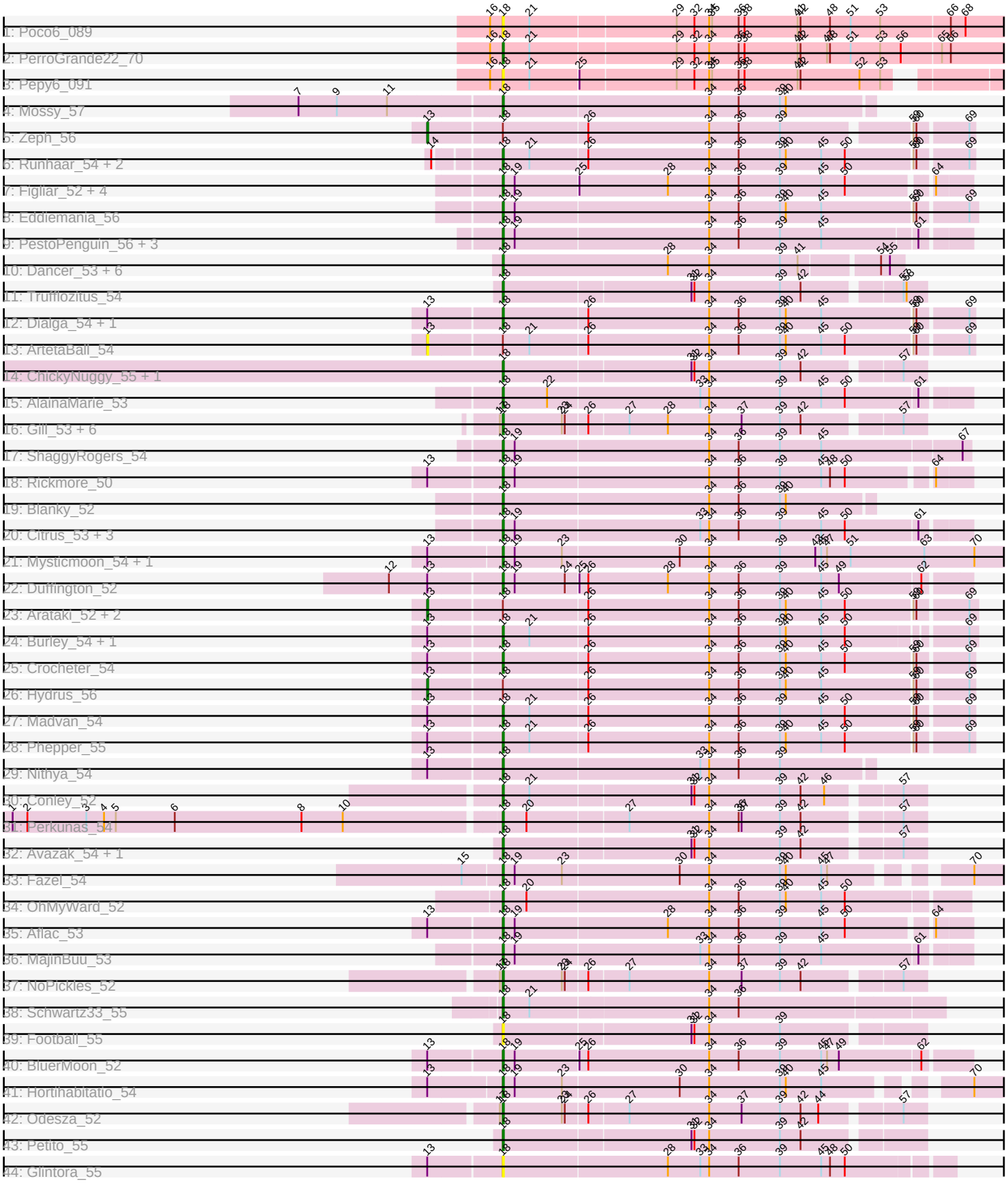
Pham 347558


1: Poco6_089
2: PerroGrande22_70
3: Pepy6_091
4: Mossy_57
5: Zeph_56
6: Runhaar_54 + 2
7: Figliar_52 + 4
8: Eddiemania_56
9: PestoPenguin_56 + 3
10: Dancer_53 + 6
11: Trufflozitus_54
12: Dialga_54 + 1
13: ArtetaBall_54
14: ChickyNuggy_55 + 1
15: AlainaMarie_53
16: Gill_53 + 6
17: ShaggyRogers_54
18: Rickmore_50
19: Blanky_52
20: Citrus_53 + 3
21: Mysticmoon_54 + 1
22: Duffington_52
23: Arataki_52 + 2
24: Burley_54 + 1
25: Crocheter_54
26: Hydrus_56
27: Madvan_54
28: Phepper_55
29: Nithya_54
30: Conley_52
31: Perkunas_54
32: Avazak_54 + 1
33: Fazel_54
34: OhMyWard_52
35: Aflac_53
36: MajinBuu_53
37: NoPickles_52
38: Schwartz33_55
39: Football_55
40: BluerMoon_52
41: Hortihabitatio_54
42: Odesza_52
43: Petito_55
44: Glintora_55

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 347558 Report

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

Pham number 347558 has 75 members, 12 are drafts.

