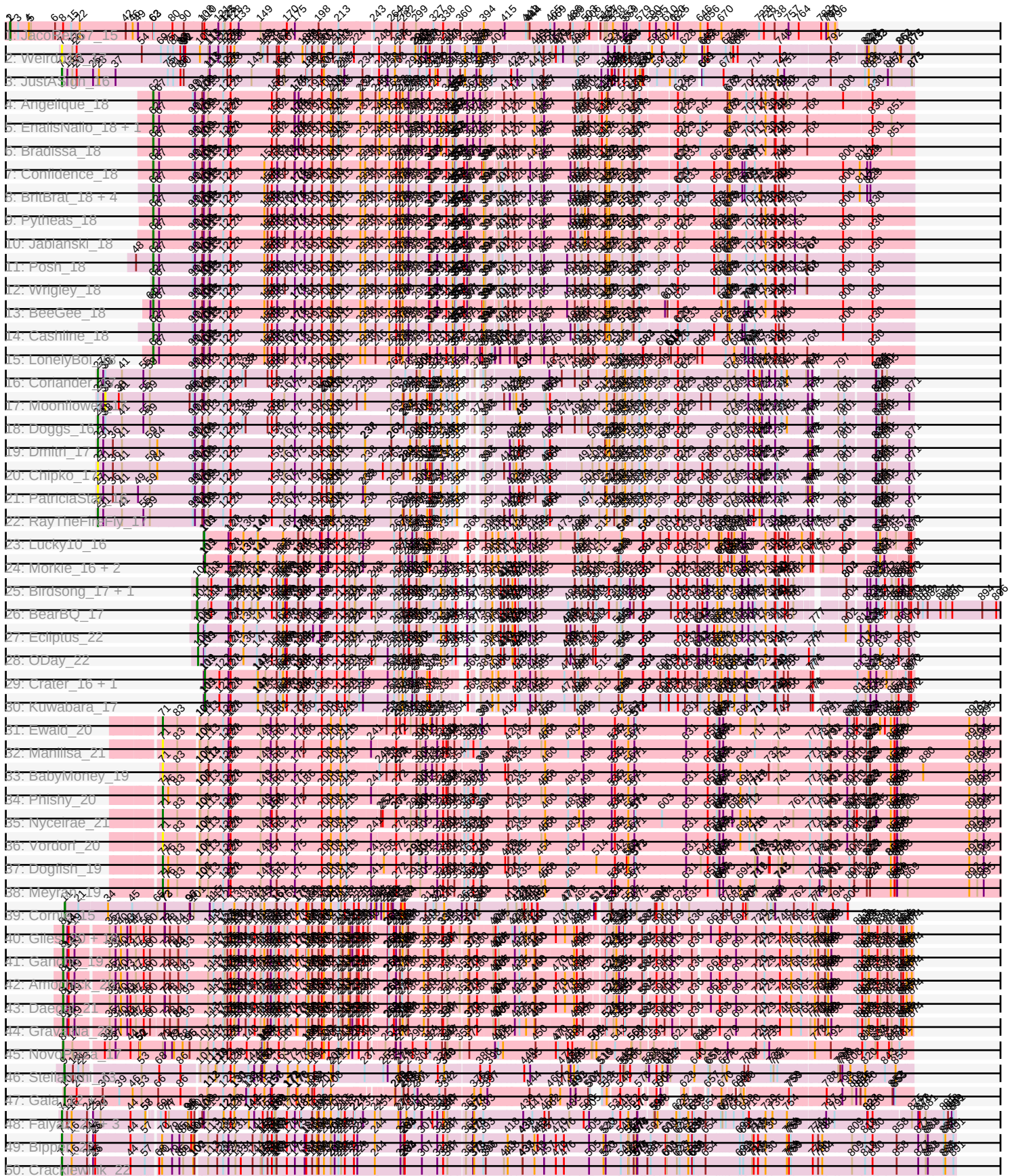


Zoomed Pham 330752



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 330752 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330752 has 81 members, 8 are drafts.

Phages represented in each track:

- Track 1 : JacoRen57_15
- Track 2 : Weirido19_17
- Track 3 : JustASigh_16
- Track 4 : Angelique_18
- Track 5 : EnalisNailo_18, Lilas_18
- Track 6 : Bradissa_18
- Track 7 : Confidence_18
- Track 8 : BritBrat_18, Floral_18, EMsquaredA_18, Marteenaa_18, Pollux_18
- Track 9 : Pytheas_18
- Track 10 : Jablanski_18
- Track 11 : Posh_18
- Track 12 : Wrigley_18
- Track 13 : BeeGee_18
- Track 14 : Cashline_18
- Track 15 : LonelyBoi_18
- Track 16 : Coriander_17
- Track 17 : Moonflower_17
- Track 18 : Doggs_16
- Track 19 : Dmitri_17
- Track 20 : Chipko_17
- Track 21 : PatriciaStar_16
- Track 22 : RayTheFireFly_17
- Track 23 : Lucky10_16
- Track 24 : Morkie_16, PhorbesPhlower_16, InLimbo_17
- Track 25 : Birdsong_17, MortyNRick_17
- Track 26 : BearBQ_17
- Track 27 : Ecliptus_22
- Track 28 : ODay_22
- Track 29 : Crater_16, Apricot_17
- Track 30 : Kuwabara_17
- Track 31 : Ewald_20
- Track 32 : Manilisa_21
- Track 33 : BabyMoney_19
- Track 34 : Phishy_20
- Track 35 : Nyceirae_21
- Track 36 : Vordorf_20
- Track 37 : Dogfish_19

- Track 38 : Meyran_19
- Track 39 : Cornie_15
- Track 40 : Giles_20, Dewey_20, Wishmaker_20, OBUpide_20, Forge_20, LilHazelNut_20, Hail_20, Luke_20, Kinbote_20, Ein37_20, BloominB_20, HH92_20, Luna22_20, Hadrien_20, Evanescence_20, Webster2_20, Ubuntu_20, Amymech_20, DeepSoil15_20
- Track 41 : Gancho_19
- Track 42 : Amochick_20
- Track 43 : Daegal_21
- Track 44 : Gravaillia_20
- Track 45 : NovoPizza_17
- Track 46 : Stellammi_13
- Track 47 : Gaia_12, Nebkiss_13
- Track 48 : Faiyaz_22, AuntGwenStacy_22, Typha_22, Hilltopfarm_22
- Track 49 : Bipper_22
- Track 50 : Cracklewink_22

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

The start number called the most often in the published annotations is 8, it was called in 24 of the 73 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amochick_20, Amymech_20, BloominB_20, Daegal_21, DeepSoil15_20, Dewey_20, Ein37_20, Evanescence_20, Forge_20, Gancho_19, Giles_20, Gravaillia_20, HH92_20, Hadrien_20, Hail_20, Kinbote_20, LilHazelNut_20, Luke_20, Luna22_20, NovoPizza_17, OBUpide_20, Ubuntu_20, Webster2_20, Wishmaker_20,

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

- JacoRen57_15,

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

- Angelique_18, Apricot_17, AuntGwenStacy_22, BabyMoney_19, BearBQ_17, BeeGee_18, Bipper_22, Birdsong_17, Bradissa_18, BritBrat_18, Cashline_18, Chipko_17, Confidence_18, Coriander_17, Cornie_15, Cracklewink_22, Crater_16, Dmitri_17, Dogfish_19, Doggs_16, EMSquaredA_18, Ecliptus_22, EnalisNailo_18, Ewald_20, Faiyaz_22, Floral_18, Gaia_12, Hilltopfarm_22, InLimbo_17, Jablanski_18, JustASigh_16, Kuwabara_17, Lilas_18, LonelyBoi_18, Lucky10_16, Manilisa_21, Marteenaa_18, Meyran_19, Moonflower_17, Morkie_16, MortyNRick_17, Nebkiss_13, Nyceirae_21, ODay_22, PatriciaStar_16, Phishy_20, PhorbesPhlower_16, Pollux_18, Posh_18, Pytheas_18, RayTheFireFly_17, Stellammi_13, Typha_22, Vordorf_20, Weirdo19_17, Wrigley_18,

Summary by start number:

Start 1:

- Found in 1 of 81 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JacoRen57_15 (AB),

Start 7:

- Found in 8 of 81 (9.9%) of genes in pham
- Manual Annotations of this start: 7 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy_22 (Y), Bipper_22 (Y), Cracklewink_22 (Y), Faiyaz_22 (Y), Hilltopfarm_22 (Y), JustASigh_16 (AH), Typha_22 (Y), Weirido19_17 (AH),

Start 8:

- Found in 25 of 81 (30.9%) of genes in pham
- Manual Annotations of this start: 24 of 73
- Called 96.0% of time when present
- Phage (with cluster) where this start called: Amochick_20 (Q), Amymech_20 (Q), BloominB_20 (Q), Daegal_21 (Q), DeepSoil15_20 (Q), Dewey_20 (Q), Ein37_20 (Q), Evanesce_20 (Q), Forge_20 (Q), Gancho_19 (Q), Giles_20 (Q), Gravallia_20 (Q), HH92_20 (Q), Hadrien_20 (Q), Hail_20 (Q), Kinbote_20 (Q), LilHazelNut_20 (Q), Luke_20 (Q), Luna22_20 (Q), NovoPizza_17 (Q), OBUpide_20 (Q), Ubuntu_20 (Q), Webster2_20 (Q), Wishmaker_20 (Q),

Start 9:

- Found in 1 of 81 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stellammi_13 (UNK),

Start 10:

- Found in 2 of 81 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_12 (X), Nebkiss_13 (X),

Start 11:

- Found in 1 of 81 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie_15 (F5),

Start 27:

- Found in 7 of 81 (8.6%) of genes in pham
- Manual Annotations of this start: 4 of 73
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Chipko_17 (DB), Coriander_17 (DB), Dmitri_17 (DB), Doggs_16 (DB), PatriciaStar_16 (DB), RayTheFireFly_17 (DB),

Start 33:

- Found in 3 of 81 (3.7%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Moonflower_17 (DB),

Start 62:

- Found in 18 of 81 (22.2%) of genes in pham

- Manual Annotations of this start: 17 of 73
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Angelique_18 (CY1), BeeGee_18 (CY5), Bradissa_18 (CY1), BritBrat_18 (CY2), Cashline_18 (CY6), Confidence_18 (CY1), EMSquaredA_18 (CY1), EnalisNailo_18 (CY1), Floral_18 (CY1), Jablanski_18 (CY3), Lilas_18 (CY1), LonelyBoi_18 (CY7), Marteenaa_18 (CY1), Pollux_18 (CY1), Posh_18 (CY4), Pytheas_18 (CY3), Wrigley_18 (CY4),

Start 71:

- Found in 9 of 81 (11.1%) of genes in pham
- Manual Annotations of this start: 5 of 73
- Called 88.9% of time when present
- Phage (with cluster) where this start called: BabyMoney_19 (DT), Dogfish_19 (DT), Ewald_20 (DT), Manilisa_21 (DT), Meyran_19 (DT), Nyceirae_21 (DT), Phishy_20 (DT), Vordorf_20 (DT),

Start 104:

- Found in 3 of 81 (3.7%) of genes in pham
- Manual Annotations of this start: 3 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BearBQ_17 (DN), Birdsong_17 (DN), MortyNRick_17 (DN),

Start 105:

- Found in 2 of 81 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 73
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ecliptus_22 (DN), ODay_22 (DN),

Start 109:

- Found in 35 of 81 (43.2%) of genes in pham
- Manual Annotations of this start: 1 of 73
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Lucky10_16 (DH),

Start 111:

- Found in 9 of 81 (11.1%) of genes in pham
- Manual Annotations of this start: 5 of 73
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Apricot_17 (DN3), Crater_16 (DN3), InLimbo_17 (DH), Kuwabara_17 (DN4), Morkie_16 (DH), PhorbesPhlower_16 (DH),

Summary by clusters:

There are 20 clusters represented in this pham: DN, CY3, CY1, AB, CY7, F5, CY5, CY2, AH, CY4, DB, DH, Q, DN4, DN3, Y, X, DT, UNK, CY6,

Info for manual annotations of cluster AB:

- Start number 1 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster AH:

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

Info for manual annotations of cluster CY1:

- Start number 62 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 62 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:

- Start number 62 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 62 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 62 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 62 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 62 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster DB:

- Start number 27 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DH:

- Start number 109 was manually annotated 1 time for cluster DH.
- Start number 111 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 104 was manually annotated 3 times for cluster DN.
- Start number 105 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN3:

- Start number 111 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 111 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DT:

- Start number 71 was manually annotated 5 times for cluster DT.

Info for manual annotations of cluster F5:

- Start number 11 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster Q:

- Start number 8 was manually annotated 24 times for cluster Q.

Info for manual annotations of cluster UNK:

- Start number 9 was manually annotated 1 time for cluster UNK.

Info for manual annotations of cluster X:

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

Info for manual annotations of cluster Y:

- Start number 7 was manually annotated 6 times for cluster Y.

Gene Information:

Gene: Amochick_20 Start: 12219, Stop: 16304, Start Num: 8

Candidate Starts for Amochick_20:

(Start: 8 @12219 has 24 MA's), (13, 12243), (14, 12249), (19, 12282), (35, 12435), (37, 12465), (40, 12495), (43, 12525), (47, 12564), (56, 12606), (60, 12639), (72, 12708), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (228, 13773), (230, 13782), (233, 13797), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (271, 13947), (276, 13965), (279, 13977), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (347, 14214), (359, 14280), (370, 14313), (372, 14319), (380, 14352), (401, 14427), (404, 14439), (405, 14454), (407, 14457), (427, 14532), (435, 14553), (448, 14625), (450, 14628), (470, 14721), (478, 14754), (490, 14793), (494, 14805), (498, 14826), (524, 14895), (525, 14898), (539, 14934), (544, 14946), (547, 14961), (554, 14985), (555, 14988), (582, 15066), (585, 15075), (596, 15123), (606, 15156), (619, 15183), (636, 15264), (661, 15327), (668, 15369), (691, 15444), (720, 15543), (729, 15585), (746, 15663), (760, 15726), (765, 15768), (778, 15828), (780, 15846), (786, 15876), (789, 15885), (790, 15891), (793, 15906), (813, 16026), (818, 16044), (819, 16059), (821, 16062), (826, 16080), (836, 16128), (839, 16143), (846, 16176), (851, 16194), (861, 16233), (864, 16242), (866, 16254), (868, 16272), (874, 16296),

Gene: Amymech_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Amymech_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Angelique_18 Start: 11177, Stop: 16801, Start Num: 62

Candidate Starts for Angelique_18:

(Start: 62 @11177 has 17 MA's), (67, 11210), (99, 11390), (103, 11402), (108, 11441), (Start: 109 @11450 has 1 MA's), (113, 11474), (123, 11558), (128, 11600), (158, 11831), (162, 11858), (174, 11954), (175, 11957), (181, 11978), (192, 12050), (200, 12104), (208, 12155), (210, 12167), (213, 12194), (215, 12209), (232, 12314), (234, 12326), (246, 12398), (250, 12419), (262, 12473), (272, 12512), (276, 12533), (280, 12548), (289, 12581), (293, 12593), (299, 12623), (307, 12656), (320, 12698), (344, 12791), (351, 12824), (352, 12827), (353, 12833), (355, 12842), (357, 12845), (367, 12908), (373, 12941), (385, 12980), (395, 13010), (414, 13094), (426, 13151), (448, 13259), (455, 13298), (457, 13310), (492, 13472), (495, 13490), (497, 13505), (504, 13532), (515, 13583), (518, 13598), (526, 13625), (528, 13631), (551, 13709), (569, 13763), (570, 13772), (579, 13802), (626, 13976), (629, 14006), (678, 14237), (682, 14249), (705, 14339), (717, 14387), (726, 14423), (730, 14447), (738, 14498), (740, 14504), (750, 14549), (755, 14570), (768, 14681), (800, 14873), (830, 15008), (923, 15248), (929, 15314), (932, 15335), (934, 15344), (936, 15371), (943, 15449), (944, 15473), (950, 15614), (957, 15749), (960, 15776), (963, 15842), (964, 15896), (969, 15998), (976, 16097), (989, 16232), (999, 16421), (1008, 16547), (1011, 16577), (1014, 16613), (1015, 16616), (1024, 16691),

Gene: Apricot_17 Start: 9635, Stop: 15046, Start Num: 111

Candidate Starts for Apricot_17:

(Start: 109 @9629 has 1 MA's), (Start: 111 @9635 has 5 MA's), (122, 9713), (127, 9755), (128, 9767), (147, 9908), (148, 9914), (155, 9950), (162, 10010), (165, 10028), (166, 10046), (170, 10067), (177, 10118), (179, 10121), (180, 10124), (185, 10148), (186, 10151), (195, 10217), (200, 10247), (212, 10325), (218, 10370), (221, 10394), (231, 10448), (235, 10469), (259, 10607), (267, 10643), (275, 10670), (280, 10691), (285, 10706), (295, 10745), (297, 10757), (300, 10769), (316, 10829), (320, 10841), (335, 10892), (368, 10967), (389, 10988), (400, 11036), (406, 11054), (428, 11123), (435, 11147), (445, 11204), (450, 11234), (455, 11267), (477, 11384), (492, 11441), (495, 11459), (497, 11474), (515, 11552), (546, 11657), (549, 11669), (550, 11675), (583, 11789), (584, 11792), (600, 11876), (609, 11906), (614, 11918), (626, 11969), (630, 12002), (642, 12071), (645, 12086), (658, 12128), (665, 12182), (670, 12197), (680, 12236), (681, 12242), (688, 12266), (703, 12326), (705, 12332), (706, 12335), (723, 12404), (738, 12491), (740, 12497), (741, 12506), (750, 12542), (756, 12566), (774, 12677), (776, 12689), (813, 12896), (826, 12959), (829, 12968), (835, 13001), (844, 13058), (851, 13085), (867, 13151), (870, 13169), (872, 13181), (923, 13208), (926, 13238), (929, 13274), (932, 13295), (935, 13307), (936, 13331), (943, 13409), (944, 13433), (945, 13448), (949, 13538), (953, 13658), (954, 13673), (956, 13694), (957, 13703), (962, 13790), (966, 14033), (971, 14123), (974, 14273), (977, 14297), (978, 14306), (979, 14333), (983, 14381), (984, 14399), (986, 14417), (988, 14441), (992, 14501), (996, 14624), (1000, 14675), (1004, 14702), (1009, 14801), (1010, 14813), (1019, 14909), (1023, 14927), (1025, 14939), (1031, 15029),

