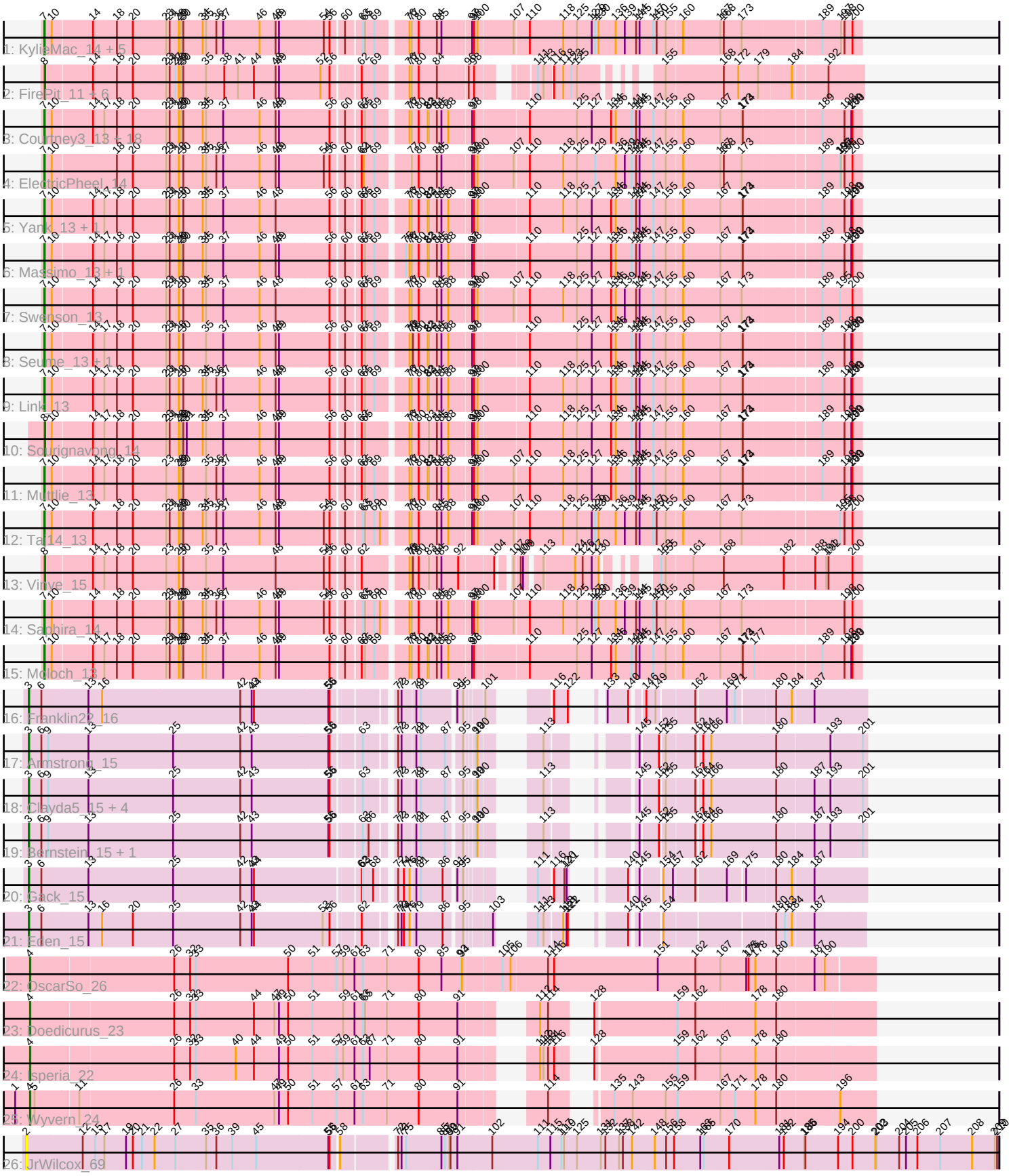
Pham 347622


1: KylieMac_14 + 5
2: FirePit_11 + 6
3: Courtney3_13 + 13
4: ElectricPheel_14
5: Yank_13 + 1
6: Massimo_13 + 1
7: Swenson_13
8: Seume_13 + 1
9: Link_13
10: Sourignavpoo_14
11: Muttie_13
12: Tat14_13
13: Vinve_15
14: Sachira_14
15: Molbch_13
16: Franklin22_16
17: Armstrong_15
18: Clayda5_15 + 4
19: Bernstein_15 + 1
20: Gack_15
21: Eden_15
22: OscarSo_26
23: Doedicurus_23
24: Isperia_22
25: Wyvern_24
26: JrWilcox_69

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 347622 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347622 has 63 members, 2 are drafts.

Phages represented in each track:
• Track 1 : KylieMac_14, Laila_15, Elkhorn_13, StewieGriff_13, Lore_13, Blair_13
• Track 2 : FirePit_11, Kels_11, Arielagos_11, StrawberryLem_11, Ximeno_11, Eyoseyas_11, SerialPhiller_11
• Track 3 : Courtney3_13, Jessica_14, TymAbreu_13, Mariposa_13, Maggie_13, Guntur_13, Copper_13, Chestnut_13, Prospero_13, CGermain_13, Dewayne_13, Sandman_13, Ronnie_13, Stratus_13, Inspire2_13, LouisXIV_13, Hunnie_13, Azathoth_13, Arby_13
• Track 4 : ElectricPheel_14
• Track 5 : Yank_13, Decurro_13
• Track 6 : Massimo_13, TinoCrisci_13
• Track 7 : Swenson_13
• Track 8 : Seume_13, Toulouse_12
• Track 9 : Link_13
• Track 10 : Sourignavong_14
• Track 11 : Muttlie_13
• Track 12 : Taj14_13
• Track 13 : Vinye_15
• Track 14 : Saphira_14
• Track 15 : Moloch_13
• Track 16 : Franklin22_16
• Track 17 : Armstrong_15
• Track 18 : Clayda5_15, Coltrane_15, Brahms_15, Vitas_15, Skylord_15
• Track 19 : Bernstein_15, Rollins_15
• Track 20 : Gack_15
• Track 21 : Eden_15
• Track 22 : OscarSo_26
• Track 23 : Doedicurus_23
• Track 24 : Isperia_22
• Track 25 : Wyvern_24
• Track 26 : JrWilcox_69

