84, Houdini22_84, Huxley_77, ICleared_84, Iceman_83, Iracema64_85, Jaykayelowell_82, JetBlade_86, JoongJeon_84, Junimo_81, KFPoly_84, Kamy_84, KekoraPapaka_82, Kingmustik0402_85, Koan_82, Koreni_84, Kratak_84, Kyee_85, LHTSCC_88, LappelDuVide_85, Lemur_85, LittleB_85, LittleGuy_85, LochMonster_86, Lorenzo_85, Lunsford_85, Maverick_84, Maxo_87, Mazhar510_85, Medusa_84, MeeZee_84, Melvin_87, Millski_84, Miramae_85, Morrow_87, Mundrea_83, Nebs_86, Nemo27_84, Noelle_84, NorthStar_82, Northrop_82, NotAPhaseMom_84, Nyxis_84, OKaNui_84, Obama12_86, Ohfah_86, Palestino_84, Peaches_83, PeterPeter_85, Phacado_85,

Phelipe_85, Phighter1804_85, Phontbonne_85, Pipcraft_81, Polymorphads_86, Pumbaa_85, Relief_84, RockieBear_82, Rocksand_82, Romney_84, Roosevelt_83, Rosa24_81, Ruin_85, Sabertooth_85, Scamp_85, SenorClean_86, Shaka_83, SheldonCooper_85, Shygu2_83, Skadoosh_82, Skipitt_84, Sparxx_86, Spino_84, Stasia_82, SteMason_85, Stink_85, Sultana_85, Taquarus_84, Thanksgivukkah_84, TinaFeyge_83, Tinybot_84, TiroTheta9_84, TroyPia_86, TygerBlood_85, Ulysses_84, Wander_85, Wilbur_85, Xena_81, YoSam321_85,

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

- AN3_86, AbbyPaige_88, Agape74_88, Anselm_87, ArcherNM_81, Benvolio_85, BiancaTri92_84, Camperdownii_83, ChipMunk_87, Crucio_86, Dalmatian_86, DeerParkTS_82, Dignity_88, DudeLittle_84, Echild_89, EvilGenius_86, Fameo_84, FiringLine_86, Georgie2_88, Heffalump_83, Herbertwm_86, HippoHollow_83, Jerm_88, JoshKayV_88, KingCyrus_85, Leviathan_88, LilTurb_87, LionsBait_85, NicoleTera_85, NothingSpecial_81, Power_86, Prudy_81, QueenB2_83, QueenBeesly_86, Retro23_86, SemperFi_86, Smeagan_89, SnapTap_86, SweetiePie_86, TarsusIV_85, Trooper_86, Turbido_87, VA6_86, Whabigail7_85, XianYue_85,

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

- 20ES_88, Adzzy_87, Aliter_83, Alma_88, Arissanae_85, Ayanochan_87, Bactobuster_78, Beemo_90, Bellris_89, BengiVuitton_88, BirdsNest_69, BobSwaget_80, BogosyJay_89, CRB1_87, Caraxes_87, Catalina_92, Celestialunch_85, Chargerpower_86, Charm_85, Che12_88, CogOmlette_87, Conquerage_88, Darrell_88, DarthPhader_86, Deloris_88, DreamTeam1_85, EdogawaKiddo_89, Eidsmoe_88, Elephantoon_90, EmyBug_87, ExplosioNervosa_88, Fayely_88, First_0087, ForesterFrank_81, Hanray_88, Halex_89, HortumSL17_91, Imvubu_58, IronMan_83, Iwokeuplikedis_90, Jaan_84, Jeeves_88, Jiawan_88, Keziacharles14_87, Klodlith_86, LadyBird_90, Landor_84, Lilleskat_87, LittleMinkey_71, Loka_81, LoneWolf_90, Luchador_85, Maminiaina_89, MegTheThird_86, Miko_81, Minispark_87, Myxus_90, Odin_85, Onglai_88, PackMan_85, Penguin Lover67_60, Ph8s_87, Phaded_80, Phaeder_90, Phonnegut_90, Pioneer_90, Priya_88, Pukovnik_81, Qobbit_88, Rachaly_83, Rahalelujah_89, Refuge_88, Rinkes_60, RyeScarlet_91, Sachima_86, Scherzo_88, SheaKeira_85, Spouty_88, Steamy_85, Sunhee_87, Superchunk_86, SwirlSquare_88, Toaka_88, Tristan_82, Trixie_86, Tubs_90, Ugenie5_77, Vanisoa_85, WorldCup_88, Yecey3_91, Zenteno07_70, Zimmer_87,

Summary by start number:

Start 23:

- Found in 1 of 270 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Imvubu_58 (B10),

Start 28:

- Found in 5 of 270 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 239
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BirdsNest_69 (B13), LittleMinkey_71 (B13), Rinkes_60 (B9), Zenteno07_70 (B13),

Start 29:

- Found in 1 of 270 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PenguinLover67_60 (B9),

Start 31:

- Found in 43 of 270 (15.9%) of genes in pham
- Manual Annotations of this start: 7 of 239
- Called 16.3% of time when present
- Phage (with cluster) where this start called: Alma_88 (A9), Ayanochan_87 (A9), Celestiallunch_85 (A9), Darrell_88 (A9), EmyBug_87 (A9), Keziacharles14_87 (A9), LoneWolf_90 (A9),

Start 32:

- Found in 61 of 270 (22.6%) of genes in pham
- Manual Annotations of this start: 11 of 239
- Called 23.0% of time when present
- Phage (with cluster) where this start called: 20ES_88 (A2), AN3_86 (A2), ArcherNM_81 (A2), BengiVuitton_88 (A2), CRB1_87 (A2), Che12_88 (A2), ChipMunk_87 (A2), First_0087 (A2), LadyBird_90 (A2), Odin_85 (A2), SemperFi_86 (A2), SweetiePie_86 (A2), Trixie_86 (A2), VA6_86 (A2),

Start 34:

- Found in 1 of 270 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Herbertwm_86 (A2),

Start 35:

- Found in 66 of 270 (24.4%) of genes in pham
- Manual Annotations of this start: 46 of 239
- Called 78.8% of time when present
- Phage (with cluster) where this start called: AbbyPaige_88 (A2), Adzzy_87 (A2), Agape74_88 (A2), Anselm_87 (A2), Benvolio_85 (A2), BiancaTri92_84 (A2), BobSwaget_80 (A2), Caraxes_87 (A2), Chargerpower_86 (A22), Crucio_86 (A2), Dalmatian_86 (A2), DeerParkTS_82 (A2), Deloris_88 (A2), Dignity_88 (A2), DudeLittle_84 (A2), Echid_89 (A2), EvilGenius_86 (A2), Fameo_84 (A2), FiringLine_86 (A2), ForesterFrank_81 (A2), Georgie2_88 (A2), Heffalump_83 (A2), HippoHollow_83 (A2), Jeeves_88 (A14), Jerm_88 (A2), JoshKayV_88 (A2), KingCyrus_85 (A2), Leviathan_88 (A2), LilTurb_87 (A2), LionsBait_85 (A2), Lokk_81 (A2), Luchador_85 (A14), Miko_81 (A2), NicoleTera_85 (A2), NothingSpecial_81 (A2), Ph8s_87 (A2), Power_86 (A2), Prudy_81 (A2), QueenB2_83 (A2), QueenBeesly_86 (A2), Rachaly_83 (A2), Retro23_86 (A2), Smeagan_89 (A2), SnapTap_86 (A2), Sunhee_87 (A14), Superchunk_86 (A2), SwirlSquare_88 (A2), TarsusIV_85 (A2), Trooper_86 (A2), Turbido_87 (A2), Whabigail7_85 (A2), XianYue_85 (A2),

Start 36:

- Found in 1 of 270 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Iwokeuplikedis_90 (A2),

Start 37:

- Found in 1 of 270 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yecey3_91 (A9),

Start 38:

- Found in 49 of 270 (18.1%) of genes in pham
- Manual Annotations of this start: 29 of 239
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Aliter_83 (A9), Arissanae_85 (A9), Beemo_90 (A9), Bellris_89 (A9), Catalina_92 (A9), Charm_85 (A9), CogOmlette_87 (A9), Conquerage_88 (A9), DreamTeam1_85 (A9), EdogawaKiddo_89 (A9), Eidsmoe_88 (A9), Elephantoon_90 (A9), ExplosioNervosa_88 (A9), Fayely_88 (A9), Hanray_88 (A9), Halex_89 (A9), HortumSL17_91 (A9), Jiawan_88 (A9), Klodlith_86 (A9), Lilleskat_87 (A9), MegTheThird_86 (A9), Minispark_87 (A9), Myxus_90 (A9), Onglai_88 (A9), PackMan_85 (A9), Phaeder_90 (A9), Phonnegut_90 (A9), Pioneer_90 (A9), Priya_88 (A9), Qobbit_88 (A9), Rahalelujah_89 (A9), RyeScarlet_91 (A9), Sachima_86 (A9), Scherzo_88 (A9), SheaKeira_85 (A9), Spouty_88 (A9), Steamy_85 (A12), Toaka_88 (A9), Tubs_90 (A9), Ugenie5_77 (A9), Vanisoa_85 (A9), WorldCup_88 (A9),

Start 39:

- Found in 3 of 270 (1.1%) of genes in pham
- Manual Annotations of this start: 2 of 239
- Called 66.7% of time when present
- Phage (with cluster) where this start called: DarthPhader_86 (A12), Zimmer_87 (A12),

Start 40:

- Found in 4 of 270 (1.5%) of genes in pham
- Manual Annotations of this start: 3 of 239
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BogosyJay_89 (A9), Maminiaina_89 (A9), Refuge_88 (A12),

Start 42:

- Found in 4 of 270 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 239
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Camperdownii_83 (A4),

Start 47:

- Found in 13 of 270 (4.8%) of genes in pham
- Manual Annotations of this start: 7 of 239
- Called 53.8% of time when present
- Phage (with cluster) where this start called: Bactobuster_78 (A2), IronMan_83 (A2), Jaan_84 (A2), Landor_84 (A2), Phaded_80 (A2), Pukovnik_81 (A2), Tristan_82 (A2),

Start 54:

- Found in 178 of 270 (65.9%) of genes in pham
- Manual Annotations of this start: 125 of 239

