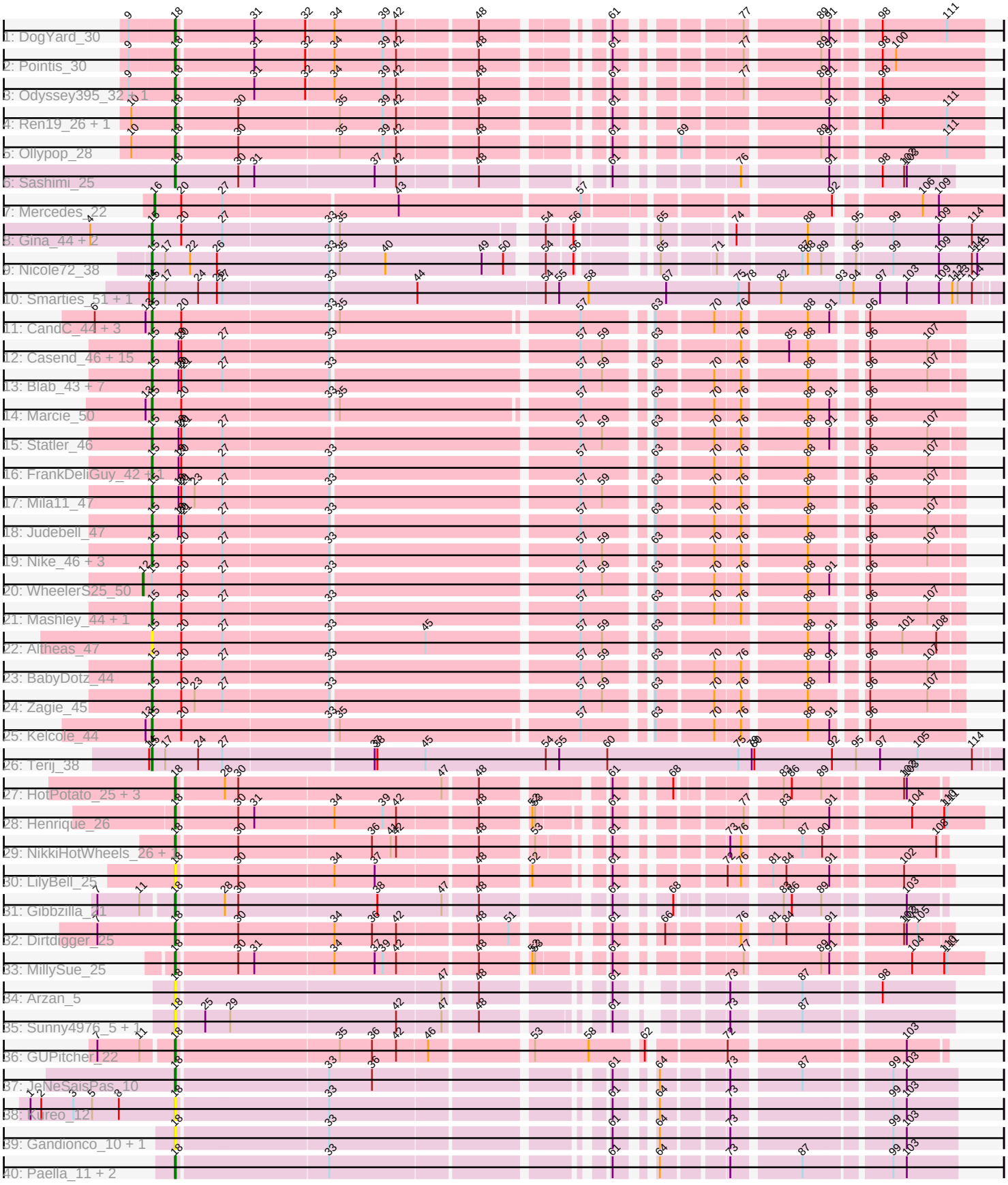
Pham 347519


1: DogYard_30
2: Pointis_30
3: Odyssey395_32 + 1
4: Ren19_26 + 1
5: Ollypop_28
6: Sashimi_25
7: Mercedes_22
8: Gina_44 + 2
9: Nicole72_38
10: Smarties_51 + 1
11: CandC_44 + 3
12: Casend_46 + 15
13: Blab_43 + 7
14: Marcie_50
15: Statler_46
16: FrankDeliGuy_42 + 1
17: Mila11_47
18: Judebell_47
19: Nike_46 + 3
20: WheelerS25_50
21: Mashley_44 + 1
22: Altheas_47
23: BabyDotz_44
24: Zagie_45
25: Kelcole_44
26: Terij_38
27: HotPotato_25 + 3
28: Henrique_26
29: NikkiHotWheels_26 + 1
30: LilyBell_25
31: Gibbzilla_21
32: Dirtdigger_25
33: MillySue_25
34: Arzan_5
35: Sunny4976_5 + 1
36: GUPitcher_22
37: JeNeSaisPas_10
38: Kureo_12
39: Gandionco_10 + 1
40: Paella_11 + 2

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 347519 Report

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

Pham number 347519 has 83 members, 14 are drafts.