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

The start number called the most often in the published annotations is 7, it was called in 38 of the 61 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arby_13, Azathoth_13, Blair_13, CGermain_13, Chestnut_13, Copper_13, Courtney3_13, Decurro_13, Dewayne_13, ElectricPheel_14, Elkhorn_13, Guntur_13, Hunnie_13, Inspire2_13, Jessica_14, KylieMac_14, Laila_15, Link_13, Lore_13, LouisXIV_13, Maggie_13, Mariposa_13, Massimo_13, Moloch_13, Muttlie_13, Prospero_13, Ronnie_13, Sandman_13, Saphira_14, Seume_13, StewieGriff_13, Stratus_13, Swenson_13, Taj14_13, TinoCrisci_13, Toulouse_12, TymAbreu_13, Yank_13,

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

Genes that do not have the "Most Annotated" start:
• Arielagos_11, Armstrong_15, Bernstein_15, Brahms_15, Clayda5_15, Coltrane_15, Doedicurus_23, Eden_15, Eyoseyas_11, FirePit_11, Franklin22_16, Gack_15, Isperia_22, JrWilcox_69, Kels_11, OscarSo_26, Rollins_15, SerialPhiller_11, Skylord_15, Sourignavong_14, StrawberryLem_11, Vinye_15, Vitas_15, Wyvern_24, Ximeno_11,

Summary by start number:

Start 2:
• Found in 1 of 63 (1.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JrWilcox_69 (GL),

Start 3:
• Found in 11 of 63 (17.5%) of genes in pham
• Manual Annotations of this start: 11 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Armstrong_15 (EB), Bernstein_15 (EB), Brahms_15 (EB), Clayda5_15 (EB), Coltrane_15 (EB), Eden_15 (EB), Franklin22_16 (EB), Gack_15 (EB), Rollins_15 (EB), Skylord_15 (EB), Vitas_15 (EB),

Start 4:
• Found in 4 of 63 (6.3%) of genes in pham
• Manual Annotations of this start: 4 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Doedicurus_23 (GJ), Isperia_22 (GJ), OscarSo_26 (GJ), Wyvern_24 (GJ),

Start 7:
• Found in 38 of 63 (60.3%) of genes in pham
• Manual Annotations of this start: 38 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arby_13 (AN), Azathoth_13 (AN), Blair_13 (AN), CGermain_13 (AN), Chestnut_13 (AN), Copper_13 (AN), Courtney3_13 (AN), Decurro_13 (AN), Dewayne_13 (AN), ElectricPheel_14 (AN), Elkhorn_13 (AN), Guntur_13 (AN), Hunnie_13 (AN), Inspire2_13 (AN), Jessica_14

(AN), KylieMac_14 (AN), Laila_15 (AN), Link_13 (AN), Lore_13 (AN), LouisXIV_13 (AN), Maggie_13 (AN), Mariposa_13 (AN), Massimo_13 (AN), Moloch_13 (AN), Muttlie_13 (AN), Prospero_13 (AN), Ronnie_13 (AN), Sandman_13 (AN), Saphira_14 (AN), Seume_13 (AN), StewieGriff_13 (AN), Stratus_13 (AN), Swenson_13 (AN), Taj14_13 (AN), TinoCrisci_13 (AN), Toulouse_12 (AN), TymAbreu_13 (AN), Yank_13 (AN),

Start 8:
• Found in 9 of 63 (14.3%) of genes in pham
• Manual Annotations of this start: 8 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arielagos_11 (AN), Eyoseyas_11 (AN), FirePit_11 (AN), Kels_11 (AN), SerialPhiller_11 (AN), Sourignavong_14 (AN), StrawberryLem_11 (AN), Vinye_15 (AN), Ximeno_11 (AN),

Summary by clusters:

There are 4 clusters represented in this pham: GL, EB, GJ, AN,

Info for manual annotations of cluster AN:
•Start number 7 was manually annotated 38 times for cluster AN.
•Start number 8 was manually annotated 8 times for cluster AN.

Info for manual annotations of cluster EB:
•Start number 3 was manually annotated 11 times for cluster EB.

Info for manual annotations of cluster GJ:
•Start number 4 was manually annotated 4 times for cluster GJ.

Gene Information:

Gene: Arby_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Arby_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Arielagos_11 Start: 6936, Stop: 8759, Start Num: 8
Candidate Starts for Arielagos_11:
(Start: 8 @6936 has 8 MA's), (14, 7056), (18, 7113), (20, 7155), (23, 7242), (24, 7251), (27, 7266), (28, 7275), (29, 7281), (30, 7287), (35, 7347), (38, 7395), (41, 7431), (44, 7473), (48, 7530), (49, 7539), (52, 7647), (56, 7671), (62, 7731), (69, 7764), (76, 7836), (77, 7842), (80, 7860), (84, 7908), (96, 7980), (98, 7992), (111, 8088), (113, 8103), (116, 8124), (118, 8145), (123, 8166), (125, 8178), (155, 8298), (168, 8439), (172, 8472), (179, 8523), (184, 8595), (192, 8673),

Gene: Armstrong_15 Start: 9789, Stop: 11612, Start Num: 3

Candidate Starts for Armstrong_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (193, 11523), (201, 11601),

