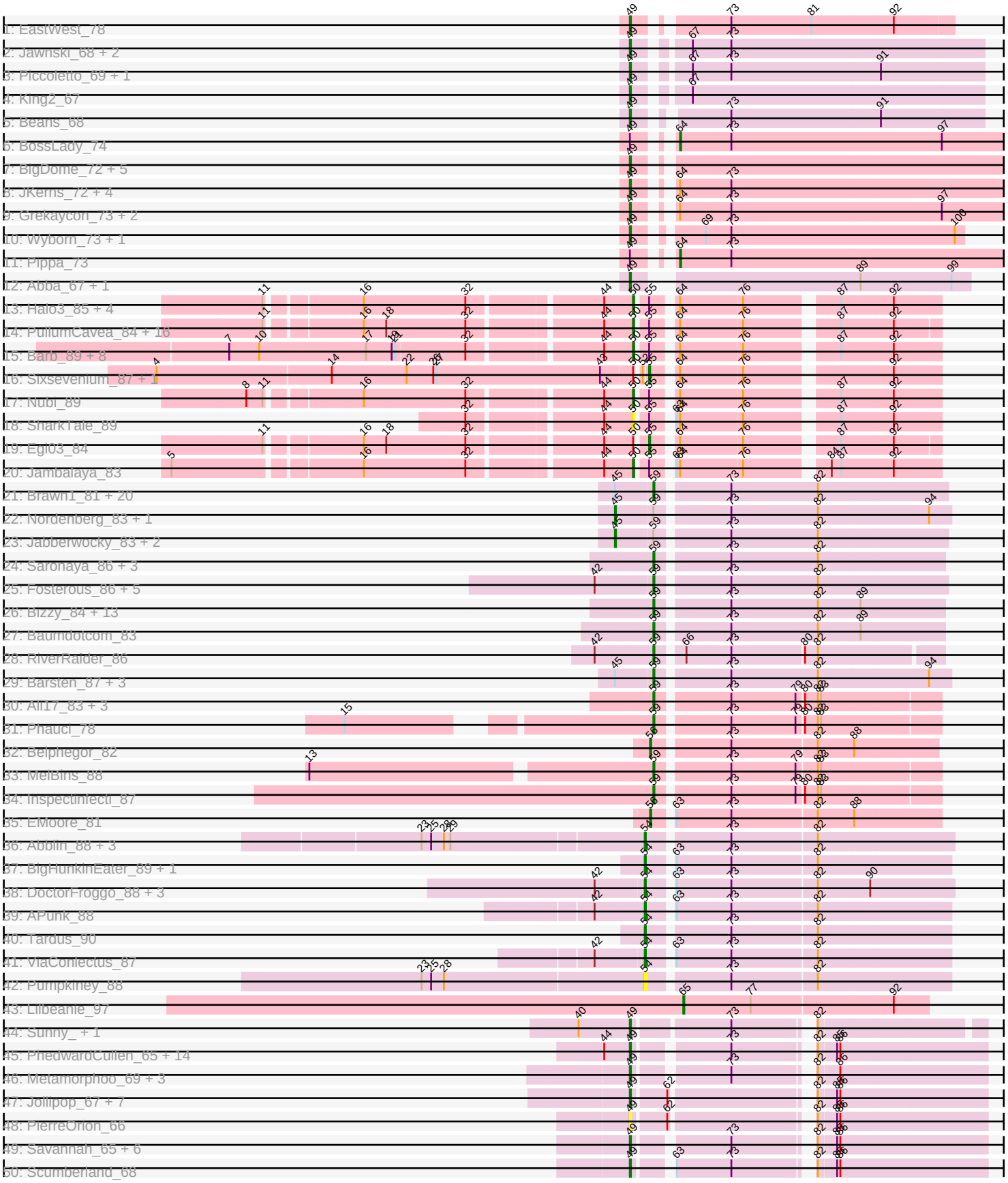
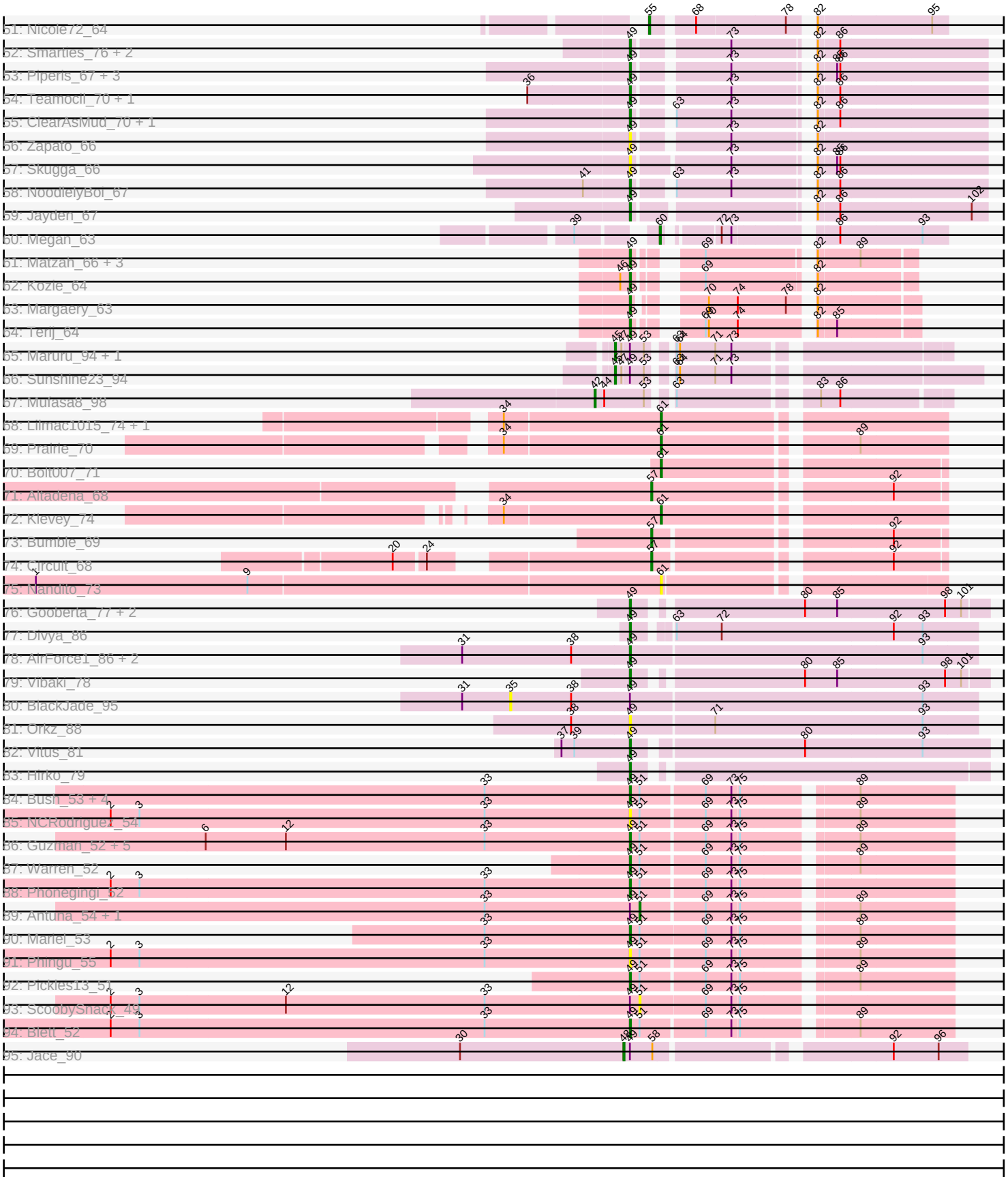
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1: EastWest_78
2: Jawnski_68 + 2
3: Piccoletto_69 + 1
4: King2_67
5: Beans_68
6: BossLady_74
7: BigDome_72 + 5
8: JKerns_72 + 4
9: Grekaycon_73 + 2
10: Wyborn_73 + 1
11: Pippa_73
12: Abba_67 + 1
13: Halo3_85 + 4
14: PullumCavea_84 + 16
15: Barb_89 + 8
16: Sixsevenium_87 + 1
17: Nubi_89
18: SharkTale_89
19: Egl03_84
20: Jambalaya_83
21: Brawn1_81 + 20
22: Nordenberg_83 + 1
23: Jabberwocky_83 + 2
24: Saronaya_86 + 3
25: Fosterous_86 + 5
26: Bizzy_84 + 13
27: Baumdotcom_83
28: RiverRaider_86
29: Barsten_87 + 3
30: Ali17_83 + 3
31: Phauci_78
32: Belphegor_82
33: MelBins_88
34: Inspectinfecti_87
35: EMoore_81
36: Abblin_88 + 3
37: BigRunkinEater_89 + 1
38: DoctorFroggo_88 + 3
39: APunk_88
40: Tardus_90
41: ViaConiectus_87
42: Pumpkiney_88
43: Lilbeanie_97
44: Sunny_ + 1
45: PhedwardCullen_65 + 14
46: Metamorphoo_69 + 3
47: Jollipop_67 + 7
48: PierreOrion_66
49: Savannah_65 + 6
50: Scumberland_68

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51: Nicole72_64
52: Smarties_76 + 2
53: Piperis_67 + 3
54: Teamocil_70 + 1
55: ClearAsMud_70 + 1
56: Zapato_66
57: Skugga_66
58: NoodlelyBoi_67
59: Jayden_67
60: Megan_63
61: Matzah_66 + 3
62: Kozie_64
63: Margaery_63
64: Terij_64
65: Maruru_94 + 1
66: Sunshine23_94
67: Mufasa8_98
68: Lilmac1015_74 + 1
69: Prairie_70
70: Bolt007_71
71: Altadena_68
72: Klevey_74
73: Bumble_69
74: Circuit_68
75: Nandito_73
76: Goobertа_77 + 2
77: Divya_86
78: AirForce1_86 + 2
79: Vibaki_78
80: BlackJade_95
81: Orkz_88
82: Vitus_81
83: Hirko_79
84: Bush_53 + 4
85: NCRodriguez1_54
86: Guzman_52 + 5
87: Warren_52
88: Phonegingi_62
89: Antuna_54 + 1
90: Mariel_53
91: Phingu_55
92: Pickles13_52
93: ScoobySnack_49
94: Blett_52
95: Jace_90

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 343594 Report

This analysis was run 11/14/26 on database version 672.

Pham number 343594 has 254 members, 24 are drafts.

Phages represented in each track:
• Track 1 : EastWest_78
• Track 2 : Jawnski_68, Brent_69, Franzy_67
• Track 3 : Piccoletto_69, NathanVaag_68
• Track 4 : King2_67
• Track 5 : Beans_68
• Track 6 : BossLady_74
• Track 7 : BigDome_72, Timinator_73, GravityBall_72, LeeroyJ_73, StevieBAY_73, BarretLemon_72
• Track 8 : JKerns_72, Shade_72, Sonny_72, Jordan_73, Zartrosa_74
• Track 9 : Grekaycon_73, TaeYoung_73, Martha_72
• Track 10 : Wyborn_73, Sicarius2_74
• Track 11 : Pippa_73
• Track 12 : Abba_67, Nostromo_67
• Track 13 : Halo3_85, SmokingBunny_87, Salvador_86, Evamon_86, Togo_86
• Track 14 : PullumCavea_84, Twister6_85, Arri_86, VanDeWege_88, Fireball_89, CherryCola_85, Valary_87, JohnPork_87, RogerDodger_89, Savbucketdawg_81, Phlop_83, Gezellig_82, KimmyK_84, Sendy_88, Wizard_81, Portcullis_86, Shinji_85
• Track 15 : Barb_89, ClamChowder_88, Danyall_86, TillyBobJoe_84, YungMoney_85, Fugax_89, PinkCoffee_87, CoveyB_87, Mutzi_85
• Track 16 : Sixsevenium_87, Bakery_90
• Track 17 : Nubi_89
• Track 18 : SharkTale_89
• Track 19 : Egi03_84
• Track 20 : Jambalaya_83
• Track 21 : Brawn1_81, Paries_88, Lennon_84, BobBob_86, Stultus_79, FuegoCuervo_89, Fitzgerald_82, ChadMasterC_83, Angelicage_83, Shivanishola_86, Kewpiedoll_85, Sanjuju_82, Ailee_82, Affeca_86, Bibwit_82, McKinley_87, Sitar_83, Love_90, Brandonk123_88, Baddon_82, Sedona_82
• Track 22 : Nordenberg_83, Charming_87
• Track 23 : Jabberwocky_83, MoontowerMania_85, Keitabear_82
• Track 24 : Saronaya_86, StorminNorm_85, Gaea_85, Gustavo_86
• Track 25 : Fosterous_86, Kamashten_85, Galadriel_85, McCrothy_83, Thing3_85, Rofo_84
• Track 26 : Bizzy_84, Kroos_84, YorkOnyx_83, Derg_77, Ribeye_84, Tycho_84, Tangerine_84, Ashertheman_84, Flatwoods_84, LilHam_78, Stichling_80, JKSyngboy_81, SchottB_83, Kwobi_86
• Track 27 : Baumdotcom_83

