Pham 180528


1: Comrade_259 + 3
2: Kenrey_264
3: Comrade_254
4: Karp_258 + 1
5: Comrade_246 + 3
6: Forrest_257 + 1
7: Francob_261
8: Moab_252
9: Jada_250 + 1
10: Gilson_258 + 2
11: Gilson_263 + 1
12: Limpid_247 + 1
13: Stigma_256 + 1
14: Emma1919_264 + 3
15: Patelgo_254
16: MeganTheeKilla_253
17: SparkleGoddess_250
18: SeresaTree_255 + 1
19: Kenrey_269
20: Moab_260 + 1
21: Kenrey_258
22: Gilson_251 + 1
23: Beuffert_251
24: Blueeyedbeauty_253
25: Emma1919_252 + 1
26: Phredrick_264
27: TunaTartare_250
28: Sham_243
29: Circinus_242 + 1
30: Circinus_213 + 1
31: Wakanda_225 + 1
32: Muntaha_259
33: Wakanda_256

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 180528 Report

This analysis was run 11/02/24 on database version 579.

Pham number 180528 has 57 members, 1 are drafts.

Phages represented in each track:
- Track 1 : Comrade_259, Belfort_264, Stigma_261, SparkleGoddess_263
- Track 2 : Kenrey_264
- Track 3 : Comrade_254
- Track 4 : Karp_258, Belfort_259
- Track 5 : Comrade_246, Karp_250, Stigma_248, Belfort_251
- Track 6 : Forrest_257, Jada_258
- Track 7 : Francob_261
- Track 8 : Moab_252
- Track 9 : Jada_250, Forrest_250
- Track 10 : Gilson_258, Emma1919_259, MeganTheeKilla_260
- Track 11 : Gilson_263, Francob_266
- Track 12 : Limpid_247, Annadreamy_241
- Track 13 : Stigma_256, SparkleGoddess_258
- Track 14 : Emma1919_264, Phredrick_269, Forrest_262, Jada_263
- Track 15 : Patelgo_254
- Track 16 : MeganTheeKilla_253
- Track 17 : SparkleGoddess_250
- Track 18 : SeresaTree_255, Faust_251
- Track 19 : Kenrey_269
- Track 20 : Moab_260, Patelgo_263
- Track 21 : Kenrey_258
- Track 22 : Gilson_251, Francob_255
- Track 23 : Beuffert_251
- Track 24 : Blueeyedbeauty_253
- Track 25 : Emma1919_252, Phredrick_257
- Track 26 : Phredrick_264
- Track 27 : TunaTartare_250
- Track 28 : Sham_243
- Track 29 : Circinus_242, BillNye_243
- Track 30 : Circinus_213, BillNye_213
- Track 31 : Wakanda_225, Muntaha_229
- Track 32 : Muntaha_259
- Track 33 : Wakanda_256

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

The start number called the most often in the published annotations is 34, it was called in 17 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Belfort_251, BillNye_213, Circinus_213, Comrade_246, Emma1919_252, Forrest_250, Francob_255, Gilson_251, Jada_250, Karp_250, Kenrey_258, MeganTheeKilla_253, Moab_252, Muntaha_229, Phredrick_257, Stigma_248, Wakanda_225,

Genes that have the "Most Annotated" start but do not call it:
• Patelgo_254, SparkleGoddess_250,

Genes that do not have the "Most Annotated" start:
• Annadreamy_241, Belfort_259, Belfort_264, Beuffert_251, BillNye_243, Blueeyedbeauty_253, Circinus_242, Comrade_254, Comrade_259, Emma1919_259, Emma1919_264, Faust_251, Forrest_257, Forrest_262, Francob_261, Francob_266, Gilson_258, Gilson_263, Jada_258, Jada_263, Karp_258, Kenrey_264, Kenrey_269, Limpid_247, MeganTheeKilla_260, Moab_260, Muntaha_259, Patelgo_263, Phredrick_264, Phredrick_269, SeresaTree_255, Sham_243, SparkleGoddess_258, SparkleGoddess_263, Stigma_256, Stigma_261, TunaTartare_250, Wakanda_256,

