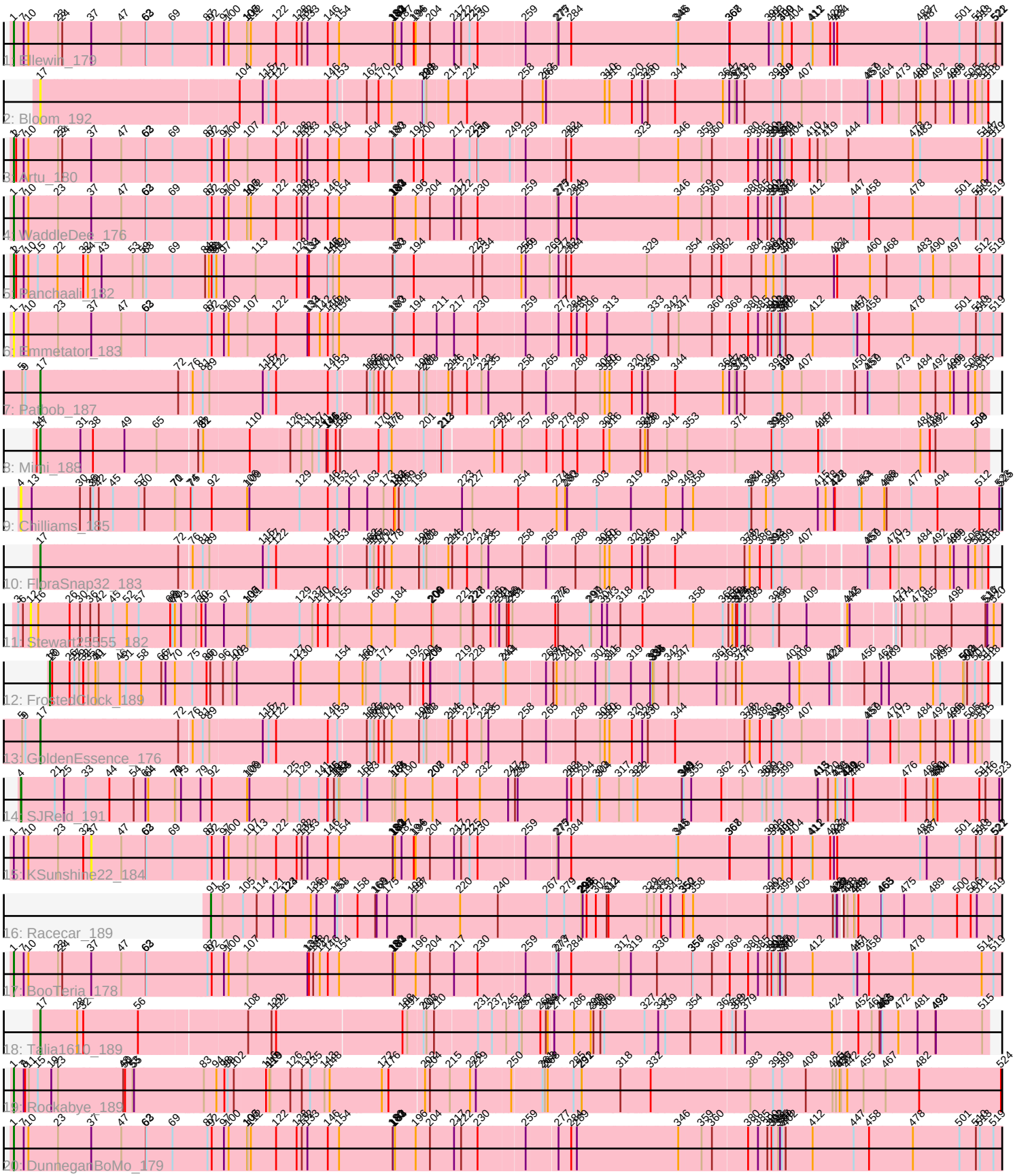
Zoomed Pham 348061



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 348061 Report

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

Pham number 348061 has 20 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Ellewin_179
• Track 2 : Bloom_192
• Track 3 : Artu_180
• Track 4 : WaddleDee_176
• Track 5 : Panchaali_182
• Track 6 : Emmetator_183
• Track 7 : Patbob_187
• Track 8 : Mimi_188
• Track 9 : Chilliams_185
• Track 10 : FloraSnap32_183
• Track 11 : Stewart25555_182
• Track 12 : FrostedClock_189
• Track 13 : GoldenEssence_176
• Track 14 : SJReid_191
• Track 15 : KSunshine22_184
• Track 16 : Racecar_189
• Track 17 : BooTeria_178
• Track 18 : Talia1610_189
• Track 19 : Rockabye_189
• Track 20 : DunneganBoMo_179