• Track 28 : RiverRaider_86
• Track 29 : Barsten_87, Tangent_87, Vivi2_88, Geodirt_84
• Track 30 : Ali17_83, Leonard_86, Hans_87, Phinally_86
• Track 31 : Phauci_78
• Track 32 : Belphegor_82
• Track 33 : MelBins_88
• Track 34 : Inspectinfecti_87
• Track 35 : EMoore_81
• Track 36 : Abblin_88, Natkenzie_88, Sampson_90, Scioto_89
• Track 37 : BigHunkinEater_89, Zitch_90
• Track 38 : DoctorFroggo_88, Verity_87, Zipp_88, Delrey21_88
• Track 39 : APunk_88
• Track 40 : Tardus_90
• Track 41 : ViaConlectus_87
• Track 42 : Pumpkiney_88
• Track 43 : Lilbeanie_97
• Track 44 : Sunny_, Merry_
• Track 45 : PhedwardCullen_65, Crisis_67, Antares_66, Phorgeous_66, CrazyRich_65, Honeyfin_67, Phrancesco_66, Jefe_66, Busephilis_65, Ganandorf_65, Shotgun_66, Glorp_67, Selwyn23_67, Pulchra_68, Lucretia_66
• Track 46 : Metamorphoo_69, Tyrumbra_65, Shrubaron_70, RobsFeet_70
• Track 47 : Jollipop_67, Onika_65, Kowalski_65, Rockwell_65, Paschalis_66, BrazzalePHS_65, PiperSansNom_67, Ramiel05_65
• Track 48 : PierreOrion_66
• Track 49 : Savannah_65, Germa_68, Hermeonysus_66, Quhwah_70, BeagleBug_65, LittleFortune_68, Cranjis_67
• Track 50 : Scumberland_68
• Track 51 : Nicole72_64
• Track 52 : Smarties_76, Fireman_69, Ariadne_76
• Track 53 : Piperis_67, Yeti_68, KaiHaiDragon_67, EarickHC_67
• Track 54 : Teamocil_70, Gina_70
• Track 55 : ClearAsMud_70, SirFrank_66
• Track 56 : Zapato_66
• Track 57 : Skugga_66
• Track 58 : NoodlelyBoi_67
• Track 59 : Jayden_67
• Track 60 : Megan_63
• Track 61 : Matzah_66, MementoMori_65, Cressida_67, Cinna_64
• Track 62 : Kozie_64
• Track 63 : Margaery_63
• Track 64 : Terij_64
• Track 65 : Maruru_94, Sonali_93
• Track 66 : Sunshine23_94
• Track 67 : Mufasa8_98
• Track 68 : Lilmac1015_74, CalWood4100_74
• Track 69 : Prairie_70
• Track 70 : Bolt007_71
• Track 71 : Altadena_68
• Track 72 : Klevey_74
• Track 73 : Bumble_69
• Track 74 : Circuit_68
• Track 75 : Nandito_73
• Track 76 : Gooberta_77, GoldDust_76, Music_81

• Track 77 : Divya_86
• Track 78 : AirForce1_86, SunnyJune_86, Jinkies_84
• Track 79 : Vibaki_78
• Track 80 : BlackJade_95
• Track 81 : Orkz_88
• Track 82 : Vitus_81
• Track 83 : Hirko_79
• Track 84 : Bush_53, Jakelyne_54, Violeta_54, Carrillo_54, MenE_54
• Track 85 : NCRodriguez_54
• Track 86 : Guzman_52, Winchester007_54, CookieDog_52, Dropshot_52, Appa_52, PhillyJawn_53
• Track 87 : Warren_52
• Track 88 : Phonegingi_52
• Track 89 : Antuna_54, Losacky_54
• Track 90 : Mariel_53
• Track 91 : Phingu_55
• Track 92 : Pickles13_51
• Track 93 : ScoobySnack_49
• Track 94 : Blett_52
• Track 95 : Jace_90

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

The start number called the most often in the published annotations is 49, it was called in 104 of the 230 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abba_67, AirForce1_86, Antares_66, Appa_52, Ariadne_76, BarretLemon_72, BeagleBug_65, Beans_68, BigDome_72, Blett_52, BrazzalePHS_65, Brent_69, Busephilis_65, Bush_53, Carrillo_54, Cinna_64, ClearAsMud_70, CookieDog_52, Cranjis_67, CrazyRich_65, Cressida_67, Crisis_67, Divya_86, Dropshot_52, EarickHC_67, EastWest_78, Fireman_69, Franzy_67, Ganandorf_65, Germa_68, Gina_70, Glorp_67, GoldDust_76, Gooberta_77, GravityBall_72, Grekaycon_73, Guzman_52, Hermeonysus_66, Hirko_79, Honeyfin_67, JKerns_72, Jakelyne_54, Jawnski_68, Jayden_67, Jefe_66, Jinkies_84, Jollipop_67, Jordan_73, KaiHaiDragon_67, King2_67, Kowalski_65, Kozie_64, LeeroyJ_73, LittleFortune_68, Lucretia_66, Margaery_63, Mariel_53, Martha_72, Matzah_66, MementoMori_65, MenE_54, Merry_, Metamorphoo_69, Music_81, NCRodriguez_54, NathanVaag_68, NoodlelyBoi_67, Nostromo_67, Onika_65, Orkz_88, Paschalis_66, PhedwardCullen_65, PhillyJawn_53, Phingu_55, Phonegingi_52, Phorgeous_66, Phrancesco_66, Piccoletto_69, Pickles13_51, PierreOrion_66, PiperSansNom_67, Piperis_67, Pulchra_68, Quhwah_70, Ramiel05_65, RobsFeet_70, Rockwell_65, Savannah_65, Scumberland_68, Selwyn23_67, Shade_72, Shotgun_66, Shrubaron_70, Sicarius2_74, SirFrank_66, Skugga_66, Smarties_76, Sonny_72, StevieBAY_73, SunnyJune_86, Sunny_, TaeYoung_73, Teamocil_70, Terij_64, Timinator_73, Tyrumbra_65, Vibaki_78, Violeta_54, Vitus_81, Warren_52, Winchester007_54, Wyborn_73, Yeti_68, Zapato_66, Zartrosa_74,

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

• Antuna_54, BlackJade_95, BossLady_74, Jace_90, Losacky_54, Maruru_94, Pippa_73, ScoobySnack_49, Sonali_93, Sunshine23_94,

Genes that do not have the "Most Annotated" start:
• APunk_88, Abblin_88, Affeca_86, Ailee_82, Ali17_83, Altadena_68, Angelicage_83, Arri_86, Ashertheman_84, Baddon_82, Bakery_90, Barb_89, Barsten_87, Baumdotcom_83, Belphegor_82, Bibwit_82, BigHunkinEater_89, Bizzy_84, BobBob_86, Bolt007_71, Brandonk123_88, Brawn1_81, Bumble_69, CalWood4100_74, ChadMasterC_83, Charming_87, CherryCola_85, Circuit_68, ClamChowder_88, CoveyB_87, Danyall_86, Delrey21_88, Derg_77, DoctorFroggo_88, EMoore_81, Egi03_84, Evamon_86, Fireball_89, Fitzgerald_82, Flatwoods_84, Fosterous_86, FuegoCuervo_89, Fugax_89, Gaea_85, Galadriel_85, Geodirt_84, Gezellig_82, Gustavo_86, Halo3_85, Hans_87, Inspectinfecti_87, JKSyngboy_81, Jabberwocky_83, Jambalaya_83, JohnPork_87, Kamashten_85, Keitabear_82, Kewpiedoll_85, KimmyK_84, Klevey_74, Kroos_84, Kwobi_86, Lennon_84, Leonard_86, LilHam_78, Lilbeanie_97, Lilmac1015_74, Love_90, McCrothy_83, McKinley_87, Megan_63, MelBins_88, MoontowerMania_85, Mufasa8_98, Mutzi_85, Nandito_73, Natkenzie_88, Nicole72_64, Nordenberg_83, Nubi_89, Paries_88, Phauci_78, Phinally_86, Phlop_83, PinkCoffee_87, Portcullis_86, Prairie_70, PullumCavea_84, Pumpkiney_88, Ribeye_84, RiverRaider_86, Rofo_84, RogerDodger_89, Salvador_86, Sampson_90, Sanjuju_82, Saronaya_86, Savbucketdawg_81, SchottB_83, Scioto_89, Sedona_82, Sendy_88, SharkTale_89, Shinji_85, Shivanishola_86, Sitar_83, Sixsevenium_87, SmokingBunny_87, Stichling_80, StorminNorm_85, Stultus_79, Tangent_87, Tangerine_84, Tardus_90, Thing3_85, TillyBobJoe_84, Togo_86, Twister6_85, Tycho_84, Valary_87, VanDeWege_88, Verity_87, ViaConlectus_87, Vivi2_88, Wizard_81, YorkOnyx_83, YungMoney_85, Zipp_88, Zitch_90,

Summary by start number:

Start 35:
• Found in 1 of 254 (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: BlackJade_95 (FL),

Start 42:
• Found in 14 of 254 (5.5%) of genes in pham
• Manual Annotations of this start: 1 of 230
• Called 7.1% of time when present
• Phage (with cluster) where this start called: Mufasa8_98 (FG),

Start 45:
• Found in 33 of 254 (13.0%) of genes in pham
• Manual Annotations of this start: 8 of 230
• Called 24.2% of time when present
• Phage (with cluster) where this start called: Charming_87 (DE1), Jabberwocky_83 (DE1), Keitabear_82 (DE1), Maruru_94 (FG), MoontowerMania_85 (DE1), Nordenberg_83 (DE1), Sonali_93 (FG), Sunshine23_94 (FG),

Start 48:
• Found in 1 of 254 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 230

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jace_90 (singleton),

Start 49:
• Found in 125 of 254 (49.2%) of genes in pham
• Manual Annotations of this start: 104 of 230
• Called 92.0% of time when present
• Phage (with cluster) where this start called: Abba_67 (AO3), AirForce1_86 (FL), Antares_66 (EC), Appa_52 (GA), Ariadne_76 (EC), BarretLemon_72 (AO2), BeagleBug_65 (EC), Beans_68 (AO1), BigDome_72 (AO2), Blett_52 (GA), BrazzalePHS_65 (EC), Brent_69 (AO1), Busephilis_65 (EC), Bush_53 (GA), Carrillo_54 (GA), Cinna_64 (EI), ClearAsMud_70 (EC), CookieDog_52 (GA), Cranjis_67 (EC), CrazyRich_65 (EC), Cressida_67 (EI), Crisis_67 (EC), Divya_86 (FL), Dropshot_52 (GA), EarickHC_67 (EC), EastWest_78 (AO), Fireman_69 (EC), Franzy_67 (AO1), Ganandorf_65 (EC), Germa_68 (EC), Gina_70 (EC), Glorp_67 (EC), GoldDust_76 (FL), Gooberta_77 (FL), GravityBall_72 (AO2), Grekaycon_73 (AO2), Guzman_52 (GA), Hermeonysus_66 (EC), Hirko_79 (FL), Honeyfin_67 (EC), JKerns_72 (AO2), Jakelyne_54 (GA), Jawnski_68 (AO1), Jayden_67 (EC), Jefe_66 (EC), Jinkies_84 (FL), Jollipop_67 (EC), Jordan_73 (AO2), KaiHaiDragon_67 (EC), King2_67 (AO1), Kowalski_65 (EC), Kozie_64 (EI), LeeroyJ_73 (AO2), LittleFortune_68 (EC), Lucretia_66 (EC), Margaery_63 (EI), Mariel_53 (GA), Martha_72 (AO2), Matzah_66 (EI), MementoMori_65 (EI), MenE_54 (GA), Merry_ (EC), Metamorphoo_69 (EC), Music_81 (FL), NCRodriguez_54 (GA), NathanVaag_68 (AO1), NoodlelyBoi_67 (EC), Nostromo_67 (AO3), Onika_65 (EC), Orkz_88 (FL), Paschalis_66 (EC), PhedwardCullen_65 (EC), PhillyJawn_53 (GA), Phingu_55 (GA), Phonegingi_52 (GA), Phorgeous_66 (EC), Phrancesco_66 (EC), Piccoletto_69 (AO1), Pickles13_51 (GA), PierreOrion_66 (EC), PiperSansNom_67 (EC), Piperis_67 (EC), Pulchra_68 (EC), Quhwah_70 (EC), Ramiel05_65 (EC), RobsFeet_70 (EC), Rockwell_65 (EC), Savannah_65 (EC), Scumberland_68 (EC), Selwyn23_67 (EC), Shade_72 (AO2), Shotgun_66 (EC), Shrubaron_70 (EC), Sicarius2_74 (AO2), SirFrank_66 (EC), Skugga_66 (EC), Smarties_76 (EC), Sonny_72 (AO2), StevieBAY_73 (AO2), SunnyJune_86 (FL), Sunny_ (EC), TaeYoung_73 (AO2), Teamocil_70 (EC), Terij_64 (EI), Timinator_73 (AO2), Tyrumbra_65 (EC), Vibaki_78 (FL), Violeta_54 (GA), Vitus_81 (FL), Warren_52 (GA), Winchester007_54 (GA), Wyborn_73 (AO2), Yeti_68 (EC), Zapato_66 (EC), Zartrosa_74 (AO2),