Summary by start number:

Start 13:
• Found in 15 of 57 (26.3%) of genes in pham
• Manual Annotations of this start: 15 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Belfort_259 (BK1), Comrade_254 (BK1), Emma1919_259 (BK1), Forrest_257 (BK1), Francob_261 (BK1), Gilson_258 (BK1), Jada_258 (BK1), Karp_258 (BK1), Kenrey_264 (BK1), MeganTheeKilla_260 (BK1), Moab_260 (BK1), Patelgo_263 (BK1), Phredrick_264 (BK1), SparkleGoddess_258 (BK1), Stigma_256 (BK1),

Start 22:
• Found in 5 of 57 (8.8%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 20.0% of time when present
• Phage (with cluster) where this start called: SparkleGoddess_250 (BK1),

Start 23:
• Found in 11 of 57 (19.3%) of genes in pham
• Manual Annotations of this start: 11 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Belfort_264 (BK1), Comrade_259 (BK1), Emma1919_264 (BK1), Forrest_262 (BK1), Francob_266 (BK1), Gilson_263 (BK1), Jada_263 (BK1), Kenrey_269 (BK1), Phredrick_269 (BK1), SparkleGoddess_263 (BK1), Stigma_261 (BK1),

Start 25:
• Found in 2 of 57 (3.5%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 50.0% of time when present

• Phage (with cluster) where this start called: Patelgo_254 (BK1),

Start 31:
• Found in 4 of 57 (7.0%) of genes in pham
• Manual Annotations of this start: 4 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Annadreamy_241 (BK1), Beuffert_251 (BK1), Blueeyedbeauty_253 (BK1), Limpid_247 (BK1),

Start 34:
• Found in 19 of 57 (33.3%) of genes in pham
• Manual Annotations of this start: 17 of 56
• Called 89.5% of time when present
• Phage (with cluster) where this start called: Belfort_251 (BK1), BillNye_213 (BK2), Circinus_213 (BK2), Comrade_246 (BK1), Emma1919_252 (BK1), Forrest_250 (BK1), Francob_255 (BK1), Gilson_251 (BK1), Jada_250 (BK1), Karp_250 (BK1), Kenrey_258 (BK1), MeganTheeKilla_253 (BK1), Moab_252 (BK1), Muntaha_229 (BK2), Phredrick_257 (BK1), Stigma_248 (BK1), Wakanda_225 (BK2),

Start 35:
• Found in 8 of 57 (14.0%) of genes in pham
• Manual Annotations of this start: 7 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BillNye_243 (BK2), Circinus_242 (BK2), Faust_251 (BK1), Muntaha_259 (BK2), SeresaTree_255 (BK1), Sham_243 (BK1), TunaTartare_250 (BK1), Wakanda_256 (BK2),

Summary by clusters:

There are 2 clusters represented in this pham: BK1, BK2,

Info for manual annotations of cluster BK1:
•Start number 13 was manually annotated 15 times for cluster BK1.
•Start number 22 was manually annotated 1 time for cluster BK1.
•Start number 23 was manually annotated 11 times for cluster BK1.
•Start number 25 was manually annotated 1 time for cluster BK1.
•Start number 31 was manually annotated 4 times for cluster BK1.
•Start number 34 was manually annotated 13 times for cluster BK1.
•Start number 35 was manually annotated 3 times for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 34 was manually annotated 4 times for cluster BK2.
•Start number 35 was manually annotated 4 times for cluster BK2.

