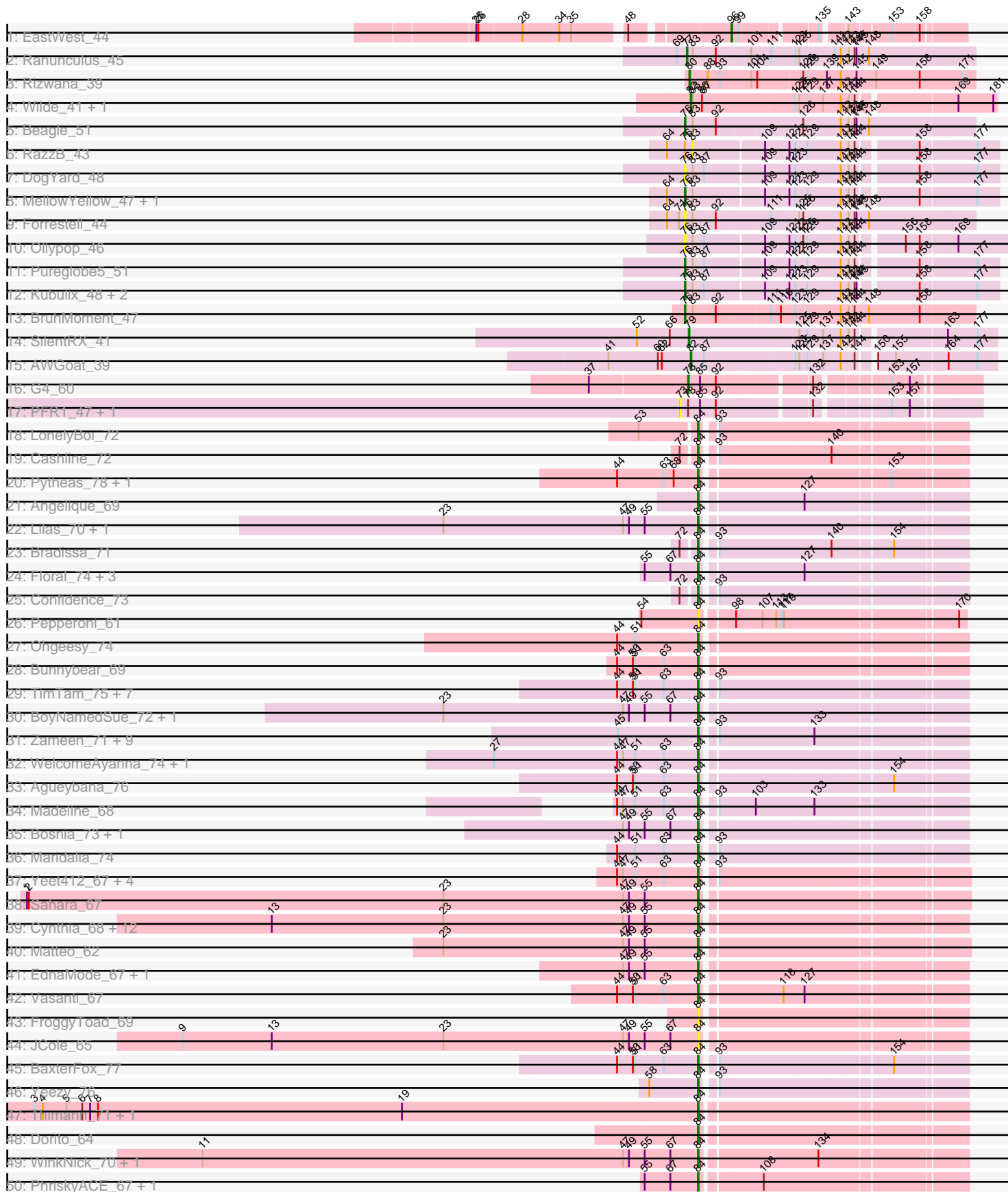
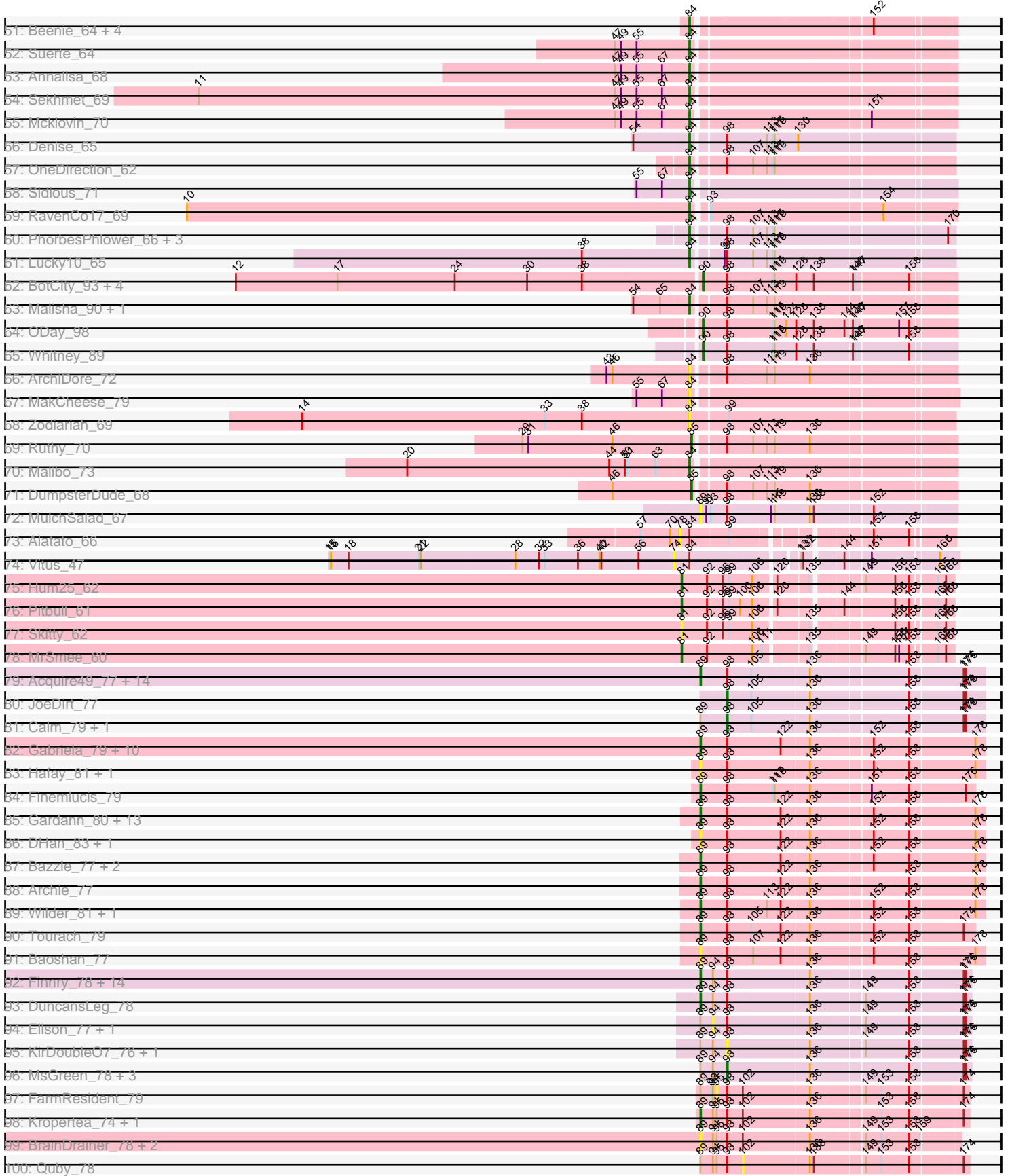


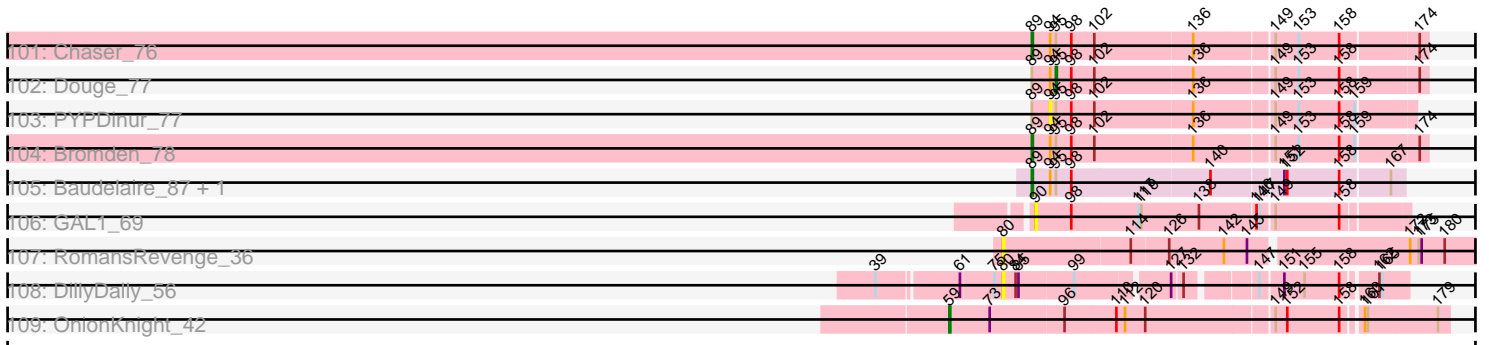
Pham 215800



Pham 215800



Pham 215800



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 215800 Report

This analysis was run 02/22/25 on database version 588.

Pham number 215800 has 236 members, 49 are drafts.

Phages represented in each track:

- Track 1 : EastWest_44
- Track 2 : Ranunculus_45
- Track 3 : Rizwana_39
- Track 4 : Wilde_41, Tank_41
- Track 5 : Beagle_51
- Track 6 : RazzB_43
- Track 7 : DogYard_48
- Track 8 : MellowYellow_47, NyleyClemson_46
- Track 9 : Forrestell_44
- Track 10 : Ollypop_46
- Track 11 : Pureglobe5_51
- Track 12 : Kubulix_48, Odyssey395_52, Pointis_49
- Track 13 : BruhMoment_47
- Track 14 : SilentRX_41
- Track 15 : AWGoat_39
- Track 16 : G4_60
- Track 17 : PFR1_47, PFR2_49
- Track 18 : LonelyBoi_72
- Track 19 : Cashline_72
- Track 20 : Pytheas_78, Jablanski_77
- Track 21 : Angelique_69
- Track 22 : Lilas_70, EnalisNailo_69
- Track 23 : Bradissa_71
- Track 24 : Floral_74, EMsquaredA_73, Pollux_76, Marteena_72
- Track 25 : Confidence_73
- Track 26 : Pepperoni_61
- Track 27 : Ohgeesy_74
- Track 28 : Bunnybear_69
- Track 29 : TimTam_75, Herod_75, Eviarto_75, BatStarr_74, Hugley_73, Nymphadora_75, Bialota_69, Zirinka_69
- Track 30 : BoyNamedSue_72, AlumE_72
- Track 31 : Zameen_71, Eudoria_71, Neobush_73, Antonio_70, Kita_72, Polly_68, Manasvini_73, Suscepit_71, Tayonia_71, Trumpet_71
- Track 32 : WelcomeAyanna_74, ThankyouJordi_74
- Track 33 : Agueybana_76
- Track 34 : Madeline_68
- Track 35 : Bosnia_73, BeeGee_76