Start 50:
• Found in 37 of 254 (14.6%) of genes in pham
• Manual Annotations of this start: 30 of 230
• Called 91.9% of time when present
• Phage (with cluster) where this start called: Arri_86 (DC1), Barb_89 (DC1), CherryCola_85 (DC1), ClamChowder_88 (DC1), CoveyB_87 (DC1), Danyall_86 (DC1), Evamon_86 (DC1), Fireball_89 (DC1), Fugax_89 (DC1), Gezellig_82 (DC1), Halo3_85 (DC1), Jambalaya_83 (DC1), JohnPork_87 (DC1), KimmyK_84 (DC1), Mutzi_85 (DC1), Nubi_89 (DC1), Phlop_83 (DC1), PinkCoffee_87 (DC1), Portcullis_86 (DC1), PullumCavea_84 (DC1), RogerDodger_89 (DC1), Salvador_86 (DC1), Savbucketdawg_81 (DC1), Sendy_88 (DC1), SharkTale_89 (DC1), Shinji_85 (DC1), SmokingBunny_87 (DC1), TillyBobJoe_84 (DC1), Togo_86 (DC1), Twister6_85 (DC1), Valary_87 (DC1), VanDeWege_88 (DC1), Wizard_81 (DC1), YungMoney_85 (DC1),

Start 51:

• Found in 21 of 254 (8.3%) of genes in pham
• Manual Annotations of this start: 2 of 230
• Called 14.3% of time when present
• Phage (with cluster) where this start called: Antuna_54 (GA), Losacky_54 (GA), ScoobySnack_49 (GA),

Start 54:
• Found in 14 of 254 (5.5%) of genes in pham
• Manual Annotations of this start: 13 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: APunk_88 (DE4), Abblin_88 (DE4), BigHunkinEater_89 (DE4), Delrey21_88 (DE4), DoctorFroggo_88 (DE4), Natkenzie_88 (DE4), Pumpkiney_88 (DE4), Sampson_90 (DE4), Scioto_89 (DE4), Tardus_90 (DE4), Verity_87 (DE4), ViaConlectus_87 (DE4), Zipp_88 (DE4), Zitch_90 (DE4),

Start 55:
• Found in 38 of 254 (15.0%) of genes in pham
• Manual Annotations of this start: 3 of 230
• Called 10.5% of time when present
• Phage (with cluster) where this start called: Bakery_90 (DC1), Egi03_84 (DC1), Nicole72_64 (EC), Sixsevenium_87 (DC1),

Start 56:
• Found in 2 of 254 (0.8%) of genes in pham
• Manual Annotations of this start: 2 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Belphegor_82 (DE2), EMoore_81 (DE2),

Start 57:
• Found in 3 of 254 (1.2%) of genes in pham
• Manual Annotations of this start: 3 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altadena_68 (FH), Bumble_69 (FH), Circuit_68 (FH),

Start 59:
• Found in 63 of 254 (24.8%) of genes in pham
• Manual Annotations of this start: 55 of 230
• Called 92.1% of time when present
• Phage (with cluster) where this start called: Affeca_86 (DE1), Ailee_82 (DE1), Ali17_83 (DE2), Angelicage_83 (DE1), Ashertheman_84 (DE1), Baddon_82 (DE1), Barsten_87 (DE1), Baumdotcom_83 (DE1), Bibwit_82 (DE1), Bizzy_84 (DE1), BobBob_86 (DE1), Brandonk123_88 (DE1), Brawn1_81 (DE1), ChadMasterC_83 (DE1), Derg_77 (DE1), Fitzgerald_82 (DE1), Flatwoods_84 (DE1), Fosterous_86 (DE1), FuegoCuervo_89 (DE1), Gaea_85 (DE1), Galadriel_85 (DE1), Geodirt_84 (DE1), Gustavo_86 (DE1), Hans_87 (DE2), Inspectinfecti_87 (DE2), JKSyngboy_81 (DE1), Kamashten_85 (DE1), Kewpiedoll_85 (DE1), Kroos_84 (DE1), Kwobi_86 (DE1), Lennon_84 (DE1), Leonard_86 (DE2), LilHam_78 (DE1), Love_90 (DE1), McCrothy_83 (DE1), McKinley_87 (DE1), MelBins_88 (DE2), Paries_88 (DE1), Phauci_78 (DE2), Phinally_86 (DE2), Ribeye_84 (DE1), RiverRaider_86 (DE1), Rofo_84 (DE1), Sanjuju_82 (DE1), Saronaya_86 (DE1), SchottB_83 (DE1), Sedona_82 (DE1), Shivanishola_86 (DE1), Sitar_83 (DE1), Stichling_80 (DE1),

StorminNorm_85 (DE1), Stultus_79 (DE1), Tangent_87 (DE1), Tangerine_84 (DE1), Thing3_85 (DE1), Tycho_84 (DE1), Vivi2_88 (DE1), YorkOnyx_83 (DE1),

Start 60:
• Found in 1 of 254 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Megan_63 (EC),

Start 61:
• Found in 6 of 254 (2.4%) of genes in pham
• Manual Annotations of this start: 4 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bolt007_71 (FH), CalWood4100_74 (FH), Klevey_74 (FH), Lilmac1015_74 (FH), Nandito_73 (FH), Prairie_70 (FH),

Start 64:
• Found in 50 of 254 (19.7%) of genes in pham
• Manual Annotations of this start: 2 of 230
• Called 4.0% of time when present
• Phage (with cluster) where this start called: BossLady_74 (AO2), Pippa_73 (AO2),

Start 65:
• Found in 1 of 254 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 230
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Lilbeanie_97 (DE5),

Summary by clusters:

There are 16 clusters represented in this pham: singleton, EI, AO1, AO, DE1, DE2, DE4, DE5, EC, AO3, AO2, GA, FG, FH, FL, DC1,

Info for manual annotations of cluster AO:
•Start number 49 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:
•Start number 49 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:
•Start number 49 was manually annotated 16 times for cluster AO2.
•Start number 64 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:
•Start number 49 was manually annotated 2 times for cluster AO3.

Info for manual annotations of cluster DC1:
•Start number 50 was manually annotated 30 times for cluster DC1.
•Start number 55 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DE1:
•Start number 45 was manually annotated 5 times for cluster DE1.
•Start number 59 was manually annotated 48 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 56 was manually annotated 2 times for cluster DE2.
•Start number 59 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 54 was manually annotated 13 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 65 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster EC:
•Start number 49 was manually annotated 47 times for cluster EC.
•Start number 55 was manually annotated 1 time for cluster EC.
•Start number 60 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:
•Start number 49 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster FG:
•Start number 42 was manually annotated 1 time for cluster FG.
•Start number 45 was manually annotated 3 times for cluster FG.

Info for manual annotations of cluster FH:
•Start number 57 was manually annotated 3 times for cluster FH.
•Start number 61 was manually annotated 4 times for cluster FH.

Info for manual annotations of cluster FL:
•Start number 49 was manually annotated 9 times for cluster FL.

Info for manual annotations of cluster GA:
•Start number 49 was manually annotated 15 times for cluster GA.
•Start number 51 was manually annotated 2 times for cluster GA.

Gene Information:

Gene: APunk_88 Start: 58714, Stop: 58983, Start Num: 54
Candidate Starts for APunk_88:
(Start: 42 @58669 has 1 MA's), (Start: 54 @58714 has 13 MA's), (63, 58732), (73, 58783), (82, 58861),

Gene: Abba_67 Start: 42825, Stop: 42538, Start Num: 49
Candidate Starts for Abba_67:
(Start: 49 @42825 has 104 MA's), (89, 42639), (99, 42555),

Gene: Abblin_88 Start: 58873, Stop: 59145, Start Num: 54
Candidate Starts for Abblin_88:
(23, 58672), (25, 58681), (28, 58693), (29, 58699), (Start: 54 @58873 has 13 MA's), (73, 58942), (82, 59020),

Gene: Affeca_86 Start: 58157, Stop: 58420, Start Num: 59
Candidate Starts for Affeca_86:

(Start: 45 @58124 has 8 MA's), (Start: 59 @58157 has 55 MA's), (73, 58220), (82, 58301),

Gene: Ailee_82 Start: 57328, Stop: 57591, Start Num: 59
Candidate Starts for Ailee_82:
(Start: 45 @57295 has 8 MA's), (Start: 59 @57328 has 55 MA's), (73, 57391), (82, 57472),

Gene: AirForce1_86 Start: 47421, Stop: 47104, Start Num: 49
Candidate Starts for AirForce1_86:
(31, 47577), (38, 47475), (Start: 49 @47421 has 104 MA's), (93, 47154),

Gene: Ali17_83 Start: 57614, Stop: 57865, Start Num: 59
Candidate Starts for Ali17_83:
(Start: 59 @57614 has 55 MA's), (73, 57677), (79, 57737), (80, 57743), (82, 57755), (83, 57758),

Gene: Altadena_68 Start: 43198, Stop: 42947, Start Num: 57
Candidate Starts for Altadena_68:
(Start: 57 @43198 has 3 MA's), (92, 42994),

Gene: Angelicage_83 Start: 58231, Stop: 58494, Start Num: 59
Candidate Starts for Angelicage_83:
(Start: 45 @58198 has 8 MA's), (Start: 59 @58231 has 55 MA's), (73, 58294), (82, 58375),

Gene: Antares_66 Start: 41631, Stop: 41924, Start Num: 49
Candidate Starts for Antares_66:
(44, 41607), (Start: 49 @41631 has 104 MA's), (73, 41709), (82, 41772), (85, 41787), (86, 41790),

Gene: Antuna_54 Start: 32652, Stop: 32918, Start Num: 51
Candidate Starts for Antuna_54:
(33, 32508), (Start: 49 @32643 has 104 MA's), (Start: 51 @32652 has 2 MA's), (69, 32709), (73, 32733), (75, 32739), (89, 32832),

Gene: Appa_52 Start: 32408, Stop: 32683, Start Num: 49
Candidate Starts for Appa_52:
(6, 32012), (12, 32087), (33, 32273), (Start: 49 @32408 has 104 MA's), (Start: 51 @32417 has 2 MA's), (69, 32474), (73, 32498), (75, 32504), (89, 32597),

Gene: Ariadne_76 Start: 43251, Stop: 43544, Start Num: 49
Candidate Starts for Ariadne_76:
(Start: 49 @43251 has 104 MA's), (73, 43329), (82, 43392), (86, 43410),

Gene: Arri_86 Start: 56263, Stop: 56015, Start Num: 50
Candidate Starts for Arri_86:
(11, 56575), (16, 56497), (18, 56476), (32, 56404), (44, 56290), (Start: 50 @56263 has 30 MA's), (Start: 55 @56254 has 3 MA's), (Start: 64 @56236 has 2 MA's), (76, 56179), (87, 56104), (92, 56056),

Gene: Ashertheman_84 Start: 56563, Stop: 56823, Start Num: 59
Candidate Starts for Ashertheman_84:
(Start: 59 @56563 has 55 MA's), (73, 56626), (82, 56707), (89, 56746),

Gene: Baddon_82 Start: 57243, Stop: 57506, Start Num: 59
Candidate Starts for Baddon_82:
(Start: 45 @57210 has 8 MA's), (Start: 59 @57243 has 55 MA's), (73, 57306), (82, 57387),

Gene: Bakery_90 Start: 58633, Stop: 58391, Start Num: 55
Candidate Starts for Bakery_90:
(4, 59074), (14, 58915), (22, 58846), (26, 58822), (27, 58819), (43, 58666), (Start: 50 @58639 has 30 MA's), (52, 58636), (Start: 55 @58633 has 3 MA's), (Start: 64 @58615 has 2 MA's), (76, 58558), (92, 58435),

Gene: Barb_89 Start: 56790, Stop: 56539, Start Num: 50
Candidate Starts for Barb_89:
(7, 57147), (10, 57120), (17, 57021), (19, 56997), (21, 56994), (32, 56931), (44, 56817), (Start: 50 @56790 has 30 MA's), (Start: 55 @56781 has 3 MA's), (Start: 64 @56763 has 2 MA's), (76, 56706), (87, 56631), (92, 56583),

Gene: BarretLemon_72 Start: 46543, Stop: 46214, Start Num: 49
Candidate Starts for BarretLemon_72:
(Start: 49 @46543 has 104 MA's),