Gene: Azathoth_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Azathoth_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Bernstein_15 Start: 9849, Stop: 11672, Start Num: 3
Candidate Starts for Bernstein_15:
(Start: 3 @9849 has 11 MA's), (6, 9882), (9, 9900), (13, 10005), (25, 10227), (42, 10404), (43, 10434), (55, 10635), (56, 10638), (63, 10701), (66, 10716), (72, 10764), (73, 10773), (79, 10803), (81, 10812), (87, 10875), (95, 10908), (99, 10926), (100, 10929), (113, 11007), (145, 11139), (152, 11181), (155, 11190), (162, 11256), (164, 11268), (166, 11289), (180, 11451), (187, 11544), (193, 11583), (201, 11661),

Gene: Blair_13 Start: 7279, Stop: 9276, Start Num: 7
Candidate Starts for Blair_13:
(Start: 7 @7279 has 38 MA's), (10, 7297), (14, 7399), (18, 7456), (20, 7498), (23, 7585), (24, 7594), (28, 7618), (29, 7624), (30, 7630), (34, 7681), (35, 7690), (36, 7717), (37, 7735), (46, 7831), (48, 7873), (49, 7882), (54, 7999), (56, 8014), (60, 8044), (63, 8077), (65, 8083), (69, 8107), (76, 8179), (77, 8185), (80, 8203), (84, 8251), (85, 8263), (97, 8332), (98, 8335), (100, 8344), (107, 8431), (110, 8464), (118, 8551), (125, 8584), (127, 8620), (129, 8629), (130, 8638), (136, 8683), (139, 8707), (144, 8737), (145, 8746), (147, 8782), (150, 8791), (155, 8815), (160, 8851), (167, 8947), (168, 8956), (173, 8998), (189, 9181), (197, 9223), (198, 9232), (200, 9253),

Gene: Brahms_15 Start: 9789, Stop: 11612, Start Num: 3
Candidate Starts for Brahms_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (187, 11484), (193, 11523), (201, 11601),

Gene: CGermain_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for CGermain_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Chestnut_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Chestnut_13:

(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Clayda5_15 Start: 9789, Stop: 11612, Start Num: 3
Candidate Starts for Clayda5_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (187, 11484), (193, 11523), (201, 11601),

Gene: Coltrane_15 Start: 9789, Stop: 11612, Start Num: 3
Candidate Starts for Coltrane_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (187, 11484), (193, 11523), (201, 11601),

Gene: Copper_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Copper_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Courtney3_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Courtney3_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Decurro_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Decurro_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (100, 8347), (110, 8467), (118, 8554), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Dewayne_13 Start: 7282, Stop: 9279, Start Num: 7

Candidate Starts for Dewayne_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Doedicurus_23 Start: 13965, Stop: 15959, Start Num: 4
Candidate Starts for Doedicurus_23:
(Start: 4 @13965 has 4 MA's), (26, 14331), (32, 14373), (33, 14388), (44, 14541), (47, 14595), (49, 14607), (50, 14631), (51, 14694), (59, 14775), (61, 14805), (63, 14826), (65, 14832), (71, 14889), (80, 14973), (91, 15069), (112, 15189), (114, 15210), (128, 15264), (159, 15465), (162, 15510), (178, 15663), (180, 15714),

Gene: Eden_15 Start: 9928, Stop: 11736, Start Num: 3
Candidate Starts for Eden_15:
(Start: 3 @9928 has 11 MA's), (6, 9961), (13, 10084), (16, 10120), (20, 10201), (25, 10306), (42, 10483), (43, 10513), (44, 10519), (53, 10699), (56, 10717), (62, 10777), (72, 10843), (73, 10852), (74, 10858), (76, 10870), (79, 10882), (86, 10948), (95, 10987), (103, 11038), (111, 11071), (113, 11086), (118, 11128), (121, 11137), (122, 11140), (140, 11203), (145, 11218), (154, 11263), (180, 11512), (183, 11533), (184, 11551), (187, 11605),

Gene: ElectricPheel_14 Start: 7353, Stop: 9350, Start Num: 7
Candidate Starts for ElectricPheel_14:
(Start: 7 @7353 has 38 MA's), (10, 7371), (18, 7530), (20, 7572), (23, 7659), (24, 7668), (28, 7692), (30, 7704), (34, 7755), (35, 7764), (36, 7791), (37, 7809), (46, 7905), (48, 7947), (49, 7956), (54, 8073), (56, 8088), (60, 8118), (62, 8148), (64, 8154), (69, 8181), (77, 8259), (80, 8277), (84, 8325), (85, 8337), (97, 8406), (98, 8409), (100, 8418), (107, 8505), (110, 8538), (118, 8625), (125, 8658), (129, 8703), (136, 8757), (139, 8781), (141, 8799), (144, 8811), (145, 8820), (147, 8856), (155, 8889), (160, 8925), (167, 9021), (168, 9030), (173, 9072), (189, 9255), (195, 9294), (197, 9297), (198, 9306), (200, 9327),

Gene: Elkhorn_13 Start: 7279, Stop: 9276, Start Num: 7
Candidate Starts for Elkhorn_13:
(Start: 7 @7279 has 38 MA's), (10, 7297), (14, 7399), (18, 7456), (20, 7498), (23, 7585), (24, 7594), (28, 7618), (29, 7624), (30, 7630), (34, 7681), (35, 7690), (36, 7717), (37, 7735), (46, 7831), (48, 7873), (49, 7882), (54, 7999), (56, 8014), (60, 8044), (63, 8077), (65, 8083), (69, 8107), (76, 8179), (77, 8185), (80, 8203), (84, 8251), (85, 8263), (97, 8332), (98, 8335), (100, 8344), (107, 8431), (110, 8464), (118, 8551), (125, 8584), (127, 8620), (129, 8629), (130, 8638), (136, 8683), (139, 8707), (144, 8737), (145, 8746), (147, 8782), (150, 8791), (155, 8815), (160, 8851), (167, 8947), (168, 8956), (173, 8998), (189, 9181), (197, 9223), (198, 9232), (200, 9253),

