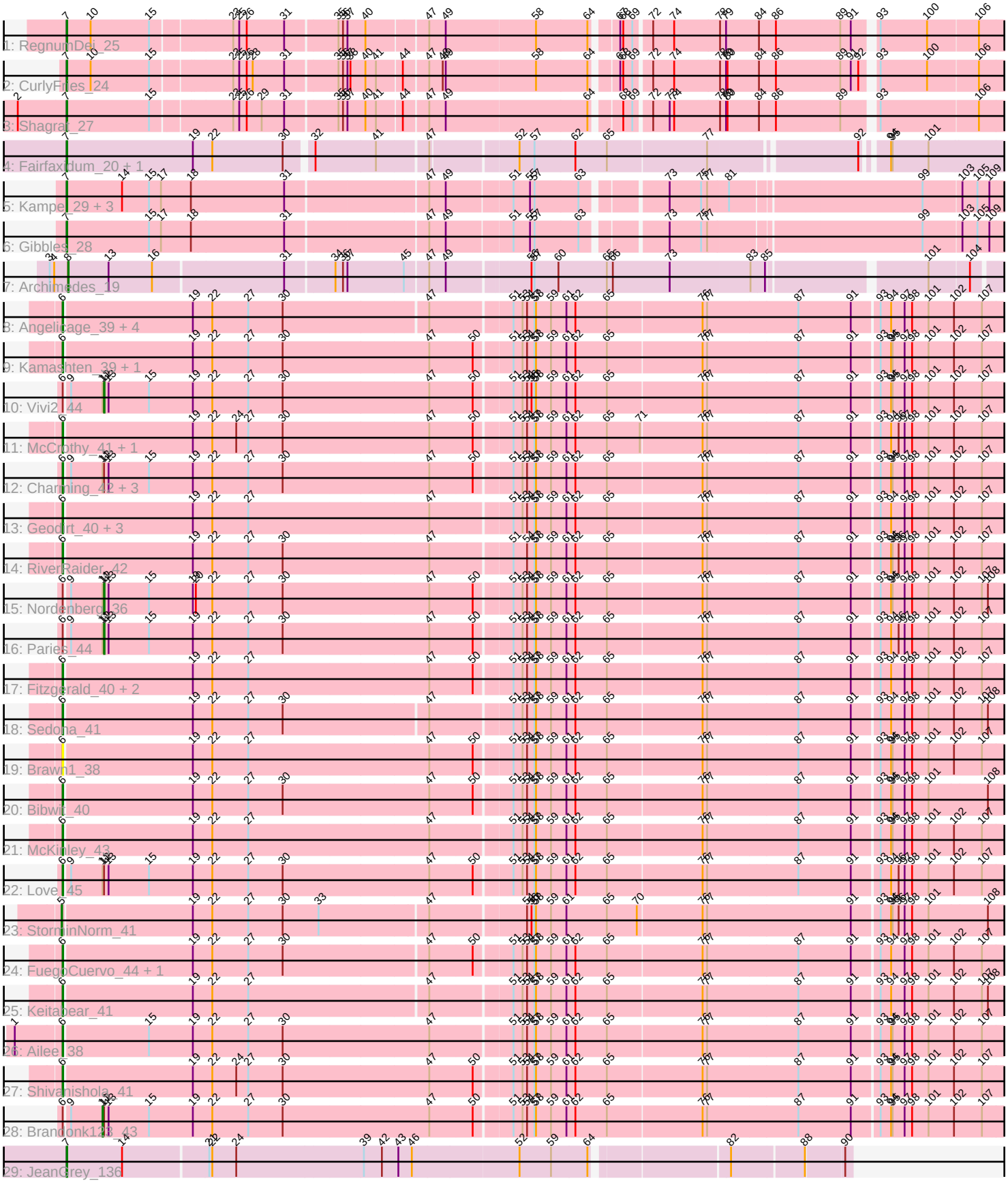
Pham 345842


1: RegnumDei_25
2: CurlyFries_24
3: Shagrat_27
4: Fairfaxdum_20 + 1
5: Kampei_29 + 3
6: Gibbles_28
7: Archimedes_19
8: Angelicage_39 + 4
9: Kamashten_39 + 1
10: Vivi2_44
11: McCrothy_41 + 1
12: Charming_42 + 3
13: Geodirt_40 + 3
14: RiverRaider_42
15: Nordenberg_36
16: Paries_44
17: Fitzgerald_40 + 2
18: Sedona_41
19: Brawn1_38
20: Bibwit_40
21: McKinley_43
22: Love_45
23: StormInNorm_41
24: FuegoCuervo_44 + 1
25: Keitabear_41
26: Ailee_38
27: Shivanishola_41
28: Brandonk128_43
29: JeanGrey_136

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 345842 Report

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

Pham number 345842 has 48 members, 2 are drafts.