Gene: Barsten_87 Start: 58499, Stop: 58765, Start Num: 59
Candidate Starts for Barsten_87:
(Start: 45 @58466 has 8 MA's), (Start: 59 @58499 has 55 MA's), (73, 58562), (82, 58643), (94, 58745),

Gene: Baumdotcom_83 Start: 56963, Stop: 57223, Start Num: 59
Candidate Starts for Baumdotcom_83:
(Start: 59 @56963 has 55 MA's), (73, 57026), (82, 57107), (89, 57146),

Gene: BeagleBug_65 Start: 41411, Stop: 41704, Start Num: 49
Candidate Starts for BeagleBug_65:
(Start: 49 @41411 has 104 MA's), (73, 41489), (82, 41552), (85, 41567), (86, 41570),

Gene: Beans_68 Start: 45863, Stop: 45561, Start Num: 49
Candidate Starts for Beans_68:
(Start: 49 @45863 has 104 MA's), (73, 45794), (91, 45656),

Gene: Belphegor_82 Start: 58991, Stop: 59245, Start Num: 56
Candidate Starts for Belphegor_82:
(Start: 56 @58991 has 2 MA's), (73, 59057), (82, 59135), (88, 59168),

Gene: Bibwit_82 Start: 56692, Stop: 56955, Start Num: 59
Candidate Starts for Bibwit_82:
(Start: 45 @56659 has 8 MA's), (Start: 59 @56692 has 55 MA's), (73, 56755), (82, 56836),

Gene: BigDome_72 Start: 46718, Stop: 46389, Start Num: 49
Candidate Starts for BigDome_72:
(Start: 49 @46718 has 104 MA's),

Gene: BigHunkinEater_89 Start: 58349, Stop: 58618, Start Num: 54
Candidate Starts for BigHunkinEater_89:
(Start: 54 @58349 has 13 MA's), (63, 58367), (73, 58418), (82, 58496),

Gene: Bizzy_84 Start: 56320, Stop: 56580, Start Num: 59
Candidate Starts for Bizzy_84:
(Start: 59 @56320 has 55 MA's), (73, 56383), (82, 56464), (89, 56503),

Gene: BlackJade_95 Start: 49180, Stop: 48752, Start Num: 35

Candidate Starts for BlackJade_95:
(31, 49225), (35, 49180), (38, 49123), (Start: 49 @49069 has 104 MA's), (93, 48802),

Gene: Blett_52 Start: 32593, Stop: 32868, Start Num: 49
Candidate Starts for Blett_52:
(2, 32110), (3, 32137), (33, 32458), (Start: 49 @32593 has 104 MA's), (Start: 51 @32602 has 2 MA's), (69, 32659), (73, 32683), (75, 32689), (89, 32782),

Gene: BobBob_86 Start: 57531, Stop: 57794, Start Num: 59
Candidate Starts for BobBob_86:
(Start: 45 @57498 has 8 MA's), (Start: 59 @57531 has 55 MA's), (73, 57594), (82, 57675),

Gene: Bolt007_71 Start: 45075, Stop: 44833, Start Num: 61
Candidate Starts for Bolt007_71:
(Start: 61 @45075 has 4 MA's),

Gene: BossLady_74 Start: 47057, Stop: 46746, Start Num: 64
Candidate Starts for BossLady_74:
(Start: 49 @47078 has 104 MA's), (Start: 64 @47057 has 2 MA's), (73, 47009), (97, 46814),

Gene: Brandonk123_88 Start: 57696, Stop: 57959, Start Num: 59
Candidate Starts for Brandonk123_88:
(Start: 45 @57663 has 8 MA's), (Start: 59 @57696 has 55 MA's), (73, 57759), (82, 57840),

Gene: Brawn1_81 Start: 56836, Stop: 57099, Start Num: 59
Candidate Starts for Brawn1_81:
(Start: 45 @56803 has 8 MA's), (Start: 59 @56836 has 55 MA's), (73, 56899), (82, 56980),

Gene: BrazzalePHS_65 Start: 41393, Stop: 41692, Start Num: 49
Candidate Starts for BrazzalePHS_65:
(Start: 49 @41393 has 104 MA's), (62, 41423), (82, 41540), (85, 41555), (86, 41558),

Gene: Brent_69 Start: 46039, Stop: 45731, Start Num: 49
Candidate Starts for Brent_69:
(Start: 49 @46039 has 104 MA's), (67, 46000), (73, 45964),

Gene: Bumble_69 Start: 44314, Stop: 44069, Start Num: 57
Candidate Starts for Bumble_69:
(Start: 57 @44314 has 3 MA's), (92, 44116),

Gene: Busephilis_65 Start: 41338, Stop: 41631, Start Num: 49
Candidate Starts for Busephilis_65:
(44, 41314), (Start: 49 @41338 has 104 MA's), (73, 41416), (82, 41479), (85, 41494), (86, 41497),

Gene: Bush_53 Start: 32542, Stop: 32817, Start Num: 49
Candidate Starts for Bush_53:
(33, 32407), (Start: 49 @32542 has 104 MA's), (Start: 51 @32551 has 2 MA's), (69, 32608), (73, 32632), (75, 32638), (89, 32731),

Gene: CalWood4100_74 Start: 45377, Stop: 45132, Start Num: 61
Candidate Starts for CalWood4100_74:
(34, 45521), (Start: 61 @45377 has 4 MA's),

Gene: Carrillo_54 Start: 32516, Stop: 32791, Start Num: 49
Candidate Starts for Carrillo_54:
(33, 32381), (Start: 49 @32516 has 104 MA's), (Start: 51 @32525 has 2 MA's), (69, 32582), (73, 32606), (75, 32612), (89, 32705),

Gene: ChadMasterC_83 Start: 58686, Stop: 58949, Start Num: 59
Candidate Starts for ChadMasterC_83:
(Start: 45 @58653 has 8 MA's), (Start: 59 @58686 has 55 MA's), (73, 58749), (82, 58830),

Gene: Charming_87 Start: 56965, Stop: 57264, Start Num: 45
Candidate Starts for Charming_87:
(Start: 45 @56965 has 8 MA's), (Start: 59 @56998 has 55 MA's), (73, 57061), (82, 57142), (94, 57244),

Gene: CherryCola_85 Start: 56676, Stop: 56428, Start Num: 50
Candidate Starts for CherryCola_85:
(11, 56988), (16, 56910), (18, 56889), (32, 56817), (44, 56703), (Start: 50 @56676 has 30 MA's), (Start: 55 @56667 has 3 MA's), (Start: 64 @56649 has 2 MA's), (76, 56592), (87, 56517), (92, 56469),

Gene: Cinna_64 Start: 43061, Stop: 43273, Start Num: 49
Candidate Starts for Cinna_64:
(Start: 49 @43061 has 104 MA's), (69, 43103), (82, 43190), (89, 43226),

Gene: Circuit_68 Start: 44623, Stop: 44378, Start Num: 57
Candidate Starts for Circuit_68:
(20, 44824), (24, 44797), (Start: 57 @44623 has 3 MA's), (92, 44425),

Gene: ClamChowder_88 Start: 56790, Stop: 56539, Start Num: 50
Candidate Starts for ClamChowder_88:
(7, 57147), (10, 57120), (17, 57021), (19, 56997), (21, 56994), (32, 56931), (44, 56817), (Start: 50 @56790 has 30 MA's), (Start: 55 @56781 has 3 MA's), (Start: 64 @56763 has 2 MA's), (76, 56706), (87, 56631), (92, 56583),

Gene: ClearAsMud_70 Start: 41913, Stop: 42206, Start Num: 49
Candidate Starts for ClearAsMud_70:
(Start: 49 @41913 has 104 MA's), (63, 41940), (73, 41991), (82, 42054), (86, 42072),

Gene: CookieDog_52 Start: 32516, Stop: 32791, Start Num: 49
Candidate Starts for CookieDog_52:
(6, 32120), (12, 32195), (33, 32381), (Start: 49 @32516 has 104 MA's), (Start: 51 @32525 has 2 MA's), (69, 32582), (73, 32606), (75, 32612), (89, 32705),

Gene: CoveyB_87 Start: 56277, Stop: 56026, Start Num: 50
Candidate Starts for CoveyB_87:
(7, 56634), (10, 56607), (17, 56508), (19, 56484), (21, 56481), (32, 56418), (44, 56304), (Start: 50 @56277 has 30 MA's), (Start: 55 @56268 has 3 MA's), (Start: 64 @56250 has 2 MA's), (76, 56193), (87, 56118), (92, 56070),

Gene: Cranjis_67 Start: 41586, Stop: 41879, Start Num: 49
Candidate Starts for Cranjis_67:
(Start: 49 @41586 has 104 MA's), (73, 41664), (82, 41727), (85, 41742), (86, 41745),

Gene: CrazyRich_65 Start: 41392, Stop: 41685, Start Num: 49
Candidate Starts for CrazyRich_65:

(44, 41368), (Start: 49 @41392 has 104 MA's), (73, 41470), (82, 41533), (85, 41548), (86, 41551),

Gene: Cressida_67 Start: 42667, Stop: 42879, Start Num: 49
Candidate Starts for Cressida_67:
(Start: 49 @42667 has 104 MA's), (69, 42709), (82, 42796), (89, 42832),

Gene: Crisis_67 Start: 41401, Stop: 41694, Start Num: 49
Candidate Starts for Crisis_67:
(44, 41377), (Start: 49 @41401 has 104 MA's), (73, 41479), (82, 41542), (85, 41557), (86, 41560),

Gene: Danyall_86 Start: 55971, Stop: 55720, Start Num: 50
Candidate Starts for Danyall_86:
(7, 56328), (10, 56301), (17, 56202), (19, 56178), (21, 56175), (32, 56112), (44, 55998), (Start: 50 @55971 has 30 MA's), (Start: 55 @55962 has 3 MA's), (Start: 64 @55944 has 2 MA's), (76, 55887), (87, 55812), (92, 55764),

Gene: Delrey21_88 Start: 60349, Stop: 60621, Start Num: 54
Candidate Starts for Delrey21_88:
(Start: 42 @60304 has 1 MA's), (Start: 54 @60349 has 13 MA's), (63, 60367), (73, 60418), (82, 60496), (90, 60544),

Gene: Derg_77 Start: 55217, Stop: 55477, Start Num: 59
Candidate Starts for Derg_77:
(Start: 59 @55217 has 55 MA's), (73, 55280), (82, 55361), (89, 55400),

Gene: Divya_86 Start: 47623, Stop: 47318, Start Num: 49
Candidate Starts for Divya_86:
(Start: 49 @47623 has 104 MA's), (63, 47596), (72, 47554), (92, 47395), (93, 47368),

Gene: DoctorFroggo_88 Start: 60349, Stop: 60621, Start Num: 54
Candidate Starts for DoctorFroggo_88:
(Start: 42 @60304 has 1 MA's), (Start: 54 @60349 has 13 MA's), (63, 60367), (73, 60418), (82, 60496), (90, 60544),

Gene: Dropshot_52 Start: 32243, Stop: 32518, Start Num: 49
Candidate Starts for Dropshot_52:
(6, 31847), (12, 31922), (33, 32108), (Start: 49 @32243 has 104 MA's), (Start: 51 @32252 has 2 MA's), (69, 32309), (73, 32333), (75, 32339), (89, 32432),

Gene: EMoore_81 Start: 58164, Stop: 58421, Start Num: 56
Candidate Starts for EMoore_81:
(Start: 56 @58164 has 2 MA's), (63, 58179), (73, 58230), (82, 58308), (88, 58341),

Gene: EarickHC_67 Start: 41323, Stop: 41616, Start Num: 49
Candidate Starts for EarickHC_67:
(Start: 49 @41323 has 104 MA's), (73, 41401), (82, 41464), (85, 41479), (86, 41482),

Gene: EastWest_78 Start: 46071, Stop: 45799, Start Num: 49
Candidate Starts for EastWest_78:
(Start: 49 @46071 has 104 MA's), (73, 46002), (81, 45927), (92, 45852),

Gene: Egi03_84 Start: 55689, Stop: 55450, Start Num: 55
Candidate Starts for Egi03_84:

(11, 56010), (16, 55932), (18, 55911), (32, 55839), (44, 55725), (Start: 50 @55698 has 30 MA's), (Start: 55 @55689 has 3 MA's), (Start: 64 @55671 has 2 MA's), (76, 55614), (87, 55539), (92, 55491),

Gene: Evamon_86 Start: 56075, Stop: 55827, Start Num: 50
Candidate Starts for Evamon_86:
(11, 56387), (16, 56309), (32, 56216), (44, 56102), (Start: 50 @56075 has 30 MA's), (Start: 55 @56066 has 3 MA's), (Start: 64 @56048 has 2 MA's), (76, 55991), (87, 55916), (92, 55868),

