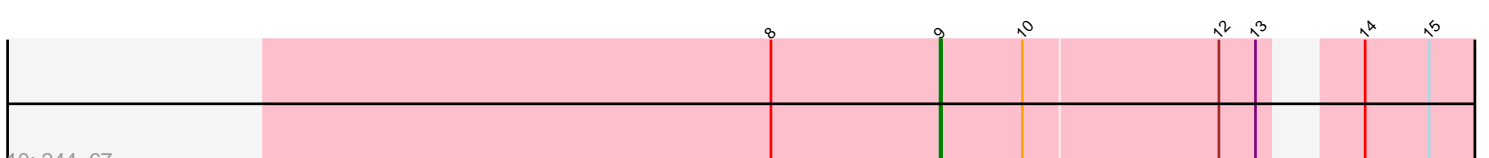
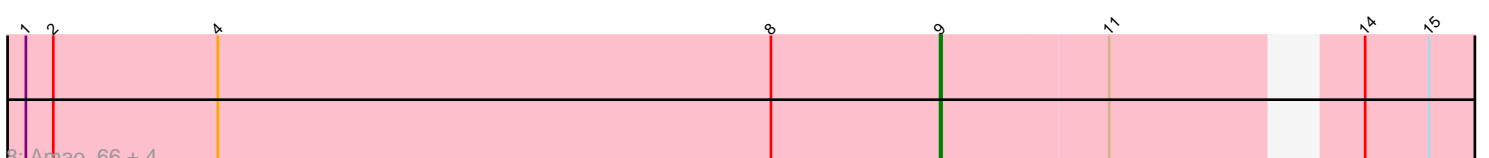
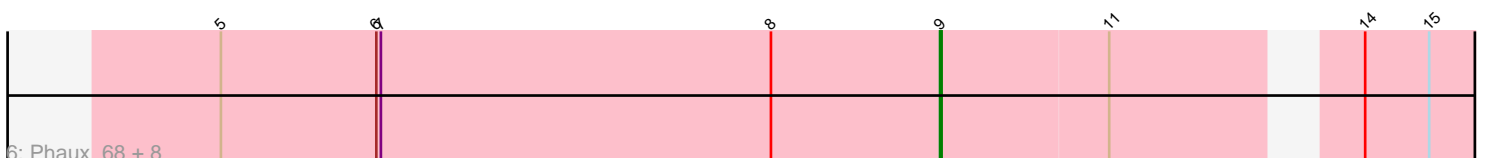
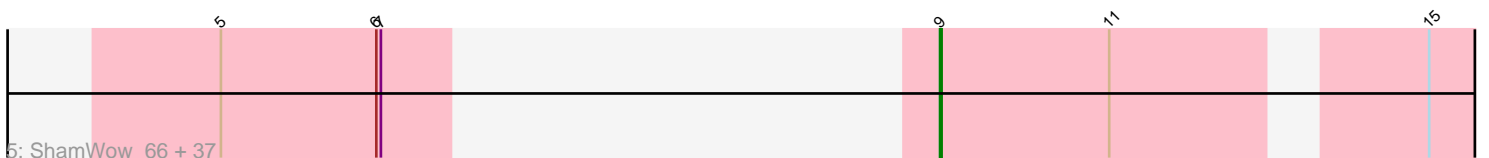
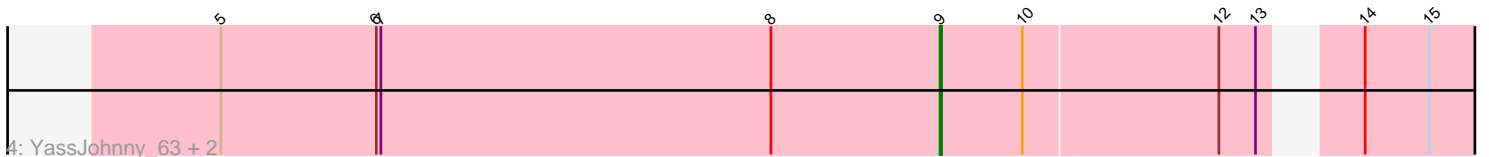
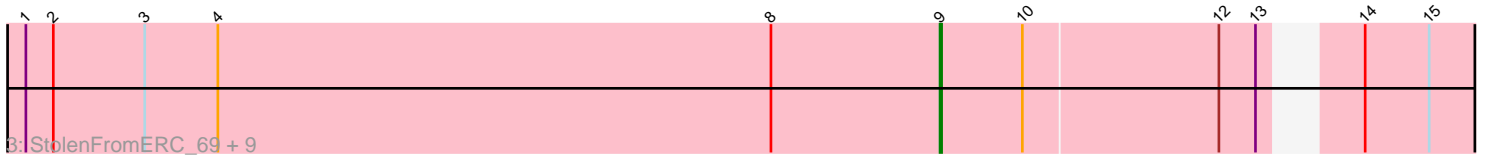
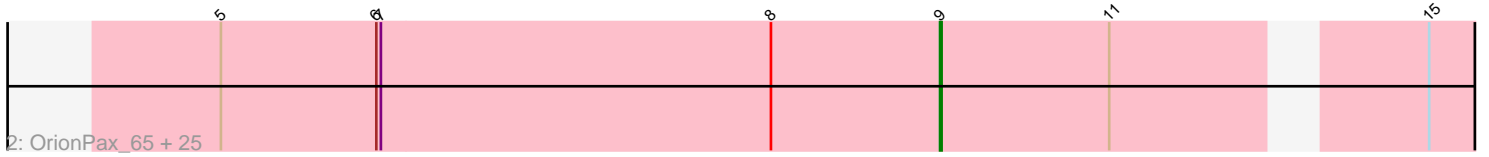
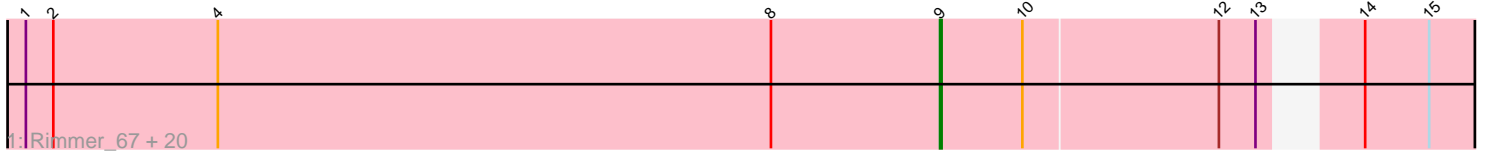


