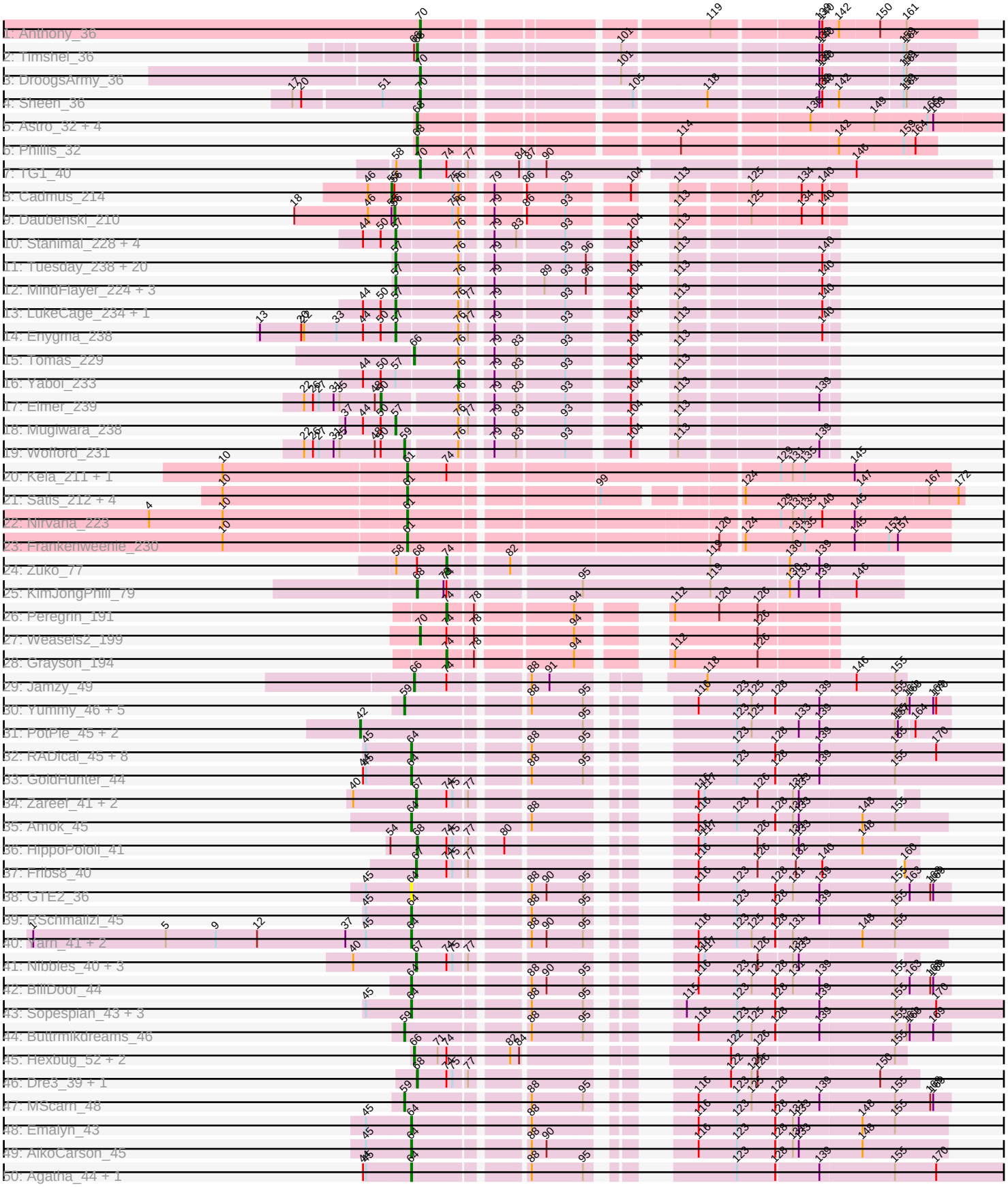
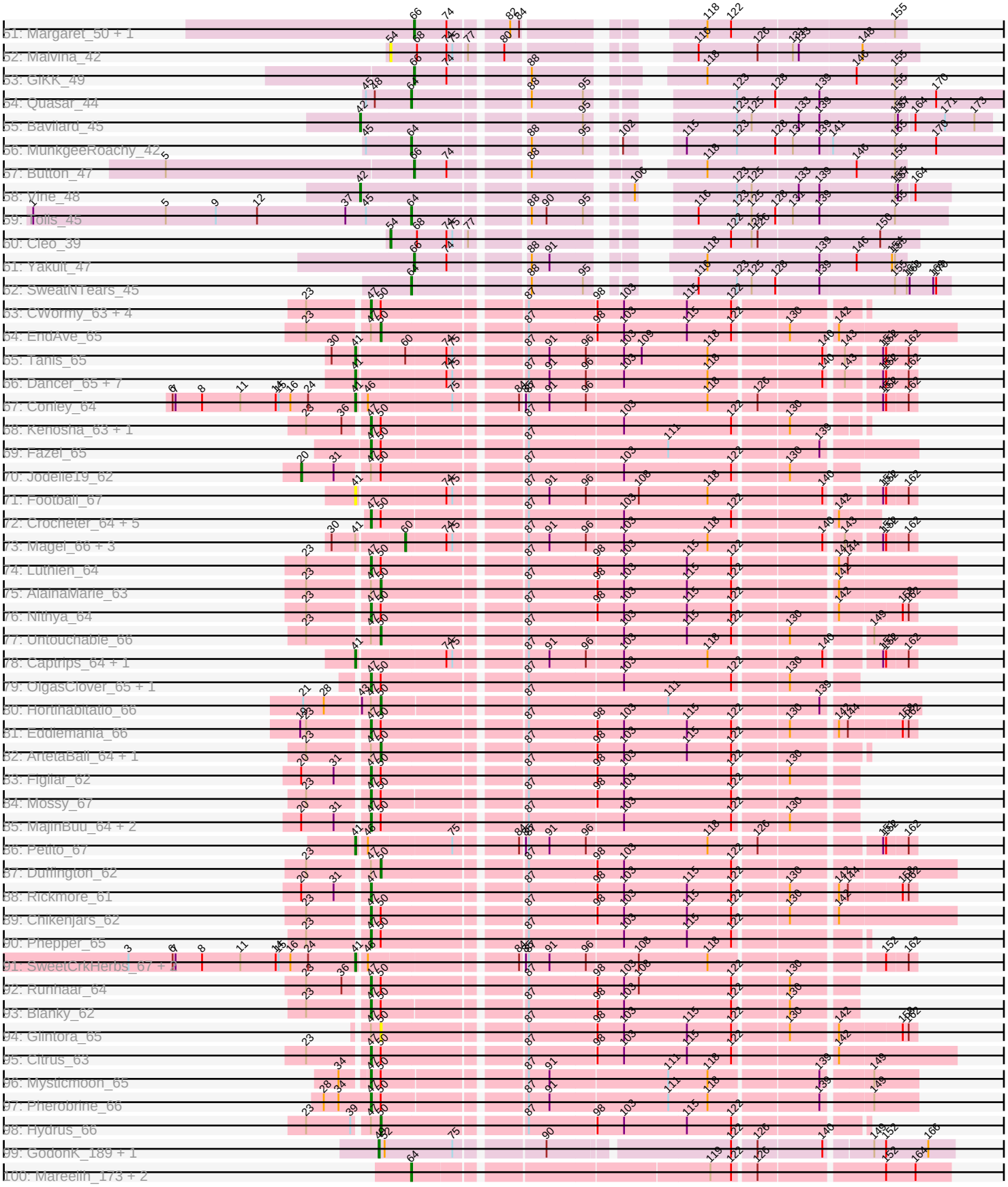
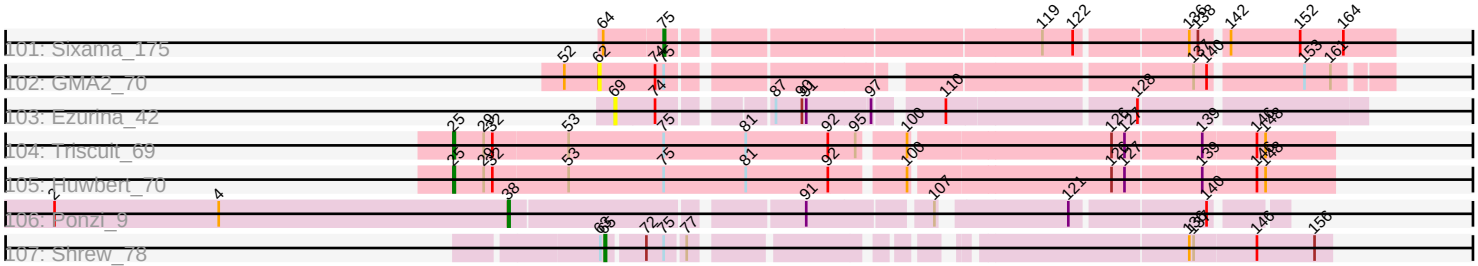
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1: Anthony_36
2: Timshel_36
3: DroogsArmy_36
4: Sheen_36
5: Astro_32 + 4
6: Phillis_32
7: TG1_40
8: Cadmus_214
9: Daubenski_210
10: Stanimal_228 + 4
11: Tuesday_238 + 20
12: MindFlayer_224 + 3
13: LukeCage_234 + 1
14: Enygma_238
15: Tomas_229
16: Yabol_233
17: Elmer_239
18: Mugiwara_238
19: Wofford_231
20: Kela_211 + 1
21: Salis_212 + 4
22: Nirvana_223
23: Frankenweenie_230
24: Zuko_77
25: KimJongPhill_79
26: Peregrin_191
27: Weasels2_199
28: Grayson_194
29: Jamzy_49
30: Yummy_46 + 5
31: PotPie_45 + 2
32: RADical_45 + 8
33: GoldHunter_44
34: Zareef_41 + 2
35: Amok_45
36: HippoPolo11_41
37: Fribs8_40
38: GTE2_36
39: RSchmalzl_45
40: Yarn_41 + 2
41: Nibbles_40 + 3
42: BillDoor_44
43: Sopesplan_43 + 3
44: Buttrmilkdreams_46
45: Hexbug_52 + 2
46: Dre3_39 + 1
47: MSCarn_48
48: Emalyn_43
49: AlkoCarson_45
50: Agatha_44 + 1

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51: Margaret_50 + 1
52: Malvina_42
53: GIKK_49
54: Quasar_44
55: Bavliard_45
56: MunkgeeRoachy_42
57: Button_47
58: Vine_48
59: Tolls_45
60: Cleo_39
61: Yakult_47
62: SweatNTears_45
63: CWormy_63 + 4
64: EndAve_65
65: Tanis_65
66: Dancer_65 + 7
67: Conley_64
68: Kenosha_63 + 1
69: Fazel_65
70: Jodelle19_62
71: Football_67
72: Crocheter_64 + 5
73: Magel_66 + 3
74: Luthien_64
75: AlainaMarie_63
76: Nithya_64
77: Untouchable_66
78: Captrips_64 + 1
79: OlgasClover_65 + 1
80: Horthabitatio_66
81: Eddiemania_66
82: AretaBall_64 + 1
83: Figlar_62
84: Mossy_67
85: MajinBuu_64 + 2
86: Petito_67
87: Dullington_62
88: Rickmore_61
89: Chikenjars_62
90: Phepper_65
91: SweetCrkHerbs_67 + 1
92: Runnaar_64
93: Blanky_62
94: Glintora_65
95: Citrus_63
96: Mysticmoon_65
97: Pherobrine_66
98: Hydrus_66
99: GodonK_189 + 1
100: Mareelin_173 + 2

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101: Sixama_175
102: GMA2_70
103: Ezurina_42
104: Triscuit_69
105: Ruwbert_70
106: Ponzi_9
107: Shrew_78

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 347271 Report

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

Pham number 347271 has 204 members, 20 are drafts.