Phages represented in each track:
- Track 1 : DogYard_30
- Track 2 : Pointis_30
- Track 3 : Odyssey395_32, Popstraw_28
- Track 4 : Ren19_26, Nikan_26
- Track 5 : Ollypop_28
- Track 6 : Sashimi_25
- Track 7 : Mercedes_22
- Track 8 : Gina_44, Teamocil_44, Skugga_41
- Track 9 : Nicole72_38
- Track 10 : Smarties_51, Ariadne_51
- Track 11 : CandC_44, KillerQueen_45, Romm_47, RobinRose_47
- Track 12 : Casend_46, Wayne3_47, Lonelysoil_44, Jehoshaphat_47, Llemily_45, Sillytadpoles_46, Teehee_46, Zhafia_48, Phabia_45, DonaldDuck_45, Quammi_43, Viceroy_44, Rudy_43, Wheelie_45, EverythinBagel_44, LilCahh_44
- Track 13 : Blab_43, Kyva_47, StrawberryJamm_47, Grassboy_46, SlySloth_47, Namago_45, Mentos_47, SallyK_46
- Track 14 : Marcie_50
- Track 15 : Statler_46
- Track 16 : FrankDeliGuy_42, ZestyBestie_43
- Track 17 : Mila11_47
- Track 18 : Judebell_47
- Track 19 : Nike_46, Rowlf_41, Tissue_46, Squash_48
- Track 20 : WheelerS25_50
- Track 21 : Mashley_44, MorillMayhem_45
- Track 22 : Altheas_47
- Track 23 : BabyDotz_44
- Track 24 : Zagie_45
- Track 25 : Kelcole_44
- Track 26 : Terij_38
- Track 27 : HotPotato_25, Karkharias_25, Peas_25, Eileen_25
- Track 28 : Henrique_26
- Track 29 : NikkiHotWheels_26, GlobiWarming_26
- Track 30 : LilyBell_25
- Track 31 : Gibbzilla_21
- Track 32 : Dirtdigger_25
- Track 33 : MillySue_25
- Track 34 : Arzan_5

• Track 35 : Sunny4976_5, Jazzy4900_6
• Track 36 : GUPitcher_22
• Track 37 : JeNeSaisPas_10
• Track 38 : Kureo_12
• Track 39 : Gandionco_10, Marianna39_11
• Track 40 : Paella_11, Elver_11, Qui_11

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

The start number called the most often in the published annotations is 15, it was called in 46 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Altheas_47, Ariadne_51, BabyDotz_44, Blab_43, CandC_44, Casend_46, DonaldDuck_45, EverythinBagel_44, FrankDeliGuy_42, Gina_44, Grassboy_46, Jehoshaphat_47, Judebell_47, Kelcole_44, KillerQueen_45, Kyva_47, LilCahh_44, Llemily_45, Lonelysoil_44, Marcie_50, Mashley_44, Mentos_47, Mila11_47, MorillMayhem_45, Namago_45, Nicole72_38, Nike_46, Phabia_45, Quammi_43, RobinRose_47, Romm_47, Rowlf_41, Rudy_43, SallyK_46, Sillytadpoles_46, Skugga_41, SlySloth_47, Smarties_51, Squash_48, Statler_46, StrawberryJamm_47, Teamocil_44, Teehee_46, Terij_38, Tissue_46, Viceroy_44, Wayne3_47, Wheelie_45, Zagie_45, ZestyBestie_43, Zhafia_48,

Genes that have the "Most Annotated" start but do not call it:
• WheelerS25_50,

Genes that do not have the "Most Annotated" start:
• Arzan_5, Dirtdigger_25, DogYard_30, Eileen_25, Elver_11, GUPitcher_22, Gandionco_10, Gibbzilla_21, GlobiWarming_26, Henrique_26, HotPotato_25, Jazzy4900_6, JeNeSaisPas_10, Karkharias_25, Kureo_12, LilyBell_25, Marianna39_11, Mercedes_22, MillySue_25, Nikan_26, NikkiHotWheels_26, Odyssey395_32, Ollypop_28, Paella_11, Peas_25, Pointis_30, Popstraw_28, Qui_11, Ren19_26, Sashimi_25, Sunny4976_5,

Summary by start number:

Start 12:
• Found in 1 of 83 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: WheelerS25_50 (EG),

Start 15:
• Found in 52 of 83 (62.7%) of genes in pham
• Manual Annotations of this start: 46 of 69
• Called 98.1% of time when present
• Phage (with cluster) where this start called: Altheas_47 (EG), Ariadne_51 (EC), BabyDotz_44 (EG), Blab_43 (EG), CandC_44 (EG), Casend_46 (EG), DonaldDuck_45 (EG), EverythinBagel_44 (EG), FrankDeliGuy_42 (EG), Gina_44 (EC), Grassboy_46 (EG), Jehoshaphat_47 (EG), Judebell_47 (EG), Kelcole_44 (EG),

KillerQueen_45 (EG), Kyva_47 (EG), LilCahh_44 (EG), Llemily_45 (EG), Lonelysoil_44 (EG), Marcie_50 (EG), Mashley_44 (EG), Mentos_47 (EG), Mila11_47 (EG), MorillMayhem_45 (EG), Namago_45 (EG), Nicole72_38 (EC), Nike_46 (EG), Phabia_45 (EG), Quammi_43 (EG), RobinRose_47 (EG), Romm_47 (EG), Rowlf_41 (EG), Rudy_43 (EG), SallyK_46 (EG), Sillytadpoles_46 (EG), Skugga_41 (EC), SlySloth_47 (EG), Smarties_51 (EC), Squash_48 (EG), Statler_46 (EG), StrawberryJamm_47 (EG), Teamocil_44 (EC), Teehee_46 (EG), Terij_38 (EI), Tissue_46 (EG), Viceroy_44 (EG), Wayne3_47 (EG), Wheelie_45 (EG), Zagie_45 (EG), ZestyBestie_43 (EG), Zhafia_48 (EG),

Start 16:
• Found in 1 of 83 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mercedes_22 (EA),

