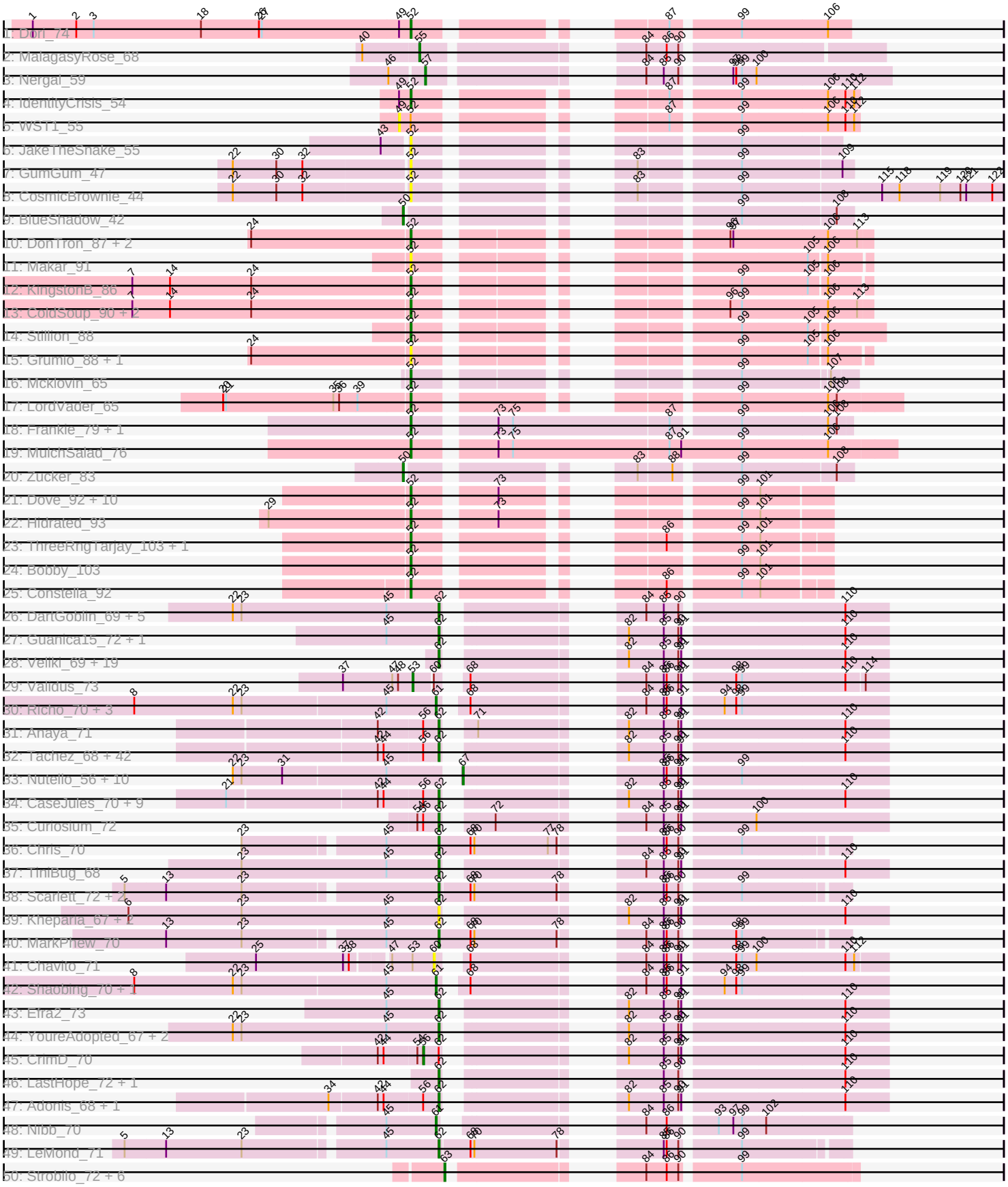
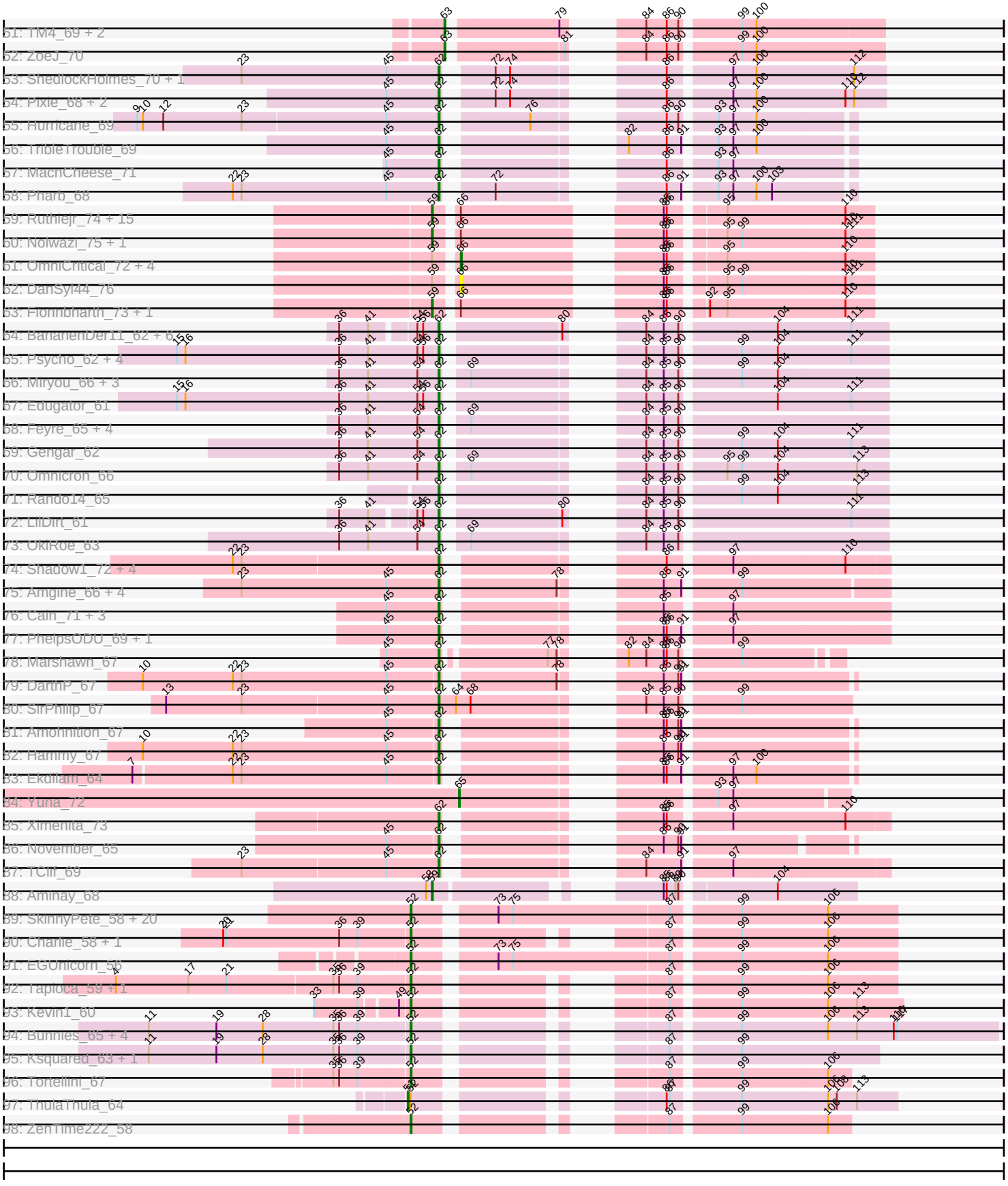
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1: Don_74
2: MalagasyRose_68
3: Nergal_59
4: IdentityCrisis_54
5: WST1_55
6: JakeTheSnake_55
7: GumGum_47
8: CosmicBrownie_44
9: BlueShadow_42
10: DonTron_87 + 2
11: Makar_91
12: KingstonB_86
13: ColdSoup_90 + 2
14: Stillon_88
15: Grumio_88 + 1
16: Micklovin_65
17: LordVader_65
18: Frankie_79 + 1
19: MulchSalad_76
20: Zucker_83
21: Dove_92 + 10
22: Hidrated_93
23: ThreeRingTanjay_103 + 1
24: Bobby_103
25: Constella_92
26: DartGoblin_69 + 5
27: Guanica15_72 + 1
28: Velki_69 + 19
29: Validus_73
30: Richo_70 + 3
31: Anaya_71
32: Tachez_68 + 42
33: Nutello_56 + 10
34: CaseJules_70 + 9
35: Curiosium_72
36: Chris_70
37: TinBug_68
38: Scarlett_72 + 2
39: Kheparia_67 + 2
40: MarkPhew_70
41: Chavito_71
42: Shabbing_70 + 1
43: Elra2_73
44: YoureAdopted_67 + 2
45: CrimD_70
46: LastHope_72 + 1
47: Adonis_68 + 1
48: Nibb_70
49: LeMond_71
50: Strobilo_72 + 6

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51: TM4_69 + 2
52: ZoeJ_70
53: ShedlockHolmes_70 + 1
54: Pixie_68 + 2
55: Hurricane_69
56: TribleTrouble_69
57: MachCheese_71
58: Pharb_68
59: Ruthlejr_74 + 15
60: Nolwazi_75 + 1
61: OmniCritical_72 + 4
62: DanSyl44_76
63: Fionnbharth_73 + 1
64: BananenDer11_62 + 6
65: Psycho_62 + 4
66: Miryou_66 + 3
67: Edugator_61
68: Feyre_65 + 4
69: Gengar_62
70: Omnicron_66
71: Rando14_65
72: LilDirt_61
73: OkiRoe_63
74: Shadow1_72 + 4
75: Amgine_66 + 4
76: Cain_71 + 3
77: PhelpsODO_69 + 1
78: Marshawn_67
79: DarthP_67
80: SirPhilip_67
81: Amohnition_67
82: Hammy_67
83: Ekuliam_64
84: Yuna_72
85: Ximenita_73
86: November_65
87: TCliff_69
88: Aminay_68
89: SkinnyPete_58 + 20
90: Charlie_58 + 1
91: EGUnicorn_56
92: Tapioca_59 + 1
93: Kevin1_60
94: Bunnies_65 + 4
95: Ksquared_63 + 1
96: Tortellini_67
97: ThulaThula_64
98: ZenTime222_58

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 347173 Report

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

Pham number 347173 has 301 members, 25 are drafts.

Phages represented in each track:
- Track 1 : Dori_74
- Track 2 : MalagasyRose_68
- Track 3 : Nergal_59
- Track 4 : IdentityCrisis_54
- Track 5 : WST1_55
- Track 6 : JakeTheSnake_55
- Track 7 : GumGum_47
- Track 8 : CosmicBrownie_44
- Track 9 : BlueShadow_42
- Track 10 : DonTron_87, Soos_83, Sting_86
- Track 11 : Makar_91
- Track 12 : KingstonB_86
- Track 13 : ColdSoup_90, Amo99_90, Jollymon_87
- Track 14 : Stillion_88
- Track 15 : Grumio_88, Purplicious_87
- Track 16 : Mcklovin_65
- Track 17 : LordVader_65
- Track 18 : Frankie_79, Piper2020_85
- Track 19 : MulchSalad_76
- Track 20 : Zucker_83
- Track 21 : Dove_92, Bombitas_95, Ejimix_100, JuicyJay_103, Halley_108, Beem_108, Minerva_106, Schatzie_101, HokkenD_96, Redno2_98, NihilNomen_108
- Track 22 : Hidrated_93
- Track 23 : ThreeRngTarjay_103, Optimus_100
- Track 24 : Bobby_103
- Track 25 : Constella_92
- Track 26 : DartGoblin_69, Anma_68, DrHayes_68, Urkel_68, Bella96_68, SamuelLPlaqson_68
- Track 27 : Guanica15_72, Yunkel11_72
- Track 28 : Veliki_69, Apocalypse_70, Bern_69, Devera_75, LindNT_67, BaghaKamala_67, Prithvi_69, Stinson_69, LaterM_68, Murucutumbu_69, Deby_68, Megsy_70, Ageofdapage_71, TaiwanKao_70, Dole_73, CheetoDust_67, JAWS_68, Tiri_68, Illumine_73, TreyKay_69
- Track 29 : Validus_73
- Track 30 : Richo_70, Dartin_70, Niklas_70, McMater_70
- Track 31 : Anaya_71

• Track 32 : Tachez_68, BGlluviae_68, Jarvi_68, Emerson_70, Padpat_71, Adephagia_68, Twitch_68, Ramen_69, Pokerus_68, Homura_68, BarrelRoll_69, Rapunzel97_70, TruffulaTree_69, Atiba_69, Beezoo_70, Spock_68, Inky_68, QuincyRose_66, Joy99_68, Jeckyll_68, ActinUp_68, Slimphazie_69, Zavala_71, Lokum_69, Ganymede_68, Peel_68, MacKat_64, Belladonna_68, Rosmarinus_68, HedwigODU_68, Topper_68, Zabiza_63, Dalmuri_68, Jayhawk_70, Clipper_72, CallaLilly_68, Lunahalos_68, Capricorn_68, Llorens_68, MeaningOfLife_69, AlishaPH_68, Mynx_70, CREW_68
• Track 33 : Nutello_56, LilPharaoh_57, Teejan_58, Torres_59, Nikao_59, Biglebops_56, Trice_56, Mdavu_57, Enkosi_58, Amelie_56, SgtBeansprout_57
• Track 34 : CaseJules_70, Boiiii_68, Blizzard_68, Durfee_68, Piatt_68, Hyperbowlee_68, Padfoot_68, Asayake_68, BEEST_68, ShiaSurprise_69
• Track 35 : Curiosium_72
• Track 36 : Chris_70
• Track 37 : TiniBug_68
• Track 38 : Scarlett_72, Oscar_71, KiSi_72
• Track 39 : Kheparia_67, Pisa4_61, Pisa1_67
• Track 40 : MarkPhew_70
• Track 41 : Chavito_71
• Track 42 : Shaobing_70, Peanam_70
• Track 43 : Efra2_73
• Track 44 : YoureAdopted_67, Sulley_67, Angelica_67
• Track 45 : CrimD_70
• Track 46 : LastHope_72, TingHuaYa_71
• Track 47 : Adonis_68, Geraldini_71
• Track 48 : Nibb_70
• Track 49 : LeMond_71
• Track 50 : Strobilo_72, Doughnut_71, Milly_71, DismalFunk_71, DismalStressor_71, Marcoliusprime_71, Findley_71
• Track 51 : TM4_69, BoostSeason_71, Mufasa_71
• Track 52 : ZoeJ_70
• Track 53 : ShedlockHolmes_70, Lea83_69
• Track 54 : Pixie_68, Keshu_71, TBond007_65
• Track 55 : Hurricane_69
• Track 56 : TribleTrouble_69
• Track 57 : MacnCheese_71
• Track 58 : Pharb_68
• Track 59 : Ruthiejr_74, Patt_69, Cheetobro_73, Reptar3000_70, Malthus_74, Y10_70, Y2_70, Mitti_73, Juliette_75, Taquito_72, Chancellor_73, MissDaisy_70, Slarp_73, JF1_73, Wintermute_73, SamScheppers_71
• Track 60 : Nolwazi_75, Lebo14_72
• Track 61 : OmniCritical_72, Qhanda_75, Kraw_73, Bobquesha_74, YasnayaPolyana_72
• Track 62 : DanSyl44_76
• Track 63 : Fionnbharth_73, Eponine_75
• Track 64 : BananenDer11_62, DoubleChamp_59, Agent47_62, Collard_60, ViviJ_61, Kratio_60, InvictusManeo_60
• Track 65 : Psycho_62, Dadosky_64, AlleyCat_64, Larva_63, Neighly_64
• Track 66 : Miryou_66, Leston_62, Guillsminger_63, Paola_62
• Track 67 : Edugator_61
• Track 68 : Feyre_65, Waterfoul_64, SoSeph_63, Heftyboy_63, Thyatira_65
• Track 69 : Gengar_62
• Track 70 : Omnicron_66

