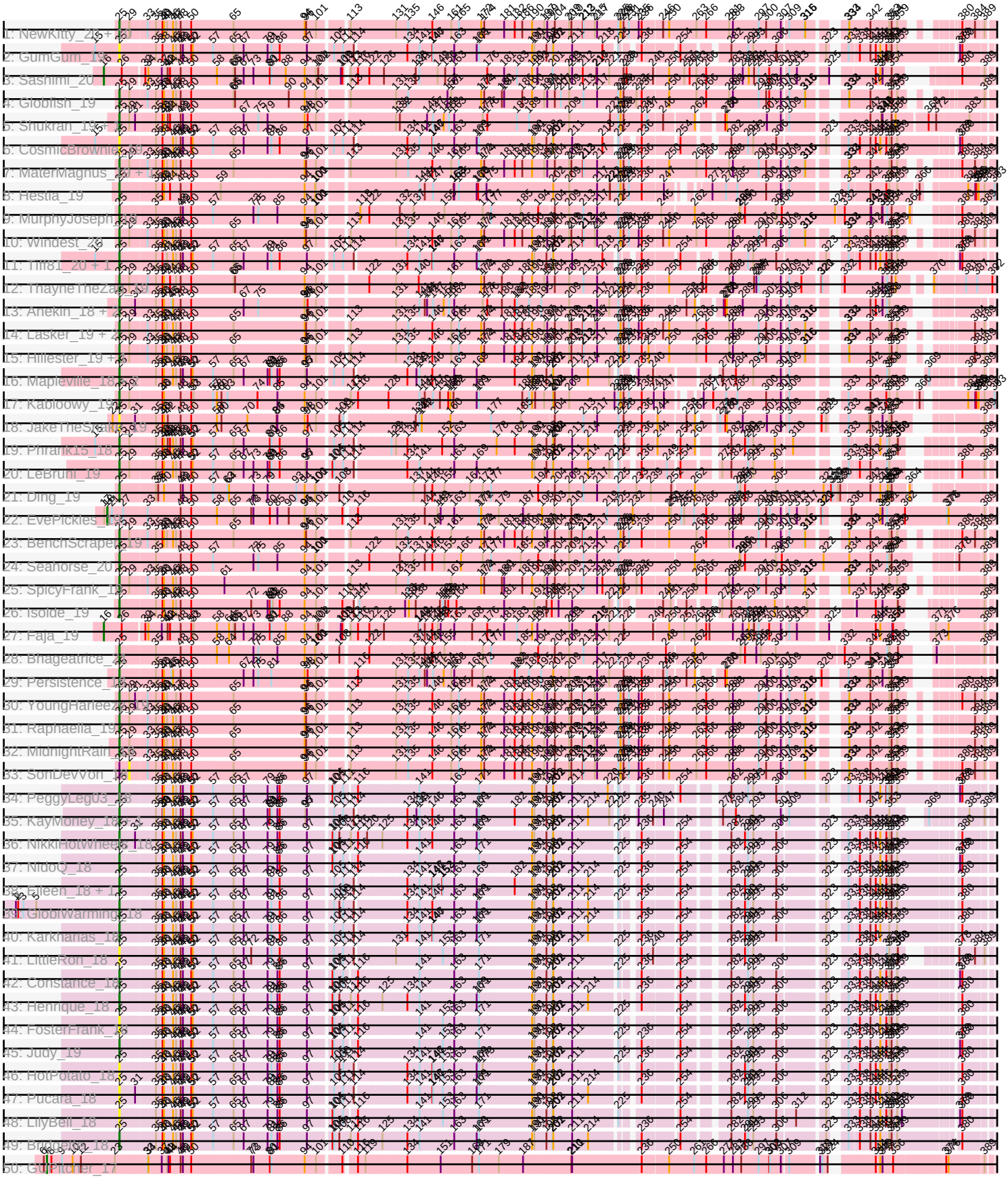
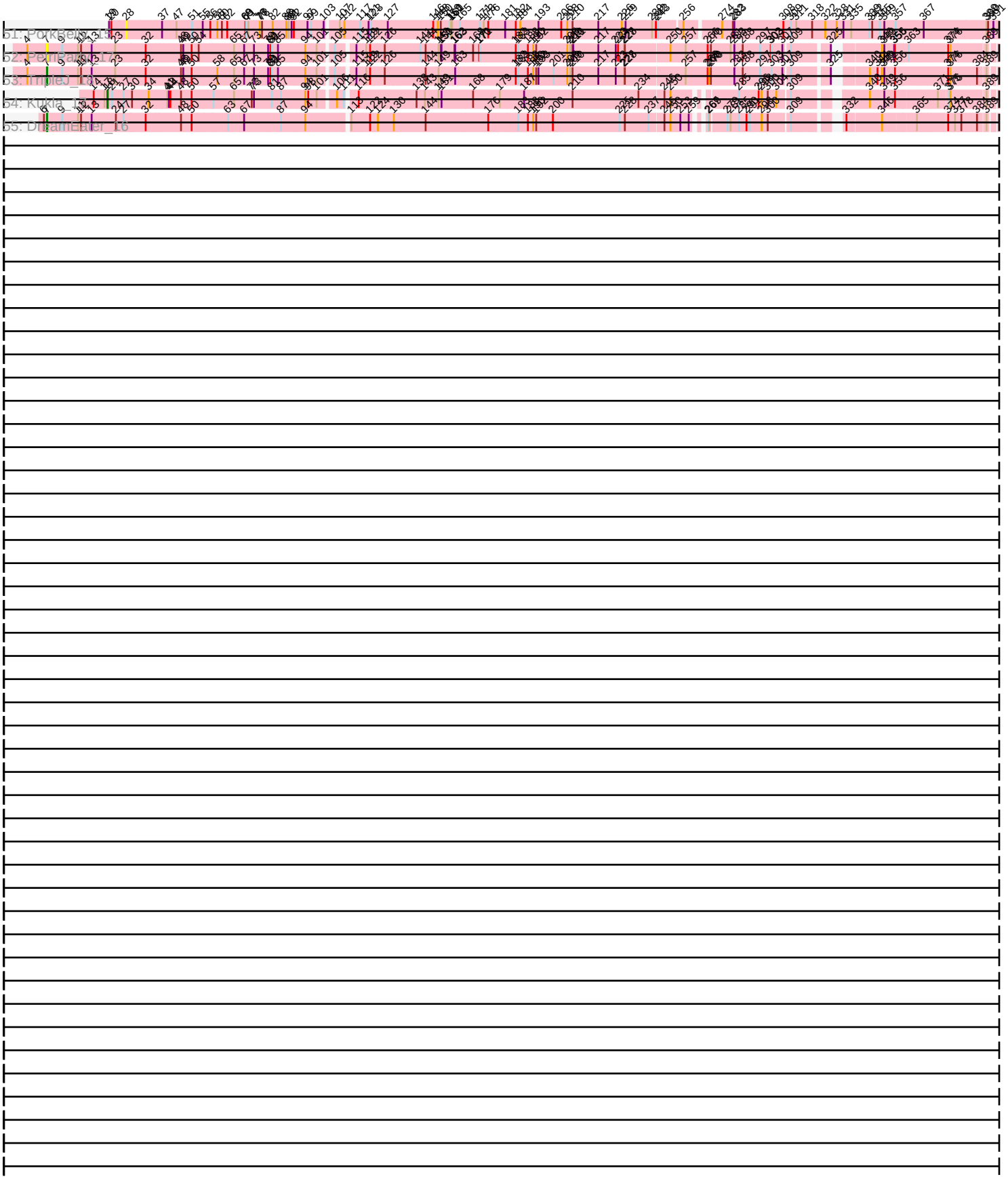
Zoomed Pham 339620



Zoomed Pham 339620



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 339620 Report

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

Pham number 339620 has 77 members, 16 are drafts.

Phages represented in each track:
- Track 1 : NewKitty_20, AdaS_19, Vopal_20, MUWow_18, Sakai_19, CookieBear_19, Richie_19, JellyBread_19, Auxilium_19, Sporco_19, Gorpy_19
- Track 2 : GumGum_19
- Track 3 : Sashimi_20
- Track 4 : Globfish_19
- Track 5 : Shukran_19, Satrap_19
- Track 6 : CosmicBrownie_19
- Track 7 : MaterMagnus_19, Aikyam_19
- Track 8 : Hestia_19
- Track 9 : MurphyJoseph_19
- Track 10 : Windest_20
- Track 11 : Tiff81_20, Nyilah_18
- Track 12 : ThayneTheZag_19
- Track 13 : Anekin_18, Crescenzo_19, DarwinJr_22
- Track 14 : Lasker_19, BlueShadow_19, BasketStar_19
- Track 15 : Hillester_19, RadFad_19
- Track 16 : Mapleville_18, Lawnathon_19, BillyTP_19
- Track 17 : Kabloowy_19
- Track 18 : JakeTheSnake_19
- Track 19 : Phrank15_18
- Track 20 : LeBruni_19
- Track 21 : Ding_19
- Track 22 : EvePickles_19
- Track 23 : BenchScraper_19
- Track 24 : Seahorse_20
- Track 25 : SpicyFrank_19
- Track 26 : Isolde_19
- Track 27 : Faja_19
- Track 28 : Bhageatrice_21
- Track 29 : Persistence_18
- Track 30 : YoungHarleezy_19
- Track 31 : Raphaella_19
- Track 32 : MidnightRain_19
- Track 33 : SonDevVon_18
- Track 34 : PeggyLeg03_18
- Track 35 : KayMoney_18, ChuckDuck_18
- Track 36 : NikkiHotWheels_18

• Track 37 : NidoQ_18
• Track 38 : Eileen_18, Peas_18
• Track 39 : GlobiWarming_18
• Track 40 : Karkharias_18
• Track 41 : LittleRon_18
• Track 42 : Constance_18
• Track 43 : Henrique_18
• Track 44 : FosterFrank_18
• Track 45 : Judy_19
• Track 46 : HotPotato_18
• Track 47 : Pucara_18
• Track 48 : LilyBell_18
• Track 49 : Bridgette_18
• Track 50 : GUPitcher_17
• Track 51 : PorkBelly_15
• Track 52 : PetriParty_17
• Track 53 : TripleJ_18
• Track 54 : Kukla_17
• Track 55 : DreamEater_16

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

The start number called the most often in the published annotations is 25, it was called in 54 of the 61 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, Crescenzo_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, JakeTheSnake_19, JellyBread_19, Judy_19, Kabloowy_19, Karkharias_18, KayMoney_18, Lasker_19, Lawnathon_19, LeBruni_19, LilyBell_18, LittleRon_18, MUWow_18, Mapleville_18, MaterMagnus_19, MidnightRain_19, MurphyJoseph_19, NewKitty_20, NidoQ_18, NikkiHotWheels_18, Nyilah_18, Peas_18, PeggyLeg03_18, Persistence_18, Phrank15_18, Pucara_18, RadFad_19, Raphaella_19, Richie_19, Sakai_19, Satrap_19, Seahorse_20, Shukran_19, SpicyFrank_19, Sporco_19, ThayneTheZag_19, Tiff81_20, Vopal_20, Windest_20, YoungHarleezy_19,

Genes that have the "Most Annotated" start but do not call it:
• SonDevVon_18,

Genes that do not have the "Most Annotated" start:
• DreamEater_16, EvePickles_19, Faja_19, GUPitcher_17, Kukla_17, PetriParty_17, PorkBelly_15, Sashimi_20, TripleJ_18,

Summary by start number:

Start 7:
• Found in 4 of 77 (5.2%) of genes in pham

• Manual Annotations of this start: 3 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DreamEater_16 (FJ), GUPitcher_17 (FJ), PetriParty_17 (FJ), TripleJ_18 (FJ),

Start 16:
• Found in 2 of 77 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 61
• 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 77 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 61
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EvePickles_19 (AY), Kukla_17 (FJ),

Start 25:
• Found in 68 of 77 (88.3%) of genes in pham
• Manual Annotations of this start: 54 of 61
• Called 98.5% 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), Crescenzo_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), JakeTheSnake_19 (AY), JellyBread_19 (AY), Judy_19 (FA), Kabloowy_19 (AY), Karkharias_18 (FA), KayMoney_18 (FA), Lasker_19 (AY), Lawnathon_19 (AY), LeBruni_19 (AY), LilyBell_18 (FA), LittleRon_18 (FA), MUWow_18 (AY), Mapleville_18 (AY), MaterMagnus_19 (AY), MidnightRain_19 (AY), MurphyJoseph_19 (AY), NewKitty_20 (AY), NidoQ_18 (FA), NikkiHotWheels_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), Satrap_19 (AY), Seahorse_20 (AY), Shukran_19 (AY), SpicyFrank_19 (AY), Sporco_19 (AY), ThayneTheZag_19 (AY), Tiff81_20 (AY), Vopal_20 (AY), Windest_20 (AY), YoungHarleezy_19 (AY),

Start 28:
• Found in 1 of 77 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: PorkBelly_15 (FJ),

Start 29:
• Found in 32 of 77 (41.6%) 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),

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 25 was manually annotated 41 times for cluster AY.

Info for manual annotations of cluster FA:
•Start number 25 was manually annotated 13 times for cluster FA.