Start 18:
• Found in 30 of 83 (36.1%) of genes in pham
• Manual Annotations of this start: 21 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arzan_5 (FI), Dirtdigger_25 (FF), DogYard_30 (AP2), Eileen_25 (FA), Elver_11 (FK), GUPitcher_22 (FJ), Gandionco_10 (FK), Gibbzilla_21 (FB), GlobiWarming_26 (FA), Henrique_26 (FA), HotPotato_25 (FA), Jazzy4900_6 (FI), JeNeSaisPas_10 (FK), Karkharias_25 (FA), Kureo_12 (FK), LilyBell_25 (FA), Marianna39_11 (FK), MillySue_25 (FF), Nikan_26 (AP2), NikkiHotWheels_26 (FA), Odyssey395_32 (AP2), Ollypop_28 (AP2), Paella_11 (FK), Peas_25 (FA), Pointis_30 (AP2), Popstraw_28 (AP2), Qui_11 (FK), Ren19_26 (AP2), Sashimi_25 (AY), Sunny4976_5 (FI),

Summary by clusters:

There are 12 clusters represented in this pham: EI, AP2, EG, EA, EC, FA, FB, FF, AY, FI, FJ, FK,

Info for manual annotations of cluster AP2:
•Start number 18 was manually annotated 6 times for cluster AP2.

Info for manual annotations of cluster AY:
•Start number 18 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster EA:
•Start number 16 was manually annotated 1 time for cluster EA.

Info for manual annotations of cluster EC:
•Start number 15 was manually annotated 5 times for cluster EC.

Info for manual annotations of cluster EG:
•Start number 12 was manually annotated 1 time for cluster EG.
•Start number 15 was manually annotated 40 times for cluster EG.

Info for manual annotations of cluster EI:
•Start number 15 was manually annotated 1 time for cluster EI.

Info for manual annotations of cluster FA:
•Start number 18 was manually annotated 6 times for cluster FA.

Info for manual annotations of cluster FB:
•Start number 18 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FF:
•Start number 18 was manually annotated 2 times for cluster FF.

Info for manual annotations of cluster FJ:
•Start number 18 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster FK:
•Start number 18 was manually annotated 4 times for cluster FK.

Gene Information:

Gene: Altheas_47 Start: 34777, Stop: 35598, Start Num: 15
Candidate Starts for Altheas_47:
(Start: 15 @34777 has 46 MA's), (20, 34810), (27, 34855), (33, 34972), (45, 35074), (57, 35236), (59, 35260), (63, 35299), (88, 35449), (91, 35473), (96, 35500), (101, 35536), (108, 35572),

Gene: Ariadne_51 Start: 31805, Stop: 32737, Start Num: 15
Candidate Starts for Ariadne_51:
(14, 31802), (Start: 15 @31805 has 46 MA's), (17, 31820), (24, 31856), (26, 31877), (27, 31883), (33, 32000), (44, 32093), (54, 32234), (55, 32249), (58, 32282), (67, 32369), (75, 32450), (78, 32462), (82, 32498), (93, 32564), (94, 32579), (97, 32609), (103, 32639), (109, 32675), (112, 32690), (113, 32696), (114, 32711),

Gene: Arzan_5 Start: 1979, Stop: 2716, Start Num: 18
Candidate Starts for Arzan_5:
(Start: 18 @1979 has 21 MA's), (47, 2264), (48, 2300), (61, 2411), (73, 2492), (87, 2561), (98, 2636),

Gene: BabyDotz_44 Start: 35141, Stop: 35962, Start Num: 15
Candidate Starts for BabyDotz_44:
(Start: 15 @35141 has 46 MA's), (20, 35174), (27, 35219), (33, 35336), (57, 35600), (59, 35624), (63, 35663), (70, 35723), (76, 35750), (88, 35813), (91, 35837), (96, 35864), (107, 35927),

Gene: Blab_43 Start: 34265, Stop: 35086, Start Num: 15
Candidate Starts for Blab_43:
(Start: 15 @34265 has 46 MA's), (19, 34295), (20, 34298), (21, 34301), (27, 34343), (33, 34460), (57, 34724), (59, 34748), (63, 34787), (70, 34847), (76, 34874), (88, 34937), (96, 34988), (107, 35051),

Gene: CandC_44 Start: 33313, Stop: 34134, Start Num: 15
Candidate Starts for CandC_44:
(6, 33250), (13, 33307), (Start: 15 @33313 has 46 MA's), (20, 33346), (33, 33508), (35, 33514), (57, 33766), (63, 33829), (70, 33889), (76, 33916), (88, 33979), (91, 34003), (96, 34030),

Gene: Casend_46 Start: 34902, Stop: 35723, Start Num: 15
Candidate Starts for Casend_46:

(Start: 15 @34902 has 46 MA's), (19, 34932), (20, 34935), (27, 34980), (33, 35097), (57, 35361), (59, 35385), (63, 35424), (76, 35511), (85, 35553), (88, 35574), (96, 35625), (107, 35688),

Gene: Dirtdigger_25 Start: 18754, Stop: 19494, Start Num: 18
Candidate Starts for Dirtdigger_25:
(7, 18670), (Start: 18 @18754 has 21 MA's), (30, 18817), (34, 18922), (36, 18964), (42, 18991), (48, 19075), (51, 19108), (61, 19183), (66, 19216), (76, 19285), (81, 19309), (84, 19324), (91, 19372), (102, 19441), (103, 19444), (105, 19456),

Gene: DogYard_30 Start: 18309, Stop: 19082, Start Num: 18
Candidate Starts for DogYard_30:
(9, 18261), (Start: 18 @18309 has 21 MA's), (31, 18390), (32, 18447), (34, 18477), (39, 18531), (42, 18546), (48, 18630), (61, 18735), (77, 18840), (89, 18915), (91, 18924), (98, 18969), (111, 19041),

