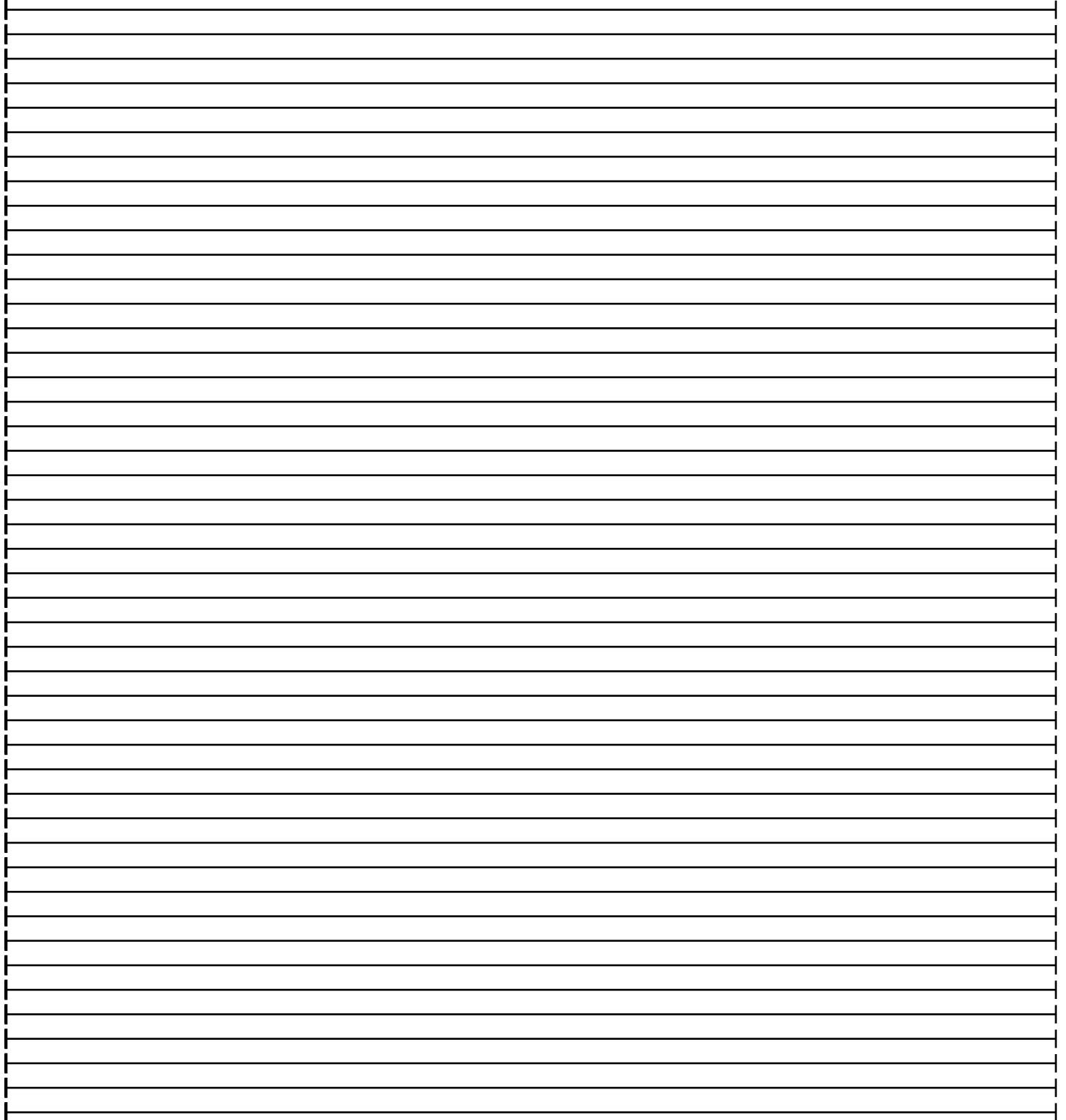
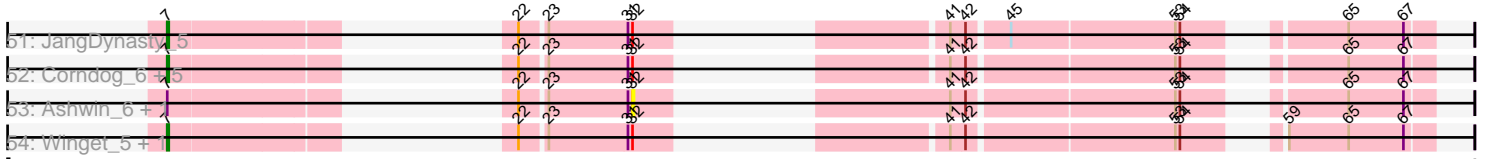


Pham 163446



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 163446 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163446 has 126 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Twister_78, Rebeuca_79
- Track 2 : OKCentral2016_77
- Track 3 : KittenMittens_74, Drake94_75
- Track 4 : Kristoff_76
- Track 5 : WalterMcMickey_77
- Track 6 : Goose_79
- Track 7 : DarthPhader_79, Refuge_81
- Track 8 : Zimmer_80
- Track 9 : Pharaoh_78
- Track 10 : Steamy_76
- Track 11 : 40AC_83
- Track 12 : Kratak_77
- Track 13 : Jaykayelowell_75, Florean_78, Bruiser_77, TinaFeyge_76
- Track 14 : JoongJeon_77, Clarenza_77, BubbleTrouble_77, KFPoly_77, Palestino_77, Albee_78, Thanksgivukkah_77, LittleB_78, Eris_77, Funston_77
- Track 15 : Miramae_78, AvatarAhPeg_78
- Track 16 : Noelle_76
- Track 17 : Stasia_75
- Track 18 : Cindaradix_73
- Track 19 : Stink_78
- Track 20 : Camperdownii_75
- Track 21 : Mundrea_77
- Track 22 : Medusa_77
- Track 23 : TygerBlood_78
- Track 24 : Achebe_74
- Track 25 : CloudWang3_90, Roksolana_90, Hexamo_89, Rifiter_90, Artemis2UCLA_89
- Track 26 : Hammer_90, ToneTone_87, Tucker_90
- Track 27 : Yokurt_89, Koko_91
- Track 28 : Kazan_89, SmellyB_88, Cookiedough_88
- Track 29 : Zaka_90, Wiks_89
- Track 30 : Hoot_83, Jordennis_86, Isiphiwo_84, BABullseye_81, JewelBug_80
- Track 31 : Gruunaga_89, Gladiator_86
- Track 32 : Blue7_91
- Track 33 : LoneWolf_84, Vanisoa_79, Arissanae_79
- Track 34 : HortumSL17_85, Scherzo_82, Phonnegut_84, Fayely_82, Tubs_84, Pioneer_84, Catalina_86, Beemo_84, Myxus_84, Phaeder_84

- Track 35 : Qobbit_82, Spouty_79, Conquerage_82, Eidsmoe_82, Alma_82, EmyBug_78
- Track 36 : Yecey3_85
- Track 37 : Keziacharles14_81
- Track 38 : Maminaiaina_83, BogosyJay_83
- Track 39 : Charm_79
- Track 40 : Rahalelujah_83
- Track 41 : Priya_82
- Track 42 : SheaKeira_79
- Track 43 : Toaka_82
- Track 44 : Elephantoon_84
- Track 45 : Camerico_39
- Track 46 : Empress_69, Doomphist_74, Poenanya_74, RedBird_72
- Track 47 : Dorothy_72
- Track 48 : GigiOuiOui_66
- Track 49 : Phanphagia_66
- Track 50 : FoulBall_5, Mori_5, Familton_6, Vorrrps_5, Schuy_5, Ryadel_7, Idergollasper_5, Shida_5, TelAviv_5, Blessica_5, Krili_5, MadKillah_5, NiebruSaylor_5, Catdawg_5, SchoolBus_5
- Track 51 : JangDynasty_5
- Track 52 : Corndog_6, Dylan_6, YungJamal_6, Firecracker_5, Smooch_6, Zakhe101_6
- Track 53 : Ashwin_6, Wildflower_5
- Track 54 : Winget_5, Alkhayr_5

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

The start number called the most often in the published annotations is 2, it was called in 43 of the 118 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Achebe_74, Albee_78, Artemis2UCLA_89, BABullseye_81, Bruiser_77, BubbleTrouble_77, Camperdownii_75, Charm_79, Clarenza_77, CloudWang3_90, Drake94_75, Elephantoon_84, Eris_77, Florean_78, Funston_77, Gladiator_86, Goose_79, Gruunaga_89, Hexamo_89, Hoot_83, Isiphiwo_84, Jaykayelowell_75, JewelBug_80, JoongJeon_77, Jordennis_86, KFPoly_77, KittenMittens_74, Kratak_77, Kristoff_76, LittleB_78, Noelle_76, Palestino_77, Pharaoh_78, Priya_82, Rahalelujah_83, Rifter_90, Roksolana_90, Steamy_76, Thanksgivukkah_77, TinaFeyge_76, Wiks_89, Zaka_90, Zimmer_80,