Info for manual annotations of cluster FJ:
•Start number 7 was manually annotated 3 times 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: 25
Candidate Starts for AdaS_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (215, 12619), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (235, 12793), (236, 12805), (246, 12880), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (380, 13795), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432, 14431), (440, 14527), (449, 14581), (472, 14734),

Gene: Aikyam_19 Start: 10844, Stop: 14785, Start Num: 25
Candidate Starts for Aikyam_19:
(Start: 25 @10844 has 54 MA's), (29, 10883), (33, 10946), (35, 10979), (38, 11003), (40, 11009), (41, 11021), (46, 11045), (47, 11057), (48, 11075), (50, 11117), (65, 11282), (94, 11549), (96, 11555), (101, 11594), (113, 11687), (131, 11855), (135, 11900), (146, 11996), (161, 12071), (165, 12101), (172, 12188), (174, 12200), (181, 12269), (182, 12305), (186, 12335), (190, 12371), (197, 12419), (199, 12431), (204, 12461), (209, 12518), (210, 12527), (212, 12572), (213, 12575), (217, 12629), (225, 12713), (226, 12722), (228, 12734), (231, 12755), (236, 12806), (250, 12905), (263, 13013), (266, 13052), (281, 13142), (283, 13157), (297, 13259), (300, 13289), (307, 13340), (309, 13361), (315, 13409), (316, 13412), (333, 13496), (334, 13499), (342, 13577), (353, 13652), (354, 13661), (359, 13676), (380, 13796), (384, 13835), (389, 13853), (398, 13952), (404, 14045), (409, 14159), (410, 14177), (414, 14216), (417, 14258), (422, 14321), (423, 14333), (426, 14369), (429, 14411), (432, 14432), (440, 14528), (449, 14582), (461, 14672), (472, 14735),

Gene: Anekin_18 Start: 10911, Stop: 14747, Start Num: 25
Candidate Starts for Anekin_18:
(Start: 25 @10911 has 54 MA's), (31, 10971), (35, 11046), (38, 11070), (40, 11076), (45, 11106), (46, 11112), (48, 11142), (50, 11184), (67, 11388), (75, 11439), (94, 11616), (95, 11619), (98, 11628), (101, 11661), (131, 11922), (141, 12012), (144, 12033), (145, 12042), (147, 12066), (154, 12108), (159, 12129), (163, 12150), (173, 12261), (176, 12279), (180, 12327), (182, 12372), (183, 12381), (189, 12429), (195, 12474), (209, 12582), (217, 12693), (221, 12741), (225, 12777), (228, 12798), (236,

12870), (258, 13017), (262, 13050), (277, 13116), (278, 13122), (280, 13125), (289, 13176), (301, 13260), (307, 13299), (309, 13320), (342, 13539), (344, 13560), (349, 13587), (351, 13605), (353, 13614), (406, 14040), (407, 14070), (409, 14121), (414, 14178), (417, 14220), (422, 14283), (423, 14295), (429, 14373), (432, 14394), (438, 14478), (447, 14532), (449, 14544), (459, 14628), (461, 14634),

Gene: Auxilium_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for Auxilium_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (215, 12619), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (235, 12793), (236, 12805), (246, 12880), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (380, 13795), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432, 14431), (440, 14527), (449, 14581), (472, 14734),

Gene: BasketStar_19 Start: 10897, Stop: 14838, Start Num: 25
Candidate Starts for BasketStar_19:
(Start: 25 @10897 has 54 MA's), (29, 10936), (33, 10999), (35, 11032), (38, 11056), (40, 11062), (41, 11074), (46, 11098), (47, 11110), (48, 11128), (50, 11170), (65, 11335), (94, 11602), (96, 11608), (101, 11647), (113, 11740), (131, 11908), (135, 11953), (146, 12049), (161, 12124), (165, 12154), (172, 12241), (174, 12253), (181, 12322), (182, 12358), (186, 12388), (190, 12424), (197, 12472), (199, 12484), (204, 12514), (209, 12571), (210, 12580), (212, 12625), (213, 12628), (215, 12673), (217, 12682), (225, 12766), (226, 12775), (228, 12787), (231, 12808), (235, 12847), (236, 12859), (246, 12934), (250, 12958), (263, 13066), (266, 13105), (281, 13195), (283, 13210), (297, 13312), (300, 13342), (307, 13393), (309, 13414), (315, 13462), (316, 13465), (333, 13549), (334, 13552), (342, 13630), (353, 13705), (354, 13714), (359, 13729), (384, 13888), (389, 13906), (398, 14005), (404, 14098), (409, 14212), (410, 14230), (414, 14269), (417, 14311), (422, 14374), (423, 14386), (426, 14422), (429, 14464), (432, 14485), (440, 14581), (449, 14635), (461, 14725), (472, 14788),

Gene: BenchScraper_19 Start: 10858, Stop: 14799, Start Num: 25
Candidate Starts for BenchScraper_19:
(Start: 25 @10858 has 54 MA's), (29, 10897), (33, 10960), (35, 10993), (38, 11017), (40, 11023), (41, 11035), (46, 11059), (47, 11071), (48, 11089), (50, 11131), (65, 11296), (94, 11563), (96, 11569), (101, 11608), (113, 11701), (131, 11869), (135, 11914), (146, 12010), (161, 12085), (172, 12202), (174, 12214), (181, 12283), (182, 12319), (186, 12349), (190, 12385), (197, 12433), (199, 12445), (204, 12475), (209, 12532), (210, 12541), (212, 12586), (213, 12589), (217, 12643), (225, 12727), (226, 12736), (228, 12748), (231, 12769), (236, 12820), (250, 12919), (263, 13027), (266, 13066), (281, 13156), (283, 13171), (297, 13273), (300, 13303), (307, 13354), (309, 13375), (315, 13423), (316, 13426), (333, 13510), (334, 13513), (342, 13591), (353, 13666), (354, 13675), (359, 13690), (380, 13810), (384, 13849), (389, 13867), (398, 13966), (404, 14059), (409, 14173), (410, 14191), (414, 14230), (417, 14272), (422, 14335), (423, 14347), (426, 14383), (429, 14425), (432, 14446), (440, 14542), (449, 14596), (461, 14686), (472, 14749),

Gene: Bhageatrice_21 Start: 12043, Stop: 16074, Start Num: 25
Candidate Starts for Bhageatrice_21:
(Start: 25 @12043 has 54 MA's), (35, 12178), (48, 12274), (50, 12316), (58, 12415), (64, 12463), (73, 12559), (75, 12571), (85, 12643), (94, 12748), (100, 12790), (101, 12793), (108, 12865), (122, 12955), (137, 13120), (144, 13165), (146, 13195), (155, 13243), (173, 13393), (177, 13426), (185, 13543),

(194, 13606), (204, 13663), (209, 13714), (213, 13771), (217, 13825), (225, 13909), (248, 14098), (262, 14200), (287, 14374), (290, 14392), (295, 14437), (299, 14455), (305, 14512), (332, 14770), (342, 14866), (351, 14932), (353, 14941), (360, 14968), (373, 15028), (389, 15142), (398, 15241), (404, 15334), (409, 15448), (410, 15466), (414, 15505), (417, 15547), (422, 15610), (423, 15622), (426, 15658), (429, 15700), (431, 15715), (432, 15721), (438, 15805), (440, 15817), (449, 15871), (461, 15961), (472, 16024),

Gene: BillyTP_19 Start: 10765, Stop: 14568, Start Num: 25
Candidate Starts for BillyTP_19:
(Start: 25 @10765 has 54 MA's), (35, 10900), (38, 10924), (40, 10930), (46, 10966), (47, 10978), (48, 10996), (49, 11005), (50, 11038), (52, 11044), (57, 11122), (65, 11203), (67, 11242), (79, 11326), (80, 11335), (81, 11341), (85, 11365), (86, 11374), (95, 11473), (97, 11479), (105, 11566), (111, 11599), (114, 11635), (134, 11818), (139, 11854), (141, 11866), (146, 11917), (163, 12004), (169, 12091), (182, 12232), (190, 12301), (191, 12310), (198, 12358), (201, 12379), (202, 12382), (211, 12454), (214, 12517), (221, 12601), (225, 12616), (235, 12655), (240, 12712), (276, 12907), (284, 12952), (293, 13015), (307, 13117), (309, 13138), (342, 13360), (351, 13426), (353, 13435), (369, 13501), (383, 13597), (389, 13636), (396, 13702), (404, 13828), (409, 13942), (410, 13960), (413, 13990), (414, 13999), (417, 14041), (422, 14104), (423, 14116), (426, 14152), (429, 14194), (432, 14215), (433, 14227), (447, 14353), (449, 14365), (459, 14449), (461, 14455), (475, 14548),

Gene: BlueShadow_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for BlueShadow_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (215, 12619), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (235, 12793), (236, 12805), (246, 12880), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432, 14431), (440, 14527), (449, 14581), (461, 14671), (472, 14734),

Gene: Bridgette_18 Start: 10928, Stop: 14845, Start Num: 25
Candidate Starts for Bridgette_18:
(Start: 25 @10928 has 54 MA's), (35, 11063), (38, 11087), (40, 11093), (46, 11129), (47, 11141), (48, 11159), (49, 11168), (50, 11201), (52, 11207), (57, 11285), (65, 11366), (67, 11405), (79, 11489), (81, 11504), (85, 11528), (86, 11537), (97, 11642), (104, 11723), (105, 11729), (108, 11750), (113, 11792), (116, 11819), (125, 11909), (134, 12002), (141, 12050), (163, 12188), (169, 12275), (171, 12284), (190, 12485), (191, 12494), (198, 12542), (201, 12563), (202, 12566), (211, 12638), (214, 12701), (236, 12851), (254, 12977), (282, 13115), (290, 13166), (291, 13178), (293, 13199), (306, 13289), (323, 13424), (333, 13463), (338, 13499), (342, 13541), (344, 13562), (346, 13580), (353, 13616), (354, 13625), (359, 13640), (380, 13853), (397, 14003), (398, 14009), (404, 14102), (409, 14216), (410, 14234), (413, 14264), (414, 14273), (417, 14315), (422, 14378), (423, 14390), (429, 14468), (432, 14489), (433, 14501), (447, 14627), (449, 14639), (460, 14726), (463, 14744),

Gene: ChuckDuck_18 Start: 10884, Stop: 14687, Start Num: 25
Candidate Starts for ChuckDuck_18:
(Start: 25 @10884 has 54 MA's), (35, 11019), (38, 11043), (39, 11046), (40, 11049), (46, 11085), (47, 11097), (48, 11115), (49, 11124), (50, 11157), (52, 11163), (57, 11241), (65, 11322), (67, 11361), (79, 11445), (80, 11454), (81, 11460), (85, 11484), (86, 11493), (95, 11592), (97, 11598), (105, 11685), (111, 11718), (114, 11754), (134, 11937), (139, 11973), (141, 11985), (146, 12036), (163, 12123),

(169, 12210), (171, 12219), (182, 12351), (190, 12420), (191, 12429), (198, 12477), (201, 12498), (202, 12501), (211, 12573), (214, 12636), (221, 12720), (225, 12735), (235, 12774), (240, 12831), (247, 12864), (276, 13026), (284, 13071), (293, 13134), (307, 13236), (309, 13257), (342, 13479), (353, 13554), (369, 13620), (383, 13716), (389, 13755), (396, 13821), (404, 13947), (409, 14061), (410, 14079), (413, 14109), (414, 14118), (417, 14160), (422, 14223), (423, 14235), (426, 14271), (429, 14313), (432, 14334), (444, 14451), (449, 14484), (450, 14493), (459, 14568), (461, 14574),

Gene: Constance_18 Start: 10931, Stop: 14827, Start Num: 25
Candidate Starts for Constance_18:
(Start: 25 @10931 has 54 MA's), (35, 11066), (38, 11090), (40, 11096), (46, 11132), (47, 11144), (48, 11162), (49, 11171), (50, 11204), (52, 11210), (57, 11288), (65, 11369), (67, 11408), (79, 11492), (85, 11531), (86, 11540), (97, 11645), (104, 11726), (105, 11732), (111, 11765), (116, 11801), (141, 12032), (163, 12170), (171, 12266), (190, 12467), (191, 12476), (198, 12524), (201, 12545), (202, 12548), (211, 12620), (225, 12782), (236, 12833), (254, 12959), (282, 13097), (291, 13160), (293, 13181), (306, 13271), (323, 13406), (333, 13445), (338, 13481), (342, 13523), (346, 13562), (350, 13586), (353, 13598), (354, 13607), (359, 13622), (379, 13826), (380, 13835), (396, 13958), (397, 13985), (398, 13991), (399, 14012), (404, 14084), (409, 14198), (413, 14246), (414, 14255), (417, 14297), (422, 14360), (423, 14372), (426, 14408), (429, 14450), (432, 14471), (433, 14483), (440, 14567), (449, 14621), (458, 14702), (460, 14708), (462, 14723), (463, 14726), (468, 14762),

Gene: CookieBear_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for CookieBear_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (215, 12619), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (235, 12793), (236, 12805), (246, 12880), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (380, 13795), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432, 14431), (440, 14527), (449, 14581), (472, 14734),

Gene: CosmicBrownie_19 Start: 10849, Stop: 14742, Start Num: 25
Candidate Starts for CosmicBrownie_19:
(15, 10756), (Start: 25 @10849 has 54 MA's), (35, 10984), (38, 11008), (46, 11050), (47, 11062), (48, 11080), (49, 11089), (50, 11122), (52, 11128), (57, 11206), (65, 11287), (67, 11326), (79, 11410), (81, 11425), (86, 11458), (97, 11563), (105, 11650), (111, 11683), (114, 11719), (134, 11902), (141, 11950), (146, 12001), (147, 12004), (163, 12088), (169, 12175), (171, 12184), (190, 12385), (191, 12394), (198, 12442), (201, 12463), (202, 12466), (211, 12538), (218, 12658), (225, 12700), (236, 12751), (254, 12877), (282, 13015), (291, 13078), (293, 13099), (306, 13189), (323, 13324), (333, 13363), (338, 13399), (342, 13441), (344, 13462), (346, 13480), (350, 13504), (353, 13516), (354, 13525), (359, 13540), (379, 13744), (380, 13753), (396, 13876), (397, 13903), (398, 13909), (404, 14002), (409, 14116), (413, 14164), (414, 14173), (417, 14215), (422, 14278), (423, 14290), (426, 14326), (429, 14368), (430, 14371), (431, 14383), (432, 14389), (433, 14401), (440, 14485), (449, 14539), (450, 14548), (461, 14629), (473, 14692),

Gene: Crescenzo_19 Start: 10839, Stop: 14675, Start Num: 25
Candidate Starts for Crescenzo_19:
(Start: 25 @10839 has 54 MA's), (31, 10899), (35, 10974), (38, 10998), (40, 11004), (45, 11034), (46, 11040), (48, 11070), (50, 11112), (67, 11316), (75, 11367), (94, 11544), (95, 11547), (98, 11556), (101, 11589), (131, 11850), (141, 11940), (144, 11961), (145, 11970), (147, 11994), (154, 12036), (159,

