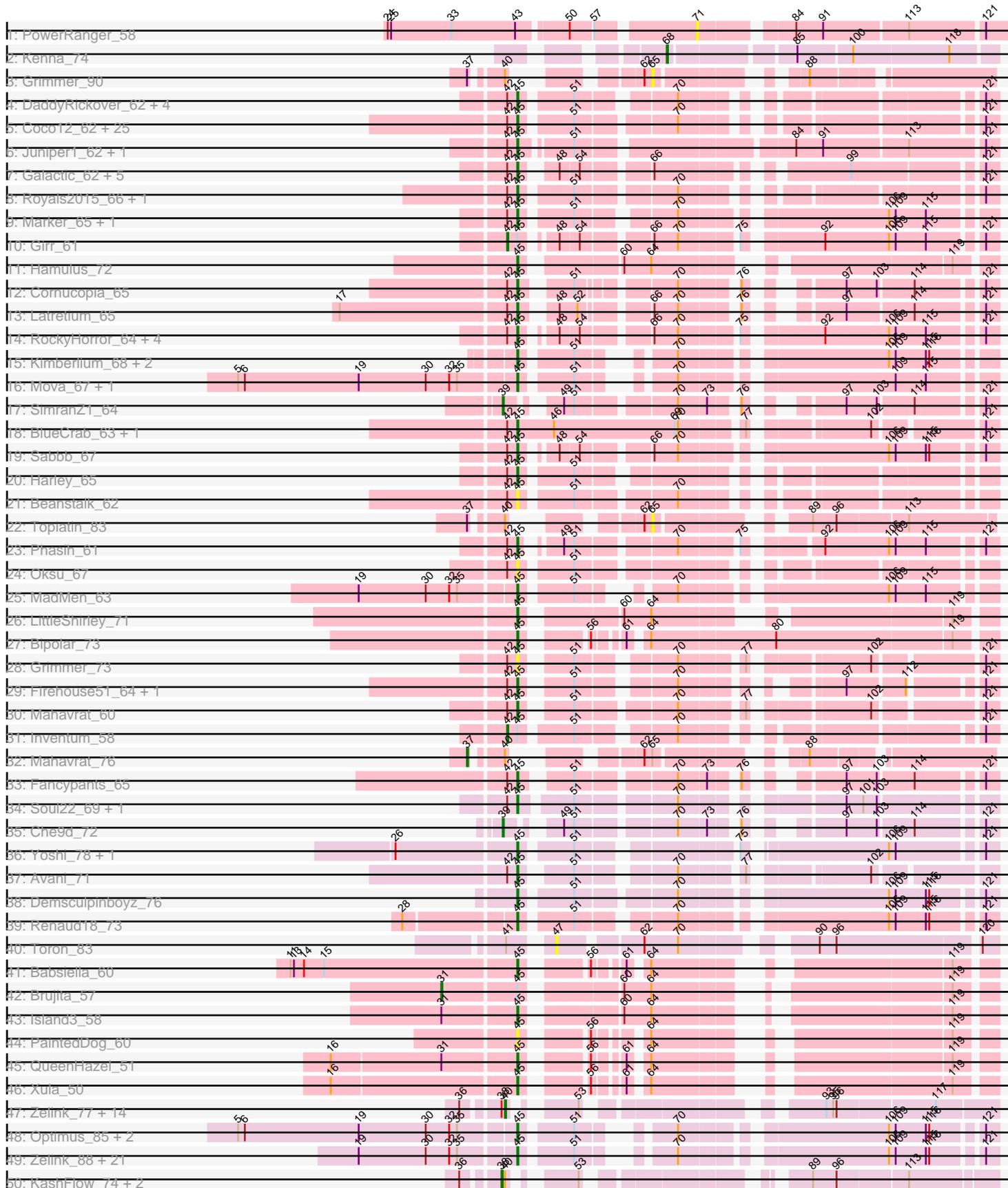
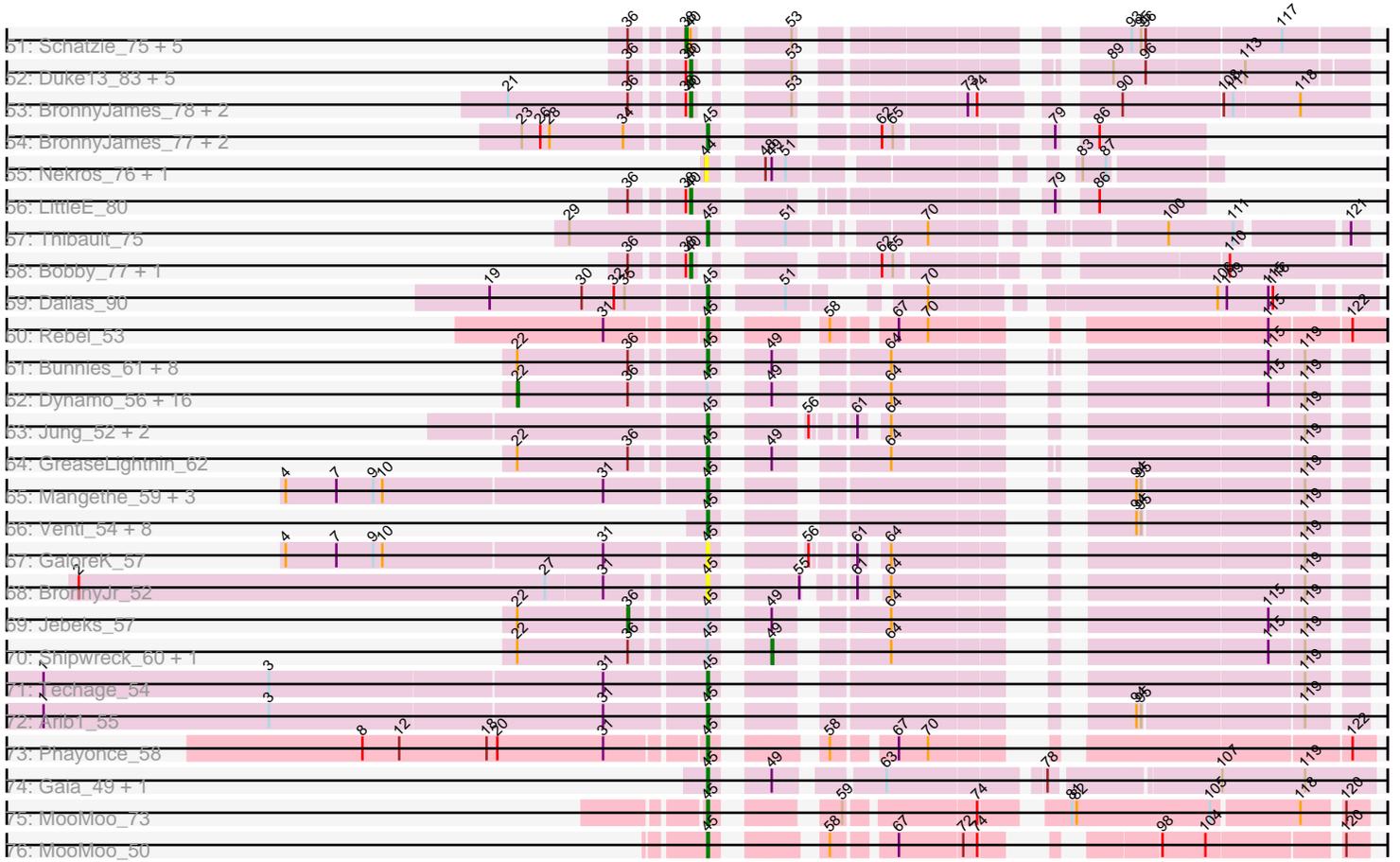


Pham 283480



Pham 283480



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 283480 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283480 has 218 members, 35 are drafts.

Phages represented in each track:

- Track 1 : PowerRanger_58
- Track 2 : Kenna_74
- Track 3 : Grimmer_90
- Track 4 : DaddyRickover_62, Sassafras_61, RedBird_61, Aubs_63, Dorothy_61
- Track 5 : Coco12_62, Velveteen_58, GUmbie_61, DRBy19_66, Eradicator_56, Yorick_62, BigPhil_59, Lizziana_69, Brookers_60, LilMoolah_61, Gorge_67, Sarma624_61, Che8_68, Saal_65, BuzzLyseyear_69, Guppsters_63, Philus_66, IbOuu_64, Job42_65, Cerasum_59, James_67, Mattes_67, Nivrat_59, Tchotchke_62, Kingsley_60, OlympiaSaint_65
- Track 6 : Juniper1_62, Estave1_66
- Track 7 : Galactic_62, Ibhubesi_63, NewHope4_64, LunaBlu_65, Polo2Bam_69, Enzomatic_70
- Track 8 : Royals2015_66, Pollywog_64
- Track 9 : Marker_65, Topiatin_70
- Track 10 : Girr_61
- Track 11 : Hamulus_72
- Track 12 : Cornucopia_65
- Track 13 : Latretium_65
- Track 14 : RockyHorror_64, MisterCuddles_61, Ruby_59, Zerg_63, Doug_65
- Track 15 : Kimberlium_68, MulchExplorer_71, QuickMath_67
- Track 16 : Mova_67, Madiba_64
- Track 17 : SimranZ1_64
- Track 18 : BlueCrab_63, ByChance_55
- Track 19 : Sabbb_67
- Track 20 : Harley_65
- Track 21 : Beanstalk_62
- Track 22 : Topiatin_83
- Track 23 : Phasih_61
- Track 24 : Oksu_67
- Track 25 : MadMen_63
- Track 26 : LittleShirley_71
- Track 27 : Bipolar_73
- Track 28 : Grimmer_73
- Track 29 : Firehouse51_64, Mutaforma13_67
- Track 30 : Mahavrat_60
- Track 31 : Invention_58
- Track 32 : Mahavrat_76

- Track 33 : Fancypants_65
- Track 34 : Soul22_69, GigiOuiOui_59
- Track 35 : Che9d_72
- Track 36 : Yoshi_78, ThetaBob_70
- Track 37 : Avani_71
- Track 38 : Demsculpinboyz_76
- Track 39 : Renaud18_73
- Track 40 : Toron_83
- Track 41 : Babsiella_60
- Track 42 : Brujita_57
- Track 43 : Island3_58
- Track 44 : PaintedDog_60
- Track 45 : QueenHazel_51
- Track 46 : Xula_50
- Track 47 : Zelink_77, Kalah2_74, NihilNomen_80, Ejimix_79, Phoebus_82, JuicyJay_77, DmpstrDiver_80, Bombitas_69, Dallas_78, ThreeRngTarjay_77, EricMillard_78, Beem_79, Bagrid_80, Odette_78, Hughesyang_79
- Track 48 : Optimus_85, BAKA_92, EricMillard_84
- Track 49 : Zelink_88, Halley_92, Kalah2_85, Bombitas_79, Dove_76, Phoebus_93, Minerva_90, Beem_91, JuicyJay_88, DmpstrDiver_91, Klein_91, Schatzie_86, Constella_76, NihilNomen_92, Odette_89, Hughesyang_91, Bagrid_90, Wanda_95, Xiaokay_80, Yeet_84, ThreeRngTarjay_88, HokkenD_80
- Track 50 : KashFlow_74, Minerva_82, BAKA_84
- Track 51 : Schatzie_75, Redno2_76, Yeet_74, Dove_65, HokkenD_71, Halley_81
- Track 52 : Duke13_83, Xiaokay_70, Thibault_67, Pound_80, Marleymoo_69, Constella_66
- Track 53 : BronnyJames_78, Omega_83, Shaboozey_77
- Track 54 : BronnyJames_77, Omega_82, Shaboozey_76
- Track 55 : Nekros_76, Nibley_70
- Track 56 : LittleE_80
- Track 57 : Thibault_75
- Track 58 : Bobby_77, Hidrated_71
- Track 59 : Dallas_90
- Track 60 : Rebel_53
- Track 61 : Bunnies_61, CactusJack_56, Thespis_58, Vidya_55, Phineas_58, Camster_58, Bhagsy_62, Pygmy_61, Kssquared_59
- Track 62 : Dynamo_56, Malithi_57, Bogie_60, Glaske_55, Brusacoram_58, Gavriela_56, Willsammy_56, Atcoo_58, Megiddo_56, KilKor_56, Bobi_76, Phalm_56, HUHilltop_59, StevieRay_61, Necropolis_55, Sonah_57, StressBall_56
- Track 63 : Jung_52, Xeno_56, HC_52
- Track 64 : GreaseLightnin_62
- Track 65 : Mangethe_59, Phegasus_59, Zilizebeth_59, Majeke_59
- Track 66 : Venti_54, Polkaroo_56, Etoile_53, Kari_53, FirstPlacePfu_55, Chubbello_53, Langerak_54, Fishburne_53, Bartholomew_53
- Track 67 : GaloreK_57
- Track 68 : BronnyJr_52
- Track 69 : Jebeks_57
- Track 70 : Shipwreck_60, PeanutPie_62
- Track 71 : Techage_54
- Track 72 : Arib1_55
- Track 73 : Phayonce_58
- Track 74 : Gaia_49, Nebkiss_53
- Track 75 : MooMoo_73