Gene: DonaldDuck_45 Start: 34251, Stop: 35072, Start Num: 15
Candidate Starts for DonaldDuck_45:
(Start: 15 @34251 has 46 MA's), (19, 34281), (20, 34284), (27, 34329), (33, 34446), (57, 34710), (59, 34734), (63, 34773), (76, 34860), (85, 34902), (88, 34923), (96, 34974), (107, 35037),

Gene: Eileen_25 Start: 19373, Stop: 20113, Start Num: 18
Candidate Starts for Eileen_25:
(Start: 18 @19373 has 21 MA's), (28, 19421), (30, 19436), (47, 19661), (48, 19697), (61, 19814), (68, 19856), (83, 19949), (86, 19958), (89, 19991), (102, 20069), (103, 20072),

Gene: Elver_11 Start: 5676, Stop: 6425, Start Num: 18
Candidate Starts for Elver_11:
(Start: 18 @5676 has 21 MA's), (33, 5838), (61, 6108), (64, 6135), (73, 6198), (87, 6267), (99, 6354), (103, 6369),

Gene: EverythinBagel_44 Start: 34639, Stop: 35460, Start Num: 15
Candidate Starts for EverythinBagel_44:
(Start: 15 @34639 has 46 MA's), (19, 34669), (20, 34672), (27, 34717), (33, 34834), (57, 35098), (59, 35122), (63, 35161), (76, 35248), (85, 35290), (88, 35311), (96, 35362), (107, 35425),

Gene: FrankDeliGuy_42 Start: 34202, Stop: 35023, Start Num: 15
Candidate Starts for FrankDeliGuy_42:
(Start: 15 @34202 has 46 MA's), (19, 34232), (20, 34235), (27, 34280), (33, 34397), (57, 34661), (63, 34724), (70, 34784), (76, 34811), (88, 34874), (96, 34925), (107, 34988),

Gene: GUPitcher_22 Start: 17778, Stop: 18548, Start Num: 18
Candidate Starts for GUPitcher_22:
(7, 17700), (11, 17745), (Start: 18 @17778 has 21 MA's), (35, 17952), (36, 17988), (42, 18015), (46, 18048), (53, 18150), (58, 18210), (62, 18261), (72, 18333), (103, 18507),

Gene: Gandionco_10 Start: 5675, Stop: 6424, Start Num: 18
Candidate Starts for Gandionco_10:
(Start: 18 @5675 has 21 MA's), (33, 5837), (61, 6107), (64, 6134), (73, 6197), (99, 6353), (103, 6368),

Gene: Gibbzilla_21 Start: 15897, Stop: 16637, Start Num: 18
Candidate Starts for Gibbzilla_21:
(7, 15819), (11, 15864), (Start: 18 @15897 has 21 MA's), (28, 15945), (30, 15960), (38, 16113), (47, 16185), (48, 16221), (61, 16338), (68, 16380), (83, 16473), (86, 16482), (89, 16515), (103, 16596),

Gene: Gina_44 Start: 29692, Stop: 30534, Start Num: 15
Candidate Starts for Gina_44:
(4, 29623), (Start: 15 @29692 has 46 MA's), (20, 29725), (27, 29770), (33, 29887), (35, 29893), (54, 30103), (56, 30130), (65, 30193), (74, 30262), (88, 30334), (95, 30376), (99, 30412), (109, 30463), (114, 30499),

Gene: GlobiWarming_26 Start: 19354, Stop: 20082, Start Num: 18
Candidate Starts for GlobiWarming_26:
(Start: 18 @19354 has 21 MA's), (30, 19417), (36, 19564), (41, 19585), (42, 19591), (48, 19675), (53, 19726), (61, 19780), (73, 19870), (76, 19882), (87, 19939), (90, 19960), (108, 20074),

Gene: Grassboy_46 Start: 34864, Stop: 35685, Start Num: 15
Candidate Starts for Grassboy_46:
(Start: 15 @34864 has 46 MA's), (19, 34894), (20, 34897), (21, 34900), (27, 34942), (33, 35059), (57, 35323), (59, 35347), (63, 35386), (70, 35446), (76, 35473), (88, 35536), (96, 35587), (107, 35650),

Gene: Henrique_26 Start: 19419, Stop: 20198, Start Num: 18
Candidate Starts for Henrique_26:
(Start: 18 @19419 has 21 MA's), (30, 19482), (31, 19500), (34, 19587), (39, 19641), (42, 19656), (48, 19740), (52, 19788), (53, 19791), (61, 19851), (77, 19956), (83, 19989), (91, 20040), (104, 20118), (110, 20154), (111, 20157),

Gene: HotPotato_25 Start: 19379, Stop: 20119, Start Num: 18
Candidate Starts for HotPotato_25:
(Start: 18 @19379 has 21 MA's), (28, 19427), (30, 19442), (47, 19667), (48, 19703), (61, 19820), (68, 19862), (83, 19955), (86, 19964), (89, 19997), (102, 20075), (103, 20078),

Gene: Jazzy4900_6 Start: 2005, Stop: 2739, Start Num: 18
Candidate Starts for Jazzy4900_6:
(Start: 18 @2005 has 21 MA's), (25, 2032), (29, 2059), (42, 2242), (47, 2290), (48, 2326), (61, 2434), (73, 2515), (87, 2584),

Gene: JeNeSaisPas_10 Start: 6208, Stop: 6957, Start Num: 18
Candidate Starts for JeNeSaisPas_10:
(Start: 18 @6208 has 21 MA's), (33, 6370), (36, 6418), (61, 6640), (64, 6667), (73, 6730), (87, 6799), (99, 6886), (103, 6901),