Gene: AuntGwenStacy_22 Start: 14030, Stop: 18613, Start Num: 7

Candidate Starts for AuntGwenStacy_22:

(Start: 7 @14030 has 7 MA's), (12, 14057), (16, 14081), (24, 14165), (25, 14177), (29, 14219), (44, 14378), (57, 14438), (58, 14441), (69, 14471), (74, 14495), (77, 14513), (94, 14612), (95, 14618), (98, 14630), (102, 14648), (108, 14669), (Start: 109 @14678 has 1 MA's), (113, 14702), (123, 14786), (124, 14789), (128, 14828), (130, 14849), (141, 14927), (142, 14930), (145, 14960), (152, 15008), (156, 15035), (158, 15059), (159, 15071), (160, 15077), (161, 15080), (170, 15140), (175, 15185), (182, 15215), (183, 15218), (192, 15281), (196, 15308), (198, 15317), (202, 15347), (208, 15386), (213, 15425), (215, 15440), (218, 15461), (224, 15512), (225, 15515), (235, 15560), (244, 15623), (251, 15650), (274, 15752), (277, 15764), (286, 15797), (297, 15842), (306, 15881), (307, 15884), (326, 15941), (331, 15968), (338, 16001), (340, 16007), (347, 16022), (365, 16106), (373, 16139), (376, 16145), (393, 16193), (439, 16394), (447, 16436), (458, 16490), (462, 16505), (485, 16610), (500, 16682), (505, 16712), (537, 16838), (548, 16880), (562, 16925), (576, 16973), (577, 16976), (593, 17045), (594, 17051), (598, 17066), (622, 17159), (627, 17177), (634, 17225), (638, 17249), (639, 17255), (654, 17321), (669, 17405), (671, 17414), (675, 17432), (687, 17477), (699, 17525), (710, 17552), (730, 17639), (736, 17669), (754, 17747), (787, 17948), (795, 17987), (823, 18155), (824,

18158), (830, 18185), (875, 18374), (877, 18407), (878, 18416), (881, 18449), (885, 18545), (888, 18569), (889, 18590), (891, 18599),

Gene: BabyMoney_19 Start: 11680, Stop: 17151, Start Num: 71

Candidate Starts for BabyMoney_19:

(Start: 71 @11680 has 5 MA's), (83, 11758), (106, 11860), (107, 11863), (113, 11905), (114, 11908), (123, 11989), (127, 12019), (128, 12031), (149, 12199), (157, 12256), (162, 12289), (175, 12388), (200, 12535), (208, 12586), (214, 12637), (219, 12670), (249, 12832), (258, 12868), (269, 12916), (272, 12922), (276, 12943), (300, 13033), (305, 13054), (313, 13084), (325, 13111), (330, 13132), (338, 13165), (354, 13216), (387, 13342), (391, 13351), (416, 13471), (420, 13486), (435, 13549), (460, 13693), (499, 13897), (535, 14053), (542, 14071), (562, 14143), (571, 14176), (631, 14449), (656, 14560), (663, 14611), (665, 14620), (667, 14626), (673, 14647), (694, 14743), (732, 14893), (743, 14935), (771, 15085), (783, 15151), (791, 15190), (792, 15199), (805, 15286), (810, 15325), (822, 15394), (825, 15400), (827, 15409), (828, 15412), (850, 15523), (854, 15544), (858, 15556), (859, 15559), (863, 15577), (880, 15700), (892, 15958), (893, 16003), (895, 16039), (898, 16171), (902, 16354), (903, 16387), (904, 16390), (908, 16471), (912, 16495), (916, 16579), (917, 16585), (920, 16660), (921, 16678), (922, 16756), (924, 16777), (927, 16801), (933, 16864), (937, 16900), (939, 16909), (940, 16915), (942, 16966),

Gene: BearBQ_17 Start: 9908, Stop: 16477, Start Num: 104

Candidate Starts for BearBQ_17:

(Start: 104 @9908 has 3 MA's), (113, 9965), (116, 9983), (127, 10067), (128, 10079), (129, 10091), (132, 10115), (136, 10145), (143, 10190), (147, 10220), (148, 10226), (158, 10295), (162, 10322), (165, 10340), (166, 10358), (169, 10370), (170, 10379), (177, 10430), (179, 10433), (180, 10436), (185, 10460), (186, 10463), (199, 10550), (200, 10559), (212, 10637), (218, 10682), (221, 10706), (226, 10739), (227, 10742), (242, 10829), (245, 10850), (267, 10955), (275, 10982), (282, 11009), (289, 11036), (290, 11039), (300, 11081), (304, 11099), (305, 11102), (327, 11174), (334, 11216), (341, 11237), (351, 11264), (356, 11273), (367, 11288), (375, 11306), (395, 11339), (400, 11372), (410, 11405), (411, 11414), (414, 11423), (420, 11444), (424, 11468), (428, 11483), (434, 11504), (435, 11507), (445, 11564), (450, 11594), (455, 11627), (483, 11765), (492, 11801), (497, 11834), (504, 11861), (510, 11888), (513, 11906), (530, 11966), (545, 12008), (549, 12029), (565, 12080), (570, 12101), (583, 12149), (584, 12152), (618, 12290), (626, 12329), (632, 12371), (642, 12431), (650, 12458), (655, 12479), (664, 12536), (670, 12557), (688, 12629), (696, 12671), (697, 12674), (709, 12707), (715, 12731), (717, 12743), (730, 12803), (738, 12854), (740, 12860), (741, 12869), (752, 12911), (756, 12929), (761, 12959), (804, 13157), (823, 13238), (829, 13256), (835, 13289), (837, 13301), (842, 13337), (851, 13373), (857, 13397), (860, 13400), (865, 13421), (870, 13457), (872, 13469), (876, 13508), (879, 13535), (882, 13562), (884, 13634), (887, 13664), (890, 13700), (894, 13868), (896, 13946), (897, 13997), (901, 14150), (906, 14285), (907, 14294), (909, 14315), (910, 14318), (911, 14327), (913, 14345), (914, 14375), (915, 14408), (923, 14612), (925, 14630), (926, 14642), (929, 14678), (932, 14699), (941, 14789), (943, 14813), (944, 14837), (949, 14945), (952, 15068), (954, 15092), (956, 15113), (957, 15122), (958, 15125), (961, 15152), (962, 15212), (966, 15455), (969, 15536), (970, 15539), (971, 15545), (974, 15704), (977, 15728), (978, 15737), (980, 15782), (981, 15794), (984, 15827), (986, 15845), (992, 15938), (995, 16043), (997, 16064), (1001, 16118), (1005, 16157), (1008, 16229), (1011, 16259), (1015, 16298), (1018, 16331), (1023, 16370), (1026, 16418), (1030, 16451), (1032, 16463),

Gene: BeeGee_18 Start: 10997, Stop: 16621, Start Num: 62

Candidate Starts for BeeGee_18:

(61, 10982), (Start: 62 @10997 has 17 MA's), (67, 11030), (99, 11210), (103, 11222), (108, 11261), (Start: 109 @11270 has 1 MA's), (113, 11294), (115, 11303), (123, 11378), (128, 11420), (154, 11609), (156, 11627), (158, 11651), (163, 11681), (174, 11774), (175, 11777), (187, 11828), (192, 11870), (200, 11924), (208, 11975), (210, 11987), (215, 12029), (232, 12134), (238, 12161), (246, 12218), (262, 12293), (272, 12332), (276, 12353), (280, 12368), (299, 12443), (319, 12515), (320, 12518),

(323, 12527), (331, 12560), (344, 12611), (351, 12644), (352, 12647), (353, 12653), (355, 12662), (357, 12665), (362, 12710), (367, 12728), (371, 12737), (392, 12812), (393, 12818), (394, 12821), (395, 12830), (407, 12884), (411, 12905), (420, 12935), (426, 12971), (445, 13055), (455, 13118), (481, 13250), (492, 13292), (497, 13325), (504, 13352), (515, 13403), (522, 13436), (526, 13445), (532, 13460), (551, 13529), (569, 13583), (570, 13592), (579, 13622), (607, 13742), (612, 13754), (626, 13796), (670, 14024), (675, 14048), (678, 14057), (682, 14069), (703, 14153), (705, 14159), (709, 14171), (717, 14207), (730, 14267), (738, 14318), (740, 14324), (750, 14369), (800, 14693), (830, 14828), (923, 15068), (929, 15134), (932, 15155), (934, 15164), (936, 15191), (943, 15269), (944, 15293), (948, 15386), (949, 15410), (950, 15434), (954, 15539), (957, 15569), (963, 15662), (964, 15716), (969, 15818), (976, 15917), (999, 16241), (1008, 16367), (1011, 16397), (1014, 16433), (1015, 16436), (1024, 16511), (1032, 16607),

Gene: Bipper_22 Start: 14060, Stop: 18745, Start Num: 7

Candidate Starts for Bipper_22:

(Start: 7 @14060 has 7 MA's), (16, 14111), (24, 14195), (25, 14207), (26, 14219), (44, 14408), (57, 14468), (70, 14522), (79, 14576), (85, 14615), (89, 14633), (98, 14678), (100, 14690), (102, 14696), (113, 14750), (120, 14801), (123, 14834), (127, 14864), (131, 14903), (144, 14999), (149, 15044), (152, 15056), (153, 15059), (156, 15083), (158, 15107), (159, 15119), (161, 15128), (162, 15134), (170, 15188), (175, 15233), (187, 15284), (188, 15293), (192, 15326), (196, 15353), (198, 15362), (202, 15392), (208, 15431), (209, 15434), (211, 15452), (213, 15470), (215, 15485), (218, 15506), (224, 15557), (229, 15575), (244, 15671), (277, 15812), (281, 15827), (283, 15833), (284, 15836), (307, 15932), (331, 16016), (338, 16049), (347, 16070), (365, 16154), (373, 16187), (376, 16193), (393, 16241), (418, 16358), (437, 16430), (438, 16433), (448, 16496), (452, 16511), (457, 16547), (470, 16598), (476, 16640), (505, 16778), (520, 16853), (523, 16865), (549, 16949), (562, 16991), (563, 16994), (570, 17021), (574, 17036), (576, 17039), (577, 17042), (591, 17114), (608, 17192), (611, 17198), (623, 17255), (627, 17270), (634, 17318), (637, 17339), (638, 17342), (639, 17348), (654, 17414), (693, 17579), (699, 17597), (713, 17642), (716, 17651), (722, 17675), (730, 17717), (754, 17828), (758, 17840), (759, 17849), (776, 17969), (780, 17999), (784, 18020), (809, 18179), (819, 18251), (830, 18293), (858, 18419), (877, 18536), (881, 18578), (883, 18590), (885, 18677), (886, 18686), (891, 18731),

Gene: Birdsong_17 Start: 9908, Stop: 15370, Start Num: 104

Candidate Starts for Birdsong_17:

(Start: 104 @9908 has 3 MA's), (113, 9965), (116, 9983), (127, 10067), (128, 10079), (129, 10091), (132, 10115), (136, 10145), (143, 10190), (147, 10220), (148, 10226), (158, 10295), (162, 10322), (165, 10340), (166, 10358), (169, 10370), (170, 10379), (177, 10430), (179, 10433), (180, 10436), (185, 10460), (186, 10463), (199, 10550), (200, 10559), (212, 10637), (218, 10682), (221, 10706), (226, 10739), (227, 10742), (242, 10829), (245, 10850), (267, 10955), (275, 10982), (282, 11009), (289, 11036), (290, 11039), (300, 11081), (304, 11099), (305, 11102), (327, 11174), (334, 11216), (341, 11237), (351, 11264), (356, 11273), (367, 11288), (375, 11306), (395, 11339), (400, 11372), (410, 11405), (411, 11414), (414, 11423), (420, 11444), (424, 11468), (428, 11483), (434, 11504), (435, 11507), (445, 11564), (450, 11594), (455, 11627), (492, 11801), (497, 11834), (504, 11861), (510, 11888), (513, 11906), (530, 11966), (545, 12008), (549, 12029), (565, 12080), (570, 12101), (583, 12149), (584, 12152), (618, 12290), (626, 12329), (632, 12371), (642, 12431), (650, 12458), (655, 12479), (664, 12536), (670, 12557), (688, 12629), (696, 12671), (697, 12674), (709, 12707), (717, 12743), (730, 12803), (738, 12854), (740, 12860), (741, 12869), (744, 12878), (752, 12911), (756, 12929), (761, 12959), (803, 13154), (804, 13157), (823, 13238), (829, 13256), (835, 13289), (837, 13301), (842, 13337), (851, 13373), (857, 13397), (860, 13400), (865, 13421), (870, 13457), (872, 13469), (923, 13496), (925, 13514), (926, 13526), (929, 13562), (932, 13583), (941, 13673), (943, 13697), (944, 13721), (949, 13829), (952, 13952), (954, 13976), (957, 14006), (958, 14009), (961, 14036), (966, 14339), (969, 14420), (970, 14423), (971, 14429), (975, 14594), (977, 14612), (978, 14621), (980, 14666), (981, 14678), (984, 14714), (986, 14732), (992, 14831), (995, 14936), (997, 14957), (1001, 15011), (1005, 15050), (1008, 15122), (1011, 15152), (1015, 15191), (1018,

15224), (1023, 15263), (1026, 15311), (1030, 15344), (1032, 15356),

Gene: BloominB_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for BloominB_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Bradissa_18 Start: 11180, Stop: 16804, Start Num: 62

Candidate Starts for Bradissa_18:

(Start: 62 @11180 has 17 MA's), (67, 11213), (99, 11393), (103, 11405), (108, 11444), (Start: 109 @11453 has 1 MA's), (113, 11477), (123, 11561), (127, 11591), (128, 11603), (158, 11834), (162, 11861), (174, 11957), (175, 11960), (181, 11981), (186, 12005), (192, 12053), (200, 12107), (208, 12158), (210, 12170), (213, 12197), (215, 12212), (232, 12317), (246, 12401), (250, 12422), (262, 12476), (276, 12536), (289, 12584), (293, 12596), (299, 12626), (307, 12659), (320, 12701), (331, 12743), (334, 12764), (344, 12794), (351, 12827), (352, 12830), (353, 12836), (355, 12845), (357, 12848), (367, 12911), (373, 12944), (385, 12983), (395, 13013), (414, 13097), (426, 13154), (448, 13262), (455, 13301), (457, 13313), (492, 13475), (495, 13493), (497, 13508), (504, 13535), (515, 13586), (518, 13601), (526, 13628), (551, 13712), (569, 13766), (570, 13775), (579, 13805), (626, 13979), (629, 14009), (645, 14096), (678, 14240), (682, 14252), (705, 14342), (717, 14390), (730, 14450), (738, 14501), (740, 14507), (750, 14552), (768, 14684), (830, 15011), (851, 15116), (923, 15251), (926, 15281), (929, 15317), (932, 15338), (934, 15347), (936, 15374), (943, 15452), (944, 15476), (950, 15617), (954, 15722), (957, 15752), (958, 15755), (963, 15845), (964, 15899), (969, 16001), (989, 16235), (998, 16403), (999, 16424), (1008, 16550), (1011, 16580), (1014, 16616), (1015, 16619),

Gene: BritBrat_18 Start: 11003, Stop: 16657, Start Num: 62

Candidate Starts for BritBrat_18:

(Start: 62 @11003 has 17 MA's), (67, 11036), (99, 11216), (103, 11228), (108, 11267), (Start: 109 @11276 has 1 MA's), (113, 11300), (115, 11309), (123, 11384), (128, 11426), (154, 11615), (156, 11633), (158, 11657), (163, 11687), (174, 11780), (175, 11783), (186, 11828), (187, 11834), (192, 11876), (200, 11930), (208, 11981), (210, 11993), (215, 12035), (232, 12140), (238, 12167), (246, 12224), (262, 12299), (272, 12338), (276, 12359), (280, 12374), (289, 12407), (299, 12449), (319, 12521), (320, 12524), (323, 12533), (344, 12617), (351, 12650), (352, 12653), (353, 12659), (355, 12668), (357, 12671), (362, 12716), (367, 12734), (371, 12743), (393, 12824), (394, 12827), (395, 12836), (407, 12890), (411, 12911), (426, 12977), (445, 13061), (455, 13124), (457, 13136), (487, 13274), (492, 13298), (495, 13316), (497, 13331), (504, 13358), (515, 13409), (522, 13442), (526,

13451), (532, 13466), (550, 13532), (551, 13535), (569, 13589), (570, 13598), (579, 13628), (626, 13802), (627, 13811), (633, 13850), (662, 13991), (678, 14063), (682, 14075), (697, 14144), (703, 14159), (705, 14165), (717, 14213), (724, 14240), (726, 14249), (738, 14324), (740, 14330), (744, 14348), (750, 14375), (800, 14699), (814, 14792), (823, 14834), (829, 14852), (923, 15104), (929, 15170), (932, 15191), (934, 15200), (936, 15227), (943, 15305), (944, 15329), (948, 15422), (949, 15446), (950, 15470), (954, 15575), (957, 15605), (963, 15698), (964, 15752), (969, 15854), (976, 15953), (998, 16256), (1008, 16403), (1011, 16433), (1014, 16469), (1015, 16472), (1024, 16547), (1032, 16643),