• Track 71 : Rando14_65
• Track 72 : LilDirt_61
• Track 73 : OkiRoe_63
• Track 74 : Shadow1_72, Tigress9_72, Krueger_72, Sunflower1121_73, Syra333_71
• Track 75 : Amgine_66, Ellie_63, Applecrisp_64, Lavahound_65, Fefferhead_65
• Track 76 : Cain_71, Phrank_71, Bryler_71, Tierra_71
• Track 77 : PhelpsODU_69, Unicorn_69
• Track 78 : Marshawn_67
• Track 79 : DarthP_67
• Track 80 : SirPhilip_67
• Track 81 : Amohnition_67
• Track 82 : Hammy_67
• Track 83 : Ekdilam_64
• Track 84 : Yuna_72
• Track 85 : Ximenita_73
• Track 86 : November_65
• Track 87 : TClif_69
• Track 88 : Aminay_68
• Track 89 : SkinnyPete_58, FirstPlacePfu_63, Pipsqueaks_62, Smurph_61, Fulbright_59, LordVader_75, Carcharodon_61, Magsby_60, Phloss_59, Chewbacca_64, Schnauzer_62, Duplicity_59, Philonius_61, Silvy_57, Silvafighter_63, Tessdabest_62, Parmesanjohn_61, Xerxes_61, Melville_66, Aggie_57, Gex_62
• Track 90 : Charlie_58, Bosection6_56
• Track 91 : EGUnicorn_56
• Track 92 : Tapioca_59, Andies_55
• Track 93 : Kevin1_60
• Track 94 : Bunnies_65, Glaske_59, CactusJack_60, KilKor_60, Phalm_60
• Track 95 : Ksquared_63, Willsammy_60
• Track 96 : Tortellini_67
• Track 97 : ThulaThula_64
• Track 98 : ZenTime222_58

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

The start number called the most often in the published annotations is 62, it was called in 154 of the 276 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ActinUp_68, Adephagia_68, Adonis_68, Agent47_62, Ageofdapage_71, AlishaPH_68, AlleyCat_64, Amgine_66, Amohnition_67, Anaya_71, Angelica_67, Anma_68, Apocalypse_70, Applecrisp_64, Asayake_68, Atiba_69, BEEST_68, BGlluviae_68, BaghaKamala_67, BananenDer11_62, BarrelRoll_69, Beezoo_70, Bella96_68, Belladonna_68, Bern_69, Blizzard_68, Boiiii_68, Bryler_71, CREW_68, Cain_71, CallaLilly_68, Capricorn_68, CaseJules_70, CheetoDust_67, Chris_70, Clipper_72, Collard_60, Curiosium_72, Dadosky_64, Dalmuri_68, DartGoblin_69, DarthP_67, Deby_68, Devera_75, Dole_73, DoubleChamp_59, DrHayes_68, Durfee_68, Edugator_61, Efra2_73, Ekdilam_64, Ellie_63, Emerson_70, Fefferhead_65, Feyre_65, Ganymede_68, Gengar_62, Geraldini_71, Guanica15_72, Guillsminger_63, Hammy_67, HedwigODU_68, Heftyboy_63, Homura_68, Hurricane_69, Hyperbowlee_68, Illumine_73, Inky_68, InvictusManeo_60, JAWS_68,

Jarvi_68, Jayhawk_70, Jeckyll_68, Joy99_68, Keshu_71, Kheparia_67, KiSi_72, Kratio_60, Krueger_72, Larva_63, LastHope_72, LaterM_68, Lavahound_65, LeMond_71, Lea83_69, Leston_62, LilDirt_61, LindNT_67, Llorens_68, Lokum_69, Lunahalos_68, MacKat_64, MacnCheese_71, MarkPhew_70, Marshawn_67, MeaningOfLife_69, Megsy_70, Miryou_66, Murucutumbu_69, Mynx_70, Neighly_64, November_65, OkiRoe_63, Omnicron_66, Oscar_71, Padfoot_68, Padpat_71, Paola_62, Peel_68, Pharb_68, PhelpsODU_69, Phrank_71, Piatt_68, Pisa1_67, Pisa4_61, Pixie_68, Pokerus_68, Prithvi_69, Psycho_62, QuincyRose_66, Ramen_69, Rando14_65, Rapunzel97_70, Rosmarinus_68, SamuelLPlaqson_68, Scarlett_72, Shadow1_72, ShedlockHolmes_70, ShiaSurprise_69, SirPhilip_67, Slimphazie_69, SoSeph_63, Spock_68, Stinson_69, Sulley_67, Sunflower1121_73, Syra333_71, TBond007_65, TClif_69, Tachez_68, TaiwanKao_70, Thyatira_65, Tierra_71, Tigress9_72, TingHuaYa_71, TiniBug_68, Tiri_68, Topper_68, TreyKay_69, TribleTrouble_69, TruffulaTree_69, Twitch_68, Unicorn_69, Urkel_68, Veliki_69, ViviJ_61, Waterfoul_64, Ximenita_73, YoureAdopted_67, Yunkel11_72, Zabiza_63, Zavala_71,

Genes that have the "Most Annotated" start but do not call it:
• CrimD_70,

Genes that do not have the "Most Annotated" start:
• Aggie_57, Amelie_56, Aminay_68, Amo99_90, Andies_55, Beem_108, Biglebops_56, BlueShadow_42, Bobby_103, Bobquesha_74, Bombitas_95, BoostSeason_71, Bosection6_56, Bunnies_65, CactusJack_60, Carcharodon_61, Chancellor_73, Charlie_58, Chavito_71, Cheetobro_73, Chewbacca_64, ColdSoup_90, Constella_92, CosmicBrownie_44, DanSyl44_76, Dartin_70, DismalFunk_71, DismalStressor_71, DonTron_87, Dori_74, Doughnut_71, Dove_92, Duplicity_59, EGUnicorn_56, Ejimix_100, Enkosi_58, Eponine_75, Findley_71, Fionnbharth_73, FirstPlacePfu_63, Frankie_79, Fulbright_59, Gex_62, Glaske_59, Grumio_88, GumGum_47, Halley_108, Hidrated_93, HokkenD_96, IdentityCrisis_54, JF1_73, JakeTheSnake_55, Jollymon_87, JuicyJay_103, Juliette_75, Kevin1_60, KilKor_60, KingstonB_86, Kraw_73, Ksquared_63, Lebo14_72, LilPharaoh_57, LordVader_65, LordVader_75, Magsby_60, Makar_91, MalagasyRose_68, Malthus_74, Marcoliusprime_71, McMater_70, Mcklovin_65, Mdavu_57, Melville_66, Milly_71, Minerva_106, MissDaisy_70, Mitti_73, Mufasa_71, MulchSalad_76, Nergal_59, Nibb_70, NihilNomen_108, Nikao_59, Niklas_70, Nolwazi_75, Nutello_56, OmniCritical_72, Optimus_100, Parmesanjohn_61, Patt_69, Peanam_70, Phalm_60, Philonius_61, Phloss_59, Piper2020_85, Pipsqueaks_62, Purplicious_87, Qhanda_75, Redno2_98, Reptar3000_70, Richo_70, Ruthiejr_74, SamScheppers_71, Schatzie_101, Schnauzer_62, SgtBeansprout_57, Shaobing_70, Silvafighter_63, Silvy_57, SkinnyPete_58, Slarp_73, Smurph_61, Soos_83, Stillion_88, Sting_86, Strobilo_72, TM4_69, Tapioca_59, Taquito_72, Teejan_58, Tessdabest_62, ThreeRngTarjay_103, ThulaThula_64, Torres_59, Tortellini_67, Trice_56, Validus_73, WST1_55, Willsammy_60, Wintermute_73, Xerxes_61, Y10_70, Y2_70, YasnayaPolyana_72, Yuna_72, ZenTime222_58, ZoeJ_70, Zucker_83,

Summary by start number:

Start 49:
• Found in 4 of 301 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present

• Phage (with cluster) where this start called: WST1_55 (AJ),

Start 50:
• Found in 2 of 301 (0.7%) of genes in pham
• Manual Annotations of this start: 2 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlueShadow_42 (AY), Zucker_83 (FN),

Start 51:
• Found in 1 of 301 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ThulaThula_64 (P5),

Start 52:
• Found in 75 of 301 (24.9%) of genes in pham
• Manual Annotations of this start: 64 of 276
• Called 97.3% of time when present
• Phage (with cluster) where this start called: Aggie_57 (N), Amo99_90 (CP), Andies_55 (N), Beem_108 (J), Bobby_103 (J), Bombitas_95 (J), Bosection6_56 (N), Bunnies_65 (P1), CactusJack_60 (P1), Carcharodon_61 (N), Charlie_58 (N), Chewbacca_64 (N), ColdSoup_90 (CP), Constella_92 (J), CosmicBrownie_44 (AY), DonTron_87 (CP), Dori_74 (AD), Dove_92 (J), Duplicity_59 (N), EGUnicorn_56 (N), Ejimix_100 (J), FirstPlacePfu_63 (P1), Frankie_79 (F1), Fulbright_59 (N), Gex_62 (N), Glaske_59 (P1), Grumio_88 (CP), GumGum_47 (AY), Halley_108 (J), Hidrated_93 (J), HokkenD_96 (J), IdentityCrisis_54 (AJ), JakeTheSnake_55 (AY), Jollymon_87 (CP), JuicyJay_103 (J), Kevin1_60 (N), KilKor_60 (P1), KingstonB_86 (CP), Ksquared_63 (P1), LordVader_65 (F), LordVader_75 (F), Magsby_60 (N), Makar_91 (CP), Mcklovin_65 (CZ4), Melville_66 (N), Minerva_106 (J), MulchSalad_76 (F7), NihilNomen_108 (J), Optimus_100 (J), Parmesanjohn_61 (N), Phalm_60 (P1), Philonius_61 (N), Phloss_59 (N), Piper2020_85 (F1), Pipsqueaks_62 (N), Purplicious_87 (CP), Redno2_98 (J), Schatzie_101 (J), Schnauzer_62 (N), Silvafighter_63 (N), Silvy_57 (N), SkinnyPete_58 (N), Smurph_61 (N), Soos_83 (CP), Stillion_88 (CP), Sting_86 (CP), Tapioca_59 (N), Tessdabest_62 (N), ThreeRngTarjay_103 (J), Tortellini_67 (P2), Willsammy_60 (P1), Xerxes_61 (N), ZenTime222_58 (T),

Start 53:
• Found in 2 of 301 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Validus_73 (K1),

Start 55:
• Found in 1 of 301 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MalagasyRose_68 (AG),

Start 56:
• Found in 72 of 301 (23.9%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 1.4% of time when present

• Phage (with cluster) where this start called: CrimD_70 (K1),

Start 57:
• Found in 1 of 301 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Nergal_59 (AG),

Start 59:
• Found in 27 of 301 (9.0%) of genes in pham
• Manual Annotations of this start: 20 of 276
• Called 77.8% of time when present
• Phage (with cluster) where this start called: Aminay_68 (K7), Chancellor_73 (K4), Cheetobro_73 (K4), Eponine_75 (K4), Fionnbharth_73 (K4), JF1_73 (K4), Juliette_75 (K4), Lebo14_72 (K4), Malthus_74 (K4), MissDaisy_70 (K4), Mitti_73 (K4), Nolwazi_75 (K4), Patt_69 (K4), Reptar3000_70 (K4), Ruthiejr_74 (K4), SamScheppers_71 (K4), Slarp_73 (K4), Taquito_72 (K4), Wintermute_73 (K4), Y10_70 (K4), Y2_70 (K4),

Start 60:
• Found in 2 of 301 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Chavito_71 (K1),

Start 61:
• Found in 7 of 301 (2.3%) of genes in pham
• Manual Annotations of this start: 7 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Dartin_70 (K1), McMater_70 (K1), Nibb_70 (K1), Niklas_70 (K1), Peanam_70 (K1), Richo_70 (K1), Shaobing_70 (K1),

Start 62:
• Found in 163 of 301 (54.2%) of genes in pham
• Manual Annotations of this start: 154 of 276
• Called 99.4% of time when present
• Phage (with cluster) where this start called: ActinUp_68 (K1), Adephagia_68 (K1), Adonis_68 (K1), Agent47_62 (K5), Ageofdapage_71 (K1), AlishaPH_68 (K1), AlleyCat_64 (K5), Amgine_66 (K6), Amohnition_67 (K6), Anaya_71 (K1), Angelica_67 (K1), Anma_68 (K1), Apocalypse_70 (K1), Applecrisp_64 (K6), Asayake_68 (K1), Atiba_69 (K1), BEEST_68 (K1), BGlluviae_68 (K1), BaghaKamala_67 (K1), BananenDer11_62 (K5), BarrelRoll_69 (K1), Beezoo_70 (K1), Bella96_68 (K1), Belladonna_68 (K1), Bern_69 (K1), Blizzard_68 (K1), Boiiii_68 (K1), Bryler_71 (K6), CREW_68 (K1), Cain_71 (K6), CallaLilly_68 (K1), Capricorn_68 (K1), CaseJules_70 (K1), CheetoDust_67 (K1), Chris_70 (K1), Clipper_72 (K1), Collard_60 (K5), Curiosium_72 (K1), Dadosky_64 (K5), Dalmuri_68 (K1), DartGoblin_69 (K1), DarthP_67 (K6), Deby_68 (K1), Devera_75 (K1), Dole_73 (K1), DoubleChamp_59 (K5), DrHayes_68 (K1), Durfee_68 (K1), Edugator_61 (K5), Efra2_73 (K1), Ekdilam_64 (K6), Ellie_63 (K6), Emerson_70 (K1), Fefferhead_65 (K6), Feyre_65 (K5), Ganymede_68 (K1), Gengar_62 (K5), Geraldini_71 (K1), Guanica15_72 (K1), Guillsminger_63 (K5), Hammy_67 (K6), HedwigODU_68 (K1), Heftyboy_63 (K5), Homura_68 (K1), Hurricane_69 (K3), Hyperbowlee_68 (K1), Illumine_73 (K1), Inky_68 (K1), InvictusManeo_60 (K5), JAWS_68 (K1), Jarvi_68 (K1), Jayhawk_70

