Zoomed Pham 283720

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 283720 Report

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

Pham number 283720 has 83 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Mao1_26, Sejanus_27, Mask_27
• Track 2 : Blocker23_32, Faze9_32, Ares_32, Opia_32, Hedgerow_32, FrenchFry_32, Tinciduntsolum_33, Coffee_32, Phantasmagoria_32, Brownie5_32, Boyle_32, West99_32, Arbiter_32, Lars_32, Kheth_32, Rhinoforte_32, Rosebush_32
• Track 3 : Qyrzula_30
• Track 4 : Tres_32
• Track 5 : MasterPo_32
• Track 6 : Lephleur_32, Kaleb_32, Kolhan_32
• Track 7 : Godines_32
• Track 8 : Bananafish_32, PrinceCharming_32
• Track 9 : Glass_32, Allegro_32, LizLemon_32
• Track 10 : Vic9_00032
• Track 11 : Holeinone_32
• Track 12 : LilSmirk_32, Calamitous_32
• Track 13 : ItsyBitsy1_32
• Track 14 : Eaglehorse_32
• Track 15 : TA17A_33
• Track 16 : Sabella_32
• Track 17 : BigPhil_19, Cerasum_19, Velveteen_19, Sarma624_19
• Track 18 : Pippy_18
• Track 19 : Jennelsea_18, Crumble_18, Clifton_18, LastJedi_18, Koella_18
• Track 20 : SamScheppers_26
• Track 21 : Eponine_28
• Track 22 : Taquito_26
• Track 23 : DanSyl44_29
• Track 24 : AvadaKedavra_20
• Track 25 : JoeDirt_20, DirkDirk_20, Enceladus_20, Appletree2_20
• Track 26 : Poochiewood_20, Wyatt2_20, Rose5_20, Acquire49_20, MAckerman_20
• Track 27 : UPIE_20
• Track 28 : Zaria_20, Calm_20
• Track 29 : CicholasNage_20, Halena_20
• Track 30 : LeBron_20
• Track 31 : Wamburgrxpress_20, Tyson_20
• Track 32 : OhShagHennessy_20
• Track 33 : Silverleaf_20
• Track 34 : Raymond7_20
• Track 35 : Phrann_20

- Track 36 : BronnyJr_21
- Track 37 : Atcoo_21
- Track 38 : Xavia_21
- Track 39 : Jeon_24
- Track 40 : D12_24, PR_24
- Track 41 : GodPhather_25

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

The start number called the most often in the published annotations is 15, it was called in 35 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Allegro_32, Arbiter_32, Ares_32, Bananafish_32, Blocker23_32, Boyle_32, Brownie5_32, Calamitous_32, Coffee_32, Eaglehorse_32, Faze9_32, FrenchFry_32, Glass_32, Godines_32, Hedgerow_32, Holeinone_32, ItsyBitsy1_32, Kaleb_32, Kheth_32, Kolhan_32, Lars_32, Lephleur_32, LilSmirk_32, LizLemon_32, MasterPo_32, Opia_32, Phantasmagoria_32, PrinceCharming_32, Qyrzula_30, Rhinoforte_32, Rosebush_32, Sabella_32, TA17A_33, Tinciduntsolum_33, Tres_32, Vic9_00032, West99_32,

Genes that have the "Most Annotated" start but do not call it:
- BigPhil_19, Cerasum_19, Clifton_18, Crumble_18, Jennelsea_18, Koella_18, LastJedi_18, Phrann_20, Pippy_18, Raymond7_20, Sarma624_19, Velveteen_19,

Genes that do not have the "Most Annotated" start:
- Acquire49_20, Appletree2_20, Atcoo_21, AvadaKedavra_20, BronnyJr_21, Calm_20, CicholasNage_20, D12_24, DanSyl44_29, DirkDirk_20, Enceladus_20, Eponine_28, GodPhather_25, Halena_20, Jeon_24, JoeDirt_20, LeBron_20, MAckerman_20, Mao1_26, Mask_27, OhShagHennessy_20, PR_24, Poochiewood_20, Rose5_20, SamScheppers_26, Sejanus_27, Silverleaf_20, Taquito_26, Tyson_20, UPIE_20, Wamburgrxpress_20, Wyatt2_20, Xavia_21, Zaria_20,

Summary by start number:

Start 2:
- Found in 5 of 83 (6.0%) of genes in pham
- Manual Annotations of this start: 2 of 77
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Atcoo_21 (P1), BronnyJr_21 (P1), Xavia_21 (P3),

Start 3:
- Found in 10 of 83 (12.0%) of genes in pham
- Manual Annotations of this start: 9 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigPhil_19 (F1), Cerasum_19 (F1), Clifton_18 (F1), Crumble_18 (F1), Jennelsea_18 (F1), Koella_18 (F1), LastJedi_18 (F1), Pippy_18 (F1), Sarma624_19 (F1), Velveteen_19 (F1),

Start 4:
• Found in 2 of 83 (2.4%) of genes in pham
• Manual Annotations of this start: 2 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phrann_20 (N), Raymond7_20 (N),

Start 10:
• Found in 4 of 83 (4.8%) of genes in pham
• Manual Annotations of this start: 3 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DanSyl44_29 (K4), Eponine_28 (K4), SamScheppers_26 (K4), Taquito_26 (K4),

Start 13:
• Found in 3 of 83 (3.6%) of genes in pham
• Manual Annotations of this start: 3 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mao1_26 (AD), Mask_27 (AD), Sejanus_27 (AD),

Start 14:
• Found in 20 of 83 (24.1%) of genes in pham
• Manual Annotations of this start: 19 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acquire49_20 (L1), Appletree2_20 (L1), AvadaKedavra_20 (L1), Calm_20 (L1), CicholasNage_20 (L1), DirkDirk_20 (L1), Enceladus_20 (L1), Halena_20 (L1), JoeDirt_20 (L1), LeBron_20 (L1), MAckerman_20 (L1), OhShagHennessy_20 (L1), Poochiewood_20 (L1), Rose5_20 (L1), Silverleaf_20 (L1), Tyson_20 (L1), UPIE_20 (L1), Wamburgrxpress_20 (L1), Wyatt2_20 (L1), Zaria_20 (L1),

Start 15:
• Found in 49 of 83 (59.0%) of genes in pham
• Manual Annotations of this start: 35 of 77
• Called 75.5% of time when present
• Phage (with cluster) where this start called: Allegro_32 (B2), Arbiter_32 (B2), Ares_32 (B2), Bananafish_32 (B2), Blocker23_32 (B2), Boyle_32 (B2), Brownie5_32 (B2), Calamitous_32 (B2), Coffee_32 (B2), Eaglehorse_32 (B2), Faze9_32 (B2), FrenchFry_32 (B2), Glass_32 (B2), Godines_32 (B2), Hedgerow_32 (B2), Holeinone_32 (B2), ItsyBitsy1_32 (B2), Kaleb_32 (B2), Kheth_32 (B2), Kolhan_32 (B2), Lars_32 (B2), Lephleur_32 (B2), LilSmirk_32 (B2), LizLemon_32 (B2), MasterPo_32 (B2), Opia_32 (B2), Phantasmagoria_32 (B2), PrinceCharming_32 (B2), Qyrzula_30 (B2), Rhinoforte_32 (B2), Rosebush_32 (B2), Sabella_32 (B2), TA17A_33 (B2), Tinciduntsolum_33 (B2), Tres_32 (B2), Vic9_00032 (B2), West99_32 (B2),

Start 16:
• Found in 39 of 83 (47.0%) of genes in pham
• Manual Annotations of this start: 4 of 77
• Called 10.3% of time when present
• Phage (with cluster) where this start called: D12_24 (W), GodPhather_25 (W), Jeon_24 (W), PR_24 (W),

Summary by clusters:

There are 9 clusters represented in this pham: F1, P1, AD, P3, L1, N, W, B2, K4,

Info for manual annotations of cluster AD:
•Start number 13 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster B2:
•Start number 15 was manually annotated 35 times for cluster B2.

Info for manual annotations of cluster F1:
•Start number 3 was manually annotated 9 times for cluster F1.

Info for manual annotations of cluster K4:
•Start number 10 was manually annotated 3 times for cluster K4.

Info for manual annotations of cluster L1:
•Start number 14 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster N:
•Start number 4 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:
•Start number 2 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P3:
•Start number 2 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster W:
•Start number 16 was manually annotated 4 times for cluster W.

Gene Information:
Gene: Acquire49_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Acquire49_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: Allegro_32 Start: 29960, Stop: 32680, Start Num: 15
Candidate Starts for Allegro_32:

(Start: 15 @29960 has 35 MA's), (19, 30014), (23, 30053), (28, 30098), (30, 30122), (31, 30125), (34, 30158), (43, 30266), (45, 30287), (46, 30290), (51, 30344), (55, 30404), (56, 30428), (61, 30464), (65, 30512), (68, 30533), (72, 30572), (75, 30611), (79, 30626), (86, 30680), (87, 30692), (89, 30716), (93, 30740), (96, 30752), (99, 30767), (101, 30782), (106, 30824), (108, 30842), (112, 30881), (114, 30905), (128, 31076), (135, 31154), (138, 31214), (140, 31250), (141, 31253), (146, 31331), (147, 31367), (150, 31391), (158, 31490), (160, 31529), (164, 31583), (168, 31700), (170, 31727), (173, 31790), (174, 31796), (175, 31811), (178, 31853), (181, 31940), (185, 31997), (186, 32015), (187, 32036), (188, 32045), (189, 32051), (190, 32057), (191, 32069), (192, 32174), (195, 32192), (198, 32225), (201, 32312), (203, 32342), (204, 32348), (208, 32408), (214, 32501), (215, 32516), (217, 32558), (222, 32672),

Gene: Appletree2_20 Start: 18940, Stop: 21621, Start Num: 14
Candidate Starts for Appletree2_20:
(Start: 14 @18940 has 19 MA's), (Start: 16 @18946 has 4 MA's), (33, 19123), (37, 19153), (40, 19216), (49, 19291), (57, 19405), (58, 19411), (66, 19477), (73, 19540), (77, 19573), (78, 19576), (82, 19600), (84, 19624), (85, 19630), (86, 19636), (90, 19684), (95, 19705), (98, 19720), (102, 19741), (105, 19780), (107, 19792), (111, 19810), (119, 19885), (121, 19915), (122, 19939), (123, 19942), (126, 19987), (129, 20038), (132, 20056), (136, 20110), (139, 20182), (140, 20194), (142, 20203), (144, 20221), (145, 20245), (146, 20275), (147, 20311), (152, 20344), (153, 20350), (156, 20416), (161, 20482), (164, 20521), (167, 20602), (168, 20638), (169, 20644), (175, 20749), (176, 20758), (177, 20773), (178, 20791), (180, 20833), (184, 20929), (185, 20935), (189, 20989), (190, 20995), (191, 21007), (194, 21118), (196, 21148), (197, 21154), (201, 21250), (202, 21256), (203, 21280), (204, 21286), (205, 21292), (207, 21337), (208, 21346), (209, 21355), (212, 21394), (213, 21430), (214, 21439), (215, 21454), (218, 21550), (220, 21601), (221, 21607),

Gene: Arbiter_32 Start: 30049, Stop: 32769, Start Num: 15
Candidate Starts for Arbiter_32:
(Start: 15 @30049 has 35 MA's), (19, 30103), (23, 30142), (28, 30187), (30, 30211), (31, 30214), (34, 30247), (43, 30355), (45, 30376), (46, 30379), (51, 30433), (55, 30493), (56, 30517), (61, 30553), (65, 30601), (68, 30622), (72, 30661), (75, 30700), (79, 30715), (86, 30769), (87, 30781), (89, 30805), (93, 30829), (96, 30841), (99, 30856), (101, 30871), (106, 30913), (108, 30931), (112, 30970), (114, 30994), (128, 31165), (135, 31243), (138, 31303), (140, 31339), (141, 31342), (146, 31420), (147, 31456), (150, 31480), (154, 31501), (164, 31672), (165, 31678), (168, 31789), (170, 31816), (173, 31879), (174, 31885), (175, 31900), (178, 31942), (181, 32029), (182, 32056), (185, 32086), (186, 32104), (187, 32125), (188, 32134), (189, 32140), (190, 32146), (191, 32158), (192, 32263), (195, 32281), (198, 32314), (201, 32401), (203, 32431), (204, 32437), (208, 32497), (214, 32590), (215, 32605), (217, 32647), (222, 32761),

Gene: Ares_32 Start: 29971, Stop: 32691, Start Num: 15
Candidate Starts for Ares_32:
(Start: 15 @29971 has 35 MA's), (19, 30025), (23, 30064), (28, 30109), (30, 30133), (31, 30136), (34, 30169), (43, 30277), (45, 30298), (46, 30301), (51, 30355), (55, 30415), (56, 30439), (61, 30475), (65, 30523), (68, 30544), (72, 30583), (75, 30622), (79, 30637), (86, 30691), (87, 30703), (89, 30727), (93, 30751), (96, 30763), (99, 30778), (101, 30793), (106, 30835), (108, 30853), (112, 30892), (114, 30916), (128, 31087), (135, 31165), (138, 31225), (140, 31261), (141, 31264), (146, 31342), (147, 31378), (150, 31402), (154, 31423), (164, 31594), (165, 31600), (168, 31711), (170, 31738), (173, 31801), (174, 31807), (175, 31822), (178, 31864), (181, 31951), (182, 31978), (185, 32008), (186, 32026), (187, 32047), (188, 32056), (189, 32062), (190, 32068), (191, 32080), (192, 32185), (195, 32203), (198, 32236), (201, 32323), (203, 32353), (204, 32359), (208, 32419), (214, 32512), (215, 32527), (217, 32569), (222, 32683),

Gene: Atcoo_21 Start: 18913, Stop: 21759, Start Num: 2
Candidate Starts for Atcoo_21:

(Start: 2 @18913 has 2 MA's), (Start: 16 @19066 has 4 MA's), (40, 19339), (42, 19351), (44, 19372), (47, 19396), (53, 19471), (59, 19543), (63, 19573), (66, 19609), (73, 19672), (74, 19687), (80, 19714), (81, 19720), (89, 19795), (92, 19819), (94, 19825), (97, 19837), (103, 19879), (104, 19885), (113, 19972), (116, 19993), (119, 20017), (124, 20083), (125, 20104), (127, 20122), (128, 20155), (130, 20179), (131, 20182), (135, 20233), (138, 20293), (140, 20329), (141, 20332), (142, 20338), (146, 20410), (147, 20446), (150, 20470), (158, 20569), (160, 20608), (164, 20662), (166, 20737), (168, 20779), (170, 20806), (173, 20869), (174, 20875), (175, 20890), (178, 20932), (179, 20971), (181, 21019), (182, 21046), (183, 21049), (185, 21076), (186, 21094), (188, 21124), (190, 21136), (191, 21148), (192, 21253), (195, 21271), (198, 21304), (199, 21319), (203, 21421), (204, 21427), (208, 21487), (210, 21505), (214, 21580), (215, 21595), (216, 21601), (217, 21637), (222, 21751),

Gene: AvadaKedavra_20 Start: 19007, Stop: 21688, Start Num: 14
Candidate Starts for AvadaKedavra_20:
(Start: 14 @19007 has 19 MA's), (Start: 16 @19013 has 4 MA's), (33, 19190), (37, 19220), (40, 19283), (49, 19358), (57, 19472), (58, 19478), (66, 19544), (73, 19607), (77, 19640), (78, 19643), (82, 19667), (84, 19691), (85, 19697), (86, 19703), (90, 19751), (95, 19772), (98, 19787), (102, 19808), (105, 19847), (107, 19859), (111, 19877), (115, 19934), (119, 19952), (121, 19982), (122, 20006), (123, 20009), (126, 20054), (129, 20105), (132, 20123), (136, 20177), (139, 20249), (140, 20261), (142, 20270), (145, 20312), (146, 20342), (147, 20378), (148, 20396), (152, 20411), (153, 20417), (155, 20450), (163, 20579), (164, 20588), (167, 20669), (168, 20705), (169, 20711), (175, 20816), (176, 20825), (177, 20840), (178, 20858), (180, 20900), (184, 20996), (185, 21002), (189, 21056), (190, 21062), (191, 21074), (194, 21185), (196, 21215), (197, 21221), (201, 21317), (202, 21323), (203, 21347), (204, 21353), (205, 21359), (207, 21404), (208, 21413), (209, 21422), (212, 21461), (213, 21497), (214, 21506), (215, 21521), (218, 21617), (220, 21668), (221, 21674),

Gene: Bananafish_32 Start: 29969, Stop: 32689, Start Num: 15
Candidate Starts for Bananafish_32:
(Start: 15 @29969 has 35 MA's), (19, 30023), (23, 30062), (28, 30107), (30, 30131), (31, 30134), (34, 30167), (43, 30275), (45, 30296), (46, 30299), (51, 30353), (55, 30413), (56, 30437), (61, 30473), (65, 30521), (68, 30542), (72, 30581), (75, 30620), (79, 30635), (86, 30689), (87, 30701), (89, 30725), (93, 30749), (96, 30761), (99, 30776), (101, 30791), (106, 30833), (108, 30851), (112, 30890), (114, 30914), (128, 31085), (135, 31163), (138, 31223), (140, 31259), (141, 31262), (146, 31340), (147, 31376), (150, 31400), (158, 31499), (160, 31538), (164, 31592), (168, 31709), (170, 31736), (173, 31799), (174, 31805), (175, 31820), (178, 31862), (181, 31949), (182, 31976), (185, 32006), (186, 32024), (187, 32045), (188, 32054), (189, 32060), (190, 32066), (191, 32078), (192, 32183), (195, 32201), (198, 32234), (201, 32321), (203, 32351), (204, 32357), (208, 32417), (214, 32510), (215, 32525), (217, 32567), (222, 32681),

Gene: BigPhil_19 Start: 17226, Stop: 20090, Start Num: 3
Candidate Starts for BigPhil_19:
(Start: 3 @17226 has 9 MA's), (5, 17247), (6, 17268), (8, 17307), (12, 17376), (Start: 15 @17385 has 35 MA's), (Start: 16 @17388 has 4 MA's), (20, 17439), (29, 17529), (35, 17580), (40, 17664), (42, 17676), (44, 17697), (48, 17730), (60, 17877), (66, 17940), (71, 17979), (73, 18003), (74, 18018), (75, 18027), (81, 18054), (83, 18060), (89, 18129), (92, 18150), (94, 18156), (100, 18192), (103, 18210), (113, 18303), (116, 18324), (119, 18348), (124, 18414), (125, 18435), (127, 18453), (128, 18486), (131, 18513), (135, 18564), (137, 18600), (138, 18624), (140, 18660), (142, 18669), (143, 18684), (145, 18711), (146, 18741), (147, 18777), (150, 18801), (158, 18900), (160, 18939), (162, 18978), (165, 18999), (168, 19110), (170, 19137), (171, 19167), (172, 19188), (173, 19200), (174, 19206), (178, 19263), (185, 19407), (186, 19425), (190, 19467), (191, 19479), (198, 19635), (201, 19722), (203, 19752), (204, 19758), (208, 19818), (210, 19836), (214, 19911), (216, 19932), (217, 19968), (222, 20082),

Gene: Blocker23_32 Start: 30090, Stop: 32807, Start Num: 15

Candidate Starts for Blocker23_32:
(Start: 15 @30090 has 35 MA's), (19, 30144), (23, 30183), (28, 30228), (30, 30252), (31, 30255), (34, 30288), (43, 30396), (45, 30417), (46, 30420), (51, 30474), (55, 30534), (56, 30558), (61, 30594), (65, 30642), (68, 30663), (72, 30702), (75, 30741), (79, 30756), (86, 30810), (87, 30822), (89, 30846), (93, 30870), (96, 30882), (99, 30897), (101, 30912), (106, 30954), (108, 30972), (112, 31011), (114, 31035), (128, 31206), (135, 31284), (138, 31344), (140, 31380), (141, 31383), (146, 31461), (147, 31497), (150, 31521), (154, 31542), (164, 31710), (165, 31716), (168, 31827), (170, 31854), (173, 31917), (174, 31923), (175, 31938), (178, 31980), (181, 32067), (182, 32094), (185, 32124), (186, 32142), (187, 32163), (188, 32172), (189, 32178), (190, 32184), (191, 32196), (192, 32301), (195, 32319), (198, 32352), (201, 32439), (203, 32469), (204, 32475), (208, 32535), (214, 32628), (215, 32643), (217, 32685), (222, 32799),

Gene: Boyle_32 Start: 30088, Stop: 32808, Start Num: 15
Candidate Starts for Boyle_32:
(Start: 15 @30088 has 35 MA's), (19, 30142), (23, 30181), (28, 30226), (30, 30250), (31, 30253), (34, 30286), (43, 30394), (45, 30415), (46, 30418), (51, 30472), (55, 30532), (56, 30556), (61, 30592), (65, 30640), (68, 30661), (72, 30700), (75, 30739), (79, 30754), (86, 30808), (87, 30820), (89, 30844), (93, 30868), (96, 30880), (99, 30895), (101, 30910), (106, 30952), (108, 30970), (112, 31009), (114, 31033), (128, 31204), (135, 31282), (138, 31342), (140, 31378), (141, 31381), (146, 31459), (147, 31495), (150, 31519), (154, 31540), (164, 31711), (165, 31717), (168, 31828), (170, 31855), (173, 31918), (174, 31924), (175, 31939), (178, 31981), (181, 32068), (182, 32095), (185, 32125), (186, 32143), (187, 32164), (188, 32173), (189, 32179), (190, 32185), (191, 32197), (192, 32302), (195, 32320), (198, 32353), (201, 32440), (203, 32470), (204, 32476), (208, 32536), (214, 32629), (215, 32644), (217, 32686), (222, 32800),

Gene: BronnyJr_21 Start: 18884, Stop: 21730, Start Num: 2
Candidate Starts for BronnyJr_21:
(Start: 2 @18884 has 2 MA's), (Start: 16 @19037 has 4 MA's), (40, 19310), (42, 19322), (47, 19367), (53, 19442), (59, 19514), (63, 19544), (66, 19580), (73, 19643), (74, 19658), (80, 19685), (81, 19691), (89, 19766), (92, 19790), (94, 19796), (97, 19808), (103, 19850), (104, 19856), (113, 19943), (116, 19964), (119, 19988), (124, 20054), (125, 20075), (127, 20093), (128, 20126), (130, 20150), (131, 20153), (135, 20204), (137, 20240), (138, 20264), (140, 20300), (142, 20309), (143, 20324), (145, 20351), (146, 20381), (147, 20417), (150, 20441), (158, 20540), (160, 20579), (164, 20633), (165, 20639), (168, 20750), (170, 20777), (173, 20840), (174, 20846), (175, 20861), (178, 20903), (181, 20990), (185, 21047), (186, 21065), (190, 21107), (191, 21119), (195, 21242), (198, 21275), (201, 21362), (203, 21392), (204, 21398), (208, 21458), (209, 21467), (210, 21476), (214, 21551), (216, 21572), (217, 21608), (222, 21722),

Gene: Brownie5_32 Start: 30094, Stop: 32814, Start Num: 15
Candidate Starts for Brownie5_32:
(Start: 15 @30094 has 35 MA's), (19, 30148), (23, 30187), (28, 30232), (30, 30256), (31, 30259), (34, 30292), (43, 30400), (45, 30421), (46, 30424), (51, 30478), (55, 30538), (56, 30562), (61, 30598), (65, 30646), (68, 30667), (72, 30706), (75, 30745), (79, 30760), (86, 30814), (87, 30826), (89, 30850), (93, 30874), (96, 30886), (99, 30901), (101, 30916), (106, 30958), (108, 30976), (112, 31015), (114, 31039), (128, 31210), (135, 31288), (138, 31348), (140, 31384), (141, 31387), (146, 31465), (147, 31501), (150, 31525), (154, 31546), (164, 31717), (165, 31723), (168, 31834), (170, 31861), (173, 31924), (174, 31930), (175, 31945), (178, 31987), (181, 32074), (182, 32101), (185, 32131), (186, 32149), (187, 32170), (188, 32179), (189, 32185), (190, 32191), (191, 32203), (192, 32308), (195, 32326), (198, 32359), (201, 32446), (203, 32476), (204, 32482), (208, 32542), (214, 32635), (215, 32650), (217, 32692), (222, 32806),

Gene: Calamitous_32 Start: 29974, Stop: 32694, Start Num: 15
Candidate Starts for Calamitous_32:

(Start: 15 @29974 has 35 MA's), (19, 30028), (23, 30067), (28, 30112), (30, 30136), (31, 30139), (34, 30172), (43, 30280), (45, 30301), (46, 30304), (51, 30358), (55, 30418), (56, 30442), (61, 30478), (65, 30526), (68, 30547), (72, 30586), (75, 30625), (79, 30640), (86, 30694), (87, 30706), (89, 30730), (93, 30754), (96, 30766), (99, 30781), (101, 30796), (106, 30838), (108, 30856), (112, 30895), (114, 30919), (128, 31090), (135, 31168), (138, 31228), (140, 31264), (141, 31267), (146, 31345), (147, 31381), (150, 31405), (154, 31426), (164, 31597), (168, 31714), (170, 31741), (173, 31804), (174, 31810), (175, 31825), (178, 31867), (181, 31954), (185, 32011), (186, 32029), (187, 32050), (188, 32059), (189, 32065), (190, 32071), (191, 32083), (192, 32188), (195, 32206), (198, 32239), (201, 32326), (203, 32356), (204, 32362), (208, 32422), (214, 32515), (215, 32530), (217, 32572), (222, 32686),

Gene: Calm_20 Start: 19011, Stop: 21692, Start Num: 14
Candidate Starts for Calm_20:
(Start: 14 @19011 has 19 MA's), (Start: 16 @19017 has 4 MA's), (33, 19194), (37, 19224), (40, 19287), (49, 19362), (54, 19416), (57, 19476), (58, 19482), (66, 19548), (73, 19611), (77, 19644), (78, 19647), (82, 19671), (84, 19695), (85, 19701), (86, 19707), (90, 19755), (95, 19776), (98, 19791), (102, 19812), (105, 19851), (107, 19863), (111, 19881), (119, 19956), (121, 19986), (122, 20010), (123, 20013), (126, 20058), (129, 20109), (132, 20127), (136, 20181), (139, 20253), (140, 20265), (142, 20274), (145, 20316), (146, 20346), (147, 20382), (148, 20400), (152, 20415), (153, 20421), (155, 20454), (163, 20583), (164, 20592), (167, 20673), (168, 20709), (169, 20715), (175, 20820), (176, 20829), (177, 20844), (178, 20862), (180, 20904), (184, 21000), (185, 21006), (189, 21060), (190, 21066), (191, 21078), (194, 21189), (196, 21219), (197, 21225), (201, 21321), (202, 21327), (203, 21351), (204, 21357), (205, 21363), (207, 21408), (208, 21417), (209, 21426), (212, 21465), (213, 21501), (214, 21510), (215, 21525), (218, 21621), (220, 21672), (221, 21678),

Gene: Cerasum_19 Start: 17226, Stop: 20090, Start Num: 3
Candidate Starts for Cerasum_19:
(Start: 3 @17226 has 9 MA's), (5, 17247), (6, 17268), (8, 17307), (12, 17376), (Start: 15 @17385 has 35 MA's), (Start: 16 @17388 has 4 MA's), (20, 17439), (29, 17529), (35, 17580), (40, 17664), (42, 17676), (44, 17697), (48, 17730), (60, 17877), (66, 17940), (71, 17979), (73, 18003), (74, 18018), (75, 18027), (81, 18054), (83, 18060), (89, 18129), (92, 18150), (94, 18156), (100, 18192), (103, 18210), (113, 18303), (116, 18324), (119, 18348), (124, 18414), (125, 18435), (127, 18453), (128, 18486), (131, 18513), (135, 18564), (137, 18600), (138, 18624), (140, 18660), (142, 18669), (143, 18684), (145, 18711), (146, 18741), (147, 18777), (150, 18801), (158, 18900), (160, 18939), (162, 18978), (165, 18999), (168, 19110), (170, 19137), (171, 19167), (172, 19188), (173, 19200), (174, 19206), (178, 19263), (185, 19407), (186, 19425), (190, 19467), (191, 19479), (198, 19635), (201, 19722), (203, 19752), (204, 19758), (208, 19818), (210, 19836), (214, 19911), (216, 19932), (217, 19968), (222, 20082),