Phages represented in each track:
- Track 1 : Anthony_36
- Track 2 : Timshel_36
- Track 3 : DroogsArmy_36
- Track 4 : Sheen_36
- Track 5 : Astro_32, Dixon_32, Smeadley_32, Caitlin_32, Groundhog_31
- Track 6 : Phillis_32
- Track 7 : TG1_40
- Track 8 : Cadmus_214
- Track 9 : Daubenski_210
- Track 10 : Stanimal_228, AngryGiraffe_228, BoomerJR_228, Genie2_228, Sollertia_229
- Track 11 : Tuesday_238, PumpkinSpice_234, Jollison_228, Rikishi_232, SaltySpitoon_231, Spilled_238, Gibbi_239, Brizzy_230, Wipeout_221, AcciDwight_239, Daisy123_233, JimJam_238, Bordeaux_229, Spelly_236, KentuckyRacer_237, CeilingFan_235, Battuta_229, TomSawyer_235, Quaran19_231, Karimac_231, Starbow_228
- Track 12 : MindFlayer_224, Amabiko_235, Birchlyn_230, IchabodCrane_225
- Track 13 : LukeCage_234, StarPlatinum_238
- Track 14 : Enygma_238
- Track 15 : Tomas_229
- Track 16 : Yaboi_233
- Track 17 : Elmer_239
- Track 18 : Mugiwara_238
- Track 19 : Wofford_231
- Track 20 : Kela_211, JustBecause_213
- Track 21 : Satis_212, Quantum_211, EhyElimayoE_215, Kradal_214, Sarkar_212
- Track 22 : Nirvana_223
- Track 23 : Frankenweenie_230
- Track 24 : Zuko_77
- Track 25 : KimJongPhill_79
- Track 26 : Peregrin_191
- Track 27 : Weasels2_199
- Track 28 : Grayson_194
- Track 29 : Jamzy_49
- Track 30 : Yummy_46, Troje_46, Blondies_47, SketchMex_44, Horseradish_46, Biskit_46
- Track 31 : PotPie_45, Tarnish_46, Yucky_48

• Track 32 : RADical_45, Burnsey_44, RedBaron_48, Axym_43, Socotra_45, Bubble_42, Nina_43, Typhonomachy_43, Carsonalex_47
• Track 33 : GoldHunter_44
• Track 34 : Zareef_41, Azira_41, Wallaby_43
• Track 35 : Amok_45
• Track 36 : HippoPololi_41
• Track 37 : Fribs8_40
• Track 38 : GTE2_36
• Track 39 : RSchmailzl_45
• Track 40 : Yarn_41, SteamedHams_44, AndPeggy_41
• Track 41 : Nibbles_40, MaVan_41, Wolfwood_41, Survivors_41
• Track 42 : BillDoor_44
• Track 43 : Sopespian_43, Eliott_44, PsychoKiller_43, Starburst_44
• Track 44 : Buttrmlkdreams_46
• Track 45 : Hexbug_52, Nodigi_52, Orla_52
• Track 46 : Dre3_39, Gibbous_39
• Track 47 : MScarn_48
• Track 48 : Emalyn_43
• Track 49 : AikoCarson_45
• Track 50 : Agatha_44, Cozz_42
• Track 51 : Margaret_50, RanchParmCat_49
• Track 52 : Malvina_42
• Track 53 : GiKK_49
• Track 54 : Quasar_44
• Track 55 : Bavilard_45
• Track 56 : MunkgeeRoachy_42
• Track 57 : Button_47
• Track 58 : Vine_48
• Track 59 : Tolls_45
• Track 60 : Cleo_39
• Track 61 : Yakult_47
• Track 62 : SweatNTears_45
• Track 63 : CWormy_63, Dialga_64, Arataki_63, Zeph_66, Demure_63
• Track 64 : EndAve_65
• Track 65 : Tanis_65
• Track 66 : Dancer_65, Capybara_65, Gravy_64, FortCran_65, Kerry_64, Artorias_65, Trufflozitus_66, JulesRay_65
• Track 67 : Conley_64
• Track 68 : Kenosha_63, Nadmeg_65
• Track 69 : Fazel_65
• Track 70 : Jodelie19_62
• Track 71 : Football_67
• Track 72 : Crocheter_64, PestoPenguin_66, Aloe25_65, ShaggyRogers_64, Gusicorn_65, BetterYeti_64
• Track 73 : Magel_66, Roney_65, Odesza_64, Gill_65
• Track 74 : Luthien_64
• Track 75 : AlainaMarie_63
• Track 76 : Nithya_64
• Track 77 : Untouchable_66
• Track 78 : Captrips_64, NoPickles_64
• Track 79 : OlgasClover_65, BluerMoon_62
• Track 80 : Hortihabitatio_66
• Track 81 : Eddiemania_66

• Track 82 : ArtetaBall_64, Madvan_64
• Track 83 : Figliar_62
• Track 84 : Mossy_67
• Track 85 : MajinBuu_64, Tonaltzin_62, TenaciousP_64
• Track 86 : Petito_67
• Track 87 : Duffington_62
• Track 88 : Rickmore_61
• Track 89 : Chikenjars_62
• Track 90 : Phepper_65
• Track 91 : SweetCrkHerbs_67, Perkunas_67, Talon44_67
• Track 92 : Runhaar_64
• Track 93 : Blanky_62
• Track 94 : Glintora_65
• Track 95 : Citrus_63
• Track 96 : Mysticmoon_65
• Track 97 : Pherobrine_66
• Track 98 : Hydrus_66
• Track 99 : GodonK_189, Phendrix_177
• Track 100 : Mareelih_173, Boopy_175, BlueNGold_172
• Track 101 : Sixama_175
• Track 102 : GMA2_70
• Track 103 : Ezurina_42
• Track 104 : Triscuit_69
• Track 105 : Huwbert_70
• Track 106 : Ponzi_9
• Track 107 : Shrew_78

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

The start number called the most often in the published annotations is 57, it was called in 31 of the 184 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AcciDwight_239, Amabiko_235, AngryGiraffe_228, Battuta_229, Birchlyn_230, BoomerJR_228, Bordeaux_229, Brizzy_230, CeilingFan_235, Daisy123_233, Enygma_238, Genie2_228, Gibbi_239, IchabodCrane_225, JimJam_238, Jollison_228, Karimac_231, KentuckyRacer_237, LukeCage_234, MindFlayer_224, Mugiwara_238, PumpkinSpice_234, Quaran19_231, Rikishi_232, SaltySpitoon_231, Sollertia_229, Spelly_236, Spilled_238, Stanimal_228, StarPlatinum_238, Starbow_228, TomSawyer_235, Tuesday_238, Wipeout_221,

Genes that have the "Most Annotated" start but do not call it:
• Yaboi_233,

Genes that do not have the "Most Annotated" start:
• Agatha_44, AikoCarson_45, AlainaMarie_63, Aloe25_65, Amok_45, AndPeggy_41, Anthony_36, Arataki_63, ArtetaBall_64, Artorias_65, Astro_32, Axym_43, Azira_41, Bavilard_45, BetterYeti_64, BillDoor_44, Biskit_46, Blanky_62, Blondies_47, BlueNGold_172, BluerMoon_62, Boopy_175, Bubble_42, Burnsey_44, Button_47, Buttrmlkdreams_46, CWormy_63, Cadmus_214, Caitlin_32, Captrips_64,

Capybara_65, Carsonalex_47, Chikenjars_62, Citrus_63, Cleo_39, Conley_64, Cozz_42, Crocheter_64, Dancer_65, Daubenski_210, Demure_63, Dialga_64, Dixon_32, Dre3_39, DroogsArmy_36, Duffington_62, Eddiemania_66, EhyElimayoE_215, Eliott_44, Elmer_239, Emalyn_43, EndAve_65, Ezurina_42, Fazel_65, Figliar_62, Football_67, FortCran_65, Frankenweenie_230, Fribs8_40, GMA2_70, GTE2_36, GiKK_49, Gibbous_39, Gill_65, Glintora_65, GodonK_189, GoldHunter_44, Gravy_64, Grayson_194, Groundhog_31, Gusicorn_65, Hexbug_52, HippoPololi_41, Horseradish_46, Hortihabitatio_66, Huwbert_70, Hydrus_66, Jamzy_49, Jodelie19_62, JulesRay_65, JustBecause_213, Kela_211, Kenosha_63, Kerry_64, KimJongPhill_79, Kradal_214, Luthien_64, MScarn_48, MaVan_41, Madvan_64, Magel_66, MajinBuu_64, Malvina_42, Mareelih_173, Margaret_50, Mossy_67, MunkgeeRoachy_42, Mysticmoon_65, Nadmeg_65, Nibbles_40, Nina_43, Nirvana_223, Nithya_64, NoPickles_64, Nodigi_52, Odesza_64, OlgasClover_65, Orla_52, Peregrin_191, Perkunas_67, PestoPenguin_66, Petito_67, Phendrix_177, Phepper_65, Pherobrine_66, Phillis_32, Ponzi_9, PotPie_45, PsychoKiller_43, Quantum_211, Quasar_44, RADical_45, RSchmailzl_45, RanchParmCat_49, RedBaron_48, Rickmore_61, Roney_65, Runhaar_64, Sarkar_212, Satis_212, ShaggyRogers_64, Sheen_36, Shrew_78, Sixama_175, SketchMex_44, Smeadley_32, Socotra_45, Sopespian_43, Starburst_44, SteamedHams_44, Survivors_41, SweatNTears_45, SweetCrkHerbs_67, TG1_40, Talon44_67, Tanis_65, Tarnish_46, TenaciousP_64, Timshel_36, Tolls_45, Tomas_229, Tonaltzin_62, Triscuit_69, Troje_46, Trufflozitus_66, Typhonomachy_43, Untouchable_66, Vine_48, Wallaby_43, Weasels2_199, Wofford_231, Wolfwood_41, Yakult_47, Yarn_41, Yucky_48, Yummy_46, Zareef_41, Zeph_66, Zuko_77,

Summary by start number:

Start 20:
• Found in 8 of 204 (3.9%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 12.5% of time when present
• Phage (with cluster) where this start called: Jodelie19_62 (DJ),

Start 25:
• Found in 2 of 204 (1.0%) of genes in pham
• Manual Annotations of this start: 2 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Huwbert_70 (GG), Triscuit_69 (GG),

Start 38:
• Found in 1 of 204 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ponzi_9 (singleton),

Start 41:
• Found in 21 of 204 (10.3%) of genes in pham
• Manual Annotations of this start: 15 of 184
• Called 81.0% of time when present
• Phage (with cluster) where this start called: Artorias_65 (DJ), Captrips_64 (DJ), Capybara_65 (DJ), Conley_64 (DJ), Dancer_65 (DJ), Football_67 (DJ), FortCran_65 (DJ), Gravy_64 (DJ), JulesRay_65 (DJ), Kerry_64 (DJ), NoPickles_64 (DJ), Perkunas_67 (DJ), Petito_67 (DJ), SweetCrkHerbs_67 (DJ), Talon44_67 (DJ),

Tanis_65 (DJ), Trufflozitus_66 (DJ),

Start 42:
• Found in 5 of 204 (2.5%) of genes in pham
• Manual Annotations of this start: 5 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bavilard_45 (CT), PotPie_45 (CT), Tarnish_46 (CT), Vine_48 (CT), Yucky_48 (CT),

Start 47:
• Found in 42 of 204 (20.6%) of genes in pham
• Manual Annotations of this start: 29 of 184
• Called 76.2% of time when present
• Phage (with cluster) where this start called: Aloe25_65 (DJ), Arataki_63 (DJ), BetterYeti_64 (DJ), Blanky_62 (DJ), BluerMoon_62 (DJ), CWormy_63 (DJ), Chikenjars_62 (DJ), Citrus_63 (DJ), Crocheter_64 (DJ), Demure_63 (DJ), Dialga_64 (DJ), Eddiemania_66 (DJ), Fazel_65 (DJ), Figliar_62 (DJ), Gusicorn_65 (DJ), Kenosha_63 (DJ), Luthien_64 (DJ), MajinBuu_64 (DJ), Mossy_67 (DJ), Mysticmoon_65 (DJ), Nadmeg_65 (DJ), Nithya_64 (DJ), OlgasClover_65 (DJ), PestoPenguin_66 (DJ), Phepper_65 (DJ), Pherobrine_66 (DJ), Rickmore_61 (DJ), Runhaar_64 (DJ), ShaggyRogers_64 (DJ), TenaciousP_64 (DJ), Tonaltzin_62 (DJ), Zeph_66 (DJ),

Start 49:
• Found in 2 of 204 (1.0%) of genes in pham
• Manual Annotations of this start: 2 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GodonK_189 (DK), Phendrix_177 (DK),

Start 50:
• Found in 53 of 204 (26.0%) of genes in pham
• Manual Annotations of this start: 8 of 184
• Called 18.9% of time when present
• Phage (with cluster) where this start called: AlainaMarie_63 (DJ), ArtetaBall_64 (DJ), Duffington_62 (DJ), Elmer_239 (BE2), EndAve_65 (DJ), Glintora_65 (DJ), Hortihabitatio_66 (DJ), Hydrus_66 (DJ), Madvan_64 (DJ), Untouchable_66 (DJ),

Start 54:
• Found in 3 of 204 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Cleo_39 (CT), Malvina_42 (CT),

Start 55:
• Found in 2 of 204 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Cadmus_214 (BE1),

Start 56:
• Found in 2 of 204 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 50.0% of time when present

• Phage (with cluster) where this start called: Daubenski_210 (BE1),

Start 57:
• Found in 35 of 204 (17.2%) of genes in pham
• Manual Annotations of this start: 31 of 184
• Called 97.1% of time when present
• Phage (with cluster) where this start called: AcciDwight_239 (BE2), Amabiko_235 (BE2), AngryGiraffe_228 (BE2), Battuta_229 (BE2), Birchlyn_230 (BE2), BoomerJR_228 (BE2), Bordeaux_229 (BE2), Brizzy_230 (BE2), CeilingFan_235 (BE2), Daisy123_233 (BE2), Enygma_238 (BE2), Genie2_228 (BE2), Gibbi_239 (BE2), IchabodCrane_225 (BE2), JimJam_238 (BE2), Jollison_228 (BE2), Karimac_231 (BE2), KentuckyRacer_237 (BE2), LukeCage_234 (BE2), MindFlayer_224 (BE2), Mugiwara_238 (BE2), PumpkinSpice_234 (BE2), Quaran19_231 (BE2), Rikishi_232 (BE2), SaltySpitoon_231 (BE2), Sollertia_229 (BE2), Spelly_236 (BE2), Spilled_238 (BE2), Stanimal_228 (BE2), StarPlatinum_238 (BE2), Starbow_228 (BE2), TomSawyer_235 (BE2), Tuesday_238 (BE2), Wipeout_221 (BE2),