- Track 36 : Maridalia_74
- Track 37 : Yeet412_67, Attis_68, SoilAssassin_68, Nettuno_66, LordFarquaad_71
- Track 38 : Sahara_67
- Track 39 : Cynthia_68, Bjanes7_65, Sproutie_68, Whiteclaw_68, Ebert_71, Clap_68, Mocha12_68, GemG_68, TuertoX_68, Gizermo_68, Haley23_68, Savage_68, Lamberg_64
- Track 40 : Matteo_62
- Track 41 : EdnaMode_67, Pickett_65
- Track 42 : Vasanti_67
- Track 43 : FroggyToad_69
- Track 44 : JCole_65
- Track 45 : BaxterFox_77
- Track 46 : Yeezy_76
- Track 47 : Thimann_71, Easley_68
- Track 48 : Dorito_64
- Track 49 : WinkNick_70, Dolores_70
- Track 50 : PhriskyACE_67, Powerball_68
- Track 51 : Beenie_64, Clark_69, Samman98_71, Invecetra_71, MichaelScott_71
- Track 52 : Suerte_64
- Track 53 : Annalisa_68
- Track 54 : Sekhmet_69
- Track 55 : Mcklovin_70
- Track 56 : Denise_65
- Track 57 : OneDirection_62
- Track 58 : Sidious_71
- Track 59 : RavenCo17_69
- Track 60 : PhorbesPhlower_66, Kuwabara_86, Lton_65, Morkie_68
- Track 61 : Lucky10_65
- Track 62 : BotCity_93, Lutum_91, BENtherdunthat_90, Phabuloso_97, Getalong_93
- Track 63 : Malisha_90, Faith5x5_63
- Track 64 : ODay_98
- Track 65 : Whitney_89
- Track 66 : ArchiDore_72
- Track 67 : MakCheese_79
- Track 68 : Zodiariah_69
- Track 69 : Ruthy_70
- Track 70 : Malibo_73
- Track 71 : DumpsterDude_68
- Track 72 : MulchSalad_67
- Track 73 : Alatato_66
- Track 74 : Vitus_47
- Track 75 : Hum25_62
- Track 76 : Pitbull_61
- Track 77 : Skitty_62
- Track 78 : MrSmee_60
- Track 79 : Acquire49_77, UPIE_76, Appletree2_76, AvadaKedavra_77, DirkDirk_74, Tyson_78, Rose5_77, Enceladus_74, LeBron_76, Halena_75, MAckerman_75, Wamburgxpress_77, Zaria_78, CicholasNage_74, Wyatt2_78
- Track 80 : JoeDirt_77
- Track 81 : Calm_79, Silverleaf_77
- Track 82 : Gabriela_79, BobsGarage_80, Faith1_80, DrSeegs_80, BigCheese_80, Winky_80, Itos_79, Miley16_80, Breezona_80, SoJulia_82, Netyap_81
- Track 83 : Hafay_81, Claus_80

- Track 84 : Finemlucis_79
- Track 85 : Gardann_80, GuuelaD_78, Zakai_81, Nicholasp3_80, LilDestine_79, Loadrie_79, Lewan_81, MkaliMitinis3_81, Rumpelstiltskin_77, Sarshaun_81, Soap141_80, Vetrix_79, Crossroads_80, Underpass_71
- Track 86 : DHan_83, ZhongYanYuan_77
- Track 87 : Bazzle_77, DanBing_80, Wigglewiggle_79
- Track 88 : Archie_77
- Track 89 : Wilder_81, Kahlid_80
- Track 90 : Tourach_79
- Track 91 : Baoshan_77
- Track 92 : Finnry_78, Moostard_76, Clautastrophe_76, Lolly9_77, MiniMac_82, Whirlwind_79, Krypton555_79, Nicholas_76, Kingsolomon_76, Lumos_79, Samty_77, Jobypre_78, MiniLon_82, Jubie_77, Snenia_77
- Track 93 : DuncansLeg_78
- Track 94 : Ellson_77, BourbonZero_79
- Track 95 : KirDoubleO7_76, LiyuLake_77
- Track 96 : MsGreen_78, Red305_79, TriFive_78, Bellis_76
- Track 97 : FarmResident_79
- Track 98 : Kropertea_74, DyoEdafos_82
- Track 99 : BrainDrainer_78, Sheng711_79, Douzhi_78
- Track 100 : Quby_78
- Track 101 : Chaser_76
- Track 102 : Douge_77
- Track 103 : PYPDinur_77
- Track 104 : Bromden_78
- Track 105 : Baudelaire_87, Aegeus_87
- Track 106 : GAL1_69
- Track 107 : RomansRevenge_36
- Track 108 : DillyDally_56
- Track 109 : OnionKnight_42

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

The start number called the most often in the published annotations is 84, it was called in 92 of the 187 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_76, AlumE_72, Angelique_69, Annalisa_68, Antonio_70, ArchiDore_72, Attis_68, BatStarr_74, BaxterFox_77, BeeGee_76, Beenie_64, Bialota_69, Bjaner7_65, Bosnia_73, BoyNamedSue_72, Bradissa_71, Bunnybear_69, Cashline_72, Clap_68, Clark_69, Confidence_73, Cynthia_68, Denise_65, Dolores_70, Dorito_64, EMSquaredA_73, Easley_68, Ebert_71, EdnaMode_67, EnalisNailo_69, Eudoria_71, Eviarto_75, Faith5x5_63, Floral_74, FroggyToad_69, GemG_68, Gizermo_68, Haley23_68, Herod_75, Hugley_73, Invecetra_71, JCole_65, Jablanski_77, Kita_72, Kuwabara_86, Lamberg_64, Lilas_70, LonelyBoi_72, LordFarquaad_71, Lton_65, Lucky10_65, Madeline_68, MakCheese_79, Malibo_73, Malisha_90, Manasvini_73, Maridalia_74, Marteenaa_72, Matteo_62, Mcklovin_70, MichaelScott_71, Mocha12_68, Morkie_68, Neobush_73, Nettuno_66, Nymphadora_75, Ohgeesy_74, OneDirection_62, Pepperoni_61, PhorbesPhlower_66, PhriskyACE_67, Pickett_65, Pollux_76, Polly_68, Powerball_68,

Pytheas_78, RavenCo17_69, Sahara_67, Samman98_71, Savage_68, Sekhmet_69, Sidious_71, SoilAssassin_68, Sproutie_68, Suerte_64, Suscepit_71, Tayonia_71, ThankyouJordi_74, Thimann_71, TimTam_75, Trumpet_71, TuertoX_68, Vasanti_67, WelcomeAyanna_74, Whiteclaw_68, WinkNick_70, Yeet412_67, Yeezy_76, Zameen_71, Zirinka_69, Zodiariah_69,

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

- Alatato_66, DillyDally_56, Vitus_47,

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

- AWGoat_39, Acquire49_77, Aegeus_87, Appletree2_76, Archie_77, AvadaKedavra_77, BENtherdunthat_90, Baoshan_77, Baudelaire_87, Bazzle_77, Beagle_51, Bellis_76, BigCheese_80, BobsGarage_80, BotCity_93, BourbonZero_79, BrainDrainer_78, Breezona_80, Bromden_78, BruhMoment_47, Calm_79, Chaser_76, CicholasNage_74, Claus_80, Clautastrophe_76, Crossroads_80, DHan_83, DanBing_80, DirkDirk_74, DogYard_48, Douge_77, Douzhi_78, DrSeegs_80, DumpsterDude_68, DuncansLeg_78, DyoEdafos_82, EastWest_44, Ellson_77, Enceladus_74, Faith1_80, FarmResident_79, Finemlucis_79, Finnry_78, Forrestell_44, G4_60, GAL1_69, Gabriela_79, Gardann_80, Getalong_93, GuuelaD_78, Hafay_81, Halena_75, Hum25_62, Itos_79, Jobypre_78, JoeDirt_77, Jubie_77, Kahlid_80, Kingsolomon_76, KirDoubleO7_76, Kropertea_74, Krypton555_79, Kubulix_48, LeBron_76, Lewan_81, LilDestine_79, LiyuLake_77, Loadrie_79, Lolly9_77, Lumos_79, Lutum_91, MAckerman_75, MellowYellow_47, Miley16_80, MiniLon_82, MiniMac_82, MkaliMitinis3_81, Moostard_76, MrSmee_60, MsGreen_78, MulchSalad_67, Netyap_81, Nicholas_76, Nicholasp3_80, NyleyClemson_46, ODay_98, Odyssey395_52, Ollypop_46, OnionKnight_42, PFR1_47, PFR2_49, PYPDinur_77, Phabuloso_97, Pitbull_61, Pointis_49, Pureglobe5_51, Quby_78, Ranunculus_45, RazzB_43, Red305_79, Rizwana_39, RomansRevenge_36, Rose5_77, Rumpelstiltskin_77, Ruthy_70, Samty_77, Sarshaun_81, Sheng711_79, SilentRX_41, Silverleaf_77, Skitty_62, Snenia_77, SoJulia_82, Soap141_80, Tank_41, Tourach_79, TriFive_78, Tyson_78, UPIE_76, Underpass_71, Vetrix_79, Wamburggrxpress_77, Whirlwind_79, Whitney_89, Wigglewiggle_79, Wilde_41, Wilder_81, Winky_80, Wyatt2_78, Zakai_81, Zaria_78, ZhongYanYuan_77,

Summary by start number:

Start 59:

- Found in 1 of 236 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OnionKnight_42 (singleton),

Start 73:

- Found in 3 of 236 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: PFR1_47 (BX), PFR2_49 (BX),

Start 74:

- Found in 1 of 236 (0.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Vitus_47 (FL),

Start 76:

- Found in 12 of 236 (5.1%) of genes in pham
- Manual Annotations of this start: 6 of 187
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Beagle_51 (AP2), BruhMoment_47 (AP3), DogYard_48 (AP2), Forrestell_44 (AP2), Kubulix_48 (AP2), MellowYellow_47 (AP2), NyleyClemson_46 (AP2), Odyssey395_52 (AP2), Ollypop_46 (AP2), Pointis_49 (AP2), Pureglobe5_51 (AP2),

Start 77:

- Found in 1 of 236 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ranunculus_45 (AP),

Start 78:

- Found in 4 of 236 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Alatato_66 (FB), G4_60 (BW),

Start 79:

- Found in 1 of 236 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SilentRX_41 (AP4),

Start 80:

- Found in 3 of 236 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally_56 (singleton), Rizwana_39 (AP1), RomansRevenge_36 (singleton),

Start 81:

- Found in 4 of 236 (1.7%) of genes in pham
- Manual Annotations of this start: 3 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hum25_62 (FQ), MrSmee_60 (FQ), Pitbull_61 (FQ), Skitty_62 (FQ),

Start 82:

- Found in 3 of 236 (1.3%) of genes in pham
- Manual Annotations of this start: 3 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_39 (AP4), Tank_41 (AP1), Wilde_41 (AP1),

Start 83:

- Found in 15 of 236 (6.4%) of genes in pham
- No Manual Annotations of this start.

- Called 6.7% of time when present
- Phage (with cluster) where this start called: RazzB_43 (AP2),

Start 84:

- Found in 104 of 236 (44.1%) of genes in pham
- Manual Annotations of this start: 92 of 187
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Agueybana_76 (CZ1), AlumE_72 (CZ1), Angelique_69 (CY1), Annalisa_68 (CZ4), Antonio_70 (CZ1), ArchiDore_72 (DW), Attis_68 (CZ2), BatStarr_74 (CZ1), BaxterFox_77 (CZ3), BeeGee_76 (CY), Beenie_64 (CZ4), Bialota_69 (CZ1), Bjaner7_65 (CZ2), Bosnia_73 (CZ1), BoyNamedSue_72 (CZ1), Bradissa_71 (CY1), Bunnybear_69 (CZ), Cashline_72 (CY), Clap_68 (CZ2), Clark_69 (CZ4), Confidence_73 (CY1), Cynthia_68 (CZ2), Denise_65 (CZ5), Dolores_70 (CZ4), Dorito_64 (CZ4), EMSquaredA_73 (CY1), Easley_68 (CZ4), Ebert_71 (CZ2), EdnaMode_67 (CZ2), EnalisNailo_69 (CY1), Eudoria_71 (CZ1), Eviarto_75 (CZ1), Faith5x5_63 (CZ6), Floral_74 (CY1), FroggyToad_69 (CZ2), GemG_68 (CZ2), Gizermo_68 (CZ2), Haley23_68 (CZ2), Herod_75 (CZ1), Hugley_73 (CZ1), Invectra_71 (CZ4), JCole_65 (CZ2), Jablanski_77 (CY), Kita_72 (CZ1), Kuwabara_86 (DN4), Lamberg_64 (CZ2), Lilas_70 (CY1), LonelyBoi_72 (CY), LordFarquaad_71 (CZ2), Lton_65 (CZ), Lucky10_65 (DH), Madeline_68 (CZ1), MakCheese_79 (DW), Malibo_73 (DW), Malisha_90 (DN), Manasvini_73 (CZ1), Maridalia_74 (CZ1), Marteena_72 (CY1), Matteo_62 (CZ2), Mcklovin_70 (CZ4), MichaelScott_71 (CZ4), Mocha12_68 (CZ2), Morkie_68 (DH), Neobush_73 (CZ1), Nettuno_66 (CZ2), Nymphadora_75 (CZ1), Ohgeesy_74 (CZ), OneDirection_62 (CZ6), Pepperoni_61 (CZ), PhorbesPhlower_66 (DH), PhriskyACE_67 (CZ4), Pickett_65 (CZ2), Pollux_76 (CY1), Polly_68 (CZ1), Powerball_68 (CZ4), Pytheas_78 (CY), RavenCo17_69 (CZ8), Sahara_67 (CZ2), Samman98_71 (CZ4), Savage_68 (CZ2), Sekhmet_69 (CZ4), Sidious_71 (CZ7), SoilAssassin_68 (CZ2), Sproutie_68 (CZ2), Suerte_64 (CZ4), Suscepit_71 (CZ1), Tayonia_71 (CZ1), ThankyouJordi_74 (CZ1), Thimann_71 (CZ4), TimTam_75 (CZ1), Trumpet_71 (CZ1), TuertoX_68 (CZ2), Vasanti_67 (CZ2), WelcomeAyanna_74 (CZ1), Whiteclaw_68 (CZ2), WinkNick_70 (CZ4), Yeet412_67 (CZ2), Yeezy_76 (CZ3), Zameen_71 (CZ1), Zirinka_69 (CZ1), Zodiariah_69 (DW),