12057), (163, 12078), (173, 12189), (176, 12207), (180, 12255), (182, 12300), (183, 12309), (189, 12357), (195, 12402), (209, 12510), (217, 12621), (221, 12669), (225, 12705), (228, 12726), (236, 12798), (258, 12945), (262, 12978), (277, 13044), (278, 13050), (280, 13053), (289, 13104), (301, 13188), (307, 13227), (309, 13248), (342, 13467), (344, 13488), (349, 13515), (351, 13533), (353, 13542), (406, 13968), (407, 13998), (409, 14049), (414, 14106), (417, 14148), (422, 14211), (423, 14223), (429, 14301), (432, 14322), (438, 14406), (447, 14460), (449, 14472), (459, 14556), (461, 14562),

Gene: DarwinJr_22 Start: 12143, Stop: 15979, Start Num: 25
Candidate Starts for DarwinJr_22:
(Start: 25 @12143 has 54 MA's), (31, 12203), (35, 12278), (38, 12302), (40, 12308), (45, 12338), (46, 12344), (48, 12374), (50, 12416), (67, 12620), (75, 12671), (94, 12848), (95, 12851), (98, 12860), (101, 12893), (131, 13154), (141, 13244), (144, 13265), (145, 13274), (147, 13298), (154, 13340), (159, 13361), (163, 13382), (173, 13493), (176, 13511), (180, 13559), (182, 13604), (183, 13613), (189, 13661), (195, 13706), (209, 13814), (217, 13925), (221, 13973), (225, 14009), (228, 14030), (236, 14102), (258, 14249), (262, 14282), (277, 14348), (278, 14354), (280, 14357), (289, 14408), (301, 14492), (307, 14531), (309, 14552), (342, 14771), (344, 14792), (349, 14819), (351, 14837), (353, 14846), (406, 15272), (407, 15302), (409, 15353), (414, 15410), (417, 15452), (422, 15515), (423, 15527), (429, 15605), (432, 15626), (438, 15710), (447, 15764), (449, 15776), (459, 15860), (461, 15866),

Gene: Ding_19 Start: 10834, Stop: 14847, Start Num: 25
Candidate Starts for Ding_19:
(Start: 25 @10834 has 54 MA's), (35, 10969), (36, 10978), (40, 10999), (48, 11065), (49, 11074), (50, 11107), (57, 11191), (63, 11248), (64, 11254), (73, 11350), (79, 11395), (93, 11506), (94, 11539), (100, 11581), (101, 11584), (108, 11656), (137, 11911), (144, 11956), (146, 11986), (155, 12034), (167, 12133), (173, 12184), (177, 12217), (194, 12397), (204, 12454), (209, 12505), (213, 12562), (217, 12616), (225, 12700), (233, 12772), (239, 12829), (252, 12910), (262, 12991), (285, 13153), (287, 13165), (290, 13183), (305, 13303), (322, 13489), (326, 13519), (327, 13525), (329, 13546), (330, 13555), (342, 13651), (346, 13690), (351, 13717), (352, 13720), (353, 13726), (354, 13735), (364, 13780), (404, 14107), (409, 14221), (414, 14278), (417, 14320), (422, 14383), (423, 14395), (426, 14431), (429, 14473), (432, 14494), (433, 14506), (438, 14578), (440, 14590), (444, 14611), (449, 14644), (453, 14677), (472, 14797),

Gene: DreamEater_16 Start: 11120, Stop: 15454, Start Num: 7
Candidate Starts for DreamEater_16:
(6, 11108), (Start: 7 @11120 has 3 MA's), (9, 11180), (11, 11243), (12, 11255), (13, 11297), (24, 11393), (27, 11423), (32, 11507), (48, 11645), (50, 11687), (63, 11828), (67, 11891), (87, 12026), (94, 12119), (113, 12278), (122, 12347), (124, 12374), (130, 12434), (144, 12557), (176, 12803), (183, 12905), (188, 12944), (190, 12962), (192, 12974), (200, 13040), (225, 13298), (228, 13319), (237, 13412), (246, 13466), (250, 13490), (253, 13529), (259, 13562), (267, 13589), (269, 13592), (279, 13652), (281, 13664), (285, 13697), (290, 13727), (291, 13739), (298, 13787), (300, 13811), (309, 13883), (332, 14015), (346, 14147), (365, 14270), (374, 14369), (377, 14393), (378, 14417), (384, 14468), (389, 14486), (398, 14582), (406, 14708), (408, 14750), (411, 14810), (420, 14909), (424, 14978), (429, 15041), (432, 15062), (437, 15125), (445, 15188), (451, 15233), (465, 15323), (477, 15434),

Gene: Eileen_18 Start: 10892, Stop: 14788, Start Num: 25
Candidate Starts for Eileen_18:
(Start: 25 @10892 has 54 MA's), (35, 11027), (38, 11051), (40, 11057), (46, 11093), (47, 11105), (48, 11123), (49, 11132), (50, 11165), (52, 11171), (57, 11249), (65, 11330), (67, 11369), (79, 11453), (81, 11468), (86, 11501), (97, 11606), (105, 11693), (111, 11726), (114, 11762), (134, 11945), (141, 11993), (146, 12044), (147, 12047), (152, 12083), (153, 12086), (163, 12131), (169, 12218), (182,

12359), (190, 12428), (191, 12437), (198, 12485), (201, 12506), (202, 12509), (211, 12581), (214, 12644), (225, 12743), (236, 12794), (254, 12920), (282, 13058), (290, 13109), (291, 13121), (293, 13142), (306, 13232), (323, 13367), (333, 13406), (338, 13442), (342, 13484), (344, 13505), (346, 13523), (350, 13547), (353, 13559), (354, 13568), (359, 13583), (380, 13796), (397, 13946), (398, 13952), (404, 14045), (409, 14159), (410, 14177), (413, 14207), (414, 14216), (417, 14258), (422, 14321), (423, 14333), (426, 14369), (429, 14411), (432, 14432), (433, 14444), (447, 14570), (449, 14582), (460, 14669), (463, 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), (21, 11024), (27, 11066), (33, 11150), (48, 11279), (50, 11321), (58, 11420), (65, 11486), (72, 11555), (73, 11564), (80, 11618), (85, 11648), (90, 11693), (94, 11753), (95, 11756), (101, 11798), (110, 11882), (116, 11918), (144, 12170), (149, 12221), (151, 12233), (163, 12287), (171, 12383), (172, 12392), (179, 12458), (187, 12545), (196, 12617), (203, 12659), (210, 12710), (219, 12851), (225, 12896), (232, 12953), (250, 13088), (251, 13094), (255, 13136), (257, 13148), (261, 13187), (266, 13235), (281, 13325), (283, 13340), (288, 13373), (297, 13442), (300, 13472), (303, 13487), (307, 13523), (309, 13544), (313, 13568), (317, 13601), (320, 13637), (321, 13640), (336, 13694), (346, 13808), (349, 13817), (351, 13835), (362, 13898), (375, 14054), (376, 14060), (389, 14168), (401, 14330), (406, 14393), (408, 14435), (412, 14513), (417, 14573), (418, 14582), (420, 14594), (421, 14618), (424, 14663), (426, 14684), (429, 14726), (432, 14747), (437, 14810), (439, 14843), (449, 14900), (454, 14939), (457, 14969), (465, 15014), (476, 15113), (478, 15131),

Gene: Faja_19 Start: 10995, Stop: 15041, Start Num: 16
Candidate Starts for Faja_19:
(Start: 16 @10995 has 2 MA's), (26, 11055), (32, 11130), (34, 11142), (37, 11193), (41, 11214), (42, 11217), (44, 11226), (48, 11268), (50, 11310), (53, 11319), (58, 11409), (64, 11457), (65, 11475), (66, 11481), (67, 11514), (73, 11553), (80, 11607), (81, 11613), (88, 11670), (94, 11742), (101, 11787), (102, 11796), (109, 11865), (110, 11871), (113, 11880), (116, 11907), (122, 11949), (126, 12003), (140, 12135), (141, 12138), (144, 12159), (146, 12189), (149, 12210), (151, 12222), (163, 12276), (168, 12345), (176, 12405), (181, 12462), (183, 12507), (190, 12564), (193, 12585), (209, 12711), (211, 12723), (216, 12819), (217, 12822), (221, 12870), (228, 12927), (240, 13044), (250, 13098), (257, 13158), (263, 13206), (266, 13245), (270, 13257), (283, 13350), (289, 13389), (292, 13413), (293, 13431), (294, 13434), (297, 13452), (302, 13494), (307, 13533), (309, 13554), (313, 13578), (325, 13668), (344, 13794), (346, 13812), (355, 13860), (356, 13863), (371, 13920), (376, 13962), (389, 14070), (394, 14103), (406, 14295), (408, 14337), (412, 14415), (417, 14475), (420, 14496), (426, 14586), (429, 14628), (432, 14649), (437, 14712), (445, 14775), (451, 14820), (465, 14910), (476, 15009), (478, 15027),

Gene: FosterFrank_18 Start: 10889, Stop: 14785, Start Num: 25
Candidate Starts for FosterFrank_18:
(Start: 25 @10889 has 54 MA's), (35, 11024), (38, 11048), (40, 11054), (46, 11090), (47, 11102), (48, 11120), (49, 11129), (50, 11162), (52, 11168), (57, 11246), (65, 11327), (67, 11366), (79, 11450), (85, 11489), (86, 11498), (97, 11603), (104, 11684), (105, 11690), (111, 11723), (116, 11759), (141, 11990), (153, 12083), (163, 12128), (171, 12224), (190, 12425), (191, 12434), (198, 12482), (201, 12503), (202, 12506), (211, 12578), (225, 12740), (254, 12917), (282, 13055), (291, 13118), (293, 13139), (306, 13229), (323, 13364), (333, 13403), (338, 13439), (342, 13481), (346, 13520), (350, 13544), (353, 13556), (354, 13565), (359, 13580), (380, 13793), (396, 13916), (397, 13943), (398, 13949), (404, 14042), (409, 14156), (413, 14204), (414, 14213), (417, 14255), (422, 14318), (423, 14330), (426, 14366), (429, 14408), (432, 14429), (433, 14441), (436, 14483), (440, 14525), (449, 14579), (458, 14660), (460, 14666), (462, 14681), (463, 14684), (468, 14720),

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

Candidate Starts for GUPitcher_17:
(6, 10426), (Start: 7 @10438 has 3 MA's), (8, 10456), (9, 10498), (10, 10540), (12, 10573), (23, 10708), (33, 10834), (34, 10837), (37, 10888), (41, 10909), (43, 10915), (44, 10921), (48, 10963), (49, 10972), (50, 11005), (72, 11239), (73, 11248), (80, 11302), (81, 11308), (94, 11437), (101, 11482), (110, 11566), (116, 11602), (119, 11629), (134, 11785), (151, 11917), (168, 12040), (171, 12067), (179, 12142), (187, 12229), (210, 12394), (211, 12397), (236, 12673), (250, 12772), (261, 12871), (266, 12919), (277, 12988), (283, 13024), (288, 13057), (297, 13126), (302, 13168), (303, 13171), (307, 13207), (309, 13228), (319, 13312), (321, 13321), (324, 13336), (344, 13462), (346, 13480), (349, 13489), (356, 13531), (374, 13702), (376, 13711), (389, 13819), (406, 14044), (408, 14086), (411, 14146), (417, 14224), (420, 14245), (424, 14314), (426, 14335), (429, 14377), (432, 14398), (437, 14461), (441, 14500), (449, 14551), (465, 14665), (476, 14764), (478, 14782),

Gene: Globfish_19 Start: 10916, Stop: 14857, Start Num: 25
Candidate Starts for Globfish_19:
(Start: 25 @10916 has 54 MA's), (29, 10955), (33, 11018), (35, 11051), (38, 11075), (40, 11081), (46, 11117), (47, 11129), (48, 11147), (50, 11189), (65, 11354), (66, 11360), (90, 11561), (94, 11621), (101, 11666), (113, 11759), (131, 11927), (135, 11972), (157, 12128), (161, 12143), (172, 12260), (174, 12272), (180, 12332), (181, 12341), (186, 12407), (190, 12443), (197, 12491), (199, 12503), (204, 12533), (207, 12557), (209, 12590), (213, 12647), (217, 12701), (225, 12785), (226, 12794), (228, 12806), (233, 12857), (236, 12878), (250, 12977), (263, 13085), (266, 13124), (281, 13214), (283, 13229), (297, 13331), (300, 13361), (302, 13373), (307, 13412), (309, 13433), (315, 13481), (316, 13484), (333, 13568), (334, 13571), (342, 13649), (353, 13724), (354, 13733), (359, 13748), (389, 13925), (404, 14117), (409, 14231), (410, 14249), (414, 14288), (417, 14330), (422, 14393), (423, 14405), (426, 14441), (429, 14483), (432, 14504), (449, 14654), (456, 14720), (461, 14744), (468, 14792), (472, 14807),

Gene: GlobiWarming_18 Start: 10885, Stop: 14781, Start Num: 25
Candidate Starts for GlobiWarming_18:
(1, 10477), (2, 10486), (3, 10507), (5, 10558), (Start: 25 @10885 has 54 MA's), (35, 11020), (38, 11044), (40, 11050), (46, 11086), (47, 11098), (48, 11116), (49, 11125), (50, 11158), (52, 11164), (57, 11242), (65, 11323), (67, 11362), (79, 11446), (81, 11461), (86, 11494), (97, 11599), (105, 11686), (108, 11707), (111, 11719), (114, 11755), (134, 11938), (141, 11986), (146, 12037), (163, 12124), (169, 12211), (171, 12220), (190, 12421), (191, 12430), (198, 12478), (201, 12499), (202, 12502), (211, 12574), (214, 12637), (225, 12736), (236, 12787), (254, 12913), (282, 13051), (290, 13102), (291, 13114), (293, 13135), (306, 13225), (323, 13360), (333, 13399), (338, 13435), (342, 13477), (344, 13498), (346, 13516), (350, 13540), (353, 13552), (354, 13561), (359, 13576), (380, 13789), (397, 13939), (398, 13945), (404, 14038), (409, 14152), (410, 14170), (413, 14200), (414, 14209), (417, 14251), (422, 14314), (423, 14326), (426, 14362), (429, 14404), (432, 14425), (433, 14437), (447, 14563), (449, 14575), (460, 14662), (463, 14680),