Phages represented in each track:
- Track 1 : Poco6_089
- Track 2 : PerroGrande22_70
- Track 3 : Pepy6_091
- Track 4 : Mossy_57
- Track 5 : Zeph_56
- Track 6 : Runhaar_54, Kenosha_53, Nadmeg_55
- Track 7 : Figliar_52, Tonaltzin_52, Jodelie19_53, TenaciousP_54, OlgasClover_55
- Track 8 : Eddiemania_56
- Track 9 : PestoPenguin_56, Aloe25_55, Gusicorn_55, BetterYeti_54
- Track 10 : Dancer_53, Bugg_55, Talon44_54, SweetCrkHerbs_54, Captrips_52, Artorias_53, FortCran_53
- Track 11 : Trufflozitus_54
- Track 12 : Dialga_54, Untouchable_55
- Track 13 : ArtetaBall_54
- Track 14 : ChickyNuggy_55, JulesRay_53
- Track 15 : AlainaMarie_53
- Track 16 : Gill_53, Roney_53, Kerry_52, Tanis_53, Capybara_53, Gravy_52, Magel_54
- Track 17 : ShaggyRogers_54
- Track 18 : Rickmore_50
- Track 19 : Blanky_52
- Track 20 : Citrus_53, Luthien_55, Chikenjars_52, EndAve_55
- Track 21 : Mysticmoon_54, Pherobrine_55
- Track 22 : Duffington_52
- Track 23 : Arataki_52, Demure_52, CWormy_53
- Track 24 : Burley_54, Vardy_53
- Track 25 : Crocheter_54
- Track 26 : Hydrus_56
- Track 27 : Madvan_54
- Track 28 : Phepper_55
- Track 29 : Nithya_54
- Track 30 : Conley_52
- Track 31 : Perkunas_54
- Track 32 : Avazak_54, Tairn4Wing_55
- Track 33 : Fazel_54
- Track 34 : OhMyWard_52
- Track 35 : Aflac_53

• Track 36 : MajinBuu_53
• Track 37 : NoPickles_52
• Track 38 : Schwartz33_55
• Track 39 : Football_55
• Track 40 : BluerMoon_52
• Track 41 : Hortihabitatio_54
• Track 42 : Odesza_52
• Track 43 : Petito_55
• Track 44 : Glintora_55

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

The start number called the most often in the published annotations is 18, it was called in 60 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aflac_53, AlainaMarie_53, Aloe25_55, Artorias_53, Avazak_54, BetterYeti_54, Blanky_52, BluerMoon_52, Bugg_55, Burley_54, Captrips_52, Capybara_53, ChickyNuggy_55, Chikenjars_52, Citrus_53, Conley_52, Crocheter_54, Dancer_53, Dialga_54, Duffington_52, Eddiemania_56, EndAve_55, Fazel_54, Figliar_52, Football_55, FortCran_53, Gill_53, Glintora_55, Gravy_52, Gusicorn_55, Hortihabitatio_54, Jodelie19_53, JulesRay_53, Kenosha_53, Kerry_52, Luthien_55, Madvan_54, Magel_54, MajinBuu_53, Mossy_57, Mysticmoon_54, Nadmeg_55, Nithya_54, NoPickles_52, Odesza_52, OhMyWard_52, OlgasClover_55, Pepy6_091, Perkunas_54, PerroGrande22_70, PestoPenguin_56, Petito_55, Phepper_55, Pherobrine_55, Poco6_089, Rickmore_50, Roney_53, Runhaar_54, Schwartz33_55, ShaggyRogers_54, SweetCrkHerbs_54, Tairn4Wing_55, Talon44_54, Tanis_53, TenaciousP_54, Tonaltzin_52, Trufflozitus_54, Untouchable_55, Vardy_53,

Genes that have the "Most Annotated" start but do not call it:
• Arataki_52, ArtetaBall_54, CWormy_53, Demure_52, Hydrus_56, Zeph_56,

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

Summary by start number:

Start 13:
• Found in 22 of 75 (29.3%) of genes in pham
• Manual Annotations of this start: 3 of 63
• Called 27.3% of time when present
• Phage (with cluster) where this start called: Arataki_52 (DJ), ArtetaBall_54 (DJ), CWormy_53 (DJ), Demure_52 (DJ), Hydrus_56 (DJ), Zeph_56 (DJ),