Gene: CicholasNage_20 Start: 18999, Stop: 21680, Start Num: 14
Candidate Starts for CicholasNage_20:
(Start: 14 @18999 has 19 MA's), (Start: 16 @19005 has 4 MA's), (33, 19182), (37, 19212), (40, 19275), (49, 19350), (54, 19404), (57, 19464), (58, 19470), (66, 19536), (73, 19599), (77, 19632), (78, 19635), (82, 19659), (84, 19683), (85, 19689), (86, 19695), (90, 19743), (95, 19764), (98, 19779), (102, 19800), (105, 19839), (107, 19851), (111, 19869), (119, 19944), (121, 19974), (122, 19998), (123, 20001), (126, 20046), (129, 20097), (132, 20115), (136, 20169), (139, 20241), (140, 20253), (142, 20262), (145, 20304), (146, 20334), (147, 20370), (148, 20388), (152, 20403), (153, 20409), (155, 20442), (163, 20571), (164, 20580), (167, 20661), (168, 20697), (169, 20703), (175, 20808), (176, 20817), (177, 20832), (178, 20850), (180, 20892), (184, 20988), (185, 20994), (189, 21048), (190, 21054), (191, 21066), (194, 21177), (196, 21207), (197, 21213), (200, 21243), (201, 21309), (202, 21315), (203, 21339), (204, 21345), (205, 21351), (207, 21396), (208, 21405), (209, 21414), (212, 21453), (213, 21489), (214, 21498), (215, 21513), (218, 21609), (220, 21660), (221, 21666),

Gene: Clifton_18 Start: 17353, Stop: 20217, Start Num: 3
Candidate Starts for Clifton_18:
(1, 17341), (Start: 3 @17353 has 9 MA's), (5, 17374), (6, 17395), (8, 17434), (12, 17503), (Start: 15 @17512 has 35 MA's), (Start: 16 @17515 has 4 MA's), (20, 17566), (29, 17656), (34, 17701), (40, 17791), (41, 17800), (42, 17803), (44, 17824), (46, 17836), (50, 17869), (60, 18004), (64, 18052), (66, 18067), (70, 18088), (73, 18130), (74, 18145), (75, 18154), (81, 18181), (83, 18187), (87, 18232), (88, 18241), (89, 18256), (91, 18268), (92, 18277), (94, 18283), (96, 18292), (100, 18319), (103, 18337), (113, 18430), (116, 18451), (119, 18475), (124, 18541), (125, 18562), (127, 18580), (128, 18613), (130, 18637), (131, 18640), (135, 18691), (137, 18727), (138, 18751), (140, 18787), (142, 18796), (143, 18811), (145, 18838), (146, 18868), (147, 18904), (150, 18928), (158, 19027), (160, 19066), (164, 19120), (168, 19237), (170, 19264), (173, 19327), (174, 19333), (175, 19348), (178, 19390), (181, 19477), (182, 19504), (185, 19534), (186, 19552), (188, 19582), (190, 19594), (191, 19606), (192, 19711), (195, 19729), (198, 19762), (201, 19849), (203, 19879), (204, 19885), (208, 19945), (209, 19954), (210, 19963), (214, 20038), (216, 20059), (217, 20095), (222, 20209),

Gene: Coffee_32 Start: 30077, Stop: 32797, Start Num: 15
Candidate Starts for Coffee_32:
(Start: 15 @30077 has 35 MA's), (19, 30131), (23, 30170), (28, 30215), (30, 30239), (31, 30242), (34, 30275), (43, 30383), (45, 30404), (46, 30407), (51, 30461), (55, 30521), (56, 30545), (61, 30581), (65, 30629), (68, 30650), (72, 30689), (75, 30728), (79, 30743), (86, 30797), (87, 30809), (89, 30833), (93, 30857), (96, 30869), (99, 30884), (101, 30899), (106, 30941), (108, 30959), (112, 30998), (114, 31022), (128, 31193), (135, 31271), (138, 31331), (140, 31367), (141, 31370), (146, 31448), (147, 31484), (150, 31508), (154, 31529), (164, 31700), (165, 31706), (168, 31817), (170, 31844), (173, 31907), (174, 31913), (175, 31928), (178, 31970), (181, 32057), (182, 32084), (185, 32114), (186, 32132), (187, 32153), (188, 32162), (189, 32168), (190, 32174), (191, 32186), (192, 32291), (195, 32309), (198, 32342), (201, 32429), (203, 32459), (204, 32465), (208, 32525), (214, 32618), (215, 32633), (217, 32675), (222, 32789),

Gene: Crumble_18 Start: 17400, Stop: 20264, Start Num: 3
Candidate Starts for Crumble_18:
(1, 17388), (Start: 3 @17400 has 9 MA's), (5, 17421), (6, 17442), (8, 17481), (12, 17550), (Start: 15 @17559 has 35 MA's), (Start: 16 @17562 has 4 MA's), (20, 17613), (29, 17703), (34, 17748), (40, 17838), (41, 17847), (42, 17850), (44, 17871), (46, 17883), (50, 17916), (60, 18051), (64, 18099), (66, 18114), (70, 18135), (73, 18177), (74, 18192), (75, 18201), (81, 18228), (83, 18234), (87, 18279), (88, 18288), (89, 18303), (91, 18315), (92, 18324), (94, 18330), (96, 18339), (100, 18366), (103, 18384), (113, 18477), (116, 18498), (119, 18522), (124, 18588), (125, 18609), (127, 18627), (128, 18660), (130, 18684), (131, 18687), (135, 18738), (137, 18774), (138, 18798), (140, 18834), (142, 18843), (143, 18858), (145, 18885), (146, 18915), (147, 18951), (150, 18975), (158, 19074), (160, 19113), (164, 19167), (168, 19284), (170, 19311), (173, 19374), (174, 19380), (175, 19395), (178, 19437), (181, 19524), (182, 19551), (185, 19581), (186, 19599), (188, 19629), (190, 19641), (191, 19653), (192, 19758), (195, 19776), (198, 19809), (201, 19896), (203, 19926), (204, 19932), (208, 19992), (209, 20001), (210, 20010), (214, 20085), (216, 20106), (217, 20142), (222, 20256),

Gene: D12_24 Start: 27231, Stop: 29945, Start Num: 16
Candidate Starts for D12_24:
(Start: 16 @27231 has 4 MA's), (21, 27300), (25, 27333), (27, 27354), (32, 27411), (36, 27441), (39, 27459), (45, 27552), (46, 27555), (51, 27609), (52, 27615), (56, 27693), (61, 27729), (63, 27750), (68, 27798), (72, 27837), (79, 27891), (86, 27945), (87, 27957), (89, 27981), (93, 28005), (94, 28008), (101, 28047), (106, 28089), (114, 28170), (117, 28185), (120, 28215), (127, 28308), (128, 28341), (133, 28398), (134, 28410), (135, 28419), (138, 28479), (140, 28515), (141, 28518), (146, 28596), (147, 28632), (151, 28662), (154, 28677), (159, 28785), (162, 28833), (163, 28839), (164, 28848), (165, 28854), (168, 28965), (170, 28992), (173, 29055), (174, 29061), (175, 29076), (178, 29118), (185, 29262), (186, 29280), (190, 29322), (191, 29334), (192, 29439), (195, 29457), (198, 29490), (201,

29577), (203, 29607), (204, 29613), (206, 29634), (208, 29673), (210, 29691), (214, 29766), (216, 29787), (217, 29823), (222, 29937),

Gene: DanSyl44_29 Start: 22286, Stop: 25030, Start Num: 10
Candidate Starts for DanSyl44_29:
(Start: 10 @22286 has 3 MA's), (18, 22376), (21, 22397), (24, 22421), (26, 22427), (27, 22445), (34, 22511), (40, 22601), (41, 22610), (42, 22613), (44, 22634), (46, 22646), (50, 22679), (60, 22814), (64, 22862), (66, 22877), (70, 22898), (71, 22916), (73, 22940), (74, 22955), (75, 22964), (81, 22991), (83, 22997), (87, 23042), (89, 23066), (91, 23078), (92, 23087), (94, 23093), (96, 23102), (100, 23129), (103, 23147), (113, 23240), (114, 23252), (116, 23261), (124, 23351), (125, 23372), (127, 23390), (128, 23423), (130, 23447), (131, 23450), (135, 23501), (137, 23537), (138, 23561), (140, 23597), (142, 23606), (143, 23621), (145, 23648), (146, 23678), (147, 23714), (148, 23732), (149, 23735), (151, 23744), (159, 23870), (161, 23894), (164, 23933), (168, 24050), (170, 24077), (173, 24140), (174, 24146), (175, 24161), (178, 24203), (181, 24290), (185, 24347), (186, 24365), (188, 24395), (190, 24407), (191, 24419), (193, 24527), (195, 24542), (198, 24575), (200, 24596), (201, 24662), (203, 24692), (204, 24698), (208, 24758), (210, 24776), (214, 24851), (216, 24872), (217, 24908), (222, 25022),

Gene: DirkDirk_20 Start: 18980, Stop: 21661, Start Num: 14
Candidate Starts for DirkDirk_20:
(Start: 14 @18980 has 19 MA's), (Start: 16 @18986 has 4 MA's), (33, 19163), (37, 19193), (40, 19256), (49, 19331), (57, 19445), (58, 19451), (66, 19517), (73, 19580), (77, 19613), (78, 19616), (82, 19640), (84, 19664), (85, 19670), (86, 19676), (90, 19724), (95, 19745), (98, 19760), (102, 19781), (105, 19820), (107, 19832), (111, 19850), (119, 19925), (121, 19955), (122, 19979), (123, 19982), (126, 20027), (129, 20078), (132, 20096), (136, 20150), (139, 20222), (140, 20234), (142, 20243), (144, 20261), (145, 20285), (146, 20315), (147, 20351), (152, 20384), (153, 20390), (156, 20456), (161, 20522), (164, 20561), (167, 20642), (168, 20678), (169, 20684), (175, 20789), (176, 20798), (177, 20813), (178, 20831), (180, 20873), (184, 20969), (185, 20975), (189, 21029), (190, 21035), (191, 21047), (194, 21158), (196, 21188), (197, 21194), (201, 21290), (202, 21296), (203, 21320), (204, 21326), (205, 21332), (207, 21377), (208, 21386), (209, 21395), (212, 21434), (213, 21470), (214, 21479), (215, 21494), (218, 21590), (220, 21641), (221, 21647),

Gene: Eaglehorse_32 Start: 30001, Stop: 32721, Start Num: 15
Candidate Starts for Eaglehorse_32:
(Start: 15 @30001 has 35 MA's), (19, 30055), (23, 30094), (28, 30139), (30, 30163), (31, 30166), (34, 30199), (43, 30307), (45, 30328), (46, 30331), (51, 30385), (55, 30445), (56, 30469), (61, 30505), (65, 30553), (68, 30574), (72, 30613), (75, 30652), (79, 30667), (86, 30721), (87, 30733), (89, 30757), (93, 30781), (96, 30793), (99, 30808), (101, 30823), (106, 30865), (108, 30883), (112, 30922), (114, 30946), (128, 31117), (135, 31195), (138, 31255), (140, 31291), (141, 31294), (146, 31372), (147, 31408), (150, 31432), (154, 31453), (164, 31624), (168, 31741), (170, 31768), (173, 31831), (174, 31837), (175, 31852), (178, 31894), (181, 31981), (182, 32008), (185, 32038), (186, 32056), (187, 32077), (188, 32086), (189, 32092), (190, 32098), (191, 32110), (192, 32215), (195, 32233), (198, 32266), (201, 32353), (203, 32383), (204, 32389), (208, 32449), (214, 32542), (215, 32557), (217, 32599), (222, 32713),

Gene: Enceladus_20 Start: 18981, Stop: 21662, Start Num: 14
Candidate Starts for Enceladus_20:
(Start: 14 @18981 has 19 MA's), (Start: 16 @18987 has 4 MA's), (33, 19164), (37, 19194), (40, 19257), (49, 19332), (57, 19446), (58, 19452), (66, 19518), (73, 19581), (77, 19614), (78, 19617), (82, 19641), (84, 19665), (85, 19671), (86, 19677), (90, 19725), (95, 19746), (98, 19761), (102, 19782), (105, 19821), (107, 19833), (111, 19851), (119, 19926), (121, 19956), (122, 19980), (123, 19983), (126, 20028), (129, 20079), (132, 20097), (136, 20151), (139, 20223), (140, 20235), (142, 20244), (144, 20262), (145, 20286), (146, 20316), (147, 20352), (152, 20385), (153, 20391), (156, 20457), (161,

20523), (164, 20562), (167, 20643), (168, 20679), (169, 20685), (175, 20790), (176, 20799), (177, 20814), (178, 20832), (180, 20874), (184, 20970), (185, 20976), (189, 21030), (190, 21036), (191, 21048), (194, 21159), (196, 21189), (197, 21195), (201, 21291), (202, 21297), (203, 21321), (204, 21327), (205, 21333), (207, 21378), (208, 21387), (209, 21396), (212, 21435), (213, 21471), (214, 21480), (215, 21495), (218, 21591), (220, 21642), (221, 21648),

Gene: Eponine_28 Start: 22173, Stop: 24917, Start Num: 10
Candidate Starts for Eponine_28:
(9, 22164), (Start: 10 @22173 has 3 MA's), (18, 22263), (24, 22308), (27, 22332), (40, 22488), (42, 22500), (44, 22521), (50, 22566), (60, 22701), (64, 22749), (66, 22764), (70, 22785), (71, 22803), (73, 22827), (74, 22842), (75, 22851), (81, 22878), (83, 22884), (87, 22929), (89, 22953), (91, 22965), (92, 22974), (94, 22980), (96, 22989), (100, 23016), (103, 23034), (113, 23127), (114, 23139), (116, 23148), (124, 23238), (125, 23259), (127, 23277), (128, 23310), (131, 23337), (135, 23388), (137, 23424), (138, 23448), (140, 23484), (142, 23493), (143, 23508), (145, 23535), (146, 23565), (147, 23601), (148, 23619), (149, 23622), (151, 23631), (161, 23781), (164, 23820), (168, 23937), (170, 23964), (173, 24027), (174, 24033), (175, 24048), (178, 24090), (181, 24177), (182, 24204), (185, 24234), (186, 24252), (188, 24282), (190, 24294), (191, 24306), (193, 24414), (195, 24429), (198, 24462), (200, 24483), (201, 24549), (203, 24579), (204, 24585), (208, 24645), (210, 24663), (214, 24738), (216, 24759), (217, 24795), (222, 24909),