Pham 192321



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 192321 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192321 has 123 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Rimmer_67, Qualification_67, NelitzaMV_64, Tomaszewski_61, Marshmallow_64, Sotrice96_67, Icee_67, Sassay_61, Buck_67, Cactus_69, Glexan_65, Kanye_63, Cookies_63, Harella_66, Balomoji_66, Daikon_68, Pat3_64, Flypotenuse_62, Myrale_66, ShereKhan_65, Willez_61
- Track 2 : OrionPax_65, BaboJay_63, xkcd_69, Nala_68, Czyszczonek_67, RiverMonster_66, Youngblood_69, MPhalcon_67, Elph10_66, Bench_69, Pumpkin_69, Lilizi_67, Misfit_67, Maxxinista_68, PhatBacter_70, Murica_69, Terminus_69, Murphy_66, Phrux_63, Bruin_63, Cjw1_66, HufflyPuff_69, Contagion_62, FireRed_70, Mosby_62, MISSy_67
- Track 3 : StolenFromERC_69, Hoonter_69, Gage_68, GoldenSpark_70, AmericanBeauty_70, GooberAzure_69, Gemini_71, Kimchi_70, Argent26_70, Holt_71
- Track 4 : YassJohnny_63, Goldilocks_69, Command613_68
- Track 5 : ShamWow_66, Stank_69, MadamMonkfish_66, StellaBean_64, Miniwave_61, Mindy_65, TeardropMSU_62, Manda_66, BigBubba_66, TBrady12_69, IHOP_64, Easy2Say_67, Adnama_70, Toto_64, Kostya_66, SophKB_63, CrystalP_65, ABCat_63, Elite2014_65, Thresher_68, ChosenOne_66, NoSleep_67, Inca_63, BilboSwaggins_65, Asriel_65, Teaspoon_67, Rakim_67, Moldemort_69, Emmina_66, Tarkin_65, Paperbeatsrock_65, Simpliphy_65, Barbarian_65, Lilpickle_65, Phaja_64, Wiggin_68, Xandras_65, Filch_67
- Track 6 : Phaux_68, Lilac_68, Hopey_66, Nimrod_67, Palpatine_68, BugsBunny_66, DrDrey_66, Petra64142_70, Policronamos_70
- Track 7 : Highbury_65, Dumbo_66, Eureka_64, Goku_64, Pharsalus_63, Henry_64, Saints25_65
- Track 8 : Amao_66, JeTaime_66, ChotaBhai_66, Stark_67, HanKaySha_66
- Track 9 : SirDuracell_65, DoctorDiddles_65, Bask21_66
- Track 10 : 244_67

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

The start number called the most often in the published annotations is 9, it was called in 109 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_67, ABCat_63, Adnama_70, Amao_66, AmericanBeauty_70, Argent26_70, Asriel_65, BaboJay_63, Balomoji_66, Barbarian_65, Bask21_66, Bench_69, BigBubba_66, BilboSwaggins_65, Bruin_63, Buck_67, BugsBunny_66, Cactus_69, ChosenOne_66, ChotaBhai_66, Cjw1_66, Command613_68, Contagion_62, Cookies_63, CrystalP_65, Czyszczonek_67, Daikon_68, DoctorDiddles_65, DrDrey_66, Easy2Say_67, Elite2014_65, Elph10_66, Emmina_66, Filch_67, FireRed_70, Flypotenuse_62, Gage_68, Gemini_71, Glexan_65, GoldenSpark_70, Goldilocks_69, GooberAzure_69, HanKaySha_66, Harella_66, Holt_71, Hoonter_69, Hopey_66, HufflyPuff_69, IHOP_64, Icee_67, Inca_63, JeTaime_66, Kanye_63, Kimchi_70, Kostya_66, Lilac_68, Lilizi_67, Lilpickle_65, MISSy_67, MPhalcon_67, MadamMonkfish_66, Manda_66, Marshmallow_64, Maxxinista_68, Mindy_65, Miniwave_61, Misfit_67, Moldemort_69, Mosby_62, Murica_69, Murphy_66, Myrale_66, Nala_68, NelitzaMV_64, Nimrod_67, NoSleep_67, OrionPax_65, Palpatine_68, Paperbeatsrock_65, Pat3_64, Petra64142_70, Phaja_64, PhatBacter_70, Phaux_68, Phrux_63, Policronamos_70, Pumpkin_69, Quallification_67, Rakim_67, Rimmer_67, RiverMonster_66, Sassay_61, ShamWow_66, ShereKhan_65, Simpliphy_65, SirDuracell_65, SophKB_63, Sotrice96_67, Stank_69, Stark_67, StellaBean_64, StolenFromERC_69, TBrady12_69, Tarkin_65, TeardropMSU_62, Teaspoon_67, Terminus_69, Thresher_68, Tomaszewski_61, Toto_64, Wiggin_68, Willez_61, Xandras_65, YassJohnny_63, Youngblood_69, xkcd_69,

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

- Dumbo_66, Eureka_64, Goku_64, Henry_64, Highbury_65, Pharsalus_63, Saints25_65,

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

-

Summary by start number:

Start 6:

- Found in 83 of 123 (67.5%) of genes in pham
- Manual Annotations of this start: 7 of 116
- Called 8.4% of time when present
- Phage (with cluster) where this start called: Dumbo_66 (E), Eureka_64 (E), Goku_64 (E), Henry_64 (E), Highbury_65 (E), Pharsalus_63 (E), Saints25_65 (E),

Start 9:

- Found in 123 of 123 (100.0%) of genes in pham
- Manual Annotations of this start: 109 of 116
- Called 94.3% of time when present
- Phage (with cluster) where this start called: 244_67 (E), ABCat_63 (E), Adnama_70 (E), Amao_66 (E), AmericanBeauty_70 (E), Argent26_70 (E), Asriel_65 (E), BaboJay_63 (E), Balomoji_66 (E), Barbarian_65 (E), Bask21_66 (E), Bench_69 (E), BigBubba_66 (E), BilboSwaggins_65 (E), Bruin_63 (E), Buck_67 (E), BugsBunny_66 (E), Cactus_69 (E), ChosenOne_66 (E), ChotaBhai_66 (E), Cjw1_66 (E), Command613_68 (E), Contagion_62 (E), Cookies_63 (E), CrystalP_65 (E), Czyszczonek_67 (E), Daikon_68 (E), DoctorDiddles_65 (E), DrDrey_66 (E), Easy2Say_67 (E), Elite2014_65 (E), Elph10_66 (E), Emmina_66 (E), Filch_67 (E), FireRed_70 (E), Flypotenuse_62 (E), Gage_68 (E), Gemini_71 (E), Glexan_65 (E), GoldenSpark_70 (E), Goldilocks_69 (E), GooberAzure_69 (E), HanKaySha_66 (E), Harella_66 (E), Holt_71 (E), Hoonter_69 (E), Hopey_66 (E), HufflyPuff_69 (E),

