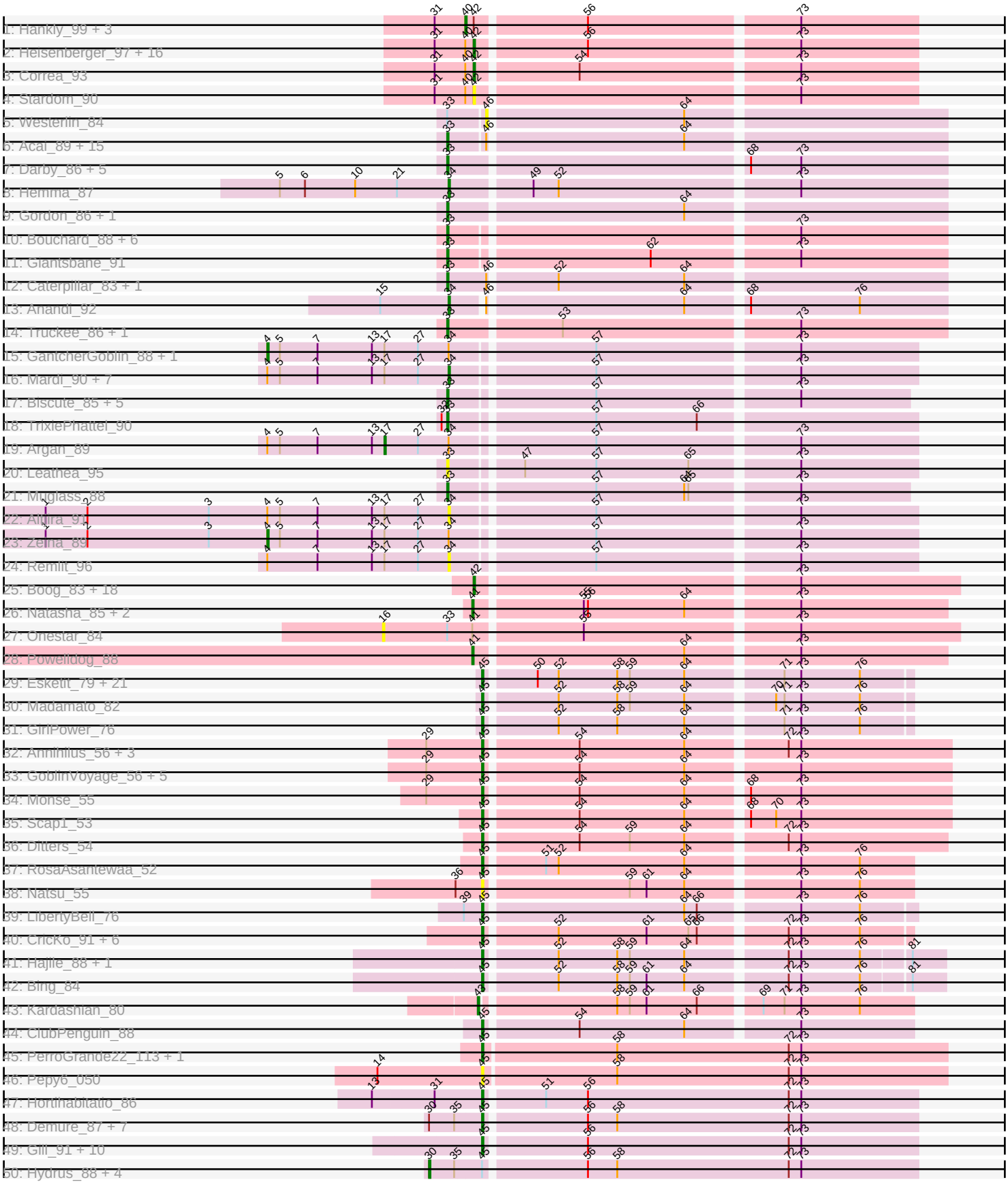
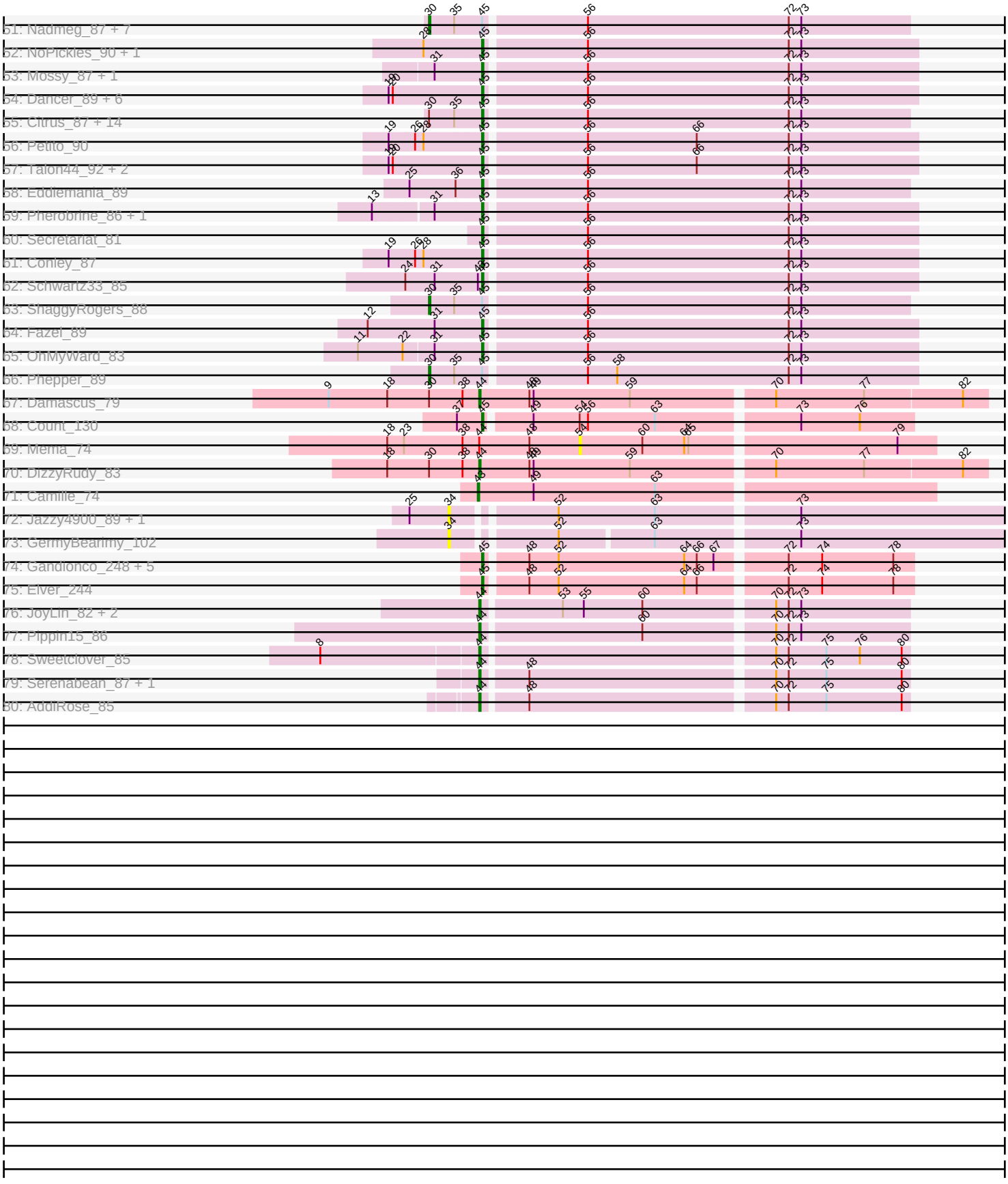
Pham 347208


1: Hankly_99 + 3
2: Heisenberger_97 + 16
3: Correa_93
4: Stardom_90
5: Westerlin_84
6: Acai_89 + 15
7: Darby_86 + 5
8: Hemma_87
9: Gordon_86 + 1
10: Bouchard_88 + 6
11: Giantsbane_91
12: Caterpillar_83 + 1
13: Anandi_92
14: Truckee_86 + 1
15: GantcherGoblin_88 + 1
16: Mardi_90 + 7
17: Biscuit_85 + 5
18: TrixiePhattel_90
19: Argan_89
20: Leathea_95
21: Muglass_88
22: Alpira_91
23: Zelna_89
24: Remlit_96
25: Boog_83 + 18
26: Natasha_85 + 2
27: Onestar_84
28: Powelldog_88
29: Esketit_79 + 21
30: Madamato_82
31: GimPower_76
32: Anninius_56 + 3
33: GoblinVoyage_56 + 5
34: Monse_55
35: Scap1_53
36: Ditters_54
37: RosaAsantewaa_52
38: Natsu_55
39: LibertyBell_76
40: Cricko_91 + 6
41: Hajlie_88 + 1
42: Bing_84
43: Kardashian_80
44: ClubPenguin_88
45: PerroGrande22_113 + 1
46: Pepy6_050
47: Hortihabitatio_86
48: Demure_87 + 7
49: Gill_91 + 10
50: Hydrus_88 + 4

Pham 347208


51: Nadmeg_87 + 7
52: NoPickles_90 + 1
53: Mossy_87 + 1
54: Dancer_89 + 6
55: Citrus_87 + 14
56: Petito_90
57: Talon44_92 + 2
58: Eddiemania_89
59: Pherobrine_86 + 1
60: Secretariat_81
61: Conley_87
62: Schwartz33_85
63: ShaggyRogers_88
64: Fazel_89
65: OhMyWard_83
66: Phepper_89
67: Damascus_79
68: Count_130
69: Mema_74
70: DizzyRudy_83
71: Camille_74
72: Jazzy4900_89 + 1
73: GermyBeanmy_102
74: Gandlonco_248 + 5
75: Elver_244
76: JoyLin_82 + 2
77: Pippin15_86
78: Sweetclover_85
79: Serenabean_87 + 1
80: AddiRose_85

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 347208 Report

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

Pham number 347208 has 260 members, 40 are drafts.

Phages represented in each track:
• Track 1 : Hankly_99, Bowling_98, Circum_96, NapoleonB_97
• Track 2 : Heisenberger_97, Elsa_94, Arcadia_94, Nason_94, Kardesai_97, GoCrazy_92, KeaneyLin_92, Dynamite_96, Mooshroom_98, Xenomorph_92, JEGGS_97, BenitoAntonio_96, Mudcat_92, Benllo_94, Tribby_99, Cheesy_98, YoshiYama_93
• Track 3 : Correa_93
• Track 4 : Stardom_90
• Track 5 : Westerlin_84
• Track 6 : Acai_89, Issa_82, ScienceWizSam_93, Nightmare_89, MiniBagel_90, LucySwiss_93, Dinallo_80, CapnMurica_85, Tenno_89, Teacup_85, Brunswick_93, Inked_92, Niktson_90, DevitoJr_89, Zippen_93, ElephantMan_90
• Track 7 : Darby_86, CastorTray_90, Ingrid_92, Loretta_88, AreFloNak_97, Trustiboi_87
• Track 8 : Hemma_87
• Track 9 : Gordon_86, Synepsis_81
• Track 10 : Bouchard_88, LilHuddy_89, Shepard_89, Tokki_95, Tipton_91, Chlochlo_91, Phaby_89
• Track 11 : Giantsbane_91
• Track 12 : Caterpillar_83, MediumFry_82
• Track 13 : Anandi_92
• Track 14 : Truckee_86, Makai_89
• Track 15 : GantcherGoblin_88, Phaila_90
• Track 16 : Mardi_90, KevinMinion_87, Stardrop_91, BlackHoleSun_91, Uzumaki_89, PoeMe_88, Navi1117_92, Tenney120_90
• Track 17 : Biscute_85, Lewando_86, Kinny_89, Barbonzobean_88, BarbieDoll_89, Renaldo_90
• Track 18 : TrixiePhattel_90
• Track 19 : Argan_89
• Track 20 : Leathea_95
• Track 21 : Muglass_88
• Track 22 : Altjira_91
• Track 23 : Zeina_89
• Track 24 : Remlit_96
• Track 25 : Boog_83, StarLord_84, HerbBucket_84, Linda_84, Djungelskog_83, Spain_84, DoctorPepper_83, Sloopyjoe_84, MrAaronian_84, Stayer_84, Michelle_84, Jeremy4pt0_83, ProfFrink_84, Sprinkle_81, BronxBay_84, Egad_85, Salk_84, Shiba_83, Raunak_84