Gene: Faze9_32 Start: 30097, Stop: 32817, Start Num: 15
Candidate Starts for Faze9_32:
(Start: 15 @30097 has 35 MA's), (19, 30151), (23, 30190), (28, 30235), (30, 30259), (31, 30262), (34, 30295), (43, 30403), (45, 30424), (46, 30427), (51, 30481), (55, 30541), (56, 30565), (61, 30601), (65, 30649), (68, 30670), (72, 30709), (75, 30748), (79, 30763), (86, 30817), (87, 30829), (89, 30853), (93, 30877), (96, 30889), (99, 30904), (101, 30919), (106, 30961), (108, 30979), (112, 31018), (114, 31042), (128, 31213), (135, 31291), (138, 31351), (140, 31387), (141, 31390), (146, 31468), (147, 31504), (150, 31528), (154, 31549), (164, 31720), (165, 31726), (168, 31837), (170, 31864), (173, 31927), (174, 31933), (175, 31948), (178, 31990), (181, 32077), (182, 32104), (185, 32134), (186, 32152), (187, 32173), (188, 32182), (189, 32188), (190, 32194), (191, 32206), (192, 32311), (195, 32329), (198, 32362), (201, 32449), (203, 32479), (204, 32485), (208, 32545), (214, 32638), (215, 32653), (217, 32695), (222, 32809),

Gene: FrenchFry_32 Start: 30091, Stop: 32811, Start Num: 15
Candidate Starts for FrenchFry_32:
(Start: 15 @30091 has 35 MA's), (19, 30145), (23, 30184), (28, 30229), (30, 30253), (31, 30256), (34, 30289), (43, 30397), (45, 30418), (46, 30421), (51, 30475), (55, 30535), (56, 30559), (61, 30595), (65, 30643), (68, 30664), (72, 30703), (75, 30742), (79, 30757), (86, 30811), (87, 30823), (89, 30847), (93, 30871), (96, 30883), (99, 30898), (101, 30913), (106, 30955), (108, 30973), (112, 31012), (114, 31036), (128, 31207), (135, 31285), (138, 31345), (140, 31381), (141, 31384), (146, 31462), (147, 31498), (150, 31522), (154, 31543), (164, 31714), (165, 31720), (168, 31831), (170, 31858), (173, 31921), (174, 31927), (175, 31942), (178, 31984), (181, 32071), (182, 32098), (185, 32128), (186, 32146), (187, 32167), (188, 32176), (189, 32182), (190, 32188), (191, 32200), (192, 32305), (195, 32323), (198, 32356), (201, 32443), (203, 32473), (204, 32479), (208, 32539), (214, 32632), (215, 32647), (217, 32689), (222, 32803),

Gene: Glass_32 Start: 30091, Stop: 32811, Start Num: 15
Candidate Starts for Glass_32:
(Start: 15 @30091 has 35 MA's), (19, 30145), (23, 30184), (28, 30229), (30, 30253), (31, 30256), (34, 30289), (43, 30397), (45, 30418), (46, 30421), (51, 30475), (55, 30535), (56, 30559), (61, 30595), (65, 30643), (68, 30664), (72, 30703), (75, 30742), (79, 30757), (86, 30811), (87, 30823), (89, 30847), (93, 30871), (96, 30883), (99, 30898), (101, 30913), (106, 30955), (108, 30973), (112, 31012), (114, 31036), (128, 31207), (135, 31285), (138, 31345), (140, 31381), (141, 31384), (146, 31462), (147,

31498), (150, 31522), (158, 31621), (160, 31660), (164, 31714), (168, 31831), (170, 31858), (173, 31921), (174, 31927), (175, 31942), (178, 31984), (181, 32071), (185, 32128), (186, 32146), (187, 32167), (188, 32176), (189, 32182), (190, 32188), (191, 32200), (192, 32305), (195, 32323), (198, 32356), (201, 32443), (203, 32473), (204, 32479), (208, 32539), (214, 32632), (215, 32647), (217, 32689), (222, 32803),

Gene: GodPhather_25 Start: 27493, Stop: 30207, Start Num: 16
Candidate Starts for GodPhather_25:
(Start: 16 @27493 has 4 MA's), (21, 27562), (25, 27595), (27, 27616), (32, 27673), (36, 27703), (39, 27721), (45, 27814), (46, 27817), (51, 27871), (56, 27955), (61, 27991), (62, 28009), (63, 28012), (68, 28060), (72, 28099), (79, 28153), (86, 28207), (87, 28219), (89, 28243), (93, 28267), (96, 28279), (99, 28294), (106, 28351), (109, 28375), (114, 28432), (120, 28477), (125, 28552), (128, 28603), (133, 28660), (135, 28681), (138, 28741), (140, 28777), (141, 28780), (146, 28858), (147, 28894), (151, 28924), (154, 28939), (159, 29047), (162, 29095), (163, 29101), (164, 29110), (165, 29116), (166, 29185), (168, 29227), (170, 29254), (173, 29317), (174, 29323), (175, 29338), (176, 29347), (178, 29380), (182, 29494), (185, 29524), (186, 29542), (187, 29563), (188, 29572), (189, 29578), (190, 29584), (191, 29596), (192, 29701), (195, 29719), (198, 29752), (200, 29773), (201, 29839), (203, 29869), (204, 29875), (208, 29935), (210, 29953), (214, 30028), (216, 30049), (217, 30085), (222, 30199),

Gene: Godines_32 Start: 29971, Stop: 32691, Start Num: 15
Candidate Starts for Godines_32:
(Start: 15 @29971 has 35 MA's), (19, 30025), (23, 30064), (25, 30082), (28, 30109), (30, 30133), (31, 30136), (34, 30169), (43, 30277), (45, 30298), (46, 30301), (51, 30355), (55, 30415), (56, 30439), (61, 30475), (65, 30523), (68, 30544), (72, 30583), (75, 30622), (79, 30637), (86, 30691), (87, 30703), (89, 30727), (93, 30751), (96, 30763), (99, 30778), (101, 30793), (106, 30835), (108, 30853), (112, 30892), (114, 30916), (128, 31087), (135, 31165), (138, 31225), (140, 31261), (141, 31264), (146, 31342), (147, 31378), (150, 31402), (154, 31423), (164, 31594), (165, 31600), (168, 31711), (170, 31738), (173, 31801), (174, 31807), (175, 31822), (178, 31864), (181, 31951), (182, 31978), (185, 32008), (186, 32026), (187, 32047), (188, 32056), (189, 32062), (190, 32068), (191, 32080), (192, 32185), (195, 32203), (198, 32236), (201, 32323), (203, 32353), (204, 32359), (208, 32419), (214, 32512), (215, 32527), (217, 32569), (222, 32683),

Gene: Halena_20 Start: 19008, Stop: 21689, Start Num: 14
Candidate Starts for Halena_20:
(Start: 14 @19008 has 19 MA's), (Start: 16 @19014 has 4 MA's), (33, 19191), (37, 19221), (40, 19284), (49, 19359), (54, 19413), (57, 19473), (58, 19479), (66, 19545), (73, 19608), (77, 19641), (78, 19644), (82, 19668), (84, 19692), (85, 19698), (86, 19704), (90, 19752), (95, 19773), (98, 19788), (102, 19809), (105, 19848), (107, 19860), (111, 19878), (119, 19953), (121, 19983), (122, 20007), (123, 20010), (126, 20055), (129, 20106), (132, 20124), (136, 20178), (139, 20250), (140, 20262), (142, 20271), (145, 20313), (146, 20343), (147, 20379), (148, 20397), (152, 20412), (153, 20418), (155, 20451), (163, 20580), (164, 20589), (167, 20670), (168, 20706), (169, 20712), (175, 20817), (176, 20826), (177, 20841), (178, 20859), (180, 20901), (184, 20997), (185, 21003), (189, 21057), (190, 21063), (191, 21075), (194, 21186), (196, 21216), (197, 21222), (200, 21252), (201, 21318), (202, 21324), (203, 21348), (204, 21354), (205, 21360), (207, 21405), (208, 21414), (209, 21423), (212, 21462), (213, 21498), (214, 21507), (215, 21522), (218, 21618), (220, 21669), (221, 21675),

Gene: Hedgerow_32 Start: 30073, Stop: 32793, Start Num: 15
Candidate Starts for Hedgerow_32:
(Start: 15 @30073 has 35 MA's), (19, 30127), (23, 30166), (28, 30211), (30, 30235), (31, 30238), (34, 30271), (43, 30379), (45, 30400), (46, 30403), (51, 30457), (55, 30517), (56, 30541), (61, 30577), (65, 30625), (68, 30646), (72, 30685), (75, 30724), (79, 30739), (86, 30793), (87, 30805), (89, 30829), (93, 30853), (96, 30865), (99, 30880), (101, 30895), (106, 30937), (108, 30955), (112, 30994), (114,

31018), (128, 31189), (135, 31267), (138, 31327), (140, 31363), (141, 31366), (146, 31444), (147, 31480), (150, 31504), (154, 31525), (164, 31696), (165, 31702), (168, 31813), (170, 31840), (173, 31903), (174, 31909), (175, 31924), (178, 31966), (181, 32053), (182, 32080), (185, 32110), (186, 32128), (187, 32149), (188, 32158), (189, 32164), (190, 32170), (191, 32182), (192, 32287), (195, 32305), (198, 32338), (201, 32425), (203, 32455), (204, 32461), (208, 32521), (214, 32614), (215, 32629), (217, 32671), (222, 32785),

Gene: Holeinone_32 Start: 29953, Stop: 32673, Start Num: 15
Candidate Starts for Holeinone_32:
(Start: 15 @29953 has 35 MA's), (19, 30007), (23, 30046), (28, 30091), (30, 30115), (31, 30118), (34, 30151), (43, 30259), (45, 30280), (46, 30283), (51, 30337), (55, 30397), (56, 30421), (61, 30457), (65, 30505), (68, 30526), (72, 30565), (75, 30604), (79, 30619), (86, 30673), (87, 30685), (89, 30709), (93, 30733), (96, 30745), (99, 30760), (101, 30775), (106, 30817), (108, 30835), (112, 30874), (114, 30898), (128, 31069), (135, 31147), (138, 31207), (140, 31243), (141, 31246), (146, 31324), (147, 31360), (150, 31384), (154, 31405), (164, 31576), (165, 31582), (168, 31693), (170, 31720), (173, 31783), (174, 31789), (175, 31804), (178, 31846), (185, 31990), (186, 32008), (187, 32029), (188, 32038), (189, 32044), (190, 32050), (191, 32062), (192, 32167), (195, 32185), (198, 32218), (199, 32233), (201, 32305), (203, 32335), (204, 32341), (208, 32401), (214, 32494), (215, 32509), (217, 32551), (219, 32653), (222, 32665),

Gene: ItsyBitsy1_32 Start: 29955, Stop: 32675, Start Num: 15
Candidate Starts for ItsyBitsy1_32:
(Start: 15 @29955 has 35 MA's), (19, 30009), (23, 30048), (28, 30093), (30, 30117), (31, 30120), (34, 30153), (43, 30261), (45, 30282), (46, 30285), (51, 30339), (55, 30399), (56, 30423), (61, 30459), (65, 30507), (68, 30528), (72, 30567), (79, 30621), (86, 30675), (87, 30687), (89, 30711), (93, 30735), (96, 30747), (99, 30762), (101, 30777), (106, 30819), (108, 30837), (112, 30876), (114, 30900), (128, 31071), (135, 31149), (138, 31209), (140, 31245), (141, 31248), (146, 31326), (147, 31362), (150, 31386), (154, 31407), (164, 31578), (168, 31695), (170, 31722), (173, 31785), (174, 31791), (175, 31806), (178, 31848), (181, 31935), (182, 31962), (185, 31992), (186, 32010), (187, 32031), (188, 32040), (189, 32046), (190, 32052), (191, 32064), (192, 32169), (195, 32187), (198, 32220), (201, 32307), (203, 32337), (204, 32343), (208, 32403), (214, 32496), (215, 32511), (217, 32553), (222, 32667),

Gene: Jennelsea_18 Start: 17353, Stop: 20217, Start Num: 3
Candidate Starts for Jennelsea_18:
(1, 17341), (Start: 3 @17353 has 9 MA's), (5, 17374), (6, 17395), (8, 17434), (12, 17503), (Start: 15 @17512 has 35 MA's), (Start: 16 @17515 has 4 MA's), (20, 17566), (29, 17656), (34, 17701), (40, 17791), (41, 17800), (42, 17803), (44, 17824), (46, 17836), (50, 17869), (60, 18004), (64, 18052), (66, 18067), (70, 18088), (73, 18130), (74, 18145), (75, 18154), (81, 18181), (83, 18187), (87, 18232), (88, 18241), (89, 18256), (91, 18268), (92, 18277), (94, 18283), (96, 18292), (100, 18319), (103, 18337), (113, 18430), (116, 18451), (119, 18475), (124, 18541), (125, 18562), (127, 18580), (128, 18613), (130, 18637), (131, 18640), (135, 18691), (137, 18727), (138, 18751), (140, 18787), (142, 18796), (143, 18811), (145, 18838), (146, 18868), (147, 18904), (150, 18928), (158, 19027), (160, 19066), (164, 19120), (168, 19237), (170, 19264), (173, 19327), (174, 19333), (175, 19348), (178, 19390), (181, 19477), (182, 19504), (185, 19534), (186, 19552), (188, 19582), (190, 19594), (191, 19606), (192, 19711), (195, 19729), (198, 19762), (201, 19849), (203, 19879), (204, 19885), (208, 19945), (209, 19954), (210, 19963), (214, 20038), (216, 20059), (217, 20095), (222, 20209),

Gene: Jeon_24 Start: 27235, Stop: 29949, Start Num: 16
Candidate Starts for Jeon_24:
(Start: 16 @27235 has 4 MA's), (21, 27304), (25, 27337), (27, 27358), (32, 27415), (36, 27445), (39, 27463), (45, 27556), (46, 27559), (51, 27613), (56, 27697), (61, 27733), (62, 27751), (63, 27754), (68, 27802), (72, 27841), (79, 27895), (86, 27949), (87, 27961), (89, 27985), (93, 28009), (96, 28021), (99,

28036), (106, 28093), (109, 28117), (114, 28174), (117, 28189), (120, 28219), (125, 28294), (128, 28345), (133, 28402), (135, 28423), (138, 28483), (140, 28519), (141, 28522), (146, 28600), (147, 28636), (151, 28666), (154, 28681), (159, 28789), (162, 28837), (163, 28843), (164, 28852), (165, 28858), (166, 28927), (168, 28969), (170, 28996), (173, 29059), (174, 29065), (175, 29080), (176, 29089), (178, 29122), (182, 29236), (185, 29266), (186, 29284), (188, 29314), (189, 29320), (190, 29326), (191, 29338), (192, 29443), (195, 29461), (198, 29494), (200, 29515), (201, 29581), (203, 29611), (204, 29617), (208, 29677), (210, 29695), (214, 29770), (217, 29827), (222, 29941),

