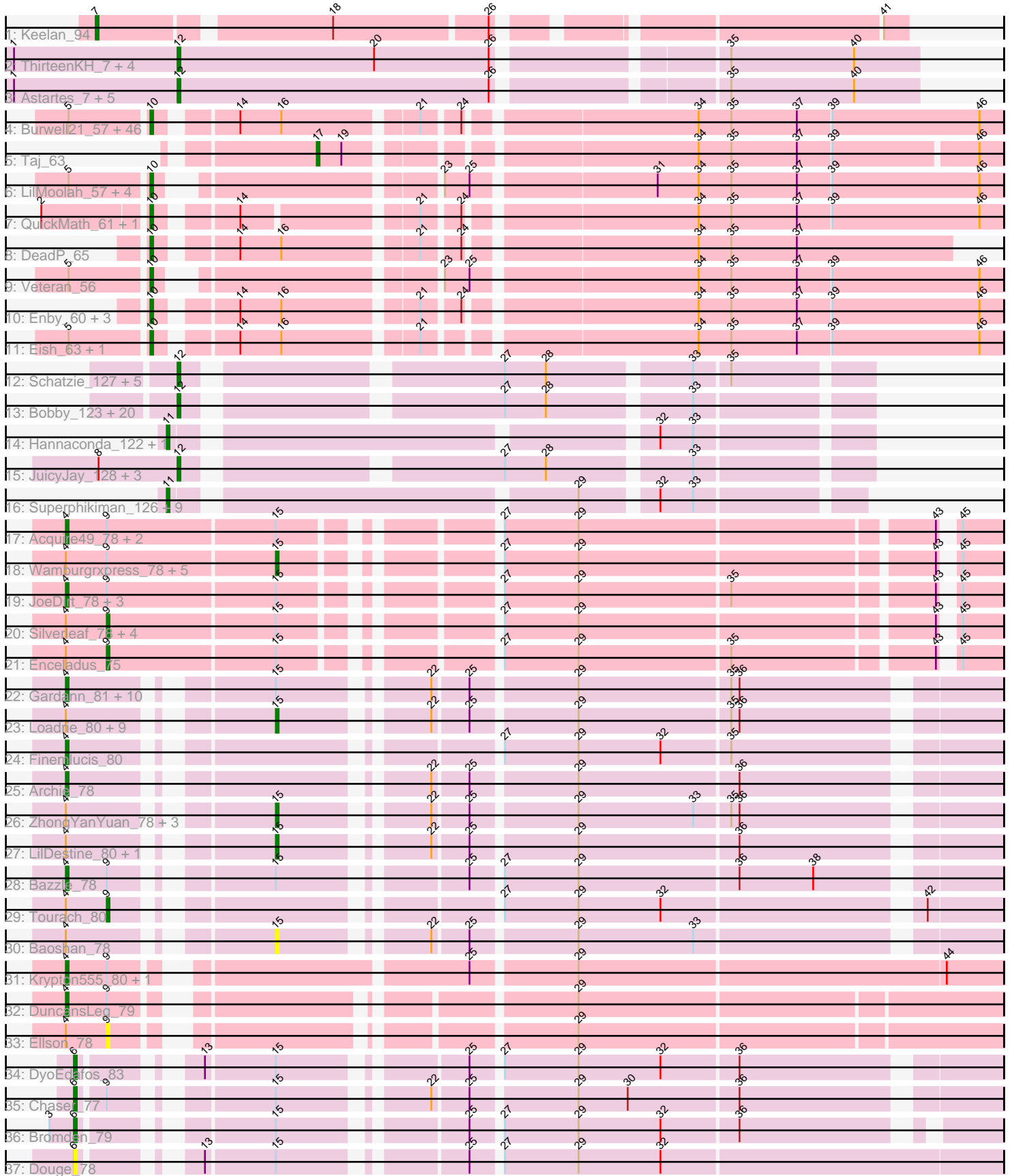


Pham 171237



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 171237 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171237 has 177 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Keelan_94
- Track 2 : ThirteenKH_7, TrippleS_7, Atraxi_7, Morrill_7, Yafa_7
- Track 3 : Astartes_7, RicoCaldo_7, Moleficent_7, Fullmetal_7, PhriedRice_7, StagePhright_7
- Track 4 : Burwell21_57, Zizzle_63, SiSi_57, Phatniss_57, Jarcob_59, Llij_55, Marker_61, Rita_60, Drago_57, Karhdo_56, BobaPhett_63, Mova_60, Soul22_65, Jabbawokkie_73, Totinger_61, Blarby_71, Madiba_57, Dante_60, Tootsieroll_60, DirtMcgirt_58, Pollywog_60, Priscilla_59, ShiLan_58, Zapner_72, Alexphander_63, NormanBulbieJr_59, PMC_56, MadMen_57, ByChance_51, Doug_61, Zerg_59, Rockne_60, DaddyRickover_58, Cabrinians_60, Boomer_64, UncleRicky_58, Firehouse51_60, Koella_53, Mutaforma13_63, LittleShirley_58, Chuckly_62, Rialto_65, Lorde_59, Scottish_57, Crumble_54, OldBen_56, Fancypants_61
- Track 5 : Taj_63
- Track 6 : LilMoolah_57, DRBy19_62, Philus_62, Job42_61, Nivrat_55
- Track 7 : QuickMath_61, Kimberlium_62
- Track 8 : DeadP_65
- Track 9 : Veteran_56
- Track 10 : Enby_60, IbOuu_60, CaptainTrips_56, SG4_56
- Track 11 : Eish_63, DaWorst_60
- Track 12 : Schatzie_127, Kalah2_122, Optimus_122, Bagrid_131, DmpstrDiver_131, Pound_120
- Track 13 : Bobby_123, EricMillard_123, Odette_133, Halley_133, Ejimix_125, Thibault_113, Hughesyang_131, Yeet_123, Minerva_130, ThreeRngTarjay_127, Dallas_132, Dove_124, Phoebus_132, Wanda_130, HokkenD_121, Redno2_123, BAKA_131, Constella_121, Zelink_126, Klein_128, Duke13_126
- Track 14 : Hannaconda_122, MiaZeal_129
- Track 15 : JuicyJay_128, Bombitas_119, NihilNomen_133, Beem_133
- Track 16 : Superphikiman_126, Porcelain_127, Ariel_129, Lucky2013_124, Gonephishing_123, Squint_127, LittleE_132, KashFlow_127, Omega_139, Courthouse_124
- Track 17 : Acquire49_78, Zaria_79, Wyatt2_79
- Track 18 : Wamburggrxpress_78, Rose5_78, AvadaKedavra_78, LeBron_77, UPIE_77, CicholasNage_75
- Track 19 : JoeDirt_78, Appletree2_77, DirkDirk_75, OhShagHennessy_75
- Track 20 : Silverleaf_78, Tyson_79, MAckerman_75, Halena_76, Calm_80
- Track 21 : Enceladus_75

- Track 22 : Gardann_81, Kahlid_81, Zakai_82, Winky_81, Miley16_81, Itos_80, Rumpelstiltskin_78, Wilder_82, MkaliMitinis3_82, Breezona_81, Faith1_81
- Track 23 : Loadrie_80, BobsGarage_81, GuuelaD_79, DrSeegs_81, BigCheese_81, Nicholasp3_81, Lewan_82, Crossroads_81, Netyap_82, Gabriela_80
- Track 24 : Finemlucis_80
- Track 25 : Archie_78
- Track 26 : ZhongYanYuan_78, Wigglewiggles_80, Hafay_82, Claus_81
- Track 27 : LilDestine_80, Vetrix_80
- Track 28 : Bazzle_78
- Track 29 : Tourach_80
- Track 30 : Baoshan_78
- Track 31 : Krypton555_80, Whirlwind_80
- Track 32 : DuncansLeg_79
- Track 33 : Ellson_78
- Track 34 : DyoEdafos_83
- Track 35 : Chaser_77
- Track 36 : Bromden_79
- Track 37 : Douge_78

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

The start number called the most often in the published annotations is 10, it was called in 58 of the 160 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander_63, Blarby_71, BobaPhett_63, Boomer_64, Burwell21_57, ByChance_51, Cabrinians_60, CaptainTrips_56, Chuckly_62, Crumble_54, DRBy19_62, DaWorst_60, DaddyRickover_58, Dante_60, DeadP_65, DirtMcGirt_58, Doug_61, Drago_57, Eish_63, Enby_60, Fancypants_61, Firehouse51_60, IbOuu_60, Jabbawokkie_73, Jarcob_59, Job42_61, Karhdo_56, Kimberlium_62, Koella_53, LilMoolah_57, LittleShirley_58, Llij_55, Lorde_59, MadMen_57, Madiba_57, Marker_61, Mova_60, Mutaforma13_63, Nivrat_55, NormanBulbieJr_59, OldBen_56, PMC_56, Phatniss_57, Philus_62, Pollywog_60, Priscilla_59, QuickMath_61, Rialto_65, Rita_60, Rockne_60, SG4_56, Scottish_57, ShiLan_58, SiSi_57, Soul22_65, Tootsieroll_60, Totinger_61, UncleRicky_58, Veteran_56, Zapner_72, Zerg_59, Zizzle_63,