• Track 26 : Natasha_85, RustyBoy_86, Sporto_81
• Track 27 : Onestar_84
• Track 28 : Powelldog_88
• Track 29 : Esketit_79, OlympicHelado_85, FidgetOrca_85, HazuAndZazu_80, Spectropatronm_82, DrGrey_79, Rima_84, TonyStarch_82, Soshi_82, TieDye_79, FrodoSwaggins_81, Jaylociraptor_83, Meibysrarus_81, TaidaOne_83, IceWarrior_83, Indigenous_85, Hoshi_84, Maya_83, Namo_85, CherryBlossom_83, Espio_81, Popy_81
• Track 30 : Madamato_82
• Track 31 : GirlPower_76
• Track 32 : Annihilus_56, SheRa_56, HotFries_54, Moozy_55
• Track 33 : GoblinVoyage_56, RavenPuff_56, Bilo_55, PherryCruz_55, Doxi13_57, Sangak_55
• Track 34 : Monse_55
• Track 35 : Scap1_53
• Track 36 : Ditters_54
• Track 37 : RosaAsantewaa_52
• Track 38 : Natsu_55
• Track 39 : LibertyBell_76
• Track 40 : CricKo_91, Rainydai_88, FromIndy_89, SendItCS_83, Miek_85, Regigigas_91, Thiqqums_91
• Track 41 : Hajile_88, Wigberry_86
• Track 42 : Bing_84
• Track 43 : Kardashian_80
• Track 44 : ClubPenguin_88
• Track 45 : PerroGrande22_113, Poco6_049
• Track 46 : Pepy6_050
• Track 47 : Hortihabitatio_86
• Track 48 : Demure_87, ArtetaBall_87, Glintora_91, Untouchable_90, Kenosha_87, Chikenjars_89, CWormy_86, Madvan_87
• Track 49 : Gill_91, Kerry_90, Magel_92, Tanis_90, Capybara_88, Trufflozitus_90, Avazak_90, Gravy_90, Odesza_89, Roney_89, Tairn4Wing_92
• Track 50 : Hydrus_88, Arataki_88, Nithya_88, Dialga_89, Zeph_91
• Track 51 : Nadmeg_87, BetterYeti_87, Figliar_87, Crocheter_88, Runhaar_86, PestoPenguin_89, Burley_87, AlainaMarie_89
• Track 52 : NoPickles_90, Captrips_88
• Track 53 : Mossy_87, Blanky_82
• Track 54 : Dancer_89, Bugg_93, JulesRay_89, ChickyNuggy_91, Artorias_89, Football_94, FortCran_89
• Track 55 : Citrus_87, Vardy_87, Jodelie19_88, Duffington_89, Rickmore_89, TenaciousP_90, Aloe25_89, Gusicorn_89, BluerMoon_87, EndAve_90, Tonaltzin_88, Luthien_88, Aflac_89, OlgasClover_90, MajinBuu_89
• Track 56 : Petito_90
• Track 57 : Talon44_92, SweetCrkHerbs_92, Perkunas_91
• Track 58 : Eddiemania_89
• Track 59 : Pherobrine_86, Mysticmoon_86
• Track 60 : Secretariat_81
• Track 61 : Conley_87
• Track 62 : Schwartz33_85
• Track 63 : ShaggyRogers_88
• Track 64 : Fazel_89
• Track 65 : OhMyWard_83
• Track 66 : Phepper_89

• Track 67 : Damascus_79
• Track 68 : Count_130
• Track 69 : Mema_74
• Track 70 : DizzyRudy_83
• Track 71 : Camille_74
• Track 72 : Jazzy4900_89, Sunny4976_88
• Track 73 : GermyBearimy_102
• Track 74 : Gandionco_248, Paella_245, JeNeSaisPas_251, Qui_244, Marianna39_248, Kureo_245
• Track 75 : Elver_244
• Track 76 : JoyLin_82, Yotsuba_82, Eevee_81
• Track 77 : Pippin15_86
• Track 78 : Sweetclover_85
• Track 79 : Serenabean_87, Daddyjeff_87
• Track 80 : AddiRose_85

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

The start number called the most often in the published annotations is 45, it was called in 101 of the 220 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_89, Aloe25_89, Annihilus_56, ArtetaBall_87, Artorias_89, Avazak_90, Bilo_55, Bing_84, Blanky_82, BluerMoon_87, Bugg_93, CWormy_86, Captrips_88, Capybara_88, CherryBlossom_83, ChickyNuggy_91, Chikenjars_89, Citrus_87, ClubPenguin_88, Conley_87, Count_130, CricKo_91, Dancer_89, Demure_87, Ditters_54, Doxi13_57, DrGrey_79, Duffington_89, Eddiemania_89, Elver_244, EndAve_90, Esketit_79, Espio_81, Fazel_89, FidgetOrca_85, Football_94, FortCran_89, FrodoSwaggins_81, FromIndy_89, Gandionco_248, Gill_91, GirlPower_76, Glintora_91, GoblinVoyage_56, Gravy_90, Gusicorn_89, Hajile_88, HazuAndZazu_80, Hortihabitatio_86, Hoshi_84, HotFries_54, IceWarrior_83, Indigenous_85, Jaylociraptor_83, JeNeSaisPas_251, Jodelie19_88, JulesRay_89, Kenosha_87, Kerry_90, Kureo_245, LibertyBell_76, Luthien_88, Madamato_82, Madvan_87, Magel_92, MajinBuu_89, Marianna39_248, Maya_83, Meibysrarus_81, Miek_85, Monse_55, Moozy_55, Mossy_87, Mysticmoon_86, Namo_85, Natsu_55, NoPickles_90, Odesza_89, OhMyWard_83, OlgasClover_90, OlympicHelado_85, Paella_245, Pepy6_050, Perkunas_91, PerroGrande22_113, Petito_90, Pherobrine_86, PherryCruz_55, Poco6_049, Popy_81, Qui_244, Rainydai_88, RavenPuff_56, Regigigas_91, Rickmore_89, Rima_84, Roney_89, RosaAsantewaa_52, Sangak_55, Scap1_53, Schwartz33_85, Secretariat_81, SendItCS_83, SheRa_56, Soshi_82, Spectropatronm_82, SweetCrkHerbs_92, TaidaOne_83, Tairn4Wing_92, Talon44_92, Tanis_90, TenaciousP_90, Thiqqums_91, TieDye_79, Tonaltzin_88, TonyStarch_82, Trufflozitus_90, Untouchable_90, Vardy_87, Wigberry_86,

Genes that have the "Most Annotated" start but do not call it:
• AlainaMarie_89, Arataki_88, BetterYeti_87, Burley_87, Crocheter_88, Dialga_89, Figliar_87, Hydrus_88, Nadmeg_87, Nithya_88, PestoPenguin_89, Phepper_89, Runhaar_86, ShaggyRogers_88, Zeph_91,

Genes that do not have the "Most Annotated" start:
• Acai_89, AddiRose_85, Altjira_91, Anandi_92, Arcadia_94, AreFloNak_97, Argan_89, BarbieDoll_89, Barbonzobean_88, BenitoAntonio_96, Benllo_94, Biscute_85, BlackHoleSun_91, Boog_83, Bouchard_88, Bowling_98, BronxBay_84, Brunswick_93, Camille_74, CapnMurica_85, CastorTray_90, Caterpillar_83, Cheesy_98, Chlochlo_91, Circum_96, Correa_93, Daddyjeff_87, Damascus_79, Darby_86, DevitoJr_89, Dinallo_80, DizzyRudy_83, Djungelskog_83, DoctorPepper_83, Dynamite_96, Eevee_81, Egad_85, ElephantMan_90, Elsa_94, GantcherGoblin_88, GermyBearimy_102, Giantsbane_91, GoCrazy_92, Gordon_86, Hankly_99, Heisenberger_97, Hemma_87, HerbBucket_84, Ingrid_92, Inked_92, Issa_82, JEGGS_97, Jazzy4900_89, Jeremy4pt0_83, JoyLin_82, Kardashian_80, Kardesai_97, KeaneyLin_92, KevinMinion_87, Kinny_89, Leathea_95, Lewando_86, LilHuddy_89, Linda_84, Loretta_88, LucySwiss_93, Makai_89, Mardi_90, MediumFry_82, Mema_74, Michelle_84, MiniBagel_90, Mooshroom_98, MrAaronian_84, Mudcat_92, Muglass_88, NapoleonB_97, Nason_94, Natasha_85, Navi1117_92, Nightmare_89, Niktson_90, Onestar_84, Phaby_89, Phaila_90, Pippin15_86, PoeMe_88, Powelldog_88, ProfFrink_84, Raunak_84, Remlit_96, Renaldo_90, RustyBoy_86, Salk_84, ScienceWizSam_93, Serenabean_87, Shepard_89, Shiba_83, Sloopyjoe_84, Spain_84, Sporto_81, Sprinkle_81, StarLord_84, Stardom_90, Stardrop_91, Stayer_84, Sunny4976_88, Sweetclover_85, Synepsis_81, Teacup_85, Tenney120_90, Tenno_89, Tipton_91, Tokki_95, Tribby_99, TrixiePhattel_90, Truckee_86, Trustiboi_87, Uzumaki_89, Westerlin_84, Xenomorph_92, YoshiYama_93, Yotsuba_82, Zeina_89, Zippen_93,

Summary by start number:

Start 4:
• Found in 14 of 260 (5.4%) of genes in pham
• Manual Annotations of this start: 3 of 220
• Called 21.4% of time when present
• Phage (with cluster) where this start called: GantcherGoblin_88 (AU6), Phaila_90 (AU6), Zeina_89 (AU6),

Start 16:
• Found in 1 of 260 (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: Onestar_84 (AW),

Start 17:
• Found in 14 of 260 (5.4%) of genes in pham
• Manual Annotations of this start: 1 of 220
• Called 7.1% of time when present
• Phage (with cluster) where this start called: Argan_89 (AU6),

Start 30:
• Found in 40 of 260 (15.4%) of genes in pham
• Manual Annotations of this start: 14 of 220
• Called 37.5% of time when present
• Phage (with cluster) where this start called: AlainaMarie_89 (DJ), Arataki_88 (DJ), BetterYeti_87 (DJ), Burley_87 (DJ), Crocheter_88 (DJ), Dialga_89 (DJ), Figliar_87 (DJ), Hydrus_88 (DJ), Nadmeg_87 (DJ), Nithya_88 (DJ), PestoPenguin_89 (DJ), Phepper_89 (DJ), Runhaar_86 (DJ), ShaggyRogers_88 (DJ), Zeph_91 (DJ),

Start 33:
• Found in 47 of 260 (18.1%) of genes in pham
• Manual Annotations of this start: 40 of 220
• Called 95.7% of time when present
• Phage (with cluster) where this start called: Acai_89 (AU1), AreFloNak_97 (AU1), BarbieDoll_89 (AU6), Barbonzobean_88 (AU6), Biscute_85 (AU6), Bouchard_88 (AU2), Brunswick_93 (AU1), CapnMurica_85 (AU1), CastorTray_90 (AU1), Caterpillar_83 (AU4), Chlochlo_91 (AU2), Darby_86 (AU1), DevitoJr_89 (AU1), Dinallo_80 (AU1), ElephantMan_90 (AU1), Giantsbane_91 (AU2), Gordon_86 (AU1), Ingrid_92 (AU3), Inked_92 (AU7), Issa_82 (AU1), Kinny_89 (AU6), Leathea_95 (AU6), Lewando_86 (AU6), LilHuddy_89 (AU2), Loretta_88 (AU3), LucySwiss_93 (AU1), Makai_89 (AU5), MediumFry_82 (AU4), MiniBagel_90 (AU1), Muglass_88 (AU6), Nightmare_89 (AU1), Niktson_90 (AU1), Phaby_89 (AU2), Renaldo_90 (AU6), ScienceWizSam_93 (AU1), Shepard_89 (AU2), Synepsis_81 (AU1), Teacup_85 (AU1), Tenno_89 (AU1), Tipton_91 (AU2), Tokki_95 (AU2), TrixiePhattel_90 (AU6), Truckee_86 (AU5), Trustiboi_87 (AU1), Zippen_93 (AU7),

Start 34:
• Found in 19 of 260 (7.3%) of genes in pham
• Manual Annotations of this start: 8 of 220
• Called 78.9% of time when present
• Phage (with cluster) where this start called: Altjira_91 (AU6), Anandi_92 (AU4), BlackHoleSun_91 (AU6), GermyBearimy_102 (FI), Hemma_87 (AU1), Jazzy4900_89 (FI), KevinMinion_87 (AU6), Mardi_90 (AU6), Navi1117_92 (AU6), PoeMe_88 (AU6), Remlit_96 (AU6), Stardrop_91 (AU6), Sunny4976_88 (FI), Tenney120_90 (AU6), Uzumaki_89 (AU6),

Start 40:
• Found in 23 of 260 (8.8%) of genes in pham
• Manual Annotations of this start: 4 of 220
• Called 17.4% of time when present
• Phage (with cluster) where this start called: Bowling_98 (AM), Circum_96 (AM), Hankly_99 (AM), NapoleonB_97 (AM),

Start 41:
• Found in 5 of 260 (1.9%) of genes in pham
• Manual Annotations of this start: 4 of 220
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Natasha_85 (AW), Powelldog_88 (AW), RustyBoy_86 (AW), Sporto_81 (AW),