Gene: JoeDirt_20 Start: 18979, Stop: 21660, Start Num: 14
Candidate Starts for JoeDirt_20:
(Start: 14 @18979 has 19 MA's), (Start: 16 @18985 has 4 MA's), (33, 19162), (37, 19192), (40, 19255), (49, 19330), (57, 19444), (58, 19450), (66, 19516), (73, 19579), (77, 19612), (78, 19615), (82, 19639), (84, 19663), (85, 19669), (86, 19675), (90, 19723), (95, 19744), (98, 19759), (102, 19780), (105, 19819), (107, 19831), (111, 19849), (119, 19924), (121, 19954), (122, 19978), (123, 19981), (126, 20026), (129, 20077), (132, 20095), (136, 20149), (139, 20221), (140, 20233), (142, 20242), (144, 20260), (145, 20284), (146, 20314), (147, 20350), (152, 20383), (153, 20389), (156, 20455), (161, 20521), (164, 20560), (167, 20641), (168, 20677), (169, 20683), (175, 20788), (176, 20797), (177, 20812), (178, 20830), (180, 20872), (184, 20968), (185, 20974), (189, 21028), (190, 21034), (191, 21046), (194, 21157), (196, 21187), (197, 21193), (201, 21289), (202, 21295), (203, 21319), (204, 21325), (205, 21331), (207, 21376), (208, 21385), (209, 21394), (212, 21433), (213, 21469), (214, 21478), (215, 21493), (218, 21589), (220, 21640), (221, 21646),

Gene: Kaleb_32 Start: 30088, Stop: 32808, Start Num: 15
Candidate Starts for Kaleb_32:
(Start: 15 @30088 has 35 MA's), (19, 30142), (23, 30181), (28, 30226), (30, 30250), (31, 30253), (34, 30286), (43, 30394), (45, 30415), (46, 30418), (51, 30472), (55, 30532), (56, 30556), (61, 30592), (65, 30640), (68, 30661), (72, 30700), (75, 30739), (79, 30754), (86, 30808), (87, 30820), (89, 30844), (93, 30868), (96, 30880), (99, 30895), (101, 30910), (106, 30952), (108, 30970), (112, 31009), (114, 31033), (128, 31204), (135, 31282), (138, 31342), (140, 31378), (141, 31381), (146, 31459), (147, 31495), (150, 31519), (154, 31540), (164, 31711), (165, 31717), (168, 31828), (170, 31855), (173, 31918), (174, 31924), (175, 31939), (178, 31981), (181, 32068), (185, 32125), (186, 32143), (187, 32164), (188, 32173), (189, 32179), (190, 32185), (191, 32197), (192, 32302), (195, 32320), (198, 32353), (201, 32440), (203, 32470), (204, 32476), (208, 32536), (214, 32629), (215, 32644), (217, 32686), (222, 32800),

Gene: Kheth_32 Start: 29973, Stop: 32693, Start Num: 15
Candidate Starts for Kheth_32:
(Start: 15 @29973 has 35 MA's), (19, 30027), (23, 30066), (28, 30111), (30, 30135), (31, 30138), (34, 30171), (43, 30279), (45, 30300), (46, 30303), (51, 30357), (55, 30417), (56, 30441), (61, 30477), (65, 30525), (68, 30546), (72, 30585), (75, 30624), (79, 30639), (86, 30693), (87, 30705), (89, 30729), (93, 30753), (96, 30765), (99, 30780), (101, 30795), (106, 30837), (108, 30855), (112, 30894), (114, 30918), (128, 31089), (135, 31167), (138, 31227), (140, 31263), (141, 31266), (146, 31344), (147, 31380), (150, 31404), (154, 31425), (164, 31596), (165, 31602), (168, 31713), (170, 31740), (173, 31803), (174, 31809), (175, 31824), (178, 31866), (181, 31953), (182, 31980), (185, 32010), (186, 32028), (187, 32049), (188, 32058), (189, 32064), (190, 32070), (191, 32082), (192, 32187), (195, 32205), (198, 32238), (201, 32325), (203, 32355), (204, 32361), (208, 32421), (214, 32514), (215, 32529), (217, 32571), (222, 32685),

Gene: Koella_18 Start: 17365, Stop: 20229, Start Num: 3
Candidate Starts for Koella_18:
(1, 17353), (Start: 3 @17365 has 9 MA's), (5, 17386), (6, 17407), (8, 17446), (12, 17515), (Start: 15 @17524 has 35 MA's), (Start: 16 @17527 has 4 MA's), (20, 17578), (29, 17668), (34, 17713), (40, 17803), (41, 17812), (42, 17815), (44, 17836), (46, 17848), (50, 17881), (60, 18016), (64, 18064), (66,

18079), (70, 18100), (73, 18142), (74, 18157), (75, 18166), (81, 18193), (83, 18199), (87, 18244), (88, 18253), (89, 18268), (91, 18280), (92, 18289), (94, 18295), (96, 18304), (100, 18331), (103, 18349), (113, 18442), (116, 18463), (119, 18487), (124, 18553), (125, 18574), (127, 18592), (128, 18625), (130, 18649), (131, 18652), (135, 18703), (137, 18739), (138, 18763), (140, 18799), (142, 18808), (143, 18823), (145, 18850), (146, 18880), (147, 18916), (150, 18940), (158, 19039), (160, 19078), (164, 19132), (168, 19249), (170, 19276), (173, 19339), (174, 19345), (175, 19360), (178, 19402), (181, 19489), (182, 19516), (185, 19546), (186, 19564), (188, 19594), (190, 19606), (191, 19618), (192, 19723), (195, 19741), (198, 19774), (201, 19861), (203, 19891), (204, 19897), (208, 19957), (209, 19966), (210, 19975), (214, 20050), (216, 20071), (217, 20107), (222, 20221),

Gene: Kolhan_32 Start: 29967, Stop: 32687, Start Num: 15
Candidate Starts for Kolhan_32:
(Start: 15 @29967 has 35 MA's), (19, 30021), (23, 30060), (28, 30105), (30, 30129), (31, 30132), (34, 30165), (43, 30273), (45, 30294), (46, 30297), (51, 30351), (55, 30411), (56, 30435), (61, 30471), (65, 30519), (68, 30540), (72, 30579), (75, 30618), (79, 30633), (86, 30687), (87, 30699), (89, 30723), (93, 30747), (96, 30759), (99, 30774), (101, 30789), (106, 30831), (108, 30849), (112, 30888), (114, 30912), (128, 31083), (135, 31161), (138, 31221), (140, 31257), (141, 31260), (146, 31338), (147, 31374), (150, 31398), (154, 31419), (164, 31590), (165, 31596), (168, 31707), (170, 31734), (173, 31797), (174, 31803), (175, 31818), (178, 31860), (181, 31947), (185, 32004), (186, 32022), (187, 32043), (188, 32052), (189, 32058), (190, 32064), (191, 32076), (192, 32181), (195, 32199), (198, 32232), (201, 32319), (203, 32349), (204, 32355), (208, 32415), (214, 32508), (215, 32523), (217, 32565), (222, 32679),

Gene: Lars_32 Start: 30078, Stop: 32798, Start Num: 15
Candidate Starts for Lars_32:
(Start: 15 @30078 has 35 MA's), (19, 30132), (23, 30171), (28, 30216), (30, 30240), (31, 30243), (34, 30276), (43, 30384), (45, 30405), (46, 30408), (51, 30462), (55, 30522), (56, 30546), (61, 30582), (65, 30630), (68, 30651), (72, 30690), (75, 30729), (79, 30744), (86, 30798), (87, 30810), (89, 30834), (93, 30858), (96, 30870), (99, 30885), (101, 30900), (106, 30942), (108, 30960), (112, 30999), (114, 31023), (128, 31194), (135, 31272), (138, 31332), (140, 31368), (141, 31371), (146, 31449), (147, 31485), (150, 31509), (154, 31530), (164, 31701), (165, 31707), (168, 31818), (170, 31845), (173, 31908), (174, 31914), (175, 31929), (178, 31971), (181, 32058), (182, 32085), (185, 32115), (186, 32133), (187, 32154), (188, 32163), (189, 32169), (190, 32175), (191, 32187), (192, 32292), (195, 32310), (198, 32343), (201, 32430), (203, 32460), (204, 32466), (208, 32526), (214, 32619), (215, 32634), (217, 32676), (222, 32790),

Gene: LastJedi_18 Start: 17396, Stop: 20260, Start Num: 3
Candidate Starts for LastJedi_18:
(1, 17384), (Start: 3 @17396 has 9 MA's), (5, 17417), (6, 17438), (8, 17477), (12, 17546), (Start: 15 @17555 has 35 MA's), (Start: 16 @17558 has 4 MA's), (20, 17609), (29, 17699), (34, 17744), (40, 17834), (41, 17843), (42, 17846), (44, 17867), (46, 17879), (50, 17912), (60, 18047), (64, 18095), (66, 18110), (70, 18131), (73, 18173), (74, 18188), (75, 18197), (81, 18224), (83, 18230), (87, 18275), (88, 18284), (89, 18299), (91, 18311), (92, 18320), (94, 18326), (96, 18335), (100, 18362), (103, 18380), (113, 18473), (116, 18494), (119, 18518), (124, 18584), (125, 18605), (127, 18623), (128, 18656), (130, 18680), (131, 18683), (135, 18734), (137, 18770), (138, 18794), (140, 18830), (142, 18839), (143, 18854), (145, 18881), (146, 18911), (147, 18947), (150, 18971), (158, 19070), (160, 19109), (164, 19163), (168, 19280), (170, 19307), (173, 19370), (174, 19376), (175, 19391), (178, 19433), (181, 19520), (182, 19547), (185, 19577), (186, 19595), (188, 19625), (190, 19637), (191, 19649), (192, 19754), (195, 19772), (198, 19805), (201, 19892), (203, 19922), (204, 19928), (208, 19988), (209, 19997), (210, 20006), (214, 20081), (216, 20102), (217, 20138), (222, 20252),

Gene: LeBron_20 Start: 19023, Stop: 21704, Start Num: 14
Candidate Starts for LeBron_20:

(Start: 14 @19023 has 19 MA's), (Start: 16 @19029 has 4 MA's), (33, 19206), (37, 19236), (40, 19299), (49, 19374), (54, 19428), (57, 19488), (58, 19494), (66, 19560), (73, 19623), (77, 19656), (78, 19659), (82, 19683), (84, 19707), (85, 19713), (86, 19719), (90, 19767), (95, 19788), (98, 19803), (102, 19824), (105, 19863), (107, 19875), (111, 19893), (119, 19968), (121, 19998), (122, 20022), (123, 20025), (126, 20070), (129, 20121), (132, 20139), (136, 20193), (139, 20265), (140, 20277), (142, 20286), (144, 20304), (145, 20328), (146, 20358), (147, 20394), (152, 20427), (153, 20433), (156, 20499), (161, 20565), (164, 20604), (167, 20685), (168, 20721), (169, 20727), (175, 20832), (176, 20841), (177, 20856), (178, 20874), (180, 20916), (184, 21012), (185, 21018), (189, 21072), (190, 21078), (191, 21090), (194, 21201), (196, 21231), (197, 21237), (201, 21333), (202, 21339), (203, 21363), (204, 21369), (205, 21375), (207, 21420), (208, 21429), (209, 21438), (212, 21477), (213, 21513), (214, 21522), (215, 21537), (218, 21633), (220, 21684), (221, 21690),

Gene: Lephleur_32 Start: 29971, Stop: 32691, Start Num: 15
Candidate Starts for Lephleur_32:
(Start: 15 @29971 has 35 MA's), (19, 30025), (23, 30064), (28, 30109), (30, 30133), (31, 30136), (34, 30169), (43, 30277), (45, 30298), (46, 30301), (51, 30355), (55, 30415), (56, 30439), (61, 30475), (65, 30523), (68, 30544), (72, 30583), (75, 30622), (79, 30637), (86, 30691), (87, 30703), (89, 30727), (93, 30751), (96, 30763), (99, 30778), (101, 30793), (106, 30835), (108, 30853), (112, 30892), (114, 30916), (128, 31087), (135, 31165), (138, 31225), (140, 31261), (141, 31264), (146, 31342), (147, 31378), (150, 31402), (154, 31423), (164, 31594), (165, 31600), (168, 31711), (170, 31738), (173, 31801), (174, 31807), (175, 31822), (178, 31864), (181, 31951), (185, 32008), (186, 32026), (187, 32047), (188, 32056), (189, 32062), (190, 32068), (191, 32080), (192, 32185), (195, 32203), (198, 32236), (201, 32323), (203, 32353), (204, 32359), (208, 32419), (214, 32512), (215, 32527), (217, 32569), (222, 32683),

Gene: LilSmirk_32 Start: 29965, Stop: 32685, Start Num: 15
Candidate Starts for LilSmirk_32:
(Start: 15 @29965 has 35 MA's), (19, 30019), (23, 30058), (28, 30103), (30, 30127), (31, 30130), (34, 30163), (43, 30271), (45, 30292), (46, 30295), (51, 30349), (55, 30409), (56, 30433), (61, 30469), (65, 30517), (68, 30538), (72, 30577), (75, 30616), (79, 30631), (86, 30685), (87, 30697), (89, 30721), (93, 30745), (96, 30757), (99, 30772), (101, 30787), (106, 30829), (108, 30847), (112, 30886), (114, 30910), (128, 31081), (135, 31159), (138, 31219), (140, 31255), (141, 31258), (146, 31336), (147, 31372), (150, 31396), (154, 31417), (164, 31588), (168, 31705), (170, 31732), (173, 31795), (174, 31801), (175, 31816), (178, 31858), (181, 31945), (185, 32002), (186, 32020), (187, 32041), (188, 32050), (189, 32056), (190, 32062), (191, 32074), (192, 32179), (195, 32197), (198, 32230), (201, 32317), (203, 32347), (204, 32353), (208, 32413), (214, 32506), (215, 32521), (217, 32563), (222, 32677),