(K1), Jeckyll_68 (K1), Joy99_68 (K1), Keshu_71 (K3), Kheparia_67 (K1), KiSi_72 (K1), Kratio_60 (K5), Krueger_72 (K6), Larva_63 (K5), LastHope_72 (K1), LaterM_68 (K1), Lavahound_65 (K6), LeMond_71 (K1), Lea83_69 (K3), Leston_62 (K5), LilDirt_61 (K5), LindNT_67 (K1), Llorens_68 (K1), Lokum_69 (K1), Lunahalos_68 (K1), MacKat_64 (K1), MacnCheese_71 (K3), MarkPhew_70 (K1), Marshawn_67 (K6), MeaningOfLife_69 (K1), Megsy_70 (K1), Miryou_66 (K5), Murucutumbu_69 (K1), Mynx_70 (K1), Neighly_64 (K3), November_65 (K6), OkiRoe_63 (K5), Omnicron_66 (K5), Oscar_71 (K1), Padfoot_68 (K1), Padpat_71 (K1), Paola_62 (K5), Peel_68 (K1), Pharb_68 (K3), PhelpsODU_69 (K6), Phrank_71 (K6), Piatt_68 (K1), Pisa1_67 (K1), Pisa4_61 (K1), Pixie_68 (K3), Pokerus_68 (K1), Prithvi_69 (K1), Psycho_62 (K5), QuincyRose_66 (K1), Ramen_69 (K1), Rando14_65 (K5), Rapunzel97_70 (K1), Rosmarinus_68 (K1), SamuelLPlaqson_68 (K1), Scarlett_72 (K1), Shadow1_72 (K6), ShedlockHolmes_70 (K3), ShiaSurprise_69 (K1), SirPhilip_67 (K6), Slimphazie_69 (K1), SoSeph_63 (K5), Spock_68 (K1), Stinson_69 (K1), Sulley_67 (K1), Sunflower1121_73 (K6), Syra333_71 (K6), TBond007_65 (K3), TClif_69 (K6), Tachez_68 (K1), TaiwanKao_70 (K1), Thyatira_65 (K5), Tierra_71 (K6), Tigress9_72 (K6), TingHuaYa_71 (K1), TiniBug_68 (K1), Tiri_68 (K1), Topper_68 (K1), TreyKay_69 (K1), TribleTrouble_69 (K3), TruffulaTree_69 (K1), Twitch_68 (K1), Unicorn_69 (K6), Urkel_68 (K1), Veliki_69 (K1), ViviJ_61 (K5), Waterfoul_64 (K5), Ximenita_73 (K6), YoureAdopted_67 (K1), Yunkel11_72 (K1), Zabiza_63 (K1), Zavala_71 (K1),

Start 63:
• Found in 11 of 301 (3.7%) of genes in pham
• Manual Annotations of this start: 11 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BoostSeason_71 (K2), DismalFunk_71 (K2), DismalStressor_71 (K2), Doughnut_71 (K2), Findley_71 (K2), Marcoliusprime_71 (K2), Milly_71 (K2), Mufasa_71 (K2), Strobilo_72 (K2), TM4_69 (K2), ZoeJ_70 (K2),

Start 65:
• Found in 1 of 301 (0.3%) of genes in pham
• Manual Annotations of this start: 1 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Yuna_72 (K6),

Start 66:
• Found in 26 of 301 (8.6%) of genes in pham
• Manual Annotations of this start: 3 of 276
• Called 23.1% of time when present
• Phage (with cluster) where this start called: Bobquesha_74 (K4), DanSyl44_76 (K4), Kraw_73 (K4), OmniCritical_72 (K4), Qhanda_75 (K4), YasnayaPolyana_72 (K4),

Start 67:
• Found in 11 of 301 (3.7%) of genes in pham
• Manual Annotations of this start: 9 of 276
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amelie_56 (K1), Biglebops_56 (K1), Enkosi_58 (K1), LilPharaoh_57 (K1), Mdavu_57 (K1), Nikao_59 (K1), Nutello_56 (K1), SgtBeansprout_57 (K1), Teejan_58 (K1), Torres_59 (K1), Trice_56 (K1),

Summary by clusters:

There are 23 clusters represented in this pham: AJ, K3, K2, K1, K7, K6, K5, K4, FN, F, P2, P1, AD, AG, P5, J, N, CZ4, AY, CP, F1, F7, T,

Info for manual annotations of cluster AD:
•Start number 52 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AG:
•Start number 55 was manually annotated 1 time for cluster AG.
•Start number 57 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster AJ:
•Start number 52 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster AY:
•Start number 50 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CP:
•Start number 52 was manually annotated 6 times for cluster CP.

Info for manual annotations of cluster CZ4:
•Start number 52 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster F:
•Start number 52 was manually annotated 2 times for cluster F.

Info for manual annotations of cluster F1:
•Start number 52 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F7:
•Start number 52 was manually annotated 1 time for cluster F7.

Info for manual annotations of cluster FN:
•Start number 50 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster J:
•Start number 52 was manually annotated 16 times for cluster J.

Info for manual annotations of cluster K1:
•Start number 53 was manually annotated 1 time for cluster K1.
•Start number 56 was manually annotated 1 time for cluster K1.
•Start number 61 was manually annotated 7 times for cluster K1.
•Start number 62 was manually annotated 95 times for cluster K1.
•Start number 67 was manually annotated 9 times for cluster K1.

Info for manual annotations of cluster K2:
•Start number 63 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:
•Start number 62 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:
•Start number 59 was manually annotated 19 times for cluster K4.

•Start number 66 was manually annotated 3 times for cluster K4.

Info for manual annotations of cluster K5:
•Start number 62 was manually annotated 25 times for cluster K5.

Info for manual annotations of cluster K6:
•Start number 62 was manually annotated 25 times for cluster K6.
•Start number 65 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster K7:
•Start number 59 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster N:
•Start number 52 was manually annotated 24 times for cluster N.

Info for manual annotations of cluster P1:
•Start number 52 was manually annotated 8 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 52 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P5:
•Start number 51 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster T:
•Start number 52 was manually annotated 1 time for cluster T.

Gene Information:

Gene: ActinUp_68 Start: 43942, Stop: 44313, Start Num: 62
Candidate Starts for ActinUp_68:
(42, 43882), (44, 43888), (Start: 56 @43927 has 1 MA's), (Start: 62 @43942 has 154 MA's), (82, 44059), (85, 44095), (90, 44110), (91, 44113), (110, 44269),

Gene: Adephagia_68 Start: 43979, Stop: 44350, Start Num: 62
Candidate Starts for Adephagia_68:
(42, 43919), (44, 43925), (Start: 56 @43964 has 1 MA's), (Start: 62 @43979 has 154 MA's), (82, 44096), (85, 44132), (90, 44147), (91, 44150), (110, 44306),

Gene: Adonis_68 Start: 44214, Stop: 44585, Start Num: 62
Candidate Starts for Adonis_68:
(34, 44106), (42, 44154), (44, 44160), (Start: 56 @44199 has 1 MA's), (Start: 62 @44214 has 154 MA's), (82, 44331), (85, 44367), (90, 44382), (91, 44385), (110, 44541),

Gene: Agent47_62 Start: 41490, Stop: 41870, Start Num: 62
Candidate Starts for Agent47_62:
(36, 41400), (41, 41430), (54, 41469), (Start: 56 @41475 has 1 MA's), (Start: 62 @41490 has 154 MA's), (80, 41598), (84, 41634), (85, 41652), (90, 41667), (104, 41757), (111, 41832),

Gene: Ageofdapage_71 Start: 45137, Stop: 45508, Start Num: 62
Candidate Starts for Ageofdapage_71:

(Start: 62 @45137 has 154 MA's), (82, 45254), (85, 45290), (90, 45305), (91, 45308), (110, 45464),

Gene: Aggie_57 Start: 39395, Stop: 39856, Start Num: 52
Candidate Starts for Aggie_57:
(Start: 52 @39395 has 64 MA's), (73, 39467), (75, 39482), (87, 39641), (99, 39704), (106, 39791),

Gene: AlishaPH_68 Start: 44240, Stop: 44611, Start Num: 62
Candidate Starts for AlishaPH_68:
(42, 44180), (44, 44186), (Start: 56 @44225 has 1 MA's), (Start: 62 @44240 has 154 MA's), (82, 44357), (85, 44393), (90, 44408), (91, 44411), (110, 44567),

Gene: AlleyCat_64 Start: 41814, Stop: 42194, Start Num: 62
Candidate Starts for AlleyCat_64:
(15, 41544), (16, 41553), (36, 41712), (41, 41742), (54, 41793), (Start: 56 @41799 has 1 MA's), (Start: 62 @41814 has 154 MA's), (84, 41958), (85, 41976), (90, 41991), (99, 42045), (104, 42081), (111, 42156),

Gene: Amelie_56 Start: 41183, Stop: 41554, Start Num: 67
Candidate Starts for Amelie_56:
(22, 40970), (23, 40979), (31, 41021), (45, 41126), (Start: 67 @41183 has 9 MA's), (85, 41336), (86, 41339), (90, 41351), (91, 41354), (99, 41405),

Gene: Amgine_66 Start: 44807, Stop: 45178, Start Num: 62
Candidate Starts for Amgine_66:
(23, 44603), (45, 44753), (Start: 62 @44807 has 154 MA's), (78, 44906), (85, 44963), (91, 44981), (99, 45032),

Gene: Aminay_68 Start: 43564, Stop: 43917, Start Num: 59
Candidate Starts for Aminay_68:
(58, 43558), (Start: 59 @43564 has 20 MA's), (85, 43735), (86, 43738), (89, 43747), (90, 43750), (104, 43837),

Gene: Amo99_90 Start: 56291, Stop: 56665, Start Num: 52
Candidate Starts for Amo99_90:
(7, 56006), (14, 56045), (24, 56129), (Start: 52 @56291 has 64 MA's), (96, 56522), (99, 56534), (106, 56621), (113, 56651),

Gene: Amohnition_67 Start: 44352, Stop: 44687, Start Num: 62
Candidate Starts for Amohnition_67:
(45, 44301), (Start: 62 @44352 has 154 MA's), (85, 44508), (86, 44511), (90, 44523), (91, 44526),

Gene: Anaya_71 Start: 44933, Stop: 45304, Start Num: 62
Candidate Starts for Anaya_71:
(42, 44873), (Start: 56 @44918 has 1 MA's), (Start: 62 @44933 has 154 MA's), (71, 44948), (82, 45050), (85, 45086), (90, 45101), (91, 45104), (110, 45260),

Gene: Andies_55 Start: 38900, Stop: 39301, Start Num: 52
Candidate Starts for Andies_55:
(4, 38603), (17, 38678), (21, 38717), (35, 38825), (36, 38831), (39, 38849), (Start: 52 @38900 has 64 MA's), (87, 39083), (99, 39146), (106, 39233),

Gene: Angelica_67 Start: 43899, Stop: 44270, Start Num: 62
Candidate Starts for Angelica_67:

(22, 43686), (23, 43695), (45, 43845), (Start: 62 @43899 has 154 MA's), (82, 44016), (85, 44052), (90, 44067), (91, 44070), (110, 44226),

Gene: Anma_68 Start: 44604, Stop: 44975, Start Num: 62
Candidate Starts for Anma_68:
(22, 44391), (23, 44400), (45, 44550), (Start: 62 @44604 has 154 MA's), (84, 44739), (85, 44757), (90, 44772), (110, 44931),

Gene: Apocalypse_70 Start: 44662, Stop: 45033, Start Num: 62
Candidate Starts for Apocalypse_70:
(Start: 62 @44662 has 154 MA's), (82, 44779), (85, 44815), (90, 44830), (91, 44833), (110, 44989),

Gene: Applecrisp_64 Start: 43937, Stop: 44308, Start Num: 62
Candidate Starts for Applecrisp_64:
(23, 43733), (45, 43883), (Start: 62 @43937 has 154 MA's), (78, 44036), (85, 44093), (91, 44111), (99, 44162),

Gene: Asayake_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Asayake_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: Atiba_69 Start: 43942, Stop: 44313, Start Num: 62
Candidate Starts for Atiba_69:
(42, 43882), (44, 43888), (Start: 56 @43927 has 1 MA's), (Start: 62 @43942 has 154 MA's), (82, 44059), (85, 44095), (90, 44110), (91, 44113), (110, 44269),

Gene: BEEST_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for BEEST_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: BGlluviae_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for BGlluviae_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: BaghaKamala_67 Start: 43528, Stop: 43899, Start Num: 62
Candidate Starts for BaghaKamala_67:
(Start: 62 @43528 has 154 MA's), (82, 43645), (85, 43681), (90, 43696), (91, 43699), (110, 43855),

Gene: BananenDer11_62 Start: 41451, Stop: 41831, Start Num: 62
Candidate Starts for BananenDer11_62:
(36, 41361), (41, 41391), (54, 41430), (Start: 56 @41436 has 1 MA's), (Start: 62 @41451 has 154 MA's), (80, 41559), (84, 41595), (85, 41613), (90, 41628), (104, 41718), (111, 41793),

Gene: BarrelRoll_69 Start: 44380, Stop: 44751, Start Num: 62
Candidate Starts for BarrelRoll_69:
(42, 44320), (44, 44326), (Start: 56 @44365 has 1 MA's), (Start: 62 @44380 has 154 MA's), (82, 44497), (85, 44533), (90, 44548), (91, 44551), (110, 44707),

Gene: Beem_108 Start: 62992, Stop: 63327, Start Num: 52
Candidate Starts for Beem_108:

(Start: 52 @62992 has 64 MA's), (73, 63064), (99, 63238), (101, 63256),

Gene: Beezoo_70 Start: 44892, Stop: 45263, Start Num: 62
Candidate Starts for Beezoo_70:
(42, 44832), (44, 44838), (Start: 56 @44877 has 1 MA's), (Start: 62 @44892 has 154 MA's), (82, 45009), (85, 45045), (90, 45060), (91, 45063), (110, 45219),

Gene: Bella96_68 Start: 44450, Stop: 44821, Start Num: 62
Candidate Starts for Bella96_68:
(22, 44237), (23, 44246), (45, 44396), (Start: 62 @44450 has 154 MA's), (84, 44585), (85, 44603), (90, 44618), (110, 44777),

Gene: Belladonna_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Belladonna_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Bern_69 Start: 43121, Stop: 43492, Start Num: 62
Candidate Starts for Bern_69:
(Start: 62 @43121 has 154 MA's), (82, 43238), (85, 43274), (90, 43289), (91, 43292), (110, 43448),

Gene: Biglebops_56 Start: 41183, Stop: 41554, Start Num: 67
Candidate Starts for Biglebops_56:
(22, 40970), (23, 40979), (31, 41021), (45, 41126), (Start: 67 @41183 has 9 MA's), (85, 41336), (86, 41339), (90, 41351), (91, 41354), (99, 41405),

Gene: Blizzard_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Blizzard_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: BlueShadow_42 Start: 28586, Stop: 28227, Start Num: 50
Candidate Starts for BlueShadow_42:
(Start: 50 @28586 has 2 MA's), (99, 28337), (108, 28244),