Start 42:
• Found in 42 of 260 (16.2%) of genes in pham
• Manual Annotations of this start: 33 of 220
• Called 90.5% of time when present
• Phage (with cluster) where this start called: Arcadia_94 (AM), BenitoAntonio_96 (AM), Benllo_94 (AM), Boog_83 (AW), BronxBay_84 (AW), Cheesy_98 (AM), Correa_93 (AM), Djungelskog_83 (AW), DoctorPepper_83 (AW), Dynamite_96 (AM), Egad_85 (AW), Elsa_94 (AM), GoCrazy_92 (AM), Heisenberger_97 (AM), HerbBucket_84 (AW), JEGGS_97 (AM), Jeremy4pt0_83 (AW), Kardesai_97 (AM), KeaneyLin_92 (AM), Linda_84 (AW), Michelle_84 (AW), Mooshroom_98 (AM), MrAaronian_84 (AW), Mudcat_92 (AM), Nason_94 (AM), ProfFrink_84 (AW),

Raunak_84 (AW), Salk_84 (AW), Shiba_83 (AW), Sloopyjoe_84 (AW), Spain_84 (AW), Sprinkle_81 (AW), StarLord_84 (AW), Stardom_90 (AM), Stayer_84 (AW), Tribby_99 (AM), Xenomorph_92 (AM), YoshiYama_93 (AM),

Start 43:
• Found in 3 of 260 (1.2%) of genes in pham
• Manual Annotations of this start: 2 of 220
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Camille_74 (EL), Kardashian_80 (BI6),

Start 44:
• Found in 11 of 260 (4.2%) of genes in pham
• Manual Annotations of this start: 10 of 220
• Called 90.9% of time when present
• Phage (with cluster) where this start called: AddiRose_85 (JA), Daddyjeff_87 (JA), Damascus_79 (EL), DizzyRudy_83 (EL), Eevee_81 (JA), JoyLin_82 (JA), Pippin15_86 (JA), Serenabean_87 (JA), Sweetclover_85 (JA), Yotsuba_82 (JA),

Start 45:
• Found in 135 of 260 (51.9%) of genes in pham
• Manual Annotations of this start: 101 of 220
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Aflac_89 (DJ), Aloe25_89 (DJ), Annihilus_56 (BI2), ArtetaBall_87 (DJ), Artorias_89 (DJ), Avazak_90 (DJ), Bilo_55 (BI2), Bing_84 (BI5), Blanky_82 (DJ), BluerMoon_87 (DJ), Bugg_93 (DJ), CWormy_86 (DJ), Captrips_88 (DJ), Capybara_88 (DJ), CherryBlossom_83 (BI1), ChickyNuggy_91 (DJ), Chikenjars_89 (DJ), Citrus_87 (DJ), ClubPenguin_88 (BI7), Conley_87 (DJ), Count_130 (EL), CricKo_91 (BI4), Dancer_89 (DJ), Demure_87 (DJ), Ditters_54 (BI2), Doxi13_57 (BI2), DrGrey_79 (BI1), Duffington_89 (DJ), Eddiemania_89 (DJ), Elver_244 (FK), EndAve_90 (DJ), Esketit_79 (BI1), Espio_81 (BI1), Fazel_89 (DJ), FidgetOrca_85 (BI1), Football_94 (DJ), FortCran_89 (DJ), FrodoSwaggins_81 (BI1), FromIndy_89 (BI4), Gandionco_248 (FK), Gill_91 (DJ), GirlPower_76 (BI1), Glintora_91 (DJ), GoblinVoyage_56 (BI2), Gravy_90 (DJ), Gusicorn_89 (DJ), Hajile_88 (BI5), HazuAndZazu_80 (BI1), Hortihabitatio_86 (DJ), Hoshi_84 (BI1), HotFries_54 (BI2), IceWarrior_83 (BI1), Indigenous_85 (BI1), Jaylociraptor_83 (BI1), JeNeSaisPas_251 (FK), Jodelie19_88 (DJ), JulesRay_89 (DJ), Kenosha_87 (DJ), Kerry_90 (DJ), Kureo_245 (FK), LibertyBell_76 (BI3), Luthien_88 (DJ), Madamato_82 (BI1), Madvan_87 (DJ), Magel_92 (DJ), MajinBuu_89 (DJ), Marianna39_248 (FK), Maya_83 (BI1), Meibysrarus_81 (BI1), Miek_85 (BI4), Monse_55 (BI2), Moozy_55 (BI2), Mossy_87 (DJ), Mysticmoon_86 (DJ), Namo_85 (BI1), Natsu_55 (BI2), NoPickles_90 (DJ), Odesza_89 (DJ), OhMyWard_83 (DJ), OlgasClover_90 (DJ), OlympicHelado_85 (BI1), Paella_245 (FK), Pepy6_050 (CC), Perkunas_91 (DJ), PerroGrande22_113 (CC), Petito_90 (DJ), Pherobrine_86 (DJ), PherryCruz_55 (BI2), Poco6_049 (CC), Popy_81 (BI1), Qui_244 (FK), Rainydai_88 (BI4), RavenPuff_56 (BI2), Regigigas_91 (BI4), Rickmore_89 (DJ), Rima_84 (BI1), Roney_89 (DJ), RosaAsantewaa_52 (BI2), Sangak_55 (BI2), Scap1_53 (BI2), Schwartz33_85 (DJ), Secretariat_81 (DJ), SendItCS_83 (BI4), SheRa_56 (BI2), Soshi_82 (BI1), Spectropatronm_82 (BI1), SweetCrkHerbs_92 (DJ), TaidaOne_83 (BI1), Tairn4Wing_92 (DJ), Talon44_92 (DJ), Tanis_90 (DJ), TenaciousP_90 (DJ), Thiqqums_91 (BI4), TieDye_79 (BI1), Tonaltzin_88 (DJ), TonyStarch_82 (BI1), Trufflozitus_90 (DJ), Untouchable_90 (DJ), Vardy_87 (DJ), Wigberry_86 (BI5),

Start 46:

• Found in 20 of 260 (7.7%) of genes in pham
• No Manual Annotations of this start.
• Called 5.0% of time when present
• Phage (with cluster) where this start called: Westerlin_84 (AU1),

Start 54:
• Found in 17 of 260 (6.5%) of genes in pham
• No Manual Annotations of this start.
• Called 5.9% of time when present
• Phage (with cluster) where this start called: Mema_74 (EL),

Summary by clusters:

There are 22 clusters represented in this pham: DJ, FI, FK, JA, AU1, AU3, AU2, AU5, AU4, AU7, AU6, EL, CC, AM, AW, BI6, BI7, BI4, BI5, BI2, BI3, BI1,

Info for manual annotations of cluster AM:
•Start number 40 was manually annotated 4 times for cluster AM.
•Start number 42 was manually annotated 17 times for cluster AM.

Info for manual annotations of cluster AU1:
•Start number 33 was manually annotated 18 times for cluster AU1.
•Start number 34 was manually annotated 1 time for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 33 was manually annotated 8 times for cluster AU2.

Info for manual annotations of cluster AU3:
•Start number 33 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:
•Start number 33 was manually annotated 2 times for cluster AU4.
•Start number 34 was manually annotated 1 time for cluster AU4.

Info for manual annotations of cluster AU5:
•Start number 33 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:
•Start number 4 was manually annotated 3 times for cluster AU6.
•Start number 17 was manually annotated 1 time for cluster AU6.
•Start number 33 was manually annotated 6 times for cluster AU6.
•Start number 34 was manually annotated 6 times for cluster AU6.

Info for manual annotations of cluster AU7:
•Start number 33 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AW:
•Start number 41 was manually annotated 4 times for cluster AW.
•Start number 42 was manually annotated 16 times for cluster AW.

Info for manual annotations of cluster BI1:
•Start number 45 was manually annotated 24 times for cluster BI1.

Info for manual annotations of cluster BI2:
•Start number 45 was manually annotated 13 times for cluster BI2.

Info for manual annotations of cluster BI3:
•Start number 45 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:
•Start number 45 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:
•Start number 45 was manually annotated 2 times for cluster BI5.

Info for manual annotations of cluster BI6:
•Start number 43 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:
•Start number 45 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster CC:
•Start number 45 was manually annotated 1 time for cluster CC.

Info for manual annotations of cluster DJ:
•Start number 30 was manually annotated 14 times for cluster DJ.
•Start number 45 was manually annotated 49 times for cluster DJ.

Info for manual annotations of cluster EL:
•Start number 43 was manually annotated 1 time for cluster EL.
•Start number 44 was manually annotated 2 times for cluster EL.
•Start number 45 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster FK:
•Start number 45 was manually annotated 4 times for cluster FK.

Info for manual annotations of cluster JA:
•Start number 44 was manually annotated 8 times for cluster JA.

Gene Information:

Gene: Acai_89 Start: 53948, Stop: 54286, Start Num: 33
Candidate Starts for Acai_89:
(Start: 33 @53948 has 40 MA's), (46, 53972), (64, 54107),

Gene: AddiRose_85 Start: 50887, Stop: 51180, Start Num: 44
Candidate Starts for AddiRose_85:
(Start: 44 @50887 has 10 MA's), (48, 50917), (70, 51085), (72, 51094), (75, 51121), (80, 51175),

Gene: Aflac_89 Start: 57301, Stop: 57600, Start Num: 45
Candidate Starts for Aflac_89:
(Start: 30 @57265 has 14 MA's), (35, 57283), (Start: 45 @57301 has 101 MA's), (56, 57370), (72, 57514), (73, 57523),

Gene: AlainaMarie_89 Start: 57292, Stop: 57627, Start Num: 30
Candidate Starts for AlainaMarie_89:
(Start: 30 @57292 has 14 MA's), (35, 57310), (Start: 45 @57328 has 101 MA's), (56, 57397), (72, 57541), (73, 57550),

Gene: Aloe25_89 Start: 56458, Stop: 56757, Start Num: 45
Candidate Starts for Aloe25_89:
(Start: 30 @56422 has 14 MA's), (35, 56440), (Start: 45 @56458 has 101 MA's), (56, 56527), (72, 56671), (73, 56680),

Gene: Altjira_91 Start: 52325, Stop: 52642, Start Num: 34
Candidate Starts for Altjira_91:
(1, 52037), (2, 52067), (3, 52154), (Start: 4 @52196 has 3 MA's), (5, 52205), (7, 52232), (13, 52271), (Start: 17 @52280 has 1 MA's), (27, 52304), (Start: 34 @52325 has 8 MA's), (57, 52421), (73, 52559),

Gene: Anandi_92 Start: 53320, Stop: 53655, Start Num: 34
Candidate Starts for Anandi_92:
(15, 53272), (Start: 34 @53320 has 8 MA's), (46, 53341), (64, 53476), (68, 53515), (76, 53593),

Gene: Annihilus_56 Start: 39529, Stop: 39849, Start Num: 45
Candidate Starts for Annihilus_56:
(29, 39490), (Start: 45 @39529 has 101 MA's), (54, 39592), (64, 39667), (72, 39733), (73, 39742),

Gene: Arataki_88 Start: 56409, Stop: 56750, Start Num: 30
Candidate Starts for Arataki_88:
(Start: 30 @56409 has 14 MA's), (35, 56427), (Start: 45 @56445 has 101 MA's), (56, 56514), (58, 56535), (72, 56658), (73, 56667),

Gene: Arcadia_94 Start: 54217, Stop: 54519, Start Num: 42
Candidate Starts for Arcadia_94:
(31, 54190), (Start: 40 @54211 has 4 MA's), (Start: 42 @54217 has 33 MA's), (56, 54292), (73, 54436),

Gene: AreFloNak_97 Start: 54422, Stop: 54763, Start Num: 33
Candidate Starts for AreFloNak_97:
(Start: 33 @54422 has 40 MA's), (68, 54623), (73, 54659),

Gene: Argan_89 Start: 51286, Stop: 51648, Start Num: 17
Candidate Starts for Argan_89:
(Start: 4 @51202 has 3 MA's), (5, 51211), (7, 51238), (13, 51277), (Start: 17 @51286 has 1 MA's), (27, 51310), (Start: 34 @51331 has 8 MA's), (57, 51427), (73, 51565),

Gene: ArtetaBall_87 Start: 56402, Stop: 56707, Start Num: 45
Candidate Starts for ArtetaBall_87:
(Start: 30 @56366 has 14 MA's), (35, 56384), (Start: 45 @56402 has 101 MA's), (56, 56471), (58, 56492), (72, 56615), (73, 56624),

Gene: Artorias_89 Start: 55853, Stop: 56158, Start Num: 45
Candidate Starts for Artorias_89:
(19, 55790), (20, 55793), (Start: 45 @55853 has 101 MA's), (56, 55922), (72, 56066), (73, 56075),

Gene: Avazak_90 Start: 56283, Stop: 56588, Start Num: 45
Candidate Starts for Avazak_90:

(Start: 45 @56283 has 101 MA's), (56, 56352), (72, 56496), (73, 56505),

Gene: BarbieDoll_89 Start: 51742, Stop: 52053, Start Num: 33
Candidate Starts for BarbieDoll_89:
(Start: 33 @51742 has 40 MA's), (57, 51838), (73, 51976),