Gene Information:

Gene: Annadreamy_241 Start: 115119, Stop: 115625, Start Num: 31
Candidate Starts for Annadreamy_241:
(Start: 31 @115119 has 4 MA's), (48, 115254), (61, 115353), (76, 115422), (90, 115560), (96, 115605), (99, 115617),

Gene: Belfort_264 Start: 125997, Stop: 126557, Start Num: 23
Candidate Starts for Belfort_264:
(Start: 23 @125997 has 11 MA's), (44, 126117), (57, 126261), (64, 126291), (66, 126300), (75, 126345), (76, 126351), (82, 126420), (90, 126489), (91, 126504),

Gene: Belfort_259 Start: 123969, Stop: 124658, Start Num: 13
Candidate Starts for Belfort_259:
(Start: 13 @123969 has 15 MA's), (18, 124050), (33, 124098), (39, 124125), (45, 124170), (51, 124236), (63, 124329), (74, 124383), (77, 124401), (83, 124470), (90, 124533), (98, 124590),

Gene: Belfort_251 Start: 119236, Stop: 119739, Start Num: 34
Candidate Starts for Belfort_251:
(Start: 22 @119197 has 1 MA's), (Start: 34 @119236 has 17 MA's), (41, 119281), (50, 119371), (56, 119437), (76, 119530), (78, 119551), (90, 119674), (98, 119728),

Gene: Beuffert_251 Start: 119885, Stop: 120391, Start Num: 31
Candidate Starts for Beuffert_251:
(20, 119840), (24, 119861), (27, 119870), (29, 119873), (Start: 31 @119885 has 4 MA's), (47, 120008), (48, 120020), (49, 120023), (76, 120188), (99, 120383),

Gene: BillNye_213 Start: 110662, Stop: 111204, Start Num: 34
Candidate Starts for BillNye_213:
(Start: 34 @110662 has 17 MA's), (51, 110809), (72, 110956), (75, 110968), (76, 110974), (79, 111013), (89, 111097), (93, 111127),

Gene: BillNye_243 Start: 122668, Stop: 123147, Start Num: 35
Candidate Starts for BillNye_243:
(Start: 35 @122668 has 7 MA's), (52, 122794), (58, 122860), (67, 122908), (76, 122947), (88, 123064), (89, 123070), (98, 123136),

Gene: Blueeyedbeauty_253 Start: 119883, Stop: 120389, Start Num: 31
Candidate Starts for Blueeyedbeauty_253:
(24, 119859), (29, 119871), (Start: 31 @119883 has 4 MA's), (62, 120123), (69, 120153), (70, 120159), (76, 120186), (81, 120261), (99, 120381),

Gene: Circinus_242 Start: 122175, Stop: 122654, Start Num: 35
Candidate Starts for Circinus_242:
(Start: 35 @122175 has 7 MA's), (52, 122301), (58, 122367), (67, 122415), (76, 122454), (88, 122571), (89, 122577), (98, 122643),

Gene: Circinus_213 Start: 110252, Stop: 110794, Start Num: 34
Candidate Starts for Circinus_213:
(Start: 34 @110252 has 17 MA's), (51, 110399), (72, 110546), (75, 110558), (76, 110564), (79, 110603), (89, 110687), (93, 110717),

Gene: Comrade_259 Start: 126136, Stop: 126696, Start Num: 23
Candidate Starts for Comrade_259:
(Start: 23 @126136 has 11 MA's), (44, 126256), (57, 126400), (64, 126430), (66, 126439), (75, 126484), (76, 126490), (82, 126559), (90, 126628), (91, 126643),

Gene: Comrade_254 Start: 124111, Stop: 124800, Start Num: 13
Candidate Starts for Comrade_254:

(Start: 13 @124111 has 15 MA's), (18, 124192), (33, 124240), (39, 124267), (45, 124312), (63, 124471), (74, 124525), (77, 124543), (83, 124612), (90, 124675), (98, 124732),

Gene: Comrade_246 Start: 119378, Stop: 119881, Start Num: 34
Candidate Starts for Comrade_246:
(Start: 22 @119339 has 1 MA's), (Start: 34 @119378 has 17 MA's), (41, 119423), (50, 119513), (56, 119579), (76, 119672), (78, 119693), (90, 119816), (98, 119870),