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

The start number called the most often in the published annotations is 1, it was called in 7 of the 15 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Artu_180, BooTeria_178, DunneganBoMo_179, Ellewin_179, Emmetator_183, Panchaali_182, Rockabye_189, WaddleDee_176,

Genes that have the "Most Annotated" start but do not call it:
• KSunshine22_184,

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

• Bloom_192, Chilliams_185, FloraSnap32_183, FrostedClock_189, GoldenEssence_176, Mimi_188, Patbob_187, Racecar_189, SJReid_191, Stewart25555_182, Talia1610_189,

Summary by start number:

Start 1:
• Found in 9 of 20 (45.0%) of genes in pham
• Manual Annotations of this start: 7 of 15
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Artu_180 (FC), BooTeria_178 (FC), DunneganBoMo_179 (FC), Ellewin_179 (FC), Emmetator_183 (FC), Panchaali_182 (FC), Rockabye_189 (FC), WaddleDee_176 (FC),

Start 4:
• Found in 2 of 20 (10.0%) of genes in pham
• Manual Annotations of this start: 1 of 15
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chilliams_185 (FC), SJReid_191 (FC),

Start 12:
• Found in 1 of 20 (5.0%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Stewart25555_182 (FC),

Start 17:
• Found in 6 of 20 (30.0%) of genes in pham
• Manual Annotations of this start: 5 of 15
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bloom_192 (FC), FloraSnap32_183 (FC), GoldenEssence_176 (FC), Mimi_188 (FC), Patbob_187 (FC), Talia1610_189 (FC),

Start 18:
• Found in 1 of 20 (5.0%) of genes in pham
• Manual Annotations of this start: 1 of 15
• Called 100.0% of time when present
• Phage (with cluster) where this start called: FrostedClock_189 (FC),

Start 37:
• Found in 7 of 20 (35.0%) of genes in pham
• No Manual Annotations of this start.
• Called 14.3% of time when present
• Phage (with cluster) where this start called: KSunshine22_184 (FC),

Start 91:
• Found in 1 of 20 (5.0%) of genes in pham
• Manual Annotations of this start: 1 of 15
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Racecar_189 (FC),

Summary by clusters:

There is one cluster represented in this pham: FC

Info for manual annotations of cluster FC:
•Start number 1 was manually annotated 7 times for cluster FC.
•Start number 4 was manually annotated 1 time for cluster FC.
•Start number 17 was manually annotated 5 times for cluster FC.
•Start number 18 was manually annotated 1 time for cluster FC.
•Start number 91 was manually annotated 1 time for cluster FC.

Gene Information:

Gene: Artu_180 Start: 126525, Stop: 134876, Start Num: 1
Candidate Starts for Artu_180:
(Start: 1 @126525 has 7 MA's), (2, 126540), (7, 126588), (10, 126618), (23, 126798), (24, 126825), (37, 127008), (47, 127197), (62, 127347), (63, 127350), (69, 127518), (87, 127734), (92, 127761), (97, 127839), (100, 127869), (107, 127983), (122, 128157), (128, 128286), (132, 128319), (133, 128355), (146, 128484), (154, 128556), (164, 128730), (180, 128883), (183, 128895), (194, 129015), (200, 129075), (217, 129243), (225, 129339), (230, 129381), (231, 129384), (249, 129561), (259, 129645), (282, 129858), (284, 129891), (323, 130293), (346, 130506), (359, 130632), (360, 130692), (380, 130881), (385, 130944), (390, 131004), (392, 131028), (393, 131037), (397, 131082), (399, 131094), (401, 131112), (404, 131157), (410, 131271), (414, 131322), (419, 131376), (444, 131514), (478, 131916), (483, 131961), (514, 132342), (517, 132378), (519, 132417), (527, 132501), (528, 132504), (531, 132591), (533, 132630), (535, 132666), (538, 132711), (540, 132750), (542, 132771), (544, 132903), (546, 132924), (548, 132990), (549, 133182), (550, 133224), (551, 133236), (557, 133476), (571, 133671), (572, 133683), (577, 133755), (587, 133953), (590, 133989), (591, 134007), (598, 134106), (601, 134214), (603, 134346), (604, 134355), (608, 134436), (611, 134532), (612, 134568), (613, 134718), (614, 134724), (617, 134751), (618, 134781),