- Track 76 : MooMoo_50

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

The start number called the most often in the published annotations is 45, it was called in 128 of the 183 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arib1_55, Aubs_63, Avani_71, BAKA_92, Babsiella_60, Bagrid_90, Bartholomew_53, Beanstalk_62, Beem_91, Bhagsy_62, BigPhil_59, Bipolar_73, BlueCrab_63, Bombitas_79, BronnyJames_77, BronnyJr_52, Brookers_60, Bunnies_61, BuzzLyseyear_69, ByChance_55, CactusJack_56, Camster_58, Cerasum_59, Che8_68, Chubbello_53, Coco12_62, Constella_76, Cornucopia_65, DRBy19_66, DaddyRickover_62, Dallas_90, Demsculpinboyz_76, DmpstrDiver_91, Dorothy_61, Doug_65, Dove_76, Enzomatic_70, Eradicator_56, EricMillard_84, Estave1_66, Etoile_53, Fancypants_65, Firehouse51_64, FirstPlacePfu_55, Fishburne_53, GUmbe_61, Gaia_49, Galactic_62, GaloreK_57, GigiOuiOui_59, Gorge_67, GreaseLightnin_62, Grimmer_73, Guppsters_63, HC_52, Halley_92, Hamulus_72, Harley_65, HokkenD_80, Hughesyang_91, IbOuu_64, Ibhubes_63, Island3_58, James_67, Job42_65, JuicyJay_88, Jung_52, Juniper1_62, Kalah2_85, Kari_53, Kimberlium_68, Kingsley_60, Klein_91, Ksquared_59, Langerak_54, Latretium_65, LilMoolah_61, LittleShirley_71, Lizziana_69, LunaBlu_65, MadMen_63, Madiba_64, Mahavrat_60, Majeke_59, Mangethe_59, Marker_65, Mattes_67, Minerva_90, MisterCuddles_61, MooMoo_50, MooMoo_73, Mova_67, MulchExplorer_71, Mutaforma13_67, Nebkiss_53, NewHope4_64, NihilNomen_92, Nivrat_59, Odette_89, Oksu_67, OlympiaSaint_65, Omega_82, Optimus_85, PaintedDog_60, Phasih_61, Phayonce_58, Phegasus_59, Philus_66, Phineas_58, Phoebus_93, Polkaroo_56, Pollywog_64, Polo2Bam_69, Pygmy_61, QueenHazel_51, QuickMath_67, Rebel_53, RedBird_61, Renaud18_73, RockyHorror_64, Royals2015_66, Ruby_59, Saal_65, Sabbb_67, Sarma624_61, Sassafras_61, Schatzie_86, Shaboozey_76, Soul22_69, Tchotchke_62, Techage_54, Thespi_58, ThetaBob_70, Thibault_75, ThreeRngTarjay_88, Topiatin_70, Velveteen_58, Venti_54, Vidya_55, Wanda_95, Xeno_56, Xiaokay_80, Xula_50, Yeet_84, Yorick_62, Yoshi_78, Zelink_88, Zerg_63, Zilizebeth_59,

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

- Atcoo_58, Bobi_76, Bogie_60, Brujita_57, Brusacoram_58, Dynamo_56, Gavriela_56, Girr_61, Glaske_55, HUHilltop_59, Inventum_58, Jebeks_57, KilKor_56, Malithi_57, Megiddo_56, Necropolis_55, PeanutPie_62, Phalm_56, Shipwreck_60, Sonah_57, StevieRay_61, StressBall_56, Willsammy_56,

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

- BAKA_84, Bagrid_80, Beem_79, Bobby_77, Bombitas_69, BronnyJames_78, Che9d_72, Constella_66, Dallas_78, DmpstrDiver_80, Dove_65, Duke13_83, Ejimix_79, EricMillard_78, Grimmer_90, Halley_81, Hidrated_71, HokkenD_71, Hughesyang_79, JuicyJay_77, Kalah2_74, KashFlow_74, Kenna_74, LittleE_80, Mahavrat_76, Marleymoo_69, Minerva_82, Nekros_76, Nibley_70, NihilNomen_80, Odette_78, Omega_83, Phoebus_82, Pound_80, PowerRanger_58, Redno2_76, Schatzie_75, Shaboozey_77, SimranZ1_64, Thibault_67, ThreeRngTarjay_77, Topiatin_83, Toron_83, Xiaokay_70, Yeet_74, Zelink_77,

Summary by start number:

Start 22:

- Found in 30 of 218 (13.8%) of genes in pham
- Manual Annotations of this start: 17 of 183
- Called 56.7% of time when present
- Phage (with cluster) where this start called: Atcoo_58 (P1), Bobi_76 (F1), Bogie_60 (P1), Brusacoram_58 (P1), Dynamo_56 (P1), Gavriela_56 (P1), Glaske_55 (P1), HUHilltop_59 (P1), KilKor_56 (P1), Malithi_57 (P1), Megiddo_56 (P1), Necropolis_55 (P1), Phalm_56 (P1), Sonah_57 (P1), StevieRay_61 (P1), StressBall_56 (P1), Willsammy_56 (P1),

Start 31:

- Found in 13 of 218 (6.0%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Brujita_57 (I1),

Start 36:

- Found in 66 of 218 (30.3%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 1.5% of time when present
- Phage (with cluster) where this start called: Jebeks_57 (P1),

Start 37:

- Found in 3 of 218 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Mahavrat_76 (F1),

Start 38:

- Found in 36 of 218 (16.5%) of genes in pham
- Manual Annotations of this start: 9 of 183
- Called 25.0% of time when present
- Phage (with cluster) where this start called: BAKA_84 (J), Dove_65 (J), Halley_81 (J), HokkenD_71 (J), KashFlow_74 (J), Minerva_82 (J), Redno2_76 (J), Schatzie_75 (J), Yeet_74 (J),

Start 39:

- Found in 2 of 218 (0.9%) of genes in pham
- Manual Annotations of this start: 2 of 183
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Che9d_72 (F2), SimranZ1_64 (F1),

Start 40:

- Found in 39 of 218 (17.9%) of genes in pham
- Manual Annotations of this start: 20 of 183
- Called 69.2% of time when present
- Phage (with cluster) where this start called: Bagrid_80 (J), Beem_79 (J), Bobby_77 (J), Bombitas_69 (J), BronnyJames_78 (J), Constella_66 (J), Dallas_78 (J), DmpstrDiver_80 (J), Duke13_83 (J), Ejimix_79 (J), EricMillard_78 (J), Hidrated_71 (J), Hughesyang_79 (J), JuicyJay_77 (J), Kalah2_74 (J), LittleE_80 (J),

Marleymoo_69 (J), NihilNomen_80 (J), Odette_78 (J), Omega_83 (J), Phoebus_82 (J), Pound_80 (J), Shaboozey_77 (J), Thibault_67 (J), ThreeRngTarjay_77 (J), Xiaokay_70 (J), Zelink_77 (J),

Start 42:

- Found in 67 of 218 (30.7%) of genes in pham
- Manual Annotations of this start: 2 of 183
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Girr_61 (F1), Inventum_58 (F1),

Start 44:

- Found in 2 of 218 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nekros_76 (J), Nibley_70 (J),

Start 45:

- Found in 172 of 218 (78.9%) of genes in pham
- Manual Annotations of this start: 128 of 183
- Called 86.6% of time when present
- Phage (with cluster) where this start called: Arib1_55 (P1), Aubs_63 (F1), Avani_71 (F2), BAKA_92 (J), Babsiella_60 (I1), Bagrid_90 (J), Bartholomew_53 (P1), Beanstalk_62 (F1), Beem_91 (J), Bhagsy_62 (P1), BigPhil_59 (F1), Bipolar_73 (F1), BlueCrab_63 (F1), Bombitas_79 (J), BronnyJames_77 (J), BronnyJr_52 (P1), Brookers_60 (F1), Bunnies_61 (P1), BuzzLyseyear_69 (F1), ByChance_55 (F1), CactusJack_56 (P1), Camster_58 (P1), Cerasum_59 (F1), Che8_68 (F1), Chubbello_53 (none), Coco12_62 (F1), Constella_76 (J), Cornucopia_65 (F1), DRBy19_66 (F1), DaddyRickover_62 (F1), Dallas_90 (J), Demsculpinboyz_76 (F2), DmpstrDiver_91 (J), Dorothy_61 (F1), Doug_65 (F1), Dove_76 (J), Enzomatic_70 (F1), Eradicator_56 (F1), EricMillard_84 (J), Estave1_66 (F1), Etoile_53 (P1), Fancypants_65 (F1), Firehouse51_64 (F1), FirstPlacePfu_55 (P1), Fishburne_53 (P1), GUmbie_61 (F1), Gaia_49 (X), Galactic_62 (F1), GaloreK_57 (P1), GigiOuiOui_59 (F1), Gorge_67 (F1), GreaseLightnin_62 (P1), Grimmer_73 (F1), Guppsters_63 (F1), HC_52 (I1), Halley_92 (J), Hamulus_72 (F1), Harley_65 (F1), HokkenD_80 (J), Hughesyang_91 (J), IbOuu_64 (F1), Ibhubesi_63 (F1), Island3_58 (I1), James_67 (F1), Job42_65 (F1), JuicyJay_88 (J), Jung_52 (P1), Juniper1_62 (F1), Kalah2_85 (J), Kari_53 (P1), Kimberlium_68 (F1), Kingsley_60 (F1), Klein_91 (J), Ksquared_59 (P1), Langerak_54 (P1), Latretium_65 (F1), LilMoolah_61 (F1), LittleShirley_71 (F1), Lizziana_69 (F1), LunaBlu_65 (F1), MadMen_63 (F1), Madiba_64 (F1), Mahavrat_60 (F1), Majeke_59 (P1), Mangethe_59 (P1), Marker_65 (F1), Mattes_67 (F1), Minerva_90 (J), MisterCuddles_61 (F1), MooMoo_50 (singleton), MooMoo_73 (singleton), Mova_67 (F1), MulchExplorer_71 (F1), Mutaforma13_67 (F1), Nebkiss_53 (X), NewHope4_64 (F1), NihilNomen_92 (J), Nivrat_59 (F1), Odette_89 (J), Oksu_67 (F1), OlympiaSaint_65 (F1), Omega_82 (J), Optimus_85 (J), PaintedDog_60 (I1), Phasih_61 (F1), Phayonce_58 (P5), Phegasus_59 (P1), Philus_66 (F1), Phineas_58 (P1), Phoebus_93 (J), Polkaroo_56 (P1), Pollywog_64 (F1), Polo2Bam_69 (F1), Pygmy_61 (P1), QueenHazel_51 (I1), QuickMath_67 (F1), Rebel_53 (N), RedBird_61 (F1), Renaud18_73 (F4), RockyHorror_64 (F1), Royals2015_66 (F1), Ruby_59 (F1), Saal_65 (F1), Sabbb_67 (F1), Sarma624_61 (F1), Sassafras_61 (F1), Schatzie_86 (J), Shaboozey_76 (J), Soul22_69 (F2), Tchotchke_62 (F1), Techage_54 (P1), Thespis_58 (P1), ThetaBob_70 (F4), Thibault_75 (J), ThreeRngTarjay_88 (J), Topiatin_70 (F1), Velveteen_58 (F1), Venti_54 (P1), Vidya_55 (P1), Wanda_95 (J), Xeno_56 (N),