Gene: Gorpy_19 Start: 10852, Stop: 14793, Start Num: 25
Candidate Starts for Gorpy_19:
(Start: 25 @10852 has 54 MA's), (29, 10891), (33, 10954), (35, 10987), (38, 11011), (40, 11017), (41, 11029), (46, 11053), (47, 11065), (48, 11083), (50, 11125), (65, 11290), (94, 11557), (96, 11563), (101, 11602), (113, 11695), (131, 11863), (135, 11908), (146, 12004), (161, 12079), (165, 12109), (172, 12196), (174, 12208), (181, 12277), (182, 12313), (186, 12343), (190, 12379), (197, 12427), (199, 12439), (204, 12469), (209, 12526), (210, 12535), (212, 12580), (213, 12583), (215, 12628), (217, 12637), (225, 12721), (226, 12730), (228, 12742), (231, 12763), (235, 12802), (236, 12814), (246, 12889), (250, 12913), (263, 13021), (266, 13060), (281, 13150), (283, 13165), (297, 13267), (300, 13297), (307, 13348), (309, 13369), (315, 13417), (316, 13420), (333, 13504), (334, 13507), (342, 13585), (353, 13660), (354, 13669), (359, 13684), (380, 13804), (384, 13843), (389, 13861), (398, 13960), (404, 14053), (409, 14167), (410, 14185), (414, 14224), (417, 14266), (422, 14329), (423, 14341), (426, 14377), (429, 14419), (432, 14440), (440, 14536), (449, 14590), (472, 14743),

Gene: GumGum_19 Start: 10840, Stop: 14733, Start Num: 25
Candidate Starts for GumGum_19:
(15, 10747), (Start: 25 @10840 has 54 MA's), (35, 10975), (38, 10999), (46, 11041), (47, 11053), (48, 11071), (49, 11080), (50, 11113), (52, 11119), (57, 11197), (65, 11278), (67, 11317), (79, 11401), (81, 11416), (86, 11449), (97, 11554), (105, 11641), (111, 11674), (114, 11710), (134, 11893), (141, 11941), (146, 11992), (147, 11995), (163, 12079), (169, 12166), (171, 12175), (190, 12376), (191, 12385), (198, 12433), (201, 12454), (202, 12457), (211, 12529), (218, 12649), (225, 12691), (236, 12742), (254, 12868), (282, 13006), (291, 13069), (293, 13090), (306, 13180), (323, 13315), (333, 13354), (338, 13390), (342, 13432), (344, 13453), (346, 13471), (350, 13495), (353, 13507), (354, 13516), (359, 13531), (379, 13735), (380, 13744), (396, 13867), (397, 13894), (398, 13900), (404, 13993), (409, 14107), (410, 14125), (414, 14164), (417, 14206), (422, 14269), (423, 14281), (425, 14314), (426, 14317), (429, 14359), (431, 14374), (432, 14380), (440, 14476), (449, 14530), (450, 14539), (461, 14620), (473, 14683),

Gene: Henrique_18 Start: 10889, Stop: 14806, Start Num: 25
Candidate Starts for Henrique_18:
(Start: 25 @10889 has 54 MA's), (35, 11024), (38, 11048), (40, 11054), (46, 11090), (47, 11102), (48, 11120), (49, 11129), (50, 11162), (52, 11168), (57, 11246), (65, 11327), (67, 11366), (79, 11450), (81, 11465), (85, 11489), (86, 11498), (97, 11603), (104, 11684), (105, 11690), (108, 11711), (113, 11753), (116, 11780), (125, 11870), (134, 11963), (141, 12011), (163, 12149), (169, 12236), (171, 12245), (190, 12446), (191, 12455), (198, 12503), (201, 12524), (202, 12527), (211, 12599), (214, 12662), (236, 12812), (254, 12938), (282, 13076), (290, 13127), (291, 13139), (293, 13160), (306, 13250), (323, 13385), (333, 13424), (338, 13460), (342, 13502), (344, 13523), (346, 13541), (353, 13577), (354, 13586), (359, 13601), (380, 13814), (397, 13964), (398, 13970), (404, 14063), (409, 14177), (410, 14195), (413, 14225), (414, 14234), (417, 14276), (422, 14339), (423, 14351), (426, 14387), (429, 14429), (432, 14450), (433, 14462), (447, 14588), (449, 14600), (460, 14687), (463, 14705),

Gene: Hestia_19 Start: 10985, Stop: 14962, Start Num: 25
Candidate Starts for Hestia_19:
(Start: 25 @10985 has 54 MA's), (35, 11120), (38, 11144), (40, 11150), (44, 11174), (48, 11216), (50, 11258), (59, 11372), (94, 11690), (100, 11732), (101, 11735), (141, 12086), (144, 12107), (147, 12140), (162, 12221), (163, 12224), (165, 12242), (169, 12311), (170, 12317), (175, 12350), (202, 12590), (209, 12653), (217, 12764), (221, 12812), (222, 12815), (225, 12848), (226, 12857), (228, 12869), (231, 12890), (236, 12941), (247, 13019), (271, 13127), (279, 13181), (285, 13226), (300, 13340), (307, 13391), (309, 13412), (333, 13553), (342, 13631), (350, 13694), (353, 13706), (359, 13730), (366, 13802), (382, 13934), (385, 13961), (386, 13964), (388, 13973), (389, 13991), (393, 14030), (398, 14129), (404, 14222), (409, 14336), (410, 14354), (414, 14393), (417, 14435), (422, 14498), (423, 14510), (425, 14543), (426, 14546), (429, 14588), (431, 14603), (432, 14609), (440, 14705), (449, 14759), (450, 14768), (461, 14849), (472, 14912),

Gene: Hillester_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for Hillester_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (236, 12805), (238, 12832), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432,

14431), (440, 14527), (449, 14581), (461, 14671), (472, 14734),

Gene: HotPotato_18 Start: 10893, Stop: 14789, Start Num: 25
Candidate Starts for HotPotato_18:
(Start: 25 @10893 has 54 MA's), (35, 11028), (38, 11052), (40, 11058), (46, 11094), (47, 11106), (48, 11124), (49, 11133), (50, 11166), (52, 11172), (57, 11250), (65, 11331), (67, 11370), (79, 11454), (81, 11469), (85, 11493), (86, 11502), (97, 11607), (105, 11694), (108, 11715), (111, 11727), (114, 11763), (134, 11946), (141, 11994), (146, 12045), (147, 12048), (153, 12087), (163, 12132), (169, 12219), (171, 12228), (173, 12240), (190, 12429), (191, 12438), (198, 12486), (201, 12507), (202, 12510), (211, 12582), (225, 12744), (236, 12795), (254, 12921), (282, 13059), (290, 13110), (291, 13122), (293, 13143), (306, 13233), (323, 13368), (333, 13407), (338, 13443), (342, 13485), (344, 13506), (346, 13524), (353, 13560), (354, 13569), (359, 13584), (380, 13797), (397, 13947), (398, 13953), (404, 14046), (409, 14160), (410, 14178), (413, 14208), (414, 14217), (417, 14259), (422, 14322), (423, 14334), (429, 14412), (432, 14433), (433, 14445), (447, 14571), (449, 14583), (460, 14670), (463, 14688),

Gene: Isolde_19 Start: 10834, Stop: 14619, Start Num: 25
Candidate Starts for Isolde_19:
(Start: 25 @10834 has 54 MA's), (35, 10969), (38, 10993), (40, 10999), (46, 11035), (47, 11047), (48, 11065), (50, 11107), (72, 11341), (79, 11395), (80, 11404), (81, 11410), (83, 11416), (86, 11443), (94, 11539), (101, 11584), (110, 11668), (114, 11704), (117, 11710), (133, 11881), (136, 11896), (138, 11923), (150, 12019), (153, 12031), (156, 12040), (158, 12052), (164, 12085), (181, 12262), (191, 12382), (198, 12430), (200, 12448), (205, 12472), (211, 12526), (221, 12673), (225, 12688), (246, 12814), (251, 12844), (258, 12886), (275, 12970), (282, 13003), (291, 13066), (304, 13171), (317, 13270), (337, 13369), (344, 13444), (349, 13471), (359, 13522), (360, 13525), (389, 13687), (398, 13786), (404, 13879), (409, 13993), (410, 14011), (413, 14041), (414, 14050), (417, 14092), (422, 14155), (423, 14167), (426, 14203), (429, 14245), (432, 14266), (438, 14350), (440, 14362), (449, 14416), (459, 14500), (461, 14506),

Gene: JakeTheSnake_19 Start: 10846, Stop: 14685, Start Num: 25
Candidate Starts for JakeTheSnake_19:
(22, 10825), (Start: 25 @10846 has 54 MA's), (31, 10906), (35, 10981), (38, 11005), (40, 11011), (42, 11026), (48, 11077), (50, 11119), (58, 11218), (60, 11236), (70, 11338), (84, 11443), (85, 11446), (94, 11551), (98, 11563), (101, 11596), (108, 11668), (111, 11680), (138, 11932), (141, 11947), (142, 11956), (160, 12070), (177, 12229), (185, 12346), (204, 12466), (213, 12574), (217, 12628), (225, 12712), (228, 12733), (236, 12805), (244, 12859), (258, 12952), (262, 12985), (273, 13036), (278, 13057), (280, 13060), (289, 13111), (301, 13195), (307, 13234), (309, 13255), (320, 13348), (323, 13360), (333, 13402), (341, 13471), (342, 13477), (349, 13525), (353, 13552), (354, 13561), (389, 13753), (398, 13852), (404, 13945), (406, 13978), (407, 14008), (409, 14059), (414, 14116), (417, 14158), (422, 14221), (423, 14233), (429, 14311), (432, 14332), (438, 14416), (447, 14470), (449, 14482), (459, 14566), (461, 14572),

Gene: JellyBread_19 Start: 10836, Stop: 14777, Start Num: 25
Candidate Starts for JellyBread_19:
(Start: 25 @10836 has 54 MA's), (29, 10875), (33, 10938), (35, 10971), (38, 10995), (40, 11001), (41, 11013), (46, 11037), (47, 11049), (48, 11067), (50, 11109), (65, 11274), (94, 11541), (96, 11547), (101, 11586), (113, 11679), (131, 11847), (135, 11892), (146, 11988), (161, 12063), (165, 12093), (172, 12180), (174, 12192), (181, 12261), (182, 12297), (186, 12327), (190, 12363), (197, 12411), (199, 12423), (204, 12453), (209, 12510), (210, 12519), (212, 12564), (213, 12567), (215, 12612), (217, 12621), (225, 12705), (226, 12714), (228, 12726), (231, 12747), (235, 12786), (236, 12798), (246, 12873), (250, 12897), (263, 13005), (266, 13044), (281, 13134), (283, 13149), (297, 13251), (300, 13281), (307, 13332), (309, 13353), (315, 13401), (316, 13404), (333, 13488), (334, 13491), (342, 13569), (353, 13644), (354, 13653), (359, 13668), (380, 13788), (384, 13827), (389, 13845), (398,

13944), (404, 14037), (409, 14151), (410, 14169), (414, 14208), (417, 14250), (422, 14313), (423, 14325), (426, 14361), (429, 14403), (432, 14424), (440, 14520), (449, 14574), (472, 14727),

Gene: Judy_19 Start: 11202, Stop: 15098, Start Num: 25
Candidate Starts for Judy_19:
(Start: 25 @11202 has 54 MA's), (35, 11337), (38, 11361), (40, 11367), (46, 11403), (47, 11415), (48, 11433), (49, 11442), (50, 11475), (52, 11481), (57, 11559), (65, 11640), (67, 11679), (79, 11763), (85, 11802), (86, 11811), (97, 11916), (104, 11997), (105, 12003), (111, 12036), (116, 12072), (141, 12303), (153, 12396), (163, 12441), (171, 12537), (190, 12738), (191, 12747), (198, 12795), (201, 12816), (202, 12819), (211, 12891), (225, 13053), (236, 13104), (254, 13230), (282, 13368), (291, 13431), (293, 13452), (306, 13542), (323, 13677), (333, 13716), (338, 13752), (342, 13794), (346, 13833), (350, 13857), (353, 13869), (354, 13878), (359, 13893), (379, 14097), (380, 14106), (396, 14229), (397, 14256), (398, 14262), (399, 14283), (404, 14355), (409, 14469), (413, 14517), (414, 14526), (417, 14568), (422, 14631), (423, 14643), (426, 14679), (429, 14721), (432, 14742), (433, 14754), (440, 14838), (449, 14892), (458, 14973), (460, 14979), (462, 14994), (463, 14997), (468, 15033),

Gene: Kabloowy_19 Start: 10969, Stop: 14973, Start Num: 25
Candidate Starts for Kabloowy_19:
(Start: 25 @10969 has 54 MA's), (29, 11008), (38, 11128), (40, 11134), (48, 11200), (50, 11242), (53, 11251), (57, 11326), (58, 11341), (60, 11359), (63, 11383), (74, 11494), (85, 11569), (94, 11674), (101, 11719), (113, 11833), (116, 11860), (128, 11974), (141, 12091), (144, 12112), (147, 12145), (150, 12172), (158, 12205), (160, 12214), (162, 12226), (169, 12316), (171, 12325), (186, 12481), (189, 12508), (190, 12517), (192, 12529), (197, 12565), (201, 12598), (202, 12601), (204, 12607), (209, 12664), (223, 12844), (225, 12859), (226, 12868), (228, 12880), (231, 12901), (236, 12952), (241, 13000), (247, 13030), (265, 13105), (272, 13141), (279, 13192), (285, 13237), (300, 13351), (307, 13402), (309, 13423), (333, 13564), (342, 13642), (350, 13705), (353, 13717), (359, 13741), (366, 13813), (382, 13945), (385, 13972), (386, 13975), (388, 13984), (389, 14002), (393, 14041), (398, 14140), (404, 14233), (409, 14347), (410, 14365), (414, 14404), (417, 14446), (422, 14509), (423, 14521), (425, 14554), (426, 14557), (429, 14599), (431, 14614), (432, 14620), (440, 14716), (449, 14770), (450, 14779), (452, 14794), (455, 14827), (472, 14923),