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

-

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

- Acquire49_78, Appletree2_77, Archie_78, Ariel_129, Astartes_7, Atraxi_7, AvadaKedavra_78, BAKA_131, Bagrid_131, Baoshan_78, Bazzle_78, Beem_133, BigCheese_81, Bobby_123, BobsGarage_81, Bombitas_119, Breezona_81, Bromden_79, Calm_80, Chaser_77, CicholasNage_75, Claus_81, Constella_121, Courthouse_124, Crossroads_81, Dallas_132, DirkDirk_75, DmpstrDiver_131, Douge_78, Dove_124, DrSeegs_81, Duke13_126, DuncansLeg_79, DyoEdafos_83, Ejimix_125, Ellson_78, Enceladus_75, EricMillard_123, Faith1_81, Finemlucis_80, Fullmetal_7, Gabriela_80, Gardann_81, Gonephishing_123, GuuelaD_79, Hafay_82, Halena_76, Halley_133, Hannaconda_122, HokkenD_121, Hughesyang_131,

Itos_80, JoeDirt_78, JuicyJay_128, Kahlid_81, Kalah2_122, KashFlow_127, Keelan_94, Klein_128, Krypton555_80, LeBron_77, Lewan_82, LilDestine_80, LittleE_132, Loadrie_80, Lucky2013_124, MAckerman_75, MiaZeal_129, Miley16_81, Minerva_130, MkaliMitinis3_82, Moleficient_7, Morrill_7, Netyap_82, Nicholasp3_81, NihilNomen_133, Odette_133, OhShagHennessy_75, Omega_139, Optimus_122, Phoebus_132, PhriedRice_7, Porcelain_127, Pound_120, Redno2_123, RicoCaldo_7, Rose5_78, Rumpelstiltskin_78, Schatzie_127, Silverleaf_78, Squint_127, StagePhright_7, Superphikiman_126, Taj_63, Thibault_113, ThirteenKH_7, ThreeRngTarjay_127, Tourach_80, TrippleS_7, Tyson_79, UPIE_77, Vatrix_80, Wamburggrxpress_78, Wanda_130, Whirlwind_80, Wigglewiggles_80, Wilder_82, Winky_81, Wyatt2_79, Yafa_7, Yeet_123, Zakai_82, Zaria_79, Zelink_126, ZhongYanYuan_78,

Summary by start number:

Start 4:

- Found in 55 of 177 (31.1%) of genes in pham
- Manual Annotations of this start: 24 of 160
- Called 43.6% of time when present
- Phage (with cluster) where this start called: Acquire49_78 (L1), Appletree2_77 (L1), Archie_78 (L2), Bazzle_78 (L2), Breezona_81 (L2), DirkDirk_75 (L1), DuncansLeg_79 (L3), Faith1_81 (L2), Finemlucis_80 (L2), Gardann_81 (L2), Itos_80 (L2), JoeDirt_78 (L1), Kahlid_81 (L2), Krypton555_80 (L3), Miley16_81 (L2), MkaliMitinis3_82 (L2), OhShagHennessy_75 (L1), Rumpelstiltskin_78 (L2), Whirlwind_80 (L3), Wilder_82 (L2), Winky_81 (L2), Wyatt2_79 (L1), Zakai_82 (L2), Zaria_79 (L1),

Start 6:

- Found in 4 of 177 (2.3%) of genes in pham
- Manual Annotations of this start: 3 of 160
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bromden_79 (L4), Chaser_77 (L4), Douge_78 (L4), DyoEdafos_83 (L4),

Start 7:

- Found in 1 of 177 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 160
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keelan_94 (DP),

Start 9:

- Found in 26 of 177 (14.7%) of genes in pham
- Manual Annotations of this start: 6 of 160
- Called 30.8% of time when present
- Phage (with cluster) where this start called: Calm_80 (L1), Ellson_78 (L3), Enceladus_75 (L1), Halena_76 (L1), MAckerman_75 (L1), Silverleaf_78 (L1), Tourach_80 (L2), Tyson_79 (L1),

Start 10:

- Found in 62 of 177 (35.0%) of genes in pham
- Manual Annotations of this start: 58 of 160
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Alexphander_63 (F1), Blarby_71 (F), BobaPhett_63 (F1), Boomer_64 (F1), Burwell21_57 (F1), ByChance_51 (F1), Cabrinians_60 (F1), CaptainTrips_56 (F1), Chuckly_62 (F1), Crumble_54 (F1), DRBy19_62 (F1), DaWorst_60 (F1), DaddyRickover_58 (F1), Dante_60 (F1), DeadP_65 (F1), DirtMcgirt_58 (F1), Doug_61 (F1), Drago_57 (F1), Eish_63 (F1), Enby_60 (F1), Fancypants_61 (F1), Firehouse51_60 (F1), IbOuu_60 (F1), Jabbawokkie_73 (F2), Jarcob_59 (F1), Job42_61 (F1), Karhdo_56 (F1), Kimberlium_62 (F1), Koella_53 (F1), LilMoolah_57 (F1), LittleShirley_58 (F1), Llij_55 (F1), Lorde_59 (F1), MadMen_57 (F1), Madiba_57 (F1), Marker_61 (F1), Mova_60 (F1), Mutaforma13_63 (F1), Nivrat_55 (F1), NormanBulbieJr_59 (F1), OldBen_56 (F1), PMC_56 (F1), Phatniss_57 (F1), Philus_62 (F1), Pollywog_60 (F1), Priscilla_59 (F1), QuickMath_61 (F1), Rialto_65 (F1), Rita_60 (F1), Rockne_60 (F1), SG4_56 (F1), Scottish_57 (F1), ShiLan_58 (F1), SiSi_57 (F1), Soul22_65 (F2), Tootsieroll_60 (F1), Totinger_61 (F1), UncleRicky_58 (F1), Veteran_56 (F1), Zapner_72 (F2), Zerg_59 (F1), Zizzle_63 (F1),

Start 11:

- Found in 12 of 177 (6.8%) of genes in pham
- Manual Annotations of this start: 11 of 160
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel_129 (J), Courthouse_124 (J), Gonephishing_123 (J), Hannaconda_122 (J), KashFlow_127 (J), LittleE_132 (J), Lucky2013_124 (J), MiaZeal_129 (J), Omega_139 (J), Porcelain_127 (J), Squint_127 (J), Superphikiman_126 (J),

Start 12:

- Found in 42 of 177 (23.7%) of genes in pham
- Manual Annotations of this start: 37 of 160
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astartes_7 (EK2), Atraxi_7 (EK2), BAKA_131 (J), Bagrid_131 (J), Beem_133 (J), Bobby_123 (J), Bombitas_119 (J), Constella_121 (J), Dallas_132 (J), DmpstrDiver_131 (J), Dove_124 (J), Duke13_126 (J), Ejimix_125 (J), EricMillard_123 (J), Fullmetal_7 (EK2), Halley_133 (J), HokkenD_121 (J), Hughesyang_131 (J), JuicyJay_128 (J), Kalah2_122 (J), Klein_128 (J), Minerva_130 (J), Moleficient_7 (EK2), Morrill_7 (EK2), NihilNomen_133 (J), Odette_133 (J), Optimus_122 (J), Phoebus_132 (J), PhriedRice_7 (EK2), Pound_120 (J), Redno2_123 (J), RicoCaldo_7 (EK2), Schatzie_127 (J), StagePhright_7 (EK2), Thibault_113 (J), ThirteenKH_7 (EK2), ThreeRngTarjay_127 (J), TrippleS_7 (EK2), Wanda_130 (J), Yafa_7 (EK2), Yeet_123 (J), Zelink_126 (J),

Start 15:

- Found in 52 of 177 (29.4%) of genes in pham
- Manual Annotations of this start: 19 of 160
- Called 44.2% of time when present
- Phage (with cluster) where this start called: AvadaKedavra_78 (L1), Baoshan_78 (L2), BigCheese_81 (L2), BobsGarage_81 (L2), CicholasNage_75 (L1), Claus_81 (L2), Crossroads_81 (L2), DrSeegs_81 (L2), Gabriela_80 (L2), GuuelaD_79 (L2), Hafay_82 (L2), LeBron_77 (L1), Lewan_82 (L2), LilDestine_80 (L2), Loadrie_80 (L2), Netyap_82 (L2), Nicholasp3_81 (L2), Rose5_78 (L1), UPIE_77 (L1), Vetrrix_80 (L2), Wamburgxpress_78 (L1), Wigglewiggles_80 (L2), ZhongYanYuan_78 (L2),

Start 17:

- Found in 1 of 177 (0.6%) of genes in pham

- Manual Annotations of this start: 1 of 160
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Taj_63 (F1),

Summary by clusters:

There are 10 clusters represented in this pham: F1, F2, F, J, L4, L2, L3, L1, EK2, DP,

Info for manual annotations of cluster DP:

- Start number 7 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster EK2:

- Start number 12 was manually annotated 9 times for cluster EK2.