Start 18:
• Found in 75 of 75 (100.0%) of genes in pham
• Manual Annotations of this start: 60 of 63
• Called 92.0% of time when present
• Phage (with cluster) where this start called: Aflac_53 (DJ), AlainaMarie_53 (DJ), Aloe25_55 (DJ), Artorias_53 (DJ), Avazak_54 (DJ), BetterYeti_54 (DJ), Blanky_52

(DJ), BluerMoon_52 (DJ), Bugg_55 (DJ), Burley_54 (DJ), Captrips_52 (DJ), Capybara_53 (DJ), ChickyNuggy_55 (DJ), Chikenjars_52 (DJ), Citrus_53 (DJ), Conley_52 (DJ), Crocheter_54 (DJ), Dancer_53 (DJ), Dialga_54 (DJ), Duffington_52 (DJ), Eddiemania_56 (DJ), EndAve_55 (DJ), Fazel_54 (DJ), Figliar_52 (DJ), Football_55 (DJ), FortCran_53 (DJ), Gill_53 (DJ), Glintora_55 (DJ), Gravy_52 (DJ), Gusicorn_55 (DJ), Hortihabitatio_54 (DJ), Jodelie19_53 (DJ), JulesRay_53 (DJ), Kenosha_53 (DJ), Kerry_52 (DJ), Luthien_55 (DJ), Madvan_54 (DJ), Magel_54 (DJ), MajinBuu_53 (DJ), Mossy_57 (DJ), Mysticmoon_54 (DJ), Nadmeg_55 (DJ), Nithya_54 (DJ), NoPickles_52 (DJ), Odesza_52 (DJ), OhMyWard_52 (DJ), OlgasClover_55 (DJ), Pepy6_091 (CC), Perkunas_54 (DJ), PerroGrande22_70 (CC), PestoPenguin_56 (DJ), Petito_55 (DJ), Phepper_55 (DJ), Pherobrine_55 (DJ), Poco6_089 (CC), Rickmore_50 (DJ), Roney_53 (DJ), Runhaar_54 (DJ), Schwartz33_55 (DJ), ShaggyRogers_54 (DJ), SweetCrkHerbs_54 (DJ), Tairn4Wing_55 (DJ), Talon44_54 (DJ), Tanis_53 (DJ), TenaciousP_54 (DJ), Tonaltzin_52 (DJ), Trufflozitus_54 (DJ), Untouchable_55 (DJ), Vardy_53 (DJ),

Summary by clusters:

There are 2 clusters represented in this pham: CC, DJ,

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

Info for manual annotations of cluster DJ:
•Start number 13 was manually annotated 3 times for cluster DJ.
•Start number 18 was manually annotated 59 times for cluster DJ.

Gene Information:

Gene: Aflac_53 Start: 37122, Stop: 37580, Start Num: 18
Candidate Starts for Aflac_53:
(Start: 13 @37050 has 3 MA's), (Start: 18 @37122 has 60 MA's), (19, 37134), (28, 37287), (34, 37329), (36, 37359), (39, 37401), (45, 37443), (50, 37467), (64, 37545),

Gene: AlainaMarie_53 Start: 37102, Stop: 37566, Start Num: 18
Candidate Starts for AlainaMarie_53:
(Start: 18 @37102 has 60 MA's), (22, 37147), (33, 37300), (34, 37309), (39, 37381), (45, 37423), (50, 37447), (61, 37519),

Gene: Aloe25_55 Start: 37204, Stop: 37665, Start Num: 18
Candidate Starts for Aloe25_55:
(Start: 18 @37204 has 60 MA's), (19, 37216), (34, 37411), (36, 37441), (39, 37483), (45, 37525), (61, 37618),

Gene: Arataki_52 Start: 36159, Stop: 36701, Start Num: 13
Candidate Starts for Arataki_52:
(Start: 13 @36159 has 3 MA's), (Start: 18 @36231 has 60 MA's), (26, 36315), (34, 36438), (36, 36468), (39, 36510), (40, 36516), (45, 36552), (50, 36576), (59, 36642), (60, 36645), (69, 36693),

Gene: ArtetaBall_54 Start: 37348, Stop: 37887, Start Num: 13
Candidate Starts for ArtetaBall_54:

(Start: 13 @37348 has 3 MA's), (Start: 18 @37420 has 60 MA's), (21, 37447), (26, 37504), (34, 37627), (36, 37657), (39, 37699), (40, 37705), (45, 37741), (50, 37765), (59, 37831), (60, 37834), (69, 37882),

Gene: Artorias_53 Start: 36489, Stop: 36887, Start Num: 18
Candidate Starts for Artorias_53:
(Start: 18 @36489 has 60 MA's), (28, 36657), (34, 36699), (39, 36771), (41, 36789), (54, 36864), (55, 36873),