Gene: Karkharias_18 Start: 10889, Stop: 14785, Start Num: 25
Candidate Starts for Karkharias_18:
(Start: 25 @10889 has 54 MA's), (35, 11024), (38, 11048), (40, 11054), (46, 11090), (47, 11102), (48, 11120), (49, 11129), (50, 11162), (52, 11168), (57, 11246), (65, 11327), (67, 11366), (79, 11450), (81, 11465), (86, 11498), (97, 11603), (105, 11690), (111, 11723), (114, 11759), (134, 11942), (141, 11990), (146, 12041), (147, 12044), (163, 12128), (169, 12215), (171, 12224), (190, 12425), (191, 12434), (198, 12482), (201, 12503), (202, 12506), (211, 12578), (214, 12641), (236, 12791), (254, 12917), (282, 13055), (290, 13106), (291, 13118), (293, 13139), (306, 13229), (323, 13364), (333, 13403), (338, 13439), (342, 13481), (344, 13502), (346, 13520), (353, 13556), (359, 13580), (380, 13793), (397, 13943), (398, 13949), (404, 14042), (409, 14156), (410, 14174), (413, 14204), (414, 14213), (417, 14255), (422, 14318), (423, 14330), (429, 14408), (432, 14429), (433, 14441), (447, 14567), (449, 14579), (460, 14666), (463, 14684),

Gene: KayMoney_18 Start: 10886, Stop: 14689, Start Num: 25
Candidate Starts for KayMoney_18:
(Start: 25 @10886 has 54 MA's), (35, 11021), (38, 11045), (39, 11048), (40, 11051), (46, 11087), (47, 11099), (48, 11117), (49, 11126), (50, 11159), (52, 11165), (57, 11243), (65, 11324), (67, 11363), (79, 11447), (80, 11456), (81, 11462), (85, 11486), (86, 11495), (95, 11594), (97, 11600), (105, 11687), (111, 11720), (114, 11756), (134, 11939), (139, 11975), (141, 11987), (146, 12038), (163, 12125), (169, 12212), (171, 12221), (182, 12353), (190, 12422), (191, 12431), (198, 12479), (201, 12500), (202, 12503), (211, 12575), (214, 12638), (221, 12722), (225, 12737), (235, 12776), (240, 12833),

(247, 12866), (276, 13028), (284, 13073), (293, 13136), (307, 13238), (309, 13259), (342, 13481), (353, 13556), (369, 13622), (383, 13718), (389, 13757), (396, 13823), (404, 13949), (409, 14063), (410, 14081), (413, 14111), (414, 14120), (417, 14162), (422, 14225), (423, 14237), (426, 14273), (429, 14315), (432, 14336), (444, 14453), (449, 14486), (450, 14495), (459, 14570), (461, 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), (21, 10491), (27, 10533), (30, 10563), (34, 10620), (41, 10692), (43, 10698), (44, 10704), (48, 10746), (50, 10788), (57, 10872), (65, 10953), (72, 11022), (73, 11031), (81, 11091), (87, 11127), (94, 11220), (98, 11232), (101, 11265), (106, 11325), (111, 11352), (116, 11385), (138, 11601), (143, 11634), (149, 11688), (151, 11700), (168, 11823), (179, 11925), (187, 12012), (210, 12177), (234, 12438), (246, 12531), (250, 12555), (285, 12762), (296, 12840), (298, 12852), (300, 12876), (304, 12909), (309, 12948), (340, 13173), (349, 13230), (356, 13272), (371, 13410), (375, 13446), (376, 13452), (389, 13560), (406, 13785), (408, 13827), (412, 13905), (417, 13965), (420, 13986), (426, 14076), (429, 14118), (432, 14139), (437, 14202), (445, 14265), (448, 14283), (449, 14292), (451, 14310), (465, 14400), (476, 14496), (478, 14514),

Gene: Lasker_19 Start: 10851, Stop: 14792, Start Num: 25
Candidate Starts for Lasker_19:
(Start: 25 @10851 has 54 MA's), (29, 10890), (33, 10953), (35, 10986), (38, 11010), (40, 11016), (41, 11028), (46, 11052), (47, 11064), (48, 11082), (50, 11124), (65, 11289), (94, 11556), (96, 11562), (101, 11601), (113, 11694), (131, 11862), (135, 11907), (146, 12003), (161, 12078), (165, 12108), (172, 12195), (174, 12207), (181, 12276), (182, 12312), (186, 12342), (190, 12378), (197, 12426), (199, 12438), (204, 12468), (209, 12525), (210, 12534), (212, 12579), (213, 12582), (215, 12627), (217, 12636), (225, 12720), (226, 12729), (228, 12741), (231, 12762), (235, 12801), (236, 12813), (246, 12888), (250, 12912), (263, 13020), (266, 13059), (281, 13149), (283, 13164), (297, 13266), (300, 13296), (307, 13347), (309, 13368), (315, 13416), (316, 13419), (333, 13503), (334, 13506), (342, 13584), (353, 13659), (354, 13668), (359, 13683), (384, 13842), (389, 13860), (398, 13959), (404, 14052), (409, 14166), (410, 14184), (414, 14223), (417, 14265), (422, 14328), (423, 14340), (426, 14376), (429, 14418), (432, 14439), (440, 14535), (449, 14589), (461, 14679), (472, 14742),

Gene: Lawnathon_19 Start: 10910, Stop: 14713, Start Num: 25
Candidate Starts for Lawnathon_19:
(Start: 25 @10910 has 54 MA's), (35, 11045), (38, 11069), (40, 11075), (46, 11111), (47, 11123), (48, 11141), (49, 11150), (50, 11183), (52, 11189), (57, 11267), (65, 11348), (67, 11387), (79, 11471), (80, 11480), (81, 11486), (85, 11510), (86, 11519), (95, 11618), (97, 11624), (105, 11711), (111, 11744), (114, 11780), (134, 11963), (139, 11999), (141, 12011), (146, 12062), (163, 12149), (169, 12236), (182, 12377), (190, 12446), (191, 12455), (198, 12503), (201, 12524), (202, 12527), (211, 12599), (214, 12662), (221, 12746), (225, 12761), (235, 12800), (240, 12857), (276, 13052), (284, 13097), (293, 13160), (307, 13262), (309, 13283), (342, 13505), (351, 13571), (353, 13580), (369, 13646), (383, 13742), (389, 13781), (396, 13847), (404, 13973), (409, 14087), (410, 14105), (413, 14135), (414, 14144), (417, 14186), (422, 14249), (423, 14261), (426, 14297), (429, 14339), (432, 14360), (433, 14372), (447, 14498), (449, 14510), (459, 14594), (461, 14600), (475, 14693),

Gene: LeBruni_19 Start: 10784, Stop: 14581, Start Num: 25
Candidate Starts for LeBruni_19:
(Start: 25 @10784 has 54 MA's), (29, 10823), (35, 10919), (38, 10943), (40, 10949), (46, 10985), (47, 10997), (48, 11015), (50, 11057), (52, 11063), (57, 11141), (65, 11222), (67, 11261), (73, 11300), (79, 11345), (80, 11354), (81, 11360), (86, 11393), (95, 11492), (97, 11498), (104, 11579), (105, 11585), (111, 11618), (114, 11654), (134, 11837), (141, 11885), (163, 12023), (169, 12110), (190, 12320), (191, 12329), (198, 12377), (201, 12398), (202, 12401), (211, 12473), (214, 12536), (221, 12620), (225, 12635), (236, 12686), (249, 12776), (254, 12812), (275, 12917), (282, 12950), (291, 13013), (293, 13034), (304, 13118), (333, 13295), (338, 13331), (342, 13373), (351, 13439), (353, 13448),

(380, 13592), (389, 13649), (404, 13841), (407, 13904), (409, 13955), (410, 13973), (414, 14012), (417, 14054), (422, 14117), (423, 14129), (426, 14165), (429, 14207), (430, 14210), (431, 14222), (432, 14228), (449, 14378), (461, 14468), (473, 14531),

Gene: LilyBell_18 Start: 10905, Stop: 14801, Start Num: 25
Candidate Starts for LilyBell_18:
(Start: 25 @10905 has 54 MA's), (35, 11040), (38, 11064), (40, 11070), (46, 11106), (47, 11118), (48, 11136), (49, 11145), (50, 11178), (52, 11184), (57, 11262), (65, 11343), (67, 11382), (79, 11466), (85, 11505), (86, 11514), (97, 11619), (104, 11700), (105, 11706), (111, 11739), (116, 11775), (141, 12006), (153, 12099), (163, 12144), (171, 12240), (190, 12441), (191, 12450), (198, 12498), (201, 12519), (202, 12522), (211, 12594), (225, 12756), (254, 12933), (282, 13071), (291, 13134), (293, 13155), (306, 13245), (312, 13302), (323, 13380), (333, 13419), (338, 13455), (342, 13497), (346, 13536), (350, 13560), (353, 13572), (354, 13581), (359, 13596), (361, 13614), (379, 13800), (380, 13809), (396, 13932), (397, 13959), (398, 13965), (404, 14058), (409, 14172), (413, 14220), (414, 14229), (417, 14271), (422, 14334), (423, 14346), (426, 14382), (429, 14424), (432, 14445), (433, 14457), (440, 14541), (449, 14595), (458, 14676), (460, 14682), (462, 14697), (463, 14700), (468, 14736),

Gene: LittleRon_18 Start: 10859, Stop: 14659, Start Num: 25
Candidate Starts for LittleRon_18:
(Start: 25 @10859 has 54 MA's), (35, 10994), (38, 11018), (40, 11024), (46, 11060), (47, 11072), (48, 11090), (49, 11099), (50, 11132), (52, 11138), (57, 11216), (65, 11297), (67, 11336), (72, 11366), (79, 11420), (81, 11435), (86, 11468), (97, 11573), (105, 11660), (111, 11693), (114, 11729), (131, 11870), (141, 11960), (153, 12053), (163, 12098), (171, 12194), (190, 12395), (191, 12404), (198, 12452), (201, 12473), (202, 12476), (211, 12548), (225, 12710), (236, 12761), (240, 12806), (254, 12887), (282, 13025), (290, 13076), (291, 13088), (293, 13109), (323, 13334), (338, 13406), (342, 13448), (351, 13514), (353, 13523), (359, 13547), (360, 13550), (378, 13655), (384, 13706), (389, 13724), (399, 13844), (404, 13916), (409, 14030), (413, 14078), (414, 14087), (417, 14129), (422, 14192), (423, 14204), (426, 14240), (429, 14282), (432, 14303), (433, 14315), (440, 14399), (449, 14453), (458, 14534), (460, 14540), (462, 14555), (463, 14558), (468, 14594),

Gene: MUWow_18 Start: 10936, Stop: 14877, Start Num: 25
Candidate Starts for MUWow_18:
(Start: 25 @10936 has 54 MA's), (29, 10975), (33, 11038), (35, 11071), (38, 11095), (40, 11101), (41, 11113), (46, 11137), (47, 11149), (48, 11167), (50, 11209), (65, 11374), (94, 11641), (96, 11647), (101, 11686), (113, 11779), (131, 11947), (135, 11992), (146, 12088), (161, 12163), (165, 12193), (172, 12280), (174, 12292), (181, 12361), (182, 12397), (186, 12427), (190, 12463), (197, 12511), (199, 12523), (204, 12553), (209, 12610), (210, 12619), (212, 12664), (213, 12667), (215, 12712), (217, 12721), (225, 12805), (226, 12814), (228, 12826), (231, 12847), (235, 12886), (236, 12898), (246, 12973), (250, 12997), (263, 13105), (266, 13144), (281, 13234), (283, 13249), (297, 13351), (300, 13381), (307, 13432), (309, 13453), (315, 13501), (316, 13504), (333, 13588), (334, 13591), (342, 13669), (353, 13744), (354, 13753), (359, 13768), (380, 13888), (384, 13927), (389, 13945), (398, 14044), (404, 14137), (409, 14251), (410, 14269), (414, 14308), (417, 14350), (422, 14413), (423, 14425), (426, 14461), (429, 14503), (432, 14524), (440, 14620), (449, 14674), (472, 14827),

Gene: Mapleville_18 Start: 10980, Stop: 14783, Start Num: 25
Candidate Starts for Mapleville_18:
(Start: 25 @10980 has 54 MA's), (35, 11115), (38, 11139), (40, 11145), (46, 11181), (47, 11193), (48, 11211), (49, 11220), (50, 11253), (52, 11259), (57, 11337), (65, 11418), (67, 11457), (79, 11541), (80, 11550), (81, 11556), (85, 11580), (86, 11589), (95, 11688), (97, 11694), (105, 11781), (111, 11814), (114, 11850), (134, 12033), (139, 12069), (141, 12081), (146, 12132), (163, 12219), (169, 12306), (182, 12447), (190, 12516), (191, 12525), (198, 12573), (201, 12594), (202, 12597), (211, 12669), (214, 12732), (221, 12816), (225, 12831), (235, 12870), (240, 12927), (276, 13122), (284, 13167),

(293, 13230), (307, 13332), (309, 13353), (342, 13575), (351, 13641), (353, 13650), (369, 13716), (383, 13812), (389, 13851), (396, 13917), (404, 14043), (409, 14157), (410, 14175), (413, 14205), (414, 14214), (417, 14256), (422, 14319), (423, 14331), (426, 14367), (429, 14409), (432, 14430), (433, 14442), (447, 14568), (449, 14580), (459, 14664), (461, 14670), (475, 14763),

Gene: MaterMagnus_19 Start: 10844, Stop: 14785, Start Num: 25
Candidate Starts for MaterMagnus_19:
(Start: 25 @10844 has 54 MA's), (29, 10883), (33, 10946), (35, 10979), (38, 11003), (40, 11009), (41, 11021), (46, 11045), (47, 11057), (48, 11075), (50, 11117), (65, 11282), (94, 11549), (96, 11555), (101, 11594), (113, 11687), (131, 11855), (135, 11900), (146, 11996), (161, 12071), (165, 12101), (172, 12188), (174, 12200), (181, 12269), (182, 12305), (186, 12335), (190, 12371), (197, 12419), (199, 12431), (204, 12461), (209, 12518), (210, 12527), (212, 12572), (213, 12575), (217, 12629), (225, 12713), (226, 12722), (228, 12734), (231, 12755), (236, 12806), (250, 12905), (263, 13013), (266, 13052), (281, 13142), (283, 13157), (297, 13259), (300, 13289), (307, 13340), (309, 13361), (315, 13409), (316, 13412), (333, 13496), (334, 13499), (342, 13577), (353, 13652), (354, 13661), (359, 13676), (380, 13796), (384, 13835), (389, 13853), (398, 13952), (404, 14045), (409, 14159), (410, 14177), (414, 14216), (417, 14258), (422, 14321), (423, 14333), (426, 14369), (429, 14411), (432, 14432), (440, 14528), (449, 14582), (461, 14672), (472, 14735),