Gene: Fireball_89 Start: 56537, Stop: 56289, Start Num: 50
Candidate Starts for Fireball_89:
(11, 56849), (16, 56771), (18, 56750), (32, 56678), (44, 56564), (Start: 50 @56537 has 30 MA's), (Start: 55 @56528 has 3 MA's), (Start: 64 @56510 has 2 MA's), (76, 56453), (87, 56378), (92, 56330),

Gene: Fireman_69 Start: 43363, Stop: 43656, Start Num: 49
Candidate Starts for Fireman_69:
(Start: 49 @43363 has 104 MA's), (73, 43441), (82, 43504), (86, 43522),

Gene: Fitzgerald_82 Start: 57842, Stop: 58105, Start Num: 59
Candidate Starts for Fitzgerald_82:
(Start: 45 @57809 has 8 MA's), (Start: 59 @57842 has 55 MA's), (73, 57905), (82, 57986),

Gene: Flatwoods_84 Start: 56131, Stop: 56391, Start Num: 59
Candidate Starts for Flatwoods_84:
(Start: 59 @56131 has 55 MA's), (73, 56194), (82, 56275), (89, 56314),

Gene: Fosterous_86 Start: 57990, Stop: 58253, Start Num: 59
Candidate Starts for Fosterous_86:
(Start: 42 @57939 has 1 MA's), (Start: 59 @57990 has 55 MA's), (73, 58053), (82, 58134),

Gene: Franzy_67 Start: 46121, Stop: 45813, Start Num: 49
Candidate Starts for Franzy_67:
(Start: 49 @46121 has 104 MA's), (67, 46082), (73, 46046),

Gene: FuegoCuervo_89 Start: 58028, Stop: 58291, Start Num: 59
Candidate Starts for FuegoCuervo_89:
(Start: 45 @57995 has 8 MA's), (Start: 59 @58028 has 55 MA's), (73, 58091), (82, 58172),

Gene: Fugax_89 Start: 56782, Stop: 56531, Start Num: 50
Candidate Starts for Fugax_89:
(7, 57139), (10, 57112), (17, 57013), (19, 56989), (21, 56986), (32, 56923), (44, 56809), (Start: 50 @56782 has 30 MA's), (Start: 55 @56773 has 3 MA's), (Start: 64 @56755 has 2 MA's), (76, 56698), (87, 56623), (92, 56575),

Gene: Gaea_85 Start: 56481, Stop: 56741, Start Num: 59
Candidate Starts for Gaea_85:
(Start: 59 @56481 has 55 MA's), (73, 56544), (82, 56625),

Gene: Galadriel_85 Start: 58206, Stop: 58469, Start Num: 59
Candidate Starts for Galadriel_85:
(Start: 42 @58155 has 1 MA's), (Start: 59 @58206 has 55 MA's), (73, 58269), (82, 58350),

Gene: Ganandorf_65 Start: 41419, Stop: 41712, Start Num: 49
Candidate Starts for Ganandorf_65:

(44, 41395), (Start: 49 @41419 has 104 MA's), (73, 41497), (82, 41560), (85, 41575), (86, 41578),

Gene: Geodirt_84 Start: 58493, Stop: 58759, Start Num: 59
Candidate Starts for Geodirt_84:
(Start: 45 @58460 has 8 MA's), (Start: 59 @58493 has 55 MA's), (73, 58556), (82, 58637), (94, 58739),

Gene: Germa_68 Start: 41249, Stop: 41542, Start Num: 49
Candidate Starts for Germa_68:
(Start: 49 @41249 has 104 MA's), (73, 41327), (82, 41390), (85, 41405), (86, 41408),

Gene: Gezellig_82 Start: 55921, Stop: 55673, Start Num: 50
Candidate Starts for Gezellig_82:
(11, 56233), (16, 56155), (18, 56134), (32, 56062), (44, 55948), (Start: 50 @55921 has 30 MA's),
(Start: 55 @55912 has 3 MA's), (Start: 64 @55894 has 2 MA's), (76, 55837), (87, 55762), (92, 55714),

Gene: Gina_70 Start: 41480, Stop: 41773, Start Num: 49
Candidate Starts for Gina_70:
(36, 41387), (Start: 49 @41480 has 104 MA's), (73, 41558), (82, 41621), (86, 41639),

Gene: Glorp_67 Start: 41383, Stop: 41676, Start Num: 49
Candidate Starts for Glorp_67:
(44, 41359), (Start: 49 @41383 has 104 MA's), (73, 41461), (82, 41524), (85, 41539), (86, 41542),

Gene: GoldDust_76 Start: 48481, Stop: 48173, Start Num: 49
Candidate Starts for GoldDust_76:
(Start: 49 @48481 has 104 MA's), (80, 48340), (85, 48310), (98, 48211), (101, 48196),

Gene: Gooberta_77 Start: 49208, Stop: 48900, Start Num: 49
Candidate Starts for Gooberta_77:
(Start: 49 @49208 has 104 MA's), (80, 49067), (85, 49037), (98, 48938), (101, 48923),

Gene: GravityBall_72 Start: 46734, Stop: 46405, Start Num: 49
Candidate Starts for GravityBall_72:
(Start: 49 @46734 has 104 MA's),

Gene: Grekaycon_73 Start: 46991, Stop: 46659, Start Num: 49
Candidate Starts for Grekaycon_73:
(Start: 49 @46991 has 104 MA's), (Start: 64 @46970 has 2 MA's), (73, 46922), (97, 46727),

Gene: Gustavo_86 Start: 57313, Stop: 57573, Start Num: 59
Candidate Starts for Gustavo_86:
(Start: 59 @57313 has 55 MA's), (73, 57376), (82, 57457),

Gene: Guzman_52 Start: 32499, Stop: 32774, Start Num: 49
Candidate Starts for Guzman_52:
(6, 32103), (12, 32178), (33, 32364), (Start: 49 @32499 has 104 MA's), (Start: 51 @32508 has 2 MA's),
(69, 32565), (73, 32589), (75, 32595), (89, 32688),

Gene: Halo3_85 Start: 56796, Stop: 56545, Start Num: 50
Candidate Starts for Halo3_85:
(11, 57108), (16, 57030), (32, 56937), (44, 56823), (Start: 50 @56796 has 30 MA's), (Start: 55 @56787
has 3 MA's), (Start: 64 @56769 has 2 MA's), (76, 56712), (87, 56637), (92, 56589),

Gene: Hans_87 Start: 58571, Stop: 58822, Start Num: 59
Candidate Starts for Hans_87:
(Start: 59 @58571 has 55 MA's), (73, 58634), (79, 58694), (80, 58700), (82, 58712), (83, 58715),

Gene: Hermeonysus_66 Start: 41314, Stop: 41607, Start Num: 49
Candidate Starts for Hermeonysus_66:
(Start: 49 @41314 has 104 MA's), (73, 41392), (82, 41455), (85, 41470), (86, 41473),

Gene: Hirko_79 Start: 48513, Stop: 48205, Start Num: 49
Candidate Starts for Hirko_79:
(Start: 49 @48513 has 104 MA's),

Gene: Honeyfin_67 Start: 41574, Stop: 41867, Start Num: 49
Candidate Starts for Honeyfin_67:
(44, 41550), (Start: 49 @41574 has 104 MA's), (73, 41652), (82, 41715), (85, 41730), (86, 41733),

Gene: Inspectinfecti_87 Start: 58519, Stop: 58770, Start Num: 59
Candidate Starts for Inspectinfecti_87:
(Start: 59 @58519 has 55 MA's), (73, 58582), (79, 58642), (80, 58648), (82, 58660), (83, 58663),

Gene: JKSyngboy_81 Start: 56985, Stop: 57245, Start Num: 59
Candidate Starts for JKSyngboy_81:
(Start: 59 @56985 has 55 MA's), (73, 57048), (82, 57129), (89, 57168),

Gene: JKerns_72 Start: 46983, Stop: 46651, Start Num: 49
Candidate Starts for JKerns_72:
(Start: 49 @46983 has 104 MA's), (Start: 64 @46962 has 2 MA's), (73, 46914),

Gene: Jabberwocky_83 Start: 58270, Stop: 58566, Start Num: 45
Candidate Starts for Jabberwocky_83:
(Start: 45 @58270 has 8 MA's), (Start: 59 @58303 has 55 MA's), (73, 58366), (82, 58447),

Gene: Jace_90 Start: 50456, Stop: 50166, Start Num: 48
Candidate Starts for Jace_90:
(30, 50609), (Start: 48 @50456 has 1 MA's), (Start: 49 @50450 has 104 MA's), (58, 50429), (92, 50234), (96, 50192),

Gene: Jakelyne_54 Start: 32609, Stop: 32884, Start Num: 49
Candidate Starts for Jakelyne_54:
(33, 32474), (Start: 49 @32609 has 104 MA's), (Start: 51 @32618 has 2 MA's), (69, 32675), (73, 32699), (75, 32705), (89, 32798),

Gene: Jambalaya_83 Start: 55378, Stop: 55127, Start Num: 50
Candidate Starts for Jambalaya_83:
(5, 55774), (16, 55612), (32, 55519), (44, 55405), (Start: 50 @55378 has 30 MA's), (Start: 55 @55369 has 3 MA's), (63, 55354), (Start: 64 @55351 has 2 MA's), (76, 55294), (84, 55228), (87, 55219), (92, 55171),

Gene: Jawnski_68 Start: 45564, Stop: 45256, Start Num: 49
Candidate Starts for Jawnski_68:
(Start: 49 @45564 has 104 MA's), (67, 45525), (73, 45489),

Gene: Jayden_67 Start: 41914, Stop: 42210, Start Num: 49

Candidate Starts for Jayden_67:
(Start: 49 @41914 has 104 MA's), (82, 42058), (86, 42076), (102, 42196),

Gene: Jefe_66 Start: 41369, Stop: 41662, Start Num: 49
Candidate Starts for Jefe_66:
(44, 41345), (Start: 49 @41369 has 104 MA's), (73, 41447), (82, 41510), (85, 41525), (86, 41528),

Gene: Jinkies_84 Start: 48737, Stop: 48420, Start Num: 49
Candidate Starts for Jinkies_84:
(31, 48893), (38, 48791), (Start: 49 @48737 has 104 MA's), (93, 48470),

Gene: JohnPork_87 Start: 55977, Stop: 55729, Start Num: 50
Candidate Starts for JohnPork_87:
(11, 56289), (16, 56211), (18, 56190), (32, 56118), (44, 56004), (Start: 50 @55977 has 30 MA's),
(Start: 55 @55968 has 3 MA's), (Start: 64 @55950 has 2 MA's), (76, 55893), (87, 55818), (92, 55770),

Gene: Jollipop_67 Start: 41751, Stop: 42050, Start Num: 49
Candidate Starts for Jollipop_67:
(Start: 49 @41751 has 104 MA's), (62, 41781), (82, 41898), (85, 41913), (86, 41916),

Gene: Jordan_73 Start: 47141, Stop: 46809, Start Num: 49
Candidate Starts for Jordan_73:
(Start: 49 @47141 has 104 MA's), (Start: 64 @47120 has 2 MA's), (73, 47072),

Gene: KaiHaiDragon_67 Start: 41323, Stop: 41616, Start Num: 49
Candidate Starts for KaiHaiDragon_67:
(Start: 49 @41323 has 104 MA's), (73, 41401), (82, 41464), (85, 41479), (86, 41482),

Gene: Kamashten_85 Start: 58100, Stop: 58363, Start Num: 59
Candidate Starts for Kamashten_85:
(Start: 42 @58049 has 1 MA's), (Start: 59 @58100 has 55 MA's), (73, 58163), (82, 58244),

Gene: Keitabear_82 Start: 58580, Stop: 58876, Start Num: 45
Candidate Starts for Keitabear_82:
(Start: 45 @58580 has 8 MA's), (Start: 59 @58613 has 55 MA's), (73, 58676), (82, 58757),

Gene: Kewpiedoll_85 Start: 58474, Stop: 58737, Start Num: 59
Candidate Starts for Kewpiedoll_85:
(Start: 45 @58441 has 8 MA's), (Start: 59 @58474 has 55 MA's), (73, 58537), (82, 58618),

Gene: KimmyK_84 Start: 56368, Stop: 56120, Start Num: 50
Candidate Starts for KimmyK_84:
(11, 56680), (16, 56602), (18, 56581), (32, 56509), (44, 56395), (Start: 50 @56368 has 30 MA's),
(Start: 55 @56359 has 3 MA's), (Start: 64 @56341 has 2 MA's), (76, 56284), (87, 56209), (92, 56161),

Gene: King2_67 Start: 46100, Stop: 45792, Start Num: 49
Candidate Starts for King2_67:
(Start: 49 @46100 has 104 MA's), (67, 46061),

Gene: Klevey_74 Start: 45284, Stop: 45039, Start Num: 61
Candidate Starts for Klevey_74:
(34, 45428), (Start: 61 @45284 has 4 MA's),