Info for manual annotations of cluster F1:

- Start number 10 was manually annotated 55 times for cluster F1.
- Start number 17 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 10 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster J:

- Start number 11 was manually annotated 11 times for cluster J.
- Start number 12 was manually annotated 28 times for cluster J.

Info for manual annotations of cluster L1:

- Start number 4 was manually annotated 7 times for cluster L1.
- Start number 9 was manually annotated 5 times for cluster L1.
- Start number 15 was manually annotated 6 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 4 was manually annotated 14 times for cluster L2.
- Start number 9 was manually annotated 1 time for cluster L2.
- Start number 15 was manually annotated 13 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 4 was manually annotated 3 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 6 was manually annotated 3 times for cluster L4.

Gene Information:

Gene: Acquire49_78 Start: 52009, Stop: 52314, Start Num: 4

Candidate Starts for Acquire49_78:

(Start: 4 @52009 has 24 MA's), (Start: 9 @52024 has 6 MA's), (Start: 15 @52084 has 19 MA's), (27, 52147), (29, 52174), (43, 52297), (45, 52300),

Gene: Alexphander_63 Start: 40422, Stop: 40706, Start Num: 10

Candidate Starts for Alexphander_63:

(5, 40395), (Start: 10 @40422 has 58 MA's), (14, 40446), (16, 40461), (21, 40506), (24, 40518), (34, 40596), (35, 40608), (37, 40632), (39, 40644), (46, 40698),

Gene: Appletree2_77 Start: 51620, Stop: 51925, Start Num: 4

Candidate Starts for Appletree2_77:

(Start: 4 @51620 has 24 MA's), (Start: 9 @51635 has 6 MA's), (Start: 15 @51695 has 19 MA's), (27, 51758), (29, 51785), (35, 51839), (43, 51908), (45, 51911),

Gene: Archie_78 Start: 53502, Stop: 53798, Start Num: 4

Candidate Starts for Archie_78:

(Start: 4 @53502 has 24 MA's), (22, 53607), (25, 53619), (29, 53655), (36, 53712),

Gene: Ariel_129 Start: 68157, Stop: 68387, Start Num: 11

Candidate Starts for Ariel_129:

(Start: 11 @68157 has 11 MA's), (29, 68292), (32, 68316), (33, 68328),

Gene: Astartes_7 Start: 5219, Stop: 4962, Start Num: 12

Candidate Starts for Astartes_7:

(1, 5279), (Start: 12 @5219 has 37 MA's), (26, 5105), (35, 5030), (40, 4985),

Gene: Atraxi_7 Start: 5184, Stop: 4927, Start Num: 12

Candidate Starts for Atraxi_7:

(1, 5244), (Start: 12 @5184 has 37 MA's), (20, 5112), (26, 5070), (35, 4995), (40, 4950),

Gene: AvadaKedavra_78 Start: 52163, Stop: 52393, Start Num: 15

Candidate Starts for AvadaKedavra_78:

(Start: 4 @52088 has 24 MA's), (Start: 9 @52103 has 6 MA's), (Start: 15 @52163 has 19 MA's), (27, 52226), (29, 52253), (43, 52376), (45, 52379),

Gene: BAKA_131 Start: 71128, Stop: 71352, Start Num: 12

Candidate Starts for BAKA_131:

(Start: 12 @71128 has 37 MA's), (27, 71230), (28, 71245), (33, 71293),

Gene: Bagrid_131 Start: 71206, Stop: 71430, Start Num: 12

Candidate Starts for Bagrid_131:

(Start: 12 @71206 has 37 MA's), (27, 71308), (28, 71323), (33, 71371), (35, 71383),

Gene: Baoshan_78 Start: 53848, Stop: 54084, Start Num: 15

Candidate Starts for Baoshan_78:

(Start: 4 @53788 has 24 MA's), (Start: 15 @53848 has 19 MA's), (22, 53893), (25, 53905), (29, 53941), (33, 53983),

Gene: Bazzle_78 Start: 53691, Stop: 53987, Start Num: 4

Candidate Starts for Bazzle_78:

(Start: 4 @53691 has 24 MA's), (Start: 9 @53706 has 6 MA's), (Start: 15 @53751 has 19 MA's), (25, 53808), (27, 53817), (29, 53844), (36, 53901), (38, 53928),

Gene: Beem_133 Start: 72681, Stop: 72905, Start Num: 12

Candidate Starts for Beem_133:

(8, 72654), (Start: 12 @72681 has 37 MA's), (27, 72783), (28, 72798), (33, 72846),

Gene: BigCheese_81 Start: 53978, Stop: 54214, Start Num: 15

Candidate Starts for BigCheese_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Blarby_71 Start: 41835, Stop: 42119, Start Num: 10

Candidate Starts for Blarby_71:

(5, 41808), (Start: 10 @41835 has 58 MA's), (14, 41859), (16, 41874), (21, 41919), (24, 41931), (34, 42009), (35, 42021), (37, 42045), (39, 42057), (46, 42111),

Gene: BobaPhett_63 Start: 42651, Stop: 42935, Start Num: 10

Candidate Starts for BobaPhett_63:

(5, 42624), (Start: 10 @42651 has 58 MA's), (14, 42675), (16, 42690), (21, 42735), (24, 42747), (34, 42825), (35, 42837), (37, 42861), (39, 42873), (46, 42927),

Gene: Bobby_123 Start: 72782, Stop: 73006, Start Num: 12

Candidate Starts for Bobby_123:

(Start: 12 @72782 has 37 MA's), (27, 72884), (28, 72899), (33, 72947),

Gene: BobsGarage_81 Start: 53978, Stop: 54214, Start Num: 15

Candidate Starts for BobsGarage_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Bombitas_119 Start: 70092, Stop: 70316, Start Num: 12

Candidate Starts for Bombitas_119:

(8, 70065), (Start: 12 @70092 has 37 MA's), (27, 70194), (28, 70209), (33, 70257),

Gene: Boomer_64 Start: 42326, Stop: 42610, Start Num: 10

Candidate Starts for Boomer_64:

(5, 42299), (Start: 10 @42326 has 58 MA's), (14, 42350), (16, 42365), (21, 42410), (24, 42422), (34, 42500), (35, 42512), (37, 42536), (39, 42548), (46, 42602),

Gene: Breezona_81 Start: 53918, Stop: 54214, Start Num: 4

Candidate Starts for Breezona_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Bromden_79 Start: 53366, Stop: 53650, Start Num: 6

Candidate Starts for Bromden_79:

(3, 53357), (Start: 6 @53366 has 3 MA's), (Start: 15 @53420 has 19 MA's), (25, 53477), (27, 53486), (29, 53513), (32, 53543), (36, 53570),

Gene: Burwell21_57 Start: 39934, Stop: 40218, Start Num: 10

Candidate Starts for Burwell21_57:

(5, 39907), (Start: 10 @39934 has 58 MA's), (14, 39958), (16, 39973), (21, 40018), (24, 40030), (34, 40108), (35, 40120), (37, 40144), (39, 40156), (46, 40210),

Gene: ByChance_51 Start: 35625, Stop: 35906, Start Num: 10

Candidate Starts for ByChance_51:

(5, 35598), (Start: 10 @35625 has 58 MA's), (14, 35649), (16, 35661), (21, 35706), (24, 35718), (34, 35796), (35, 35808), (37, 35832), (39, 35844), (46, 35898),

Gene: Cabrinians_60 Start: 40012, Stop: 40296, Start Num: 10

Candidate Starts for Cabrinians_60:

(5, 39985), (Start: 10 @40012 has 58 MA's), (14, 40036), (16, 40051), (21, 40096), (24, 40108), (34, 40186), (35, 40198), (37, 40222), (39, 40234), (46, 40288),

Gene: Calm_80 Start: 52346, Stop: 52636, Start Num: 9

Candidate Starts for Calm_80:

(Start: 4 @52331 has 24 MA's), (Start: 9 @52346 has 6 MA's), (Start: 15 @52406 has 19 MA's), (27, 52469), (29, 52496), (43, 52619), (45, 52622),

Gene: CaptainTrips_56 Start: 39508, Stop: 39792, Start Num: 10

Candidate Starts for CaptainTrips_56:

(Start: 10 @39508 has 58 MA's), (14, 39532), (16, 39547), (21, 39592), (24, 39604), (34, 39682), (35, 39694), (37, 39718), (39, 39730), (46, 39784),

Gene: Chaser_77 Start: 52365, Stop: 52655, Start Num: 6

Candidate Starts for Chaser_77:

(Start: 6 @52365 has 3 MA's), (Start: 9 @52374 has 6 MA's), (Start: 15 @52419 has 19 MA's), (22, 52464), (25, 52476), (29, 52512), (30, 52530), (36, 52569),

Gene: Chuckly_62 Start: 40654, Stop: 40938, Start Num: 10

Candidate Starts for Chuckly_62:

(5, 40627), (Start: 10 @40654 has 58 MA's), (14, 40678), (16, 40693), (21, 40738), (24, 40750), (34, 40828), (35, 40840), (37, 40864), (39, 40876), (46, 40930),

Gene: CicholasNage_75 Start: 51748, Stop: 51978, Start Num: 15

Candidate Starts for CicholasNage_75:

(Start: 4 @51673 has 24 MA's), (Start: 9 @51688 has 6 MA's), (Start: 15 @51748 has 19 MA's), (27, 51811), (29, 51838), (43, 51961), (45, 51964),

Gene: Claus_81 Start: 53913, Stop: 54149, Start Num: 15

Candidate Starts for Claus_81:

(Start: 4 @53853 has 24 MA's), (Start: 15 @53913 has 19 MA's), (22, 53958), (25, 53970), (29, 54006), (33, 54048), (35, 54060), (36, 54063),

Gene: Constella_121 Start: 68215, Stop: 68439, Start Num: 12

Candidate Starts for Constella_121:

(Start: 12 @68215 has 37 MA's), (27, 68317), (28, 68332), (33, 68380),

Gene: Courthouse_124 Start: 67757, Stop: 67984, Start Num: 11

Candidate Starts for Courthouse_124:

(Start: 11 @67757 has 11 MA's), (29, 67892), (32, 67916), (33, 67928),

Gene: Crossroads_81 Start: 54053, Stop: 54289, Start Num: 15

Candidate Starts for Crossroads_81:

(Start: 4 @53993 has 24 MA's), (Start: 15 @54053 has 19 MA's), (22, 54098), (25, 54110), (29, 54146), (35, 54200), (36, 54203),

Gene: Crumble_54 Start: 35948, Stop: 36232, Start Num: 10

Candidate Starts for Crumble_54:

(5, 35921), (Start: 10 @35948 has 58 MA's), (14, 35972), (16, 35987), (21, 36032), (24, 36044), (34, 36122), (35, 36134), (37, 36158), (39, 36170), (46, 36224),

Gene: DRBy19_62 Start: 41112, Stop: 41393, Start Num: 10

Candidate Starts for DRBy19_62:

(5, 41085), (Start: 10 @41112 has 58 MA's), (23, 41196), (25, 41205), (31, 41268), (34, 41283), (35, 41295), (37, 41319), (39, 41331), (46, 41385),

Gene: DaWorst_60 Start: 40413, Stop: 40697, Start Num: 10

Candidate Starts for DaWorst_60:

(5, 40386), (Start: 10 @40413 has 58 MA's), (14, 40437), (16, 40452), (21, 40497), (34, 40587), (35, 40599), (37, 40623), (39, 40635), (46, 40689),

Gene: DaddyRickover_58 Start: 40151, Stop: 40435, Start Num: 10

Candidate Starts for DaddyRickover_58:

(5, 40124), (Start: 10 @40151 has 58 MA's), (14, 40175), (16, 40190), (21, 40235), (24, 40247), (34, 40325), (35, 40337), (37, 40361), (39, 40373), (46, 40427),

Gene: Dallas_132 Start: 72193, Stop: 72417, Start Num: 12

Candidate Starts for Dallas_132:

(Start: 12 @72193 has 37 MA's), (27, 72295), (28, 72310), (33, 72358),

Gene: Dante_60 Start: 39936, Stop: 40220, Start Num: 10

Candidate Starts for Dante_60:

(5, 39909), (Start: 10 @39936 has 58 MA's), (14, 39960), (16, 39975), (21, 40020), (24, 40032), (34, 40110), (35, 40122), (37, 40146), (39, 40158), (46, 40212),

Gene: DeadP_65 Start: 42582, Stop: 42848, Start Num: 10

Candidate Starts for DeadP_65:

(Start: 10 @42582 has 58 MA's), (14, 42606), (16, 42621), (21, 42666), (24, 42678), (34, 42756), (35, 42768), (37, 42792),

Gene: DirkDirk_75 Start: 51200, Stop: 51505, Start Num: 4

Candidate Starts for DirkDirk_75:

(Start: 4 @51200 has 24 MA's), (Start: 9 @51215 has 6 MA's), (Start: 15 @51275 has 19 MA's), (27, 51338), (29, 51365), (35, 51419), (43, 51488), (45, 51491),

Gene: DirtMcgirt_58 Start: 38676, Stop: 38960, Start Num: 10

Candidate Starts for DirtMcgirt_58:

(5, 38649), (Start: 10 @38676 has 58 MA's), (14, 38700), (16, 38715), (21, 38760), (24, 38772), (34, 38850), (35, 38862), (37, 38886), (39, 38898), (46, 38952),

Gene: DmpstrDiver_131 Start: 71495, Stop: 71719, Start Num: 12

Candidate Starts for DmpstrDiver_131:

(Start: 12 @71495 has 37 MA's), (27, 71597), (28, 71612), (33, 71660), (35, 71672),

Gene: Doug_61 Start: 40679, Stop: 40963, Start Num: 10

Candidate Starts for Doug_61:

(5, 40652), (Start: 10 @40679 has 58 MA's), (14, 40703), (16, 40718), (21, 40763), (24, 40775), (34, 40853), (35, 40865), (37, 40889), (39, 40901), (46, 40955),

Gene: Douge_78 Start: 52288, Stop: 52587, Start Num: 6

Candidate Starts for Douge_78:

(Start: 6 @52288 has 3 MA's), (13, 52318), (Start: 15 @52342 has 19 MA's), (25, 52399), (27, 52408), (29, 52435), (32, 52465),

Gene: Dove_124 Start: 67139, Stop: 67363, Start Num: 12

Candidate Starts for Dove_124:

(Start: 12 @67139 has 37 MA's), (27, 67241), (28, 67256), (33, 67304),

Gene: DrSeegs_81 Start: 53978, Stop: 54214, Start Num: 15

Candidate Starts for DrSeegs_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Drago_57 Start: 38679, Stop: 38963, Start Num: 10

Candidate Starts for Drago_57:

(5, 38652), (Start: 10 @38679 has 58 MA's), (14, 38703), (16, 38718), (21, 38763), (24, 38775), (34, 38853), (35, 38865), (37, 38889), (39, 38901), (46, 38955),

Gene: Duke13_126 Start: 68796, Stop: 69020, Start Num: 12

Candidate Starts for Duke13_126:

(Start: 12 @68796 has 37 MA's), (27, 68898), (28, 68913), (33, 68961),

Gene: DuncansLeg_79 Start: 53780, Stop: 54082, Start Num: 4

Candidate Starts for DuncansLeg_79:

(Start: 4 @53780 has 24 MA's), (Start: 9 @53795 has 6 MA's), (29, 53933),

Gene: DyoEdafos_83 Start: 53198, Stop: 53488, Start Num: 6

Candidate Starts for DyoEdafos_83:

(Start: 6 @53198 has 3 MA's), (13, 53228), (Start: 15 @53252 has 19 MA's), (25, 53309), (27, 53318), (29, 53345), (32, 53375), (36, 53402),

Gene: Eish_63 Start: 40928, Stop: 41212, Start Num: 10

Candidate Starts for Eish_63:

(5, 40901), (Start: 10 @40928 has 58 MA's), (14, 40952), (16, 40967), (21, 41012), (34, 41102), (35, 41114), (37, 41138), (39, 41150), (46, 41204),

Gene: Ejimix_125 Start: 72261, Stop: 72485, Start Num: 12

Candidate Starts for Ejimix_125:

(Start: 12 @72261 has 37 MA's), (27, 72363), (28, 72378), (33, 72426),

Gene: Ellson_78 Start: 54110, Stop: 54397, Start Num: 9

Candidate Starts for Ellson_78:

(Start: 4 @54095 has 24 MA's), (Start: 9 @54110 has 6 MA's), (29, 54248),

Gene: Enby_60 Start: 38955, Stop: 39239, Start Num: 10

Candidate Starts for Enby_60:

(Start: 10 @38955 has 58 MA's), (14, 38979), (16, 38994), (21, 39039), (24, 39051), (34, 39129), (35, 39141), (37, 39165), (39, 39177), (46, 39231),

Gene: Enceladus_75 Start: 51992, Stop: 52282, Start Num: 9

Candidate Starts for Enceladus_75:

(Start: 4 @51977 has 24 MA's), (Start: 9 @51992 has 6 MA's), (Start: 15 @52052 has 19 MA's), (27, 52115), (29, 52142), (35, 52196), (43, 52265), (45, 52268),

Gene: EricMillard_123 Start: 70765, Stop: 70989, Start Num: 12

Candidate Starts for EricMillard_123:

(Start: 12 @70765 has 37 MA's), (27, 70867), (28, 70882), (33, 70930),

Gene: Faith1_81 Start: 53918, Stop: 54214, Start Num: 4

Candidate Starts for Faith1_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Fancypants_61 Start: 40646, Stop: 40930, Start Num: 10

Candidate Starts for Fancypants_61:

(5, 40619), (Start: 10 @40646 has 58 MA's), (14, 40670), (16, 40685), (21, 40730), (24, 40742), (34, 40820), (35, 40832), (37, 40856), (39, 40868), (46, 40922),

Gene: Finemlucis_80 Start: 54386, Stop: 54682, Start Num: 4

Candidate Starts for Finemlucis_80:

(Start: 4 @54386 has 24 MA's), (27, 54512), (29, 54539), (32, 54569), (35, 54593),

Gene: Firehouse51_60 Start: 43530, Stop: 43814, Start Num: 10

Candidate Starts for Firehouse51_60:

(5, 43503), (Start: 10 @43530 has 58 MA's), (14, 43554), (16, 43569), (21, 43614), (24, 43626), (34, 43704), (35, 43716), (37, 43740), (39, 43752), (46, 43806),

Gene: Fullmetal_7 Start: 5216, Stop: 4959, Start Num: 12

Candidate Starts for Fullmetal_7:

(1, 5276), (Start: 12 @5216 has 37 MA's), (26, 5102), (35, 5027), (40, 4982),

Gene: Gabriela_80 Start: 53324, Stop: 53560, Start Num: 15

Candidate Starts for Gabriela_80:

(Start: 4 @53264 has 24 MA's), (Start: 15 @53324 has 19 MA's), (22, 53369), (25, 53381), (29, 53417), (35, 53471), (36, 53474),

Gene: Gardann_81 Start: 53753, Stop: 54049, Start Num: 4

Candidate Starts for Gardann_81:

(Start: 4 @53753 has 24 MA's), (Start: 15 @53813 has 19 MA's), (22, 53858), (25, 53870), (29, 53906), (35, 53960), (36, 53963),

Gene: Gonephishing_123 Start: 67355, Stop: 67585, Start Num: 11

Candidate Starts for Gonephishing_123:

(Start: 11 @67355 has 11 MA's), (29, 67490), (32, 67514), (33, 67526),

Gene: GuuelaD_79 Start: 54093, Stop: 54329, Start Num: 15

Candidate Starts for GuuelaD_79:

(Start: 4 @54033 has 24 MA's), (Start: 15 @54093 has 19 MA's), (22, 54138), (25, 54150), (29, 54186), (35, 54240), (36, 54243),

Gene: Hafay_82 Start: 53908, Stop: 54144, Start Num: 15

Candidate Starts for Hafay_82:

(Start: 4 @53848 has 24 MA's), (Start: 15 @53908 has 19 MA's), (22, 53953), (25, 53965), (29, 54001), (33, 54043), (35, 54055), (36, 54058),

Gene: Halena_76 Start: 51262, Stop: 51552, Start Num: 9

Candidate Starts for Halena_76:

(Start: 4 @51247 has 24 MA's), (Start: 9 @51262 has 6 MA's), (Start: 15 @51322 has 19 MA's), (27, 51385), (29, 51412), (43, 51535), (45, 51538),

Gene: Halley_133 Start: 72577, Stop: 72801, Start Num: 12

Candidate Starts for Halley_133:

(Start: 12 @72577 has 37 MA's), (27, 72679), (28, 72694), (33, 72742),

Gene: Hannaconda_122 Start: 68008, Stop: 68238, Start Num: 11

Candidate Starts for Hannaconda_122:

(Start: 11 @68008 has 11 MA's), (32, 68167), (33, 68179),

Gene: HokkenD_121 Start: 70940, Stop: 71164, Start Num: 12

Candidate Starts for HokkenD_121:

(Start: 12 @70940 has 37 MA's), (27, 71042), (28, 71057), (33, 71105),

Gene: Hughesyang_131 Start: 72302, Stop: 72526, Start Num: 12

Candidate Starts for Hughesyang_131:

(Start: 12 @72302 has 37 MA's), (27, 72404), (28, 72419), (33, 72467),

Gene: lbOuu_60 Start: 40412, Stop: 40696, Start Num: 10

Candidate Starts for lbOuu_60:

(Start: 10 @40412 has 58 MA's), (14, 40436), (16, 40451), (21, 40496), (24, 40508), (34, 40586), (35, 40598), (37, 40622), (39, 40634), (46, 40688),

Gene: Itos_80 Start: 52824, Stop: 53120, Start Num: 4

Candidate Starts for Itos_80:

(Start: 4 @52824 has 24 MA's), (Start: 15 @52884 has 19 MA's), (22, 52929), (25, 52941), (29, 52977), (35, 53031), (36, 53034),

Gene: Jabbawokkie_73 Start: 41755, Stop: 42039, Start Num: 10

Candidate Starts for Jabbawokkie_73:

(5, 41728), (Start: 10 @41755 has 58 MA's), (14, 41779), (16, 41794), (21, 41839), (24, 41851), (34, 41929), (35, 41941), (37, 41965), (39, 41977), (46, 42031),

Gene: Jacob_59 Start: 39980, Stop: 40264, Start Num: 10

Candidate Starts for Jacob_59:

(5, 39953), (Start: 10 @39980 has 58 MA's), (14, 40004), (16, 40019), (21, 40064), (24, 40076), (34, 40154), (35, 40166), (37, 40190), (39, 40202), (46, 40256),

Gene: Job42_61 Start: 41920, Stop: 42201, Start Num: 10

Candidate Starts for Job42_61:

(5, 41893), (Start: 10 @41920 has 58 MA's), (23, 42004), (25, 42013), (31, 42076), (34, 42091), (35, 42103), (37, 42127), (39, 42139), (46, 42193),

Gene: JoeDirt_78 Start: 52575, Stop: 52880, Start Num: 4

Candidate Starts for JoeDirt_78:

(Start: 4 @52575 has 24 MA's), (Start: 9 @52590 has 6 MA's), (Start: 15 @52650 has 19 MA's), (27, 52713), (29, 52740), (35, 52794), (43, 52863), (45, 52866),

Gene: JuicyJay_128 Start: 73817, Stop: 74041, Start Num: 12

Candidate Starts for JuicyJay_128:

(8, 73790), (Start: 12 @73817 has 37 MA's), (27, 73919), (28, 73934), (33, 73982),

Gene: Kahlid_81 Start: 53924, Stop: 54220, Start Num: 4

Candidate Starts for Kahlid_81:

(Start: 4 @53924 has 24 MA's), (Start: 15 @53984 has 19 MA's), (22, 54029), (25, 54041), (29, 54077), (35, 54131), (36, 54134),

Gene: Kalah2_122 Start: 71108, Stop: 71332, Start Num: 12
Candidate Starts for Kalah2_122:
(Start: 12 @71108 has 37 MA's), (27, 71210), (28, 71225), (33, 71273), (35, 71285),

Gene: Karhdo_56 Start: 39525, Stop: 39809, Start Num: 10
Candidate Starts for Karhdo_56:
(5, 39498), (Start: 10 @39525 has 58 MA's), (14, 39549), (16, 39564), (21, 39609), (24, 39621), (34, 39699), (35, 39711), (37, 39735), (39, 39747), (46, 39801),

Gene: KashFlow_127 Start: 69790, Stop: 70017, Start Num: 11
Candidate Starts for KashFlow_127:
(Start: 11 @69790 has 11 MA's), (29, 69925), (32, 69949), (33, 69961),

Gene: Keelan_94 Start: 48287, Stop: 48550, Start Num: 7
Candidate Starts for Keelan_94:
(Start: 7 @48287 has 1 MA's), (18, 48365), (26, 48419), (41, 48542),

Gene: Kimberlium_62 Start: 41811, Stop: 42092, Start Num: 10
Candidate Starts for Kimberlium_62:
(2, 41775), (Start: 10 @41811 has 58 MA's), (14, 41835), (21, 41892), (24, 41904), (34, 41982), (35, 41994), (37, 42018), (39, 42030), (46, 42084),

Gene: Klein_128 Start: 69498, Stop: 69722, Start Num: 12
Candidate Starts for Klein_128:
(Start: 12 @69498 has 37 MA's), (27, 69600), (28, 69615), (33, 69663),

Gene: Koella_53 Start: 35910, Stop: 36194, Start Num: 10
Candidate Starts for Koella_53:
(5, 35883), (Start: 10 @35910 has 58 MA's), (14, 35934), (16, 35949), (21, 35994), (24, 36006), (34, 36084), (35, 36096), (37, 36120), (39, 36132), (46, 36186),

Gene: Krypton555_80 Start: 54028, Stop: 54342, Start Num: 4
Candidate Starts for Krypton555_80:
(Start: 4 @54028 has 24 MA's), (Start: 9 @54043 has 6 MA's), (25, 54154), (29, 54190), (44, 54322),