Gene: MidnightRain_19 Start: 10842, Stop: 14783, Start Num: 25
Candidate Starts for MidnightRain_19:
(Start: 25 @10842 has 54 MA's), (29, 10881), (33, 10944), (35, 10977), (38, 11001), (40, 11007), (41, 11019), (46, 11043), (47, 11055), (48, 11073), (50, 11115), (65, 11280), (94, 11547), (96, 11553), (101, 11592), (113, 11685), (131, 11853), (135, 11898), (146, 11994), (161, 12069), (165, 12099), (172, 12186), (174, 12198), (181, 12267), (182, 12303), (186, 12333), (190, 12369), (197, 12417), (199, 12429), (204, 12459), (209, 12516), (210, 12525), (212, 12570), (213, 12573), (215, 12618), (217, 12627), (225, 12711), (226, 12720), (228, 12732), (231, 12753), (235, 12792), (236, 12804), (246, 12879), (250, 12903), (263, 13011), (266, 13050), (281, 13140), (283, 13155), (297, 13257), (300, 13287), (307, 13338), (309, 13359), (315, 13407), (316, 13410), (333, 13494), (334, 13497), (342, 13575), (353, 13650), (354, 13659), (359, 13674), (384, 13833), (389, 13851), (398, 13950), (404, 14043), (409, 14157), (410, 14175), (414, 14214), (417, 14256), (422, 14319), (423, 14331), (426, 14367), (429, 14409), (432, 14430), (440, 14526), (449, 14580), (461, 14670), (472, 14733),

Gene: MurphyJoseph_19 Start: 10843, Stop: 14868, Start Num: 25
Candidate Starts for MurphyJoseph_19:
(Start: 25 @10843 has 54 MA's), (35, 10978), (48, 11074), (49, 11083), (50, 11116), (57, 11200), (73, 11359), (75, 11371), (85, 11443), (94, 11548), (100, 11590), (101, 11593), (118, 11722), (122, 11755), (132, 11866), (137, 11920), (155, 12043), (173, 12193), (177, 12226), (185, 12343), (194, 12406), (204, 12463), (209, 12514), (213, 12571), (217, 12625), (225, 12709), (245, 12880), (262, 13000), (286, 13171), (287, 13174), (290, 13192), (305, 13312), (308, 13336), (328, 13543), (332, 13570), (342, 13663), (343, 13666), (348, 13708), (349, 13711), (351, 13729), (354, 13747), (364, 13792), (380, 13870), (389, 13927), (398, 14026), (404, 14119), (406, 14152), (407, 14182), (409, 14233), (410, 14251), (414, 14290), (417, 14332), (419, 14350), (423, 14407), (426, 14443), (429, 14485), (430, 14488), (432, 14506), (449, 14656), (466, 14770), (469, 14803),

Gene: NewKitty_20 Start: 11073, Stop: 15014, Start Num: 25
Candidate Starts for NewKitty_20:
(Start: 25 @11073 has 54 MA's), (29, 11112), (33, 11175), (35, 11208), (38, 11232), (40, 11238), (41, 11250), (46, 11274), (47, 11286), (48, 11304), (50, 11346), (65, 11511), (94, 11778), (96, 11784), (101, 11823), (113, 11916), (131, 12084), (135, 12129), (146, 12225), (161, 12300), (165, 12330), (172, 12417), (174, 12429), (181, 12498), (182, 12534), (186, 12564), (190, 12600), (197, 12648), (199, 12660), (204, 12690), (209, 12747), (210, 12756), (212, 12801), (213, 12804), (215, 12849), (217, 12858), (225, 12942), (226, 12951), (228, 12963), (231, 12984), (235, 13023), (236, 13035), (246,

13110), (250, 13134), (263, 13242), (266, 13281), (281, 13371), (283, 13386), (297, 13488), (300, 13518), (307, 13569), (309, 13590), (315, 13638), (316, 13641), (333, 13725), (334, 13728), (342, 13806), (353, 13881), (354, 13890), (359, 13905), (380, 14025), (384, 14064), (389, 14082), (398, 14181), (404, 14274), (409, 14388), (410, 14406), (414, 14445), (417, 14487), (422, 14550), (423, 14562), (426, 14598), (429, 14640), (432, 14661), (440, 14757), (449, 14811), (472, 14964),

Gene: NidoQ_18 Start: 10948, Stop: 14841, Start Num: 25
Candidate Starts for NidoQ_18:
(Start: 25 @10948 has 54 MA's), (35, 11083), (38, 11107), (40, 11113), (46, 11149), (47, 11161), (48, 11179), (49, 11188), (50, 11221), (52, 11227), (57, 11305), (65, 11386), (67, 11425), (79, 11509), (85, 11548), (86, 11557), (97, 11662), (104, 11743), (105, 11749), (111, 11782), (116, 11818), (141, 12049), (163, 12187), (171, 12283), (190, 12484), (191, 12493), (198, 12541), (201, 12562), (202, 12565), (211, 12637), (225, 12799), (236, 12850), (254, 12976), (282, 13114), (291, 13177), (293, 13198), (306, 13288), (323, 13423), (333, 13462), (338, 13498), (342, 13540), (346, 13579), (350, 13603), (353, 13615), (354, 13624), (359, 13639), (379, 13843), (380, 13852), (396, 13975), (397, 14002), (398, 14008), (399, 14029), (404, 14101), (409, 14215), (413, 14263), (414, 14272), (417, 14314), (422, 14377), (423, 14389), (426, 14425), (427, 14434), (429, 14467), (431, 14482), (432, 14488), (433, 14500), (447, 14626), (449, 14638), (459, 14722), (461, 14728),

Gene: NikkiHotWheels_18 Start: 10888, Stop: 14802, Start Num: 25
Candidate Starts for NikkiHotWheels_18:
(Start: 25 @10888 has 54 MA's), (31, 10948), (35, 11023), (38, 11047), (40, 11053), (46, 11089), (47, 11101), (48, 11119), (49, 11128), (50, 11161), (52, 11167), (57, 11245), (65, 11326), (67, 11365), (79, 11449), (85, 11488), (86, 11497), (97, 11602), (104, 11683), (105, 11689), (108, 11710), (113, 11752), (116, 11779), (120, 11812), (125, 11869), (134, 11962), (141, 12010), (146, 12061), (163, 12148), (169, 12235), (171, 12244), (190, 12445), (191, 12454), (198, 12502), (201, 12523), (202, 12526), (211, 12598), (225, 12760), (236, 12811), (254, 12937), (282, 13075), (290, 13126), (291, 13138), (293, 13159), (306, 13249), (323, 13384), (333, 13423), (338, 13459), (342, 13501), (344, 13522), (346, 13540), (350, 13564), (353, 13576), (354, 13585), (359, 13600), (380, 13813), (397, 13963), (398, 13969), (404, 14062), (409, 14176), (410, 14194), (413, 14224), (414, 14233), (417, 14275), (422, 14338), (423, 14350), (426, 14386), (429, 14428), (431, 14443), (432, 14449), (433, 14461), (447, 14587), (449, 14599), (459, 14683), (461, 14689),

Gene: Nyilah_18 Start: 10881, Stop: 14774, Start Num: 25
Candidate Starts for Nyilah_18:
(15, 10788), (Start: 25 @10881 has 54 MA's), (35, 11016), (38, 11040), (41, 11058), (46, 11082), (47, 11094), (48, 11112), (49, 11121), (50, 11154), (52, 11160), (57, 11238), (65, 11319), (67, 11358), (79, 11442), (81, 11457), (86, 11490), (97, 11595), (105, 11682), (111, 11715), (114, 11751), (134, 11934), (141, 11982), (146, 12033), (147, 12036), (163, 12120), (169, 12207), (171, 12216), (190, 12417), (191, 12426), (198, 12474), (201, 12495), (202, 12498), (211, 12570), (218, 12690), (225, 12732), (236, 12783), (254, 12909), (282, 13047), (291, 13110), (293, 13131), (306, 13221), (323, 13356), (333, 13395), (338, 13431), (342, 13473), (344, 13494), (346, 13512), (350, 13536), (353, 13548), (354, 13557), (359, 13572), (379, 13776), (380, 13785), (396, 13908), (397, 13935), (398, 13941), (404, 14034), (409, 14148), (413, 14196), (414, 14205), (417, 14247), (422, 14310), (423, 14322), (426, 14358), (429, 14400), (431, 14415), (432, 14421), (433, 14433), (440, 14517), (449, 14571), (450, 14580), (461, 14661), (473, 14724),

Gene: Peas_18 Start: 10892, Stop: 14788, Start Num: 25
Candidate Starts for Peas_18:
(Start: 25 @10892 has 54 MA's), (35, 11027), (38, 11051), (40, 11057), (46, 11093), (47, 11105), (48, 11123), (49, 11132), (50, 11165), (52, 11171), (57, 11249), (65, 11330), (67, 11369), (79, 11453), (81, 11468), (86, 11501), (97, 11606), (105, 11693), (111, 11726), (114, 11762), (134, 11945), (141, 11993), (146, 12044), (147, 12047), (152, 12083), (153, 12086), (163, 12131), (169, 12218), (182,

12359), (190, 12428), (191, 12437), (198, 12485), (201, 12506), (202, 12509), (211, 12581), (214, 12644), (225, 12743), (236, 12794), (254, 12920), (282, 13058), (290, 13109), (291, 13121), (293, 13142), (306, 13232), (323, 13367), (333, 13406), (338, 13442), (342, 13484), (344, 13505), (346, 13523), (350, 13547), (353, 13559), (354, 13568), (359, 13583), (380, 13796), (397, 13946), (398, 13952), (404, 14045), (409, 14159), (410, 14177), (413, 14207), (414, 14216), (417, 14258), (422, 14321), (423, 14333), (426, 14369), (429, 14411), (432, 14432), (433, 14444), (447, 14570), (449, 14582), (460, 14669), (463, 14687),

Gene: PeggyLeg03_18 Start: 10931, Stop: 14827, Start Num: 25
Candidate Starts for PeggyLeg03_18:
(Start: 25 @10931 has 54 MA's), (35, 11066), (38, 11090), (40, 11096), (46, 11132), (47, 11144), (48, 11162), (49, 11171), (50, 11204), (52, 11210), (57, 11288), (65, 11369), (67, 11408), (79, 11492), (85, 11531), (86, 11540), (97, 11645), (104, 11726), (105, 11732), (111, 11765), (116, 11801), (141, 12032), (163, 12170), (171, 12266), (190, 12467), (191, 12476), (198, 12524), (201, 12545), (202, 12548), (211, 12620), (220, 12761), (225, 12782), (236, 12833), (254, 12959), (282, 13097), (291, 13160), (293, 13181), (306, 13271), (323, 13406), (333, 13445), (338, 13481), (342, 13523), (346, 13562), (350, 13586), (351, 13589), (353, 13598), (354, 13607), (359, 13622), (379, 13826), (380, 13835), (396, 13958), (397, 13985), (398, 13991), (399, 14012), (404, 14084), (409, 14198), (413, 14246), (414, 14255), (417, 14297), (422, 14360), (423, 14372), (426, 14408), (429, 14450), (432, 14471), (433, 14483), (440, 14567), (449, 14621), (458, 14702), (460, 14708), (462, 14723), (463, 14726), (468, 14762),

Gene: Persistence_18 Start: 10866, Stop: 14705, Start Num: 25
Candidate Starts for Persistence_18:
(Start: 25 @10866 has 54 MA's), (35, 11001), (38, 11025), (40, 11031), (45, 11061), (46, 11067), (48, 11097), (50, 11139), (67, 11343), (73, 11382), (75, 11394), (81, 11442), (94, 11571), (98, 11583), (101, 11616), (116, 11736), (131, 11877), (135, 11922), (141, 11967), (144, 11988), (145, 11997), (147, 12021), (154, 12063), (161, 12093), (163, 12105), (168, 12174), (173, 12216), (182, 12327), (183, 12336), (189, 12384), (195, 12429), (202, 12474), (209, 12537), (217, 12648), (221, 12696), (228, 12753), (236, 12825), (246, 12900), (249, 12915), (258, 12972), (262, 13005), (278, 13077), (280, 13080), (301, 13215), (307, 13254), (309, 13275), (320, 13368), (333, 13422), (341, 13491), (342, 13497), (349, 13545), (353, 13572), (354, 13581), (404, 13965), (405, 13992), (406, 13998), (407, 14028), (409, 14079), (414, 14136), (417, 14178), (422, 14241), (423, 14253), (427, 14298), (429, 14331), (432, 14352), (440, 14448), (449, 14502), (467, 14634),

Gene: PetriParty_17 Start: 11046, Stop: 15431, Start Num: 7
Candidate Starts for PetriParty_17:
(4, 10968), (Start: 7 @11046 has 3 MA's), (9, 11106), (11, 11169), (12, 11181), (13, 11223), (23, 11316), (32, 11433), (48, 11571), (49, 11580), (50, 11613), (54, 11640), (65, 11778), (67, 11817), (73, 11856), (79, 11901), (80, 11910), (81, 11916), (85, 11940), (94, 12045), (101, 12090), (105, 12141), (115, 12201), (119, 12237), (122, 12252), (126, 12306), (141, 12441), (144, 12462), (149, 12513), (150, 12522), (151, 12525), (162, 12576), (163, 12579), (168, 12648), (170, 12672), (171, 12675), (182, 12801), (183, 12810), (188, 12849), (190, 12867), (192, 12879), (208, 13002), (209, 13014), (210, 13023), (211, 13026), (217, 13125), (223, 13194), (224, 13203), (227, 13227), (228, 13230), (250, 13401), (257, 13461), (266, 13548), (270, 13560), (281, 13638), (283, 13653), (288, 13686), (297, 13755), (302, 13797), (303, 13800), (307, 13836), (309, 13857), (325, 13971), (346, 14115), (349, 14124), (355, 14163), (356, 14166), (363, 14205), (374, 14337), (376, 14346), (389, 14454), (406, 14679), (408, 14721), (411, 14781), (417, 14859), (420, 14880), (424, 14949), (426, 14970), (429, 15012), (432, 15033), (437, 15096), (441, 15135), (449, 15186), (457, 15255), (465, 15300), (478, 15417),