Gene: Cashline_18 Start: 10857, Stop: 16481, Start Num: 62

Candidate Starts for Cashline_18:

(Start: 62 @10857 has 17 MA's), (67, 10890), (99, 11070), (103, 11082), (108, 11121), (Start: 109 @11130 has 1 MA's), (113, 11154), (115, 11163), (123, 11238), (128, 11280), (154, 11469), (156, 11487), (158, 11511), (163, 11541), (174, 11634), (175, 11637), (187, 11688), (192, 11730), (200, 11784), (208, 11835), (210, 11847), (215, 11889), (232, 11994), (238, 12021), (246, 12078), (262, 12153), (272, 12192), (276, 12213), (280, 12228), (289, 12261), (299, 12303), (319, 12375), (320, 12378), (323, 12387), (344, 12471), (351, 12504), (352, 12507), (353, 12513), (355, 12522), (357, 12525), (362, 12570), (371, 12597), (392, 12672), (393, 12678), (394, 12681), (395, 12690), (407, 12744), (411, 12765), (420, 12795), (426, 12831), (445, 12915), (455, 12978), (457, 12990), (487, 13128), (492, 13152), (495, 13170), (497, 13185), (504, 13212), (515, 13263), (522, 13296), (526, 13305), (532, 13320), (550, 13386), (551, 13389), (569, 13443), (570, 13452), (579, 13482), (626, 13656), (627, 13665), (633, 13704), (662, 13845), (678, 13917), (682, 13929), (697, 13998), (703, 14013), (705, 14019), (717, 14067), (740, 14184), (744, 14202), (750, 14229), (800, 14553), (830, 14688), (923, 14928), (929, 14994), (932, 15015), (934, 15024), (936, 15051), (943, 15129), (944, 15153), (948, 15246), (949, 15270), (950, 15294), (954, 15399), (957, 15429), (963, 15522), (964, 15576), (969, 15678), (976, 15777), (999, 16101), (1008, 16227), (1011, 16257), (1014, 16293), (1015, 16296), (1024, 16371), (1032, 16467),

Gene: Chipko_17 Start: 10890, Stop: 16577, Start Num: 27

Candidate Starts for Chipko_17:

(Start: 27 @10890 has 4 MA's), (31, 10920), (36, 10974), (41, 11025), (59, 11181), (64, 11223), (99, 11418), (103, 11430), (108, 11469), (Start: 109 @11478 has 1 MA's), (113, 11502), (123, 11586), (128, 11628), (158, 11859), (167, 11928), (175, 11985), (192, 12078), (200, 12132), (208, 12183), (210, 12195), (215, 12237), (238, 12369), (254, 12465), (263, 12510), (280, 12576), (281, 12579), (282, 12582), (292, 12618), (300, 12654), (305, 12675), (313, 12705), (316, 12714), (320, 12726), (324, 12738), (327, 12747), (334, 12789), (337, 12798), (351, 12837), (358, 12852), (393, 12900), (395, 12912), (414, 12996), (421, 13026), (425, 13047), (430, 13062), (438, 13095), (459, 13218), (461, 13227), (464, 13239), (497, 13392), (509, 13443), (515, 13470), (526, 13512), (540, 13554), (545, 13566), (551, 13596), (556, 13611), (569, 13650), (579, 13689), (586, 13719), (599, 13779), (626, 13863), (629, 13893), (650, 13992), (660, 14031), (677, 14124), (689, 14169), (709, 14232), (716, 14256), (724, 14289), (725, 14292), (727, 14301), (739, 14367), (741, 14379), (769, 14544), (772, 14553), (775, 14565), (797, 14664), (801, 14697), (834, 14844), (835, 14847), (837, 14859), (840, 14880), (845, 14907), (871, 15024), (928, 15102), (930, 15123), (932, 15144), (946, 15279), (947, 15297), (954, 15462), (957, 15492), (961, 15522), (968, 15726), (969, 15744), (972, 15762), (987, 15939), (990, 15999), (991, 16008), (993, 16053), (1007, 16317), (1011, 16350), (1012, 16353), (1013, 16374), (1016, 16416), (1017, 16419), (1020, 16455), (1027, 16530), (1028, 16536), (1029, 16539), (1032, 16566), (1033, 16569),

Gene: Confidence_18 Start: 10997, Stop: 16651, Start Num: 62

Candidate Starts for Confidence_18:

(Start: 62 @10997 has 17 MA's), (67, 11030), (99, 11210), (103, 11222), (108, 11261), (Start: 109 @11270 has 1 MA's), (113, 11294), (115, 11303), (123, 11378), (128, 11420), (154, 11609), (158, 11651), (163, 11681), (168, 11723), (174, 11774), (175, 11777), (187, 11828), (192, 11870), (200,

11924), (208, 11975), (210, 11987), (215, 12029), (232, 12134), (238, 12161), (246, 12218), (262, 12293), (272, 12332), (276, 12353), (280, 12368), (289, 12401), (299, 12443), (319, 12515), (320, 12518), (323, 12527), (344, 12611), (351, 12644), (352, 12647), (353, 12653), (355, 12662), (357, 12665), (362, 12710), (367, 12728), (371, 12737), (392, 12812), (393, 12818), (394, 12821), (395, 12830), (407, 12884), (411, 12905), (420, 12935), (426, 12971), (445, 13055), (455, 13118), (457, 13130), (487, 13268), (492, 13292), (495, 13310), (497, 13325), (504, 13352), (515, 13403), (522, 13436), (526, 13445), (532, 13460), (550, 13526), (551, 13529), (569, 13583), (570, 13592), (579, 13622), (626, 13796), (627, 13805), (633, 13844), (662, 13985), (678, 14057), (682, 14069), (697, 14138), (703, 14153), (705, 14159), (717, 14207), (740, 14324), (744, 14342), (750, 14369), (800, 14693), (814, 14786), (823, 14828), (829, 14846), (923, 15098), (929, 15164), (932, 15185), (934, 15194), (936, 15221), (943, 15299), (944, 15323), (948, 15416), (950, 15464), (954, 15569), (957, 15599), (963, 15692), (964, 15746), (969, 15848), (976, 15947), (998, 16250), (999, 16271), (1008, 16397), (1011, 16427), (1014, 16463), (1015, 16466), (1024, 16541), (1032, 16637),

Gene: Coriander_17 Start: 10886, Stop: 16564, Start Num: 27

Candidate Starts for Coriander_17:

(Start: 27 @10886 has 4 MA's), (31, 10916), (33, 10928), (41, 11021), (55, 11141), (59, 11177), (99, 11414), (103, 11426), (108, 11465), (113, 11498), (123, 11582), (128, 11624), (135, 11690), (138, 11708), (156, 11831), (158, 11855), (162, 11882), (175, 11981), (192, 12074), (200, 12128), (208, 12179), (210, 12191), (215, 12233), (263, 12506), (285, 12587), (300, 12650), (304, 12668), (305, 12671), (320, 12722), (327, 12743), (334, 12785), (351, 12833), (358, 12848), (377, 12878), (393, 12896), (395, 12908), (435, 13076), (436, 13079), (463, 13229), (474, 13298), (492, 13358), (497, 13391), (504, 13418), (526, 13511), (540, 13553), (545, 13565), (551, 13595), (556, 13610), (569, 13649), (579, 13688), (586, 13718), (599, 13778), (626, 13862), (629, 13892), (677, 14123), (689, 14168), (709, 14231), (716, 14255), (724, 14288), (727, 14300), (733, 14339), (739, 14366), (747, 14399), (754, 14429), (767, 14534), (769, 14543), (775, 14564), (797, 14663), (834, 14843), (835, 14846), (837, 14858), (840, 14879), (845, 14906), (928, 15101), (930, 15122), (931, 15125), (932, 15143), (946, 15278), (953, 15446), (957, 15491), (961, 15521), (964, 15629), (969, 15731), (976, 15830), (987, 15926), (990, 15986), (993, 16040), (1006, 16298), (1007, 16304), (1011, 16337), (1012, 16340), (1013, 16361), (1016, 16403), (1017, 16406), (1020, 16442), (1027, 16517), (1028, 16523), (1029, 16526), (1032, 16553),

Gene: Cornie_15 Start: 9733, Stop: 13863, Start Num: 11

Candidate Starts for Cornie_15:

(Start: 11 @9733 has 1 MA's), (21, 9808), (34, 9964), (45, 10093), (65, 10234), (72, 10273), (73, 10276), (96, 10411), (97, 10414), (101, 10435), (115, 10516), (117, 10537), (123, 10591), (130, 10654), (138, 10717), (144, 10756), (149, 10801), (154, 10822), (161, 10885), (162, 10891), (168, 10936), (176, 10999), (178, 11005), (188, 11053), (190, 11065), (192, 11086), (200, 11140), (202, 11152), (207, 11179), (208, 11182), (213, 11221), (215, 11236), (218, 11257), (224, 11308), (230, 11335), (239, 11380), (241, 11404), (244, 11425), (247, 11434), (253, 11461), (256, 11476), (259, 11497), (260, 11500), (264, 11518), (265, 11527), (278, 11572), (280, 11581), (284, 11593), (312, 11707), (327, 11752), (329, 11767), (340, 11812), (361, 11911), (366, 11938), (378, 11977), (381, 11992), (383, 12001), (419, 12148), (429, 12193), (431, 12196), (437, 12226), (440, 12238), (443, 12259), (446, 12280), (451, 12310), (452, 12313), (477, 12451), (479, 12460), (495, 12523), (511, 12583), (512, 12592), (531, 12637), (533, 12640), (534, 12649), (558, 12727), (567, 12754), (575, 12787), (594, 12880), (596, 12889), (604, 12919), (624, 12973), (635, 13018), (672, 13189), (684, 13237), (698, 13300), (704, 13315), (707, 13324), (731, 13432), (735, 13453), (737, 13468), (739, 13477), (762, 13579), (776, 13672), (779, 13690), (794, 13777), (806, 13858),

Gene: Cracklewink_22 Start: 14060, Stop: 18745, Start Num: 7

Candidate Starts for Cracklewink_22:

(Start: 7 @14060 has 7 MA's), (16, 14111), (24, 14195), (25, 14207), (26, 14219), (44, 14408), (57, 14468), (68, 14507), (70, 14522), (79, 14576), (85, 14615), (89, 14633), (100, 14690), (102, 14696),

(113, 14750), (120, 14801), (123, 14834), (127, 14864), (131, 14903), (134, 14933), (144, 14999), (149, 15044), (152, 15056), (153, 15059), (156, 15083), (158, 15107), (159, 15119), (161, 15128), (162, 15134), (170, 15188), (175, 15233), (187, 15284), (188, 15293), (192, 15326), (196, 15353), (198, 15362), (202, 15392), (208, 15431), (209, 15434), (211, 15452), (213, 15470), (215, 15485), (218, 15506), (224, 15557), (229, 15575), (244, 15671), (277, 15812), (281, 15827), (283, 15833), (284, 15836), (307, 15932), (331, 16016), (338, 16049), (347, 16070), (365, 16154), (373, 16187), (376, 16193), (393, 16241), (396, 16250), (413, 16340), (418, 16358), (437, 16430), (438, 16433), (448, 16496), (457, 16547), (470, 16598), (476, 16640), (505, 16778), (520, 16853), (523, 16865), (549, 16949), (562, 16991), (563, 16994), (570, 17021), (574, 17036), (576, 17039), (577, 17042), (588, 17096), (591, 17114), (608, 17192), (611, 17198), (623, 17255), (627, 17270), (634, 17318), (637, 17339), (638, 17342), (639, 17348), (654, 17414), (693, 17579), (699, 17597), (713, 17642), (716, 17651), (722, 17675), (730, 17717), (754, 17828), (758, 17840), (759, 17849), (776, 17969), (780, 17999), (784, 18020), (809, 18179), (819, 18251), (830, 18293), (858, 18419), (877, 18536), (881, 18578), (883, 18590), (885, 18677), (886, 18686), (891, 18731),

Gene: Crater_16 Start: 9635, Stop: 15046, Start Num: 111

Candidate Starts for Crater_16:

(Start: 109 @9629 has 1 MA's), (Start: 111 @9635 has 5 MA's), (122, 9713), (127, 9755), (128, 9767), (147, 9908), (148, 9914), (155, 9950), (162, 10010), (165, 10028), (166, 10046), (170, 10067), (177, 10118), (179, 10121), (180, 10124), (185, 10148), (186, 10151), (195, 10217), (200, 10247), (212, 10325), (218, 10370), (221, 10394), (231, 10448), (235, 10469), (259, 10607), (267, 10643), (275, 10670), (280, 10691), (285, 10706), (295, 10745), (297, 10757), (300, 10769), (316, 10829), (320, 10841), (335, 10892), (368, 10967), (389, 10988), (400, 11036), (406, 11054), (428, 11123), (435, 11147), (445, 11204), (450, 11234), (455, 11267), (477, 11384), (492, 11441), (495, 11459), (497, 11474), (515, 11552), (546, 11657), (549, 11669), (550, 11675), (583, 11789), (584, 11792), (600, 11876), (609, 11906), (614, 11918), (626, 11969), (630, 12002), (642, 12071), (645, 12086), (658, 12128), (665, 12182), (670, 12197), (680, 12236), (681, 12242), (688, 12266), (703, 12326), (705, 12332), (706, 12335), (723, 12404), (738, 12491), (740, 12497), (741, 12506), (750, 12542), (756, 12566), (774, 12677), (776, 12689), (813, 12896), (826, 12959), (829, 12968), (835, 13001), (844, 13058), (851, 13085), (867, 13151), (870, 13169), (872, 13181), (923, 13208), (926, 13238), (929, 13274), (932, 13295), (935, 13307), (936, 13331), (943, 13409), (944, 13433), (945, 13448), (949, 13538), (953, 13658), (954, 13673), (956, 13694), (957, 13703), (962, 13790), (966, 14033), (971, 14123), (974, 14273), (977, 14297), (978, 14306), (979, 14333), (983, 14381), (984, 14399), (986, 14417), (988, 14441), (992, 14501), (996, 14624), (1000, 14675), (1004, 14702), (1009, 14801), (1010, 14813), (1019, 14909), (1023, 14927), (1025, 14939), (1031, 15029),

Gene: Daegal_21 Start: 12510, Stop: 16592, Start Num: 8

Candidate Starts for Daegal_21:

(Start: 8 @12510 has 24 MA's), (13, 12534), (14, 12540), (19, 12573), (35, 12726), (37, 12756), (40, 12786), (43, 12816), (44, 12834), (47, 12855), (56, 12897), (60, 12930), (72, 12996), (73, 12999), (78, 13026), (84, 13071), (93, 13119), (113, 13236), (117, 13266), (123, 13320), (125, 13329), (126, 13344), (128, 13362), (130, 13383), (131, 13389), (133, 13407), (138, 13446), (141, 13461), (146, 13497), (149, 13530), (153, 13545), (156, 13569), (157, 13587), (159, 13605), (161, 13614), (164, 13632), (167, 13662), (171, 13677), (176, 13728), (188, 13779), (189, 13782), (190, 13791), (192, 13812), (197, 13845), (198, 13848), (200, 13866), (202, 13878), (210, 13929), (213, 13959), (215, 13974), (216, 13983), (220, 14016), (222, 14025), (228, 14061), (230, 14070), (233, 14085), (240, 14112), (259, 14190), (260, 14193), (261, 14196), (271, 14235), (276, 14253), (279, 14265), (288, 14295), (310, 14376), (318, 14400), (336, 14475), (347, 14502), (359, 14568), (370, 14601), (372, 14607), (380, 14640), (401, 14715), (404, 14727), (405, 14742), (407, 14745), (427, 14820), (435, 14841), (448, 14913), (450, 14916), (470, 15009), (478, 15042), (490, 15081), (494, 15093), (498, 15114), (524, 15183), (525, 15186), (539, 15222), (544, 15234), (547, 15249), (554, 15273), (555, 15276), (582, 15354), (585, 15363), (596, 15411), (606, 15444), (619, 15471), (636, 15552), (661, 15615), (668, 15657), (691, 15732), (720, 15831), (729, 15873), (746, 15951), (760, 16014), (765,

16056), (778, 16116), (780, 16134), (786, 16164), (789, 16173), (790, 16179), (793, 16194), (813, 16314), (818, 16332), (819, 16347), (821, 16350), (826, 16368), (836, 16416), (839, 16431), (846, 16464), (851, 16482), (861, 16521), (864, 16530), (866, 16542), (868, 16560), (874, 16584),

Gene: DeepSoil15_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for DeepSoil15_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Dewey_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Dewey_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Dmitri_17 Start: 10871, Stop: 16561, Start Num: 27

Candidate Starts for Dmitri_17:

(Start: 27 @10871 has 4 MA's), (31, 10901), (36, 10955), (41, 11006), (59, 11162), (64, 11204), (99, 11399), (103, 11411), (108, 11450), (Start: 109 @11459 has 1 MA's), (113, 11483), (123, 11567), (128, 11609), (158, 11840), (167, 11909), (175, 11966), (192, 12059), (200, 12113), (208, 12164), (210,