Gene: Avazak_54 Start: 36834, Stop: 37244, Start Num: 18
Candidate Starts for Avazak_54:
(Start: 18 @36834 has 60 MA's), (31, 37020), (32, 37023), (34, 37038), (39, 37110), (42, 37131), (57, 37221),

Gene: BetterYeti_54 Start: 37203, Stop: 37664, Start Num: 18
Candidate Starts for BetterYeti_54:
(Start: 18 @37203 has 60 MA's), (19, 37215), (34, 37410), (36, 37440), (39, 37482), (45, 37524), (61, 37617),

Gene: Blanky_52 Start: 38832, Stop: 39203, Start Num: 18
Candidate Starts for Blanky_52:
(Start: 18 @38832 has 60 MA's), (34, 39039), (36, 39069), (39, 39111), (40, 39117),

Gene: BluerMoon_52 Start: 37145, Stop: 37609, Start Num: 18
Candidate Starts for BluerMoon_52:
(Start: 13 @37073 has 3 MA's), (Start: 18 @37145 has 60 MA's), (19, 37157), (25, 37220), (26, 37229), (34, 37352), (36, 37382), (39, 37424), (45, 37466), (47, 37472), (49, 37484), (62, 37565),

Gene: Bugg_55 Start: 36534, Stop: 36932, Start Num: 18
Candidate Starts for Bugg_55:
(Start: 18 @36534 has 60 MA's), (28, 36702), (34, 36744), (39, 36816), (41, 36834), (54, 36909), (55, 36918),

Gene: Burley_54 Start: 36888, Stop: 37352, Start Num: 18
Candidate Starts for Burley_54:
(Start: 13 @36816 has 3 MA's), (Start: 18 @36888 has 60 MA's), (21, 36915), (26, 36972), (34, 37095), (36, 37125), (39, 37167), (40, 37173), (45, 37209), (50, 37233), (69, 37344),

Gene: CWormy_53 Start: 36761, Stop: 37303, Start Num: 13
Candidate Starts for CWormy_53:
(Start: 13 @36761 has 3 MA's), (Start: 18 @36833 has 60 MA's), (26, 36917), (34, 37040), (36, 37070), (39, 37112), (40, 37118), (45, 37154), (50, 37178), (59, 37244), (60, 37247), (69, 37295),

Gene: Captrips_52 Start: 35964, Stop: 36362, Start Num: 18
Candidate Starts for Captrips_52:
(Start: 18 @35964 has 60 MA's), (28, 36132), (34, 36174), (39, 36246), (41, 36264), (54, 36339), (55, 36348),

Gene: Capybara_53 Start: 36333, Stop: 36743, Start Num: 18
Candidate Starts for Capybara_53:
(17, 36330), (Start: 18 @36333 has 60 MA's), (23, 36393), (24, 36396), (26, 36417), (27, 36456), (28, 36495), (34, 36537), (37, 36570), (39, 36609), (42, 36630), (57, 36720),

Gene: ChickyNuggy_55 Start: 36591, Stop: 37001, Start Num: 18

Candidate Starts for ChickyNuggy_55:
(Start: 18 @36591 has 60 MA's), (31, 36777), (32, 36780), (34, 36795), (39, 36867), (42, 36888), (57, 36978),

Gene: Chikenjars_52 Start: 37114, Stop: 37578, Start Num: 18
Candidate Starts for Chikenjars_52:
(Start: 18 @37114 has 60 MA's), (19, 37126), (33, 37312), (34, 37321), (36, 37351), (39, 37393), (45, 37435), (50, 37459), (61, 37531),

Gene: Citrus_53 Start: 37392, Stop: 37856, Start Num: 18
Candidate Starts for Citrus_53:
(Start: 18 @37392 has 60 MA's), (19, 37404), (33, 37590), (34, 37599), (36, 37629), (39, 37671), (45, 37713), (50, 37737), (61, 37809),

Gene: Conley_52 Start: 37120, Stop: 37530, Start Num: 18
Candidate Starts for Conley_52:
(Start: 18 @37120 has 60 MA's), (21, 37147), (31, 37306), (32, 37309), (34, 37324), (39, 37396), (42, 37417), (46, 37441), (57, 37507),

Gene: Crocheter_54 Start: 37278, Stop: 37745, Start Num: 18
Candidate Starts for Crocheter_54:
(Start: 13 @37206 has 3 MA's), (Start: 18 @37278 has 60 MA's), (26, 37362), (34, 37485), (36, 37515), (39, 37557), (40, 37563), (45, 37599), (50, 37623), (59, 37689), (60, 37692), (69, 37740),

Gene: Dancer_53 Start: 36224, Stop: 36622, Start Num: 18
Candidate Starts for Dancer_53:
(Start: 18 @36224 has 60 MA's), (28, 36392), (34, 36434), (39, 36506), (41, 36524), (54, 36599), (55, 36608),