Gene: Phrank15_18 Start: 10912, Stop: 14718, Start Num: 25
Candidate Starts for Phrank15_18:

(15, 10822), (Start: 25 @10912 has 54 MA's), (29, 10951), (35, 11047), (38, 11071), (40, 11077), (41, 11089), (42, 11092), (44, 11101), (46, 11113), (47, 11125), (48, 11143), (49, 11152), (50, 11185), (52, 11191), (57, 11269), (65, 11350), (67, 11389), (80, 11482), (81, 11488), (86, 11521), (97, 11626), (105, 11713), (111, 11746), (114, 11782), (129, 11908), (131, 11923), (134, 11965), (152, 12103), (163, 12151), (178, 12307), (182, 12379), (190, 12448), (191, 12457), (198, 12505), (201, 12526), (202, 12529), (204, 12535), (211, 12601), (214, 12664), (225, 12763), (228, 12772), (236, 12814), (244, 12868), (254, 12940), (262, 12994), (282, 13078), (290, 13129), (291, 13141), (293, 13162), (304, 13246), (310, 13297), (333, 13423), (342, 13501), (346, 13540), (351, 13567), (353, 13576), (359, 13600), (360, 13603), (389, 13777), (404, 13969), (406, 14002), (409, 14083), (410, 14101), (414, 14140), (417, 14182), (422, 14245), (423, 14257), (426, 14293), (429, 14335), (432, 14356), (433, 14368), (440, 14452), (449, 14506), (458, 14581), (460, 14587), (462, 14602), (463, 14605),

Gene: PorkBelly_15 Start: 10316, Stop: 14599, Start Num: 28
Candidate Starts for PorkBelly_15:
(19, 10247), (20, 10256), (28, 10316), (37, 10454), (47, 10511), (51, 10571), (55, 10613), (56, 10643), (58, 10670), (60, 10688), (62, 10706), (68, 10778), (69, 10781), (71, 10790), (76, 10835), (77, 10838), (78, 10844), (82, 10886), (88, 10940), (89, 10949), (91, 10961), (92, 10970), (97, 11024), (99, 11036), (103, 11084), (107, 11126), (112, 11144), (117, 11207), (121, 11240), (123, 11249), (127, 11315), (146, 11495), (148, 11513), (150, 11525), (159, 11561), (160, 11567), (161, 11570), (165, 11600), (171, 11678), (173, 11693), (176, 11711), (181, 11768), (182, 11810), (184, 11828), (193, 11897), (206, 11984), (208, 12008), (210, 12029), (217, 12131), (226, 12224), (229, 12239), (239, 12344), (242, 12359), (243, 12362), (256, 12446), (274, 12572), (282, 12614), (283, 12620), (308, 12806), (309, 12836), (311, 12857), (318, 12920), (322, 12968), (328, 13013), (331, 13040), (335, 13070), (339, 13136), (342, 13148), (345, 13178), (349, 13196), (357, 13241), (367, 13352), (389, 13595), (390, 13601), (391, 13622), (402, 13820), (403, 13829), (404, 13832), (415, 14030), (416, 14033), (422, 14117), (423, 14129), (426, 14165), (428, 14195), (434, 14258), (435, 14279), (438, 14312), (443, 14345), (446, 14366), (464, 14498), (470, 14543), (471, 14546), (474, 14558),

Gene: Pucara_18 Start: 10892, Stop: 14788, Start Num: 25
Candidate Starts for Pucara_18:
(Start: 25 @10892 has 54 MA's), (31, 10952), (35, 11027), (38, 11051), (40, 11057), (46, 11093), (47, 11105), (48, 11123), (49, 11132), (50, 11165), (52, 11171), (57, 11249), (65, 11330), (67, 11369), (79, 11453), (81, 11468), (85, 11492), (86, 11501), (97, 11606), (105, 11693), (111, 11726), (114, 11762), (134, 11945), (141, 11993), (146, 12044), (147, 12047), (153, 12086), (163, 12131), (169, 12218), (171, 12227), (190, 12428), (191, 12437), (198, 12485), (201, 12506), (202, 12509), (211, 12581), (214, 12644), (236, 12794), (254, 12920), (282, 13058), (290, 13109), (291, 13121), (293, 13142), (306, 13232), (323, 13367), (333, 13406), (338, 13442), (342, 13484), (344, 13505), (346, 13523), (353, 13559), (359, 13583), (380, 13796), (397, 13946), (398, 13952), (404, 14045), (409, 14159), (410, 14177), (413, 14207), (414, 14216), (417, 14258), (422, 14321), (423, 14333), (429, 14411), (432, 14432), (433, 14444), (444, 14549), (447, 14570), (449, 14582), (460, 14669), (463, 14687),

Gene: RadFad_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for RadFad_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (236, 12805), (238, 12832), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432,

14431), (440, 14527), (449, 14581), (461, 14671), (472, 14734),

Gene: Raphaella_19 Start: 10843, Stop: 14784, Start Num: 25
Candidate Starts for Raphaella_19:
(Start: 25 @10843 has 54 MA's), (29, 10882), (33, 10945), (35, 10978), (38, 11002), (40, 11008), (41, 11020), (46, 11044), (47, 11056), (48, 11074), (50, 11116), (65, 11281), (94, 11548), (96, 11554), (101, 11593), (113, 11686), (131, 11854), (135, 11899), (146, 11995), (161, 12070), (165, 12100), (172, 12187), (174, 12199), (181, 12268), (182, 12304), (186, 12334), (190, 12370), (197, 12418), (199, 12430), (204, 12460), (209, 12517), (210, 12526), (212, 12571), (213, 12574), (215, 12619), (217, 12628), (225, 12712), (226, 12721), (228, 12733), (231, 12754), (235, 12793), (236, 12805), (246, 12880), (250, 12904), (263, 13012), (266, 13051), (281, 13141), (283, 13156), (297, 13258), (300, 13288), (307, 13339), (309, 13360), (315, 13408), (316, 13411), (333, 13495), (334, 13498), (342, 13576), (353, 13651), (354, 13660), (359, 13675), (384, 13834), (389, 13852), (398, 13951), (404, 14044), (409, 14158), (410, 14176), (414, 14215), (417, 14257), (422, 14320), (423, 14332), (426, 14368), (429, 14410), (432, 14431), (440, 14527), (449, 14581), (472, 14734),

Gene: Richie_19 Start: 10858, Stop: 14799, Start Num: 25
Candidate Starts for Richie_19:
(Start: 25 @10858 has 54 MA's), (29, 10897), (33, 10960), (35, 10993), (38, 11017), (40, 11023), (41, 11035), (46, 11059), (47, 11071), (48, 11089), (50, 11131), (65, 11296), (94, 11563), (96, 11569), (101, 11608), (113, 11701), (131, 11869), (135, 11914), (146, 12010), (161, 12085), (165, 12115), (172, 12202), (174, 12214), (181, 12283), (182, 12319), (186, 12349), (190, 12385), (197, 12433), (199, 12445), (204, 12475), (209, 12532), (210, 12541), (212, 12586), (213, 12589), (215, 12634), (217, 12643), (225, 12727), (226, 12736), (228, 12748), (231, 12769), (235, 12808), (236, 12820), (246, 12895), (250, 12919), (263, 13027), (266, 13066), (281, 13156), (283, 13171), (297, 13273), (300, 13303), (307, 13354), (309, 13375), (315, 13423), (316, 13426), (333, 13510), (334, 13513), (342, 13591), (353, 13666), (354, 13675), (359, 13690), (380, 13810), (384, 13849), (389, 13867), (398, 13966), (404, 14059), (409, 14173), (410, 14191), (414, 14230), (417, 14272), (422, 14335), (423, 14347), (426, 14383), (429, 14425), (432, 14446), (440, 14542), (449, 14596), (472, 14749),

Gene: Sakai_19 Start: 10852, Stop: 14793, Start Num: 25
Candidate Starts for Sakai_19:
(Start: 25 @10852 has 54 MA's), (29, 10891), (33, 10954), (35, 10987), (38, 11011), (40, 11017), (41, 11029), (46, 11053), (47, 11065), (48, 11083), (50, 11125), (65, 11290), (94, 11557), (96, 11563), (101, 11602), (113, 11695), (131, 11863), (135, 11908), (146, 12004), (161, 12079), (165, 12109), (172, 12196), (174, 12208), (181, 12277), (182, 12313), (186, 12343), (190, 12379), (197, 12427), (199, 12439), (204, 12469), (209, 12526), (210, 12535), (212, 12580), (213, 12583), (215, 12628), (217, 12637), (225, 12721), (226, 12730), (228, 12742), (231, 12763), (235, 12802), (236, 12814), (246, 12889), (250, 12913), (263, 13021), (266, 13060), (281, 13150), (283, 13165), (297, 13267), (300, 13297), (307, 13348), (309, 13369), (315, 13417), (316, 13420), (333, 13504), (334, 13507), (342, 13585), (353, 13660), (354, 13669), (359, 13684), (380, 13804), (384, 13843), (389, 13861), (398, 13960), (404, 14053), (409, 14167), (410, 14185), (414, 14224), (417, 14266), (422, 14329), (423, 14341), (426, 14377), (429, 14419), (432, 14440), (440, 14536), (449, 14590), (472, 14743),

Gene: Sashimi_20 Start: 11112, Stop: 15146, Start Num: 16
Candidate Starts for Sashimi_20:
(Start: 16 @11112 has 2 MA's), (26, 11172), (32, 11247), (34, 11259), (37, 11310), (41, 11331), (42, 11334), (44, 11343), (48, 11385), (50, 11427), (58, 11526), (65, 11592), (66, 11598), (67, 11631), (73, 11670), (80, 11724), (81, 11730), (88, 11787), (94, 11859), (101, 11904), (102, 11913), (109, 11982), (110, 11988), (113, 11997), (116, 12024), (122, 12066), (126, 12120), (138, 12240), (141, 12255), (149, 12327), (156, 12357), (163, 12393), (176, 12522), (181, 12579), (183, 12624), (190, 12681), (193, 12702), (201, 12762), (209, 12828), (211, 12840), (212, 12882), (216, 12936), (217, 12939), (221, 12987), (228, 13044), (230, 13056), (240, 13161), (250, 13215), (257, 13275), (260, 13296),

(263, 13323), (266, 13362), (283, 13467), (289, 13506), (292, 13530), (294, 13551), (297, 13569), (302, 13611), (307, 13650), (309, 13671), (313, 13695), (325, 13785), (344, 13911), (346, 13929), (349, 13938), (354, 13974), (380, 14118), (389, 14175), (406, 14400), (408, 14442), (417, 14580), (420, 14601), (426, 14691), (429, 14733), (432, 14754), (437, 14817), (445, 14880), (451, 14925), (465, 15015), (476, 15114), (478, 15132),

Gene: Satrap_19 Start: 10758, Stop: 14705, Start Num: 25
Candidate Starts for Satrap_19:
(Start: 25 @10758 has 54 MA's), (29, 10797), (31, 10818), (35, 10893), (38, 10917), (40, 10923), (42, 10938), (44, 10947), (48, 10989), (49, 10998), (50, 11031), (67, 11235), (75, 11286), (79, 11319), (94, 11463), (98, 11475), (101, 11508), (131, 11769), (132, 11781), (145, 11889), (147, 11913), (154, 11955), (159, 11976), (163, 11997), (173, 12108), (176, 12126), (183, 12228), (189, 12276), (209, 12429), (222, 12591), (225, 12624), (226, 12633), (228, 12645), (236, 12717), (237, 12738), (246, 12792), (262, 12897), (278, 12969), (280, 12972), (301, 13107), (307, 13146), (309, 13167), (342, 13386), (347, 13428), (348, 13431), (349, 13434), (354, 13470), (358, 13479), (368, 13593), (372, 13623), (383, 13734), (398, 13872), (404, 13965), (409, 14079), (410, 14097), (414, 14136), (417, 14178), (419, 14196), (423, 14253), (426, 14289), (429, 14331), (432, 14352), (433, 14364), (449, 14502), (459, 14586), (461, 14592), (468, 14640), (471, 14652),

Gene: Seahorse_20 Start: 11096, Stop: 15148, Start Num: 25
Candidate Starts for Seahorse_20:
(Start: 25 @11096 has 54 MA's), (35, 11231), (48, 11327), (50, 11369), (57, 11453), (73, 11612), (75, 11624), (85, 11696), (94, 11801), (100, 11843), (101, 11846), (122, 12008), (132, 12119), (137, 12173), (144, 12218), (146, 12248), (155, 12296), (166, 12362), (173, 12446), (177, 12479), (185, 12596), (194, 12659), (204, 12716), (209, 12767), (213, 12824), (217, 12878), (225, 12962), (262, 13253), (286, 13424), (287, 13427), (290, 13445), (305, 13565), (308, 13589), (322, 13751), (334, 13853), (342, 13931), (351, 13997), (353, 14006), (354, 14015), (378, 14138), (389, 14207), (398, 14306), (401, 14369), (404, 14399), (407, 14462), (409, 14513), (410, 14531), (414, 14570), (417, 14612), (422, 14675), (423, 14687), (426, 14723), (429, 14765), (430, 14768), (432, 14786), (449, 14936), (466, 15050), (469, 15083),