Gene: Jehoshaphat_47 Start: 35170, Stop: 35991, Start Num: 15
Candidate Starts for Jehoshaphat_47:
(Start: 15 @35170 has 46 MA's), (19, 35200), (20, 35203), (27, 35248), (33, 35365), (57, 35629), (59, 35653), (63, 35692), (76, 35779), (85, 35821), (88, 35842), (96, 35893), (107, 35956),

Gene: Judebell_47 Start: 34667, Stop: 35488, Start Num: 15
Candidate Starts for Judebell_47:
(Start: 15 @34667 has 46 MA's), (19, 34697), (20, 34700), (21, 34703), (27, 34745), (33, 34862), (57, 35126), (63, 35189), (70, 35249), (76, 35276), (88, 35339), (96, 35390), (107, 35453),

Gene: Karkharias_25 Start: 19375, Stop: 20115, Start Num: 18
Candidate Starts for Karkharias_25:
(Start: 18 @19375 has 21 MA's), (28, 19423), (30, 19438), (47, 19663), (48, 19699), (61, 19816), (68, 19858), (83, 19951), (86, 19960), (89, 19993), (102, 20071), (103, 20074),

Gene: Kelcole_44 Start: 33768, Stop: 34589, Start Num: 15

Candidate Starts for Kelcole_44:
(13, 33762), (Start: 15 @33768 has 46 MA's), (20, 33801), (33, 33963), (35, 33969), (57, 34221), (63, 34284), (70, 34344), (76, 34371), (88, 34434), (91, 34458), (96, 34485),

Gene: KillerQueen_45 Start: 33563, Stop: 34384, Start Num: 15
Candidate Starts for KillerQueen_45:
(6, 33500), (13, 33557), (Start: 15 @33563 has 46 MA's), (20, 33596), (33, 33758), (35, 33764), (57, 34016), (63, 34079), (70, 34139), (76, 34166), (88, 34229), (91, 34253), (96, 34280),

Gene: Kureo_12 Start: 6079, Stop: 6828, Start Num: 18
Candidate Starts for Kureo_12:
(1, 5917), (2, 5929), (3, 5965), (5, 5986), (8, 6016), (Start: 18 @6079 has 21 MA's), (33, 6241), (61, 6511), (64, 6538), (73, 6601), (99, 6757), (103, 6772),

Gene: Kyva_47 Start: 34899, Stop: 35720, Start Num: 15
Candidate Starts for Kyva_47:
(Start: 15 @34899 has 46 MA's), (19, 34929), (20, 34932), (21, 34935), (27, 34977), (33, 35094), (57, 35358), (59, 35382), (63, 35421), (70, 35481), (76, 35508), (88, 35571), (96, 35622), (107, 35685),

Gene: LilCahh_44 Start: 34267, Stop: 35088, Start Num: 15
Candidate Starts for LilCahh_44:
(Start: 15 @34267 has 46 MA's), (19, 34297), (20, 34300), (27, 34345), (33, 34462), (57, 34726), (59, 34750), (63, 34789), (76, 34876), (85, 34918), (88, 34939), (96, 34990), (107, 35053),

Gene: LilyBell_25 Start: 19391, Stop: 20131, Start Num: 18
Candidate Starts for LilyBell_25:
(Start: 18 @19391 has 21 MA's), (30, 19454), (34, 19559), (37, 19604), (48, 19712), (52, 19760), (61, 19820), (72, 19907), (76, 19922), (81, 19946), (84, 19961), (91, 20009), (102, 20078),

Gene: Llemily_45 Start: 33946, Stop: 34767, Start Num: 15
Candidate Starts for Llemily_45:
(Start: 15 @33946 has 46 MA's), (19, 33976), (20, 33979), (27, 34024), (33, 34141), (57, 34405), (59, 34429), (63, 34468), (76, 34555), (85, 34597), (88, 34618), (96, 34669), (107, 34732),

Gene: Lonelysoil_44 Start: 34188, Stop: 35009, Start Num: 15
Candidate Starts for Lonelysoil_44:
(Start: 15 @34188 has 46 MA's), (19, 34218), (20, 34221), (27, 34266), (33, 34383), (57, 34647), (59, 34671), (63, 34710), (76, 34797), (85, 34839), (88, 34860), (96, 34911), (107, 34974),

Gene: Marcie_50 Start: 34414, Stop: 35235, Start Num: 15
Candidate Starts for Marcie_50:
(13, 34408), (Start: 15 @34414 has 46 MA's), (20, 34447), (33, 34609), (35, 34615), (57, 34867), (63, 34930), (70, 34990), (76, 35017), (88, 35080), (91, 35104), (96, 35131),

Gene: Marianna39_11 Start: 5675, Stop: 6424, Start Num: 18
Candidate Starts for Marianna39_11:
(Start: 18 @5675 has 21 MA's), (33, 5837), (61, 6107), (64, 6134), (73, 6197), (99, 6353), (103, 6368),

Gene: Mashley_44 Start: 34586, Stop: 35407, Start Num: 15
Candidate Starts for Mashley_44:
(Start: 15 @34586 has 46 MA's), (20, 34619), (27, 34664), (33, 34781), (57, 35045), (63, 35108), (70, 35168), (76, 35195), (88, 35258), (96, 35309), (107, 35372),

Gene: Mentos_47 Start: 35680, Stop: 36501, Start Num: 15
Candidate Starts for Mentos_47:
(Start: 15 @35680 has 46 MA's), (19, 35710), (20, 35713), (21, 35716), (27, 35758), (33, 35875), (57, 36139), (59, 36163), (63, 36202), (70, 36262), (76, 36289), (88, 36352), (96, 36403), (107, 36466),