Phages represented in each track:
- Track 1 : RegnumDei_25
- Track 2 : CurlyFries_24
- Track 3 : Shagrat_27
- Track 4 : Fairfaxidum_20, PrincePatrick_20
- Track 5 : Kampe_29, RobinSparkles_32, Orchid_29, PatrickStar_29
- Track 6 : Gibbles_28
- Track 7 : Archimedes_19
- Track 8 : Angelicage_39, Lennon_41, ChadMasterC_42, Sitar_41, Affeca_39
- Track 9 : Kamashten_39, Thing3_39
- Track 10 : Vivi2_44
- Track 11 : McCrothy_41, Galadriel_41
- Track 12 : Charming_42, Tangent_42, Rofo_42, BobBob_39
- Track 13 : Geodirt_40, MoontowerMania_41, Barsten_42, Stultus_40
- Track 14 : RiverRaider_42
- Track 15 : Nordenberg_36
- Track 16 : Paries_44
- Track 17 : Fitzgerald_40, Jabberwocky_40, Sanjuju_40
- Track 18 : Sedona_41
- Track 19 : Brawn1_38
- Track 20 : Bibwit_40
- Track 21 : McKinley_43
- Track 22 : Love_45
- Track 23 : StorminNorm_41
- Track 24 : FuegoCuervo_44, Kewpiedoll_41
- Track 25 : Keitabear_41
- Track 26 : Ailee_38
- Track 27 : Shivanishola_41
- Track 28 : Brandonk123_43
- Track 29 : JeanGrey_136

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 29 of the 46 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Affeca_39, Ailee_38, Angelicage_39, Barsten_42, Bibwit_40, BobBob_39, Brawn1_38, ChadMasterC_42, Charming_42, Fitzgerald_40, FuegoCuervo_44, Galadriel_41, Geodirt_40, Jabberwocky_40, Kamashten_39, Keitabear_41, Kewpiedoll_41, Lennon_41, Love_45, McCrothy_41, McKinley_43, MoontowerMania_41, RiverRaider_42, Rofo_42, Sanjuju_40, Sedona_41, Shivanishola_41, Sitar_41, Stultus_40, Tangent_42, Thing3_39,

Genes that have the "Most Annotated" start but do not call it:
• Brandonk123_43, Nordenberg_36, Paries_44, Vivi2_44,

Genes that do not have the "Most Annotated" start:
• Archimedes_19, CurlyFries_24, Fairfaxidum_20, Gibbles_28, JeanGrey_136, Kampe_29, Orchid_29, PatrickStar_29, PrincePatrick_20, RegnumDei_25, RobinSparkles_32, Shagrat_27, StorminNorm_41,

Summary by start number:

Start 5:
• Found in 1 of 48 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: StorminNorm_41 (DE1),

Start 6:
• Found in 35 of 48 (72.9%) of genes in pham
• Manual Annotations of this start: 29 of 46
• Called 88.6% of time when present
• Phage (with cluster) where this start called: Affeca_39 (DE1), Ailee_38 (DE1), Angelicage_39 (DE1), Barsten_42 (DE1), Bibwit_40 (DE1), BobBob_39 (DE1), Brawn1_38 (DE1), ChadMasterC_42 (DE1), Charming_42 (DE1), Fitzgerald_40 (DE1), FuegoCuervo_44 (DE1), Galadriel_41 (DE1), Geodirt_40 (DE1), Jabberwocky_40 (DE1), Kamashten_39 (DE1), Keitabear_41 (DE1), Kewpiedoll_41 (DE1), Lennon_41 (DE1), Love_45 (DE1), McCrothy_41 (DE1), McKinley_43 (DE1), MoontowerMania_41 (DE1), RiverRaider_42 (DE1), Rofo_42 (DE1), Sanjuju_40 (DE1), Sedona_41 (DE1), Shivanishola_41 (DE1), Sitar_41 (DE1), Stultus_40 (DE1), Tangent_42 (DE1), Thing3_39 (DE1),

Start 7:
• Found in 11 of 48 (22.9%) of genes in pham
• Manual Annotations of this start: 11 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CurlyFries_24 (CF), Fairfaxidum_20 (CV), Gibbles_28 (CX), JeanGrey_136 (singleton), Kampe_29 (CX), Orchid_29 (CX), PatrickStar_29 (CX), PrincePatrick_20 (CV), RegnumDei_25 (CF), RobinSparkles_32 (CX), Shagrat_27 (CF),