Xiaokay_80 (J), Xula_50 (I1), Yeet_84 (J), Yorick_62 (F1), Yoshi_78 (F2), Zelink_88 (J), Zerg_63 (F1), Zilizebeth_59 (P1),

Start 47:

- Found in 1 of 218 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toron_83 (F6),

Start 49:

- Found in 37 of 218 (17.0%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 5.4% of time when present
- Phage (with cluster) where this start called: PeanutPie_62 (P1), Shipwreck_60 (P1),

Start 65:

- Found in 8 of 218 (3.7%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Grimmer_90 (F1), Topiatin_83 (F1),

Start 68:

- Found in 1 of 218 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 183
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kenna_74 (DN1),

Start 71:

- Found in 1 of 218 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PowerRanger_58 (A1),

Summary by clusters:

There are 14 clusters represented in this pham: F1, singleton, P1, F4, F6, P5, I1, J, F2, N, A1, DN1, none, X,

Info for manual annotations of cluster DN1:

- Start number 68 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster F1:

- Start number 22 was manually annotated 1 time for cluster F1.
- Start number 37 was manually annotated 1 time for cluster F1.
- Start number 39 was manually annotated 1 time for cluster F1.
- Start number 42 was manually annotated 2 times for cluster F1.
- Start number 45 was manually annotated 62 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 39 was manually annotated 1 time for cluster F2.
- Start number 45 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 45 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster I1:

- Start number 31 was manually annotated 1 time for cluster I1.
- Start number 45 was manually annotated 5 times for cluster I1.

Info for manual annotations of cluster J:

- Start number 38 was manually annotated 9 times for cluster J.
- Start number 40 was manually annotated 20 times for cluster J.
- Start number 45 was manually annotated 25 times for cluster J.

Info for manual annotations of cluster N:

- Start number 45 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 22 was manually annotated 16 times for cluster P1.
- Start number 36 was manually annotated 1 time for cluster P1.
- Start number 45 was manually annotated 23 times for cluster P1.
- Start number 49 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P5:

- Start number 45 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster X:

- Start number 45 was manually annotated 2 times for cluster X.

Gene Information:

Gene: Arib1_55 Start: 36318, Stop: 36641, Start Num: 45

Candidate Starts for Arib1_55:

(1, 35895), (3, 36042), (Start: 31 @36255 has 1 MA's), (Start: 45 @36318 has 128 MA's), (94, 36507), (95, 36510), (119, 36609),

Gene: Atcoo_58 Start: 40217, Stop: 40654, Start Num: 22

Candidate Starts for Atcoo_58:

(Start: 22 @40217 has 17 MA's), (Start: 36 @40289 has 1 MA's), (Start: 45 @40331 has 128 MA's), (Start: 49 @40355 has 1 MA's), (64, 40412), (115, 40601), (119, 40622),

Gene: Aubs_63 Start: 41384, Stop: 41719, Start Num: 45

Candidate Starts for Aubs_63:

(Start: 42 @41375 has 2 MA's), (Start: 45 @41384 has 128 MA's), (51, 41423), (70, 41495), (121, 41708),

Gene: Avani_71 Start: 41759, Stop: 42094, Start Num: 45

Candidate Starts for Avani_71:

(Start: 42 @41750 has 2 MA's), (Start: 45 @41759 has 128 MA's), (51, 41792), (70, 41864), (77, 41912), (102, 41999),

Gene: BAKA_92 Start: 57196, Stop: 57537, Start Num: 45

Candidate Starts for BAKA_92:

(5, 56956), (6, 56962), (19, 57064), (30, 57124), (32, 57145), (35, 57151), (Start: 45 @57196 has 128 MA's), (51, 57235), (70, 57289), (106, 57451), (109, 57457), (115, 57484), (116, 57487), (121, 57526),

Gene: BAKA_84 Start: 53281, Stop: 52940, Start Num: 38

Candidate Starts for BAKA_84:

(Start: 36 @53308 has 1 MA's), (Start: 38 @53281 has 9 MA's), (Start: 40 @53278 has 20 MA's), (53, 53242), (89, 53095), (96, 53074), (113, 53014),

Gene: Babsiella_60 Start: 39552, Stop: 39869, Start Num: 45

Candidate Starts for Babsiella_60:

(11, 39354), (13, 39357), (14, 39366), (15, 39384), (Start: 45 @39552 has 128 MA's), (56, 39594), (61, 39612), (64, 39624), (119, 39837),

Gene: Bagrid_90 Start: 56063, Stop: 56404, Start Num: 45

Candidate Starts for Bagrid_90:

(19, 55931), (30, 55991), (32, 56012), (35, 56018), (Start: 45 @56063 has 128 MA's), (51, 56102), (70, 56156), (106, 56318), (109, 56324), (115, 56351), (116, 56354), (121, 56393),

Gene: Bagrid_80 Start: 51928, Stop: 51584, Start Num: 40

Candidate Starts for Bagrid_80:

(Start: 36 @51958 has 1 MA's), (Start: 38 @51931 has 9 MA's), (Start: 40 @51928 has 20 MA's), (53, 51892), (93, 51730), (95, 51724), (96, 51721), (117, 51637),

Gene: Bartholomew_53 Start: 36260, Stop: 36583, Start Num: 45

Candidate Starts for Bartholomew_53:

(Start: 45 @36260 has 128 MA's), (94, 36449), (95, 36452), (119, 36551),

Gene: Beanstalk_62 Start: 39767, Stop: 40108, Start Num: 45

Candidate Starts for Beanstalk_62:

(Start: 42 @39758 has 2 MA's), (Start: 45 @39767 has 128 MA's), (51, 39806), (70, 39884),

Gene: Beem_91 Start: 56924, Stop: 57265, Start Num: 45

Candidate Starts for Beem_91:

(19, 56792), (30, 56852), (32, 56873), (35, 56879), (Start: 45 @56924 has 128 MA's), (51, 56963), (70, 57017), (106, 57179), (109, 57185), (115, 57212), (116, 57215), (121, 57254),

Gene: Beem_79 Start: 52789, Stop: 52445, Start Num: 40

Candidate Starts for Beem_79:

(Start: 36 @52819 has 1 MA's), (Start: 38 @52792 has 9 MA's), (Start: 40 @52789 has 20 MA's), (53, 52753), (93, 52591), (95, 52585), (96, 52582), (117, 52498),

Gene: Bhagsy_62 Start: 40139, Stop: 40462, Start Num: 45

Candidate Starts for Bhagsy_62:

(Start: 22 @40025 has 17 MA's), (Start: 36 @40097 has 1 MA's), (Start: 45 @40139 has 128 MA's), (Start: 49 @40163 has 1 MA's), (64, 40220), (115, 40409), (119, 40430),

Gene: BigPhil_59 Start: 37375, Stop: 37716, Start Num: 45

Candidate Starts for BigPhil_59:

(Start: 42 @37366 has 2 MA's), (Start: 45 @37375 has 128 MA's), (51, 37414), (70, 37492), (121, 37705),

Gene: Bipolar_73 Start: 45463, Stop: 45828, Start Num: 45
Candidate Starts for Bipolar_73:
(Start: 45 @45463 has 128 MA's), (56, 45505), (61, 45523), (64, 45535), (80, 45643), (119, 45796),

Gene: BlueCrab_63 Start: 41722, Stop: 42096, Start Num: 45
Candidate Starts for BlueCrab_63:
(Start: 42 @41713 has 2 MA's), (Start: 45 @41722 has 128 MA's), (46, 41755), (69, 41863), (70, 41866), (77, 41914), (102, 42001), (121, 42085),

Gene: Bobby_77 Start: 51896, Stop: 51546, Start Num: 40
Candidate Starts for Bobby_77:
(Start: 36 @51926 has 1 MA's), (Start: 38 @51899 has 9 MA's), (Start: 40 @51896 has 20 MA's), (62, 51821), (65, 51815), (110, 51644),

Gene: Bobi_76 Start: 47153, Stop: 47593, Start Num: 22
Candidate Starts for Bobi_76:
(Start: 22 @47153 has 17 MA's), (Start: 36 @47225 has 1 MA's), (Start: 45 @47267 has 128 MA's), (Start: 49 @47291 has 1 MA's), (64, 47348), (115, 47540), (119, 47561),

Gene: Bogie_60 Start: 39977, Stop: 40417, Start Num: 22
Candidate Starts for Bogie_60:
(Start: 22 @39977 has 17 MA's), (Start: 36 @40049 has 1 MA's), (Start: 45 @40091 has 128 MA's), (Start: 49 @40115 has 1 MA's), (64, 40172), (115, 40364), (119, 40385),

Gene: Bombitas_79 Start: 54087, Stop: 54428, Start Num: 45
Candidate Starts for Bombitas_79:
(19, 53955), (30, 54015), (32, 54036), (35, 54042), (Start: 45 @54087 has 128 MA's), (51, 54126), (70, 54180), (106, 54342), (109, 54348), (115, 54375), (116, 54378), (121, 54417),

Gene: Bombitas_69 Start: 49952, Stop: 49608, Start Num: 40
Candidate Starts for Bombitas_69:
(Start: 36 @49982 has 1 MA's), (Start: 38 @49955 has 9 MA's), (Start: 40 @49952 has 20 MA's), (53, 49916), (93, 49754), (95, 49748), (96, 49745), (117, 49661),

Gene: BronnyJames_78 Start: 48223, Stop: 47873, Start Num: 40
Candidate Starts for BronnyJames_78:
(21, 48331), (Start: 36 @48253 has 1 MA's), (Start: 38 @48226 has 9 MA's), (Start: 40 @48223 has 20 MA's), (53, 48187), (73, 48100), (74, 48094), (90, 48028), (108, 47965), (111, 47959), (118, 47917),

Gene: BronnyJames_77 Start: 47876, Stop: 47634, Start Num: 45
Candidate Starts for BronnyJames_77:
(23, 47987), (26, 47975), (28, 47969), (34, 47921), (Start: 45 @47876 has 128 MA's), (62, 47801), (65, 47795), (79, 47717), (86, 47702),

Gene: BronnyJr_52 Start: 37549, Stop: 37866, Start Num: 45
Candidate Starts for BronnyJr_52:
(2, 37153), (27, 37456), (Start: 31 @37492 has 1 MA's), (Start: 45 @37549 has 128 MA's), (55, 37591), (61, 37609), (64, 37621), (119, 37834),

Gene: Brookers_60 Start: 40326, Stop: 40667, Start Num: 45
Candidate Starts for Brookers_60:
(Start: 42 @40317 has 2 MA's), (Start: 45 @40326 has 128 MA's), (51, 40365), (70, 40443), (121, 40656),

Gene: Brujita_57 Start: 38345, Stop: 38749, Start Num: 31

Candidate Starts for Brujita_57:

(Start: 31 @38345 has 1 MA's), (Start: 45 @38408 has 128 MA's), (60, 38480), (64, 38504), (119, 38717),

Gene: Brusacoram_58 Start: 38760, Stop: 39197, Start Num: 22

Candidate Starts for Brusacoram_58:

(Start: 22 @38760 has 17 MA's), (Start: 36 @38832 has 1 MA's), (Start: 45 @38874 has 128 MA's), (Start: 49 @38898 has 1 MA's), (64, 38955), (115, 39144), (119, 39165),

Gene: Bunnies_61 Start: 40221, Stop: 40544, Start Num: 45

Candidate Starts for Bunnies_61:

(Start: 22 @40107 has 17 MA's), (Start: 36 @40179 has 1 MA's), (Start: 45 @40221 has 128 MA's), (Start: 49 @40245 has 1 MA's), (64, 40302), (115, 40491), (119, 40512),

Gene: BuzzLyseyear_69 Start: 42383, Stop: 42724, Start Num: 45

Candidate Starts for BuzzLyseyear_69:

(Start: 42 @42374 has 2 MA's), (Start: 45 @42383 has 128 MA's), (51, 42422), (70, 42500), (121, 42713),

Gene: ByChance_55 Start: 36650, Stop: 37024, Start Num: 45

Candidate Starts for ByChance_55:

(Start: 42 @36641 has 2 MA's), (Start: 45 @36650 has 128 MA's), (46, 36683), (69, 36791), (70, 36794), (77, 36842), (102, 36929), (121, 37013),

Gene: CactusJack_56 Start: 39089, Stop: 39412, Start Num: 45

Candidate Starts for CactusJack_56:

(Start: 22 @38975 has 17 MA's), (Start: 36 @39047 has 1 MA's), (Start: 45 @39089 has 128 MA's), (Start: 49 @39113 has 1 MA's), (64, 39170), (115, 39359), (119, 39380),

Gene: Camster_58 Start: 38552, Stop: 38878, Start Num: 45

Candidate Starts for Camster_58:

(Start: 22 @38438 has 17 MA's), (Start: 36 @38510 has 1 MA's), (Start: 45 @38552 has 128 MA's), (Start: 49 @38576 has 1 MA's), (64, 38633), (115, 38825), (119, 38846),

Gene: Cerasum_59 Start: 37393, Stop: 37734, Start Num: 45

Candidate Starts for Cerasum_59:

(Start: 42 @37384 has 2 MA's), (Start: 45 @37393 has 128 MA's), (51, 37432), (70, 37510), (121, 37723),

Gene: Che8_68 Start: 43879, Stop: 44220, Start Num: 45

Candidate Starts for Che8_68:

(Start: 42 @43870 has 2 MA's), (Start: 45 @43879 has 128 MA's), (51, 43918), (70, 43996), (121, 44209),

Gene: Che9d_72 Start: 41100, Stop: 41432, Start Num: 39

Candidate Starts for Che9d_72:

(Start: 39 @41100 has 2 MA's), (Start: 49 @41130 has 1 MA's), (51, 41139), (70, 41217), (73, 41241), (76, 41259), (97, 41313), (103, 41340), (114, 41370), (121, 41421),

Gene: Chubbello_53 Start: 36256, Stop: 36579, Start Num: 45

Candidate Starts for Chubbello_53:

(Start: 45 @36256 has 128 MA's), (94, 36445), (95, 36448), (119, 36547),

Gene: Coco12_62 Start: 41450, Stop: 41791, Start Num: 45

Candidate Starts for Coco12_62:

(Start: 42 @41441 has 2 MA's), (Start: 45 @41450 has 128 MA's), (51, 41489), (70, 41567), (121, 41780),

Gene: Constella_76 Start: 51061, Stop: 51402, Start Num: 45

Candidate Starts for Constella_76:

(19, 50929), (30, 50989), (32, 51010), (35, 51016), (Start: 45 @51061 has 128 MA's), (51, 51100), (70, 51154), (106, 51316), (109, 51322), (115, 51349), (116, 51352), (121, 51391),

Gene: Constella_66 Start: 46926, Stop: 46588, Start Num: 40

Candidate Starts for Constella_66:

(Start: 36 @46956 has 1 MA's), (Start: 38 @46929 has 9 MA's), (Start: 40 @46926 has 20 MA's), (53, 46890), (89, 46743), (96, 46722), (113, 46662),

Gene: Cornucopia_65 Start: 41687, Stop: 42007, Start Num: 45

Candidate Starts for Cornucopia_65:

(Start: 42 @41678 has 2 MA's), (Start: 45 @41687 has 128 MA's), (51, 41720), (70, 41792), (76, 41834), (97, 41888), (103, 41915), (114, 41945), (121, 41996),

Gene: DRBy19_66 Start: 42134, Stop: 42475, Start Num: 45

Candidate Starts for DRBy19_66:

(Start: 42 @42125 has 2 MA's), (Start: 45 @42134 has 128 MA's), (51, 42173), (70, 42251), (121, 42464),

Gene: DaddyRickover_62 Start: 41176, Stop: 41511, Start Num: 45

Candidate Starts for DaddyRickover_62:

(Start: 42 @41167 has 2 MA's), (Start: 45 @41176 has 128 MA's), (51, 41215), (70, 41287), (121, 41500),

Gene: Dallas_90 Start: 55845, Stop: 56192, Start Num: 45

Candidate Starts for Dallas_90:

(19, 55713), (30, 55773), (32, 55794), (35, 55800), (Start: 45 @55845 has 128 MA's), (51, 55884), (70, 55938), (106, 56100), (109, 56106), (115, 56133), (116, 56136),

Gene: Dallas_78 Start: 51710, Stop: 51366, Start Num: 40

Candidate Starts for Dallas_78:

(Start: 36 @51740 has 1 MA's), (Start: 38 @51713 has 9 MA's), (Start: 40 @51710 has 20 MA's), (53, 51674), (93, 51512), (95, 51506), (96, 51503), (117, 51419),

Gene: Demsculpinboyz_76 Start: 41371, Stop: 41736, Start Num: 45

Candidate Starts for Demsculpinboyz_76:

(Start: 45 @41371 has 128 MA's), (51, 41410), (70, 41488), (106, 41650), (109, 41656), (115, 41683), (116, 41686), (121, 41725),

Gene: DmpstrDiver_80 Start: 52136, Stop: 51792, Start Num: 40

Candidate Starts for DmpstrDiver_80:

(Start: 36 @52166 has 1 MA's), (Start: 38 @52139 has 9 MA's), (Start: 40 @52136 has 20 MA's), (53, 52100), (93, 51938), (95, 51932), (96, 51929), (117, 51845),

Gene: DmpstrDiver_91 Start: 56259, Stop: 56600, Start Num: 45

Candidate Starts for DmpstrDiver_91:

(19, 56127), (30, 56187), (32, 56208), (35, 56214), (Start: 45 @56259 has 128 MA's), (51, 56298), (70, 56352), (106, 56514), (109, 56520), (115, 56547), (116, 56550), (121, 56589),

Gene: Dorothy_61 Start: 40350, Stop: 40685, Start Num: 45

Candidate Starts for Dorothy_61:

(Start: 42 @40341 has 2 MA's), (Start: 45 @40350 has 128 MA's), (51, 40389), (70, 40461), (121, 40674),

Gene: Doug_65 Start: 41707, Stop: 42063, Start Num: 45

Candidate Starts for Doug_65:

(Start: 42 @41698 has 2 MA's), (Start: 45 @41707 has 128 MA's), (48, 41728), (54, 41743), (66, 41794), (70, 41815), (75, 41860), (92, 41920), (106, 41977), (109, 41983), (115, 42010), (121, 42052),

Gene: Dove_76 Start: 52353, Stop: 52694, Start Num: 45

Candidate Starts for Dove_76:

(19, 52221), (30, 52281), (32, 52302), (35, 52308), (Start: 45 @52353 has 128 MA's), (51, 52392), (70, 52446), (106, 52608), (109, 52614), (115, 52641), (116, 52644), (121, 52683),

Gene: Dove_65 Start: 48221, Stop: 47874, Start Num: 38

Candidate Starts for Dove_65:

(Start: 36 @48248 has 1 MA's), (Start: 38 @48221 has 9 MA's), (Start: 40 @48218 has 20 MA's), (53, 48182), (93, 48020), (95, 48014), (96, 48011), (117, 47927),

Gene: Duke13_83 Start: 52490, Stop: 52152, Start Num: 40

Candidate Starts for Duke13_83:

(Start: 36 @52520 has 1 MA's), (Start: 38 @52493 has 9 MA's), (Start: 40 @52490 has 20 MA's), (53, 52454), (89, 52307), (96, 52286), (113, 52226),

Gene: Dynamo_56 Start: 38011, Stop: 38451, Start Num: 22

Candidate Starts for Dynamo_56:

(Start: 22 @38011 has 17 MA's), (Start: 36 @38083 has 1 MA's), (Start: 45 @38125 has 128 MA's), (Start: 49 @38149 has 1 MA's), (64, 38206), (115, 38398), (119, 38419),

Gene: Ejimix_79 Start: 53578, Stop: 53234, Start Num: 40

Candidate Starts for Ejimix_79:

(Start: 36 @53608 has 1 MA's), (Start: 38 @53581 has 9 MA's), (Start: 40 @53578 has 20 MA's), (53, 53542), (93, 53380), (95, 53374), (96, 53371), (117, 53287),

Gene: Enzomatic_70 Start: 40804, Stop: 41145, Start Num: 45

Candidate Starts for Enzomatic_70:

(Start: 42 @40795 has 2 MA's), (Start: 45 @40804 has 128 MA's), (48, 40825), (54, 40840), (66, 40891), (99, 41029), (121, 41134),

Gene: Eradicator_56 Start: 39233, Stop: 39574, Start Num: 45

Candidate Starts for Eradicator_56:

(Start: 42 @39224 has 2 MA's), (Start: 45 @39233 has 128 MA's), (51, 39272), (70, 39350), (121, 39563),

Gene: EricMillard_84 Start: 55991, Stop: 56332, Start Num: 45

Candidate Starts for EricMillard_84:

(5, 55751), (6, 55757), (19, 55859), (30, 55919), (32, 55940), (35, 55946), (Start: 45 @55991 has 128 MA's), (51, 56030), (70, 56084), (106, 56246), (109, 56252), (115, 56279), (116, 56282), (121, 56321),

Gene: EricMillard_78 Start: 52781, Stop: 52437, Start Num: 40

Candidate Starts for EricMillard_78:

(Start: 36 @52811 has 1 MA's), (Start: 38 @52784 has 9 MA's), (Start: 40 @52781 has 20 MA's), (53, 52745), (93, 52583), (95, 52577), (96, 52574), (117, 52490),

Gene: Estave1_66 Start: 42262, Stop: 42642, Start Num: 45

Candidate Starts for Estave1_66:

(Start: 42 @42253 has 2 MA's), (Start: 45 @42262 has 128 MA's), (51, 42301), (84, 42472), (91, 42496), (113, 42568), (121, 42631),

Gene: Etoile_53 Start: 36260, Stop: 36583, Start Num: 45

Candidate Starts for Etoile_53:

(Start: 45 @36260 has 128 MA's), (94, 36449), (95, 36452), (119, 36551),

Gene: Fancypants_65 Start: 41674, Stop: 42000, Start Num: 45

Candidate Starts for Fancypants_65:

(Start: 42 @41665 has 2 MA's), (Start: 45 @41674 has 128 MA's), (51, 41707), (70, 41785), (73, 41809), (76, 41827), (97, 41881), (103, 41908), (114, 41938), (121, 41989),

Gene: Firehouse51_64 Start: 44558, Stop: 44872, Start Num: 45

Candidate Starts for Firehouse51_64:

(Start: 42 @44549 has 2 MA's), (Start: 45 @44558 has 128 MA's), (51, 44591), (70, 44663), (97, 44762), (112, 44810), (121, 44861),

Gene: FirstPlacePfu_55 Start: 36292, Stop: 36615, Start Num: 45

Candidate Starts for FirstPlacePfu_55:

(Start: 45 @36292 has 128 MA's), (94, 36481), (95, 36484), (119, 36583),

Gene: Fishburne_53 Start: 36260, Stop: 36583, Start Num: 45

Candidate Starts for Fishburne_53:

(Start: 45 @36260 has 128 MA's), (94, 36449), (95, 36452), (119, 36551),

Gene: GUmbie_61 Start: 40460, Stop: 40801, Start Num: 45

Candidate Starts for GUmbie_61:

(Start: 42 @40451 has 2 MA's), (Start: 45 @40460 has 128 MA's), (51, 40499), (70, 40577), (121, 40790),

Gene: Gaia_49 Start: 36916, Stop: 36548, Start Num: 45

Candidate Starts for Gaia_49:

(Start: 45 @36916 has 128 MA's), (Start: 49 @36892 has 1 MA's), (63, 36835), (78, 36745), (107, 36646), (119, 36592),

Gene: Galactic_62 Start: 40920, Stop: 41261, Start Num: 45

Candidate Starts for Galactic_62:

(Start: 42 @40911 has 2 MA's), (Start: 45 @40920 has 128 MA's), (48, 40941), (54, 40956), (66, 41007), (99, 41145), (121, 41250),

Gene: GaloreK_57 Start: 37790, Stop: 38107, Start Num: 45

Candidate Starts for GaloreK_57:

(4, 37523), (7, 37556), (9, 37580), (10, 37586), (Start: 31 @37727 has 1 MA's), (Start: 45 @37790 has 128 MA's), (56, 37832), (61, 37850), (64, 37862), (119, 38075),

Gene: Gavriela_56 Start: 38975, Stop: 39412, Start Num: 22

Candidate Starts for Gavriela_56:

(Start: 22 @38975 has 17 MA's), (Start: 36 @39047 has 1 MA's), (Start: 45 @39089 has 128 MA's),
(Start: 49 @39113 has 1 MA's), (64, 39170), (115, 39359), (119, 39380),

Gene: GigiOuiOui_59 Start: 39900, Stop: 40250, Start Num: 45

Candidate Starts for GigiOuiOui_59:

(Start: 42 @39891 has 2 MA's), (Start: 45 @39900 has 128 MA's), (51, 39939), (70, 40017), (97,
40131), (101, 40146), (103, 40158),

Gene: Girr_61 Start: 40755, Stop: 41120, Start Num: 42

Candidate Starts for Girr_61:

(Start: 42 @40755 has 2 MA's), (Start: 45 @40764 has 128 MA's), (48, 40785), (54, 40800), (66,
40851), (70, 40872), (75, 40917), (92, 40977), (106, 41034), (109, 41040), (115, 41067), (121, 41109),

Gene: Glaske_55 Start: 38975, Stop: 39412, Start Num: 22

Candidate Starts for Glaske_55:

(Start: 22 @38975 has 17 MA's), (Start: 36 @39047 has 1 MA's), (Start: 45 @39089 has 128 MA's),
(Start: 49 @39113 has 1 MA's), (64, 39170), (115, 39359), (119, 39380),

Gene: Gorge_67 Start: 42402, Stop: 42743, Start Num: 45

Candidate Starts for Gorge_67:

(Start: 42 @42393 has 2 MA's), (Start: 45 @42402 has 128 MA's), (51, 42441), (70, 42519), (121,
42732),

Gene: GreaseLightnin_62 Start: 40455, Stop: 40778, Start Num: 45

Candidate Starts for GreaseLightnin_62:

(Start: 22 @40341 has 17 MA's), (Start: 36 @40413 has 1 MA's), (Start: 45 @40455 has 128 MA's),
(Start: 49 @40479 has 1 MA's), (64, 40536), (119, 40746),

Gene: Grimmer_90 Start: 48780, Stop: 49022, Start Num: 65

Candidate Starts for Grimmer_90:

(Start: 37 @48684 has 1 MA's), (Start: 40 @48705 has 20 MA's), (62, 48774), (65, 48780), (88, 48876),

Gene: Grimmer_73 Start: 42556, Stop: 42891, Start Num: 45

Candidate Starts for Grimmer_73:

(Start: 42 @42547 has 2 MA's), (Start: 45 @42556 has 128 MA's), (51, 42589), (70, 42661), (77,
42709), (102, 42796), (121, 42880),

Gene: Guppsters_63 Start: 40585, Stop: 40926, Start Num: 45

Candidate Starts for Guppsters_63:

(Start: 42 @40576 has 2 MA's), (Start: 45 @40585 has 128 MA's), (51, 40624), (70, 40702), (121,
40915),

Gene: HC_52 Start: 35682, Stop: 35999, Start Num: 45

Candidate Starts for HC_52:

(Start: 45 @35682 has 128 MA's), (56, 35724), (61, 35742), (64, 35754), (119, 35967),

Gene: HUHilltop_59 Start: 38234, Stop: 38674, Start Num: 22

Candidate Starts for HUHilltop_59:

(Start: 22 @38234 has 17 MA's), (Start: 36 @38306 has 1 MA's), (Start: 45 @38348 has 128 MA's),
(Start: 49 @38372 has 1 MA's), (64, 38429), (115, 38621), (119, 38642),

Gene: Halley_92 Start: 56924, Stop: 57265, Start Num: 45

Candidate Starts for Halley_92:

(19, 56792), (30, 56852), (32, 56873), (35, 56879), (Start: 45 @56924 has 128 MA's), (51, 56963), (70, 57017), (106, 57179), (109, 57185), (115, 57212), (116, 57215), (121, 57254),

Gene: Halley_81 Start: 52792, Stop: 52445, Start Num: 38

Candidate Starts for Halley_81:

(Start: 36 @52819 has 1 MA's), (Start: 38 @52792 has 9 MA's), (Start: 40 @52789 has 20 MA's), (53, 52753), (93, 52591), (95, 52585), (96, 52582), (117, 52498),

Gene: Hamulus_72 Start: 45640, Stop: 45987, Start Num: 45

Candidate Starts for Hamulus_72:

(Start: 45 @45640 has 128 MA's), (60, 45712), (64, 45736), (119, 45955),

Gene: Harley_65 Start: 42034, Stop: 42369, Start Num: 45

Candidate Starts for Harley_65:

(Start: 42 @42025 has 2 MA's), (Start: 45 @42034 has 128 MA's), (51, 42073),

Gene: Hidrated_71 Start: 51173, Stop: 50823, Start Num: 40

Candidate Starts for Hidrated_71:

(Start: 36 @51203 has 1 MA's), (Start: 38 @51176 has 9 MA's), (Start: 40 @51173 has 20 MA's), (62, 51098), (65, 51092), (110, 50921),

Gene: HokkenD_71 Start: 51061, Stop: 50714, Start Num: 38

Candidate Starts for HokkenD_71:

(Start: 36 @51088 has 1 MA's), (Start: 38 @51061 has 9 MA's), (Start: 40 @51058 has 20 MA's), (53, 51022), (93, 50860), (95, 50854), (96, 50851), (117, 50767),

Gene: HokkenD_80 Start: 55193, Stop: 55534, Start Num: 45

Candidate Starts for HokkenD_80:

(19, 55061), (30, 55121), (32, 55142), (35, 55148), (Start: 45 @55193 has 128 MA's), (51, 55232), (70, 55286), (106, 55448), (109, 55454), (115, 55481), (116, 55484), (121, 55523),

Gene: Hughesyang_91 Start: 56882, Stop: 57223, Start Num: 45

Candidate Starts for Hughesyang_91:

(19, 56750), (30, 56810), (32, 56831), (35, 56837), (Start: 45 @56882 has 128 MA's), (51, 56921), (70, 56975), (106, 57137), (109, 57143), (115, 57170), (116, 57173), (121, 57212),

Gene: Hughesyang_79 Start: 52747, Stop: 52403, Start Num: 40

Candidate Starts for Hughesyang_79:

(Start: 36 @52777 has 1 MA's), (Start: 38 @52750 has 9 MA's), (Start: 40 @52747 has 20 MA's), (53, 52711), (93, 52549), (95, 52543), (96, 52540), (117, 52456),

Gene: lbOuu_64 Start: 41437, Stop: 41772, Start Num: 45

Candidate Starts for lbOuu_64:

(Start: 42 @41428 has 2 MA's), (Start: 45 @41437 has 128 MA's), (51, 41476), (70, 41548), (121, 41761),

Gene: lbhubesi_63 Start: 41044, Stop: 41385, Start Num: 45

Candidate Starts for lbhubesi_63:

(Start: 42 @41035 has 2 MA's), (Start: 45 @41044 has 128 MA's), (48, 41065), (54, 41080), (66, 41131), (99, 41269), (121, 41374),

Gene: Inventum_58 Start: 40539, Stop: 40883, Start Num: 42

Candidate Starts for Inventum_58:

(Start: 42 @40539 has 2 MA's), (Start: 45 @40548 has 128 MA's), (51, 40587), (70, 40659), (121, 40872),

Gene: Island3_58 Start: 38408, Stop: 38749, Start Num: 45

Candidate Starts for Island3_58:

(Start: 31 @38345 has 1 MA's), (Start: 45 @38408 has 128 MA's), (60, 38480), (64, 38504), (119, 38717),

Gene: James_67 Start: 42527, Stop: 42868, Start Num: 45

Candidate Starts for James_67:

(Start: 42 @42518 has 2 MA's), (Start: 45 @42527 has 128 MA's), (51, 42566), (70, 42644), (121, 42857),

Gene: Jebeks_57 Start: 37603, Stop: 37971, Start Num: 36

Candidate Starts for Jebeks_57:

(Start: 22 @37531 has 17 MA's), (Start: 36 @37603 has 1 MA's), (Start: 45 @37645 has 128 MA's), (Start: 49 @37669 has 1 MA's), (64, 37726), (115, 37918), (119, 37939),

Gene: Job42_65 Start: 42942, Stop: 43283, Start Num: 45

Candidate Starts for Job42_65:

(Start: 42 @42933 has 2 MA's), (Start: 45 @42942 has 128 MA's), (51, 42981), (70, 43059), (121, 43272),

Gene: JuicyJay_77 Start: 53923, Stop: 53579, Start Num: 40

Candidate Starts for JuicyJay_77:

(Start: 36 @53953 has 1 MA's), (Start: 38 @53926 has 9 MA's), (Start: 40 @53923 has 20 MA's), (53, 53887), (93, 53725), (95, 53719), (96, 53716), (117, 53632),

Gene: JuicyJay_88 Start: 58058, Stop: 58399, Start Num: 45

Candidate Starts for JuicyJay_88:

(19, 57926), (30, 57986), (32, 58007), (35, 58013), (Start: 45 @58058 has 128 MA's), (51, 58097), (70, 58151), (106, 58313), (109, 58319), (115, 58346), (116, 58349), (121, 58388),

Gene: Jung_52 Start: 35997, Stop: 36314, Start Num: 45

Candidate Starts for Jung_52:

(Start: 45 @35997 has 128 MA's), (56, 36039), (61, 36057), (64, 36069), (119, 36282),

Gene: Juniper1_62 Start: 41298, Stop: 41678, Start Num: 45

Candidate Starts for Juniper1_62:

(Start: 42 @41289 has 2 MA's), (Start: 45 @41298 has 128 MA's), (51, 41337), (84, 41508), (91, 41532), (113, 41604), (121, 41667),

Gene: Kalah2_74 Start: 52082, Stop: 51738, Start Num: 40

Candidate Starts for Kalah2_74:

(Start: 36 @52112 has 1 MA's), (Start: 38 @52085 has 9 MA's), (Start: 40 @52082 has 20 MA's), (53, 52046), (93, 51884), (95, 51878), (96, 51875), (117, 51791),

Gene: Kalah2_85 Start: 56217, Stop: 56558, Start Num: 45

Candidate Starts for Kalah2_85:

(19, 56085), (30, 56145), (32, 56166), (35, 56172), (Start: 45 @56217 has 128 MA's), (51, 56256), (70, 56310), (106, 56472), (109, 56478), (115, 56505), (116, 56508), (121, 56547),

Gene: Kari_53 Start: 36257, Stop: 36580, Start Num: 45
Candidate Starts for Kari_53:
(Start: 45 @36257 has 128 MA's), (94, 36446), (95, 36449), (119, 36548),

Gene: KashFlow_74 Start: 47820, Stop: 47479, Start Num: 38
Candidate Starts for KashFlow_74:
(Start: 36 @47847 has 1 MA's), (Start: 38 @47820 has 9 MA's), (Start: 40 @47817 has 20 MA's), (53, 47781), (89, 47634), (96, 47613), (113, 47553),

Gene: Kenna_74 Start: 44226, Stop: 44492, Start Num: 68
Candidate Starts for Kenna_74:
(Start: 68 @44226 has 1 MA's), (85, 44325), (100, 44370), (118, 44454),

Gene: KilKor_56 Start: 39668, Stop: 40105, Start Num: 22
Candidate Starts for KilKor_56:
(Start: 22 @39668 has 17 MA's), (Start: 36 @39740 has 1 MA's), (Start: 45 @39782 has 128 MA's),
(Start: 49 @39806 has 1 MA's), (64, 39863), (115, 40052), (119, 40073),

