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Pham 268093

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 268093 Report

This analysis was run 02/07/26 on database version 634.

Pham number 268093 has 75 members, 30 are drafts.

Phages represented in each track:

- Track 1 : NewKitty_20, AdaS_19, Vopal_20, Sporco_20, MUWow_18, Sakai_19, CookieBear_19, Richie_19, JellyBread_19, Auxilium_19, Gorpy_19
- Track 2 : GumGum_19
- Track 3 : Sashimi_20
- Track 4 : Globfish_19
- Track 5 : Shukran_19
- Track 6 : Mapleville_19, Lawnathon_19, BillyTP_19
- Track 7 : CosmicBrownie_19
- Track 8 : MaterMagnus_19, Aikyam_19
- Track 9 : Hestia_19
- Track 10 : MurphyJoseph_19
- Track 11 : Tiff81_20, Nyilah_18
- Track 12 : ThayneTheZag_19
- Track 13 : Anekin_18, DarwinJr_22
- Track 14 : Lasker_19, BlueShadow_19, BasketStar_19
- Track 15 : Hillester_19, RadFad_19
- Track 16 : Kabloowy_19
- Track 17 : SonDevVon_18
- Track 18 : Phrank15_18
- Track 19 : Crescenzo_19
- Track 20 : Ding_19
- Track 21 : EvePickles_19
- Track 22 : BenchScraper_19
- Track 23 : Seahorse_20
- Track 24 : SpicyFrank_19
- Track 25 : Isolde_19
- Track 26 : Faja_19
- Track 27 : Bhageatrice_21
- Track 28 : Satrap_19
- Track 29 : Persistence_18
- Track 30 : YoungHarleezy_19
- Track 31 : Raphaella_19
- Track 32 : MidnightRain_19
- Track 33 : Windest_20
- Track 34 : LeBruni_20
- Track 35 : PeggyLeg03_18
- Track 36 : KayMoney_18, ChuckDuck_18

- Track 37 : NikkiHotWheels_18
- Track 38 : NidoQ_18
- Track 39 : Eileen_18, Peas_18
- Track 40 : GlobiWarming_18
- Track 41 : Karkharias_18
- Track 42 : LittleRon_18
- Track 43 : Constance_18
- Track 44 : Henrique_18
- Track 45 : FosterFrank_18
- Track 46 : Judy_19
- Track 47 : HotPotato_18
- Track 48 : Pucara_18
- Track 49 : Bridgette_18
- Track 50 : LilyBell_18
- Track 51 : DreamEater_18
- Track 52 : GUPitcher_17
- Track 53 : PetriParty_17
- Track 54 : TripleJ_18
- Track 55 : Kukla_17

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

The start number called the most often in the published annotations is 22, it was called in 40 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AdaS_19, Aikyam_19, Anekin_18, Auxilium_19, BasketStar_19, BenchScraper_19, Bhageatrice_21, BillyTP_19, BlueShadow_19, Bridgette_18, ChuckDuck_18, Constance_18, CookieBear_19, CosmicBrownie_19, DarwinJr_22, Ding_19, Eileen_18, FosterFrank_18, Globfish_19, GlobiWarming_18, Gorpy_19, GumGum_19, Henrique_18, Hestia_19, Hillester_19, HotPotato_18, Isolde_19, JellyBread_19, Judy_19, Kabloowy_19, Karkharias_18, KayMoney_18, Lasker_19, Lawnathon_19, LeBruni_20, LilyBell_18, LittleRon_18, MUWow_18, Mapleville_19, MaterMagnus_19, MidnightRain_19, MurphyJoseph_19, NewKitty_20, NidoQ_18, Nyilah_18, Peas_18, PeggyLeg03_18, Persistence_18, Phrank15_18, Pucara_18, RadFad_19, Raphaella_19, Richie_19, Sakai_19, Seahorse_20, Shukran_19, SpicyFrank_19, Sporco_20, ThayneTheZag_19, Tiff81_20, Vopal_20, Windest_20, YoungHarleezy_19,

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

- Crescenzo_19, NikkiHotWheels_18, Satrap_19, SonDevVon_18,

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

- DreamEater_18, EvePickles_19, Faja_19, GUPitcher_17, Kukla_17, PetriParty_17, Sashimi_20, TripleJ_18,

Summary by start number:

Start 7:

- Found in 4 of 75 (5.3%) of genes in pham

- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DreamEater_18 (FJ), GUPitcher_17 (FJ), PetriParty_17 (FJ), TripleJ_18 (FJ),

Start 16:

- Found in 2 of 75 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Faja_19 (AY), Sashimi_20 (AY),

Start 18:

- Found in 2 of 75 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EvePickles_19 (AY), Kukla_17 (FJ),

Start 22:

- Found in 67 of 75 (89.3%) of genes in pham
- Manual Annotations of this start: 40 of 45
- Called 94.0% of time when present
- Phage (with cluster) where this start called: AdaS_19 (AY), Aikyam_19 (AY), Anekin_18 (AY), Auxilium_19 (AY), BasketStar_19 (AY), BenchScraper_19 (AY), Bhageatrice_21 (AY), BillyTP_19 (AY), BlueShadow_19 (AY), Bridgette_18 (FA), ChuckDuck_18 (FA), Constance_18 (FA), CookieBear_19 (AY), CosmicBrownie_19 (AY), DarwinJr_22 (AY), Ding_19 (AY), Eileen_18 (FA), FosterFrank_18 (FA), Globfish_19 (AY), GlobiWarming_18 (FA), Gorpy_19 (AY), GumGum_19 (AY), Henrique_18 (FA), Hestia_19 (AY), Hillester_19 (AY), HotPotato_18 (FA), Isolde_19 (AY), JellyBread_19 (AY), Judy_19 (FA), Kabloowy_19 (AY), Karkharias_18 (FA), KayMoney_18 (FA), Lasker_19 (AY), Lawnathon_19 (AY), LeBruni_20 (AY), LilyBell_18 (FA), LittleRon_18 (FA), MUWow_18 (AY), Mapleville_19 (AY), MaterMagnus_19 (AY), MidnightRain_19 (AY), MurphyJoseph_19 (AY), NewKitty_20 (AY), NidoQ_18 (FA), Nyilah_18 (AY), Peas_18 (FA), PeggyLeg03_18 (FA), Persistence_18 (AY), Phrank15_18 (AY), Pucara_18 (FA), RadFad_19 (AY), Raphaella_19 (AY), Richie_19 (AY), Sakai_19 (AY), Seahorse_20 (AY), Shukran_19 (AY), SpicyFrank_19 (AY), Sporco_20 (AY), ThayneTheZag_19 (AY), Tiff81_20 (AY), Vopal_20 (AY), Windest_20 (AY), YoungHarleezy_19 (AY),

Start 25:

- Found in 32 of 75 (42.7%) of genes in pham
- No Manual Annotations of this start.
- Called 3.1% of time when present
- Phage (with cluster) where this start called: SonDevVon_18 (AY),

Start 27:

- Found in 8 of 75 (10.7%) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: NikkiHotWheels_18 (FA),

Start 31:

- Found in 66 of 75 (88.0%) of genes in pham
- No Manual Annotations of this start.

- Called 3.0% of time when present
- Phage (with cluster) where this start called: Crescenzo_19 (AY), Satrap_19 (AY),

Summary by clusters:

There are 3 clusters represented in this pham: AY, FA, FJ,

Info for manual annotations of cluster AY:

- Start number 16 was manually annotated 2 times for cluster AY.
- Start number 18 was manually annotated 1 time for cluster AY.
- Start number 22 was manually annotated 30 times for cluster AY.

Info for manual annotations of cluster FA:

- Start number 22 was manually annotated 10 times for cluster FA.

Info for manual annotations of cluster FJ:

- Start number 7 was manually annotated 1 time for cluster FJ.
- Start number 18 was manually annotated 1 time for cluster FJ.

Gene Information:

Gene: AdaS_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for AdaS_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (192, 12619), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (213, 12793), (214, 12805), (223, 12880), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (346, 13795), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (428, 14734),

Gene: Aikyam_19 Start: 10844, Stop: 14785, Start Num: 22

Candidate Starts for Aikyam_19:

(Start: 22 @10844 has 40 MA's), (25, 10883), (29, 10946), (31, 10979), (34, 11003), (36, 11009), (37, 11021), (42, 11045), (43, 11057), (44, 11075), (46, 11117), (57, 11282), (74, 11549), (76, 11555), (80, 11594), (89, 11687), (104, 11855), (108, 11900), (118, 11996), (132, 12071), (136, 12101), (144, 12188), (147, 12200), (154, 12269), (156, 12305), (158, 12335), (164, 12371), (170, 12419), (172, 12431), (177, 12461), (184, 12518), (186, 12527), (189, 12572), (190, 12575), (194, 12629), (202, 12713), (203, 12722), (205, 12734), (207, 12755), (214, 12806), (227, 12905), (241, 13013), (245, 13052), (257, 13142), (259, 13157), (278, 13259), (281, 13289), (286, 13340), (287, 13361), (291, 13409), (292, 13412), (307, 13496), (308, 13499), (314, 13577), (324, 13652), (325, 13661), (331, 13676), (346, 13796), (352, 13835), (356, 13853), (364, 13952), (368, 14045), (373, 14159), (374, 14177), (378, 14216), (379, 14258), (384, 14321), (385, 14333), (388, 14369), (390, 14411), (393, 14432), (399, 14528), (406, 14582), (418, 14672), (428, 14735),

Gene: Anekin_18 Start: 10911, Stop: 14747, Start Num: 22

Candidate Starts for Anekin_18:

(Start: 22 @10911 has 40 MA's), (27, 10971), (31, 11046), (34, 11070), (36, 11076), (41, 11106), (42, 11112), (44, 11142), (46, 11184), (59, 11388), (63, 11439), (74, 11616), (75, 11619), (78, 11628), (80, 11661), (104, 11922), (114, 12012), (116, 12033), (117, 12042), (119, 12066), (125, 12108), (130, 12129), (134, 12150), (146, 12261), (149, 12279), (153, 12327), (156, 12372), (157, 12381), (163, 12429), (167, 12474), (184, 12582), (194, 12693), (197, 12741), (202, 12777), (205, 12798), (214, 12870), (247, 13017), (253, 13050), (259, 13116), (260, 13122), (261, 13125), (271, 13176), (282, 13260), (286, 13299), (287, 13320), (314, 13539), (316, 13560), (320, 13587), (322, 13605), (324, 13614), (370, 14040), (371, 14070), (373, 14121), (378, 14178), (379, 14220), (384, 14283), (385, 14295), (390, 14373), (393, 14394), (397, 14478), (404, 14532), (406, 14544), (416, 14628), (418, 14634),

Gene: Auxilium_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for Auxilium_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (192, 12619), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (213, 12793), (214, 12805), (223, 12880), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (346, 13795), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (428, 14734),

Gene: BasketStar_19 Start: 10897, Stop: 14838, Start Num: 22

Candidate Starts for BasketStar_19:

(Start: 22 @10897 has 40 MA's), (25, 10936), (29, 10999), (31, 11032), (34, 11056), (36, 11062), (37, 11074), (42, 11098), (43, 11110), (44, 11128), (46, 11170), (57, 11335), (74, 11602), (76, 11608), (80, 11647), (89, 11740), (104, 11908), (108, 11953), (118, 12049), (132, 12124), (136, 12154), (144, 12241), (147, 12253), (154, 12322), (156, 12358), (158, 12388), (164, 12424), (170, 12472), (172, 12484), (177, 12514), (184, 12571), (186, 12580), (189, 12625), (190, 12628), (192, 12673), (194, 12682), (202, 12766), (203, 12775), (205, 12787), (207, 12808), (213, 12847), (214, 12859), (223, 12934), (227, 12958), (241, 13066), (245, 13105), (257, 13195), (259, 13210), (278, 13312), (281, 13342), (286, 13393), (287, 13414), (291, 13462), (292, 13465), (307, 13549), (308, 13552), (314, 13630), (324, 13705), (325, 13714), (331, 13729), (352, 13888), (356, 13906), (364, 14005), (368, 14098), (373, 14212), (374, 14230), (378, 14269), (379, 14311), (384, 14374), (385, 14386), (388, 14422), (390, 14464), (393, 14485), (399, 14581), (406, 14635), (418, 14725), (428, 14788),

Gene: BenchScraper_19 Start: 10858, Stop: 14799, Start Num: 22

Candidate Starts for BenchScraper_19:

(Start: 22 @10858 has 40 MA's), (25, 10897), (29, 10960), (31, 10993), (34, 11017), (36, 11023), (37, 11035), (42, 11059), (43, 11071), (44, 11089), (46, 11131), (57, 11296), (74, 11563), (76, 11569), (80, 11608), (89, 11701), (104, 11869), (108, 11914), (118, 12010), (132, 12085), (144, 12202), (147, 12214), (154, 12283), (156, 12319), (158, 12349), (164, 12385), (170, 12433), (172, 12445), (177, 12475), (184, 12532), (186, 12541), (189, 12586), (190, 12589), (194, 12643), (202, 12727), (203, 12736), (205, 12748), (207, 12769), (214, 12820), (227, 12919), (241, 13027), (245, 13066), (257, 13156), (259, 13171), (278, 13273), (281, 13303), (286, 13354), (287, 13375), (291, 13423), (292, 13426), (307, 13510), (308, 13513), (314, 13591), (324, 13666), (325, 13675), (331, 13690), (346, 13810), (352, 13849), (356, 13867), (364, 13966), (368, 14059), (373, 14173), (374, 14191), (378, 14230), (379, 14272), (384, 14335), (385, 14347), (388, 14383), (390, 14425), (393, 14446), (399, 14542), (406, 14596), (418, 14686), (428, 14749),