Gene: Shukran_19 Start: 10758, Stop: 14705, Start Num: 25
Candidate Starts for Shukran_19:
(Start: 25 @10758 has 54 MA's), (29, 10797), (31, 10818), (35, 10893), (38, 10917), (40, 10923), (42, 10938), (44, 10947), (48, 10989), (49, 10998), (50, 11031), (67, 11235), (75, 11286), (79, 11319), (94, 11463), (98, 11475), (101, 11508), (131, 11769), (132, 11781), (145, 11889), (147, 11913), (154, 11955), (159, 11976), (163, 11997), (173, 12108), (176, 12126), (183, 12228), (189, 12276), (209, 12429), (222, 12591), (225, 12624), (226, 12633), (228, 12645), (236, 12717), (237, 12738), (246, 12792), (262, 12897), (278, 12969), (280, 12972), (301, 13107), (307, 13146), (309, 13167), (342, 13386), (347, 13428), (348, 13431), (349, 13434), (354, 13470), (358, 13479), (368, 13593), (372, 13623), (383, 13734), (398, 13872), (404, 13965), (409, 14079), (410, 14097), (414, 14136), (417, 14178), (419, 14196), (423, 14253), (426, 14289), (429, 14331), (432, 14352), (433, 14364), (449, 14502), (459, 14586), (461, 14592), (468, 14640), (471, 14652),

Gene: SonDevVon_18 Start: 10884, Stop: 14786, Start Num: 29
Candidate Starts for SonDevVon_18:
(Start: 25 @10845 has 54 MA's), (29, 10884), (33, 10947), (35, 10980), (38, 11004), (40, 11010), (41, 11022), (46, 11046), (47, 11058), (48, 11076), (50, 11118), (65, 11283), (94, 11550), (96, 11556), (101, 11595), (113, 11688), (131, 11856), (135, 11901), (146, 11997), (161, 12072), (165, 12102), (172, 12189), (174, 12201), (181, 12270), (182, 12306), (186, 12336), (190, 12372), (197, 12420), (199, 12432), (204, 12462), (209, 12519), (210, 12528), (212, 12573), (213, 12576), (215, 12621), (217, 12630), (225, 12714), (226, 12723), (228, 12735), (231, 12756), (235, 12795), (236, 12807), (246, 12882), (250, 12906), (263, 13014), (266, 13053), (281, 13143), (283, 13158), (297, 13260), (300,

13290), (307, 13341), (309, 13362), (315, 13410), (316, 13413), (333, 13497), (334, 13500), (342, 13578), (353, 13653), (354, 13662), (359, 13677), (380, 13797), (384, 13836), (389, 13854), (398, 13953), (404, 14046), (409, 14160), (410, 14178), (413, 14208), (414, 14217), (417, 14259), (422, 14322), (423, 14334), (426, 14370), (429, 14412), (432, 14433), (433, 14445), (447, 14571), (449, 14583), (461, 14673), (472, 14736),

Gene: SpicyFrank_19 Start: 10920, Stop: 14861, Start Num: 25
Candidate Starts for SpicyFrank_19:
(Start: 25 @10920 has 54 MA's), (29, 10959), (33, 11022), (35, 11055), (38, 11079), (40, 11085), (46, 11121), (47, 11133), (48, 11151), (50, 11193), (61, 11322), (94, 11625), (101, 11670), (113, 11763), (131, 11931), (135, 11976), (161, 12147), (172, 12264), (174, 12276), (180, 12336), (181, 12345), (186, 12411), (190, 12447), (197, 12495), (199, 12507), (204, 12537), (209, 12594), (213, 12651), (217, 12705), (218, 12726), (225, 12789), (226, 12798), (228, 12810), (233, 12861), (236, 12882), (250, 12981), (263, 13089), (266, 13128), (281, 13218), (283, 13233), (297, 13335), (300, 13365), (307, 13416), (309, 13437), (315, 13485), (316, 13488), (333, 13572), (334, 13575), (342, 13653), (353, 13728), (359, 13752), (389, 13929), (398, 14028), (404, 14121), (409, 14235), (410, 14253), (414, 14292), (417, 14334), (422, 14397), (423, 14409), (426, 14445), (429, 14487), (431, 14502), (432, 14508), (449, 14658), (461, 14748), (468, 14796), (472, 14811),

Gene: Sporco_19 Start: 10900, Stop: 14841, Start Num: 25
Candidate Starts for Sporco_19:
(Start: 25 @10900 has 54 MA's), (29, 10939), (33, 11002), (35, 11035), (38, 11059), (40, 11065), (41, 11077), (46, 11101), (47, 11113), (48, 11131), (50, 11173), (65, 11338), (94, 11605), (96, 11611), (101, 11650), (113, 11743), (131, 11911), (135, 11956), (146, 12052), (161, 12127), (165, 12157), (172, 12244), (174, 12256), (181, 12325), (182, 12361), (186, 12391), (190, 12427), (197, 12475), (199, 12487), (204, 12517), (209, 12574), (210, 12583), (212, 12628), (213, 12631), (215, 12676), (217, 12685), (225, 12769), (226, 12778), (228, 12790), (231, 12811), (235, 12850), (236, 12862), (246, 12937), (250, 12961), (263, 13069), (266, 13108), (281, 13198), (283, 13213), (297, 13315), (300, 13345), (307, 13396), (309, 13417), (315, 13465), (316, 13468), (333, 13552), (334, 13555), (342, 13633), (353, 13708), (354, 13717), (359, 13732), (380, 13852), (384, 13891), (389, 13909), (398, 14008), (404, 14101), (409, 14215), (410, 14233), (414, 14272), (417, 14314), (422, 14377), (423, 14389), (426, 14425), (429, 14467), (432, 14488), (440, 14584), (449, 14638), (472, 14791),

Gene: ThayneTheZag_19 Start: 10917, Stop: 14951, Start Num: 25
Candidate Starts for ThayneTheZag_19:
(Start: 25 @10917 has 54 MA's), (29, 10956), (33, 11019), (35, 11052), (38, 11076), (40, 11082), (44, 11106), (47, 11130), (48, 11148), (50, 11190), (65, 11355), (66, 11361), (94, 11622), (101, 11667), (122, 11829), (131, 11928), (140, 12015), (161, 12144), (172, 12261), (174, 12273), (180, 12333), (186, 12408), (190, 12444), (197, 12492), (199, 12504), (204, 12534), (209, 12591), (213, 12648), (217, 12702), (225, 12786), (226, 12795), (228, 12807), (233, 12858), (236, 12879), (250, 12978), (264, 13110), (266, 13125), (281, 13215), (283, 13230), (294, 13314), (295, 13323), (297, 13332), (307, 13413), (309, 13434), (314, 13476), (320, 13527), (321, 13530), (332, 13557), (349, 13707), (351, 13725), (354, 13743), (358, 13752), (370, 13833), (381, 13926), (387, 13959), (392, 14010), (395, 14076), (399, 14139), (400, 14157), (404, 14211), (406, 14244), (409, 14325), (410, 14343), (414, 14382), (417, 14424), (422, 14487), (423, 14499), (429, 14577), (432, 14598), (438, 14682), (442, 14712), (444, 14715), (449, 14748), (450, 14757), (459, 14832), (461, 14838),

Gene: Tiff81_20 Start: 10986, Stop: 14879, Start Num: 25
Candidate Starts for Tiff81_20:
(15, 10893), (Start: 25 @10986 has 54 MA's), (35, 11121), (38, 11145), (41, 11163), (46, 11187), (47, 11199), (48, 11217), (49, 11226), (50, 11259), (52, 11265), (57, 11343), (65, 11424), (67, 11463), (79, 11547), (81, 11562), (86, 11595), (97, 11700), (105, 11787), (111, 11820), (114, 11856), (134, 12039), (141, 12087), (146, 12138), (147, 12141), (163, 12225), (169, 12312), (171, 12321), (190, 12522),

(191, 12531), (198, 12579), (201, 12600), (202, 12603), (211, 12675), (218, 12795), (225, 12837), (236, 12888), (254, 13014), (282, 13152), (291, 13215), (293, 13236), (306, 13326), (323, 13461), (333, 13500), (338, 13536), (342, 13578), (344, 13599), (346, 13617), (350, 13641), (353, 13653), (354, 13662), (359, 13677), (379, 13881), (380, 13890), (396, 14013), (397, 14040), (398, 14046), (404, 14139), (409, 14253), (413, 14301), (414, 14310), (417, 14352), (422, 14415), (423, 14427), (426, 14463), (429, 14505), (431, 14520), (432, 14526), (433, 14538), (440, 14622), (449, 14676), (450, 14685), (461, 14766), (473, 14829),

Gene: TripleJ_18 Start: 11061, Stop: 15446, Start Num: 7
Candidate Starts for TripleJ_18:
(4, 10983), (Start: 7 @11061 has 3 MA's), (9, 11121), (11, 11184), (12, 11196), (13, 11238), (23, 11331), (32, 11448), (48, 11586), (49, 11595), (50, 11628), (58, 11727), (65, 11793), (67, 11832), (73, 11871), (79, 11916), (80, 11925), (81, 11931), (85, 11955), (94, 12060), (101, 12105), (105, 12156), (115, 12216), (119, 12252), (122, 12267), (126, 12321), (144, 12477), (149, 12528), (163, 12594), (182, 12816), (183, 12825), (188, 12864), (190, 12882), (192, 12894), (193, 12903), (201, 12963), (208, 13017), (209, 13029), (210, 13038), (217, 13140), (223, 13209), (227, 13242), (228, 13245), (257, 13476), (266, 13563), (268, 13569), (270, 13575), (283, 13668), (288, 13701), (297, 13770), (303, 13815), (307, 13851), (309, 13872), (325, 13986), (340, 14082), (344, 14112), (346, 14130), (349, 14139), (356, 14181), (374, 14352), (376, 14361), (384, 14451), (389, 14469), (406, 14694), (408, 14736), (411, 14796), (417, 14874), (420, 14895), (424, 14964), (426, 14985), (429, 15027), (432, 15048), (437, 15111), (441, 15150), (449, 15201), (454, 15240), (465, 15315), (476, 15414), (478, 15432),

Gene: Vopal_20 Start: 10915, Stop: 14856, Start Num: 25
Candidate Starts for Vopal_20:
(Start: 25 @10915 has 54 MA's), (29, 10954), (33, 11017), (35, 11050), (38, 11074), (40, 11080), (41, 11092), (46, 11116), (47, 11128), (48, 11146), (50, 11188), (65, 11353), (94, 11620), (96, 11626), (101, 11665), (113, 11758), (131, 11926), (135, 11971), (146, 12067), (161, 12142), (165, 12172), (172, 12259), (174, 12271), (181, 12340), (182, 12376), (186, 12406), (190, 12442), (197, 12490), (199, 12502), (204, 12532), (209, 12589), (210, 12598), (212, 12643), (213, 12646), (215, 12691), (217, 12700), (225, 12784), (226, 12793), (228, 12805), (231, 12826), (235, 12865), (236, 12877), (246, 12952), (250, 12976), (263, 13084), (266, 13123), (281, 13213), (283, 13228), (297, 13330), (300, 13360), (307, 13411), (309, 13432), (315, 13480), (316, 13483), (333, 13567), (334, 13570), (342, 13648), (353, 13723), (354, 13732), (359, 13747), (380, 13867), (384, 13906), (389, 13924), (398, 14023), (404, 14116), (409, 14230), (410, 14248), (414, 14287), (417, 14329), (422, 14392), (423, 14404), (426, 14440), (429, 14482), (432, 14503), (440, 14599), (449, 14653), (472, 14806),

Gene: Windest_20 Start: 10899, Stop: 14840, Start Num: 25
Candidate Starts for Windest_20:
(Start: 25 @10899 has 54 MA's), (29, 10938), (33, 11001), (35, 11034), (38, 11058), (40, 11064), (41, 11076), (46, 11100), (47, 11112), (48, 11130), (50, 11172), (65, 11337), (94, 11604), (96, 11610), (101, 11649), (113, 11742), (131, 11910), (135, 11955), (146, 12051), (161, 12126), (165, 12156), (172, 12243), (174, 12255), (181, 12324), (182, 12360), (186, 12390), (190, 12426), (197, 12474), (199, 12486), (204, 12516), (209, 12573), (210, 12582), (212, 12627), (213, 12630), (215, 12675), (217, 12684), (225, 12768), (226, 12777), (228, 12789), (231, 12810), (235, 12849), (236, 12861), (246, 12936), (250, 12960), (263, 13068), (266, 13107), (281, 13197), (283, 13212), (297, 13314), (300, 13344), (307, 13395), (309, 13416), (315, 13464), (316, 13467), (333, 13551), (334, 13554), (342, 13632), (353, 13707), (354, 13716), (359, 13731), (380, 13851), (384, 13890), (389, 13908), (398, 14007), (404, 14100), (409, 14214), (410, 14232), (414, 14271), (417, 14313), (422, 14376), (423, 14388), (426, 14424), (429, 14466), (432, 14487), (440, 14583), (449, 14637), (461, 14727), (472, 14790),

Gene: YoungHarleezy_19 Start: 10856, Stop: 14797, Start Num: 25

Candidate Starts for YoungHarleezy_19:
(Start: 25 @10856 has 54 MA's), (29, 10895), (31, 10916), (33, 10958), (35, 10991), (38, 11015), (40, 11021), (41, 11033), (47, 11069), (48, 11087), (50, 11129), (65, 11294), (94, 11561), (96, 11567), (101, 11606), (113, 11699), (131, 11867), (135, 11912), (146, 12008), (161, 12083), (165, 12113), (172, 12200), (174, 12212), (181, 12281), (182, 12317), (186, 12347), (190, 12383), (197, 12431), (199, 12443), (204, 12473), (209, 12530), (210, 12539), (212, 12584), (213, 12587), (215, 12632), (217, 12641), (225, 12725), (226, 12734), (228, 12746), (231, 12767), (235, 12806), (236, 12818), (246, 12893), (250, 12917), (263, 13025), (266, 13064), (281, 13154), (283, 13169), (297, 13271), (300, 13301), (307, 13352), (309, 13373), (315, 13421), (316, 13424), (333, 13508), (334, 13511), (342, 13589), (353, 13664), (354, 13673), (359, 13688), (380, 13808), (384, 13847), (389, 13865), (398, 13964), (404, 14057), (409, 14171), (410, 14189), (414, 14228), (417, 14270), (422, 14333), (423, 14345), (426, 14381), (429, 14423), (432, 14444), (440, 14540), (449, 14594), (472, 14747),