Gene: Barbonzobean_88 Start: 52044, Stop: 52355, Start Num: 33
Candidate Starts for Barbonzobean_88:
(Start: 33 @52044 has 40 MA's), (57, 52140), (73, 52278),

Gene: BenitoAntonio_96 Start: 54148, Stop: 54450, Start Num: 42
Candidate Starts for BenitoAntonio_96:
(31, 54121), (Start: 40 @54142 has 4 MA's), (Start: 42 @54148 has 33 MA's), (56, 54223), (73, 54367),

Gene: Benllo_94 Start: 54986, Stop: 55288, Start Num: 42
Candidate Starts for Benllo_94:
(31, 54959), (Start: 40 @54980 has 4 MA's), (Start: 42 @54986 has 33 MA's), (56, 55061), (73, 55205),

Gene: BetterYeti_87 Start: 56421, Stop: 56756, Start Num: 30
Candidate Starts for BetterYeti_87:
(Start: 30 @56421 has 14 MA's), (35, 56439), (Start: 45 @56457 has 101 MA's), (56, 56526), (72, 56670), (73, 56679),

Gene: Bilo_55 Start: 39823, Stop: 40143, Start Num: 45
Candidate Starts for Bilo_55:
(29, 39784), (Start: 45 @39823 has 101 MA's), (54, 39886), (64, 39961), (73, 40036),

Gene: Bing_84 Start: 52233, Stop: 52544, Start Num: 45
Candidate Starts for Bing_84:
(Start: 45 @52233 has 101 MA's), (52, 52281), (58, 52323), (59, 52332), (61, 52344), (64, 52371), (72, 52437), (73, 52446), (76, 52488), (81, 52521),

Gene: Biscute_85 Start: 51587, Stop: 51898, Start Num: 33
Candidate Starts for Biscute_85:
(Start: 33 @51587 has 40 MA's), (57, 51683), (73, 51821),

Gene: BlackHoleSun_91 Start: 51618, Stop: 51935, Start Num: 34
Candidate Starts for BlackHoleSun_91:
(Start: 4 @51489 has 3 MA's), (5, 51498), (7, 51525), (13, 51564), (Start: 17 @51573 has 1 MA's), (27, 51597), (Start: 34 @51618 has 8 MA's), (57, 51714), (73, 51852),

Gene: Blanky_82 Start: 57097, Stop: 57402, Start Num: 45
Candidate Starts for Blanky_82:
(31, 57064), (Start: 45 @57097 has 101 MA's), (56, 57166), (72, 57310), (73, 57319),

Gene: BluerMoon_87 Start: 57131, Stop: 57430, Start Num: 45
Candidate Starts for BluerMoon_87:
(Start: 30 @57095 has 14 MA's), (35, 57113), (Start: 45 @57131 has 101 MA's), (56, 57200), (72, 57344), (73, 57353),

Gene: Boog_83 Start: 50318, Stop: 50650, Start Num: 42
Candidate Starts for Boog_83:
(Start: 42 @50318 has 33 MA's), (73, 50537),

Gene: Bouchard_88 Start: 53388, Stop: 53726, Start Num: 33
Candidate Starts for Bouchard_88:
(Start: 33 @53388 has 40 MA's), (73, 53622),

Gene: Bowling_98 Start: 55030, Stop: 55338, Start Num: 40
Candidate Starts for Bowling_98:
(31, 55009), (Start: 40 @55030 has 4 MA's), (Start: 42 @55036 has 33 MA's), (56, 55111), (73, 55255),

Gene: BronxBay_84 Start: 50569, Stop: 50901, Start Num: 42
Candidate Starts for BronxBay_84:
(Start: 42 @50569 has 33 MA's), (73, 50788),

Gene: Brunswick_93 Start: 54283, Stop: 54621, Start Num: 33
Candidate Starts for Brunswick_93:
(Start: 33 @54283 has 40 MA's), (46, 54307), (64, 54442),

Gene: Bugg_93 Start: 55898, Stop: 56203, Start Num: 45
Candidate Starts for Bugg_93:
(19, 55835), (20, 55838), (Start: 45 @55898 has 101 MA's), (56, 55967), (72, 56111), (73, 56120),

Gene: Burley_87 Start: 56095, Stop: 56430, Start Num: 30
Candidate Starts for Burley_87:
(Start: 30 @56095 has 14 MA's), (35, 56113), (Start: 45 @56131 has 101 MA's), (56, 56200), (72, 56344), (73, 56353),

Gene: CWormy_86 Start: 56085, Stop: 56390, Start Num: 45
Candidate Starts for CWormy_86:
(Start: 30 @56049 has 14 MA's), (35, 56067), (Start: 45 @56085 has 101 MA's), (56, 56154), (58, 56175), (72, 56298), (73, 56307),

Gene: Camille_74 Start: 49086, Stop: 49403, Start Num: 43
Candidate Starts for Camille_74:
(Start: 43 @49086 has 2 MA's), (49, 49125), (63, 49212),

Gene: CapnMurica_85 Start: 54229, Stop: 54567, Start Num: 33
Candidate Starts for CapnMurica_85:
(Start: 33 @54229 has 40 MA's), (46, 54253), (64, 54388),

Gene: Captrips_88 Start: 55634, Stop: 55939, Start Num: 45
Candidate Starts for Captrips_88:
(28, 55595), (Start: 45 @55634 has 101 MA's), (56, 55703), (72, 55847), (73, 55856),

Gene: Capybara_88 Start: 55857, Stop: 56162, Start Num: 45
Candidate Starts for Capybara_88:
(Start: 45 @55857 has 101 MA's), (56, 55926), (72, 56070), (73, 56079),

Gene: CastorTray_90 Start: 54445, Stop: 54786, Start Num: 33
Candidate Starts for CastorTray_90:
(Start: 33 @54445 has 40 MA's), (68, 54646), (73, 54682),

Gene: Caterpillar_83 Start: 52687, Stop: 53028, Start Num: 33
Candidate Starts for Caterpillar_83:

(Start: 33 @52687 has 40 MA's), (46, 52714), (52, 52759), (64, 52849),

Gene: Cheesy_98 Start: 54899, Stop: 55201, Start Num: 42
Candidate Starts for Cheesy_98:
(31, 54872), (Start: 40 @54893 has 4 MA's), (Start: 42 @54899 has 33 MA's), (56, 54974), (73, 55118),

Gene: CherryBlossom_83 Start: 51474, Stop: 51764, Start Num: 45
Candidate Starts for CherryBlossom_83:
(Start: 45 @51474 has 101 MA's), (50, 51507), (52, 51522), (58, 51564), (59, 51573), (64, 51612), (71, 51675), (73, 51687), (76, 51729),

Gene: ChickyNuggy_91 Start: 56024, Stop: 56329, Start Num: 45
Candidate Starts for ChickyNuggy_91:
(19, 55961), (20, 55964), (Start: 45 @56024 has 101 MA's), (56, 56093), (72, 56237), (73, 56246),

Gene: Chikenjars_89 Start: 57556, Stop: 57855, Start Num: 45
Candidate Starts for Chikenjars_89:
(Start: 30 @57520 has 14 MA's), (35, 57538), (Start: 45 @57556 has 101 MA's), (56, 57625), (58, 57646), (72, 57769), (73, 57778),

Gene: Chlochlo_91 Start: 53458, Stop: 53796, Start Num: 33
Candidate Starts for Chlochlo_91:
(Start: 33 @53458 has 40 MA's), (73, 53692),

Gene: Circum_96 Start: 54506, Stop: 54814, Start Num: 40
Candidate Starts for Circum_96:
(31, 54485), (Start: 40 @54506 has 4 MA's), (Start: 42 @54512 has 33 MA's), (56, 54587), (73, 54731),

Gene: Citrus_87 Start: 57149, Stop: 57448, Start Num: 45
Candidate Starts for Citrus_87:
(Start: 30 @57113 has 14 MA's), (35, 57131), (Start: 45 @57149 has 101 MA's), (56, 57218), (72, 57362), (73, 57371),

Gene: ClubPenguin_88 Start: 52169, Stop: 52462, Start Num: 45
Candidate Starts for ClubPenguin_88:
(Start: 45 @52169 has 101 MA's), (54, 52232), (64, 52307), (73, 52382),

Gene: Conley_87 Start: 56148, Stop: 56453, Start Num: 45
Candidate Starts for Conley_87:
(19, 56085), (26, 56103), (28, 56109), (Start: 45 @56148 has 101 MA's), (56, 56217), (72, 56361), (73, 56370),

Gene: Correa_93 Start: 53560, Stop: 53862, Start Num: 42
Candidate Starts for Correa_93:
(31, 53533), (Start: 40 @53554 has 4 MA's), (Start: 42 @53560 has 33 MA's), (54, 53629), (73, 53779),

Gene: Count_130 Start: 74858, Stop: 75151, Start Num: 45
Candidate Starts for Count_130:
(37, 74840), (Start: 45 @74858 has 101 MA's), (49, 74888), (54, 74921), (56, 74927), (63, 74975), (73, 75071), (76, 75113),

Gene: CricKo_91 Start: 53655, Stop: 53945, Start Num: 45
Candidate Starts for CricKo_91:

(Start: 45 @53655 has 101 MA's), (52, 53703), (61, 53766), (65, 53796), (66, 53802), (72, 53859), (73, 53868), (76, 53910),

Gene: Crocheter_88 Start: 56515, Stop: 56850, Start Num: 30
Candidate Starts for Crocheter_88:
(Start: 30 @56515 has 14 MA's), (35, 56533), (Start: 45 @56551 has 101 MA's), (56, 56620), (72, 56764), (73, 56773),

Gene: Daddyjeff_87 Start: 51237, Stop: 51530, Start Num: 44
Candidate Starts for Daddyjeff_87:
(Start: 44 @51237 has 10 MA's), (48, 51267), (70, 51435), (72, 51444), (75, 51471), (80, 51525),

Gene: Damascus_79 Start: 52477, Stop: 52830, Start Num: 44
Candidate Starts for Damascus_79:
(9, 52369), (18, 52411), (Start: 30 @52441 has 14 MA's), (38, 52465), (Start: 44 @52477 has 10 MA's), (48, 52513), (49, 52516), (59, 52585), (70, 52681), (77, 52744), (82, 52813),

Gene: Dancer_89 Start: 55590, Stop: 55895, Start Num: 45
Candidate Starts for Dancer_89:
(19, 55527), (20, 55530), (Start: 45 @55590 has 101 MA's), (56, 55659), (72, 55803), (73, 55812),

Gene: Darby_86 Start: 53826, Stop: 54167, Start Num: 33
Candidate Starts for Darby_86:
(Start: 33 @53826 has 40 MA's), (68, 54027), (73, 54063),

Gene: Demure_87 Start: 56579, Stop: 56884, Start Num: 45
Candidate Starts for Demure_87:
(Start: 30 @56543 has 14 MA's), (35, 56561), (Start: 45 @56579 has 101 MA's), (56, 56648), (58, 56669), (72, 56792), (73, 56801),

Gene: DevitoJr_89 Start: 54115, Stop: 54453, Start Num: 33
Candidate Starts for DevitoJr_89:
(Start: 33 @54115 has 40 MA's), (46, 54139), (64, 54274),

Gene: Dialga_89 Start: 56382, Stop: 56723, Start Num: 30
Candidate Starts for Dialga_89:
(Start: 30 @56382 has 14 MA's), (35, 56400), (Start: 45 @56418 has 101 MA's), (56, 56487), (58, 56508), (72, 56631), (73, 56640),

Gene: Dinallo_80 Start: 54473, Stop: 54811, Start Num: 33
Candidate Starts for Dinallo_80:
(Start: 33 @54473 has 40 MA's), (46, 54497), (64, 54632),

Gene: Ditters_54 Start: 40002, Stop: 40319, Start Num: 45
Candidate Starts for Ditters_54:
(Start: 45 @40002 has 101 MA's), (54, 40065), (59, 40101), (64, 40140), (72, 40206), (73, 40215),

Gene: DizzyRudy_83 Start: 51813, Stop: 52166, Start Num: 44
Candidate Starts for DizzyRudy_83:
(18, 51747), (Start: 30 @51777 has 14 MA's), (38, 51801), (Start: 44 @51813 has 10 MA's), (48, 51849), (49, 51852), (59, 51921), (70, 52017), (77, 52080), (82, 52149),

Gene: Djungelskog_83 Start: 50571, Stop: 50903, Start Num: 42

Candidate Starts for Djungelskog_83:
(Start: 42 @50571 has 33 MA's), (73, 50790),

Gene: DoctorPepper_83 Start: 50302, Stop: 50634, Start Num: 42
Candidate Starts for DoctorPepper_83:
(Start: 42 @50302 has 33 MA's), (73, 50521),

Gene: Doxi13_57 Start: 39659, Stop: 39979, Start Num: 45
Candidate Starts for Doxi13_57:
(29, 39620), (Start: 45 @39659 has 101 MA's), (54, 39722), (64, 39797), (73, 39872),