Gene: Emma1919_259 Start: 122901, Stop: 123620, Start Num: 13
Candidate Starts for Emma1919_259:
(1, 122649), (2, 122688), (3, 122742), (Start: 13 @122901 has 15 MA's), (15, 122952), (17, 122979), (28, 123033), (37, 123093), (39, 123111), (40, 123114), (41, 123117), (43, 123141), (45, 123156), (59, 123297), (77, 123387), (81, 123474), (86, 123519), (88, 123531), (90, 123546), (98, 123603), (100, 123609),

Gene: Emma1919_264 Start: 125172, Stop: 125729, Start Num: 23
Candidate Starts for Emma1919_264:
(Start: 23 @125172 has 11 MA's), (32, 125199), (51, 125364), (53, 125376), (65, 125469), (67, 125484), (76, 125523), (77, 125532), (90, 125661), (92, 125679),

Gene: Emma1919_252 Start: 118200, Stop: 118700, Start Num: 34
Candidate Starts for Emma1919_252:
(Start: 34 @118200 has 17 MA's), (42, 118254), (52, 118347), (70, 118464), (76, 118491), (78, 118512), (90, 118635), (95, 118677),

Gene: Faust_251 Start: 120587, Stop: 121060, Start Num: 35
Candidate Starts for Faust_251:
(Start: 35 @120587 has 7 MA's), (40, 120614), (52, 120713), (60, 120782), (68, 120821), (76, 120860), (85, 120965), (87, 120974), (95, 121037), (96, 121040),

Gene: Forrest_257 Start: 123360, Stop: 124052, Start Num: 13
Candidate Starts for Forrest_257:
(5, 123285), (Start: 13 @123360 has 15 MA's), (16, 123414), (28, 123492), (37, 123552), (41, 123576), (45, 123615), (46, 123618), (51, 123681), (54, 123696), (77, 123846), (79, 123879), (88, 123966), (90, 123981), (91, 123996), (98, 124038),

Gene: Forrest_250 Start: 118548, Stop: 119048, Start Num: 34
Candidate Starts for Forrest_250:
(19, 118485), (Start: 34 @118548 has 17 MA's), (42, 118602), (52, 118695), (70, 118812), (76, 118839), (78, 118860), (84, 118929), (90, 118983), (96, 119028),

Gene: Forrest_262 Start: 125609, Stop: 126166, Start Num: 23
Candidate Starts for Forrest_262:
(Start: 23 @125609 has 11 MA's), (32, 125636), (51, 125801), (53, 125813), (65, 125906), (67, 125921), (76, 125960), (77, 125969), (90, 126098), (92, 126116),

Gene: Francob_261 Start: 123723, Stop: 124442, Start Num: 13
Candidate Starts for Francob_261:
(4, 123648), (Start: 13 @123723 has 15 MA's), (15, 123774), (17, 123801), (28, 123855), (37, 123915), (39, 123933), (40, 123936), (41, 123939), (43, 123963), (45, 123978), (59, 124119), (77, 124209), (81, 124296), (86, 124341), (88, 124353), (90, 124368), (98, 124425), (100, 124431),

Gene: Francob_266 Start: 125994, Stop: 126551, Start Num: 23

Candidate Starts for Francob_266:
(Start: 23 @125994 has 11 MA's), (32, 126021), (36, 126054), (51, 126186), (53, 126198), (65, 126291), (67, 126306), (76, 126345), (77, 126354), (90, 126483), (92, 126501),

Gene: Francob_255 Start: 119293, Stop: 119793, Start Num: 34
Candidate Starts for Francob_255:
(Start: 34 @119293 has 17 MA's), (42, 119347), (51, 119437), (52, 119440), (70, 119557), (76, 119584), (78, 119605), (90, 119728), (95, 119770),

Gene: Gilson_258 Start: 123260, Stop: 123979, Start Num: 13
Candidate Starts for Gilson_258:
(1, 123008), (2, 123047), (3, 123101), (Start: 13 @123260 has 15 MA's), (15, 123311), (17, 123338), (28, 123392), (37, 123452), (39, 123470), (40, 123473), (41, 123476), (43, 123500), (45, 123515), (59, 123656), (77, 123746), (81, 123833), (86, 123878), (88, 123890), (90, 123905), (98, 123962), (100, 123968),