Gene: Demure_52 Start: 36159, Stop: 36701, Start Num: 13
Candidate Starts for Demure_52:
(Start: 13 @36159 has 3 MA's), (Start: 18 @36231 has 60 MA's), (26, 36315), (34, 36438), (36, 36468), (39, 36510), (40, 36516), (45, 36552), (50, 36576), (59, 36642), (60, 36645), (69, 36693),

Gene: Dialga_54 Start: 37447, Stop: 37914, Start Num: 18
Candidate Starts for Dialga_54:
(Start: 13 @37375 has 3 MA's), (Start: 18 @37447 has 60 MA's), (26, 37531), (34, 37654), (36, 37684), (39, 37726), (40, 37732), (45, 37768), (59, 37858), (60, 37861), (69, 37909),

Gene: Duffington_52 Start: 36809, Stop: 37273, Start Num: 18
Candidate Starts for Duffington_52:
(12, 36698), (Start: 13 @36737 has 3 MA's), (Start: 18 @36809 has 60 MA's), (19, 36821), (24, 36872), (25, 36884), (26, 36893), (28, 36974), (34, 37016), (36, 37046), (39, 37088), (45, 37130), (49, 37148), (62, 37229),

Gene: Eddiemania_56 Start: 38023, Stop: 38493, Start Num: 18
Candidate Starts for Eddiemania_56:
(Start: 18 @38023 has 60 MA's), (19, 38035), (34, 38230), (36, 38260), (39, 38302), (40, 38308), (45, 38344), (59, 38434), (60, 38437), (69, 38485),

Gene: EndAve_55 Start: 37282, Stop: 37746, Start Num: 18
Candidate Starts for EndAve_55:

(Start: 18 @37282 has 60 MA's), (19, 37294), (33, 37480), (34, 37489), (36, 37519), (39, 37561), (45, 37603), (50, 37627), (61, 37699),

Gene: Fazel_54 Start: 36737, Stop: 37225, Start Num: 18
Candidate Starts for Fazel_54:
(15, 36698), (Start: 18 @36737 has 60 MA's), (19, 36749), (23, 36797), (30, 36914), (34, 36944), (39, 37016), (40, 37022), (45, 37058), (47, 37064), (70, 37175),

Gene: Figliar_52 Start: 37190, Stop: 37648, Start Num: 18
Candidate Starts for Figliar_52:
(Start: 18 @37190 has 60 MA's), (19, 37202), (25, 37265), (28, 37355), (34, 37397), (36, 37427), (39, 37469), (45, 37511), (50, 37535), (64, 37613),

Gene: Football_55 Start: 36388, Stop: 36798, Start Num: 18
Candidate Starts for Football_55:
(Start: 18 @36388 has 60 MA's), (31, 36574), (32, 36577), (34, 36592), (39, 36664),

Gene: FortCran_53 Start: 36489, Stop: 36887, Start Num: 18
Candidate Starts for FortCran_53:
(Start: 18 @36489 has 60 MA's), (28, 36657), (34, 36699), (39, 36771), (41, 36789), (54, 36864), (55, 36873),

Gene: Gill_53 Start: 36350, Stop: 36760, Start Num: 18
Candidate Starts for Gill_53:
(17, 36347), (Start: 18 @36350 has 60 MA's), (23, 36410), (24, 36413), (26, 36434), (27, 36473), (28, 36512), (34, 36554), (37, 36587), (39, 36626), (42, 36647), (57, 36737),

Gene: Glintora_55 Start: 37742, Stop: 38188, Start Num: 18
Candidate Starts for Glintora_55:
(Start: 13 @37670 has 3 MA's), (Start: 18 @37742 has 60 MA's), (28, 37907), (33, 37940), (34, 37949), (36, 37979), (39, 38021), (45, 38063), (48, 38072), (50, 38087),

Gene: Gravy_52 Start: 36023, Stop: 36433, Start Num: 18
Candidate Starts for Gravy_52:
(17, 36020), (Start: 18 @36023 has 60 MA's), (23, 36083), (24, 36086), (26, 36107), (27, 36146), (28, 36185), (34, 36227), (37, 36260), (39, 36299), (42, 36320), (57, 36410),

Gene: Gusicorn_55 Start: 37204, Stop: 37665, Start Num: 18
Candidate Starts for Gusicorn_55:
(Start: 18 @37204 has 60 MA's), (19, 37216), (34, 37411), (36, 37441), (39, 37483), (45, 37525), (61, 37618),

Gene: Hortihabitatio_54 Start: 36942, Stop: 37460, Start Num: 18
Candidate Starts for Hortihabitatio_54:
(Start: 13 @36870 has 3 MA's), (Start: 18 @36942 has 60 MA's), (19, 36954), (23, 37002), (30, 37119), (34, 37149), (39, 37221), (40, 37227), (45, 37263), (70, 37380),