Gene: Eyoseyas_11 Start: 6936, Stop: 8759, Start Num: 8
Candidate Starts for Eyoseyas_11:
(Start: 8 @6936 has 8 MA's), (14, 7056), (18, 7113), (20, 7155), (23, 7242), (24, 7251), (27, 7266), (28, 7275), (29, 7281), (30, 7287), (35, 7347), (38, 7395), (41, 7431), (44, 7473), (48, 7530), (49, 7539), (52, 7647), (56, 7671), (62, 7731), (69, 7764), (76, 7836), (77, 7842), (80, 7860), (84, 7908), (96, 7980), (98, 7992), (111, 8088), (113, 8103), (116, 8124), (118, 8145), (123, 8166), (125, 8178), (155, 8298), (168, 8439), (172, 8472), (179, 8523), (184, 8595), (192, 8673),

Gene: FirePit_11 Start: 6936, Stop: 8759, Start Num: 8
Candidate Starts for FirePit_11:

(Start: 8 @6936 has 8 MA's), (14, 7056), (18, 7113), (20, 7155), (23, 7242), (24, 7251), (27, 7266), (28, 7275), (29, 7281), (30, 7287), (35, 7347), (38, 7395), (41, 7431), (44, 7473), (48, 7530), (49, 7539), (52, 7647), (56, 7671), (62, 7731), (69, 7764), (76, 7836), (77, 7842), (80, 7860), (84, 7908), (96, 7980), (98, 7992), (111, 8088), (113, 8103), (116, 8124), (118, 8145), (123, 8166), (125, 8178), (155, 8298), (168, 8439), (172, 8472), (179, 8523), (184, 8595), (192, 8673),

Gene: Franklin22_16 Start: 10101, Stop: 11915, Start Num: 3
Candidate Starts for Franklin22_16:
(Start: 3 @10101 has 11 MA's), (6, 10134), (13, 10257), (16, 10293), (42, 10656), (43, 10686), (44, 10692), (55, 10887), (56, 10890), (72, 11016), (73, 11025), (79, 11055), (81, 11064), (91, 11145), (95, 11160), (101, 11193), (116, 11277), (122, 11313), (133, 11325), (140, 11376), (146, 11400), (149, 11424), (162, 11508), (169, 11577), (171, 11598), (180, 11685), (184, 11724), (187, 11778),

Gene: Gack_15 Start: 9990, Stop: 11804, Start Num: 3
Candidate Starts for Gack_15:
(Start: 3 @9990 has 11 MA's), (6, 10023), (13, 10146), (25, 10368), (42, 10545), (43, 10575), (44, 10581), (62, 10839), (63, 10842), (68, 10869), (72, 10905), (74, 10920), (76, 10932), (79, 10944), (81, 10953), (86, 11010), (91, 11034), (95, 11049), (111, 11133), (116, 11166), (120, 11193), (121, 11199), (140, 11265), (145, 11280), (154, 11325), (157, 11346), (162, 11397), (169, 11466), (175, 11508), (180, 11574), (184, 11613), (187, 11667),

Gene: Guntur_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Guntur_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Hunnie_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Hunnie_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Inspire2_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Inspire2_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Isperia_22 Start: 13262, Stop: 15256, Start Num: 4
Candidate Starts for Isperia_22:

(Start: 4 @13262 has 4 MA's), (26, 13628), (32, 13670), (33, 13685), (40, 13790), (44, 13838), (49, 13904), (50, 13928), (51, 13991), (57, 14054), (59, 14072), (61, 14102), (63, 14123), (67, 14141), (71, 14186), (80, 14270), (91, 14366), (112, 14486), (113, 14495), (114, 14507), (116, 14522), (128, 14561), (159, 14762), (162, 14807), (167, 14873), (178, 14960), (180, 15011),

Gene: Jessica_14 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Jessica_14:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: JrWilcox_69 Start: 33279, Stop: 35780, Start Num: 2
Candidate Starts for JrWilcox_69:
(2, 33279), (12, 33426), (15, 33459), (17, 33483), (19, 33540), (20, 33558), (21, 33582), (22, 33615), (27, 33669), (35, 33750), (36, 33777), (39, 33819), (45, 33882), (55, 34071), (56, 34074), (58, 34092), (72, 34212), (73, 34221), (75, 34233), (85, 34326), (87, 34335), (89, 34347), (90, 34350), (91, 34368), (102, 34458), (111, 34578), (115, 34611), (117, 34638), (119, 34644), (125, 34677), (131, 34740), (132, 34752), (137, 34788), (138, 34797), (142, 34821), (148, 34878), (156, 34908), (158, 34929), (163, 34998), (165, 35007), (170, 35073), (181, 35205), (182, 35217), (185, 35271), (186, 35274), (194, 35358), (200, 35394), (202, 35454), (203, 35457), (204, 35517), (205, 35535), (206, 35565), (207, 35625), (208, 35709), (209, 35769), (210, 35775),