Start 85:

- Found in 6 of 236 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 187
- Called 33.3% of time when present
- Phage (with cluster) where this start called: DumpsterDude_68 (DW), Ruthy_70 (DW),

Start 89:

- Found in 93 of 236 (39.4%) of genes in pham
- Manual Annotations of this start: 64 of 187
- Called 84.9% of time when present
- Phage (with cluster) where this start called: Acquire49_77 (L1), Aegeus_87 (L5), Appletree2_76 (L1), Archie_77 (L2), AvadaKedavra_77 (L1), Baoshan_77 (L2), Baudelaire_87 (L5), Bazzle_77 (L2), BigCheese_80 (L2), BobsGarage_80 (L2), BrainDrainer_78 (L4), Breezona_80 (L2), Bromden_78 (L4), Chaser_76 (L4), CicholasNage_74 (L1), Claus_80 (L2), Clautastrophe_76 (L3), Crossroads_80 (L2), DHan_83 (L2), DanBing_80 (L2), DirkDirk_74 (L1), Douzhi_78 (L4), DrSeegs_80 (L2), DuncansLeg_78 (L3), DyoEdafos_82 (L4), Enceladus_74 (L1), Faith1_80 (L2), Finemlucis_79 (L2), Finnry_78 (L3), Gabriela_79 (L2), Gardann_80 (L2), GuuelaD_78

(L2), Hafay_81 (L2), Halena_75 (L1), Itos_79 (L2), Jobypre_78 (L3), Jubie_77 (L3), Kahlid_80 (L2), Kingsolomon_76 (L3), Kropertea_74 (L4), Krypton555_79 (L3), LeBron_76 (L1), Lewan_81 (L2), LilDestine_79 (L2), Loadrie_79 (L2), Lolly9_77 (L3), Lumos_79 (L3), MAckerman_75 (L1), Miley16_80 (L2), MiniLon_82 (L3), MiniMac_82 (L3), MkaliMitinis3_81 (L2), Moostard_76 (L3), MulchSalad_67 (F), Netyap_81 (L2), Nicholas_76 (L3), Nicholasp3_80 (L2), Rose5_77 (L1), Rumpelstiltskin_77 (L2), Samty_77 (L3), Sarshaun_81 (L2), Sheng711_79 (L4), Snenia_77 (L3), SoJulia_82 (L2), Soap141_80 (L2), Tourach_79 (L2), Tyson_78 (L1), UPIE_76 (L1), Underpass_71 (L2), Vetrix_79 (L2), Wamburgrxpress_77 (L1), Whirlwind_79 (L3), Wigglewiggles_79 (L2), Wilder_81 (L2), Winky_80 (L2), Wyatt2_78 (L1), Zakai_81 (L2), Zaria_78 (L1), ZhongYanYuan_77 (L2),

Start 90:

- Found in 8 of 236 (3.4%) of genes in pham
- Manual Annotations of this start: 6 of 187
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BENtherdunthat_90 (DN1), BotCity_93 (DN), GAL1_69 (singleton), Getalong_93 (DN1), Lutum_91 (DN1), ODay_98 (DN), Phabuloso_97 (DN1), Whitney_89 (DN1),

Start 94:

- Found in 37 of 236 (15.7%) of genes in pham
- No Manual Annotations of this start.
- Called 8.1% of time when present
- Phage (with cluster) where this start called: BourbonZero_79 (L3), Ellson_77 (L3), PYPDinur_77 (L4),

Start 95:

- Found in 13 of 236 (5.5%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 15.4% of time when present
- Phage (with cluster) where this start called: Douge_77 (L4), FarmResident_79 (L4),

Start 96:

- Found in 5 of 236 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 187
- Called 20.0% of time when present
- Phage (with cluster) where this start called: EastWest_44 (AO),

Start 98:

- Found in 115 of 236 (48.7%) of genes in pham
- Manual Annotations of this start: 4 of 187
- Called 7.8% of time when present
- Phage (with cluster) where this start called: Bellis_76 (L3), Calm_79 (L1), JoeDirt_77 (L1), KirDoubleO7_76 (L3), LiyuLake_77 (L3), MsGreen_78 (L3), Red305_79 (L3), Silverleaf_77 (L1), TriFive_78 (L3),

Start 102:

- Found in 11 of 236 (4.7%) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Quby_78 (L4),

Summary by clusters:

There are 34 clusters represented in this pham: DN, FQ, singleton, DH, AP2, CZ3, AP1, CZ6, CZ7, CZ4, CZ5, FB, BW, CZ8, DW, FL, DN4, BX, CZ2, DN1, AP3, AP4, CY1, CZ1, F, AO, CZ, CY, L5, L2, L3, L1, AP, L4,

Info for manual annotations of cluster AO:

- Start number 96 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AP:

- Start number 77 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 80 was manually annotated 1 time for cluster AP1.
- Start number 82 was manually annotated 2 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 76 was manually annotated 5 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 76 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 79 was manually annotated 1 time for cluster AP4.
- Start number 82 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster BW:

- Start number 78 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster CY:

- Start number 84 was manually annotated 5 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 84 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 84 was manually annotated 3 times for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 84 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 84 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 84 was manually annotated 2 times for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 84 was manually annotated 14 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 84 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:

- Start number 84 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster CZ7:

- Start number 84 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 84 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DH:

- Start number 84 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 84 was manually annotated 1 time for cluster DN.
- Start number 90 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 90 was manually annotated 5 times for cluster DN1.

Info for manual annotations of cluster DN4:

- Start number 84 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DW:

- Start number 84 was manually annotated 1 time for cluster DW.
- Start number 85 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster FQ:

- Start number 81 was manually annotated 3 times for cluster FQ.

Info for manual annotations of cluster L1:

- Start number 89 was manually annotated 15 times for cluster L1.
- Start number 98 was manually annotated 3 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 89 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 89 was manually annotated 16 times for cluster L3.
- Start number 98 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 89 was manually annotated 3 times for cluster L4.
- Start number 95 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster L5:

- Start number 89 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: AWGoat_39 Start: 35301, Stop: 34870, Start Num: 82

Candidate Starts for AWGoat_39:

(41, 35424), (60, 35349), (62, 35343), (Start: 82 @35301 has 3 MA's), (87, 35283), (123, 35148), (125, 35142), (129, 35130), (137, 35106), (142, 35079), (144, 35058), (150, 35040), (155, 35013), (164, 34941), (177, 34899),

Gene: Acquire49_77 Start: 51648, Stop: 52061, Start Num: 89

Candidate Starts for Acquire49_77:

(Start: 89 @51648 has 64 MA's), (Start: 98 @51687 has 4 MA's), (105, 51723), (136, 51810), (158, 51951), (174, 52029), (176, 52032),

Gene: Aegeus_87 Start: 54478, Stop: 54843, Start Num: 89

Candidate Starts for Aegeus_87:

(Start: 89 @54478 has 64 MA's), (94, 54496), (Start: 95 @54502 has 1 MA's), (Start: 98 @54517 has 4 MA's), (140, 54658), (151, 54724), (152, 54727), (158, 54781), (167, 54829),

Gene: Agueybana_76 Start: 49121, Stop: 49486, Start Num: 84

Candidate Starts for Agueybana_76:

(44, 49004), (50, 49028), (51, 49031), (63, 49073), (Start: 84 @49121 has 92 MA's), (154, 49385),

Gene: Alatato_66 Start: 36072, Stop: 36431, Start Num: 78

Candidate Starts for Alatato_66:

(57, 36012), (70, 36057), (Start: 78 @36072 has 1 MA's), (Start: 84 @36087 has 92 MA's), (99, 36144), (152, 36318), (158, 36372),

Gene: AlumE_72 Start: 48795, Stop: 49160, Start Num: 84

Candidate Starts for AlumE_72:

(23, 48408), (47, 48681), (49, 48690), (55, 48714), (67, 48753), (Start: 84 @48795 has 92 MA's),

Gene: Angelique_69 Start: 48080, Stop: 48445, Start Num: 84

Candidate Starts for Angelique_69:

(Start: 84 @48080 has 92 MA's), (127, 48221),

Gene: Annalisa_68 Start: 43981, Stop: 44349, Start Num: 84

Candidate Starts for Annalisa_68:

(47, 43867), (49, 43876), (55, 43900), (67, 43939), (Start: 84 @43981 has 92 MA's),

Gene: Antonio_70 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Antonio_70:

(45, 46443), (Start: 84 @46557 has 92 MA's), (93, 46572), (133, 46713),

Gene: Appletree2_76 Start: 51259, Stop: 51672, Start Num: 89

Candidate Starts for Appletree2_76:

(Start: 89 @51259 has 64 MA's), (Start: 98 @51298 has 4 MA's), (105, 51334), (136, 51421), (158, 51562), (174, 51640), (176, 51643),

Gene: ArchiDore_72 Start: 49542, Stop: 49913, Start Num: 84

Candidate Starts for ArchiDore_72:

(43, 49416), (46, 49425), (Start: 84 @49542 has 92 MA's), (Start: 98 @49584 has 4 MA's), (113, 49644), (119, 49656), (136, 49710),

Gene: Archie_77 Start: 53141, Stop: 53554, Start Num: 89
Candidate Starts for Archie_77:
(Start: 89 @53141 has 64 MA's), (Start: 98 @53180 has 4 MA's), (122, 53261), (136, 53303), (158, 53444), (178, 53540),

Gene: Attis_68 Start: 45280, Stop: 45648, Start Num: 84
Candidate Starts for Attis_68:
(44, 45163), (47, 45172), (51, 45190), (63, 45232), (Start: 84 @45280 has 92 MA's), (93, 45295),

Gene: AvadaKedavra_77 Start: 51727, Stop: 52140, Start Num: 89
Candidate Starts for AvadaKedavra_77:
(Start: 89 @51727 has 64 MA's), (Start: 98 @51766 has 4 MA's), (105, 51802), (136, 51889), (158, 52030), (174, 52108), (176, 52111),

Gene: BENtherdunthat_90 Start: 49249, Stop: 49614, Start Num: 90
Candidate Starts for BENtherdunthat_90:
(12, 48544), (17, 48700), (24, 48880), (30, 48991), (38, 49075), (Start: 90 @49249 has 6 MA's), (Start: 98 @49285 has 4 MA's), (117, 49354), (119, 49357), (128, 49390), (138, 49417), (146, 49471), (147, 49474), (158, 49552),

Gene: Baoshan_77 Start: 53427, Stop: 53840, Start Num: 89
Candidate Starts for Baoshan_77:
(Start: 89 @53427 has 64 MA's), (Start: 98 @53466 has 4 MA's), (107, 53505), (122, 53547), (136, 53589), (152, 53676), (158, 53730), (178, 53826),

Gene: BatStarr_74 Start: 49525, Stop: 49890, Start Num: 84
Candidate Starts for BatStarr_74:
(44, 49408), (50, 49432), (51, 49435), (63, 49477), (Start: 84 @49525 has 92 MA's), (93, 49540),

Gene: Baudelaire_87 Start: 54478, Stop: 54843, Start Num: 89
Candidate Starts for Baudelaire_87:
(Start: 89 @54478 has 64 MA's), (94, 54496), (Start: 95 @54502 has 1 MA's), (Start: 98 @54517 has 4 MA's), (140, 54658), (151, 54724), (152, 54727), (158, 54781), (167, 54829),