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

- 40AC_83, Alma_82, Arissanae_79, AvatarAhPeg_78, Beemo_84, Blue7_91, BogosyJay_83, Catalina_86, Cindaradix_73, Conquerage_82, Cookiedough_88, DarthPhader_79, Eidsmoe_82, EmyBug_78, Fayely_82, Hammer_90, HortumSL17_85, Kazan_89, Keziacharles14_81, Koko_91, LoneWolf_84, Maminaiaina_83, Medusa_77, Miramae_78, Mundrea_77, Myxus_84, OKCentral2016_77, Phaeder_84, Phonnegut_84, Pioneer_84, Qobbit_82, Rebeuca_79, Refuge_81, Scherzo_82, SheaKeira_79, SmellyB_88, Spouty_79, Stasia_75, Stink_78, Toaka_82, ToneTone_87, Tubs_84, Tucker_90, Twister_78, TygerBlood_78, Vanisoa_79, WalterMcMickey_77, Yecey3_85, Yokurt_89,

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

- Alkhayr_5, Ashwin_6, Blessica_5, Camerico_39, Catdawg_5, Corndog_6, Doomphist_74, Dorothy_72, Dylan_6, Empress_69, Familton_6, Firecracker_5, FoulBall_5, GigiOuiOui_66, Idergollasper_5, JangDynasty_5, Krili_5, MadKillah_5, Mori_5, NiebruSaylor_5, Phanphagia_66, Poenanya_74, RedBird_72, Ryadel_7, SchoolBus_5, Schuy_5, Shida_5, Smooch_6, TelAviv_5, Vorrrps_5, Wildflower_5, Winget_5, YungJamal_6, Zakhe101_6,

Summary by start number:

Start 1:

- Found in 7 of 126 (5.6%) of genes in pham
- Manual Annotations of this start: 5 of 118
- Called 71.4% of time when present
- Phage (with cluster) where this start called: Doomphist_74 (F1), Empress_69 (F1), GigiOuiOui_66 (F1), Poenanya_74 (F1), RedBird_72 (F1),

Start 2:

- Found in 92 of 126 (73.0%) of genes in pham
- Manual Annotations of this start: 43 of 118
- Called 46.7% of time when present
- Phage (with cluster) where this start called: Achebe_74 (A4), Albee_78 (A4), Artemis2UCLA_89 (A6), BABullseye_81 (A6), Bruiser_77 (A4), BubbleTrouble_77 (A4), Camperdownii_75 (A4), Charm_79 (A9), Clarenza_77 (A4), CloudWang3_90 (A6), Drake94_75 (A10), Elephantoon_84 (A9), Eris_77 (A4), Florean_78 (A4), Funston_77 (A4), Gladiator_86 (A6), Goose_79 (A10), Gruunaga_89 (A6), Hexamo_89 (A6), Hoot_83 (A6), Isiphiwo_84 (A6), Jaykayelowell_75 (A4), JewelBug_80 (A6), JoongJeon_77 (A4), Jordennis_86 (A6), KFPoly_77 (A4), KittenMittens_74 (A10), Kratark_77 (A4), Kristoff_76 (A10), LittleB_78 (A4), Noelle_76 (A4), Palestino_77 (A4), Pharaoh_78 (A12), Priya_82 (A9), Rahalelujah_83 (A9), Rifter_90 (A6), Roksolana_90 (A6), Steamy_76 (A12), Thanksgivukkah_77 (A4), TinaFeyge_76 (A4), Wiks_89 (A6), Zaka_90 (A6), Zimmer_80 (A12),

Start 3:

- Found in 9 of 126 (7.1%) of genes in pham
- Manual Annotations of this start: 1 of 118
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Phanphagia_66 (F1),

Start 4:

- Found in 68 of 126 (54.0%) of genes in pham
- Manual Annotations of this start: 5 of 118
- Called 7.4% of time when present
- Phage (with cluster) where this start called: Blue7_91 (A6), Cookiedough_88 (A6), Kazan_89 (A6), OKCentral2016_77 (A10), SmellyB_88 (A6),

Start 7:

- Found in 26 of 126 (20.6%) of genes in pham
- Manual Annotations of this start: 21 of 118
- Called 92.3% of time when present

- Phage (with cluster) where this start called: Alkhayr_5 (O), Blessica_5 (O), Catdawg_5 (O), Corndog_6 (O), Dylan_6 (O), Familton_6 (O), Firecracker_5 (O), FoulBall_5 (O), Idergollasper_5 (O), JangDynasty_5 (O), Krili_5 (O), MadKillah_5 (O), Mori_5 (O), NiebruSaylor_5 (O), Ryadel_7 (O), SchoolBus_5 (O), Schuy_5 (O), Shida_5 (O), Smooch_6 (O), TelAviv_5 (O), Vorrps_5 (O), Winget_5 (O), YungJamal_6 (O), Zakhe101_6 (O),

Start 10:

- Found in 68 of 126 (54.0%) of genes in pham
- Manual Annotations of this start: 12 of 118
- Called 17.6% of time when present
- Phage (with cluster) where this start called: Arissanae_79 (A9), BogosyJay_83 (A9), DarthPhader_79 (A12), Keziacharles14_81 (A9), LoneWolf_84 (A9), Maminiaiina_83 (A9), Refuge_81 (A12), SheaKeira_79 (A9), Toaka_82 (A9), Vanisoa_79 (A9), WalterMcMickey_77 (A10), Yecey3_85 (A9),

Start 11:

- Found in 46 of 126 (36.5%) of genes in pham
- Manual Annotations of this start: 3 of 118
- Called 6.5% of time when present
- Phage (with cluster) where this start called: Koko_91 (A6), Mundrea_77 (A4), Yokurt_89 (A6),

Start 12:

- Found in 10 of 126 (7.9%) of genes in pham
- Manual Annotations of this start: 3 of 118
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Hammer_90 (A6), ToneTone_87 (A6), Tucker_90 (A6),

Start 13:

- Found in 33 of 126 (26.2%) of genes in pham
- Manual Annotations of this start: 16 of 118
- Called 54.5% of time when present
- Phage (with cluster) where this start called: Alma_82 (A9), Beemo_84 (A9), Catalina_86 (A9), Conquerage_82 (A9), Eidsmoe_82 (A9), EmyBug_78 (A9), Fayely_82 (A9), HortumSL17_85 (A9), Myxus_84 (A9), Phaeder_84 (A9), Phonnegut_84 (A9), Pioneer_84 (A9), Qobbit_82 (A9), Rebeuca_79 (A10), Scherzo_82 (A9), Spouty_79 (A9), Tubs_84 (A9), Twister_78 (A10),

Start 14:

- Found in 19 of 126 (15.1%) of genes in pham
- Manual Annotations of this start: 2 of 118
- Called 10.5% of time when present
- Phage (with cluster) where this start called: Stasia_75 (A4), TygerBlood_78 (A4),

Start 15:

- Found in 28 of 126 (22.2%) of genes in pham
- Manual Annotations of this start: 4 of 118
- Called 14.3% of time when present
- Phage (with cluster) where this start called: AvatarAhPeg_78 (A4), Dorothy_72 (F1), Medusa_77 (A4), Miramae_78 (A4),

Start 19:

- Found in 1 of 126 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC_83 (A17),

Start 29:

- Found in 4 of 126 (3.2%) of genes in pham
- Manual Annotations of this start: 2 of 118
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cindaradix_73 (A4), Stink_78 (A4),

Start 30:

- Found in 1 of 126 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 118
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico_39 (DF),

Start 32:

- Found in 26 of 126 (20.6%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Ashwin_6 (O), Wildflower_5 (O),

Summary by clusters:

There are 9 clusters represented in this pham: F1, A17, A10, A12, DF, O, A4, A6, A9,

Info for manual annotations of cluster A10:

- Start number 2 was manually annotated 4 times for cluster A10.
- Start number 4 was manually annotated 1 time for cluster A10.
- Start number 10 was manually annotated 1 time for cluster A10.
- Start number 13 was manually annotated 2 times for cluster A10.

Info for manual annotations of cluster A12:

- Start number 2 was manually annotated 3 times for cluster A12.
- Start number 10 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A4:

- Start number 2 was manually annotated 18 times for cluster A4.
- Start number 11 was manually annotated 1 time for cluster A4.
- Start number 14 was manually annotated 2 times for cluster A4.
- Start number 15 was manually annotated 3 times for cluster A4.
- Start number 29 was manually annotated 2 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 2 was manually annotated 14 times for cluster A6.
- Start number 4 was manually annotated 4 times for cluster A6.
- Start number 11 was manually annotated 2 times for cluster A6.
- Start number 12 was manually annotated 3 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 2 was manually annotated 4 times for cluster A9.
- Start number 10 was manually annotated 9 times for cluster A9.
- Start number 13 was manually annotated 14 times for cluster A9.