Gene: Bloom_192 Start: 125632, Stop: 131058, Start Num: 17
Candidate Starts for Bloom_192:
(Start: 17 @125632 has 5 MA's), (104, 126790), (115, 126925), (117, 126961), (122, 127006), (146, 127291), (153, 127351), (162, 127519), (170, 127594), (178, 127678), (199, 127861), (201, 127867), (203, 127885), (214, 127993), (224, 128107), (258, 128413), (262, 128530), (265, 128551), (310, 128872), (316, 128896), (320, 129028), (325, 129091), (330, 129121), (344, 129274), (364, 129565), (367, 129592), (371, 129616), (373, 129628), (378, 129676), (393, 129847), (398, 129901), (399, 129904), (407, 130027), (457, 130336), (459, 130348), (464, 130426), (473, 130531), (480, 130618), (484, 130645), (492, 130735), (496, 130819), (499, 130843), (505, 130930), (508, 130972), (515, 131014), (518, 131053),

Gene: BooTeria_178 Start: 126052, Stop: 134382, Start Num: 1
Candidate Starts for BooTeria_178:
(Start: 1 @126052 has 7 MA's), (7, 126115), (10, 126145), (23, 126325), (24, 126352), (37, 126535), (47, 126724), (62, 126874), (63, 126877), (87, 127261), (92, 127288), (97, 127366), (100, 127396), (107, 127510), (133, 127882), (134, 127891), (138, 127918), (142, 127960), (146, 128011), (154, 128083), (180, 128410), (181, 128416), (183, 128422), (184, 128425), (196, 128554), (204, 128641), (217, 128776), (230, 128914), (259, 129178), (273, 129334), (277, 129349), (284, 129424), (317, 129715), (319, 129781), (336, 129925), (356, 130108), (357, 130111), (360, 130222), (368, 130309), (380, 130411), (385, 130474), (390, 130534), (392, 130558), (393, 130567), (395, 130600), (397, 130612), (399, 130624), (402, 130648), (412, 130810), (447, 131056), (451, 131077), (458, 131149), (478, 131422), (514, 131848), (519, 131923), (527, 132007), (528, 132010), (531, 132097), (533,

132136), (540, 132256), (542, 132277), (544, 132409), (546, 132430), (548, 132496), (549, 132688), (550, 132730), (551, 132742), (557, 132982), (562, 133051), (571, 133177), (577, 133261), (587, 133459), (590, 133495), (591, 133513), (598, 133612), (600, 133717), (601, 133720), (603, 133852), (604, 133861), (606, 133933), (608, 133942), (611, 134038), (612, 134074), (613, 134224), (614, 134230), (617, 134257), (618, 134287),

Gene: Chilliams_185 Start: 118889, Stop: 125611, Start Num: 4
Candidate Starts for Chilliams_185:
(Start: 4 @118889 has 1 MA's), (13, 118955), (30, 119246), (36, 119312), (39, 119330), (42, 119366), (45, 119450), (57, 119609), (60, 119642), (70, 119825), (71, 119828), (74, 119918), (75, 119927), (92, 120047), (106, 120269), (109, 120284), (129, 120581), (146, 120746), (153, 120803), (157, 120878), (163, 120983), (173, 121079), (182, 121136), (184, 121142), (186, 121166), (189, 121202), (195, 121268), (223, 121562), (227, 121628), (254, 121910), (274, 122153), (280, 122207), (283, 122219), (303, 122399), (319, 122597), (340, 122792), (349, 122891), (358, 122942), (381, 123245), (384, 123257), (388, 123350), (393, 123392), (415, 123656), (418, 123692), (427, 123734), (428, 123740), (453, 123866), (454, 123881), (466, 124019), (468, 124034), (477, 124163), (494, 124307), (512, 124544), (523, 124667), (525, 124676), (529, 124721), (530, 124754), (539, 124931), (545, 125045), (547, 125051), (556, 125168), (561, 125210), (574, 125432), (575, 125435), (581, 125564),