Gene: BaxterFox_77 Start: 50109, Stop: 50474, Start Num: 84
Candidate Starts for BaxterFox_77:
(44, 49992), (50, 50016), (51, 50019), (63, 50061), (Start: 84 @50109 has 92 MA's), (93, 50124), (154, 50373),

Gene: Bazzle_77 Start: 53330, Stop: 53743, Start Num: 89
Candidate Starts for Bazzle_77:
(Start: 89 @53330 has 64 MA's), (Start: 98 @53369 has 4 MA's), (122, 53450), (136, 53492), (152, 53579), (158, 53633), (178, 53729),

Gene: Beagle_51 Start: 38228, Stop: 37809, Start Num: 76
Candidate Starts for Beagle_51:
(Start: 76 @38228 has 6 MA's), (83, 38216), (92, 38183), (126, 38057), (142, 38000), (143, 37988), (144, 37979), (145, 37976), (148, 37958),

Gene: BeeGee_76 Start: 48379, Stop: 48744, Start Num: 84
Candidate Starts for BeeGee_76:
(47, 48265), (49, 48274), (55, 48298), (67, 48337), (Start: 84 @48379 has 92 MA's),

Gene: Beenie_64 Start: 44525, Stop: 44890, Start Num: 84

Candidate Starts for Beenie_64:

(Start: 84 @44525 has 92 MA's), (152, 44774),

Gene: Bellis_76 Start: 53474, Stop: 53827, Start Num: 98

Candidate Starts for Bellis_76:

(Start: 89 @53435 has 64 MA's), (94, 53453), (Start: 98 @53474 has 4 MA's), (136, 53597), (158, 53738), (174, 53816), (176, 53819),

Gene: Bialota_69 Start: 48237, Stop: 48602, Start Num: 84

Candidate Starts for Bialota_69:

(44, 48120), (50, 48144), (51, 48147), (63, 48189), (Start: 84 @48237 has 92 MA's), (93, 48252),

Gene: BigCheese_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for BigCheese_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: Bjaner7_65 Start: 42654, Stop: 43019, Start Num: 84

Candidate Starts for Bjaner7_65:

(13, 42006), (23, 42267), (47, 42540), (49, 42549), (55, 42573), (Start: 84 @42654 has 92 MA's),

Gene: BobsGarage_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for BobsGarage_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: Bosnia_73 Start: 50639, Stop: 51004, Start Num: 84

Candidate Starts for Bosnia_73:

(47, 50525), (49, 50534), (55, 50558), (67, 50597), (Start: 84 @50639 has 92 MA's),

Gene: BotCity_93 Start: 50778, Stop: 51143, Start Num: 90

Candidate Starts for BotCity_93:

(12, 50073), (17, 50229), (24, 50409), (30, 50520), (38, 50604), (Start: 90 @50778 has 6 MA's), (Start: 98 @50814 has 4 MA's), (117, 50883), (119, 50886), (128, 50919), (138, 50946), (146, 51000), (147, 51003), (158, 51081),

Gene: BourbonZero_79 Start: 53449, Stop: 53823, Start Num: 94

Candidate Starts for BourbonZero_79:

(Start: 89 @53431 has 64 MA's), (94, 53449), (Start: 98 @53470 has 4 MA's), (136, 53593), (149, 53668), (158, 53734), (174, 53812), (176, 53815),

Gene: BoyNamedSue_72 Start: 48795, Stop: 49160, Start Num: 84

Candidate Starts for BoyNamedSue_72:

(23, 48408), (47, 48681), (49, 48690), (55, 48714), (67, 48753), (Start: 84 @48795 has 92 MA's),

Gene: Bradissa_71 Start: 49627, Stop: 49992, Start Num: 84

Candidate Starts for Bradissa_71:

(72, 49609), (Start: 84 @49627 has 92 MA's), (93, 49642), (140, 49807), (154, 49891),

Gene: BrainDrainer_78 Start: 52369, Stop: 52743, Start Num: 89

Candidate Starts for BrainDrainer_78:

(Start: 89 @52369 has 64 MA's), (94, 52387), (Start: 95 @52393 has 1 MA's), (Start: 98 @52408 has 4 MA's), (102, 52432), (136, 52531), (149, 52606), (153, 52630), (158, 52672), (159, 52687),

Gene: Breezona_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for Breezona_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: Bromden_78 Start: 53002, Stop: 53388, Start Num: 89

Candidate Starts for Bromden_78:

(Start: 89 @53002 has 64 MA's), (94, 53020), (Start: 95 @53026 has 1 MA's), (Start: 98 @53041 has 4 MA's), (102, 53065), (136, 53164), (149, 53239), (153, 53263), (158, 53305), (159, 53320), (174, 53380),

Gene: BruhMoment_47 Start: 39339, Stop: 38920, Start Num: 76

Candidate Starts for BruhMoment_47:

(Start: 76 @39339 has 6 MA's), (83, 39327), (92, 39294), (111, 39216), (116, 39201), (123, 39180), (129, 39162), (142, 39111), (143, 39099), (144, 39090), (148, 39069), (158, 38994),

Gene: Bunnybear_69 Start: 47790, Stop: 48155, Start Num: 84

Candidate Starts for Bunnybear_69:

(44, 47673), (50, 47697), (51, 47700), (63, 47742), (Start: 84 @47790 has 92 MA's),

Gene: Calm_79 Start: 52009, Stop: 52383, Start Num: 98

Candidate Starts for Calm_79:

(Start: 89 @51970 has 64 MA's), (Start: 98 @52009 has 4 MA's), (105, 52045), (136, 52132), (158, 52273), (174, 52351), (176, 52354),

Gene: Cashline_72 Start: 50322, Stop: 50687, Start Num: 84

Candidate Starts for Cashline_72:

(72, 50304), (Start: 84 @50322 has 92 MA's), (93, 50337), (140, 50502),

Gene: Chaser_76 Start: 52001, Stop: 52387, Start Num: 89

Candidate Starts for Chaser_76:

(Start: 89 @52001 has 64 MA's), (94, 52019), (Start: 95 @52025 has 1 MA's), (Start: 98 @52040 has 4 MA's), (102, 52064), (136, 52163), (149, 52238), (153, 52262), (158, 52304), (174, 52379),

Gene: CicholasNage_74 Start: 51312, Stop: 51725, Start Num: 89

Candidate Starts for CicholasNage_74:

(Start: 89 @51312 has 64 MA's), (Start: 98 @51351 has 4 MA's), (105, 51387), (136, 51474), (158, 51615), (174, 51693), (176, 51696),

Gene: Clap_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Clap_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Clark_69 Start: 44288, Stop: 44653, Start Num: 84

Candidate Starts for Clark_69:

(Start: 84 @44288 has 92 MA's), (152, 44537),

Gene: Claus_80 Start: 53492, Stop: 53905, Start Num: 89

Candidate Starts for Claus_80:

(Start: 89 @53492 has 64 MA's), (Start: 98 @53531 has 4 MA's), (136, 53654), (152, 53741), (158, 53795), (178, 53891),

Gene: Clautastrophe_76 Start: 53433, Stop: 53825, Start Num: 89

Candidate Starts for Clautastrophe_76:

(Start: 89 @53433 has 64 MA's), (94, 53451), (Start: 98 @53472 has 4 MA's), (136, 53595), (158, 53736), (174, 53814), (176, 53817),

Gene: Confidence_73 Start: 47600, Stop: 47965, Start Num: 84

Candidate Starts for Confidence_73:

(72, 47582), (Start: 84 @47600 has 92 MA's), (93, 47615),

Gene: Crossroads_80 Start: 53632, Stop: 54045, Start Num: 89

Candidate Starts for Crossroads_80:

(Start: 89 @53632 has 64 MA's), (Start: 98 @53671 has 4 MA's), (122, 53752), (136, 53794), (152, 53881), (158, 53935), (178, 54031),

Gene: Cynthia_68 Start: 42831, Stop: 43196, Start Num: 84

Candidate Starts for Cynthia_68:

(13, 42183), (23, 42444), (47, 42717), (49, 42726), (55, 42750), (Start: 84 @42831 has 92 MA's),

Gene: DHan_83 Start: 53710, Stop: 54123, Start Num: 89

Candidate Starts for DHan_83:

(Start: 89 @53710 has 64 MA's), (Start: 98 @53749 has 4 MA's), (122, 53830), (136, 53872), (152, 53959), (158, 54013), (178, 54109),

Gene: DanBing_80 Start: 53362, Stop: 53775, Start Num: 89

Candidate Starts for DanBing_80:

(Start: 89 @53362 has 64 MA's), (Start: 98 @53401 has 4 MA's), (122, 53482), (136, 53524), (152, 53611), (158, 53665), (178, 53761),

Gene: Denise_65 Start: 39624, Stop: 39992, Start Num: 84

Candidate Starts for Denise_65:

(54, 39543), (Start: 84 @39624 has 92 MA's), (Start: 98 @39666 has 4 MA's), (113, 39726), (117, 39735), (119, 39738), (130, 39774),

Gene: DillyDally_56 Start: 35605, Stop: 35967, Start Num: 80

Candidate Starts for DillyDally_56:

(39, 35485), (61, 35563), (75, 35596), (Start: 80 @35605 has 1 MA's), (Start: 84 @35617 has 92 MA's), (Start: 85 @35620 has 2 MA's), (99, 35674), (127, 35761), (132, 35770), (147, 35830), (151, 35851), (155, 35872), (158, 35908), (162, 35938), (165, 35941),

Gene: DirkDirk_74 Start: 50839, Stop: 51252, Start Num: 89

Candidate Starts for DirkDirk_74:

(Start: 89 @50839 has 64 MA's), (Start: 98 @50878 has 4 MA's), (105, 50914), (136, 51001), (158, 51142), (174, 51220), (176, 51223),

Gene: DogYard_48 Start: 38145, Stop: 37708, Start Num: 76

Candidate Starts for DogYard_48:

(Start: 76 @38145 has 6 MA's), (83, 38133), (87, 38118), (109, 38031), (121, 37998), (123, 37989), (142, 37920), (143, 37908), (144, 37899), (158, 37818), (177, 37740),

Gene: Dolores_70 Start: 43516, Stop: 43884, Start Num: 84

Candidate Starts for Dolores_70:

(11, 42763), (47, 43402), (49, 43411), (55, 43435), (67, 43474), (Start: 84 @43516 has 92 MA's), (134, 43681),

Gene: Dorito_64 Start: 42718, Stop: 43086, Start Num: 84

Candidate Starts for Dorito_64:

(Start: 84 @42718 has 92 MA's),

Gene: Douge_77 Start: 51948, Stop: 52310, Start Num: 95

Candidate Starts for Douge_77:

(Start: 89 @51924 has 64 MA's), (94, 51942), (Start: 95 @51948 has 1 MA's), (Start: 98 @51963 has 4 MA's), (102, 51987), (136, 52086), (149, 52161), (153, 52185), (158, 52227), (174, 52302),

Gene: Douzhi_78 Start: 52186, Stop: 52560, Start Num: 89

Candidate Starts for Douzhi_78:

(Start: 89 @52186 has 64 MA's), (94, 52204), (Start: 95 @52210 has 1 MA's), (Start: 98 @52225 has 4 MA's), (102, 52249), (136, 52348), (149, 52423), (153, 52447), (158, 52489), (159, 52504),

Gene: DrSeegs_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for DrSeegs_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: DumpsterDude_68 Start: 50011, Stop: 50379, Start Num: 85

Candidate Starts for DumpsterDude_68:

(46, 49891), (Start: 85 @50011 has 2 MA's), (Start: 98 @50050 has 4 MA's), (107, 50089), (113, 50110), (119, 50122), (136, 50176),

Gene: DuncansLeg_78 Start: 53419, Stop: 53811, Start Num: 89

Candidate Starts for DuncansLeg_78:

(Start: 89 @53419 has 64 MA's), (94, 53437), (Start: 98 @53458 has 4 MA's), (136, 53581), (149, 53656), (158, 53722), (174, 53800), (176, 53803),

Gene: DyoEdafos_82 Start: 52834, Stop: 53220, Start Num: 89

Candidate Starts for DyoEdafos_82:

(Start: 89 @52834 has 64 MA's), (94, 52852), (Start: 95 @52858 has 1 MA's), (Start: 98 @52873 has 4 MA's), (102, 52897), (136, 52996), (153, 53095), (158, 53137), (174, 53212),

Gene: EMSquaredA_73 Start: 47755, Stop: 48120, Start Num: 84

Candidate Starts for EMSquaredA_73:

(55, 47674), (67, 47713), (Start: 84 @47755 has 92 MA's), (127, 47896),

Gene: Easley_68 Start: 43289, Stop: 43654, Start Num: 84

Candidate Starts for Easley_68:

(3, 42284), (4, 42296), (5, 42332), (6, 42356), (7, 42368), (8, 42380), (19, 42842), (Start: 84 @43289 has 92 MA's),

Gene: EastWest_44 Start: 33743, Stop: 34048, Start Num: 96

Candidate Starts for EastWest_44:

(25, 33407), (26, 33410), (28, 33473), (34, 33527), (35, 33545), (48, 33611), (Start: 96 @33743 has 1 MA's), (99, 33752), (135, 33857), (143, 33887), (153, 33944), (158, 33986),

Gene: Ebert_71 Start: 43265, Stop: 43630, Start Num: 84

Candidate Starts for Ebert_71:

(13, 42617), (23, 42878), (47, 43151), (49, 43160), (55, 43184), (Start: 84 @43265 has 92 MA's),

Gene: EdnaMode_67 Start: 42941, Stop: 43306, Start Num: 84

Candidate Starts for EdnaMode_67:

(47, 42827), (49, 42836), (55, 42860), (Start: 84 @42941 has 92 MA's),

Gene: Ellson_77 Start: 53752, Stop: 54126, Start Num: 94

Candidate Starts for Ellson_77:

(Start: 89 @53734 has 64 MA's), (94, 53752), (Start: 98 @53773 has 4 MA's), (136, 53896), (149, 53971), (158, 54037), (174, 54115), (176, 54118),

Gene: EnalisNailo_69 Start: 48247, Stop: 48612, Start Num: 84

Candidate Starts for EnalisNailo_69:

(23, 47860), (47, 48133), (49, 48142), (55, 48166), (Start: 84 @48247 has 92 MA's),

Gene: Enceladus_74 Start: 51616, Stop: 52029, Start Num: 89

Candidate Starts for Enceladus_74:

(Start: 89 @51616 has 64 MA's), (Start: 98 @51655 has 4 MA's), (105, 51691), (136, 51778), (158, 51919), (174, 51997), (176, 52000),

Gene: Eudoria_71 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Eudoria_71:

(45, 46443), (Start: 84 @46557 has 92 MA's), (93, 46572), (133, 46713),

Gene: Eviarto_75 Start: 49500, Stop: 49865, Start Num: 84

Candidate Starts for Eviarto_75:

(44, 49383), (50, 49407), (51, 49410), (63, 49452), (Start: 84 @49500 has 92 MA's), (93, 49515),

Gene: Faith1_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for Faith1_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: Faith5x5_63 Start: 38073, Stop: 38444, Start Num: 84

Candidate Starts for Faith5x5_63:

(54, 37992), (65, 38031), (Start: 84 @38073 has 92 MA's), (Start: 98 @38115 has 4 MA's), (107, 38154), (113, 38175), (119, 38187),

Gene: FarmResident_79 Start: 51952, Stop: 52314, Start Num: 95

Candidate Starts for FarmResident_79:

(Start: 89 @51928 has 64 MA's), (93, 51943), (94, 51946), (Start: 95 @51952 has 1 MA's), (Start: 98 @51967 has 4 MA's), (102, 51991), (136, 52090), (149, 52165), (153, 52189), (158, 52231), (174, 52306),

Gene: Finemlucis_79 Start: 54025, Stop: 54423, Start Num: 89

Candidate Starts for Finemlucis_79:

(Start: 89 @54025 has 64 MA's), (Start: 98 @54064 has 4 MA's), (117, 54133), (119, 54136), (136, 54187), (151, 54271), (158, 54328), (176, 54409),

Gene: Finnry_78 Start: 53684, Stop: 54076, Start Num: 89

Candidate Starts for Finnry_78:

(Start: 89 @53684 has 64 MA's), (94, 53702), (Start: 98 @53723 has 4 MA's), (136, 53846), (158, 53987), (174, 54065), (176, 54068),

Gene: Floral_74 Start: 49712, Stop: 50077, Start Num: 84

Candidate Starts for Floral_74:

(55, 49631), (67, 49670), (Start: 84 @49712 has 92 MA's), (127, 49853),

Gene: Forrestell_44 Start: 36597, Stop: 36178, Start Num: 76

Candidate Starts for Forrestell_44:

(64, 36621), (71, 36603), (Start: 76 @36597 has 6 MA's), (83, 36585), (92, 36552), (111, 36474), (125, 36432), (126, 36426), (142, 36369), (143, 36357), (144, 36348), (145, 36345), (148, 36327),

Gene: FroggyToad_69 Start: 44360, Stop: 44728, Start Num: 84

Candidate Starts for FroggyToad_69:

(Start: 84 @44360 has 92 MA's),

Gene: G4_60 Start: 34029, Stop: 34412, Start Num: 78

Candidate Starts for G4_60:

(37, 33882), (Start: 78 @34029 has 1 MA's), (Start: 85 @34047 has 2 MA's), (92, 34071), (132, 34194), (153, 34290), (157, 34317),

Gene: GAL1_69 Start: 43840, Stop: 44205, Start Num: 90

Candidate Starts for GAL1_69:

(Start: 90 @43840 has 6 MA's), (Start: 98 @43876 has 4 MA's), (117, 43945), (119, 43948), (138, 44008), (146, 44062), (147, 44065), (149, 44077), (158, 44143),

Gene: Gabriela_79 Start: 52903, Stop: 53316, Start Num: 89

Candidate Starts for Gabriela_79:

(Start: 89 @52903 has 64 MA's), (Start: 98 @52942 has 4 MA's), (122, 53023), (136, 53065), (152, 53152), (158, 53206), (178, 53302),

Gene: Gardann_80 Start: 53392, Stop: 53805, Start Num: 89

Candidate Starts for Gardann_80:

(Start: 89 @53392 has 64 MA's), (Start: 98 @53431 has 4 MA's), (122, 53512), (136, 53554), (152, 53641), (158, 53695), (178, 53791),

Gene: GemG_68 Start: 42837, Stop: 43202, Start Num: 84

Candidate Starts for GemG_68:

(13, 42189), (23, 42450), (47, 42723), (49, 42732), (55, 42756), (Start: 84 @42837 has 92 MA's),

Gene: Getalong_93 Start: 51704, Stop: 52069, Start Num: 90

Candidate Starts for Getalong_93:

(12, 50999), (17, 51155), (24, 51335), (30, 51446), (38, 51530), (Start: 90 @51704 has 6 MA's), (Start: 98 @51740 has 4 MA's), (117, 51809), (119, 51812), (128, 51845), (138, 51872), (146, 51926), (147, 51929), (158, 52007),

Gene: Gizermo_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Gizermo_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: GuuelaD_78 Start: 53672, Stop: 54085, Start Num: 89

Candidate Starts for GuuelaD_78:

(Start: 89 @53672 has 64 MA's), (Start: 98 @53711 has 4 MA's), (122, 53792), (136, 53834), (152, 53921), (158, 53975), (178, 54071),

Gene: Hafay_81 Start: 53487, Stop: 53900, Start Num: 89

Candidate Starts for Hafay_81:

(Start: 89 @53487 has 64 MA's), (Start: 98 @53526 has 4 MA's), (136, 53649), (152, 53736), (158, 53790), (178, 53886),

Gene: Halena_75 Start: 50886, Stop: 51299, Start Num: 89

Candidate Starts for Halena_75:

(Start: 89 @50886 has 64 MA's), (Start: 98 @50925 has 4 MA's), (105, 50961), (136, 51048), (158, 51189), (174, 51267), (176, 51270),

Gene: Haley23_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Haley23_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Herod_75 Start: 49919, Stop: 50284, Start Num: 84

Candidate Starts for Herod_75:

(44, 49802), (50, 49826), (51, 49829), (63, 49871), (Start: 84 @49919 has 92 MA's), (93, 49934),

Gene: Hugley_73 Start: 49899, Stop: 50264, Start Num: 84

Candidate Starts for Hugley_73:

(44, 49782), (50, 49806), (51, 49809), (63, 49851), (Start: 84 @49899 has 92 MA's), (93, 49914),

Gene: Hum25_62 Start: 35736, Stop: 36095, Start Num: 81

Candidate Starts for Hum25_62:

(Start: 81 @35736 has 3 MA's), (92, 35775), (Start: 96 @35796 has 1 MA's), (99, 35805), (106, 35838), (120, 35865), (135, 35910), (149, 35973), (156, 36018), (158, 36039), (165, 36072), (168, 36084),

Gene: Invectra_71 Start: 45861, Stop: 46226, Start Num: 84

Candidate Starts for Invectra_71:

(Start: 84 @45861 has 92 MA's), (152, 46110),

Gene: Itos_79 Start: 52463, Stop: 52876, Start Num: 89

Candidate Starts for Itos_79:

(Start: 89 @52463 has 64 MA's), (Start: 98 @52502 has 4 MA's), (122, 52583), (136, 52625), (152, 52712), (158, 52766), (178, 52862),

Gene: JCole_65 Start: 41503, Stop: 41868, Start Num: 84

Candidate Starts for JCole_65:

(9, 40720), (13, 40855), (23, 41116), (47, 41389), (49, 41398), (55, 41422), (67, 41461), (Start: 84 @41503 has 92 MA's),

Gene: Jablanski_77 Start: 51014, Stop: 51379, Start Num: 84

Candidate Starts for Jablanski_77:

(44, 50894), (63, 50963), (68, 50978), (Start: 84 @51014 has 92 MA's), (153, 51275),

Gene: Jobypre_78 Start: 53433, Stop: 53825, Start Num: 89

Candidate Starts for Jobypre_78:

(Start: 89 @53433 has 64 MA's), (94, 53451), (Start: 98 @53472 has 4 MA's), (136, 53595), (158, 53736), (174, 53814), (176, 53817),

Gene: JoeDirt_77 Start: 52253, Stop: 52627, Start Num: 98
Candidate Starts for JoeDirt_77:
(Start: 98 @52253 has 4 MA's), (105, 52289), (136, 52376), (158, 52517), (174, 52595), (176, 52598),

Gene: Jubie_77 Start: 53568, Stop: 53960, Start Num: 89
Candidate Starts for Jubie_77:
(Start: 89 @53568 has 64 MA's), (94, 53586), (Start: 98 @53607 has 4 MA's), (136, 53730), (158, 53871), (174, 53949), (176, 53952),

Gene: Kahlid_80 Start: 53563, Stop: 53976, Start Num: 89
Candidate Starts for Kahlid_80:
(Start: 89 @53563 has 64 MA's), (Start: 98 @53602 has 4 MA's), (113, 53662), (122, 53683), (136, 53725), (152, 53812), (158, 53866), (178, 53962),

Gene: Kingsolomon_76 Start: 53440, Stop: 53832, Start Num: 89
Candidate Starts for Kingsolomon_76:
(Start: 89 @53440 has 64 MA's), (94, 53458), (Start: 98 @53479 has 4 MA's), (136, 53602), (158, 53743), (174, 53821), (176, 53824),

Gene: KirDoubleO7_76 Start: 53460, Stop: 53813, Start Num: 98
Candidate Starts for KirDoubleO7_76:
(Start: 89 @53421 has 64 MA's), (94, 53439), (Start: 98 @53460 has 4 MA's), (136, 53583), (149, 53658), (158, 53724), (174, 53802), (176, 53805),

Gene: Kita_72 Start: 46566, Stop: 46931, Start Num: 84
Candidate Starts for Kita_72:
(45, 46452), (Start: 84 @46566 has 92 MA's), (93, 46581), (133, 46722),

Gene: Kropertea_74 Start: 52116, Stop: 52502, Start Num: 89
Candidate Starts for Kropertea_74:
(Start: 89 @52116 has 64 MA's), (94, 52134), (Start: 95 @52140 has 1 MA's), (Start: 98 @52155 has 4 MA's), (102, 52179), (136, 52278), (153, 52377), (158, 52419), (174, 52494),

Gene: Krypton555_79 Start: 53667, Stop: 54059, Start Num: 89
Candidate Starts for Krypton555_79:
(Start: 89 @53667 has 64 MA's), (94, 53685), (Start: 98 @53706 has 4 MA's), (136, 53829), (158, 53970), (174, 54048), (176, 54051),