Gene: DrGrey_79 Start: 51987, Stop: 52277, Start Num: 45
Candidate Starts for DrGrey_79:
(Start: 45 @51987 has 101 MA's), (50, 52020), (52, 52035), (58, 52077), (59, 52086), (64, 52125), (71, 52188), (73, 52200), (76, 52242),

Gene: Duffington_89 Start: 57356, Stop: 57655, Start Num: 45
Candidate Starts for Duffington_89:
(Start: 30 @57320 has 14 MA's), (35, 57338), (Start: 45 @57356 has 101 MA's), (56, 57425), (72, 57569), (73, 57578),

Gene: Dynamite_96 Start: 54004, Stop: 54306, Start Num: 42
Candidate Starts for Dynamite_96:
(31, 53977), (Start: 40 @53998 has 4 MA's), (Start: 42 @54004 has 33 MA's), (56, 54079), (73, 54223),

Gene: Eddiemania_89 Start: 57446, Stop: 57745, Start Num: 45
Candidate Starts for Eddiemania_89:
(25, 57395), (36, 57428), (Start: 45 @57446 has 101 MA's), (56, 57515), (72, 57659), (73, 57668),

Gene: Eevee_81 Start: 52573, Stop: 52866, Start Num: 44
Candidate Starts for Eevee_81:
(Start: 44 @52573 has 10 MA's), (53, 52627), (55, 52642), (60, 52684), (70, 52771), (72, 52780), (73, 52789),

Gene: Egad_85 Start: 50576, Stop: 50908, Start Num: 42
Candidate Starts for Egad_85:
(Start: 42 @50576 has 33 MA's), (73, 50795),

Gene: ElephantMan_90 Start: 54476, Stop: 54814, Start Num: 33
Candidate Starts for ElephantMan_90:
(Start: 33 @54476 has 40 MA's), (46, 54500), (64, 54635),

Gene: Elsa_94 Start: 54217, Stop: 54519, Start Num: 42
Candidate Starts for Elsa_94:
(31, 54190), (Start: 40 @54211 has 4 MA's), (Start: 42 @54217 has 33 MA's), (56, 54292), (73, 54436),

Gene: Elver_244 Start: 109082, Stop: 109375, Start Num: 45
Candidate Starts for Elver_244:
(Start: 45 @109082 has 101 MA's), (48, 109109), (52, 109130), (64, 109220), (66, 109229), (72, 109286), (74, 109310), (78, 109361),

Gene: EndAve_90 Start: 57266, Stop: 57565, Start Num: 45
Candidate Starts for EndAve_90:

(Start: 30 @57230 has 14 MA's), (35, 57248), (Start: 45 @57266 has 101 MA's), (56, 57335), (72, 57479), (73, 57488),

Gene: Esketit_79 Start: 50575, Stop: 50865, Start Num: 45
Candidate Starts for Esketit_79:
(Start: 45 @50575 has 101 MA's), (50, 50608), (52, 50623), (58, 50665), (59, 50674), (64, 50713), (71, 50776), (73, 50788), (76, 50830),

Gene: Espio_81 Start: 52358, Stop: 52648, Start Num: 45
Candidate Starts for Espio_81:
(Start: 45 @52358 has 101 MA's), (50, 52391), (52, 52406), (58, 52448), (59, 52457), (64, 52496), (71, 52559), (73, 52571), (76, 52613),

Gene: Fazel_89 Start: 56115, Stop: 56420, Start Num: 45
Candidate Starts for Fazel_89:
(12, 56034), (31, 56082), (Start: 45 @56115 has 101 MA's), (56, 56184), (72, 56328), (73, 56337),

Gene: FidgetOrca_85 Start: 52025, Stop: 52315, Start Num: 45
Candidate Starts for FidgetOrca_85:
(Start: 45 @52025 has 101 MA's), (50, 52058), (52, 52073), (58, 52115), (59, 52124), (64, 52163), (71, 52226), (73, 52238), (76, 52280),

Gene: Figliar_87 Start: 57124, Stop: 57459, Start Num: 30
Candidate Starts for Figliar_87:
(Start: 30 @57124 has 14 MA's), (35, 57142), (Start: 45 @57160 has 101 MA's), (56, 57229), (72, 57373), (73, 57382),

Gene: Football_94 Start: 55933, Stop: 56238, Start Num: 45
Candidate Starts for Football_94:
(19, 55870), (20, 55873), (Start: 45 @55933 has 101 MA's), (56, 56002), (72, 56146), (73, 56155),

Gene: FortCran_89 Start: 55854, Stop: 56159, Start Num: 45
Candidate Starts for FortCran_89:
(19, 55791), (20, 55794), (Start: 45 @55854 has 101 MA's), (56, 55923), (72, 56067), (73, 56076),

Gene: FrodoSwaggins_81 Start: 52382, Stop: 52672, Start Num: 45
Candidate Starts for FrodoSwaggins_81:
(Start: 45 @52382 has 101 MA's), (50, 52415), (52, 52430), (58, 52472), (59, 52481), (64, 52520), (71, 52583), (73, 52595), (76, 52637),

Gene: FromIndy_89 Start: 52855, Stop: 53145, Start Num: 45
Candidate Starts for FromIndy_89:
(Start: 45 @52855 has 101 MA's), (52, 52903), (61, 52966), (65, 52996), (66, 53002), (72, 53059), (73, 53068), (76, 53110),

Gene: Gandionco_248 Start: 109877, Stop: 110170, Start Num: 45
Candidate Starts for Gandionco_248:
(Start: 45 @109877 has 101 MA's), (48, 109904), (52, 109925), (64, 110015), (66, 110024), (67, 110036), (72, 110081), (74, 110105), (78, 110156),

Gene: GantcherGoblin_88 Start: 51349, Stop: 51795, Start Num: 4
Candidate Starts for GantcherGoblin_88:

(Start: 4 @51349 has 3 MA's), (5, 51358), (7, 51385), (13, 51424), (Start: 17 @51433 has 1 MA's), (27, 51457), (Start: 34 @51478 has 8 MA's), (57, 51574), (73, 51712),

Gene: GermyBearimy_102 Start: 55428, Stop: 55799, Start Num: 34
Candidate Starts for GermyBearimy_102:
(Start: 34 @55428 has 8 MA's), (52, 55494), (63, 55557), (73, 55653),

Gene: Giantsbane_91 Start: 52822, Stop: 53160, Start Num: 33
Candidate Starts for Giantsbane_91:
(Start: 33 @52822 has 40 MA's), (62, 52957), (73, 53056),

Gene: Gill_91 Start: 55884, Stop: 56189, Start Num: 45
Candidate Starts for Gill_91:
(Start: 45 @55884 has 101 MA's), (56, 55953), (72, 56097), (73, 56106),

Gene: GirlPower_76 Start: 51444, Stop: 51734, Start Num: 45
Candidate Starts for GirlPower_76:
(Start: 45 @51444 has 101 MA's), (52, 51492), (58, 51534), (64, 51582), (71, 51645), (73, 51657), (76, 51699),

Gene: Glintora_91 Start: 57547, Stop: 57846, Start Num: 45
Candidate Starts for Glintora_91:
(Start: 30 @57511 has 14 MA's), (35, 57529), (Start: 45 @57547 has 101 MA's), (56, 57616), (58, 57637), (72, 57760), (73, 57769),

Gene: GoCrazy_92 Start: 52968, Stop: 53270, Start Num: 42
Candidate Starts for GoCrazy_92:
(31, 52941), (Start: 40 @52962 has 4 MA's), (Start: 42 @52968 has 33 MA's), (56, 53043), (73, 53187),

Gene: GoblinVoyage_56 Start: 39503, Stop: 39823, Start Num: 45
Candidate Starts for GoblinVoyage_56:
(29, 39464), (Start: 45 @39503 has 101 MA's), (54, 39566), (64, 39641), (73, 39716),

Gene: Gordon_86 Start: 54346, Stop: 54687, Start Num: 33
Candidate Starts for Gordon_86:
(Start: 33 @54346 has 40 MA's), (64, 54508),

Gene: Gravy_90 Start: 55547, Stop: 55852, Start Num: 45
Candidate Starts for Gravy_90:
(Start: 45 @55547 has 101 MA's), (56, 55616), (72, 55760), (73, 55769),

Gene: Gusicorn_89 Start: 56458, Stop: 56757, Start Num: 45
Candidate Starts for Gusicorn_89:
(Start: 30 @56422 has 14 MA's), (35, 56440), (Start: 45 @56458 has 101 MA's), (56, 56527), (72, 56671), (73, 56680),

Gene: Hajile_88 Start: 52789, Stop: 53100, Start Num: 45
Candidate Starts for Hajile_88:
(Start: 45 @52789 has 101 MA's), (52, 52837), (58, 52879), (59, 52888), (64, 52927), (72, 52993), (73, 53002), (76, 53044), (81, 53077),

Gene: Hankly_99 Start: 54591, Stop: 54899, Start Num: 40
Candidate Starts for Hankly_99:

(31, 54570), (Start: 40 @54591 has 4 MA's), (Start: 42 @54597 has 33 MA's), (56, 54672), (73, 54816),

Gene: HazuAndZazu_80 Start: 51734, Stop: 52024, Start Num: 45
Candidate Starts for HazuAndZazu_80:
(Start: 45 @51734 has 101 MA's), (50, 51767), (52, 51782), (58, 51824), (59, 51833), (64, 51872), (71, 51935), (73, 51947), (76, 51989),

Gene: Heisenberger_97 Start: 54367, Stop: 54669, Start Num: 42
Candidate Starts for Heisenberger_97:
(31, 54340), (Start: 40 @54361 has 4 MA's), (Start: 42 @54367 has 33 MA's), (56, 54442), (73, 54586),

Gene: Hemma_87 Start: 51241, Stop: 51582, Start Num: 34
Candidate Starts for Hemma_87:
(5, 51121), (6, 51139), (10, 51175), (21, 51205), (Start: 34 @51241 has 8 MA's), (49, 51295), (52, 51313), (73, 51478),

Gene: HerbBucket_84 Start: 50302, Stop: 50634, Start Num: 42
Candidate Starts for HerbBucket_84:
(Start: 42 @50302 has 33 MA's), (73, 50521),

Gene: Hortihabitatio_86 Start: 55884, Stop: 56189, Start Num: 45
Candidate Starts for Hortihabitatio_86:
(13, 55809), (31, 55851), (Start: 45 @55884 has 101 MA's), (51, 55923), (56, 55953), (72, 56097), (73, 56106),

Gene: Hoshi_84 Start: 51639, Stop: 51929, Start Num: 45
Candidate Starts for Hoshi_84:
(Start: 45 @51639 has 101 MA's), (50, 51672), (52, 51687), (58, 51729), (59, 51738), (64, 51777), (71, 51840), (73, 51852), (76, 51894),

Gene: HotFries_54 Start: 39686, Stop: 40006, Start Num: 45
Candidate Starts for HotFries_54:
(29, 39647), (Start: 45 @39686 has 101 MA's), (54, 39749), (64, 39824), (72, 39890), (73, 39899),

Gene: Hydrus_88 Start: 56826, Stop: 57167, Start Num: 30
Candidate Starts for Hydrus_88:
(Start: 30 @56826 has 14 MA's), (35, 56844), (Start: 45 @56862 has 101 MA's), (56, 56931), (58, 56952), (72, 57075), (73, 57084),

Gene: IceWarrior_83 Start: 51444, Stop: 51734, Start Num: 45
Candidate Starts for IceWarrior_83:
(Start: 45 @51444 has 101 MA's), (50, 51477), (52, 51492), (58, 51534), (59, 51543), (64, 51582), (71, 51645), (73, 51657), (76, 51699),

Gene: Indigenous_85 Start: 52030, Stop: 52320, Start Num: 45
Candidate Starts for Indigenous_85:
(Start: 45 @52030 has 101 MA's), (50, 52063), (52, 52078), (58, 52120), (59, 52129), (64, 52168), (71, 52231), (73, 52243), (76, 52285),

Gene: Ingrid_92 Start: 53005, Stop: 53346, Start Num: 33
Candidate Starts for Ingrid_92:
(Start: 33 @53005 has 40 MA's), (68, 53206), (73, 53242),

Gene: Inked_92 Start: 53930, Stop: 54268, Start Num: 33
Candidate Starts for Inked_92:
(Start: 33 @53930 has 40 MA's), (46, 53954), (64, 54089),

Gene: Issa_82 Start: 53534, Stop: 53872, Start Num: 33
Candidate Starts for Issa_82:
(Start: 33 @53534 has 40 MA's), (46, 53558), (64, 53693),

Gene: JEGGS_97 Start: 54446, Stop: 54748, Start Num: 42
Candidate Starts for JEGGS_97:
(31, 54419), (Start: 40 @54440 has 4 MA's), (Start: 42 @54446 has 33 MA's), (56, 54521), (73, 54665),