Info for manual annotations of cluster DF:

- Start number 30 was manually annotated 1 time for cluster DF.

Info for manual annotations of cluster F1:

- Start number 1 was manually annotated 5 times for cluster F1.
- Start number 3 was manually annotated 1 time for cluster F1.
- Start number 15 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster O:

- Start number 7 was manually annotated 21 times for cluster O.

Gene Information:

Gene: 40AC_83 Start: 49035, Stop: 48499, Start Num: 19

Candidate Starts for 40AC_83:

(Start: 2 @49257 has 43 MA's), (Start: 4 @49233 has 5 MA's), (Start: 10 @49176 has 12 MA's), (18, 49083), (19, 49035), (20, 49005), (21, 48996), (40, 48810), (44, 48786), (53, 48663), (54, 48660), (63, 48564), (64, 48561), (66, 48522),

Gene: Achebe_74 Start: 46689, Stop: 45955, Start Num: 2

Candidate Starts for Achebe_74:

(Start: 2 @46689 has 43 MA's), (9, 46611), (Start: 11 @46590 has 3 MA's), (Start: 14 @46542 has 2 MA's), (Start: 15 @46539 has 4 MA's), (16, 46527), (34, 46434), (36, 46362), (37, 46344), (39, 46278), (49, 46173), (53, 46113), (54, 46110), (61, 46023), (65, 46002), (67, 45966),

Gene: Albee_78 Start: 46898, Stop: 46164, Start Num: 2

Candidate Starts for Albee_78:

(Start: 2 @46898 has 43 MA's), (9, 46820), (Start: 11 @46799 has 3 MA's), (Start: 14 @46751 has 2 MA's), (Start: 15 @46748 has 4 MA's), (34, 46643), (36, 46571), (37, 46553), (39, 46487), (49, 46382), (53, 46322), (54, 46319), (61, 46232), (65, 46211),

Gene: Alkhayr_5 Start: 1855, Stop: 1286, Start Num: 7

Candidate Starts for Alkhayr_5:

(Start: 7 @1855 has 21 MA's), (22, 1738), (23, 1723), (31, 1672), (32, 1669), (41, 1555), (42, 1546), (53, 1417), (54, 1414), (59, 1378), (65, 1339), (67, 1303),

Gene: Alma_82 Start: 46797, Stop: 46282, Start Num: 13

Candidate Starts for Alma_82:

(Start: 2 @46929 has 43 MA's), (Start: 4 @46905 has 5 MA's), (9, 46851), (Start: 10 @46848 has 12 MA's), (Start: 13 @46797 has 16 MA's), (40, 46590), (43, 46569), (47, 46521), (53, 46443), (54, 46440), (61, 46353),

Gene: Arissanae_79 Start: 46740, Stop: 46174, Start Num: 10

Candidate Starts for Arissanae_79:

(Start: 2 @46821 has 43 MA's), (Start: 4 @46797 has 5 MA's), (9, 46743), (Start: 10 @46740 has 12 MA's), (40, 46482), (43, 46461), (53, 46335), (54, 46332), (61, 46245),

Gene: Artemis2UCLA_89 Start: 47205, Stop: 46558, Start Num: 2

Candidate Starts for Artemis2UCLA_89:

(Start: 2 @47205 has 43 MA's), (Start: 4 @47181 has 5 MA's), (9, 47127), (Start: 10 @47124 has 12 MA's), (Start: 12 @47094 has 3 MA's), (46, 46800), (53, 46719), (54, 46716), (63, 46623), (64, 46620),

Gene: Ashwin_6 Start: 1973, Stop: 1590, Start Num: 32

Candidate Starts for Ashwin_6:

(Start: 7 @2159 has 21 MA's), (22, 2042), (23, 2027), (31, 1976), (32, 1973), (41, 1859), (42, 1850), (53, 1721), (54, 1718), (65, 1643), (67, 1607),

Gene: AvatarAhPeg_78 Start: 46909, Stop: 46328, Start Num: 15

Candidate Starts for AvatarAhPeg_78:

(Start: 2 @47059 has 43 MA's), (9, 46981), (Start: 11 @46960 has 3 MA's), (Start: 13 @46927 has 16 MA's), (Start: 15 @46909 has 4 MA's), (26, 46840), (27, 46834), (Start: 29 @46822 has 2 MA's), (39, 46651), (53, 46486), (54, 46483), (61, 46396), (65, 46375), (67, 46339),

Gene: BABullseye_81 Start: 45537, Stop: 44887, Start Num: 2

Candidate Starts for BABullseye_81:

(Start: 2 @45537 has 43 MA's), (Start: 4 @45513 has 5 MA's), (9, 45459), (Start: 10 @45456 has 12 MA's), (Start: 11 @45438 has 3 MA's), (40, 45198), (44, 45174), (47, 45129), (53, 45051), (54, 45048), (55, 45027), (63, 44952), (64, 44949),

Gene: Beemo_84 Start: 46790, Stop: 46275, Start Num: 13

Candidate Starts for Beemo_84:

(Start: 2 @46922 has 43 MA's), (Start: 4 @46898 has 5 MA's), (Start: 10 @46841 has 12 MA's), (Start: 13 @46790 has 16 MA's), (40, 46583), (43, 46562), (47, 46514), (53, 46436), (54, 46433), (61, 46346),

Gene: Blessica_5 Start: 1714, Stop: 1145, Start Num: 7

Candidate Starts for Blessica_5:

(Start: 7 @1714 has 21 MA's), (22, 1597), (23, 1582), (31, 1531), (32, 1528), (41, 1414), (42, 1405), (45, 1381), (53, 1276), (54, 1273), (59, 1237), (65, 1198), (67, 1162),

Gene: Blue7_91 Start: 47412, Stop: 46786, Start Num: 4

Candidate Starts for Blue7_91:

(Start: 2 @47436 has 43 MA's), (Start: 4 @47412 has 5 MA's), (9, 47358), (Start: 10 @47355 has 12 MA's), (Start: 11 @47337 has 3 MA's), (46, 47031), (53, 46950), (54, 46947), (55, 46926), (63, 46851), (64, 46848),

Gene: BogosyJay_83 Start: 46896, Stop: 46318, Start Num: 10

Candidate Starts for BogosyJay_83:

(Start: 2 @46977 has 43 MA's), (Start: 3 @46956 has 1 MA's), (Start: 4 @46953 has 5 MA's), (Start: 10 @46896 has 12 MA's), (Start: 13 @46845 has 16 MA's), (40, 46638), (43, 46617), (53, 46491), (54, 46488), (61, 46401), (65, 46380), (68, 46335),

Gene: Bruiser_77 Start: 46898, Stop: 46164, Start Num: 2

Candidate Starts for Bruiser_77:

(Start: 2 @46898 has 43 MA's), (9, 46820), (Start: 11 @46799 has 3 MA's), (Start: 14 @46751 has 2 MA's), (Start: 15 @46748 has 4 MA's), (34, 46643), (36, 46571), (37, 46553), (39, 46487), (53, 46322), (54, 46319), (61, 46232), (65, 46211),

Gene: BubbleTrouble_77 Start: 46925, Stop: 46191, Start Num: 2

Candidate Starts for BubbleTrouble_77:

(Start: 2 @46925 has 43 MA's), (9, 46847), (Start: 11 @46826 has 3 MA's), (Start: 14 @46778 has 2 MA's), (Start: 15 @46775 has 4 MA's), (34, 46670), (36, 46598), (37, 46580), (39, 46514), (49, 46409), (53, 46349), (54, 46346), (61, 46259), (65, 46238),

Gene: Camerico_39 Start: 42850, Stop: 43254, Start Num: 30

Candidate Starts for Camerico_39:

(5, 42643), (24, 42814), (Start: 30 @42850 has 1 MA's), (45, 42979), (52, 43048), (53, 43072), (54, 43075), (60, 43135), (62, 43156),

Gene: Camperdownii_75 Start: 46323, Stop: 45583, Start Num: 2

Candidate Starts for Camperdownii_75:

(Start: 2 @46323 has 43 MA's), (Start: 4 @46299 has 5 MA's), (Start: 10 @46242 has 12 MA's), (41, 45870), (47, 45807), (53, 45729), (54, 45726), (63, 45645), (65, 45630),

Gene: Catalina_86 Start: 46900, Stop: 46385, Start Num: 13

Candidate Starts for Catalina_86:

(Start: 2 @47032 has 43 MA's), (Start: 4 @47008 has 5 MA's), (Start: 10 @46951 has 12 MA's), (Start: 13 @46900 has 16 MA's), (40, 46693), (43, 46672), (47, 46624), (53, 46546), (54, 46543), (61, 46456),