Gene: Kubulix_48 Start: 38093, Stop: 37656, Start Num: 76
Candidate Starts for Kubulix_48:
(Start: 76 @38093 has 6 MA's), (83, 38081), (87, 38066), (109, 37979), (121, 37946), (123, 37937), (129, 37919), (142, 37868), (143, 37856), (144, 37847), (145, 37844), (158, 37766), (177, 37688),

Gene: Kuwabara_86 Start: 51241, Stop: 51609, Start Num: 84
Candidate Starts for Kuwabara_86:
(Start: 84 @51241 has 92 MA's), (Start: 98 @51283 has 4 MA's), (107, 51322), (113, 51343), (117, 51352), (119, 51355), (170, 51601),

Gene: Lamberg_64 Start: 41342, Stop: 41707, Start Num: 84
Candidate Starts for Lamberg_64:
(13, 40694), (23, 40955), (47, 41228), (49, 41237), (55, 41261), (Start: 84 @41342 has 92 MA's),

Gene: LeBron_76 Start: 50885, Stop: 51298, Start Num: 89

Candidate Starts for LeBron_76:

(Start: 89 @50885 has 64 MA's), (Start: 98 @50924 has 4 MA's), (105, 50960), (136, 51047), (158, 51188), (174, 51266), (176, 51269),

Gene: Lewan_81 Start: 53615, Stop: 54049, Start Num: 89

Candidate Starts for Lewan_81:

(Start: 89 @53615 has 64 MA's), (Start: 98 @53654 has 4 MA's), (122, 53735), (136, 53777), (152, 53864), (158, 53918), (178, 54014),

Gene: LilDestine_79 Start: 53467, Stop: 53880, Start Num: 89

Candidate Starts for LilDestine_79:

(Start: 89 @53467 has 64 MA's), (Start: 98 @53506 has 4 MA's), (122, 53587), (136, 53629), (152, 53716), (158, 53770), (178, 53866),

Gene: Lilas_70 Start: 49785, Stop: 50150, Start Num: 84

Candidate Starts for Lilas_70:

(23, 49398), (47, 49671), (49, 49680), (55, 49704), (Start: 84 @49785 has 92 MA's),

Gene: LiyuLake_77 Start: 53533, Stop: 53886, Start Num: 98

Candidate Starts for LiyuLake_77:

(Start: 89 @53494 has 64 MA's), (94, 53512), (Start: 98 @53533 has 4 MA's), (136, 53656), (149, 53731), (158, 53797), (174, 53875), (176, 53878),

Gene: Loadrie_79 Start: 53642, Stop: 54055, Start Num: 89

Candidate Starts for Loadrie_79:

(Start: 89 @53642 has 64 MA's), (Start: 98 @53681 has 4 MA's), (122, 53762), (136, 53804), (152, 53891), (158, 53945), (178, 54041),

Gene: Lolly9_77 Start: 53537, Stop: 53929, Start Num: 89

Candidate Starts for Lolly9_77:

(Start: 89 @53537 has 64 MA's), (94, 53555), (Start: 98 @53576 has 4 MA's), (136, 53699), (158, 53840), (174, 53918), (176, 53921),

Gene: LonelyBoi_72 Start: 50747, Stop: 51112, Start Num: 84

Candidate Starts for LonelyBoi_72:

(53, 50669), (Start: 84 @50747 has 92 MA's), (93, 50762),

Gene: LordFarquaad_71 Start: 45261, Stop: 45629, Start Num: 84

Candidate Starts for LordFarquaad_71:

(44, 45144), (47, 45153), (51, 45171), (63, 45213), (Start: 84 @45261 has 92 MA's), (93, 45276),

Gene: Lton_65 Start: 38394, Stop: 38762, Start Num: 84

Candidate Starts for Lton_65:

(Start: 84 @38394 has 92 MA's), (Start: 98 @38436 has 4 MA's), (107, 38475), (113, 38496), (117, 38505), (119, 38508), (170, 38754),

Gene: Lucky10_65 Start: 40814, Stop: 41182, Start Num: 84

Candidate Starts for Lucky10_65:

(38, 40652), (Start: 84 @40814 has 92 MA's), (97, 40853), (Start: 98 @40856 has 4 MA's), (107, 40895), (113, 40916), (117, 40925), (119, 40928),

Gene: Lumos_79 Start: 53430, Stop: 53822, Start Num: 89

Candidate Starts for Lumos_79:

(Start: 89 @53430 has 64 MA's), (94, 53448), (Start: 98 @53469 has 4 MA's), (136, 53592), (158, 53733), (174, 53811), (176, 53814),

Gene: Lutum_91 Start: 49684, Stop: 50049, Start Num: 90

Candidate Starts for Lutum_91:

(12, 48979), (17, 49135), (24, 49315), (30, 49426), (38, 49510), (Start: 90 @49684 has 6 MA's), (Start: 98 @49720 has 4 MA's), (117, 49789), (119, 49792), (128, 49825), (138, 49852), (146, 49906), (147, 49909), (158, 49987),

Gene: MAckerman_75 Start: 50879, Stop: 51292, Start Num: 89

Candidate Starts for MAckerman_75:

(Start: 89 @50879 has 64 MA's), (Start: 98 @50918 has 4 MA's), (105, 50954), (136, 51041), (158, 51182), (174, 51260), (176, 51263),

Gene: Madeline_68 Start: 48371, Stop: 48736, Start Num: 84

Candidate Starts for Madeline_68:

(44, 48254), (47, 48263), (51, 48281), (63, 48323), (Start: 84 @48371 has 92 MA's), (93, 48386), (103, 48440), (133, 48527),

Gene: MakCheese_79 Start: 49464, Stop: 49835, Start Num: 84

Candidate Starts for MakCheese_79:

(55, 49383), (67, 49422), (Start: 84 @49464 has 92 MA's),

Gene: Malibo_73 Start: 47674, Stop: 48039, Start Num: 84

Candidate Starts for Malibo_73:

(20, 47248), (44, 47557), (50, 47581), (51, 47584), (63, 47626), (Start: 84 @47674 has 92 MA's),

Gene: Malisha_90 Start: 52796, Stop: 53167, Start Num: 84

Candidate Starts for Malisha_90:

(54, 52715), (65, 52754), (Start: 84 @52796 has 92 MA's), (Start: 98 @52838 has 4 MA's), (107, 52877), (113, 52898), (119, 52910),

Gene: Manasvini_73 Start: 46581, Stop: 46946, Start Num: 84

Candidate Starts for Manasvini_73:

(45, 46467), (Start: 84 @46581 has 92 MA's), (93, 46596), (133, 46737),

Gene: Maridalia_74 Start: 47802, Stop: 48167, Start Num: 84

Candidate Starts for Maridalia_74:

(44, 47685), (51, 47712), (63, 47754), (Start: 84 @47802 has 92 MA's), (93, 47817),

Gene: Marteena_72 Start: 47755, Stop: 48120, Start Num: 84

Candidate Starts for Marteena_72:

(55, 47674), (67, 47713), (Start: 84 @47755 has 92 MA's), (127, 47896),

Gene: Matteo_62 Start: 41374, Stop: 41742, Start Num: 84

Candidate Starts for Matteo_62:

(23, 40987), (47, 41260), (49, 41269), (55, 41293), (Start: 84 @41374 has 92 MA's),

Gene: Mcklovin_70 Start: 50090, Stop: 50455, Start Num: 84

Candidate Starts for Mcklovin_70:

(47, 49976), (49, 49985), (55, 50009), (67, 50048), (Start: 84 @50090 has 92 MA's), (151, 50336),

Gene: MellowYellow_47 Start: 36986, Stop: 36549, Start Num: 76

Candidate Starts for MellowYellow_47:

(64, 37010), (Start: 76 @36986 has 6 MA's), (83, 36974), (109, 36872), (121, 36839), (123, 36830), (129, 36812), (142, 36761), (143, 36749), (144, 36740), (158, 36659), (177, 36581),

Gene: MichaelScott_71 Start: 44969, Stop: 45334, Start Num: 84

Candidate Starts for MichaelScott_71:

(Start: 84 @44969 has 92 MA's), (152, 45218),

Gene: Miley16_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for Miley16_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: MiniLon_82 Start: 53538, Stop: 53930, Start Num: 89

Candidate Starts for MiniLon_82:

(Start: 89 @53538 has 64 MA's), (94, 53556), (Start: 98 @53577 has 4 MA's), (136, 53700), (158, 53841), (174, 53919), (176, 53922),

Gene: MiniMac_82 Start: 53533, Stop: 53925, Start Num: 89

Candidate Starts for MiniMac_82:

(Start: 89 @53533 has 64 MA's), (94, 53551), (Start: 98 @53572 has 4 MA's), (136, 53695), (158, 53836), (174, 53914), (176, 53917),

Gene: MkaliMitinis3_81 Start: 53626, Stop: 54039, Start Num: 89

Candidate Starts for MkaliMitinis3_81:

(Start: 89 @53626 has 64 MA's), (Start: 98 @53665 has 4 MA's), (122, 53746), (136, 53788), (152, 53875), (158, 53929), (178, 54025),

Gene: Mocha12_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Mocha12_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Moostard_76 Start: 53435, Stop: 53827, Start Num: 89

Candidate Starts for Moostard_76:

(Start: 89 @53435 has 64 MA's), (94, 53453), (Start: 98 @53474 has 4 MA's), (136, 53597), (158, 53738), (174, 53816), (176, 53819),

Gene: Morkie_68 Start: 39542, Stop: 39910, Start Num: 84

Candidate Starts for Morkie_68:

(Start: 84 @39542 has 92 MA's), (Start: 98 @39584 has 4 MA's), (107, 39623), (113, 39644), (117, 39653), (119, 39656), (170, 39902),

Gene: MrSmee_60 Start: 35393, Stop: 35752, Start Num: 81

Candidate Starts for MrSmee_60:

(Start: 81 @35393 has 3 MA's), (92, 35432), (106, 35495), (111, 35507), (135, 35567), (149, 35630), (156, 35675), (157, 35681), (158, 35696), (165, 35729), (168, 35741),

Gene: MsGreen_78 Start: 53471, Stop: 53824, Start Num: 98

Candidate Starts for MsGreen_78:

(Start: 89 @53432 has 64 MA's), (94, 53450), (Start: 98 @53471 has 4 MA's), (136, 53594), (158, 53735), (174, 53813), (176, 53816),

Gene: MulchSalad_67 Start: 40786, Stop: 41157, Start Num: 89

Candidate Starts for MulchSalad_67:

(Start: 89 @40786 has 64 MA's), (91, 40795), (93, 40801), (Start: 98 @40825 has 4 MA's), (115, 40891), (119, 40897), (136, 40951), (138, 40957), (152, 41038),

Gene: Neobush_73 Start: 47125, Stop: 47490, Start Num: 84

Candidate Starts for Neobush_73:

(45, 47011), (Start: 84 @47125 has 92 MA's), (93, 47140), (133, 47281),

Gene: Nettuno_66 Start: 42038, Stop: 42406, Start Num: 84

Candidate Starts for Nettuno_66:

(44, 41921), (47, 41930), (51, 41948), (63, 41990), (Start: 84 @42038 has 92 MA's), (93, 42053),

Gene: Netyap_81 Start: 53558, Stop: 53971, Start Num: 89

Candidate Starts for Netyap_81:

(Start: 89 @53558 has 64 MA's), (Start: 98 @53597 has 4 MA's), (122, 53678), (136, 53720), (152, 53807), (158, 53861), (178, 53957),

Gene: Nicholas_76 Start: 53440, Stop: 53832, Start Num: 89

Candidate Starts for Nicholas_76:

(Start: 89 @53440 has 64 MA's), (94, 53458), (Start: 98 @53479 has 4 MA's), (136, 53602), (158, 53743), (174, 53821), (176, 53824),

Gene: Nicholasp3_80 Start: 53392, Stop: 53805, Start Num: 89

Candidate Starts for Nicholasp3_80:

(Start: 89 @53392 has 64 MA's), (Start: 98 @53431 has 4 MA's), (122, 53512), (136, 53554), (152, 53641), (158, 53695), (178, 53791),

Gene: NyleyClemson_46 Start: 36601, Stop: 36164, Start Num: 76

Candidate Starts for NyleyClemson_46:

(64, 36625), (Start: 76 @36601 has 6 MA's), (83, 36589), (109, 36487), (121, 36454), (123, 36445), (129, 36427), (142, 36376), (143, 36364), (144, 36355), (158, 36274), (177, 36196),