Gene: LeBron_77 Start: 51321, Stop: 51551, Start Num: 15
Candidate Starts for LeBron_77:
(Start: 4 @51246 has 24 MA's), (Start: 9 @51261 has 6 MA's), (Start: 15 @51321 has 19 MA's), (27, 51384), (29, 51411), (43, 51534), (45, 51537),

Gene: Lewan_82 Start: 54036, Stop: 54272, Start Num: 15
Candidate Starts for Lewan_82:
(Start: 4 @53976 has 24 MA's), (Start: 15 @54036 has 19 MA's), (22, 54081), (25, 54093), (29, 54129), (35, 54183), (36, 54186),

Gene: LilDestine_80 Start: 53888, Stop: 54124, Start Num: 15
Candidate Starts for LilDestine_80:
(Start: 4 @53828 has 24 MA's), (Start: 15 @53888 has 19 MA's), (22, 53933), (25, 53945), (29, 53981), (36, 54038),

Gene: LilMoolah_57 Start: 39425, Stop: 39706, Start Num: 10
Candidate Starts for LilMoolah_57:

(5, 39398), (Start: 10 @39425 has 58 MA's), (23, 39509), (25, 39518), (31, 39581), (34, 39596), (35, 39608), (37, 39632), (39, 39644), (46, 39698),

Gene: LittleE_132 Start: 70999, Stop: 71229, Start Num: 11

Candidate Starts for LittleE_132:

(Start: 11 @70999 has 11 MA's), (29, 71134), (32, 71158), (33, 71170),

Gene: LittleShirley_58 Start: 40469, Stop: 40753, Start Num: 10

Candidate Starts for LittleShirley_58:

(5, 40442), (Start: 10 @40469 has 58 MA's), (14, 40493), (16, 40508), (21, 40553), (24, 40565), (34, 40643), (35, 40655), (37, 40679), (39, 40691), (46, 40745),

Gene: Llij_55 Start: 38833, Stop: 39117, Start Num: 10

Candidate Starts for Llij_55:

(5, 38806), (Start: 10 @38833 has 58 MA's), (14, 38857), (16, 38872), (21, 38917), (24, 38929), (34, 39007), (35, 39019), (37, 39043), (39, 39055), (46, 39109),

Gene: Loadrie_80 Start: 54063, Stop: 54299, Start Num: 15

Candidate Starts for Loadrie_80:

(Start: 4 @54003 has 24 MA's), (Start: 15 @54063 has 19 MA's), (22, 54108), (25, 54120), (29, 54156), (35, 54210), (36, 54213),

Gene: Lorde_59 Start: 38120, Stop: 38404, Start Num: 10

Candidate Starts for Lorde_59:

(5, 38093), (Start: 10 @38120 has 58 MA's), (14, 38144), (16, 38159), (21, 38204), (24, 38216), (34, 38294), (35, 38306), (37, 38330), (39, 38342), (46, 38396),

Gene: Lucky2013_124 Start: 67876, Stop: 68106, Start Num: 11

Candidate Starts for Lucky2013_124:

(Start: 11 @67876 has 11 MA's), (29, 68011), (32, 68035), (33, 68047),

Gene: MAckerman_75 Start: 51255, Stop: 51545, Start Num: 9

Candidate Starts for MAckerman_75:

(Start: 4 @51240 has 24 MA's), (Start: 9 @51255 has 6 MA's), (Start: 15 @51315 has 19 MA's), (27, 51378), (29, 51405), (43, 51528), (45, 51531),

Gene: MadMen_57 Start: 39757, Stop: 40041, Start Num: 10

Candidate Starts for MadMen_57:

(5, 39730), (Start: 10 @39757 has 58 MA's), (14, 39781), (16, 39796), (21, 39841), (24, 39853), (34, 39931), (35, 39943), (37, 39967), (39, 39979), (46, 40033),

Gene: Madiba_57 Start: 39006, Stop: 39290, Start Num: 10

Candidate Starts for Madiba_57:

(5, 38979), (Start: 10 @39006 has 58 MA's), (14, 39030), (16, 39045), (21, 39090), (24, 39102), (34, 39180), (35, 39192), (37, 39216), (39, 39228), (46, 39282),

Gene: Marker_61 Start: 40100, Stop: 40384, Start Num: 10

Candidate Starts for Marker_61:

(5, 40073), (Start: 10 @40100 has 58 MA's), (14, 40124), (16, 40139), (21, 40184), (24, 40196), (34, 40274), (35, 40286), (37, 40310), (39, 40322), (46, 40376),

Gene: MiaZeal_129 Start: 69014, Stop: 69244, Start Num: 11

Candidate Starts for MiaZeal_129:

(Start: 11 @69014 has 11 MA's), (32, 69173), (33, 69185),

Gene: Miley16_81 Start: 53918, Stop: 54214, Start Num: 4

Candidate Starts for Miley16_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Minerva_130 Start: 70903, Stop: 71127, Start Num: 12

Candidate Starts for Minerva_130:

(Start: 12 @70903 has 37 MA's), (27, 71005), (28, 71020), (33, 71068),

Gene: MkaliMitinis3_82 Start: 53987, Stop: 54283, Start Num: 4

Candidate Starts for MkaliMitinis3_82:

(Start: 4 @53987 has 24 MA's), (Start: 15 @54047 has 19 MA's), (22, 54092), (25, 54104), (29, 54140), (35, 54194), (36, 54197),

Gene: Moleficent_7 Start: 5213, Stop: 4956, Start Num: 12

Candidate Starts for Moleficent_7:

(1, 5273), (Start: 12 @5213 has 37 MA's), (26, 5099), (35, 5024), (40, 4979),

Gene: Morrill_7 Start: 5168, Stop: 4911, Start Num: 12

Candidate Starts for Morrill_7:

(1, 5228), (Start: 12 @5168 has 37 MA's), (20, 5096), (26, 5054), (35, 4979), (40, 4934),

Gene: Mova_60 Start: 39510, Stop: 39794, Start Num: 10

Candidate Starts for Mova_60:

(5, 39483), (Start: 10 @39510 has 58 MA's), (14, 39534), (16, 39549), (21, 39594), (24, 39606), (34, 39684), (35, 39696), (37, 39720), (39, 39732), (46, 39786),

Gene: Mutaforma13_63 Start: 42840, Stop: 43124, Start Num: 10

Candidate Starts for Mutaforma13_63:

(5, 42813), (Start: 10 @42840 has 58 MA's), (14, 42864), (16, 42879), (21, 42924), (24, 42936), (34, 43014), (35, 43026), (37, 43050), (39, 43062), (46, 43116),

Gene: Netyap_82 Start: 53979, Stop: 54215, Start Num: 15

Candidate Starts for Netyap_82:

(Start: 4 @53919 has 24 MA's), (Start: 15 @53979 has 19 MA's), (22, 54024), (25, 54036), (29, 54072), (35, 54126), (36, 54129),

Gene: Nicholasp3_81 Start: 53813, Stop: 54049, Start Num: 15

Candidate Starts for Nicholasp3_81:

(Start: 4 @53753 has 24 MA's), (Start: 15 @53813 has 19 MA's), (22, 53858), (25, 53870), (29, 53906), (35, 53960), (36, 53963),

Gene: NihilNomen_133 Start: 71762, Stop: 71986, Start Num: 12

Candidate Starts for NihilNomen_133:

(8, 71735), (Start: 12 @71762 has 37 MA's), (27, 71864), (28, 71879), (33, 71927),

Gene: Nivrat_55 Start: 39298, Stop: 39579, Start Num: 10

Candidate Starts for Nivrat_55:

(5, 39271), (Start: 10 @39298 has 58 MA's), (23, 39382), (25, 39391), (31, 39454), (34, 39469), (35, 39481), (37, 39505), (39, 39517), (46, 39571),

Gene: NormanBulbieJr_59 Start: 39923, Stop: 40207, Start Num: 10
Candidate Starts for NormanBulbieJr_59:
(5, 39896), (Start: 10 @39923 has 58 MA's), (14, 39947), (16, 39962), (21, 40007), (24, 40019), (34, 40097), (35, 40109), (37, 40133), (39, 40145), (46, 40199),

Gene: Odette_133 Start: 72857, Stop: 73081, Start Num: 12
Candidate Starts for Odette_133:
(Start: 12 @72857 has 37 MA's), (27, 72959), (28, 72974), (33, 73022),

Gene: OhShagHennessy_75 Start: 51278, Stop: 51583, Start Num: 4
Candidate Starts for OhShagHennessy_75:
(Start: 4 @51278 has 24 MA's), (Start: 9 @51293 has 6 MA's), (Start: 15 @51353 has 19 MA's), (27, 51416), (29, 51443), (35, 51497), (43, 51566), (45, 51569),