Gene: Jaylociraptor_83 Start: 51610, Stop: 51900, Start Num: 45
Candidate Starts for Jaylociraptor_83:
(Start: 45 @51610 has 101 MA's), (50, 51643), (52, 51658), (58, 51700), (59, 51709), (64, 51748), (71, 51811), (73, 51823), (76, 51865),

Gene: Jazzy4900_89 Start: 54541, Stop: 54918, Start Num: 34
Candidate Starts for Jazzy4900_89:
(25, 54514), (Start: 34 @54541 has 8 MA's), (52, 54607), (63, 54676), (73, 54772),

Gene: JeNeSaisPas_251 Start: 110065, Stop: 110358, Start Num: 45
Candidate Starts for JeNeSaisPas_251:
(Start: 45 @110065 has 101 MA's), (48, 110092), (52, 110113), (64, 110203), (66, 110212), (67, 110224), (72, 110269), (74, 110293), (78, 110344),

Gene: Jeremy4pt0_83 Start: 50256, Stop: 50588, Start Num: 42
Candidate Starts for Jeremy4pt0_83:
(Start: 42 @50256 has 33 MA's), (73, 50475),

Gene: Jodelie19_88 Start: 58344, Stop: 58643, Start Num: 45
Candidate Starts for Jodelie19_88:
(Start: 30 @58308 has 14 MA's), (35, 58326), (Start: 45 @58344 has 101 MA's), (56, 58413), (72, 58557), (73, 58566),

Gene: JoyLin_82 Start: 53326, Stop: 53619, Start Num: 44
Candidate Starts for JoyLin_82:
(Start: 44 @53326 has 10 MA's), (53, 53380), (55, 53395), (60, 53437), (70, 53524), (72, 53533), (73, 53542),

Gene: JulesRay_89 Start: 55949, Stop: 56254, Start Num: 45
Candidate Starts for JulesRay_89:
(19, 55886), (20, 55889), (Start: 45 @55949 has 101 MA's), (56, 56018), (72, 56162), (73, 56171),

Gene: Kardashian_80 Start: 51975, Stop: 52268, Start Num: 43
Candidate Starts for Kardashian_80:
(Start: 43 @51975 has 2 MA's), (58, 52065), (59, 52074), (61, 52086), (66, 52122), (69, 52161), (71, 52176), (73, 52188), (76, 52230),

Gene: Kardesai_97 Start: 54025, Stop: 54327, Start Num: 42
Candidate Starts for Kardesai_97:
(31, 53998), (Start: 40 @54019 has 4 MA's), (Start: 42 @54025 has 33 MA's), (56, 54100), (73, 54244),

Gene: KeaneyLin_92 Start: 54006, Stop: 54308, Start Num: 42
Candidate Starts for KeaneyLin_92:
(31, 53979), (Start: 40 @54000 has 4 MA's), (Start: 42 @54006 has 33 MA's), (56, 54081), (73, 54225),

Gene: Kenosha_87 Start: 56919, Stop: 57224, Start Num: 45
Candidate Starts for Kenosha_87:
(Start: 30 @56883 has 14 MA's), (35, 56901), (Start: 45 @56919 has 101 MA's), (56, 56988), (58, 57009), (72, 57132), (73, 57141),

Gene: Kerry_90 Start: 55610, Stop: 55915, Start Num: 45
Candidate Starts for Kerry_90:
(Start: 45 @55610 has 101 MA's), (56, 55679), (72, 55823), (73, 55832),

Gene: KevinMinion_87 Start: 52323, Stop: 52640, Start Num: 34
Candidate Starts for KevinMinion_87:
(Start: 4 @52194 has 3 MA's), (5, 52203), (7, 52230), (13, 52269), (Start: 17 @52278 has 1 MA's), (27, 52302), (Start: 34 @52323 has 8 MA's), (57, 52419), (73, 52557),

Gene: Kinny_89 Start: 52518, Stop: 52829, Start Num: 33
Candidate Starts for Kinny_89:
(Start: 33 @52518 has 40 MA's), (57, 52614), (73, 52752),

Gene: Kureo_245 Start: 108288, Stop: 108581, Start Num: 45
Candidate Starts for Kureo_245:
(Start: 45 @108288 has 101 MA's), (48, 108315), (52, 108336), (64, 108426), (66, 108435), (67, 108447), (72, 108492), (74, 108516), (78, 108567),

Gene: Leathea_95 Start: 51147, Stop: 51464, Start Num: 33
Candidate Starts for Leathea_95:
(Start: 33 @51147 has 40 MA's), (47, 51192), (57, 51243), (65, 51309), (73, 51381),

Gene: Lewando_86 Start: 51174, Stop: 51485, Start Num: 33
Candidate Starts for Lewando_86:
(Start: 33 @51174 has 40 MA's), (57, 51270), (73, 51408),

Gene: LibertyBell_76 Start: 48692, Stop: 48985, Start Num: 45
Candidate Starts for LibertyBell_76:
(39, 48680), (Start: 45 @48692 has 101 MA's), (64, 48830), (66, 48839), (73, 48905), (76, 48947),

Gene: LilHuddy_89 Start: 53435, Stop: 53773, Start Num: 33
Candidate Starts for LilHuddy_89:
(Start: 33 @53435 has 40 MA's), (73, 53669),

Gene: Linda_84 Start: 50589, Stop: 50921, Start Num: 42
Candidate Starts for Linda_84:
(Start: 42 @50589 has 33 MA's), (73, 50808),

Gene: Loretta_88 Start: 53005, Stop: 53346, Start Num: 33
Candidate Starts for Loretta_88:
(Start: 33 @53005 has 40 MA's), (68, 53206), (73, 53242),

Gene: LucySwiss_93 Start: 54380, Stop: 54715, Start Num: 33
Candidate Starts for LucySwiss_93:

(Start: 33 @54380 has 40 MA's), (46, 54401), (64, 54536),

Gene: Luthien_88 Start: 57271, Stop: 57570, Start Num: 45
Candidate Starts for Luthien_88:
(Start: 30 @57235 has 14 MA's), (35, 57253), (Start: 45 @57271 has 101 MA's), (56, 57340), (72, 57484), (73, 57493),

Gene: Madamato_82 Start: 51285, Stop: 51575, Start Num: 45
Candidate Starts for Madamato_82:
(Start: 45 @51285 has 101 MA's), (52, 51333), (58, 51375), (59, 51384), (64, 51423), (70, 51480), (71, 51486), (73, 51498), (76, 51540),

Gene: Madvan_87 Start: 56174, Stop: 56479, Start Num: 45
Candidate Starts for Madvan_87:
(Start: 30 @56138 has 14 MA's), (35, 56156), (Start: 45 @56174 has 101 MA's), (56, 56243), (58, 56264), (72, 56387), (73, 56396),

Gene: Magel_92 Start: 55799, Stop: 56104, Start Num: 45
Candidate Starts for Magel_92:
(Start: 45 @55799 has 101 MA's), (56, 55868), (72, 56012), (73, 56021),

Gene: MajinBuu_89 Start: 57538, Stop: 57837, Start Num: 45
Candidate Starts for MajinBuu_89:
(Start: 30 @57502 has 14 MA's), (35, 57520), (Start: 45 @57538 has 101 MA's), (56, 57607), (72, 57751), (73, 57760),

Gene: Makai_89 Start: 54043, Stop: 54384, Start Num: 33
Candidate Starts for Makai_89:
(Start: 33 @54043 has 40 MA's), (53, 54118), (73, 54280),

Gene: Mardi_90 Start: 51735, Stop: 52052, Start Num: 34
Candidate Starts for Mardi_90:
(Start: 4 @51606 has 3 MA's), (5, 51615), (7, 51642), (13, 51681), (Start: 17 @51690 has 1 MA's), (27, 51714), (Start: 34 @51735 has 8 MA's), (57, 51831), (73, 51969),

Gene: Marianna39_248 Start: 110480, Stop: 110773, Start Num: 45
Candidate Starts for Marianna39_248:
(Start: 45 @110480 has 101 MA's), (48, 110507), (52, 110528), (64, 110618), (66, 110627), (67, 110639), (72, 110684), (74, 110708), (78, 110759),

Gene: Maya_83 Start: 51624, Stop: 51914, Start Num: 45
Candidate Starts for Maya_83:
(Start: 45 @51624 has 101 MA's), (50, 51657), (52, 51672), (58, 51714), (59, 51723), (64, 51762), (71, 51825), (73, 51837), (76, 51879),

Gene: MediumFry_82 Start: 53043, Stop: 53384, Start Num: 33
Candidate Starts for MediumFry_82:
(Start: 33 @53043 has 40 MA's), (46, 53070), (52, 53115), (64, 53205),

Gene: Meibysrarus_81 Start: 51008, Stop: 51298, Start Num: 45
Candidate Starts for Meibysrarus_81:
(Start: 45 @51008 has 101 MA's), (50, 51041), (52, 51056), (58, 51098), (59, 51107), (64, 51146), (71, 51209), (73, 51221), (76, 51263),

Gene: Mema_74 Start: 53163, Stop: 53408, Start Num: 54
Candidate Starts for Mema_74:
(18, 53025), (23, 53037), (38, 53079), (Start: 44 @53091 has 10 MA's), (48, 53127), (54, 53163), (60, 53208), (64, 53238), (65, 53241), (79, 53382),

Gene: Michelle_84 Start: 50568, Stop: 50900, Start Num: 42
Candidate Starts for Michelle_84:
(Start: 42 @50568 has 33 MA's), (73, 50787),

Gene: Miek_85 Start: 52037, Stop: 52327, Start Num: 45
Candidate Starts for Miek_85:
(Start: 45 @52037 has 101 MA's), (52, 52085), (61, 52148), (65, 52178), (66, 52184), (72, 52241), (73, 52250), (76, 52292),

Gene: MiniBagel_90 Start: 54346, Stop: 54684, Start Num: 33
Candidate Starts for MiniBagel_90:
(Start: 33 @54346 has 40 MA's), (46, 54370), (64, 54505),

Gene: Monse_55 Start: 39510, Stop: 39830, Start Num: 45
Candidate Starts for Monse_55:
(29, 39471), (Start: 45 @39510 has 101 MA's), (54, 39573), (64, 39648), (68, 39687), (73, 39723),

Gene: Mooshroom_98 Start: 54025, Stop: 54327, Start Num: 42
Candidate Starts for Mooshroom_98:
(31, 53998), (Start: 40 @54019 has 4 MA's), (Start: 42 @54025 has 33 MA's), (56, 54100), (73, 54244),

Gene: Moozy_55 Start: 39513, Stop: 39833, Start Num: 45
Candidate Starts for Moozy_55:
(29, 39474), (Start: 45 @39513 has 101 MA's), (54, 39576), (64, 39651), (72, 39717), (73, 39726),

Gene: Mossy_87 Start: 57201, Stop: 57506, Start Num: 45
Candidate Starts for Mossy_87:
(31, 57168), (Start: 45 @57201 has 101 MA's), (56, 57270), (72, 57414), (73, 57423),

Gene: MrAaronian_84 Start: 50568, Stop: 50900, Start Num: 42
Candidate Starts for MrAaronian_84:
(Start: 42 @50568 has 33 MA's), (73, 50787),

Gene: Mudcat_92 Start: 55602, Stop: 55904, Start Num: 42
Candidate Starts for Mudcat_92:
(31, 55575), (Start: 40 @55596 has 4 MA's), (Start: 42 @55602 has 33 MA's), (56, 55677), (73, 55821),

Gene: Muglass_88 Start: 51936, Stop: 52247, Start Num: 33
Candidate Starts for Muglass_88:
(Start: 33 @51936 has 40 MA's), (57, 52032), (64, 52095), (65, 52098), (73, 52170),

Gene: Mysticmoon_86 Start: 56297, Stop: 56602, Start Num: 45
Candidate Starts for Mysticmoon_86:
(13, 56225), (31, 56264), (Start: 45 @56297 has 101 MA's), (56, 56366), (72, 56510), (73, 56519),

Gene: Nadmeg_87 Start: 57121, Stop: 57456, Start Num: 30
Candidate Starts for Nadmeg_87:

(Start: 30 @57121 has 14 MA's), (35, 57139), (Start: 45 @57157 has 101 MA's), (56, 57226), (72, 57370), (73, 57379),

Gene: Namo_85 Start: 52079, Stop: 52369, Start Num: 45
Candidate Starts for Namo_85:
(Start: 45 @52079 has 101 MA's), (50, 52112), (52, 52127), (58, 52169), (59, 52178), (64, 52217), (71, 52280), (73, 52292), (76, 52334),

Gene: NapoleonB_97 Start: 53998, Stop: 54306, Start Num: 40
Candidate Starts for NapoleonB_97:
(31, 53977), (Start: 40 @53998 has 4 MA's), (Start: 42 @54004 has 33 MA's), (56, 54079), (73, 54223),

Gene: Nason_94 Start: 54217, Stop: 54519, Start Num: 42
Candidate Starts for Nason_94:
(31, 54190), (Start: 40 @54211 has 4 MA's), (Start: 42 @54217 has 33 MA's), (56, 54292), (73, 54436),

