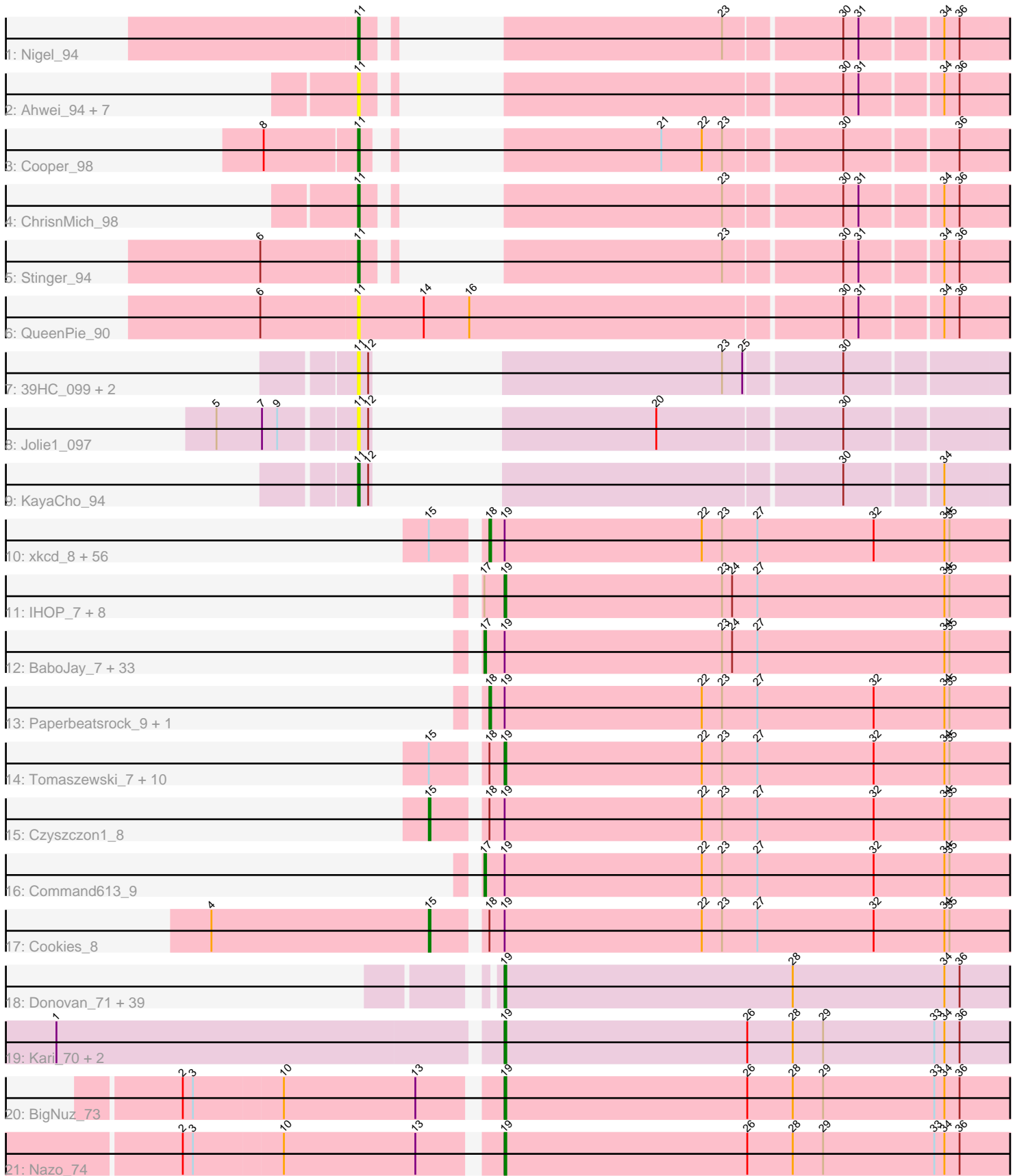


Pham 196319



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 196319 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196319 has 179 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Nigel_94
- Track 2 : Ahwei_94, Antihero_96, Poster_95, Lambano_94, GinPorsche_96, Epah_96, Hally898_94, Nanao_96
- Track 3 : Cooper_98
- Track 4 : ChrisnMich_98
- Track 5 : Stinger_94
- Track 6 : QueenPie_90
- Track 7 : 39HC_099, Hosp_094, 40BC_099
- Track 8 : Jolie1_097
- Track 9 : KayaCho_94
- Track 10 : xkcd_8, Elph10_8, Moldemort_8, Holt_9, Bench_9, NoSleep_8, Goldilocks_9, Cactus_9, MadamMonkfish_7, Sassay_7, Murphy_7, Adnama_9, Hopey_8, Phaux_6, Lilac_9, Rakim_9, DoctorDiddles_8, Simpliphy_8, Easy2Say_8, Highbury_8, MPhalcon_7, Phrux_7, Saints25_8, RiverMonster_7, Maxxinista_8, HanKaySha_8, Bruin_7, 244_8, Dumbo_7, GooberAzure_9, Nimrod_7, Pumpkin_8, Policronamos_7, Gemini_9, Wiggin_9, Tarkin_9, OrionPax_8, Qualification_9, Petra64142_8, Argent26_9, Buck_7, Contagion_7, MISSy_7, Willez_7, Thresher_8, Stark_8, Mosby_7, Murica_6, Ukulele_7, GoldenSpark_9, Xandras_9, Lilizi_9, Hoonter_9, HufflyPuff_6, Nala_7, Kanye_9, AmericanBeauty_9
- Track 11 : IHOP_7, Tuco_8, Phaja_7, Icee_7, Miniwave_8, Balomoji_7, Inca_7, Gator_6, Teaspoon_7
- Track 12 : BaboJay_7, Marshmallow_8, Pharsalus_8, FairyPath_8, Flypotenuse_6, SirDuracell_7, Henry_8, NelitzaMV_8, BigBubba_7, CrystalP_8, BadStone_7, StellaBean_8, ChotaBhai_7, Kostya_8, Dusk_7, Traaww1_6, Bask21_7, Rimmer_7, ShamWow_8, Toto_8, Porky_6, Mindy_8, DrDrey_8, ABCat_7, Harella_6, Amao_8, SophKB_8, Pat3_7, Myrale_8, YassJohnny_8, Emmina_7, TeardropMSU_7, BilboSwaggins_8, Daikon_6
- Track 13 : Paperbeatsrock_9, Youngblood_7
- Track 14 : Tomaszewski_7, Cjw1_7, Palpatine_7, StolenFromERC_9, JeTaime_9, Terminus_7, Misfit_7, PhatBacter_7, Stank_9, Filch_8, ShereKhan_9
- Track 15 : Czyszczo1_8
- Track 16 : Command613_9
- Track 17 : Cookies_8
- Track 18 : Donovan_71, HUHilltop_74, Pygmy_75, Bunnies_74, Jebeks_69, Techage_72, Phalm_72, FirstPlacePfu_72, StevieRay_73, Sonah_72, Juniormint_68, Bogie_74, DillTech15_81, Camster_72, Malithi_71, StressBall_71, CactusJack_72, Totinger_76, GreaseLightnin_73, Fastidio_74, Glaske_71, Zilizebeth_76, Majeke_74,