Gene: DunneganBoMo_179 Start: 125234, Stop: 133039, Start Num: 1
Candidate Starts for DunneganBoMo_179:
(Start: 1 @125234 has 7 MA's), (7, 125297), (10, 125327), (23, 125507), (37, 125717), (47, 125906), (62, 126056), (63, 126059), (69, 126227), (87, 126443), (92, 126470), (97, 126548), (100, 126578), (106, 126689), (107, 126692), (112, 126713), (122, 126866), (128, 126995), (132, 127028), (133, 127064), (146, 127193), (154, 127265), (180, 127592), (181, 127598), (183, 127604), (184, 127607), (196, 127736), (204, 127823), (217, 127958), (222, 128003), (230, 128096), (259, 128360), (277, 128531), (284, 128606), (289, 128642), (346, 129221), (359, 129347), (360, 129407), (380, 129596), (385, 129659), (390, 129719), (392, 129743), (393, 129752), (395, 129785), (397, 129797), (399, 129809), (402, 129833), (412, 129995), (447, 130241), (458, 130334), (478, 130607), (501, 130898), (510, 130997), (513, 131021), (519, 131108), (527, 131192), (528, 131195), (531, 131282), (533, 131321), (540, 131441), (541, 131456), (542, 131462), (557, 131639), (562, 131708), (571, 131834), (577, 131918), (583, 132059), (587, 132116), (591, 132170), (598, 132269), (600, 132374), (601, 132377), (603, 132509), (604, 132518), (606, 132590), (608, 132599), (611, 132695), (612, 132731), (613, 132881), (614, 132887), (617, 132914), (618, 132944),

Gene: Ellewin_179 Start: 125325, Stop: 133118, Start Num: 1
Candidate Starts for Ellewin_179:
(Start: 1 @125325 has 7 MA's), (7, 125388), (10, 125418), (23, 125598), (24, 125625), (37, 125808), (47, 125997), (62, 126147), (63, 126150), (69, 126318), (87, 126534), (92, 126561), (97, 126639), (100, 126669), (106, 126780), (107, 126783), (112, 126804), (122, 126957), (128, 127086), (132, 127119), (133, 127155), (146, 127284), (154, 127356), (180, 127683), (181, 127689), (183, 127695), (184, 127698), (187, 127740), (194, 127815), (196, 127827), (204, 127914), (217, 128049), (222, 128094), (225, 128145), (230, 128187), (259, 128451), (275, 128613), (277, 128622), (284, 128697), (345, 129303), (346, 129312), (367, 129579), (368, 129582), (391, 129807), (393, 129831), (399, 129888), (400, 129891), (404, 129951), (411, 130068), (412, 130074), (422, 130173), (427, 130197), (434, 130218), (483, 130731), (487, 130770), (501, 130977), (510, 131076), (513, 131100), (521, 131196), (522, 131202), (527, 131271), (531, 131361), (533, 131400), (534, 131403), (540, 131520), (541, 131535), (542, 131541), (557, 131718), (562, 131787), (569, 131895), (571, 131913), (577, 131997), (579, 132018), (585, 132153), (586, 132165), (587, 132195), (591, 132249), (594, 132276), (597, 132324), (600, 132453), (601, 132456), (605, 132624), (608, 132678), (611, 132774), (612, 132810), (614, 132966),

Gene: Emmetator_183 Start: 125449, Stop: 133245, Start Num: 1

Candidate Starts for Emmetator_183:
(Start: 1 @125449 has 7 MA's), (7, 125512), (10, 125542), (23, 125722), (37, 125932), (47, 126121), (62, 126271), (63, 126274), (87, 126658), (92, 126685), (97, 126763), (100, 126793), (107, 126907), (122, 127081), (133, 127279), (134, 127288), (142, 127357), (146, 127408), (149, 127441), (154, 127480), (180, 127807), (183, 127819), (194, 127939), (211, 128071), (217, 128167), (230, 128308), (259, 128572), (277, 128743), (284, 128818), (289, 128854), (296, 128911), (313, 129037), (333, 129289), (342, 129385), (347, 129430), (360, 129613), (368, 129700), (380, 129802), (385, 129865), (390, 129925), (392, 129949), (393, 129958), (395, 129991), (397, 130003), (399, 130015), (402, 130039), (412, 130201), (447, 130447), (451, 130468), (458, 130540), (478, 130813), (501, 131104), (510, 131203), (513, 131227), (519, 131314), (527, 131398), (528, 131401), (531, 131488), (533, 131527), (540, 131647), (541, 131662), (542, 131668), (557, 131845), (562, 131914), (571, 132040), (577, 132124), (583, 132265), (587, 132322), (591, 132376), (598, 132475), (600, 132580), (601, 132583), (603, 132715), (604, 132724), (606, 132796), (608, 132805), (611, 132901), (612, 132937), (613, 133087), (614, 133093), (617, 133120), (618, 133150),