Start 59:
• Found in 9 of 204 (4.4%) of genes in pham
• Manual Annotations of this start: 9 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Biskit_46 (CT), Blondies_47 (CT), Buttrmlkdreams_46 (CT), Horseradish_46 (CT), MScarn_48 (CT), SketchMex_44 (CT), Troje_46 (CT), Wofford_231 (BE2), Yummy_46 (CT),

Start 60:
• Found in 5 of 204 (2.5%) of genes in pham
• Manual Annotations of this start: 4 of 184
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Gill_65 (DJ), Magel_66 (DJ), Odesza_64 (DJ), Roney_65 (DJ),

Start 61:
• Found in 9 of 204 (4.4%) of genes in pham
• Manual Annotations of this start: 9 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EhyElimayoE_215 (BM), Frankenweenie_230 (BM), JustBecause_213 (BM), Kela_211 (BM), Kradal_214 (BM), Nirvana_223 (BM), Quantum_211 (BM), Sarkar_212 (BM), Satis_212 (BM),

Start 62:
• Found in 1 of 204 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA2_70 (DS),

Start 64:
• Found in 33 of 204 (16.2%) of genes in pham
• Manual Annotations of this start: 26 of 184
• Called 97.0% of time when present
• Phage (with cluster) where this start called: Agatha_44 (CT), AikoCarson_45 (CT), Amok_45 (CT), AndPeggy_41 (CT), Axym_43 (CT), BillDoor_44 (CT),

BlueNGold_172 (DS), Boopy_175 (DS), Bubble_42 (CT), Burnsey_44 (CT), Carsonalex_47 (CT), Cozz_42 (CT), Eliott_44 (CT), Emalyn_43 (CT), GTE2_36 (CT), GoldHunter_44 (CT), Mareelih_173 (DS), MunkgeeRoachy_42 (CT), Nina_43 (CT), PsychoKiller_43 (CT), Quasar_44 (CT), RADical_45 (CT), RSchmailzl_45 (CT), RedBaron_48 (CT), Socotra_45 (CT), Sopespian_43 (CT), Starburst_44 (CT), SteamedHams_44 (CT), SweatNTears_45 (CT), Tolls_45 (CT), Typhonomachy_43 (CT), Yarn_41 (CT),

Start 65:
• Found in 1 of 204 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Shrew_78 (singleton),

Start 66:
• Found in 11 of 204 (5.4%) of genes in pham
• Manual Annotations of this start: 10 of 184
• Called 90.9% of time when present
• Phage (with cluster) where this start called: Button_47 (CT), GiKK_49 (CT), Hexbug_52 (CT), Jamzy_49 (CT), Margaret_50 (CT), Nodigi_52 (CT), Orla_52 (CT), RanchParmCat_49 (CT), Tomas_229 (BE2), Yakult_47 (CT),

Start 67:
• Found in 8 of 204 (3.9%) of genes in pham
• Manual Annotations of this start: 7 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Azira_41 (CT), Fribs8_40 (CT), MaVan_41 (CT), Nibbles_40 (CT), Survivors_41 (CT), Wallaby_43 (CT), Wolfwood_41 (CT), Zareef_41 (CT),

Start 68:
• Found in 14 of 204 (6.9%) of genes in pham
• Manual Annotations of this start: 11 of 184
• Called 78.6% of time when present
• Phage (with cluster) where this start called: Astro_32 (A8), Caitlin_32 (A8), Dixon_32 (A8), Dre3_39 (CT), Gibbous_39 (CT), Groundhog_31 (A8), HippoPololi_41 (CT), KimJongPhill_79 (BR), Phillis_32 (A8), Smeadley_32 (A8), Timshel_36 (A7),

Start 69:
• Found in 1 of 204 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ezurina_42 (FR),

Start 70:
• Found in 5 of 204 (2.5%) of genes in pham
• Manual Annotations of this start: 5 of 184
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anthony_36 (A20), DroogsArmy_36 (A7), Sheen_36 (A7), TG1_40 (BB1), Weasels2_199 (CB),

Start 74:
• Found in 48 of 204 (23.5%) of genes in pham

• Manual Annotations of this start: 3 of 184
• Called 6.2% of time when present
• Phage (with cluster) where this start called: Grayson_194 (CB), Peregrin_191 (CB), Zuko_77 (BR),

Start 75:
• Found in 40 of 204 (19.6%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 2.5% of time when present
• Phage (with cluster) where this start called: Sixama_175 (DS),

Start 76:
• Found in 40 of 204 (19.6%) of genes in pham
• Manual Annotations of this start: 1 of 184
• Called 2.5% of time when present
• Phage (with cluster) where this start called: Yaboi_233 (BE2),

Summary by clusters:

There are 16 clusters represented in this pham: A20, FR, DJ, BR, CB, DK, singleton, GG, A7, BM, BE2, A8, BE1, DS, BB1, CT,

Info for manual annotations of cluster A20:
•Start number 70 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A7:
•Start number 68 was manually annotated 1 time for cluster A7.
•Start number 70 was manually annotated 2 times for cluster A7.

Info for manual annotations of cluster A8:
•Start number 68 was manually annotated 6 times for cluster A8.

Info for manual annotations of cluster BB1:
•Start number 70 was manually annotated 1 time for cluster BB1.

Info for manual annotations of cluster BE1:
•Start number 55 was manually annotated 1 time for cluster BE1.
•Start number 56 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 50 was manually annotated 1 time for cluster BE2.
•Start number 57 was manually annotated 31 times for cluster BE2.
•Start number 59 was manually annotated 1 time for cluster BE2.
•Start number 66 was manually annotated 1 time for cluster BE2.
•Start number 76 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BM:
•Start number 61 was manually annotated 9 times for cluster BM.

Info for manual annotations of cluster BR:
•Start number 68 was manually annotated 1 time for cluster BR.
•Start number 74 was manually annotated 1 time for cluster BR.

Info for manual annotations of cluster CB:
•Start number 70 was manually annotated 1 time for cluster CB.
•Start number 74 was manually annotated 2 times for cluster CB.

Info for manual annotations of cluster CT:
•Start number 42 was manually annotated 5 times for cluster CT.
•Start number 54 was manually annotated 1 time for cluster CT.
•Start number 59 was manually annotated 8 times for cluster CT.
•Start number 64 was manually annotated 23 times for cluster CT.
•Start number 66 was manually annotated 9 times for cluster CT.
•Start number 67 was manually annotated 7 times for cluster CT.
•Start number 68 was manually annotated 3 times for cluster CT.

Info for manual annotations of cluster DJ:
•Start number 20 was manually annotated 1 time for cluster DJ.
•Start number 41 was manually annotated 15 times for cluster DJ.
•Start number 47 was manually annotated 29 times for cluster DJ.
•Start number 50 was manually annotated 7 times for cluster DJ.
•Start number 60 was manually annotated 4 times for cluster DJ.

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

Info for manual annotations of cluster DS:
•Start number 64 was manually annotated 3 times for cluster DS.
•Start number 75 was manually annotated 1 time for cluster DS.

Info for manual annotations of cluster GG:
•Start number 25 was manually annotated 2 times for cluster GG.

Gene Information:

Gene: AcciDwight_239 Start: 109317, Stop: 109685, Start Num: 57
Candidate Starts for AcciDwight_239:
(Start: 57 @109317 has 31 MA's), (Start: 76 @109377 has 1 MA's), (79, 109401), (93, 109467), (96, 109488), (104, 109521), (113, 109536), (140, 109671),

Gene: Agatha_44 Start: 33075, Stop: 32551, Start Num: 64
Candidate Starts for Agatha_44:
(44, 33123), (45, 33120), (Start: 64 @33075 has 26 MA's), (88, 32976), (95, 32925), (123, 32829), (128, 32790), (139, 32748), (155, 32673), (170, 32631),

Gene: AikoCarson_45 Start: 33253, Stop: 32798, Start Num: 64
Candidate Starts for AikoCarson_45:
(45, 33298), (Start: 64 @33253 has 26 MA's), (88, 33154), (90, 33139), (116, 33046), (123, 33007), (128, 32968), (131, 32953), (133, 32947), (148, 32884),

Gene: AlainaMarie_63 Start: 46290, Stop: 46832, Start Num: 50
Candidate Starts for AlainaMarie_63:

(23, 46224), (Start: 47 @46281 has 29 MA's), (Start: 50 @46290 has 8 MA's), (87, 46422), (98, 46488), (103, 46515), (115, 46578), (122, 46623), (142, 46716),

Gene: Aloe25_65 Start: 46391, Stop: 46861, Start Num: 47
Candidate Starts for Aloe25_65:
(Start: 47 @46391 has 29 MA's), (Start: 50 @46400 has 8 MA's), (87, 46529), (103, 46622), (122, 46730), (142, 46823),

Gene: Amabiko_235 Start: 109135, Stop: 109503, Start Num: 57
Candidate Starts for Amabiko_235:
(Start: 57 @109135 has 31 MA's), (Start: 76 @109195 has 1 MA's), (79, 109219), (89, 109264), (93, 109285), (96, 109306), (104, 109339), (113, 109354), (140, 109489),

Gene: Amok_45 Start: 33277, Stop: 32822, Start Num: 64
Candidate Starts for Amok_45:
(Start: 64 @33277 has 26 MA's), (88, 33178), (116, 33070), (123, 33031), (128, 32992), (131, 32977), (133, 32971), (148, 32908), (155, 32875),

Gene: AndPeggy_41 Start: 32608, Stop: 32153, Start Num: 64
Candidate Starts for AndPeggy_41:
(1, 32992), (5, 32857), (9, 32806), (12, 32764), (37, 32674), (45, 32653), (Start: 64 @32608 has 26 MA's), (88, 32509), (90, 32494), (95, 32458), (116, 32401), (123, 32362), (125, 32347), (128, 32323), (131, 32308), (148, 32239), (155, 32206),

Gene: AngryGiraffe_228 Start: 108607, Stop: 108975, Start Num: 57
Candidate Starts for AngryGiraffe_228:
(44, 108574), (Start: 50 @108592 has 8 MA's), (Start: 57 @108607 has 31 MA's), (Start: 76 @108667 has 1 MA's), (79, 108691), (83, 108712), (93, 108757), (104, 108811), (113, 108826),

Gene: Anthony_36 Start: 26453, Stop: 25938, Start Num: 70
Candidate Starts for Anthony_36:
(Start: 70 @26453 has 5 MA's), (119, 26195), (139, 26093), (140, 26090), (142, 26075), (150, 26036), (161, 26009),

Gene: Arataki_63 Start: 45961, Stop: 46422, Start Num: 47
Candidate Starts for Arataki_63:
(23, 45904), (Start: 47 @45961 has 29 MA's), (Start: 50 @45970 has 8 MA's), (87, 46102), (98, 46168), (103, 46195), (115, 46258), (122, 46303),

Gene: ArtetaBall_64 Start: 46607, Stop: 47059, Start Num: 50
Candidate Starts for ArtetaBall_64:
(23, 46541), (Start: 47 @46598 has 29 MA's), (Start: 50 @46607 has 8 MA's), (87, 46739), (98, 46805), (103, 46832), (115, 46895), (122, 46940),

Gene: Artorias_65 Start: 46494, Stop: 47009, Start Num: 41
Candidate Starts for Artorias_65:
(Start: 41 @46494 has 15 MA's), (Start: 74 @46578 has 3 MA's), (Start: 75 @46584 has 1 MA's), (87, 46644), (91, 46665), (96, 46701), (103, 46737), (118, 46821), (140, 46929), (143, 46944), (151, 46977), (152, 46980), (162, 47001),

Gene: Astro_32 Start: 26313, Stop: 25705, Start Num: 68
Candidate Starts for Astro_32:
(Start: 68 @26313 has 11 MA's), (136, 25959), (149, 25896), (165, 25845), (169, 25839),

Gene: Axym_43 Start: 32972, Stop: 32448, Start Num: 64
Candidate Starts for Axym_43:
(45, 33017), (Start: 64 @32972 has 26 MA's), (88, 32873), (95, 32822), (123, 32726), (128, 32687), (139, 32645), (155, 32570), (170, 32528),

Gene: Azira_41 Start: 32431, Stop: 32018, Start Num: 67
Candidate Starts for Azira_41:
(40, 32494), (Start: 67 @32431 has 7 MA's), (Start: 74 @32401 has 3 MA's), (Start: 75 @32395 has 1 MA's), (77, 32383), (116, 32227), (117, 32221), (126, 32167), (131, 32134), (133, 32128),

Gene: Battuta_229 Start: 108450, Stop: 108818, Start Num: 57
Candidate Starts for Battuta_229:
(Start: 57 @108450 has 31 MA's), (Start: 76 @108510 has 1 MA's), (79, 108534), (93, 108600), (96, 108621), (104, 108654), (113, 108669), (140, 108804),

