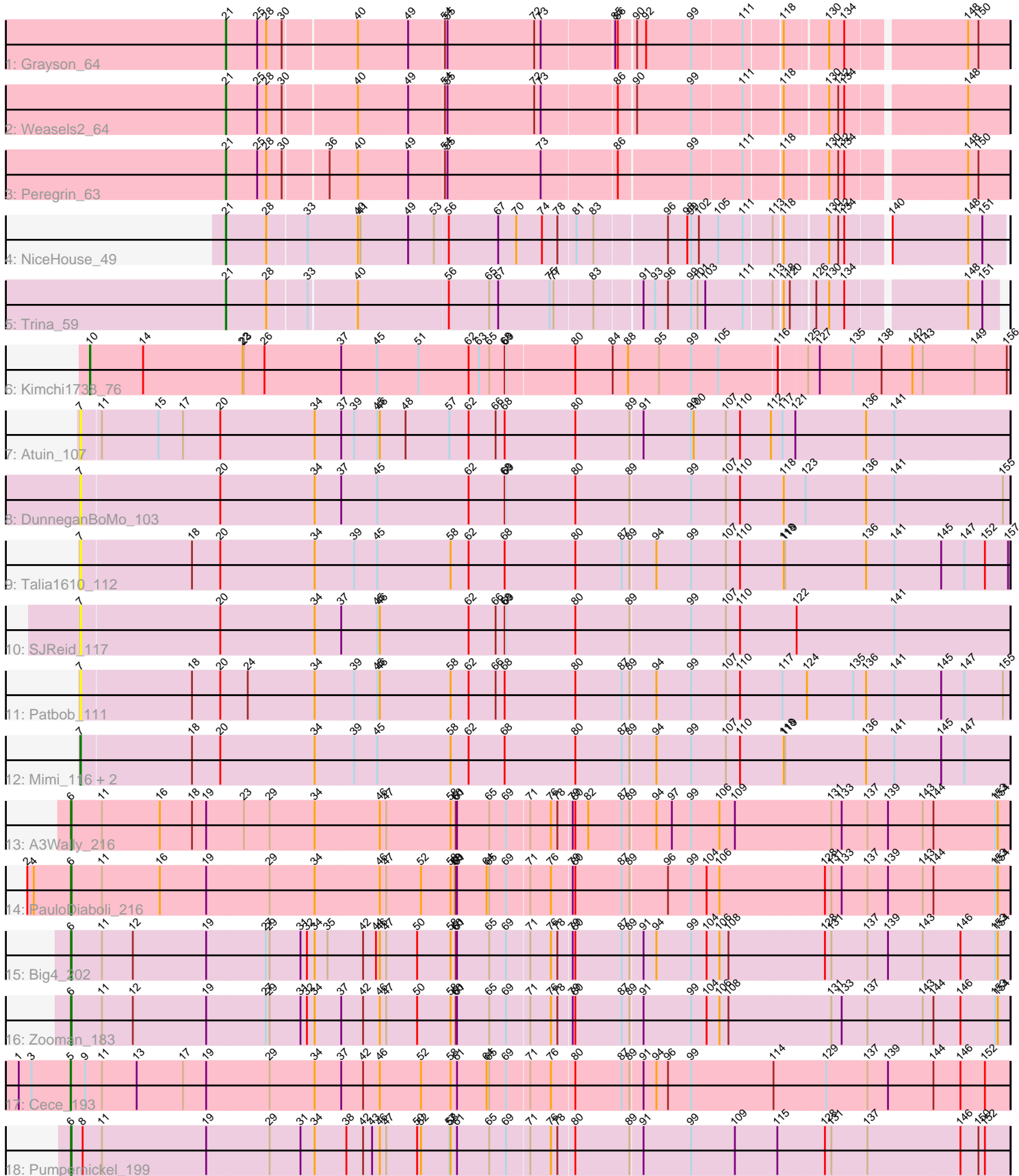


Pham 170320



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 170320 Report

This analysis was run 07/09/24 on database version 566.