Brusacoram_70, Fishburne_70, Phegasus_74, Ksquared_72, Phineas_72, Atcoo_70, Megiddo_71, Jung_69, KilKor_72, Dynamo_71, Langerak_70, Mangethe_74, Necropolis_69, Shipwreck_74, LittleShirley_80, Thespis_70, Willsammy_73

- Track 19 : Kari_70, Bartholomew_69, Venti_71
- Track 20 : BigNuz_73
- Track 21 : Nazo_74

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

The start number called the most often in the published annotations is 19, it was called in 63 of the 158 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Atcoo_70, Balomoji_7, Bartholomew_69, BigNuz_73, Bogie_74, Brusacoram_70, Bunnies_74, CactusJack_72, Camster_72, Cjw1_7, DillTech15_81, Donovan_71, Dynamo_71, Fastidio_74, Filch_8, FirstPlacePfu_72, Fishburne_70, Gator_6, Glaske_71, GreaseLightnin_73, HUHilltop_74, IHOP_7, Icee_7, Inca_7, JeTaimie_9, Jebeks_69, Jung_69, Juniormint_68, Kari_70, KilKor_72, Ksquared_72, Langerak_70, LittleShirley_80, Majeke_74, Malithi_71, Mangethe_74, Megiddo_71, Miniwave_8, Misfit_7, Nazo_74, Necropolis_69, Palpatine_7, Phaja_7, Phalm_72, PhatBacter_7, Phegasus_74, Phineas_72, Pygmy_75, ShereKhan_9, Shipwreck_74, Sonah_72, Stank_9, StevieRay_73, StolenFromERC_9, StressBall_71, Teaspoon_7, Techage_72, Terminus_7, Thespis_70, Tomaszewski_7, Totinger_76, Tuco_8, Venti_71, Willsammy_73, Zilizebeth_76,

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

- 244_8, ABCat_7, Adnama_9, Amao_8, AmericanBeauty_9, Argent26_9, BaboJay_7, BadStone_7, Bask21_7, Bench_9, BigBubba_7, BilboSwaggins_8, Bruin_7, Buck_7, Cactus_9, ChotaBhai_7, Command613_9, Contagion_7, Cookies_8, CrystalP_8, Czyszczo1_8, Daikon_6, DoctorDiddles_8, DrDrey_8, Dumbo_7, Dusk_7, Easy2Say_8, Elph10_8, Emmina_7, FairyPath_8, Flypotenuse_6, Gemini_9, GoldenSpark_9, Goldilocks_9, GooberAzure_9, HanKaySha_8, Harella_6, Henry_8, Highbury_8, Holt_9, Hoonter_9, Hopey_8, HufflyPuff_6, Kanye_9, Kostya_8, Lilac_9, Lilizi_9, MISSy_7, MPhalcon_7, MadamMonkfish_7, Marshmallow_8, Maxxinista_8, Mindy_8, Moldemort_8, Mosby_7, Murica_6, Murphy_7, Myrale_8, Nala_7, NelitzaMV_8, Nimrod_7, NoSleep_8, OrionPax_8, Paperbeatsrock_9, Pat3_7, Petra64142_8, Pharsalus_8, Phaux_6, Phrux_7, Policronamos_7, Porky_6, Pumpkin_8, Quallification_9, Rakim_9, Rimmer_7, RiverMonster_7, Saints25_8, Sassay_7, ShamWow_8, Simpliphy_8, SirDuracell_7, SophKB_8, Stark_8, StellaBean_8, Tarkin_9, TeardropMSU_7, Thresher_8, Toto_8, Traaww1_6, Ukulele_7, Wiggin_9, Willez_7, Xandras_9, YassJohnny_8, Youngblood_7, xkcd_8,

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

- 39HC_099, 40BC_099, Ahwei_94, Antihero_96, ChrisnMich_98, Cooper_98, Epah_96, GinPorsche_96, Hally898_94, Hosp_094, Jolie1_097, KayaCho_94, Lambano_94, Nanao_96, Nigel_94, Poster_95, QueenPie_90, Stinger_94,

Summary by start number:

Start 11:

- Found in 18 of 179 (10.1%) of genes in pham
- Manual Annotations of this start: 5 of 158
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_099 (B6), 40BC_099 (B6), Ahwei_94 (B4), Antihero_96 (B4), ChrisnMich_98 (B4), Cooper_98 (B4), Epah_96 (B4), GinPorsche_96 (B4), Hally898_94 (B4), Hosp_094 (B6), Jolie1_097 (B6), KayaCho_94 (B6), Lambano_94 (B4), Nanao_96 (B4), Nigel_94 (B4), Poster_95 (B4), QueenPie_90 (B4), Stinger_94 (B4),

Start 15:

- Found in 70 of 179 (39.1%) of genes in pham
- Manual Annotations of this start: 2 of 158
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Cookies_8 (E), Czyszczone1_8 (E),

Start 17:

- Found in 44 of 179 (24.6%) of genes in pham
- Manual Annotations of this start: 31 of 158
- Called 79.5% of time when present
- Phage (with cluster) where this start called: ABCat_7 (E), Amao_8 (E), BaboJay_7 (E), BadStone_7 (E), Bask21_7 (E), BigBubba_7 (E), BilboSwaggins_8 (E), ChotaBhai_7 (E), Command613_9 (E), CrystalP_8 (E), Daikon_6 (E), DrDrey_8 (E), Dusk_7 (E), Emmina_7 (E), FairyPath_8 (E), Flypotenuse_6 (E), Harella_6 (E), Henry_8 (E), Kostya_8 (E), Marshmallow_8 (E), Mindy_8 (E), Myrale_8 (E), NelitzaMV_8 (E), Pat3_7 (E), Pharsalus_8 (E), Porky_6 (E), Rimmer_7 (E), ShamWow_8 (E), SirDuracell_7 (E), SophKB_8 (E), StellaBean_8 (E), TeardropMSU_7 (E), Toto_8 (E), Traaww1_6 (E), YassJohnny_8 (E),

Start 18:

- Found in 72 of 179 (40.2%) of genes in pham
- Manual Annotations of this start: 57 of 158
- Called 81.9% of time when present
- Phage (with cluster) where this start called: 244_8 (E), Adnama_9 (E), AmericanBeauty_9 (E), Argent26_9 (E), Bench_9 (E), Bruin_7 (E), Buck_7 (E), Cactus_9 (E), Contagion_7 (E), DoctorDiddles_8 (E), Dumbo_7 (E), Easy2Say_8 (E), Elph10_8 (E), Gemini_9 (E), GoldenSpark_9 (E), Goldilocks_9 (E), GooberAzure_9 (E), HanKaySha_8 (E), Highbury_8 (E), Holt_9 (E), Hoonter_9 (E), Hopey_8 (E), HufflyPuff_6 (E), Kanye_9 (E), Lilac_9 (E), Lilizi_9 (E), MISSy_7 (E), MPhalcon_7 (E), MadamMonkfish_7 (E), Maxxinista_8 (E), Moldemort_8 (E), Mosby_7 (E), Murica_6 (E), Murphy_7 (E), Nala_7 (E), Nimrod_7 (E), NoSleep_8 (E), OrionPax_8 (E), Paperbeatsrock_9 (E), Petra64142_8 (E), Phaux_6 (E), Phrux_7 (E), Policronamos_7 (E), Pumpkin_8 (E), Quallification_9 (E), Rakim_9 (E), RiverMonster_7 (E), Saints25_8 (E), Sassay_7 (E), Simpliphy_8 (E), Stark_8 (E), Tarkin_9 (E), Thresher_8 (E), Ukulele_7 (E), Wiggin_9 (E), Willez_7 (E), Xandras_9 (E), Youngblood_7 (E), xkcd_8 (E),