Gene: FloraSnap32_183 Start: 123963, Stop: 129392, Start Num: 17
Candidate Starts for FloraSnap32_183:
(Start: 17 @123963 has 5 MA's), (72, 124800), (76, 124875), (81, 124926), (89, 124959), (115, 125256), (117, 125292), (122, 125337), (146, 125622), (153, 125682), (162, 125850), (165, 125871), (167, 125895), (170, 125925), (174, 125961), (178, 126009), (198, 126168), (201, 126198), (203, 126216), (214, 126324), (216, 126348), (224, 126438), (233, 126522), (235, 126564), (258, 126744), (265, 126882), (288, 127032), (305, 127173), (310, 127203), (316, 127227), (320, 127359), (325, 127422), (330, 127452), (344, 127605), (378, 128013), (382, 128040), (386, 128100), (392, 128172), (393, 128181), (399, 128238), (407, 128361), (457, 128670), (459, 128682), (470, 128811), (473, 128865), (484, 128979), (492, 129069), (496, 129153), (499, 129177), (505, 129264), (508, 129306), (515, 129348), (518, 129387),

Gene: FrostedClock_189 Start: 126293, Stop: 131746, Start Num: 18
Candidate Starts for FrostedClock_189:
(Start: 18 @126293 has 1 MA's), (20, 126308), (26, 126419), (27, 126449), (29, 126479), (32, 126506), (35, 126536), (40, 126581), (41, 126599), (46, 126722), (51, 126761), (58, 126854), (66, 126965), (67, 126992), (70, 127046), (75, 127148), (86, 127235), (90, 127259), (96, 127340), (101, 127400), (103, 127427), (127, 127778), (130, 127823), (154, 128048), (160, 128186), (161, 128207), (171, 128291), (192, 128468), (200, 128522), (204, 128558), (205, 128561), (219, 128708), (228, 128792), (243, 128948), (244, 128966), (265, 129179), (270, 129212), (274, 129233), (281, 129284), (287, 129335), (301, 129437), (311, 129497), (315, 129518), (319, 129641), (331, 129743), (333, 129755), (334, 129761), (335, 129767), (342, 129854), (347, 129905), (361, 130124), (365, 130181), (372, 130247), (376, 130286), (403, 130589), (406, 130652), (421, 130802), (423, 130817), (456, 130985), (463, 131087), (469, 131135), (490, 131402), (495, 131447), (502, 131591), (503, 131597), (504, 131612), (507, 131660), (515, 131699), (518, 131738),

Gene: GoldenEssence_176 Start: 119841, Stop: 125270, Start Num: 17
Candidate Starts for GoldenEssence_176:
(5, 119724), (9, 119745), (Start: 17 @119841 has 5 MA's), (72, 120678), (76, 120753), (81, 120804), (89, 120837), (115, 121134), (117, 121170), (122, 121215), (146, 121500), (153, 121560), (162, 121728), (165, 121749), (167, 121773), (170, 121803), (174, 121839), (178, 121887), (198, 122046), (201, 122076), (203, 122094), (214, 122202), (216, 122226), (224, 122316), (233, 122400), (235, 122442), (258, 122622), (265, 122760), (288, 122910), (305, 123051), (310, 123081), (316, 123105), (320, 123237), (325, 123300), (330, 123330), (344, 123483), (378, 123891), (382, 123918), (386, 123978), (392, 124050), (393, 124059), (399, 124116), (407, 124239), (457, 124548), (459, 124560), (470, 124689), (473, 124743), (484, 124857), (492, 124947), (496, 125031), (499, 125055), (505, 125142), (508, 125184), (515, 125226),