- Called 74.7% of time when present
- Phage (with cluster) where this start called: Abdiel_84 (A4), Albee_85 (A4), Alberto7_86 (A4), Annyong_84 (A4), Arturo_82 (A4), AvatarAhPeg_85 (A4), Avle17_85 (A4), Baby16_85 (A4), BangNhom_82 (A4), Bartimeaus_85 (A4), BellusTerra_85 (A4), Blackmoor_84 (A4), Bombshell_85 (A4), Broseidon_85 (A4), Bruiser_84 (A4), BubbleTrouble_84 (A4), Buckaroo_81 (A4), Burger_83 (A4), Caelakin_83 (A4), CentreCat_85 (A4), Cerulean_87 (A4), ChampagnePapi_88 (A4), Chaph_85 (A4), Cindaradix_80 (A4), Citius_85 (A4), Clarenza_84 (A4), Cocoaberry_85 (A4), Commander_83 (A4), Connomayer_85 (A4), Datway_82 (A4), Deano_82 (A4), Dhanush_85 (A4), DirtyDunning_84 (A4), Eagle_84 (A4), Eapen_85 (A4), Eris_84 (A4), Eros_85 (A4), Eurydice_86 (A4), Florean_85 (A4), Flux_86 (A4), Funston_84 (A4), Gadost_85 (A4), HamSlice_81 (A4), Happiness_84 (A4), Holli_84 (A4), Houdini22_84 (A4), Huxley_77 (A4), ICleared_84 (A4), Iceman_83 (A4), Iracema64_85 (A4), Jaykayelowell_82 (A4), JetBlade_86 (A4), JoongJeon_84 (A4), Junimo_81 (A4), KFPoly_84 (A4), Kämpy_84 (A4), KekoraPapaka_82 (A4), Kingmustik0402_85 (A4), Koan_82 (A4), Koreni_84 (A4), Kratark_84 (A4), Kyee_85 (A4), LHTSCC_88 (A4), LappelDuVide_85 (A4), Lemur_85 (A4), LittleB_85 (A4), LittleGuy_85 (A4), LochMonster_86 (A4), Lorenzo_85 (A4), Lunsford_85 (A4), Maverick_84 (A4), Maxo_87 (A4), Mazhar510_85 (A4), Medusa_84 (A4), MeeZee_84 (A4), Melvin_87 (A4), Millski_84 (A4), Miramae_85 (A4), Morrow_87 (A4), Mundrea_83 (A4), Nebs_86 (A4), Nemo27_84 (A4), Noelle_84 (A4), NorthStar_82 (A4), Northrop_82 (A4), NotAPhaseMom_84 (A4), Nyxis_84 (A4), OKaNui_84 (A4), Obama12_86 (A4), Ohfah_86 (A4), Palestino_84 (A4), Peaches_83 (A4), PeterPeter_85 (A4), Phacado_85 (A4), Phelipe_85 (A4), Phighter1804_85 (A4), Phontbonne_85 (A4), Pipcraft_81 (A4), Polymorphads_86 (A4), Pumbaa_85 (A4), Relief_84 (A4), RockieBear_82 (A4), Rocksand_82 (A4), Romney_84 (A4), Roosevelt_83 (A4), Rosa24_81 (A4), Ruin_85 (A4), Sabertooth_85 (A4), Scamp_85 (A4), SenorClean_86 (A4), Shaka_83 (A4), SheldonCooper_85 (A4), Shygu2_83 (A4), Skadoosh_82 (A4), Skipitt_84 (A4), Sparxx_86 (A4), Spino_84 (A4), Stasia_82 (A4), SteMason_85 (A4), Stink_85 (A4), Sultana_85 (A4), Taquarus_84 (A4), Thanksgivukkah_84 (A4), TinaFeyge_83 (A4), Tinybot_84 (A4), TiroTheta9_84 (A4), TroyPia_86 (A4), TygerBlood_85 (A4), Ulysses_84 (A4), Wander_85 (A4), Wilbur_85 (A4), Xena_81 (A4), YoSam321_85 (A4),

Summary by clusters:

There are 9 clusters represented in this pham: A14, A22, A12, A2, A4, B10, A9, B9, B13,

Info for manual annotations of cluster A12:

- Start number 38 was manually annotated 1 time for cluster A12.
- Start number 39 was manually annotated 2 times for cluster A12.
- Start number 40 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 35 was manually annotated 3 times for cluster A14.

Info for manual annotations of cluster A2:

- Start number 32 was manually annotated 11 times for cluster A2.
- Start number 34 was manually annotated 1 time for cluster A2.
- Start number 35 was manually annotated 42 times for cluster A2.
- Start number 36 was manually annotated 1 time for cluster A2.
- Start number 47 was manually annotated 7 times for cluster A2.

Info for manual annotations of cluster A22:

- Start number 35 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A4:

- Start number 42 was manually annotated 1 time for cluster A4.
- Start number 54 was manually annotated 125 times for cluster A4.

Info for manual annotations of cluster A9:

- Start number 31 was manually annotated 7 times for cluster A9.
- Start number 37 was manually annotated 1 time for cluster A9.
- Start number 38 was manually annotated 28 times for cluster A9.
- Start number 40 was manually annotated 2 times for cluster A9.

Info for manual annotations of cluster B10:

- Start number 23 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B13:

- Start number 28 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B9:

- Start number 28 was manually annotated 1 time for cluster B9.
- Start number 29 was manually annotated 1 time for cluster B9.

Gene Information:

Gene: 20ES_88 Start: 48926, Stop: 48621, Start Num: 32

Candidate Starts for 20ES_88:

(Start: 32 @48926 has 11 MA's), (Start: 35 @48911 has 46 MA's), (56, 48845), (63, 48803), (80, 48758), (90, 48653),

Gene: AN3_86 Start: 47190, Stop: 46879, Start Num: 32

Candidate Starts for AN3_86:

(Start: 32 @47190 has 11 MA's), (Start: 35 @47175 has 46 MA's), (49, 47130), (Start: 54 @47106 has 125 MA's), (63, 47061), (90, 46911),

Gene: AbbyPaige_88 Start: 49174, Stop: 48878, Start Num: 35

Candidate Starts for AbbyPaige_88:

(17, 49324), (Start: 32 @49189 has 11 MA's), (Start: 35 @49174 has 46 MA's), (Start: 54 @49105 has 125 MA's), (63, 49060), (80, 49015), (82, 49006),

Gene: Abdiel_84 Start: 48815, Stop: 48603, Start Num: 54

Candidate Starts for Abdiel_84:

(Start: 54 @48815 has 125 MA's), (65, 48773), (78, 48746), (84, 48698), (85, 48692), (89, 48638), (91, 48629),

Gene: Adzzy_87 Start: 47625, Stop: 47383, Start Num: 35

Candidate Starts for Adzzy_87:

(26, 47697), (Start: 32 @47640 has 11 MA's), (Start: 35 @47625 has 46 MA's), (62, 47547), (70, 47526), (84, 47460),

Gene: Agape74_88 Start: 49150, Stop: 48854, Start Num: 35

Candidate Starts for Agape74_88:

(17, 49300), (Start: 32 @49165 has 11 MA's), (Start: 35 @49150 has 46 MA's), (Start: 54 @49081 has 125 MA's), (63, 49036), (80, 48991), (82, 48982),

Gene: Albee_85 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Albee_85:

(Start: 54 @48803 has 125 MA's), (65, 48761), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Alberto7_86 Start: 49140, Stop: 48928, Start Num: 54

Candidate Starts for Alberto7_86:

(Start: 54 @49140 has 125 MA's), (78, 49071), (84, 49023), (85, 49017), (89, 48963), (91, 48954),

Gene: Aliter_83 Start: 46251, Stop: 46006, Start Num: 38

Candidate Starts for Aliter_83:

(Start: 31 @46278 has 7 MA's), (Start: 38 @46251 has 29 MA's), (50, 46215), (56, 46188),

Gene: Alma_88 Start: 49120, Stop: 48845, Start Num: 31

Candidate Starts for Alma_88:

(Start: 31 @49120 has 7 MA's), (Start: 38 @49093 has 29 MA's), (56, 49030), (71, 48973),

Gene: Annyong_84 Start: 48848, Stop: 48636, Start Num: 54

Candidate Starts for Annyong_84:

(Start: 54 @48848 has 125 MA's), (78, 48779), (84, 48731), (85, 48725), (89, 48671), (91, 48662),

Gene: Anselm_87 Start: 49020, Stop: 48757, Start Num: 35

Candidate Starts for Anselm_87:

(Start: 32 @49035 has 11 MA's), (Start: 35 @49020 has 46 MA's), (49, 48975), (Start: 54 @48951 has 125 MA's),

Gene: ArcherNM_81 Start: 48470, Stop: 48147, Start Num: 32

Candidate Starts for ArcherNM_81:

(19, 48590), (Start: 32 @48470 has 11 MA's), (Start: 35 @48455 has 46 MA's), (52, 48395), (Start: 54 @48386 has 125 MA's), (70, 48314), (80, 48263),

Gene: Arissanae_85 Start: 48962, Stop: 48717, Start Num: 38

Candidate Starts for Arissanae_85:

(Start: 38 @48962 has 29 MA's), (45, 48941), (56, 48899),

Gene: Arturo_82 Start: 48931, Stop: 48719, Start Num: 54

Candidate Starts for Arturo_82:

(Start: 54 @48931 has 125 MA's), (78, 48862), (84, 48814), (85, 48808), (89, 48754), (91, 48745),

Gene: AvatarAhPeg_85 Start: 49056, Stop: 48844, Start Num: 54

Candidate Starts for AvatarAhPeg_85:

(Start: 54 @49056 has 125 MA's), (78, 48987), (84, 48939), (85, 48933), (89, 48879), (91, 48870),

Gene: Avle17_85 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for Avle17_85:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Ayanochan_87 Start: 48901, Stop: 48629, Start Num: 31

Candidate Starts for Ayanochan_87:

(Start: 31 @48901 has 7 MA's), (Start: 38 @48874 has 29 MA's), (50, 48838), (56, 48811),

Gene: Baby16_85 Start: 48814, Stop: 48602, Start Num: 54

Candidate Starts for Baby16_85:

(Start: 54 @48814 has 125 MA's), (78, 48745), (84, 48697), (85, 48691), (89, 48637), (91, 48628),

Gene: Bactobuster_78 Start: 47603, Stop: 47352, Start Num: 47

Candidate Starts for Bactobuster_78:

(7, 47975), (30, 47696), (Start: 47 @47603 has 7 MA's), (91, 47372),

Gene: BangNhom_82 Start: 49240, Stop: 49028, Start Num: 54

Candidate Starts for BangNhom_82:

(Start: 54 @49240 has 125 MA's), (65, 49198), (78, 49171), (84, 49123), (85, 49117), (89, 49063), (91, 49054),

Gene: Bartimeaus_85 Start: 48805, Stop: 48593, Start Num: 54

Candidate Starts for Bartimeaus_85:

(Start: 54 @48805 has 125 MA's), (78, 48736), (84, 48688), (85, 48682), (89, 48628), (91, 48619),

Gene: Beemo_90 Start: 49084, Stop: 48839, Start Num: 38

Candidate Starts for Beemo_90:

(Start: 31 @49111 has 7 MA's), (Start: 38 @49084 has 29 MA's), (50, 49048), (56, 49021),

Gene: Bellris_89 Start: 48609, Stop: 48355, Start Num: 38

Candidate Starts for Bellris_89:

(Start: 31 @48633 has 7 MA's), (Start: 38 @48609 has 29 MA's), (45, 48588), (56, 48546), (87, 48387),

Gene: BellusTerra_85 Start: 48668, Stop: 48456, Start Num: 54

Candidate Starts for BellusTerra_85:

(Start: 54 @48668 has 125 MA's), (78, 48599), (84, 48551), (85, 48545), (89, 48491), (91, 48482),

Gene: BengiVuitton_88 Start: 49031, Stop: 48726, Start Num: 32

Candidate Starts for BengiVuitton_88:

(Start: 32 @49031 has 11 MA's), (Start: 35 @49016 has 46 MA's), (56, 48950), (63, 48908), (90, 48758),

Gene: Benvolio_85 Start: 48794, Stop: 48495, Start Num: 35

Candidate Starts for Benvolio_85:

(18, 48935), (Start: 32 @48809 has 11 MA's), (Start: 35 @48794 has 46 MA's), (46, 48755), (Start: 54 @48725 has 125 MA's), (63, 48677), (91, 48524),

Gene: BiancaTri92_84 Start: 48631, Stop: 48332, Start Num: 35

Candidate Starts for BiancaTri92_84:

(25, 48709), (Start: 32 @48646 has 11 MA's), (Start: 35 @48631 has 46 MA's), (46, 48592), (49, 48586), (Start: 54 @48562 has 125 MA's), (56, 48553), (91, 48361),

Gene: BirdsNest_69 Start: 56932, Stop: 56600, Start Num: 28

Candidate Starts for BirdsNest_69:

(8, 57136), (Start: 28 @56932 has 3 MA's),

Gene: Blackmoor_84 Start: 48805, Stop: 48593, Start Num: 54

Candidate Starts for Blackmoor_84:

(Start: 54 @48805 has 125 MA's), (78, 48736), (84, 48688), (85, 48682), (89, 48628), (91, 48619),

Gene: BobSwaget_80 Start: 46489, Stop: 46259, Start Num: 35

Candidate Starts for BobSwaget_80:

(Start: 32 @46504 has 11 MA's), (Start: 35 @46489 has 46 MA's), (60, 46426),

Gene: BogosyJay_89 Start: 49135, Stop: 48884, Start Num: 40

Candidate Starts for BogosyJay_89:

(Start: 40 @49135 has 3 MA's), (Start: 47 @49114 has 7 MA's), (56, 49078), (87, 48916),

Gene: Bombshell_85 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Bombshell_85:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Broseidon_85 Start: 48806, Stop: 48594, Start Num: 54

Candidate Starts for Broseidon_85:

(Start: 54 @48806 has 125 MA's), (78, 48737), (84, 48689), (85, 48683), (89, 48629), (91, 48620),

Gene: Bruiser_84 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Bruiser_84:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: BubbleTrouble_84 Start: 48830, Stop: 48618, Start Num: 54

Candidate Starts for BubbleTrouble_84:

(Start: 54 @48830 has 125 MA's), (78, 48761), (84, 48713), (85, 48707), (89, 48653), (91, 48644),

Gene: Buckaroo_81 Start: 48807, Stop: 48595, Start Num: 54

Candidate Starts for Buckaroo_81:

(Start: 54 @48807 has 125 MA's), (78, 48738), (84, 48690), (85, 48684), (89, 48630), (91, 48621),

Gene: Burger_83 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Burger_83:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: CRB1_87 Start: 49179, Stop: 48874, Start Num: 32

Candidate Starts for CRB1_87:

(Start: 32 @49179 has 11 MA's), (Start: 35 @49164 has 46 MA's), (56, 49098), (63, 49056), (90, 48906),

Gene: Caelakin_83 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Caelakin_83:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Camperdownii_83 Start: 48398, Stop: 48144, Start Num: 42

Candidate Starts for Camperdownii_83:

(Start: 42 @48398 has 1 MA's), (Start: 54 @48359 has 125 MA's), (57, 48347), (80, 48272), (84, 48233), (91, 48164), (92, 48152),

Gene: Caraxes_87 Start: 47583, Stop: 47341, Start Num: 35

Candidate Starts for Caraxes_87:

(Start: 32 @47598 has 11 MA's), (Start: 35 @47583 has 46 MA's), (70, 47484),

Gene: Catalina_92 Start: 49198, Stop: 48953, Start Num: 38

Candidate Starts for Catalina_92:

(Start: 31 @49225 has 7 MA's), (Start: 38 @49198 has 29 MA's), (50, 49162), (56, 49135),

Gene: Celestiallunch_85 Start: 48365, Stop: 48090, Start Num: 31

Candidate Starts for Celestiallunch_85:

(1, 48890), (4, 48761), (Start: 31 @48365 has 7 MA's), (Start: 38 @48341 has 29 MA's), (45, 48320), (56, 48278),

Gene: CentreCat_85 Start: 48843, Stop: 48631, Start Num: 54

Candidate Starts for CentreCat_85:

(Start: 54 @48843 has 125 MA's), (78, 48774), (84, 48726), (85, 48720), (89, 48666), (91, 48657),

Gene: Cerulean_87 Start: 49241, Stop: 49029, Start Num: 54

Candidate Starts for Cerulean_87:

(Start: 54 @49241 has 125 MA's), (65, 49199), (78, 49172), (84, 49124), (85, 49118), (89, 49064), (91, 49055),

Gene: ChampagnePapi_88 Start: 49243, Stop: 49031, Start Num: 54

Candidate Starts for ChampagnePapi_88:

(Start: 54 @49243 has 125 MA's), (78, 49174), (84, 49126), (85, 49120), (89, 49066), (91, 49057),

Gene: Chaph_85 Start: 48814, Stop: 48602, Start Num: 54

Candidate Starts for Chaph_85:

(Start: 54 @48814 has 125 MA's), (78, 48745), (84, 48697), (85, 48691), (89, 48637), (91, 48628),

Gene: Chargerpower_86 Start: 47145, Stop: 46894, Start Num: 35

Candidate Starts for Chargerpower_86:

(5, 47541), (6, 47505), (18, 47286), (Start: 32 @47160 has 11 MA's), (Start: 35 @47145 has 46 MA's),

Gene: Charm_85 Start: 48488, Stop: 48237, Start Num: 38

Candidate Starts for Charm_85:

(Start: 38 @48488 has 29 MA's), (Start: 47 @48461 has 7 MA's), (56, 48425), (85, 48308),

Gene: Che12_88 Start: 47719, Stop: 47462, Start Num: 32

Candidate Starts for Che12_88:

(Start: 32 @47719 has 11 MA's), (Start: 35 @47704 has 46 MA's), (56, 47650), (62, 47626), (70, 47605), (84, 47539),

Gene: ChipMunk_87 Start: 50092, Stop: 49781, Start Num: 32

Candidate Starts for ChipMunk_87:

(Start: 32 @50092 has 11 MA's), (Start: 35 @50077 has 46 MA's), (Start: 54 @50008 has 125 MA's), (63, 49963), (80, 49918),

Gene: Cindaradix_80 Start: 49002, Stop: 48796, Start Num: 54

Candidate Starts for Cindaradix_80:

(Start: 54 @49002 has 125 MA's), (67, 48954), (78, 48933), (84, 48885), (85, 48879), (91, 48816),

Gene: Citius_85 Start: 48824, Stop: 48612, Start Num: 54

Candidate Starts for Citius_85:

(Start: 54 @48824 has 125 MA's), (78, 48755), (84, 48707), (85, 48701), (89, 48647), (91, 48638),

Gene: Clarenza_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Clarenza_84:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Cocoaberry_85 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for Cocoaberry_85:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: CogOmlette_87 Start: 48606, Stop: 48352, Start Num: 38

Candidate Starts for CogOmlette_87:

(Start: 31 @48630 has 7 MA's), (Start: 38 @48606 has 29 MA's), (45, 48585), (56, 48543), (87, 48384),

Gene: Commander_83 Start: 48807, Stop: 48595, Start Num: 54

Candidate Starts for Commander_83:

(Start: 54 @48807 has 125 MA's), (78, 48738), (84, 48690), (85, 48684), (89, 48630), (91, 48621),

Gene: Connomayer_85 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Connomayer_85:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Conquerage_88 Start: 48859, Stop: 48614, Start Num: 38

Candidate Starts for Conquerage_88:

(Start: 31 @48886 has 7 MA's), (Start: 38 @48859 has 29 MA's), (50, 48823), (56, 48796),

Gene: Crucio_86 Start: 49024, Stop: 48728, Start Num: 35

Candidate Starts for Crucio_86:

(18, 49168), (Start: 32 @49039 has 11 MA's), (Start: 35 @49024 has 46 MA's), (Start: 54 @48955 has 125 MA's), (63, 48910), (80, 48865), (91, 48757),

Gene: Dalmatian_86 Start: 48805, Stop: 48542, Start Num: 35

Candidate Starts for Dalmatian_86:

(22, 48901), (Start: 32 @48820 has 11 MA's), (Start: 35 @48805 has 46 MA's), (Start: 54 @48736 has 125 MA's),

Gene: Darrell_88 Start: 48317, Stop: 48039, Start Num: 31

Candidate Starts for Darrell_88:

(27, 48359), (Start: 31 @48317 has 7 MA's), (Start: 38 @48293 has 29 MA's), (56, 48230), (80, 48155), (87, 48071),