Gene: LizLemon_32 Start: 30087, Stop: 32807, Start Num: 15
Candidate Starts for LizLemon_32:
(Start: 15 @30087 has 35 MA's), (19, 30141), (23, 30180), (28, 30225), (30, 30249), (31, 30252), (34, 30285), (43, 30393), (45, 30414), (46, 30417), (51, 30471), (55, 30531), (56, 30555), (61, 30591), (65, 30639), (68, 30660), (72, 30699), (75, 30738), (79, 30753), (86, 30807), (87, 30819), (89, 30843), (93, 30867), (96, 30879), (99, 30894), (101, 30909), (106, 30951), (108, 30969), (112, 31008), (114, 31032), (128, 31203), (135, 31281), (138, 31341), (140, 31377), (141, 31380), (146, 31458), (147, 31494), (150, 31518), (158, 31617), (160, 31656), (164, 31710), (168, 31827), (170, 31854), (173, 31917), (174, 31923), (175, 31938), (178, 31980), (181, 32067), (185, 32124), (186, 32142), (187, 32163), (188, 32172), (189, 32178), (190, 32184), (191, 32196), (192, 32301), (195, 32319), (198, 32352), (201, 32439), (203, 32469), (204, 32475), (208, 32535), (214, 32628), (215, 32643), (217, 32685), (222, 32799),

Gene: MAckerman_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for MAckerman_20:

(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: Mao1_26 Start: 25993, Stop: 28746, Start Num: 13
Candidate Starts for Mao1_26:
(7, 25900), (Start: 13 @25993 has 3 MA's), (22, 26071), (25, 26107), (28, 26134), (30, 26158), (38, 26227), (41, 26296), (44, 26320), (46, 26332), (65, 26566), (67, 26578), (69, 26593), (72, 26629), (76, 26671), (84, 26725), (89, 26773), (93, 26803), (94, 26806), (110, 26914), (114, 26968), (117, 26983), (118, 26998), (124, 27067), (125, 27088), (127, 27106), (128, 27139), (130, 27163), (131, 27166), (135, 27217), (137, 27253), (138, 27277), (140, 27313), (142, 27322), (143, 27337), (145, 27364), (146, 27394), (147, 27430), (148, 27448), (149, 27451), (151, 27460), (159, 27586), (162, 27634), (168, 27766), (170, 27793), (172, 27844), (173, 27856), (174, 27862), (178, 27919), (179, 27958), (181, 28006), (182, 28033), (185, 28063), (186, 28081), (188, 28111), (190, 28123), (191, 28135), (193, 28243), (195, 28258), (198, 28291), (200, 28312), (201, 28378), (203, 28408), (204, 28414), (208, 28474), (209, 28483), (210, 28492), (214, 28567), (215, 28582), (216, 28588), (217, 28624), (222, 28738),

Gene: Mask_27 Start: 25986, Stop: 28739, Start Num: 13
Candidate Starts for Mask_27:
(7, 25893), (Start: 13 @25986 has 3 MA's), (22, 26064), (25, 26100), (28, 26127), (30, 26151), (38, 26220), (41, 26289), (44, 26313), (46, 26325), (65, 26559), (67, 26571), (69, 26586), (72, 26622), (76, 26664), (84, 26718), (89, 26766), (93, 26796), (94, 26799), (110, 26907), (114, 26961), (117, 26976), (118, 26991), (124, 27060), (125, 27081), (127, 27099), (128, 27132), (130, 27156), (131, 27159), (135, 27210), (137, 27246), (138, 27270), (140, 27306), (142, 27315), (143, 27330), (145, 27357), (146, 27387), (147, 27423), (148, 27441), (149, 27444), (151, 27453), (159, 27579), (162, 27627), (168, 27759), (170, 27786), (172, 27837), (173, 27849), (174, 27855), (178, 27912), (179, 27951), (181, 27999), (182, 28026), (185, 28056), (186, 28074), (188, 28104), (190, 28116), (191, 28128), (193, 28236), (195, 28251), (198, 28284), (200, 28305), (201, 28371), (203, 28401), (204, 28407), (208, 28467), (209, 28476), (210, 28485), (214, 28560), (215, 28575), (216, 28581), (217, 28617), (222, 28731),

Gene: MasterPo_32 Start: 29974, Stop: 32694, Start Num: 15
Candidate Starts for MasterPo_32:
(Start: 15 @29974 has 35 MA's), (19, 30028), (23, 30067), (28, 30112), (30, 30136), (31, 30139), (34, 30172), (43, 30280), (45, 30301), (46, 30304), (51, 30358), (55, 30418), (56, 30442), (61, 30478), (65, 30526), (68, 30547), (72, 30586), (75, 30625), (79, 30640), (86, 30694), (87, 30706), (89, 30730), (93, 30754), (96, 30766), (99, 30781), (101, 30796), (106, 30838), (108, 30856), (112, 30895), (114, 30919), (128, 31090), (135, 31168), (138, 31228), (140, 31264), (141, 31267), (146, 31345), (147, 31381), (150, 31405), (154, 31426), (164, 31597), (165, 31603), (168, 31714), (170, 31741), (173, 31804), (174, 31810), (175, 31825), (178, 31867), (181, 31954), (182, 31981), (185, 32011), (186, 32029), (187, 32050), (188, 32059), (189, 32065), (190, 32071), (191, 32083), (192, 32188), (195, 32206), (198, 32239), (201, 32326), (203, 32356), (204, 32362), (208, 32422), (214, 32515), (215, 32530), (216, 32536), (217, 32572), (222, 32686),

Gene: OhShagHennessy_20 Start: 18962, Stop: 21643, Start Num: 14
Candidate Starts for OhShagHennessy_20:
(Start: 14 @18962 has 19 MA's), (Start: 16 @18968 has 4 MA's), (33, 19145), (37, 19175), (40, 19238), (49, 19313), (57, 19427), (58, 19433), (66, 19499), (73, 19562), (77, 19595), (78, 19598), (82, 19622), (84, 19646), (85, 19652), (86, 19658), (90, 19706), (95, 19727), (98, 19742), (102, 19763), (105, 19802), (107, 19814), (111, 19832), (119, 19907), (121, 19937), (122, 19961), (123, 19964), (126, 20009), (129, 20060), (132, 20078), (136, 20132), (139, 20204), (140, 20216), (142, 20225), (144, 20243), (145, 20267), (146, 20297), (147, 20333), (152, 20366), (153, 20372), (156, 20438), (161, 20504), (164, 20543), (167, 20624), (168, 20660), (169, 20666), (175, 20771), (176, 20780), (177, 20795), (178, 20813), (180, 20855), (184, 20951), (189, 21011), (190, 21017), (191, 21029), (194, 21140), (196, 21170), (197, 21176), (201, 21272), (202, 21278), (203, 21302), (204, 21308), (205, 21314), (207, 21359), (208, 21368), (209, 21377), (212, 21416), (213, 21452), (214, 21461), (215, 21476), (218, 21572), (220, 21623), (221, 21629),

Gene: Opia_32 Start: 29961, Stop: 32681, Start Num: 15
Candidate Starts for Opia_32:
(Start: 15 @29961 has 35 MA's), (19, 30015), (23, 30054), (28, 30099), (30, 30123), (31, 30126), (34, 30159), (43, 30267), (45, 30288), (46, 30291), (51, 30345), (55, 30405), (56, 30429), (61, 30465), (65, 30513), (68, 30534), (72, 30573), (75, 30612), (79, 30627), (86, 30681), (87, 30693), (89, 30717), (93, 30741), (96, 30753), (99, 30768), (101, 30783), (106, 30825), (108, 30843), (112, 30882), (114, 30906), (128, 31077), (135, 31155), (138, 31215), (140, 31251), (141, 31254), (146, 31332), (147, 31368), (150, 31392), (154, 31413), (164, 31584), (165, 31590), (168, 31701), (170, 31728), (173, 31791), (174, 31797), (175, 31812), (178, 31854), (181, 31941), (182, 31968), (185, 31998), (186, 32016), (187, 32037), (188, 32046), (189, 32052), (190, 32058), (191, 32070), (192, 32175), (195, 32193), (198, 32226), (201, 32313), (203, 32343), (204, 32349), (208, 32409), (214, 32502), (215, 32517), (217, 32559), (222, 32673),

Gene: PR_24 Start: 27208, Stop: 29922, Start Num: 16
Candidate Starts for PR_24:
(Start: 16 @27208 has 4 MA's), (21, 27277), (25, 27310), (27, 27331), (32, 27388), (36, 27418), (39, 27436), (45, 27529), (46, 27532), (51, 27586), (52, 27592), (56, 27670), (61, 27706), (63, 27727), (68, 27775), (72, 27814), (79, 27868), (86, 27922), (87, 27934), (89, 27958), (93, 27982), (94, 27985), (101, 28024), (106, 28066), (114, 28147), (117, 28162), (120, 28192), (127, 28285), (128, 28318), (133, 28375), (134, 28387), (135, 28396), (138, 28456), (140, 28492), (141, 28495), (146, 28573), (147, 28609), (151, 28639), (154, 28654), (159, 28762), (162, 28810), (163, 28816), (164, 28825), (165, 28831), (168, 28942), (170, 28969), (173, 29032), (174, 29038), (175, 29053), (178, 29095), (185, 29239), (186, 29257), (190, 29299), (191, 29311), (192, 29416), (195, 29434), (198, 29467), (201, 29554), (203, 29584), (204, 29590), (206, 29611), (208, 29650), (210, 29668), (214, 29743), (216, 29764), (217, 29800), (222, 29914),

Gene: Phantasmagoria_32 Start: 29972, Stop: 32692, Start Num: 15
Candidate Starts for Phantasmagoria_32:
(Start: 15 @29972 has 35 MA's), (19, 30026), (23, 30065), (28, 30110), (30, 30134), (31, 30137), (34, 30170), (43, 30278), (45, 30299), (46, 30302), (51, 30356), (55, 30416), (56, 30440), (61, 30476), (65, 30524), (68, 30545), (72, 30584), (75, 30623), (79, 30638), (86, 30692), (87, 30704), (89, 30728), (93, 30752), (96, 30764), (99, 30779), (101, 30794), (106, 30836), (108, 30854), (112, 30893), (114, 30917), (128, 31088), (135, 31166), (138, 31226), (140, 31262), (141, 31265), (146, 31343), (147, 31379), (150, 31403), (154, 31424), (164, 31595), (165, 31601), (168, 31712), (170, 31739), (173, 31802), (174, 31808), (175, 31823), (178, 31865), (181, 31952), (182, 31979), (185, 32009), (186, 32027), (187, 32048), (188, 32057), (189, 32063), (190, 32069), (191, 32081), (192, 32186), (195, 32204), (198, 32237), (201, 32324), (203, 32354), (204, 32360), (208, 32420), (214, 32513), (215, 32528), (217, 32570), (222, 32684),

Gene: Phrann_20 Start: 17560, Stop: 20412, Start Num: 4
Candidate Starts for Phrann_20:
(Start: 2 @17548 has 2 MA's), (Start: 4 @17560 has 2 MA's), (5, 17572), (11, 17683), (Start: 15 @17707 has 35 MA's), (Start: 16 @17710 has 4 MA's), (17, 17719), (29, 17857), (33, 17899), (34, 17902), (40, 17992), (42, 18004), (44, 18025), (47, 18049), (53, 18124), (59, 18196), (63, 18226), (66, 18262), (73, 18325), (74, 18340), (81, 18373), (89, 18448), (92, 18472), (94, 18478), (103, 18532), (104, 18538), (113, 18625), (116, 18646), (119, 18670), (124, 18736), (125, 18757), (127, 18775), (128, 18808), (131, 18835), (135, 18886), (137, 18922), (138, 18946), (140, 18982), (142, 18991), (143, 19006), (145, 19033), (146, 19063), (147, 19099), (150, 19123), (158, 19222), (160, 19261), (162, 19300), (165, 19321), (168, 19432), (170, 19459), (171, 19489), (172, 19510), (173, 19522), (174, 19528), (178, 19585), (179, 19624), (185, 19729), (186, 19747), (190, 19789), (191, 19801), (198, 19957), (201, 20044), (203, 20074), (204, 20080), (208, 20140), (210, 20158), (214, 20233), (216, 20254), (217, 20290), (222, 20404),

Gene: Pippy_18 Start: 17389, Stop: 20253, Start Num: 3
Candidate Starts for Pippy_18:
(1, 17377), (Start: 3 @17389 has 9 MA's), (5, 17410), (6, 17431), (8, 17470), (12, 17539), (Start: 15 @17548 has 35 MA's), (Start: 16 @17551 has 4 MA's), (20, 17602), (29, 17692), (34, 17737), (40, 17827), (41, 17836), (42, 17839), (44, 17860), (46, 17872), (50, 17905), (60, 18040), (64, 18088), (66, 18103), (70, 18124), (73, 18166), (74, 18181), (75, 18190), (81, 18217), (83, 18223), (87, 18268), (88, 18277), (89, 18292), (92, 18313), (94, 18319), (96, 18328), (100, 18355), (103, 18373), (113, 18466), (116, 18487), (119, 18511), (124, 18577), (125, 18598), (127, 18616), (128, 18649), (130, 18673), (131, 18676), (135, 18727), (137, 18763), (138, 18787), (140, 18823), (142, 18832), (143, 18847), (145, 18874), (146, 18904), (147, 18940), (150, 18964), (158, 19063), (160, 19102), (164, 19156), (168, 19273), (170, 19300), (173, 19363), (174, 19369), (175, 19384), (178, 19426), (181, 19513), (182, 19540), (185, 19570), (186, 19588), (188, 19618), (190, 19630), (191, 19642), (192, 19747), (195, 19765), (198, 19798), (201, 19885), (203, 19915), (204, 19921), (208, 19981), (209, 19990), (210, 19999), (214, 20074), (216, 20095), (217, 20131), (222, 20245),

Gene: Poochiewood_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Poochiewood_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: PrinceCharming_32 Start: 30078, Stop: 32798, Start Num: 15
Candidate Starts for PrinceCharming_32:
(Start: 15 @30078 has 35 MA's), (19, 30132), (23, 30171), (28, 30216), (30, 30240), (31, 30243), (34, 30276), (43, 30384), (45, 30405), (46, 30408), (51, 30462), (55, 30522), (56, 30546), (61, 30582), (65, 30630), (68, 30651), (72, 30690), (75, 30729), (79, 30744), (86, 30798), (87, 30810), (89, 30834), (93, 30858), (96, 30870), (99, 30885), (101, 30900), (106, 30942), (108, 30960), (112, 30999), (114, 31023), (128, 31194), (135, 31272), (138, 31332), (140, 31368), (141, 31371), (146, 31449), (147, 31485), (150, 31509), (158, 31608), (160, 31647), (164, 31701), (168, 31818), (170, 31845), (173, 31908), (174, 31914), (175, 31929), (178, 31971), (181, 32058), (182, 32085), (185, 32115), (186, 32133), (187, 32154), (188, 32163), (189, 32169), (190, 32175), (191, 32187), (192, 32292), (195,