Gene: Bavilard_45 Start: 34242, Stop: 33691, Start Num: 42
Candidate Starts for Bavilard_45:
(Start: 42 @34242 has 5 MA's), (95, 34038), (123, 33942), (125, 33927), (133, 33882), (139, 33861), (155, 33786), (157, 33783), (164, 33768), (171, 33738), (173, 33708),

Gene: BetterYeti_64 Start: 46390, Stop: 46860, Start Num: 47
Candidate Starts for BetterYeti_64:
(Start: 47 @46390 has 29 MA's), (Start: 50 @46399 has 8 MA's), (87, 46528), (103, 46621), (122, 46729), (142, 46822),

Gene: BillDoor_44 Start: 32280, Stop: 31822, Start Num: 64
Candidate Starts for BillDoor_44:
(Start: 64 @32280 has 26 MA's), (88, 32181), (90, 32166), (95, 32130), (116, 32073), (123, 32034), (125, 32019), (128, 31995), (131, 31980), (139, 31953), (155, 31878), (163, 31863), (168, 31842), (169, 31839),

Gene: Birchlyn_230 Start: 106383, Stop: 106751, Start Num: 57
Candidate Starts for Birchlyn_230:
(Start: 57 @106383 has 31 MA's), (Start: 76 @106443 has 1 MA's), (79, 106467), (89, 106512), (93, 106533), (96, 106554), (104, 106587), (113, 106602), (140, 106737),

Gene: Biskit_46 Start: 32979, Stop: 32512, Start Num: 59
Candidate Starts for Biskit_46:
(Start: 59 @32979 has 9 MA's), (88, 32871), (95, 32820), (116, 32763), (123, 32724), (125, 32709), (128, 32685), (139, 32643), (155, 32568), (161, 32556), (163, 32553), (169, 32529), (170, 32526),

Gene: Blanky_62 Start: 47900, Stop: 48352, Start Num: 47
Candidate Starts for Blanky_62:
(23, 47843), (Start: 47 @47900 has 29 MA's), (Start: 50 @47909 has 8 MA's), (87, 48038), (98, 48104), (103, 48131), (122, 48239), (130, 48290),

Gene: Blondies_47 Start: 33296, Stop: 32829, Start Num: 59
Candidate Starts for Blondies_47:
(Start: 59 @33296 has 9 MA's), (88, 33188), (95, 33137), (116, 33080), (123, 33041), (125, 33026), (128, 33002), (139, 32960), (155, 32885), (161, 32873), (163, 32870), (169, 32846), (170, 32843),

Gene: BlueNGold_172 Start: 101916, Stop: 101413, Start Num: 64

Candidate Starts for BlueNGold_172:
(Start: 64 @101916 has 26 MA's), (119, 101640), (122, 101619), (126, 101598), (152, 101478), (164, 101448),

Gene: BluerMoon_62 Start: 46364, Stop: 46819, Start Num: 47
Candidate Starts for BluerMoon_62:
(Start: 47 @46364 has 29 MA's), (Start: 50 @46373 has 8 MA's), (87, 46505), (103, 46598), (122, 46706), (130, 46757),

Gene: BoomerJR_228 Start: 109040, Stop: 109408, Start Num: 57
Candidate Starts for BoomerJR_228:
(44, 109007), (Start: 50 @109025 has 8 MA's), (Start: 57 @109040 has 31 MA's), (Start: 76 @109100 has 1 MA's), (79, 109124), (83, 109145), (93, 109190), (104, 109244), (113, 109259),

Gene: Boopy_175 Start: 101927, Stop: 101424, Start Num: 64
Candidate Starts for Boopy_175:
(Start: 64 @101927 has 26 MA's), (119, 101651), (122, 101630), (126, 101609), (152, 101489), (164, 101459),

Gene: Bordeaux_229 Start: 109033, Stop: 109401, Start Num: 57
Candidate Starts for Bordeaux_229:
(Start: 57 @109033 has 31 MA's), (Start: 76 @109093 has 1 MA's), (79, 109117), (93, 109183), (96, 109204), (104, 109237), (113, 109252), (140, 109387),

Gene: Brizzy_230 Start: 109561, Stop: 109929, Start Num: 57
Candidate Starts for Brizzy_230:
(Start: 57 @109561 has 31 MA's), (Start: 76 @109621 has 1 MA's), (79, 109645), (93, 109711), (96, 109732), (104, 109765), (113, 109780), (140, 109915),

Gene: Bubble_42 Start: 32662, Stop: 32138, Start Num: 64
Candidate Starts for Bubble_42:
(45, 32707), (Start: 64 @32662 has 26 MA's), (88, 32563), (95, 32512), (123, 32416), (128, 32377), (139, 32335), (155, 32260), (170, 32218),

Gene: Burnsey_44 Start: 33066, Stop: 32542, Start Num: 64
Candidate Starts for Burnsey_44:
(45, 33111), (Start: 64 @33066 has 26 MA's), (88, 32967), (95, 32916), (123, 32820), (128, 32781), (139, 32739), (155, 32664), (170, 32622),

Gene: Button_47 Start: 33224, Stop: 32799, Start Num: 66
Candidate Starts for Button_47:
(5, 33473), (Start: 66 @33224 has 10 MA's), (Start: 74 @33191 has 3 MA's), (88, 33125), (118, 32996), (146, 32849), (155, 32810),

Gene: Buttrmlkdreams_46 Start: 33426, Stop: 32959, Start Num: 59
Candidate Starts for Buttrmlkdreams_46:
(Start: 59 @33426 has 9 MA's), (88, 33318), (95, 33267), (116, 33210), (123, 33171), (125, 33156), (128, 33132), (139, 33090), (155, 33015), (161, 33003), (163, 33000), (169, 32976),

Gene: CWormy_63 Start: 46012, Stop: 46473, Start Num: 47
Candidate Starts for CWormy_63:
(23, 45955), (Start: 47 @46012 has 29 MA's), (Start: 50 @46021 has 8 MA's), (87, 46153), (98, 46219), (103, 46246), (115, 46309), (122, 46354),

Gene: Cadmus_214 Start: 108600, Stop: 108977, Start Num: 55
Candidate Starts for Cadmus_214:
(46, 108576), (Start: 55 @108600 has 1 MA's), (Start: 56 @108603 has 1 MA's), (Start: 75 @108657 has 1 MA's), (Start: 76 @108663 has 1 MA's), (79, 108687), (86, 108714), (93, 108753), (104, 108807), (113, 108822), (125, 108888), (134, 108936), (140, 108957),

Gene: Caitlin_32 Start: 26306, Stop: 25698, Start Num: 68
Candidate Starts for Caitlin_32:
(Start: 68 @26306 has 11 MA's), (136, 25952), (149, 25889), (165, 25838), (169, 25832),

Gene: Captrips_64 Start: 45969, Stop: 46484, Start Num: 41
Candidate Starts for Captrips_64:
(Start: 41 @45969 has 15 MA's), (Start: 74 @46053 has 3 MA's), (Start: 75 @46059 has 1 MA's), (87, 46119), (91, 46140), (96, 46176), (103, 46212), (118, 46296), (140, 46404), (151, 46452), (152, 46455), (162, 46476),

Gene: Capybara_65 Start: 46300, Stop: 46815, Start Num: 41
Candidate Starts for Capybara_65:
(Start: 41 @46300 has 15 MA's), (Start: 74 @46384 has 3 MA's), (Start: 75 @46390 has 1 MA's), (87, 46450), (91, 46471), (96, 46507), (103, 46543), (118, 46627), (140, 46735), (143, 46750), (151, 46783), (152, 46786), (162, 46807),

Gene: Carsonalex_47 Start: 33034, Stop: 32510, Start Num: 64
Candidate Starts for Carsonalex_47:
(45, 33079), (Start: 64 @33034 has 26 MA's), (88, 32935), (95, 32884), (123, 32788), (128, 32749), (139, 32707), (155, 32632), (170, 32590),

Gene: CeilingFan_235 Start: 109828, Stop: 110196, Start Num: 57
Candidate Starts for CeilingFan_235:
(Start: 57 @109828 has 31 MA's), (Start: 76 @109888 has 1 MA's), (79, 109912), (93, 109978), (96, 109999), (104, 110032), (113, 110047), (140, 110182),

Gene: Chikenjars_62 Start: 46297, Stop: 46848, Start Num: 47
Candidate Starts for Chikenjars_62:
(23, 46240), (Start: 47 @46297 has 29 MA's), (Start: 50 @46306 has 8 MA's), (87, 46438), (98, 46504), (103, 46531), (115, 46594), (122, 46639), (130, 46690), (142, 46732),

Gene: Citrus_63 Start: 46571, Stop: 47122, Start Num: 47
Candidate Starts for Citrus_63:
(23, 46514), (Start: 47 @46571 has 29 MA's), (Start: 50 @46580 has 8 MA's), (87, 46712), (98, 46778), (103, 46805), (115, 46868), (122, 46913), (142, 47006),

Gene: Cleo_39 Start: 32050, Stop: 31601, Start Num: 54
Candidate Starts for Cleo_39:
(Start: 54 @32050 has 1 MA's), (Start: 68 @32023 has 11 MA's), (Start: 74 @31993 has 3 MA's), (Start: 75 @31987 has 1 MA's), (77, 31975), (122, 31786), (125, 31765), (126, 31759), (150, 31639),

Gene: Conley_64 Start: 47055, Stop: 47570, Start Num: 41
Candidate Starts for Conley_64:
(6, 46869), (7, 46872), (8, 46899), (11, 46938), (14, 46974), (15, 46977), (16, 46989), (24, 47007), (Start: 41 @47055 has 15 MA's), (46, 47064), (Start: 75 @47145 has 1 MA's), (84, 47199), (85, 47202), (87, 47205), (91, 47226), (96, 47262), (118, 47382), (126, 47427), (151, 47538), (152, 47541),

(162, 47562),

Gene: Cozz_42 Start: 32663, Stop: 32139, Start Num: 64
Candidate Starts for Cozz_42:
(44, 32711), (45, 32708), (Start: 64 @32663 has 26 MA's), (88, 32564), (95, 32513), (123, 32417), (128, 32378), (139, 32336), (155, 32261), (170, 32219),

Gene: Crocheter_64 Start: 46484, Stop: 46954, Start Num: 47
Candidate Starts for Crocheter_64:
(Start: 47 @46484 has 29 MA's), (Start: 50 @46493 has 8 MA's), (87, 46622), (103, 46715), (122, 46823), (142, 46916),

Gene: Daisy123_233 Start: 109690, Stop: 110058, Start Num: 57
Candidate Starts for Daisy123_233:
(Start: 57 @109690 has 31 MA's), (Start: 76 @109750 has 1 MA's), (79, 109774), (93, 109840), (96, 109861), (104, 109894), (113, 109909), (140, 110044),

Gene: Dancer_65 Start: 46229, Stop: 46744, Start Num: 41
Candidate Starts for Dancer_65:
(Start: 41 @46229 has 15 MA's), (Start: 74 @46313 has 3 MA's), (Start: 75 @46319 has 1 MA's), (87, 46379), (91, 46400), (96, 46436), (103, 46472), (118, 46556), (140, 46664), (143, 46679), (151, 46712), (152, 46715), (162, 46736),

Gene: Daubenski_210 Start: 108498, Stop: 108872, Start Num: 56
Candidate Starts for Daubenski_210:
(18, 108396), (46, 108471), (Start: 55 @108495 has 1 MA's), (Start: 56 @108498 has 1 MA's), (Start: 75 @108552 has 1 MA's), (Start: 76 @108558 has 1 MA's), (79, 108582), (86, 108609), (93, 108648), (113, 108717), (125, 108783), (134, 108831), (140, 108852),

Gene: Demure_63 Start: 45961, Stop: 46422, Start Num: 47
Candidate Starts for Demure_63:
(23, 45904), (Start: 47 @45961 has 29 MA's), (Start: 50 @45970 has 8 MA's), (87, 46102), (98, 46168), (103, 46195), (115, 46258), (122, 46303),

Gene: Dialga_64 Start: 46617, Stop: 47078, Start Num: 47
Candidate Starts for Dialga_64:
(23, 46560), (Start: 47 @46617 has 29 MA's), (Start: 50 @46626 has 8 MA's), (87, 46758), (98, 46824), (103, 46851), (115, 46914), (122, 46959),

Gene: Dixon_32 Start: 26307, Stop: 25699, Start Num: 68
Candidate Starts for Dixon_32:
(Start: 68 @26307 has 11 MA's), (136, 25953), (149, 25890), (165, 25839), (169, 25833),

Gene: Dre3_39 Start: 31766, Stop: 31344, Start Num: 68
Candidate Starts for Dre3_39:
(Start: 68 @31766 has 11 MA's), (Start: 74 @31736 has 3 MA's), (Start: 75 @31730 has 1 MA's), (77, 31718), (122, 31529), (125, 31508), (126, 31502), (150, 31382),

Gene: DroogsArmy_36 Start: 29992, Stop: 29501, Start Num: 70
Candidate Starts for DroogsArmy_36:
(Start: 70 @29992 has 5 MA's), (101, 29818), (139, 29632), (140, 29629), (159, 29551), (161, 29548),