Pham number 170320 has 20 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Grayson\_64
- Track 2 : Weasels2\_64
- Track 3 : Peregrin\_63
- Track 4 : NiceHouse\_49
- Track 5 : Trina\_59
- Track 6 : Kimchi1738\_76
- Track 7 : Atuin\_107
- Track 8 : DunneganBoMo\_103
- Track 9 : Talia1610\_112
- Track 10 : SJReid\_117
- Track 11 : Patbob\_111
- Track 12 : Mimi\_116, Bloom\_114, Racecar\_111
- Track 13 : A3Wally\_216
- Track 14 : PauloDiaboli\_216
- Track 15 : Big4\_202
- Track 16 : Zooman\_183
- Track 17 : Cece\_193
- Track 18 : Pumpernickel\_199

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

The start number called the most often in the published annotations is 6, it was called in 5 of the 13 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- A3Wally\_216, Big4\_202, PauloDiaboli\_216, Pumpernickel\_199, Zooman\_183,

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

- 

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

- Atuin\_107, Bloom\_114, Cece\_193, DunneganBoMo\_103, Grayson\_64, Kimchi1738\_76, Mimi\_116, NiceHouse\_49, Patbob\_111, Peregrin\_63, Racecar\_111, SJReid\_117, Talia1610\_112, Trina\_59, Weasels2\_64,

## Summary by start number:

### Start 5:

- Found in 1 of 20 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 13
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cece\_193 (GD3),

### Start 6:

- Found in 5 of 20 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 5 of 13
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_216 (GD1), Big4\_202 (GD2), PauloDiaboli\_216 (GD1), Pumpnickel\_199 (GD4), Zooman\_183 (GD2),

### Start 7:

- Found in 8 of 20 ( 40.0% ) of genes in pham
- Manual Annotations of this start: 1 of 13
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_107 (FC), Bloom\_114 (FC), DunneganBoMo\_103 (FC), Mimi\_116 (FC), Patbob\_111 (FC), Racecar\_111 (FC), SJReid\_117 (FC), Talia1610\_112 (FC),

### Start 10:

- Found in 1 of 20 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 13
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kimchi1738\_76 (EN),

### Start 21:

- Found in 5 of 20 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 5 of 13
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson\_64 (CB), NiceHouse\_49 (CE), Peregrin\_63 (CB), Trina\_59 (CE), Weasels2\_64 (CB),

## Summary by clusters:

There are 8 clusters represented in this pham: GD1, GD2, GD3, GD4, CB, CE, FC, EN,

### Info for manual annotations of cluster CB:

- Start number 21 was manually annotated 3 times for cluster CB.

### Info for manual annotations of cluster CE:

- Start number 21 was manually annotated 2 times for cluster CE.

### Info for manual annotations of cluster EN:

- Start number 10 was manually annotated 1 time for cluster EN.

### Info for manual annotations of cluster FC:

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

Info for manual annotations of cluster GD1:

- Start number 6 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster GD2:

- Start number 6 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:

- Start number 5 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:

- Start number 6 was manually annotated 1 time for cluster GD4.

### **Gene Information:**

Gene: A3Wally\_216 Start: 117654, Stop: 115501, Start Num: 6

Candidate Starts for A3Wally\_216:

(Start: 6 @117654 has 5 MA's), (11, 117582), (16, 117447), (18, 117372), (19, 117339), (23, 117252), (29, 117192), (34, 117087), (46, 116937), (47, 116922), (58, 116772), (60, 116760), (61, 116757), (65, 116682), (69, 116643), (71, 116595), (76, 116547), (78, 116532), (79, 116502), (80, 116496), (82, 116466), (87, 116388), (89, 116370), (94, 116313), (97, 116277), (99, 116232), (106, 116166), (109, 116130), (131, 115914), (133, 115890), (137, 115830), (139, 115782), (143, 115701), (144, 115677), (153, 115536), (154, 115530),

Gene: Atuin\_107 Start: 87692, Stop: 89833, Start Num: 7

Candidate Starts for Atuin\_107:

(Start: 7 @87692 has 1 MA's), (11, 87734), (15, 87866), (17, 87923), (20, 88010), (34, 88229), (37, 88289), (39, 88319), (45, 88373), (46, 88379), (48, 88439), (57, 88541), (62, 88586), (66, 88649), (68, 88670), (80, 88832), (89, 88958), (91, 88985), (99, 89096), (100, 89102), (107, 89177), (110, 89210), (112, 89282), (117, 89309), (121, 89336), (136, 89501), (141, 89567),

Gene: Big4\_202 Start: 114062, Stop: 111909, Start Num: 6

Candidate Starts for Big4\_202:

(Start: 6 @114062 has 5 MA's), (11, 113990), (12, 113918), (19, 113747), (27, 113609), (29, 113600), (31, 113528), (32, 113513), (34, 113495), (35, 113465), (42, 113384), (44, 113354), (46, 113345), (47, 113330), (50, 113258), (58, 113180), (60, 113168), (61, 113165), (65, 113090), (69, 113051), (71, 113003), (76, 112955), (78, 112940), (79, 112910), (80, 112904), (87, 112796), (89, 112778), (91, 112751), (94, 112721), (99, 112640), (104, 112604), (106, 112574), (108, 112553), (128, 112337), (131, 112322), (137, 112238), (139, 112190), (143, 112109), (146, 112022), (153, 111944), (154, 111938),

Gene: Bloom\_114 Start: 87765, Stop: 89903, Start Num: 7

Candidate Starts for Bloom\_114:

(Start: 7 @87765 has 1 MA's), (18, 88017), (20, 88083), (34, 88302), (39, 88392), (45, 88446), (58, 88617), (62, 88659), (68, 88743), (80, 88905), (87, 89013), (89, 89031), (94, 89088), (99, 89169), (107, 89250), (110, 89283), (118, 89385), (119, 89388), (136, 89571), (141, 89637), (145, 89745), (147, 89799),

Gene: Cece\_193 Start: 118582, Stop: 116429, Start Num: 5

Candidate Starts for Cece\_193:

(1, 118702), (3, 118672), (Start: 5 @118582 has 1 MA's), (9, 118549), (11, 118510), (13, 118429), (17, 118321), (19, 118267), (29, 118120), (34, 118015), (37, 117955), (42, 117904), (46, 117865), (52, 117769), (58, 117700), (61, 117685), (64, 117616), (65, 117610), (69, 117571), (71, 117523), (76, 117475), (80, 117424), (87, 117316), (89, 117298), (91, 117271), (94, 117241), (96, 117214), (99, 117160), (114, 116971), (129, 116854), (137, 116758), (139, 116710), (144, 116605), (146, 116542), (152, 116488),

Gene: DunneganBoMo\_103 Start: 83562, Stop: 85703, Start Num: 7

Candidate Starts for DunneganBoMo\_103:

(Start: 7 @83562 has 1 MA's), (20, 83880), (34, 84099), (37, 84159), (45, 84243), (62, 84456), (68, 84540), (69, 84543), (80, 84702), (89, 84828), (99, 84966), (107, 85047), (110, 85080), (118, 85182), (123, 85230), (136, 85371), (141, 85437), (155, 85686),

Gene: Grayson\_64 Start: 25287, Stop: 26981, Start Num: 21

Candidate Starts for Grayson\_64:

(Start: 21 @25287 has 5 MA's), (25, 25359), (28, 25380), (30, 25416), (40, 25575), (49, 25686), (54, 25767), (55, 25773), (72, 25974), (73, 25989), (85, 26151), (86, 26157), (90, 26193), (92, 26214), (99, 26319), (111, 26433), (118, 26514), (130, 26604), (134, 26637), (148, 26886), (150, 26910),

Gene: Kimchi1738\_76 Start: 56215, Stop: 54110, Start Num: 10

Candidate Starts for Kimchi1738\_76:

(Start: 10 @56215 has 1 MA's), (14, 56092), (22, 55861), (23, 55858), (26, 55813), (37, 55636), (45, 55552), (51, 55456), (62, 55339), (63, 55315), (65, 55291), (68, 55255), (69, 55252), (80, 55099), (84, 55012), (88, 54976), (95, 54904), (99, 54829), (105, 54766), (116, 54634), (125, 54577), (127, 54550), (135, 54472), (138, 54406), (142, 54334), (143, 54310), (149, 54193), (156, 54118),

Gene: Mimi\_116 Start: 87112, Stop: 89250, Start Num: 7

Candidate Starts for Mimi\_116:

(Start: 7 @87112 has 1 MA's), (18, 87364), (20, 87430), (34, 87649), (39, 87739), (45, 87793), (58, 87964), (62, 88006), (68, 88090), (80, 88252), (87, 88360), (89, 88378), (94, 88435), (99, 88516), (107, 88597), (110, 88630), (118, 88732), (119, 88735), (136, 88918), (141, 88984), (145, 89092), (147, 89146),

Gene: NiceHouse\_49 Start: 21298, Stop: 23001, Start Num: 21

Candidate Starts for NiceHouse\_49:

(Start: 21 @21298 has 5 MA's), (28, 21391), (33, 21481), (40, 21598), (41, 21604), (49, 21709), (53, 21769), (56, 21799), (67, 21913), (70, 21955), (74, 22015), (78, 22051), (81, 22090), (83, 22129), (96, 22288), (98, 22333), (99, 22342), (102, 22360), (105, 22405), (111, 22462), (113, 22522), (118, 22540), (130, 22630), (132, 22651), (134, 22663), (140, 22744), (148, 22915), (151, 22948),

Gene: Patbob\_111 Start: 87847, Stop: 89985, Start Num: 7

Candidate Starts for Patbob\_111:

(Start: 7 @87847 has 1 MA's), (18, 88099), (20, 88165), (24, 88228), (34, 88384), (39, 88474), (45, 88528), (46, 88534), (58, 88699), (62, 88741), (66, 88804), (68, 88825), (80, 88987), (87, 89095), (89, 89113), (94, 89170), (99, 89251), (107, 89332), (110, 89365), (117, 89464), (124, 89515), (135, 89623), (136, 89653), (141, 89719), (145, 89827), (147, 89881), (155, 89968),

Gene: PauloDiaboli\_216 Start: 115867, Stop: 113714, Start Num: 6

Candidate Starts for PauloDiaboli\_216:

(2, 115969), (4, 115954), (Start: 6 @115867 has 5 MA's), (11, 115795), (16, 115660), (19, 115552), (29, 115405), (34, 115300), (46, 115150), (47, 115135), (52, 115054), (58, 114985), (59, 114976), (60, 114973), (61, 114970), (64, 114901), (65, 114895), (69, 114856), (71, 114808), (76, 114760), (79, 114715), (80, 114709), (87, 114601), (89, 114583), (96, 114499), (99, 114445), (104, 114409), (106,

114379), (128, 114142), (131, 114127), (133, 114103), (137, 114043), (139, 113995), (143, 113914), (144, 113890), (153, 113749), (154, 113743),

Gene: Peregrin\_63 Start: 24861, Stop: 26558, Start Num: 21

Candidate Starts for Peregrin\_63:

(Start: 21 @24861 has 5 MA's), (25, 24933), (28, 24954), (30, 24990), (36, 25086), (40, 25152), (49, 25263), (54, 25344), (55, 25350), (73, 25566), (86, 25734), (99, 25896), (111, 26010), (118, 26091), (130, 26181), (132, 26202), (134, 26214), (148, 26463), (150, 26487),

Gene: Pumpernickel\_199 Start: 115229, Stop: 113079, Start Num: 6

Candidate Starts for Pumpernickel\_199:

(Start: 6 @115229 has 5 MA's), (8, 115205), (11, 115160), (19, 114917), (29, 114770), (31, 114698), (34, 114665), (38, 114593), (42, 114554), (43, 114533), (46, 114515), (47, 114500), (50, 114428), (52, 114419), (57, 114353), (58, 114350), (61, 114335), (65, 114260), (69, 114221), (71, 114173), (76, 114125), (78, 114110), (80, 114074), (89, 113948), (91, 113921), (99, 113810), (109, 113708), (115, 113612), (128, 113507), (131, 113492), (137, 113408), (146, 113192), (150, 113153), (152, 113138),

Gene: Racecar\_111 Start: 87765, Stop: 89903, Start Num: 7

Candidate Starts for Racecar\_111:

(Start: 7 @87765 has 1 MA's), (18, 88017), (20, 88083), (34, 88302), (39, 88392), (45, 88446), (58, 88617), (62, 88659), (68, 88743), (80, 88905), (87, 89013), (89, 89031), (94, 89088), (99, 89169), (107, 89250), (110, 89283), (118, 89385), (119, 89388), (136, 89571), (141, 89637), (145, 89745), (147, 89799),

Gene: SJReid\_117 Start: 80008, Stop: 82146, Start Num: 7

Candidate Starts for SJReid\_117:

(Start: 7 @80008 has 1 MA's), (20, 80326), (34, 80545), (37, 80605), (45, 80689), (46, 80695), (62, 80902), (66, 80965), (68, 80986), (69, 80989), (80, 81148), (89, 81274), (99, 81412), (107, 81493), (110, 81526), (122, 81655), (141, 81880),

Gene: Talia1610\_112 Start: 87131, Stop: 89269, Start Num: 7

Candidate Starts for Talia1610\_112:

(Start: 7 @87131 has 1 MA's), (18, 87383), (20, 87449), (34, 87668), (39, 87758), (45, 87812), (58, 87983), (62, 88025), (68, 88109), (80, 88271), (87, 88379), (89, 88397), (94, 88454), (99, 88535), (107, 88616), (110, 88649), (118, 88751), (119, 88754), (136, 88937), (141, 89003), (145, 89111), (147, 89165), (152, 89210), (157, 89264),

Gene: Trina\_59 Start: 25020, Stop: 26696, Start Num: 21

Candidate Starts for Trina\_59:

(Start: 21 @25020 has 5 MA's), (28, 25113), (33, 25203), (40, 25308), (56, 25509), (65, 25602), (67, 25623), (75, 25743), (77, 25752), (83, 25839), (91, 25941), (93, 25968), (96, 25998), (99, 26052), (101, 26067), (103, 26085), (111, 26172), (113, 26232), (118, 26250), (120, 26262), (126, 26310), (130, 26340), (134, 26373), (148, 26625), (151, 26658),

Gene: Weasels2\_64 Start: 24867, Stop: 26561, Start Num: 21

Candidate Starts for Weasels2\_64:

(Start: 21 @24867 has 5 MA's), (25, 24939), (28, 24960), (30, 24996), (40, 25155), (49, 25266), (54, 25347), (55, 25353), (72, 25554), (73, 25569), (86, 25737), (90, 25773), (99, 25899), (111, 26013), (118, 26094), (130, 26184), (132, 26205), (134, 26217), (148, 26466),

Gene: Zooman\_183 Start: 110285, Stop: 108132, Start Num: 6

Candidate Starts for Zooman\_183:

(Start: 6 @110285 has 5 MA's), (11, 110213), (12, 110141), (19, 109970), (27, 109832), (29, 109823), (31, 109751), (32, 109736), (34, 109718), (37, 109658), (42, 109607), (46, 109568), (47, 109553), (50, 109481), (58, 109403), (60, 109391), (61, 109388), (65, 109313), (69, 109274), (71, 109226), (76, 109178), (78, 109163), (79, 109133), (80, 109127), (87, 109019), (89, 109001), (91, 108974), (99, 108863), (104, 108827), (106, 108797), (108, 108776), (131, 108545), (133, 108521), (137, 108461), (143, 108332), (144, 108308), (146, 108245), (153, 108167), (154, 108161),