Gene: Hydrus_56 Start: 37978, Stop: 38517, Start Num: 13
Candidate Starts for Hydrus_56:
(Start: 13 @37978 has 3 MA's), (Start: 18 @38050 has 60 MA's), (26, 38134), (34, 38257), (36, 38287), (39, 38329), (40, 38335), (45, 38371), (59, 38461), (60, 38464), (69, 38512),

Gene: Jodelie19_53 Start: 38594, Stop: 39052, Start Num: 18

Candidate Starts for Jodelie19_53:
(Start: 18 @38594 has 60 MA's), (19, 38606), (25, 38669), (28, 38759), (34, 38801), (36, 38831), (39, 38873), (45, 38915), (50, 38939), (64, 39017),

Gene: JulesRay_53 Start: 36516, Stop: 36926, Start Num: 18
Candidate Starts for JulesRay_53:
(Start: 18 @36516 has 60 MA's), (31, 36702), (32, 36705), (34, 36720), (39, 36792), (42, 36813), (57, 36903),

Gene: Kenosha_53 Start: 37509, Stop: 37976, Start Num: 18
Candidate Starts for Kenosha_53:
(14, 37449), (Start: 18 @37509 has 60 MA's), (21, 37536), (26, 37593), (34, 37716), (36, 37746), (39, 37788), (40, 37794), (45, 37830), (50, 37854), (59, 37920), (60, 37923), (69, 37971),

Gene: Kerry_52 Start: 36023, Stop: 36433, Start Num: 18
Candidate Starts for Kerry_52:
(17, 36020), (Start: 18 @36023 has 60 MA's), (23, 36083), (24, 36086), (26, 36107), (27, 36146), (28, 36185), (34, 36227), (37, 36260), (39, 36299), (42, 36320), (57, 36410),

Gene: Luthien_55 Start: 37280, Stop: 37744, Start Num: 18
Candidate Starts for Luthien_55:
(Start: 18 @37280 has 60 MA's), (19, 37292), (33, 37478), (34, 37487), (36, 37517), (39, 37559), (45, 37601), (50, 37625), (61, 37697),

Gene: Madvan_54 Start: 36919, Stop: 37386, Start Num: 18
Candidate Starts for Madvan_54:
(Start: 13 @36847 has 3 MA's), (Start: 18 @36919 has 60 MA's), (21, 36946), (26, 37003), (34, 37126), (36, 37156), (39, 37198), (45, 37240), (50, 37264), (59, 37330), (60, 37333), (69, 37381),

Gene: Magel_54 Start: 36254, Stop: 36676, Start Num: 18
Candidate Starts for Magel_54:
(17, 36251), (Start: 18 @36254 has 60 MA's), (23, 36314), (24, 36317), (26, 36338), (27, 36377), (28, 36416), (34, 36458), (37, 36491), (39, 36530), (42, 36551), (57, 36653),

Gene: MajinBuu_53 Start: 37216, Stop: 37680, Start Num: 18
Candidate Starts for MajinBuu_53:
(Start: 18 @37216 has 60 MA's), (19, 37228), (33, 37414), (34, 37423), (36, 37453), (39, 37495), (45, 37537), (61, 37633),

Gene: Mossy_57 Start: 39044, Stop: 39415, Start Num: 18
Candidate Starts for Mossy_57:
(7, 38843), (9, 38882), (11, 38933), (Start: 18 @39044 has 60 MA's), (34, 39251), (36, 39281), (39, 39323), (40, 39329),

Gene: Mysticmoon_54 Start: 37743, Stop: 38270, Start Num: 18
Candidate Starts for Mysticmoon_54:
(Start: 13 @37671 has 3 MA's), (Start: 18 @37743 has 60 MA's), (19, 37755), (23, 37803), (30, 37920), (34, 37950), (39, 38022), (43, 38058), (45, 38064), (47, 38070), (51, 38094), (63, 38169), (70, 38220),

Gene: Nadmeg_55 Start: 38165, Stop: 38632, Start Num: 18
Candidate Starts for Nadmeg_55:
(14, 38105), (Start: 18 @38165 has 60 MA's), (21, 38192), (26, 38249), (34, 38372), (36, 38402), (39, 38444), (40, 38450), (45, 38486), (50, 38510), (59, 38576), (60, 38579), (69, 38627),

Gene: Nithya_54 Start: 37126, Stop: 37497, Start Num: 18
Candidate Starts for Nithya_54:
(Start: 13 @37054 has 3 MA's), (Start: 18 @37126 has 60 MA's), (33, 37324), (34, 37333), (36, 37363), (39, 37405),