Gene: Duffington_62 Start: 46002, Stop: 46544, Start Num: 50

Candidate Starts for Duffington_62:
(23, 45936), (Start: 47 @45993 has 29 MA's), (Start: 50 @46002 has 8 MA's), (87, 46134), (98, 46200), (103, 46227), (122, 46335),

Gene: Eddiemania_66 Start: 47192, Stop: 47701, Start Num: 47
Candidate Starts for Eddiemania_66:
(19, 47129), (23, 47135), (Start: 47 @47192 has 29 MA's), (Start: 50 @47201 has 8 MA's), (87, 47333), (98, 47399), (103, 47426), (115, 47489), (122, 47534), (130, 47585), (142, 47627), (144, 47636), (158, 47687), (162, 47693),

Gene: EhyElimayoE_215 Start: 129333, Stop: 129842, Start Num: 61
Candidate Starts for EhyElimayoE_215:
(10, 129150), (Start: 61 @129333 has 9 MA's), (99, 129507), (124, 129624), (147, 129741), (167, 129807), (172, 129837),

Gene: Eliott_44 Start: 32961, Stop: 32437, Start Num: 64
Candidate Starts for Eliott_44:
(45, 33006), (Start: 64 @32961 has 26 MA's), (88, 32862), (95, 32811), (115, 32766), (123, 32715), (128, 32676), (139, 32634), (155, 32559), (170, 32517),

Gene: Elmer_239 Start: 112604, Stop: 112984, Start Num: 50
Candidate Starts for Elmer_239:
(22, 112526), (26, 112535), (27, 112541), (31, 112556), (35, 112562), (48, 112598), (Start: 50 @112604 has 8 MA's), (Start: 76 @112676 has 1 MA's), (79, 112700), (83, 112721), (93, 112766), (104, 112820), (113, 112835), (139, 112967),

Gene: Emalyn_43 Start: 32069, Stop: 31614, Start Num: 64
Candidate Starts for Emalyn_43:
(45, 32114), (Start: 64 @32069 has 26 MA's), (88, 31970), (116, 31862), (123, 31823), (128, 31784), (131, 31769), (133, 31763), (148, 31700), (155, 31667),

Gene: EndAve_65 Start: 46474, Stop: 47016, Start Num: 50
Candidate Starts for EndAve_65:
(23, 46408), (Start: 47 @46465 has 29 MA's), (Start: 50 @46474 has 8 MA's), (87, 46606), (98, 46672), (103, 46699), (115, 46762), (122, 46807), (130, 46858), (142, 46900),

Gene: Enygma_238 Start: 111845, Stop: 112213, Start Num: 57
Candidate Starts for Enygma_238:
(13, 111707), (Start: 20 @111749 has 1 MA's), (22, 111752), (33, 111785), (44, 111812), (Start: 50 @111830 has 8 MA's), (Start: 57 @111845 has 31 MA's), (Start: 76 @111905 has 1 MA's), (77, 111911), (79, 111929), (93, 111995), (104, 112049), (113, 112064), (140, 112199),

Gene: Ezurina_42 Start: 31024, Stop: 30563, Start Num: 69
Candidate Starts for Ezurina_42:
(69, 31024), (Start: 74 @30997 has 3 MA's), (87, 30934), (90, 30916), (91, 30913), (97, 30871), (110, 30832), (128, 30709),

Gene: Fazel_65 Start: 46305, Stop: 46814, Start Num: 47
Candidate Starts for Fazel_65:
(Start: 47 @46305 has 29 MA's), (Start: 50 @46314 has 8 MA's), (87, 46443), (111, 46581), (139, 46725),

Gene: Figliar_62 Start: 46394, Stop: 46849, Start Num: 47

Candidate Starts for Figliar_62:
(Start: 20 @46331 has 1 MA's), (31, 46364), (Start: 47 @46394 has 29 MA's), (Start: 50 @46403 has 8 MA's), (87, 46535), (98, 46601), (103, 46628), (122, 46736), (130, 46787),

Gene: Football_67 Start: 46120, Stop: 46635, Start Num: 41
Candidate Starts for Football_67:
(Start: 41 @46120 has 15 MA's), (Start: 74 @46204 has 3 MA's), (Start: 75 @46210 has 1 MA's), (87, 46270), (91, 46291), (96, 46327), (108, 46378), (118, 46447), (140, 46555), (151, 46603), (152, 46606), (162, 46627),

Gene: FortCran_65 Start: 46494, Stop: 47009, Start Num: 41
Candidate Starts for FortCran_65:
(Start: 41 @46494 has 15 MA's), (Start: 74 @46578 has 3 MA's), (Start: 75 @46584 has 1 MA's), (87, 46644), (91, 46665), (96, 46701), (103, 46737), (118, 46821), (140, 46929), (143, 46944), (151, 46977), (152, 46980), (162, 47001),

Gene: Frankenweenie_230 Start: 138966, Stop: 139478, Start Num: 61
Candidate Starts for Frankenweenie_230:
(10, 138783), (Start: 61 @138966 has 9 MA's), (120, 139251), (124, 139272), (131, 139320), (135, 139332), (145, 139383), (153, 139416), (157, 139425),

Gene: Fribs8_40 Start: 32159, Stop: 31746, Start Num: 67
Candidate Starts for Fribs8_40:
(Start: 67 @32159 has 7 MA's), (Start: 74 @32129 has 3 MA's), (Start: 75 @32123 has 1 MA's), (77, 32111), (116, 31955), (126, 31895), (132, 31859), (140, 31832), (160, 31760),

Gene: GMA2_70 Start: 73346, Stop: 72861, Start Num: 62
Candidate Starts for GMA2_70:
(52, 73370), (62, 73346), (Start: 74 @73307 has 3 MA's), (Start: 75 @73301 has 1 MA's), (137, 72983), (140, 72974), (153, 72914), (161, 72896),

Gene: GTE2_36 Start: 32665, Stop: 32207, Start Num: 64
Candidate Starts for GTE2_36:
(45, 32710), (Start: 64 @32665 has 26 MA's), (88, 32566), (90, 32551), (95, 32515), (116, 32458), (123, 32419), (128, 32380), (131, 32365), (139, 32338), (155, 32263), (163, 32248), (168, 32227), (169, 32224),

Gene: Genie2_228 Start: 109165, Stop: 109533, Start Num: 57
Candidate Starts for Genie2_228:
(44, 109132), (Start: 50 @109150 has 8 MA's), (Start: 57 @109165 has 31 MA's), (Start: 76 @109225 has 1 MA's), (79, 109249), (83, 109270), (93, 109315), (104, 109369), (113, 109384),

Gene: GiKK_49 Start: 33554, Stop: 33129, Start Num: 66
Candidate Starts for GiKK_49:
(Start: 66 @33554 has 10 MA's), (Start: 74 @33521 has 3 MA's), (88, 33455), (118, 33326), (146, 33179), (155, 33140),

Gene: Gibbi_239 Start: 109321, Stop: 109689, Start Num: 57
Candidate Starts for Gibbi_239:
(Start: 57 @109321 has 31 MA's), (Start: 76 @109381 has 1 MA's), (79, 109405), (93, 109471), (96, 109492), (104, 109525), (113, 109540), (140, 109675),

Gene: Gibbous_39 Start: 31766, Stop: 31344, Start Num: 68

Candidate Starts for Gibbous_39:
(Start: 68 @31766 has 11 MA's), (Start: 74 @31736 has 3 MA's), (Start: 75 @31730 has 1 MA's), (77, 31718), (122, 31529), (125, 31508), (126, 31502), (150, 31382),

Gene: Gill_65 Start: 46357, Stop: 46827, Start Num: 60
Candidate Starts for Gill_65:
(30, 46288), (Start: 41 @46312 has 15 MA's), (Start: 60 @46357 has 4 MA's), (Start: 74 @46396 has 3 MA's), (Start: 75 @46402 has 1 MA's), (87, 46462), (91, 46483), (96, 46519), (103, 46555), (118, 46639), (140, 46747), (143, 46762), (151, 46795), (152, 46798), (162, 46819),

Gene: Glintora_65 Start: 46950, Stop: 47450, Start Num: 50
Candidate Starts for Glintora_65:
(Start: 47 @46941 has 29 MA's), (Start: 50 @46950 has 8 MA's), (87, 47082), (98, 47148), (103, 47175), (115, 47238), (122, 47283), (130, 47334), (142, 47376), (158, 47436), (162, 47442),

Gene: GodonK_189 Start: 98192, Stop: 97662, Start Num: 49
Candidate Starts for GodonK_189:
(Start: 49 @98192 has 2 MA's), (52, 98186), (Start: 75 @98117 has 1 MA's), (90, 98039), (122, 97868), (126, 97847), (140, 97784), (149, 97742), (152, 97730), (166, 97688),

Gene: GoldHunter_44 Start: 33075, Stop: 32551, Start Num: 64
Candidate Starts for GoldHunter_44:
(44, 33123), (45, 33120), (Start: 64 @33075 has 26 MA's), (88, 32976), (95, 32925), (123, 32829), (128, 32790), (139, 32748), (155, 32673),

Gene: Gravy_64 Start: 45990, Stop: 46505, Start Num: 41
Candidate Starts for Gravy_64:
(Start: 41 @45990 has 15 MA's), (Start: 74 @46074 has 3 MA's), (Start: 75 @46080 has 1 MA's), (87, 46140), (91, 46161), (96, 46197), (103, 46233), (118, 46317), (140, 46425), (143, 46440), (151, 46473), (152, 46476), (162, 46497),

Gene: Grayson_194 Start: 100750, Stop: 101079, Start Num: 74
Candidate Starts for Grayson_194:
(Start: 74 @100750 has 3 MA's), (78, 100774), (94, 100861), (112, 100918), (126, 101002),

Gene: Groundhog_31 Start: 26278, Stop: 25670, Start Num: 68
Candidate Starts for Groundhog_31:
(Start: 68 @26278 has 11 MA's), (136, 25924), (149, 25861), (165, 25810), (169, 25804),

Gene: Gusicorn_65 Start: 46391, Stop: 46861, Start Num: 47
Candidate Starts for Gusicorn_65:
(Start: 47 @46391 has 29 MA's), (Start: 50 @46400 has 8 MA's), (87, 46529), (103, 46622), (122, 46730), (142, 46823),

Gene: Hexbug_52 Start: 35640, Stop: 35221, Start Num: 66
Candidate Starts for Hexbug_52:
(Start: 66 @35640 has 10 MA's), (71, 35616), (Start: 74 @35607 has 3 MA's), (82, 35556), (84, 35547), (122, 35394), (126, 35367), (155, 35232),

Gene: HippoPololi_41 Start: 32178, Stop: 31756, Start Num: 68
Candidate Starts for HippoPololi_41:
(Start: 54 @32205 has 1 MA's), (Start: 68 @32178 has 11 MA's), (Start: 74 @32148 has 3 MA's), (Start: 75 @32142 has 1 MA's), (77, 32130), (80, 32103), (116, 31974), (117, 31968), (126, 31914),

(131, 31881), (133, 31875), (148, 31812),

Gene: Horseradish_46 Start: 32912, Stop: 32445, Start Num: 59
Candidate Starts for Horseradish_46:
(Start: 59 @32912 has 9 MA's), (88, 32804), (95, 32753), (116, 32696), (123, 32657), (125, 32642), (128, 32618), (139, 32576), (155, 32501), (161, 32489), (163, 32486), (169, 32462), (170, 32459),

Gene: Hortihabitatio_66 Start: 47107, Stop: 47610, Start Num: 50
Candidate Starts for Hortihabitatio_66:
(21, 47032), (28, 47053), (43, 47089), (Start: 47 @47098 has 29 MA's), (Start: 50 @47107 has 8 MA's), (87, 47236), (111, 47374), (139, 47518),

Gene: Huwbert_70 Start: 43330, Stop: 43914, Start Num: 25
Candidate Starts for Huwbert_70:
(Start: 25 @43330 has 2 MA's), (29, 43351), (32, 43357), (53, 43408), (Start: 75 @43474 has 1 MA's), (81, 43531), (92, 43588), (100, 43633), (126, 43765), (127, 43774), (139, 43825), (146, 43861), (148, 43867),

Gene: Hydrus_66 Start: 47228, Stop: 47680, Start Num: 50
Candidate Starts for Hydrus_66:
(23, 47162), (39, 47207), (Start: 47 @47219 has 29 MA's), (Start: 50 @47228 has 8 MA's), (87, 47360), (98, 47426), (103, 47453), (115, 47516), (122, 47561),

Gene: IchabodCrane_225 Start: 108836, Stop: 109204, Start Num: 57
Candidate Starts for IchabodCrane_225:
(Start: 57 @108836 has 31 MA's), (Start: 76 @108896 has 1 MA's), (79, 108920), (89, 108965), (93, 108986), (96, 109007), (104, 109040), (113, 109055), (140, 109190),

Gene: Jamzy_49 Start: 33537, Stop: 33112, Start Num: 66
Candidate Starts for Jamzy_49:
(Start: 66 @33537 has 10 MA's), (Start: 74 @33504 has 3 MA's), (88, 33438), (91, 33420), (118, 33309), (146, 33162), (155, 33123),