Gene: Kels_11 Start: 6861, Stop: 8684, Start Num: 8
Candidate Starts for Kels_11:
(Start: 8 @6861 has 8 MA's), (14, 6981), (18, 7038), (20, 7080), (23, 7167), (24, 7176), (27, 7191), (28, 7200), (29, 7206), (30, 7212), (35, 7272), (38, 7320), (41, 7356), (44, 7398), (48, 7455), (49, 7464), (52, 7572), (56, 7596), (62, 7656), (69, 7689), (76, 7761), (77, 7767), (80, 7785), (84, 7833), (96, 7905), (98, 7917), (111, 8013), (113, 8028), (116, 8049), (118, 8070), (123, 8091), (125, 8103), (155, 8223), (168, 8364), (172, 8397), (179, 8448), (184, 8520), (192, 8598),

Gene: KylieMac_14 Start: 7266, Stop: 9263, Start Num: 7
Candidate Starts for KylieMac_14:
(Start: 7 @7266 has 38 MA's), (10, 7284), (14, 7386), (18, 7443), (20, 7485), (23, 7572), (24, 7581), (28, 7605), (29, 7611), (30, 7617), (34, 7668), (35, 7677), (36, 7704), (37, 7722), (46, 7818), (48, 7860), (49, 7869), (54, 7986), (56, 8001), (60, 8031), (63, 8064), (65, 8070), (69, 8094), (76, 8166), (77, 8172), (80, 8190), (84, 8238), (85, 8250), (97, 8319), (98, 8322), (100, 8331), (107, 8418), (110, 8451), (118, 8538), (125, 8571), (127, 8607), (129, 8616), (130, 8625), (136, 8670), (139, 8694), (144, 8724), (145, 8733), (147, 8769), (150, 8778), (155, 8802), (160, 8838), (167, 8934), (168, 8943), (173, 8985), (189, 9168), (197, 9210), (198, 9219), (200, 9240),

Gene: Laila_15 Start: 7279, Stop: 9276, Start Num: 7
Candidate Starts for Laila_15:
(Start: 7 @7279 has 38 MA's), (10, 7297), (14, 7399), (18, 7456), (20, 7498), (23, 7585), (24, 7594), (28, 7618), (29, 7624), (30, 7630), (34, 7681), (35, 7690), (36, 7717), (37, 7735), (46, 7831), (48, 7873), (49, 7882), (54, 7999), (56, 8014), (60, 8044), (63, 8077), (65, 8083), (69, 8107), (76, 8179), (77, 8185), (80, 8203), (84, 8251), (85, 8263), (97, 8332), (98, 8335), (100, 8344), (107, 8431), (110, 8464), (118, 8551), (125, 8584), (127, 8620), (129, 8629), (130, 8638), (136, 8683), (139, 8707), (144, 8737), (145, 8746), (147, 8782), (150, 8791), (155, 8815), (160, 8851), (167, 8947), (168, 8956), (173, 8998), (189, 9181), (197, 9223), (198, 9232), (200, 9253),

Gene: Link_13 Start: 7281, Stop: 9278, Start Num: 7
Candidate Starts for Link_13:
(Start: 7 @7281 has 38 MA's), (10, 7299), (14, 7401), (17, 7428), (18, 7458), (20, 7500), (23, 7587), (24, 7596), (28, 7620), (30, 7632), (34, 7683), (35, 7692), (36, 7719), (37, 7737), (46, 7833), (48, 7875), (49, 7884), (56, 8016), (60, 8046), (62, 8076), (65, 8085), (69, 8109), (76, 8181), (77, 8187), (80, 8205), (82, 8229), (83, 8232), (84, 8253), (85, 8265), (88, 8283), (97, 8334), (98, 8337), (100, 8346), (110, 8466), (118, 8553), (125, 8586), (127, 8622), (134, 8673), (136, 8685), (141, 8727), (144, 8739), (145, 8748), (147, 8784), (155, 8817), (160, 8853), (167, 8949), (173, 9000), (174, 9003), (189, 9183), (198, 9234), (199, 9252), (200, 9255),

Gene: Lore_13 Start: 7279, Stop: 9276, Start Num: 7
Candidate Starts for Lore_13:
(Start: 7 @7279 has 38 MA's), (10, 7297), (14, 7399), (18, 7456), (20, 7498), (23, 7585), (24, 7594), (28, 7618), (29, 7624), (30, 7630), (34, 7681), (35, 7690), (36, 7717), (37, 7735), (46, 7831), (48, 7873), (49, 7882), (54, 7999), (56, 8014), (60, 8044), (63, 8077), (65, 8083), (69, 8107), (76, 8179), (77, 8185), (80, 8203), (84, 8251), (85, 8263), (97, 8332), (98, 8335), (100, 8344), (107, 8431), (110, 8464), (118, 8551), (125, 8584), (127, 8620), (129, 8629), (130, 8638), (136, 8683), (139, 8707), (144, 8737), (145, 8746), (147, 8782), (150, 8791), (155, 8815), (160, 8851), (167, 8947), (168, 8956), (173, 8998), (189, 9181), (197, 9223), (198, 9232), (200, 9253),

Gene: LouisXIV_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for LouisXIV_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Maggie_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Maggie_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Mariposa_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Mariposa_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Massimo_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Massimo_13:

(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (75, 8173), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Moloch_13 Start: 7356, Stop: 9353, Start Num: 7
Candidate Starts for Moloch_13:
(Start: 7 @7356 has 38 MA's), (10, 7374), (14, 7476), (17, 7503), (18, 7533), (20, 7575), (23, 7662), (24, 7671), (28, 7695), (29, 7701), (30, 7707), (34, 7758), (35, 7767), (37, 7812), (46, 7908), (48, 7950), (49, 7959), (56, 8091), (60, 8121), (62, 8151), (65, 8160), (69, 8184), (76, 8256), (77, 8262), (80, 8280), (82, 8304), (83, 8307), (84, 8328), (85, 8340), (88, 8358), (97, 8409), (98, 8412), (110, 8541), (125, 8661), (127, 8697), (134, 8748), (136, 8760), (141, 8802), (144, 8814), (145, 8823), (147, 8859), (155, 8892), (160, 8928), (167, 9024), (173, 9075), (174, 9078), (177, 9108), (189, 9258), (198, 9309), (199, 9327), (200, 9330),