Gene: Gilson_263 Start: 125531, Stop: 126088, Start Num: 23
Candidate Starts for Gilson_263:
(Start: 23 @125531 has 11 MA's), (32, 125558), (36, 125591), (51, 125723), (53, 125735), (65, 125828), (67, 125843), (76, 125882), (77, 125891), (90, 126020), (92, 126038),

Gene: Gilson_251 Start: 118558, Stop: 119058, Start Num: 34
Candidate Starts for Gilson_251:
(Start: 34 @118558 has 17 MA's), (42, 118612), (51, 118702), (52, 118705), (70, 118822), (76, 118849), (78, 118870), (90, 118993), (95, 119035),

Gene: Jada_250 Start: 117788, Stop: 118288, Start Num: 34
Candidate Starts for Jada_250:
(19, 117725), (Start: 34 @117788 has 17 MA's), (42, 117842), (52, 117935), (70, 118052), (76, 118079), (78, 118100), (84, 118169), (90, 118223), (96, 118268),

Gene: Jada_258 Start: 122600, Stop: 123292, Start Num: 13
Candidate Starts for Jada_258:
(5, 122525), (Start: 13 @122600 has 15 MA's), (16, 122654), (28, 122732), (37, 122792), (41, 122816), (45, 122855), (46, 122858), (51, 122921), (54, 122936), (77, 123086), (79, 123119), (88, 123206), (90, 123221), (91, 123236), (98, 123278),

Gene: Jada_263 Start: 124849, Stop: 125406, Start Num: 23
Candidate Starts for Jada_263:
(Start: 23 @124849 has 11 MA's), (32, 124876), (51, 125041), (53, 125053), (65, 125146), (67, 125161), (76, 125200), (77, 125209), (90, 125338), (92, 125356),

Gene: Karp_258 Start: 125566, Stop: 126255, Start Num: 13
Candidate Starts for Karp_258:
(Start: 13 @125566 has 15 MA's), (18, 125647), (33, 125695), (39, 125722), (45, 125767), (51, 125833), (63, 125926), (74, 125980), (77, 125998), (83, 126067), (90, 126130), (98, 126187),

Gene: Karp_250 Start: 120834, Stop: 121337, Start Num: 34
Candidate Starts for Karp_250:
(Start: 22 @120795 has 1 MA's), (Start: 34 @120834 has 17 MA's), (41, 120879), (50, 120969), (56, 121035), (76, 121128), (78, 121149), (90, 121272), (98, 121326),

Gene: Kenrey_264 Start: 124500, Stop: 125192, Start Num: 13

Candidate Starts for Kenrey_264:
(Start: 13 @124500 has 15 MA's), (15, 124551), (28, 124632), (37, 124692), (38, 124707), (45, 124755), (46, 124758), (54, 124836), (77, 124986), (79, 125019), (88, 125106), (90, 125121), (91, 125136), (97, 125172), (98, 125178),

Gene: Kenrey_269 Start: 126743, Stop: 127300, Start Num: 23
Candidate Starts for Kenrey_269:
(Start: 23 @126743 has 11 MA's), (32, 126770), (51, 126935), (53, 126947), (65, 127040), (67, 127055), (76, 127094), (77, 127103), (90, 127232), (91, 127247), (92, 127250),

Gene: Kenrey_258 Start: 119950, Stop: 120450, Start Num: 34
Candidate Starts for Kenrey_258:
(Start: 34 @119950 has 17 MA's), (42, 120004), (52, 120097), (70, 120214), (76, 120241), (78, 120262), (84, 120331), (90, 120385),

Gene: Limpid_247 Start: 120432, Stop: 120938, Start Num: 31
Candidate Starts for Limpid_247:
(Start: 31 @120432 has 4 MA's), (48, 120567), (61, 120666), (76, 120735), (90, 120873), (96, 120918), (99, 120930),