Gene: Bhageatrice_21 Start: 12043, Stop: 16074, Start Num: 22

Candidate Starts for Bhageatrice_21:

(Start: 22 @12043 has 40 MA's), (31, 12178), (44, 12274), (46, 12316), (51, 12415), (56, 12463), (61, 12559), (63, 12571), (68, 12643), (74, 12748), (79, 12790), (80, 12793), (85, 12865), (97, 12955), (110, 13120), (116, 13165), (118, 13195), (126, 13243), (145, 13393), (150, 13426), (161, 13543), (167, 13606), (178, 13663), (184, 13714), (190, 13771), (194, 13825), (202, 13909), (226, 14098), (239, 14200), (262, 14374), (264, 14392), (270, 14437), (273, 14455), (280, 14512), (306, 14770), (314, 14866), (322, 14932), (324, 14941), (332, 14968), (344, 15028), (359, 15142), (364, 15241), (368, 15334), (373, 15448), (374, 15466), (378, 15505), (379, 15547), (384, 15610), (385, 15622), (388, 15658), (390, 15700), (392, 15715), (393, 15721), (397, 15805), (399, 15817), (406, 15871), (418, 15961), (427, 16024),

Gene: BillyTP_19 Start: 10765, Stop: 14568, Start Num: 22

Candidate Starts for BillyTP_19:

(Start: 22 @10765 has 40 MA's), (31, 10900), (34, 10924), (36, 10930), (42, 10966), (43, 10978), (44, 10996), (45, 11005), (46, 11038), (47, 11044), (50, 11122), (57, 11203), (59, 11242), (64, 11326), (65, 11335), (66, 11341), (68, 11365), (69, 11374), (75, 11473), (77, 11479), (83, 11566), (88, 11599), (90, 11635), (107, 11818), (112, 11854), (114, 11866), (118, 11917), (134, 12004), (143, 12091), (160, 12232), (169, 12301), (171, 12310), (180, 12358), (183, 12379), (184, 12382), (191, 12454), (199, 12517), (212, 12601), (214, 12616), (221, 12655), (230, 12712), (258, 12907), (266, 12952), (274, 13015), (286, 13117), (287, 13138), (314, 13360), (322, 13426), (324, 13435), (342, 13501), (355, 13597), (359, 13636), (362, 13702), (368, 13828), (373, 13942), (374, 13960), (377, 13990), (378, 13999), (379, 14041), (384, 14104), (385, 14116), (388, 14152), (390, 14194), (393, 14215), (394, 14227), (404, 14353), (406, 14365), (416, 14449), (418, 14455), (429, 14548),

Gene: BlueShadow_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for BlueShadow_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (192, 12619), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (213, 12793), (214, 12805), (223, 12880), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (418, 14671), (428, 14734),

Gene: Bridgette_18 Start: 10928, Stop: 14845, Start Num: 22

Candidate Starts for Bridgette_18:

(Start: 22 @10928 has 40 MA's), (31, 11063), (34, 11087), (36, 11093), (42, 11129), (43, 11141), (44, 11159), (45, 11168), (46, 11201), (47, 11207), (50, 11285), (57, 11366), (59, 11405), (64, 11489), (66, 11504), (68, 11528), (69, 11537), (77, 11642), (82, 11723), (83, 11729), (85, 11750), (89, 11792), (92, 11819), (99, 11909), (107, 12002), (114, 12050), (134, 12188), (143, 12275), (145, 12284), (169, 12485), (171, 12494), (180, 12542), (183, 12563), (184, 12566), (191, 12638), (199, 12701), (222, 12851), (242, 12977), (263, 13115), (269, 13166), (271, 13178), (274, 13199), (285, 13289), (299, 13424), (307, 13463), (311, 13499), (314, 13541), (316, 13562), (317, 13580), (324, 13616), (325, 13625), (331, 13640), (353, 13853), (363, 14003), (364, 14009), (368, 14102), (373, 14216), (374, 14234), (377, 14264), (378, 14273), (379, 14315), (384, 14378), (385, 14390), (390, 14468), (393, 14489), (394, 14501), (404, 14627), (406, 14639), (417, 14726), (420, 14744),

Gene: ChuckDuck_18 Start: 10884, Stop: 14687, Start Num: 22

Candidate Starts for ChuckDuck_18:

(Start: 22 @10884 has 40 MA's), (31, 11019), (34, 11043), (35, 11046), (36, 11049), (42, 11085), (43, 11097), (44, 11115), (45, 11124), (46, 11157), (47, 11163), (50, 11241), (57, 11322), (59, 11361), (64, 11445), (65, 11454), (66, 11460), (68, 11484), (69, 11493), (75, 11592), (77, 11598), (83, 11685), (88, 11718), (90, 11754), (107, 11937), (112, 11973), (114, 11985), (118, 12036), (134, 12123), (143, 12210), (145, 12219), (160, 12351), (169, 12420), (171, 12429), (180, 12477), (183, 12498), (184, 12501), (191, 12573), (199, 12636), (212, 12720), (214, 12735), (221, 12774), (230, 12831), (236, 12864), (258, 13026), (266, 13071), (274, 13134), (286, 13236), (287, 13257), (314, 13479), (324, 13554), (342, 13620), (355, 13716), (359, 13755), (362, 13821), (368, 13947), (373, 14061), (374, 14079), (377, 14109), (378, 14118), (379, 14160), (384, 14223), (385, 14235), (388, 14271), (390, 14313), (393, 14334), (402, 14451), (406, 14484), (407, 14493), (416, 14568), (418, 14574),

Gene: Constance_18 Start: 10931, Stop: 14827, Start Num: 22

Candidate Starts for Constance_18:

(Start: 22 @10931 has 40 MA's), (31, 11066), (34, 11090), (36, 11096), (42, 11132), (43, 11144), (44, 11162), (45, 11171), (46, 11204), (47, 11210), (50, 11288), (57, 11369), (59, 11408), (64, 11492), (68, 11531), (69, 11540), (77, 11645), (82, 11726), (83, 11732), (88, 11765), (92, 11801), (114, 12032), (134, 12170), (145, 12266), (169, 12467), (171, 12476), (180, 12524), (183, 12545), (184, 12548), (191, 12620), (214, 12782), (222, 12833), (242, 12959), (263, 13097), (271, 13160), (274, 13181), (285, 13271), (299, 13406), (307, 13445), (311, 13481), (314, 13523), (317, 13562), (321, 13586), (324, 13598), (325, 13607), (331, 13622), (351, 13826), (353, 13835), (362, 13958), (363, 13985), (364, 13991), (365, 14012), (368, 14084), (373, 14198), (377, 14246), (378, 14255), (379, 14297), (384, 14360), (385, 14372), (388, 14408), (390, 14450), (393, 14471), (394, 14483), (399, 14567), (406, 14621), (415, 14702), (417, 14708), (419, 14723), (420, 14726), (424, 14762),

Gene: CookieBear_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for CookieBear_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (192, 12619), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (213, 12793), (214, 12805), (223, 12880), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (346, 13795), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (428, 14734),

Gene: CosmicBrownie_19 Start: 10849, Stop: 14742, Start Num: 22

Candidate Starts for CosmicBrownie_19:

(15, 10756), (Start: 22 @10849 has 40 MA's), (31, 10984), (34, 11008), (42, 11050), (43, 11062), (44, 11080), (45, 11089), (46, 11122), (47, 11128), (50, 11206), (57, 11287), (59, 11326), (64, 11410), (66, 11425), (69, 11458), (77, 11563), (83, 11650), (88, 11683), (90, 11719), (107, 11902), (114, 11950), (118, 12001), (119, 12004), (134, 12088), (143, 12175), (145, 12184), (169, 12385), (171, 12394), (180, 12442), (183, 12463), (184, 12466), (191, 12538), (208, 12658), (214, 12700), (222, 12751), (242, 12877), (263, 13015), (271, 13078), (274, 13099), (285, 13189), (299, 13324), (307, 13363), (311, 13399), (314, 13441), (316, 13462), (317, 13480), (321, 13504), (324, 13516), (325, 13525), (331, 13540), (351, 13744), (353, 13753), (362, 13876), (363, 13903), (364, 13909), (368, 14002), (373, 14116), (377, 14164), (378, 14173), (379, 14215), (384, 14278), (385, 14290), (388, 14326), (390, 14368), (391, 14371), (392, 14383), (393, 14389), (394, 14401), (399, 14485), (406, 14539), (407, 14548), (418, 14629), (428, 14692),

Gene: Crescenzo_19 Start: 10974, Stop: 14675, Start Num: 31

Candidate Starts for Crescenzo_19:

(Start: 22 @10839 has 40 MA's), (27, 10899), (31, 10974), (34, 10998), (36, 11004), (41, 11034), (42, 11040), (44, 11070), (46, 11112), (59, 11316), (63, 11367), (74, 11544), (75, 11547), (78, 11556), (80, 11589), (104, 11850), (114, 11940), (116, 11961), (117, 11970), (119, 11994), (125, 12036), (130, 12057), (134, 12078), (146, 12189), (149, 12207), (153, 12255), (156, 12300), (157, 12309), (163, 12357), (167, 12402), (184, 12510), (194, 12621), (197, 12669), (202, 12705), (205, 12726), (214, 12798), (247, 12945), (253, 12978), (259, 13044), (260, 13050), (261, 13053), (271, 13104), (282, 13188), (286, 13227), (287, 13248), (314, 13467), (316, 13488), (320, 13515), (322, 13533), (324, 13542), (370, 13968), (371, 13998), (373, 14049), (378, 14106), (379, 14148), (384, 14211), (385, 14223), (390, 14301), (393, 14322), (397, 14406), (404, 14460), (406, 14472), (416, 14556), (418, 14562),

Gene: DarwinJr_22 Start: 12143, Stop: 15979, Start Num: 22

Candidate Starts for DarwinJr_22:

(Start: 22 @12143 has 40 MA's), (27, 12203), (31, 12278), (34, 12302), (36, 12308), (41, 12338), (42, 12344), (44, 12374), (46, 12416), (59, 12620), (63, 12671), (74, 12848), (75, 12851), (78, 12860), (80, 12893), (104, 13154), (114, 13244), (116, 13265), (117, 13274), (119, 13298), (125, 13340), (130, 13361), (134, 13382), (146, 13493), (149, 13511), (153, 13559), (156, 13604), (157, 13613), (163, 13661), (167, 13706), (184, 13814), (194, 13925), (197, 13973), (202, 14009), (205, 14030), (214, 14102), (247, 14249), (253, 14282), (259, 14348), (260, 14354), (261, 14357), (271, 14408), (282, 14492), (286, 14531), (287, 14552), (314, 14771), (316, 14792), (320, 14819), (322, 14837), (324, 14846), (370, 15272), (371, 15302), (373, 15353), (378, 15410), (379, 15452), (384, 15515), (385, 15527), (390, 15605), (393, 15626), (397, 15710), (404, 15764), (406, 15776), (416, 15860), (418, 15866),

Gene: Ding_19 Start: 10834, Stop: 14847, Start Num: 22

Candidate Starts for Ding_19:

(Start: 22 @10834 has 40 MA's), (31, 10969), (32, 10978), (36, 10999), (44, 11065), (45, 11074), (46, 11107), (50, 11191), (55, 11248), (56, 11254), (61, 11350), (64, 11395), (73, 11506), (74, 11539), (79, 11581), (80, 11584), (85, 11656), (110, 11911), (116, 11956), (118, 11986), (126, 12034), (138, 12133), (145, 12184), (150, 12217), (167, 12397), (178, 12454), (184, 12505), (190, 12562), (194, 12616), (202, 12700), (210, 12772), (218, 12829), (229, 12910), (239, 12991), (259, 13153), (262, 13165), (264, 13183), (280, 13303), (294, 13489), (298, 13519), (300, 13525), (304, 13546), (305, 13555), (314, 13651), (317, 13690), (322, 13717), (323, 13720), (324, 13726), (325, 13735), (342, 13780), (368, 14107), (373, 14221), (378, 14278), (379, 14320), (384, 14383), (385, 14395), (388, 14431), (390, 14473), (393, 14494), (394, 14506), (397, 14578), (399, 14590), (402, 14611), (406, 14644), (410, 14677), (427, 14797),

Gene: DreamEater_18 Start: 11120, Stop: 15454, Start Num: 7

Candidate Starts for DreamEater_18:

(6, 11108), (Start: 7 @11120 has 1 MA's), (9, 11180), (11, 11243), (12, 11255), (13, 11297), (21, 11393), (24, 11423), (28, 11507), (44, 11645), (46, 11687), (55, 11828), (59, 11891), (70, 12026), (74, 12119), (89, 12278), (97, 12347), (98, 12374), (103, 12434), (116, 12557), (149, 12803), (157, 12905), (162, 12944), (164, 12962), (165, 12974), (173, 13040), (202, 13298), (205, 13319), (216, 13412), (223, 13466), (227, 13490), (231, 13529), (237, 13562), (246, 13589), (249, 13592), (255, 13652), (257, 13664), (263, 13697), (268, 13727), (271, 13739), (279, 13787), (281, 13811), (287, 13883), (306, 14015), (317, 14147), (336, 14270), (343, 14369), (348, 14393), (350, 14417), (357, 14468), (359, 14486), (364, 14582), (370, 14708), (372, 14750), (375, 14810), (382, 14909), (386, 14978), (390, 15041), (393, 15062), (396, 15125), (403, 15188), (408, 15233), (421, 15323), (431, 15434),

Gene: Eileen_18 Start: 10892, Stop: 14788, Start Num: 22

Candidate Starts for Eileen_18:

(Start: 22 @10892 has 40 MA's), (31, 11027), (34, 11051), (36, 11057), (42, 11093), (43, 11105), (44, 11123), (45, 11132), (46, 11165), (47, 11171), (50, 11249), (57, 11330), (59, 11369), (64, 11453), (66, 11468), (69, 11501), (77, 11606), (83, 11693), (88, 11726), (90, 11762), (107, 11945), (114, 11993), (118, 12044), (119, 12047), (123, 12083), (124, 12086), (134, 12131), (143, 12218), (160, 12359), (169, 12428), (171, 12437), (180, 12485), (183, 12506), (184, 12509), (191, 12581), (199, 12644), (214, 12743), (222, 12794), (242, 12920), (263, 13058), (269, 13109), (271, 13121), (274, 13142), (285, 13232), (299, 13367), (307, 13406), (311, 13442), (314, 13484), (316, 13505), (317, 13523), (321, 13547), (324, 13559), (325, 13568), (331, 13583), (353, 13796), (363, 13946), (364, 13952), (368, 14045), (373, 14159), (374, 14177), (377, 14207), (378, 14216), (379, 14258), (384, 14321), (385, 14333), (388, 14369), (390, 14411), (393, 14432), (394, 14444), (404, 14570), (406, 14582), (417, 14669), (420, 14687),

Gene: EvePickles_19 Start: 11006, Stop: 15145, Start Num: 18

Candidate Starts for EvePickles_19:

(17, 10994), (Start: 18 @11006 has 2 MA's), (19, 11024), (24, 11066), (29, 11150), (44, 11279), (46, 11321), (51, 11420), (57, 11486), (60, 11555), (61, 11564), (65, 11618), (68, 11648), (72, 11693), (74, 11753), (75, 11756), (80, 11798), (87, 11882), (92, 11918), (116, 12170), (120, 12221), (122, 12233), (134, 12287), (142, 12383), (144, 12392), (151, 12458), (159, 12545), (168, 12617), (176, 12659), (186, 12710), (196, 12851), (202, 12896), (209, 12953), (227, 13088), (228, 13094), (233, 13136), (234, 13148), (240, 13187), (245, 13235), (257, 13325), (259, 13340), (265, 13373), (278, 13442), (281, 13472), (283, 13487), (286, 13523), (287, 13544), (289, 13568), (293, 13601), (296, 13637), (297, 13640), (309, 13694), (317, 13808), (320, 13817), (322, 13835), (334, 13898), (344, 14054), (345, 14060), (359, 14168), (367, 14330), (370, 14393), (372, 14435), (376, 14513), (379, 14573), (380, 14582), (382, 14594), (383, 14618), (386, 14663), (388, 14684), (390, 14726), (393, 14747), (396, 14810), (398, 14843), (406, 14900), (411, 14939), (414, 14969), (421, 15014), (430, 15113), (432, 15131),

Gene: Faja_19 Start: 10995, Stop: 15041, Start Num: 16

Candidate Starts for Faja_19:

(Start: 16 @10995 has 2 MA's), (23, 11055), (28, 11130), (30, 11142), (33, 11193), (37, 11214), (38, 11217), (40, 11226), (44, 11268), (46, 11310), (48, 11319), (51, 11409), (56, 11457), (57, 11475), (58, 11481), (59, 11514), (61, 11553), (65, 11607), (66, 11613), (71, 11670), (74, 11742), (80, 11787), (81, 11796), (86, 11865), (87, 11871), (89, 11880), (92, 11907), (97, 11949), (100, 12003), (113, 12135), (114, 12138), (116, 12159), (118, 12189), (120, 12210), (122, 12222), (134, 12276), (139, 12345), (149, 12405), (154, 12462), (157, 12507), (164, 12564), (166, 12585), (184, 12711), (187, 12723), (193, 12819), (194, 12822), (197, 12870), (205, 12927), (219, 13044), (227, 13098), (234, 13158), (241, 13206), (245, 13245), (250, 13257), (259, 13350), (267, 13389), (272, 13413), (274, 13431), (275, 13434), (278, 13452), (282, 13494), (286, 13533), (287, 13554), (289, 13578), (303, 13668), (316, 13794), (317, 13812), (327, 13860), (328, 13863), (341, 13920), (345, 13962), (359, 14070), (360, 14103), (370, 14295), (372, 14337), (376, 14415), (379, 14475), (382, 14496), (388, 14586), (390, 14628), (393, 14649), (396, 14712), (403, 14775), (408, 14820), (421, 14910), (430, 15009), (432, 15027),

Gene: FosterFrank_18 Start: 10889, Stop: 14785, Start Num: 22

Candidate Starts for FosterFrank_18:

(Start: 22 @10889 has 40 MA's), (31, 11024), (34, 11048), (36, 11054), (42, 11090), (43, 11102), (44, 11120), (45, 11129), (46, 11162), (47, 11168), (50, 11246), (57, 11327), (59, 11366), (64, 11450), (68, 11489), (69, 11498), (77, 11603), (82, 11684), (83, 11690), (88, 11723), (92, 11759), (114, 11990), (124, 12083), (134, 12128), (145, 12224), (169, 12425), (171, 12434), (180, 12482), (183, 12503), (184, 12506), (191, 12578), (214, 12740), (242, 12917), (263, 13055), (271, 13118), (274, 13139), (285, 13229), (299, 13364), (307, 13403), (311, 13439), (314, 13481), (317, 13520), (321, 13544), (324, 13556), (325, 13565), (331, 13580), (353, 13793), (362, 13916), (363, 13943), (364, 13949), (368, 14042), (373, 14156), (377, 14204), (378, 14213), (379, 14255), (384, 14318), (385, 14330),

(388, 14366), (390, 14408), (393, 14429), (394, 14441), (395, 14483), (399, 14525), (406, 14579),
(415, 14660), (417, 14666), (419, 14681), (420, 14684), (424, 14720),

Gene: GUPitcher_17 Start: 10438, Stop: 14796, Start Num: 7

Candidate Starts for GUPitcher_17:

(6, 10426), (Start: 7 @10438 has 1 MA's), (8, 10456), (9, 10498), (10, 10540), (12, 10573), (20, 10708),
(29, 10834), (30, 10837), (33, 10888), (37, 10909), (39, 10915), (40, 10921), (44, 10963), (45, 10972),
(46, 11005), (60, 11239), (61, 11248), (65, 11302), (66, 11308), (74, 11437), (80, 11482), (87, 11566),
(92, 11602), (95, 11629), (107, 11785), (122, 11917), (139, 12040), (142, 12067), (151, 12142), (159,
12229), (186, 12394), (187, 12397), (214, 12673), (227, 12772), (240, 12871), (245, 12919), (254,
12988), (259, 13024), (265, 13057), (278, 13126), (282, 13168), (283, 13171), (286, 13207), (287,
13228), (295, 13312), (297, 13321), (301, 13336), (316, 13462), (317, 13480), (320, 13489), (328,
13531), (343, 13702), (345, 13711), (359, 13819), (370, 14044), (372, 14086), (375, 14146), (379,
14224), (382, 14245), (386, 14314), (388, 14335), (390, 14377), (393, 14398), (396, 14461), (400,
14500), (406, 14551), (421, 14665), (430, 14764), (432, 14782),

Gene: Globfish_19 Start: 10916, Stop: 14857, Start Num: 22

Candidate Starts for Globfish_19:

(Start: 22 @10916 has 40 MA's), (25, 10955), (29, 11018), (31, 11051), (34, 11075), (36, 11081), (42,
11117), (43, 11129), (44, 11147), (46, 11189), (57, 11354), (58, 11360), (72, 11561), (74, 11621), (80,
11666), (89, 11759), (104, 11927), (108, 11972), (128, 12128), (132, 12143), (144, 12260), (147,
12272), (153, 12332), (154, 12341), (158, 12407), (164, 12443), (170, 12491), (172, 12503), (177,
12533), (179, 12557), (184, 12590), (190, 12647), (194, 12701), (202, 12785), (203, 12794), (205,
12806), (210, 12857), (214, 12878), (227, 12977), (241, 13085), (245, 13124), (257, 13214), (259,
13229), (278, 13331), (281, 13361), (282, 13373), (286, 13412), (287, 13433), (291, 13481), (292,
13484), (307, 13568), (308, 13571), (314, 13649), (324, 13724), (325, 13733), (331, 13748), (356,
13925), (368, 14117), (373, 14231), (374, 14249), (378, 14288), (379, 14330), (384, 14393), (385,
14405), (388, 14441), (390, 14483), (393, 14504), (406, 14654), (413, 14720), (418, 14744), (424,
14792), (428, 14807),

Gene: GlobiWarming_18 Start: 10885, Stop: 14781, Start Num: 22

Candidate Starts for GlobiWarming_18:

(1, 10477), (2, 10486), (3, 10507), (5, 10558), (Start: 22 @10885 has 40 MA's), (31, 11020), (34,
11044), (36, 11050), (42, 11086), (43, 11098), (44, 11116), (45, 11125), (46, 11158), (47, 11164), (50,
11242), (57, 11323), (59, 11362), (64, 11446), (66, 11461), (69, 11494), (77, 11599), (83, 11686), (85,
11707), (88, 11719), (90, 11755), (107, 11938), (114, 11986), (118, 12037), (134, 12124), (143,
12211), (145, 12220), (169, 12421), (171, 12430), (180, 12478), (183, 12499), (184, 12502), (191,
12574), (199, 12637), (214, 12736), (222, 12787), (242, 12913), (263, 13051), (269, 13102), (271,
13114), (274, 13135), (285, 13225), (299, 13360), (307, 13399), (311, 13435), (314, 13477), (316,
13498), (317, 13516), (321, 13540), (324, 13552), (325, 13561), (331, 13576), (353, 13789), (363,
13939), (364, 13945), (368, 14038), (373, 14152), (374, 14170), (377, 14200), (378, 14209), (379,
14251), (384, 14314), (385, 14326), (388, 14362), (390, 14404), (393, 14425), (394, 14437), (404,
14563), (406, 14575), (417, 14662), (420, 14680),

Gene: Gorpy_19 Start: 10852, Stop: 14793, Start Num: 22

Candidate Starts for Gorpy_19:

(Start: 22 @10852 has 40 MA's), (25, 10891), (29, 10954), (31, 10987), (34, 11011), (36, 11017), (37,
11029), (42, 11053), (43, 11065), (44, 11083), (46, 11125), (57, 11290), (74, 11557), (76, 11563), (80,
11602), (89, 11695), (104, 11863), (108, 11908), (118, 12004), (132, 12079), (136, 12109), (144,
12196), (147, 12208), (154, 12277), (156, 12313), (158, 12343), (164, 12379), (170, 12427), (172,
12439), (177, 12469), (184, 12526), (186, 12535), (189, 12580), (190, 12583), (192, 12628), (194,
12637), (202, 12721), (203, 12730), (205, 12742), (207, 12763), (213, 12802), (214, 12814), (223,
12889), (227, 12913), (241, 13021), (245, 13060), (257, 13150), (259, 13165), (278, 13267), (281,

13297), (286, 13348), (287, 13369), (291, 13417), (292, 13420), (307, 13504), (308, 13507), (314, 13585), (324, 13660), (325, 13669), (331, 13684), (346, 13804), (352, 13843), (356, 13861), (364, 13960), (368, 14053), (373, 14167), (374, 14185), (378, 14224), (379, 14266), (384, 14329), (385, 14341), (388, 14377), (390, 14419), (393, 14440), (399, 14536), (406, 14590), (428, 14743),

Gene: GumGum_19 Start: 10840, Stop: 14733, Start Num: 22

Candidate Starts for GumGum_19:

(15, 10747), (Start: 22 @10840 has 40 MA's), (31, 10975), (34, 10999), (42, 11041), (43, 11053), (44, 11071), (45, 11080), (46, 11113), (47, 11119), (50, 11197), (57, 11278), (59, 11317), (64, 11401), (66, 11416), (69, 11449), (77, 11554), (83, 11641), (88, 11674), (90, 11710), (107, 11893), (114, 11941), (118, 11992), (119, 11995), (134, 12079), (143, 12166), (145, 12175), (169, 12376), (171, 12385), (180, 12433), (183, 12454), (184, 12457), (191, 12529), (208, 12649), (214, 12691), (222, 12742), (242, 12868), (263, 13006), (271, 13069), (274, 13090), (285, 13180), (299, 13315), (307, 13354), (311, 13390), (314, 13432), (316, 13453), (317, 13471), (321, 13495), (324, 13507), (325, 13516), (331, 13531), (351, 13735), (353, 13744), (362, 13867), (363, 13894), (364, 13900), (368, 13993), (373, 14107), (374, 14125), (378, 14164), (379, 14206), (384, 14269), (385, 14281), (387, 14314), (388, 14317), (390, 14359), (392, 14374), (393, 14380), (399, 14476), (406, 14530), (407, 14539), (418, 14620), (428, 14683),

Gene: Henrique_18 Start: 10889, Stop: 14806, Start Num: 22

Candidate Starts for Henrique_18:

(Start: 22 @10889 has 40 MA's), (31, 11024), (34, 11048), (36, 11054), (42, 11090), (43, 11102), (44, 11120), (45, 11129), (46, 11162), (47, 11168), (50, 11246), (57, 11327), (59, 11366), (64, 11450), (66, 11465), (68, 11489), (69, 11498), (77, 11603), (82, 11684), (83, 11690), (85, 11711), (89, 11753), (92, 11780), (99, 11870), (107, 11963), (114, 12011), (134, 12149), (143, 12236), (145, 12245), (169, 12446), (171, 12455), (180, 12503), (183, 12524), (184, 12527), (191, 12599), (199, 12662), (222, 12812), (242, 12938), (263, 13076), (269, 13127), (271, 13139), (274, 13160), (285, 13250), (299, 13385), (307, 13424), (311, 13460), (314, 13502), (316, 13523), (317, 13541), (324, 13577), (325, 13586), (331, 13601), (353, 13814), (363, 13964), (364, 13970), (368, 14063), (373, 14177), (374, 14195), (377, 14225), (378, 14234), (379, 14276), (384, 14339), (385, 14351), (388, 14387), (390, 14429), (393, 14450), (394, 14462), (404, 14588), (406, 14600), (417, 14687), (420, 14705),

Gene: Hestia_19 Start: 10985, Stop: 14962, Start Num: 22

Candidate Starts for Hestia_19:

(Start: 22 @10985 has 40 MA's), (31, 11120), (34, 11144), (36, 11150), (40, 11174), (44, 11216), (46, 11258), (52, 11372), (74, 11690), (79, 11732), (80, 11735), (114, 12086), (116, 12107), (119, 12140), (133, 12221), (134, 12224), (136, 12242), (140, 12311), (141, 12317), (148, 12350), (175, 12590), (184, 12653), (194, 12764), (197, 12812), (198, 12815), (202, 12848), (203, 12857), (205, 12869), (207, 12890), (214, 12941), (224, 13019), (251, 13127), (256, 13181), (263, 13226), (281, 13340), (286, 13391), (287, 13412), (307, 13553), (314, 13631), (321, 13694), (324, 13706), (331, 13730), (337, 13802), (347, 13934), (350, 13961), (351, 13964), (353, 13973), (355, 13991), (359, 14030), (364, 14129), (368, 14222), (373, 14336), (374, 14354), (378, 14393), (379, 14435), (384, 14498), (385, 14510), (387, 14543), (388, 14546), (390, 14588), (392, 14603), (393, 14609), (399, 14705), (406, 14759), (407, 14768), (418, 14849), (428, 14912),

Gene: Hillester_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for Hillester_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (214, 12805), (217, 12832), (227, 12904), (241,

13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (418, 14671), (428, 14734),

Gene: HotPotato_18 Start: 10893, Stop: 14789, Start Num: 22

Candidate Starts for HotPotato_18:

(Start: 22 @10893 has 40 MA's), (31, 11028), (34, 11052), (36, 11058), (42, 11094), (43, 11106), (44, 11124), (45, 11133), (46, 11166), (47, 11172), (50, 11250), (57, 11331), (59, 11370), (64, 11454), (66, 11469), (68, 11493), (69, 11502), (77, 11607), (83, 11694), (85, 11715), (88, 11727), (90, 11763), (107, 11946), (114, 11994), (118, 12045), (119, 12048), (124, 12087), (134, 12132), (143, 12219), (145, 12228), (148, 12240), (169, 12429), (171, 12438), (180, 12486), (183, 12507), (184, 12510), (191, 12582), (214, 12744), (222, 12795), (242, 12921), (263, 13059), (269, 13110), (271, 13122), (274, 13143), (285, 13233), (299, 13368), (307, 13407), (311, 13443), (314, 13485), (316, 13506), (317, 13524), (324, 13560), (325, 13569), (331, 13584), (353, 13797), (363, 13947), (364, 13953), (368, 14046), (373, 14160), (374, 14178), (377, 14208), (378, 14217), (379, 14259), (384, 14322), (385, 14334), (390, 14412), (393, 14433), (394, 14445), (404, 14571), (406, 14583), (417, 14670), (420, 14688),

Gene: Isolde_19 Start: 10834, Stop: 14619, Start Num: 22

Candidate Starts for Isolde_19:

(Start: 22 @10834 has 40 MA's), (31, 10969), (34, 10993), (36, 10999), (42, 11035), (43, 11047), (44, 11065), (46, 11107), (60, 11341), (64, 11395), (65, 11404), (66, 11410), (67, 11416), (69, 11443), (74, 11539), (80, 11584), (87, 11668), (90, 11704), (93, 11710), (106, 11881), (109, 11896), (111, 11923), (121, 12019), (124, 12031), (127, 12040), (129, 12052), (135, 12085), (155, 12262), (171, 12382), (180, 12430), (182, 12448), (188, 12472), (191, 12526), (212, 12673), (214, 12688), (235, 12814), (239, 12844), (247, 12886), (257, 12970), (263, 13003), (271, 13066), (284, 13171), (293, 13270), (310, 13369), (316, 13444), (320, 13471), (331, 13522), (332, 13525), (359, 13687), (364, 13786), (368, 13879), (373, 13993), (374, 14011), (377, 14041), (378, 14050), (379, 14092), (384, 14155), (385, 14167), (388, 14203), (390, 14245), (393, 14266), (397, 14350), (399, 14362), (406, 14416), (416, 14500), (418, 14506),

Gene: JellyBread_19 Start: 10836, Stop: 14777, Start Num: 22

Candidate Starts for JellyBread_19:

(Start: 22 @10836 has 40 MA's), (25, 10875), (29, 10938), (31, 10971), (34, 10995), (36, 11001), (37, 11013), (42, 11037), (43, 11049), (44, 11067), (46, 11109), (57, 11274), (74, 11541), (76, 11547), (80, 11586), (89, 11679), (104, 11847), (108, 11892), (118, 11988), (132, 12063), (136, 12093), (144, 12180), (147, 12192), (154, 12261), (156, 12297), (158, 12327), (164, 12363), (170, 12411), (172, 12423), (177, 12453), (184, 12510), (186, 12519), (189, 12564), (190, 12567), (192, 12612), (194, 12621), (202, 12705), (203, 12714), (205, 12726), (207, 12747), (213, 12786), (214, 12798), (223, 12873), (227, 12897), (241, 13005), (245, 13044), (257, 13134), (259, 13149), (278, 13251), (281, 13281), (286, 13332), (287, 13353), (291, 13401), (292, 13404), (307, 13488), (308, 13491), (314, 13569), (324, 13644), (325, 13653), (331, 13668), (346, 13788), (352, 13827), (356, 13845), (364, 13944), (368, 14037), (373, 14151), (374, 14169), (378, 14208), (379, 14250), (384, 14313), (385, 14325), (388, 14361), (390, 14403), (393, 14424), (399, 14520), (406, 14574), (428, 14727),

Gene: Judy_19 Start: 11202, Stop: 15098, Start Num: 22

Candidate Starts for Judy_19:

(Start: 22 @11202 has 40 MA's), (31, 11337), (34, 11361), (36, 11367), (42, 11403), (43, 11415), (44, 11433), (45, 11442), (46, 11475), (47, 11481), (50, 11559), (57, 11640), (59, 11679), (64, 11763), (68, 11802), (69, 11811), (77, 11916), (82, 11997), (83, 12003), (88, 12036), (92, 12072), (114, 12303), (124, 12396), (134, 12441), (145, 12537), (169, 12738), (171, 12747), (180, 12795), (183, 12816),

(184, 12819), (191, 12891), (214, 13053), (222, 13104), (242, 13230), (263, 13368), (271, 13431), (274, 13452), (285, 13542), (299, 13677), (307, 13716), (311, 13752), (314, 13794), (317, 13833), (321, 13857), (324, 13869), (325, 13878), (331, 13893), (351, 14097), (353, 14106), (362, 14229), (363, 14256), (364, 14262), (365, 14283), (368, 14355), (373, 14469), (377, 14517), (378, 14526), (379, 14568), (384, 14631), (385, 14643), (388, 14679), (390, 14721), (393, 14742), (394, 14754), (399, 14838), (406, 14892), (415, 14973), (417, 14979), (419, 14994), (420, 14997), (424, 15033),

Gene: Kabloowy_19 Start: 10969, Stop: 14973, Start Num: 22

Candidate Starts for Kabloowy_19:

(Start: 22 @10969 has 40 MA's), (25, 11008), (34, 11128), (36, 11134), (44, 11200), (46, 11242), (48, 11251), (50, 11326), (51, 11341), (53, 11359), (55, 11383), (62, 11494), (68, 11569), (74, 11674), (80, 11719), (89, 11833), (92, 11860), (101, 11974), (114, 12091), (116, 12112), (119, 12145), (121, 12172), (129, 12205), (131, 12214), (133, 12226), (140, 12316), (142, 12325), (158, 12481), (163, 12508), (164, 12517), (165, 12529), (170, 12565), (174, 12598), (175, 12601), (177, 12607), (184, 12664), (200, 12844), (202, 12859), (203, 12868), (205, 12880), (207, 12901), (214, 12952), (220, 13000), (224, 13030), (244, 13105), (252, 13141), (256, 13192), (263, 13237), (281, 13351), (286, 13402), (287, 13423), (307, 13564), (314, 13642), (321, 13705), (324, 13717), (331, 13741), (337, 13813), (347, 13945), (350, 13972), (351, 13975), (353, 13984), (355, 14002), (359, 14041), (364, 14140), (368, 14233), (373, 14347), (374, 14365), (378, 14404), (379, 14446), (384, 14509), (385, 14521), (387, 14554), (388, 14557), (390, 14599), (392, 14614), (393, 14620), (399, 14716), (406, 14770), (407, 14779), (409, 14794), (412, 14827), (428, 14923),

Gene: Karkharias_18 Start: 10889, Stop: 14785, Start Num: 22

Candidate Starts for Karkharias_18:

(Start: 22 @10889 has 40 MA's), (31, 11024), (34, 11048), (36, 11054), (42, 11090), (43, 11102), (44, 11120), (45, 11129), (46, 11162), (47, 11168), (50, 11246), (57, 11327), (59, 11366), (64, 11450), (66, 11465), (69, 11498), (77, 11603), (83, 11690), (88, 11723), (90, 11759), (107, 11942), (114, 11990), (118, 12041), (119, 12044), (134, 12128), (143, 12215), (145, 12224), (169, 12425), (171, 12434), (180, 12482), (183, 12503), (184, 12506), (191, 12578), (199, 12641), (222, 12791), (242, 12917), (263, 13055), (269, 13106), (271, 13118), (274, 13139), (285, 13229), (299, 13364), (307, 13403), (311, 13439), (314, 13481), (316, 13502), (317, 13520), (324, 13556), (331, 13580), (353, 13793), (363, 13943), (364, 13949), (368, 14042), (373, 14156), (374, 14174), (377, 14204), (378, 14213), (379, 14255), (384, 14318), (385, 14330), (390, 14408), (393, 14429), (394, 14441), (404, 14567), (406, 14579), (417, 14666), (420, 14684),

Gene: KayMoney_18 Start: 10886, Stop: 14689, Start Num: 22

Candidate Starts for KayMoney_18:

(Start: 22 @10886 has 40 MA's), (31, 11021), (34, 11045), (35, 11048), (36, 11051), (42, 11087), (43, 11099), (44, 11117), (45, 11126), (46, 11159), (47, 11165), (50, 11243), (57, 11324), (59, 11363), (64, 11447), (65, 11456), (66, 11462), (68, 11486), (69, 11495), (75, 11594), (77, 11600), (83, 11687), (88, 11720), (90, 11756), (107, 11939), (112, 11975), (114, 11987), (118, 12038), (134, 12125), (143, 12212), (145, 12221), (160, 12353), (169, 12422), (171, 12431), (180, 12479), (183, 12500), (184, 12503), (191, 12575), (199, 12638), (212, 12722), (214, 12737), (221, 12776), (230, 12833), (236, 12866), (258, 13028), (266, 13073), (274, 13136), (286, 13238), (287, 13259), (314, 13481), (324, 13556), (342, 13622), (355, 13718), (359, 13757), (362, 13823), (368, 13949), (373, 14063), (374, 14081), (377, 14111), (378, 14120), (379, 14162), (384, 14225), (385, 14237), (388, 14273), (390, 14315), (393, 14336), (402, 14453), (406, 14486), (407, 14495), (416, 14570), (418, 14576),