Gene: Bobby_103 Start: 64857, Stop: 65192, Start Num: 52
Candidate Starts for Bobby_103:
(Start: 52 @64857 has 64 MA's), (99, 65103), (101, 65121),

Gene: Bobquesha_74 Start: 43552, Stop: 43914, Start Num: 66
Candidate Starts for Bobquesha_74:
(Start: 59 @43534 has 20 MA's), (Start: 66 @43552 has 3 MA's), (85, 43714), (86, 43717), (95, 43765), (110, 43885),

Gene: Boiiii_68 Start: 44296, Stop: 44667, Start Num: 62
Candidate Starts for Boiiii_68:
(21, 44086), (42, 44236), (44, 44242), (Start: 56 @44281 has 1 MA's), (Start: 62 @44296 has 154 MA's), (82, 44413), (85, 44449), (90, 44464), (91, 44467), (110, 44623),

Gene: Bombitas_95 Start: 60155, Stop: 60490, Start Num: 52
Candidate Starts for Bombitas_95:
(Start: 52 @60155 has 64 MA's), (73, 60227), (99, 60401), (101, 60419),

Gene: BoostSeason_71 Start: 46076, Stop: 46420, Start Num: 63
Candidate Starts for BoostSeason_71:
(Start: 63 @46076 has 11 MA's), (79, 46181), (84, 46220), (86, 46241), (90, 46253), (99, 46307), (100, 46322),

Gene: Bosection6_56 Start: 38504, Stop: 38905, Start Num: 52
Candidate Starts for Bosection6_56:
(20, 38315), (21, 38318), (36, 38435), (39, 38453), (Start: 52 @38504 has 64 MA's), (87, 38687), (99, 38750), (106, 38837),

Gene: Bryler_71 Start: 43715, Stop: 44089, Start Num: 62
Candidate Starts for Bryler_71:
(45, 43661), (Start: 62 @43715 has 154 MA's), (85, 43871), (97, 43931),

Gene: Bunnies_65 Start: 41638, Stop: 42144, Start Num: 52
Candidate Starts for Bunnies_65:
(11, 41374), (19, 41443), (28, 41491), (35, 41563), (36, 41569), (39, 41587), (Start: 52 @41638 has 64 MA's), (87, 41821), (99, 41884), (106, 41971), (113, 42001), (116, 42037), (117, 42040),

Gene: CREW_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for CREW_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: CactusJack_60 Start: 40506, Stop: 41012, Start Num: 52
Candidate Starts for CactusJack_60:
(11, 40242), (19, 40311), (28, 40359), (35, 40431), (36, 40437), (39, 40455), (Start: 52 @40506 has 64 MA's), (87, 40689), (99, 40752), (106, 40839), (113, 40869), (116, 40905), (117, 40908),

Gene: Cain_71 Start: 43703, Stop: 44077, Start Num: 62
Candidate Starts for Cain_71:
(45, 43649), (Start: 62 @43703 has 154 MA's), (85, 43859), (97, 43919),

Gene: CallaLilly_68 Start: 44020, Stop: 44391, Start Num: 62
Candidate Starts for CallaLilly_68:
(42, 43960), (44, 43966), (Start: 56 @44005 has 1 MA's), (Start: 62 @44020 has 154 MA's), (82, 44137), (85, 44173), (90, 44188), (91, 44191), (110, 44347),

Gene: Capricorn_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Capricorn_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Carcharodon_61 Start: 38739, Stop: 39203, Start Num: 52
Candidate Starts for Carcharodon_61:
(Start: 52 @38739 has 64 MA's), (73, 38811), (75, 38826), (87, 38985), (99, 39048), (106, 39135),

Gene: CaseJules_70 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for CaseJules_70:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: Chancellor_73 Start: 44642, Stop: 45022, Start Num: 59

Candidate Starts for Chancellor_73:
(Start: 59 @44642 has 20 MA's), (Start: 66 @44660 has 3 MA's), (85, 44822), (86, 44825), (95, 44873), (110, 44993),

Gene: Charlie_58 Start: 38128, Stop: 38529, Start Num: 52
Candidate Starts for Charlie_58:
(20, 37939), (21, 37942), (36, 38059), (39, 38077), (Start: 52 @38128 has 64 MA's), (87, 38311), (99, 38374), (106, 38461),

Gene: Chavito_71 Start: 45115, Stop: 45489, Start Num: 60
Candidate Starts for Chavito_71:
(25, 44947), (37, 45037), (38, 45043), (47, 45076), (Start: 53 @45097 has 1 MA's), (60, 45115), (68, 45130), (84, 45256), (85, 45274), (86, 45277), (90, 45289), (91, 45292), (98, 45337), (99, 45343), (100, 45358), (110, 45448), (112, 45457),

Gene: CheetoDust_67 Start: 43575, Stop: 43946, Start Num: 62
Candidate Starts for CheetoDust_67:
(Start: 62 @43575 has 154 MA's), (82, 43692), (85, 43728), (90, 43743), (91, 43746), (110, 43902),

Gene: Cheetobro_73 Start: 44639, Stop: 45019, Start Num: 59
Candidate Starts for Cheetobro_73:
(Start: 59 @44639 has 20 MA's), (Start: 66 @44657 has 3 MA's), (85, 44819), (86, 44822), (95, 44870), (110, 44990),

Gene: Chewbacca_64 Start: 38634, Stop: 39098, Start Num: 52
Candidate Starts for Chewbacca_64:
(Start: 52 @38634 has 64 MA's), (73, 38706), (75, 38721), (87, 38880), (99, 38943), (106, 39030),

Gene: Chris_70 Start: 44892, Stop: 45239, Start Num: 62
Candidate Starts for Chris_70:
(23, 44703), (45, 44838), (Start: 62 @44892 has 154 MA's), (68, 44925), (70, 44928), (77, 45003), (78, 45012), (85, 45069), (86, 45072), (90, 45084), (99, 45138),

Gene: Clipper_72 Start: 44996, Stop: 45367, Start Num: 62
Candidate Starts for Clipper_72:
(42, 44936), (44, 44942), (Start: 56 @44981 has 1 MA's), (Start: 62 @44996 has 154 MA's), (82, 45113), (85, 45149), (90, 45164), (91, 45167), (110, 45323),

Gene: ColdSoup_90 Start: 56372, Stop: 56746, Start Num: 52
Candidate Starts for ColdSoup_90:
(7, 56087), (14, 56126), (24, 56210), (Start: 52 @56372 has 64 MA's), (96, 56603), (99, 56615), (106, 56702), (113, 56732),

Gene: Collard_60 Start: 41451, Stop: 41831, Start Num: 62
Candidate Starts for Collard_60:
(36, 41361), (41, 41391), (54, 41430), (Start: 56 @41436 has 1 MA's), (Start: 62 @41451 has 154 MA's), (80, 41559), (84, 41595), (85, 41613), (90, 41628), (104, 41718), (111, 41793),

Gene: Constella_92 Start: 57167, Stop: 57499, Start Num: 52
Candidate Starts for Constella_92:
(Start: 52 @57167 has 64 MA's), (86, 57347), (99, 57413), (101, 57431),

Gene: CosmicBrownie_44 Start: 29321, Stop: 29833, Start Num: 52

Candidate Starts for CosmicBrownie_44:
(22, 29144), (30, 29189), (32, 29216), (Start: 52 @29321 has 64 MA's), (83, 29474), (99, 29567), (115, 29708), (118, 29726), (119, 29768), (120, 29789), (121, 29795), (122, 29822),

Gene: CrimD_70 Start: 44874, Stop: 45260, Start Num: 56
Candidate Starts for CrimD_70:
(42, 44829), (44, 44835), (54, 44868), (Start: 56 @44874 has 1 MA's), (Start: 62 @44889 has 154 MA's), (82, 45006), (85, 45042), (90, 45057), (91, 45060), (110, 45216),

Gene: Curiosium_72 Start: 43619, Stop: 43990, Start Num: 62
Candidate Starts for Curiosium_72:
(54, 43598), (Start: 56 @43604 has 1 MA's), (Start: 62 @43619 has 154 MA's), (72, 43652), (84, 43754), (85, 43772), (90, 43787), (91, 43790), (100, 43856),

Gene: Dadosky_64 Start: 41816, Stop: 42196, Start Num: 62
Candidate Starts for Dadosky_64:
(15, 41546), (16, 41555), (36, 41714), (41, 41744), (54, 41795), (Start: 56 @41801 has 1 MA's), (Start: 62 @41816 has 154 MA's), (84, 41960), (85, 41978), (90, 41993), (99, 42047), (104, 42083), (111, 42158),

Gene: Dalmuri_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Dalmuri_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: DanSyl44_76 Start: 45851, Stop: 46213, Start Num: 66
Candidate Starts for DanSyl44_76:
(Start: 59 @45833 has 20 MA's), (Start: 66 @45851 has 3 MA's), (85, 46013), (86, 46016), (95, 46064), (99, 46079), (110, 46184), (111, 46190),

Gene: DartGoblin_69 Start: 44422, Stop: 44793, Start Num: 62
Candidate Starts for DartGoblin_69:
(22, 44209), (23, 44218), (45, 44368), (Start: 62 @44422 has 154 MA's), (84, 44557), (85, 44575), (90, 44590), (110, 44749),

Gene: DarthP_67 Start: 44206, Stop: 44541, Start Num: 62
Candidate Starts for DarthP_67:
(10, 43903), (22, 43996), (23, 44005), (45, 44155), (Start: 62 @44206 has 154 MA's), (78, 44305), (85, 44362), (90, 44377), (91, 44380),

Gene: Dartin_70 Start: 44359, Stop: 44739, Start Num: 61
Candidate Starts for Dartin_70:
(8, 44050), (22, 44152), (23, 44161), (45, 44308), (Start: 61 @44359 has 7 MA's), (68, 44377), (84, 44503), (85, 44521), (86, 44524), (91, 44539), (94, 44572), (98, 44584), (99, 44590),

Gene: Deby_68 Start: 44347, Stop: 44718, Start Num: 62
Candidate Starts for Deby_68:
(Start: 62 @44347 has 154 MA's), (82, 44464), (85, 44500), (90, 44515), (91, 44518), (110, 44674),

Gene: Devera_75 Start: 45700, Stop: 46071, Start Num: 62
Candidate Starts for Devera_75:
(Start: 62 @45700 has 154 MA's), (82, 45817), (85, 45853), (90, 45868), (91, 45871), (110, 46027),

Gene: DismalFunk_71 Start: 46501, Stop: 46845, Start Num: 63
Candidate Starts for DismalFunk_71:
(Start: 63 @46501 has 11 MA's), (84, 46642), (86, 46663), (90, 46675), (99, 46729),

Gene: DismalStressor_71 Start: 46501, Stop: 46845, Start Num: 63
Candidate Starts for DismalStressor_71:
(Start: 63 @46501 has 11 MA's), (84, 46642), (86, 46663), (90, 46675), (99, 46729),

Gene: Dole_73 Start: 45703, Stop: 46074, Start Num: 62
Candidate Starts for Dole_73:
(Start: 62 @45703 has 154 MA's), (82, 45820), (85, 45856), (90, 45871), (91, 45874), (110, 46030),

Gene: DonTron_87 Start: 56250, Stop: 56624, Start Num: 52
Candidate Starts for DonTron_87:
(24, 56088), (Start: 52 @56250 has 64 MA's), (96, 56481), (97, 56484), (106, 56580), (113, 56610),

Gene: Dori_74 Start: 55849, Stop: 56205, Start Num: 52
Candidate Starts for Dori_74:
(1, 55459), (2, 55504), (3, 55522), (18, 55633), (26, 55693), (27, 55696), (49, 55837), (Start: 52 @55849 has 64 MA's), (87, 56032), (99, 56095), (106, 56182),

Gene: DoubleChamp_59 Start: 41451, Stop: 41831, Start Num: 62
Candidate Starts for DoubleChamp_59:
(36, 41361), (41, 41391), (54, 41430), (Start: 56 @41436 has 1 MA's), (Start: 62 @41451 has 154 MA's), (80, 41559), (84, 41595), (85, 41613), (90, 41628), (104, 41718), (111, 41793),

Gene: Doughnut_71 Start: 46117, Stop: 46461, Start Num: 63
Candidate Starts for Doughnut_71:
(Start: 63 @46117 has 11 MA's), (84, 46258), (86, 46279), (90, 46291), (99, 46345),

Gene: Dove_92 Start: 58421, Stop: 58756, Start Num: 52
Candidate Starts for Dove_92:
(Start: 52 @58421 has 64 MA's), (73, 58493), (99, 58667), (101, 58685),

Gene: DrHayes_68 Start: 44604, Stop: 44975, Start Num: 62
Candidate Starts for DrHayes_68:
(22, 44391), (23, 44400), (45, 44550), (Start: 62 @44604 has 154 MA's), (84, 44739), (85, 44757), (90, 44772), (110, 44931),

Gene: Duplicity_59 Start: 37996, Stop: 38460, Start Num: 52
Candidate Starts for Duplicity_59:
(Start: 52 @37996 has 64 MA's), (73, 38068), (75, 38083), (87, 38242), (99, 38305), (106, 38392),

Gene: Durfee_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Durfee_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: EGUnicorn_56 Start: 37062, Stop: 37526, Start Num: 52
Candidate Starts for EGUnicorn_56:
(Start: 52 @37062 has 64 MA's), (73, 37134), (75, 37149), (87, 37308), (99, 37371), (106, 37458),

Gene: Edugator_61 Start: 43237, Stop: 43617, Start Num: 62

Candidate Starts for Edugator_61:
(15, 42967), (16, 42976), (36, 43135), (41, 43165), (54, 43216), (Start: 56 @43222 has 1 MA's), (Start: 62 @43237 has 154 MA's), (84, 43381), (85, 43399), (90, 43414), (104, 43504), (111, 43579),

Gene: Efra2_73 Start: 44448, Stop: 44819, Start Num: 62
Candidate Starts for Efra2_73:
(45, 44394), (Start: 62 @44448 has 154 MA's), (82, 44565), (85, 44601), (90, 44616), (91, 44619), (110, 44775),

Gene: Ejimix_100 Start: 62719, Stop: 63054, Start Num: 52
Candidate Starts for Ejimix_100:
(Start: 52 @62719 has 64 MA's), (73, 62791), (99, 62965), (101, 62983),

Gene: Ekdilam_64 Start: 44431, Stop: 44766, Start Num: 62
Candidate Starts for Ekdilam_64:
(7, 44122), (22, 44221), (23, 44230), (45, 44380), (Start: 62 @44431 has 154 MA's), (85, 44587), (86, 44590), (91, 44605), (97, 44647), (100, 44671),

Gene: Ellie_63 Start: 43667, Stop: 44038, Start Num: 62
Candidate Starts for Ellie_63:
(23, 43463), (45, 43613), (Start: 62 @43667 has 154 MA's), (78, 43766), (85, 43823), (91, 43841), (99, 43892),

Gene: Emerson_70 Start: 44414, Stop: 44785, Start Num: 62
Candidate Starts for Emerson_70:
(42, 44354), (44, 44360), (Start: 56 @44399 has 1 MA's), (Start: 62 @44414 has 154 MA's), (82, 44531), (85, 44567), (90, 44582), (91, 44585), (110, 44741),