32310), (198, 32343), (201, 32430), (203, 32460), (204, 32466), (208, 32526), (214, 32619), (215, 32634), (217, 32676), (222, 32790),

Gene: Qyrzula_30 Start: 30056, Stop: 32776, Start Num: 15
Candidate Starts for Qyrzula_30:
(Start: 15 @30056 has 35 MA's), (19, 30110), (23, 30149), (28, 30194), (30, 30218), (31, 30221), (34, 30254), (43, 30362), (45, 30383), (46, 30386), (51, 30440), (55, 30500), (56, 30524), (61, 30560), (62, 30578), (63, 30581), (65, 30608), (68, 30629), (72, 30668), (75, 30707), (79, 30722), (86, 30776), (87, 30788), (89, 30812), (93, 30836), (96, 30848), (99, 30863), (101, 30878), (106, 30920), (108, 30938), (112, 30977), (114, 31001), (128, 31172), (135, 31250), (138, 31310), (140, 31346), (141, 31349), (146, 31427), (147, 31463), (150, 31487), (158, 31586), (160, 31625), (164, 31679), (168, 31796), (170, 31823), (173, 31886), (174, 31892), (175, 31907), (178, 31949), (181, 32036), (182, 32063), (185, 32093), (186, 32111), (187, 32132), (188, 32141), (189, 32147), (190, 32153), (191, 32165), (192, 32270), (195, 32288), (198, 32321), (201, 32408), (203, 32438), (204, 32444), (208, 32504), (214, 32597), (217, 32654), (222, 32768),

Gene: Raymond7_20 Start: 17560, Stop: 20415, Start Num: 4
Candidate Starts for Raymond7_20:
(Start: 2 @17548 has 2 MA's), (Start: 4 @17560 has 2 MA's), (5, 17572), (11, 17683), (Start: 15 @17707 has 35 MA's), (Start: 16 @17710 has 4 MA's), (17, 17719), (40, 17992), (42, 18004), (44, 18025), (47, 18049), (53, 18124), (59, 18196), (63, 18226), (66, 18262), (73, 18325), (74, 18340), (81, 18373), (89, 18448), (92, 18472), (94, 18478), (97, 18490), (103, 18532), (104, 18538), (113, 18625), (116, 18646), (119, 18670), (124, 18736), (125, 18757), (127, 18775), (128, 18808), (130, 18832), (131, 18835), (135, 18886), (137, 18922), (138, 18946), (140, 18982), (147, 19099), (148, 19117), (149, 19120), (157, 19219), (164, 19318), (165, 19324), (168, 19435), (170, 19462), (173, 19525), (174, 19531), (175, 19546), (178, 19588), (179, 19627), (181, 19675), (182, 19702), (185, 19732), (186, 19750), (188, 19780), (189, 19786), (190, 19792), (191, 19804), (192, 19909), (195, 19927), (198, 19960), (199, 19975), (203, 20077), (204, 20083), (208, 20143), (209, 20152), (210, 20161), (211, 20188), (214, 20236), (215, 20251), (216, 20257), (217, 20293), (222, 20407),

Gene: Rhinoforte_32 Start: 30081, Stop: 32801, Start Num: 15
Candidate Starts for Rhinoforte_32:
(Start: 15 @30081 has 35 MA's), (19, 30135), (23, 30174), (28, 30219), (30, 30243), (31, 30246), (34, 30279), (43, 30387), (45, 30408), (46, 30411), (51, 30465), (55, 30525), (56, 30549), (61, 30585), (65, 30633), (68, 30654), (72, 30693), (75, 30732), (79, 30747), (86, 30801), (87, 30813), (89, 30837), (93, 30861), (96, 30873), (99, 30888), (101, 30903), (106, 30945), (108, 30963), (112, 31002), (114, 31026), (128, 31197), (135, 31275), (138, 31335), (140, 31371), (141, 31374), (146, 31452), (147, 31488), (150, 31512), (154, 31533), (164, 31704), (165, 31710), (168, 31821), (170, 31848), (173, 31911), (174, 31917), (175, 31932), (178, 31974), (181, 32061), (182, 32088), (185, 32118), (186, 32136), (187, 32157), (188, 32166), (189, 32172), (190, 32178), (191, 32190), (192, 32295), (195, 32313), (198, 32346), (201, 32433), (203, 32463), (204, 32469), (208, 32529), (214, 32622), (215, 32637), (217, 32679), (222, 32793),

Gene: Rose5_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Rose5_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190,

21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: Rosebush_32 Start: 30088, Stop: 32808, Start Num: 15
Candidate Starts for Rosebush_32:
(Start: 15 @30088 has 35 MA's), (19, 30142), (23, 30181), (28, 30226), (30, 30250), (31, 30253), (34, 30286), (43, 30394), (45, 30415), (46, 30418), (51, 30472), (55, 30532), (56, 30556), (61, 30592), (65, 30640), (68, 30661), (72, 30700), (75, 30739), (79, 30754), (86, 30808), (87, 30820), (89, 30844), (93, 30868), (96, 30880), (99, 30895), (101, 30910), (106, 30952), (108, 30970), (112, 31009), (114, 31033), (128, 31204), (135, 31282), (138, 31342), (140, 31378), (141, 31381), (146, 31459), (147, 31495), (150, 31519), (154, 31540), (164, 31711), (165, 31717), (168, 31828), (170, 31855), (173, 31918), (174, 31924), (175, 31939), (178, 31981), (181, 32068), (182, 32095), (185, 32125), (186, 32143), (187, 32164), (188, 32173), (189, 32179), (190, 32185), (191, 32197), (192, 32302), (195, 32320), (198, 32353), (201, 32440), (203, 32470), (204, 32476), (208, 32536), (214, 32629), (215, 32644), (217, 32686), (222, 32800),

Gene: Sabella_32 Start: 29965, Stop: 32685, Start Num: 15
Candidate Starts for Sabella_32:
(Start: 15 @29965 has 35 MA's), (19, 30019), (23, 30058), (28, 30103), (30, 30127), (31, 30130), (34, 30163), (43, 30271), (45, 30292), (46, 30295), (51, 30349), (55, 30409), (56, 30433), (61, 30469), (62, 30487), (63, 30490), (65, 30517), (68, 30538), (72, 30577), (79, 30631), (86, 30685), (87, 30697), (89, 30721), (93, 30745), (96, 30757), (99, 30772), (101, 30787), (106, 30829), (108, 30847), (112, 30886), (114, 30910), (128, 31081), (135, 31159), (138, 31219), (140, 31255), (141, 31258), (146, 31336), (147, 31372), (150, 31396), (154, 31417), (164, 31588), (165, 31594), (168, 31705), (170, 31732), (173, 31795), (174, 31801), (175, 31816), (178, 31858), (181, 31945), (182, 31972), (185, 32002), (186, 32020), (187, 32041), (188, 32050), (189, 32056), (190, 32062), (191, 32074), (192, 32179), (195, 32197), (198, 32230), (201, 32317), (203, 32347), (204, 32353), (208, 32413), (214, 32506), (215, 32521), (217, 32563), (222, 32677),

Gene: SamScheppers_26 Start: 21811, Stop: 24555, Start Num: 10
Candidate Starts for SamScheppers_26:
(Start: 10 @21811 has 3 MA's), (18, 21901), (21, 21922), (24, 21946), (26, 21952), (27, 21970), (34, 22036), (40, 22126), (41, 22135), (42, 22138), (44, 22159), (46, 22171), (50, 22204), (60, 22339), (64, 22387), (66, 22402), (70, 22423), (71, 22441), (73, 22465), (74, 22480), (75, 22489), (81, 22516), (83, 22522), (87, 22567), (89, 22591), (91, 22603), (92, 22612), (94, 22618), (96, 22627), (100, 22654), (103, 22672), (113, 22765), (114, 22777), (116, 22786), (124, 22876), (125, 22897), (127, 22915), (128, 22948), (131, 22975), (135, 23026), (137, 23062), (138, 23086), (140, 23122), (142, 23131), (143, 23146), (145, 23173), (146, 23203), (147, 23239), (148, 23257), (149, 23260), (151, 23269), (161, 23419), (164, 23458), (168, 23575), (170, 23602), (173, 23665), (174, 23671), (175, 23686), (178, 23728), (181, 23815), (182, 23842), (185, 23872), (186, 23890), (188, 23920), (190, 23932), (191, 23944), (193, 24052), (195, 24067), (198, 24100), (200, 24121), (201, 24187), (203, 24217), (204, 24223), (208, 24283), (210, 24301), (214, 24376), (216, 24397), (217, 24433), (222, 24547),

Gene: Sarma624_19 Start: 17226, Stop: 20090, Start Num: 3
Candidate Starts for Sarma624_19:
(Start: 3 @17226 has 9 MA's), (5, 17247), (6, 17268), (8, 17307), (12, 17376), (Start: 15 @17385 has 35 MA's), (Start: 16 @17388 has 4 MA's), (20, 17439), (29, 17529), (35, 17580), (40, 17664), (42, 17676), (44, 17697), (48, 17730), (60, 17877), (66, 17940), (71, 17979), (73, 18003), (74, 18018), (75, 18027), (81, 18054), (83, 18060), (89, 18129), (92, 18150), (94, 18156), (100, 18192), (103, 18210), (113, 18303), (116, 18324), (119, 18348), (124, 18414), (125, 18435), (127, 18453), (128, 18486), (131, 18513), (135, 18564), (137, 18600), (138, 18624), (140, 18660), (142, 18669), (143, 18684), (145, 18711), (146, 18741), (147, 18777), (150, 18801), (158, 18900), (160, 18939), (162, 18978),

(165, 18999), (168, 19110), (170, 19137), (171, 19167), (172, 19188), (173, 19200), (174, 19206), (178, 19263), (185, 19407), (186, 19425), (190, 19467), (191, 19479), (198, 19635), (201, 19722), (203, 19752), (204, 19758), (208, 19818), (210, 19836), (214, 19911), (216, 19932), (217, 19968), (222, 20082),

Gene: Sejanus_27 Start: 26927, Stop: 29680, Start Num: 13
Candidate Starts for Sejanus_27:
(7, 26834), (Start: 13 @26927 has 3 MA's), (22, 27005), (25, 27041), (28, 27068), (30, 27092), (38, 27161), (41, 27230), (44, 27254), (46, 27266), (65, 27500), (67, 27512), (69, 27527), (72, 27563), (76, 27605), (84, 27659), (89, 27707), (93, 27737), (94, 27740), (110, 27848), (114, 27902), (117, 27917), (118, 27932), (124, 28001), (125, 28022), (127, 28040), (128, 28073), (130, 28097), (131, 28100), (135, 28151), (137, 28187), (138, 28211), (140, 28247), (142, 28256), (143, 28271), (145, 28298), (146, 28328), (147, 28364), (148, 28382), (149, 28385), (151, 28394), (159, 28520), (162, 28568), (168, 28700), (170, 28727), (172, 28778), (173, 28790), (174, 28796), (178, 28853), (179, 28892), (181, 28940), (182, 28967), (185, 28997), (186, 29015), (188, 29045), (190, 29057), (191, 29069), (193, 29177), (195, 29192), (198, 29225), (200, 29246), (201, 29312), (203, 29342), (204, 29348), (208, 29408), (209, 29417), (210, 29426), (214, 29501), (215, 29516), (216, 29522), (217, 29558), (222, 29672),

Gene: Silverleaf_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Silverleaf_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (84, 19681), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (200, 21241), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: TA17A_33 Start: 29955, Stop: 32675, Start Num: 15
Candidate Starts for TA17A_33:
(Start: 15 @29955 has 35 MA's), (19, 30009), (23, 30048), (25, 30066), (28, 30093), (30, 30117), (31, 30120), (34, 30153), (43, 30261), (45, 30282), (46, 30285), (51, 30339), (55, 30399), (56, 30423), (61, 30459), (65, 30507), (68, 30528), (72, 30567), (79, 30621), (86, 30675), (87, 30687), (89, 30711), (93, 30735), (96, 30747), (99, 30762), (101, 30777), (106, 30819), (108, 30837), (112, 30876), (114, 30900), (128, 31071), (135, 31149), (138, 31209), (140, 31245), (141, 31248), (146, 31326), (147, 31362), (150, 31386), (158, 31485), (160, 31524), (164, 31578), (168, 31695), (170, 31722), (173, 31785), (174, 31791), (178, 31848), (181, 31935), (182, 31962), (185, 31992), (186, 32010), (187, 32031), (188, 32040), (189, 32046), (190, 32052), (191, 32064), (192, 32169), (195, 32187), (198, 32220), (201, 32307), (203, 32337), (204, 32343), (208, 32403), (214, 32496), (215, 32511), (217, 32553), (222, 32667),

Gene: Taquito_26 Start: 21892, Stop: 24636, Start Num: 10
Candidate Starts for Taquito_26:
(Start: 10 @21892 has 3 MA's), (18, 21982), (21, 22003), (24, 22027), (27, 22051), (34, 22117), (40, 22207), (41, 22216), (42, 22219), (44, 22240), (46, 22252), (50, 22285), (60, 22420), (64, 22468), (66, 22483), (70, 22504), (71, 22522), (73, 22546), (74, 22561), (75, 22570), (81, 22597), (83, 22603), (87, 22648), (89, 22672), (91, 22684), (92, 22693), (94, 22699), (96, 22708), (100, 22735), (103, 22753), (113, 22846), (114, 22858), (116, 22867), (124, 22957), (125, 22978), (127, 22996), (128, 23029),

(131, 23056), (135, 23107), (137, 23143), (138, 23167), (140, 23203), (142, 23212), (143, 23227),
(145, 23254), (146, 23284), (147, 23320), (148, 23338), (149, 23341), (151, 23350), (161, 23500),
(164, 23539), (168, 23656), (170, 23683), (173, 23746), (174, 23752), (175, 23767), (178, 23809),
(181, 23896), (182, 23923), (185, 23953), (186, 23971), (190, 24013), (191, 24025), (193, 24133),
(195, 24148), (198, 24181), (200, 24202), (201, 24268), (203, 24298), (204, 24304), (208, 24364),
(210, 24382), (214, 24457), (216, 24478), (217, 24514), (222, 24628),