IHOP_64 (E), Icee_67 (E), Inca_63 (E), JeTaime_66 (E), Kanye_63 (E), Kimchi_70 (E), Kostya_66 (E), Lilac_68 (E), Lilizi_67 (E), Lilpickle_65 (E), MISSy_67 (E), MPhalcon_67 (E), MadamMonkfish_66 (E), Manda_66 (E), Marshmallow_64 (E), Maxxinista_68 (E), Mindy_65 (E), Miniwave_61 (E), Misfit_67 (E), Moldemort_69 (E), Mosby_62 (E), Murica_69 (E), Murphy_66 (E), Myrale_66 (E), Nala_68 (E), NelitzaMV_64 (E), Nimrod_67 (E), NoSleep_67 (E), OrionPax_65 (E), Palpatine_68 (E), Paperbeatsrock_65 (E), Pat3_64 (E), Petra64142_70 (E), Phaja_64 (E), PhatBacter_70 (E), Phaux_68 (E), Phrux_63 (E), Policronamos_70 (E), Pumpkin_69 (E), Quallification_67 (E), Rakim_67 (E), Rimmer_67 (E), RiverMonster_66 (E), Sassay_61 (E), ShamWow_66 (E), ShereKhan_65 (E), Simpliphy_65 (E), SirDuracell_65 (E), SophKB_63 (E), Sotrice96_67 (E), Stank_69 (E), Stark_67 (E), StellaBean_64 (E), StolenFromERC_69 (E), TBrady12_69 (E), Tarkin_65 (E), TeardropMSU_62 (E), Teaspoon_67 (E), Terminus_69 (E), Thresher_68 (E), Tomaszewski_61 (E), Toto_64 (E), Wiggin_68 (E), Willez_61 (E), Xandras_65 (E), YassJohnny_63 (E), Youngblood_69 (E), xkcd_69 (E),

Summary by clusters:

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

- Start number 6 was manually annotated 7 times for cluster E.
- Start number 9 was manually annotated 109 times for cluster E.

Gene Information:

Gene: 244_67 Start: 43867, Stop: 44196, Start Num: 9

Candidate Starts for 244_67:

(8, 43756), (Start: 9 @43867 has 109 MA's), (10, 43921), (12, 44047), (13, 44071), (14, 44110), (15, 44152),

Gene: ABCat_63 Start: 44214, Stop: 44543, Start Num: 9

Candidate Starts for ABCat_63:

(5, 44040), (Start: 6 @44142 has 7 MA's), (7, 44145), (Start: 9 @44214 has 109 MA's), (11, 44325), (15, 44499),

Gene: Adnama_70 Start: 44237, Stop: 44566, Start Num: 9

Candidate Starts for Adnama_70:

(5, 44063), (Start: 6 @44165 has 7 MA's), (7, 44168), (Start: 9 @44237 has 109 MA's), (11, 44348), (15, 44522),

Gene: Amao_66 Start: 43625, Stop: 43951, Start Num: 9

Candidate Starts for Amao_66:

(1, 43025), (2, 43043), (4, 43151), (8, 43514), (Start: 9 @43625 has 109 MA's), (11, 43733), (14, 43865), (15, 43907),

Gene: AmericanBeauty_70 Start: 44380, Stop: 44709, Start Num: 9

Candidate Starts for AmericanBeauty_70:

(1, 43780), (2, 43798), (3, 43858), (4, 43906), (8, 44269), (Start: 9 @44380 has 109 MA's), (10, 44434), (12, 44560), (13, 44584), (14, 44623), (15, 44665),

Gene: Argent26_70 Start: 44018, Stop: 44347, Start Num: 9

Candidate Starts for Argent26_70:

(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10, 44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: Asriel_65 Start: 42574, Stop: 42903, Start Num: 9

Candidate Starts for Asriel_65:

(5, 42400), (Start: 6 @42502 has 7 MA's), (7, 42505), (Start: 9 @42574 has 109 MA's), (11, 42685), (15, 42859),

Gene: BaboJay_63 Start: 43411, Stop: 43740, Start Num: 9

Candidate Starts for BaboJay_63:

(5, 42940), (Start: 6 @43042 has 7 MA's), (7, 43045), (8, 43300), (Start: 9 @43411 has 109 MA's), (11, 43522), (15, 43696),

Gene: Balomoji_66 Start: 44344, Stop: 44673, Start Num: 9

Candidate Starts for Balomoji_66:

(1, 43744), (2, 43762), (4, 43870), (8, 44233), (Start: 9 @44344 has 109 MA's), (10, 44398), (12, 44524), (13, 44548), (14, 44587), (15, 44629),

Gene: Barbarian_65 Start: 42574, Stop: 42903, Start Num: 9

Candidate Starts for Barbarian_65:

(5, 42400), (Start: 6 @42502 has 7 MA's), (7, 42505), (Start: 9 @42574 has 109 MA's), (11, 42685), (15, 42859),

Gene: Bask21_66 Start: 43185, Stop: 43514, Start Num: 9

Candidate Starts for Bask21_66:

(1, 42585), (2, 42603), (4, 42711), (8, 43074), (Start: 9 @43185 has 109 MA's), (11, 43296), (15, 43470),

Gene: Bench_69 Start: 43848, Stop: 44213, Start Num: 9

Candidate Starts for Bench_69:

(5, 43377), (Start: 6 @43479 has 7 MA's), (7, 43482), (8, 43737), (Start: 9 @43848 has 109 MA's), (11, 43959), (15, 44169),

Gene: BigBubba_66 Start: 43593, Stop: 43922, Start Num: 9

Candidate Starts for BigBubba_66:

(5, 43419), (Start: 6 @43521 has 7 MA's), (7, 43524), (Start: 9 @43593 has 109 MA's), (11, 43704), (15, 43878),

Gene: BilboSwaggins_65 Start: 44222, Stop: 44551, Start Num: 9

Candidate Starts for BilboSwaggins_65:

(5, 44048), (Start: 6 @44150 has 7 MA's), (7, 44153), (Start: 9 @44222 has 109 MA's), (11, 44333), (15, 44507),

Gene: Bruin_63 Start: 42757, Stop: 43086, Start Num: 9

Candidate Starts for Bruin_63:

(5, 42286), (Start: 6 @42388 has 7 MA's), (7, 42391), (8, 42646), (Start: 9 @42757 has 109 MA's), (11, 42868), (15, 43042),

Gene: Buck_67 Start: 44465, Stop: 44794, Start Num: 9

Candidate Starts for Buck_67:

(1, 43865), (2, 43883), (4, 43991), (8, 44354), (Start: 9 @44465 has 109 MA's), (10, 44519), (12, 44645), (13, 44669), (14, 44708), (15, 44750),

Gene: BugsBunny_66 Start: 44295, Stop: 44621, Start Num: 9

Candidate Starts for BugsBunny_66:

(5, 43824), (Start: 6 @43926 has 7 MA's), (7, 43929), (8, 44184), (Start: 9 @44295 has 109 MA's), (11, 44403), (14, 44535), (15, 44577),

Gene: Cactus_69 Start: 43238, Stop: 43567, Start Num: 9

Candidate Starts for Cactus_69:

(1, 42638), (2, 42656), (4, 42764), (8, 43127), (Start: 9 @43238 has 109 MA's), (10, 43292), (12, 43418), (13, 43442), (14, 43481), (15, 43523),

Gene: ChosenOne_66 Start: 43241, Stop: 43570, Start Num: 9

Candidate Starts for ChosenOne_66:

(5, 43067), (Start: 6 @43169 has 7 MA's), (7, 43172), (Start: 9 @43241 has 109 MA's), (11, 43352), (15, 43526),

Gene: ChotaBhai_66 Start: 43556, Stop: 43882, Start Num: 9

Candidate Starts for ChotaBhai_66:

(1, 42956), (2, 42974), (4, 43082), (8, 43445), (Start: 9 @43556 has 109 MA's), (11, 43664), (14, 43796), (15, 43838),

Gene: Cjw1_66 Start: 44938, Stop: 45267, Start Num: 9

Candidate Starts for Cjw1_66:

(5, 44467), (Start: 6 @44569 has 7 MA's), (7, 44572), (8, 44827), (Start: 9 @44938 has 109 MA's), (11, 45049), (15, 45223),

Gene: Command613_68 Start: 44277, Stop: 44606, Start Num: 9

Candidate Starts for Command613_68:

(5, 43806), (Start: 6 @43908 has 7 MA's), (7, 43911), (8, 44166), (Start: 9 @44277 has 109 MA's), (10, 44331), (12, 44457), (13, 44481), (14, 44520), (15, 44562),

Gene: Contagion_62 Start: 43038, Stop: 43367, Start Num: 9

Candidate Starts for Contagion_62:

(5, 42567), (Start: 6 @42669 has 7 MA's), (7, 42672), (8, 42927), (Start: 9 @43038 has 109 MA's), (11, 43149), (15, 43323),

Gene: Cookies_63 Start: 43407, Stop: 43736, Start Num: 9

Candidate Starts for Cookies_63:

(1, 42807), (2, 42825), (4, 42933), (8, 43296), (Start: 9 @43407 has 109 MA's), (10, 43461), (12, 43587), (13, 43611), (14, 43650), (15, 43692),

Gene: CrystalP_65 Start: 44222, Stop: 44551, Start Num: 9

Candidate Starts for CrystalP_65:

(5, 44048), (Start: 6 @44150 has 7 MA's), (7, 44153), (Start: 9 @44222 has 109 MA's), (11, 44333), (15, 44507),

Gene: Czyszczone1_67 Start: 43747, Stop: 44076, Start Num: 9

Candidate Starts for Czyszczone1_67:

(5, 43276), (Start: 6 @43378 has 7 MA's), (7, 43381), (8, 43636), (Start: 9 @43747 has 109 MA's), (11, 43858), (15, 44032),

Gene: Daikon_68 Start: 44365, Stop: 44694, Start Num: 9

Candidate Starts for Daikon_68:

(1, 43765), (2, 43783), (4, 43891), (8, 44254), (Start: 9 @44365 has 109 MA's), (10, 44419), (12, 44545), (13, 44569), (14, 44608), (15, 44650),

Gene: DoctorDiddles_65 Start: 43597, Stop: 43926, Start Num: 9

Candidate Starts for DoctorDiddles_65:

(1, 42997), (2, 43015), (4, 43123), (8, 43486), (Start: 9 @43597 has 109 MA's), (11, 43708), (15, 43882),

Gene: DrDrey_66 Start: 44666, Stop: 44992, Start Num: 9

Candidate Starts for DrDrey_66:

(5, 44195), (Start: 6 @44297 has 7 MA's), (7, 44300), (8, 44555), (Start: 9 @44666 has 109 MA's), (11, 44774), (14, 44906), (15, 44948),

Gene: Dumbo_66 Start: 43074, Stop: 43475, Start Num: 6

Candidate Starts for Dumbo_66:

(5, 42972), (Start: 6 @43074 has 7 MA's), (7, 43077), (Start: 9 @43146 has 109 MA's), (11, 43257), (15, 43431),

Gene: Easy2Say_67 Start: 44684, Stop: 45013, Start Num: 9

Candidate Starts for Easy2Say_67:

(5, 44510), (Start: 6 @44612 has 7 MA's), (7, 44615), (Start: 9 @44684 has 109 MA's), (11, 44795), (15, 44969),

Gene: Elite2014_65 Start: 43240, Stop: 43569, Start Num: 9

Candidate Starts for Elite2014_65:

(5, 43066), (Start: 6 @43168 has 7 MA's), (7, 43171), (Start: 9 @43240 has 109 MA's), (11, 43351), (15, 43525),

Gene: Elph10_66 Start: 43245, Stop: 43574, Start Num: 9

Candidate Starts for Elph10_66:

(5, 42774), (Start: 6 @42876 has 7 MA's), (7, 42879), (8, 43134), (Start: 9 @43245 has 109 MA's), (11, 43356), (15, 43530),

Gene: Emmina_66 Start: 43147, Stop: 43476, Start Num: 9

Candidate Starts for Emmina_66:

(5, 42973), (Start: 6 @43075 has 7 MA's), (7, 43078), (Start: 9 @43147 has 109 MA's), (11, 43258), (15, 43432),

Gene: Eureka_64 Start: 43639, Stop: 44040, Start Num: 6

Candidate Starts for Eureka_64:

(5, 43537), (Start: 6 @43639 has 7 MA's), (7, 43642), (Start: 9 @43711 has 109 MA's), (11, 43822), (15, 43996),

Gene: Filch_67 Start: 43172, Stop: 43501, Start Num: 9

Candidate Starts for Filch_67:

(5, 42998), (Start: 6 @43100 has 7 MA's), (7, 43103), (Start: 9 @43172 has 109 MA's), (11, 43283), (15, 43457),

Gene: FireRed_70 Start: 44734, Stop: 45063, Start Num: 9

Candidate Starts for FireRed_70:

(5, 44263), (Start: 6 @44365 has 7 MA's), (7, 44368), (8, 44623), (Start: 9 @44734 has 109 MA's), (11, 44845), (15, 45019),

Gene: Flypotenuse_62 Start: 43228, Stop: 43557, Start Num: 9

Candidate Starts for Flypotenuse_62:

(1, 42628), (2, 42646), (4, 42754), (8, 43117), (Start: 9 @43228 has 109 MA's), (10, 43282), (12, 43408), (13, 43432), (14, 43471), (15, 43513),

Gene: Gage_68 Start: 44018, Stop: 44347, Start Num: 9

Candidate Starts for Gage_68:

(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10, 44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: Gemini_71 Start: 44535, Stop: 44864, Start Num: 9

Candidate Starts for Gemini_71:

(1, 43935), (2, 43953), (3, 44013), (4, 44061), (8, 44424), (Start: 9 @44535 has 109 MA's), (10, 44589), (12, 44715), (13, 44739), (14, 44778), (15, 44820),

Gene: Glexan_65 Start: 44355, Stop: 44684, Start Num: 9

Candidate Starts for Glexan_65:

(1, 43755), (2, 43773), (4, 43881), (8, 44244), (Start: 9 @44355 has 109 MA's), (10, 44409), (12, 44535), (13, 44559), (14, 44598), (15, 44640),

Gene: Goku_64 Start: 43368, Stop: 43769, Start Num: 6

Candidate Starts for Goku_64:

(5, 43266), (Start: 6 @43368 has 7 MA's), (7, 43371), (Start: 9 @43440 has 109 MA's), (11, 43551), (15, 43725),

Gene: GoldenSpark_70 Start: 44018, Stop: 44347, Start Num: 9

Candidate Starts for GoldenSpark_70:

(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10, 44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: Goldilocks_69 Start: 43519, Stop: 43848, Start Num: 9

Candidate Starts for Goldilocks_69:

(5, 43048), (Start: 6 @43150 has 7 MA's), (7, 43153), (8, 43408), (Start: 9 @43519 has 109 MA's), (10, 43573), (12, 43699), (13, 43723), (14, 43762), (15, 43804),

Gene: GooberAzure_69 Start: 44018, Stop: 44347, Start Num: 9

Candidate Starts for GooberAzure_69:

(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10, 44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: HanKaySha_66 Start: 43328, Stop: 43654, Start Num: 9

Candidate Starts for HanKaySha_66:

(1, 42728), (2, 42746), (4, 42854), (8, 43217), (Start: 9 @43328 has 109 MA's), (11, 43436), (14, 43568), (15, 43610),

Gene: Harella_66 Start: 44871, Stop: 45200, Start Num: 9

Candidate Starts for Harella_66:

(1, 44271), (2, 44289), (4, 44397), (8, 44760), (Start: 9 @44871 has 109 MA's), (10, 44925), (12, 45051), (13, 45075), (14, 45114), (15, 45156),

Gene: Henry_64 Start: 43590, Stop: 43991, Start Num: 6
Candidate Starts for Henry_64:
(5, 43488), (Start: 6 @43590 has 7 MA's), (7, 43593), (Start: 9 @43662 has 109 MA's), (11, 43773),
(15, 43947),

Gene: Highbury_65 Start: 43241, Stop: 43642, Start Num: 6
Candidate Starts for Highbury_65:
(5, 43139), (Start: 6 @43241 has 7 MA's), (7, 43244), (Start: 9 @43313 has 109 MA's), (11, 43424),
(15, 43598),

Gene: Holt_71 Start: 44432, Stop: 44761, Start Num: 9
Candidate Starts for Holt_71:
(1, 43832), (2, 43850), (3, 43910), (4, 43958), (8, 44321), (Start: 9 @44432 has 109 MA's), (10,
44486), (12, 44612), (13, 44636), (14, 44675), (15, 44717),

Gene: Hoonter_69 Start: 44018, Stop: 44347, Start Num: 9
Candidate Starts for Hoonter_69:
(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10,
44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: Hokey_66 Start: 43860, Stop: 44186, Start Num: 9
Candidate Starts for Hokey_66:
(5, 43389), (Start: 6 @43491 has 7 MA's), (7, 43494), (8, 43749), (Start: 9 @43860 has 109 MA's),
(11, 43968), (14, 44100), (15, 44142),

Gene: HufflyPuff_69 Start: 44690, Stop: 45019, Start Num: 9
Candidate Starts for HufflyPuff_69:
(5, 44219), (Start: 6 @44321 has 7 MA's), (7, 44324), (8, 44579), (Start: 9 @44690 has 109 MA's),
(11, 44801), (15, 44975),

Gene: IHOP_64 Start: 43786, Stop: 44115, Start Num: 9
Candidate Starts for IHOP_64:
(5, 43612), (Start: 6 @43714 has 7 MA's), (7, 43717), (Start: 9 @43786 has 109 MA's), (11, 43897),
(15, 44071),

Gene: Icee_67 Start: 43685, Stop: 44014, Start Num: 9
Candidate Starts for Icee_67:
(1, 43085), (2, 43103), (4, 43211), (8, 43574), (Start: 9 @43685 has 109 MA's), (10, 43739), (12,
43865), (13, 43889), (14, 43928), (15, 43970),

Gene: Inca_63 Start: 42311, Stop: 42640, Start Num: 9
Candidate Starts for Inca_63:
(5, 42137), (Start: 6 @42239 has 7 MA's), (7, 42242), (Start: 9 @42311 has 109 MA's), (11, 42422),
(15, 42596),

Gene: JeTaime_66 Start: 44512, Stop: 44838, Start Num: 9
Candidate Starts for JeTaime_66:
(1, 43912), (2, 43930), (4, 44038), (8, 44401), (Start: 9 @44512 has 109 MA's), (11, 44620), (14,
44752), (15, 44794),

Gene: Kanye_63 Start: 43367, Stop: 43696, Start Num: 9
Candidate Starts for Kanye_63:

(1, 42767), (2, 42785), (4, 42893), (8, 43256), (Start: 9 @43367 has 109 MA's), (10, 43421), (12, 43547), (13, 43571), (14, 43610), (15, 43652),

Gene: Kimchi_70 Start: 44021, Stop: 44350, Start Num: 9

Candidate Starts for Kimchi_70:

(1, 43421), (2, 43439), (3, 43499), (4, 43547), (8, 43910), (Start: 9 @44021 has 109 MA's), (10, 44075), (12, 44201), (13, 44225), (14, 44264), (15, 44306),

Gene: Kostya_66 Start: 43885, Stop: 44214, Start Num: 9

Candidate Starts for Kostya_66:

(5, 43711), (Start: 6 @43813 has 7 MA's), (7, 43816), (Start: 9 @43885 has 109 MA's), (11, 43996), (15, 44170),

Gene: Lilac_68 Start: 43645, Stop: 43971, Start Num: 9

Candidate Starts for Lilac_68:

(5, 43174), (Start: 6 @43276 has 7 MA's), (7, 43279), (8, 43534), (Start: 9 @43645 has 109 MA's), (11, 43753), (14, 43885), (15, 43927),

Gene: Lilizi_67 Start: 43319, Stop: 43684, Start Num: 9

Candidate Starts for Lilizi_67:

(5, 42848), (Start: 6 @42950 has 7 MA's), (7, 42953), (8, 43208), (Start: 9 @43319 has 109 MA's), (11, 43430), (15, 43640),

Gene: Lilpickle_65 Start: 43240, Stop: 43569, Start Num: 9

Candidate Starts for Lilpickle_65:

(5, 43066), (Start: 6 @43168 has 7 MA's), (7, 43171), (Start: 9 @43240 has 109 MA's), (11, 43351), (15, 43525),

Gene: MISSy_67 Start: 43743, Stop: 44072, Start Num: 9

Candidate Starts for MISSy_67:

(5, 43272), (Start: 6 @43374 has 7 MA's), (7, 43377), (8, 43632), (Start: 9 @43743 has 109 MA's), (11, 43854), (15, 44028),

Gene: MPhalcon_67 Start: 43736, Stop: 44065, Start Num: 9

Candidate Starts for MPhalcon_67:

(5, 43265), (Start: 6 @43367 has 7 MA's), (7, 43370), (8, 43625), (Start: 9 @43736 has 109 MA's), (11, 43847), (15, 44021),

Gene: MadamMonkfish_66 Start: 42964, Stop: 43293, Start Num: 9

Candidate Starts for MadamMonkfish_66:

(5, 42790), (Start: 6 @42892 has 7 MA's), (7, 42895), (Start: 9 @42964 has 109 MA's), (11, 43075), (15, 43249),

Gene: Manda_66 Start: 44245, Stop: 44574, Start Num: 9

Candidate Starts for Manda_66:

(5, 44071), (Start: 6 @44173 has 7 MA's), (7, 44176), (Start: 9 @44245 has 109 MA's), (11, 44356), (15, 44530),

Gene: Marshmallow_64 Start: 44513, Stop: 44842, Start Num: 9

Candidate Starts for Marshmallow_64:

(1, 43913), (2, 43931), (4, 44039), (8, 44402), (Start: 9 @44513 has 109 MA's), (10, 44567), (12, 44693), (13, 44717), (14, 44756), (15, 44798),

Gene: Maxxinista_68 Start: 43615, Stop: 43944, Start Num: 9

Candidate Starts for Maxxinista_68:

(5, 43144), (Start: 6 @43246 has 7 MA's), (7, 43249), (8, 43504), (Start: 9 @43615 has 109 MA's), (11, 43726), (15, 43900),

Gene: Mindy_65 Start: 42828, Stop: 43157, Start Num: 9

Candidate Starts for Mindy_65:

(5, 42654), (Start: 6 @42756 has 7 MA's), (7, 42759), (Start: 9 @42828 has 109 MA's), (11, 42939), (15, 43113),

Gene: Miniwave_61 Start: 43281, Stop: 43610, Start Num: 9

Candidate Starts for Miniwave_61:

(5, 43107), (Start: 6 @43209 has 7 MA's), (7, 43212), (Start: 9 @43281 has 109 MA's), (11, 43392), (15, 43566),

Gene: Misfit_67 Start: 44755, Stop: 45084, Start Num: 9

Candidate Starts for Misfit_67:

(5, 44284), (Start: 6 @44386 has 7 MA's), (7, 44389), (8, 44644), (Start: 9 @44755 has 109 MA's), (11, 44866), (15, 45040),

Gene: Moldemort_69 Start: 43837, Stop: 44166, Start Num: 9

Candidate Starts for Moldemort_69:

(5, 43663), (Start: 6 @43765 has 7 MA's), (7, 43768), (Start: 9 @43837 has 109 MA's), (11, 43948), (15, 44122),

Gene: Mosby_62 Start: 43038, Stop: 43367, Start Num: 9

Candidate Starts for Mosby_62:

(5, 42567), (Start: 6 @42669 has 7 MA's), (7, 42672), (8, 42927), (Start: 9 @43038 has 109 MA's), (11, 43149), (15, 43323),

Gene: Murica_69 Start: 44690, Stop: 45019, Start Num: 9

Candidate Starts for Murica_69:

(5, 44219), (Start: 6 @44321 has 7 MA's), (7, 44324), (8, 44579), (Start: 9 @44690 has 109 MA's), (11, 44801), (15, 44975),

Gene: Murphy_66 Start: 44127, Stop: 44456, Start Num: 9

Candidate Starts for Murphy_66:

(5, 43656), (Start: 6 @43758 has 7 MA's), (7, 43761), (8, 44016), (Start: 9 @44127 has 109 MA's), (11, 44238), (15, 44412),

Gene: Myrale_66 Start: 44378, Stop: 44707, Start Num: 9

Candidate Starts for Myrale_66:

(1, 43778), (2, 43796), (4, 43904), (8, 44267), (Start: 9 @44378 has 109 MA's), (10, 44432), (12, 44558), (13, 44582), (14, 44621), (15, 44663),

Gene: Nala_68 Start: 44248, Stop: 44577, Start Num: 9

Candidate Starts for Nala_68:

(5, 43777), (Start: 6 @43879 has 7 MA's), (7, 43882), (8, 44137), (Start: 9 @44248 has 109 MA's), (11, 44359), (15, 44533),

Gene: NelitzaMV_64 Start: 43327, Stop: 43656, Start Num: 9

Candidate Starts for NelitzaMV_64:

(1, 42727), (2, 42745), (4, 42853), (8, 43216), (Start: 9 @43327 has 109 MA's), (10, 43381), (12, 43507), (13, 43531), (14, 43570), (15, 43612),

Gene: Nimrod_67 Start: 44948, Stop: 45274, Start Num: 9

Candidate Starts for Nimrod_67:

(5, 44477), (Start: 6 @44579 has 7 MA's), (7, 44582), (8, 44837), (Start: 9 @44948 has 109 MA's), (11, 45056), (14, 45188), (15, 45230),

Gene: NoSleep_67 Start: 43585, Stop: 43914, Start Num: 9

Candidate Starts for NoSleep_67:

(5, 43411), (Start: 6 @43513 has 7 MA's), (7, 43516), (Start: 9 @43585 has 109 MA's), (11, 43696), (15, 43870),

Gene: OrionPax_65 Start: 43333, Stop: 43662, Start Num: 9

Candidate Starts for OrionPax_65:

(5, 42862), (Start: 6 @42964 has 7 MA's), (7, 42967), (8, 43222), (Start: 9 @43333 has 109 MA's), (11, 43444), (15, 43618),

Gene: Palpatine_68 Start: 44720, Stop: 45046, Start Num: 9

Candidate Starts for Palpatine_68:

(5, 44249), (Start: 6 @44351 has 7 MA's), (7, 44354), (8, 44609), (Start: 9 @44720 has 109 MA's), (11, 44828), (14, 44960), (15, 45002),

Gene: Paperbeatsrock_65 Start: 43959, Stop: 44288, Start Num: 9

Candidate Starts for Paperbeatsrock_65:

(5, 43785), (Start: 6 @43887 has 7 MA's), (7, 43890), (Start: 9 @43959 has 109 MA's), (11, 44070), (15, 44244),

Gene: Pat3_64 Start: 42482, Stop: 42811, Start Num: 9

Candidate Starts for Pat3_64:

(1, 41882), (2, 41900), (4, 42008), (8, 42371), (Start: 9 @42482 has 109 MA's), (10, 42536), (12, 42662), (13, 42686), (14, 42725), (15, 42767),

Gene: Petra64142_70 Start: 45184, Stop: 45510, Start Num: 9

Candidate Starts for Petra64142_70:

(5, 44713), (Start: 6 @44815 has 7 MA's), (7, 44818), (8, 45073), (Start: 9 @45184 has 109 MA's), (11, 45292), (14, 45424), (15, 45466),

Gene: Phaja_64 Start: 43785, Stop: 44114, Start Num: 9

Candidate Starts for Phaja_64:

(5, 43611), (Start: 6 @43713 has 7 MA's), (7, 43716), (Start: 9 @43785 has 109 MA's), (11, 43896), (15, 44070),

Gene: Pharsalus_63 Start: 43687, Stop: 44088, Start Num: 6

Candidate Starts for Pharsalus_63:

(5, 43585), (Start: 6 @43687 has 7 MA's), (7, 43690), (Start: 9 @43759 has 109 MA's), (11, 43870), (15, 44044),

Gene: PhatBacter_70 Start: 44734, Stop: 45063, Start Num: 9

Candidate Starts for PhatBacter_70:

(5, 44263), (Start: 6 @44365 has 7 MA's), (7, 44368), (8, 44623), (Start: 9 @44734 has 109 MA's), (11, 44845), (15, 45019),

Gene: Phaux_68 Start: 44732, Stop: 45058, Start Num: 9
Candidate Starts for Phaux_68:
(5, 44261), (Start: 6 @44363 has 7 MA's), (7, 44366), (8, 44621), (Start: 9 @44732 has 109 MA's),
(11, 44840), (14, 44972), (15, 45014),

Gene: Phrux_63 Start: 43325, Stop: 43654, Start Num: 9
Candidate Starts for Phrux_63:
(5, 42854), (Start: 6 @42956 has 7 MA's), (7, 42959), (8, 43214), (Start: 9 @43325 has 109 MA's),
(11, 43436), (15, 43610),

Gene: Policronamos_70 Start: 44732, Stop: 45058, Start Num: 9
Candidate Starts for Policronamos_70:
(5, 44261), (Start: 6 @44363 has 7 MA's), (7, 44366), (8, 44621), (Start: 9 @44732 has 109 MA's),
(11, 44840), (14, 44972), (15, 45014),

Gene: Pumpkin_69 Start: 44383, Stop: 44712, Start Num: 9
Candidate Starts for Pumpkin_69:
(5, 43912), (Start: 6 @44014 has 7 MA's), (7, 44017), (8, 44272), (Start: 9 @44383 has 109 MA's),
(11, 44494), (15, 44668),

Gene: Quallification_67 Start: 44367, Stop: 44696, Start Num: 9
Candidate Starts for Quallification_67:
(1, 43767), (2, 43785), (4, 43893), (8, 44256), (Start: 9 @44367 has 109 MA's), (10, 44421), (12,
44547), (13, 44571), (14, 44610), (15, 44652),

Gene: Rakim_67 Start: 43836, Stop: 44165, Start Num: 9
Candidate Starts for Rakim_67:
(5, 43662), (Start: 6 @43764 has 7 MA's), (7, 43767), (Start: 9 @43836 has 109 MA's), (11, 43947),
(15, 44121),

Gene: Rimmer_67 Start: 44075, Stop: 44404, Start Num: 9
Candidate Starts for Rimmer_67:
(1, 43475), (2, 43493), (4, 43601), (8, 43964), (Start: 9 @44075 has 109 MA's), (10, 44129), (12,
44255), (13, 44279), (14, 44318), (15, 44360),

Gene: RiverMonster_66 Start: 43903, Stop: 44232, Start Num: 9
Candidate Starts for RiverMonster_66:
(5, 43432), (Start: 6 @43534 has 7 MA's), (7, 43537), (8, 43792), (Start: 9 @43903 has 109 MA's),
(11, 44014), (15, 44188),

Gene: Saints25_65 Start: 43241, Stop: 43642, Start Num: 6
Candidate Starts for Saints25_65:
(5, 43139), (Start: 6 @43241 has 7 MA's), (7, 43244), (Start: 9 @43313 has 109 MA's), (11, 43424),
(15, 43598),

Gene: Sassay_61 Start: 42000, Stop: 42329, Start Num: 9
Candidate Starts for Sassay_61:
(1, 41400), (2, 41418), (4, 41526), (8, 41889), (Start: 9 @42000 has 109 MA's), (10, 42054), (12,
42180), (13, 42204), (14, 42243), (15, 42285),

Gene: ShamWow_66 Start: 44222, Stop: 44551, Start Num: 9
Candidate Starts for ShamWow_66:

(5, 44048), (Start: 6 @44150 has 7 MA's), (7, 44153), (Start: 9 @44222 has 109 MA's), (11, 44333), (15, 44507),

Gene: ShereKhan_65 Start: 44291, Stop: 44620, Start Num: 9

Candidate Starts for ShereKhan_65:

(1, 43691), (2, 43709), (4, 43817), (8, 44180), (Start: 9 @44291 has 109 MA's), (10, 44345), (12, 44471), (13, 44495), (14, 44534), (15, 44576),

Gene: Simpliphy_65 Start: 43303, Stop: 43632, Start Num: 9

Candidate Starts for Simpliphy_65:

(5, 43129), (Start: 6 @43231 has 7 MA's), (7, 43234), (Start: 9 @43303 has 109 MA's), (11, 43414), (15, 43588),

Gene: SirDuracell_65 Start: 42574, Stop: 42903, Start Num: 9

Candidate Starts for SirDuracell_65:

(1, 41974), (2, 41992), (4, 42100), (8, 42463), (Start: 9 @42574 has 109 MA's), (11, 42685), (15, 42859),

Gene: SophKB_63 Start: 42978, Stop: 43307, Start Num: 9

Candidate Starts for SophKB_63:

(5, 42804), (Start: 6 @42906 has 7 MA's), (7, 42909), (Start: 9 @42978 has 109 MA's), (11, 43089), (15, 43263),

Gene: Sotrice96_67 Start: 43981, Stop: 44310, Start Num: 9

Candidate Starts for Sotrice96_67:

(1, 43381), (2, 43399), (4, 43507), (8, 43870), (Start: 9 @43981 has 109 MA's), (10, 44035), (12, 44161), (13, 44185), (14, 44224), (15, 44266),

Gene: Stank_69 Start: 44236, Stop: 44565, Start Num: 9

Candidate Starts for Stank_69:

(5, 44062), (Start: 6 @44164 has 7 MA's), (7, 44167), (Start: 9 @44236 has 109 MA's), (11, 44347), (15, 44521),

Gene: Stark_67 Start: 43789, Stop: 44115, Start Num: 9

Candidate Starts for Stark_67:

(1, 43189), (2, 43207), (4, 43315), (8, 43678), (Start: 9 @43789 has 109 MA's), (11, 43897), (14, 44029), (15, 44071),

Gene: StellaBean_64 Start: 43546, Stop: 43875, Start Num: 9

Candidate Starts for StellaBean_64:

(5, 43372), (Start: 6 @43474 has 7 MA's), (7, 43477), (Start: 9 @43546 has 109 MA's), (11, 43657), (15, 43831),

Gene: StolenFromERC_69 Start: 44018, Stop: 44347, Start Num: 9

Candidate Starts for StolenFromERC_69:

(1, 43418), (2, 43436), (3, 43496), (4, 43544), (8, 43907), (Start: 9 @44018 has 109 MA's), (10, 44072), (12, 44198), (13, 44222), (14, 44261), (15, 44303),

Gene: TBrady12_69 Start: 43720, Stop: 44049, Start Num: 9

Candidate Starts for TBrady12_69:

(5, 43546), (Start: 6 @43648 has 7 MA's), (7, 43651), (Start: 9 @43720 has 109 MA's), (11, 43831), (15, 44005),

Gene: Tarkin_65 Start: 43968, Stop: 44297, Start Num: 9

Candidate Starts for Tarkin_65:

(5, 43794), (Start: 6 @43896 has 7 MA's), (7, 43899), (Start: 9 @43968 has 109 MA's), (11, 44079), (15, 44253),

Gene: TeardropMSU_62 Start: 42968, Stop: 43297, Start Num: 9

Candidate Starts for TeardropMSU_62:

(5, 42794), (Start: 6 @42896 has 7 MA's), (7, 42899), (Start: 9 @42968 has 109 MA's), (11, 43079), (15, 43253),

Gene: Teaspoon_67 Start: 43862, Stop: 44191, Start Num: 9

Candidate Starts for Teaspoon_67:

(5, 43688), (Start: 6 @43790 has 7 MA's), (7, 43793), (Start: 9 @43862 has 109 MA's), (11, 43973), (15, 44147),

Gene: Terminus_69 Start: 44755, Stop: 45084, Start Num: 9

Candidate Starts for Terminus_69:

(5, 44284), (Start: 6 @44386 has 7 MA's), (7, 44389), (8, 44644), (Start: 9 @44755 has 109 MA's), (11, 44866), (15, 45040),

Gene: Thresher_68 Start: 44845, Stop: 45174, Start Num: 9

Candidate Starts for Thresher_68:

(5, 44671), (Start: 6 @44773 has 7 MA's), (7, 44776), (Start: 9 @44845 has 109 MA's), (11, 44956), (15, 45130),

Gene: Tomaszewski_61 Start: 43134, Stop: 43463, Start Num: 9

Candidate Starts for Tomaszewski_61:

(1, 42534), (2, 42552), (4, 42660), (8, 43023), (Start: 9 @43134 has 109 MA's), (10, 43188), (12, 43314), (13, 43338), (14, 43377), (15, 43419),

Gene: Toto_64 Start: 44222, Stop: 44551, Start Num: 9

Candidate Starts for Toto_64:

(5, 44048), (Start: 6 @44150 has 7 MA's), (7, 44153), (Start: 9 @44222 has 109 MA's), (11, 44333), (15, 44507),

Gene: Wiggin_68 Start: 43804, Stop: 44133, Start Num: 9

Candidate Starts for Wiggin_68:

(5, 43630), (Start: 6 @43732 has 7 MA's), (7, 43735), (Start: 9 @43804 has 109 MA's), (11, 43915), (15, 44089),

Gene: Willez_61 Start: 42000, Stop: 42329, Start Num: 9

Candidate Starts for Willez_61:

(1, 41400), (2, 41418), (4, 41526), (8, 41889), (Start: 9 @42000 has 109 MA's), (10, 42054), (12, 42180), (13, 42204), (14, 42243), (15, 42285),

Gene: Xandras_65 Start: 43215, Stop: 43544, Start Num: 9

Candidate Starts for Xandras_65:

(5, 43041), (Start: 6 @43143 has 7 MA's), (7, 43146), (Start: 9 @43215 has 109 MA's), (11, 43326), (15, 43500),

Gene: YassJohnny_63 Start: 43173, Stop: 43502, Start Num: 9

Candidate Starts for YassJohnny_63:

(5, 42702), (Start: 6 @42804 has 7 MA's), (7, 42807), (8, 43062), (Start: 9 @43173 has 109 MA's), (10, 43227), (12, 43353), (13, 43377), (14, 43416), (15, 43458),

Gene: Youngblood_69 Start: 44685, Stop: 45014, Start Num: 9

Candidate Starts for Youngblood_69:

(5, 44214), (Start: 6 @44316 has 7 MA's), (7, 44319), (8, 44574), (Start: 9 @44685 has 109 MA's), (11, 44796), (15, 44970),

Gene: xkcd_69 Start: 44875, Stop: 45204, Start Num: 9

Candidate Starts for xkcd_69:

(5, 44404), (Start: 6 @44506 has 7 MA's), (7, 44509), (8, 44764), (Start: 9 @44875 has 109 MA's), (11, 44986), (15, 45160),