Gene: Mercedes_22 Start: 16548, Stop: 17417, Start Num: 16
Candidate Starts for Mercedes_22:
(Start: 16 @16548 has 1 MA's), (20, 16578), (27, 16623), (43, 16812), (57, 17007), (92, 17247), (106, 17328), (109, 17346),

Gene: Mila11_47 Start: 35553, Stop: 36374, Start Num: 15
Candidate Starts for Mila11_47:
(Start: 15 @35553 has 46 MA's), (19, 35583), (20, 35586), (21, 35589), (23, 35601), (27, 35631), (33, 35748), (57, 36012), (59, 36036), (63, 36075), (70, 36135), (76, 36162), (88, 36225), (96, 36276), (107, 36339),

Gene: MillySue_25 Start: 18770, Stop: 19546, Start Num: 18
Candidate Starts for MillySue_25:
(Start: 18 @18770 has 21 MA's), (30, 18833), (31, 18851), (34, 18938), (37, 18983), (39, 18992), (42, 19007), (48, 19091), (52, 19139), (53, 19142), (61, 19199), (77, 19304), (89, 19379), (91, 19388), (104, 19466), (110, 19502), (111, 19505),

Gene: MorillMayhem_45 Start: 34460, Stop: 35281, Start Num: 15
Candidate Starts for MorillMayhem_45:
(Start: 15 @34460 has 46 MA's), (20, 34493), (27, 34538), (33, 34655), (57, 34919), (63, 34982), (70, 35042), (76, 35069), (88, 35132), (96, 35183), (107, 35246),

Gene: Namago_45 Start: 34029, Stop: 34850, Start Num: 15
Candidate Starts for Namago_45:
(Start: 15 @34029 has 46 MA's), (19, 34059), (20, 34062), (21, 34065), (27, 34107), (33, 34224), (57, 34488), (59, 34512), (63, 34551), (70, 34611), (76, 34638), (88, 34701), (96, 34752), (107, 34815),

Gene: Nicole72_38 Start: 31673, Stop: 32521, Start Num: 15
Candidate Starts for Nicole72_38:
(Start: 15 @31673 has 46 MA's), (17, 31688), (22, 31715), (26, 31745), (33, 31871), (35, 31877), (40, 31928), (49, 32036), (50, 32060), (54, 32090), (56, 32117), (65, 32180), (71, 32234), (87, 32315), (88, 32321), (89, 32336), (95, 32363), (99, 32399), (109, 32450), (114, 32486), (115, 32492),

Gene: Nikan_26 Start: 17493, Stop: 18272, Start Num: 18
Candidate Starts for Nikan_26:
(10, 17445), (Start: 18 @17493 has 21 MA's), (30, 17556), (35, 17667), (39, 17715), (42, 17730), (48, 17814), (61, 17925), (91, 18114), (98, 18159), (111, 18231),

Gene: Nike_46 Start: 34984, Stop: 35805, Start Num: 15
Candidate Starts for Nike_46:
(Start: 15 @34984 has 46 MA's), (20, 35017), (27, 35062), (33, 35179), (57, 35443), (59, 35467), (63, 35506), (70, 35566), (76, 35593), (88, 35656), (96, 35707), (107, 35770),

Gene: NikkiHotWheels_26 Start: 19375, Stop: 20103, Start Num: 18
Candidate Starts for NikkiHotWheels_26:
(Start: 18 @19375 has 21 MA's), (30, 19438), (36, 19585), (41, 19606), (42, 19612), (48, 19696), (53, 19747), (61, 19801), (73, 19891), (76, 19903), (87, 19960), (90, 19981), (108, 20095),

Gene: Odyssey395_32 Start: 18434, Stop: 19207, Start Num: 18
Candidate Starts for Odyssey395_32:
(9, 18386), (Start: 18 @18434 has 21 MA's), (31, 18515), (32, 18572), (34, 18602), (39, 18656), (42, 18671), (48, 18755), (61, 18860), (77, 18965), (89, 19040), (91, 19049), (98, 19094),

Gene: Ollypop_28 Start: 17518, Stop: 18294, Start Num: 18
Candidate Starts for Ollypop_28:
(10, 17470), (Start: 18 @17518 has 21 MA's), (30, 17581), (35, 17692), (39, 17740), (42, 17755), (48, 17839), (61, 17947), (69, 17992), (89, 18127), (91, 18136), (111, 18253),

Gene: Paella_11 Start: 5675, Stop: 6424, Start Num: 18
Candidate Starts for Paella_11:
(Start: 18 @5675 has 21 MA's), (33, 5837), (61, 6107), (64, 6134), (73, 6197), (87, 6266), (99, 6353), (103, 6368),

Gene: Peas_25 Start: 19373, Stop: 20113, Start Num: 18
Candidate Starts for Peas_25:
(Start: 18 @19373 has 21 MA's), (28, 19421), (30, 19436), (47, 19661), (48, 19697), (61, 19814), (68, 19856), (83, 19949), (86, 19958), (89, 19991), (102, 20069), (103, 20072),

Gene: Phabia_45 Start: 34361, Stop: 35182, Start Num: 15
Candidate Starts for Phabia_45:
(Start: 15 @34361 has 46 MA's), (19, 34391), (20, 34394), (27, 34439), (33, 34556), (57, 34820), (59, 34844), (63, 34883), (76, 34970), (85, 35012), (88, 35033), (96, 35084), (107, 35147),

Gene: Pointis_30 Start: 18438, Stop: 19211, Start Num: 18
Candidate Starts for Pointis_30:
(9, 18390), (Start: 18 @18438 has 21 MA's), (31, 18519), (32, 18576), (34, 18606), (39, 18660), (42, 18675), (48, 18759), (61, 18864), (77, 18969), (89, 19044), (91, 19053), (98, 19098), (100, 19113),