Gene: MeganTheeKilla_253 Start: 118359, Stop: 118859, Start Num: 34
Candidate Starts for MeganTheeKilla_253:
(Start: 34 @118359 has 17 MA's), (42, 118413), (52, 118506), (70, 118623), (76, 118650), (78, 118671), (90, 118794), (95, 118836),

Gene: MeganTheeKilla_260 Start: 123071, Stop: 123790, Start Num: 13
Candidate Starts for MeganTheeKilla_260:
(1, 122819), (2, 122858), (3, 122912), (Start: 13 @123071 has 15 MA's), (15, 123122), (17, 123149), (28, 123203), (37, 123263), (39, 123281), (40, 123284), (41, 123287), (43, 123311), (45, 123326), (59, 123467), (77, 123557), (81, 123644), (86, 123689), (88, 123701), (90, 123716), (98, 123773), (100, 123779),

Gene: Moab_252 Start: 120522, Stop: 121022, Start Num: 34
Candidate Starts for Moab_252:
(21, 120471), (Start: 25 @120489 has 1 MA's), (Start: 34 @120522 has 17 MA's), (49, 120645), (74, 120804), (76, 120813), (78, 120834),

Gene: Moab_260 Start: 125006, Stop: 125689, Start Num: 13
Candidate Starts for Moab_260:
(12, 125000), (Start: 13 @125006 has 15 MA's), (15, 125051), (16, 125054), (26, 125129), (28, 125132), (41, 125216), (45, 125255), (54, 125336), (59, 125396), (74, 125468), (77, 125486), (79, 125519), (88, 125603), (90, 125618), (98, 125675),

Gene: Muntaha_259 Start: 123170, Stop: 123649, Start Num: 35
Candidate Starts for Muntaha_259:
(14, 123047), (Start: 35 @123170 has 7 MA's), (52, 123296), (58, 123362), (67, 123410), (76, 123449), (77, 123458), (89, 123572), (98, 123638),

Gene: Muntaha_229 Start: 110982, Stop: 111503, Start Num: 34
Candidate Starts for Muntaha_229:
(Start: 34 @110982 has 17 MA's), (51, 111123), (56, 111183), (71, 111252), (73, 111273), (76, 111288), (80, 111351),

Gene: Patelgo_254 Start: 121436, Stop: 121969, Start Num: 25
Candidate Starts for Patelgo_254:
(21, 121418), (Start: 25 @121436 has 1 MA's), (Start: 34 @121469 has 17 MA's), (49, 121592), (74, 121751), (76, 121760), (78, 121781),

Gene: Patelgo_263 Start: 125938, Stop: 126621, Start Num: 13
Candidate Starts for Patelgo_263:
(12, 125932), (Start: 13 @125938 has 15 MA's), (15, 125983), (16, 125986), (26, 126061), (28, 126064), (41, 126148), (45, 126187), (54, 126268), (59, 126328), (74, 126400), (77, 126418), (79, 126451), (88, 126535), (90, 126550), (98, 126607),

Gene: Phredrick_269 Start: 125970, Stop: 126527, Start Num: 23
Candidate Starts for Phredrick_269:
(Start: 23 @125970 has 11 MA's), (32, 125997), (51, 126162), (53, 126174), (65, 126267), (67, 126282), (76, 126321), (77, 126330), (90, 126459), (92, 126477),

Gene: Phredrick_264 Start: 123744, Stop: 124418, Start Num: 13
Candidate Starts for Phredrick_264:
(5, 123669), (Start: 13 @123744 has 15 MA's), (17, 123822), (30, 123873), (51, 124041), (53, 124053), (59, 124116), (77, 124206), (79, 124239), (86, 124317), (88, 124329), (90, 124344), (92, 124362), (97, 124395), (98, 124401), (100, 124407),

Gene: Phredrick_257 Start: 119042, Stop: 119542, Start Num: 34
Candidate Starts for Phredrick_257:
(Start: 34 @119042 has 17 MA's), (42, 119096), (52, 119189), (70, 119306), (76, 119333), (78, 119354), (90, 119477), (95, 119519),