Gene: Kowalski_65 Start: 41388, Stop: 41687, Start Num: 49
Candidate Starts for Kowalski_65:
(Start: 49 @41388 has 104 MA's), (62, 41418), (82, 41535), (85, 41550), (86, 41553),

Gene: Kozie_64 Start: 42302, Stop: 42514, Start Num: 49
Candidate Starts for Kozie_64:
(46, 42293), (Start: 49 @42302 has 104 MA's), (69, 42344), (82, 42431),

Gene: Kroos_84 Start: 56981, Stop: 57241, Start Num: 59
Candidate Starts for Kroos_84:
(Start: 59 @56981 has 55 MA's), (73, 57044), (82, 57125), (89, 57164),

Gene: Kwobi_86 Start: 57490, Stop: 57750, Start Num: 59
Candidate Starts for Kwobi_86:
(Start: 59 @57490 has 55 MA's), (73, 57553), (82, 57634), (89, 57673),

Gene: LeeroyJ_73 Start: 46660, Stop: 46331, Start Num: 49
Candidate Starts for LeeroyJ_73:
(Start: 49 @46660 has 104 MA's),

Gene: Lennon_84 Start: 59043, Stop: 59306, Start Num: 59
Candidate Starts for Lennon_84:
(Start: 45 @59010 has 8 MA's), (Start: 59 @59043 has 55 MA's), (73, 59106), (82, 59187),

Gene: Leonard_86 Start: 58581, Stop: 58832, Start Num: 59
Candidate Starts for Leonard_86:
(Start: 59 @58581 has 55 MA's), (73, 58644), (79, 58704), (80, 58710), (82, 58722), (83, 58725),

Gene: LilHam_78 Start: 54602, Stop: 54862, Start Num: 59
Candidate Starts for LilHam_78:
(Start: 59 @54602 has 55 MA's), (73, 54665), (82, 54746), (89, 54785),

Gene: Lilbeanie_97 Start: 58823, Stop: 59047, Start Num: 65
Candidate Starts for Lilbeanie_97:
(Start: 65 @58823 has 1 MA's), (77, 58886), (92, 59015),

Gene: Lilmac1015_74 Start: 45377, Stop: 45132, Start Num: 61
Candidate Starts for Lilmac1015_74:
(34, 45521), (Start: 61 @45377 has 4 MA's),

Gene: LittleFortune_68 Start: 41679, Stop: 41972, Start Num: 49
Candidate Starts for LittleFortune_68:
(Start: 49 @41679 has 104 MA's), (73, 41757), (82, 41820), (85, 41835), (86, 41838),

Gene: Losacky_54 Start: 32783, Stop: 33049, Start Num: 51
Candidate Starts for Losacky_54:
(33, 32639), (Start: 49 @32774 has 104 MA's), (Start: 51 @32783 has 2 MA's), (69, 32840), (73, 32864), (75, 32870), (89, 32963),

Gene: Love_90 Start: 58854, Stop: 59117, Start Num: 59
Candidate Starts for Love_90:
(Start: 45 @58821 has 8 MA's), (Start: 59 @58854 has 55 MA's), (73, 58917), (82, 58998),

Gene: Lucretia_66 Start: 41301, Stop: 41594, Start Num: 49
Candidate Starts for Lucretia_66:
(44, 41277), (Start: 49 @41301 has 104 MA's), (73, 41379), (82, 41442), (85, 41457), (86, 41460),

Gene: Margaery_63 Start: 42267, Stop: 42482, Start Num: 49
Candidate Starts for Margaery_63:
(Start: 49 @42267 has 104 MA's), (70, 42309), (74, 42336), (78, 42381), (82, 42396),

Gene: Mariel_53 Start: 32980, Stop: 33258, Start Num: 49
Candidate Starts for Mariel_53:
(33, 32845), (Start: 49 @32980 has 104 MA's), (Start: 51 @32989 has 2 MA's), (69, 33049), (73, 33073), (75, 33079), (89, 33172),

Gene: Martha_72 Start: 46927, Stop: 46595, Start Num: 49
Candidate Starts for Martha_72:
(Start: 49 @46927 has 104 MA's), (Start: 64 @46906 has 2 MA's), (73, 46858), (97, 46663),

Gene: Maruru_94 Start: 57349, Stop: 57080, Start Num: 45
Candidate Starts for Maruru_94:
(Start: 45 @57349 has 8 MA's), (47, 57343), (Start: 49 @57337 has 104 MA's), (53, 57325), (63, 57310), (Start: 64 @57307 has 2 MA's), (71, 57274), (73, 57259),

Gene: Matzah_66 Start: 43128, Stop: 43340, Start Num: 49
Candidate Starts for Matzah_66:
(Start: 49 @43128 has 104 MA's), (69, 43170), (82, 43257), (89, 43293),

Gene: McCrothy_83 Start: 58830, Stop: 59093, Start Num: 59
Candidate Starts for McCrothy_83:
(Start: 42 @58779 has 1 MA's), (Start: 59 @58830 has 55 MA's), (73, 58893), (82, 58974),

Gene: McKinley_87 Start: 57834, Stop: 58097, Start Num: 59
Candidate Starts for McKinley_87:
(Start: 45 @57801 has 8 MA's), (Start: 59 @57834 has 55 MA's), (73, 57897), (82, 57978),

Gene: Megan_63 Start: 45613, Stop: 45837, Start Num: 60
Candidate Starts for Megan_63:
(39, 45556), (Start: 60 @45613 has 1 MA's), (72, 45652), (73, 45661), (86, 45739), (93, 45814),

Gene: MelBins_88 Start: 59070, Stop: 59321, Start Num: 59
Candidate Starts for MelBins_88:
(13, 58767), (Start: 59 @59070 has 55 MA's), (73, 59133), (79, 59193), (82, 59211), (83, 59214),

Gene: MementoMori_65 Start: 42723, Stop: 42935, Start Num: 49
Candidate Starts for MementoMori_65:
(Start: 49 @42723 has 104 MA's), (69, 42765), (82, 42852), (89, 42888),

Gene: MenE_54 Start: 32665, Stop: 32940, Start Num: 49
Candidate Starts for MenE_54:
(33, 32530), (Start: 49 @32665 has 104 MA's), (Start: 51 @32674 has 2 MA's), (69, 32731), (73, 32755), (75, 32761), (89, 32854),

Gene: Merry_ Start: 43564, Stop: 43854, Start Num: 49
Candidate Starts for Merry_:

(40, 43516), (Start: 49 @43564 has 104 MA's), (73, 43648), (82, 43711),

Gene: Metamorphoo_69 Start: 42657, Stop: 42950, Start Num: 49
Candidate Starts for Metamorphoo_69:
(Start: 49 @42657 has 104 MA's), (73, 42735), (82, 42798), (86, 42816),

Gene: MoontowerMania_85 Start: 58915, Stop: 59211, Start Num: 45
Candidate Starts for MoontowerMania_85:
(Start: 45 @58915 has 8 MA's), (Start: 59 @58948 has 55 MA's), (73, 59011), (82, 59092),

Gene: Mufasa8_98 Start: 57231, Stop: 56944, Start Num: 42
Candidate Starts for Mufasa8_98:
(Start: 42 @57231 has 1 MA's), (44, 57222), (53, 57186), (63, 57171), (83, 57057), (86, 57039),

Gene: Music_81 Start: 49006, Stop: 48698, Start Num: 49
Candidate Starts for Music_81:
(Start: 49 @49006 has 104 MA's), (80, 48865), (85, 48835), (98, 48736), (101, 48721),

Gene: Mutzi_85 Start: 56931, Stop: 56680, Start Num: 50
Candidate Starts for Mutzi_85:
(7, 57288), (10, 57261), (17, 57162), (19, 57138), (21, 57135), (32, 57072), (44, 56958), (Start: 50 @56931 has 30 MA's), (Start: 55 @56922 has 3 MA's), (Start: 64 @56904 has 2 MA's), (76, 56847), (87, 56772), (92, 56724),

Gene: NCRodriguez_54 Start: 32734, Stop: 33009, Start Num: 49
Candidate Starts for NCRodriguez_54:
(2, 32251), (3, 32278), (33, 32599), (Start: 49 @32734 has 104 MA's), (Start: 51 @32743 has 2 MA's), (69, 32800), (73, 32824), (75, 32830), (89, 32923),

Gene: Nandito_73 Start: 45609, Stop: 45370, Start Num: 61
Candidate Starts for Nandito_73:
(1, 46188), (9, 45990), (Start: 61 @45609 has 4 MA's),

Gene: NathanVaag_68 Start: 45795, Stop: 45487, Start Num: 49
Candidate Starts for NathanVaag_68:
(Start: 49 @45795 has 104 MA's), (67, 45756), (73, 45720), (91, 45582),

Gene: Natkenzie_88 Start: 58873, Stop: 59145, Start Num: 54
Candidate Starts for Natkenzie_88:
(23, 58672), (25, 58681), (28, 58693), (29, 58699), (Start: 54 @58873 has 13 MA's), (73, 58942), (82, 59020),

Gene: Nicole72_64 Start: 46099, Stop: 46344, Start Num: 55
Candidate Starts for Nicole72_64:
(Start: 55 @46099 has 3 MA's), (68, 46132), (78, 46213), (82, 46228), (95, 46330),

Gene: NoodlelyBoi_67 Start: 42162, Stop: 42455, Start Num: 49
Candidate Starts for NoodlelyBoi_67:
(41, 42120), (Start: 49 @42162 has 104 MA's), (63, 42189), (73, 42240), (82, 42303), (86, 42321),

Gene: Nordenberg_83 Start: 56540, Stop: 56839, Start Num: 45
Candidate Starts for Nordenberg_83:
(Start: 45 @56540 has 8 MA's), (Start: 59 @56573 has 55 MA's), (73, 56636), (82, 56717), (94, 56819),

Gene: Nostromo_67 Start: 43577, Stop: 43287, Start Num: 49
Candidate Starts for Nostromo_67:
(Start: 49 @43577 has 104 MA's), (89, 43391), (99, 43307),

Gene: Nubi_89 Start: 56334, Stop: 56083, Start Num: 50
Candidate Starts for Nubi_89:
(8, 56661), (11, 56646), (16, 56568), (32, 56475), (44, 56361), (Start: 50 @56334 has 30 MA's), (Start: 55 @56325 has 3 MA's), (Start: 64 @56307 has 2 MA's), (76, 56250), (87, 56175), (92, 56127),

Gene: Onika_65 Start: 41397, Stop: 41696, Start Num: 49
Candidate Starts for Onika_65:
(Start: 49 @41397 has 104 MA's), (62, 41427), (82, 41544), (85, 41559), (86, 41562),

Gene: Orkz_88 Start: 46496, Stop: 46179, Start Num: 49
Candidate Starts for Orkz_88:
(38, 46550), (Start: 49 @46496 has 104 MA's), (71, 46421), (93, 46229),

Gene: Paries_88 Start: 59125, Stop: 59388, Start Num: 59
Candidate Starts for Paries_88:
(Start: 45 @59092 has 8 MA's), (Start: 59 @59125 has 55 MA's), (73, 59188), (82, 59269),

Gene: Paschalis_66 Start: 41416, Stop: 41715, Start Num: 49
Candidate Starts for Paschalis_66:
(Start: 49 @41416 has 104 MA's), (62, 41446), (82, 41563), (85, 41578), (86, 41581),

Gene: Phauci_78 Start: 55646, Stop: 55897, Start Num: 59
Candidate Starts for Phauci_78:
(15, 55400), (Start: 59 @55646 has 55 MA's), (73, 55709), (79, 55769), (80, 55775), (82, 55787), (83, 55790),

Gene: PhedwardCullen_65 Start: 41139, Stop: 41432, Start Num: 49
Candidate Starts for PhedwardCullen_65:
(44, 41115), (Start: 49 @41139 has 104 MA's), (73, 41217), (82, 41280), (85, 41295), (86, 41298),

Gene: PhillyJawn_53 Start: 32405, Stop: 32680, Start Num: 49
Candidate Starts for PhillyJawn_53:
(6, 32009), (12, 32084), (33, 32270), (Start: 49 @32405 has 104 MA's), (Start: 51 @32414 has 2 MA's), (69, 32471), (73, 32495), (75, 32501), (89, 32594),

Gene: Phinally_86 Start: 58578, Stop: 58829, Start Num: 59
Candidate Starts for Phinally_86:
(Start: 59 @58578 has 55 MA's), (73, 58641), (79, 58701), (80, 58707), (82, 58719), (83, 58722),

Gene: Phingu_55 Start: 32629, Stop: 32904, Start Num: 49
Candidate Starts for Phingu_55:
(2, 32146), (3, 32173), (33, 32494), (Start: 49 @32629 has 104 MA's), (Start: 51 @32638 has 2 MA's), (69, 32695), (73, 32719), (75, 32725), (89, 32818),