12176), (215, 12218), (237, 12347), (238, 12350), (263, 12491), (264, 12494), (292, 12599), (300, 12635), (304, 12653), (305, 12656), (320, 12707), (327, 12728), (334, 12770), (345, 12800), (346, 12803), (351, 12818), (358, 12833), (395, 12893), (421, 13007), (425, 13028), (434, 13058), (438, 13076), (459, 13199), (464, 13220), (509, 13424), (522, 13484), (526, 13493), (532, 13508), (540, 13535), (545, 13547), (551, 13577), (569, 13631), (579, 13670), (586, 13700), (599, 13760), (605, 13781), (626, 13844), (629, 13874), (660, 14012), (677, 14105), (689, 14150), (709, 14213), (716, 14237), (724, 14270), (725, 14273), (727, 14282), (739, 14348), (769, 14525), (772, 14534), (775, 14546), (797, 14645), (801, 14678), (834, 14825), (835, 14828), (837, 14840), (840, 14861), (845, 14888), (871, 15005), (928, 15083), (930, 15104), (932, 15125), (946, 15260), (957, 15476), (959, 15485), (961, 15506), (969, 15728), (972, 15746), (987, 15923), (990, 15983), (991, 15992), (993, 16037), (1007, 16301), (1011, 16334), (1012, 16337), (1013, 16358), (1016, 16400), (1017, 16403), (1020, 16439), (1027, 16514), (1028, 16520), (1029, 16523), (1032, 16550), (1033, 16553),

Gene: Dogfish_19 Start: 11823, Stop: 17324, Start Num: 71

Candidate Starts for Dogfish_19:

(Start: 71 @11823 has 5 MA's), (76, 11853), (83, 11901), (106, 12003), (107, 12006), (113, 12048), (123, 12132), (127, 12162), (128, 12174), (149, 12342), (157, 12399), (175, 12531), (200, 12678), (208, 12729), (214, 12780), (219, 12813), (241, 12939), (256, 12996), (272, 13065), (293, 13143), (294, 13146), (303, 13191), (305, 13197), (313, 13227), (331, 13290), (338, 13323), (348, 13350), (354, 13386), (363, 13428), (374, 13473), (387, 13512), (390, 13518), (416, 13644), (420, 13659), (426, 13695), (435, 13722), (454, 13836), (483, 13995), (514, 14142), (542, 14235), (560, 14298), (562, 14307), (571, 14340), (573, 14346), (631, 14613), (647, 14691), (656, 14724), (663, 14775), (665, 14784), (667, 14790), (673, 14811), (717, 14985), (718, 14988), (719, 14991), (721, 15000), (732, 15057), (734, 15063), (743, 15099), (748, 15111), (749, 15114), (761, 15159), (771, 15252), (781, 15306), (783, 15318), (791, 15357), (792, 15366), (807, 15465), (810, 15492), (822, 15561), (825, 15567), (827, 15576), (828, 15579), (849, 15684), (850, 15690), (854, 15711), (858, 15723), (859, 15726), (863, 15744), (892, 16125), (893, 16170), (895, 16203), (898, 16335), (902, 16524), (903, 16557), (908, 16641), (912, 16665), (916, 16749), (917, 16755), (921, 16848), (922, 16926), (924, 16947), (927, 16971), (933, 17034), (937, 17070), (939, 17079), (942, 17136),

Gene: Doggs_16 Start: 10586, Stop: 16264, Start Num: 27

Candidate Starts for Doggs_16:

(Start: 27 @10586 has 4 MA's), (31, 10616), (33, 10628), (41, 10721), (55, 10841), (59, 10877), (99, 11114), (103, 11126), (108, 11165), (113, 11198), (123, 11282), (128, 11324), (135, 11390), (138, 11408), (156, 11531), (158, 11555), (162, 11582), (175, 11681), (192, 11774), (200, 11828), (208, 11879), (210, 11891), (215, 11933), (263, 12206), (281, 12275), (282, 12278), (285, 12287), (300, 12350), (304, 12368), (305, 12371), (320, 12422), (327, 12443), (334, 12485), (351, 12533), (358, 12548), (377, 12578), (393, 12596), (395, 12608), (435, 12776), (436, 12779), (463, 12929), (474, 12998), (492, 13058), (497, 13091), (504, 13118), (526, 13211), (540, 13253), (545, 13265), (551, 13295), (556, 13310), (569, 13349), (579, 13388), (586, 13418), (599, 13478), (626, 13562), (629, 13592), (677, 13823), (689, 13868), (709, 13931), (716, 13955), (724, 13988), (727, 14000), (733, 14039), (739, 14066), (747, 14099), (754, 14129), (767, 14234), (769, 14243), (775, 14264), (797, 14363), (801, 14396), (835, 14546), (837, 14558), (840, 14579), (845, 14606), (928, 14801), (930, 14822), (931, 14825), (932, 14843), (946, 14978), (953, 15146), (957, 15191), (961, 15221), (964, 15329), (967, 15401), (969, 15431), (976, 15530), (987, 15629), (990, 15689), (994, 15782), (1002, 15890), (1004, 15902), (1006, 15998), (1007, 16004), (1011, 16037), (1012, 16040), (1016, 16103), (1017, 16106), (1027, 16217), (1028, 16223), (1029, 16226), (1032, 16253), (1033, 16256),

Gene: EMSquaredA_18 Start: 11003, Stop: 16657, Start Num: 62

Candidate Starts for EMSquaredA_18:

(Start: 62 @11003 has 17 MA's), (67, 11036), (99, 11216), (103, 11228), (108, 11267), (Start: 109 @11276 has 1 MA's), (113, 11300), (115, 11309), (123, 11384), (128, 11426), (154, 11615), (156, 11633), (158, 11657), (163, 11687), (174, 11780), (175, 11783), (186, 11828), (187, 11834), (192,

11876), (200, 11930), (208, 11981), (210, 11993), (215, 12035), (232, 12140), (238, 12167), (246, 12224), (262, 12299), (272, 12338), (276, 12359), (280, 12374), (289, 12407), (299, 12449), (319, 12521), (320, 12524), (323, 12533), (344, 12617), (351, 12650), (352, 12653), (353, 12659), (355, 12668), (357, 12671), (362, 12716), (367, 12734), (371, 12743), (393, 12824), (394, 12827), (395, 12836), (407, 12890), (411, 12911), (426, 12977), (445, 13061), (455, 13124), (457, 13136), (487, 13274), (492, 13298), (495, 13316), (497, 13331), (504, 13358), (515, 13409), (522, 13442), (526, 13451), (532, 13466), (550, 13532), (551, 13535), (569, 13589), (570, 13598), (579, 13628), (626, 13802), (627, 13811), (633, 13850), (662, 13991), (678, 14063), (682, 14075), (697, 14144), (703, 14159), (705, 14165), (717, 14213), (724, 14240), (726, 14249), (738, 14324), (740, 14330), (744, 14348), (750, 14375), (800, 14699), (814, 14792), (823, 14834), (829, 14852), (923, 15104), (929, 15170), (932, 15191), (934, 15200), (936, 15227), (943, 15305), (944, 15329), (948, 15422), (949, 15446), (950, 15470), (954, 15575), (957, 15605), (963, 15698), (964, 15752), (969, 15854), (976, 15953), (998, 16256), (1008, 16403), (1011, 16433), (1014, 16469), (1015, 16472), (1024, 16547), (1032, 16643),

Gene: Ecliptus_22 Start: 11993, Stop: 17506, Start Num: 105

Candidate Starts for Ecliptus_22:

(Start: 105 @11993 has 2 MA's), (Start: 109 @12026 has 1 MA's), (Start: 111 @12032 has 5 MA's), (127, 12152), (128, 12164), (136, 12230), (147, 12305), (162, 12407), (166, 12443), (170, 12464), (179, 12518), (180, 12521), (186, 12548), (193, 12599), (199, 12635), (200, 12644), (212, 12722), (218, 12767), (221, 12791), (226, 12824), (227, 12827), (245, 12935), (267, 13040), (275, 13067), (282, 13094), (285, 13103), (289, 13121), (290, 13124), (300, 13166), (304, 13184), (305, 13187), (327, 13259), (334, 13301), (341, 13322), (344, 13328), (351, 13349), (356, 13358), (367, 13373), (375, 13391), (395, 13424), (400, 13457), (410, 13490), (411, 13499), (414, 13508), (420, 13529), (424, 13553), (426, 13565), (428, 13568), (434, 13589), (435, 13592), (445, 13649), (450, 13679), (479, 13838), (480, 13841), (487, 13862), (492, 13886), (497, 13919), (510, 13973), (512, 13988), (545, 14093), (549, 14114), (551, 14123), (583, 14234), (584, 14237), (626, 14414), (632, 14456), (642, 14516), (643, 14525), (655, 14564), (662, 14603), (664, 14621), (670, 14642), (677, 14675), (688, 14714), (697, 14759), (709, 14792), (717, 14828), (730, 14888), (740, 14945), (753, 14999), (777, 15152), (802, 15305), (817, 15359), (826, 15404), (829, 15413), (835, 15446), (860, 15551), (870, 15608), (923, 15647), (929, 15713), (932, 15734), (942, 15842), (943, 15848), (944, 15872), (949, 15986), (950, 16010), (951, 16085), (954, 16121), (956, 16142), (957, 16151), (958, 16154), (961, 16181), (966, 16484), (969, 16565), (970, 16568), (971, 16574), (975, 16739), (977, 16757), (978, 16766), (980, 16811), (981, 16823), (984, 16856), (986, 16874), (992, 16967), (995, 17072), (997, 17093), (1001, 17147), (1005, 17186), (1008, 17258), (1011, 17288), (1015, 17327), (1018, 17360), (1023, 17399), (1026, 17447), (1030, 17480), (1032, 17492),

Gene: Ein37_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Ein37_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585,

15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: EnalisNailo_18 Start: 11182, Stop: 16806, Start Num: 62

Candidate Starts for EnalisNailo_18:

(Start: 62 @11182 has 17 MA's), (67, 11215), (99, 11395), (103, 11407), (108, 11446), (Start: 109 @11455 has 1 MA's), (113, 11479), (123, 11563), (127, 11593), (128, 11605), (158, 11836), (162, 11863), (174, 11959), (175, 11962), (181, 11983), (186, 12007), (192, 12055), (200, 12109), (208, 12160), (210, 12172), (213, 12199), (215, 12214), (232, 12319), (246, 12403), (250, 12424), (262, 12478), (272, 12517), (276, 12538), (289, 12586), (293, 12598), (299, 12628), (307, 12661), (320, 12703), (331, 12745), (334, 12766), (344, 12796), (351, 12829), (352, 12832), (353, 12838), (355, 12847), (357, 12850), (367, 12913), (373, 12946), (385, 12985), (395, 13015), (414, 13099), (426, 13156), (448, 13264), (455, 13303), (457, 13315), (492, 13477), (495, 13495), (497, 13510), (504, 13537), (515, 13588), (518, 13603), (526, 13630), (551, 13714), (569, 13768), (570, 13777), (579, 13807), (626, 13981), (629, 14011), (645, 14098), (678, 14242), (682, 14254), (705, 14344), (717, 14392), (730, 14452), (738, 14503), (740, 14509), (750, 14554), (768, 14686), (830, 15013), (851, 15118), (923, 15253), (926, 15283), (929, 15319), (932, 15340), (934, 15349), (936, 15376), (943, 15454), (944, 15478), (950, 15619), (954, 15724), (957, 15754), (958, 15757), (963, 15847), (964, 15901), (969, 16003), (989, 16237), (998, 16405), (999, 16426), (1008, 16552), (1011, 16582), (1014, 16618), (1015, 16621),

Gene: Evanescce_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Evanescce_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Ewald_20 Start: 12085, Stop: 17598, Start Num: 71

Candidate Starts for Ewald_20:

(Start: 71 @12085 has 5 MA's), (83, 12163), (106, 12265), (107, 12268), (113, 12310), (123, 12394), (127, 12424), (128, 12436), (149, 12604), (157, 12661), (162, 12694), (175, 12793), (186, 12838), (200, 12940), (208, 12991), (214, 13042), (219, 13075), (258, 13273), (269, 13321), (272, 13327), (276, 13348), (284, 13375), (293, 13405), (300, 13438), (305, 13459), (308, 13474), (322, 13507), (325, 13516), (330, 13537), (338, 13570), (354, 13621), (387, 13747), (391, 13756), (416, 13876),

(444, 14011), (455, 14077), (460, 14098), (496, 14278), (499, 14302), (542, 14476), (562, 14548), (571, 14581), (573, 14587), (631, 14854), (656, 14965), (663, 15016), (665, 15025), (667, 15031), (673, 15052), (694, 15148), (718, 15229), (719, 15232), (743, 15352), (783, 15595), (791, 15637), (805, 15733), (807, 15745), (810, 15772), (812, 15787), (822, 15841), (825, 15847), (827, 15856), (828, 15859), (838, 15910), (842, 15937), (850, 15970), (854, 15991), (859, 16006), (863, 16024), (869, 16063), (892, 16405), (893, 16450), (895, 16486), (898, 16618), (903, 16834), (912, 16942), (916, 17026), (917, 17032), (918, 17056), (919, 17092), (920, 17107), (922, 17203), (924, 17224), (927, 17248), (933, 17311), (937, 17347), (939, 17356), (940, 17362), (942, 17413),

Gene: Faiyaz_22 Start: 14030, Stop: 18613, Start Num: 7

Candidate Starts for Faiyaz_22:

(Start: 7 @14030 has 7 MA's), (12, 14057), (16, 14081), (24, 14165), (25, 14177), (29, 14219), (44, 14378), (57, 14438), (58, 14441), (69, 14471), (74, 14495), (77, 14513), (94, 14612), (95, 14618), (98, 14630), (102, 14648), (108, 14669), (Start: 109 @14678 has 1 MA's), (113, 14702), (123, 14786), (124, 14789), (128, 14828), (130, 14849), (141, 14927), (142, 14930), (145, 14960), (152, 15008), (156, 15035), (158, 15059), (159, 15071), (160, 15077), (161, 15080), (170, 15140), (175, 15185), (182, 15215), (183, 15218), (192, 15281), (196, 15308), (198, 15317), (202, 15347), (208, 15386), (213, 15425), (215, 15440), (218, 15461), (224, 15512), (225, 15515), (235, 15560), (244, 15623), (251, 15650), (274, 15752), (277, 15764), (286, 15797), (297, 15842), (306, 15881), (307, 15884), (326, 15941), (331, 15968), (338, 16001), (340, 16007), (347, 16022), (365, 16106), (373, 16139), (376, 16145), (393, 16193), (439, 16394), (447, 16436), (458, 16490), (462, 16505), (485, 16610), (500, 16682), (505, 16712), (537, 16838), (548, 16880), (562, 16925), (576, 16973), (577, 16976), (593, 17045), (594, 17051), (598, 17066), (622, 17159), (627, 17177), (634, 17225), (638, 17249), (639, 17255), (654, 17321), (669, 17405), (671, 17414), (675, 17432), (687, 17477), (699, 17525), (710, 17552), (730, 17639), (736, 17669), (754, 17747), (787, 17948), (795, 17987), (823, 18155), (824, 18158), (830, 18185), (875, 18374), (877, 18407), (878, 18416), (881, 18449), (885, 18545), (888, 18569), (889, 18590), (891, 18599),

Gene: Floral_18 Start: 11003, Stop: 16657, Start Num: 62

Candidate Starts for Floral_18:

(Start: 62 @11003 has 17 MA's), (67, 11036), (99, 11216), (103, 11228), (108, 11267), (Start: 109 @11276 has 1 MA's), (113, 11300), (115, 11309), (123, 11384), (128, 11426), (154, 11615), (156, 11633), (158, 11657), (163, 11687), (174, 11780), (175, 11783), (186, 11828), (187, 11834), (192, 11876), (200, 11930), (208, 11981), (210, 11993), (215, 12035), (232, 12140), (238, 12167), (246, 12224), (262, 12299), (272, 12338), (276, 12359), (280, 12374), (289, 12407), (299, 12449), (319, 12521), (320, 12524), (323, 12533), (344, 12617), (351, 12650), (352, 12653), (353, 12659), (355, 12668), (357, 12671), (362, 12716), (367, 12734), (371, 12743), (393, 12824), (394, 12827), (395, 12836), (407, 12890), (411, 12911), (426, 12977), (445, 13061), (455, 13124), (457, 13136), (487, 13274), (492, 13298), (495, 13316), (497, 13331), (504, 13358), (515, 13409), (522, 13442), (526, 13451), (532, 13466), (550, 13532), (551, 13535), (569, 13589), (570, 13598), (579, 13628), (626, 13802), (627, 13811), (633, 13850), (662, 13991), (678, 14063), (682, 14075), (697, 14144), (703, 14159), (705, 14165), (717, 14213), (724, 14240), (726, 14249), (738, 14324), (740, 14330), (744, 14348), (750, 14375), (800, 14699), (814, 14792), (823, 14834), (829, 14852), (923, 15104), (929, 15170), (932, 15191), (934, 15200), (936, 15227), (943, 15305), (944, 15329), (948, 15422), (949, 15446), (950, 15470), (954, 15575), (957, 15605), (963, 15698), (964, 15752), (969, 15854), (976, 15953), (998, 16256), (1008, 16403), (1011, 16433), (1014, 16469), (1015, 16472), (1024, 16547), (1032, 16643),

Gene: Forge_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Forge_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126,

13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Gaia_12 Start: 9452, Stop: 13315, Start Num: 10

Candidate Starts for Gaia_12:

(Start: 10 @9452 has 2 MA's), (20, 9518), (30, 9629), (39, 9713), (46, 9785), (53, 9815), (66, 9890), (86, 10010), (112, 10139), (113, 10142), (123, 10226), (130, 10289), (131, 10295), (139, 10355), (141, 10367), (146, 10403), (154, 10457), (157, 10493), (158, 10499), (171, 10583), (172, 10586), (173, 10592), (176, 10634), (178, 10640), (190, 10697), (192, 10718), (194, 10730), (201, 10778), (208, 10823), (268, 11114), (270, 11117), (279, 11153), (281, 11159), (282, 11162), (288, 11186), (297, 11219), (301, 11237), (333, 11357), (342, 11390), (376, 11525), (388, 11561), (397, 11594), (444, 11807), (466, 11906), (472, 11957), (487, 12005), (491, 12023), (493, 12029), (504, 12071), (507, 12080), (519, 12083), (526, 12107), (548, 12143), (578, 12233), (596, 12281), (601, 12284), (628, 12320), (657, 12386), (670, 12440), (690, 12479), (695, 12488), (700, 12503), (758, 12707), (759, 12716), (788, 12872), (799, 12944), (809, 12992), (811, 13016), (815, 13037), (816, 13040), (820, 13061), (852, 13202), (853, 13211), (855, 13217),

Gene: Gancho_19 Start: 11937, Stop: 16022, Start Num: 8

Candidate Starts for Gancho_19:

(Start: 8 @11937 has 24 MA's), (13, 11961), (14, 11967), (19, 12000), (35, 12153), (37, 12183), (40, 12213), (43, 12243), (47, 12282), (56, 12324), (60, 12357), (72, 12426), (78, 12456), (83, 12495), (84, 12501), (93, 12549), (113, 12666), (117, 12696), (123, 12750), (125, 12759), (126, 12774), (128, 12792), (130, 12813), (131, 12819), (133, 12837), (138, 12876), (141, 12891), (146, 12927), (149, 12960), (154, 12981), (156, 12999), (157, 13017), (159, 13035), (161, 13044), (164, 13062), (167, 13092), (171, 13107), (176, 13158), (178, 13164), (188, 13209), (189, 13212), (190, 13221), (192, 13242), (197, 13275), (198, 13278), (200, 13296), (202, 13308), (210, 13359), (213, 13389), (215, 13404), (216, 13413), (220, 13446), (222, 13455), (223, 13467), (228, 13491), (230, 13500), (236, 13524), (240, 13542), (259, 13620), (260, 13623), (261, 13626), (266, 13653), (271, 13665), (276, 13683), (279, 13695), (280, 13698), (287, 13716), (288, 13725), (310, 13806), (318, 13830), (336, 13905), (338, 13911), (347, 13932), (370, 14031), (372, 14037), (380, 14070), (401, 14145), (404, 14157), (405, 14172), (407, 14175), (427, 14250), (435, 14271), (442, 14301), (448, 14343), (450, 14346), (490, 14511), (494, 14523), (498, 14544), (524, 14613), (525, 14616), (539, 14652), (544, 14664), (554, 14703), (555, 14706), (582, 14784), (585, 14793), (596, 14841), (606, 14874), (619, 14901), (636, 14982), (668, 15087), (691, 15162), (720, 15261), (729, 15303), (746, 15381), (760, 15444), (765, 15486), (773, 15522), (778, 15546), (780, 15564), (786, 15594), (789, 15603), (790, 15609), (793, 15624), (813, 15744), (818, 15762), (819, 15777), (821, 15780), (826, 15798), (836, 15846), (839, 15861), (846, 15894), (851, 15912), (861, 15951), (864, 15960), (866, 15972), (868, 15990), (874, 16014),

Gene: Giles_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Giles_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Gravaillia_20 Start: 11955, Stop: 16028, Start Num: 8

Candidate Starts for Gravaillia_20:

(Start: 8 @11955 has 24 MA's), (13, 11979), (14, 11985), (19, 12018), (35, 12171), (37, 12201), (40, 12231), (43, 12261), (44, 12279), (47, 12300), (56, 12342), (60, 12375), (72, 12432), (78, 12462), (83, 12501), (84, 12507), (93, 12555), (113, 12672), (117, 12702), (123, 12756), (125, 12765), (126, 12780), (128, 12798), (130, 12819), (131, 12825), (133, 12843), (138, 12882), (141, 12897), (146, 12933), (149, 12966), (154, 12987), (156, 13005), (157, 13023), (159, 13041), (161, 13050), (164, 13068), (167, 13098), (171, 13113), (176, 13164), (178, 13170), (188, 13215), (189, 13218), (190, 13227), (192, 13248), (197, 13281), (198, 13284), (200, 13302), (202, 13314), (210, 13365), (213, 13395), (215, 13410), (216, 13419), (220, 13452), (222, 13461), (223, 13473), (228, 13497), (230, 13506), (236, 13530), (240, 13548), (259, 13626), (260, 13629), (261, 13632), (266, 13659), (271, 13671), (276, 13689), (279, 13701), (280, 13704), (287, 13722), (288, 13731), (310, 13812), (318, 13836), (336, 13911), (338, 13917), (347, 13938), (370, 14037), (372, 14043), (380, 14076), (401, 14151), (404, 14163), (405, 14178), (407, 14181), (427, 14256), (435, 14277), (442, 14307), (448, 14349), (450, 14352), (490, 14517), (494, 14529), (498, 14550), (524, 14619), (525, 14622), (539, 14658), (544, 14670), (554, 14709), (555, 14712), (582, 14790), (585, 14799), (596, 14847), (606, 14880), (619, 14907), (636, 14988), (668, 15093), (691, 15168), (720, 15267), (729, 15309), (746, 15387), (760, 15450), (765, 15492), (773, 15528), (778, 15552), (780, 15570), (786, 15600), (789, 15609), (790, 15615), (793, 15630), (813, 15750), (818, 15768), (819, 15783), (821, 15786), (826, 15804), (836, 15852), (839, 15867), (846, 15900), (851, 15918), (861, 15957), (864, 15966), (866, 15978), (868, 15996), (874, 16020),

Gene: HH92_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for HH92_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215,

13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Hadrien_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Hadrien_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Hail_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Hail_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780,

15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Hilltopfarm_22 Start: 14060, Stop: 18643, Start Num: 7

Candidate Starts for Hilltopfarm_22:

(Start: 7 @14060 has 7 MA's), (12, 14087), (16, 14111), (24, 14195), (25, 14207), (29, 14249), (44, 14408), (57, 14468), (58, 14471), (69, 14501), (74, 14525), (77, 14543), (94, 14642), (95, 14648), (98, 14660), (102, 14678), (108, 14699), (Start: 109 @14708 has 1 MA's), (113, 14732), (123, 14816), (124, 14819), (128, 14858), (130, 14879), (141, 14957), (142, 14960), (145, 14990), (152, 15038), (156, 15065), (158, 15089), (159, 15101), (160, 15107), (161, 15110), (170, 15170), (175, 15215), (182, 15245), (183, 15248), (192, 15311), (196, 15338), (198, 15347), (202, 15377), (208, 15416), (213, 15455), (215, 15470), (218, 15491), (224, 15542), (225, 15545), (235, 15590), (244, 15653), (251, 15680), (274, 15782), (277, 15794), (286, 15827), (297, 15872), (306, 15911), (307, 15914), (326, 15971), (331, 15998), (338, 16031), (340, 16037), (347, 16052), (365, 16136), (373, 16169), (376, 16175), (393, 16223), (439, 16424), (447, 16466), (458, 16520), (462, 16535), (485, 16640), (500, 16712), (505, 16742), (537, 16868), (548, 16910), (562, 16955), (576, 17003), (577, 17006), (593, 17075), (594, 17081), (598, 17096), (622, 17189), (627, 17207), (634, 17255), (638, 17279), (639, 17285), (654, 17351), (669, 17435), (671, 17444), (675, 17462), (687, 17507), (699, 17555), (710, 17582), (730, 17669), (736, 17699), (754, 17777), (787, 17978), (795, 18017), (823, 18185), (824, 18188), (830, 18215), (875, 18404), (877, 18437), (878, 18446), (881, 18479), (885, 18575), (888, 18599), (889, 18620), (891, 18629),

Gene: InLimbo_17 Start: 8855, Stop: 14248, Start Num: 111

Candidate Starts for InLimbo_17:

(Start: 109 @8849 has 1 MA's), (Start: 111 @8855 has 5 MA's), (127, 8975), (128, 8987), (136, 9053), (137, 9056), (147, 9128), (148, 9134), (162, 9230), (165, 9248), (166, 9266), (177, 9338), (179, 9341), (180, 9344), (186, 9371), (191, 9407), (199, 9458), (200, 9467), (205, 9503), (212, 9545), (218, 9590), (221, 9614), (231, 9668), (235, 9689), (267, 9863), (276, 9896), (285, 9926), (289, 9944), (295, 9965), (297, 9977), (300, 9989), (309, 10028), (311, 10034), (316, 10049), (320, 10061), (335, 10112), (343, 10133), (368, 10187), (396, 10235), (400, 10256), (406, 10274), (417, 10304), (428, 10343), (435, 10367), (445, 10424), (450, 10454), (455, 10487), (492, 10661), (495, 10679), (497, 10694), (504, 10721), (515, 10772), (545, 10868), (546, 10877), (549, 10889), (583, 11009), (584, 11012), (600, 11096), (626, 11189), (630, 11222), (642, 11291), (665, 11402), (666, 11405), (670, 11417), (680, 11456), (681, 11462), (684, 11474), (688, 11486), (697, 11531), (703, 11546), (706, 11555), (730, 11660), (738, 11711), (740, 11717), (752, 11768), (756, 11786), (766, 11861), (774, 11897), (776, 11909), (785, 11930), (800, 12035), (801, 12041), (835, 12191), (837, 12203), (838, 12212), (841, 12236), (870, 12353), (872, 12365), (923, 12392), (926, 12422), (929, 12458), (932, 12479), (943, 12593), (944, 12617), (949, 12725), (954, 12863), (957, 12893), (961, 12923), (962, 12983), (966, 13226), (971, 13316), (978, 13508), (984, 13598), (986, 13616), (994, 13784), (997, 13835), (1001, 13889), (1004, 13904), (1008, 14000), (1011, 14030), (1015, 14069), (1018, 14102), (1019, 14123), (1021, 14135), (1022, 14138), (1030, 14222), (1032, 14234),

Gene: Jablanski_18 Start: 11132, Stop: 16768, Start Num: 62

Candidate Starts for Jablanski_18:

(Start: 62 @11132 has 17 MA's), (67, 11165), (99, 11345), (103, 11357), (108, 11396), (Start: 109 @11405 has 1 MA's), (113, 11429), (115, 11438), (123, 11513), (128, 11555), (154, 11744), (156, 11762), (158, 11786), (163, 11816), (168, 11858), (174, 11909), (175, 11912), (187, 11963), (192, 12005), (200, 12059), (208, 12110), (210, 12122), (215, 12164), (232, 12269), (238, 12296), (246, 12353), (262, 12428), (272, 12467), (276, 12488), (280, 12503), (289, 12536), (299, 12578), (319, 12650), (320, 12653), (323, 12662), (344, 12746), (351, 12779), (352, 12782), (353, 12788), (355, 12797), (357, 12800), (362, 12845), (367, 12863), (371, 12872), (394, 12956), (395, 12965), (407, 13019), (411, 13040), (420, 13070), (426, 13106), (445, 13190), (455, 13253), (457, 13265), (487,

13403), (492, 13427), (495, 13445), (497, 13460), (502, 13478), (504, 13487), (515, 13538), (522, 13571), (526, 13580), (532, 13595), (550, 13661), (551, 13664), (569, 13718), (570, 13727), (579, 13757), (599, 13847), (626, 13931), (629, 13961), (662, 14120), (665, 14144), (675, 14183), (678, 14192), (682, 14204), (705, 14294), (717, 14342), (726, 14378), (730, 14402), (738, 14453), (740, 14459), (750, 14504), (763, 14567), (800, 14828), (830, 14963), (923, 15203), (929, 15269), (932, 15290), (934, 15299), (936, 15326), (943, 15404), (944, 15428), (948, 15521), (950, 15569), (954, 15674), (955, 15686), (957, 15704), (963, 15797), (964, 15851), (965, 15875), (969, 15953), (976, 16052), (989, 16199), (999, 16388), (1008, 16514), (1011, 16544), (1014, 16580), (1015, 16583), (1032, 16754),

Gene: JacoRen57_15 Start: 9894, Stop: 14315, Start Num: 1

Candidate Starts for JacoRen57_15:

(Start: 1 @9894 has 1 MA's), (2, 9897), (3, 9939), (4, 9999), (5, 10011), (6, 10146), (Start: 8 @10191 has 24 MA's), (15, 10236), (22, 10284), (42, 10542), (46, 10581), (49, 10608), (Start: 62 @10692 has 17 MA's), (63, 10695), (80, 10800), (90, 10863), (108, 10965), (110, 10977), (121, 11055), (123, 11082), (125, 11091), (128, 11124), (133, 11169), (149, 11292), (170, 11436), (175, 11481), (198, 11610), (213, 11718), (243, 11898), (264, 11991), (273, 12027), (282, 12060), (299, 12129), (327, 12225), (338, 12279), (360, 12372), (394, 12480), (415, 12582), (441, 12690), (443, 12702), (444, 12711), (465, 12822), (469, 12846), (486, 12927), (489, 12942), (503, 13002), (506, 13017), (516, 13053), (521, 13077), (527, 13089), (538, 13122), (553, 13182), (559, 13197), (579, 13269), (590, 13314), (595, 13350), (610, 13404), (620, 13437), (625, 13458), (646, 13572), (656, 13605), (670, 13677), (723, 13887), (728, 13914), (738, 13974), (757, 14049), (764, 14106), (782, 14229), (787, 14256), (790, 14265), (796, 14304),

Gene: JustASigh_16 Start: 11096, Stop: 15256, Start Num: 7

Candidate Starts for JustASigh_16:

(Start: 7 @11096 has 7 MA's), (13, 11126), (17, 11153), (20, 11177), (25, 11267), (28, 11300), (37, 11393), (75, 11678), (81, 11708), (86, 11747), (90, 11765), (113, 11900), (115, 11909), (123, 11984), (126, 12008), (128, 12026), (143, 12143), (162, 12284), (164, 12296), (167, 12326), (188, 12443), (189, 12446), (192, 12476), (200, 12530), (202, 12542), (213, 12620), (215, 12635), (217, 12653), (234, 12752), (248, 12809), (259, 12851), (268, 12890), (291, 12953), (302, 13001), (303, 13004), (315, 13046), (320, 13061), (328, 13091), (332, 13103), (347, 13154), (349, 13166), (360, 13220), (364, 13232), (379, 13286), (384, 13304), (388, 13310), (399, 13352), (422, 13436), (433, 13466), (447, 13541), (456, 13595), (495, 13739), (517, 13808), (529, 13838), (534, 13856), (536, 13859), (541, 13874), (546, 13895), (554, 13922), (563, 13949), (572, 13976), (580, 13994), (582, 14006), (584, 14012), (597, 14060), (616, 14114), (621, 14141), (649, 14234), (651, 14240), (674, 14345), (714, 14495), (742, 14612), (751, 14648), (792, 14864), (819, 15029), (826, 15050), (831, 15068), (847, 15131), (851, 15143), (873, 15242), (875, 15245),

Gene: Kinbote_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Kinbote_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450,

14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Kuwabara_17 Start: 9635, Stop: 15067, Start Num: 111

Candidate Starts for Kuwabara_17:

(Start: 109 @9629 has 1 MA's), (Start: 111 @9635 has 5 MA's), (122, 9713), (127, 9755), (128, 9767), (147, 9908), (148, 9914), (155, 9950), (162, 10010), (165, 10028), (166, 10046), (170, 10067), (177, 10118), (179, 10121), (180, 10124), (185, 10148), (186, 10151), (195, 10217), (200, 10247), (212, 10325), (218, 10370), (221, 10394), (231, 10448), (235, 10469), (259, 10607), (267, 10643), (275, 10670), (280, 10691), (285, 10706), (295, 10745), (297, 10757), (300, 10769), (316, 10829), (320, 10841), (335, 10892), (368, 10967), (389, 10988), (400, 11036), (406, 11054), (428, 11123), (435, 11147), (445, 11204), (450, 11234), (455, 11267), (477, 11384), (492, 11441), (495, 11459), (497, 11474), (515, 11552), (546, 11657), (549, 11669), (550, 11675), (583, 11789), (584, 11792), (600, 11876), (609, 11906), (614, 11918), (626, 11969), (630, 12002), (642, 12071), (645, 12086), (658, 12128), (665, 12182), (666, 12185), (670, 12197), (680, 12236), (681, 12242), (688, 12266), (703, 12326), (705, 12332), (706, 12335), (723, 12404), (738, 12491), (740, 12497), (741, 12506), (750, 12542), (756, 12566), (774, 12677), (776, 12689), (813, 12896), (821, 12941), (829, 12968), (835, 13001), (851, 13079), (857, 13103), (860, 13106), (870, 13163), (872, 13175), (923, 13202), (925, 13220), (929, 13268), (932, 13289), (941, 13379), (943, 13403), (944, 13427), (949, 13535), (952, 13658), (954, 13682), (956, 13703), (957, 13712), (958, 13715), (961, 13742), (962, 13802), (966, 14045), (969, 14126), (970, 14129), (971, 14135), (975, 14300), (977, 14318), (978, 14327), (980, 14372), (981, 14384), (984, 14417), (986, 14435), (992, 14528), (995, 14633), (997, 14654), (1001, 14708), (1005, 14747), (1008, 14819), (1011, 14849), (1015, 14888), (1018, 14921), (1023, 14960), (1026, 15008), (1030, 15041), (1032, 15053),

Gene: LilHazelNut_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for LilHazelNut_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Lilas_18 Start: 11182, Stop: 16806, Start Num: 62

Candidate Starts for Lilas_18:

(Start: 62 @11182 has 17 MA's), (67, 11215), (99, 11395), (103, 11407), (108, 11446), (Start: 109 @11455 has 1 MA's), (113, 11479), (123, 11563), (127, 11593), (128, 11605), (158, 11836), (162, 11863), (174, 11959), (175, 11962), (181, 11983), (186, 12007), (192, 12055), (200, 12109), (208, 12160), (210, 12172), (213, 12199), (215, 12214), (232, 12319), (246, 12403), (250, 12424), (262, 12478), (272, 12517), (276, 12538), (289, 12586), (293, 12598), (299, 12628), (307, 12661), (320, 12703), (331, 12745), (334, 12766), (344, 12796), (351, 12829), (352, 12832), (353, 12838), (355, 12847), (357, 12850), (367, 12913), (373, 12946), (385, 12985), (395, 13015), (414, 13099), (426, 13156), (448, 13264), (455, 13303), (457, 13315), (492, 13477), (495, 13495), (497, 13510), (504, 13537), (515, 13588), (518, 13603), (526, 13630), (551, 13714), (569, 13768), (570, 13777), (579, 13807), (626, 13981), (629, 14011), (645, 14098), (678, 14242), (682, 14254), (705, 14344), (717, 14392), (730, 14452), (738, 14503), (740, 14509), (750, 14554), (768, 14686), (830, 15013), (851, 15118), (923, 15253), (926, 15283), (929, 15319), (932, 15340), (934, 15349), (936, 15376), (943, 15454), (944, 15478), (950, 15619), (954, 15724), (957, 15754), (958, 15757), (963, 15847), (964, 15901), (969, 16003), (989, 16237), (998, 16405), (999, 16426), (1008, 16552), (1011, 16582), (1014, 16618), (1015, 16621),

Gene: LonelyBoi_18 Start: 11131, Stop: 16809, Start Num: 62

Candidate Starts for LonelyBoi_18:

(Start: 62 @11131 has 17 MA's), (67, 11164), (99, 11344), (103, 11356), (108, 11395), (Start: 109 @11404 has 1 MA's), (113, 11428), (115, 11437), (123, 11512), (128, 11554), (154, 11743), (156, 11761), (158, 11785), (163, 11815), (168, 11857), (174, 11908), (175, 11911), (187, 11962), (192, 12004), (200, 12058), (208, 12109), (210, 12121), (215, 12163), (232, 12268), (238, 12295), (246, 12352), (262, 12427), (272, 12466), (276, 12487), (280, 12502), (289, 12535), (299, 12577), (320, 12652), (331, 12694), (344, 12745), (351, 12778), (352, 12781), (355, 12796), (367, 12862), (377, 12904), (385, 12934), (392, 12946), (395, 12964), (399, 13000), (403, 13018), (408, 13045), (409, 13048), (421, 13099), (426, 13126), (432, 13138), (445, 13210), (455, 13273), (457, 13285), (468, 13330), (492, 13447), (497, 13480), (504, 13507), (510, 13534), (526, 13600), (545, 13654), (549, 13675), (583, 13795), (584, 13798), (600, 13882), (614, 13924), (615, 13927), (617, 13933), (618, 13936), (626, 13975), (642, 14077), (650, 14104), (675, 14233), (688, 14281), (703, 14341), (705, 14347), (709, 14359), (715, 14383), (717, 14395), (730, 14455), (738, 14506), (740, 14512), (750, 14557), (768, 14689), (830, 15016), (923, 15256), (929, 15322), (932, 15343), (934, 15352), (936, 15379), (943, 15457), (944, 15481), (948, 15574), (949, 15598), (950, 15622), (954, 15727), (957, 15757), (963, 15850), (964, 15904), (969, 16006), (976, 16105), (998, 16408), (999, 16429), (1008, 16555), (1011, 16585), (1014, 16621), (1015, 16624), (1024, 16699), (1032, 16795),

Gene: Lucky10_16 Start: 8884, Stop: 14280, Start Num: 109

Candidate Starts for Lucky10_16:

(Start: 109 @8884 has 1 MA's), (Start: 111 @8890 has 5 MA's), (127, 9010), (128, 9022), (136, 9088), (147, 9163), (148, 9169), (166, 9301), (177, 9373), (179, 9376), (180, 9379), (186, 9406), (191, 9442), (199, 9493), (200, 9502), (205, 9538), (212, 9580), (218, 9625), (221, 9649), (231, 9703), (235, 9724), (267, 9898), (276, 9931), (285, 9961), (295, 10000), (297, 10012), (300, 10024), (311, 10069), (316, 10084), (320, 10096), (335, 10147), (368, 10222), (396, 10270), (400, 10291), (406, 10309), (417, 10339), (428, 10378), (435, 10402), (445, 10459), (450, 10489), (455, 10522), (473, 10618), (492, 10696), (495, 10714), (497, 10729), (515, 10807), (549, 10924), (550, 10930), (583, 11044), (584, 11047), (600, 11131), (614, 11173), (626, 11224), (630, 11257), (642, 11326), (658, 11383), (665, 11437), (666, 11440), (670, 11452), (680, 11491), (684, 11509), (688, 11521), (697, 11566), (703, 11581), (730, 11695), (738, 11746), (740, 11752), (744, 11770), (752, 11803), (756, 11821), (766, 11896), (774, 11932), (776, 11944), (785, 11965), (800, 12070), (801, 12076), (835, 12226), (837, 12238), (838, 12247), (845, 12286), (857, 12328), (870, 12388), (872, 12400), (923, 12427), (926, 12457), (929, 12493), (932, 12514), (943, 12628), (944, 12652), (954, 12895), (955, 12907), (957, 12925), (962, 13015), (966, 13258), (973, 13378), (978, 13540), (984, 13630), (986, 13648), (994, 13816), (997, 13867), (1001, 13921), (1004, 13936), (1008, 14032), (1011, 14062), (1015, 14101),

(1018, 14134), (1019, 14155), (1021, 14167), (1022, 14170), (1026, 14221), (1030, 14254), (1032, 14266),

Gene: Luke_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Luke_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Luna22_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Luna22_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Manilisa_21 Start: 12686, Stop: 18193, Start Num: 71

Candidate Starts for Manilisa_21:

(Start: 71 @12686 has 5 MA's), (83, 12764), (106, 12866), (107, 12869), (113, 12911), (123, 12995), (127, 13025), (128, 13037), (149, 13205), (157, 13262), (162, 13295), (175, 13394), (186, 13439), (200, 13541), (208, 13592), (214, 13643), (219, 13676), (241, 13802), (272, 13928), (300, 14039), (305, 14060), (313, 14090), (331, 14153), (338, 14186), (344, 14204), (348, 14213), (354, 14249),

(363, 14291), (369, 14312), (374, 14336), (387, 14375), (420, 14522), (435, 14585), (455, 14708), (460, 14729), (483, 14849), (499, 14933), (535, 15089), (542, 15107), (562, 15179), (571, 15212), (631, 15485), (656, 15596), (663, 15647), (665, 15656), (667, 15662), (673, 15683), (717, 15857), (743, 15971), (771, 16124), (783, 16190), (791, 16229), (792, 16238), (805, 16325), (810, 16364), (822, 16433), (825, 16439), (827, 16448), (828, 16451), (850, 16562), (854, 16583), (858, 16595), (859, 16598), (863, 16616), (892, 16997), (893, 17042), (895, 17078), (898, 17210), (903, 17429), (904, 17432), (908, 17513), (912, 17537), (916, 17621), (917, 17627), (920, 17702), (921, 17720), (922, 17798), (924, 17819), (927, 17843), (933, 17906), (937, 17942), (939, 17951), (940, 17957), (942, 18008),

Gene: Marteena_18 Start: 11003, Stop: 16657, Start Num: 62

Candidate Starts for Marteena_18:

(Start: 62 @11003 has 17 MA's), (67, 11036), (99, 11216), (103, 11228), (108, 11267), (Start: 109 @11276 has 1 MA's), (113, 11300), (115, 11309), (123, 11384), (128, 11426), (154, 11615), (156, 11633), (158, 11657), (163, 11687), (174, 11780), (175, 11783), (186, 11828), (187, 11834), (192, 11876), (200, 11930), (208, 11981), (210, 11993), (215, 12035), (232, 12140), (238, 12167), (246, 12224), (262, 12299), (272, 12338), (276, 12359), (280, 12374), (289, 12407), (299, 12449), (319, 12521), (320, 12524), (323, 12533), (344, 12617), (351, 12650), (352, 12653), (353, 12659), (355, 12668), (357, 12671), (362, 12716), (367, 12734), (371, 12743), (393, 12824), (394, 12827), (395, 12836), (407, 12890), (411, 12911), (426, 12977), (445, 13061), (455, 13124), (457, 13136), (487, 13274), (492, 13298), (495, 13316), (497, 13331), (504, 13358), (515, 13409), (522, 13442), (526, 13451), (532, 13466), (550, 13532), (551, 13535), (569, 13589), (570, 13598), (579, 13628), (626, 13802), (627, 13811), (633, 13850), (662, 13991), (678, 14063), (682, 14075), (697, 14144), (703, 14159), (705, 14165), (717, 14213), (724, 14240), (726, 14249), (738, 14324), (740, 14330), (744, 14348), (750, 14375), (800, 14699), (814, 14792), (823, 14834), (829, 14852), (923, 15104), (929, 15170), (932, 15191), (934, 15200), (936, 15227), (943, 15305), (944, 15329), (948, 15422), (949, 15446), (950, 15470), (954, 15575), (957, 15605), (963, 15698), (964, 15752), (969, 15854), (976, 15953), (998, 16256), (1008, 16403), (1011, 16433), (1014, 16469), (1015, 16472), (1024, 16547), (1032, 16643),

Gene: Meyran_19 Start: 12510, Stop: 18056, Start Num: 71

Candidate Starts for Meyran_19:

(Start: 71 @12510 has 5 MA's), (76, 12540), (83, 12588), (106, 12690), (107, 12693), (113, 12735), (123, 12819), (127, 12849), (128, 12861), (149, 13029), (157, 13086), (162, 13119), (175, 13218), (200, 13365), (208, 13416), (214, 13467), (219, 13500), (241, 13626), (272, 13752), (293, 13830), (305, 13884), (331, 13977), (338, 14010), (348, 14037), (354, 14073), (363, 14115), (369, 14136), (374, 14160), (387, 14199), (390, 14205), (420, 14346), (435, 14409), (455, 14532), (460, 14553), (483, 14673), (535, 14913), (542, 14931), (562, 15003), (571, 15036), (631, 15309), (656, 15420), (663, 15471), (665, 15480), (667, 15486), (673, 15507), (694, 15603), (717, 15681), (719, 15687), (743, 15807), (745, 15813), (771, 15984), (781, 16038), (783, 16050), (791, 16089), (792, 16098), (807, 16197), (810, 16224), (822, 16293), (827, 16308), (828, 16311), (850, 16422), (854, 16443), (858, 16455), (859, 16458), (869, 16515), (892, 16857), (893, 16902), (895, 16938), (898, 17070), (902, 17256), (903, 17289), (904, 17292), (908, 17373), (912, 17397), (916, 17481), (917, 17487), (920, 17562), (921, 17580), (922, 17658), (924, 17679), (927, 17703), (933, 17766), (937, 17802), (939, 17811), (940, 17817), (942, 17868),

Gene: Moonflower_17 Start: 10660, Stop: 16308, Start Num: 33

Candidate Starts for Moonflower_17:

(Start: 27 @10618 has 4 MA's), (31, 10648), (33, 10660), (38, 10735), (41, 10753), (55, 10873), (59, 10909), (96, 11128), (99, 11146), (103, 11158), (108, 11197), (Start: 109 @11206 has 1 MA's), (113, 11230), (123, 11314), (128, 11356), (158, 11587), (167, 11656), (175, 11713), (192, 11806), (200, 11860), (201, 11866), (203, 11875), (208, 11911), (210, 11923), (215, 11965), (228, 12052), (238, 12097), (263, 12238), (280, 12304), (282, 12310), (292, 12346), (299, 12379), (300, 12382), (316,

12442), (320, 12454), (324, 12466), (327, 12475), (334, 12517), (345, 12547), (351, 12565), (358, 12580), (395, 12640), (414, 12724), (421, 12754), (425, 12775), (430, 12790), (438, 12823), (459, 12946), (461, 12955), (464, 12967), (497, 13120), (515, 13198), (526, 13240), (540, 13282), (545, 13294), (551, 13324), (556, 13339), (569, 13378), (579, 13417), (586, 13447), (599, 13507), (626, 13591), (629, 13621), (648, 13714), (660, 13759), (677, 13852), (689, 13897), (709, 13960), (724, 14017), (727, 14029), (739, 14095), (747, 14128), (769, 14272), (775, 14293), (797, 14392), (801, 14425), (834, 14572), (835, 14575), (837, 14587), (840, 14608), (845, 14635), (871, 14752), (928, 14830), (930, 14851), (931, 14854), (932, 14872), (946, 15007), (953, 15178), (957, 15223), (969, 15475), (972, 15493), (985, 15664), (990, 15733), (994, 15826), (1002, 15934), (1004, 15946), (1006, 16042), (1007, 16048), (1011, 16081), (1012, 16084), (1013, 16105), (1016, 16147), (1017, 16150), (1020, 16186), (1027, 16261), (1028, 16267), (1029, 16270), (1032, 16297), (1033, 16300),

Gene: Morkie_16 Start: 8855, Stop: 14248, Start Num: 111

Candidate Starts for Morkie_16:

(Start: 109 @8849 has 1 MA's), (Start: 111 @8855 has 5 MA's), (127, 8975), (128, 8987), (136, 9053), (137, 9056), (147, 9128), (148, 9134), (162, 9230), (165, 9248), (166, 9266), (177, 9338), (179, 9341), (180, 9344), (186, 9371), (191, 9407), (199, 9458), (200, 9467), (205, 9503), (212, 9545), (218, 9590), (221, 9614), (231, 9668), (235, 9689), (267, 9863), (276, 9896), (285, 9926), (289, 9944), (295, 9965), (297, 9977), (300, 9989), (309, 10028), (311, 10034), (316, 10049), (320, 10061), (335, 10112), (343, 10133), (368, 10187), (396, 10235), (400, 10256), (406, 10274), (417, 10304), (428, 10343), (435, 10367), (445, 10424), (450, 10454), (455, 10487), (492, 10661), (495, 10679), (497, 10694), (504, 10721), (515, 10772), (545, 10868), (546, 10877), (549, 10889), (583, 11009), (584, 11012), (600, 11096), (626, 11189), (630, 11222), (642, 11291), (665, 11402), (666, 11405), (670, 11417), (680, 11456), (681, 11462), (684, 11474), (688, 11486), (697, 11531), (703, 11546), (706, 11555), (730, 11660), (738, 11711), (740, 11717), (752, 11768), (756, 11786), (766, 11861), (774, 11897), (776, 11909), (785, 11930), (800, 12035), (801, 12041), (835, 12191), (837, 12203), (838, 12212), (841, 12236), (870, 12353), (872, 12365), (923, 12392), (926, 12422), (929, 12458), (932, 12479), (943, 12593), (944, 12617), (949, 12725), (954, 12863), (957, 12893), (961, 12923), (962, 12983), (966, 13226), (971, 13316), (978, 13508), (984, 13598), (986, 13616), (994, 13784), (997, 13835), (1001, 13889), (1004, 13904), (1008, 14000), (1011, 14030), (1015, 14069), (1018, 14102), (1019, 14123), (1021, 14135), (1022, 14138), (1030, 14222), (1032, 14234),

Gene: MortyNRick_17 Start: 9908, Stop: 15370, Start Num: 104

Candidate Starts for MortyNRick_17:

(Start: 104 @9908 has 3 MA's), (113, 9965), (116, 9983), (127, 10067), (128, 10079), (129, 10091), (132, 10115), (136, 10145), (143, 10190), (147, 10220), (148, 10226), (158, 10295), (162, 10322), (165, 10340), (166, 10358), (169, 10370), (170, 10379), (177, 10430), (179, 10433), (180, 10436), (185, 10460), (186, 10463), (199, 10550), (200, 10559), (212, 10637), (218, 10682), (221, 10706), (226, 10739), (227, 10742), (242, 10829), (245, 10850), (267, 10955), (275, 10982), (282, 11009), (289, 11036), (290, 11039), (300, 11081), (304, 11099), (305, 11102), (327, 11174), (334, 11216), (341, 11237), (351, 11264), (356, 11273), (367, 11288), (375, 11306), (395, 11339), (400, 11372), (410, 11405), (411, 11414), (414, 11423), (420, 11444), (424, 11468), (428, 11483), (434, 11504), (435, 11507), (445, 11564), (450, 11594), (455, 11627), (492, 11801), (497, 11834), (504, 11861), (510, 11888), (513, 11906), (530, 11966), (545, 12008), (549, 12029), (565, 12080), (570, 12101), (583, 12149), (584, 12152), (618, 12290), (626, 12329), (632, 12371), (642, 12431), (650, 12458), (655, 12479), (664, 12536), (670, 12557), (688, 12629), (696, 12671), (697, 12674), (709, 12707), (717, 12743), (730, 12803), (738, 12854), (740, 12860), (741, 12869), (744, 12878), (752, 12911), (756, 12929), (761, 12959), (803, 13154), (804, 13157), (823, 13238), (829, 13256), (835, 13289), (837, 13301), (842, 13337), (851, 13373), (857, 13397), (860, 13400), (865, 13421), (870, 13457), (872, 13469), (923, 13496), (925, 13514), (926, 13526), (929, 13562), (932, 13583), (941, 13673), (943, 13697), (944, 13721), (949, 13829), (952, 13952), (954, 13976), (957, 14006), (958, 14009), (961, 14036), (966, 14339), (969, 14420), (970, 14423), (971, 14429), (975, 14594), (977, 14612), (978, 14621), (980, 14666), (981, 14678), (984, 14714), (986, 14732), (992, 14831), (995, 14936),