Gene: Natasha_85 Start: 50502, Stop: 50825, Start Num: 41
Candidate Starts for Natasha_85:
(Start: 41 @50502 has 4 MA's), (55, 50574), (56, 50577), (64, 50646), (73, 50721),

Gene: Natsu_55 Start: 39109, Stop: 39402, Start Num: 45
Candidate Starts for Natsu_55:
(36, 39091), (Start: 45 @39109 has 101 MA's), (59, 39208), (61, 39220), (64, 39247), (73, 39322), (76, 39364),

Gene: Navi1117_92 Start: 52818, Stop: 53135, Start Num: 34
Candidate Starts for Navi1117_92:
(Start: 4 @52689 has 3 MA's), (5, 52698), (7, 52725), (13, 52764), (Start: 17 @52773 has 1 MA's), (27, 52797), (Start: 34 @52818 has 8 MA's), (57, 52914), (73, 53052),

Gene: Nightmare_89 Start: 54909, Stop: 55247, Start Num: 33
Candidate Starts for Nightmare_89:
(Start: 33 @54909 has 40 MA's), (46, 54933), (64, 55068),

Gene: Niktson_90 Start: 54476, Stop: 54814, Start Num: 33
Candidate Starts for Niktson_90:
(Start: 33 @54476 has 40 MA's), (46, 54500), (64, 54635),

Gene: Nithya_88 Start: 57069, Stop: 57404, Start Num: 30
Candidate Starts for Nithya_88:
(Start: 30 @57069 has 14 MA's), (35, 57087), (Start: 45 @57105 has 101 MA's), (56, 57174), (58, 57195), (72, 57318), (73, 57327),

Gene: NoPickles_90 Start: 55706, Stop: 56011, Start Num: 45
Candidate Starts for NoPickles_90:
(28, 55667), (Start: 45 @55706 has 101 MA's), (56, 55775), (72, 55919), (73, 55928),

Gene: Odesza_89 Start: 55746, Stop: 56051, Start Num: 45
Candidate Starts for Odesza_89:
(Start: 45 @55746 has 101 MA's), (56, 55815), (72, 55959), (73, 55968),

Gene: OhMyWard_83 Start: 56996, Stop: 57301, Start Num: 45
Candidate Starts for OhMyWard_83:

(11, 56912), (22, 56942), (31, 56963), (Start: 45 @56996 has 101 MA's), (56, 57065), (72, 57209), (73, 57218),

Gene: OlgasClover_90 Start: 57939, Stop: 58238, Start Num: 45
Candidate Starts for OlgasClover_90:
(Start: 30 @57903 has 14 MA's), (35, 57921), (Start: 45 @57939 has 101 MA's), (56, 58008), (72, 58152), (73, 58161),

Gene: OlympicHelado_85 Start: 52100, Stop: 52390, Start Num: 45
Candidate Starts for OlympicHelado_85:
(Start: 45 @52100 has 101 MA's), (50, 52133), (52, 52148), (58, 52190), (59, 52199), (64, 52238), (71, 52301), (73, 52313), (76, 52355),

Gene: Onestar_84 Start: 50968, Stop: 51363, Start Num: 16
Candidate Starts for Onestar_84:
(16, 50968), (Start: 33 @51013 has 40 MA's), (Start: 41 @51031 has 4 MA's), (55, 51103), (73, 51250),

Gene: Paella_245 Start: 109816, Stop: 110109, Start Num: 45
Candidate Starts for Paella_245:
(Start: 45 @109816 has 101 MA's), (48, 109843), (52, 109864), (64, 109954), (66, 109963), (67, 109975), (72, 110020), (74, 110044), (78, 110095),

Gene: Pepy6_050 Start: 72684, Stop: 73013, Start Num: 45
Candidate Starts for Pepy6_050:
(14, 72609), (Start: 45 @72684 has 101 MA's), (58, 72777), (72, 72900), (73, 72909),

Gene: Perkunas_91 Start: 55643, Stop: 55948, Start Num: 45
Candidate Starts for Perkunas_91:
(19, 55580), (20, 55583), (Start: 45 @55643 has 101 MA's), (56, 55712), (66, 55790), (72, 55856), (73, 55865),

Gene: PerroGrande22_113 Start: 75337, Stop: 75666, Start Num: 45
Candidate Starts for PerroGrande22_113:
(Start: 45 @75337 has 101 MA's), (58, 75430), (72, 75553), (73, 75562),

Gene: PestoPenguin_89 Start: 56422, Stop: 56757, Start Num: 30
Candidate Starts for PestoPenguin_89:
(Start: 30 @56422 has 14 MA's), (35, 56440), (Start: 45 @56458 has 101 MA's), (56, 56527), (72, 56671), (73, 56680),

Gene: Petito_90 Start: 56517, Stop: 56822, Start Num: 45
Candidate Starts for Petito_90:
(19, 56454), (26, 56472), (28, 56478), (Start: 45 @56517 has 101 MA's), (56, 56586), (66, 56664), (72, 56730), (73, 56739),

Gene: Phaby_89 Start: 53367, Stop: 53705, Start Num: 33
Candidate Starts for Phaby_89:
(Start: 33 @53367 has 40 MA's), (73, 53601),

Gene: Phaila_90 Start: 51627, Stop: 52073, Start Num: 4
Candidate Starts for Phaila_90:
(Start: 4 @51627 has 3 MA's), (5, 51636), (7, 51663), (13, 51702), (Start: 17 @51711 has 1 MA's), (27, 51735), (Start: 34 @51756 has 8 MA's), (57, 51852), (73, 51990),

Gene: Phepper_89 Start: 56610, Stop: 56951, Start Num: 30
Candidate Starts for Phepper_89:
(Start: 30 @56610 has 14 MA's), (35, 56628), (Start: 45 @56646 has 101 MA's), (56, 56715), (58, 56736), (72, 56859), (73, 56868),

Gene: Pherobrine_86 Start: 56340, Stop: 56645, Start Num: 45
Candidate Starts for Pherobrine_86:
(13, 56268), (31, 56307), (Start: 45 @56340 has 101 MA's), (56, 56409), (72, 56553), (73, 56562),

Gene: PherryCruz_55 Start: 39702, Stop: 40022, Start Num: 45
Candidate Starts for PherryCruz_55:
(29, 39663), (Start: 45 @39702 has 101 MA's), (54, 39765), (64, 39840), (73, 39915),

Gene: Pippin15_86 Start: 50675, Stop: 50968, Start Num: 44
Candidate Starts for Pippin15_86:
(Start: 44 @50675 has 10 MA's), (60, 50786), (70, 50873), (72, 50882), (73, 50891),

Gene: Poco6_049 Start: 73946, Stop: 74275, Start Num: 45
Candidate Starts for Poco6_049:
(Start: 45 @73946 has 101 MA's), (58, 74039), (72, 74162), (73, 74171),

Gene: PoeMe_88 Start: 51771, Stop: 52088, Start Num: 34
Candidate Starts for PoeMe_88:
(Start: 4 @51642 has 3 MA's), (5, 51651), (7, 51678), (13, 51717), (Start: 17 @51726 has 1 MA's), (27, 51750), (Start: 34 @51771 has 8 MA's), (57, 51867), (73, 52005),

Gene: Popy_81 Start: 52381, Stop: 52671, Start Num: 45
Candidate Starts for Popy_81:
(Start: 45 @52381 has 101 MA's), (50, 52414), (52, 52429), (58, 52471), (59, 52480), (64, 52519), (71, 52582), (73, 52594), (76, 52636),

Gene: Powelldog_88 Start: 51614, Stop: 51937, Start Num: 41
Candidate Starts for Powelldog_88:
(Start: 41 @51614 has 4 MA's), (64, 51758), (73, 51833),

Gene: ProfFrink_84 Start: 50537, Stop: 50869, Start Num: 42
Candidate Starts for ProfFrink_84:
(Start: 42 @50537 has 33 MA's), (73, 50756),

Gene: Qui_244 Start: 109804, Stop: 110097, Start Num: 45
Candidate Starts for Qui_244:
(Start: 45 @109804 has 101 MA's), (48, 109831), (52, 109852), (64, 109942), (66, 109951), (67, 109963), (72, 110008), (74, 110032), (78, 110083),

Gene: Rainydai_88 Start: 53655, Stop: 53945, Start Num: 45
Candidate Starts for Rainydai_88:
(Start: 45 @53655 has 101 MA's), (52, 53703), (61, 53766), (65, 53796), (66, 53802), (72, 53859), (73, 53868), (76, 53910),

Gene: Raunak_84 Start: 50247, Stop: 50579, Start Num: 42
Candidate Starts for Raunak_84:
(Start: 42 @50247 has 33 MA's), (73, 50466),

Gene: RavenPuff_56 Start: 39672, Stop: 39992, Start Num: 45
Candidate Starts for RavenPuff_56:
(29, 39633), (Start: 45 @39672 has 101 MA's), (54, 39735), (64, 39810), (73, 39885),

Gene: Regigigas_91 Start: 53267, Stop: 53557, Start Num: 45
Candidate Starts for Regigigas_91:
(Start: 45 @53267 has 101 MA's), (52, 53315), (61, 53378), (65, 53408), (66, 53414), (72, 53471), (73, 53480), (76, 53522),

Gene: Remlit_96 Start: 51871, Stop: 52188, Start Num: 34
Candidate Starts for Remlit_96:
(Start: 4 @51742 has 3 MA's), (7, 51778), (13, 51817), (Start: 17 @51826 has 1 MA's), (27, 51850), (Start: 34 @51871 has 8 MA's), (57, 51967), (73, 52105),

Gene: Renaldo_90 Start: 51279, Stop: 51590, Start Num: 33
Candidate Starts for Renaldo_90:
(Start: 33 @51279 has 40 MA's), (57, 51375), (73, 51513),

Gene: Rickmore_89 Start: 56232, Stop: 56531, Start Num: 45
Candidate Starts for Rickmore_89:
(Start: 30 @56196 has 14 MA's), (35, 56214), (Start: 45 @56232 has 101 MA's), (56, 56301), (72, 56445), (73, 56454),

Gene: Rima_84 Start: 52079, Stop: 52369, Start Num: 45
Candidate Starts for Rima_84:
(Start: 45 @52079 has 101 MA's), (50, 52112), (52, 52127), (58, 52169), (59, 52178), (64, 52217), (71, 52280), (73, 52292), (76, 52334),

Gene: Roney_89 Start: 55909, Stop: 56214, Start Num: 45
Candidate Starts for Roney_89:
(Start: 45 @55909 has 101 MA's), (56, 55978), (72, 56122), (73, 56131),

Gene: RosaAsantewaa_52 Start: 38783, Stop: 39076, Start Num: 45
Candidate Starts for RosaAsantewaa_52:
(Start: 45 @38783 has 101 MA's), (51, 38822), (52, 38831), (64, 38921), (73, 38996), (76, 39038),

Gene: Runhaar_86 Start: 56213, Stop: 56548, Start Num: 30
Candidate Starts for Runhaar_86:
(Start: 30 @56213 has 14 MA's), (35, 56231), (Start: 45 @56249 has 101 MA's), (56, 56318), (72, 56462), (73, 56471),

Gene: RustyBoy_86 Start: 50701, Stop: 51024, Start Num: 41
Candidate Starts for RustyBoy_86:
(Start: 41 @50701 has 4 MA's), (55, 50773), (56, 50776), (64, 50845), (73, 50920),

Gene: Salk_84 Start: 50551, Stop: 50883, Start Num: 42
Candidate Starts for Salk_84:
(Start: 42 @50551 has 33 MA's), (73, 50770),

Gene: Sangak_55 Start: 39212, Stop: 39532, Start Num: 45
Candidate Starts for Sangak_55:
(29, 39173), (Start: 45 @39212 has 101 MA's), (54, 39275), (64, 39350), (73, 39425),

Gene: Scap1_53 Start: 39048, Stop: 39368, Start Num: 45
Candidate Starts for Scap1_53:
(Start: 45 @39048 has 101 MA's), (54, 39111), (64, 39186), (68, 39225), (70, 39243), (73, 39261),

Gene: Schwartz33_85 Start: 55529, Stop: 55834, Start Num: 45
Candidate Starts for Schwartz33_85:
(24, 55475), (31, 55496), (Start: 43 @55526 has 2 MA's), (Start: 45 @55529 has 101 MA's), (56, 55598), (72, 55742), (73, 55751),

Gene: ScienceWizSam_93 Start: 54288, Stop: 54626, Start Num: 33
Candidate Starts for ScienceWizSam_93:
(Start: 33 @54288 has 40 MA's), (46, 54312), (64, 54447),

Gene: Secretariat_81 Start: 53797, Stop: 54102, Start Num: 45
Candidate Starts for Secretariat_81:
(Start: 45 @53797 has 101 MA's), (56, 53866), (72, 54010), (73, 54019),

Gene: SendItCS_83 Start: 52025, Stop: 52315, Start Num: 45
Candidate Starts for SendItCS_83:
(Start: 45 @52025 has 101 MA's), (52, 52073), (61, 52136), (65, 52166), (66, 52172), (72, 52229), (73, 52238), (76, 52280),