Gene: Nymphadora_75 Start: 49524, Stop: 49889, Start Num: 84

Candidate Starts for Nymphadora_75:

(44, 49407), (50, 49431), (51, 49434), (63, 49476), (Start: 84 @49524 has 92 MA's), (93, 49539),

Gene: ODay_98 Start: 52337, Stop: 52702, Start Num: 90

Candidate Starts for ODay_98:

(Start: 90 @52337 has 6 MA's), (Start: 98 @52373 has 4 MA's), (117, 52442), (119, 52445), (124, 52463), (128, 52478), (138, 52505), (144, 52550), (146, 52559), (147, 52562), (157, 52625), (158, 52640),

Gene: Odyssey395_52 Start: 38270, Stop: 37833, Start Num: 76

Candidate Starts for Odyssey395_52:

(Start: 76 @38270 has 6 MA's), (83, 38258), (87, 38243), (109, 38156), (121, 38123), (123, 38114), (129, 38096), (142, 38045), (143, 38033), (144, 38024), (145, 38021), (158, 37943), (177, 37865),

Gene: Ohgeesy_74 Start: 49004, Stop: 49369, Start Num: 84

Candidate Starts for Ohgeesy_74:

(44, 48887), (51, 48914), (Start: 84 @49004 has 92 MA's),

Gene: Ollypop_46 Start: 38043, Stop: 37591, Start Num: 76

Candidate Starts for Ollypop_46:

(Start: 76 @38043 has 6 MA's), (83, 38031), (87, 38016), (109, 37929), (121, 37896), (123, 37887), (126, 37875), (129, 37869), (142, 37818), (143, 37806), (144, 37797), (156, 37737), (158, 37716), (169, 37665),

Gene: OneDirection_62 Start: 36956, Stop: 37324, Start Num: 84

Candidate Starts for OneDirection_62:

(Start: 84 @36956 has 92 MA's), (Start: 98 @36998 has 4 MA's), (107, 37037), (113, 37058), (117, 37067), (119, 37070),

Gene: OnionKnight_42 Start: 30317, Stop: 30808, Start Num: 59

Candidate Starts for OnionKnight_42:

(Start: 59 @30317 has 1 MA's), (73, 30359), (Start: 96 @30434 has 1 MA's), (110, 30485), (112, 30494), (120, 30515), (149, 30641), (152, 30653), (158, 30707), (160, 30722), (161, 30725), (179, 30797),

Gene: PFR1_47 Start: 32984, Stop: 33379, Start Num: 73

Candidate Starts for PFR1_47:

(73, 32984), (Start: 78 @32996 has 1 MA's), (Start: 85 @33014 has 2 MA's), (92, 33038), (132, 33161), (153, 33257), (157, 33284),

Gene: PFR2_49 Start: 34553, Stop: 34948, Start Num: 73

Candidate Starts for PFR2_49:

(73, 34553), (Start: 78 @34565 has 1 MA's), (Start: 85 @34583 has 2 MA's), (92, 34607), (132, 34730), (153, 34826), (157, 34853),

Gene: PYPDinur_77 Start: 52639, Stop: 52995, Start Num: 94

Candidate Starts for PYPDinur_77:

(Start: 89 @52621 has 64 MA's), (94, 52639), (Start: 95 @52645 has 1 MA's), (Start: 98 @52660 has 4 MA's), (102, 52684), (136, 52783), (149, 52858), (153, 52882), (158, 52924), (159, 52939),

Gene: Pepperoni_61 Start: 38082, Stop: 38450, Start Num: 84

Candidate Starts for Pepperoni_61:

(54, 38001), (Start: 84 @38082 has 92 MA's), (Start: 98 @38124 has 4 MA's), (107, 38163), (113, 38184), (117, 38193), (119, 38196), (170, 38442),

Gene: Phabuloso_97 Start: 51176, Stop: 51541, Start Num: 90

Candidate Starts for Phabuloso_97:

(12, 50471), (17, 50627), (24, 50807), (30, 50918), (38, 51002), (Start: 90 @51176 has 6 MA's), (Start: 98 @51212 has 4 MA's), (117, 51281), (119, 51284), (128, 51317), (138, 51344), (146, 51398), (147, 51401), (158, 51479),

Gene: PhorbesPhlower_66 Start: 38937, Stop: 39305, Start Num: 84

Candidate Starts for PhorbesPhlower_66:

(Start: 84 @38937 has 92 MA's), (Start: 98 @38979 has 4 MA's), (107, 39018), (113, 39039), (117, 39048), (119, 39051), (170, 39297),

Gene: PhriskyACE_67 Start: 44129, Stop: 44497, Start Num: 84

Candidate Starts for PhriskyACE_67:

(55, 44048), (67, 44087), (Start: 84 @44129 has 92 MA's), (108, 44213),

Gene: Pickett_65 Start: 41546, Stop: 41911, Start Num: 84

Candidate Starts for Pickett_65:

(47, 41432), (49, 41441), (55, 41465), (Start: 84 @41546 has 92 MA's),

Gene: Pitbull_61 Start: 34580, Stop: 34939, Start Num: 81

Candidate Starts for Pitbull_61:

(Start: 81 @34580 has 3 MA's), (92, 34619), (Start: 96 @34640 has 1 MA's), (99, 34649), (100, 34664), (106, 34682), (120, 34709), (144, 34793), (156, 34862), (158, 34883), (165, 34916), (168, 34928),

Gene: Pointis_49 Start: 38268, Stop: 37831, Start Num: 76

Candidate Starts for Pointis_49:

(Start: 76 @38268 has 6 MA's), (83, 38256), (87, 38241), (109, 38154), (121, 38121), (123, 38112), (129, 38094), (142, 38043), (143, 38031), (144, 38022), (145, 38019), (158, 37941), (177, 37863),

Gene: Pollux_76 Start: 49712, Stop: 50077, Start Num: 84

Candidate Starts for Pollux_76:

(55, 49631), (67, 49670), (Start: 84 @49712 has 92 MA's), (127, 49853),

Gene: Polly_68 Start: 46000, Stop: 46365, Start Num: 84

Candidate Starts for Polly_68:

(45, 45886), (Start: 84 @46000 has 92 MA's), (93, 46015), (133, 46156),

Gene: Powerball_68 Start: 44232, Stop: 44600, Start Num: 84

Candidate Starts for Powerball_68:

(55, 44151), (67, 44190), (Start: 84 @44232 has 92 MA's), (108, 44316),

Gene: Pureglobe5_51 Start: 38451, Stop: 38014, Start Num: 76

Candidate Starts for Pureglobe5_51:

(Start: 76 @38451 has 6 MA's), (83, 38439), (87, 38424), (109, 38337), (121, 38304), (123, 38295), (129, 38277), (142, 38226), (143, 38214), (144, 38205), (158, 38124), (177, 38046),

Gene: Pytheas_78 Start: 51013, Stop: 51378, Start Num: 84

Candidate Starts for Pytheas_78:

(44, 50893), (63, 50962), (68, 50977), (Start: 84 @51013 has 92 MA's), (153, 51274),

Gene: Quby_78 Start: 52015, Stop: 52338, Start Num: 102

Candidate Starts for Quby_78:

(Start: 89 @51952 has 64 MA's), (94, 51970), (Start: 95 @51976 has 1 MA's), (Start: 98 @51991 has 4 MA's), (102, 52015), (136, 52114), (138, 52120), (149, 52189), (153, 52213), (158, 52255), (174, 52330),

Gene: Ranunculus_45 Start: 40272, Stop: 39856, Start Num: 77

Candidate Starts for Ranunculus_45:

(69, 40284), (Start: 77 @40272 has 1 MA's), (83, 40263), (92, 40230), (101, 40179), (111, 40152), (123, 40116), (125, 40110), (141, 40056), (142, 40047), (143, 40035), (144, 40026), (145, 40023), (148, 40005),

Gene: RavenCo17_69 Start: 47361, Stop: 47729, Start Num: 84

Candidate Starts for RavenCo17_69:

(10, 46593), (Start: 84 @47361 has 92 MA's), (93, 47376), (154, 47625),

Gene: RazzB_43 Start: 36720, Stop: 36295, Start Num: 83

Candidate Starts for RazzB_43:

(64, 36756), (Start: 76 @36732 has 6 MA's), (83, 36720), (109, 36618), (121, 36585), (123, 36576), (129, 36558), (142, 36507), (143, 36495), (144, 36486), (158, 36405), (177, 36327),

Gene: Red305_79 Start: 53472, Stop: 53825, Start Num: 98

Candidate Starts for Red305_79:

(Start: 89 @53433 has 64 MA's), (94, 53451), (Start: 98 @53472 has 4 MA's), (136, 53595), (158, 53736), (174, 53814), (176, 53817),

Gene: Rizwana_39 Start: 36865, Stop: 36446, Start Num: 80

Candidate Starts for Rizwana_39:

(Start: 80 @36865 has 1 MA's), (88, 36841), (93, 36823), (101, 36775), (104, 36769), (126, 36703), (129, 36697), (139, 36667), (142, 36646), (145, 36622), (149, 36592), (158, 36526), (171, 36463),

Gene: RomansRevenge_36 Start: 34253, Stop: 33783, Start Num: 80

Candidate Starts for RomansRevenge_36:

(Start: 80 @34253 has 1 MA's), (114, 34124), (126, 34088), (142, 34031), (145, 34007), (172, 33851), (173, 33842), (175, 33839), (180, 33815),

Gene: Rose5_77 Start: 52059, Stop: 52472, Start Num: 89

Candidate Starts for Rose5_77:

(Start: 89 @52059 has 64 MA's), (Start: 98 @52098 has 4 MA's), (105, 52134), (136, 52221), (158, 52362), (174, 52440), (176, 52443),

Gene: Rumpelstiltskin_77 Start: 53185, Stop: 53598, Start Num: 89

Candidate Starts for Rumpelstiltskin_77:

(Start: 89 @53185 has 64 MA's), (Start: 98 @53224 has 4 MA's), (122, 53305), (136, 53347), (152, 53434), (158, 53488), (178, 53584),

Gene: Ruthy_70 Start: 49109, Stop: 49477, Start Num: 85

Candidate Starts for Ruthy_70:

(29, 48851), (31, 48860), (46, 48989), (Start: 85 @49109 has 2 MA's), (Start: 98 @49148 has 4 MA's), (107, 49187), (113, 49208), (119, 49220), (136, 49274),

Gene: Sahara_67 Start: 42654, Stop: 43022, Start Num: 84

Candidate Starts for Sahara_67:

(1, 41634), (2, 41637), (23, 42267), (47, 42540), (49, 42549), (55, 42573), (Start: 84 @42654 has 92 MA's),

Gene: Samman98_71 Start: 44391, Stop: 44756, Start Num: 84

Candidate Starts for Samman98_71:

(Start: 84 @44391 has 92 MA's), (152, 44640),

Gene: Samty_77 Start: 53428, Stop: 53820, Start Num: 89

Candidate Starts for Samty_77:

(Start: 89 @53428 has 64 MA's), (94, 53446), (Start: 98 @53467 has 4 MA's), (136, 53590), (158, 53731), (174, 53809), (176, 53812),

Gene: Sarshaun_81 Start: 53650, Stop: 54063, Start Num: 89

Candidate Starts for Sarshaun_81:

(Start: 89 @53650 has 64 MA's), (Start: 98 @53689 has 4 MA's), (122, 53770), (136, 53812), (152, 53899), (158, 53953), (178, 54049),

Gene: Savage_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Savage_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Sekhmet_69 Start: 43915, Stop: 44283, Start Num: 84
Candidate Starts for Sekhmet_69:
(11, 43162), (47, 43801), (49, 43810), (55, 43834), (67, 43873), (Start: 84 @43915 has 92 MA's),

Gene: Sheng711_79 Start: 52255, Stop: 52629, Start Num: 89
Candidate Starts for Sheng711_79:
(Start: 89 @52255 has 64 MA's), (94, 52273), (Start: 95 @52279 has 1 MA's), (Start: 98 @52294 has 4 MA's), (102, 52318), (136, 52417), (149, 52492), (153, 52516), (158, 52558), (159, 52573),

Gene: Sidious_71 Start: 48554, Stop: 48919, Start Num: 84
Candidate Starts for Sidious_71:
(55, 48473), (67, 48512), (Start: 84 @48554 has 92 MA's),