(997, 14957), (1001, 15011), (1005, 15050), (1008, 15122), (1011, 15152), (1015, 15191), (1018, 15224), (1023, 15263), (1026, 15311), (1030, 15344), (1032, 15356),

Gene: Nebkiss_13 Start: 9453, Stop: 13316, Start Num: 10

Candidate Starts for Nebkiss_13:

(Start: 10 @9453 has 2 MA's), (20, 9519), (30, 9630), (39, 9714), (46, 9786), (53, 9816), (66, 9891), (86, 10011), (112, 10140), (113, 10143), (123, 10227), (130, 10290), (131, 10296), (139, 10356), (141, 10368), (146, 10404), (154, 10458), (157, 10494), (158, 10500), (171, 10584), (172, 10587), (173, 10593), (176, 10635), (178, 10641), (190, 10698), (192, 10719), (194, 10731), (201, 10779), (208, 10824), (268, 11115), (270, 11118), (279, 11154), (281, 11160), (282, 11163), (288, 11187), (297, 11220), (301, 11238), (333, 11358), (342, 11391), (376, 11526), (388, 11562), (397, 11595), (444, 11808), (466, 11907), (472, 11958), (487, 12006), (491, 12024), (493, 12030), (504, 12072), (507, 12081), (519, 12084), (526, 12108), (548, 12144), (578, 12234), (596, 12282), (601, 12285), (628, 12321), (657, 12387), (670, 12441), (690, 12480), (695, 12489), (700, 12504), (758, 12708), (759, 12717), (788, 12873), (799, 12945), (809, 12993), (811, 13017), (815, 13038), (816, 13041), (820, 13062), (852, 13203), (853, 13212), (855, 13218),

Gene: NovoPizza_17 Start: 12303, Stop: 16601, Start Num: 8

Candidate Starts for NovoPizza_17:

(Start: 8 @12303 has 24 MA's), (17, 12354), (32, 12498), (35, 12519), (37, 12549), (44, 12627), (50, 12666), (51, 12669), (52, 12672), (Start: 71 @12795 has 5 MA's), (73, 12807), (79, 12846), (82, 12855), (88, 12903), (95, 12939), (96, 12942), (107, 13002), (113, 13044), (117, 13074), (123, 13128), (126, 13152), (128, 13170), (140, 13260), (149, 13338), (151, 13347), (153, 13353), (154, 13359), (156, 13377), (164, 13440), (167, 13470), (188, 13587), (189, 13590), (190, 13599), (192, 13620), (200, 13674), (202, 13686), (206, 13713), (213, 13767), (215, 13782), (220, 13824), (223, 13845), (230, 13878), (240, 13920), (257, 13986), (270, 14040), (271, 14043), (277, 14064), (296, 14121), (314, 14196), (321, 14217), (336, 14283), (342, 14301), (347, 14310), (359, 14376), (372, 14415), (403, 14538), (405, 14556), (412, 14583), (450, 14745), (470, 14847), (471, 14856), (482, 14910), (488, 14925), (508, 15015), (509, 15018), (514, 15036), (543, 15123), (568, 15210), (569, 15213), (581, 15252), (593, 15303), (621, 15402), (641, 15495), (644, 15510), (653, 15540), (679, 15663), (720, 15810), (729, 15852), (733, 15873), (778, 16107), (792, 16182), (818, 16332), (819, 16347), (833, 16401), (836, 16413), (848, 16476), (851, 16491), (861, 16530),

Gene: Nyceirae_21 Start: 12425, Stop: 17932, Start Num: 71

Candidate Starts for Nyceirae_21:

(Start: 71 @12425 has 5 MA's), (83, 12503), (106, 12605), (107, 12608), (113, 12650), (123, 12734), (127, 12764), (128, 12776), (149, 12944), (157, 13001), (158, 13007), (162, 13034), (175, 13133), (200, 13280), (208, 13331), (214, 13382), (219, 13415), (252, 13586), (254, 13592), (269, 13661), (272, 13667), (293, 13745), (300, 13778), (303, 13793), (305, 13799), (313, 13829), (331, 13892), (338, 13925), (348, 13952), (354, 13988), (363, 14030), (369, 14051), (387, 14114), (390, 14120), (420, 14261), (435, 14324), (460, 14468), (483, 14588), (496, 14648), (499, 14672), (535, 14828), (542, 14846), (562, 14918), (571, 14951), (573, 14957), (603, 15095), (631, 15224), (656, 15335), (663, 15386), (665, 15395), (667, 15401), (673, 15422), (685, 15473), (694, 15518), (712, 15569), (761, 15773), (771, 15866), (783, 15932), (791, 15971), (792, 15980), (805, 16067), (807, 16079), (810, 16106), (812, 16121), (822, 16175), (825, 16181), (827, 16190), (828, 16193), (835, 16226), (850, 16304), (854, 16325), (858, 16337), (859, 16340), (863, 16358), (869, 16397), (892, 16739), (893, 16784), (895, 16820), (898, 16952), (899, 16967), (900, 17003), (902, 17135), (903, 17168), (905, 17195), (912, 17276), (916, 17360), (917, 17366), (918, 17390), (919, 17426), (922, 17537), (924, 17558), (927, 17582), (933, 17645), (937, 17681), (938, 17687), (939, 17690), (942, 17747),

Gene: OBUpride_20 Start: 12216, Stop: 16295, Start Num: 8

Candidate Starts for OBUpride_20:

(Start: 8 @12216 has 24 MA's), (13, 12240), (14, 12246), (19, 12279), (35, 12432), (37, 12462), (40, 12492), (43, 12522), (44, 12540), (47, 12561), (56, 12603), (60, 12636), (72, 12702), (73, 12705), (78, 12732), (84, 12777), (93, 12825), (113, 12942), (117, 12972), (123, 13026), (125, 13035), (126, 13050), (128, 13068), (130, 13089), (131, 13095), (133, 13113), (138, 13152), (141, 13167), (146, 13203), (149, 13236), (153, 13251), (156, 13275), (157, 13293), (159, 13311), (161, 13320), (164, 13338), (167, 13368), (171, 13383), (176, 13434), (188, 13485), (189, 13488), (190, 13497), (192, 13518), (197, 13551), (198, 13554), (200, 13572), (202, 13584), (210, 13635), (213, 13665), (215, 13680), (216, 13689), (220, 13722), (222, 13731), (223, 13743), (228, 13767), (230, 13776), (236, 13800), (240, 13818), (259, 13896), (260, 13899), (261, 13902), (266, 13929), (271, 13941), (276, 13959), (279, 13971), (280, 13974), (287, 13992), (288, 14001), (310, 14082), (318, 14106), (336, 14181), (338, 14187), (350, 14229), (359, 14274), (370, 14307), (372, 14313), (401, 14421), (404, 14433), (405, 14448), (423, 14511), (427, 14523), (435, 14544), (442, 14574), (448, 14616), (450, 14619), (470, 14712), (478, 14745), (490, 14784), (494, 14796), (498, 14817), (524, 14886), (525, 14889), (539, 14925), (544, 14937), (547, 14952), (554, 14976), (555, 14979), (582, 15057), (585, 15066), (596, 15114), (606, 15147), (619, 15174), (636, 15255), (661, 15318), (668, 15360), (691, 15435), (720, 15534), (729, 15576), (746, 15654), (760, 15717), (765, 15759), (778, 15819), (780, 15837), (786, 15867), (789, 15876), (790, 15882), (793, 15897), (813, 16017), (818, 16035), (819, 16050), (821, 16053), (826, 16071), (836, 16119), (839, 16134), (846, 16167), (851, 16185), (861, 16224), (864, 16233), (866, 16245), (868, 16263), (874, 16287),

Gene: ODay_22 Start: 12098, Stop: 17611, Start Num: 105

Candidate Starts for ODay_22:

(Start: 105 @12098 has 2 MA's), (Start: 109 @12131 has 1 MA's), (Start: 111 @12137 has 5 MA's), (127, 12257), (128, 12269), (136, 12335), (147, 12410), (158, 12485), (162, 12512), (165, 12530), (166, 12548), (169, 12560), (170, 12569), (179, 12623), (180, 12626), (185, 12650), (186, 12653), (199, 12740), (200, 12749), (212, 12827), (218, 12872), (221, 12896), (227, 12932), (242, 13019), (245, 13040), (259, 13109), (267, 13145), (275, 13172), (282, 13199), (289, 13226), (290, 13229), (300, 13271), (304, 13289), (305, 13292), (334, 13406), (341, 13427), (351, 13454), (356, 13463), (367, 13478), (395, 13529), (400, 13562), (410, 13595), (411, 13604), (414, 13613), (424, 13658), (426, 13670), (428, 13673), (434, 13694), (435, 13697), (445, 13754), (450, 13784), (479, 13943), (480, 13946), (487, 13967), (492, 13991), (497, 14024), (510, 14078), (512, 14093), (545, 14198), (549, 14219), (551, 14228), (583, 14339), (584, 14342), (626, 14519), (632, 14561), (642, 14621), (643, 14630), (655, 14669), (662, 14708), (664, 14726), (670, 14747), (677, 14780), (688, 14819), (709, 14897), (717, 14933), (730, 14993), (738, 15044), (740, 15050), (753, 15104), (770, 15230), (777, 15257), (817, 15464), (829, 15518), (838, 15572), (860, 15656), (870, 15713), (923, 15752), (929, 15818), (932, 15839), (936, 15875), (939, 15890), (943, 15953), (944, 15977), (948, 16067), (949, 16091), (950, 16115), (951, 16190), (952, 16202), (954, 16226), (956, 16247), (957, 16256), (961, 16286), (962, 16346), (966, 16589), (969, 16670), (970, 16673), (971, 16679), (975, 16844), (977, 16862), (978, 16871), (980, 16916), (981, 16928), (984, 16961), (986, 16979), (992, 17072), (995, 17177), (997, 17198), (1001, 17252), (1005, 17291), (1008, 17363), (1011, 17393), (1015, 17432), (1018, 17465), (1023, 17504), (1026, 17552), (1030, 17585), (1032, 17597),

Gene: PatriciaStar_16 Start: 10219, Stop: 15909, Start Num: 27

Candidate Starts for PatriciaStar_16:

(Start: 27 @10219 has 4 MA's), (31, 10249), (36, 10303), (41, 10354), (49, 10444), (59, 10510), (99, 10747), (103, 10759), (108, 10798), (Start: 109 @10807 has 1 MA's), (113, 10831), (123, 10915), (128, 10957), (158, 11188), (167, 11257), (175, 11314), (192, 11407), (200, 11461), (204, 11488), (208, 11512), (210, 11524), (215, 11566), (235, 11686), (238, 11698), (263, 11839), (300, 11983), (305, 12004), (320, 12055), (324, 12067), (334, 12118), (351, 12166), (358, 12181), (395, 12241), (421, 12355), (425, 12376), (434, 12406), (438, 12424), (450, 12496), (459, 12547), (464, 12568), (501, 12736), (509, 12772), (522, 12832), (526, 12841), (540, 12883), (545, 12895), (551, 12925), (556, 12940), (569, 12979), (579, 13018), (586, 13048), (599, 13108), (626, 13192), (629, 13222), (648, 13315), (660, 13360), (677, 13453), (689, 13498), (709, 13561), (716, 13585), (724, 13618), (725,

13621), (727, 13630), (739, 13696), (747, 13729), (767, 13864), (769, 13873), (772, 13882), (775, 13894), (797, 13993), (801, 14026), (834, 14173), (835, 14176), (837, 14188), (840, 14209), (845, 14236), (871, 14353), (928, 14431), (930, 14452), (932, 14473), (946, 14608), (957, 14824), (961, 14854), (969, 15076), (972, 15094), (990, 15334), (994, 15427), (1002, 15535), (1003, 15541), (1007, 15649), (1013, 15706), (1016, 15748), (1017, 15751), (1020, 15787), (1027, 15862), (1028, 15868), (1029, 15871), (1032, 15898), (1033, 15901),

Gene: Phishy_20 Start: 12376, Stop: 17922, Start Num: 71

Candidate Starts for Phishy_20:

(Start: 71 @12376 has 5 MA's), (76, 12406), (83, 12454), (106, 12556), (107, 12559), (113, 12601), (123, 12685), (127, 12715), (128, 12727), (149, 12895), (157, 12952), (162, 12985), (175, 13084), (186, 13129), (200, 13231), (208, 13282), (214, 13333), (219, 13366), (241, 13492), (272, 13618), (300, 13729), (305, 13750), (313, 13780), (331, 13843), (338, 13876), (344, 13894), (348, 13903), (354, 13939), (363, 13981), (369, 14002), (374, 14026), (387, 14065), (420, 14212), (435, 14275), (455, 14398), (460, 14419), (483, 14539), (499, 14623), (535, 14779), (542, 14797), (562, 14869), (571, 14902), (631, 15175), (656, 15286), (663, 15337), (665, 15346), (667, 15352), (673, 15373), (694, 15469), (711, 15517), (717, 15547), (719, 15553), (743, 15673), (771, 15850), (783, 15916), (791, 15955), (792, 15964), (805, 16051), (810, 16090), (822, 16159), (825, 16165), (827, 16174), (828, 16177), (850, 16288), (854, 16309), (858, 16321), (859, 16324), (863, 16342), (892, 16723), (893, 16768), (895, 16804), (898, 16936), (902, 17122), (903, 17155), (904, 17158), (908, 17239), (912, 17263), (916, 17347), (917, 17353), (920, 17428), (921, 17446), (922, 17524), (924, 17545), (927, 17569), (933, 17632), (937, 17668), (939, 17677), (940, 17683), (942, 17734),

Gene: PhorbesPhlower_16 Start: 8855, Stop: 14248, Start Num: 111

Candidate Starts for PhorbesPhlower_16:

(Start: 109 @8849 has 1 MA's), (Start: 111 @8855 has 5 MA's), (127, 8975), (128, 8987), (136, 9053), (137, 9056), (147, 9128), (148, 9134), (162, 9230), (165, 9248), (166, 9266), (177, 9338), (179, 9341), (180, 9344), (186, 9371), (191, 9407), (199, 9458), (200, 9467), (205, 9503), (212, 9545), (218, 9590), (221, 9614), (231, 9668), (235, 9689), (267, 9863), (276, 9896), (285, 9926), (289, 9944), (295, 9965), (297, 9977), (300, 9989), (309, 10028), (311, 10034), (316, 10049), (320, 10061), (335, 10112), (343, 10133), (368, 10187), (396, 10235), (400, 10256), (406, 10274), (417, 10304), (428, 10343), (435, 10367), (445, 10424), (450, 10454), (455, 10487), (492, 10661), (495, 10679), (497, 10694), (504, 10721), (515, 10772), (545, 10868), (546, 10877), (549, 10889), (583, 11009), (584, 11012), (600, 11096), (626, 11189), (630, 11222), (642, 11291), (665, 11402), (666, 11405), (670, 11417), (680, 11456), (681, 11462), (684, 11474), (688, 11486), (697, 11531), (703, 11546), (706, 11555), (730, 11660), (738, 11711), (740, 11717), (752, 11768), (756, 11786), (766, 11861), (774, 11897), (776, 11909), (785, 11930), (800, 12035), (801, 12041), (835, 12191), (837, 12203), (838, 12212), (841, 12236), (870, 12353), (872, 12365), (923, 12392), (926, 12422), (929, 12458), (932, 12479), (943, 12593), (944, 12617), (949, 12725), (954, 12863), (957, 12893), (961, 12923), (962, 12983), (966, 13226), (971, 13316), (978, 13508), (984, 13598), (986, 13616), (994, 13784), (997, 13835), (1001, 13889), (1004, 13904), (1008, 14000), (1011, 14030), (1015, 14069), (1018, 14102), (1019, 14123), (1021, 14135), (1022, 14138), (1030, 14222), (1032, 14234),

Gene: Pollux_18 Start: 11003, Stop: 16657, Start Num: 62

Candidate Starts for Pollux_18:

(Start: 62 @11003 has 17 MA's), (67, 11036), (99, 11216), (103, 11228), (108, 11267), (Start: 109 @11276 has 1 MA's), (113, 11300), (115, 11309), (123, 11384), (128, 11426), (154, 11615), (156, 11633), (158, 11657), (163, 11687), (174, 11780), (175, 11783), (186, 11828), (187, 11834), (192, 11876), (200, 11930), (208, 11981), (210, 11993), (215, 12035), (232, 12140), (238, 12167), (246, 12224), (262, 12299), (272, 12338), (276, 12359), (280, 12374), (289, 12407), (299, 12449), (319, 12521), (320, 12524), (323, 12533), (344, 12617), (351, 12650), (352, 12653), (353, 12659), (355, 12668), (357, 12671), (362, 12716), (367, 12734), (371, 12743), (393, 12824), (394, 12827), (395, 12836), (407, 12890), (411, 12911), (426, 12977), (445, 13061), (455, 13124), (457, 13136), (487,

13274), (492, 13298), (495, 13316), (497, 13331), (504, 13358), (515, 13409), (522, 13442), (526, 13451), (532, 13466), (550, 13532), (551, 13535), (569, 13589), (570, 13598), (579, 13628), (626, 13802), (627, 13811), (633, 13850), (662, 13991), (678, 14063), (682, 14075), (697, 14144), (703, 14159), (705, 14165), (717, 14213), (724, 14240), (726, 14249), (738, 14324), (740, 14330), (744, 14348), (750, 14375), (800, 14699), (814, 14792), (823, 14834), (829, 14852), (923, 15104), (929, 15170), (932, 15191), (934, 15200), (936, 15227), (943, 15305), (944, 15329), (948, 15422), (949, 15446), (950, 15470), (954, 15575), (957, 15605), (963, 15698), (964, 15752), (969, 15854), (976, 15953), (998, 16256), (1008, 16403), (1011, 16433), (1014, 16469), (1015, 16472), (1024, 16547), (1032, 16643),