Gene: NoPickles_52 Start: 35688, Stop: 36098, Start Num: 18
Candidate Starts for NoPickles_52:
(17, 35685), (Start: 18 @35688 has 60 MA's), (23, 35748), (24, 35751), (26, 35772), (27, 35811), (34, 35892), (37, 35925), (39, 35964), (42, 35985), (57, 36075),

Gene: Odesza_52 Start: 36078, Stop: 36488, Start Num: 18
Candidate Starts for Odesza_52:
(17, 36075), (Start: 18 @36078 has 60 MA's), (23, 36138), (24, 36141), (26, 36162), (27, 36201), (34, 36282), (37, 36315), (39, 36354), (42, 36375), (44, 36393), (57, 36465),

Gene: OhMyWard_52 Start: 38137, Stop: 38601, Start Num: 18
Candidate Starts for OhMyWard_52:
(Start: 18 @38137 has 60 MA's), (20, 38161), (34, 38344), (36, 38374), (39, 38416), (40, 38422), (45, 38458), (50, 38482),

Gene: OlgasClover_55 Start: 38175, Stop: 38633, Start Num: 18
Candidate Starts for OlgasClover_55:
(Start: 18 @38175 has 60 MA's), (19, 38187), (25, 38250), (28, 38340), (34, 38382), (36, 38412), (39, 38454), (45, 38496), (50, 38520), (64, 38598),

Gene: Pepy6_091 Start: 46716, Stop: 47210, Start Num: 18
Candidate Starts for Pepy6_091:
(16, 46704), (Start: 18 @46716 has 60 MA's), (21, 46743), (25, 46791), (29, 46887), (32, 46905), (34, 46920), (35, 46923), (36, 46950), (38, 46956), (41, 47010), (42, 47013), (52, 47073), (53, 47094),

Gene: Perkunas_54 Start: 36360, Stop: 36770, Start Num: 18
Candidate Starts for Perkunas_54:
(1, 35874), (2, 35889), (3, 35949), (4, 35967), (5, 35979), (6, 36039), (8, 36168), (10, 36210), (Start: 18 @36360 has 60 MA's), (20, 36384), (27, 36483), (34, 36564), (36, 36594), (37, 36597), (39, 36636), (42, 36657), (57, 36747),

Gene: PerroGrande22_70 Start: 49107, Stop: 49640, Start Num: 18
Candidate Starts for PerroGrande22_70:
(16, 49095), (Start: 18 @49107 has 60 MA's), (21, 49134), (29, 49278), (32, 49296), (34, 49311), (36, 49341), (38, 49347), (41, 49401), (42, 49404), (47, 49431), (48, 49434), (51, 49455), (53, 49485), (56, 49506), (65, 49545), (66, 49554),

Gene: PestoPenguin_56 Start: 37204, Stop: 37665, Start Num: 18
Candidate Starts for PestoPenguin_56:
(Start: 18 @37204 has 60 MA's), (19, 37216), (34, 37411), (36, 37441), (39, 37483), (45, 37525), (61, 37618),

Gene: Petito_55 Start: 38180, Stop: 38590, Start Num: 18
Candidate Starts for Petito_55:
(Start: 18 @38180 has 60 MA's), (31, 38366), (32, 38369), (34, 38384), (39, 38456), (42, 38477),

Gene: Phepper_55 Start: 37181, Stop: 37648, Start Num: 18

Candidate Starts for Phepper_55:
(Start: 13 @37109 has 3 MA's), (Start: 18 @37181 has 60 MA's), (21, 37208), (26, 37265), (34, 37388), (36, 37418), (39, 37460), (40, 37466), (45, 37502), (50, 37526), (59, 37592), (60, 37595), (69, 37643),

Gene: Pherobrine_55 Start: 38033, Stop: 38560, Start Num: 18
Candidate Starts for Pherobrine_55:
(Start: 13 @37961 has 3 MA's), (Start: 18 @38033 has 60 MA's), (19, 38045), (23, 38093), (30, 38210), (34, 38240), (39, 38312), (43, 38348), (45, 38354), (47, 38360), (51, 38384), (63, 38459), (70, 38510),

Gene: Poco6_089 Start: 48918, Stop: 49439, Start Num: 18
Candidate Starts for Poco6_089:
(16, 48906), (Start: 18 @48918 has 60 MA's), (21, 48945), (29, 49089), (32, 49107), (34, 49122), (35, 49125), (36, 49152), (38, 49158), (41, 49212), (42, 49215), (48, 49245), (51, 49266), (53, 49296), (66, 49365), (68, 49380),

Gene: Rickmore_50 Start: 34982, Stop: 35440, Start Num: 18
Candidate Starts for Rickmore_50:
(Start: 13 @34910 has 3 MA's), (Start: 18 @34982 has 60 MA's), (19, 34994), (34, 35189), (36, 35219), (39, 35261), (45, 35303), (48, 35312), (50, 35327), (64, 35405),