Gene: SilentRX_41 Start: 36325, Stop: 35891, Start Num: 79
Candidate Starts for SilentRX_41:
(52, 36400), (66, 36352), (Start: 79 @36325 has 1 MA's), (125, 36163), (129, 36151), (137, 36127), (142, 36100), (143, 36088), (144, 36079), (163, 35962), (177, 35920),

Gene: Silverleaf_77 Start: 51554, Stop: 51928, Start Num: 98
Candidate Starts for Silverleaf_77:
(Start: 89 @51515 has 64 MA's), (Start: 98 @51554 has 4 MA's), (105, 51590), (136, 51677), (158, 51818), (174, 51896), (176, 51899),

Gene: Skitty_62 Start: 33627, Stop: 33986, Start Num: 81
Candidate Starts for Skitty_62:
(Start: 81 @33627 has 3 MA's), (92, 33666), (Start: 96 @33687 has 1 MA's), (99, 33696), (106, 33729), (135, 33801), (156, 33909), (158, 33930), (165, 33963), (168, 33975),

Gene: Snenia_77 Start: 53434, Stop: 53826, Start Num: 89
Candidate Starts for Snenia_77:
(Start: 89 @53434 has 64 MA's), (94, 53452), (Start: 98 @53473 has 4 MA's), (136, 53596), (158, 53737), (174, 53815), (176, 53818),

Gene: SoJulia_82 Start: 54718, Stop: 55131, Start Num: 89
Candidate Starts for SoJulia_82:
(Start: 89 @54718 has 64 MA's), (Start: 98 @54757 has 4 MA's), (122, 54838), (136, 54880), (152, 54967), (158, 55021), (178, 55117),

Gene: Soap141_80 Start: 53650, Stop: 54063, Start Num: 89
Candidate Starts for Soap141_80:
(Start: 89 @53650 has 64 MA's), (Start: 98 @53689 has 4 MA's), (122, 53770), (136, 53812), (152, 53899), (158, 53953), (178, 54049),

Gene: SoilAssassin_68 Start: 45279, Stop: 45647, Start Num: 84
Candidate Starts for SoilAssassin_68:
(44, 45162), (47, 45171), (51, 45189), (63, 45231), (Start: 84 @45279 has 92 MA's), (93, 45294),

Gene: Sproutie_68 Start: 42833, Stop: 43198, Start Num: 84
Candidate Starts for Sproutie_68:
(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Suerte_64 Start: 43530, Stop: 43898, Start Num: 84
Candidate Starts for Suerte_64:

(47, 43416), (49, 43425), (55, 43449), (Start: 84 @43530 has 92 MA's),

Gene: Susceptit_71 Start: 46558, Stop: 46923, Start Num: 84

Candidate Starts for Susceptit_71:

(45, 46444), (Start: 84 @46558 has 92 MA's), (93, 46573), (133, 46714),

Gene: Tank_41 Start: 36839, Stop: 36408, Start Num: 82

Candidate Starts for Tank_41:

(Start: 82 @36839 has 3 MA's), (83, 36836), (86, 36824), (87, 36821), (123, 36686), (125, 36680), (129, 36668), (137, 36644), (142, 36617), (143, 36605), (144, 36596), (169, 36464), (181, 36413),

Gene: Tayonia_71 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Tayonia_71:

(45, 46443), (Start: 84 @46557 has 92 MA's), (93, 46572), (133, 46713),

Gene: ThankyouJordi_74 Start: 49930, Stop: 50295, Start Num: 84

Candidate Starts for ThankyouJordi_74:

(27, 49627), (44, 49813), (47, 49822), (51, 49840), (63, 49882), (Start: 84 @49930 has 92 MA's),

Gene: Thimann_71 Start: 44657, Stop: 45025, Start Num: 84

Candidate Starts for Thimann_71:

(3, 43652), (4, 43664), (5, 43700), (6, 43724), (7, 43736), (8, 43748), (19, 44210), (Start: 84 @44657 has 92 MA's),

Gene: TimTam_75 Start: 49524, Stop: 49889, Start Num: 84

Candidate Starts for TimTam_75:

(44, 49407), (50, 49431), (51, 49434), (63, 49476), (Start: 84 @49524 has 92 MA's), (93, 49539),

Gene: Tourach_79 Start: 53675, Stop: 54073, Start Num: 89

Candidate Starts for Tourach_79:

(Start: 89 @53675 has 64 MA's), (Start: 98 @53714 has 4 MA's), (105, 53750), (122, 53795), (136, 53837), (152, 53924), (158, 53978), (174, 54056),

Gene: TriFive_78 Start: 53472, Stop: 53825, Start Num: 98

Candidate Starts for TriFive_78:

(Start: 89 @53433 has 64 MA's), (94, 53451), (Start: 98 @53472 has 4 MA's), (136, 53595), (158, 53736), (174, 53814), (176, 53817),

Gene: Trumpet_71 Start: 46558, Stop: 46923, Start Num: 84

Candidate Starts for Trumpet_71:

(45, 46444), (Start: 84 @46558 has 92 MA's), (93, 46573), (133, 46714),

Gene: TuertoX_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for TuertoX_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Tyson_78 Start: 51985, Stop: 52398, Start Num: 89

Candidate Starts for Tyson_78:

(Start: 89 @51985 has 64 MA's), (Start: 98 @52024 has 4 MA's), (105, 52060), (136, 52147), (158, 52288), (174, 52366), (176, 52369),

Gene: UPIE_76 Start: 51581, Stop: 51994, Start Num: 89

Candidate Starts for UPIE_76:

(Start: 89 @51581 has 64 MA's), (Start: 98 @51620 has 4 MA's), (105, 51656), (136, 51743), (158, 51884), (174, 51962), (176, 51965),

Gene: Underpass_71 Start: 48428, Stop: 48841, Start Num: 89

Candidate Starts for Underpass_71:

(Start: 89 @48428 has 64 MA's), (Start: 98 @48467 has 4 MA's), (122, 48548), (136, 48590), (152, 48677), (158, 48731), (178, 48827),

Gene: Vasanti_67 Start: 44256, Stop: 44621, Start Num: 84

Candidate Starts for Vasanti_67:

(44, 44139), (50, 44163), (51, 44166), (63, 44208), (Start: 84 @44256 has 92 MA's), (118, 44367), (127, 44397),

Gene: Vetrix_79 Start: 53474, Stop: 53887, Start Num: 89

Candidate Starts for Vetrix_79:

(Start: 89 @53474 has 64 MA's), (Start: 98 @53513 has 4 MA's), (122, 53594), (136, 53636), (152, 53723), (158, 53777), (178, 53873),

Gene: Vitus_47 Start: 35385, Stop: 35762, Start Num: 74

Candidate Starts for Vitus_47:

(15, 34857), (16, 34860), (18, 34887), (21, 34995), (22, 34998), (28, 35142), (32, 35178), (33, 35187), (36, 35238), (40, 35271), (42, 35274), (56, 35331), (74, 35385), (Start: 84 @35409 has 92 MA's), (131, 35553), (132, 35556), (144, 35604), (151, 35637), (166, 35733),

Gene: Wamburgexpress_77 Start: 52020, Stop: 52433, Start Num: 89

Candidate Starts for Wamburgexpress_77:

(Start: 89 @52020 has 64 MA's), (Start: 98 @52059 has 4 MA's), (105, 52095), (136, 52182), (158, 52323), (174, 52401), (176, 52404),

Gene: WelcomeAyanna_74 Start: 50077, Stop: 50442, Start Num: 84

Candidate Starts for WelcomeAyanna_74:

(27, 49774), (44, 49960), (47, 49969), (51, 49987), (63, 50029), (Start: 84 @50077 has 92 MA's),

Gene: Whirlwind_79 Start: 53633, Stop: 54025, Start Num: 89

Candidate Starts for Whirlwind_79:

(Start: 89 @53633 has 64 MA's), (94, 53651), (Start: 98 @53672 has 4 MA's), (136, 53795), (158, 53936), (174, 54014), (176, 54017),

Gene: Whiteclaw_68 Start: 42833, Stop: 43198, Start Num: 84

Candidate Starts for Whiteclaw_68:

(13, 42185), (23, 42446), (47, 42719), (49, 42728), (55, 42752), (Start: 84 @42833 has 92 MA's),

Gene: Whitney_89 Start: 51269, Stop: 51634, Start Num: 90

Candidate Starts for Whitney_89:

(Start: 90 @51269 has 6 MA's), (Start: 98 @51305 has 4 MA's), (117, 51374), (119, 51377), (128, 51410), (138, 51437), (146, 51491), (147, 51494), (158, 51572),

Gene: Wigglewiggles_79 Start: 53419, Stop: 53832, Start Num: 89

Candidate Starts for Wigglewiggles_79:

(Start: 89 @53419 has 64 MA's), (Start: 98 @53458 has 4 MA's), (122, 53539), (136, 53581), (152, 53668), (158, 53722), (178, 53818),

Gene: Wilde_41 Start: 36681, Stop: 36250, Start Num: 82

Candidate Starts for Wilde_41:

(Start: 82 @36681 has 3 MA's), (83, 36678), (86, 36666), (87, 36663), (123, 36528), (125, 36522), (129, 36510), (137, 36486), (142, 36459), (143, 36447), (144, 36438), (169, 36306), (181, 36255),

Gene: Wilder_81 Start: 53563, Stop: 53976, Start Num: 89

Candidate Starts for Wilder_81:

(Start: 89 @53563 has 64 MA's), (Start: 98 @53602 has 4 MA's), (113, 53662), (122, 53683), (136, 53725), (152, 53812), (158, 53866), (178, 53962),

Gene: WinkNick_70 Start: 43439, Stop: 43807, Start Num: 84

Candidate Starts for WinkNick_70:

(11, 42686), (47, 43325), (49, 43334), (55, 43358), (67, 43397), (Start: 84 @43439 has 92 MA's), (134, 43604),

Gene: Winky_80 Start: 53557, Stop: 53970, Start Num: 89

Candidate Starts for Winky_80:

(Start: 89 @53557 has 64 MA's), (Start: 98 @53596 has 4 MA's), (122, 53677), (136, 53719), (152, 53806), (158, 53860), (178, 53956),

Gene: Wyatt2_78 Start: 51983, Stop: 52396, Start Num: 89

Candidate Starts for Wyatt2_78:

(Start: 89 @51983 has 64 MA's), (Start: 98 @52022 has 4 MA's), (105, 52058), (136, 52145), (158, 52286), (174, 52364), (176, 52367),

Gene: Yeet412_67 Start: 44083, Stop: 44451, Start Num: 84

Candidate Starts for Yeet412_67:

(44, 43966), (47, 43975), (51, 43993), (63, 44035), (Start: 84 @44083 has 92 MA's), (93, 44098),

Gene: Yeezy_76 Start: 47471, Stop: 47836, Start Num: 84

Candidate Starts for Yeezy_76:

(58, 47405), (Start: 84 @47471 has 92 MA's), (93, 47486),

Gene: Zakai_81 Start: 53883, Stop: 54296, Start Num: 89

Candidate Starts for Zakai_81:

(Start: 89 @53883 has 64 MA's), (Start: 98 @53922 has 4 MA's), (122, 54003), (136, 54045), (152, 54132), (158, 54186), (178, 54282),

Gene: Zameen_71 Start: 46557, Stop: 46922, Start Num: 84

Candidate Starts for Zameen_71:

(45, 46443), (Start: 84 @46557 has 92 MA's), (93, 46572), (133, 46713),

Gene: Zaria_78 Start: 51435, Stop: 51848, Start Num: 89

Candidate Starts for Zaria_78:

(Start: 89 @51435 has 64 MA's), (Start: 98 @51474 has 4 MA's), (105, 51510), (136, 51597), (158, 51738), (174, 51816), (176, 51819),

Gene: ZhongYanYuan_77 Start: 53010, Stop: 53423, Start Num: 89

Candidate Starts for ZhongYanYuan_77:

(Start: 89 @53010 has 64 MA's), (Start: 98 @53049 has 4 MA's), (122, 53130), (136, 53172), (152, 53259), (158, 53313), (178, 53409),

Gene: Zirinka_69 Start: 48225, Stop: 48590, Start Num: 84

Candidate Starts for Zirinka_69:

(44, 48108), (50, 48132), (51, 48135), (63, 48177), (Start: 84 @48225 has 92 MA's), (93, 48240),

Gene: Zodiariah_69 Start: 48840, Stop: 49217, Start Num: 84

Candidate Starts for Zodiariah_69:

(14, 48246), (33, 48618), (38, 48675), (Start: 84 @48840 has 92 MA's), (99, 48894),