Gene: Posh_18 Start: 11000, Stop: 16621, Start Num: 62

Candidate Starts for Posh_18:

(48, 10904), (Start: 62 @11000 has 17 MA's), (67, 11033), (99, 11213), (103, 11225), (108, 11264), (Start: 109 @11273 has 1 MA's), (113, 11297), (115, 11306), (123, 11381), (128, 11423), (154, 11612), (156, 11630), (158, 11654), (163, 11684), (175, 11780), (187, 11831), (192, 11873), (200, 11927), (208, 11978), (210, 11990), (215, 12032), (232, 12137), (238, 12164), (246, 12221), (262, 12296), (272, 12335), (276, 12356), (280, 12371), (289, 12404), (299, 12446), (319, 12518), (320, 12521), (323, 12530), (331, 12563), (344, 12614), (351, 12647), (352, 12650), (353, 12656), (355, 12665), (357, 12668), (362, 12713), (367, 12731), (371, 12740), (393, 12821), (394, 12824), (395, 12833), (407, 12887), (411, 12908), (426, 12974), (445, 13058), (455, 13121), (457, 13133), (481, 13253), (492, 13295), (497, 13328), (504, 13355), (515, 13406), (522, 13439), (526, 13448), (532, 13463), (551, 13532), (569, 13586), (570, 13595), (579, 13625), (599, 13715), (626, 13799), (662, 13988), (665, 14012), (675, 14051), (678, 14060), (682, 14072), (705, 14162), (717, 14210), (730, 14270), (738, 14321), (740, 14327), (750, 14372), (763, 14435), (767, 14495), (768, 14501), (800, 14693), (830, 14828), (923, 15068), (929, 15134), (932, 15155), (934, 15164), (936, 15191), (943, 15269), (944, 15293), (948, 15386), (950, 15434), (954, 15539), (955, 15551), (957, 15569), (958, 15572), (963, 15662), (964, 15716), (965, 15740), (969, 15818), (976, 15917), (998, 16220), (999, 16241), (1008, 16367), (1011, 16397), (1014, 16433), (1015, 16436), (1024, 16511), (1032, 16607),

Gene: Pytheas_18 Start: 11131, Stop: 16767, Start Num: 62

Candidate Starts for Pytheas_18:

(Start: 62 @11131 has 17 MA's), (67, 11164), (99, 11344), (103, 11356), (108, 11395), (Start: 109 @11404 has 1 MA's), (113, 11428), (115, 11437), (123, 11512), (128, 11554), (154, 11743), (156, 11761), (158, 11785), (163, 11815), (168, 11857), (174, 11908), (175, 11911), (187, 11962), (192, 12004), (200, 12058), (208, 12109), (210, 12121), (215, 12163), (232, 12268), (238, 12295), (246, 12352), (262, 12427), (272, 12466), (276, 12487), (280, 12502), (289, 12535), (299, 12577), (319, 12649), (320, 12652), (323, 12661), (344, 12745), (351, 12778), (352, 12781), (353, 12787), (355, 12796), (357, 12799), (362, 12844), (367, 12862), (371, 12871), (394, 12955), (395, 12964), (407, 13018), (411, 13039), (420, 13069), (426, 13105), (445, 13189), (455, 13252), (457, 13264), (487, 13402), (492, 13426), (495, 13444), (497, 13459), (502, 13477), (504, 13486), (515, 13537), (522, 13570), (526, 13579), (532, 13594), (550, 13660), (551, 13663), (569, 13717), (570, 13726), (579, 13756), (599, 13846), (626, 13930), (629, 13960), (662, 14119), (665, 14143), (675, 14182), (678, 14191), (682, 14203), (705, 14293), (717, 14341), (726, 14377), (730, 14401), (738, 14452), (740, 14458), (750, 14503), (763, 14566), (800, 14827), (830, 14962), (923, 15202), (929, 15268), (932, 15289), (934, 15298), (936, 15325), (943, 15403), (944, 15427), (948, 15520), (950, 15568), (954, 15673), (955, 15685), (957, 15703), (963, 15796), (964, 15850), (965, 15874), (969, 15952), (976, 16051), (989, 16198), (999, 16387), (1008, 16513), (1011, 16543), (1014, 16579), (1015, 16582), (1032, 16753),

Gene: RayTheFireFly_17 Start: 10898, Stop: 16588, Start Num: 27

Candidate Starts for RayTheFireFly_17:

(Start: 27 @10898 has 4 MA's), (31, 10928), (41, 11033), (55, 11153), (59, 11189), (99, 11426), (103, 11438), (108, 11477), (Start: 109 @11486 has 1 MA's), (113, 11510), (123, 11594), (128, 11636), (158,

11867), (167, 11936), (175, 11993), (192, 12086), (200, 12140), (208, 12191), (210, 12203), (215, 12245), (238, 12377), (263, 12518), (280, 12584), (282, 12590), (292, 12626), (299, 12659), (300, 12662), (316, 12722), (320, 12734), (324, 12746), (327, 12755), (334, 12797), (345, 12827), (351, 12845), (358, 12860), (395, 12920), (414, 13004), (421, 13034), (425, 13055), (430, 13070), (438, 13103), (459, 13226), (461, 13235), (464, 13247), (497, 13400), (515, 13478), (526, 13520), (540, 13562), (545, 13574), (551, 13604), (556, 13619), (569, 13658), (579, 13697), (586, 13727), (599, 13787), (626, 13871), (629, 13901), (648, 13994), (660, 14039), (677, 14132), (689, 14177), (701, 14219), (709, 14240), (716, 14264), (724, 14297), (727, 14309), (739, 14375), (747, 14408), (769, 14552), (775, 14573), (797, 14672), (801, 14705), (834, 14852), (835, 14855), (837, 14867), (840, 14888), (845, 14915), (871, 15032), (928, 15110), (930, 15131), (931, 15134), (953, 15458), (957, 15503), (969, 15755), (972, 15773), (982, 15920), (990, 16013), (994, 16106), (1002, 16214), (1003, 16220), (1006, 16322), (1007, 16328), (1011, 16361), (1012, 16364), (1013, 16385), (1016, 16427), (1017, 16430), (1020, 16466), (1027, 16541), (1028, 16547), (1029, 16550), (1032, 16577), (1033, 16580),

Gene: Stellammi_13 Start: 8345, Stop: 12694, Start Num: 9

Candidate Starts for Stellammi_13:

(Start: 9 @8345 has 1 MA's), (18, 8393), (21, 8423), (23, 8450), (53, 8711), (68, 8789), (86, 8903), (107, 8993), (113, 9035), (118, 9077), (119, 9083), (123, 9119), (128, 9161), (130, 9182), (141, 9260), (145, 9293), (150, 9332), (151, 9338), (154, 9350), (163, 9422), (172, 9479), (178, 9533), (190, 9590), (194, 9623), (208, 9716), (210, 9728), (213, 9755), (237, 9899), (255, 10001), (259, 10025), (274, 10082), (276, 10091), (288, 10130), (304, 10172), (332, 10271), (339, 10304), (340, 10307), (386, 10481), (398, 10523), (440, 10700), (445, 10733), (474, 10889), (484, 10928), (487, 10937), (490, 10955), (495, 10976), (516, 11090), (519, 11099), (548, 11195), (552, 11213), (557, 11222), (566, 11249), (587, 11336), (589, 11345), (596, 11381), (604, 11414), (611, 11438), (613, 11444), (617, 11456), (640, 11585), (657, 11663), (659, 11672), (671, 11741), (676, 11765), (702, 11861), (708, 11882), (735, 12002), (737, 12014), (741, 12035), (797, 12320), (798, 12329), (799, 12341), (808, 12380), (820, 12458), (843, 12560), (856, 12605),

Gene: Typha_22 Start: 14030, Stop: 18613, Start Num: 7

Candidate Starts for Typha_22:

(Start: 7 @14030 has 7 MA's), (12, 14057), (16, 14081), (24, 14165), (25, 14177), (29, 14219), (44, 14378), (57, 14438), (58, 14441), (69, 14471), (74, 14495), (77, 14513), (94, 14612), (95, 14618), (98, 14630), (102, 14648), (108, 14669), (Start: 109 @14678 has 1 MA's), (113, 14702), (123, 14786), (124, 14789), (128, 14828), (130, 14849), (141, 14927), (142, 14930), (145, 14960), (152, 15008), (156, 15035), (158, 15059), (159, 15071), (160, 15077), (161, 15080), (170, 15140), (175, 15185), (182, 15215), (183, 15218), (192, 15281), (196, 15308), (198, 15317), (202, 15347), (208, 15386), (213, 15425), (215, 15440), (218, 15461), (224, 15512), (225, 15515), (235, 15560), (244, 15623), (251, 15650), (274, 15752), (277, 15764), (286, 15797), (297, 15842), (306, 15881), (307, 15884), (326, 15941), (331, 15968), (338, 16001), (340, 16007), (347, 16022), (365, 16106), (373, 16139), (376, 16145), (393, 16193), (439, 16394), (447, 16436), (458, 16490), (462, 16505), (485, 16610), (500, 16682), (505, 16712), (537, 16838), (548, 16880), (562, 16925), (576, 16973), (577, 16976), (593, 17045), (594, 17051), (598, 17066), (622, 17159), (627, 17177), (634, 17225), (638, 17249), (639, 17255), (654, 17321), (669, 17405), (671, 17414), (675, 17432), (687, 17477), (699, 17525), (710, 17552), (730, 17639), (736, 17669), (754, 17747), (787, 17948), (795, 17987), (823, 18155), (824, 18158), (830, 18185), (875, 18374), (877, 18407), (878, 18416), (881, 18449), (885, 18545), (888, 18569), (889, 18590), (891, 18599),

Gene: Ubuntu_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Ubuntu_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126,

13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Vordorf_20 Start: 11980, Stop: 17523, Start Num: 71

Candidate Starts for Vordorf_20:

(Start: 71 @11980 has 5 MA's), (83, 12058), (106, 12160), (107, 12163), (113, 12205), (123, 12289), (127, 12319), (128, 12331), (149, 12499), (157, 12556), (162, 12589), (175, 12688), (200, 12835), (208, 12886), (214, 12937), (219, 12970), (241, 13096), (272, 13222), (293, 13300), (305, 13354), (331, 13447), (338, 13480), (348, 13507), (354, 13543), (363, 13585), (369, 13606), (374, 13630), (387, 13669), (390, 13675), (420, 13816), (435, 13879), (455, 14002), (460, 14023), (483, 14143), (499, 14227), (535, 14383), (542, 14401), (562, 14473), (571, 14506), (631, 14779), (656, 14890), (663, 14941), (665, 14950), (667, 14956), (673, 14977), (694, 15073), (711, 15121), (717, 15151), (719, 15157), (743, 15277), (771, 15454), (783, 15520), (791, 15559), (792, 15568), (805, 15655), (810, 15694), (822, 15763), (825, 15769), (827, 15778), (828, 15781), (850, 15892), (854, 15913), (858, 15925), (859, 15928), (863, 15946), (892, 16327), (893, 16372), (895, 16408), (898, 16540), (902, 16723), (903, 16756), (904, 16759), (908, 16840), (912, 16864), (916, 16948), (917, 16954), (920, 17029), (921, 17047), (922, 17125), (924, 17146), (927, 17170), (933, 17233), (937, 17269), (940, 17284), (942, 17335),

Gene: Webster2_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Webster2_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861,

16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Weirdo19_17 Start: 10901, Stop: 14980, Start Num: 7

Candidate Starts for Weirdo19_17:

(Start: 7 @10901 has 7 MA's), (17, 10958), (20, 10982), (54, 11345), (69, 11447), (75, 11480), (81, 11510), (86, 11549), (87, 11558), (90, 11567), (91, 11570), (92, 11576), (106, 11657), (113, 11702), (115, 11711), (121, 11759), (123, 11786), (126, 11810), (128, 11828), (130, 11849), (149, 11996), (153, 12011), (156, 12035), (162, 12086), (164, 12098), (167, 12128), (184, 12224), (188, 12245), (189, 12248), (192, 12278), (197, 12311), (200, 12332), (202, 12344), (210, 12395), (213, 12422), (215, 12437), (224, 12509), (248, 12611), (268, 12692), (276, 12713), (297, 12779), (298, 12785), (302, 12803), (303, 12806), (306, 12818), (313, 12842), (317, 12854), (320, 12863), (336, 12929), (347, 12956), (349, 12968), (364, 13034), (375, 13076), (379, 13088), (382, 13100), (388, 13112), (402, 13166), (449, 13352), (453, 13373), (456, 13397), (467, 13421), (470, 13442), (471, 13451), (475, 13472), (491, 13526), (495, 13541), (529, 13640), (541, 13676), (554, 13724), (561, 13742), (563, 13751), (564, 13754), (592, 13844), (602, 13892), (628, 13973), (649, 14030), (652, 14042), (656, 14054), (675, 14147), (683, 14174), (686, 14186), (692, 14210), (746, 14387), (792, 14609), (821, 14756), (823, 14765), (826, 14774), (832, 14795), (833, 14798), (862, 14903), (864, 14909), (873, 14966), (875, 14969),

Gene: Wishmaker_20 Start: 12222, Stop: 16301, Start Num: 8

Candidate Starts for Wishmaker_20:

(Start: 8 @12222 has 24 MA's), (13, 12246), (14, 12252), (19, 12285), (35, 12438), (37, 12468), (40, 12498), (43, 12528), (44, 12546), (47, 12567), (56, 12609), (60, 12642), (72, 12708), (73, 12711), (78, 12738), (84, 12783), (93, 12831), (113, 12948), (117, 12978), (123, 13032), (125, 13041), (126, 13056), (128, 13074), (130, 13095), (131, 13101), (133, 13119), (138, 13158), (141, 13173), (146, 13209), (149, 13242), (153, 13257), (156, 13281), (157, 13299), (159, 13317), (161, 13326), (164, 13344), (167, 13374), (171, 13389), (176, 13440), (188, 13491), (189, 13494), (190, 13503), (192, 13524), (197, 13557), (198, 13560), (200, 13578), (202, 13590), (210, 13641), (213, 13671), (215, 13686), (216, 13695), (220, 13728), (222, 13737), (223, 13749), (228, 13773), (230, 13782), (236, 13806), (240, 13824), (259, 13902), (260, 13905), (261, 13908), (266, 13935), (271, 13947), (276, 13965), (279, 13977), (280, 13980), (287, 13998), (288, 14007), (310, 14088), (318, 14112), (336, 14187), (338, 14193), (350, 14235), (359, 14280), (370, 14313), (372, 14319), (401, 14427), (404, 14439), (405, 14454), (423, 14517), (427, 14529), (435, 14550), (442, 14580), (448, 14622), (450, 14625), (470, 14718), (478, 14751), (490, 14790), (494, 14802), (498, 14823), (524, 14892), (525, 14895), (539, 14931), (544, 14943), (547, 14958), (554, 14982), (555, 14985), (582, 15063), (585, 15072), (596, 15120), (606, 15153), (619, 15180), (636, 15261), (661, 15324), (668, 15366), (691, 15441), (720, 15540), (729, 15582), (746, 15660), (760, 15723), (765, 15765), (778, 15825), (780, 15843), (786, 15873), (789, 15882), (790, 15888), (793, 15903), (813, 16023), (818, 16041), (819, 16056), (821, 16059), (826, 16077), (836, 16125), (839, 16140), (846, 16173), (851, 16191), (861, 16230), (864, 16239), (866, 16251), (868, 16269), (874, 16293),

Gene: Wrigley_18 Start: 10897, Stop: 16518, Start Num: 62

Candidate Starts for Wrigley_18:

(Start: 62 @10897 has 17 MA's), (67, 10930), (99, 11110), (103, 11122), (108, 11161), (Start: 109 @11170 has 1 MA's), (113, 11194), (115, 11203), (123, 11278), (128, 11320), (154, 11509), (156, 11527), (158, 11551), (163, 11581), (168, 11623), (175, 11677), (187, 11728), (192, 11770), (200, 11824), (208, 11875), (210, 11887), (215, 11929), (232, 12034), (238, 12061), (246, 12118), (262, 12193), (272, 12232), (276, 12253), (280, 12268), (289, 12301), (299, 12343), (319, 12415), (320, 12418), (323, 12427), (331, 12460), (344, 12511), (351, 12544), (352, 12547), (353, 12553), (355, 12562), (357, 12565), (362, 12610), (367, 12628), (371, 12637), (393, 12718), (394, 12721), (395, 12730), (407, 12784), (411, 12805), (426, 12871), (445, 12955), (455, 13018), (457, 13030), (481, 13150), (492, 13192), (497, 13225), (504, 13252), (515, 13303), (522, 13336), (526, 13345), (532, 13360), (551, 13429), (569, 13483), (570, 13492), (579, 13522), (599, 13612), (626, 13696), (662,

13885), (665, 13909), (675, 13948), (678, 13957), (682, 13969), (705, 14059), (717, 14107), (730, 14167), (738, 14218), (740, 14224), (750, 14269), (763, 14332), (767, 14392), (768, 14398), (800, 14590), (830, 14725), (923, 14965), (929, 15031), (932, 15052), (934, 15061), (936, 15088), (943, 15166), (944, 15190), (948, 15283), (950, 15331), (954, 15436), (955, 15448), (957, 15466), (963, 15559), (964, 15613), (965, 15637), (969, 15715), (976, 15814), (1008, 16264), (1011, 16294), (1014, 16330), (1015, 16333), (1024, 16408), (1032, 16504),