Gene: Kukla_17 Start: 10473, Stop: 14528, Start Num: 18

Candidate Starts for Kukla_17:

(14, 10419), (17, 10461), (Start: 18 @10473 has 2 MA's), (19, 10491), (24, 10533), (26, 10563), (30, 10620), (37, 10692), (39, 10698), (40, 10704), (44, 10746), (46, 10788), (50, 10872), (57, 10953), (60, 11022), (61, 11031), (66, 11091), (70, 11127), (74, 11220), (78, 11232), (80, 11265), (84, 11325), (88,

11352), (92, 11385), (111, 11601), (115, 11634), (120, 11688), (122, 11700), (139, 11823), (151, 11925), (159, 12012), (186, 12177), (211, 12438), (223, 12531), (227, 12555), (263, 12762), (277, 12840), (279, 12852), (281, 12876), (284, 12909), (287, 12948), (312, 13173), (320, 13230), (328, 13272), (341, 13410), (344, 13446), (345, 13452), (359, 13560), (370, 13785), (372, 13827), (376, 13905), (379, 13965), (382, 13986), (388, 14076), (390, 14118), (393, 14139), (396, 14202), (403, 14265), (405, 14283), (406, 14292), (408, 14310), (421, 14400), (430, 14496), (432, 14514),

Gene: Lasker_19 Start: 10851, Stop: 14792, Start Num: 22

Candidate Starts for Lasker_19:

(Start: 22 @10851 has 40 MA's), (25, 10890), (29, 10953), (31, 10986), (34, 11010), (36, 11016), (37, 11028), (42, 11052), (43, 11064), (44, 11082), (46, 11124), (57, 11289), (74, 11556), (76, 11562), (80, 11601), (89, 11694), (104, 11862), (108, 11907), (118, 12003), (132, 12078), (136, 12108), (144, 12195), (147, 12207), (154, 12276), (156, 12312), (158, 12342), (164, 12378), (170, 12426), (172, 12438), (177, 12468), (184, 12525), (186, 12534), (189, 12579), (190, 12582), (192, 12627), (194, 12636), (202, 12720), (203, 12729), (205, 12741), (207, 12762), (213, 12801), (214, 12813), (223, 12888), (227, 12912), (241, 13020), (245, 13059), (257, 13149), (259, 13164), (278, 13266), (281, 13296), (286, 13347), (287, 13368), (291, 13416), (292, 13419), (307, 13503), (308, 13506), (314, 13584), (324, 13659), (325, 13668), (331, 13683), (352, 13842), (356, 13860), (364, 13959), (368, 14052), (373, 14166), (374, 14184), (378, 14223), (379, 14265), (384, 14328), (385, 14340), (388, 14376), (390, 14418), (393, 14439), (399, 14535), (406, 14589), (418, 14679), (428, 14742),

Gene: Lawnathon_19 Start: 10910, Stop: 14713, Start Num: 22

Candidate Starts for Lawnathon_19:

(Start: 22 @10910 has 40 MA's), (31, 11045), (34, 11069), (36, 11075), (42, 11111), (43, 11123), (44, 11141), (45, 11150), (46, 11183), (47, 11189), (50, 11267), (57, 11348), (59, 11387), (64, 11471), (65, 11480), (66, 11486), (68, 11510), (69, 11519), (75, 11618), (77, 11624), (83, 11711), (88, 11744), (90, 11780), (107, 11963), (112, 11999), (114, 12011), (118, 12062), (134, 12149), (143, 12236), (160, 12377), (169, 12446), (171, 12455), (180, 12503), (183, 12524), (184, 12527), (191, 12599), (199, 12662), (212, 12746), (214, 12761), (221, 12800), (230, 12857), (258, 13052), (266, 13097), (274, 13160), (286, 13262), (287, 13283), (314, 13505), (322, 13571), (324, 13580), (342, 13646), (355, 13742), (359, 13781), (362, 13847), (368, 13973), (373, 14087), (374, 14105), (377, 14135), (378, 14144), (379, 14186), (384, 14249), (385, 14261), (388, 14297), (390, 14339), (393, 14360), (394, 14372), (404, 14498), (406, 14510), (416, 14594), (418, 14600), (429, 14693),

Gene: LeBruni_20 Start: 10784, Stop: 14581, Start Num: 22

Candidate Starts for LeBruni_20:

(Start: 22 @10784 has 40 MA's), (25, 10823), (31, 10919), (34, 10943), (36, 10949), (42, 10985), (43, 10997), (44, 11015), (46, 11057), (47, 11063), (50, 11141), (57, 11222), (59, 11261), (61, 11300), (64, 11345), (65, 11354), (66, 11360), (69, 11393), (75, 11492), (77, 11498), (82, 11579), (83, 11585), (88, 11618), (90, 11654), (107, 11837), (114, 11885), (134, 12023), (143, 12110), (169, 12320), (171, 12329), (180, 12377), (183, 12398), (184, 12401), (191, 12473), (199, 12536), (212, 12620), (214, 12635), (222, 12686), (238, 12776), (242, 12812), (257, 12917), (263, 12950), (271, 13013), (274, 13034), (284, 13118), (307, 13295), (311, 13331), (314, 13373), (322, 13439), (324, 13448), (353, 13592), (359, 13649), (368, 13841), (371, 13904), (373, 13955), (374, 13973), (378, 14012), (379, 14054), (384, 14117), (385, 14129), (388, 14165), (390, 14207), (391, 14210), (392, 14222), (393, 14228), (406, 14378), (418, 14468), (428, 14531),

Gene: LilyBell_18 Start: 10905, Stop: 14801, Start Num: 22

Candidate Starts for LilyBell_18:

(Start: 22 @10905 has 40 MA's), (31, 11040), (34, 11064), (36, 11070), (42, 11106), (43, 11118), (44, 11136), (45, 11145), (46, 11178), (47, 11184), (50, 11262), (57, 11343), (59, 11382), (64, 11466), (68, 11505), (69, 11514), (77, 11619), (82, 11700), (83, 11706), (88, 11739), (92, 11775), (114, 12006), (124, 12099), (134, 12144), (145, 12240), (169, 12441), (171, 12450), (180, 12498), (183, 12519),

(184, 12522), (191, 12594), (214, 12756), (242, 12933), (263, 13071), (271, 13134), (274, 13155), (285, 13245), (289, 13302), (299, 13380), (307, 13419), (311, 13455), (314, 13497), (317, 13536), (321, 13560), (324, 13572), (325, 13581), (331, 13596), (333, 13614), (351, 13800), (353, 13809), (362, 13932), (363, 13959), (364, 13965), (368, 14058), (373, 14172), (377, 14220), (378, 14229), (379, 14271), (384, 14334), (385, 14346), (388, 14382), (390, 14424), (393, 14445), (394, 14457), (399, 14541), (406, 14595), (415, 14676), (417, 14682), (419, 14697), (420, 14700), (424, 14736),

Gene: LittleRon_18 Start: 10859, Stop: 14659, Start Num: 22

Candidate Starts for LittleRon_18:

(Start: 22 @10859 has 40 MA's), (31, 10994), (34, 11018), (36, 11024), (42, 11060), (43, 11072), (44, 11090), (45, 11099), (46, 11132), (47, 11138), (50, 11216), (57, 11297), (59, 11336), (60, 11366), (64, 11420), (66, 11435), (69, 11468), (77, 11573), (83, 11660), (88, 11693), (90, 11729), (104, 11870), (114, 11960), (124, 12053), (134, 12098), (145, 12194), (169, 12395), (171, 12404), (180, 12452), (183, 12473), (184, 12476), (191, 12548), (214, 12710), (222, 12761), (230, 12806), (242, 12887), (263, 13025), (269, 13076), (271, 13088), (274, 13109), (299, 13334), (311, 13406), (314, 13448), (322, 13514), (324, 13523), (331, 13547), (332, 13550), (350, 13655), (357, 13706), (359, 13724), (365, 13844), (368, 13916), (373, 14030), (377, 14078), (378, 14087), (379, 14129), (384, 14192), (385, 14204), (388, 14240), (390, 14282), (393, 14303), (394, 14315), (399, 14399), (406, 14453), (415, 14534), (417, 14540), (419, 14555), (420, 14558), (424, 14594),

Gene: MUWow_18 Start: 10936, Stop: 14877, Start Num: 22

Candidate Starts for MUWow_18:

(Start: 22 @10936 has 40 MA's), (25, 10975), (29, 11038), (31, 11071), (34, 11095), (36, 11101), (37, 11113), (42, 11137), (43, 11149), (44, 11167), (46, 11209), (57, 11374), (74, 11641), (76, 11647), (80, 11686), (89, 11779), (104, 11947), (108, 11992), (118, 12088), (132, 12163), (136, 12193), (144, 12280), (147, 12292), (154, 12361), (156, 12397), (158, 12427), (164, 12463), (170, 12511), (172, 12523), (177, 12553), (184, 12610), (186, 12619), (189, 12664), (190, 12667), (192, 12712), (194, 12721), (202, 12805), (203, 12814), (205, 12826), (207, 12847), (213, 12886), (214, 12898), (223, 12973), (227, 12997), (241, 13105), (245, 13144), (257, 13234), (259, 13249), (278, 13351), (281, 13381), (286, 13432), (287, 13453), (291, 13501), (292, 13504), (307, 13588), (308, 13591), (314, 13669), (324, 13744), (325, 13753), (331, 13768), (346, 13888), (352, 13927), (356, 13945), (364, 14044), (368, 14137), (373, 14251), (374, 14269), (378, 14308), (379, 14350), (384, 14413), (385, 14425), (388, 14461), (390, 14503), (393, 14524), (399, 14620), (406, 14674), (428, 14827),

Gene: Mapleville_19 Start: 10980, Stop: 14783, Start Num: 22

Candidate Starts for Mapleville_19:

(Start: 22 @10980 has 40 MA's), (31, 11115), (34, 11139), (36, 11145), (42, 11181), (43, 11193), (44, 11211), (45, 11220), (46, 11253), (47, 11259), (50, 11337), (57, 11418), (59, 11457), (64, 11541), (65, 11550), (66, 11556), (68, 11580), (69, 11589), (75, 11688), (77, 11694), (83, 11781), (88, 11814), (90, 11850), (107, 12033), (112, 12069), (114, 12081), (118, 12132), (134, 12219), (143, 12306), (160, 12447), (169, 12516), (171, 12525), (180, 12573), (183, 12594), (184, 12597), (191, 12669), (199, 12732), (212, 12816), (214, 12831), (221, 12870), (230, 12927), (258, 13122), (266, 13167), (274, 13230), (286, 13332), (287, 13353), (314, 13575), (322, 13641), (324, 13650), (342, 13716), (355, 13812), (359, 13851), (362, 13917), (368, 14043), (373, 14157), (374, 14175), (377, 14205), (378, 14214), (379, 14256), (384, 14319), (385, 14331), (388, 14367), (390, 14409), (393, 14430), (394, 14442), (404, 14568), (406, 14580), (416, 14664), (418, 14670), (429, 14763),

Gene: MaterMagnus_19 Start: 10844, Stop: 14785, Start Num: 22

Candidate Starts for MaterMagnus_19:

(Start: 22 @10844 has 40 MA's), (25, 10883), (29, 10946), (31, 10979), (34, 11003), (36, 11009), (37, 11021), (42, 11045), (43, 11057), (44, 11075), (46, 11117), (57, 11282), (74, 11549), (76, 11555), (80, 11594), (89, 11687), (104, 11855), (108, 11900), (118, 11996), (132, 12071), (136, 12101), (144, 12188), (147, 12200), (154, 12269), (156, 12305), (158, 12335), (164, 12371), (170, 12419), (172,

12431), (177, 12461), (184, 12518), (186, 12527), (189, 12572), (190, 12575), (194, 12629), (202, 12713), (203, 12722), (205, 12734), (207, 12755), (214, 12806), (227, 12905), (241, 13013), (245, 13052), (257, 13142), (259, 13157), (278, 13259), (281, 13289), (286, 13340), (287, 13361), (291, 13409), (292, 13412), (307, 13496), (308, 13499), (314, 13577), (324, 13652), (325, 13661), (331, 13676), (346, 13796), (352, 13835), (356, 13853), (364, 13952), (368, 14045), (373, 14159), (374, 14177), (378, 14216), (379, 14258), (384, 14321), (385, 14333), (388, 14369), (390, 14411), (393, 14432), (399, 14528), (406, 14582), (418, 14672), (428, 14735),

Gene: MidnightRain_19 Start: 10842, Stop: 14783, Start Num: 22

Candidate Starts for MidnightRain_19:

(Start: 22 @10842 has 40 MA's), (25, 10881), (29, 10944), (31, 10977), (34, 11001), (36, 11007), (37, 11019), (42, 11043), (43, 11055), (44, 11073), (46, 11115), (57, 11280), (74, 11547), (76, 11553), (80, 11592), (89, 11685), (104, 11853), (108, 11898), (118, 11994), (132, 12069), (136, 12099), (144, 12186), (147, 12198), (154, 12267), (156, 12303), (158, 12333), (164, 12369), (170, 12417), (172, 12429), (177, 12459), (184, 12516), (186, 12525), (189, 12570), (190, 12573), (192, 12618), (194, 12627), (202, 12711), (203, 12720), (205, 12732), (207, 12753), (213, 12792), (214, 12804), (223, 12879), (227, 12903), (241, 13011), (245, 13050), (257, 13140), (259, 13155), (278, 13257), (281, 13287), (286, 13338), (287, 13359), (291, 13407), (292, 13410), (307, 13494), (308, 13497), (314, 13575), (324, 13650), (325, 13659), (331, 13674), (352, 13833), (356, 13851), (364, 13950), (368, 14043), (373, 14157), (374, 14175), (378, 14214), (379, 14256), (384, 14319), (385, 14331), (388, 14367), (390, 14409), (393, 14430), (399, 14526), (406, 14580), (418, 14670), (428, 14733),

Gene: MurphyJoseph_19 Start: 10843, Stop: 14868, Start Num: 22

Candidate Starts for MurphyJoseph_19:

(Start: 22 @10843 has 40 MA's), (31, 10978), (44, 11074), (45, 11083), (46, 11116), (50, 11200), (61, 11359), (63, 11371), (68, 11443), (74, 11548), (79, 11590), (80, 11593), (94, 11722), (97, 11755), (105, 11866), (110, 11920), (126, 12043), (145, 12193), (150, 12226), (161, 12343), (167, 12406), (178, 12463), (184, 12514), (190, 12571), (194, 12625), (202, 12709), (224, 12880), (239, 13000), (261, 13171), (262, 13174), (264, 13192), (280, 13312), (283, 13336), (302, 13543), (306, 13570), (314, 13663), (315, 13666), (319, 13708), (320, 13711), (322, 13729), (325, 13747), (342, 13792), (353, 13870), (359, 13927), (364, 14026), (368, 14119), (370, 14152), (371, 14182), (373, 14233), (374, 14251), (378, 14290), (379, 14332), (381, 14350), (385, 14407), (388, 14443), (390, 14485), (391, 14488), (393, 14506), (406, 14656), (422, 14770), (425, 14803),

Gene: NewKitty_20 Start: 11073, Stop: 15014, Start Num: 22

Candidate Starts for NewKitty_20:

(Start: 22 @11073 has 40 MA's), (25, 11112), (29, 11175), (31, 11208), (34, 11232), (36, 11238), (37, 11250), (42, 11274), (43, 11286), (44, 11304), (46, 11346), (57, 11511), (74, 11778), (76, 11784), (80, 11823), (89, 11916), (104, 12084), (108, 12129), (118, 12225), (132, 12300), (136, 12330), (144, 12417), (147, 12429), (154, 12498), (156, 12534), (158, 12564), (164, 12600), (170, 12648), (172, 12660), (177, 12690), (184, 12747), (186, 12756), (189, 12801), (190, 12804), (192, 12849), (194, 12858), (202, 12942), (203, 12951), (205, 12963), (207, 12984), (213, 13023), (214, 13035), (223, 13110), (227, 13134), (241, 13242), (245, 13281), (257, 13371), (259, 13386), (278, 13488), (281, 13518), (286, 13569), (287, 13590), (291, 13638), (292, 13641), (307, 13725), (308, 13728), (314, 13806), (324, 13881), (325, 13890), (331, 13905), (346, 14025), (352, 14064), (356, 14082), (364, 14181), (368, 14274), (373, 14388), (374, 14406), (378, 14445), (379, 14487), (384, 14550), (385, 14562), (388, 14598), (390, 14640), (393, 14661), (399, 14757), (406, 14811), (428, 14964),

Gene: NidoQ_18 Start: 10948, Stop: 14841, Start Num: 22

Candidate Starts for NidoQ_18:

(Start: 22 @10948 has 40 MA's), (31, 11083), (34, 11107), (36, 11113), (42, 11149), (43, 11161), (44, 11179), (45, 11188), (46, 11221), (47, 11227), (50, 11305), (57, 11386), (59, 11425), (64, 11509), (68, 11548), (69, 11557), (77, 11662), (82, 11743), (83, 11749), (88, 11782), (92, 11818), (114, 12049),

(134, 12187), (145, 12283), (169, 12484), (171, 12493), (180, 12541), (183, 12562), (184, 12565), (191, 12637), (214, 12799), (222, 12850), (242, 12976), (263, 13114), (271, 13177), (274, 13198), (285, 13288), (299, 13423), (307, 13462), (311, 13498), (314, 13540), (317, 13579), (321, 13603), (324, 13615), (325, 13624), (331, 13639), (351, 13843), (353, 13852), (362, 13975), (363, 14002), (364, 14008), (365, 14029), (368, 14101), (373, 14215), (377, 14263), (378, 14272), (379, 14314), (384, 14377), (385, 14389), (388, 14425), (389, 14434), (390, 14467), (392, 14482), (393, 14488), (394, 14500), (404, 14626), (406, 14638), (416, 14722), (418, 14728),

Gene: NikkiHotWheels_18 Start: 10948, Stop: 14802, Start Num: 27

Candidate Starts for NikkiHotWheels_18:

(Start: 22 @10888 has 40 MA's), (27, 10948), (31, 11023), (34, 11047), (36, 11053), (42, 11089), (43, 11101), (44, 11119), (45, 11128), (46, 11161), (47, 11167), (50, 11245), (57, 11326), (59, 11365), (64, 11449), (68, 11488), (69, 11497), (77, 11602), (82, 11683), (83, 11689), (85, 11710), (89, 11752), (92, 11779), (96, 11812), (99, 11869), (107, 11962), (114, 12010), (118, 12061), (134, 12148), (143, 12235), (145, 12244), (169, 12445), (171, 12454), (180, 12502), (183, 12523), (184, 12526), (191, 12598), (214, 12760), (222, 12811), (242, 12937), (263, 13075), (269, 13126), (271, 13138), (274, 13159), (285, 13249), (299, 13384), (307, 13423), (311, 13459), (314, 13501), (316, 13522), (317, 13540), (321, 13564), (324, 13576), (325, 13585), (331, 13600), (353, 13813), (363, 13963), (364, 13969), (368, 14062), (373, 14176), (374, 14194), (377, 14224), (378, 14233), (379, 14275), (384, 14338), (385, 14350), (388, 14386), (390, 14428), (392, 14443), (393, 14449), (394, 14461), (404, 14587), (406, 14599), (416, 14683), (418, 14689),

Gene: Nyilah_18 Start: 10881, Stop: 14774, Start Num: 22

Candidate Starts for Nyilah_18:

(15, 10788), (Start: 22 @10881 has 40 MA's), (31, 11016), (34, 11040), (37, 11058), (42, 11082), (43, 11094), (44, 11112), (45, 11121), (46, 11154), (47, 11160), (50, 11238), (57, 11319), (59, 11358), (64, 11442), (66, 11457), (69, 11490), (77, 11595), (83, 11682), (88, 11715), (90, 11751), (107, 11934), (114, 11982), (118, 12033), (119, 12036), (134, 12120), (143, 12207), (145, 12216), (169, 12417), (171, 12426), (180, 12474), (183, 12495), (184, 12498), (191, 12570), (208, 12690), (214, 12732), (222, 12783), (242, 12909), (263, 13047), (271, 13110), (274, 13131), (285, 13221), (299, 13356), (307, 13395), (311, 13431), (314, 13473), (316, 13494), (317, 13512), (321, 13536), (324, 13548), (325, 13557), (331, 13572), (351, 13776), (353, 13785), (362, 13908), (363, 13935), (364, 13941), (368, 14034), (373, 14148), (377, 14196), (378, 14205), (379, 14247), (384, 14310), (385, 14322), (388, 14358), (390, 14400), (392, 14415), (393, 14421), (394, 14433), (399, 14517), (406, 14571), (407, 14580), (418, 14661), (428, 14724),

Gene: Peas_18 Start: 10892, Stop: 14788, Start Num: 22

Candidate Starts for Peas_18:

(Start: 22 @10892 has 40 MA's), (31, 11027), (34, 11051), (36, 11057), (42, 11093), (43, 11105), (44, 11123), (45, 11132), (46, 11165), (47, 11171), (50, 11249), (57, 11330), (59, 11369), (64, 11453), (66, 11468), (69, 11501), (77, 11606), (83, 11693), (88, 11726), (90, 11762), (107, 11945), (114, 11993), (118, 12044), (119, 12047), (123, 12083), (124, 12086), (134, 12131), (143, 12218), (160, 12359), (169, 12428), (171, 12437), (180, 12485), (183, 12506), (184, 12509), (191, 12581), (199, 12644), (214, 12743), (222, 12794), (242, 12920), (263, 13058), (269, 13109), (271, 13121), (274, 13142), (285, 13232), (299, 13367), (307, 13406), (311, 13442), (314, 13484), (316, 13505), (317, 13523), (321, 13547), (324, 13559), (325, 13568), (331, 13583), (353, 13796), (363, 13946), (364, 13952), (368, 14045), (373, 14159), (374, 14177), (377, 14207), (378, 14216), (379, 14258), (384, 14321), (385, 14333), (388, 14369), (390, 14411), (393, 14432), (394, 14444), (404, 14570), (406, 14582), (417, 14669), (420, 14687),

Gene: PeggyLeg03_18 Start: 10931, Stop: 14827, Start Num: 22

Candidate Starts for PeggyLeg03_18:

(Start: 22 @10931 has 40 MA's), (31, 11066), (34, 11090), (36, 11096), (42, 11132), (43, 11144), (44, 11162), (45, 11171), (46, 11204), (47, 11210), (50, 11288), (57, 11369), (59, 11408), (64, 11492), (68, 11531), (69, 11540), (77, 11645), (82, 11726), (83, 11732), (88, 11765), (92, 11801), (114, 12032), (134, 12170), (145, 12266), (169, 12467), (171, 12476), (180, 12524), (183, 12545), (184, 12548), (191, 12620), (210, 12761), (214, 12782), (222, 12833), (242, 12959), (263, 13097), (271, 13160), (274, 13181), (285, 13271), (299, 13406), (307, 13445), (311, 13481), (314, 13523), (317, 13562), (321, 13586), (322, 13589), (324, 13598), (325, 13607), (331, 13622), (351, 13826), (353, 13835), (362, 13958), (363, 13985), (364, 13991), (365, 14012), (368, 14084), (373, 14198), (377, 14246), (378, 14255), (379, 14297), (384, 14360), (385, 14372), (388, 14408), (390, 14450), (393, 14471), (394, 14483), (399, 14567), (406, 14621), (415, 14702), (417, 14708), (419, 14723), (420, 14726), (424, 14762),

Gene: Persistence_18 Start: 10866, Stop: 14705, Start Num: 22

Candidate Starts for Persistence_18:

(Start: 22 @10866 has 40 MA's), (31, 11001), (34, 11025), (36, 11031), (41, 11061), (42, 11067), (44, 11097), (46, 11139), (59, 11343), (61, 11382), (63, 11394), (66, 11442), (74, 11571), (78, 11583), (80, 11616), (92, 11736), (104, 11877), (108, 11922), (114, 11967), (116, 11988), (117, 11997), (119, 12021), (125, 12063), (132, 12093), (134, 12105), (139, 12174), (146, 12216), (156, 12327), (157, 12336), (163, 12384), (167, 12429), (175, 12474), (184, 12537), (194, 12648), (197, 12696), (205, 12753), (214, 12825), (223, 12900), (225, 12915), (247, 12972), (253, 13005), (260, 13077), (261, 13080), (282, 13215), (286, 13254), (287, 13275), (296, 13368), (307, 13422), (313, 13491), (314, 13497), (320, 13545), (324, 13572), (325, 13581), (368, 13965), (369, 13992), (370, 13998), (371, 14028), (373, 14079), (378, 14136), (379, 14178), (384, 14241), (385, 14253), (389, 14298), (390, 14331), (393, 14352), (399, 14448), (406, 14502), (423, 14634),

Gene: PetriParty_17 Start: 11046, Stop: 15431, Start Num: 7

Candidate Starts for PetriParty_17:

(4, 10968), (Start: 7 @11046 has 1 MA's), (9, 11106), (11, 11169), (12, 11181), (13, 11223), (20, 11316), (28, 11433), (44, 11571), (45, 11580), (46, 11613), (49, 11640), (57, 11778), (59, 11817), (61, 11856), (64, 11901), (65, 11910), (66, 11916), (68, 11940), (74, 12045), (80, 12090), (83, 12141), (91, 12201), (95, 12237), (97, 12252), (100, 12306), (114, 12441), (116, 12462), (120, 12513), (121, 12522), (122, 12525), (133, 12576), (134, 12579), (139, 12648), (141, 12672), (142, 12675), (156, 12801), (157, 12810), (162, 12849), (164, 12867), (165, 12879), (181, 13002), (184, 13014), (186, 13023), (187, 13026), (194, 13125), (200, 13194), (201, 13203), (204, 13227), (205, 13230), (227, 13401), (234, 13461), (245, 13548), (250, 13560), (257, 13638), (259, 13653), (265, 13686), (278, 13755), (282, 13797), (283, 13800), (286, 13836), (287, 13857), (303, 13971), (317, 14115), (320, 14124), (327, 14163), (328, 14166), (335, 14205), (343, 14337), (345, 14346), (359, 14454), (370, 14679), (372, 14721), (375, 14781), (379, 14859), (382, 14880), (386, 14949), (388, 14970), (390, 15012), (393, 15033), (396, 15096), (400, 15135), (406, 15186), (414, 15255), (421, 15300), (432, 15417),