Gene: JimJam_238 Start: 110757, Stop: 111125, Start Num: 57
Candidate Starts for JimJam_238:
(Start: 57 @110757 has 31 MA's), (Start: 76 @110817 has 1 MA's), (79, 110841), (93, 110907), (96, 110928), (104, 110961), (113, 110976), (140, 111111),

Gene: Jodelie19_62 Start: 47735, Stop: 48253, Start Num: 20
Candidate Starts for Jodelie19_62:
(Start: 20 @47735 has 1 MA's), (31, 47768), (Start: 47 @47798 has 29 MA's), (Start: 50 @47807 has 8 MA's), (87, 47939), (103, 48032), (122, 48140), (130, 48191),

Gene: Jollison_228 Start: 108967, Stop: 109335, Start Num: 57
Candidate Starts for Jollison_228:
(Start: 57 @108967 has 31 MA's), (Start: 76 @109027 has 1 MA's), (79, 109051), (93, 109117), (96, 109138), (104, 109171), (113, 109186), (140, 109321),

Gene: JulesRay_65 Start: 46487, Stop: 47002, Start Num: 41
Candidate Starts for JulesRay_65:
(Start: 41 @46487 has 15 MA's), (Start: 74 @46571 has 3 MA's), (Start: 75 @46577 has 1 MA's), (87, 46637), (91, 46658), (96, 46694), (103, 46730), (118, 46814), (140, 46922), (143, 46937), (151, 46970), (152, 46973), (162, 46994),

Gene: JustBecause_213 Start: 126485, Stop: 127003, Start Num: 61
Candidate Starts for JustBecause_213:
(10, 126302), (Start: 61 @126485 has 9 MA's), (Start: 74 @126524 has 3 MA's), (129, 126833), (131, 126845), (135, 126857), (145, 126908),

Gene: Karimac_231 Start: 109152, Stop: 109520, Start Num: 57
Candidate Starts for Karimac_231:
(Start: 57 @109152 has 31 MA's), (Start: 76 @109212 has 1 MA's), (79, 109236), (93, 109302), (96, 109323), (104, 109356), (113, 109371), (140, 109506),

Gene: Kela_211 Start: 126330, Stop: 126848, Start Num: 61
Candidate Starts for Kela_211:
(10, 126147), (Start: 61 @126330 has 9 MA's), (Start: 74 @126369 has 3 MA's), (129, 126678), (131, 126690), (135, 126702), (145, 126753),

Gene: Kenosha_63 Start: 46678, Stop: 47133, Start Num: 47
Candidate Starts for Kenosha_63:
(23, 46621), (36, 46657), (Start: 47 @46678 has 29 MA's), (Start: 50 @46687 has 8 MA's), (87, 46816), (103, 46909), (122, 47017), (130, 47068),

Gene: KentuckyRacer_237 Start: 110672, Stop: 111040, Start Num: 57
Candidate Starts for KentuckyRacer_237:
(Start: 57 @110672 has 31 MA's), (Start: 76 @110732 has 1 MA's), (79, 110756), (93, 110822), (96, 110843), (104, 110876), (113, 110891), (140, 111026),

Gene: Kerry_64 Start: 45990, Stop: 46505, Start Num: 41
Candidate Starts for Kerry_64:
(Start: 41 @45990 has 15 MA's), (Start: 74 @46074 has 3 MA's), (Start: 75 @46080 has 1 MA's), (87, 46140), (91, 46161), (96, 46197), (103, 46233), (118, 46317), (140, 46425), (143, 46440), (151, 46473), (152, 46476), (162, 46497),

Gene: KimJongPhill_79 Start: 56740, Stop: 57207, Start Num: 68
Candidate Starts for KimJongPhill_79:
(Start: 68 @56740 has 11 MA's), (73, 56767), (Start: 74 @56770 has 3 MA's), (95, 56887), (119, 57016), (130, 57094), (133, 57103), (139, 57124), (146, 57160),

Gene: Kradal_214 Start: 129330, Stop: 129839, Start Num: 61
Candidate Starts for Kradal_214:
(10, 129147), (Start: 61 @129330 has 9 MA's), (99, 129504), (124, 129621), (147, 129738), (167, 129804), (172, 129834),

Gene: LukeCage_234 Start: 111003, Stop: 111371, Start Num: 57
Candidate Starts for LukeCage_234:
(44, 110970), (Start: 50 @110988 has 8 MA's), (Start: 57 @111003 has 31 MA's), (Start: 76 @111063 has 1 MA's), (77, 111069), (79, 111087), (93, 111153), (104, 111207), (113, 111222), (140, 111357),

Gene: Luthien_64 Start: 46459, Stop: 47010, Start Num: 47
Candidate Starts for Luthien_64:
(23, 46402), (Start: 47 @46459 has 29 MA's), (Start: 50 @46468 has 8 MA's), (87, 46600), (98, 46666), (103, 46693), (115, 46756), (122, 46801), (142, 46894), (144, 46903),

Gene: MScarn_48 Start: 33094, Stop: 32627, Start Num: 59

Candidate Starts for MScarn_48:
(Start: 59 @33094 has 9 MA's), (88, 32986), (95, 32935), (116, 32878), (123, 32839), (125, 32824), (128, 32800), (139, 32758), (155, 32683), (168, 32647), (169, 32644),

Gene: MaVan_41 Start: 32460, Stop: 32047, Start Num: 67
Candidate Starts for MaVan_41:
(40, 32523), (Start: 67 @32460 has 7 MA's), (Start: 74 @32430 has 3 MA's), (Start: 75 @32424 has 1 MA's), (77, 32412), (116, 32256), (117, 32250), (126, 32196), (131, 32163), (133, 32157),

Gene: Madvan_64 Start: 46114, Stop: 46566, Start Num: 50
Candidate Starts for Madvan_64:
(23, 46048), (Start: 47 @46105 has 29 MA's), (Start: 50 @46114 has 8 MA's), (87, 46246), (98, 46312), (103, 46339), (115, 46402), (122, 46447),

Gene: Magel_66 Start: 46272, Stop: 46742, Start Num: 60
Candidate Starts for Magel_66:
(30, 46203), (Start: 41 @46227 has 15 MA's), (Start: 60 @46272 has 4 MA's), (Start: 74 @46311 has 3 MA's), (Start: 75 @46317 has 1 MA's), (87, 46377), (91, 46398), (96, 46434), (103, 46470), (118, 46554), (140, 46662), (143, 46677), (151, 46710), (152, 46713), (162, 46734),

Gene: MajinBuu_64 Start: 46776, Stop: 47231, Start Num: 47
Candidate Starts for MajinBuu_64:
(Start: 20 @46713 has 1 MA's), (31, 46746), (Start: 47 @46776 has 29 MA's), (Start: 50 @46785 has 8 MA's), (87, 46917), (103, 47010), (122, 47118), (130, 47169),

Gene: Malvina_42 Start: 32203, Stop: 31754, Start Num: 54
Candidate Starts for Malvina_42:
(Start: 54 @32203 has 1 MA's), (Start: 68 @32176 has 11 MA's), (Start: 74 @32146 has 3 MA's), (Start: 75 @32140 has 1 MA's), (77, 32128), (80, 32101), (116, 31972), (126, 31912), (131, 31879), (133, 31873), (148, 31810),

Gene: Mareelih_173 Start: 101362, Stop: 100859, Start Num: 64
Candidate Starts for Mareelih_173:
(Start: 64 @101362 has 26 MA's), (119, 101086), (122, 101065), (126, 101044), (152, 100924), (164, 100894),

Gene: Margaret_50 Start: 34280, Stop: 33861, Start Num: 66
Candidate Starts for Margaret_50:
(Start: 66 @34280 has 10 MA's), (Start: 74 @34247 has 3 MA's), (82, 34196), (84, 34187), (118, 34058), (122, 34034), (155, 33872),

Gene: MindFlayer_224 Start: 108352, Stop: 108720, Start Num: 57
Candidate Starts for MindFlayer_224:
(Start: 57 @108352 has 31 MA's), (Start: 76 @108412 has 1 MA's), (79, 108436), (89, 108481), (93, 108502), (96, 108523), (104, 108556), (113, 108571), (140, 108706),

Gene: Mossy_67 Start: 48112, Stop: 48564, Start Num: 47
Candidate Starts for Mossy_67:
(23, 48055), (Start: 47 @48112 has 29 MA's), (Start: 50 @48121 has 8 MA's), (87, 48250), (98, 48316), (103, 48343), (122, 48451),

Gene: Mugiwara_238 Start: 111539, Stop: 111907, Start Num: 57
Candidate Starts for Mugiwara_238:

(37, 111488), (44, 111506), (Start: 50 @111524 has 8 MA's), (Start: 57 @111539 has 31 MA's), (Start: 76 @111599 has 1 MA's), (77, 111605), (79, 111623), (83, 111644), (93, 111689), (104, 111743), (113, 111758),

Gene: MunkgeeRoachy_42 Start: 32424, Stop: 31900, Start Num: 64
Candidate Starts for MunkgeeRoachy_42:
(45, 32469), (Start: 64 @32424 has 26 MA's), (88, 32325), (95, 32274), (102, 32256), (115, 32229), (123, 32178), (128, 32139), (131, 32124), (139, 32097), (141, 32085), (155, 32022), (170, 31980),

Gene: Mysticmoon_65 Start: 47500, Stop: 48009, Start Num: 47
Candidate Starts for Mysticmoon_65:
(34, 47476), (Start: 47 @47500 has 29 MA's), (Start: 50 @47509 has 8 MA's), (87, 47638), (91, 47659), (111, 47776), (118, 47815), (139, 47920), (149, 47965),

Gene: Nadmeg_65 Start: 47342, Stop: 47797, Start Num: 47
Candidate Starts for Nadmeg_65:
(23, 47285), (36, 47321), (Start: 47 @47342 has 29 MA's), (Start: 50 @47351 has 8 MA's), (87, 47480), (103, 47573), (122, 47681), (130, 47732),

Gene: Nibbles_40 Start: 32147, Stop: 31734, Start Num: 67
Candidate Starts for Nibbles_40:
(40, 32210), (Start: 67 @32147 has 7 MA's), (Start: 74 @32117 has 3 MA's), (Start: 75 @32111 has 1 MA's), (77, 32099), (116, 31943), (117, 31937), (126, 31883), (131, 31850), (133, 31844),

Gene: Nina_43 Start: 33199, Stop: 32675, Start Num: 64
Candidate Starts for Nina_43:
(45, 33244), (Start: 64 @33199 has 26 MA's), (88, 33100), (95, 33049), (123, 32953), (128, 32914), (139, 32872), (155, 32797), (170, 32755),

Gene: Nirvana_223 Start: 137189, Stop: 137701, Start Num: 61
Candidate Starts for Nirvana_223:
(4, 136931), (10, 137006), (Start: 61 @137189 has 9 MA's), (129, 137531), (131, 137543), (135, 137555), (140, 137573), (145, 137606),

Gene: Nithya_64 Start: 46208, Stop: 46717, Start Num: 47
Candidate Starts for Nithya_64:
(23, 46151), (Start: 47 @46208 has 29 MA's), (Start: 50 @46217 has 8 MA's), (87, 46349), (98, 46415), (103, 46442), (115, 46505), (122, 46550), (142, 46643), (158, 46703), (162, 46709),

Gene: NoPickles_64 Start: 45655, Stop: 46170, Start Num: 41
Candidate Starts for NoPickles_64:
(Start: 41 @45655 has 15 MA's), (Start: 74 @45739 has 3 MA's), (Start: 75 @45745 has 1 MA's), (87, 45805), (91, 45826), (96, 45862), (103, 45898), (118, 45982), (140, 46090), (151, 46138), (152, 46141), (162, 46162),

Gene: Nodigi_52 Start: 35691, Stop: 35272, Start Num: 66
Candidate Starts for Nodigi_52:
(Start: 66 @35691 has 10 MA's), (71, 35667), (Start: 74 @35658 has 3 MA's), (82, 35607), (84, 35598), (122, 35445), (126, 35418), (155, 35283),

Gene: Odesza_64 Start: 46216, Stop: 46686, Start Num: 60
Candidate Starts for Odesza_64:

(30, 46147), (Start: 41 @46171 has 15 MA's), (Start: 60 @46216 has 4 MA's), (Start: 74 @46255 has 3 MA's), (Start: 75 @46261 has 1 MA's), (87, 46321), (91, 46342), (96, 46378), (103, 46414), (118, 46498), (140, 46606), (143, 46621), (151, 46654), (152, 46657), (162, 46678),

Gene: OlgasClover_65 Start: 47388, Stop: 47843, Start Num: 47
Candidate Starts for OlgasClover_65:
(Start: 47 @47388 has 29 MA's), (Start: 50 @47397 has 8 MA's), (87, 47529), (103, 47622), (122, 47730), (130, 47781),

Gene: Orla_52 Start: 35599, Stop: 35180, Start Num: 66
Candidate Starts for Orla_52:
(Start: 66 @35599 has 10 MA's), (71, 35575), (Start: 74 @35566 has 3 MA's), (82, 35515), (84, 35506), (122, 35353), (126, 35326), (155, 35191),