Gene: Kimberlium_68 Start: 43340, Stop: 43681, Start Num: 45
Candidate Starts for Kimberlium_68:
(Start: 45 @43340 has 128 MA's), (51, 43379), (70, 43433), (106, 43595), (109, 43601), (115, 43628),
(116, 43631),

Gene: Kingsley_60 Start: 40183, Stop: 40524, Start Num: 45
Candidate Starts for Kingsley_60:
(Start: 42 @40174 has 2 MA's), (Start: 45 @40183 has 128 MA's), (51, 40222), (70, 40300), (121, 40513),

Gene: Klein_91 Start: 55893, Stop: 56234, Start Num: 45
Candidate Starts for Klein_91:
(19, 55761), (30, 55821), (32, 55842), (35, 55848), (Start: 45 @55893 has 128 MA's), (51, 55932), (70, 55986), (106, 56148), (109, 56154), (115, 56181), (116, 56184), (121, 56223),

Gene: Ksquared_59 Start: 40221, Stop: 40544, Start Num: 45
Candidate Starts for Ksquared_59:
(Start: 22 @40107 has 17 MA's), (Start: 36 @40179 has 1 MA's), (Start: 45 @40221 has 128 MA's),
(Start: 49 @40245 has 1 MA's), (64, 40302), (115, 40491), (119, 40512),

Gene: Langerak_54 Start: 36276, Stop: 36599, Start Num: 45
Candidate Starts for Langerak_54:
(Start: 45 @36276 has 128 MA's), (94, 36465), (95, 36468), (119, 36567),

Gene: Latretium_65 Start: 41581, Stop: 41904, Start Num: 45
Candidate Starts for Latretium_65:
(17, 41428), (Start: 42 @41572 has 2 MA's), (Start: 45 @41581 has 128 MA's), (48, 41602), (52, 41617), (66, 41668), (70, 41689), (76, 41731), (97, 41785), (114, 41842), (121, 41893),

Gene: LilMoolah_61 Start: 40447, Stop: 40788, Start Num: 45
Candidate Starts for LilMoolah_61:
(Start: 42 @40438 has 2 MA's), (Start: 45 @40447 has 128 MA's), (51, 40486), (70, 40564), (121, 40777),

Gene: LittleE_80 Start: 51274, Stop: 51020, Start Num: 40

Candidate Starts for LittleE_80:

(Start: 36 @51304 has 1 MA's), (Start: 38 @51277 has 9 MA's), (Start: 40 @51274 has 20 MA's), (79, 51103), (86, 51088),

Gene: LittleShirley_71 Start: 44686, Stop: 45033, Start Num: 45

Candidate Starts for LittleShirley_71:

(Start: 45 @44686 has 128 MA's), (60, 44758), (64, 44782), (119, 45001),

Gene: Lizziana_69 Start: 42008, Stop: 42349, Start Num: 45

Candidate Starts for Lizziana_69:

(Start: 42 @41999 has 2 MA's), (Start: 45 @42008 has 128 MA's), (51, 42047), (70, 42125), (121, 42338),

Gene: LunaBlu_65 Start: 41579, Stop: 41920, Start Num: 45

Candidate Starts for LunaBlu_65:

(Start: 42 @41570 has 2 MA's), (Start: 45 @41579 has 128 MA's), (48, 41600), (54, 41615), (66, 41666), (99, 41804), (121, 41909),

Gene: MadMen_63 Start: 41307, Stop: 41648, Start Num: 45

Candidate Starts for MadMen_63:

(19, 41175), (30, 41235), (32, 41256), (35, 41262), (Start: 45 @41307 has 128 MA's), (51, 41346), (70, 41400), (106, 41562), (109, 41568), (115, 41595),

Gene: Madiba_64 Start: 40812, Stop: 41153, Start Num: 45

Candidate Starts for Madiba_64:

(5, 40572), (6, 40578), (19, 40680), (30, 40740), (32, 40761), (35, 40767), (Start: 45 @40812 has 128 MA's), (51, 40851), (70, 40905), (109, 41073), (115, 41100),

Gene: Mahavrat_60 Start: 40518, Stop: 40859, Start Num: 45

Candidate Starts for Mahavrat_60:

(Start: 42 @40509 has 2 MA's), (Start: 45 @40518 has 128 MA's), (51, 40551), (70, 40629), (77, 40677), (102, 40764), (121, 40848),

Gene: Mahavrat_76 Start: 46252, Stop: 46590, Start Num: 37

Candidate Starts for Mahavrat_76:

(Start: 37 @46252 has 1 MA's), (Start: 40 @46273 has 20 MA's), (62, 46342), (65, 46348), (88, 46444),

Gene: Majeke_59 Start: 37835, Stop: 38158, Start Num: 45

Candidate Starts for Majeke_59:

(4, 37568), (7, 37601), (9, 37625), (10, 37631), (Start: 31 @37772 has 1 MA's), (Start: 45 @37835 has 128 MA's), (94, 38024), (95, 38027), (119, 38126),

Gene: Malithi_57 Start: 38149, Stop: 38589, Start Num: 22

Candidate Starts for Malithi_57:

(Start: 22 @38149 has 17 MA's), (Start: 36 @38221 has 1 MA's), (Start: 45 @38263 has 128 MA's), (Start: 49 @38287 has 1 MA's), (64, 38344), (115, 38536), (119, 38557),

Gene: Mangethe_59 Start: 37835, Stop: 38158, Start Num: 45

Candidate Starts for Mangethe_59:

(4, 37568), (7, 37601), (9, 37625), (10, 37631), (Start: 31 @37772 has 1 MA's), (Start: 45 @37835 has 128 MA's), (94, 38024), (95, 38027), (119, 38126),

Gene: Marker_65 Start: 41128, Stop: 41487, Start Num: 45

Candidate Starts for Marker_65:

(Start: 42 @41119 has 2 MA's), (Start: 45 @41128 has 128 MA's), (51, 41167), (70, 41239), (106, 41401), (109, 41407), (115, 41434),

Gene: Marleymoo_69 Start: 49698, Stop: 49360, Start Num: 40

Candidate Starts for Marleymoo_69:

(Start: 36 @49728 has 1 MA's), (Start: 38 @49701 has 9 MA's), (Start: 40 @49698 has 20 MA's), (53, 49662), (89, 49515), (96, 49494), (113, 49434),

Gene: Mattes_67 Start: 42527, Stop: 42868, Start Num: 45

Candidate Starts for Mattes_67:

(Start: 42 @42518 has 2 MA's), (Start: 45 @42527 has 128 MA's), (51, 42566), (70, 42644), (121, 42857),

Gene: Megiddo_56 Start: 38999, Stop: 39439, Start Num: 22

Candidate Starts for Megiddo_56:

(Start: 22 @38999 has 17 MA's), (Start: 36 @39071 has 1 MA's), (Start: 45 @39113 has 128 MA's), (Start: 49 @39137 has 1 MA's), (64, 39194), (115, 39386), (119, 39407),

Gene: Minerva_82 Start: 52925, Stop: 52584, Start Num: 38

Candidate Starts for Minerva_82:

(Start: 36 @52952 has 1 MA's), (Start: 38 @52925 has 9 MA's), (Start: 40 @52922 has 20 MA's), (53, 52886), (89, 52739), (96, 52718), (113, 52658),

Gene: Minerva_90 Start: 56841, Stop: 57182, Start Num: 45

Candidate Starts for Minerva_90:

(19, 56709), (30, 56769), (32, 56790), (35, 56796), (Start: 45 @56841 has 128 MA's), (51, 56880), (70, 56934), (106, 57096), (109, 57102), (115, 57129), (116, 57132), (121, 57171),

Gene: MisterCuddles_61 Start: 40764, Stop: 41120, Start Num: 45

Candidate Starts for MisterCuddles_61:

(Start: 42 @40755 has 2 MA's), (Start: 45 @40764 has 128 MA's), (48, 40785), (54, 40800), (66, 40851), (70, 40872), (75, 40917), (92, 40977), (106, 41034), (109, 41040), (115, 41067), (121, 41109),

Gene: MooMoo_73 Start: 46091, Stop: 46441, Start Num: 45

Candidate Starts for MooMoo_73:

(Start: 45 @46091 has 128 MA's), (59, 46145), (74, 46220), (81, 46262), (82, 46265), (105, 46352), (118, 46406), (120, 46427),

Gene: MooMoo_50 Start: 36541, Stop: 36855, Start Num: 45

Candidate Starts for MooMoo_50:

(Start: 45 @36541 has 128 MA's), (58, 36589), (67, 36622), (72, 36661), (74, 36670), (98, 36736), (104, 36763), (120, 36841),

Gene: Mova_67 Start: 41316, Stop: 41657, Start Num: 45

Candidate Starts for Mova_67:

(5, 41076), (6, 41082), (19, 41184), (30, 41244), (32, 41265), (35, 41271), (Start: 45 @41316 has 128 MA's), (51, 41355), (70, 41409), (109, 41577), (115, 41604),

Gene: MulchExplorer_71 Start: 43339, Stop: 43680, Start Num: 45

Candidate Starts for MulchExplorer_71:

(Start: 45 @43339 has 128 MA's), (51, 43378), (70, 43432), (106, 43594), (109, 43600), (115, 43627), (116, 43630),

Gene: Mutaforma13_67 Start: 43868, Stop: 44182, Start Num: 45

Candidate Starts for Mutaforma13_67:

(Start: 42 @43859 has 2 MA's), (Start: 45 @43868 has 128 MA's), (51, 43901), (70, 43973), (97, 44072), (112, 44120), (121, 44171),

Gene: Nebkiss_53 Start: 36617, Stop: 36249, Start Num: 45

Candidate Starts for Nebkiss_53:

(Start: 45 @36617 has 128 MA's), (Start: 49 @36593 has 1 MA's), (63, 36536), (78, 36446), (107, 36347), (119, 36293),

Gene: Necropolis_55 Start: 37600, Stop: 38040, Start Num: 22

Candidate Starts for Necropolis_55:

(Start: 22 @37600 has 17 MA's), (Start: 36 @37672 has 1 MA's), (Start: 45 @37714 has 128 MA's), (Start: 49 @37738 has 1 MA's), (64, 37795), (115, 37987), (119, 38008),

Gene: Nekros_76 Start: 50135, Stop: 49875, Start Num: 44

Candidate Starts for Nekros_76:

(44, 50135), (48, 50108), (Start: 49 @50105 has 1 MA's), (51, 50096), (83, 49958), (87, 49943),

Gene: NewHope4_64 Start: 40950, Stop: 41291, Start Num: 45

Candidate Starts for NewHope4_64:

(Start: 42 @40941 has 2 MA's), (Start: 45 @40950 has 128 MA's), (48, 40971), (54, 40986), (66, 41037), (99, 41175), (121, 41280),

Gene: Nibley_70 Start: 46983, Stop: 46723, Start Num: 44

Candidate Starts for Nibley_70:

(44, 46983), (48, 46956), (Start: 49 @46953 has 1 MA's), (51, 46944), (83, 46806), (87, 46791),

Gene: NihilNomen_80 Start: 52876, Stop: 52532, Start Num: 40

Candidate Starts for NihilNomen_80:

(Start: 36 @52906 has 1 MA's), (Start: 38 @52879 has 9 MA's), (Start: 40 @52876 has 20 MA's), (53, 52840), (93, 52678), (95, 52672), (96, 52669), (117, 52585),

Gene: NihilNomen_92 Start: 57011, Stop: 57352, Start Num: 45

Candidate Starts for NihilNomen_92:

(19, 56879), (30, 56939), (32, 56960), (35, 56966), (Start: 45 @57011 has 128 MA's), (51, 57050), (70, 57104), (106, 57266), (109, 57272), (115, 57299), (116, 57302), (121, 57341),

Gene: Nivrat_59 Start: 40320, Stop: 40661, Start Num: 45

Candidate Starts for Nivrat_59:

(Start: 42 @40311 has 2 MA's), (Start: 45 @40320 has 128 MA's), (51, 40359), (70, 40437), (121, 40650),