Gene: Muttlie_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Muttlie_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (28, 7621), (29, 7627), (30, 7633), (35, 7693), (36, 7720), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (100, 8347), (107, 8434), (110, 8467), (118, 8554), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: OscarSo_26 Start: 15660, Stop: 17801, Start Num: 4
Candidate Starts for OscarSo_26:
(Start: 4 @15660 has 4 MA's), (26, 16026), (32, 16068), (33, 16083), (50, 16326), (51, 16389), (57, 16452), (59, 16470), (61, 16500), (63, 16521), (71, 16584), (80, 16668), (85, 16728), (93, 16773), (94, 16776), (105, 16869), (106, 16890), (114, 16983), (116, 16998), (151, 17271), (162, 17361), (167, 17427), (175, 17490), (176, 17496), (178, 17514), (180, 17565), (187, 17655), (190, 17682),

Gene: Prospero_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Prospero_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Rollins_15 Start: 9849, Stop: 11672, Start Num: 3
Candidate Starts for Rollins_15:
(Start: 3 @9849 has 11 MA's), (6, 9882), (9, 9900), (13, 10005), (25, 10227), (42, 10404), (43, 10434), (55, 10635), (56, 10638), (63, 10701), (66, 10716), (72, 10764), (73, 10773), (79, 10803), (81, 10812), (87, 10875), (95, 10908), (99, 10926), (100, 10929), (113, 11007), (145, 11139), (152, 11181), (155, 11190), (162, 11256), (164, 11268), (166, 11289), (180, 11451), (187, 11544), (193, 11583), (201, 11661),

Gene: Ronnie_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Ronnie_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Sandman_13 Start: 7356, Stop: 9353, Start Num: 7
Candidate Starts for Sandman_13:
(Start: 7 @7356 has 38 MA's), (10, 7374), (14, 7476), (17, 7503), (18, 7533), (20, 7575), (23, 7662), (24, 7671), (28, 7695), (29, 7701), (30, 7707), (34, 7758), (35, 7767), (37, 7812), (46, 7908), (48, 7950), (49, 7959), (56, 8091), (60, 8121), (62, 8151), (65, 8160), (69, 8184), (76, 8256), (77, 8262), (80, 8280), (82, 8304), (83, 8307), (84, 8328), (85, 8340), (88, 8358), (97, 8409), (98, 8412), (110, 8541), (125, 8661), (127, 8697), (134, 8748), (136, 8760), (141, 8802), (144, 8814), (145, 8823), (147, 8859), (155, 8892), (160, 8928), (167, 9024), (173, 9075), (174, 9078), (189, 9258), (198, 9309), (199, 9327), (200, 9330),

Gene: Saphira_14 Start: 7280, Stop: 9277, Start Num: 7
Candidate Starts for Saphira_14:
(Start: 7 @7280 has 38 MA's), (10, 7298), (14, 7400), (18, 7457), (20, 7499), (23, 7586), (24, 7595), (28, 7619), (29, 7625), (30, 7631), (34, 7682), (35, 7691), (36, 7718), (37, 7736), (46, 7832), (48, 7874), (49, 7883), (54, 8000), (56, 8015), (60, 8045), (63, 8078), (65, 8084), (69, 8108), (70, 8123), (76, 8180), (77, 8186), (80, 8204), (84, 8252), (85, 8264), (88, 8282), (97, 8333), (98, 8336), (100, 8345), (107, 8432), (110, 8465), (118, 8552), (125, 8585), (127, 8621), (129, 8630), (130, 8639), (136, 8684), (139, 8708), (144, 8738), (145, 8747), (147, 8783), (150, 8792), (155, 8816), (160, 8852), (167, 8948), (173, 8999), (198, 9233), (200, 9254),

Gene: SerialPhiller_11 Start: 6936, Stop: 8759, Start Num: 8
Candidate Starts for SerialPhiller_11:
(Start: 8 @6936 has 8 MA's), (14, 7056), (18, 7113), (20, 7155), (23, 7242), (24, 7251), (27, 7266), (28, 7275), (29, 7281), (30, 7287), (35, 7347), (38, 7395), (41, 7431), (44, 7473), (48, 7530), (49, 7539), (52, 7647), (56, 7671), (62, 7731), (69, 7764), (76, 7836), (77, 7842), (80, 7860), (84, 7908), (96, 7980), (98, 7992), (111, 8088), (113, 8103), (116, 8124), (118, 8145), (123, 8166), (125, 8178), (155, 8298), (168, 8439), (172, 8472), (179, 8523), (184, 8595), (192, 8673),

Gene: Seume_13 Start: 7077, Stop: 9074, Start Num: 7
Candidate Starts for Seume_13:
(Start: 7 @7077 has 38 MA's), (10, 7095), (14, 7197), (17, 7224), (18, 7254), (20, 7296), (23, 7383), (24, 7392), (28, 7416), (30, 7428), (35, 7488), (37, 7533), (46, 7629), (48, 7671), (49, 7680), (56, 7812), (60, 7842), (62, 7872), (65, 7881), (69, 7905), (76, 7977), (77, 7983), (78, 7986), (80, 8001), (82, 8025), (83, 8028), (84, 8049), (85, 8061), (88, 8079), (97, 8130), (98, 8133), (110, 8262), (125, 8382), (127, 8418), (134, 8469), (136, 8481), (141, 8523), (144, 8535), (145, 8544), (147, 8580), (155, 8613), (160, 8649), (167, 8745), (173, 8796), (174, 8799), (189, 8979), (198, 9030), (199, 9048), (200, 9051),