Gene: OldBen_56 Start: 39848, Stop: 40132, Start Num: 10
Candidate Starts for OldBen_56:
(5, 39821), (Start: 10 @39848 has 58 MA's), (14, 39872), (16, 39887), (21, 39932), (24, 39944), (34, 40022), (35, 40034), (37, 40058), (39, 40070), (46, 40124),

Gene: Omega_139 Start: 72680, Stop: 72910, Start Num: 11
Candidate Starts for Omega_139:
(Start: 11 @72680 has 11 MA's), (29, 72815), (32, 72839), (33, 72851),

Gene: Optimus_122 Start: 69299, Stop: 69523, Start Num: 12
Candidate Starts for Optimus_122:
(Start: 12 @69299 has 37 MA's), (27, 69401), (28, 69416), (33, 69464), (35, 69476),

Gene: PMC_56 Start: 40550, Stop: 40834, Start Num: 10
Candidate Starts for PMC_56:
(5, 40523), (Start: 10 @40550 has 58 MA's), (14, 40574), (16, 40589), (21, 40634), (24, 40646), (34, 40724), (35, 40736), (37, 40760), (39, 40772), (46, 40826),

Gene: Phatniss_57 Start: 39928, Stop: 40212, Start Num: 10
Candidate Starts for Phatniss_57:
(5, 39901), (Start: 10 @39928 has 58 MA's), (14, 39952), (16, 39967), (21, 40012), (24, 40024), (34, 40102), (35, 40114), (37, 40138), (39, 40150), (46, 40204),

Gene: Philus_62 Start: 41088, Stop: 41369, Start Num: 10
Candidate Starts for Philus_62:
(5, 41061), (Start: 10 @41088 has 58 MA's), (23, 41172), (25, 41181), (31, 41244), (34, 41259), (35, 41271), (37, 41295), (39, 41307), (46, 41361),

Gene: Phoebus_132 Start: 73656, Stop: 73880, Start Num: 12
Candidate Starts for Phoebus_132:
(Start: 12 @73656 has 37 MA's), (27, 73758), (28, 73773), (33, 73821),

Gene: PhriedRice_7 Start: 5180, Stop: 4923, Start Num: 12
Candidate Starts for PhriedRice_7:
(1, 5240), (Start: 12 @5180 has 37 MA's), (26, 5066), (35, 4991), (40, 4946),

Gene: Pollywog_60 Start: 40759, Stop: 41043, Start Num: 10
Candidate Starts for Pollywog_60:

(5, 40732), (Start: 10 @40759 has 58 MA's), (14, 40783), (16, 40798), (21, 40843), (24, 40855), (34, 40933), (35, 40945), (37, 40969), (39, 40981), (46, 41035),

Gene: Porcelain_127 Start: 68822, Stop: 69052, Start Num: 11

Candidate Starts for Porcelain_127:

(Start: 11 @68822 has 11 MA's), (29, 68957), (32, 68981), (33, 68993),

Gene: Pound_120 Start: 70039, Stop: 70263, Start Num: 12

Candidate Starts for Pound_120:

(Start: 12 @70039 has 37 MA's), (27, 70141), (28, 70156), (33, 70204), (35, 70216),

Gene: Priscilla_59 Start: 40022, Stop: 40306, Start Num: 10

Candidate Starts for Priscilla_59:

(5, 39995), (Start: 10 @40022 has 58 MA's), (14, 40046), (16, 40061), (21, 40106), (24, 40118), (34, 40196), (35, 40208), (37, 40232), (39, 40244), (46, 40298),

Gene: QuickMath_61 Start: 42034, Stop: 42315, Start Num: 10

Candidate Starts for QuickMath_61:

(2, 41998), (Start: 10 @42034 has 58 MA's), (14, 42058), (21, 42115), (24, 42127), (34, 42205), (35, 42217), (37, 42241), (39, 42253), (46, 42307),

Gene: Redno2_123 Start: 69089, Stop: 69313, Start Num: 12

Candidate Starts for Redno2_123:

(Start: 12 @69089 has 37 MA's), (27, 69191), (28, 69206), (33, 69254),

Gene: Rialto_65 Start: 42826, Stop: 43110, Start Num: 10

Candidate Starts for Rialto_65:

(5, 42799), (Start: 10 @42826 has 58 MA's), (14, 42850), (16, 42865), (21, 42910), (24, 42922), (34, 43000), (35, 43012), (37, 43036), (39, 43048), (46, 43102),

Gene: RicoCaldo_7 Start: 5210, Stop: 4953, Start Num: 12

Candidate Starts for RicoCaldo_7:

(1, 5270), (Start: 12 @5210 has 37 MA's), (26, 5096), (35, 5021), (40, 4976),

Gene: Rita_60 Start: 38653, Stop: 38937, Start Num: 10

Candidate Starts for Rita_60:

(5, 38626), (Start: 10 @38653 has 58 MA's), (14, 38677), (16, 38692), (21, 38737), (24, 38749), (34, 38827), (35, 38839), (37, 38863), (39, 38875), (46, 38929),

Gene: Rockne_60 Start: 40562, Stop: 40846, Start Num: 10

Candidate Starts for Rockne_60:

(5, 40535), (Start: 10 @40562 has 58 MA's), (14, 40586), (16, 40601), (21, 40646), (24, 40658), (34, 40736), (35, 40748), (37, 40772), (39, 40784), (46, 40838),

Gene: Rose5_78 Start: 52495, Stop: 52725, Start Num: 15

Candidate Starts for Rose5_78:

(Start: 4 @52420 has 24 MA's), (Start: 9 @52435 has 6 MA's), (Start: 15 @52495 has 19 MA's), (27, 52558), (29, 52585), (43, 52708), (45, 52711),

Gene: Rumpelstiltskin_78 Start: 53546, Stop: 53842, Start Num: 4

Candidate Starts for Rumpelstiltskin_78:

(Start: 4 @53546 has 24 MA's), (Start: 15 @53606 has 19 MA's), (22, 53651), (25, 53663), (29, 53699), (35, 53753), (36, 53756),

Gene: SG4_56 Start: 39440, Stop: 39724, Start Num: 10

Candidate Starts for SG4_56:

(Start: 10 @39440 has 58 MA's), (14, 39464), (16, 39479), (21, 39524), (24, 39536), (34, 39614), (35, 39626), (37, 39650), (39, 39662), (46, 39716),

Gene: Schatzie_127 Start: 71752, Stop: 71976, Start Num: 12

Candidate Starts for Schatzie_127:

(Start: 12 @71752 has 37 MA's), (27, 71854), (28, 71869), (33, 71917), (35, 71929),

Gene: Scottish_57 Start: 39568, Stop: 39852, Start Num: 10

Candidate Starts for Scottish_57:

(5, 39541), (Start: 10 @39568 has 58 MA's), (14, 39592), (16, 39607), (21, 39652), (24, 39664), (34, 39742), (35, 39754), (37, 39778), (39, 39790), (46, 39844),

Gene: ShiLan_58 Start: 39969, Stop: 40253, Start Num: 10

Candidate Starts for ShiLan_58:

(5, 39942), (Start: 10 @39969 has 58 MA's), (14, 39993), (16, 40008), (21, 40053), (24, 40065), (34, 40143), (35, 40155), (37, 40179), (39, 40191), (46, 40245),

Gene: SiSi_57 Start: 39342, Stop: 39626, Start Num: 10

Candidate Starts for SiSi_57:

(5, 39315), (Start: 10 @39342 has 58 MA's), (14, 39366), (16, 39381), (21, 39426), (24, 39438), (34, 39516), (35, 39528), (37, 39552), (39, 39564), (46, 39618),

Gene: Silverleaf_78 Start: 51891, Stop: 52181, Start Num: 9

Candidate Starts for Silverleaf_78:

(Start: 4 @51876 has 24 MA's), (Start: 9 @51891 has 6 MA's), (Start: 15 @51951 has 19 MA's), (27, 52014), (29, 52041), (43, 52164), (45, 52167),

Gene: Soul22_65 Start: 41527, Stop: 41811, Start Num: 10

Candidate Starts for Soul22_65:

(5, 41500), (Start: 10 @41527 has 58 MA's), (14, 41551), (16, 41566), (21, 41611), (24, 41623), (34, 41701), (35, 41713), (37, 41737), (39, 41749), (46, 41803),

Gene: Squint_127 Start: 69127, Stop: 69354, Start Num: 11

Candidate Starts for Squint_127:

(Start: 11 @69127 has 11 MA's), (29, 69262), (32, 69286), (33, 69298),

Gene: StagePhright_7 Start: 5180, Stop: 4923, Start Num: 12

Candidate Starts for StagePhright_7:

(1, 5240), (Start: 12 @5180 has 37 MA's), (26, 5066), (35, 4991), (40, 4946),

Gene: Superphikiman_126 Start: 68039, Stop: 68266, Start Num: 11

Candidate Starts for Superphikiman_126:

(Start: 11 @68039 has 11 MA's), (29, 68174), (32, 68198), (33, 68210),

Gene: Taj_63 Start: 41748, Stop: 41978, Start Num: 17

Candidate Starts for Taj_63:

(Start: 17 @41748 has 1 MA's), (19, 41757), (34, 41871), (35, 41883), (37, 41907), (39, 41919), (46, 41970),

Gene: Thibault_113 Start: 66424, Stop: 66648, Start Num: 12

Candidate Starts for Thibault_113:

(Start: 12 @66424 has 37 MA's), (27, 66526), (28, 66541), (33, 66589),

Gene: ThirteenKH_7 Start: 5168, Stop: 4911, Start Num: 12

Candidate Starts for ThirteenKH_7:

(1, 5228), (Start: 12 @5168 has 37 MA's), (20, 5096), (26, 5054), (35, 4979), (40, 4934),

Gene: ThreeRngTarjay_127 Start: 72247, Stop: 72471, Start Num: 12

Candidate Starts for ThreeRngTarjay_127:

(Start: 12 @72247 has 37 MA's), (27, 72349), (28, 72364), (33, 72412),

Gene: Tootsieroll_60 Start: 39265, Stop: 39549, Start Num: 10

Candidate Starts for Tootsieroll_60:

(5, 39238), (Start: 10 @39265 has 58 MA's), (14, 39289), (16, 39304), (21, 39349), (24, 39361), (34, 39439), (35, 39451), (37, 39475), (39, 39487), (46, 39541),

Gene: Totinger_61 Start: 39195, Stop: 39479, Start Num: 10

Candidate Starts for Totinger_61:

(5, 39168), (Start: 10 @39195 has 58 MA's), (14, 39219), (16, 39234), (21, 39279), (24, 39291), (34, 39369), (35, 39381), (37, 39405), (39, 39417), (46, 39471),

Gene: Tourach_80 Start: 54051, Stop: 54332, Start Num: 9

Candidate Starts for Tourach_80:

(Start: 4 @54036 has 24 MA's), (Start: 9 @54051 has 6 MA's), (27, 54162), (29, 54189), (32, 54219), (42, 54306),

Gene: TrippleS_7 Start: 5168, Stop: 4911, Start Num: 12

Candidate Starts for TrippleS_7:

(1, 5228), (Start: 12 @5168 has 37 MA's), (20, 5096), (26, 5054), (35, 4979), (40, 4934),

Gene: Tyson_79 Start: 52361, Stop: 52651, Start Num: 9

Candidate Starts for Tyson_79:

(Start: 4 @52346 has 24 MA's), (Start: 9 @52361 has 6 MA's), (Start: 15 @52421 has 19 MA's), (27, 52484), (29, 52511), (43, 52634), (45, 52637),

Gene: UPIE_77 Start: 52017, Stop: 52247, Start Num: 15

Candidate Starts for UPIE_77:

(Start: 4 @51942 has 24 MA's), (Start: 9 @51957 has 6 MA's), (Start: 15 @52017 has 19 MA's), (27, 52080), (29, 52107), (43, 52230), (45, 52233),

Gene: UncleRicky_58 Start: 40176, Stop: 40460, Start Num: 10

Candidate Starts for UncleRicky_58:

(5, 40149), (Start: 10 @40176 has 58 MA's), (14, 40200), (16, 40215), (21, 40260), (24, 40272), (34, 40350), (35, 40362), (37, 40386), (39, 40398), (46, 40452),

Gene: Veteran_56 Start: 38956, Stop: 39237, Start Num: 10

Candidate Starts for Veteran_56:

(5, 38929), (Start: 10 @38956 has 58 MA's), (23, 39040), (25, 39049), (34, 39127), (35, 39139), (37, 39163), (39, 39175), (46, 39229),

Gene: Vetric_80 Start: 53895, Stop: 54131, Start Num: 15

Candidate Starts for Vetric_80:

(Start: 4 @53835 has 24 MA's), (Start: 15 @53895 has 19 MA's), (22, 53940), (25, 53952), (29, 53988), (36, 54045),

Gene: Wamburgexpress_78 Start: 52456, Stop: 52686, Start Num: 15

Candidate Starts for Wamburgexpress_78:

(Start: 4 @52381 has 24 MA's), (Start: 9 @52396 has 6 MA's), (Start: 15 @52456 has 19 MA's), (27, 52519), (29, 52546), (43, 52669), (45, 52672),

Gene: Wanda_130 Start: 69382, Stop: 69606, Start Num: 12

Candidate Starts for Wanda_130:

(Start: 12 @69382 has 37 MA's), (27, 69484), (28, 69499), (33, 69547),

Gene: Whirlwind_80 Start: 53994, Stop: 54305, Start Num: 4

Candidate Starts for Whirlwind_80:

(Start: 4 @53994 has 24 MA's), (Start: 9 @54009 has 6 MA's), (25, 54120), (29, 54156), (44, 54285),

Gene: Wigglewobble_80 Start: 53840, Stop: 54076, Start Num: 15

Candidate Starts for Wigglewobble_80:

(Start: 4 @53780 has 24 MA's), (Start: 15 @53840 has 19 MA's), (22, 53885), (25, 53897), (29, 53933), (33, 53975), (35, 53987), (36, 53990),

Gene: Wilder_82 Start: 53924, Stop: 54220, Start Num: 4

Candidate Starts for Wilder_82:

(Start: 4 @53924 has 24 MA's), (Start: 15 @53984 has 19 MA's), (22, 54029), (25, 54041), (29, 54077), (35, 54131), (36, 54134),

Gene: Winky_81 Start: 53918, Stop: 54214, Start Num: 4

Candidate Starts for Winky_81:

(Start: 4 @53918 has 24 MA's), (Start: 15 @53978 has 19 MA's), (22, 54023), (25, 54035), (29, 54071), (35, 54125), (36, 54128),

Gene: Wyatt2_79 Start: 52344, Stop: 52649, Start Num: 4

Candidate Starts for Wyatt2_79:

(Start: 4 @52344 has 24 MA's), (Start: 9 @52359 has 6 MA's), (Start: 15 @52419 has 19 MA's), (27, 52482), (29, 52509), (43, 52632), (45, 52635),

Gene: Yafa_7 Start: 5183, Stop: 4926, Start Num: 12

Candidate Starts for Yafa_7:

(1, 5243), (Start: 12 @5183 has 37 MA's), (20, 5111), (26, 5069), (35, 4994), (40, 4949),

Gene: Yeet_123 Start: 70969, Stop: 71193, Start Num: 12

Candidate Starts for Yeet_123:

(Start: 12 @70969 has 37 MA's), (27, 71071), (28, 71086), (33, 71134),

Gene: Zakai_82 Start: 54244, Stop: 54540, Start Num: 4

Candidate Starts for Zakai_82:

(Start: 4 @54244 has 24 MA's), (Start: 15 @54304 has 19 MA's), (22, 54349), (25, 54361), (29, 54397), (35, 54451), (36, 54454),

Gene: Zapner_72 Start: 41849, Stop: 42133, Start Num: 10

Candidate Starts for Zapner_72:

(5, 41822), (Start: 10 @41849 has 58 MA's), (14, 41873), (16, 41888), (21, 41933), (24, 41945), (34, 42023), (35, 42035), (37, 42059), (39, 42071), (46, 42125),

Gene: Zaria_79 Start: 51796, Stop: 52101, Start Num: 4

Candidate Starts for Zaria_79:

(Start: 4 @51796 has 24 MA's), (Start: 9 @51811 has 6 MA's), (Start: 15 @51871 has 19 MA's), (27, 51934), (29, 51961), (43, 52084), (45, 52087),

Gene: Zelink_126 Start: 72194, Stop: 72418, Start Num: 12

Candidate Starts for Zelink_126:

(Start: 12 @72194 has 37 MA's), (27, 72296), (28, 72311), (33, 72359),

Gene: Zerg_59 Start: 39720, Stop: 40004, Start Num: 10

Candidate Starts for Zerg_59:

(5, 39693), (Start: 10 @39720 has 58 MA's), (14, 39744), (16, 39759), (21, 39804), (24, 39816), (34, 39894), (35, 39906), (37, 39930), (39, 39942), (46, 39996),

Gene: ZhongYanYuan_78 Start: 53431, Stop: 53667, Start Num: 15

Candidate Starts for ZhongYanYuan_78:

(Start: 4 @53371 has 24 MA's), (Start: 15 @53431 has 19 MA's), (22, 53476), (25, 53488), (29, 53524), (33, 53566), (35, 53578), (36, 53581),

Gene: Zizzle_63 Start: 41563, Stop: 41847, Start Num: 10

Candidate Starts for Zizzle_63:

(5, 41536), (Start: 10 @41563 has 58 MA's), (14, 41587), (16, 41602), (21, 41647), (24, 41659), (34, 41737), (35, 41749), (37, 41773), (39, 41785), (46, 41839),