Gene: KSunshine22_184 Start: 124825, Stop: 132135, Start Num: 37
Candidate Starts for KSunshine22_184:
(Start: 1 @124342 has 7 MA's), (7, 124405), (10, 124435), (23, 124615), (32, 124774), (37, 124825), (47, 125014), (62, 125164), (63, 125167), (69, 125335), (87, 125551), (92, 125578), (97, 125656), (100, 125686), (107, 125800), (113, 125848), (122, 125974), (128, 126103), (132, 126136), (133, 126172), (146, 126301), (154, 126373), (180, 126700), (181, 126706), (183, 126712), (184, 126715), (187, 126757), (194, 126832), (196, 126844), (204, 126931), (217, 127066), (222, 127111), (225, 127162), (230, 127204), (259, 127468), (275, 127630), (277, 127639), (284, 127714), (345, 128320), (346, 128329), (367, 128596), (368, 128599), (391, 128824), (393, 128848), (399, 128905), (400, 128908), (404, 128968), (411, 129085), (412, 129091), (422, 129190), (427, 129214), (434, 129235), (483, 129748), (487, 129787), (501, 129994), (510, 130093), (513, 130117), (521, 130213), (522, 130219), (527, 130288), (531, 130378), (533, 130417), (540, 130537), (541, 130552), (542, 130558), (557, 130735), (562, 130804), (569, 130912), (571, 130930), (577, 131014), (585, 131170), (586, 131182), (587, 131212), (591, 131266), (594, 131293), (596, 131332), (597, 131341), (600, 131470), (601, 131473), (605, 131641), (608, 131695), (611, 131791), (612, 131827), (614, 131983),

Gene: Mimi_188 Start: 125347, Stop: 130668, Start Num: 17
Candidate Starts for Mimi_188:
(14, 125323), (Start: 17 @125347 has 5 MA's), (31, 125590), (38, 125662), (49, 125833), (65, 126016), (78, 126241), (81, 126262), (82, 126265), (110, 126493), (126, 126712), (131, 126778), (137, 126841), (141, 126880), (144, 126919), (145, 126925), (146, 126928), (152, 126979), (156, 127006), (170, 127231), (177, 127294), (178, 127312), (201, 127501), (212, 127597), (213, 127600), (238, 127873), (242, 127915), (257, 128017), (266, 128161), (278, 128239), (290, 128323), (308, 128473), (316, 128503), (324, 128686), (328, 128716), (330, 128728), (341, 128830), (353, 128956), (371, 129226), (392, 129445), (393, 129454), (399, 129511), (416, 129706), (417, 129724), (484, 130255), (488, 130309), (492, 130345), (508, 130582), (509, 130585),

Gene: Panchaali_182 Start: 126457, Stop: 134247, Start Num: 1
Candidate Starts for Panchaali_182:
(Start: 1 @126457 has 7 MA's), (2, 126472), (7, 126520), (10, 126550), (15, 126610), (22, 126727), (32, 126889), (34, 126919), (43, 127006), (53, 127198), (59, 127264), (63, 127282), (69, 127450), (84, 127645), (88, 127669), (92, 127687), (93, 127699), (94, 127717), (97, 127765), (113, 127957), (128, 128212), (133, 128281), (134, 128290), (146, 128410), (147, 128413), (149, 128443), (154, 128482), (180, 128809), (183, 128821), (194, 128944), (228, 129289), (234, 129340), (256, 129547), (259, 129574), (269, 129703), (277, 129745), (282, 129787), (284, 129820), (329, 130261), (354, 130495), (360, 130621), (362, 130672), (384, 130831), (388, 130924), (393, 130966), (394, 130969), (399, 131023), (402, 131047), (427, 131332), (434, 131353), (460, 131554), (468, 131656), (483, 131866), (490, 131944), (497, 132052), (512, 132229), (519, 132319), (527, 132403), (531, 132493), (532, 132526), (538, 132613), (543, 132676), (555, 132832), (558, 132853), (560, 132862), (564, 132958), (565, 132961), (567, 133000), (568, 133018), (571, 133042), (584, 133279), (587, 133324), (588, 133330), (589, 133333), (593, 133396), (597, 133456), (600, 133588), (601, 133591), (605, 133762), (607, 133810), (609, 133819), (610, 133852), (615, 134113), (616, 134116), (618, 134152),