Gene: Catdawg_5 Start: 1764, Stop: 1195, Start Num: 7

Candidate Starts for Catdawg_5:

(Start: 7 @1764 has 21 MA's), (22, 1647), (23, 1632), (31, 1581), (32, 1578), (41, 1464), (42, 1455), (45, 1431), (53, 1326), (54, 1323), (59, 1287), (65, 1248), (67, 1212),

Gene: Charm_79 Start: 46368, Stop: 45709, Start Num: 2

Candidate Starts for Charm_79:

(Start: 2 @46368 has 43 MA's), (Start: 4 @46344 has 5 MA's), (9, 46290), (Start: 10 @46287 has 12 MA's), (40, 46029), (43, 46008), (51, 45921), (53, 45882), (54, 45879), (58, 45813), (61, 45792), (65, 45771), (68, 45726),

Gene: Cindaradix_73 Start: 46788, Stop: 46300, Start Num: 29

Candidate Starts for Cindaradix_73:

(Start: 2 @47025 has 43 MA's), (9, 46947), (Start: 11 @46926 has 3 MA's), (26, 46806), (Start: 29 @46788 has 2 MA's), (39, 46623), (41, 46602), (53, 46458), (54, 46455), (61, 46368), (65, 46347),

Gene: Clarenza_77 Start: 46895, Stop: 46161, Start Num: 2

Candidate Starts for Clarenza_77:

(Start: 2 @46895 has 43 MA's), (9, 46817), (Start: 11 @46796 has 3 MA's), (Start: 14 @46748 has 2 MA's), (Start: 15 @46745 has 4 MA's), (34, 46640), (36, 46568), (37, 46550), (39, 46484), (49, 46379), (53, 46319), (54, 46316), (61, 46229), (65, 46208),

Gene: CloudWang3_90 Start: 47734, Stop: 47087, Start Num: 2

Candidate Starts for CloudWang3_90:

(Start: 2 @47734 has 43 MA's), (Start: 4 @47710 has 5 MA's), (9, 47656), (Start: 10 @47653 has 12 MA's), (Start: 12 @47623 has 3 MA's), (46, 47329), (53, 47248), (54, 47245), (63, 47152), (64, 47149),

Gene: Conquerage_82 Start: 46566, Stop: 46051, Start Num: 13

Candidate Starts for Conquerage_82:

(Start: 2 @46698 has 43 MA's), (Start: 4 @46674 has 5 MA's), (9, 46620), (Start: 10 @46617 has 12 MA's), (Start: 13 @46566 has 16 MA's), (40, 46359), (43, 46338), (47, 46290), (53, 46212), (54, 46209), (61, 46122),

Gene: Cookiedough_88 Start: 47826, Stop: 47200, Start Num: 4

Candidate Starts for Cookiedough_88:

(Start: 2 @47850 has 43 MA's), (Start: 4 @47826 has 5 MA's), (9, 47772), (Start: 10 @47769 has 12 MA's), (Start: 11 @47751 has 3 MA's), (40, 47511), (44, 47487), (47, 47442), (53, 47364), (54, 47361), (55, 47340), (63, 47265), (64, 47262),

Gene: Corndog_6 Start: 2141, Stop: 1578, Start Num: 7

Candidate Starts for Corndog_6:

(Start: 7 @2141 has 21 MA's), (22, 2024), (23, 2009), (31, 1958), (32, 1955), (41, 1847), (42, 1838), (53, 1709), (54, 1706), (65, 1631), (67, 1595),

Gene: DarthPhader_79 Start: 47620, Stop: 47048, Start Num: 10

Candidate Starts for DarthPhader_79:

(Start: 2 @47701 has 43 MA's), (Start: 4 @47677 has 5 MA's), (Start: 10 @47620 has 12 MA's), (28, 47464), (43, 47338), (53, 47212), (54, 47209), (63, 47116), (64, 47113), (66, 47074),

Gene: Doomphist_74 Start: 45998, Stop: 46735, Start Num: 1

Candidate Starts for Doomphist_74:

(Start: 1 @45998 has 5 MA's), (Start: 3 @46055 has 1 MA's), (6, 46079), (8, 46097), (9, 46112), (Start: 11 @46133 has 3 MA's), (Start: 13 @46166 has 16 MA's), (Start: 15 @46184 has 4 MA's), (35, 46343), (47, 46505), (53, 46583), (54, 46586), (55, 46607), (57, 46616), (61, 46643), (69, 46724),

Gene: Dorothy_72 Start: 44809, Stop: 45360, Start Num: 15

Candidate Starts for Dorothy_72:

(Start: 1 @44623 has 5 MA's), (Start: 3 @44680 has 1 MA's), (6, 44704), (8, 44722), (9, 44737), (Start: 11 @44758 has 3 MA's), (Start: 13 @44791 has 16 MA's), (Start: 15 @44809 has 4 MA's), (35, 44968), (47, 45130), (53, 45208), (54, 45211), (55, 45232), (57, 45241), (61, 45268), (69, 45349),

Gene: Drake94_75 Start: 45844, Stop: 45209, Start Num: 2

Candidate Starts for Drake94_75:

(Start: 2 @45844 has 43 MA's), (Start: 4 @45820 has 5 MA's), (Start: 10 @45763 has 12 MA's), (25, 45628), (47, 45439), (53, 45361), (54, 45358), (55, 45337), (56, 45325), (63, 45271),

Gene: Dylan_6 Start: 2163, Stop: 1594, Start Num: 7

Candidate Starts for Dylan_6:

(Start: 7 @2163 has 21 MA's), (22, 2046), (23, 2031), (31, 1980), (32, 1977), (41, 1863), (42, 1854), (53, 1725), (54, 1722), (65, 1647), (67, 1611),

Gene: Eidsmoe_82 Start: 46558, Stop: 46043, Start Num: 13

Candidate Starts for Eidsmoe_82:

(Start: 2 @46690 has 43 MA's), (Start: 4 @46666 has 5 MA's), (9, 46612), (Start: 10 @46609 has 12 MA's), (Start: 13 @46558 has 16 MA's), (40, 46351), (43, 46330), (47, 46282), (53, 46204), (54, 46201), (61, 46114),

Gene: Elephantoon_84 Start: 46848, Stop: 46192, Start Num: 2

Candidate Starts for Elephantoon_84:

(Start: 2 @46848 has 43 MA's), (Start: 4 @46824 has 5 MA's), (9, 46770), (Start: 10 @46767 has 12 MA's), (28, 46614), (40, 46509), (43, 46488), (53, 46362), (54, 46359), (61, 46272), (65, 46251), (68, 46206),

Gene: Empress_69 Start: 44809, Stop: 45546, Start Num: 1

Candidate Starts for Empress_69:

(Start: 1 @44809 has 5 MA's), (Start: 3 @44866 has 1 MA's), (6, 44890), (8, 44908), (9, 44923), (Start: 11 @44944 has 3 MA's), (Start: 13 @44977 has 16 MA's), (Start: 15 @44995 has 4 MA's), (35,

45154), (47, 45316), (53, 45394), (54, 45397), (55, 45418), (57, 45427), (61, 45454), (69, 45535),

Gene: EmyBug_78 Start: 46560, Stop: 46045, Start Num: 13

Candidate Starts for EmyBug_78:

(Start: 2 @46692 has 43 MA's), (Start: 4 @46668 has 5 MA's), (9, 46614), (Start: 10 @46611 has 12 MA's), (Start: 13 @46560 has 16 MA's), (40, 46353), (43, 46332), (47, 46284), (53, 46206), (54, 46203), (61, 46116),

Gene: Eris_77 Start: 46910, Stop: 46176, Start Num: 2

Candidate Starts for Eris_77:

(Start: 2 @46910 has 43 MA's), (9, 46832), (Start: 11 @46811 has 3 MA's), (Start: 14 @46763 has 2 MA's), (Start: 15 @46760 has 4 MA's), (34, 46655), (36, 46583), (37, 46565), (39, 46499), (49, 46394), (53, 46334), (54, 46331), (61, 46244), (65, 46223),

Gene: Familton_6 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Familton_6:

(Start: 7 @1765 has 21 MA's), (22, 1648), (23, 1633), (31, 1582), (32, 1579), (41, 1465), (42, 1456), (45, 1432), (53, 1327), (54, 1324), (59, 1288), (65, 1249), (67, 1213),

Gene: Fayely_82 Start: 46533, Stop: 46018, Start Num: 13

Candidate Starts for Fayely_82:

(Start: 2 @46665 has 43 MA's), (Start: 4 @46641 has 5 MA's), (Start: 10 @46584 has 12 MA's), (Start: 13 @46533 has 16 MA's), (40, 46326), (43, 46305), (47, 46257), (53, 46179), (54, 46176), (61, 46089),