Gene: Enkosi_58 Start: 43796, Stop: 44167, Start Num: 67
Candidate Starts for Enkosi_58:
(22, 43583), (23, 43592), (31, 43634), (45, 43739), (Start: 67 @43796 has 9 MA's), (85, 43949), (86, 43952), (90, 43964), (91, 43967), (99, 44018),

Gene: Eponine_75 Start: 45485, Stop: 45865, Start Num: 59
Candidate Starts for Eponine_75:
(Start: 59 @45485 has 20 MA's), (Start: 66 @45503 has 3 MA's), (85, 45665), (86, 45668), (92, 45698), (95, 45716), (110, 45836),

Gene: Fefferhead_65 Start: 43576, Stop: 43947, Start Num: 62
Candidate Starts for Fefferhead_65:
(23, 43372), (45, 43522), (Start: 62 @43576 has 154 MA's), (78, 43675), (85, 43732), (91, 43750), (99, 43801),

Gene: Feyre_65 Start: 45225, Stop: 45605, Start Num: 62
Candidate Starts for Feyre_65:
(36, 45123), (41, 45153), (54, 45204), (Start: 62 @45225 has 154 MA's), (69, 45243), (84, 45369), (85, 45387), (90, 45402),

Gene: Findley_71 Start: 46495, Stop: 46839, Start Num: 63
Candidate Starts for Findley_71:
(Start: 63 @46495 has 11 MA's), (84, 46636), (86, 46657), (90, 46669), (99, 46723),

Gene: Fionnbharth_73 Start: 44883, Stop: 45263, Start Num: 59

Candidate Starts for Fionnbharth_73:
(Start: 59 @44883 has 20 MA's), (Start: 66 @44901 has 3 MA's), (85, 45063), (86, 45066), (92, 45096), (95, 45114), (110, 45234),

Gene: FirstPlacePfu_63 Start: 38539, Stop: 39003, Start Num: 52
Candidate Starts for FirstPlacePfu_63:
(Start: 52 @38539 has 64 MA's), (73, 38611), (75, 38626), (87, 38785), (99, 38848), (106, 38935),

Gene: Frankie_79 Start: 47128, Stop: 47547, Start Num: 52
Candidate Starts for Frankie_79:
(Start: 52 @47128 has 64 MA's), (73, 47200), (75, 47215), (87, 47374), (99, 47437), (106, 47524), (108, 47533),

Gene: Fulbright_59 Start: 37433, Stop: 37897, Start Num: 52
Candidate Starts for Fulbright_59:
(Start: 52 @37433 has 64 MA's), (73, 37505), (75, 37520), (87, 37679), (99, 37742), (106, 37829),

Gene: Ganymede_68 Start: 44320, Stop: 44691, Start Num: 62
Candidate Starts for Ganymede_68:
(42, 44260), (44, 44266), (Start: 56 @44305 has 1 MA's), (Start: 62 @44320 has 154 MA's), (82, 44437), (85, 44473), (90, 44488), (91, 44491), (110, 44647),

Gene: Gengar_62 Start: 43211, Stop: 43591, Start Num: 62
Candidate Starts for Gengar_62:
(36, 43109), (41, 43139), (54, 43190), (Start: 62 @43211 has 154 MA's), (84, 43355), (85, 43373), (90, 43388), (99, 43442), (104, 43478), (111, 43553),

Gene: Geraldini_71 Start: 44976, Stop: 45347, Start Num: 62
Candidate Starts for Geraldini_71:
(34, 44868), (42, 44916), (44, 44922), (Start: 56 @44961 has 1 MA's), (Start: 62 @44976 has 154 MA's), (82, 45093), (85, 45129), (90, 45144), (91, 45147), (110, 45303),

Gene: Gex_62 Start: 38755, Stop: 39219, Start Num: 52
Candidate Starts for Gex_62:
(Start: 52 @38755 has 64 MA's), (73, 38827), (75, 38842), (87, 39001), (99, 39064), (106, 39151),

Gene: Glaske_59 Start: 40506, Stop: 41012, Start Num: 52
Candidate Starts for Glaske_59:
(11, 40242), (19, 40311), (28, 40359), (35, 40431), (36, 40437), (39, 40455), (Start: 52 @40506 has 64 MA's), (87, 40689), (99, 40752), (106, 40839), (113, 40869), (116, 40905), (117, 40908),

Gene: Grumio_88 Start: 55850, Stop: 56215, Start Num: 52
Candidate Starts for Grumio_88:
(24, 55688), (Start: 52 @55850 has 64 MA's), (99, 56093), (105, 56159), (106, 56174),

Gene: Guanica15_72 Start: 44186, Stop: 44557, Start Num: 62
Candidate Starts for Guanica15_72:
(45, 44132), (Start: 62 @44186 has 154 MA's), (82, 44303), (85, 44339), (90, 44354), (91, 44357), (110, 44513),

Gene: Guillsminger_63 Start: 43165, Stop: 43545, Start Num: 62
Candidate Starts for Guillsminger_63:

(36, 43063), (41, 43093), (54, 43144), (Start: 62 @43165 has 154 MA's), (69, 43183), (84, 43309), (85, 43327), (90, 43342), (99, 43396), (104, 43432),

Gene: GumGum_47 Start: 29741, Stop: 30097, Start Num: 52
Candidate Starts for GumGum_47:
(22, 29564), (30, 29609), (32, 29636), (Start: 52 @29741 has 64 MA's), (83, 29894), (99, 29987), (109, 30086),

Gene: Halley_108 Start: 62993, Stop: 63328, Start Num: 52
Candidate Starts for Halley_108:
(Start: 52 @62993 has 64 MA's), (73, 63065), (99, 63239), (101, 63257),

Gene: Hammy_67 Start: 44194, Stop: 44529, Start Num: 62
Candidate Starts for Hammy_67:
(10, 43891), (22, 43984), (23, 43993), (45, 44143), (Start: 62 @44194 has 154 MA's), (85, 44350), (90, 44365), (91, 44368),

Gene: HedwigODU_68 Start: 43942, Stop: 44313, Start Num: 62
Candidate Starts for HedwigODU_68:
(42, 43882), (44, 43888), (Start: 56 @43927 has 1 MA's), (Start: 62 @43942 has 154 MA's), (82, 44059), (85, 44095), (90, 44110), (91, 44113), (110, 44269),

Gene: Heftyboy_63 Start: 43532, Stop: 43912, Start Num: 62
Candidate Starts for Heftyboy_63:
(36, 43430), (41, 43460), (54, 43511), (Start: 62 @43532 has 154 MA's), (69, 43550), (84, 43676), (85, 43694), (90, 43709),

Gene: Hidrated_93 Start: 60927, Stop: 61262, Start Num: 52
Candidate Starts for Hidrated_93:
(29, 60783), (Start: 52 @60927 has 64 MA's), (73, 60999), (99, 61173), (101, 61191),

Gene: HokkenD_96 Start: 61261, Stop: 61596, Start Num: 52
Candidate Starts for HokkenD_96:
(Start: 52 @61261 has 64 MA's), (73, 61333), (99, 61507), (101, 61525),

Gene: Homura_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Homura_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Hurricane_69 Start: 44340, Stop: 44675, Start Num: 62
Candidate Starts for Hurricane_69:
(9, 44031), (10, 44037), (12, 44058), (23, 44139), (45, 44286), (Start: 62 @44340 has 154 MA's), (76, 44412), (86, 44499), (90, 44511), (93, 44541), (97, 44556), (100, 44580),

Gene: Hyperbowlee_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Hyperbowlee_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: IdentityCrisis_54 Start: 33602, Stop: 33967, Start Num: 52
Candidate Starts for IdentityCrisis_54:

(49, 33590), (Start: 52 @33602 has 64 MA's), (87, 33785), (99, 33848), (106, 33935), (110, 33953), (112, 33962),

Gene: Illumine_73 Start: 45702, Stop: 46073, Start Num: 62
Candidate Starts for Illumine_73:
(Start: 62 @45702 has 154 MA's), (82, 45819), (85, 45855), (90, 45870), (91, 45873), (110, 46029),

Gene: Inky_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Inky_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: InvictusManeo_60 Start: 41494, Stop: 41874, Start Num: 62
Candidate Starts for InvictusManeo_60:
(36, 41404), (41, 41434), (54, 41473), (Start: 56 @41479 has 1 MA's), (Start: 62 @41494 has 154 MA's), (80, 41602), (84, 41638), (85, 41656), (90, 41671), (104, 41761), (111, 41836),

Gene: JAWS_68 Start: 44140, Stop: 44511, Start Num: 62
Candidate Starts for JAWS_68:
(Start: 62 @44140 has 154 MA's), (82, 44257), (85, 44293), (90, 44308), (91, 44311), (110, 44467),

Gene: JF1_73 Start: 44849, Stop: 45229, Start Num: 59
Candidate Starts for JF1_73:
(Start: 59 @44849 has 20 MA's), (Start: 66 @44867 has 3 MA's), (85, 45029), (86, 45032), (95, 45080), (110, 45200),

Gene: JakeTheSnake_55 Start: 32735, Stop: 33079, Start Num: 52
Candidate Starts for JakeTheSnake_55:
(43, 32711), (Start: 52 @32735 has 64 MA's), (99, 32981),

Gene: Jarvi_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Jarvi_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Jayhawk_70 Start: 44440, Stop: 44811, Start Num: 62
Candidate Starts for Jayhawk_70:
(42, 44380), (44, 44386), (Start: 56 @44425 has 1 MA's), (Start: 62 @44440 has 154 MA's), (82, 44557), (85, 44593), (90, 44608), (91, 44611), (110, 44767),

Gene: Jeckyll_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Jeckyll_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Jollymon_87 Start: 56372, Stop: 56746, Start Num: 52
Candidate Starts for Jollymon_87:
(7, 56087), (14, 56126), (24, 56210), (Start: 52 @56372 has 64 MA's), (96, 56603), (99, 56615), (106, 56702), (113, 56732),

Gene: Joy99_68 Start: 44026, Stop: 44397, Start Num: 62
Candidate Starts for Joy99_68:

(42, 43966), (44, 43972), (Start: 56 @44011 has 1 MA's), (Start: 62 @44026 has 154 MA's), (82, 44143), (85, 44179), (90, 44194), (91, 44197), (110, 44353),

Gene: JuicyJay_103 Start: 64127, Stop: 64462, Start Num: 52
Candidate Starts for JuicyJay_103:
(Start: 52 @64127 has 64 MA's), (73, 64199), (99, 64373), (101, 64391),

Gene: Juliette_75 Start: 44947, Stop: 45327, Start Num: 59
Candidate Starts for Juliette_75:
(Start: 59 @44947 has 20 MA's), (Start: 66 @44965 has 3 MA's), (85, 45127), (86, 45130), (95, 45178), (110, 45298),

Gene: Keshu_71 Start: 44440, Stop: 44811, Start Num: 62
Candidate Starts for Keshu_71:
(45, 44386), (Start: 62 @44440 has 154 MA's), (72, 44476), (74, 44491), (86, 44599), (97, 44656), (100, 44680), (110, 44770), (112, 44779),

Gene: Kevin1_60 Start: 37027, Stop: 37434, Start Num: 52
Candidate Starts for Kevin1_60:
(33, 36940), (39, 36985), (49, 37018), (Start: 52 @37027 has 64 MA's), (87, 37210), (99, 37273), (106, 37360), (113, 37390),

Gene: Kheparia_67 Start: 41682, Stop: 42053, Start Num: 62
Candidate Starts for Kheparia_67:
(6, 41361), (23, 41478), (45, 41628), (Start: 62 @41682 has 154 MA's), (82, 41799), (85, 41835), (90, 41850), (91, 41853), (110, 42009),

Gene: KiSi_72 Start: 44874, Stop: 45218, Start Num: 62
Candidate Starts for KiSi_72:
(5, 44565), (13, 44607), (23, 44685), (Start: 62 @44874 has 154 MA's), (68, 44904), (70, 44907), (78, 44991), (85, 45048), (86, 45051), (90, 45063), (99, 45117),

Gene: KilKor_60 Start: 41199, Stop: 41705, Start Num: 52
Candidate Starts for KilKor_60:
(11, 40935), (19, 41004), (28, 41052), (35, 41124), (36, 41130), (39, 41148), (Start: 52 @41199 has 64 MA's), (87, 41382), (99, 41445), (106, 41532), (113, 41562), (116, 41598), (117, 41601),

Gene: KingstonB_86 Start: 55783, Stop: 56148, Start Num: 52
Candidate Starts for KingstonB_86:
(7, 55498), (14, 55537), (24, 55621), (Start: 52 @55783 has 64 MA's), (99, 56026), (105, 56092), (106, 56107),

Gene: Kratio_60 Start: 41230, Stop: 41610, Start Num: 62
Candidate Starts for Kratio_60:
(36, 41140), (41, 41170), (54, 41209), (Start: 56 @41215 has 1 MA's), (Start: 62 @41230 has 154 MA's), (80, 41338), (84, 41374), (85, 41392), (90, 41407), (104, 41497), (111, 41572),

Gene: Kraw_73 Start: 44653, Stop: 45015, Start Num: 66
Candidate Starts for Kraw_73:
(Start: 59 @44635 has 20 MA's), (Start: 66 @44653 has 3 MA's), (85, 44815), (86, 44818), (95, 44866), (110, 44986),

Gene: Krueger_72 Start: 43991, Stop: 44365, Start Num: 62

Candidate Starts for Krueger_72:
(22, 43781), (23, 43790), (Start: 62 @43991 has 154 MA's), (86, 44150), (97, 44207), (110, 44321),

Gene: Ksquared_63 Start: 41638, Stop: 42021, Start Num: 52
Candidate Starts for Ksquared_63:
(11, 41374), (19, 41443), (28, 41491), (35, 41563), (36, 41569), (39, 41587), (Start: 52 @41638 has 64 MA's), (87, 41821), (99, 41884),

Gene: Larva_63 Start: 42688, Stop: 43068, Start Num: 62
Candidate Starts for Larva_63:
(15, 42418), (16, 42427), (36, 42586), (41, 42616), (54, 42667), (Start: 56 @42673 has 1 MA's), (Start: 62 @42688 has 154 MA's), (84, 42832), (85, 42850), (90, 42865), (99, 42919), (104, 42955), (111, 43030),

Gene: LastHope_72 Start: 43303, Stop: 43674, Start Num: 62
Candidate Starts for LastHope_72:
(Start: 62 @43303 has 154 MA's), (85, 43456), (90, 43471), (110, 43630),

Gene: LaterM_68 Start: 44555, Stop: 44926, Start Num: 62
Candidate Starts for LaterM_68:
(Start: 62 @44555 has 154 MA's), (82, 44672), (85, 44708), (90, 44723), (91, 44726), (110, 44882),

Gene: Lavahound_65 Start: 44944, Stop: 45315, Start Num: 62
Candidate Starts for Lavahound_65:
(23, 44740), (45, 44890), (Start: 62 @44944 has 154 MA's), (78, 45043), (85, 45100), (91, 45118), (99, 45169),