Gene: Patbob_187 Start: 126457, Stop: 131883, Start Num: 17
Candidate Starts for Patbob_187:
(5, 126340), (9, 126361), (Start: 17 @126457 has 5 MA's), (72, 127294), (76, 127369), (81, 127420), (89, 127453), (115, 127750), (117, 127786), (122, 127831), (146, 128116), (153, 128176), (162, 128344), (165, 128365), (167, 128389), (170, 128419), (174, 128455), (178, 128503), (198, 128662), (201, 128692), (203, 128710), (214, 128818), (216, 128842), (224, 128932), (233, 129016), (235, 129058), (258, 129238), (265, 129376), (288, 129526), (305, 129667), (310, 129697), (316, 129721), (320, 129853), (325, 129916), (330, 129946), (344, 130099), (364, 130390), (367, 130417), (371, 130441), (373, 130453), (378, 130501), (393, 130672), (399, 130729), (400, 130732), (407, 130852), (450, 131101), (457, 131161), (459, 131173), (473, 131356), (484, 131470), (492, 131560), (496,

131644), (499, 131668), (505, 131755), (508, 131797), (515, 131839),

Gene: Racecar_189 Start: 126225, Stop: 130841, Start Num: 91
Candidate Starts for Racecar_189:
(Start: 91 @126225 has 1 MA's), (95, 126288), (105, 126408), (114, 126492), (121, 126594), (123, 126660), (124, 126663), (136, 126804), (139, 126837), (151, 126942), (153, 126957), (158, 127068), (168, 127179), (169, 127188), (175, 127248), (193, 127404), (197, 127431), (220, 127686), (240, 127905), (267, 128184), (279, 128286), (291, 128382), (292, 128385), (293, 128388), (295, 128391), (296, 128412), (302, 128463), (312, 128529), (314, 128541), (329, 128766), (335, 128811), (338, 128853), (343, 128901), (350, 128973), (352, 128979), (358, 129030), (390, 129450), (393, 129483), (399, 129537), (405, 129636), (426, 129840), (429, 129855), (432, 129864), (433, 129867), (438, 129885), (443, 129909), (448, 129951), (449, 129954), (452, 129975), (463, 130113), (465, 130119), (475, 130245), (489, 130410), (500, 130566), (506, 130653), (511, 130692), (519, 130797),

Gene: Rockabye_189 Start: 118145, Stop: 125200, Start Num: 1
Candidate Starts for Rockabye_189:
(Start: 1 @118145 has 7 MA's), (7, 118208), (8, 118217), (11, 118241), (15, 118298), (19, 118376), (23, 118418), (48, 118820), (50, 118832), (53, 118880), (55, 118889), (83, 119315), (94, 119390), (98, 119432), (99, 119453), (102, 119480), (116, 119660), (118, 119681), (119, 119684), (126, 119798), (132, 119870), (135, 119915), (143, 119993), (148, 120026), (172, 120308), (176, 120347), (202, 120557), (204, 120587), (215, 120707), (226, 120827), (229, 120863), (250, 121037), (261, 121202), (263, 121217), (268, 121235), (285, 121394), (291, 121442), (292, 121445), (318, 121688), (332, 121844), (383, 122381), (393, 122519), (399, 122573), (408, 122714), (425, 122852), (431, 122873), (436, 122897), (437, 122900), (442, 122933), (455, 123029), (467, 123164), (482, 123371), (524, 123872), (526, 123905), (531, 123998), (535, 124073), (559, 124364), (563, 124430), (566, 124481), (570, 124538), (571, 124550), (573, 124568), (578, 124646), (579, 124649), (580, 124712), (587, 124826), (592, 124886), (595, 124943), (599, 125036), (600, 125090), (602, 125183),

Gene: SJReid_191 Start: 116232, Stop: 122984, Start Num: 4
Candidate Starts for SJReid_191:
(Start: 4 @116232 has 1 MA's), (21, 116436), (25, 116493), (33, 116622), (44, 116766), (54, 116910), (61, 116985), (64, 117003), (70, 117162), (71, 117165), (73, 117201), (79, 117312), (92, 117381), (106, 117603), (109, 117618), (125, 117843), (129, 117915), (141, 118032), (145, 118077), (146, 118080), (150, 118116), (153, 118137), (154, 118149), (155, 118152), (159, 118281), (163, 118317), (179, 118458), (184, 118476), (185, 118479), (190, 118542), (207, 118704), (208, 118707), (218, 118860), (232, 119004), (247, 119166), (252, 119208), (253, 119223), (283, 119529), (284, 119556), (294, 119622), (303, 119706), (304, 119724), (317, 119844), (321, 119934), (322, 119961), (348, 120240), (349, 120246), (351, 120252), (355, 120297), (362, 120471), (377, 120576), (387, 120696), (389, 120723), (393, 120762), (399, 120816), (413, 121020), (415, 121026), (420, 121068), (430, 121116), (435, 121128), (439, 121161), (440, 121167), (441, 121170), (446, 121206), (476, 121503), (486, 121617), (490, 121653), (491, 121665), (494, 121680), (512, 121917), (516, 121956), (523, 122040), (529, 122094), (530, 122127), (536, 122253), (537, 122277), (545, 122418), (547, 122424), (552, 122445), (553, 122472), (554, 122505), (561, 122583), (576, 122823), (581, 122937), (582, 122940),