Gene: Phrank15_18 Start: 10912, Stop: 14718, Start Num: 22

Candidate Starts for Phrank15_18:

(15, 10822), (Start: 22 @10912 has 40 MA's), (25, 10951), (31, 11047), (34, 11071), (36, 11077), (37, 11089), (38, 11092), (40, 11101), (42, 11113), (43, 11125), (44, 11143), (45, 11152), (46, 11185), (47, 11191), (50, 11269), (57, 11350), (59, 11389), (65, 11482), (66, 11488), (69, 11521), (77, 11626), (83, 11713), (88, 11746), (90, 11782), (102, 11908), (104, 11923), (107, 11965), (123, 12103), (134, 12151), (152, 12307), (160, 12379), (169, 12448), (171, 12457), (180, 12505), (183, 12526), (184, 12529), (185, 12535), (191, 12601), (199, 12664), (214, 12763), (215, 12772), (222, 12814), (232, 12868), (242, 12940), (253, 12994), (263, 13078), (269, 13129), (271, 13141), (274, 13162), (284, 13246), (288, 13297), (307, 13423), (314, 13501), (317, 13540), (322, 13567), (324, 13576), (331, 13600), (332, 13603), (359, 13777), (368, 13969), (370, 14002), (373, 14083), (374, 14101), (378, 14140), (379, 14182), (384, 14245), (385, 14257), (388, 14293), (390, 14335), (393, 14356), (394,

14368), (399, 14452), (406, 14506), (415, 14581), (417, 14587), (419, 14602), (420, 14605),

Gene: Pucara_18 Start: 10892, Stop: 14788, Start Num: 22

Candidate Starts for Pucara_18:

(Start: 22 @10892 has 40 MA's), (27, 10952), (31, 11027), (34, 11051), (36, 11057), (42, 11093), (43, 11105), (44, 11123), (45, 11132), (46, 11165), (47, 11171), (50, 11249), (57, 11330), (59, 11369), (64, 11453), (66, 11468), (68, 11492), (69, 11501), (77, 11606), (83, 11693), (88, 11726), (90, 11762), (107, 11945), (114, 11993), (118, 12044), (119, 12047), (124, 12086), (134, 12131), (143, 12218), (145, 12227), (169, 12428), (171, 12437), (180, 12485), (183, 12506), (184, 12509), (191, 12581), (199, 12644), (222, 12794), (242, 12920), (263, 13058), (269, 13109), (271, 13121), (274, 13142), (285, 13232), (299, 13367), (307, 13406), (311, 13442), (314, 13484), (316, 13505), (317, 13523), (324, 13559), (331, 13583), (353, 13796), (363, 13946), (364, 13952), (368, 14045), (373, 14159), (374, 14177), (377, 14207), (378, 14216), (379, 14258), (384, 14321), (385, 14333), (390, 14411), (393, 14432), (394, 14444), (402, 14549), (404, 14570), (406, 14582), (417, 14669), (420, 14687),

Gene: RadFad_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for RadFad_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (214, 12805), (217, 12832), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (418, 14671), (428, 14734),

Gene: Raphaella_19 Start: 10843, Stop: 14784, Start Num: 22

Candidate Starts for Raphaella_19:

(Start: 22 @10843 has 40 MA's), (25, 10882), (29, 10945), (31, 10978), (34, 11002), (36, 11008), (37, 11020), (42, 11044), (43, 11056), (44, 11074), (46, 11116), (57, 11281), (74, 11548), (76, 11554), (80, 11593), (89, 11686), (104, 11854), (108, 11899), (118, 11995), (132, 12070), (136, 12100), (144, 12187), (147, 12199), (154, 12268), (156, 12304), (158, 12334), (164, 12370), (170, 12418), (172, 12430), (177, 12460), (184, 12517), (186, 12526), (189, 12571), (190, 12574), (192, 12619), (194, 12628), (202, 12712), (203, 12721), (205, 12733), (207, 12754), (213, 12793), (214, 12805), (223, 12880), (227, 12904), (241, 13012), (245, 13051), (257, 13141), (259, 13156), (278, 13258), (281, 13288), (286, 13339), (287, 13360), (291, 13408), (292, 13411), (307, 13495), (308, 13498), (314, 13576), (324, 13651), (325, 13660), (331, 13675), (352, 13834), (356, 13852), (364, 13951), (368, 14044), (373, 14158), (374, 14176), (378, 14215), (379, 14257), (384, 14320), (385, 14332), (388, 14368), (390, 14410), (393, 14431), (399, 14527), (406, 14581), (428, 14734),

Gene: Richie_19 Start: 10858, Stop: 14799, Start Num: 22

Candidate Starts for Richie_19:

(Start: 22 @10858 has 40 MA's), (25, 10897), (29, 10960), (31, 10993), (34, 11017), (36, 11023), (37, 11035), (42, 11059), (43, 11071), (44, 11089), (46, 11131), (57, 11296), (74, 11563), (76, 11569), (80, 11608), (89, 11701), (104, 11869), (108, 11914), (118, 12010), (132, 12085), (136, 12115), (144, 12202), (147, 12214), (154, 12283), (156, 12319), (158, 12349), (164, 12385), (170, 12433), (172, 12445), (177, 12475), (184, 12532), (186, 12541), (189, 12586), (190, 12589), (192, 12634), (194, 12643), (202, 12727), (203, 12736), (205, 12748), (207, 12769), (213, 12808), (214, 12820), (223, 12895), (227, 12919), (241, 13027), (245, 13066), (257, 13156), (259, 13171), (278, 13273), (281, 13303), (286, 13354), (287, 13375), (291, 13423), (292, 13426), (307, 13510), (308, 13513), (314,

13591), (324, 13666), (325, 13675), (331, 13690), (346, 13810), (352, 13849), (356, 13867), (364, 13966), (368, 14059), (373, 14173), (374, 14191), (378, 14230), (379, 14272), (384, 14335), (385, 14347), (388, 14383), (390, 14425), (393, 14446), (399, 14542), (406, 14596), (428, 14749),

Gene: Sakai_19 Start: 10852, Stop: 14793, Start Num: 22

Candidate Starts for Sakai_19:

(Start: 22 @10852 has 40 MA's), (25, 10891), (29, 10954), (31, 10987), (34, 11011), (36, 11017), (37, 11029), (42, 11053), (43, 11065), (44, 11083), (46, 11125), (57, 11290), (74, 11557), (76, 11563), (80, 11602), (89, 11695), (104, 11863), (108, 11908), (118, 12004), (132, 12079), (136, 12109), (144, 12196), (147, 12208), (154, 12277), (156, 12313), (158, 12343), (164, 12379), (170, 12427), (172, 12439), (177, 12469), (184, 12526), (186, 12535), (189, 12580), (190, 12583), (192, 12628), (194, 12637), (202, 12721), (203, 12730), (205, 12742), (207, 12763), (213, 12802), (214, 12814), (223, 12889), (227, 12913), (241, 13021), (245, 13060), (257, 13150), (259, 13165), (278, 13267), (281, 13297), (286, 13348), (287, 13369), (291, 13417), (292, 13420), (307, 13504), (308, 13507), (314, 13585), (324, 13660), (325, 13669), (331, 13684), (346, 13804), (352, 13843), (356, 13861), (364, 13960), (368, 14053), (373, 14167), (374, 14185), (378, 14224), (379, 14266), (384, 14329), (385, 14341), (388, 14377), (390, 14419), (393, 14440), (399, 14536), (406, 14590), (428, 14743),

Gene: Sashimi_20 Start: 11112, Stop: 15146, Start Num: 16

Candidate Starts for Sashimi_20:

(Start: 16 @11112 has 2 MA's), (23, 11172), (28, 11247), (30, 11259), (33, 11310), (37, 11331), (38, 11334), (40, 11343), (44, 11385), (46, 11427), (51, 11526), (57, 11592), (58, 11598), (59, 11631), (61, 11670), (65, 11724), (66, 11730), (71, 11787), (74, 11859), (80, 11904), (81, 11913), (86, 11982), (87, 11988), (89, 11997), (92, 12024), (97, 12066), (100, 12120), (111, 12240), (114, 12255), (120, 12327), (127, 12357), (134, 12393), (149, 12522), (154, 12579), (157, 12624), (164, 12681), (166, 12702), (174, 12762), (184, 12828), (187, 12840), (189, 12882), (193, 12936), (194, 12939), (197, 12987), (205, 13044), (206, 13056), (219, 13161), (227, 13215), (234, 13275), (238, 13296), (241, 13323), (245, 13362), (259, 13467), (267, 13506), (272, 13530), (275, 13551), (278, 13569), (282, 13611), (286, 13650), (287, 13671), (289, 13695), (303, 13785), (316, 13911), (317, 13929), (320, 13938), (325, 13974), (353, 14118), (359, 14175), (370, 14400), (372, 14442), (379, 14580), (382, 14601), (388, 14691), (390, 14733), (393, 14754), (396, 14817), (403, 14880), (408, 14925), (421, 15015), (430, 15114), (432, 15132),

Gene: Satrap_19 Start: 10893, Stop: 14705, Start Num: 31

Candidate Starts for Satrap_19:

(Start: 22 @10758 has 40 MA's), (25, 10797), (27, 10818), (31, 10893), (34, 10917), (36, 10923), (38, 10938), (40, 10947), (44, 10989), (45, 10998), (46, 11031), (59, 11235), (63, 11286), (64, 11319), (74, 11463), (78, 11475), (80, 11508), (104, 11769), (105, 11781), (117, 11889), (119, 11913), (125, 11955), (130, 11976), (134, 11997), (146, 12108), (149, 12126), (157, 12228), (163, 12276), (184, 12429), (198, 12591), (202, 12624), (203, 12633), (205, 12645), (214, 12717), (216, 12738), (223, 12792), (253, 12897), (260, 12969), (261, 12972), (282, 13107), (286, 13146), (287, 13167), (314, 13386), (318, 13428), (319, 13431), (320, 13434), (326, 13470), (330, 13479), (339, 13593), (340, 13623), (354, 13734), (364, 13872), (368, 13965), (373, 14079), (374, 14097), (378, 14136), (379, 14178), (381, 14196), (385, 14253), (388, 14289), (390, 14331), (393, 14352), (394, 14364), (406, 14502), (416, 14586), (418, 14592), (424, 14640), (426, 14652),

Gene: Seahorse_20 Start: 11096, Stop: 15148, Start Num: 22

Candidate Starts for Seahorse_20:

(Start: 22 @11096 has 40 MA's), (31, 11231), (44, 11327), (46, 11369), (50, 11453), (61, 11612), (63, 11624), (68, 11696), (74, 11801), (79, 11843), (80, 11846), (97, 12008), (105, 12119), (110, 12173), (116, 12218), (118, 12248), (126, 12296), (137, 12362), (145, 12446), (150, 12479), (161, 12596), (167, 12659), (178, 12716), (184, 12767), (190, 12824), (194, 12878), (202, 12962), (239, 13253), (261, 13424), (262, 13427), (264, 13445), (280, 13565), (283, 13589), (294, 13751), (308, 13853),

(314, 13931), (322, 13997), (324, 14006), (325, 14015), (350, 14138), (359, 14207), (364, 14306), (367, 14369), (368, 14399), (371, 14462), (373, 14513), (374, 14531), (378, 14570), (379, 14612), (384, 14675), (385, 14687), (388, 14723), (390, 14765), (391, 14768), (393, 14786), (406, 14936), (422, 15050), (425, 15083),

Gene: Shukran_19 Start: 10758, Stop: 14705, Start Num: 22

Candidate Starts for Shukran_19:

(Start: 22 @10758 has 40 MA's), (25, 10797), (27, 10818), (31, 10893), (34, 10917), (36, 10923), (38, 10938), (40, 10947), (44, 10989), (45, 10998), (46, 11031), (59, 11235), (63, 11286), (64, 11319), (74, 11463), (78, 11475), (80, 11508), (104, 11769), (105, 11781), (117, 11889), (119, 11913), (125, 11955), (130, 11976), (134, 11997), (146, 12108), (149, 12126), (157, 12228), (163, 12276), (184, 12429), (198, 12591), (202, 12624), (203, 12633), (205, 12645), (214, 12717), (216, 12738), (223, 12792), (253, 12897), (260, 12969), (261, 12972), (282, 13107), (286, 13146), (287, 13167), (314, 13386), (318, 13428), (319, 13431), (320, 13434), (326, 13470), (330, 13479), (339, 13593), (340, 13623), (354, 13734), (364, 13872), (368, 13965), (373, 14079), (374, 14097), (378, 14136), (379, 14178), (381, 14196), (385, 14253), (388, 14289), (390, 14331), (393, 14352), (394, 14364), (406, 14502), (416, 14586), (418, 14592), (424, 14640), (426, 14652),