Gene: LeMond_71 Start: 44508, Stop: 44852, Start Num: 62
Candidate Starts for LeMond_71:
(5, 44199), (13, 44241), (23, 44319), (45, 44454), (Start: 62 @44508 has 154 MA's), (68, 44538), (70, 44541), (78, 44625), (85, 44682), (86, 44685), (90, 44697), (99, 44751),

Gene: Lea83_69 Start: 44374, Stop: 44745, Start Num: 62
Candidate Starts for Lea83_69:
(23, 44170), (45, 44320), (Start: 62 @44374 has 154 MA's), (72, 44410), (74, 44425), (86, 44533), (97, 44590), (100, 44614), (112, 44713),

Gene: Lebo14_72 Start: 44968, Stop: 45348, Start Num: 59
Candidate Starts for Lebo14_72:
(Start: 59 @44968 has 20 MA's), (Start: 66 @44986 has 3 MA's), (85, 45148), (86, 45151), (95, 45199), (99, 45214), (110, 45319), (111, 45325),

Gene: Leston_62 Start: 43294, Stop: 43674, Start Num: 62
Candidate Starts for Leston_62:
(36, 43192), (41, 43222), (54, 43273), (Start: 62 @43294 has 154 MA's), (69, 43312), (84, 43438), (85, 43456), (90, 43471), (99, 43525), (104, 43561),

Gene: LilDirt_61 Start: 41252, Stop: 41632, Start Num: 62
Candidate Starts for LilDirt_61:
(36, 41162), (41, 41192), (54, 41231), (Start: 56 @41237 has 1 MA's), (Start: 62 @41252 has 154 MA's), (80, 41360), (84, 41396), (85, 41414), (90, 41429), (111, 41594),

Gene: LilPharaoh_57 Start: 40911, Stop: 41282, Start Num: 67

Candidate Starts for LilPharaoh_57:
(22, 40698), (23, 40707), (31, 40749), (45, 40854), (Start: 67 @40911 has 9 MA's), (85, 41064), (86, 41067), (90, 41079), (91, 41082), (99, 41133),

Gene: LindNT_67 Start: 44352, Stop: 44723, Start Num: 62
Candidate Starts for LindNT_67:
(Start: 62 @44352 has 154 MA's), (82, 44469), (85, 44505), (90, 44520), (91, 44523), (110, 44679),

Gene: Llorens_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Llorens_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Lokum_69 Start: 44098, Stop: 44469, Start Num: 62
Candidate Starts for Lokum_69:
(42, 44038), (44, 44044), (Start: 56 @44083 has 1 MA's), (Start: 62 @44098 has 154 MA's), (82, 44215), (85, 44251), (90, 44266), (91, 44269), (110, 44425),

Gene: LordVader_75 Start: 46008, Stop: 46472, Start Num: 52
Candidate Starts for LordVader_75:
(Start: 52 @46008 has 64 MA's), (73, 46080), (75, 46095), (87, 46254), (99, 46317), (106, 46404),

Gene: LordVader_65 Start: 40263, Stop: 40670, Start Num: 52
Candidate Starts for LordVader_65:
(20, 40074), (21, 40077), (35, 40188), (36, 40194), (39, 40212), (Start: 52 @40263 has 64 MA's), (99, 40509), (106, 40596), (108, 40605),

Gene: Lunahalos_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Lunahalos_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: MacKat_64 Start: 39880, Stop: 40251, Start Num: 62
Candidate Starts for MacKat_64:
(42, 39820), (44, 39826), (Start: 56 @39865 has 1 MA's), (Start: 62 @39880 has 154 MA's), (82, 39997), (85, 40033), (90, 40048), (91, 40051), (110, 40207),

Gene: MacnCheese_71 Start: 44967, Stop: 45302, Start Num: 62
Candidate Starts for MacnCheese_71:
(45, 44913), (Start: 62 @44967 has 154 MA's), (86, 45126), (93, 45168), (97, 45183),

Gene: Magsby_60 Start: 38701, Stop: 39165, Start Num: 52
Candidate Starts for Magsby_60:
(Start: 52 @38701 has 64 MA's), (73, 38773), (75, 38788), (87, 38947), (99, 39010), (106, 39097),

Gene: Makar_91 Start: 56322, Stop: 56687, Start Num: 52
Candidate Starts for Makar_91:
(Start: 52 @56322 has 64 MA's), (105, 56631), (106, 56646),

Gene: MalagasyRose_68 Start: 43493, Stop: 43888, Start Num: 55
Candidate Starts for MalagasyRose_68:
(40, 43436), (Start: 55 @43493 has 1 MA's), (84, 43661), (86, 43682), (90, 43694),

Gene: Malthus_74 Start: 44635, Stop: 45015, Start Num: 59
Candidate Starts for Malthus_74:
(Start: 59 @44635 has 20 MA's), (Start: 66 @44653 has 3 MA's), (85, 44815), (86, 44818), (95, 44866), (110, 44986),

Gene: Marcoliusprime_71 Start: 46501, Stop: 46845, Start Num: 63
Candidate Starts for Marcoliusprime_71:
(Start: 63 @46501 has 11 MA's), (84, 46642), (86, 46663), (90, 46675), (99, 46729),

Gene: MarkPhew_70 Start: 44007, Stop: 44354, Start Num: 62
Candidate Starts for MarkPhew_70:
(13, 43740), (23, 43818), (45, 43953), (Start: 62 @44007 has 154 MA's), (68, 44040), (70, 44043), (78, 44127), (84, 44166), (85, 44184), (86, 44187), (90, 44199), (98, 44247), (99, 44253),

Gene: Marshawn_67 Start: 44384, Stop: 44707, Start Num: 62
Candidate Starts for Marshawn_67:
(45, 44330), (Start: 62 @44384 has 154 MA's), (77, 44480), (78, 44489), (82, 44510), (84, 44528), (85, 44546), (86, 44549), (90, 44561), (99, 44615),

Gene: McMater_70 Start: 44359, Stop: 44739, Start Num: 61
Candidate Starts for McMater_70:
(8, 44050), (22, 44152), (23, 44161), (45, 44308), (Start: 61 @44359 has 7 MA's), (68, 44377), (84, 44503), (85, 44521), (86, 44524), (91, 44539), (94, 44572), (98, 44584), (99, 44590),

Gene: Mcklovin_65 Start: 48076, Stop: 48429, Start Num: 52
Candidate Starts for Mcklovin_65:
(Start: 52 @48076 has 64 MA's), (99, 48319), (107, 48403),

Gene: Mdavu_57 Start: 41172, Stop: 41543, Start Num: 67
Candidate Starts for Mdavu_57:
(22, 40959), (23, 40968), (31, 41010), (45, 41115), (Start: 67 @41172 has 9 MA's), (85, 41325), (86, 41328), (90, 41340), (91, 41343), (99, 41394),

Gene: MeaningOfLife_69 Start: 44849, Stop: 45220, Start Num: 62
Candidate Starts for MeaningOfLife_69:
(42, 44789), (44, 44795), (Start: 56 @44834 has 1 MA's), (Start: 62 @44849 has 154 MA's), (82, 44966), (85, 45002), (90, 45017), (91, 45020), (110, 45176),

Gene: Megsy_70 Start: 44274, Stop: 44645, Start Num: 62
Candidate Starts for Megsy_70:
(Start: 62 @44274 has 154 MA's), (82, 44391), (85, 44427), (90, 44442), (91, 44445), (110, 44601),

Gene: Melville_66 Start: 38310, Stop: 38774, Start Num: 52
Candidate Starts for Melville_66:
(Start: 52 @38310 has 64 MA's), (73, 38382), (75, 38397), (87, 38556), (99, 38619), (106, 38706),

Gene: Milly_71 Start: 46475, Stop: 46819, Start Num: 63
Candidate Starts for Milly_71:
(Start: 63 @46475 has 11 MA's), (84, 46616), (86, 46637), (90, 46649), (99, 46703),

Gene: Minerva_106 Start: 62938, Stop: 63273, Start Num: 52
Candidate Starts for Minerva_106:
(Start: 52 @62938 has 64 MA's), (73, 63010), (99, 63184), (101, 63202),

Gene: Miryou_66 Start: 45908, Stop: 46288, Start Num: 62
Candidate Starts for Miryou_66:
(36, 45806), (41, 45836), (54, 45887), (Start: 62 @45908 has 154 MA's), (69, 45926), (84, 46052), (85, 46070), (90, 46085), (99, 46139), (104, 46175),

Gene: MissDaisy_70 Start: 43549, Stop: 43929, Start Num: 59
Candidate Starts for MissDaisy_70:
(Start: 59 @43549 has 20 MA's), (Start: 66 @43567 has 3 MA's), (85, 43729), (86, 43732), (95, 43780), (110, 43900),

Gene: Mitti_73 Start: 44790, Stop: 45170, Start Num: 59
Candidate Starts for Mitti_73:
(Start: 59 @44790 has 20 MA's), (Start: 66 @44808 has 3 MA's), (85, 44970), (86, 44973), (95, 45021), (110, 45141),

Gene: Mufasa_71 Start: 46061, Stop: 46405, Start Num: 63
Candidate Starts for Mufasa_71:
(Start: 63 @46061 has 11 MA's), (79, 46166), (84, 46205), (86, 46226), (90, 46238), (99, 46292), (100, 46307),

Gene: MulchSalad_76 Start: 47746, Stop: 48222, Start Num: 52
Candidate Starts for MulchSalad_76:
(Start: 52 @47746 has 64 MA's), (73, 47818), (75, 47833), (87, 47992), (91, 48004), (99, 48067), (106, 48154),

Gene: Murucutumbu_69 Start: 45130, Stop: 45501, Start Num: 62
Candidate Starts for Murucutumbu_69:
(Start: 62 @45130 has 154 MA's), (82, 45247), (85, 45283), (90, 45298), (91, 45301), (110, 45457),

Gene: Mynx_70 Start: 44709, Stop: 45080, Start Num: 62
Candidate Starts for Mynx_70:
(42, 44649), (44, 44655), (Start: 56 @44694 has 1 MA's), (Start: 62 @44709 has 154 MA's), (82, 44826), (85, 44862), (90, 44877), (91, 44880), (110, 45036),

Gene: Neighly_64 Start: 42687, Stop: 43067, Start Num: 62
Candidate Starts for Neighly_64:
(15, 42417), (16, 42426), (36, 42585), (41, 42615), (54, 42666), (Start: 56 @42672 has 1 MA's), (Start: 62 @42687 has 154 MA's), (84, 42831), (85, 42849), (90, 42864), (99, 42918), (104, 42954), (111, 43029),

Gene: Nergal_59 Start: 40436, Stop: 40837, Start Num: 57
Candidate Starts for Nergal_59:
(46, 40403), (Start: 57 @40436 has 1 MA's), (84, 40598), (85, 40616), (90, 40631), (97, 40676), (98, 40679), (99, 40685), (100, 40700),

Gene: Nibb_70 Start: 44218, Stop: 44553, Start Num: 61
Candidate Starts for Nibb_70:
(45, 44167), (Start: 61 @44218 has 7 MA's), (84, 44356), (86, 44377), (93, 44419), (97, 44434), (99, 44443), (102, 44467),

Gene: NihilNomen_108 Start: 63079, Stop: 63414, Start Num: 52
Candidate Starts for NihilNomen_108:

(Start: 52 @63079 has 64 MA's), (73, 63151), (99, 63325), (101, 63343),

Gene: Nikao_59 Start: 43796, Stop: 44167, Start Num: 67
Candidate Starts for Nikao_59:
(22, 43583), (23, 43592), (31, 43634), (45, 43739), (Start: 67 @43796 has 9 MA's), (85, 43949), (86, 43952), (90, 43964), (91, 43967), (99, 44018),

Gene: Niklas_70 Start: 44420, Stop: 44800, Start Num: 61
Candidate Starts for Niklas_70:
(8, 44111), (22, 44213), (23, 44222), (45, 44369), (Start: 61 @44420 has 7 MA's), (68, 44438), (84, 44564), (85, 44582), (86, 44585), (91, 44600), (94, 44633), (98, 44645), (99, 44651),

Gene: Nolwazi_75 Start: 44781, Stop: 45161, Start Num: 59
Candidate Starts for Nolwazi_75:
(Start: 59 @44781 has 20 MA's), (Start: 66 @44799 has 3 MA's), (85, 44961), (86, 44964), (95, 45012), (99, 45027), (110, 45132), (111, 45138),

Gene: November_65 Start: 44103, Stop: 44429, Start Num: 62
Candidate Starts for November_65:
(45, 44052), (Start: 62 @44103 has 154 MA's), (85, 44259), (90, 44274), (91, 44277),

Gene: Nutello_56 Start: 41183, Stop: 41554, Start Num: 67
Candidate Starts for Nutello_56:
(22, 40970), (23, 40979), (31, 41021), (45, 41126), (Start: 67 @41183 has 9 MA's), (85, 41336), (86, 41339), (90, 41351), (91, 41354), (99, 41405),

Gene: OkiRoe_63 Start: 43580, Stop: 43960, Start Num: 62
Candidate Starts for OkiRoe_63:
(36, 43478), (41, 43508), (54, 43559), (Start: 62 @43580 has 154 MA's), (69, 43598), (84, 43724), (85, 43742), (90, 43757),

Gene: OmniCritical_72 Start: 44741, Stop: 45103, Start Num: 66
Candidate Starts for OmniCritical_72:
(Start: 59 @44723 has 20 MA's), (Start: 66 @44741 has 3 MA's), (85, 44903), (86, 44906), (95, 44954), (110, 45074),

Gene: Omnicron_66 Start: 43686, Stop: 44066, Start Num: 62
Candidate Starts for Omnicron_66:
(36, 43584), (41, 43614), (54, 43665), (Start: 62 @43686 has 154 MA's), (69, 43704), (84, 43830), (85, 43848), (90, 43863), (95, 43902), (99, 43917), (104, 43953), (113, 44034),

Gene: Optimus_100 Start: 61613, Stop: 61945, Start Num: 52
Candidate Starts for Optimus_100:
(Start: 52 @61613 has 64 MA's), (86, 61793), (99, 61859), (101, 61877),

Gene: Oscar_71 Start: 44425, Stop: 44769, Start Num: 62
Candidate Starts for Oscar_71:
(5, 44116), (13, 44158), (23, 44236), (Start: 62 @44425 has 154 MA's), (68, 44455), (70, 44458), (78, 44542), (85, 44599), (86, 44602), (90, 44614), (99, 44668),

Gene: Padfoot_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Padfoot_68:

(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: Padpat_71 Start: 44414, Stop: 44785, Start Num: 62
Candidate Starts for Padpat_71:
(42, 44354), (44, 44360), (Start: 56 @44399 has 1 MA's), (Start: 62 @44414 has 154 MA's), (82, 44531), (85, 44567), (90, 44582), (91, 44585), (110, 44741),

Gene: Paola_62 Start: 43165, Stop: 43545, Start Num: 62
Candidate Starts for Paola_62:
(36, 43063), (41, 43093), (54, 43144), (Start: 62 @43165 has 154 MA's), (69, 43183), (84, 43309), (85, 43327), (90, 43342), (99, 43396), (104, 43432),

Gene: Parmesanjohn_61 Start: 38759, Stop: 39223, Start Num: 52
Candidate Starts for Parmesanjohn_61:
(Start: 52 @38759 has 64 MA's), (73, 38831), (75, 38846), (87, 39005), (99, 39068), (106, 39155),