Gene: DarthPhader_86 Start: 50000, Stop: 49740, Start Num: 39

Candidate Starts for DarthPhader_86:

(Start: 39 @50000 has 2 MA's), (56, 49940), (80, 49853), (85, 49808),

Gene: Datway_82 Start: 48614, Stop: 48402, Start Num: 54

Candidate Starts for Datway_82:

(Start: 42 @48650 has 1 MA's), (Start: 54 @48614 has 125 MA's), (78, 48545), (84, 48497), (85, 48491), (89, 48437), (91, 48428),

Gene: Deano_82 Start: 48811, Stop: 48599, Start Num: 54

Candidate Starts for Deano_82:

(Start: 54 @48811 has 125 MA's), (78, 48742), (84, 48694), (85, 48688), (89, 48634), (91, 48625),

Gene: DeerParkTS_82 Start: 47533, Stop: 47222, Start Num: 35

Candidate Starts for DeerParkTS_82:

(Start: 32 @47548 has 11 MA's), (Start: 35 @47533 has 46 MA's), (44, 47512), (Start: 54 @47464 has 125 MA's), (57, 47452), (73, 47386), (91, 47251),

Gene: Deloris_88 Start: 48709, Stop: 48419, Start Num: 35

Candidate Starts for Deloris_88:

(Start: 32 @48724 has 11 MA's), (Start: 35 @48709 has 46 MA's), (56, 48643), (63, 48601), (90, 48451),

Gene: Dhanush_85 Start: 48806, Stop: 48594, Start Num: 54

Candidate Starts for Dhanush_85:

(Start: 54 @48806 has 125 MA's), (78, 48737), (84, 48689), (85, 48683), (89, 48629), (91, 48620),

Gene: Dignity_88 Start: 49257, Stop: 48961, Start Num: 35

Candidate Starts for Dignity_88:

(17, 49407), (Start: 32 @49272 has 11 MA's), (Start: 35 @49257 has 46 MA's), (Start: 54 @49188 has 125 MA's), (63, 49143), (80, 49098), (82, 49089),

Gene: DirtyDunning_84 Start: 48815, Stop: 48603, Start Num: 54

Candidate Starts for DirtyDunning_84:

(Start: 54 @48815 has 125 MA's), (78, 48746), (84, 48698), (85, 48692), (89, 48638), (91, 48629),

Gene: DreamTeam1_85 Start: 48336, Stop: 48085, Start Num: 38

Candidate Starts for DreamTeam1_85:

(Start: 38 @48336 has 29 MA's), (Start: 47 @48309 has 7 MA's), (56, 48273), (85, 48156),

Gene: DudeLittle_84 Start: 48523, Stop: 48260, Start Num: 35

Candidate Starts for DudeLittle_84:

(22, 48619), (Start: 32 @48538 has 11 MA's), (Start: 35 @48523 has 46 MA's), (Start: 54 @48454 has 125 MA's),

Gene: Eagle_84 Start: 48865, Stop: 48653, Start Num: 54

Candidate Starts for Eagle_84:

(Start: 54 @48865 has 125 MA's), (78, 48796), (84, 48748), (85, 48742), (89, 48688), (91, 48679),

Gene: Eapen_85 Start: 48798, Stop: 48586, Start Num: 54

Candidate Starts for Eapen_85:

(Start: 54 @48798 has 125 MA's), (78, 48729), (84, 48681), (85, 48675), (89, 48621), (91, 48612),

Gene: Echild_89 Start: 48818, Stop: 48519, Start Num: 35

Candidate Starts for Echild_89:

(18, 48959), (Start: 32 @48833 has 11 MA's), (Start: 35 @48818 has 46 MA's), (46, 48779), (Start: 54 @48749 has 125 MA's), (63, 48701), (91, 48548),

Gene: EdogawaKiddo_89 Start: 49161, Stop: 48916, Start Num: 38

Candidate Starts for EdogawaKiddo_89:

(Start: 31 @49188 has 7 MA's), (Start: 38 @49161 has 29 MA's), (50, 49125), (56, 49098),

Gene: Eidsmoe_88 Start: 48852, Stop: 48607, Start Num: 38

Candidate Starts for Eidsmoe_88:

(Start: 31 @48879 has 7 MA's), (Start: 38 @48852 has 29 MA's), (50, 48816), (56, 48789),

Gene: Elephantoon_90 Start: 49016, Stop: 48762, Start Num: 38

Candidate Starts for Elephantoon_90:

(Start: 38 @49016 has 29 MA's), (43, 49004), (56, 48953), (80, 48878), (87, 48794),

Gene: EmyBug_87 Start: 48881, Stop: 48609, Start Num: 31

Candidate Starts for EmyBug_87:

(Start: 31 @48881 has 7 MA's), (Start: 38 @48854 has 29 MA's), (50, 48818), (56, 48791),

Gene: Eris_84 Start: 48815, Stop: 48603, Start Num: 54

Candidate Starts for Eris_84:

(Start: 54 @48815 has 125 MA's), (78, 48746), (84, 48698), (85, 48692), (89, 48638), (91, 48629),

Gene: Eros_85 Start: 48811, Stop: 48599, Start Num: 54

Candidate Starts for Eros_85:

(Start: 54 @48811 has 125 MA's), (78, 48742), (84, 48694), (85, 48688), (89, 48634), (91, 48625),

Gene: Eurydice_86 Start: 48840, Stop: 48628, Start Num: 54

Candidate Starts for Eurydice_86:

(Start: 54 @48840 has 125 MA's), (78, 48771), (84, 48723), (85, 48717), (89, 48663), (91, 48654),

Gene: EvilGenius_86 Start: 50078, Stop: 49782, Start Num: 35

Candidate Starts for EvilGenius_86:

(Start: 32 @50093 has 11 MA's), (Start: 35 @50078 has 46 MA's), (Start: 54 @50009 has 125 MA's), (63, 49964), (80, 49919),

Gene: ExplosioNervosa_88 Start: 48920, Stop: 48675, Start Num: 38

Candidate Starts for ExplosioNervosa_88:

(Start: 31 @48947 has 7 MA's), (Start: 38 @48920 has 29 MA's), (50, 48884), (56, 48857),

Gene: Fameo_84 Start: 48576, Stop: 48280, Start Num: 35

Candidate Starts for Fameo_84:

(22, 48672), (Start: 32 @48591 has 11 MA's), (Start: 35 @48576 has 46 MA's), (Start: 54 @48507 has 125 MA's), (63, 48462), (80, 48417), (91, 48309),

Gene: Fayely_88 Start: 48828, Stop: 48583, Start Num: 38

Candidate Starts for Fayely_88:

(Start: 31 @48855 has 7 MA's), (Start: 38 @48828 has 29 MA's), (50, 48792), (56, 48765),

Gene: FiringLine_86 Start: 48964, Stop: 48668, Start Num: 35

Candidate Starts for FiringLine_86:

(Start: 32 @48979 has 11 MA's), (Start: 35 @48964 has 46 MA's), (Start: 54 @48895 has 125 MA's), (63, 48850), (80, 48805), (91, 48697),

Gene: First_0087 Start: 48829, Stop: 48521, Start Num: 32

Candidate Starts for First_0087:

(Start: 32 @48829 has 11 MA's), (Start: 35 @48814 has 46 MA's), (56, 48748), (63, 48706), (90, 48553),

Gene: Florean_85 Start: 48802, Stop: 48590, Start Num: 54

Candidate Starts for Florean_85:

(Start: 54 @48802 has 125 MA's), (78, 48733), (84, 48685), (85, 48679), (89, 48625), (91, 48616),

Gene: Flux_86 Start: 48801, Stop: 48589, Start Num: 54

Candidate Starts for Flux_86:

(Start: 54 @48801 has 125 MA's), (78, 48732), (84, 48684), (85, 48678), (89, 48624), (91, 48615),

Gene: ForesterFrank_81 Start: 48650, Stop: 48381, Start Num: 35

Candidate Starts for ForesterFrank_81:

(10, 48845), (16, 48794), (Start: 32 @48665 has 11 MA's), (Start: 35 @48650 has 46 MA's), (51, 48617), (83, 48470), (85, 48452), (88, 48404),

Gene: Funston_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Funston_84:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Gadost_85 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for Gadost_85:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: Georgie2_88 Start: 49168, Stop: 48872, Start Num: 35

Candidate Starts for Georgie2_88:

(18, 49312), (Start: 32 @49183 has 11 MA's), (Start: 35 @49168 has 46 MA's), (Start: 54 @49099 has 125 MA's), (63, 49054), (80, 49009), (91, 48901),

Gene: HamSlice_81 Start: 48802, Stop: 48590, Start Num: 54

Candidate Starts for HamSlice_81:

(Start: 54 @48802 has 125 MA's), (78, 48733), (84, 48685), (85, 48679), (89, 48625), (91, 48616),

Gene: Hanray_88 Start: 49149, Stop: 48895, Start Num: 38

Candidate Starts for Hanray_88:

(Start: 31 @49176 has 7 MA's), (Start: 38 @49149 has 29 MA's), (56, 49086), (68, 49038), (79, 49017), (80, 49011), (85, 48966),

Gene: Happiness_84 Start: 48826, Stop: 48614, Start Num: 54

Candidate Starts for Happiness_84:

(Start: 54 @48826 has 125 MA's), (78, 48757), (84, 48709), (85, 48703), (89, 48649), (91, 48640),

Gene: Heffalump_83 Start: 49044, Stop: 48748, Start Num: 35

Candidate Starts for Heffalump_83:

(22, 49140), (Start: 32 @49059 has 11 MA's), (Start: 35 @49044 has 46 MA's), (Start: 54 @48975 has 125 MA's), (63, 48930), (80, 48885), (91, 48777),

Gene: Herbertwm_86 Start: 49248, Stop: 48952, Start Num: 34

Candidate Starts for Herbertwm_86:

(Start: 34 @49248 has 1 MA's), (Start: 54 @49188 has 125 MA's), (64, 49137), (84, 49050),

Gene: HippoHollow_83 Start: 49676, Stop: 49380, Start Num: 35

Candidate Starts for HippoHollow_83:

(Start: 35 @49676 has 46 MA's), (Start: 54 @49607 has 125 MA's), (63, 49562), (80, 49517),

Gene: Horex_89 Start: 49162, Stop: 48908, Start Num: 38

Candidate Starts for Horex_89:

(Start: 31 @49189 has 7 MA's), (Start: 38 @49162 has 29 MA's), (56, 49099), (68, 49051), (79, 49030), (80, 49024), (85, 48979),

Gene: Holli_84 Start: 48593, Stop: 48381, Start Num: 54

Candidate Starts for Holli_84:

(Start: 54 @48593 has 125 MA's), (78, 48524), (84, 48476), (85, 48470), (89, 48416), (91, 48407),

Gene: HortumSL17_91 Start: 49196, Stop: 48951, Start Num: 38

Candidate Starts for HortumSL17_91:

(Start: 31 @49223 has 7 MA's), (Start: 38 @49196 has 29 MA's), (50, 49160), (56, 49133),

Gene: Houdini22_84 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for Houdini22_84:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: Huxley_77 Start: 46696, Stop: 46484, Start Num: 54

Candidate Starts for Huxley_77:

(Start: 54 @46696 has 125 MA's), (78, 46627), (84, 46579), (85, 46573), (89, 46519), (91, 46510),

Gene: ICleared_84 Start: 48871, Stop: 48659, Start Num: 54

Candidate Starts for ICleared_84:

(Start: 54 @48871 has 125 MA's), (78, 48802), (84, 48754), (85, 48748), (89, 48694), (91, 48685),

Gene: Iceman_83 Start: 49093, Stop: 48881, Start Num: 54

Candidate Starts for Iceman_83:

(Start: 54 @49093 has 125 MA's), (78, 49024), (84, 48976), (85, 48970), (89, 48916), (91, 48907),

Gene: Imvubu_58 Start: 54802, Stop: 54467, Start Num: 23

Candidate Starts for Imvubu_58:

(Start: 23 @54802 has 1 MA's), (Start: 28 @54772 has 3 MA's), (80, 54607), (82, 54598), (85, 54562), (94, 54478),

Gene: Iracema64_85 Start: 49067, Stop: 48855, Start Num: 54

Candidate Starts for Iracema64_85:

(Start: 54 @49067 has 125 MA's), (78, 48998), (84, 48950), (85, 48944), (89, 48890), (91, 48881),

Gene: IronMan_83 Start: 49127, Stop: 48876, Start Num: 47

Candidate Starts for IronMan_83:

(Start: 47 @49127 has 7 MA's), (91, 48896),

Gene: Iwokeuplikedis_90 Start: 49128, Stop: 48847, Start Num: 36

Candidate Starts for Iwokeuplikedis_90:

(Start: 36 @49128 has 1 MA's), (48, 49092), (55, 49065), (59, 49044), (65, 49017), (79, 48993), (85, 48942),

Gene: Jaan_84 Start: 49235, Stop: 48984, Start Num: 47

Candidate Starts for Jaan_84:

(7, 49607), (30, 49328), (Start: 47 @49235 has 7 MA's), (65, 49157), (91, 49004),

Gene: Jaykayelowell_82 Start: 48796, Stop: 48584, Start Num: 54

Candidate Starts for Jaykayelowell_82:

(Start: 54 @48796 has 125 MA's), (78, 48727), (84, 48679), (85, 48673), (89, 48619), (91, 48610),

Gene: Jeeves_88 Start: 47130, Stop: 46858, Start Num: 35

Candidate Starts for Jeeves_88:

(24, 47208), (Start: 32 @47145 has 11 MA's), (Start: 35 @47130 has 46 MA's), (56, 47067), (58, 47061), (66, 47019), (73, 47001), (82, 46965),

Gene: Jerm_88 Start: 49225, Stop: 48929, Start Num: 35

Candidate Starts for Jerm_88:

(17, 49375), (Start: 32 @49240 has 11 MA's), (Start: 35 @49225 has 46 MA's), (Start: 54 @49156 has 125 MA's), (63, 49111), (80, 49066), (82, 49057),

Gene: JetBlade_86 Start: 48831, Stop: 48619, Start Num: 54

Candidate Starts for JetBlade_86:

(Start: 54 @48831 has 125 MA's), (65, 48789), (78, 48762), (84, 48714), (85, 48708), (89, 48654), (91, 48645),

Gene: Jiawan_88 Start: 49179, Stop: 48925, Start Num: 38

Candidate Starts for Jiawan_88:

(Start: 31 @49206 has 7 MA's), (Start: 38 @49179 has 29 MA's), (56, 49116), (68, 49068), (79, 49047), (80, 49041), (85, 48996),

Gene: JoongJeon_84 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for JoongJeon_84:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: JoshKayV_88 Start: 49393, Stop: 49097, Start Num: 35

Candidate Starts for JoshKayV_88:

(Start: 35 @49393 has 46 MA's), (Start: 54 @49324 has 125 MA's), (63, 49279), (82, 49225), (90, 49129),

Gene: Junimo_81 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Junimo_81:

(Start: 54 @48803 has 125 MA's), (67, 48755), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: KFPoly_84 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for KFPoly_84:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Kamy_84 Start: 48806, Stop: 48594, Start Num: 54

Candidate Starts for Kamy_84:

(Start: 54 @48806 has 125 MA's), (78, 48737), (84, 48689), (85, 48683), (89, 48629), (91, 48620),

Gene: KekoraPapaka_82 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for KekoraPapaka_82:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Keziacharles14_87 Start: 49677, Stop: 49432, Start Num: 31

Candidate Starts for Keziacharles14_87:

(Start: 31 @49677 has 7 MA's), (Start: 38 @49653 has 29 MA's), (56, 49590), (69, 49551), (79, 49539), (86, 49455),

Gene: KingCyrus_85 Start: 50091, Stop: 49795, Start Num: 35

Candidate Starts for KingCyrus_85:

(Start: 32 @50106 has 11 MA's), (Start: 35 @50091 has 46 MA's), (Start: 54 @50022 has 125 MA's), (63, 49977), (80, 49932),

Gene: Kingmustik0402_85 Start: 48792, Stop: 48580, Start Num: 54

Candidate Starts for Kingmustik0402_85:

(Start: 54 @48792 has 125 MA's), (65, 48750), (78, 48723), (84, 48675), (85, 48669), (89, 48615), (91, 48606),

Gene: Klodlith_86 Start: 48558, Stop: 48307, Start Num: 38

Candidate Starts for Klodlith_86:

(Start: 38 @48558 has 29 MA's), (46, 48534), (Start: 47 @48531 has 7 MA's), (56, 48495), (85, 48378),

Gene: Koan_82 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Koan_82:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Koreni_84 Start: 48484, Stop: 48272, Start Num: 54

Candidate Starts for Koreni_84:

(Start: 54 @48484 has 125 MA's), (78, 48415), (84, 48367), (85, 48361), (89, 48307), (91, 48298),

Gene: Kratak_84 Start: 48837, Stop: 48625, Start Num: 54

Candidate Starts for Kratak_84:

(Start: 54 @48837 has 125 MA's), (78, 48768), (84, 48720), (85, 48714), (89, 48660), (91, 48651),

Gene: Kyee_85 Start: 48798, Stop: 48586, Start Num: 54

Candidate Starts for Kyee_85:

(Start: 54 @48798 has 125 MA's), (78, 48729), (84, 48681), (85, 48675), (89, 48621), (91, 48612),

Gene: LHTSCC_88 Start: 49244, Stop: 49032, Start Num: 54

Candidate Starts for LHTSCC_88:

(Start: 54 @49244 has 125 MA's), (78, 49175), (84, 49127), (85, 49121), (89, 49067), (91, 49058),

Gene: LadyBird_90 Start: 49324, Stop: 49019, Start Num: 32

Candidate Starts for LadyBird_90:

(Start: 32 @49324 has 11 MA's), (Start: 35 @49309 has 46 MA's), (56, 49243), (63, 49201), (80, 49156), (90, 49051),

Gene: Landor_84 Start: 49160, Stop: 48909, Start Num: 47

Candidate Starts for Landor_84:

(Start: 47 @49160 has 7 MA's), (91, 48929),

Gene: LappelDuVide_85 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for LappelDuVide_85:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Lemur_85 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Lemur_85:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Leviathan_88 Start: 49306, Stop: 49010, Start Num: 35

Candidate Starts for Leviathan_88:

(17, 49456), (Start: 32 @49321 has 11 MA's), (Start: 35 @49306 has 46 MA's), (Start: 54 @49237 has 125 MA's), (58, 49222), (63, 49192), (80, 49147), (82, 49138),

Gene: LilTurb_87 Start: 49102, Stop: 48806, Start Num: 35

Candidate Starts for LilTurb_87:

(17, 49252), (Start: 32 @49117 has 11 MA's), (Start: 35 @49102 has 46 MA's), (Start: 54 @49033 has 125 MA's), (63, 48988), (80, 48943), (82, 48934),

Gene: Lilleskat_87 Start: 49150, Stop: 48905, Start Num: 38

Candidate Starts for Lilleskat_87:

(Start: 31 @49177 has 7 MA's), (Start: 38 @49150 has 29 MA's), (50, 49114), (56, 49087),

Gene: LionsBait_85 Start: 49616, Stop: 49320, Start Num: 35

Candidate Starts for LionsBait_85:

(Start: 35 @49616 has 46 MA's), (Start: 54 @49547 has 125 MA's), (63, 49502), (80, 49457),

Gene: LittleB_85 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for LittleB_85:

(Start: 54 @48804 has 125 MA's), (65, 48762), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: LittleGuy_85 Start: 48694, Stop: 48482, Start Num: 54

Candidate Starts for LittleGuy_85:

(Start: 54 @48694 has 125 MA's), (78, 48625), (84, 48577), (85, 48571), (89, 48517), (91, 48508),

Gene: LittleMinkey_71 Start: 56857, Stop: 56546, Start Num: 28

Candidate Starts for LittleMinkey_71:

(19, 56935), (Start: 28 @56857 has 3 MA's), (Start: 39 @56788 has 2 MA's),

Gene: LochMonster_86 Start: 49040, Stop: 48828, Start Num: 54

Candidate Starts for LochMonster_86:

(Start: 54 @49040 has 125 MA's), (65, 48998), (78, 48971), (84, 48923), (85, 48917), (89, 48863), (91, 48854),

Gene: Lokk_81 Start: 47110, Stop: 46880, Start Num: 35

Candidate Starts for Lokk_81:

(15, 47272), (Start: 32 @47125 has 11 MA's), (Start: 35 @47110 has 46 MA's), (60, 47047),