Gene: Tinciduntsolum_33 Start: 30093, Stop: 32813, Start Num: 15
Candidate Starts for Tinciduntsolum_33:
(Start: 15 @30093 has 35 MA's), (19, 30147), (23, 30186), (28, 30231), (30, 30255), (31, 30258), (34,
30291), (43, 30399), (45, 30420), (46, 30423), (51, 30477), (55, 30537), (56, 30561), (61, 30597), (65,
30645), (68, 30666), (72, 30705), (75, 30744), (79, 30759), (86, 30813), (87, 30825), (89, 30849), (93,
30873), (96, 30885), (99, 30900), (101, 30915), (106, 30957), (108, 30975), (112, 31014), (114,
31038), (128, 31209), (135, 31287), (138, 31347), (140, 31383), (141, 31386), (146, 31464), (147,
31500), (150, 31524), (154, 31545), (164, 31716), (165, 31722), (168, 31833), (170, 31860), (173,
31923), (174, 31929), (175, 31944), (178, 31986), (181, 32073), (182, 32100), (185, 32130), (186,
32148), (187, 32169), (188, 32178), (189, 32184), (190, 32190), (191, 32202), (192, 32307), (195,
32325), (198, 32358), (201, 32445), (203, 32475), (204, 32481), (208, 32541), (214, 32634), (215,
32649), (217, 32691), (222, 32805),

Gene: Tres_32 Start: 29968, Stop: 32688, Start Num: 15
Candidate Starts for Tres_32:
(Start: 15 @29968 has 35 MA's), (19, 30022), (23, 30061), (28, 30106), (30, 30130), (31, 30133), (34,
30166), (43, 30274), (45, 30295), (46, 30298), (51, 30352), (55, 30412), (56, 30436), (61, 30472), (65,
30520), (68, 30541), (72, 30580), (75, 30619), (79, 30634), (86, 30688), (89, 30724), (93, 30748), (96,
30760), (99, 30775), (101, 30790), (106, 30832), (108, 30850), (112, 30889), (114, 30913), (128,
31084), (135, 31162), (138, 31222), (140, 31258), (141, 31261), (146, 31339), (147, 31375), (150,
31399), (154, 31420), (164, 31591), (165, 31597), (168, 31708), (170, 31735), (173, 31798), (174,
31804), (175, 31819), (178, 31861), (181, 31948), (182, 31975), (185, 32005), (186, 32023), (187,
32044), (188, 32053), (189, 32059), (190, 32065), (191, 32077), (192, 32182), (195, 32200), (198,
32233), (201, 32320), (203, 32350), (204, 32356), (208, 32416), (214, 32509), (215, 32524), (217,
32566), (222, 32680),

Gene: Tyson_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Tyson_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273),
(49, 19348), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657),
(84, 19681), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105,
19837), (107, 19849), (111, 19867), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126,
20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145,
20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163,
20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177,
20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191,
21064), (194, 21175), (196, 21205), (197, 21211), (200, 21241), (201, 21307), (202, 21313), (203,
21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213,
21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: UPIE_20 Start: 18995, Stop: 21676, Start Num: 14
Candidate Starts for UPIE_20:
(Start: 14 @18995 has 19 MA's), (Start: 16 @19001 has 4 MA's), (33, 19178), (37, 19208), (40, 19271),
(49, 19346), (54, 19400), (57, 19460), (58, 19466), (66, 19532), (73, 19595), (77, 19628), (78, 19631),
(82, 19655), (85, 19685), (86, 19691), (90, 19739), (95, 19760), (98, 19775), (102, 19796), (105,
19835), (107, 19847), (111, 19865), (115, 19922), (119, 19940), (121, 19970), (122, 19994), (123,

19997), (126, 20042), (129, 20093), (132, 20111), (136, 20165), (139, 20237), (140, 20249), (142, 20258), (145, 20300), (146, 20330), (147, 20366), (148, 20384), (152, 20399), (153, 20405), (155, 20438), (163, 20567), (164, 20576), (167, 20657), (168, 20693), (169, 20699), (175, 20804), (176, 20813), (177, 20828), (178, 20846), (180, 20888), (184, 20984), (185, 20990), (189, 21044), (190, 21050), (191, 21062), (194, 21173), (196, 21203), (197, 21209), (200, 21239), (201, 21305), (202, 21311), (203, 21335), (204, 21341), (205, 21347), (207, 21392), (208, 21401), (209, 21410), (212, 21449), (213, 21485), (214, 21494), (215, 21509), (218, 21605), (220, 21656), (221, 21662),

Gene: Velveteen_19 Start: 17226, Stop: 20090, Start Num: 3
Candidate Starts for Velveteen_19:
(Start: 3 @17226 has 9 MA's), (5, 17247), (6, 17268), (8, 17307), (12, 17376), (Start: 15 @17385 has 35 MA's), (Start: 16 @17388 has 4 MA's), (20, 17439), (29, 17529), (35, 17580), (40, 17664), (42, 17676), (44, 17697), (48, 17730), (60, 17877), (66, 17940), (71, 17979), (73, 18003), (74, 18018), (75, 18027), (81, 18054), (83, 18060), (89, 18129), (92, 18150), (94, 18156), (100, 18192), (103, 18210), (113, 18303), (116, 18324), (119, 18348), (124, 18414), (125, 18435), (127, 18453), (128, 18486), (131, 18513), (135, 18564), (137, 18600), (138, 18624), (140, 18660), (142, 18669), (143, 18684), (145, 18711), (146, 18741), (147, 18777), (150, 18801), (158, 18900), (160, 18939), (162, 18978), (165, 18999), (168, 19110), (170, 19137), (171, 19167), (172, 19188), (173, 19200), (174, 19206), (178, 19263), (185, 19407), (186, 19425), (190, 19467), (191, 19479), (198, 19635), (201, 19722), (203, 19752), (204, 19758), (208, 19818), (210, 19836), (214, 19911), (216, 19932), (217, 19968), (222, 20082),

Gene: Vic9_00032 Start: 30412, Stop: 33132, Start Num: 15
Candidate Starts for Vic9_00032:
(Start: 15 @30412 has 35 MA's), (19, 30466), (23, 30505), (25, 30523), (28, 30550), (30, 30574), (31, 30577), (34, 30610), (43, 30718), (45, 30739), (46, 30742), (51, 30796), (55, 30856), (56, 30880), (61, 30916), (65, 30964), (68, 30985), (72, 31024), (75, 31063), (79, 31078), (86, 31132), (87, 31144), (89, 31168), (93, 31192), (96, 31204), (99, 31219), (101, 31234), (106, 31276), (108, 31294), (112, 31333), (114, 31357), (128, 31528), (135, 31606), (138, 31666), (140, 31702), (141, 31705), (146, 31783), (147, 31819), (150, 31843), (158, 31942), (160, 31981), (164, 32035), (168, 32152), (170, 32179), (173, 32242), (174, 32248), (175, 32263), (178, 32305), (181, 32392), (185, 32449), (186, 32467), (190, 32509), (191, 32521), (192, 32626), (195, 32644), (196, 32662), (198, 32677), (201, 32764), (203, 32794), (204, 32800), (208, 32860), (214, 32953), (215, 32968), (217, 33010), (222, 33124),

Gene: Wamburgrxpress_20 Start: 19010, Stop: 21691, Start Num: 14
Candidate Starts for Wamburgrxpress_20:
(Start: 14 @19010 has 19 MA's), (Start: 16 @19016 has 4 MA's), (33, 19193), (37, 19223), (40, 19286), (49, 19361), (57, 19475), (58, 19481), (66, 19547), (73, 19610), (77, 19643), (78, 19646), (82, 19670), (84, 19694), (85, 19700), (86, 19706), (90, 19754), (95, 19775), (98, 19790), (102, 19811), (105, 19850), (107, 19862), (111, 19880), (119, 19955), (121, 19985), (122, 20009), (123, 20012), (126, 20057), (129, 20108), (132, 20126), (136, 20180), (139, 20252), (140, 20264), (142, 20273), (145, 20315), (146, 20345), (147, 20381), (148, 20399), (152, 20414), (153, 20420), (155, 20453), (163, 20582), (164, 20591), (167, 20672), (168, 20708), (169, 20714), (175, 20819), (176, 20828), (177, 20843), (178, 20861), (180, 20903), (184, 20999), (185, 21005), (189, 21059), (190, 21065), (191, 21077), (194, 21188), (196, 21218), (197, 21224), (200, 21254), (201, 21320), (202, 21326), (203, 21350), (204, 21356), (205, 21362), (207, 21407), (208, 21416), (209, 21425), (212, 21464), (213, 21500), (214, 21509), (215, 21524), (218, 21620), (220, 21671), (221, 21677),

Gene: West99_32 Start: 30088, Stop: 32808, Start Num: 15
Candidate Starts for West99_32:
(Start: 15 @30088 has 35 MA's), (19, 30142), (23, 30181), (28, 30226), (30, 30250), (31, 30253), (34, 30286), (43, 30394), (45, 30415), (46, 30418), (51, 30472), (55, 30532), (56, 30556), (61, 30592), (65, 30640), (68, 30661), (72, 30700), (75, 30739), (79, 30754), (86, 30808), (87, 30820), (89, 30844), (93,

30868), (96, 30880), (99, 30895), (101, 30910), (106, 30952), (108, 30970), (112, 31009), (114, 31033), (128, 31204), (135, 31282), (138, 31342), (140, 31378), (141, 31381), (146, 31459), (147, 31495), (150, 31519), (154, 31540), (164, 31711), (165, 31717), (168, 31828), (170, 31855), (173, 31918), (174, 31924), (175, 31939), (178, 31981), (181, 32068), (182, 32095), (185, 32125), (186, 32143), (187, 32164), (188, 32173), (189, 32179), (190, 32185), (191, 32197), (192, 32302), (195, 32320), (198, 32353), (201, 32440), (203, 32470), (204, 32476), (208, 32536), (214, 32629), (215, 32644), (217, 32686), (222, 32800),

Gene: Wyatt2_20 Start: 18997, Stop: 21678, Start Num: 14
Candidate Starts for Wyatt2_20:
(Start: 14 @18997 has 19 MA's), (Start: 16 @19003 has 4 MA's), (33, 19180), (37, 19210), (40, 19273), (49, 19348), (54, 19402), (57, 19462), (58, 19468), (66, 19534), (73, 19597), (77, 19630), (78, 19633), (82, 19657), (85, 19687), (86, 19693), (90, 19741), (95, 19762), (98, 19777), (102, 19798), (105, 19837), (107, 19849), (111, 19867), (115, 19924), (119, 19942), (121, 19972), (122, 19996), (123, 19999), (126, 20044), (129, 20095), (132, 20113), (136, 20167), (139, 20239), (140, 20251), (142, 20260), (145, 20302), (146, 20332), (147, 20368), (148, 20386), (152, 20401), (153, 20407), (155, 20440), (163, 20569), (164, 20578), (167, 20659), (168, 20695), (169, 20701), (175, 20806), (176, 20815), (177, 20830), (178, 20848), (180, 20890), (184, 20986), (185, 20992), (189, 21046), (190, 21052), (191, 21064), (194, 21175), (196, 21205), (197, 21211), (201, 21307), (202, 21313), (203, 21337), (204, 21343), (205, 21349), (207, 21394), (208, 21403), (209, 21412), (212, 21451), (213, 21487), (214, 21496), (215, 21511), (218, 21607), (220, 21658), (221, 21664),

Gene: Xavia_21 Start: 19042, Stop: 21888, Start Num: 2
Candidate Starts for Xavia_21:
(Start: 2 @19042 has 2 MA's), (Start: 16 @19195 has 4 MA's), (40, 19468), (42, 19480), (44, 19501), (47, 19525), (53, 19600), (59, 19672), (63, 19702), (66, 19738), (73, 19801), (74, 19816), (81, 19849), (89, 19924), (92, 19948), (94, 19954), (97, 19966), (103, 20008), (104, 20014), (113, 20101), (116, 20122), (119, 20146), (124, 20212), (125, 20233), (127, 20251), (128, 20284), (130, 20308), (131, 20311), (133, 20341), (135, 20362), (138, 20422), (140, 20458), (141, 20461), (142, 20467), (146, 20539), (147, 20575), (148, 20593), (149, 20596), (151, 20605), (154, 20620), (159, 20728), (164, 20791), (166, 20866), (168, 20908), (170, 20935), (173, 20998), (174, 21004), (175, 21019), (178, 21061), (179, 21100), (181, 21148), (182, 21175), (183, 21178), (185, 21205), (186, 21223), (188, 21253), (190, 21265), (191, 21277), (192, 21382), (195, 21400), (198, 21433), (201, 21520), (203, 21550), (204, 21556), (208, 21616), (209, 21625), (210, 21634), (211, 21661), (214, 21709), (215, 21724), (216, 21730), (217, 21766), (222, 21880),

Gene: Zaria_20 Start: 19011, Stop: 21692, Start Num: 14
Candidate Starts for Zaria_20:
(Start: 14 @19011 has 19 MA's), (Start: 16 @19017 has 4 MA's), (33, 19194), (37, 19224), (40, 19287), (49, 19362), (54, 19416), (57, 19476), (58, 19482), (66, 19548), (73, 19611), (77, 19644), (78, 19647), (82, 19671), (84, 19695), (85, 19701), (86, 19707), (90, 19755), (95, 19776), (98, 19791), (102, 19812), (105, 19851), (107, 19863), (111, 19881), (119, 19956), (121, 19986), (122, 20010), (123, 20013), (126, 20058), (129, 20109), (132, 20127), (136, 20181), (139, 20253), (140, 20265), (142, 20274), (145, 20316), (146, 20346), (147, 20382), (148, 20400), (152, 20415), (153, 20421), (155, 20454), (163, 20583), (164, 20592), (167, 20673), (168, 20709), (169, 20715), (175, 20820), (176, 20829), (177, 20844), (178, 20862), (180, 20904), (184, 21000), (185, 21006), (189, 21060), (190, 21066), (191, 21078), (194, 21189), (196, 21219), (197, 21225), (201, 21321), (202, 21327), (203, 21351), (204, 21357), (205, 21363), (207, 21408), (208, 21417), (209, 21426), (212, 21465), (213, 21501), (214, 21510), (215, 21525), (218, 21621), (220, 21672), (221, 21678),