Gene: Popstraw_28 Start: 18224, Stop: 18997, Start Num: 18
Candidate Starts for Popstraw_28:
(9, 18176), (Start: 18 @18224 has 21 MA's), (31, 18305), (32, 18362), (34, 18392), (39, 18446), (42, 18461), (48, 18545), (61, 18650), (77, 18755), (89, 18830), (91, 18839), (98, 18884),

Gene: Quammi_43 Start: 34061, Stop: 34882, Start Num: 15
Candidate Starts for Quammi_43:
(Start: 15 @34061 has 46 MA's), (19, 34091), (20, 34094), (27, 34139), (33, 34256), (57, 34520), (59, 34544), (63, 34583), (76, 34670), (85, 34712), (88, 34733), (96, 34784), (107, 34847),

Gene: Qui_11 Start: 5675, Stop: 6424, Start Num: 18
Candidate Starts for Qui_11:
(Start: 18 @5675 has 21 MA's), (33, 5837), (61, 6107), (64, 6134), (73, 6197), (87, 6266), (99, 6353), (103, 6368),

Gene: Ren19_26 Start: 17493, Stop: 18272, Start Num: 18
Candidate Starts for Ren19_26:
(10, 17445), (Start: 18 @17493 has 21 MA's), (30, 17556), (35, 17667), (39, 17715), (42, 17730), (48, 17814), (61, 17925), (91, 18114), (98, 18159), (111, 18231),

Gene: RobinRose_47 Start: 33922, Stop: 34743, Start Num: 15
Candidate Starts for RobinRose_47:

(6, 33859), (13, 33916), (Start: 15 @33922 has 46 MA's), (20, 33955), (33, 34117), (35, 34123), (57, 34375), (63, 34438), (70, 34498), (76, 34525), (88, 34588), (91, 34612), (96, 34639),

Gene: Romm_47 Start: 33922, Stop: 34743, Start Num: 15
Candidate Starts for Romm_47:
(6, 33859), (13, 33916), (Start: 15 @33922 has 46 MA's), (20, 33955), (33, 34117), (35, 34123), (57, 34375), (63, 34438), (70, 34498), (76, 34525), (88, 34588), (91, 34612), (96, 34639),

Gene: Rowlf_41 Start: 34034, Stop: 34855, Start Num: 15
Candidate Starts for Rowlf_41:
(Start: 15 @34034 has 46 MA's), (20, 34067), (27, 34112), (33, 34229), (57, 34493), (59, 34517), (63, 34556), (70, 34616), (76, 34643), (88, 34706), (96, 34757), (107, 34820),

Gene: Rudy_43 Start: 34094, Stop: 34915, Start Num: 15
Candidate Starts for Rudy_43:
(Start: 15 @34094 has 46 MA's), (19, 34124), (20, 34127), (27, 34172), (33, 34289), (57, 34553), (59, 34577), (63, 34616), (76, 34703), (85, 34745), (88, 34766), (96, 34817), (107, 34880),

Gene: SallyK_46 Start: 35043, Stop: 35864, Start Num: 15
Candidate Starts for SallyK_46:
(Start: 15 @35043 has 46 MA's), (19, 35073), (20, 35076), (21, 35079), (27, 35121), (33, 35238), (57, 35502), (59, 35526), (63, 35565), (70, 35625), (76, 35652), (88, 35715), (96, 35766), (107, 35829),

Gene: Sashimi_25 Start: 18056, Stop: 18802, Start Num: 18
Candidate Starts for Sashimi_25:
(Start: 18 @18056 has 21 MA's), (30, 18125), (31, 18143), (37, 18275), (42, 18299), (48, 18383), (61, 18491), (76, 18593), (91, 18680), (98, 18725), (102, 18749), (103, 18752),

Gene: Sillytadpoles_46 Start: 33934, Stop: 34755, Start Num: 15
Candidate Starts for Sillytadpoles_46:
(Start: 15 @33934 has 46 MA's), (19, 33964), (20, 33967), (27, 34012), (33, 34129), (57, 34393), (59, 34417), (63, 34456), (76, 34543), (85, 34585), (88, 34606), (96, 34657), (107, 34720),

Gene: Skugga_41 Start: 29708, Stop: 30550, Start Num: 15
Candidate Starts for Skugga_41:
(4, 29639), (Start: 15 @29708 has 46 MA's), (20, 29741), (27, 29786), (33, 29903), (35, 29909), (54, 30119), (56, 30146), (65, 30209), (74, 30278), (88, 30350), (95, 30392), (99, 30428), (109, 30479), (114, 30515),

Gene: SlySloth_47 Start: 34731, Stop: 35552, Start Num: 15
Candidate Starts for SlySloth_47:
(Start: 15 @34731 has 46 MA's), (19, 34761), (20, 34764), (21, 34767), (27, 34809), (33, 34926), (57, 35190), (59, 35214), (63, 35253), (70, 35313), (76, 35340), (88, 35403), (96, 35454), (107, 35517),

Gene: Smarties_51 Start: 31805, Stop: 32737, Start Num: 15
Candidate Starts for Smarties_51:
(14, 31802), (Start: 15 @31805 has 46 MA's), (17, 31820), (24, 31856), (26, 31877), (27, 31883), (33, 32000), (44, 32093), (54, 32234), (55, 32249), (58, 32282), (67, 32369), (75, 32450), (78, 32462), (82, 32498), (93, 32564), (94, 32579), (97, 32609), (103, 32639), (109, 32675), (112, 32690), (113, 32696), (114, 32711),

Gene: Squash_48 Start: 34995, Stop: 35816, Start Num: 15
Candidate Starts for Squash_48:

(Start: 15 @34995 has 46 MA's), (20, 35028), (27, 35073), (33, 35190), (57, 35454), (59, 35478), (63, 35517), (70, 35577), (76, 35604), (88, 35667), (96, 35718), (107, 35781),

Gene: Statler_46 Start: 34849, Stop: 35670, Start Num: 15
Candidate Starts for Statler_46:
(Start: 15 @34849 has 46 MA's), (19, 34879), (20, 34882), (21, 34885), (27, 34927), (57, 35308), (59, 35332), (63, 35371), (70, 35431), (76, 35458), (88, 35521), (91, 35545), (96, 35572), (107, 35635),

Gene: StrawberryJamm_47 Start: 34297, Stop: 35118, Start Num: 15
Candidate Starts for StrawberryJamm_47:
(Start: 15 @34297 has 46 MA's), (19, 34327), (20, 34330), (21, 34333), (27, 34375), (33, 34492), (57, 34756), (59, 34780), (63, 34819), (70, 34879), (76, 34906), (88, 34969), (96, 35020), (107, 35083),

Gene: Sunny4976_5 Start: 2005, Stop: 2739, Start Num: 18
Candidate Starts for Sunny4976_5:
(Start: 18 @2005 has 21 MA's), (25, 2032), (29, 2059), (42, 2242), (47, 2290), (48, 2326), (61, 2434), (73, 2515), (87, 2584),

Gene: Teamocil_44 Start: 29791, Stop: 30633, Start Num: 15
Candidate Starts for Teamocil_44:
(4, 29722), (Start: 15 @29791 has 46 MA's), (20, 29824), (27, 29869), (33, 29986), (35, 29992), (54, 30202), (56, 30229), (65, 30292), (74, 30361), (88, 30433), (95, 30475), (99, 30511), (109, 30562), (114, 30598),

Gene: Teehee_46 Start: 35167, Stop: 35988, Start Num: 15
Candidate Starts for Teehee_46:
(Start: 15 @35167 has 46 MA's), (19, 35197), (20, 35200), (27, 35245), (33, 35362), (57, 35626), (59, 35650), (63, 35689), (76, 35776), (85, 35818), (88, 35839), (96, 35890), (107, 35953),

Gene: Terij_38 Start: 28525, Stop: 29463, Start Num: 15
Candidate Starts for Terij_38:
(14, 28522), (Start: 15 @28525 has 46 MA's), (17, 28540), (24, 28576), (27, 28603), (37, 28765), (38, 28768), (45, 28822), (54, 28957), (55, 28972), (60, 29026), (75, 29173), (79, 29188), (80, 29191), (92, 29278), (95, 29305), (97, 29332), (105, 29374), (114, 29434),

Gene: Tissue_46 Start: 34672, Stop: 35493, Start Num: 15
Candidate Starts for Tissue_46:
(Start: 15 @34672 has 46 MA's), (20, 34705), (27, 34750), (33, 34867), (57, 35131), (59, 35155), (63, 35194), (70, 35254), (76, 35281), (88, 35344), (96, 35395), (107, 35458),

Gene: Viceroy_44 Start: 34064, Stop: 34885, Start Num: 15
Candidate Starts for Viceroy_44:
(Start: 15 @34064 has 46 MA's), (19, 34094), (20, 34097), (27, 34142), (33, 34259), (57, 34523), (59, 34547), (63, 34586), (76, 34673), (85, 34715), (88, 34736), (96, 34787), (107, 34850),

Gene: Wayne3_47 Start: 34930, Stop: 35751, Start Num: 15
Candidate Starts for Wayne3_47:
(Start: 15 @34930 has 46 MA's), (19, 34960), (20, 34963), (27, 35008), (33, 35125), (57, 35389), (59, 35413), (63, 35452), (76, 35539), (85, 35581), (88, 35602), (96, 35653), (107, 35716),

Gene: WheelerS25_50 Start: 35485, Stop: 36315, Start Num: 12
Candidate Starts for WheelerS25_50:

(Start: 12 @35485 has 1 MA's), (Start: 15 @35494 has 46 MA's), (20, 35527), (27, 35572), (33, 35689), (57, 35953), (59, 35977), (63, 36016), (70, 36076), (76, 36103), (88, 36166), (91, 36190), (96, 36217),

Gene: Wheelie_45 Start: 34251, Stop: 35072, Start Num: 15
Candidate Starts for Wheelie_45:
(Start: 15 @34251 has 46 MA's), (19, 34281), (20, 34284), (27, 34329), (33, 34446), (57, 34710), (59, 34734), (63, 34773), (76, 34860), (85, 34902), (88, 34923), (96, 34974), (107, 35037),

Gene: Zagie_45 Start: 34499, Stop: 35320, Start Num: 15
Candidate Starts for Zagie_45:
(Start: 15 @34499 has 46 MA's), (20, 34532), (23, 34547), (27, 34577), (33, 34694), (57, 34958), (59, 34982), (63, 35021), (70, 35081), (76, 35108), (88, 35171), (96, 35222), (107, 35285),

Gene: ZestyBestie_43 Start: 34197, Stop: 35018, Start Num: 15
Candidate Starts for ZestyBestie_43:
(Start: 15 @34197 has 46 MA's), (19, 34227), (20, 34230), (27, 34275), (33, 34392), (57, 34656), (63, 34719), (70, 34779), (76, 34806), (88, 34869), (96, 34920), (107, 34983),

Gene: Zhafia_48 Start: 34731, Stop: 35552, Start Num: 15
Candidate Starts for Zhafia_48:
(Start: 15 @34731 has 46 MA's), (19, 34761), (20, 34764), (27, 34809), (33, 34926), (57, 35190), (59, 35214), (63, 35253), (76, 35340), (85, 35382), (88, 35403), (96, 35454), (107, 35517),