Gene: Peregrin_191 Start: 101143, Stop: 101472, Start Num: 74
Candidate Starts for Peregrin_191:
(Start: 74 @101143 has 3 MA's), (78, 101167), (94, 101254), (112, 101311), (120, 101356), (126, 101395),

Gene: Perkunas_67 Start: 46556, Stop: 47071, Start Num: 41
Candidate Starts for Perkunas_67:
(3, 46325), (6, 46370), (7, 46373), (8, 46400), (11, 46439), (14, 46475), (15, 46478), (16, 46490), (24, 46508), (Start: 41 @46556 has 15 MA's), (46, 46565), (84, 46700), (85, 46703), (87, 46706), (91, 46727), (96, 46763), (108, 46814), (118, 46883), (152, 47042), (162, 47063),

Gene: PestoPenguin_66 Start: 46391, Stop: 46861, Start Num: 47
Candidate Starts for PestoPenguin_66:
(Start: 47 @46391 has 29 MA's), (Start: 50 @46400 has 8 MA's), (87, 46529), (103, 46622), (122, 46730), (142, 46823),

Gene: Petito_67 Start: 47726, Stop: 48241, Start Num: 41
Candidate Starts for Petito_67:
(Start: 41 @47726 has 15 MA's), (46, 47735), (Start: 75 @47816 has 1 MA's), (84, 47870), (85, 47873), (87, 47876), (91, 47897), (96, 47933), (118, 48053), (126, 48098), (151, 48209), (152, 48212), (162, 48233),

Gene: Phendrix_177 Start: 96622, Stop: 96095, Start Num: 49
Candidate Starts for Phendrix_177:
(Start: 49 @96622 has 2 MA's), (52, 96616), (Start: 75 @96547 has 1 MA's), (90, 96469), (122, 96298), (126, 96277), (140, 96214), (149, 96172), (152, 96160), (166, 96118),

Gene: Phepper_65 Start: 46347, Stop: 46808, Start Num: 47
Candidate Starts for Phepper_65:
(23, 46290), (Start: 47 @46347 has 29 MA's), (Start: 50 @46356 has 8 MA's), (87, 46488), (103, 46581), (115, 46644), (122, 46689),

Gene: Pherobrine_66 Start: 47919, Stop: 48428, Start Num: 47
Candidate Starts for Pherobrine_66:
(28, 47871), (34, 47886), (Start: 47 @47919 has 29 MA's), (Start: 50 @47928 has 8 MA's), (87, 48057), (91, 48078), (111, 48195), (118, 48234), (139, 48339), (149, 48384),

Gene: Phillis_32 Start: 26263, Stop: 25784, Start Num: 68
Candidate Starts for Phillis_32:

(Start: 68 @26263 has 11 MA's), (114, 26032), (142, 25882), (159, 25816), (164, 25804),

Gene: Ponzi_9 Start: 7221, Stop: 6748, Start Num: 38
Candidate Starts for Ponzi_9:
(2, 7536), (4, 7422), (Start: 38 @7221 has 1 MA's), (91, 7035), (107, 6957), (121, 6879), (140, 6792),

Gene: PotPie_45 Start: 35409, Stop: 34900, Start Num: 42
Candidate Starts for PotPie_45:
(Start: 42 @35409 has 5 MA's), (95, 35205), (123, 35109), (125, 35094), (133, 35049), (139, 35028), (155, 34953), (157, 34950), (164, 34935),

Gene: PsychoKiller_43 Start: 32962, Stop: 32438, Start Num: 64
Candidate Starts for PsychoKiller_43:
(45, 33007), (Start: 64 @32962 has 26 MA's), (88, 32863), (95, 32812), (115, 32767), (123, 32716), (128, 32677), (139, 32635), (155, 32560), (170, 32518),

Gene: PumpkinSpice_234 Start: 109573, Stop: 109941, Start Num: 57
Candidate Starts for PumpkinSpice_234:
(Start: 57 @109573 has 31 MA's), (Start: 76 @109633 has 1 MA's), (79, 109657), (93, 109723), (96, 109744), (104, 109777), (113, 109792), (140, 109927),

Gene: Quantum_211 Start: 129324, Stop: 129833, Start Num: 61
Candidate Starts for Quantum_211:
(10, 129141), (Start: 61 @129324 has 9 MA's), (99, 129498), (124, 129615), (147, 129732), (167, 129798), (172, 129828),

Gene: Quaran19_231 Start: 109014, Stop: 109382, Start Num: 57
Candidate Starts for Quaran19_231:
(Start: 57 @109014 has 31 MA's), (Start: 76 @109074 has 1 MA's), (79, 109098), (93, 109164), (96, 109185), (104, 109218), (113, 109233), (140, 109368),

Gene: Quasar_44 Start: 33624, Stop: 33100, Start Num: 64
Candidate Starts for Quasar_44:
(45, 33669), (48, 33660), (Start: 64 @33624 has 26 MA's), (88, 33525), (95, 33474), (123, 33378), (128, 33339), (139, 33297), (155, 33222), (170, 33180),

Gene: RADical_45 Start: 32956, Stop: 32432, Start Num: 64
Candidate Starts for RADical_45:
(45, 33001), (Start: 64 @32956 has 26 MA's), (88, 32857), (95, 32806), (123, 32710), (128, 32671), (139, 32629), (155, 32554), (170, 32512),

Gene: RSchmailzl_45 Start: 33112, Stop: 32588, Start Num: 64
Candidate Starts for RSchmailzl_45:
(45, 33157), (Start: 64 @33112 has 26 MA's), (88, 33013), (95, 32962), (123, 32866), (128, 32827), (139, 32785), (155, 32710),

Gene: RanchParmCat_49 Start: 34421, Stop: 34002, Start Num: 66
Candidate Starts for RanchParmCat_49:
(Start: 66 @34421 has 10 MA's), (Start: 74 @34388 has 3 MA's), (82, 34337), (84, 34328), (118, 34199), (122, 34175), (155, 34013),

Gene: RedBaron_48 Start: 33291, Stop: 32767, Start Num: 64
Candidate Starts for RedBaron_48:

(45, 33336), (Start: 64 @33291 has 26 MA's), (88, 33192), (95, 33141), (123, 33045), (128, 33006), (139, 32964), (155, 32889), (170, 32847),

Gene: Rickmore_61 Start: 44723, Stop: 45232, Start Num: 47
Candidate Starts for Rickmore_61:
(Start: 20 @44660 has 1 MA's), (31, 44693), (Start: 47 @44723 has 29 MA's), (87, 44864), (98, 44930), (103, 44957), (115, 45020), (122, 45065), (130, 45116), (142, 45158), (144, 45167), (158, 45218), (162, 45224),

Gene: Rikishi_232 Start: 109295, Stop: 109663, Start Num: 57
Candidate Starts for Rikishi_232:
(Start: 57 @109295 has 31 MA's), (Start: 76 @109355 has 1 MA's), (79, 109379), (93, 109445), (96, 109466), (104, 109499), (113, 109514), (140, 109649),

Gene: Roney_65 Start: 46382, Stop: 46852, Start Num: 60
Candidate Starts for Roney_65:
(30, 46313), (Start: 41 @46337 has 15 MA's), (Start: 60 @46382 has 4 MA's), (Start: 74 @46421 has 3 MA's), (Start: 75 @46427 has 1 MA's), (87, 46487), (91, 46508), (96, 46544), (103, 46580), (118, 46664), (140, 46772), (143, 46787), (151, 46820), (152, 46823), (162, 46844),

Gene: Runhaar_64 Start: 46158, Stop: 46613, Start Num: 47
Candidate Starts for Runhaar_64:
(23, 46101), (36, 46137), (Start: 47 @46158 has 29 MA's), (Start: 50 @46167 has 8 MA's), (87, 46299), (98, 46365), (103, 46392), (108, 46407), (122, 46500), (130, 46551),

Gene: SaltySpitoon_231 Start: 108556, Stop: 108924, Start Num: 57
Candidate Starts for SaltySpitoon_231:
(Start: 57 @108556 has 31 MA's), (Start: 76 @108616 has 1 MA's), (79, 108640), (93, 108706), (96, 108727), (104, 108760), (113, 108775), (140, 108910),

Gene: Sarkar_212 Start: 129354, Stop: 129863, Start Num: 61
Candidate Starts for Sarkar_212:
(10, 129171), (Start: 61 @129354 has 9 MA's), (99, 129528), (124, 129645), (147, 129762), (167, 129828), (172, 129858),

Gene: Satis_212 Start: 129667, Stop: 130176, Start Num: 61
Candidate Starts for Satis_212:
(10, 129484), (Start: 61 @129667 has 9 MA's), (99, 129841), (124, 129958), (147, 130075), (167, 130141), (172, 130171),

Gene: ShaggyRogers_64 Start: 46127, Stop: 46597, Start Num: 47
Candidate Starts for ShaggyRogers_64:
(Start: 47 @46127 has 29 MA's), (Start: 50 @46136 has 8 MA's), (87, 46265), (103, 46358), (122, 46466), (142, 46559),

Gene: Sheen_36 Start: 29802, Stop: 29311, Start Num: 70
Candidate Starts for Sheen_36:
(17, 29925), (Start: 20 @29916 has 1 MA's), (51, 29838), (Start: 70 @29802 has 5 MA's), (105, 29616), (118, 29547), (139, 29442), (140, 29439), (142, 29424), (159, 29361), (161, 29358),

Gene: Shrew_78 Start: 46074, Stop: 46502, Start Num: 65
Candidate Starts for Shrew_78:

(63, 46071), (Start: 65 @46074 has 1 MA's), (72, 46098), (Start: 75 @46110 has 1 MA's), (77, 46122), (136, 46407), (137, 46410), (146, 46452), (156, 46491),

Gene: Sixama_175 Start: 101856, Stop: 101392, Start Num: 75
Candidate Starts for Sixama_175:
(Start: 64 @101895 has 26 MA's), (Start: 75 @101856 has 1 MA's), (119, 101619), (122, 101598), (136, 101526), (138, 101520), (142, 101505), (152, 101457), (164, 101427),

Gene: SketchMex_44 Start: 32979, Stop: 32512, Start Num: 59
Candidate Starts for SketchMex_44:
(Start: 59 @32979 has 9 MA's), (88, 32871), (95, 32820), (116, 32763), (123, 32724), (125, 32709), (128, 32685), (139, 32643), (155, 32568), (161, 32556), (163, 32553), (169, 32529), (170, 32526),

Gene: Smeadley_32 Start: 26306, Stop: 25698, Start Num: 68
Candidate Starts for Smeadley_32:
(Start: 68 @26306 has 11 MA's), (136, 25952), (149, 25889), (165, 25838), (169, 25832),

Gene: Socotra_45 Start: 33074, Stop: 32550, Start Num: 64
Candidate Starts for Socotra_45:
(45, 33119), (Start: 64 @33074 has 26 MA's), (88, 32975), (95, 32924), (123, 32828), (128, 32789), (139, 32747), (155, 32672), (170, 32630),

Gene: Sollertia_229 Start: 109154, Stop: 109522, Start Num: 57
Candidate Starts for Sollertia_229:
(44, 109121), (Start: 50 @109139 has 8 MA's), (Start: 57 @109154 has 31 MA's), (Start: 76 @109214 has 1 MA's), (79, 109238), (83, 109259), (93, 109304), (104, 109358), (113, 109373),

Gene: Sopespian_43 Start: 32963, Stop: 32439, Start Num: 64
Candidate Starts for Sopespian_43:
(45, 33008), (Start: 64 @32963 has 26 MA's), (88, 32864), (95, 32813), (115, 32768), (123, 32717), (128, 32678), (139, 32636), (155, 32561), (170, 32519),

Gene: Spelly_236 Start: 108485, Stop: 108853, Start Num: 57
Candidate Starts for Spelly_236:
(Start: 57 @108485 has 31 MA's), (Start: 76 @108545 has 1 MA's), (79, 108569), (93, 108635), (96, 108656), (104, 108689), (113, 108704), (140, 108839),

Gene: Spilled_238 Start: 109689, Stop: 110057, Start Num: 57
Candidate Starts for Spilled_238:
(Start: 57 @109689 has 31 MA's), (Start: 76 @109749 has 1 MA's), (79, 109773), (93, 109839), (96, 109860), (104, 109893), (113, 109908), (140, 110043),

Gene: Stanimal_228 Start: 109526, Stop: 109894, Start Num: 57
Candidate Starts for Stanimal_228:
(44, 109493), (Start: 50 @109511 has 8 MA's), (Start: 57 @109526 has 31 MA's), (Start: 76 @109586 has 1 MA's), (79, 109610), (83, 109631), (93, 109676), (104, 109730), (113, 109745),

Gene: StarPlatinum_238 Start: 111486, Stop: 111854, Start Num: 57
Candidate Starts for StarPlatinum_238:
(44, 111453), (Start: 50 @111471 has 8 MA's), (Start: 57 @111486 has 31 MA's), (Start: 76 @111546 has 1 MA's), (77, 111552), (79, 111570), (93, 111636), (104, 111690), (113, 111705), (140, 111840),

Gene: Starbow_228 Start: 108529, Stop: 108897, Start Num: 57

Candidate Starts for Starbow_228:
(Start: 57 @108529 has 31 MA's), (Start: 76 @108589 has 1 MA's), (79, 108613), (93, 108679), (96, 108700), (104, 108733), (113, 108748), (140, 108883),