Start 19:

- Found in 161 of 179 (89.9%) of genes in pham
- Manual Annotations of this start: 63 of 158
- Called 40.4% of time when present
- Phage (with cluster) where this start called: Atcoo_70 (P1), Balomoji_7 (E), Bartholomew_69 (P1), BigNuz_73 (P4), Bogie_74 (P1), Brusacoram_70 (P1),

Bunnies_74 (P1), CactusJack_72 (P1), Camster_72 (P1), Cjw1_7 (E), DillTech15_81 (F1), Donovan_71 (P1), Dynamo_71 (P1), Fastidio_74 (F1), Filch_8 (E), FirstPlacePfu_72 (P1), Fishburne_70 (P1), Gator_6 (E), Glaske_71 (P1), GreaseLightnin_73 (P1), HUHilltop_74 (P1), IHOP_7 (E), Icee_7 (E), Inca_7 (E), JeTaime_9 (E), Jebeks_69 (P1), Jung_69 (P1), Juniormint_68 (P1), Kari_70 (P1), KilKor_72 (P1), Ksqared_72 (P1), Langerak_70 (P1), LittleShirley_80 (F1), Majeke_74 (P1), Malithi_71 (P1), Mangethe_74 (P1), Megiddo_71 (P1), Miniwave_8 (E), Misfit_7 (E), Nazo_74 (P4), Necropolis_69 (P1), Palpatine_7 (E), Phaja_7 (E), Phalm_72 (P1), PhatBacter_7 (E), Phegasus_74 (P1), Phineas_72 (P1), Pygmy_75 (P1), ShereKhan_9 (E), Shipwreck_74 (P1), Sonah_72 (P1), Stank_9 (E), StevieRay_73 (P1), StolenFromERC_9 (E), StressBall_71 (P1), Teaspoon_7 (E), Techage_72 (P1), Terminus_7 (E), Thespis_70 (P1), Tomaszewski_7 (E), Totinger_76 (F1), Tuco_8 (E), Venti_71 (P1), Willsammy_73 (P1), Zilizebeth_76 (P1),

Summary by clusters:

There are 6 clusters represented in this pham: F1, P1, E, P4, B4, B6,

Info for manual annotations of cluster B4:

- Start number 11 was manually annotated 4 times for cluster B4.

Info for manual annotations of cluster B6:

- Start number 11 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster E:

- Start number 15 was manually annotated 2 times for cluster E.
- Start number 17 was manually annotated 31 times for cluster E.
- Start number 18 was manually annotated 57 times for cluster E.
- Start number 19 was manually annotated 19 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 19 was manually annotated 4 times for cluster F1.

Info for manual annotations of cluster P1:

- Start number 19 was manually annotated 38 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 19 was manually annotated 2 times for cluster P4.

Gene Information:

Gene: 244_8 Start: 2232, Stop: 1924, Start Num: 18

Candidate Starts for 244_8:

(Start: 15 @2259 has 2 MA's), (Start: 18 @2232 has 57 MA's), (Start: 19 @2223 has 63 MA's), (22, 2106), (23, 2094), (27, 2073), (32, 2004), (34, 1962), (35, 1959),

Gene: 39HC_099 Start: 70611, Stop: 70294, Start Num: 11

Candidate Starts for 39HC_099:

(Start: 11 @70611 has 5 MA's), (12, 70605), (23, 70473), (25, 70461), (30, 70407),

Gene: 40BC_099 Start: 70611, Stop: 70294, Start Num: 11

Candidate Starts for 40BC_099:

(Start: 11 @70611 has 5 MA's), (12, 70605), (23, 70473), (25, 70461), (30, 70407),

Gene: ABCat_7 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for ABCat_7:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Adnama_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Adnama_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Ahwei_94 Start: 69585, Stop: 69253, Start Num: 11

Candidate Starts for Ahwei_94:

(Start: 11 @69585 has 5 MA's), (30, 69375), (31, 69366), (34, 69321), (36, 69312),

Gene: Amao_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for Amao_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: AmericanBeauty_9 Start: 2461, Stop: 2153, Start Num: 18

Candidate Starts for AmericanBeauty_9:

(Start: 15 @2488 has 2 MA's), (Start: 18 @2461 has 57 MA's), (Start: 19 @2452 has 63 MA's), (22, 2335), (23, 2323), (27, 2302), (32, 2233), (34, 2191), (35, 2188),

Gene: Antihero_96 Start: 69510, Stop: 69178, Start Num: 11

Candidate Starts for Antihero_96:

(Start: 11 @69510 has 5 MA's), (30, 69300), (31, 69291), (34, 69246), (36, 69237),

Gene: Argent26_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Argent26_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Atcoo_70 Start: 46361, Stop: 46687, Start Num: 19

Candidate Starts for Atcoo_70:

(Start: 19 @46361 has 63 MA's), (28, 46532), (34, 46622), (36, 46631),

Gene: BaboJay_7 Start: 1798, Stop: 1475, Start Num: 17

Candidate Starts for BaboJay_7:

(Start: 17 @1798 has 31 MA's), (Start: 19 @1786 has 63 MA's), (23, 1657), (24, 1651), (27, 1636), (34, 1525), (35, 1522),

Gene: BadStone_7 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for BadStone_7:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Balomoji_7 Start: 1989, Stop: 1678, Start Num: 19

Candidate Starts for Balomoji_7:

(Start: 17 @2001 has 31 MA's), (Start: 19 @1989 has 63 MA's), (23, 1860), (24, 1854), (27, 1839), (34, 1728), (35, 1725),

Gene: Bartholomew_69 Start: 43466, Stop: 43765, Start Num: 19

Candidate Starts for Bartholomew_69:

(1, 43211), (Start: 19 @43466 has 63 MA's), (26, 43610), (28, 43637), (29, 43655), (33, 43721), (34, 43727), (36, 43736),

Gene: Bask21_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for Bask21_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Bench_9 Start: 2538, Stop: 2230, Start Num: 18

Candidate Starts for Bench_9:

(Start: 15 @2565 has 2 MA's), (Start: 18 @2538 has 57 MA's), (Start: 19 @2529 has 63 MA's), (22, 2412), (23, 2400), (27, 2379), (32, 2310), (34, 2268), (35, 2265),

Gene: BigBubba_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for BigBubba_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: BigNuz_73 Start: 45865, Stop: 46164, Start Num: 19

Candidate Starts for BigNuz_73:

(2, 45688), (3, 45694), (10, 45745), (13, 45823), (Start: 19 @45865 has 63 MA's), (26, 46009), (28, 46036), (29, 46054), (33, 46120), (34, 46126), (36, 46135),

Gene: BilboSwaggins_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for BilboSwaggins_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Bogie_74 Start: 45973, Stop: 46299, Start Num: 19

Candidate Starts for Bogie_74:

(Start: 19 @45973 has 63 MA's), (28, 46144), (34, 46234), (36, 46243),

Gene: Bruin_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Bruin_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Brusacoram_70 Start: 44904, Stop: 45230, Start Num: 19

Candidate Starts for Brusacoram_70:

(Start: 19 @44904 has 63 MA's), (28, 45075), (34, 45165), (36, 45174),

Gene: Buck_7 Start: 1924, Stop: 1604, Start Num: 18

Candidate Starts for Buck_7:

(Start: 15 @1951 has 2 MA's), (Start: 18 @1924 has 57 MA's), (Start: 19 @1915 has 63 MA's), (22, 1798), (23, 1786), (27, 1765), (32, 1696), (34, 1654), (35, 1651),

Gene: Bunnies_74 Start: 46105, Stop: 46431, Start Num: 19

Candidate Starts for Bunnies_74:

(Start: 19 @46105 has 63 MA's), (28, 46276), (34, 46366), (36, 46375),

Gene: Cactus_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Cactus_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: CactusJack_72 Start: 45601, Stop: 45927, Start Num: 19

Candidate Starts for CactusJack_72:

(Start: 19 @45601 has 63 MA's), (28, 45772), (34, 45862), (36, 45871),

Gene: Camster_72 Start: 44434, Stop: 44760, Start Num: 19

Candidate Starts for Camster_72:

(Start: 19 @44434 has 63 MA's), (28, 44605), (34, 44695), (36, 44704),

Gene: ChotaBhai_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for ChotaBhai_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: ChrisnMich_98 Start: 69201, Stop: 68869, Start Num: 11

Candidate Starts for ChrisnMich_98:

(Start: 11 @69201 has 5 MA's), (23, 69057), (30, 68991), (31, 68982), (34, 68937), (36, 68928),

Gene: Cjw1_7 Start: 2232, Stop: 1933, Start Num: 19

Candidate Starts for Cjw1_7:

(Start: 15 @2268 has 2 MA's), (Start: 18 @2241 has 57 MA's), (Start: 19 @2232 has 63 MA's), (22, 2115), (23, 2103), (27, 2082), (32, 2013), (34, 1971), (35, 1968),

Gene: Command613_9 Start: 2338, Stop: 2027, Start Num: 17

Candidate Starts for Command613_9:

(Start: 17 @2338 has 31 MA's), (Start: 19 @2326 has 63 MA's), (22, 2209), (23, 2197), (27, 2176), (32, 2107), (34, 2065), (35, 2062),

Gene: Contagion_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Contagion_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Cookies_8 Start: 2164, Stop: 1829, Start Num: 15

Candidate Starts for Cookies_8:

(4, 2293), (Start: 15 @2164 has 2 MA's), (Start: 18 @2137 has 57 MA's), (Start: 19 @2128 has 63 MA's), (22, 2011), (23, 1999), (27, 1978), (32, 1909), (34, 1867), (35, 1864),

Gene: Cooper_98 Start: 69570, Stop: 69241, Start Num: 11

Candidate Starts for Cooper_98:

(8, 69624), (Start: 11 @69570 has 5 MA's), (21, 69465), (22, 69441), (23, 69429), (30, 69363), (36, 69300),

Gene: CrystalP_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for CrystalP_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Czyszczone1_8 Start: 2447, Stop: 2112, Start Num: 15

Candidate Starts for Czyszczone1_8:

(Start: 15 @2447 has 2 MA's), (Start: 18 @2420 has 57 MA's), (Start: 19 @2411 has 63 MA's), (22, 2294), (23, 2282), (27, 2261), (32, 2192), (34, 2150), (35, 2147),

Gene: Daikon_6 Start: 2001, Stop: 1678, Start Num: 17

Candidate Starts for Daikon_6:

(Start: 17 @2001 has 31 MA's), (Start: 19 @1989 has 63 MA's), (23, 1860), (24, 1854), (27, 1839), (34, 1728), (35, 1725),

Gene: DillTech15_81 Start: 47595, Stop: 47921, Start Num: 19

Candidate Starts for DillTech15_81:

(Start: 19 @47595 has 63 MA's), (28, 47766), (34, 47856), (36, 47865),

Gene: DoctorDiddles_8 Start: 2417, Stop: 2109, Start Num: 18

Candidate Starts for DoctorDiddles_8:

(Start: 15 @2444 has 2 MA's), (Start: 18 @2417 has 57 MA's), (Start: 19 @2408 has 63 MA's), (22, 2291), (23, 2279), (27, 2258), (32, 2189), (34, 2147), (35, 2144),

Gene: Donovan_71 Start: 44563, Stop: 44889, Start Num: 19

Candidate Starts for Donovan_71:

(Start: 19 @44563 has 63 MA's), (28, 44734), (34, 44824), (36, 44833),

Gene: DrDrey_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for DrDrey_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Dumbo_7 Start: 2232, Stop: 1924, Start Num: 18

Candidate Starts for Dumbo_7:

(Start: 15 @2259 has 2 MA's), (Start: 18 @2232 has 57 MA's), (Start: 19 @2223 has 63 MA's), (22, 2106), (23, 2094), (27, 2073), (32, 2004), (34, 1962), (35, 1959),

Gene: Dusk_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for Dusk_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Dynamo_71 Start: 44007, Stop: 44333, Start Num: 19

Candidate Starts for Dynamo_71:

(Start: 19 @44007 has 63 MA's), (28, 44178), (34, 44268), (36, 44277),

Gene: Easy2Say_8 Start: 2214, Stop: 1906, Start Num: 18

Candidate Starts for Easy2Say_8:

(Start: 15 @2241 has 2 MA's), (Start: 18 @2214 has 57 MA's), (Start: 19 @2205 has 63 MA's), (22, 2088), (23, 2076), (27, 2055), (32, 1986), (34, 1944), (35, 1941),

Gene: Elph10_8 Start: 2235, Stop: 1927, Start Num: 18

Candidate Starts for Elph10_8:

(Start: 15 @2262 has 2 MA's), (Start: 18 @2235 has 57 MA's), (Start: 19 @2226 has 63 MA's), (22, 2109), (23, 2097), (27, 2076), (32, 2007), (34, 1965), (35, 1962),

Gene: Emmina_7 Start: 1798, Stop: 1475, Start Num: 17
Candidate Starts for Emmina_7:
(Start: 17 @1798 has 31 MA's), (Start: 19 @1786 has 63 MA's), (23, 1657), (24, 1651), (27, 1636),
(34, 1525), (35, 1522),

Gene: Epah_96 Start: 69510, Stop: 69178, Start Num: 11
Candidate Starts for Epah_96:
(Start: 11 @69510 has 5 MA's), (30, 69300), (31, 69291), (34, 69246), (36, 69237),

Gene: FairyPath_8 Start: 2267, Stop: 1956, Start Num: 17
Candidate Starts for FairyPath_8:
(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105),
(34, 1994), (35, 1991),

Gene: Fastidio_74 Start: 44403, Stop: 44729, Start Num: 19
Candidate Starts for Fastidio_74:
(Start: 19 @44403 has 63 MA's), (28, 44574), (34, 44664), (36, 44673),

Gene: Filch_8 Start: 2220, Stop: 1921, Start Num: 19
Candidate Starts for Filch_8:
(Start: 15 @2256 has 2 MA's), (Start: 18 @2229 has 57 MA's), (Start: 19 @2220 has 63 MA's), (22,
2103), (23, 2091), (27, 2070), (32, 2001), (34, 1959), (35, 1956),