Gene: LoneWolf_90 Start: 49212, Stop: 48946, Start Num: 31

Candidate Starts for LoneWolf_90:

(Start: 31 @49212 has 7 MA's), (Start: 38 @49188 has 29 MA's), (56, 49128), (66, 49083), (71, 49074), (87, 48978),

Gene: Lorenzo_85 Start: 48801, Stop: 48589, Start Num: 54

Candidate Starts for Lorenzo_85:

(Start: 54 @48801 has 125 MA's), (78, 48732), (84, 48684), (85, 48678), (89, 48624), (91, 48615),

Gene: Luchador_85 Start: 48225, Stop: 47965, Start Num: 35

Candidate Starts for Luchador_85:

(Start: 35 @48225 has 46 MA's), (46, 48201), (56, 48162), (73, 48108),

Gene: Lunsford_85 Start: 48796, Stop: 48584, Start Num: 54

Candidate Starts for Lunsford_85:

(Start: 54 @48796 has 125 MA's), (78, 48727), (84, 48679), (85, 48673), (89, 48619), (91, 48610),

Gene: Maminiaina_89 Start: 49117, Stop: 48866, Start Num: 40

Candidate Starts for Maminiaina_89:

(Start: 40 @49117 has 3 MA's), (Start: 47 @49096 has 7 MA's), (56, 49060), (87, 48898),

Gene: Maverick_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Maverick_84:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Maxo_87 Start: 48806, Stop: 48594, Start Num: 54

Candidate Starts for Maxo_87:

(Start: 54 @48806 has 125 MA's), (78, 48737), (84, 48689), (85, 48683), (89, 48629), (91, 48620),

Gene: Mazhar510_85 Start: 48801, Stop: 48589, Start Num: 54

Candidate Starts for Mazhar510_85:

(Start: 54 @48801 has 125 MA's), (78, 48732), (84, 48684), (85, 48678), (89, 48624), (91, 48615),

Gene: Medusa_84 Start: 48816, Stop: 48604, Start Num: 54

Candidate Starts for Medusa_84:

(Start: 54 @48816 has 125 MA's), (78, 48747), (84, 48699), (85, 48693), (89, 48639), (91, 48630),

Gene: MeeZee_84 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for MeeZee_84:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: MegTheThird_86 Start: 48559, Stop: 48308, Start Num: 38

Candidate Starts for MegTheThird_86:

(2, 49105), (3, 49042), (4, 48979), (Start: 31 @48583 has 7 MA's), (Start: 38 @48559 has 29 MA's), (45, 48538), (56, 48496),

Gene: Melvin_87 Start: 48798, Stop: 48586, Start Num: 54

Candidate Starts for Melvin_87:

(Start: 54 @48798 has 125 MA's), (78, 48729), (84, 48681), (85, 48675), (89, 48621), (91, 48612),

Gene: Miko_81 Start: 47875, Stop: 47645, Start Num: 35

Candidate Starts for Miko_81:

(Start: 32 @47890 has 11 MA's), (Start: 35 @47875 has 46 MA's), (60, 47812),

Gene: Millski_84 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for Millski_84:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: Minispark_87 Start: 48603, Stop: 48349, Start Num: 38

Candidate Starts for Minispark_87:

(Start: 31 @48627 has 7 MA's), (Start: 38 @48603 has 29 MA's), (45, 48582), (56, 48540), (87, 48381),

Gene: Miramae_85 Start: 48719, Stop: 48507, Start Num: 54

Candidate Starts for Miramae_85:

(Start: 54 @48719 has 125 MA's), (78, 48650), (81, 48635), (84, 48602), (85, 48596), (89, 48542), (91, 48533),

Gene: Morrow_87 Start: 48843, Stop: 48631, Start Num: 54

Candidate Starts for Morrow_87:

(Start: 54 @48843 has 125 MA's), (78, 48774), (84, 48726), (85, 48720), (89, 48666), (91, 48657),

Gene: Mundrea_83 Start: 48681, Stop: 48469, Start Num: 54

Candidate Starts for Mundrea_83:

(Start: 54 @48681 has 125 MA's), (78, 48612), (84, 48564), (85, 48558), (89, 48504), (91, 48495),

Gene: Myxus_90 Start: 49196, Stop: 48951, Start Num: 38

Candidate Starts for Myxus_90:

(Start: 31 @49223 has 7 MA's), (Start: 38 @49196 has 29 MA's), (50, 49160), (56, 49133),

Gene: Nebs_86 Start: 48843, Stop: 48631, Start Num: 54

Candidate Starts for Nebs_86:

(Start: 54 @48843 has 125 MA's), (78, 48774), (84, 48726), (85, 48720), (89, 48666), (91, 48657),

Gene: Nemo27_84 Start: 48799, Stop: 48587, Start Num: 54

Candidate Starts for Nemo27_84:

(Start: 54 @48799 has 125 MA's), (78, 48730), (84, 48682), (85, 48676), (89, 48622), (91, 48613),

Gene: NicoleTera_85 Start: 48705, Stop: 48442, Start Num: 35

Candidate Starts for NicoleTera_85:

(21, 48834), (Start: 32 @48720 has 11 MA's), (Start: 35 @48705 has 46 MA's), (46, 48666), (Start: 54 @48636 has 125 MA's), (56, 48627),

Gene: Noelle_84 Start: 48915, Stop: 48700, Start Num: 54

Candidate Starts for Noelle_84:

(Start: 54 @48915 has 125 MA's), (57, 48903), (80, 48828), (84, 48789), (91, 48720), (92, 48708),

Gene: NorthStar_82 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for NorthStar_82:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Northrop_82 Start: 48799, Stop: 48587, Start Num: 54

Candidate Starts for Northrop_82:

(Start: 54 @48799 has 125 MA's), (67, 48751), (78, 48730), (84, 48682), (85, 48676), (89, 48622), (91, 48613),

Gene: NotAPhaseMom_84 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for NotAPhaseMom_84:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: NothingSpecial_81 Start: 48512, Stop: 48231, Start Num: 35

Candidate Starts for NothingSpecial_81:

(12, 48719), (Start: 35 @48512 has 46 MA's), (46, 48473), (49, 48467), (Start: 54 @48443 has 125 MA's), (65, 48395), (83, 48332),

Gene: Nyxis_84 Start: 48688, Stop: 48476, Start Num: 54

Candidate Starts for Nyxis_84:

(Start: 54 @48688 has 125 MA's), (78, 48619), (84, 48571), (85, 48565), (89, 48511), (91, 48502),

Gene: OKaNui_84 Start: 48854, Stop: 48642, Start Num: 54

Candidate Starts for OKaNui_84:

(Start: 54 @48854 has 125 MA's), (78, 48785), (84, 48737), (85, 48731), (89, 48677), (91, 48668),

Gene: Obama12_86 Start: 49227, Stop: 49015, Start Num: 54

Candidate Starts for Obama12_86:

(Start: 54 @49227 has 125 MA's), (78, 49158), (84, 49110), (85, 49104), (89, 49050), (91, 49041),

Gene: Odin_85 Start: 48071, Stop: 47814, Start Num: 32

Candidate Starts for Odin_85:

(Start: 32 @48071 has 11 MA's), (Start: 35 @48056 has 46 MA's), (70, 47957),

Gene: Ohfah_86 Start: 48843, Stop: 48631, Start Num: 54

Candidate Starts for Ohfah_86:

(Start: 54 @48843 has 125 MA's), (78, 48774), (84, 48726), (85, 48720), (89, 48666), (91, 48657),

Gene: Onglai_88 Start: 47351, Stop: 47097, Start Num: 38

Candidate Starts for Onglai_88:

(Start: 31 @47378 has 7 MA's), (Start: 38 @47351 has 29 MA's), (56, 47288), (68, 47240), (79, 47219), (80, 47213), (85, 47168),

Gene: PackMan_85 Start: 47110, Stop: 46865, Start Num: 38

Candidate Starts for PackMan_85:

(Start: 31 @47137 has 7 MA's), (Start: 38 @47110 has 29 MA's), (50, 47074), (56, 47047),

Gene: Palestino_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Palestino_84:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Peaches_83 Start: 48808, Stop: 48596, Start Num: 54

Candidate Starts for Peaches_83:

(Start: 54 @48808 has 125 MA's), (78, 48739), (84, 48691), (85, 48685), (89, 48631), (91, 48622),

Gene: PenguinLover67_60 Start: 56278, Stop: 55991, Start Num: 29

Candidate Starts for PenguinLover67_60:

(Start: 29 @56278 has 1 MA's), (82, 56119), (84, 56089), (91, 56017),

Gene: PeterPeter_85 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for PeterPeter_85:

(Start: 54 @48797 has 125 MA's), (65, 48755), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Ph8s_87 Start: 47838, Stop: 47596, Start Num: 35

Candidate Starts for Ph8s_87:

(Start: 32 @47853 has 11 MA's), (Start: 35 @47838 has 46 MA's), (62, 47760), (70, 47739),

Gene: Phacado_85 Start: 48799, Stop: 48587, Start Num: 54

Candidate Starts for Phacado_85:

(Start: 54 @48799 has 125 MA's), (78, 48730), (84, 48682), (85, 48676), (89, 48622), (91, 48613),

Gene: Phaded_80 Start: 49118, Stop: 48867, Start Num: 47

Candidate Starts for Phaded_80:

(7, 49490), (30, 49211), (Start: 47 @49118 has 7 MA's), (91, 48887),

Gene: Phaeder_90 Start: 49071, Stop: 48826, Start Num: 38

Candidate Starts for Phaeder_90:

(Start: 31 @49098 has 7 MA's), (Start: 38 @49071 has 29 MA's), (50, 49035), (56, 49008),

Gene: Phelipe_85 Start: 48764, Stop: 48552, Start Num: 54

Candidate Starts for Phelipe_85:

(Start: 54 @48764 has 125 MA's), (78, 48695), (84, 48647), (85, 48641), (89, 48587), (91, 48578),

Gene: Phighter1804_85 Start: 48864, Stop: 48652, Start Num: 54

Candidate Starts for Phighter1804_85:

(Start: 54 @48864 has 125 MA's), (65, 48822), (78, 48795), (84, 48747), (85, 48741), (89, 48687), (91, 48678),

Gene: Phonnegut_90 Start: 49083, Stop: 48838, Start Num: 38

Candidate Starts for Phonnegut_90:

(Start: 31 @49110 has 7 MA's), (Start: 38 @49083 has 29 MA's), (50, 49047), (56, 49020),

Gene: Phontbonne_85 Start: 48704, Stop: 48492, Start Num: 54

Candidate Starts for Phontbonne_85:

(Start: 54 @48704 has 125 MA's), (78, 48635), (84, 48587), (85, 48581), (89, 48527), (91, 48518),

Gene: Pioneer_90 Start: 49083, Stop: 48838, Start Num: 38

Candidate Starts for Pioneer_90:

(Start: 31 @49110 has 7 MA's), (Start: 38 @49083 has 29 MA's), (50, 49047), (56, 49020),

Gene: Pipcraft_81 Start: 48804, Stop: 48592, Start Num: 54

Candidate Starts for Pipcraft_81:

(Start: 54 @48804 has 125 MA's), (78, 48735), (84, 48687), (85, 48681), (89, 48627), (91, 48618),

Gene: Polymorphads_86 Start: 48824, Stop: 48612, Start Num: 54

Candidate Starts for Polymorphads_86:

(Start: 54 @48824 has 125 MA's), (78, 48755), (84, 48707), (85, 48701), (89, 48647), (91, 48638),

Gene: Power_86 Start: 49167, Stop: 48871, Start Num: 35

Candidate Starts for Power_86:

(18, 49311), (Start: 32 @49182 has 11 MA's), (Start: 35 @49167 has 46 MA's), (Start: 54 @49098 has 125 MA's), (63, 49053), (80, 49008), (91, 48900),

Gene: Priya_88 Start: 48855, Stop: 48610, Start Num: 38

Candidate Starts for Priya_88:

(Start: 31 @48882 has 7 MA's), (Start: 38 @48855 has 29 MA's), (50, 48819), (56, 48792),

Gene: Prudy_81 Start: 48955, Stop: 48647, Start Num: 35

Candidate Starts for Prudy_81:

(14, 49102), (Start: 32 @48970 has 11 MA's), (Start: 35 @48955 has 46 MA's), (52, 48895), (Start: 54 @48886 has 125 MA's), (70, 48814), (80, 48763),

Gene: Pukovnik_81 Start: 48588, Stop: 48337, Start Num: 47

Candidate Starts for Pukovnik_81:

(Start: 47 @48588 has 7 MA's), (55, 48561), (91, 48357),

Gene: Pumbaa_85 Start: 48748, Stop: 48536, Start Num: 54

Candidate Starts for Pumbaa_85:

(Start: 54 @48748 has 125 MA's), (65, 48706), (78, 48679), (84, 48631), (85, 48625), (89, 48571), (91, 48562),

Gene: Qobbit_88 Start: 48817, Stop: 48572, Start Num: 38

Candidate Starts for Qobbit_88:

(Start: 31 @48844 has 7 MA's), (Start: 38 @48817 has 29 MA's), (50, 48781), (56, 48754),

Gene: QueenB2_83 Start: 48257, Stop: 47961, Start Num: 35

Candidate Starts for QueenB2_83:

(18, 48401), (Start: 32 @48272 has 11 MA's), (Start: 35 @48257 has 46 MA's), (Start: 54 @48188 has 125 MA's), (63, 48143), (80, 48098), (91, 47990),

Gene: QueenBeesly_86 Start: 48964, Stop: 48668, Start Num: 35

Candidate Starts for QueenBeesly_86:

(Start: 32 @48979 has 11 MA's), (Start: 35 @48964 has 46 MA's), (Start: 54 @48895 has 125 MA's), (63, 48850), (80, 48805), (91, 48697),

Gene: Rachaly_83 Start: 48018, Stop: 47788, Start Num: 35

Candidate Starts for Rachaly_83:

(Start: 32 @48033 has 11 MA's), (Start: 35 @48018 has 46 MA's), (60, 47955),

Gene: Rahalelujah_89 Start: 48618, Stop: 48364, Start Num: 38

Candidate Starts for Rahalelujah_89:

(Start: 31 @48642 has 7 MA's), (Start: 38 @48618 has 29 MA's), (45, 48597), (56, 48555), (87, 48396),

Gene: Refuge_88 Start: 50832, Stop: 50584, Start Num: 40

Candidate Starts for Refuge_88:

(Start: 40 @50832 has 3 MA's), (56, 50775), (87, 50616),

Gene: Relief_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Relief_84:

(Start: 54 @48800 has 125 MA's), (65, 48758), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Retro23_86 Start: 48647, Stop: 48384, Start Num: 35

Candidate Starts for Retro23_86:

(22, 48743), (Start: 32 @48662 has 11 MA's), (Start: 35 @48647 has 46 MA's), (49, 48602), (Start: 54 @48578 has 125 MA's),

Gene: Rinkes_60 Start: 56279, Stop: 55929, Start Num: 28

Candidate Starts for Rinkes_60:

(Start: 28 @56279 has 3 MA's), (52, 56165), (53, 56159), (55, 56153), (85, 56018), (92, 55943), (93, 55940),

Gene: RockieBear_82 Start: 48808, Stop: 48596, Start Num: 54

Candidate Starts for RockieBear_82:

(Start: 54 @48808 has 125 MA's), (78, 48739), (84, 48691), (85, 48685), (89, 48631), (91, 48622),

Gene: Rocksand_82 Start: 48799, Stop: 48587, Start Num: 54

Candidate Starts for Rocksand_82:

(Start: 54 @48799 has 125 MA's), (67, 48751), (78, 48730), (84, 48682), (85, 48676), (89, 48622), (91, 48613),

Gene: Romney_84 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Romney_84:

(Start: 54 @48800 has 125 MA's), (65, 48758), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Roosevelt_83 Start: 48805, Stop: 48593, Start Num: 54

Candidate Starts for Roosevelt_83:

(Start: 54 @48805 has 125 MA's), (78, 48736), (84, 48688), (85, 48682), (89, 48628), (91, 48619),

Gene: Rosa24_81 Start: 48831, Stop: 48619, Start Num: 54
Candidate Starts for Rosa24_81:
(Start: 54 @48831 has 125 MA's), (78, 48762), (84, 48714), (85, 48708), (89, 48654), (91, 48645),

Gene: Ruin_85 Start: 48796, Stop: 48584, Start Num: 54
Candidate Starts for Ruin_85:
(Start: 54 @48796 has 125 MA's), (78, 48727), (84, 48679), (85, 48673), (89, 48619), (91, 48610),

Gene: RyeScarlet_91 Start: 49069, Stop: 48815, Start Num: 38
Candidate Starts for RyeScarlet_91:
(Start: 31 @49096 has 7 MA's), (Start: 38 @49069 has 29 MA's), (56, 49006), (68, 48958), (79, 48937), (80, 48931), (85, 48886),

Gene: Sabertooth_85 Start: 48808, Stop: 48596, Start Num: 54
Candidate Starts for Sabertooth_85:
(Start: 54 @48808 has 125 MA's), (78, 48739), (84, 48691), (85, 48685), (89, 48631), (91, 48622),

Gene: Sachima_86 Start: 49098, Stop: 48853, Start Num: 38
Candidate Starts for Sachima_86:
(Start: 31 @49125 has 7 MA's), (Start: 38 @49098 has 29 MA's), (50, 49062), (56, 49035),

Gene: Scamp_85 Start: 48805, Stop: 48593, Start Num: 54
Candidate Starts for Scamp_85:
(Start: 54 @48805 has 125 MA's), (78, 48736), (84, 48688), (85, 48682), (89, 48628), (91, 48619),

Gene: Scherzo_88 Start: 49115, Stop: 48870, Start Num: 38
Candidate Starts for Scherzo_88:
(Start: 31 @49142 has 7 MA's), (Start: 38 @49115 has 29 MA's), (50, 49079), (56, 49052),

Gene: SemperFi_86 Start: 48867, Stop: 48556, Start Num: 32
Candidate Starts for SemperFi_86:
(Start: 32 @48867 has 11 MA's), (Start: 35 @48852 has 46 MA's), (Start: 54 @48783 has 125 MA's), (63, 48738), (80, 48693), (91, 48585),

Gene: SenorClean_86 Start: 48803, Stop: 48591, Start Num: 54
Candidate Starts for SenorClean_86:
(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Shaka_83 Start: 48801, Stop: 48589, Start Num: 54
Candidate Starts for Shaka_83:
(Start: 54 @48801 has 125 MA's), (78, 48732), (84, 48684), (85, 48678), (89, 48624), (91, 48615),

Gene: SheaKeira_85 Start: 48361, Stop: 48110, Start Num: 38
Candidate Starts for SheaKeira_85:
(Start: 38 @48361 has 29 MA's), (Start: 47 @48334 has 7 MA's), (56, 48298), (85, 48181),

Gene: SheldonCooper_85 Start: 49241, Stop: 49029, Start Num: 54
Candidate Starts for SheldonCooper_85:
(Start: 54 @49241 has 125 MA's), (65, 49199), (78, 49172), (84, 49124), (85, 49118), (89, 49064), (91, 49055),

Gene: Shygu2_83 Start: 48747, Stop: 48535, Start Num: 54
Candidate Starts for Shygu2_83:

(Start: 42 @48783 has 1 MA's), (Start: 54 @48747 has 125 MA's), (78, 48678), (84, 48630), (85, 48624), (89, 48570), (91, 48561),

Gene: Skadoosh_82 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Skadoosh_82:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Skipitt_84 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for Skipitt_84:

(Start: 54 @48797 has 125 MA's), (65, 48755), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Smeagan_89 Start: 49397, Stop: 49101, Start Num: 35

Candidate Starts for Smeagan_89:

(17, 49547), (Start: 32 @49412 has 11 MA's), (Start: 35 @49397 has 46 MA's), (Start: 54 @49328 has 125 MA's), (63, 49283), (82, 49229),

Gene: SnapTap_86 Start: 48823, Stop: 48527, Start Num: 35

Candidate Starts for SnapTap_86:

(18, 48967), (Start: 32 @48838 has 11 MA's), (Start: 35 @48823 has 46 MA's), (Start: 54 @48754 has 125 MA's), (63, 48709), (80, 48664), (91, 48556),

Gene: Sparxx_86 Start: 48799, Stop: 48587, Start Num: 54

Candidate Starts for Sparxx_86:

(Start: 54 @48799 has 125 MA's), (65, 48757), (78, 48730), (84, 48682), (85, 48676), (89, 48622), (91, 48613),

Gene: Spino_84 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for Spino_84:

(Start: 54 @48803 has 125 MA's), (65, 48761), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Spouty_88 Start: 48854, Stop: 48609, Start Num: 38

Candidate Starts for Spouty_88:

(Start: 31 @48881 has 7 MA's), (Start: 38 @48854 has 29 MA's), (50, 48818), (56, 48791),

Gene: Stasia_82 Start: 48786, Stop: 48571, Start Num: 54

Candidate Starts for Stasia_82:

(Start: 40 @48828 has 3 MA's), (Start: 54 @48786 has 125 MA's), (67, 48732), (80, 48702), (84, 48663), (85, 48657), (91, 48594), (92, 48582),

Gene: SteMason_85 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for SteMason_85:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Steamy_85 Start: 49811, Stop: 49554, Start Num: 38

Candidate Starts for Steamy_85:

(Start: 38 @49811 has 29 MA's), (56, 49751), (85, 49625),

Gene: Stink_85 Start: 49027, Stop: 48815, Start Num: 54

Candidate Starts for Stink_85:

(Start: 54 @49027 has 125 MA's), (78, 48958), (81, 48943), (84, 48910), (85, 48904), (89, 48850), (91, 48841),

Gene: Sultana_85 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Sultana_85:

(Start: 54 @48800 has 125 MA's), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: Sunhee_87 Start: 46599, Stop: 46327, Start Num: 35

Candidate Starts for Sunhee_87:

(Start: 32 @46614 has 11 MA's), (Start: 35 @46599 has 46 MA's), (51, 46557), (56, 46536), (58, 46530), (66, 46488), (73, 46470),

Gene: Superchunk_86 Start: 47583, Stop: 47341, Start Num: 35

Candidate Starts for Superchunk_86:

(Start: 32 @47598 has 11 MA's), (Start: 35 @47583 has 46 MA's), (70, 47484),

Gene: SweetiePie_86 Start: 48971, Stop: 48660, Start Num: 32

Candidate Starts for SweetiePie_86:

(18, 49100), (Start: 32 @48971 has 11 MA's), (Start: 35 @48956 has 46 MA's), (Start: 54 @48887 has 125 MA's), (63, 48842), (80, 48797), (91, 48689),

Gene: SwirlSquare_88 Start: 47313, Stop: 47071, Start Num: 35

Candidate Starts for SwirlSquare_88:

(Start: 32 @47328 has 11 MA's), (Start: 35 @47313 has 46 MA's), (56, 47259), (62, 47235), (70, 47214), (84, 47148),

Gene: Taquarus_84 Start: 48812, Stop: 48600, Start Num: 54

Candidate Starts for Taquarus_84:

(Start: 54 @48812 has 125 MA's), (78, 48743), (84, 48695), (85, 48689), (89, 48635), (91, 48626),

Gene: TarsusIV_85 Start: 48814, Stop: 48545, Start Num: 35

Candidate Starts for TarsusIV_85:

(13, 48976), (Start: 32 @48829 has 11 MA's), (Start: 35 @48814 has 46 MA's), (46, 48775), (Start: 54 @48745 has 125 MA's),

Gene: Thanksgivukkah_84 Start: 48801, Stop: 48589, Start Num: 54

Candidate Starts for Thanksgivukkah_84:

(Start: 54 @48801 has 125 MA's), (78, 48732), (84, 48684), (85, 48678), (89, 48624), (91, 48615),

Gene: TinaFeyge_83 Start: 48798, Stop: 48586, Start Num: 54

Candidate Starts for TinaFeyge_83:

(Start: 54 @48798 has 125 MA's), (78, 48729), (84, 48681), (85, 48675), (89, 48621), (91, 48612),

Gene: Tinybot_84 Start: 48830, Stop: 48618, Start Num: 54

Candidate Starts for Tinybot_84:

(Start: 54 @48830 has 125 MA's), (78, 48761), (84, 48713), (85, 48707), (89, 48653), (91, 48644),

Gene: TiroTheta9_84 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for TiroTheta9_84:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Toaka_88 Start: 48957, Stop: 48709, Start Num: 38

Candidate Starts for Toaka_88:

(27, 49023), (Start: 31 @48981 has 7 MA's), (33, 48969), (Start: 38 @48957 has 29 MA's), (50, 48921), (56, 48894), (66, 48846), (71, 48837), (85, 48780),

Gene: Tristan_82 Start: 48950, Stop: 48699, Start Num: 47

Candidate Starts for Tristan_82:

(7, 49322), (30, 49043), (Start: 47 @48950 has 7 MA's), (91, 48719),

Gene: Trixie_86 Start: 49391, Stop: 49113, Start Num: 32

Candidate Starts for Trixie_86:

(11, 49589), (Start: 32 @49391 has 11 MA's), (Start: 35 @49376 has 46 MA's), (41, 49361), (56, 49313), (72, 49253), (74, 49244), (76, 49241), (85, 49181),

Gene: Trooper_86 Start: 48532, Stop: 48263, Start Num: 35

Candidate Starts for Trooper_86:

(9, 48766), (20, 48667), (Start: 32 @48547 has 11 MA's), (Start: 35 @48532 has 46 MA's), (49, 48487), (Start: 54 @48463 has 125 MA's),

Gene: TroyPia_86 Start: 48838, Stop: 48626, Start Num: 54

Candidate Starts for TroyPia_86:

(Start: 54 @48838 has 125 MA's), (78, 48769), (84, 48721), (85, 48715), (89, 48661), (91, 48652),

Gene: Tubs_90 Start: 49071, Stop: 48826, Start Num: 38

Candidate Starts for Tubs_90:

(Start: 31 @49098 has 7 MA's), (Start: 38 @49071 has 29 MA's), (50, 49035), (56, 49008),

Gene: Turbido_87 Start: 49118, Stop: 48822, Start Num: 35

Candidate Starts for Turbido_87:

(17, 49268), (Start: 32 @49133 has 11 MA's), (Start: 35 @49118 has 46 MA's), (Start: 54 @49049 has 125 MA's), (63, 49004), (80, 48959), (82, 48950),

Gene: TygerBlood_85 Start: 48803, Stop: 48591, Start Num: 54

Candidate Starts for TygerBlood_85:

(Start: 54 @48803 has 125 MA's), (78, 48734), (84, 48686), (85, 48680), (89, 48626), (91, 48617),

Gene: Ugenie5_77 Start: 46559, Stop: 46314, Start Num: 38

Candidate Starts for Ugenie5_77:

(Start: 31 @46586 has 7 MA's), (Start: 38 @46559 has 29 MA's), (50, 46523), (56, 46496),

Gene: Ulysses_84 Start: 48486, Stop: 48274, Start Num: 54

Candidate Starts for Ulysses_84:

(Start: 54 @48486 has 125 MA's), (78, 48417), (84, 48369), (85, 48363), (89, 48309), (91, 48300),

Gene: VA6_86 Start: 48761, Stop: 48450, Start Num: 32

Candidate Starts for VA6_86:

(Start: 32 @48761 has 11 MA's), (Start: 35 @48746 has 46 MA's), (49, 48701), (Start: 54 @48677 has 125 MA's), (63, 48632), (90, 48482),

Gene: Vanisoa_85 Start: 49296, Stop: 49042, Start Num: 38

Candidate Starts for Vanisoa_85:

(27, 49362), (Start: 31 @49320 has 7 MA's), (33, 49308), (Start: 38 @49296 has 29 MA's), (45, 49275), (56, 49233), (68, 49185), (80, 49158), (85, 49113),

Gene: Wander_85 Start: 48797, Stop: 48585, Start Num: 54

Candidate Starts for Wander_85:

(Start: 54 @48797 has 125 MA's), (78, 48728), (84, 48680), (85, 48674), (89, 48620), (91, 48611),

Gene: Whabigail7_85 Start: 49116, Stop: 48820, Start Num: 35

Candidate Starts for Whabigail7_85:

(17, 49266), (Start: 32 @49131 has 11 MA's), (Start: 35 @49116 has 46 MA's), (Start: 54 @49047 has 125 MA's), (63, 49002), (80, 48957), (82, 48948),

Gene: Wilbur_85 Start: 48800, Stop: 48588, Start Num: 54

Candidate Starts for Wilbur_85:

(Start: 54 @48800 has 125 MA's), (65, 48758), (78, 48731), (84, 48683), (85, 48677), (89, 48623), (91, 48614),

Gene: WorldCup_88 Start: 48754, Stop: 48503, Start Num: 38

Candidate Starts for WorldCup_88:

(Start: 31 @48778 has 7 MA's), (Start: 38 @48754 has 29 MA's), (45, 48733), (56, 48691), (85, 48571), (87, 48535),

Gene: Xena_81 Start: 48622, Stop: 48410, Start Num: 54

Candidate Starts for Xena_81:

(Start: 42 @48658 has 1 MA's), (Start: 54 @48622 has 125 MA's), (78, 48553), (84, 48505), (85, 48499), (89, 48445), (91, 48436),

Gene: XianYue_85 Start: 48882, Stop: 48607, Start Num: 35

Candidate Starts for XianYue_85:

(22, 48981), (Start: 32 @48897 has 11 MA's), (Start: 35 @48882 has 46 MA's), (Start: 54 @48837 has 125 MA's), (63, 48789),

Gene: Yecey3_91 Start: 48834, Stop: 48583, Start Num: 37

Candidate Starts for Yecey3_91:

(Start: 37 @48834 has 1 MA's), (56, 48771), (87, 48615),

Gene: YoSam321_85 Start: 48798, Stop: 48586, Start Num: 54

Candidate Starts for YoSam321_85:

(Start: 54 @48798 has 125 MA's), (78, 48729), (84, 48681), (85, 48675), (89, 48621), (91, 48612),

Gene: Zenteno07_70 Start: 57108, Stop: 56800, Start Num: 28

Candidate Starts for Zenteno07_70:

(Start: 28 @57108 has 3 MA's), (61, 56994),

Gene: Zimmer_87 Start: 50279, Stop: 50019, Start Num: 39

Candidate Starts for Zimmer_87:

(Start: 31 @50306 has 7 MA's), (Start: 39 @50279 has 2 MA's), (56, 50222), (75, 50153), (77, 50150), (80, 50135), (85, 50090),