Gene: Starburst_44 Start: 32956, Stop: 32432, Start Num: 64
Candidate Starts for Starburst_44:
(45, 33001), (Start: 64 @32956 has 26 MA's), (88, 32857), (95, 32806), (115, 32761), (123, 32710), (128, 32671), (139, 32629), (155, 32554), (170, 32512),

Gene: SteamedHams_44 Start: 32460, Stop: 32005, Start Num: 64
Candidate Starts for SteamedHams_44:
(1, 32844), (5, 32709), (9, 32658), (12, 32616), (37, 32526), (45, 32505), (Start: 64 @32460 has 26 MA's), (88, 32361), (90, 32346), (95, 32310), (116, 32253), (123, 32214), (125, 32199), (128, 32175), (131, 32160), (148, 32091), (155, 32058),

Gene: Survivors_41 Start: 32356, Stop: 31943, Start Num: 67
Candidate Starts for Survivors_41:
(40, 32419), (Start: 67 @32356 has 7 MA's), (Start: 74 @32326 has 3 MA's), (Start: 75 @32320 has 1 MA's), (77, 32308), (116, 32152), (117, 32146), (126, 32092), (131, 32059), (133, 32053),

Gene: SweatNTears_45 Start: 32906, Stop: 32448, Start Num: 64
Candidate Starts for SweatNTears_45:
(Start: 64 @32906 has 26 MA's), (88, 32807), (95, 32756), (116, 32699), (123, 32660), (125, 32645), (128, 32621), (139, 32579), (155, 32504), (161, 32492), (163, 32489), (169, 32465), (170, 32462),

Gene: SweetCrkHerbs_67 Start: 46248, Stop: 46763, Start Num: 41
Candidate Starts for SweetCrkHerbs_67:
(3, 46017), (6, 46062), (7, 46065), (8, 46092), (11, 46131), (14, 46167), (15, 46170), (16, 46182), (24, 46200), (Start: 41 @46248 has 15 MA's), (46, 46257), (84, 46392), (85, 46395), (87, 46398), (91, 46419), (96, 46455), (108, 46506), (118, 46575), (152, 46734), (162, 46755),

Gene: TG1_40 Start: 31978, Stop: 32517, Start Num: 70
Candidate Starts for TG1_40:
(58, 31954), (Start: 70 @31978 has 5 MA's), (Start: 74 @32005 has 3 MA's), (77, 32023), (84, 32065), (87, 32071), (90, 32089), (146, 32380),

Gene: Talon44_67 Start: 46590, Stop: 47105, Start Num: 41
Candidate Starts for Talon44_67:
(3, 46359), (6, 46404), (7, 46407), (8, 46434), (11, 46473), (14, 46509), (15, 46512), (16, 46524), (24, 46542), (Start: 41 @46590 has 15 MA's), (46, 46599), (84, 46734), (85, 46737), (87, 46740), (91, 46761), (96, 46797), (108, 46848), (118, 46917), (152, 47076), (162, 47097),

Gene: Tanis_65 Start: 46157, Stop: 46672, Start Num: 41
Candidate Starts for Tanis_65:
(30, 46133), (Start: 41 @46157 has 15 MA's), (Start: 60 @46202 has 4 MA's), (Start: 74 @46241 has 3 MA's), (Start: 75 @46247 has 1 MA's), (87, 46307), (91, 46328), (96, 46364), (103, 46400), (109, 46418), (118, 46484), (140, 46592), (143, 46607), (151, 46640), (152, 46643), (162, 46664),

Gene: Tarnish_46 Start: 34958, Stop: 34449, Start Num: 42
Candidate Starts for Tarnish_46:
(Start: 42 @34958 has 5 MA's), (95, 34754), (123, 34658), (125, 34643), (133, 34598), (139, 34577), (155, 34502), (157, 34499), (164, 34484),

Gene: TenaciousP_64 Start: 47760, Stop: 48215, Start Num: 47
Candidate Starts for TenaciousP_64:
(Start: 20 @47697 has 1 MA's), (31, 47730), (Start: 47 @47760 has 29 MA's), (Start: 50 @47769 has 8 MA's), (87, 47901), (103, 47994), (122, 48102), (130, 48153),

Gene: Timshel_36 Start: 30226, Stop: 29732, Start Num: 68
Candidate Starts for Timshel_36:
(Start: 66 @30229 has 10 MA's), (Start: 68 @30226 has 11 MA's), (101, 30049), (139, 29863), (140, 29860), (159, 29782), (161, 29779),

Gene: Tolls_45 Start: 32853, Stop: 32398, Start Num: 64
Candidate Starts for Tolls_45:
(1, 33237), (5, 33102), (9, 33051), (12, 33009), (37, 32919), (45, 32898), (Start: 64 @32853 has 26 MA's), (88, 32754), (90, 32739), (95, 32703), (116, 32646), (123, 32607), (125, 32592), (128, 32568), (131, 32553), (139, 32526), (155, 32451),

Gene: TomSawyer_235 Start: 111000, Stop: 111368, Start Num: 57
Candidate Starts for TomSawyer_235:
(Start: 57 @111000 has 31 MA's), (Start: 76 @111060 has 1 MA's), (79, 111084), (93, 111150), (96, 111171), (104, 111204), (113, 111219), (140, 111354),

Gene: Tomas_229 Start: 109990, Stop: 110343, Start Num: 66
Candidate Starts for Tomas_229:
(Start: 66 @109990 has 10 MA's), (Start: 76 @110035 has 1 MA's), (79, 110059), (83, 110080), (93, 110125), (104, 110179), (113, 110194),

Gene: Tonaltzin_62 Start: 46330, Stop: 46785, Start Num: 47
Candidate Starts for Tonaltzin_62:
(Start: 20 @46267 has 1 MA's), (31, 46300), (Start: 47 @46330 has 29 MA's), (Start: 50 @46339 has 8 MA's), (87, 46471), (103, 46564), (122, 46672), (130, 46723),

Gene: Triscuit_69 Start: 43287, Stop: 43871, Start Num: 25
Candidate Starts for Triscuit_69:
(Start: 25 @43287 has 2 MA's), (29, 43308), (32, 43314), (53, 43365), (Start: 75 @43431 has 1 MA's), (81, 43488), (92, 43545), (95, 43563), (100, 43590), (126, 43722), (127, 43731), (139, 43782), (146, 43818), (148, 43824),

Gene: Troje_46 Start: 33317, Stop: 32850, Start Num: 59
Candidate Starts for Troje_46:
(Start: 59 @33317 has 9 MA's), (88, 33209), (95, 33158), (116, 33101), (123, 33062), (125, 33047), (128, 33023), (139, 32981), (155, 32906), (161, 32894), (163, 32891), (169, 32867), (170, 32864),

Gene: Trufflozitus_66 Start: 46845, Stop: 47360, Start Num: 41
Candidate Starts for Trufflozitus_66:
(Start: 41 @46845 has 15 MA's), (Start: 74 @46929 has 3 MA's), (Start: 75 @46935 has 1 MA's), (87, 46995), (91, 47016), (96, 47052), (103, 47088), (118, 47172), (140, 47280), (143, 47295), (151, 47328), (152, 47331), (162, 47352),

Gene: Tuesday_238 Start: 109540, Stop: 109908, Start Num: 57
Candidate Starts for Tuesday_238:
(Start: 57 @109540 has 31 MA's), (Start: 76 @109600 has 1 MA's), (79, 109624), (93, 109690), (96, 109711), (104, 109744), (113, 109759), (140, 109894),

Gene: Typhonomachy_43 Start: 32785, Stop: 32261, Start Num: 64
Candidate Starts for Typhonomachy_43:
(45, 32830), (Start: 64 @32785 has 26 MA's), (88, 32686), (95, 32635), (123, 32539), (128, 32500), (139, 32458), (155, 32383), (170, 32341),

Gene: Untouchable_66 Start: 47269, Stop: 47808, Start Num: 50
Candidate Starts for Untouchable_66:
(23, 47203), (Start: 47 @47260 has 29 MA's), (Start: 50 @47269 has 8 MA's), (87, 47401), (103, 47494), (115, 47557), (122, 47602), (130, 47653), (149, 47725),

Gene: Vine_48 Start: 35175, Stop: 34666, Start Num: 42
Candidate Starts for Vine_48:
(Start: 42 @35175 has 5 MA's), (106, 34941), (123, 34875), (125, 34860), (133, 34815), (139, 34794), (155, 34719), (157, 34716), (164, 34701),

Gene: Wallaby_43 Start: 32457, Stop: 32044, Start Num: 67
Candidate Starts for Wallaby_43:
(40, 32520), (Start: 67 @32457 has 7 MA's), (Start: 74 @32427 has 3 MA's), (Start: 75 @32421 has 1 MA's), (77, 32409), (116, 32253), (117, 32247), (126, 32193), (131, 32160), (133, 32154),

Gene: Weasels2_199 Start: 104456, Stop: 104812, Start Num: 70
Candidate Starts for Weasels2_199:
(Start: 70 @104456 has 5 MA's), (Start: 74 @104483 has 3 MA's), (78, 104507), (94, 104594), (126, 104735),

Gene: Wipeout_221 Start: 109952, Stop: 110320, Start Num: 57
Candidate Starts for Wipeout_221:
(Start: 57 @109952 has 31 MA's), (Start: 76 @110012 has 1 MA's), (79, 110036), (93, 110102), (96, 110123), (104, 110156), (113, 110171), (140, 110306),

Gene: Wofford_231 Start: 112242, Stop: 112598, Start Num: 59
Candidate Starts for Wofford_231:
(22, 112140), (26, 112149), (27, 112155), (31, 112170), (35, 112176), (48, 112212), (Start: 50 @112218 has 8 MA's), (Start: 59 @112242 has 9 MA's), (Start: 76 @112290 has 1 MA's), (79, 112314), (83, 112335), (93, 112380), (104, 112434), (113, 112449), (139, 112581),

Gene: Wolfwood_41 Start: 32428, Stop: 32015, Start Num: 67
Candidate Starts for Wolfwood_41:
(40, 32491), (Start: 67 @32428 has 7 MA's), (Start: 74 @32398 has 3 MA's), (Start: 75 @32392 has 1 MA's), (77, 32380), (116, 32224), (117, 32218), (126, 32164), (131, 32131), (133, 32125),

Gene: Yaboi_233 Start: 109149, Stop: 109457, Start Num: 76
Candidate Starts for Yaboi_233:
(44, 109056), (Start: 50 @109074 has 8 MA's), (Start: 57 @109089 has 31 MA's), (Start: 76 @109149 has 1 MA's), (79, 109173), (83, 109194), (93, 109239), (104, 109293), (113, 109308),

Gene: Yakult_47 Start: 34354, Stop: 33935, Start Num: 66
Candidate Starts for Yakult_47:
(Start: 66 @34354 has 10 MA's), (Start: 74 @34321 has 3 MA's), (88, 34255), (91, 34237), (118, 34132), (139, 34021), (146, 33985), (154, 33949), (155, 33946),

Gene: Yarn_41 Start: 32613, Stop: 32158, Start Num: 64
Candidate Starts for Yarn_41:

(1, 32997), (5, 32862), (9, 32811), (12, 32769), (37, 32679), (45, 32658), (Start: 64 @32613 has 26 MA's), (88, 32514), (90, 32499), (95, 32463), (116, 32406), (123, 32367), (125, 32352), (128, 32328), (131, 32313), (148, 32244), (155, 32211),

Gene: Yucky_48 Start: 34967, Stop: 34458, Start Num: 42
Candidate Starts for Yucky_48:
(Start: 42 @34967 has 5 MA's), (95, 34763), (123, 34667), (125, 34652), (133, 34607), (139, 34586), (155, 34511), (157, 34508), (164, 34493),

Gene: Yummy_46 Start: 33026, Stop: 32559, Start Num: 59
Candidate Starts for Yummy_46:
(Start: 59 @33026 has 9 MA's), (88, 32918), (95, 32867), (116, 32810), (123, 32771), (125, 32756), (128, 32732), (139, 32690), (155, 32615), (161, 32603), (163, 32600), (169, 32576), (170, 32573),

Gene: Zareef_41 Start: 32450, Stop: 32037, Start Num: 67
Candidate Starts for Zareef_41:
(40, 32513), (Start: 67 @32450 has 7 MA's), (Start: 74 @32420 has 3 MA's), (Start: 75 @32414 has 1 MA's), (77, 32402), (116, 32246), (117, 32240), (126, 32186), (131, 32153), (133, 32147),

Gene: Zeph_66 Start: 47186, Stop: 47647, Start Num: 47
Candidate Starts for Zeph_66:
(23, 47129), (Start: 47 @47186 has 29 MA's), (Start: 50 @47195 has 8 MA's), (87, 47327), (98, 47393), (103, 47420), (115, 47483), (122, 47528),

Gene: Zuko_77 Start: 57041, Stop: 57478, Start Num: 74
Candidate Starts for Zuko_77:
(58, 56990), (Start: 68 @57011 has 11 MA's), (Start: 74 @57041 has 3 MA's), (82, 57092), (119, 57287), (130, 57365), (139, 57395),