Gene: Stewart25555_182 Start: 125560, Stop: 131241, Start Num: 12
Candidate Starts for Stewart25555_182:
(3, 125482), (6, 125512), (12, 125560), (16, 125608), (26, 125794), (30, 125860), (36, 125926), (42, 125980), (45, 126064), (52, 126151), (57, 126223), (68, 126409), (69, 126424), (70, 126439), (73, 126478), (77, 126562), (80, 126595), (85, 126622), (97, 126739), (106, 126880), (107, 126883), (111, 126901), (129, 127195), (137, 127276), (140, 127309), (146, 127363), (155, 127435), (166, 127627), (184, 127759), (206, 127987), (208, 127993), (209, 127996), (221, 128170), (227, 128245), (228, 128251), (236, 128356), (239, 128386), (241, 128410), (246, 128458), (248, 128470), (251, 128494),

(272, 128749), (276, 128764), (297, 128944), (299, 128953), (307, 129022), (313, 129055), (318, 129136), (326, 129247), (358, 129535), (363, 129703), (366, 129724), (370, 129739), (372, 129760), (374, 129769), (375, 129781), (379, 129817), (383, 129850), (393, 129988), (396, 130024), (409, 130171), (442, 130342), (445, 130351), (471, 130570), (474, 130588), (479, 130648), (485, 130699), (498, 130843), (516, 131041), (517, 131053), (520, 131089),

Gene: Talia1610_189 Start: 125642, Stop: 131137, Start Num: 17
Candidate Starts for Talia1610_189:
(Start: 17 @125642 has 5 MA's), (28, 125864), (32, 125903), (56, 126242), (108, 126839), (120, 126980), (122, 127007), (188, 127748), (191, 127778), (201, 127868), (203, 127886), (210, 127928), (231, 128147), (237, 128222), (245, 128297), (255, 128363), (257, 128378), (260, 128483), (264, 128516), (268, 128528), (271, 128555), (286, 128660), (298, 128762), (300, 128777), (306, 128816), (309, 128840), (327, 129077), (337, 129158), (339, 129203), (354, 129356), (362, 129542), (369, 129587), (372, 129608), (379, 129665), (424, 130190), (452, 130331), (461, 130409), (462, 130457), (463, 130469), (465, 130475), (472, 130577), (481, 130685), (492, 130799), (493, 130802), (515, 131093),

Gene: WaddleDee_176 Start: 124507, Stop: 132312, Start Num: 1
Candidate Starts for WaddleDee_176:
(Start: 1 @124507 has 7 MA's), (7, 124570), (10, 124600), (23, 124780), (37, 124990), (47, 125179), (62, 125329), (63, 125332), (69, 125500), (87, 125716), (92, 125743), (97, 125821), (100, 125851), (106, 125962), (107, 125965), (112, 125986), (122, 126139), (128, 126268), (132, 126301), (133, 126337), (146, 126466), (154, 126538), (180, 126865), (181, 126871), (183, 126877), (184, 126880), (196, 127009), (204, 127096), (217, 127231), (222, 127276), (230, 127369), (259, 127633), (275, 127795), (277, 127804), (284, 127879), (289, 127915), (346, 128494), (359, 128620), (360, 128680), (380, 128869), (385, 128932), (390, 128992), (392, 129016), (393, 129025), (397, 129070), (399, 129082), (402, 129106), (412, 129268), (447, 129514), (458, 129607), (478, 129880), (501, 130171), (510, 130270), (513, 130294), (519, 130381), (527, 130465), (528, 130468), (531, 130555), (533, 130594), (540, 130714), (541, 130729), (542, 130735), (557, 130912), (562, 130981), (571, 131107), (577, 131191), (583, 131332), (587, 131389), (591, 131443), (598, 131542), (600, 131647), (601, 131650), (603, 131782), (604, 131791), (606, 131863), (608, 131872), (611, 131968), (612, 132004), (613, 132154), (614, 132160), (617, 132187), (618, 132217),