Gene: SeresaTree_255 Start: 120812, Stop: 121285, Start Num: 35
Candidate Starts for SeresaTree_255:
(Start: 35 @120812 has 7 MA's), (40, 120839), (52, 120938), (60, 121007), (68, 121046), (76, 121085), (85, 121190), (87, 121199), (95, 121262), (96, 121265),

Gene: Sham_243 Start: 121073, Stop: 121546, Start Num: 35
Candidate Starts for Sham_243:
(Start: 35 @121073 has 7 MA's), (54, 121208), (55, 121214), (56, 121247), (66, 121295), (74, 121337), (76, 121346), (85, 121451), (87, 121460), (89, 121472), (91, 121496), (94, 121505),

Gene: SparkleGoddess_258 Start: 124835, Stop: 125527, Start Num: 13
Candidate Starts for SparkleGoddess_258:
(8, 124802), (12, 124829), (Start: 13 @124835 has 15 MA's), (18, 124919), (33, 124967), (39, 124994), (45, 125039), (63, 125198), (74, 125252), (77, 125270), (83, 125339), (90, 125402), (98, 125459),

Gene: SparkleGoddess_250 Start: 120070, Stop: 120612, Start Num: 22
Candidate Starts for SparkleGoddess_250:
(Start: 22 @120070 has 1 MA's), (Start: 34 @120109 has 17 MA's), (41, 120154), (50, 120244), (56, 120310), (76, 120403), (78, 120424), (90, 120547), (98, 120601),

Gene: SparkleGoddess_263 Start: 126863, Stop: 127423, Start Num: 23
Candidate Starts for SparkleGoddess_263:
(Start: 23 @126863 has 11 MA's), (44, 126983), (57, 127127), (64, 127157), (66, 127166), (75, 127211), (76, 127217), (82, 127286), (90, 127355), (91, 127370),

Gene: Stigma_261 Start: 126576, Stop: 127136, Start Num: 23
Candidate Starts for Stigma_261:
(Start: 23 @126576 has 11 MA's), (44, 126696), (57, 126840), (64, 126870), (66, 126879), (75, 126924), (76, 126930), (82, 126999), (90, 127068), (91, 127083),

Gene: Stigma_256 Start: 124548, Stop: 125240, Start Num: 13
Candidate Starts for Stigma_256:
(8, 124515), (12, 124542), (Start: 13 @124548 has 15 MA's), (18, 124632), (33, 124680), (39, 124707), (45, 124752), (63, 124911), (74, 124965), (77, 124983), (83, 125052), (90, 125115), (98, 125172),

Gene: Stigma_248 Start: 119821, Stop: 120324, Start Num: 34
Candidate Starts for Stigma_248:
(Start: 22 @119782 has 1 MA's), (Start: 34 @119821 has 17 MA's), (41, 119866), (50, 119956), (56, 120022), (76, 120115), (78, 120136), (90, 120259), (98, 120313),

Gene: TunaTartare_250 Start: 122541, Stop: 123014, Start Num: 35
Candidate Starts for TunaTartare_250:
(Start: 35 @122541 has 7 MA's), (56, 122715), (57, 122727), (60, 122736), (76, 122814), (85, 122919), (89, 122940), (94, 122973),

Gene: Wakanda_225 Start: 109969, Stop: 110490, Start Num: 34
Candidate Starts for Wakanda_225:
(Start: 34 @109969 has 17 MA's), (51, 110110), (56, 110170), (71, 110239), (73, 110260), (76, 110275), (80, 110338),

Gene: Wakanda_256 Start: 122334, Stop: 122813, Start Num: 35
Candidate Starts for Wakanda_256:
(6, 122118), (7, 122124), (9, 122142), (10, 122148), (11, 122154), (Start: 35 @122334 has 7 MA's), (52, 122460), (58, 122526), (67, 122574), (76, 122613), (77, 122622), (89, 122736), (98, 122802),