Gene: FirstPlacePfu_72 Start: 42966, Stop: 43292, Start Num: 19
Candidate Starts for FirstPlacePfu_72:
(Start: 19 @42966 has 63 MA's), (28, 43137), (34, 43227), (36, 43236),

Gene: Fishburne_70 Start: 44389, Stop: 44715, Start Num: 19
Candidate Starts for Fishburne_70:
(Start: 19 @44389 has 63 MA's), (28, 44560), (34, 44650), (36, 44659),

Gene: Flypotenuse_6 Start: 1883, Stop: 1560, Start Num: 17
Candidate Starts for Flypotenuse_6:
(Start: 17 @1883 has 31 MA's), (Start: 19 @1871 has 63 MA's), (23, 1742), (24, 1736), (27, 1721),
(34, 1610), (35, 1607),

Gene: Gator_6 Start: 1871, Stop: 1560, Start Num: 19
Candidate Starts for Gator_6:
(Start: 17 @1883 has 31 MA's), (Start: 19 @1871 has 63 MA's), (23, 1742), (24, 1736), (27, 1721),
(34, 1610), (35, 1607),

Gene: Gemini_9 Start: 2464, Stop: 2156, Start Num: 18
Candidate Starts for Gemini_9:
(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22,
2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: GinPorsche_96 Start: 69507, Stop: 69175, Start Num: 11
Candidate Starts for GinPorsche_96:
(Start: 11 @69507 has 5 MA's), (30, 69297), (31, 69288), (34, 69243), (36, 69234),

Gene: Glaske_71 Start: 45601, Stop: 45927, Start Num: 19
Candidate Starts for Glaske_71:
(Start: 19 @45601 has 63 MA's), (28, 45772), (34, 45862), (36, 45871),

Gene: GoldenSpark_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for GoldenSpark_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Goldilocks_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Goldilocks_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: GooberAzure_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for GooberAzure_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: GreaseLightnin_73 Start: 45758, Stop: 46084, Start Num: 19

Candidate Starts for GreaseLightnin_73:

(Start: 19 @45758 has 63 MA's), (28, 45929), (34, 46019), (36, 46028),

Gene: HUHilltop_74 Start: 44230, Stop: 44556, Start Num: 19

Candidate Starts for HUHilltop_74:

(Start: 19 @44230 has 63 MA's), (28, 44401), (34, 44491), (36, 44500),

Gene: Hally898_94 Start: 69347, Stop: 69015, Start Num: 11

Candidate Starts for Hally898_94:

(Start: 11 @69347 has 5 MA's), (30, 69137), (31, 69128), (34, 69083), (36, 69074),

Gene: HanKaySha_8 Start: 2420, Stop: 2112, Start Num: 18

Candidate Starts for HanKaySha_8:

(Start: 15 @2447 has 2 MA's), (Start: 18 @2420 has 57 MA's), (Start: 19 @2411 has 63 MA's), (22, 2294), (23, 2282), (27, 2261), (32, 2192), (34, 2150), (35, 2147),

Gene: Harella_6 Start: 1883, Stop: 1560, Start Num: 17

Candidate Starts for Harella_6:

(Start: 17 @1883 has 31 MA's), (Start: 19 @1871 has 63 MA's), (23, 1742), (24, 1736), (27, 1721), (34, 1610), (35, 1607),

Gene: Henry_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for Henry_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Highbury_8 Start: 2429, Stop: 2121, Start Num: 18

Candidate Starts for Highbury_8:

(Start: 15 @2456 has 2 MA's), (Start: 18 @2429 has 57 MA's), (Start: 19 @2420 has 63 MA's), (22, 2303), (23, 2291), (27, 2270), (32, 2201), (34, 2159), (35, 2156),

Gene: Holt_9 Start: 2535, Stop: 2227, Start Num: 18

Candidate Starts for Holt_9:

(Start: 15 @2562 has 2 MA's), (Start: 18 @2535 has 57 MA's), (Start: 19 @2526 has 63 MA's), (22, 2409), (23, 2397), (27, 2376), (32, 2307), (34, 2265), (35, 2262),

Gene: Hoonter_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Hoonter_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Hokey_8 Start: 2229, Stop: 1921, Start Num: 18

Candidate Starts for Hokey_8:

(Start: 15 @2256 has 2 MA's), (Start: 18 @2229 has 57 MA's), (Start: 19 @2220 has 63 MA's), (22, 2103), (23, 2091), (27, 2070), (32, 2001), (34, 1959), (35, 1956),

Gene: Hosp_094 Start: 67915, Stop: 67598, Start Num: 11

Candidate Starts for Hosp_094:

(Start: 11 @67915 has 5 MA's), (12, 67909), (23, 67777), (25, 67765), (30, 67711),

Gene: HufflyPuff_6 Start: 1815, Stop: 1507, Start Num: 18

Candidate Starts for HufflyPuff_6:

(Start: 15 @1842 has 2 MA's), (Start: 18 @1815 has 57 MA's), (Start: 19 @1806 has 63 MA's), (22, 1689), (23, 1677), (27, 1656), (32, 1587), (34, 1545), (35, 1542),

Gene: IHOP_7 Start: 1915, Stop: 1604, Start Num: 19

Candidate Starts for IHOP_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Icee_7 Start: 1915, Stop: 1604, Start Num: 19

Candidate Starts for Icee_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Inca_7 Start: 1928, Stop: 1629, Start Num: 19

Candidate Starts for Inca_7:

(Start: 17 @1940 has 31 MA's), (Start: 19 @1928 has 63 MA's), (23, 1799), (24, 1793), (27, 1778), (34, 1667), (35, 1664),

Gene: JeTaime_9 Start: 2267, Stop: 1968, Start Num: 19

Candidate Starts for JeTaime_9:

(Start: 15 @2303 has 2 MA's), (Start: 18 @2276 has 57 MA's), (Start: 19 @2267 has 63 MA's), (22, 2150), (23, 2138), (27, 2117), (32, 2048), (34, 2006), (35, 2003),

Gene: Jebeks_69 Start: 42861, Stop: 43187, Start Num: 19

Candidate Starts for Jebeks_69:

(Start: 19 @42861 has 63 MA's), (28, 43032), (34, 43122), (36, 43131),

Gene: Jolie1_097 Start: 70103, Stop: 69783, Start Num: 11

Candidate Starts for Jolie1_097:

(5, 70181), (7, 70154), (9, 70145), (Start: 11 @70103 has 5 MA's), (12, 70097), (20, 70004), (30, 69899),

Gene: Jung_69 Start: 43882, Stop: 44208, Start Num: 19

Candidate Starts for Jung_69:

(Start: 19 @43882 has 63 MA's), (28, 44053), (34, 44143), (36, 44152),

Gene: Juniormint_68 Start: 42976, Stop: 43302, Start Num: 19

Candidate Starts for Juniormint_68:

(Start: 19 @42976 has 63 MA's), (28, 43147), (34, 43237), (36, 43246),

Gene: Kanye_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Kanye_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Kari_70 Start: 44950, Stop: 45249, Start Num: 19

Candidate Starts for Kari_70:

(1, 44695), (Start: 19 @44950 has 63 MA's), (26, 45094), (28, 45121), (29, 45139), (33, 45205), (34, 45211), (36, 45220),

Gene: KayaCho_94 Start: 69889, Stop: 69572, Start Num: 11

Candidate Starts for KayaCho_94:

(Start: 11 @69889 has 5 MA's), (12, 69883), (30, 69685), (34, 69631),

Gene: KilKor_72 Start: 46294, Stop: 46620, Start Num: 19

Candidate Starts for KilKor_72:

(Start: 19 @46294 has 63 MA's), (28, 46465), (34, 46555), (36, 46564),

Gene: Kostya_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for Kostya_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Ksquared_72 Start: 45982, Stop: 46308, Start Num: 19

Candidate Starts for Ksquared_72:

(Start: 19 @45982 has 63 MA's), (28, 46153), (34, 46243), (36, 46252),

Gene: Lambano_94 Start: 69347, Stop: 69015, Start Num: 11

Candidate Starts for Lambano_94:

(Start: 11 @69347 has 5 MA's), (30, 69137), (31, 69128), (34, 69083), (36, 69074),

Gene: Langerak_70 Start: 44367, Stop: 44693, Start Num: 19

Candidate Starts for Langerak_70:

(Start: 19 @44367 has 63 MA's), (28, 44538), (34, 44628), (36, 44637),

Gene: Lilac_9 Start: 2255, Stop: 1947, Start Num: 18

Candidate Starts for Lilac_9:

(Start: 15 @2282 has 2 MA's), (Start: 18 @2255 has 57 MA's), (Start: 19 @2246 has 63 MA's), (22, 2129), (23, 2117), (27, 2096), (32, 2027), (34, 1985), (35, 1982),

Gene: Lilizi_9 Start: 2467, Stop: 2159, Start Num: 18

Candidate Starts for Lilizi_9:

(Start: 15 @2494 has 2 MA's), (Start: 18 @2467 has 57 MA's), (Start: 19 @2458 has 63 MA's), (22, 2341), (23, 2329), (27, 2308), (32, 2239), (34, 2197), (35, 2194),

Gene: LittleShirley_80 Start: 48076, Stop: 48402, Start Num: 19

Candidate Starts for LittleShirley_80:

(Start: 19 @48076 has 63 MA's), (28, 48247), (34, 48337), (36, 48346),

Gene: MISSy_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for MISSy_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: MPhalcon_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for MPhalcon_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: MadamMonkfish_7 Start: 2096, Stop: 1788, Start Num: 18

Candidate Starts for MadamMonkfish_7:

(Start: 15 @2123 has 2 MA's), (Start: 18 @2096 has 57 MA's), (Start: 19 @2087 has 63 MA's), (22, 1970), (23, 1958), (27, 1937), (32, 1868), (34, 1826), (35, 1823),

Gene: Majeke_74 Start: 45012, Stop: 45338, Start Num: 19

Candidate Starts for Majeke_74:

(Start: 19 @45012 has 63 MA's), (28, 45183), (34, 45273), (36, 45282),

Gene: Malithi_71 Start: 44156, Stop: 44482, Start Num: 19

Candidate Starts for Malithi_71:

(Start: 19 @44156 has 63 MA's), (28, 44327), (34, 44417), (36, 44426),

Gene: Mangethe_74 Start: 45012, Stop: 45338, Start Num: 19

Candidate Starts for Mangethe_74:

(Start: 19 @45012 has 63 MA's), (28, 45183), (34, 45273), (36, 45282),

Gene: Marshmallow_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for Marshmallow_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Maxxinista_8 Start: 2235, Stop: 1927, Start Num: 18

Candidate Starts for Maxxinista_8:

(Start: 15 @2262 has 2 MA's), (Start: 18 @2235 has 57 MA's), (Start: 19 @2226 has 63 MA's), (22, 2109), (23, 2097), (27, 2076), (32, 2007), (34, 1965), (35, 1962),

Gene: Megiddo_71 Start: 46162, Stop: 46488, Start Num: 19

Candidate Starts for Megiddo_71:

(Start: 19 @46162 has 63 MA's), (28, 46333), (34, 46423), (36, 46432),

Gene: Mindy_8 Start: 2138, Stop: 1827, Start Num: 17

Candidate Starts for Mindy_8:

(Start: 17 @2138 has 31 MA's), (Start: 19 @2126 has 63 MA's), (23, 1997), (24, 1991), (27, 1976), (34, 1865), (35, 1862),

Gene: Miniwave_8 Start: 2255, Stop: 1956, Start Num: 19

Candidate Starts for Miniwave_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Misfit_7 Start: 1850, Stop: 1551, Start Num: 19

Candidate Starts for Misfit_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Moldemort_8 Start: 2420, Stop: 2112, Start Num: 18

Candidate Starts for Moldemort_8:

(Start: 15 @2447 has 2 MA's), (Start: 18 @2420 has 57 MA's), (Start: 19 @2411 has 63 MA's), (22, 2294), (23, 2282), (27, 2261), (32, 2192), (34, 2150), (35, 2147),

Gene: Mosby_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Mosby_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Murica_6 Start: 1815, Stop: 1507, Start Num: 18

Candidate Starts for Murica_6:

(Start: 15 @1842 has 2 MA's), (Start: 18 @1815 has 57 MA's), (Start: 19 @1806 has 63 MA's), (22, 1689), (23, 1677), (27, 1656), (32, 1587), (34, 1545), (35, 1542),

Gene: Murphy_7 Start: 2137, Stop: 1829, Start Num: 18

Candidate Starts for Murphy_7:

(Start: 15 @2164 has 2 MA's), (Start: 18 @2137 has 57 MA's), (Start: 19 @2128 has 63 MA's), (22, 2011), (23, 1999), (27, 1978), (32, 1909), (34, 1867), (35, 1864),

Gene: Myrale_8 Start: 2138, Stop: 1827, Start Num: 17

Candidate Starts for Myrale_8:

(Start: 17 @2138 has 31 MA's), (Start: 19 @2126 has 63 MA's), (23, 1997), (24, 1991), (27, 1976), (34, 1865), (35, 1862),

Gene: Nala_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Nala_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Nanao_96 Start: 69360, Stop: 69028, Start Num: 11

Candidate Starts for Nanao_96:

(Start: 11 @69360 has 5 MA's), (30, 69150), (31, 69141), (34, 69096), (36, 69087),

Gene: Nazo_74 Start: 45751, Stop: 46050, Start Num: 19

Candidate Starts for Nazo_74:

(2, 45574), (3, 45580), (10, 45631), (13, 45709), (Start: 19 @45751 has 63 MA's), (26, 45895), (28, 45922), (29, 45940), (33, 46006), (34, 46012), (36, 46021),

Gene: Necropolis_69 Start: 43597, Stop: 43923, Start Num: 19

Candidate Starts for Necropolis_69:

(Start: 19 @43597 has 63 MA's), (28, 43768), (34, 43858), (36, 43867),

Gene: NelitzaMV_8 Start: 2138, Stop: 1827, Start Num: 17

Candidate Starts for NelitzaMV_8:

(Start: 17 @2138 has 31 MA's), (Start: 19 @2126 has 63 MA's), (23, 1997), (24, 1991), (27, 1976), (34, 1865), (35, 1862),