Gene: Phlop_83 Start: 55971, Stop: 55723, Start Num: 50
Candidate Starts for Phlop_83:
(11, 56283), (16, 56205), (18, 56184), (32, 56112), (44, 55998), (Start: 50 @55971 has 30 MA's), (Start: 55 @55962 has 3 MA's), (Start: 64 @55944 has 2 MA's), (76, 55887), (87, 55812), (92, 55764),

Gene: Phonegingi_52 Start: 32447, Stop: 32722, Start Num: 49
Candidate Starts for Phonegingi_52:
(2, 31964), (3, 31991), (33, 32312), (Start: 49 @32447 has 104 MA's), (Start: 51 @32456 has 2 MA's), (69, 32513), (73, 32537), (75, 32543),

Gene: Phorgeous_66 Start: 41205, Stop: 41498, Start Num: 49
Candidate Starts for Phorgeous_66:
(44, 41181), (Start: 49 @41205 has 104 MA's), (73, 41283), (82, 41346), (85, 41361), (86, 41364),

Gene: Phrancesco_66 Start: 41528, Stop: 41821, Start Num: 49
Candidate Starts for Phrancesco_66:
(44, 41504), (Start: 49 @41528 has 104 MA's), (73, 41606), (82, 41669), (85, 41684), (86, 41687),

Gene: Piccoletto_69 Start: 45957, Stop: 45649, Start Num: 49
Candidate Starts for Piccoletto_69:
(Start: 49 @45957 has 104 MA's), (67, 45918), (73, 45882), (91, 45744),

Gene: Pickles13_51 Start: 32723, Stop: 32998, Start Num: 49
Candidate Starts for Pickles13_51:
(Start: 49 @32723 has 104 MA's), (Start: 51 @32732 has 2 MA's), (69, 32789), (73, 32813), (75, 32819), (89, 32912),

Gene: PierreOrion_66 Start: 41628, Stop: 41927, Start Num: 49
Candidate Starts for PierreOrion_66:
(Start: 49 @41628 has 104 MA's), (62, 41658), (82, 41775), (85, 41790), (86, 41793),

Gene: PinkCoffee_87 Start: 55835, Stop: 55587, Start Num: 50
Candidate Starts for PinkCoffee_87:
(7, 56192), (10, 56165), (17, 56066), (19, 56042), (21, 56039), (32, 55976), (44, 55862), (Start: 50 @55835 has 30 MA's), (Start: 55 @55826 has 3 MA's), (Start: 64 @55808 has 2 MA's), (76, 55751), (87, 55676), (92, 55628),

Gene: PiperSansNom_67 Start: 41707, Stop: 42006, Start Num: 49
Candidate Starts for PiperSansNom_67:
(Start: 49 @41707 has 104 MA's), (62, 41737), (82, 41854), (85, 41869), (86, 41872),

Gene: Piperis_67 Start: 41330, Stop: 41623, Start Num: 49
Candidate Starts for Piperis_67:
(Start: 49 @41330 has 104 MA's), (73, 41408), (82, 41471), (85, 41486), (86, 41489),

Gene: Pippa_73 Start: 46951, Stop: 46640, Start Num: 64
Candidate Starts for Pippa_73:
(Start: 49 @46972 has 104 MA's), (Start: 64 @46951 has 2 MA's), (73, 46903),

Gene: Portcullis_86 Start: 55977, Stop: 55729, Start Num: 50
Candidate Starts for Portcullis_86:
(11, 56289), (16, 56211), (18, 56190), (32, 56118), (44, 56004), (Start: 50 @55977 has 30 MA's), (Start: 55 @55968 has 3 MA's), (Start: 64 @55950 has 2 MA's), (76, 55893), (87, 55818), (92, 55770),

Gene: Prairie_70 Start: 44683, Stop: 44438, Start Num: 61
Candidate Starts for Prairie_70:
(34, 44827), (Start: 61 @44683 has 4 MA's), (89, 44518),

Gene: Pulchra_68 Start: 41726, Stop: 42019, Start Num: 49
Candidate Starts for Pulchra_68:
(44, 41702), (Start: 49 @41726 has 104 MA's), (73, 41804), (82, 41867), (85, 41882), (86, 41885),

Gene: PullumCavea_84 Start: 56148, Stop: 55900, Start Num: 50
Candidate Starts for PullumCavea_84:
(11, 56460), (16, 56382), (18, 56361), (32, 56289), (44, 56175), (Start: 50 @56148 has 30 MA's), (Start: 55 @56139 has 3 MA's), (Start: 64 @56121 has 2 MA's), (76, 56064), (87, 55989), (92, 55941),

Gene: Pumpkiney_88 Start: 57465, Stop: 57734, Start Num: 54
Candidate Starts for Pumpkiney_88:
(23, 57261), (25, 57270), (28, 57282), (Start: 54 @57465 has 13 MA's), (73, 57534), (82, 57612),

Gene: Quhwah_70 Start: 42015, Stop: 42308, Start Num: 49
Candidate Starts for Quhwah_70:
(Start: 49 @42015 has 104 MA's), (73, 42093), (82, 42156), (85, 42171), (86, 42174),

Gene: Ramiel05_65 Start: 41388, Stop: 41687, Start Num: 49
Candidate Starts for Ramiel05_65:
(Start: 49 @41388 has 104 MA's), (62, 41418), (82, 41535), (85, 41550), (86, 41553),

Gene: Ribeye_84 Start: 56456, Stop: 56716, Start Num: 59
Candidate Starts for Ribeye_84:
(Start: 59 @56456 has 55 MA's), (73, 56519), (82, 56600), (89, 56639),

Gene: RiverRaider_86 Start: 55943, Stop: 56194, Start Num: 59
Candidate Starts for RiverRaider_86:
(Start: 42 @55889 has 1 MA's), (Start: 59 @55943 has 55 MA's), (66, 55964), (73, 56006), (80, 56072), (82, 56084),

Gene: RobsFeet_70 Start: 42943, Stop: 43236, Start Num: 49
Candidate Starts for RobsFeet_70:
(Start: 49 @42943 has 104 MA's), (73, 43021), (82, 43084), (86, 43102),

Gene: Rockwell_65 Start: 41418, Stop: 41717, Start Num: 49
Candidate Starts for Rockwell_65:
(Start: 49 @41418 has 104 MA's), (62, 41448), (82, 41565), (85, 41580), (86, 41583),

Gene: Rofo_84 Start: 57573, Stop: 57836, Start Num: 59
Candidate Starts for Rofo_84:
(Start: 42 @57522 has 1 MA's), (Start: 59 @57573 has 55 MA's), (73, 57636), (82, 57717),

Gene: RogerDodger_89 Start: 56736, Stop: 56488, Start Num: 50
Candidate Starts for RogerDodger_89:
(11, 57048), (16, 56970), (18, 56949), (32, 56877), (44, 56763), (Start: 50 @56736 has 30 MA's), (Start: 55 @56727 has 3 MA's), (Start: 64 @56709 has 2 MA's), (76, 56652), (87, 56577), (92, 56529),

Gene: Salvador_86 Start: 56073, Stop: 55825, Start Num: 50
Candidate Starts for Salvador_86:
(11, 56385), (16, 56307), (32, 56214), (44, 56100), (Start: 50 @56073 has 30 MA's), (Start: 55 @56064 has 3 MA's), (Start: 64 @56046 has 2 MA's), (76, 55989), (87, 55914), (92, 55866),

Gene: Sampson_90 Start: 59024, Stop: 59296, Start Num: 54
Candidate Starts for Sampson_90:
(23, 58823), (25, 58832), (28, 58844), (29, 58850), (Start: 54 @59024 has 13 MA's), (73, 59093), (82, 59171),

Gene: Sanjuju_82 Start: 57928, Stop: 58191, Start Num: 59
Candidate Starts for Sanjuju_82:
(Start: 45 @57895 has 8 MA's), (Start: 59 @57928 has 55 MA's), (73, 57991), (82, 58072),

Gene: Saronaya_86 Start: 57313, Stop: 57573, Start Num: 59
Candidate Starts for Saronaya_86:
(Start: 59 @57313 has 55 MA's), (73, 57376), (82, 57457),

Gene: Savannah_65 Start: 41445, Stop: 41738, Start Num: 49
Candidate Starts for Savannah_65:
(Start: 49 @41445 has 104 MA's), (73, 41523), (82, 41586), (85, 41601), (86, 41604),

Gene: Savbucketdawg_81 Start: 55415, Stop: 55167, Start Num: 50
Candidate Starts for Savbucketdawg_81:
(11, 55727), (16, 55649), (18, 55628), (32, 55556), (44, 55442), (Start: 50 @55415 has 30 MA's), (Start: 55 @55406 has 3 MA's), (Start: 64 @55388 has 2 MA's), (76, 55331), (87, 55256), (92, 55208),

Gene: SchottB_83 Start: 57376, Stop: 57636, Start Num: 59
Candidate Starts for SchottB_83:
(Start: 59 @57376 has 55 MA's), (73, 57439), (82, 57520), (89, 57559),

Gene: Scioto_89 Start: 58874, Stop: 59146, Start Num: 54
Candidate Starts for Scioto_89:
(23, 58673), (25, 58682), (28, 58694), (29, 58700), (Start: 54 @58874 has 13 MA's), (73, 58943), (82, 59021),

Gene: ScoobySnack_49 Start: 32220, Stop: 32489, Start Num: 51
Candidate Starts for ScoobySnack_49:
(2, 31728), (3, 31755), (12, 31890), (33, 32076), (Start: 49 @32211 has 104 MA's), (Start: 51 @32220 has 2 MA's), (69, 32280), (73, 32304), (75, 32310),

Gene: Scumberland_68 Start: 41640, Stop: 41933, Start Num: 49
Candidate Starts for Scumberland_68:
(Start: 49 @41640 has 104 MA's), (63, 41667), (73, 41718), (82, 41781), (85, 41796), (86, 41799),

Gene: Sedona_82 Start: 58425, Stop: 58688, Start Num: 59
Candidate Starts for Sedona_82:
(Start: 45 @58392 has 8 MA's), (Start: 59 @58425 has 55 MA's), (73, 58488), (82, 58569),

Gene: Selwyn23_67 Start: 41557, Stop: 41850, Start Num: 49
Candidate Starts for Selwyn23_67:
(44, 41533), (Start: 49 @41557 has 104 MA's), (73, 41635), (82, 41698), (85, 41713), (86, 41716),

Gene: Sendy_88 Start: 56153, Stop: 55905, Start Num: 50
Candidate Starts for Sendy_88:
(11, 56465), (16, 56387), (18, 56366), (32, 56294), (44, 56180), (Start: 50 @56153 has 30 MA's), (Start: 55 @56144 has 3 MA's), (Start: 64 @56126 has 2 MA's), (76, 56069), (87, 55994), (92, 55946),

Gene: Shade_72 Start: 46747, Stop: 46415, Start Num: 49
Candidate Starts for Shade_72:
(Start: 49 @46747 has 104 MA's), (Start: 64 @46726 has 2 MA's), (73, 46678),

Gene: SharkTale_89 Start: 57477, Stop: 57226, Start Num: 50
Candidate Starts for SharkTale_89:
(32, 57618), (44, 57504), (Start: 50 @57477 has 30 MA's), (Start: 55 @57468 has 3 MA's), (63, 57453), (Start: 64 @57450 has 2 MA's), (76, 57393), (87, 57318), (92, 57270),

Gene: Shinji_85 Start: 56154, Stop: 55906, Start Num: 50
Candidate Starts for Shinji_85:
(11, 56466), (16, 56388), (18, 56367), (32, 56295), (44, 56181), (Start: 50 @56154 has 30 MA's), (Start: 55 @56145 has 3 MA's), (Start: 64 @56127 has 2 MA's), (76, 56070), (87, 55995), (92, 55947),

Gene: Shivanishola_86 Start: 56589, Stop: 56852, Start Num: 59
Candidate Starts for Shivanishola_86:
(Start: 45 @56556 has 8 MA's), (Start: 59 @56589 has 55 MA's), (73, 56652), (82, 56733),

Gene: Shotgun_66 Start: 41324, Stop: 41617, Start Num: 49
Candidate Starts for Shotgun_66:
(44, 41300), (Start: 49 @41324 has 104 MA's), (73, 41402), (82, 41465), (85, 41480), (86, 41483),

Gene: Shrubaron_70 Start: 42538, Stop: 42831, Start Num: 49
Candidate Starts for Shrubaron_70:
(Start: 49 @42538 has 104 MA's), (73, 42616), (82, 42679), (86, 42697),

Gene: Sicarius2_74 Start: 44932, Stop: 44645, Start Num: 49
Candidate Starts for Sicarius2_74:
(Start: 49 @44932 has 104 MA's), (69, 44884), (73, 44860), (100, 44653),

Gene: SirFrank_66 Start: 41608, Stop: 41901, Start Num: 49
Candidate Starts for SirFrank_66:
(Start: 49 @41608 has 104 MA's), (63, 41635), (73, 41686), (82, 41749), (86, 41767),