Gene: Patt_69 Start: 43273, Stop: 43653, Start Num: 59
Candidate Starts for Patt_69:
(Start: 59 @43273 has 20 MA's), (Start: 66 @43291 has 3 MA's), (85, 43453), (86, 43456), (95, 43504), (110, 43624),

Gene: Peanam_70 Start: 44377, Stop: 44757, Start Num: 61
Candidate Starts for Peanam_70:
(8, 44068), (22, 44170), (23, 44179), (45, 44326), (Start: 61 @44377 has 7 MA's), (68, 44395), (84, 44521), (85, 44539), (86, 44542), (91, 44557), (94, 44590), (98, 44602), (99, 44608),

Gene: Peel_68 Start: 44099, Stop: 44470, Start Num: 62
Candidate Starts for Peel_68:
(42, 44039), (44, 44045), (Start: 56 @44084 has 1 MA's), (Start: 62 @44099 has 154 MA's), (82, 44216), (85, 44252), (90, 44267), (91, 44270), (110, 44426),

Gene: Phalm_60 Start: 40506, Stop: 41012, Start Num: 52
Candidate Starts for Phalm_60:
(11, 40242), (19, 40311), (28, 40359), (35, 40431), (36, 40437), (39, 40455), (Start: 52 @40506 has 64 MA's), (87, 40689), (99, 40752), (106, 40839), (113, 40869), (116, 40905), (117, 40908),

Gene: Pharb_68 Start: 43690, Stop: 44025, Start Num: 62
Candidate Starts for Pharb_68:
(22, 43477), (23, 43486), (45, 43636), (Start: 62 @43690 has 154 MA's), (72, 43726), (86, 43849), (91, 43864), (93, 43891), (97, 43906), (100, 43930), (103, 43945),

Gene: PhelpsODU_69 Start: 43630, Stop: 44004, Start Num: 62
Candidate Starts for PhelpsODU_69:
(45, 43576), (Start: 62 @43630 has 154 MA's), (85, 43786), (86, 43789), (91, 43804), (97, 43846),

Gene: Philonius_61 Start: 38924, Stop: 39388, Start Num: 52
Candidate Starts for Philonius_61:
(Start: 52 @38924 has 64 MA's), (73, 38996), (75, 39011), (87, 39170), (99, 39233), (106, 39320),

Gene: Phloss_59 Start: 38166, Stop: 38630, Start Num: 52
Candidate Starts for Phloss_59:
(Start: 52 @38166 has 64 MA's), (73, 38238), (75, 38253), (87, 38412), (99, 38475), (106, 38562),

Gene: Phrank_71 Start: 43693, Stop: 44067, Start Num: 62
Candidate Starts for Phrank_71:
(45, 43639), (Start: 62 @43693 has 154 MA's), (85, 43849), (97, 43909),

Gene: Piatt_68 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for Piatt_68:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: Piper2020_85 Start: 51523, Stop: 51987, Start Num: 52
Candidate Starts for Piper2020_85:
(Start: 52 @51523 has 64 MA's), (73, 51595), (75, 51610), (87, 51769), (99, 51832), (106, 51919), (108, 51928),

Gene: Pipsqueaks_62 Start: 38737, Stop: 39201, Start Num: 52
Candidate Starts for Pipsqueaks_62:
(Start: 52 @38737 has 64 MA's), (73, 38809), (75, 38824), (87, 38983), (99, 39046), (106, 39133),

Gene: Pisa1_67 Start: 44679, Stop: 45050, Start Num: 62
Candidate Starts for Pisa1_67:
(6, 44358), (23, 44475), (45, 44625), (Start: 62 @44679 has 154 MA's), (82, 44796), (85, 44832), (90, 44847), (91, 44850), (110, 45006),

Gene: Pisa4_61 Start: 40048, Stop: 40419, Start Num: 62
Candidate Starts for Pisa4_61:
(6, 39727), (23, 39844), (45, 39994), (Start: 62 @40048 has 154 MA's), (82, 40165), (85, 40201), (90, 40216), (91, 40219), (110, 40375),

Gene: Pixie_68 Start: 43865, Stop: 44236, Start Num: 62
Candidate Starts for Pixie_68:
(45, 43811), (Start: 62 @43865 has 154 MA's), (72, 43901), (74, 43916), (86, 44024), (97, 44081), (100, 44105), (110, 44195), (112, 44204),

Gene: Pokerus_68 Start: 44439, Stop: 44810, Start Num: 62
Candidate Starts for Pokerus_68:
(42, 44379), (44, 44385), (Start: 56 @44424 has 1 MA's), (Start: 62 @44439 has 154 MA's), (82, 44556), (85, 44592), (90, 44607), (91, 44610), (110, 44766),

Gene: Prithvi_69 Start: 44352, Stop: 44723, Start Num: 62
Candidate Starts for Prithvi_69:
(Start: 62 @44352 has 154 MA's), (82, 44469), (85, 44505), (90, 44520), (91, 44523), (110, 44679),

Gene: Psycho_62 Start: 41813, Stop: 42193, Start Num: 62
Candidate Starts for Psycho_62:
(15, 41543), (16, 41552), (36, 41711), (41, 41741), (54, 41792), (Start: 56 @41798 has 1 MA's), (Start: 62 @41813 has 154 MA's), (84, 41957), (85, 41975), (90, 41990), (99, 42044), (104, 42080), (111, 42155),

Gene: Purplicious_87 Start: 55615, Stop: 55980, Start Num: 52
Candidate Starts for Purplicious_87:
(24, 55453), (Start: 52 @55615 has 64 MA's), (99, 55858), (105, 55924), (106, 55939),

Gene: Qhanda_75 Start: 44669, Stop: 45031, Start Num: 66
Candidate Starts for Qhanda_75:
(Start: 59 @44651 has 20 MA's), (Start: 66 @44669 has 3 MA's), (85, 44831), (86, 44834), (95, 44882), (110, 45002),

Gene: QuincyRose_66 Start: 44320, Stop: 44691, Start Num: 62
Candidate Starts for QuincyRose_66:
(42, 44260), (44, 44266), (Start: 56 @44305 has 1 MA's), (Start: 62 @44320 has 154 MA's), (82, 44437), (85, 44473), (90, 44488), (91, 44491), (110, 44647),

Gene: Ramen_69 Start: 43944, Stop: 44315, Start Num: 62
Candidate Starts for Ramen_69:
(42, 43884), (44, 43890), (Start: 56 @43929 has 1 MA's), (Start: 62 @43944 has 154 MA's), (82, 44061), (85, 44097), (90, 44112), (91, 44115), (110, 44271),

Gene: Rando14_65 Start: 42494, Stop: 42874, Start Num: 62
Candidate Starts for Rando14_65:
(Start: 62 @42494 has 154 MA's), (84, 42638), (85, 42656), (90, 42671), (99, 42725), (104, 42761), (113, 42842),

Gene: Rapunzel97_70 Start: 44395, Stop: 44766, Start Num: 62
Candidate Starts for Rapunzel97_70:
(42, 44335), (44, 44341), (Start: 56 @44380 has 1 MA's), (Start: 62 @44395 has 154 MA's), (82, 44512), (85, 44548), (90, 44563), (91, 44566), (110, 44722),

Gene: Redno2_98 Start: 58813, Stop: 59148, Start Num: 52
Candidate Starts for Redno2_98:
(Start: 52 @58813 has 64 MA's), (73, 58885), (99, 59059), (101, 59077),

Gene: Reptar3000_70 Start: 43262, Stop: 43642, Start Num: 59
Candidate Starts for Reptar3000_70:
(Start: 59 @43262 has 20 MA's), (Start: 66 @43280 has 3 MA's), (85, 43442), (86, 43445), (95, 43493), (110, 43613),

Gene: Richo_70 Start: 44359, Stop: 44739, Start Num: 61
Candidate Starts for Richo_70:
(8, 44050), (22, 44152), (23, 44161), (45, 44308), (Start: 61 @44359 has 7 MA's), (68, 44377), (84, 44503), (85, 44521), (86, 44524), (91, 44539), (94, 44572), (98, 44584), (99, 44590),

Gene: Rosmarinus_68 Start: 44085, Stop: 44456, Start Num: 62
Candidate Starts for Rosmarinus_68:
(42, 44025), (44, 44031), (Start: 56 @44070 has 1 MA's), (Start: 62 @44085 has 154 MA's), (82, 44202), (85, 44238), (90, 44253), (91, 44256), (110, 44412),

Gene: Ruthiejr_74 Start: 44734, Stop: 45114, Start Num: 59
Candidate Starts for Ruthiejr_74:
(Start: 59 @44734 has 20 MA's), (Start: 66 @44752 has 3 MA's), (85, 44914), (86, 44917), (95, 44965), (110, 45085),

Gene: SamScheppers_71 Start: 45114, Stop: 45494, Start Num: 59
Candidate Starts for SamScheppers_71:
(Start: 59 @45114 has 20 MA's), (Start: 66 @45132 has 3 MA's), (85, 45294), (86, 45297), (95, 45345), (110, 45465),

Gene: SamuelLPlaqson_68 Start: 44604, Stop: 44975, Start Num: 62
Candidate Starts for SamuelLPlaqson_68:
(22, 44391), (23, 44400), (45, 44550), (Start: 62 @44604 has 154 MA's), (84, 44739), (85, 44757), (90, 44772), (110, 44931),

Gene: Scarlett_72 Start: 44755, Stop: 45099, Start Num: 62
Candidate Starts for Scarlett_72:
(5, 44446), (13, 44488), (23, 44566), (Start: 62 @44755 has 154 MA's), (68, 44785), (70, 44788), (78, 44872), (85, 44929), (86, 44932), (90, 44944), (99, 44998),

Gene: Schatzie_101 Start: 61869, Stop: 62204, Start Num: 52
Candidate Starts for Schatzie_101:
(Start: 52 @61869 has 64 MA's), (73, 61941), (99, 62115), (101, 62133),

Gene: Schnauzer_62 Start: 38759, Stop: 39223, Start Num: 52
Candidate Starts for Schnauzer_62:
(Start: 52 @38759 has 64 MA's), (73, 38831), (75, 38846), (87, 39005), (99, 39068), (106, 39155),

Gene: SgtBeansprout_57 Start: 41183, Stop: 41554, Start Num: 67
Candidate Starts for SgtBeansprout_57:
(22, 40970), (23, 40979), (31, 41021), (45, 41126), (Start: 67 @41183 has 9 MA's), (85, 41336), (86, 41339), (90, 41351), (91, 41354), (99, 41405),

Gene: Shadow1_72 Start: 44143, Stop: 44517, Start Num: 62
Candidate Starts for Shadow1_72:
(22, 43933), (23, 43942), (Start: 62 @44143 has 154 MA's), (86, 44302), (97, 44359), (110, 44473),

Gene: Shaobing_70 Start: 44395, Stop: 44775, Start Num: 61
Candidate Starts for Shaobing_70:
(8, 44086), (22, 44188), (23, 44197), (45, 44344), (Start: 61 @44395 has 7 MA's), (68, 44413), (84, 44539), (85, 44557), (86, 44560), (91, 44575), (94, 44608), (98, 44620), (99, 44626),

Gene: ShedlockHolmes_70 Start: 44378, Stop: 44749, Start Num: 62
Candidate Starts for ShedlockHolmes_70:
(23, 44174), (45, 44324), (Start: 62 @44378 has 154 MA's), (72, 44414), (74, 44429), (86, 44537), (97, 44594), (100, 44618), (112, 44717),

Gene: ShiaSurprise_69 Start: 44294, Stop: 44665, Start Num: 62
Candidate Starts for ShiaSurprise_69:
(21, 44084), (42, 44234), (44, 44240), (Start: 56 @44279 has 1 MA's), (Start: 62 @44294 has 154 MA's), (82, 44411), (85, 44447), (90, 44462), (91, 44465), (110, 44621),

Gene: Silvafighter_63 Start: 38302, Stop: 38766, Start Num: 52
Candidate Starts for Silvafighter_63:
(Start: 52 @38302 has 64 MA's), (73, 38374), (75, 38389), (87, 38548), (99, 38611), (106, 38698),

Gene: Silvy_57 Start: 39395, Stop: 39856, Start Num: 52
Candidate Starts for Silvy_57:
(Start: 52 @39395 has 64 MA's), (73, 39467), (75, 39482), (87, 39641), (99, 39704), (106, 39791),

Gene: SirPhilip_67 Start: 44537, Stop: 44893, Start Num: 62
Candidate Starts for SirPhilip_67:

(13, 44258), (23, 44336), (45, 44483), (Start: 62 @44537 has 154 MA's), (64, 44555), (68, 44570), (84, 44696), (85, 44714), (90, 44729), (99, 44783),

Gene: SkinnyPete_58 Start: 38506, Stop: 38970, Start Num: 52
Candidate Starts for SkinnyPete_58:
(Start: 52 @38506 has 64 MA's), (73, 38578), (75, 38593), (87, 38752), (99, 38815), (106, 38902),

Gene: Slarp_73 Start: 44642, Stop: 45022, Start Num: 59
Candidate Starts for Slarp_73:
(Start: 59 @44642 has 20 MA's), (Start: 66 @44660 has 3 MA's), (85, 44822), (86, 44825), (95, 44873), (110, 44993),

Gene: Slimphazie_69 Start: 44395, Stop: 44766, Start Num: 62
Candidate Starts for Slimphazie_69:
(42, 44335), (44, 44341), (Start: 56 @44380 has 1 MA's), (Start: 62 @44395 has 154 MA's), (82, 44512), (85, 44548), (90, 44563), (91, 44566), (110, 44722),

Gene: Smurph_61 Start: 38759, Stop: 39223, Start Num: 52
Candidate Starts for Smurph_61:
(Start: 52 @38759 has 64 MA's), (73, 38831), (75, 38846), (87, 39005), (99, 39068), (106, 39155),

Gene: SoSeph_63 Start: 43532, Stop: 43912, Start Num: 62
Candidate Starts for SoSeph_63:
(36, 43430), (41, 43460), (54, 43511), (Start: 62 @43532 has 154 MA's), (69, 43550), (84, 43676), (85, 43694), (90, 43709),

Gene: Soos_83 Start: 55576, Stop: 55950, Start Num: 52
Candidate Starts for Soos_83:
(24, 55414), (Start: 52 @55576 has 64 MA's), (96, 55807), (97, 55810), (106, 55906), (113, 55936),

Gene: Spock_68 Start: 44098, Stop: 44469, Start Num: 62
Candidate Starts for Spock_68:
(42, 44038), (44, 44044), (Start: 56 @44083 has 1 MA's), (Start: 62 @44098 has 154 MA's), (82, 44215), (85, 44251), (90, 44266), (91, 44269), (110, 44425),

Gene: Stillion_88 Start: 56941, Stop: 57324, Start Num: 52
Candidate Starts for Stillion_88:
(Start: 52 @56941 has 64 MA's), (99, 57184), (105, 57250), (106, 57265),