Gene: Firecracker_5 Start: 1850, Stop: 1287, Start Num: 7

Candidate Starts for Firecracker_5:

(Start: 7 @1850 has 21 MA's), (22, 1733), (23, 1718), (31, 1667), (32, 1664), (41, 1556), (42, 1547), (53, 1418), (54, 1415), (65, 1340), (67, 1304),

Gene: Florean_78 Start: 46897, Stop: 46163, Start Num: 2

Candidate Starts for Florean_78:

(Start: 2 @46897 has 43 MA's), (9, 46819), (Start: 11 @46798 has 3 MA's), (Start: 14 @46750 has 2 MA's), (Start: 15 @46747 has 4 MA's), (34, 46642), (36, 46570), (37, 46552), (39, 46486), (53, 46321), (54, 46318), (61, 46231), (65, 46210),

Gene: FoulBall_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for FoulBall_5:

(Start: 7 @1765 has 21 MA's), (22, 1648), (23, 1633), (31, 1582), (32, 1579), (41, 1465), (42, 1456), (45, 1432), (53, 1327), (54, 1324), (59, 1288), (65, 1249), (67, 1213),

Gene: Funston_77 Start: 46895, Stop: 46161, Start Num: 2

Candidate Starts for Funston_77:

(Start: 2 @46895 has 43 MA's), (9, 46817), (Start: 11 @46796 has 3 MA's), (Start: 14 @46748 has 2 MA's), (Start: 15 @46745 has 4 MA's), (34, 46640), (36, 46568), (37, 46550), (39, 46484), (49, 46379), (53, 46319), (54, 46316), (61, 46229), (65, 46208),

Gene: GigiOuiOui_66 Start: 44414, Stop: 45145, Start Num: 1

Candidate Starts for GigiOuiOui_66:

(Start: 1 @44414 has 5 MA's), (Start: 3 @44471 has 1 MA's), (8, 44513), (9, 44528), (Start: 11 @44549 has 3 MA's), (33, 44729), (47, 44921), (53, 45002), (54, 45005), (61, 45062), (66, 45110), (69, 45134),

Gene: Gladiator_86 Start: 47390, Stop: 46743, Start Num: 2

Candidate Starts for Gladiator_86:

(Start: 2 @47390 has 43 MA's), (Start: 4 @47366 has 5 MA's), (9, 47312), (Start: 10 @47309 has 12 MA's), (Start: 11 @47291 has 3 MA's), (Start: 12 @47279 has 3 MA's), (46, 46985), (53, 46904), (54, 46901), (63, 46808), (64, 46805),

Gene: Goose_79 Start: 46498, Stop: 45863, Start Num: 2

Candidate Starts for Goose_79:

(Start: 2 @46498 has 43 MA's), (Start: 4 @46474 has 5 MA's), (Start: 10 @46417 has 12 MA's), (25, 46282), (47, 46093), (53, 46015), (54, 46012), (56, 45979), (63, 45925),

Gene: Gruunaga_89 Start: 47345, Stop: 46698, Start Num: 2

Candidate Starts for Gruunaga_89:

(Start: 2 @47345 has 43 MA's), (Start: 4 @47321 has 5 MA's), (9, 47267), (Start: 10 @47264 has 12 MA's), (Start: 11 @47246 has 3 MA's), (Start: 12 @47234 has 3 MA's), (46, 46940), (53, 46859), (54, 46856), (63, 46763), (64, 46760),

Gene: Hammer_90 Start: 46941, Stop: 46405, Start Num: 12

Candidate Starts for Hammer_90:

(Start: 2 @47052 has 43 MA's), (Start: 4 @47028 has 5 MA's), (9, 46974), (Start: 10 @46971 has 12 MA's), (Start: 12 @46941 has 3 MA's), (46, 46647), (53, 46566), (54, 46563), (63, 46470), (64, 46467),

Gene: Hexamo_89 Start: 47220, Stop: 46573, Start Num: 2

Candidate Starts for Hexamo_89:

(Start: 2 @47220 has 43 MA's), (Start: 4 @47196 has 5 MA's), (9, 47142), (Start: 10 @47139 has 12 MA's), (Start: 12 @47109 has 3 MA's), (46, 46815), (53, 46734), (54, 46731), (63, 46638), (64, 46635),

Gene: Hoot_83 Start: 45056, Stop: 44406, Start Num: 2

Candidate Starts for Hoot_83:

(Start: 2 @45056 has 43 MA's), (Start: 4 @45032 has 5 MA's), (9, 44978), (Start: 10 @44975 has 12 MA's), (Start: 11 @44957 has 3 MA's), (40, 44717), (44, 44693), (47, 44648), (53, 44570), (54, 44567), (55, 44546), (63, 44471), (64, 44468),

Gene: HortumSL17_85 Start: 46898, Stop: 46383, Start Num: 13

Candidate Starts for HortumSL17_85:

(Start: 2 @47030 has 43 MA's), (Start: 4 @47006 has 5 MA's), (Start: 10 @46949 has 12 MA's), (Start: 13 @46898 has 16 MA's), (40, 46691), (43, 46670), (47, 46622), (53, 46544), (54, 46541), (61, 46454),

Gene: Idergollasper_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Idergollasper_5:

(Start: 7 @1765 has 21 MA's), (22, 1648), (23, 1633), (31, 1582), (32, 1579), (41, 1465), (42, 1456), (45, 1432), (53, 1327), (54, 1324), (59, 1288), (65, 1249), (67, 1213),

Gene: Isiphiwo_84 Start: 46767, Stop: 46117, Start Num: 2

Candidate Starts for Isiphiwo_84:

(Start: 2 @46767 has 43 MA's), (Start: 4 @46743 has 5 MA's), (9, 46689), (Start: 10 @46686 has 12 MA's), (Start: 11 @46668 has 3 MA's), (40, 46428), (44, 46404), (47, 46359), (53, 46281), (54, 46278), (55, 46257), (63, 46182), (64, 46179),

Gene: JangDynasty_5 Start: 1854, Stop: 1291, Start Num: 7

Candidate Starts for JangDynasty_5:

(Start: 7 @1854 has 21 MA's), (22, 1737), (23, 1722), (31, 1671), (32, 1668), (41, 1560), (42, 1551), (45, 1527), (53, 1422), (54, 1419), (65, 1344), (67, 1308),

Gene: Jaykayelowell_75 Start: 46891, Stop: 46157, Start Num: 2

Candidate Starts for Jaykayelowell_75:

(Start: 2 @46891 has 43 MA's), (9, 46813), (Start: 11 @46792 has 3 MA's), (Start: 14 @46744 has 2 MA's), (Start: 15 @46741 has 4 MA's), (34, 46636), (36, 46564), (37, 46546), (39, 46480), (53, 46315), (54, 46312), (61, 46225), (65, 46204),

Gene: JewelBug_80 Start: 45535, Stop: 44885, Start Num: 2

Candidate Starts for JewelBug_80:

(Start: 2 @45535 has 43 MA's), (Start: 4 @45511 has 5 MA's), (9, 45457), (Start: 10 @45454 has 12 MA's), (Start: 11 @45436 has 3 MA's), (40, 45196), (44, 45172), (47, 45127), (53, 45049), (54, 45046), (55, 45025), (63, 44950), (64, 44947),

Gene: JoongJeon_77 Start: 46892, Stop: 46158, Start Num: 2

Candidate Starts for JoongJeon_77:

(Start: 2 @46892 has 43 MA's), (9, 46814), (Start: 11 @46793 has 3 MA's), (Start: 14 @46745 has 2 MA's), (Start: 15 @46742 has 4 MA's), (34, 46637), (36, 46565), (37, 46547), (39, 46481), (49, 46376), (53, 46316), (54, 46313), (61, 46226), (65, 46205),

Gene: Jordennis_86 Start: 47439, Stop: 46789, Start Num: 2

Candidate Starts for Jordennis_86:

(Start: 2 @47439 has 43 MA's), (Start: 4 @47415 has 5 MA's), (9, 47361), (Start: 10 @47358 has 12 MA's), (Start: 11 @47340 has 3 MA's), (40, 47100), (44, 47076), (47, 47031), (53, 46953), (54, 46950), (55, 46929), (63, 46854), (64, 46851),

Gene: KFPoly_77 Start: 46892, Stop: 46158, Start Num: 2

Candidate Starts for KFPoly_77:

(Start: 2 @46892 has 43 MA's), (9, 46814), (Start: 11 @46793 has 3 MA's), (Start: 14 @46745 has 2 MA's), (Start: 15 @46742 has 4 MA's), (34, 46637), (36, 46565), (37, 46547), (39, 46481), (49, 46376), (53, 46316), (54, 46313), (61, 46226), (65, 46205),

Gene: Kazan_89 Start: 47187, Stop: 46561, Start Num: 4

Candidate Starts for Kazan_89:

(Start: 2 @47211 has 43 MA's), (Start: 4 @47187 has 5 MA's), (9, 47133), (Start: 10 @47130 has 12 MA's), (Start: 11 @47112 has 3 MA's), (40, 46872), (44, 46848), (47, 46803), (53, 46725), (54, 46722), (55, 46701), (63, 46626), (64, 46623),

Gene: Keziacharles14_81 Start: 47447, Stop: 46881, Start Num: 10

Candidate Starts for Keziacharles14_81:

(Start: 2 @47528 has 43 MA's), (Start: 4 @47504 has 5 MA's), (9, 47450), (Start: 10 @47447 has 12 MA's), (Start: 13 @47396 has 16 MA's), (40, 47189), (43, 47168), (47, 47120), (53, 47042), (54, 47039), (61, 46952),

Gene: KittenMittens_74 Start: 45854, Stop: 45219, Start Num: 2

Candidate Starts for KittenMittens_74:

(Start: 2 @45854 has 43 MA's), (Start: 4 @45830 has 5 MA's), (Start: 10 @45773 has 12 MA's), (25, 45638), (47, 45449), (53, 45371), (54, 45368), (55, 45347), (56, 45335), (63, 45281),

Gene: Koko_91 Start: 47970, Stop: 47419, Start Num: 11

Candidate Starts for Koko_91:

(Start: 2 @48069 has 43 MA's), (Start: 4 @48045 has 5 MA's), (9, 47991), (Start: 10 @47988 has 12 MA's), (Start: 11 @47970 has 3 MA's), (46, 47664), (53, 47583), (54, 47580), (55, 47559), (63, 47484), (64, 47481),

Gene: Kratark_77 Start: 46932, Stop: 46198, Start Num: 2

Candidate Starts for Kratark_77:

(Start: 2 @46932 has 43 MA's), (9, 46854), (Start: 11 @46833 has 3 MA's), (Start: 14 @46785 has 2 MA's), (Start: 15 @46782 has 4 MA's), (34, 46677), (36, 46605), (37, 46587), (38, 46566), (39, 46521), (49, 46416), (53, 46356), (54, 46353), (61, 46266), (65, 46245),

Gene: Krili_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Krili_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: Kristoff_76 Start: 47122, Stop: 46487, Start Num: 2

Candidate Starts for Kristoff_76:

(Start: 2 @47122 has 43 MA's), (Start: 4 @47098 has 5 MA's), (Start: 10 @47041 has 12 MA's), (Start: 13 @46990 has 16 MA's), (25, 46906), (47, 46717), (53, 46639), (54, 46636), (56, 46603), (63, 46549),

Gene: LittleB_78 Start: 46899, Stop: 46165, Start Num: 2

Candidate Starts for LittleB_78:

(Start: 2 @46899 has 43 MA's), (9, 46821), (Start: 11 @46800 has 3 MA's), (Start: 14 @46752 has 2 MA's), (Start: 15 @46749 has 4 MA's), (34, 46644), (36, 46572), (37, 46554), (39, 46488), (49, 46383), (53, 46323), (54, 46320), (61, 46233), (65, 46212),

Gene: LoneWolf_84 Start: 46963, Stop: 46397, Start Num: 10

Candidate Starts for LoneWolf_84:

(Start: 2 @47044 has 43 MA's), (Start: 4 @47020 has 5 MA's), (9, 46966), (Start: 10 @46963 has 12 MA's), (40, 46705), (43, 46684), (53, 46558), (54, 46555), (61, 46468),

Gene: MadKillah_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for MadKillah_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: Maminiaina_83 Start: 46878, Stop: 46300, Start Num: 10

Candidate Starts for Maminiaina_83:

(Start: 2 @46959 has 43 MA's), (Start: 3 @46938 has 1 MA's), (Start: 4 @46935 has 5 MA's), (Start: 10 @46878 has 12 MA's), (Start: 13 @46827 has 16 MA's), (40, 46620), (43, 46599), (53, 46473), (54, 46470), (61, 46383), (65, 46362), (68, 46317),

Gene: Medusa_77 Start: 46761, Stop: 46177, Start Num: 15

Candidate Starts for Medusa_77:

(Start: 2 @46911 has 43 MA's), (9, 46833), (Start: 11 @46812 has 3 MA's), (Start: 14 @46764 has 2 MA's), (Start: 15 @46761 has 4 MA's), (34, 46656), (36, 46584), (37, 46566), (39, 46500), (53, 46335), (54, 46332), (61, 46245), (65, 46224),

Gene: Miramae_78 Start: 46572, Stop: 45991, Start Num: 15

Candidate Starts for Miramae_78:

(Start: 2 @46722 has 43 MA's), (9, 46644), (Start: 11 @46623 has 3 MA's), (Start: 13 @46590 has 16 MA's), (Start: 15 @46572 has 4 MA's), (26, 46503), (27, 46497), (Start: 29 @46485 has 2 MA's), (39, 46314), (53, 46149), (54, 46146), (61, 46059), (65, 46038), (67, 46002),

Gene: Mori_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Mori_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: Mundrea_77 Start: 46850, Stop: 46224, Start Num: 11

Candidate Starts for Mundrea_77:

(Start: 2 @46949 has 43 MA's), (9, 46871), (Start: 11 @46850 has 3 MA's), (26, 46730), (39, 46547), (41, 46526), (53, 46382), (54, 46379), (61, 46292), (65, 46271),

Gene: Myxus_84 Start: 46898, Stop: 46383, Start Num: 13

Candidate Starts for Myxus_84:

(Start: 2 @47030 has 43 MA's), (Start: 4 @47006 has 5 MA's), (Start: 10 @46949 has 12 MA's), (Start: 13 @46898 has 16 MA's), (40, 46691), (43, 46670), (47, 46622), (53, 46544), (54, 46541), (61, 46454),

Gene: NiebruSaylor_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for NiebruSaylor_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: Noelle_76 Start: 46925, Stop: 46305, Start Num: 2

Candidate Starts for Noelle_76:

(Start: 2 @46925 has 43 MA's), (Start: 4 @46901 has 5 MA's), (Start: 10 @46844 has 12 MA's), (41, 46592), (47, 46529), (53, 46451), (54, 46448), (63, 46367), (65, 46352), (67, 46316),

Gene: OKCentral2016_77 Start: 45901, Stop: 45290, Start Num: 4

Candidate Starts for OKCentral2016_77:

(Start: 2 @45925 has 43 MA's), (Start: 4 @45901 has 5 MA's), (Start: 10 @45844 has 12 MA's), (25, 45709), (47, 45520), (53, 45442), (54, 45439), (56, 45406), (63, 45352),

Gene: Palestino_77 Start: 46895, Stop: 46161, Start Num: 2

Candidate Starts for Palestino_77:

(Start: 2 @46895 has 43 MA's), (9, 46817), (Start: 11 @46796 has 3 MA's), (Start: 14 @46748 has 2 MA's), (Start: 15 @46745 has 4 MA's), (34, 46640), (36, 46568), (37, 46550), (39, 46484), (49, 46379), (53, 46319), (54, 46316), (61, 46229), (65, 46208),

Gene: Phaeder_84 Start: 46773, Stop: 46258, Start Num: 13

Candidate Starts for Phaeder_84:

(Start: 2 @46905 has 43 MA's), (Start: 4 @46881 has 5 MA's), (Start: 10 @46824 has 12 MA's), (Start: 13 @46773 has 16 MA's), (40, 46566), (43, 46545), (47, 46497), (53, 46419), (54, 46416), (61, 46329),

Gene: Phanphagia_66 Start: 43660, Stop: 44277, Start Num: 3

Candidate Starts for Phanphagia_66:

(Start: 1 @43603 has 5 MA's), (Start: 3 @43660 has 1 MA's), (6, 43684), (9, 43717), (Start: 11 @43738 has 3 MA's), (Start: 13 @43771 has 16 MA's), (Start: 15 @43789 has 4 MA's), (17, 43798), (35, 43876), (53, 44125), (54, 44128), (57, 44158), (61, 44185), (69, 44266),

Gene: Pharaoh_78 Start: 47942, Stop: 47292, Start Num: 2

Candidate Starts for Pharaoh_78:

(Start: 2 @47942 has 43 MA's), (Start: 4 @47918 has 5 MA's), (Start: 10 @47861 has 12 MA's), (40, 47600), (43, 47579), (53, 47456), (54, 47453), (55, 47432), (63, 47360), (64, 47357),

Gene: Phonnegut_84 Start: 46789, Stop: 46274, Start Num: 13

Candidate Starts for Phonnegut_84:

(Start: 2 @46921 has 43 MA's), (Start: 4 @46897 has 5 MA's), (Start: 10 @46840 has 12 MA's), (Start: 13 @46789 has 16 MA's), (40, 46582), (43, 46561), (47, 46513), (53, 46435), (54, 46432), (61, 46345),