Gene: Nigel_94 Start: 68852, Stop: 68520, Start Num: 11

Candidate Starts for Nigel_94:

(Start: 11 @68852 has 5 MA's), (23, 68708), (30, 68642), (31, 68633), (34, 68588), (36, 68579),

Gene: Nimrod_7 Start: 1924, Stop: 1604, Start Num: 18

Candidate Starts for Nimrod_7:

(Start: 15 @1951 has 2 MA's), (Start: 18 @1924 has 57 MA's), (Start: 19 @1915 has 63 MA's), (22, 1798), (23, 1786), (27, 1765), (32, 1696), (34, 1654), (35, 1651),

Gene: NoSleep_8 Start: 2417, Stop: 2109, Start Num: 18

Candidate Starts for NoSleep_8:

(Start: 15 @2444 has 2 MA's), (Start: 18 @2417 has 57 MA's), (Start: 19 @2408 has 63 MA's), (22, 2291), (23, 2279), (27, 2258), (32, 2189), (34, 2147), (35, 2144),

Gene: OrionPax_8 Start: 2420, Stop: 2112, Start Num: 18

Candidate Starts for OrionPax_8:

(Start: 15 @2447 has 2 MA's), (Start: 18 @2420 has 57 MA's), (Start: 19 @2411 has 63 MA's), (22, 2294), (23, 2282), (27, 2261), (32, 2192), (34, 2150), (35, 2147),

Gene: Palpatine_7 Start: 1847, Stop: 1548, Start Num: 19

Candidate Starts for Palpatine_7:

(Start: 15 @1883 has 2 MA's), (Start: 18 @1856 has 57 MA's), (Start: 19 @1847 has 63 MA's), (22, 1730), (23, 1718), (27, 1697), (32, 1628), (34, 1586), (35, 1583),

Gene: Paperbeatsrock_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Paperbeatsrock_9:

(Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Pat3_7 Start: 1967, Stop: 1644, Start Num: 17

Candidate Starts for Pat3_7:

(Start: 17 @1967 has 31 MA's), (Start: 19 @1955 has 63 MA's), (23, 1826), (24, 1820), (27, 1805), (34, 1694), (35, 1691),

Gene: Petra64142_8 Start: 2140, Stop: 1832, Start Num: 18

Candidate Starts for Petra64142_8:

(Start: 15 @2167 has 2 MA's), (Start: 18 @2140 has 57 MA's), (Start: 19 @2131 has 63 MA's), (22, 2014), (23, 2002), (27, 1981), (32, 1912), (34, 1870), (35, 1867),

Gene: Phaja_7 Start: 1915, Stop: 1604, Start Num: 19

Candidate Starts for Phaja_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Phalm_72 Start: 45592, Stop: 45918, Start Num: 19

Candidate Starts for Phalm_72:

(Start: 19 @45592 has 63 MA's), (28, 45763), (34, 45853), (36, 45862),

Gene: Pharsalus_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for Pharsalus_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: PhatBacter_7 Start: 1850, Stop: 1551, Start Num: 19

Candidate Starts for PhatBacter_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Phaux_6 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Phaux_6:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Phegasus_74 Start: 44979, Stop: 45305, Start Num: 19

Candidate Starts for Phegasus_74:

(Start: 19 @44979 has 63 MA's), (28, 45150), (34, 45240), (36, 45249),

Gene: Phineas_72 Start: 44564, Stop: 44890, Start Num: 19

Candidate Starts for Phineas_72:

(Start: 19 @44564 has 63 MA's), (28, 44735), (34, 44825), (36, 44834),

Gene: Phrux_7 Start: 2215, Stop: 1907, Start Num: 18

Candidate Starts for Phrux_7:

(Start: 15 @2242 has 2 MA's), (Start: 18 @2215 has 57 MA's), (Start: 19 @2206 has 63 MA's), (22, 2089), (23, 2077), (27, 2056), (32, 1987), (34, 1945), (35, 1942),

Gene: Policronamos_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Policronamos_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Porky_6 Start: 1798, Stop: 1475, Start Num: 17

Candidate Starts for Porky_6:

(Start: 17 @1798 has 31 MA's), (Start: 19 @1786 has 63 MA's), (23, 1657), (24, 1651), (27, 1636), (34, 1525), (35, 1522),

Gene: Poster_95 Start: 69361, Stop: 69029, Start Num: 11

Candidate Starts for Poster_95:

(Start: 11 @69361 has 5 MA's), (30, 69151), (31, 69142), (34, 69097), (36, 69088),

Gene: Pumpkin_8 Start: 2233, Stop: 1925, Start Num: 18

Candidate Starts for Pumpkin_8:

(Start: 15 @2260 has 2 MA's), (Start: 18 @2233 has 57 MA's), (Start: 19 @2224 has 63 MA's), (22, 2107), (23, 2095), (27, 2074), (32, 2005), (34, 1963), (35, 1960),

Gene: Pygmy_75 Start: 45946, Stop: 46272, Start Num: 19

Candidate Starts for Pygmy_75:

(Start: 19 @45946 has 63 MA's), (28, 46117), (34, 46207), (36, 46216),

Gene: Quallification_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Quallification_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: QueenPie_90 Start: 69267, Stop: 68863, Start Num: 11

Candidate Starts for QueenPie_90:

(6, 69324), (Start: 11 @69267 has 5 MA's), (14, 69228), (16, 69201), (30, 68985), (31, 68976), (34, 68931), (36, 68922),

Gene: Rakim_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Rakim_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Rimmer_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for Rimmer_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: RiverMonster_7 Start: 2229, Stop: 1921, Start Num: 18

Candidate Starts for RiverMonster_7:

(Start: 15 @2256 has 2 MA's), (Start: 18 @2229 has 57 MA's), (Start: 19 @2220 has 63 MA's), (22, 2103), (23, 2091), (27, 2070), (32, 2001), (34, 1959), (35, 1956),

Gene: Saints25_8 Start: 2429, Stop: 2121, Start Num: 18

Candidate Starts for Saints25_8:

(Start: 15 @2456 has 2 MA's), (Start: 18 @2429 has 57 MA's), (Start: 19 @2420 has 63 MA's), (22, 2303), (23, 2291), (27, 2270), (32, 2201), (34, 2159), (35, 2156),

Gene: Sassay_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Sassay_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: ShamWow_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for ShamWow_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: ShereKhan_9 Start: 2455, Stop: 2156, Start Num: 19

Candidate Starts for ShereKhan_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Shipwreck_74 Start: 46004, Stop: 46330, Start Num: 19

Candidate Starts for Shipwreck_74:

(Start: 19 @46004 has 63 MA's), (28, 46175), (34, 46265), (36, 46274),

Gene: Simpliphy_8 Start: 2420, Stop: 2112, Start Num: 18

Candidate Starts for Simpliphy_8:

(Start: 15 @2447 has 2 MA's), (Start: 18 @2420 has 57 MA's), (Start: 19 @2411 has 63 MA's), (22, 2294), (23, 2282), (27, 2261), (32, 2192), (34, 2150), (35, 2147),

Gene: SirDuracell_7 Start: 1927, Stop: 1604, Start Num: 17

Candidate Starts for SirDuracell_7:

(Start: 17 @1927 has 31 MA's), (Start: 19 @1915 has 63 MA's), (23, 1786), (24, 1780), (27, 1765), (34, 1654), (35, 1651),

Gene: Sonah_72 Start: 43701, Stop: 44027, Start Num: 19

Candidate Starts for Sonah_72:

(Start: 19 @43701 has 63 MA's), (28, 43872), (34, 43962), (36, 43971),

Gene: SophKB_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for SophKB_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Stank_9 Start: 2455, Stop: 2156, Start Num: 19

Candidate Starts for Stank_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Stark_8 Start: 2232, Stop: 1924, Start Num: 18

Candidate Starts for Stark_8:

(Start: 15 @2259 has 2 MA's), (Start: 18 @2232 has 57 MA's), (Start: 19 @2223 has 63 MA's), (22, 2106), (23, 2094), (27, 2073), (32, 2004), (34, 1962), (35, 1959),

Gene: StellaBean_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for StellaBean_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: StevieRay_73 Start: 46138, Stop: 46464, Start Num: 19

Candidate Starts for StevieRay_73:

(Start: 19 @46138 has 63 MA's), (28, 46309), (34, 46399), (36, 46408),

Gene: Stinger_94 Start: 68586, Stop: 68254, Start Num: 11

Candidate Starts for Stinger_94:

(6, 68643), (Start: 11 @68586 has 5 MA's), (23, 68442), (30, 68376), (31, 68367), (34, 68322), (36, 68313),

Gene: StolenFromERC_9 Start: 2455, Stop: 2156, Start Num: 19

Candidate Starts for StolenFromERC_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: StressBall_71 Start: 45294, Stop: 45620, Start Num: 19

Candidate Starts for StressBall_71:

(Start: 19 @45294 has 63 MA's), (28, 45465), (34, 45555), (36, 45564),

Gene: Tarkin_9 Start: 2467, Stop: 2159, Start Num: 18

Candidate Starts for Tarkin_9:

(Start: 15 @2494 has 2 MA's), (Start: 18 @2467 has 57 MA's), (Start: 19 @2458 has 63 MA's), (22, 2341), (23, 2329), (27, 2308), (32, 2239), (34, 2197), (35, 2194),

Gene: TeardropMSU_7 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for TeardropMSU_7:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Teaspoon_7 Start: 1955, Stop: 1644, Start Num: 19

Candidate Starts for Teaspoon_7:

(Start: 17 @1967 has 31 MA's), (Start: 19 @1955 has 63 MA's), (23, 1826), (24, 1820), (27, 1805), (34, 1694), (35, 1691),

Gene: Techage_72 Start: 44495, Stop: 44821, Start Num: 19
Candidate Starts for Techage_72:
(Start: 19 @44495 has 63 MA's), (28, 44666), (34, 44756), (36, 44765),

Gene: Terminus_7 Start: 1850, Stop: 1551, Start Num: 19
Candidate Starts for Terminus_7:
(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Thespis_70 Start: 44904, Stop: 45230, Start Num: 19
Candidate Starts for Thespis_70:
(Start: 19 @44904 has 63 MA's), (28, 45075), (34, 45165), (36, 45174),

Gene: Thresher_8 Start: 2229, Stop: 1921, Start Num: 18
Candidate Starts for Thresher_8:
(Start: 15 @2256 has 2 MA's), (Start: 18 @2229 has 57 MA's), (Start: 19 @2220 has 63 MA's), (22, 2103), (23, 2091), (27, 2070), (32, 2001), (34, 1959), (35, 1956),

Gene: Tomaszewski_7 Start: 1850, Stop: 1551, Start Num: 19
Candidate Starts for Tomaszewski_7:
(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Totinger_76 Start: 47153, Stop: 47479, Start Num: 19
Candidate Starts for Totinger_76:
(Start: 19 @47153 has 63 MA's), (28, 47324), (34, 47414), (36, 47423),

Gene: Toto_8 Start: 2267, Stop: 1956, Start Num: 17
Candidate Starts for Toto_8:
(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Traaww1_6 Start: 1913, Stop: 1590, Start Num: 17
Candidate Starts for Traaww1_6:
(Start: 17 @1913 has 31 MA's), (Start: 19 @1901 has 63 MA's), (23, 1772), (24, 1766), (27, 1751), (34, 1640), (35, 1637),

Gene: Tuco_8 Start: 2255, Stop: 1956, Start Num: 19
Candidate Starts for Tuco_8:
(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Ukulele_7 Start: 2232, Stop: 1924, Start Num: 18
Candidate Starts for Ukulele_7:
(Start: 15 @2259 has 2 MA's), (Start: 18 @2232 has 57 MA's), (Start: 19 @2223 has 63 MA's), (22, 2106), (23, 2094), (27, 2073), (32, 2004), (34, 1962), (35, 1959),

Gene: Venti_71 Start: 43466, Stop: 43765, Start Num: 19
Candidate Starts for Venti_71:
(1, 43211), (Start: 19 @43466 has 63 MA's), (26, 43610), (28, 43637), (29, 43655), (33, 43721), (34, 43727), (36, 43736),

Gene: Wiggin_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Wiggin_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: Willez_7 Start: 1859, Stop: 1551, Start Num: 18

Candidate Starts for Willez_7:

(Start: 15 @1886 has 2 MA's), (Start: 18 @1859 has 57 MA's), (Start: 19 @1850 has 63 MA's), (22, 1733), (23, 1721), (27, 1700), (32, 1631), (34, 1589), (35, 1586),

Gene: Willsammy_73 Start: 45778, Stop: 46104, Start Num: 19

Candidate Starts for Willsammy_73:

(Start: 19 @45778 has 63 MA's), (28, 45949), (34, 46039), (36, 46048),

Gene: Xandras_9 Start: 2464, Stop: 2156, Start Num: 18

Candidate Starts for Xandras_9:

(Start: 15 @2491 has 2 MA's), (Start: 18 @2464 has 57 MA's), (Start: 19 @2455 has 63 MA's), (22, 2338), (23, 2326), (27, 2305), (32, 2236), (34, 2194), (35, 2191),

Gene: YassJohnny_8 Start: 2267, Stop: 1956, Start Num: 17

Candidate Starts for YassJohnny_8:

(Start: 17 @2267 has 31 MA's), (Start: 19 @2255 has 63 MA's), (23, 2126), (24, 2120), (27, 2105), (34, 1994), (35, 1991),

Gene: Youngblood_7 Start: 1856, Stop: 1548, Start Num: 18

Candidate Starts for Youngblood_7:

(Start: 18 @1856 has 57 MA's), (Start: 19 @1847 has 63 MA's), (22, 1730), (23, 1718), (27, 1697), (32, 1628), (34, 1586), (35, 1583),

Gene: Zilizabeth_76 Start: 45336, Stop: 45662, Start Num: 19

Candidate Starts for Zilizabeth_76:

(Start: 19 @45336 has 63 MA's), (28, 45507), (34, 45597), (36, 45606),

Gene: xkcd_8 Start: 2011, Stop: 1703, Start Num: 18

Candidate Starts for xkcd_8:

(Start: 15 @2038 has 2 MA's), (Start: 18 @2011 has 57 MA's), (Start: 19 @2002 has 63 MA's), (22, 1885), (23, 1873), (27, 1852), (32, 1783), (34, 1741), (35, 1738),