Gene: Sting_86 Start: 56015, Stop: 56389, Start Num: 52
Candidate Starts for Sting_86:
(24, 55853), (Start: 52 @56015 has 64 MA's), (96, 56246), (97, 56249), (106, 56345), (113, 56375),

Gene: Stinson_69 Start: 44490, Stop: 44861, Start Num: 62
Candidate Starts for Stinson_69:
(Start: 62 @44490 has 154 MA's), (82, 44607), (85, 44643), (90, 44658), (91, 44661), (110, 44817),

Gene: Strobilo_72 Start: 46477, Stop: 46821, Start Num: 63
Candidate Starts for Strobilo_72:
(Start: 63 @46477 has 11 MA's), (84, 46618), (86, 46639), (90, 46651), (99, 46705),

Gene: Sulley_67 Start: 43925, Stop: 44296, Start Num: 62
Candidate Starts for Sulley_67:

(22, 43712), (23, 43721), (45, 43871), (Start: 62 @43925 has 154 MA's), (82, 44042), (85, 44078), (90, 44093), (91, 44096), (110, 44252),

Gene: Sunflower1121_73 Start: 44289, Stop: 44663, Start Num: 62
Candidate Starts for Sunflower1121_73:
(22, 44079), (23, 44088), (Start: 62 @44289 has 154 MA's), (86, 44448), (97, 44505), (110, 44619),

Gene: Syra333_71 Start: 44003, Stop: 44377, Start Num: 62
Candidate Starts for Syra333_71:
(22, 43793), (23, 43802), (Start: 62 @44003 has 154 MA's), (86, 44162), (97, 44219), (110, 44333),

Gene: TBond007_65 Start: 43864, Stop: 44235, Start Num: 62
Candidate Starts for TBond007_65:
(45, 43810), (Start: 62 @43864 has 154 MA's), (72, 43900), (74, 43915), (86, 44023), (97, 44080), (100, 44104), (110, 44194), (112, 44203),

Gene: TClif_69 Start: 43964, Stop: 44338, Start Num: 62
Candidate Starts for TClif_69:
(23, 43763), (45, 43910), (Start: 62 @43964 has 154 MA's), (84, 44102), (91, 44138), (97, 44180),

Gene: TM4_69 Start: 41139, Stop: 41513, Start Num: 63
Candidate Starts for TM4_69:
(Start: 63 @41139 has 11 MA's), (79, 41244), (84, 41283), (86, 41304), (90, 41316), (99, 41370), (100, 41385),

Gene: Tachez_68 Start: 43942, Stop: 44313, Start Num: 62
Candidate Starts for Tachez_68:
(42, 43882), (44, 43888), (Start: 56 @43927 has 1 MA's), (Start: 62 @43942 has 154 MA's), (82, 44059), (85, 44095), (90, 44110), (91, 44113), (110, 44269),

Gene: TaiwanKao_70 Start: 44414, Stop: 44785, Start Num: 62
Candidate Starts for TaiwanKao_70:
(Start: 62 @44414 has 154 MA's), (82, 44531), (85, 44567), (90, 44582), (91, 44585), (110, 44741),

Gene: Tapioca_59 Start: 39339, Stop: 39740, Start Num: 52
Candidate Starts for Tapioca_59:
(4, 39042), (17, 39117), (21, 39156), (35, 39264), (36, 39270), (39, 39288), (Start: 52 @39339 has 64 MA's), (87, 39522), (99, 39585), (106, 39672),

Gene: Taquito_72 Start: 44847, Stop: 45227, Start Num: 59
Candidate Starts for Taquito_72:
(Start: 59 @44847 has 20 MA's), (Start: 66 @44865 has 3 MA's), (85, 45027), (86, 45030), (95, 45078), (110, 45198),

Gene: Teejan_58 Start: 43796, Stop: 44167, Start Num: 67
Candidate Starts for Teejan_58:
(22, 43583), (23, 43592), (31, 43634), (45, 43739), (Start: 67 @43796 has 9 MA's), (85, 43949), (86, 43952), (90, 43964), (91, 43967), (99, 44018),

Gene: Tessdabest_62 Start: 38893, Stop: 39357, Start Num: 52
Candidate Starts for Tessdabest_62:
(Start: 52 @38893 has 64 MA's), (73, 38965), (75, 38980), (87, 39139), (99, 39202), (106, 39289),

Gene: ThreeRngTarjay_103 Start: 63154, Stop: 63486, Start Num: 52
Candidate Starts for ThreeRngTarjay_103:
(Start: 52 @63154 has 64 MA's), (86, 63334), (99, 63400), (101, 63418),

Gene: ThulaThula_64 Start: 43444, Stop: 43848, Start Num: 51
Candidate Starts for ThulaThula_64:
(Start: 51 @43444 has 1 MA's), (Start: 52 @43447 has 64 MA's), (86, 43627), (87, 43630), (99, 43693), (106, 43780), (108, 43789), (113, 43810),

Gene: Thyatira_65 Start: 45497, Stop: 45877, Start Num: 62
Candidate Starts for Thyatira_65:
(36, 45395), (41, 45425), (54, 45476), (Start: 62 @45497 has 154 MA's), (69, 45515), (84, 45641), (85, 45659), (90, 45674),

Gene: Tierra_71 Start: 44504, Stop: 44878, Start Num: 62
Candidate Starts for Tierra_71:
(45, 44450), (Start: 62 @44504 has 154 MA's), (85, 44660), (97, 44720),

Gene: Tigress9_72 Start: 44320, Stop: 44694, Start Num: 62
Candidate Starts for Tigress9_72:
(22, 44110), (23, 44119), (Start: 62 @44320 has 154 MA's), (86, 44479), (97, 44536), (110, 44650),

Gene: TingHuaYa_71 Start: 43669, Stop: 44040, Start Num: 62
Candidate Starts for TingHuaYa_71:
(Start: 62 @43669 has 154 MA's), (85, 43822), (90, 43837), (110, 43996),

Gene: TiniBug_68 Start: 44600, Stop: 44971, Start Num: 62
Candidate Starts for TiniBug_68:
(23, 44396), (45, 44546), (Start: 62 @44600 has 154 MA's), (84, 44735), (85, 44753), (90, 44768), (91, 44771), (110, 44927),

Gene: Tiri_68 Start: 43998, Stop: 44369, Start Num: 62
Candidate Starts for Tiri_68:
(Start: 62 @43998 has 154 MA's), (82, 44115), (85, 44151), (90, 44166), (91, 44169), (110, 44325),

Gene: Topper_68 Start: 44097, Stop: 44468, Start Num: 62
Candidate Starts for Topper_68:
(42, 44037), (44, 44043), (Start: 56 @44082 has 1 MA's), (Start: 62 @44097 has 154 MA's), (82, 44214), (85, 44250), (90, 44265), (91, 44268), (110, 44424),

Gene: Torres_59 Start: 43797, Stop: 44168, Start Num: 67
Candidate Starts for Torres_59:
(22, 43584), (23, 43593), (31, 43635), (45, 43740), (Start: 67 @43797 has 9 MA's), (85, 43950), (86, 43953), (90, 43965), (91, 43968), (99, 44019),

Gene: Tortellini_67 Start: 45000, Stop: 45356, Start Num: 52
Candidate Starts for Tortellini_67:
(35, 44925), (36, 44931), (39, 44949), (Start: 52 @45000 has 64 MA's), (87, 45183), (99, 45246), (106, 45333),

Gene: TreyKay_69 Start: 44352, Stop: 44723, Start Num: 62
Candidate Starts for TreyKay_69:
(Start: 62 @44352 has 154 MA's), (82, 44469), (85, 44505), (90, 44520), (91, 44523), (110, 44679),

Gene: TribleTrouble_69 Start: 44867, Stop: 45202, Start Num: 62
Candidate Starts for TribleTrouble_69:
(45, 44813), (Start: 62 @44867 has 154 MA's), (82, 44987), (86, 45026), (91, 45041), (93, 45068), (97, 45083), (100, 45107),

Gene: Trice_56 Start: 41184, Stop: 41555, Start Num: 67
Candidate Starts for Trice_56:
(22, 40971), (23, 40980), (31, 41022), (45, 41127), (Start: 67 @41184 has 9 MA's), (85, 41337), (86, 41340), (90, 41352), (91, 41355), (99, 41406),

Gene: TruffulaTree_69 Start: 44391, Stop: 44762, Start Num: 62
Candidate Starts for TruffulaTree_69:
(42, 44331), (44, 44337), (Start: 56 @44376 has 1 MA's), (Start: 62 @44391 has 154 MA's), (82, 44508), (85, 44544), (90, 44559), (91, 44562), (110, 44718),

Gene: Twitch_68 Start: 44099, Stop: 44470, Start Num: 62
Candidate Starts for Twitch_68:
(42, 44039), (44, 44045), (Start: 56 @44084 has 1 MA's), (Start: 62 @44099 has 154 MA's), (82, 44216), (85, 44252), (90, 44267), (91, 44270), (110, 44426),

Gene: Unicorn_69 Start: 43630, Stop: 44004, Start Num: 62
Candidate Starts for Unicorn_69:
(45, 43576), (Start: 62 @43630 has 154 MA's), (85, 43786), (86, 43789), (91, 43804), (97, 43846),

Gene: Urkel_68 Start: 44604, Stop: 44975, Start Num: 62
Candidate Starts for Urkel_68:
(22, 44391), (23, 44400), (45, 44550), (Start: 62 @44604 has 154 MA's), (84, 44739), (85, 44757), (90, 44772), (110, 44931),

Gene: Validus_73 Start: 44948, Stop: 45340, Start Num: 53
Candidate Starts for Validus_73:
(37, 44876), (47, 44927), (48, 44933), (Start: 53 @44948 has 1 MA's), (60, 44966), (68, 44981), (84, 45107), (85, 45125), (86, 45128), (90, 45140), (91, 45143), (98, 45188), (99, 45194), (110, 45299), (114, 45317),

Gene: Veliki_69 Start: 44131, Stop: 44502, Start Num: 62
Candidate Starts for Veliki_69:
(Start: 62 @44131 has 154 MA's), (82, 44248), (85, 44284), (90, 44299), (91, 44302), (110, 44458),

Gene: ViviJ_61 Start: 41251, Stop: 41631, Start Num: 62
Candidate Starts for ViviJ_61:
(36, 41161), (41, 41191), (54, 41230), (Start: 56 @41236 has 1 MA's), (Start: 62 @41251 has 154 MA's), (80, 41359), (84, 41395), (85, 41413), (90, 41428), (104, 41518), (111, 41593),

Gene: WST1_55 Start: 33447, Stop: 33824, Start Num: 49
Candidate Starts for WST1_55:
(49, 33447), (Start: 52 @33459 has 64 MA's), (87, 33642), (99, 33705), (106, 33792), (110, 33810), (112, 33819),

Gene: Waterfoul_64 Start: 43594, Stop: 43974, Start Num: 62
Candidate Starts for Waterfoul_64:

(36, 43492), (41, 43522), (54, 43573), (Start: 62 @43594 has 154 MA's), (69, 43612), (84, 43738), (85, 43756), (90, 43771),

Gene: Willsammy_60 Start: 40682, Stop: 41095, Start Num: 52
Candidate Starts for Willsammy_60:
(11, 40418), (19, 40487), (28, 40535), (35, 40607), (36, 40613), (39, 40631), (Start: 52 @40682 has 64 MA's), (87, 40865), (99, 40928),

Gene: Wintermute_73 Start: 44872, Stop: 45252, Start Num: 59
Candidate Starts for Wintermute_73:
(Start: 59 @44872 has 20 MA's), (Start: 66 @44890 has 3 MA's), (85, 45052), (86, 45055), (95, 45103), (110, 45223),

Gene: Xerxes_61 Start: 38756, Stop: 39220, Start Num: 52
Candidate Starts for Xerxes_61:
(Start: 52 @38756 has 64 MA's), (73, 38828), (75, 38843), (87, 39002), (99, 39065), (106, 39152),

Gene: Ximenita_73 Start: 44332, Stop: 44706, Start Num: 62
Candidate Starts for Ximenita_73:
(Start: 62 @44332 has 154 MA's), (85, 44488), (86, 44491), (97, 44548), (110, 44662),

Gene: Y10_70 Start: 44849, Stop: 45229, Start Num: 59
Candidate Starts for Y10_70:
(Start: 59 @44849 has 20 MA's), (Start: 66 @44867 has 3 MA's), (85, 45029), (86, 45032), (95, 45080), (110, 45200),

Gene: Y2_70 Start: 44849, Stop: 45229, Start Num: 59
Candidate Starts for Y2_70:
(Start: 59 @44849 has 20 MA's), (Start: 66 @44867 has 3 MA's), (85, 45029), (86, 45032), (95, 45080), (110, 45200),

Gene: YasnayaPolyana_72 Start: 44716, Stop: 45078, Start Num: 66
Candidate Starts for YasnayaPolyana_72:
(Start: 59 @44698 has 20 MA's), (Start: 66 @44716 has 3 MA's), (85, 44878), (86, 44881), (95, 44929), (110, 45049),

Gene: YoureAdopted_67 Start: 44277, Stop: 44648, Start Num: 62
Candidate Starts for YoureAdopted_67:
(22, 44064), (23, 44073), (45, 44223), (Start: 62 @44277 has 154 MA's), (82, 44394), (85, 44430), (90, 44445), (91, 44448), (110, 44604),

Gene: Yuna_72 Start: 45450, Stop: 45779, Start Num: 65
Candidate Starts for Yuna_72:
(Start: 65 @45450 has 1 MA's), (93, 45651), (97, 45666),

Gene: Yunkel11_72 Start: 44191, Stop: 44562, Start Num: 62
Candidate Starts for Yunkel11_72:
(45, 44137), (Start: 62 @44191 has 154 MA's), (82, 44308), (85, 44344), (90, 44359), (91, 44362), (110, 44518),

Gene: Zabiza_63 Start: 40247, Stop: 40618, Start Num: 62
Candidate Starts for Zabiza_63:

(42, 40187), (44, 40193), (Start: 56 @40232 has 1 MA's), (Start: 62 @40247 has 154 MA's), (82, 40364), (85, 40400), (90, 40415), (91, 40418), (110, 40574),

Gene: Zavala_71 Start: 44669, Stop: 45040, Start Num: 62
Candidate Starts for Zavala_71:
(42, 44609), (44, 44615), (Start: 56 @44654 has 1 MA's), (Start: 62 @44669 has 154 MA's), (82, 44786), (85, 44822), (90, 44837), (91, 44840), (110, 44996),

Gene: ZenTime222_58 Start: 39792, Stop: 40148, Start Num: 52
Candidate Starts for ZenTime222_58:
(Start: 52 @39792 has 64 MA's), (87, 39975), (99, 40038), (106, 40125),

Gene: ZoeJ_70 Start: 45880, Stop: 46251, Start Num: 63
Candidate Starts for ZoeJ_70:
(Start: 63 @45880 has 11 MA's), (81, 45988), (84, 46021), (86, 46042), (90, 46054), (99, 46108), (100, 46123),

Gene: Zucker_83 Start: 48730, Stop: 49089, Start Num: 50
Candidate Starts for Zucker_83:
(Start: 50 @48730 has 2 MA's), (83, 48886), (88, 48919), (99, 48979), (108, 49072),