Gene: Pioneer_84 Start: 46789, Stop: 46274, Start Num: 13

Candidate Starts for Pioneer_84:

(Start: 2 @46921 has 43 MA's), (Start: 4 @46897 has 5 MA's), (Start: 10 @46840 has 12 MA's), (Start: 13 @46789 has 16 MA's), (40, 46582), (43, 46561), (47, 46513), (53, 46435), (54, 46432), (61, 46345),

Gene: Poenanya_74 Start: 45998, Stop: 46735, Start Num: 1

Candidate Starts for Poenanya_74:

(Start: 1 @45998 has 5 MA's), (Start: 3 @46055 has 1 MA's), (6, 46079), (8, 46097), (9, 46112), (Start: 11 @46133 has 3 MA's), (Start: 13 @46166 has 16 MA's), (Start: 15 @46184 has 4 MA's), (35, 46343), (47, 46505), (53, 46583), (54, 46586), (55, 46607), (57, 46616), (61, 46643), (69, 46724),

Gene: Priya_82 Start: 46693, Stop: 46046, Start Num: 2

Candidate Starts for Priya_82:

(Start: 2 @46693 has 43 MA's), (Start: 4 @46669 has 5 MA's), (9, 46615), (Start: 10 @46612 has 12 MA's), (Start: 13 @46561 has 16 MA's), (40, 46354), (43, 46333), (47, 46285), (53, 46207), (54, 46204), (61, 46117),

Gene: Qobbit_82 Start: 46523, Stop: 46008, Start Num: 13

Candidate Starts for Qobbit_82:

(Start: 2 @46655 has 43 MA's), (Start: 4 @46631 has 5 MA's), (9, 46577), (Start: 10 @46574 has 12 MA's), (Start: 13 @46523 has 16 MA's), (40, 46316), (43, 46295), (47, 46247), (53, 46169), (54, 46166), (61, 46079),

Gene: Rahalelujah_83 Start: 46456, Stop: 45809, Start Num: 2

Candidate Starts for Rahalelujah_83:

(Start: 2 @46456 has 43 MA's), (Start: 4 @46432 has 5 MA's), (9, 46378), (Start: 10 @46375 has 12 MA's), (40, 46117), (43, 46096), (48, 46045), (50, 46024), (53, 45970), (54, 45967), (61, 45880),

Gene: Rebeuca_79 Start: 46991, Stop: 46488, Start Num: 13

Candidate Starts for Rebeuca_79:

(Start: 2 @47123 has 43 MA's), (Start: 4 @47099 has 5 MA's), (Start: 10 @47042 has 12 MA's), (Start: 13 @46991 has 16 MA's), (25, 46907), (47, 46718), (53, 46640), (54, 46637), (56, 46604), (63, 46550),

Gene: RedBird_72 Start: 44502, Stop: 45227, Start Num: 1

Candidate Starts for RedBird_72:

(Start: 1 @44502 has 5 MA's), (Start: 3 @44559 has 1 MA's), (6, 44583), (8, 44589), (9, 44604), (Start: 11 @44625 has 3 MA's), (Start: 13 @44658 has 16 MA's), (Start: 15 @44676 has 4 MA's), (35, 44835), (47, 44997), (53, 45075), (54, 45078), (55, 45099), (57, 45108), (61, 45135), (69, 45216),

Gene: Refuge_81 Start: 48475, Stop: 47903, Start Num: 10

Candidate Starts for Refuge_81:

(Start: 2 @48556 has 43 MA's), (Start: 4 @48532 has 5 MA's), (Start: 10 @48475 has 12 MA's), (28, 48319), (43, 48193), (53, 48067), (54, 48064), (63, 47971), (64, 47968), (66, 47929),

Gene: Rifter_90 Start: 46847, Stop: 46200, Start Num: 2

Candidate Starts for Rifter_90:

(Start: 2 @46847 has 43 MA's), (Start: 4 @46823 has 5 MA's), (9, 46769), (Start: 10 @46766 has 12 MA's), (Start: 12 @46736 has 3 MA's), (46, 46442), (53, 46361), (54, 46358), (63, 46265), (64, 46262),

Gene: Roksolana_90 Start: 47563, Stop: 46916, Start Num: 2

Candidate Starts for Roksolana_90:

(Start: 2 @47563 has 43 MA's), (Start: 4 @47539 has 5 MA's), (9, 47485), (Start: 10 @47482 has 12 MA's), (Start: 12 @47452 has 3 MA's), (46, 47158), (53, 47077), (54, 47074), (63, 46981), (64, 46978),

Gene: Ryadel_7 Start: 2296, Stop: 1727, Start Num: 7

Candidate Starts for Ryadel_7:

(Start: 7 @2296 has 21 MA's), (22, 2179), (23, 2164), (31, 2113), (32, 2110), (41, 1996), (42, 1987), (45, 1963), (53, 1858), (54, 1855), (59, 1819), (65, 1780), (67, 1744),

Gene: Scherzo_82 Start: 46821, Stop: 46306, Start Num: 13

Candidate Starts for Scherzo_82:

(Start: 2 @46953 has 43 MA's), (Start: 4 @46929 has 5 MA's), (Start: 10 @46872 has 12 MA's), (Start: 13 @46821 has 16 MA's), (40, 46614), (43, 46593), (47, 46545), (53, 46467), (54, 46464), (61, 46377),

Gene: SchoolBus_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for SchoolBus_5:

(Start: 7 @1765 has 21 MA's), (22, 1648), (23, 1633), (31, 1582), (32, 1579), (41, 1465), (42, 1456), (45, 1432), (53, 1327), (54, 1324), (59, 1288), (65, 1249), (67, 1213),

Gene: Schuy_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Schuy_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: SheaKeira_79 Start: 46163, Stop: 45585, Start Num: 10

Candidate Starts for SheaKeira_79:

(Start: 2 @46244 has 43 MA's), (Start: 4 @46220 has 5 MA's), (9, 46166), (Start: 10 @46163 has 12 MA's), (40, 45905), (43, 45884), (47, 45836), (51, 45797), (53, 45758), (54, 45755), (58, 45689), (61, 45668), (65, 45647), (68, 45602),

Gene: Shida_5 Start: 1765, Stop: 1196, Start Num: 7

Candidate Starts for Shida_5:

(Start: 7 @1765 has 21 MA's), (22, 1648), (23, 1633), (31, 1582), (32, 1579), (41, 1465), (42, 1456), (45, 1432), (53, 1327), (54, 1324), (59, 1288), (65, 1249), (67, 1213),

Gene: SmellyB_88 Start: 47181, Stop: 46555, Start Num: 4

Candidate Starts for SmellyB_88:

(Start: 2 @47205 has 43 MA's), (Start: 4 @47181 has 5 MA's), (9, 47127), (Start: 10 @47124 has 12 MA's), (Start: 11 @47106 has 3 MA's), (40, 46866), (44, 46842), (47, 46797), (53, 46719), (54, 46716), (55, 46695), (63, 46620), (64, 46617),

Gene: Smooch_6 Start: 2139, Stop: 1576, Start Num: 7

Candidate Starts for Smooch_6:

(Start: 7 @2139 has 21 MA's), (22, 2022), (23, 2007), (31, 1956), (32, 1953), (41, 1845), (42, 1836), (53, 1707), (54, 1704), (65, 1629), (67, 1593),

Gene: Spouty_79 Start: 46560, Stop: 46045, Start Num: 13

Candidate Starts for Spouty_79:

(Start: 2 @46692 has 43 MA's), (Start: 4 @46668 has 5 MA's), (9, 46614), (Start: 10 @46611 has 12 MA's), (Start: 13 @46560 has 16 MA's), (40, 46353), (43, 46332), (47, 46284), (53, 46206), (54, 46203), (61, 46116),

Gene: Stasia_75 Start: 46708, Stop: 46121, Start Num: 14

Candidate Starts for Stasia_75:

(Start: 2 @46855 has 43 MA's), (9, 46777), (Start: 11 @46756 has 3 MA's), (Start: 14 @46708 has 2 MA's), (Start: 15 @46705 has 4 MA's), (34, 46600), (36, 46528), (37, 46510), (39, 46444), (53, 46279), (54, 46276), (61, 46189), (65, 46168), (67, 46132),

Gene: Steamy_76 Start: 47037, Stop: 46378, Start Num: 2

Candidate Starts for Steamy_76:

(Start: 2 @47037 has 43 MA's), (Start: 4 @47013 has 5 MA's), (Start: 10 @46956 has 12 MA's), (43, 46674), (53, 46548), (54, 46545), (55, 46524), (63, 46452), (66, 46410),

Gene: Stink_78 Start: 46793, Stop: 46299, Start Num: 29

Candidate Starts for Stink_78:

(Start: 2 @47030 has 43 MA's), (9, 46952), (Start: 11 @46931 has 3 MA's), (Start: 13 @46898 has 16 MA's), (Start: 15 @46880 has 4 MA's), (26, 46811), (27, 46805), (Start: 29 @46793 has 2 MA's), (39, 46622), (53, 46457), (54, 46454), (61, 46367), (65, 46346), (67, 46310),

Gene: TelAviv_5 Start: 1762, Stop: 1193, Start Num: 7

Candidate Starts for TelAviv_5:

(Start: 7 @1762 has 21 MA's), (22, 1645), (23, 1630), (31, 1579), (32, 1576), (41, 1462), (42, 1453), (45, 1429), (53, 1324), (54, 1321), (59, 1285), (65, 1246), (67, 1210),

Gene: Thanksgivukkah_77 Start: 46896, Stop: 46162, Start Num: 2

Candidate Starts for Thanksgivukkah_77:

(Start: 2 @46896 has 43 MA's), (9, 46818), (Start: 11 @46797 has 3 MA's), (Start: 14 @46749 has 2 MA's), (Start: 15 @46746 has 4 MA's), (34, 46641), (36, 46569), (37, 46551), (39, 46485), (49, 46380), (53, 46320), (54, 46317), (61, 46230), (65, 46209),

Gene: TinaFeyge_76 Start: 46893, Stop: 46159, Start Num: 2

Candidate Starts for TinaFeyge_76:

(Start: 2 @46893 has 43 MA's), (9, 46815), (Start: 11 @46794 has 3 MA's), (Start: 14 @46746 has 2 MA's), (Start: 15 @46743 has 4 MA's), (34, 46638), (36, 46566), (37, 46548), (39, 46482), (53, 46317), (54, 46314), (61, 46227), (65, 46206),

Gene: Toaka_82 Start: 46732, Stop: 46166, Start Num: 10

Candidate Starts for Toaka_82:

(Start: 2 @46813 has 43 MA's), (Start: 4 @46789 has 5 MA's), (Start: 10 @46732 has 12 MA's), (40, 46474), (43, 46453), (47, 46405), (53, 46327), (54, 46324), (61, 46237),

Gene: ToneTone_87 Start: 47116, Stop: 46580, Start Num: 12

Candidate Starts for ToneTone_87:

(Start: 2 @47227 has 43 MA's), (Start: 4 @47203 has 5 MA's), (9, 47149), (Start: 10 @47146 has 12 MA's), (Start: 12 @47116 has 3 MA's), (46, 46822), (53, 46741), (54, 46738), (63, 46645), (64, 46642),

Gene: Tubs_84 Start: 46773, Stop: 46258, Start Num: 13

Candidate Starts for Tubs_84:

(Start: 2 @46905 has 43 MA's), (Start: 4 @46881 has 5 MA's), (Start: 10 @46824 has 12 MA's), (Start: 13 @46773 has 16 MA's), (40, 46566), (43, 46545), (47, 46497), (53, 46419), (54, 46416), (61, 46329),

Gene: Tucker_90 Start: 47319, Stop: 46783, Start Num: 12

Candidate Starts for Tucker_90:

(Start: 2 @47430 has 43 MA's), (Start: 4 @47406 has 5 MA's), (9, 47352), (Start: 10 @47349 has 12 MA's), (Start: 12 @47319 has 3 MA's), (46, 47025), (53, 46944), (54, 46941), (63, 46848), (64, 46845),

Gene: Twister_78 Start: 46549, Stop: 46046, Start Num: 13

Candidate Starts for Twister_78:

(Start: 2 @46681 has 43 MA's), (Start: 4 @46657 has 5 MA's), (Start: 10 @46600 has 12 MA's), (Start: 13 @46549 has 16 MA's), (25, 46465), (47, 46276), (53, 46198), (54, 46195), (56, 46162), (63, 46108),

Gene: TygerBlood_78 Start: 46751, Stop: 46164, Start Num: 14

Candidate Starts for TygerBlood_78:

(Start: 2 @46898 has 43 MA's), (9, 46820), (Start: 11 @46799 has 3 MA's), (Start: 14 @46751 has 2 MA's), (Start: 15 @46748 has 4 MA's), (34, 46643), (36, 46571), (37, 46553), (39, 46487), (49, 46382), (53, 46322), (54, 46319), (61, 46232), (65, 46211),

Gene: Vanisoa_79 Start: 47062, Stop: 46496, Start Num: 10

Candidate Starts for Vanisoa_79:

(Start: 2 @47143 has 43 MA's), (Start: 4 @47119 has 5 MA's), (9, 47065), (Start: 10 @47062 has 12 MA's), (40, 46804), (43, 46783), (53, 46657), (54, 46654), (61, 46567),

Gene: Vorrps_5 Start: 1716, Stop: 1147, Start Num: 7

Candidate Starts for Vorrps_5:

(Start: 7 @1716 has 21 MA's), (22, 1599), (23, 1584), (31, 1533), (32, 1530), (41, 1416), (42, 1407), (45, 1383), (53, 1278), (54, 1275), (59, 1239), (65, 1200), (67, 1164),

Gene: WalterMcMickey_77 Start: 46600, Stop: 46046, Start Num: 10

Candidate Starts for WalterMcMickey_77:

(Start: 2 @46681 has 43 MA's), (Start: 4 @46657 has 5 MA's), (Start: 10 @46600 has 12 MA's), (Start: 13 @46549 has 16 MA's), (25, 46465), (47, 46276), (53, 46198), (54, 46195), (56, 46162), (63, 46108),

Gene: Wiks_89 Start: 47310, Stop: 46660, Start Num: 2

Candidate Starts for Wiks_89:

(Start: 2 @47310 has 43 MA's), (Start: 4 @47286 has 5 MA's), (9, 47232), (Start: 10 @47229 has 12 MA's), (Start: 11 @47211 has 3 MA's), (46, 46905), (53, 46824), (54, 46821), (55, 46800), (63, 46725), (64, 46722),

Gene: Wildflower_5 Start: 1625, Stop: 1242, Start Num: 32

Candidate Starts for Wildflower_5:

(Start: 7 @1811 has 21 MA's), (22, 1694), (23, 1679), (31, 1628), (32, 1625), (41, 1511), (42, 1502), (53, 1373), (54, 1370), (65, 1295), (67, 1259),

Gene: Winget_5 Start: 1850, Stop: 1287, Start Num: 7

Candidate Starts for Winget_5:

(Start: 7 @1850 has 21 MA's), (22, 1733), (23, 1718), (31, 1667), (32, 1664), (41, 1556), (42, 1547), (53, 1418), (54, 1415), (59, 1379), (65, 1340), (67, 1304),

Gene: Yecey3_85 Start: 46628, Stop: 46062, Start Num: 10

Candidate Starts for Yecey3_85:

(Start: 2 @46709 has 43 MA's), (Start: 4 @46685 has 5 MA's), (Start: 10 @46628 has 12 MA's), (43, 46349), (53, 46223), (54, 46220), (67, 46076),

Gene: Yokurt_89 Start: 47211, Stop: 46660, Start Num: 11

Candidate Starts for Yokurt_89:

(Start: 2 @47310 has 43 MA's), (Start: 4 @47286 has 5 MA's), (9, 47232), (Start: 10 @47229 has 12 MA's), (Start: 11 @47211 has 3 MA's), (46, 46905), (53, 46824), (54, 46821), (55, 46800), (63, 46725), (64, 46722),

Gene: YungJamal_6 Start: 2139, Stop: 1576, Start Num: 7

Candidate Starts for YungJamal_6:

(Start: 7 @2139 has 21 MA's), (22, 2022), (23, 2007), (31, 1956), (32, 1953), (41, 1845), (42, 1836), (53, 1707), (54, 1704), (65, 1629), (67, 1593),

Gene: Zaka_90 Start: 47310, Stop: 46660, Start Num: 2

Candidate Starts for Zaka_90:

(Start: 2 @47310 has 43 MA's), (Start: 4 @47286 has 5 MA's), (9, 47232), (Start: 10 @47229 has 12 MA's), (Start: 11 @47211 has 3 MA's), (46, 46905), (53, 46824), (54, 46821), (55, 46800), (63, 46725), (64, 46722),

Gene: Zakhe101_6 Start: 2163, Stop: 1594, Start Num: 7

Candidate Starts for Zakhe101_6:

(Start: 7 @2163 has 21 MA's), (22, 2046), (23, 2031), (31, 1980), (32, 1977), (41, 1863), (42, 1854), (53, 1725), (54, 1722), (65, 1647), (67, 1611),

Gene: Zimmer_80 Start: 47793, Stop: 47140, Start Num: 2

Candidate Starts for Zimmer_80:

(Start: 2 @47793 has 43 MA's), (Start: 4 @47769 has 5 MA's), (Start: 10 @47712 has 12 MA's), (40, 47451), (44, 47427), (53, 47304), (54, 47301), (63, 47208), (64, 47205), (66, 47166),