Gene: Serenabean_87 Start: 51398, Stop: 51691, Start Num: 44
Candidate Starts for Serenabean_87:
(Start: 44 @51398 has 10 MA's), (48, 51428), (70, 51596), (72, 51605), (75, 51632), (80, 51686),

Gene: ShaggyRogers_88 Start: 56181, Stop: 56516, Start Num: 30
Candidate Starts for ShaggyRogers_88:
(Start: 30 @56181 has 14 MA's), (35, 56199), (Start: 45 @56217 has 101 MA's), (56, 56286), (72, 56430), (73, 56439),

Gene: SheRa_56 Start: 39582, Stop: 39902, Start Num: 45
Candidate Starts for SheRa_56:
(29, 39543), (Start: 45 @39582 has 101 MA's), (54, 39645), (64, 39720), (72, 39786), (73, 39795),

Gene: Shepard_89 Start: 53355, Stop: 53693, Start Num: 33
Candidate Starts for Shepard_89:
(Start: 33 @53355 has 40 MA's), (73, 53589),

Gene: Shiba_83 Start: 50263, Stop: 50595, Start Num: 42
Candidate Starts for Shiba_83:
(Start: 42 @50263 has 33 MA's), (73, 50482),

Gene: Sloopyjoe_84 Start: 50570, Stop: 50902, Start Num: 42
Candidate Starts for Sloopyjoe_84:
(Start: 42 @50570 has 33 MA's), (73, 50789),

Gene: Soshi_82 Start: 52222, Stop: 52512, Start Num: 45
Candidate Starts for Soshi_82:
(Start: 45 @52222 has 101 MA's), (50, 52255), (52, 52270), (58, 52312), (59, 52321), (64, 52360), (71, 52423), (73, 52435), (76, 52477),

Gene: Spain_84 Start: 50568, Stop: 50900, Start Num: 42
Candidate Starts for Spain_84:
(Start: 42 @50568 has 33 MA's), (73, 50787),

Gene: Spectropatronm_82 Start: 51618, Stop: 51908, Start Num: 45
Candidate Starts for Spectropatronm_82:
(Start: 45 @51618 has 101 MA's), (50, 51651), (52, 51666), (58, 51708), (59, 51717), (64, 51756), (71, 51819), (73, 51831), (76, 51873),

Gene: Sporto_81 Start: 50849, Stop: 51172, Start Num: 41
Candidate Starts for Sporto_81:
(Start: 41 @50849 has 4 MA's), (55, 50921), (56, 50924), (64, 50993), (73, 51068),

Gene: Sprinkle_81 Start: 50522, Stop: 50845, Start Num: 42
Candidate Starts for Sprinkle_81:
(Start: 42 @50522 has 33 MA's), (73, 50741),

Gene: StarLord_84 Start: 50563, Stop: 50895, Start Num: 42
Candidate Starts for StarLord_84:
(Start: 42 @50563 has 33 MA's), (73, 50782),

Gene: Stardom_90 Start: 52069, Stop: 52371, Start Num: 42
Candidate Starts for Stardom_90:
(31, 52042), (Start: 40 @52063 has 4 MA's), (Start: 42 @52069 has 33 MA's), (73, 52288),

Gene: Stardrop_91 Start: 52722, Stop: 53039, Start Num: 34
Candidate Starts for Stardrop_91:
(Start: 4 @52593 has 3 MA's), (5, 52602), (7, 52629), (13, 52668), (Start: 17 @52677 has 1 MA's), (27, 52701), (Start: 34 @52722 has 8 MA's), (57, 52818), (73, 52956),

Gene: Stayer_84 Start: 50566, Stop: 50898, Start Num: 42
Candidate Starts for Stayer_84:
(Start: 42 @50566 has 33 MA's), (73, 50785),

Gene: Sunny4976_88 Start: 54541, Stop: 54918, Start Num: 34
Candidate Starts for Sunny4976_88:
(25, 54514), (Start: 34 @54541 has 8 MA's), (52, 54607), (63, 54676), (73, 54772),

Gene: SweetCrkHerbs_92 Start: 55656, Stop: 55961, Start Num: 45
Candidate Starts for SweetCrkHerbs_92:
(19, 55593), (20, 55596), (Start: 45 @55656 has 101 MA's), (56, 55725), (66, 55803), (72, 55869), (73, 55878),

Gene: Sweetclover_85 Start: 50105, Stop: 50398, Start Num: 44
Candidate Starts for Sweetclover_85:
(8, 49997), (Start: 44 @50105 has 10 MA's), (70, 50303), (72, 50312), (75, 50339), (76, 50363), (80, 50393),

Gene: Synepsis_81 Start: 53610, Stop: 53951, Start Num: 33
Candidate Starts for Synepsis_81:
(Start: 33 @53610 has 40 MA's), (64, 53772),

Gene: TaidaOne_83 Start: 52094, Stop: 52384, Start Num: 45

Candidate Starts for TaidaOne_83:
(Start: 45 @52094 has 101 MA's), (50, 52127), (52, 52142), (58, 52184), (59, 52193), (64, 52232), (71, 52295), (73, 52307), (76, 52349),

Gene: Tairn4Wing_92 Start: 55692, Stop: 55997, Start Num: 45
Candidate Starts for Tairn4Wing_92:
(Start: 45 @55692 has 101 MA's), (56, 55761), (72, 55905), (73, 55914),

Gene: Talon44_92 Start: 56253, Stop: 56558, Start Num: 45
Candidate Starts for Talon44_92:
(19, 56190), (20, 56193), (Start: 45 @56253 has 101 MA's), (56, 56322), (66, 56400), (72, 56466), (73, 56475),

Gene: Tanis_90 Start: 55729, Stop: 56034, Start Num: 45
Candidate Starts for Tanis_90:
(Start: 45 @55729 has 101 MA's), (56, 55798), (72, 55942), (73, 55951),

Gene: Teacup_85 Start: 54308, Stop: 54646, Start Num: 33
Candidate Starts for Teacup_85:
(Start: 33 @54308 has 40 MA's), (46, 54332), (64, 54467),

Gene: TenaciousP_90 Start: 58307, Stop: 58606, Start Num: 45
Candidate Starts for TenaciousP_90:
(Start: 30 @58271 has 14 MA's), (35, 58289), (Start: 45 @58307 has 101 MA's), (56, 58376), (72, 58520), (73, 58529),

Gene: Tenney120_90 Start: 52029, Stop: 52346, Start Num: 34
Candidate Starts for Tenney120_90:
(Start: 4 @51900 has 3 MA's), (5, 51909), (7, 51936), (13, 51975), (Start: 17 @51984 has 1 MA's), (27, 52008), (Start: 34 @52029 has 8 MA's), (57, 52125), (73, 52263),

Gene: Tenno_89 Start: 54263, Stop: 54601, Start Num: 33
Candidate Starts for Tenno_89:
(Start: 33 @54263 has 40 MA's), (46, 54287), (64, 54422),

Gene: Thiqqums_91 Start: 53655, Stop: 53945, Start Num: 45
Candidate Starts for Thiqqums_91:
(Start: 45 @53655 has 101 MA's), (52, 53703), (61, 53766), (65, 53796), (66, 53802), (72, 53859), (73, 53868), (76, 53910),

Gene: TieDye_79 Start: 50942, Stop: 51232, Start Num: 45
Candidate Starts for TieDye_79:
(Start: 45 @50942 has 101 MA's), (50, 50975), (52, 50990), (58, 51032), (59, 51041), (64, 51080), (71, 51143), (73, 51155), (76, 51197),

Gene: Tipton_91 Start: 53735, Stop: 54073, Start Num: 33
Candidate Starts for Tipton_91:
(Start: 33 @53735 has 40 MA's), (73, 53969),

Gene: Tokki_95 Start: 53736, Stop: 54074, Start Num: 33
Candidate Starts for Tokki_95:
(Start: 33 @53736 has 40 MA's), (73, 53970),

Gene: Tonaltzin_88 Start: 57046, Stop: 57345, Start Num: 45
Candidate Starts for Tonaltzin_88:
(Start: 30 @57010 has 14 MA's), (35, 57028), (Start: 45 @57046 has 101 MA's), (56, 57115), (72, 57259), (73, 57268),

Gene: TonyStarch_82 Start: 51380, Stop: 51670, Start Num: 45
Candidate Starts for TonyStarch_82:
(Start: 45 @51380 has 101 MA's), (50, 51413), (52, 51428), (58, 51470), (59, 51479), (64, 51518), (71, 51581), (73, 51593), (76, 51635),

Gene: Tribby_99 Start: 55243, Stop: 55545, Start Num: 42
Candidate Starts for Tribby_99:
(31, 55216), (Start: 40 @55237 has 4 MA's), (Start: 42 @55243 has 33 MA's), (56, 55318), (73, 55462),

Gene: TrixiePhattel_90 Start: 51329, Stop: 51646, Start Num: 33
Candidate Starts for TrixiePhattel_90:
(32, 51326), (Start: 33 @51329 has 40 MA's), (57, 51425), (66, 51497),

Gene: Truckee_86 Start: 53795, Stop: 54136, Start Num: 33
Candidate Starts for Truckee_86:
(Start: 33 @53795 has 40 MA's), (53, 53870), (73, 54032),

Gene: Trufflozitus_90 Start: 56207, Stop: 56512, Start Num: 45
Candidate Starts for Trufflozitus_90:
(Start: 45 @56207 has 101 MA's), (56, 56276), (72, 56420), (73, 56429),

Gene: Trustiboi_87 Start: 54309, Stop: 54650, Start Num: 33
Candidate Starts for Trustiboi_87:
(Start: 33 @54309 has 40 MA's), (68, 54510), (73, 54546),

Gene: Untouchable_90 Start: 57643, Stop: 57948, Start Num: 45
Candidate Starts for Untouchable_90:
(Start: 30 @57607 has 14 MA's), (35, 57625), (Start: 45 @57643 has 101 MA's), (56, 57712), (58, 57733), (72, 57856), (73, 57865),

Gene: Uzumaki_89 Start: 51465, Stop: 51782, Start Num: 34
Candidate Starts for Uzumaki_89:
(Start: 4 @51336 has 3 MA's), (5, 51345), (7, 51372), (13, 51411), (Start: 17 @51420 has 1 MA's), (27, 51444), (Start: 34 @51465 has 8 MA's), (57, 51561), (73, 51699),

Gene: Vardy_87 Start: 56164, Stop: 56463, Start Num: 45
Candidate Starts for Vardy_87:
(Start: 30 @56128 has 14 MA's), (35, 56146), (Start: 45 @56164 has 101 MA's), (56, 56233), (72, 56377), (73, 56386),

Gene: Westerlin_84 Start: 55207, Stop: 55521, Start Num: 46
Candidate Starts for Westerlin_84:
(Start: 33 @55183 has 40 MA's), (46, 55207), (64, 55342),

Gene: Wigberry_86 Start: 52792, Stop: 53103, Start Num: 45
Candidate Starts for Wigberry_86:
(Start: 45 @52792 has 101 MA's), (52, 52840), (58, 52882), (59, 52891), (64, 52930), (72, 52996), (73, 53005), (76, 53047), (81, 53080),

Gene: Xenomorph_92 Start: 54848, Stop: 55150, Start Num: 42
Candidate Starts for Xenomorph_92:
(31, 54821), (Start: 40 @54842 has 4 MA's), (Start: 42 @54848 has 33 MA's), (56, 54923), (73, 55067),

Gene: YoshiYama_93 Start: 54431, Stop: 54733, Start Num: 42
Candidate Starts for YoshiYama_93:
(31, 54404), (Start: 40 @54425 has 4 MA's), (Start: 42 @54431 has 33 MA's), (56, 54506), (73, 54650),

Gene: Yotsuba_82 Start: 53343, Stop: 53636, Start Num: 44
Candidate Starts for Yotsuba_82:
(Start: 44 @53343 has 10 MA's), (53, 53397), (55, 53412), (60, 53454), (70, 53541), (72, 53550), (73, 53559),

Gene: Zeina_89 Start: 50998, Stop: 51444, Start Num: 4
Candidate Starts for Zeina_89:
(1, 50839), (2, 50869), (3, 50956), (Start: 4 @50998 has 3 MA's), (5, 51007), (7, 51034), (13, 51073), (Start: 17 @51082 has 1 MA's), (27, 51106), (Start: 34 @51127 has 8 MA's), (57, 51223), (73, 51361),

Gene: Zeph_91 Start: 57411, Stop: 57752, Start Num: 30
Candidate Starts for Zeph_91:
(Start: 30 @57411 has 14 MA's), (35, 57429), (Start: 45 @57447 has 101 MA's), (56, 57516), (58, 57537), (72, 57660), (73, 57669),

Gene: Zippen_93 Start: 54182, Stop: 54523, Start Num: 33
Candidate Starts for Zippen_93:
(Start: 33 @54182 has 40 MA's), (46, 54209), (64, 54344),