Gene: Sitar_83 Start: 58447, Stop: 58710, Start Num: 59
Candidate Starts for Sitar_83:
(Start: 45 @58414 has 8 MA's), (Start: 59 @58447 has 55 MA's), (73, 58510), (82, 58591),

Gene: Sixsevenium_87 Start: 57614, Stop: 57372, Start Num: 55
Candidate Starts for Sixsevenium_87:
(4, 58055), (14, 57896), (22, 57827), (26, 57803), (27, 57800), (43, 57647), (Start: 50 @57620 has 30 MA's), (52, 57617), (Start: 55 @57614 has 3 MA's), (Start: 64 @57596 has 2 MA's), (76, 57539), (92, 57416),

Gene: Skugga_66 Start: 41866, Stop: 42165, Start Num: 49
Candidate Starts for Skugga_66:
(Start: 49 @41866 has 104 MA's), (73, 41950), (82, 42013), (85, 42028), (86, 42031),

Gene: Smarties_76 Start: 43251, Stop: 43544, Start Num: 49
Candidate Starts for Smarties_76:
(Start: 49 @43251 has 104 MA's), (73, 43329), (82, 43392), (86, 43410),

Gene: SmokingBunny_87 Start: 57069, Stop: 56821, Start Num: 50

Candidate Starts for SmokingBunny_87:
(11, 57381), (16, 57303), (32, 57210), (44, 57096), (Start: 50 @57069 has 30 MA's), (Start: 55 @57060 has 3 MA's), (Start: 64 @57042 has 2 MA's), (76, 56985), (87, 56910), (92, 56862),

Gene: Sonali_93 Start: 57959, Stop: 57690, Start Num: 45
Candidate Starts for Sonali_93:
(Start: 45 @57959 has 8 MA's), (47, 57953), (Start: 49 @57947 has 104 MA's), (53, 57935), (63, 57920), (Start: 64 @57917 has 2 MA's), (71, 57884), (73, 57869),

Gene: Sonny_72 Start: 46702, Stop: 46370, Start Num: 49
Candidate Starts for Sonny_72:
(Start: 49 @46702 has 104 MA's), (Start: 64 @46681 has 2 MA's), (73, 46633),

Gene: StevieBAY_73 Start: 46953, Stop: 46624, Start Num: 49
Candidate Starts for StevieBAY_73:
(Start: 49 @46953 has 104 MA's),

Gene: Stichling_80 Start: 55984, Stop: 56244, Start Num: 59
Candidate Starts for Stichling_80:
(Start: 59 @55984 has 55 MA's), (73, 56047), (82, 56128), (89, 56167),

Gene: StorminNorm_85 Start: 57257, Stop: 57517, Start Num: 59
Candidate Starts for StorminNorm_85:
(Start: 59 @57257 has 55 MA's), (73, 57320), (82, 57401),

Gene: Stultus_79 Start: 56719, Stop: 56982, Start Num: 59
Candidate Starts for Stultus_79:
(Start: 45 @56686 has 8 MA's), (Start: 59 @56719 has 55 MA's), (73, 56782), (82, 56863),

Gene: Sunny_ Start: 43566, Stop: 43856, Start Num: 49
Candidate Starts for Sunny_:
(40, 43518), (Start: 49 @43566 has 104 MA's), (73, 43650), (82, 43713),

Gene: SunnyJune_86 Start: 47606, Stop: 47289, Start Num: 49
Candidate Starts for SunnyJune_86:
(31, 47762), (38, 47660), (Start: 49 @47606 has 104 MA's), (93, 47339),

Gene: Sunshine23_94 Start: 57567, Stop: 57268, Start Num: 45
Candidate Starts for Sunshine23_94:
(Start: 45 @57567 has 8 MA's), (47, 57561), (Start: 49 @57555 has 104 MA's), (53, 57543), (63, 57528), (Start: 64 @57525 has 2 MA's), (71, 57492), (73, 57477),

Gene: TaeYoung_73 Start: 46899, Stop: 46567, Start Num: 49
Candidate Starts for TaeYoung_73:
(Start: 49 @46899 has 104 MA's), (Start: 64 @46878 has 2 MA's), (73, 46830), (97, 46635),

Gene: Tangent_87 Start: 57279, Stop: 57545, Start Num: 59
Candidate Starts for Tangent_87:
(Start: 45 @57246 has 8 MA's), (Start: 59 @57279 has 55 MA's), (73, 57342), (82, 57423), (94, 57525),

Gene: Tangerine_84 Start: 56314, Stop: 56574, Start Num: 59
Candidate Starts for Tangerine_84:
(Start: 59 @56314 has 55 MA's), (73, 56377), (82, 56458), (89, 56497),

Gene: Tardus_90 Start: 59420, Stop: 59689, Start Num: 54
Candidate Starts for Tardus_90:
(Start: 54 @59420 has 13 MA's), (73, 59489), (82, 59567),

Gene: Teamocil_70 Start: 41573, Stop: 41866, Start Num: 49
Candidate Starts for Teamocil_70:
(36, 41480), (Start: 49 @41573 has 104 MA's), (73, 41651), (82, 41714), (86, 41732),

Gene: Terij_64 Start: 41499, Stop: 41717, Start Num: 49
Candidate Starts for Terij_64:
(Start: 49 @41499 has 104 MA's), (69, 41541), (70, 41544), (74, 41571), (82, 41631), (85, 41646),

Gene: Thing3_85 Start: 58100, Stop: 58363, Start Num: 59
Candidate Starts for Thing3_85:
(Start: 42 @58049 has 1 MA's), (Start: 59 @58100 has 55 MA's), (73, 58163), (82, 58244),

Gene: TillyBobJoe_84 Start: 55955, Stop: 55707, Start Num: 50
Candidate Starts for TillyBobJoe_84:
(7, 56312), (10, 56285), (17, 56186), (19, 56162), (21, 56159), (32, 56096), (44, 55982), (Start: 50 @55955 has 30 MA's), (Start: 55 @55946 has 3 MA's), (Start: 64 @55928 has 2 MA's), (76, 55871), (87, 55796), (92, 55748),

Gene: Timinator_73 Start: 46773, Stop: 46444, Start Num: 49
Candidate Starts for Timinator_73:
(Start: 49 @46773 has 104 MA's),

Gene: Togo_86 Start: 57069, Stop: 56821, Start Num: 50
Candidate Starts for Togo_86:
(11, 57381), (16, 57303), (32, 57210), (44, 57096), (Start: 50 @57069 has 30 MA's), (Start: 55 @57060 has 3 MA's), (Start: 64 @57042 has 2 MA's), (76, 56985), (87, 56910), (92, 56862),

Gene: Twister6_85 Start: 55418, Stop: 55170, Start Num: 50
Candidate Starts for Twister6_85:
(11, 55730), (16, 55652), (18, 55631), (32, 55559), (44, 55445), (Start: 50 @55418 has 30 MA's), (Start: 55 @55409 has 3 MA's), (Start: 64 @55391 has 2 MA's), (76, 55334), (87, 55259), (92, 55211),

Gene: Tycho_84 Start: 56791, Stop: 57051, Start Num: 59
Candidate Starts for Tycho_84:
(Start: 59 @56791 has 55 MA's), (73, 56854), (82, 56935), (89, 56974),

Gene: Tyrumbra_65 Start: 42225, Stop: 42518, Start Num: 49
Candidate Starts for Tyrumbra_65:
(Start: 49 @42225 has 104 MA's), (73, 42303), (82, 42366), (86, 42384),

Gene: Valary_87 Start: 57061, Stop: 56813, Start Num: 50
Candidate Starts for Valary_87:
(11, 57373), (16, 57295), (18, 57274), (32, 57202), (44, 57088), (Start: 50 @57061 has 30 MA's), (Start: 55 @57052 has 3 MA's), (Start: 64 @57034 has 2 MA's), (76, 56977), (87, 56902), (92, 56854),

Gene: VanDeWege_88 Start: 56586, Stop: 56338, Start Num: 50
Candidate Starts for VanDeWege_88:

(11, 56898), (16, 56820), (18, 56799), (32, 56727), (44, 56613), (Start: 50 @56586 has 30 MA's), (Start: 55 @56577 has 3 MA's), (Start: 64 @56559 has 2 MA's), (76, 56502), (87, 56427), (92, 56379),

Gene: Verity_87 Start: 60121, Stop: 60393, Start Num: 54
Candidate Starts for Verity_87:
(Start: 42 @60076 has 1 MA's), (Start: 54 @60121 has 13 MA's), (63, 60139), (73, 60190), (82, 60268), (90, 60316),

Gene: ViaConlectus_87 Start: 57801, Stop: 58070, Start Num: 54
Candidate Starts for ViaConlectus_87:
(Start: 42 @57756 has 1 MA's), (Start: 54 @57801 has 13 MA's), (63, 57819), (73, 57870), (82, 57948),

Gene: Vibaki_78 Start: 47924, Stop: 47616, Start Num: 49
Candidate Starts for Vibaki_78:
(Start: 49 @47924 has 104 MA's), (80, 47783), (85, 47753), (98, 47654), (101, 47639),

Gene: Violeta_54 Start: 32507, Stop: 32782, Start Num: 49
Candidate Starts for Violeta_54:
(33, 32372), (Start: 49 @32507 has 104 MA's), (Start: 51 @32516 has 2 MA's), (69, 32573), (73, 32597), (75, 32603), (89, 32696),

Gene: Vitus_81 Start: 47279, Stop: 46962, Start Num: 49
Candidate Starts for Vitus_81:
(37, 47342), (39, 47330), (Start: 49 @47279 has 104 MA's), (80, 47132), (93, 47024),

Gene: Vivi2_88 Start: 58335, Stop: 58601, Start Num: 59
Candidate Starts for Vivi2_88:
(Start: 45 @58302 has 8 MA's), (Start: 59 @58335 has 55 MA's), (73, 58398), (82, 58479), (94, 58581),

Gene: Warren_52 Start: 32462, Stop: 32737, Start Num: 49
Candidate Starts for Warren_52:
(Start: 49 @32462 has 104 MA's), (Start: 51 @32471 has 2 MA's), (69, 32528), (73, 32552), (75, 32558), (89, 32651),

Gene: Winchester007_54 Start: 32210, Stop: 32485, Start Num: 49
Candidate Starts for Winchester007_54:
(6, 31814), (12, 31889), (33, 32075), (Start: 49 @32210 has 104 MA's), (Start: 51 @32219 has 2 MA's), (69, 32276), (73, 32300), (75, 32306), (89, 32399),

Gene: Wizard_81 Start: 55921, Stop: 55673, Start Num: 50
Candidate Starts for Wizard_81:
(11, 56233), (16, 56155), (18, 56134), (32, 56062), (44, 55948), (Start: 50 @55921 has 30 MA's), (Start: 55 @55912 has 3 MA's), (Start: 64 @55894 has 2 MA's), (76, 55837), (87, 55762), (92, 55714),

Gene: Wyborn_73 Start: 45667, Stop: 45380, Start Num: 49
Candidate Starts for Wyborn_73:
(Start: 49 @45667 has 104 MA's), (69, 45619), (73, 45595), (100, 45388),

Gene: Yeti_68 Start: 41362, Stop: 41655, Start Num: 49
Candidate Starts for Yeti_68:
(Start: 49 @41362 has 104 MA's), (73, 41440), (82, 41503), (85, 41518), (86, 41521),

Gene: YorkOnyx_83 Start: 56426, Stop: 56686, Start Num: 59

Candidate Starts for YorkOnyx_83:
(Start: 59 @56426 has 55 MA's), (73, 56489), (82, 56570), (89, 56609),

Gene: YungMoney_85 Start: 57771, Stop: 57520, Start Num: 50
Candidate Starts for YungMoney_85:
(7, 58128), (10, 58101), (17, 58002), (19, 57978), (21, 57975), (32, 57912), (44, 57798), (Start: 50 @57771 has 30 MA's), (Start: 55 @57762 has 3 MA's), (Start: 64 @57744 has 2 MA's), (76, 57687), (87, 57612), (92, 57564),

Gene: Zapato_66 Start: 42216, Stop: 42509, Start Num: 49
Candidate Starts for Zapato_66:
(Start: 49 @42216 has 104 MA's), (73, 42294), (82, 42357),

Gene: Zartrosa_74 Start: 46999, Stop: 46667, Start Num: 49
Candidate Starts for Zartrosa_74:
(Start: 49 @46999 has 104 MA's), (Start: 64 @46978 has 2 MA's), (73, 46930),

Gene: Zipp_88 Start: 60092, Stop: 60364, Start Num: 54
Candidate Starts for Zipp_88:
(Start: 42 @60047 has 1 MA's), (Start: 54 @60092 has 13 MA's), (63, 60110), (73, 60161), (82, 60239), (90, 60287),

Gene: Zitch_90 Start: 58345, Stop: 58614, Start Num: 54
Candidate Starts for Zitch_90:
(Start: 54 @58345 has 13 MA's), (63, 58363), (73, 58414), (82, 58492),