Gene: Skylord_15 Start: 9789, Stop: 11612, Start Num: 3
Candidate Starts for Skylord_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (187, 11484), (193, 11523), (201, 11601),

Gene: Sourignavong_14 Start: 7383, Stop: 9380, Start Num: 8
Candidate Starts for Sourignavong_14:
(Start: 8 @7383 has 8 MA's), (10, 7401), (14, 7503), (17, 7530), (18, 7560), (20, 7602), (23, 7689), (24, 7698), (28, 7722), (29, 7728), (30, 7734), (31, 7743), (34, 7785), (35, 7794), (37, 7839), (46, 7935), (48, 7977), (49, 7986), (56, 8118), (60, 8148), (62, 8178), (65, 8187), (76, 8283), (77, 8289), (80, 8307), (83, 8334), (84, 8355), (85, 8367), (88, 8385), (97, 8436), (98, 8439), (100, 8448), (110, 8568), (118, 8655), (125, 8688), (127, 8724), (134, 8775), (136, 8787), (141, 8829), (144, 8841), (145, 8850), (147, 8886), (155, 8919), (160, 8955), (167, 9051), (173, 9102), (174, 9105), (189, 9285), (198, 9336), (199, 9354), (200, 9357),

Gene: StewieGriff_13 Start: 7279, Stop: 9276, Start Num: 7
Candidate Starts for StewieGriff_13:
(Start: 7 @7279 has 38 MA's), (10, 7297), (14, 7399), (18, 7456), (20, 7498), (23, 7585), (24, 7594), (28, 7618), (29, 7624), (30, 7630), (34, 7681), (35, 7690), (36, 7717), (37, 7735), (46, 7831), (48, 7873), (49, 7882), (54, 7999), (56, 8014), (60, 8044), (63, 8077), (65, 8083), (69, 8107), (76, 8179), (77, 8185), (80, 8203), (84, 8251), (85, 8263), (97, 8332), (98, 8335), (100, 8344), (107, 8431), (110, 8464), (118, 8551), (125, 8584), (127, 8620), (129, 8629), (130, 8638), (136, 8683), (139, 8707), (144, 8737), (145, 8746), (147, 8782), (150, 8791), (155, 8815), (160, 8851), (167, 8947), (168, 8956), (173, 8998), (189, 9181), (197, 9223), (198, 9232), (200, 9253),

Gene: Stratus_13 Start: 7356, Stop: 9353, Start Num: 7
Candidate Starts for Stratus_13:
(Start: 7 @7356 has 38 MA's), (10, 7374), (14, 7476), (17, 7503), (18, 7533), (20, 7575), (23, 7662), (24, 7671), (28, 7695), (29, 7701), (30, 7707), (34, 7758), (35, 7767), (37, 7812), (46, 7908), (48, 7950), (49, 7959), (56, 8091), (60, 8121), (62, 8151), (65, 8160), (69, 8184), (76, 8256), (77, 8262), (80, 8280), (82, 8304), (83, 8307), (84, 8328), (85, 8340), (88, 8358), (97, 8409), (98, 8412), (110, 8541), (125, 8661), (127, 8697), (134, 8748), (136, 8760), (141, 8802), (144, 8814), (145, 8823), (147, 8859), (155, 8892), (160, 8928), (167, 9024), (173, 9075), (174, 9078), (189, 9258), (198, 9309), (199, 9327), (200, 9330),

Gene: StrawberryLem_11 Start: 6861, Stop: 8684, Start Num: 8
Candidate Starts for StrawberryLem_11:
(Start: 8 @6861 has 8 MA's), (14, 6981), (18, 7038), (20, 7080), (23, 7167), (24, 7176), (27, 7191), (28, 7200), (29, 7206), (30, 7212), (35, 7272), (38, 7320), (41, 7356), (44, 7398), (48, 7455), (49, 7464), (52, 7572), (56, 7596), (62, 7656), (69, 7689), (76, 7761), (77, 7767), (80, 7785), (84, 7833), (96, 7905), (98, 7917), (111, 8013), (113, 8028), (116, 8049), (118, 8070), (123, 8091), (125, 8103), (155, 8223), (168, 8364), (172, 8397), (179, 8448), (184, 8520), (192, 8598),

Gene: Swenson_13 Start: 7403, Stop: 9400, Start Num: 7
Candidate Starts for Swenson_13:
(Start: 7 @7403 has 38 MA's), (10, 7421), (14, 7523), (18, 7580), (20, 7622), (23, 7709), (24, 7718), (28, 7742), (30, 7754), (34, 7805), (35, 7814), (37, 7859), (46, 7955), (48, 7997), (56, 8138), (60, 8168), (62, 8198), (65, 8207), (69, 8231), (76, 8303), (77, 8309), (80, 8327), (84, 8375), (85, 8387), (88, 8405), (97, 8456), (98, 8459), (100, 8468), (107, 8555), (110, 8588), (118, 8675), (125, 8708), (127, 8744), (134, 8795), (136, 8807), (139, 8831), (144, 8861), (145, 8870), (147, 8906), (155, 8939), (160, 8975), (167, 9071), (173, 9122), (189, 9305), (195, 9344), (200, 9377),

Gene: Taj14_13 Start: 7259, Stop: 9256, Start Num: 7
Candidate Starts for Taj14_13:
(Start: 7 @7259 has 38 MA's), (10, 7277), (14, 7379), (18, 7436), (20, 7478), (23, 7565), (24, 7574), (28, 7598), (29, 7604), (30, 7610), (34, 7661), (35, 7670), (36, 7697), (37, 7715), (46, 7811), (48, 7853), (49, 7862), (54, 7979), (56, 7994), (60, 8024), (63, 8057), (65, 8063), (69, 8087), (70, 8102), (76, 8159),