Gene: Roney_53 Start: 36376, Stop: 36786, Start Num: 18
Candidate Starts for Roney_53:
(17, 36373), (Start: 18 @36376 has 60 MA's), (23, 36436), (24, 36439), (26, 36460), (27, 36499), (28, 36538), (34, 36580), (37, 36613), (39, 36652), (42, 36673), (57, 36763),

Gene: Runhaar_54 Start: 36981, Stop: 37448, Start Num: 18
Candidate Starts for Runhaar_54:
(14, 36921), (Start: 18 @36981 has 60 MA's), (21, 37008), (26, 37065), (34, 37188), (36, 37218), (39, 37260), (40, 37266), (45, 37302), (50, 37326), (59, 37392), (60, 37395), (69, 37443),

Gene: Schwartz33_55 Start: 37144, Stop: 37581, Start Num: 18
Candidate Starts for Schwartz33_55:
(Start: 18 @37144 has 60 MA's), (21, 37171), (34, 37348), (36, 37378),

Gene: ShaggyRogers_54 Start: 36933, Stop: 37400, Start Num: 18
Candidate Starts for ShaggyRogers_54:
(Start: 18 @36933 has 60 MA's), (19, 36945), (34, 37140), (36, 37170), (39, 37212), (45, 37254), (67, 37392),

Gene: SweetCrkHerbs_54 Start: 36034, Stop: 36432, Start Num: 18
Candidate Starts for SweetCrkHerbs_54:
(Start: 18 @36034 has 60 MA's), (28, 36202), (34, 36244), (39, 36316), (41, 36334), (54, 36409), (55, 36418),

Gene: Tairn4Wing_55 Start: 36335, Stop: 36745, Start Num: 18
Candidate Starts for Tairn4Wing_55:
(Start: 18 @36335 has 60 MA's), (31, 36521), (32, 36524), (34, 36539), (39, 36611), (42, 36632), (57, 36722),

Gene: Talon44_54 Start: 36376, Stop: 36774, Start Num: 18
Candidate Starts for Talon44_54:
(Start: 18 @36376 has 60 MA's), (28, 36544), (34, 36586), (39, 36658), (41, 36676), (54, 36751), (55, 36760),

Gene: Tanis_53 Start: 36196, Stop: 36606, Start Num: 18
Candidate Starts for Tanis_53:
(17, 36193), (Start: 18 @36196 has 60 MA's), (23, 36256), (24, 36259), (26, 36280), (27, 36319), (28, 36358), (34, 36400), (37, 36433), (39, 36472), (42, 36493), (57, 36583),

Gene: TenaciousP_54 Start: 38556, Stop: 39014, Start Num: 18
Candidate Starts for TenaciousP_54:
(Start: 18 @38556 has 60 MA's), (19, 38568), (25, 38631), (28, 38721), (34, 38763), (36, 38793), (39, 38835), (45, 38877), (50, 38901), (64, 38979),

Gene: Tonaltzin_52 Start: 37126, Stop: 37584, Start Num: 18
Candidate Starts for Tonaltzin_52:
(Start: 18 @37126 has 60 MA's), (19, 37138), (25, 37201), (28, 37291), (34, 37333), (36, 37363), (39, 37405), (45, 37447), (50, 37471), (64, 37549),

Gene: Trufflozitus_54 Start: 36858, Stop: 37268, Start Num: 18
Candidate Starts for Trufflozitus_54:
(Start: 18 @36858 has 60 MA's), (31, 37044), (32, 37047), (34, 37062), (39, 37134), (42, 37155), (57, 37245), (58, 37248),

Gene: Untouchable_55 Start: 37530, Stop: 37997, Start Num: 18
Candidate Starts for Untouchable_55:
(Start: 13 @37458 has 3 MA's), (Start: 18 @37530 has 60 MA's), (26, 37614), (34, 37737), (36, 37767), (39, 37809), (40, 37815), (45, 37851), (59, 37941), (60, 37944), (69, 37992),

Gene: Vardy_53 Start: 36877, Stop: 37338, Start Num: 18
Candidate Starts for Vardy_53:
(Start: 13 @36805 has 3 MA's), (Start: 18 @36877 has 60 MA's), (21, 36904), (26, 36961), (34, 37084), (36, 37114), (39, 37156), (40, 37162), (45, 37198), (50, 37222), (69, 37333),

Gene: Zeph_56 Start: 37958, Stop: 38485, Start Num: 13
Candidate Starts for Zeph_56:
(Start: 13 @37958 has 3 MA's), (Start: 18 @38030 has 60 MA's), (26, 38114), (34, 38237), (36, 38267), (39, 38309), (59, 38429), (60, 38432), (69, 38480),