Gene: SonDevVon_18 Start: 10884, Stop: 14786, Start Num: 25

Candidate Starts for SonDevVon_18:

(Start: 22 @10845 has 40 MA's), (25, 10884), (29, 10947), (31, 10980), (34, 11004), (36, 11010), (37, 11022), (42, 11046), (43, 11058), (44, 11076), (46, 11118), (57, 11283), (74, 11550), (76, 11556), (80, 11595), (89, 11688), (104, 11856), (108, 11901), (118, 11997), (132, 12072), (136, 12102), (144, 12189), (147, 12201), (154, 12270), (156, 12306), (158, 12336), (164, 12372), (170, 12420), (172, 12432), (177, 12462), (184, 12519), (186, 12528), (189, 12573), (190, 12576), (192, 12621), (194, 12630), (202, 12714), (203, 12723), (205, 12735), (207, 12756), (213, 12795), (214, 12807), (223, 12882), (227, 12906), (241, 13014), (245, 13053), (257, 13143), (259, 13158), (278, 13260), (281, 13290), (286, 13341), (287, 13362), (291, 13410), (292, 13413), (307, 13497), (308, 13500), (314, 13578), (324, 13653), (325, 13662), (331, 13677), (346, 13797), (352, 13836), (356, 13854), (364, 13953), (368, 14046), (373, 14160), (374, 14178), (377, 14208), (378, 14217), (379, 14259), (384, 14322), (385, 14334), (388, 14370), (390, 14412), (393, 14433), (394, 14445), (404, 14571), (406, 14583), (418, 14673), (428, 14736),

Gene: SpicyFrank_19 Start: 10920, Stop: 14861, Start Num: 22

Candidate Starts for SpicyFrank_19:

(Start: 22 @10920 has 40 MA's), (25, 10959), (29, 11022), (31, 11055), (34, 11079), (36, 11085), (42, 11121), (43, 11133), (44, 11151), (46, 11193), (54, 11322), (74, 11625), (80, 11670), (89, 11763), (104, 11931), (108, 11976), (132, 12147), (144, 12264), (147, 12276), (153, 12336), (154, 12345), (158, 12411), (164, 12447), (170, 12495), (172, 12507), (177, 12537), (184, 12594), (190, 12651), (194, 12705), (195, 12726), (202, 12789), (203, 12798), (205, 12810), (210, 12861), (214, 12882), (227, 12981), (241, 13089), (245, 13128), (257, 13218), (259, 13233), (278, 13335), (281, 13365), (286, 13416), (287, 13437), (291, 13485), (292, 13488), (307, 13572), (308, 13575), (314, 13653), (324, 13728), (331, 13752), (356, 13929), (364, 14028), (368, 14121), (373, 14235), (374, 14253), (378, 14292), (379, 14334), (384, 14397), (385, 14409), (388, 14445), (390, 14487), (392, 14502), (393, 14508), (406, 14658), (418, 14748), (424, 14796), (428, 14811),

Gene: Sporco_20 Start: 10900, Stop: 14841, Start Num: 22

Candidate Starts for Sporco_20:

(Start: 22 @10900 has 40 MA's), (25, 10939), (29, 11002), (31, 11035), (34, 11059), (36, 11065), (37, 11077), (42, 11101), (43, 11113), (44, 11131), (46, 11173), (57, 11338), (74, 11605), (76, 11611), (80, 11650), (89, 11743), (104, 11911), (108, 11956), (118, 12052), (132, 12127), (136, 12157), (144, 12244), (147, 12256), (154, 12325), (156, 12361), (158, 12391), (164, 12427), (170, 12475), (172, 12487), (177, 12517), (184, 12574), (186, 12583), (189, 12628), (190, 12631), (192, 12676), (194,

12685), (202, 12769), (203, 12778), (205, 12790), (207, 12811), (213, 12850), (214, 12862), (223, 12937), (227, 12961), (241, 13069), (245, 13108), (257, 13198), (259, 13213), (278, 13315), (281, 13345), (286, 13396), (287, 13417), (291, 13465), (292, 13468), (307, 13552), (308, 13555), (314, 13633), (324, 13708), (325, 13717), (331, 13732), (346, 13852), (352, 13891), (356, 13909), (364, 14008), (368, 14101), (373, 14215), (374, 14233), (378, 14272), (379, 14314), (384, 14377), (385, 14389), (388, 14425), (390, 14467), (393, 14488), (399, 14584), (406, 14638), (428, 14791),

Gene: ThayneTheZag_19 Start: 10917, Stop: 14951, Start Num: 22

Candidate Starts for ThayneTheZag_19:

(Start: 22 @10917 has 40 MA's), (25, 10956), (29, 11019), (31, 11052), (34, 11076), (36, 11082), (40, 11106), (43, 11130), (44, 11148), (46, 11190), (57, 11355), (58, 11361), (74, 11622), (80, 11667), (97, 11829), (104, 11928), (113, 12015), (132, 12144), (144, 12261), (147, 12273), (153, 12333), (158, 12408), (164, 12444), (170, 12492), (172, 12504), (177, 12534), (184, 12591), (190, 12648), (194, 12702), (202, 12786), (203, 12795), (205, 12807), (210, 12858), (214, 12879), (227, 12978), (243, 13110), (245, 13125), (257, 13215), (259, 13230), (275, 13314), (276, 13323), (278, 13332), (286, 13413), (287, 13434), (290, 13476), (296, 13527), (297, 13530), (306, 13557), (320, 13707), (322, 13725), (325, 13743), (329, 13752), (338, 13833), (349, 13926), (353, 13959), (358, 14010), (361, 14076), (365, 14139), (366, 14157), (368, 14211), (370, 14244), (373, 14325), (374, 14343), (378, 14382), (379, 14424), (384, 14487), (385, 14499), (390, 14577), (393, 14598), (397, 14682), (401, 14712), (402, 14715), (406, 14748), (407, 14757), (416, 14832), (418, 14838),

Gene: Tiff81_20 Start: 10986, Stop: 14879, Start Num: 22

Candidate Starts for Tiff81_20:

(15, 10893), (Start: 22 @10986 has 40 MA's), (31, 11121), (34, 11145), (37, 11163), (42, 11187), (43, 11199), (44, 11217), (45, 11226), (46, 11259), (47, 11265), (50, 11343), (57, 11424), (59, 11463), (64, 11547), (66, 11562), (69, 11595), (77, 11700), (83, 11787), (88, 11820), (90, 11856), (107, 12039), (114, 12087), (118, 12138), (119, 12141), (134, 12225), (143, 12312), (145, 12321), (169, 12522), (171, 12531), (180, 12579), (183, 12600), (184, 12603), (191, 12675), (208, 12795), (214, 12837), (222, 12888), (242, 13014), (263, 13152), (271, 13215), (274, 13236), (285, 13326), (299, 13461), (307, 13500), (311, 13536), (314, 13578), (316, 13599), (317, 13617), (321, 13641), (324, 13653), (325, 13662), (331, 13677), (351, 13881), (353, 13890), (362, 14013), (363, 14040), (364, 14046), (368, 14139), (373, 14253), (377, 14301), (378, 14310), (379, 14352), (384, 14415), (385, 14427), (388, 14463), (390, 14505), (392, 14520), (393, 14526), (394, 14538), (399, 14622), (406, 14676), (407, 14685), (418, 14766), (428, 14829),

Gene: TripleJ_18 Start: 11061, Stop: 15446, Start Num: 7

Candidate Starts for TripleJ_18:

(4, 10983), (Start: 7 @11061 has 1 MA's), (9, 11121), (11, 11184), (12, 11196), (13, 11238), (20, 11331), (28, 11448), (44, 11586), (45, 11595), (46, 11628), (51, 11727), (57, 11793), (59, 11832), (61, 11871), (64, 11916), (65, 11925), (66, 11931), (68, 11955), (74, 12060), (80, 12105), (83, 12156), (91, 12216), (95, 12252), (97, 12267), (100, 12321), (116, 12477), (120, 12528), (134, 12594), (156, 12816), (157, 12825), (162, 12864), (164, 12882), (165, 12894), (166, 12903), (174, 12963), (181, 13017), (184, 13029), (186, 13038), (194, 13140), (200, 13209), (204, 13242), (205, 13245), (234, 13476), (245, 13563), (248, 13569), (250, 13575), (259, 13668), (265, 13701), (278, 13770), (283, 13815), (286, 13851), (287, 13872), (303, 13986), (312, 14082), (316, 14112), (317, 14130), (320, 14139), (328, 14181), (343, 14352), (345, 14361), (357, 14451), (359, 14469), (370, 14694), (372, 14736), (375, 14796), (379, 14874), (382, 14895), (386, 14964), (388, 14985), (390, 15027), (393, 15048), (396, 15111), (400, 15150), (406, 15201), (411, 15240), (421, 15315), (430, 15414), (432, 15432),

Gene: Vopal_20 Start: 10915, Stop: 14856, Start Num: 22

Candidate Starts for Vopal_20:

(Start: 22 @10915 has 40 MA's), (25, 10954), (29, 11017), (31, 11050), (34, 11074), (36, 11080), (37, 11092), (42, 11116), (43, 11128), (44, 11146), (46, 11188), (57, 11353), (74, 11620), (76, 11626), (80, 11665), (89, 11758), (104, 11926), (108, 11971), (118, 12067), (132, 12142), (136, 12172), (144, 12259), (147, 12271), (154, 12340), (156, 12376), (158, 12406), (164, 12442), (170, 12490), (172, 12502), (177, 12532), (184, 12589), (186, 12598), (189, 12643), (190, 12646), (192, 12691), (194, 12700), (202, 12784), (203, 12793), (205, 12805), (207, 12826), (213, 12865), (214, 12877), (223, 12952), (227, 12976), (241, 13084), (245, 13123), (257, 13213), (259, 13228), (278, 13330), (281, 13360), (286, 13411), (287, 13432), (291, 13480), (292, 13483), (307, 13567), (308, 13570), (314, 13648), (324, 13723), (325, 13732), (331, 13747), (346, 13867), (352, 13906), (356, 13924), (364, 14023), (368, 14116), (373, 14230), (374, 14248), (378, 14287), (379, 14329), (384, 14392), (385, 14404), (388, 14440), (390, 14482), (393, 14503), (399, 14599), (406, 14653), (428, 14806),

Gene: Windest_20 Start: 10899, Stop: 14840, Start Num: 22

Candidate Starts for Windest_20:

(Start: 22 @10899 has 40 MA's), (25, 10938), (29, 11001), (31, 11034), (34, 11058), (36, 11064), (37, 11076), (42, 11100), (43, 11112), (44, 11130), (46, 11172), (57, 11337), (74, 11604), (76, 11610), (80, 11649), (89, 11742), (104, 11910), (108, 11955), (118, 12051), (132, 12126), (136, 12156), (144, 12243), (147, 12255), (154, 12324), (156, 12360), (158, 12390), (164, 12426), (170, 12474), (172, 12486), (177, 12516), (184, 12573), (186, 12582), (189, 12627), (190, 12630), (192, 12675), (194, 12684), (202, 12768), (203, 12777), (205, 12789), (207, 12810), (213, 12849), (214, 12861), (223, 12936), (227, 12960), (241, 13068), (245, 13107), (257, 13197), (259, 13212), (278, 13314), (281, 13344), (286, 13395), (287, 13416), (291, 13464), (292, 13467), (307, 13551), (308, 13554), (314, 13632), (324, 13707), (325, 13716), (331, 13731), (346, 13851), (352, 13890), (356, 13908), (364, 14007), (368, 14100), (373, 14214), (374, 14232), (378, 14271), (379, 14313), (384, 14376), (385, 14388), (388, 14424), (390, 14466), (393, 14487), (399, 14583), (406, 14637), (418, 14727), (428, 14790),

Gene: YoungHarleezy_19 Start: 10856, Stop: 14797, Start Num: 22

Candidate Starts for YoungHarleezy_19:

(Start: 22 @10856 has 40 MA's), (25, 10895), (27, 10916), (29, 10958), (31, 10991), (34, 11015), (36, 11021), (37, 11033), (43, 11069), (44, 11087), (46, 11129), (57, 11294), (74, 11561), (76, 11567), (80, 11606), (89, 11699), (104, 11867), (108, 11912), (118, 12008), (132, 12083), (136, 12113), (144, 12200), (147, 12212), (154, 12281), (156, 12317), (158, 12347), (164, 12383), (170, 12431), (172, 12443), (177, 12473), (184, 12530), (186, 12539), (189, 12584), (190, 12587), (192, 12632), (194, 12641), (202, 12725), (203, 12734), (205, 12746), (207, 12767), (213, 12806), (214, 12818), (223, 12893), (227, 12917), (241, 13025), (245, 13064), (257, 13154), (259, 13169), (278, 13271), (281, 13301), (286, 13352), (287, 13373), (291, 13421), (292, 13424), (307, 13508), (308, 13511), (314, 13589), (324, 13664), (325, 13673), (331, 13688), (346, 13808), (352, 13847), (356, 13865), (364, 13964), (368, 14057), (373, 14171), (374, 14189), (378, 14228), (379, 14270), (384, 14333), (385, 14345), (388, 14381), (390, 14423), (393, 14444), (399, 14540), (406, 14594), (428, 14747),