(77, 8165), (80, 8183), (84, 8231), (85, 8243), (88, 8261), (97, 8312), (98, 8315), (100, 8324), (107, 8411), (110, 8444), (118, 8531), (125, 8564), (127, 8600), (129, 8609), (130, 8618), (136, 8663), (139, 8687), (144, 8717), (145, 8726), (147, 8762), (150, 8771), (155, 8795), (160, 8831), (167, 8927), (173, 8978), (195, 9200), (198, 9212), (200, 9233),

Gene: TinoCrisci_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for TinoCrisci_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (75, 8173), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Toulouse_12 Start: 7077, Stop: 9074, Start Num: 7
Candidate Starts for Toulouse_12:
(Start: 7 @7077 has 38 MA's), (10, 7095), (14, 7197), (17, 7224), (18, 7254), (20, 7296), (23, 7383), (24, 7392), (28, 7416), (30, 7428), (35, 7488), (37, 7533), (46, 7629), (48, 7671), (49, 7680), (56, 7812), (60, 7842), (62, 7872), (65, 7881), (69, 7905), (76, 7977), (77, 7983), (78, 7986), (80, 8001), (82, 8025), (83, 8028), (84, 8049), (85, 8061), (88, 8079), (97, 8130), (98, 8133), (110, 8262), (125, 8382), (127, 8418), (134, 8469), (136, 8481), (141, 8523), (144, 8535), (145, 8544), (147, 8580), (155, 8613), (160, 8649), (167, 8745), (173, 8796), (174, 8799), (189, 8979), (198, 9030), (199, 9048), (200, 9051),

Gene: TymAbreu_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for TymAbreu_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (29, 7627), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (49, 7885), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (110, 8467), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),

Gene: Vinye_15 Start: 7588, Stop: 9417, Start Num: 8
Candidate Starts for Vinye_15:
(Start: 8 @7588 has 8 MA's), (14, 7708), (17, 7735), (18, 7765), (20, 7807), (23, 7894), (28, 7927), (30, 7939), (35, 7999), (37, 8044), (48, 8182), (54, 8308), (56, 8323), (60, 8353), (62, 8383), (76, 8488), (77, 8494), (78, 8497), (80, 8512), (83, 8539), (84, 8560), (85, 8572), (92, 8611), (104, 8689), (107, 8710), (108, 8716), (109, 8722), (113, 8752), (124, 8818), (126, 8830), (127, 8854), (130, 8872), (153, 8938), (155, 8950), (161, 9013), (168, 9091), (182, 9235), (188, 9304), (191, 9331), (192, 9337), (200, 9394),

Gene: Vitas_15 Start: 9789, Stop: 11612, Start Num: 3
Candidate Starts for Vitas_15:
(Start: 3 @9789 has 11 MA's), (6, 9822), (9, 9840), (13, 9945), (25, 10167), (42, 10344), (43, 10374), (55, 10575), (56, 10578), (63, 10641), (72, 10704), (73, 10713), (79, 10743), (81, 10752), (87, 10815), (95, 10848), (99, 10866), (100, 10869), (113, 10947), (145, 11079), (152, 11121), (155, 11130), (162, 11196), (164, 11208), (166, 11229), (180, 11391), (187, 11484), (193, 11523), (201, 11601),

Gene: Wyvern_24 Start: 14072, Stop: 16066, Start Num: 4
Candidate Starts for Wyvern_24:
(1, 14033), (Start: 4 @14072 has 4 MA's), (5, 14084), (11, 14195), (26, 14438), (33, 14495), (47, 14702), (49, 14714), (50, 14738), (51, 14801), (57, 14864), (61, 14912), (63, 14933), (71, 14996), (80,

15080), (91, 15176), (114, 15317), (135, 15413), (143, 15461), (155, 15548), (159, 15572), (167, 15683), (171, 15716), (178, 15770), (180, 15821), (196, 15974),

Gene: Ximeno_11 Start: 6936, Stop: 8759, Start Num: 8
Candidate Starts for Ximeno_11:
(Start: 8 @6936 has 8 MA's), (14, 7056), (18, 7113), (20, 7155), (23, 7242), (24, 7251), (27, 7266), (28, 7275), (29, 7281), (30, 7287), (35, 7347), (38, 7395), (41, 7431), (44, 7473), (48, 7530), (49, 7539), (52, 7647), (56, 7671), (62, 7731), (69, 7764), (76, 7836), (77, 7842), (80, 7860), (84, 7908), (96, 7980), (98, 7992), (111, 8088), (113, 8103), (116, 8124), (118, 8145), (123, 8166), (125, 8178), (155, 8298), (168, 8439), (172, 8472), (179, 8523), (184, 8595), (192, 8673),

Gene: Yank_13 Start: 7282, Stop: 9279, Start Num: 7
Candidate Starts for Yank_13:
(Start: 7 @7282 has 38 MA's), (10, 7300), (14, 7402), (17, 7429), (18, 7459), (20, 7501), (23, 7588), (24, 7597), (28, 7621), (30, 7633), (34, 7684), (35, 7693), (37, 7738), (46, 7834), (48, 7876), (56, 8017), (60, 8047), (62, 8077), (65, 8086), (69, 8110), (76, 8182), (77, 8188), (80, 8206), (82, 8230), (83, 8233), (84, 8254), (85, 8266), (88, 8284), (97, 8335), (98, 8338), (100, 8347), (110, 8467), (118, 8554), (125, 8587), (127, 8623), (134, 8674), (136, 8686), (141, 8728), (144, 8740), (145, 8749), (147, 8785), (155, 8818), (160, 8854), (167, 8950), (173, 9001), (174, 9004), (189, 9184), (198, 9235), (199, 9253), (200, 9256),