Gene: Odette_89 Start: 56053, Stop: 56394, Start Num: 45

Candidate Starts for Odette_89:

(19, 55921), (30, 55981), (32, 56002), (35, 56008), (Start: 45 @56053 has 128 MA's), (51, 56092), (70, 56146), (106, 56308), (109, 56314), (115, 56341), (116, 56344), (121, 56383),

Gene: Odette_78 Start: 51918, Stop: 51574, Start Num: 40

Candidate Starts for Odette_78:

(Start: 36 @51948 has 1 MA's), (Start: 38 @51921 has 9 MA's), (Start: 40 @51918 has 20 MA's), (53, 51882), (93, 51720), (95, 51714), (96, 51711), (117, 51627),

Gene: Oksu_67 Start: 43933, Stop: 44274, Start Num: 45

Candidate Starts for Oksu_67:

(Start: 42 @43924 has 2 MA's), (Start: 45 @43933 has 128 MA's), (51, 43972),

Gene: OlympiaSaint_65 Start: 41469, Stop: 41810, Start Num: 45

Candidate Starts for OlympiaSaint_65:

(Start: 42 @41460 has 2 MA's), (Start: 45 @41469 has 128 MA's), (51, 41508), (70, 41586), (121, 41799),

Gene: Omega_82 Start: 52706, Stop: 52464, Start Num: 45

Candidate Starts for Omega_82:

(23, 52817), (26, 52805), (28, 52799), (34, 52751), (Start: 45 @52706 has 128 MA's), (62, 52631), (65, 52625), (79, 52547), (86, 52532),

Gene: Omega_83 Start: 53053, Stop: 52703, Start Num: 40

Candidate Starts for Omega_83:

(21, 53161), (Start: 36 @53083 has 1 MA's), (Start: 38 @53056 has 9 MA's), (Start: 40 @53053 has 20 MA's), (53, 53017), (73, 52930), (74, 52924), (90, 52858), (108, 52795), (111, 52789), (118, 52747),

Gene: Optimus_85 Start: 55545, Stop: 55886, Start Num: 45

Candidate Starts for Optimus_85:

(5, 55305), (6, 55311), (19, 55413), (30, 55473), (32, 55494), (35, 55500), (Start: 45 @55545 has 128 MA's), (51, 55584), (70, 55638), (106, 55800), (109, 55806), (115, 55833), (116, 55836), (121, 55875),

Gene: PaintedDog_60 Start: 40222, Stop: 40539, Start Num: 45

Candidate Starts for PaintedDog_60:

(Start: 45 @40222 has 128 MA's), (56, 40264), (64, 40294), (119, 40507),

Gene: PeanutPie_62 Start: 40166, Stop: 40465, Start Num: 49

Candidate Starts for PeanutPie_62:

(Start: 22 @40028 has 17 MA's), (Start: 36 @40100 has 1 MA's), (Start: 45 @40142 has 128 MA's), (Start: 49 @40166 has 1 MA's), (64, 40223), (115, 40412), (119, 40433),

Gene: Phalm_56 Start: 38975, Stop: 39412, Start Num: 22

Candidate Starts for Phalm_56:

(Start: 22 @38975 has 17 MA's), (Start: 36 @39047 has 1 MA's), (Start: 45 @39089 has 128 MA's), (Start: 49 @39113 has 1 MA's), (64, 39170), (115, 39359), (119, 39380),

Gene: Phasih_61 Start: 41374, Stop: 41724, Start Num: 45

Candidate Starts for Phasih_61:

(Start: 42 @41365 has 2 MA's), (Start: 45 @41374 has 128 MA's), (Start: 49 @41395 has 1 MA's), (51, 41404), (70, 41482), (75, 41527), (92, 41581), (106, 41638), (109, 41644), (115, 41671), (121, 41713),

Gene: Phayonce_58 Start: 40466, Stop: 40795, Start Num: 45

Candidate Starts for Phayonce_58:

(8, 40253), (12, 40277), (18, 40334), (20, 40340), (Start: 31 @40409 has 1 MA's), (Start: 45 @40466 has 128 MA's), (58, 40514), (67, 40547), (70, 40565), (122, 40781),

Gene: Phegasus_59 Start: 37802, Stop: 38125, Start Num: 45

Candidate Starts for Phegasus_59:

(4, 37535), (7, 37568), (9, 37592), (10, 37598), (Start: 31 @37739 has 1 MA's), (Start: 45 @37802 has 128 MA's), (94, 37991), (95, 37994), (119, 38093),

Gene: Philus_66 Start: 42110, Stop: 42451, Start Num: 45

Candidate Starts for Philus_66:

(Start: 42 @42101 has 2 MA's), (Start: 45 @42110 has 128 MA's), (51, 42149), (70, 42227), (121, 42440),

Gene: Phineas_58 Start: 38683, Stop: 39009, Start Num: 45

Candidate Starts for Phineas_58:

(Start: 22 @38569 has 17 MA's), (Start: 36 @38641 has 1 MA's), (Start: 45 @38683 has 128 MA's), (Start: 49 @38707 has 1 MA's), (64, 38764), (115, 38956), (119, 38977),

Gene: Phoebus_82 Start: 54058, Stop: 53714, Start Num: 40

Candidate Starts for Phoebus_82:

(Start: 36 @54088 has 1 MA's), (Start: 38 @54061 has 9 MA's), (Start: 40 @54058 has 20 MA's), (53, 54022), (93, 53860), (95, 53854), (96, 53851), (117, 53767),

Gene: Phoebus_93 Start: 58193, Stop: 58534, Start Num: 45

Candidate Starts for Phoebus_93:

(19, 58061), (30, 58121), (32, 58142), (35, 58148), (Start: 45 @58193 has 128 MA's), (51, 58232), (70, 58286), (106, 58448), (109, 58454), (115, 58481), (116, 58484), (121, 58523),

Gene: Polkaroo_56 Start: 37599, Stop: 37922, Start Num: 45

Candidate Starts for Polkaroo_56:

(Start: 45 @37599 has 128 MA's), (94, 37788), (95, 37791), (119, 37890),

Gene: Pollywog_64 Start: 41787, Stop: 42128, Start Num: 45

Candidate Starts for Pollywog_64:

(Start: 42 @41778 has 2 MA's), (Start: 45 @41787 has 128 MA's), (51, 41826), (70, 41904), (121, 42117),

Gene: Polo2Bam_69 Start: 40804, Stop: 41145, Start Num: 45

Candidate Starts for Polo2Bam_69:

(Start: 42 @40795 has 2 MA's), (Start: 45 @40804 has 128 MA's), (48, 40825), (54, 40840), (66, 40891), (99, 41029), (121, 41134),

Gene: Pound_80 Start: 54194, Stop: 53856, Start Num: 40

Candidate Starts for Pound_80:

(Start: 36 @54224 has 1 MA's), (Start: 38 @54197 has 9 MA's), (Start: 40 @54194 has 20 MA's), (53, 54158), (89, 54011), (96, 53990), (113, 53930),

Gene: PowerRanger_58 Start: 41782, Stop: 41528, Start Num: 71

Candidate Starts for PowerRanger_58:

(24, 42031), (25, 42028), (33, 41974), (43, 41917), (50, 41878), (57, 41860), (71, 41782), (84, 41710), (91, 41686), (113, 41614), (121, 41551),

Gene: Pygmy_61 Start: 40147, Stop: 40473, Start Num: 45

Candidate Starts for Pygmy_61:

(Start: 22 @40033 has 17 MA's), (Start: 36 @40105 has 1 MA's), (Start: 45 @40147 has 128 MA's), (Start: 49 @40171 has 1 MA's), (64, 40228), (115, 40420), (119, 40441),

Gene: QueenHazel_51 Start: 36206, Stop: 36523, Start Num: 45

Candidate Starts for QueenHazel_51:

(16, 36047), (Start: 31 @36143 has 1 MA's), (Start: 45 @36206 has 128 MA's), (56, 36248), (61, 36266), (64, 36278), (119, 36491),

Gene: QuickMath_67 Start: 43563, Stop: 43904, Start Num: 45

Candidate Starts for QuickMath_67:

(Start: 45 @43563 has 128 MA's), (51, 43602), (70, 43656), (106, 43818), (109, 43824), (115, 43851), (116, 43854),

Gene: Rebel_53 Start: 34876, Stop: 35211, Start Num: 45

Candidate Starts for Rebel_53:

(Start: 31 @34819 has 1 MA's), (Start: 45 @34876 has 128 MA's), (58, 34924), (67, 34957), (70, 34975), (115, 35143), (122, 35191),

Gene: RedBird_61 Start: 40229, Stop: 40564, Start Num: 45

Candidate Starts for RedBird_61:

(Start: 42 @40220 has 2 MA's), (Start: 45 @40229 has 128 MA's), (51, 40268), (70, 40340), (121, 40553),

Gene: Redno2_76 Start: 49675, Stop: 49328, Start Num: 38

Candidate Starts for Redno2_76:

(Start: 36 @49702 has 1 MA's), (Start: 38 @49675 has 9 MA's), (Start: 40 @49672 has 20 MA's), (53, 49636), (93, 49474), (95, 49468), (96, 49465), (117, 49381),

Gene: Renaud18_73 Start: 42883, Stop: 43242, Start Num: 45

Candidate Starts for Renaud18_73:

(28, 42793), (Start: 45 @42883 has 128 MA's), (51, 42922), (70, 42994), (106, 43156), (109, 43162), (115, 43189), (116, 43192), (121, 43231),

Gene: RockyHorror_64 Start: 40636, Stop: 40992, Start Num: 45

Candidate Starts for RockyHorror_64:

(Start: 42 @40627 has 2 MA's), (Start: 45 @40636 has 128 MA's), (48, 40657), (54, 40672), (66, 40723), (70, 40744), (75, 40789), (92, 40849), (106, 40906), (109, 40912), (115, 40939), (121, 40981),

Gene: Royals2015_66 Start: 41205, Stop: 41546, Start Num: 45

Candidate Starts for Royals2015_66:

(Start: 42 @41196 has 2 MA's), (Start: 45 @41205 has 128 MA's), (51, 41244), (70, 41322), (121, 41535),

Gene: Ruby_59 Start: 40765, Stop: 41121, Start Num: 45

Candidate Starts for Ruby_59:

(Start: 42 @40756 has 2 MA's), (Start: 45 @40765 has 128 MA's), (48, 40786), (54, 40801), (66, 40852), (70, 40873), (75, 40918), (92, 40978), (106, 41035), (109, 41041), (115, 41068), (121, 41110),

Gene: Saal_65 Start: 42221, Stop: 42562, Start Num: 45

Candidate Starts for Saal_65:

(Start: 42 @42212 has 2 MA's), (Start: 45 @42221 has 128 MA's), (51, 42260), (70, 42338), (121, 42551),

Gene: Sabbb_67 Start: 41906, Stop: 42262, Start Num: 45

Candidate Starts for Sabbb_67:

(Start: 42 @41897 has 2 MA's), (Start: 45 @41906 has 128 MA's), (48, 41927), (54, 41942), (66, 41993), (70, 42014), (106, 42176), (109, 42182), (115, 42209), (116, 42212), (121, 42251),

Gene: Sarma624_61 Start: 37375, Stop: 37716, Start Num: 45

Candidate Starts for Sarma624_61:

(Start: 42 @37366 has 2 MA's), (Start: 45 @37375 has 128 MA's), (51, 37414), (70, 37492), (121, 37705),

Gene: Sassafra_61 Start: 40547, Stop: 40882, Start Num: 45

Candidate Starts for Sassafra_61:

(Start: 42 @40538 has 2 MA's), (Start: 45 @40547 has 128 MA's), (51, 40586), (70, 40658), (121, 40871),

Gene: Schatzie_75 Start: 51668, Stop: 51321, Start Num: 38

Candidate Starts for Schatzie_75:

(Start: 36 @51695 has 1 MA's), (Start: 38 @51668 has 9 MA's), (Start: 40 @51665 has 20 MA's), (53, 51629), (93, 51467), (95, 51461), (96, 51458), (117, 51374),

Gene: Schatzie_86 Start: 55800, Stop: 56141, Start Num: 45

Candidate Starts for Schatzie_86:

(19, 55668), (30, 55728), (32, 55749), (35, 55755), (Start: 45 @55800 has 128 MA's), (51, 55839), (70, 55893), (106, 56055), (109, 56061), (115, 56088), (116, 56091), (121, 56130),

Gene: Shaboozey_76 Start: 47897, Stop: 47655, Start Num: 45

Candidate Starts for Shaboozey_76:

(23, 48008), (26, 47996), (28, 47990), (34, 47942), (Start: 45 @47897 has 128 MA's), (62, 47822), (65, 47816), (79, 47738), (86, 47723),

Gene: Shaboozey_77 Start: 48244, Stop: 47894, Start Num: 40

Candidate Starts for Shaboozey_77:

(21, 48352), (Start: 36 @48274 has 1 MA's), (Start: 38 @48247 has 9 MA's), (Start: 40 @48244 has 20 MA's), (53, 48208), (73, 48121), (74, 48115), (90, 48049), (108, 47986), (111, 47980), (118, 47938),

Gene: Shipwreck_60 Start: 40146, Stop: 40448, Start Num: 49

Candidate Starts for Shipwreck_60:

(Start: 22 @40008 has 17 MA's), (Start: 36 @40080 has 1 MA's), (Start: 45 @40122 has 128 MA's), (Start: 49 @40146 has 1 MA's), (64, 40203), (115, 40395), (119, 40416),

Gene: SimranZ1_64 Start: 41403, Stop: 41735, Start Num: 39

Candidate Starts for SimranZ1_64:

(Start: 39 @41403 has 2 MA's), (Start: 49 @41433 has 1 MA's), (51, 41442), (70, 41520), (73, 41544), (76, 41562), (97, 41616), (103, 41643), (114, 41673), (121, 41724),

Gene: Sonah_57 Start: 37705, Stop: 38145, Start Num: 22

Candidate Starts for Sonah_57:

(Start: 22 @37705 has 17 MA's), (Start: 36 @37777 has 1 MA's), (Start: 45 @37819 has 128 MA's), (Start: 49 @37843 has 1 MA's), (64, 37900), (115, 38092), (119, 38113),

Gene: Soul22_69 Start: 42555, Stop: 42905, Start Num: 45

Candidate Starts for Soul22_69:

(Start: 42 @42546 has 2 MA's), (Start: 45 @42555 has 128 MA's), (51, 42594), (70, 42672), (97, 42786), (101, 42801), (103, 42813),

Gene: StevieRay_61 Start: 40026, Stop: 40466, Start Num: 22

Candidate Starts for StevieRay_61:

(Start: 22 @40026 has 17 MA's), (Start: 36 @40098 has 1 MA's), (Start: 45 @40140 has 128 MA's),
(Start: 49 @40164 has 1 MA's), (64, 40221), (115, 40413), (119, 40434),

Gene: StressBall_56 Start: 38975, Stop: 39412, Start Num: 22

Candidate Starts for StressBall_56:

(Start: 22 @38975 has 17 MA's), (Start: 36 @39047 has 1 MA's), (Start: 45 @39089 has 128 MA's),
(Start: 49 @39113 has 1 MA's), (64, 39170), (115, 39359), (119, 39380),

Gene: Tchotchke_62 Start: 40712, Stop: 41053, Start Num: 45

Candidate Starts for Tchotchke_62:

(Start: 42 @40703 has 2 MA's), (Start: 45 @40712 has 128 MA's), (51, 40751), (70, 40829), (121,
41042),

Gene: Techage_54 Start: 36368, Stop: 36694, Start Num: 45

Candidate Starts for Techage_54:

(1, 35945), (3, 36092), (Start: 31 @36305 has 1 MA's), (Start: 45 @36368 has 128 MA's), (119, 36662),

Gene: Thespis_58 Start: 38874, Stop: 39197, Start Num: 45

Candidate Starts for Thespis_58:

(Start: 22 @38760 has 17 MA's), (Start: 36 @38832 has 1 MA's), (Start: 45 @38874 has 128 MA's),
(Start: 49 @38898 has 1 MA's), (64, 38955), (115, 39144), (119, 39165),

Gene: ThetaBob_70 Start: 42862, Stop: 43218, Start Num: 45

Candidate Starts for ThetaBob_70:

(26, 42760), (Start: 45 @42862 has 128 MA's), (51, 42901), (75, 43018), (106, 43132), (109, 43138),
(121, 43207),

Gene: Thibault_75 Start: 51674, Stop: 52018, Start Num: 45

Candidate Starts for Thibault_75:

(29, 51590), (Start: 45 @51674 has 128 MA's), (51, 51713), (70, 51785), (100, 51902), (111, 51944),
(121, 52007),

Gene: Thibault_67 Start: 47871, Stop: 47533, Start Num: 40

Candidate Starts for Thibault_67:

(Start: 36 @47901 has 1 MA's), (Start: 38 @47874 has 9 MA's), (Start: 40 @47871 has 20 MA's), (53,
47835), (89, 47688), (96, 47667), (113, 47607),

Gene: ThreeRngTarjay_77 Start: 52950, Stop: 52606, Start Num: 40

Candidate Starts for ThreeRngTarjay_77:

(Start: 36 @52980 has 1 MA's), (Start: 38 @52953 has 9 MA's), (Start: 40 @52950 has 20 MA's), (53,
52914), (93, 52752), (95, 52746), (96, 52743), (117, 52659),

Gene: ThreeRngTarjay_88 Start: 57085, Stop: 57426, Start Num: 45

Candidate Starts for ThreeRngTarjay_88:

(19, 56953), (30, 57013), (32, 57034), (35, 57040), (Start: 45 @57085 has 128 MA's), (51, 57124), (70,
57178), (106, 57340), (109, 57346), (115, 57373), (116, 57376), (121, 57415),

Gene: Topiatin_83 Start: 49070, Stop: 49327, Start Num: 65

Candidate Starts for Topiatin_83:

(Start: 37 @48974 has 1 MA's), (Start: 40 @48995 has 20 MA's), (62, 49064), (65, 49070), (89, 49172),
(96, 49193), (113, 49253),

Gene: Topiatin_70 Start: 43622, Stop: 43981, Start Num: 45

Candidate Starts for Topiatin_70:

(Start: 42 @43613 has 2 MA's), (Start: 45 @43622 has 128 MA's), (51, 43661), (70, 43733), (106, 43895), (109, 43901), (115, 43928),

Gene: Toron_83 Start: 50561, Stop: 50893, Start Num: 47

Candidate Starts for Toron_83:

(41, 50534), (47, 50561), (62, 50624), (70, 50654), (90, 50744), (96, 50759), (120, 50879),

Gene: Velveteen_58 Start: 37375, Stop: 37716, Start Num: 45

Candidate Starts for Velveteen_58:

(Start: 42 @37366 has 2 MA's), (Start: 45 @37375 has 128 MA's), (51, 37414), (70, 37492), (121, 37705),

Gene: Venti_54 Start: 36260, Stop: 36583, Start Num: 45

Candidate Starts for Venti_54:

(Start: 45 @36260 has 128 MA's), (94, 36449), (95, 36452), (119, 36551),

Gene: Vidya_55 Start: 37618, Stop: 37944, Start Num: 45

Candidate Starts for Vidya_55:

(Start: 22 @37504 has 17 MA's), (Start: 36 @37576 has 1 MA's), (Start: 45 @37618 has 128 MA's), (Start: 49 @37642 has 1 MA's), (64, 37699), (115, 37891), (119, 37912),

Gene: Wanda_95 Start: 56202, Stop: 56543, Start Num: 45

Candidate Starts for Wanda_95:

(19, 56070), (30, 56130), (32, 56151), (35, 56157), (Start: 45 @56202 has 128 MA's), (51, 56241), (70, 56295), (106, 56457), (109, 56463), (115, 56490), (116, 56493), (121, 56532),

Gene: Willsammy_56 Start: 39151, Stop: 39588, Start Num: 22

Candidate Starts for Willsammy_56:

(Start: 22 @39151 has 17 MA's), (Start: 36 @39223 has 1 MA's), (Start: 45 @39265 has 128 MA's), (Start: 49 @39289 has 1 MA's), (64, 39346), (115, 39535), (119, 39556),

Gene: Xeno_56 Start: 35652, Stop: 35969, Start Num: 45

Candidate Starts for Xeno_56:

(Start: 45 @35652 has 128 MA's), (56, 35694), (61, 35712), (64, 35724), (119, 35937),

Gene: Xiaokay_70 Start: 48787, Stop: 48449, Start Num: 40

Candidate Starts for Xiaokay_70:

(Start: 36 @48817 has 1 MA's), (Start: 38 @48790 has 9 MA's), (Start: 40 @48787 has 20 MA's), (53, 48751), (89, 48604), (96, 48583), (113, 48523),

Gene: Xiaokay_80 Start: 52922, Stop: 53263, Start Num: 45

Candidate Starts for Xiaokay_80:

(19, 52790), (30, 52850), (32, 52871), (35, 52877), (Start: 45 @52922 has 128 MA's), (51, 52961), (70, 53015), (106, 53177), (109, 53183), (115, 53210), (116, 53213), (121, 53252),

Gene: Xula_50 Start: 35808, Stop: 36125, Start Num: 45

Candidate Starts for Xula_50:

(16, 35649), (Start: 45 @35808 has 128 MA's), (56, 35850), (61, 35868), (64, 35880), (119, 36093),

Gene: Yeet_74 Start: 51170, Stop: 50823, Start Num: 38

Candidate Starts for Yeet_74:

(Start: 36 @51197 has 1 MA's), (Start: 38 @51170 has 9 MA's), (Start: 40 @51167 has 20 MA's), (53, 51131), (93, 50969), (95, 50963), (96, 50960), (117, 50876),

Gene: Yeet_84 Start: 55302, Stop: 55643, Start Num: 45

Candidate Starts for Yeet_84:

(19, 55170), (30, 55230), (32, 55251), (35, 55257), (Start: 45 @55302 has 128 MA's), (51, 55341), (70, 55395), (106, 55557), (109, 55563), (115, 55590), (116, 55593), (121, 55632),

Gene: Yorick_62 Start: 41335, Stop: 41676, Start Num: 45

Candidate Starts for Yorick_62:

(Start: 42 @41326 has 2 MA's), (Start: 45 @41335 has 128 MA's), (51, 41374), (70, 41452), (121, 41665),

Gene: Yoshi_78 Start: 43126, Stop: 43482, Start Num: 45

Candidate Starts for Yoshi_78:

(26, 43024), (Start: 45 @43126 has 128 MA's), (51, 43165), (75, 43282), (106, 43396), (109, 43402), (121, 43471),

Gene: Zelink_77 Start: 53262, Stop: 52918, Start Num: 40

Candidate Starts for Zelink_77:

(Start: 36 @53292 has 1 MA's), (Start: 38 @53265 has 9 MA's), (Start: 40 @53262 has 20 MA's), (53, 53226), (93, 53064), (95, 53058), (96, 53055), (117, 52971),

Gene: Zelink_88 Start: 57397, Stop: 57738, Start Num: 45

Candidate Starts for Zelink_88:

(19, 57265), (30, 57325), (32, 57346), (35, 57352), (Start: 45 @57397 has 128 MA's), (51, 57436), (70, 57490), (106, 57652), (109, 57658), (115, 57685), (116, 57688), (121, 57727),

Gene: Zerg_63 Start: 40748, Stop: 41104, Start Num: 45

Candidate Starts for Zerg_63:

(Start: 42 @40739 has 2 MA's), (Start: 45 @40748 has 128 MA's), (48, 40769), (54, 40784), (66, 40835), (70, 40856), (75, 40901), (92, 40961), (106, 41018), (109, 41024), (115, 41051), (121, 41093),

Gene: Zilizebeth_59 Start: 37826, Stop: 38149, Start Num: 45

Candidate Starts for Zilizebeth_59:

(4, 37559), (7, 37592), (9, 37616), (10, 37622), (Start: 31 @37763 has 1 MA's), (Start: 45 @37826 has 128 MA's), (94, 38015), (95, 38018), (119, 38117),