Start 8:
• Found in 1 of 48 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archimedes_19 (DA),

Start 11:
• Found in 9 of 48 (18.8%) of genes in pham
• Manual Annotations of this start: 1 of 46
• Called 11.1% of time when present
• Phage (with cluster) where this start called: Brandonk123_43 (DE1),

Start 12:
• Found in 9 of 48 (18.8%) of genes in pham
• Manual Annotations of this start: 3 of 46
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Nordenberg_36 (DE1), Paries_44 (DE1), Vivi2_44 (DE1),

Summary by clusters:

There are 6 clusters represented in this pham: singleton, DE1, CF, DA, CX, CV,

Info for manual annotations of cluster CF:
•Start number 7 was manually annotated 3 times for cluster CF.

Info for manual annotations of cluster CV:
•Start number 7 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CX:
•Start number 7 was manually annotated 5 times for cluster CX.

Info for manual annotations of cluster DA:
•Start number 8 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DE1:
•Start number 5 was manually annotated 1 time for cluster DE1.
•Start number 6 was manually annotated 29 times for cluster DE1.
•Start number 11 was manually annotated 1 time for cluster DE1.
•Start number 12 was manually annotated 3 times for cluster DE1.

Gene Information:

Gene: Affeca_39 Start: 36048, Stop: 37859, Start Num: 6
Candidate Starts for Affeca_39:
(Start: 6 @36048 has 29 MA's), (19, 36300), (22, 36339), (27, 36411), (30, 36480), (47, 36759), (51, 36906), (53, 36924), (54, 36933), (57, 36948), (58, 36951), (59, 36981), (61, 37011), (62, 37029), (65, 37092), (76, 37278), (77, 37287), (87, 37467), (91, 37569), (93, 37620), (94, 37641), (97, 37668), (98, 37683), (101, 37716), (102, 37767), (107, 37821),

Gene: Ailee_38 Start: 35934, Stop: 37754, Start Num: 6
Candidate Starts for Ailee_38:
(1, 35844), (Start: 6 @35934 has 29 MA's), (15, 36099), (19, 36186), (22, 36225), (27, 36297), (30, 36366), (47, 36654), (51, 36801), (53, 36819), (54, 36828), (57, 36843), (58, 36846), (59, 36876), (61, 36906), (62, 36924), (65, 36987), (76, 37173), (77, 37182), (87, 37362), (91, 37464), (93, 37515), (94, 37536), (95, 37539), (97, 37563), (98, 37578), (101, 37611), (102, 37662), (107, 37716),

Gene: Angelicage_39 Start: 36466, Stop: 38277, Start Num: 6
Candidate Starts for Angelicage_39:
(Start: 6 @36466 has 29 MA's), (19, 36718), (22, 36757), (27, 36829), (30, 36898), (47, 37177), (51, 37324), (53, 37342), (54, 37351), (57, 37366), (58, 37369), (59, 37399), (61, 37429), (62, 37447), (65, 37510), (76, 37696), (77, 37705), (87, 37885), (91, 37987), (93, 38038), (94, 38059), (97, 38086), (98, 38101), (101, 38134), (102, 38185), (107, 38239),

Gene: Archimedes_19 Start: 17079, Stop: 18842, Start Num: 8
Candidate Starts for Archimedes_19:
(3, 17043), (4, 17052), (Start: 8 @17079 has 1 MA's), (13, 17160), (16, 17244), (31, 17499), (34, 17589), (36, 17604), (37, 17613), (45, 17724), (47, 17766), (49, 17793), (56, 17943), (57, 17949), (60, 17997), (65, 18093), (66, 18105), (73, 18219), (83, 18378), (85, 18405), (101, 18690), (104, 18768),

Gene: Barsten_42 Start: 36609, Stop: 38429, Start Num: 6
Candidate Starts for Barsten_42:
(Start: 6 @36609 has 29 MA's), (19, 36861), (22, 36900), (27, 36972), (47, 37329), (51, 37476), (53, 37494), (54, 37503), (57, 37518), (58, 37521), (59, 37551), (61, 37581), (62, 37599), (65, 37662), (76, 37848), (77, 37857), (87, 38037), (91, 38139), (93, 38190), (94, 38211), (97, 38238), (98, 38253), (101, 38286), (102, 38337), (107, 38391),

Gene: Bibwit_40 Start: 35867, Stop: 37684, Start Num: 6
Candidate Starts for Bibwit_40:
(Start: 6 @35867 has 29 MA's), (19, 36119), (22, 36158), (27, 36230), (30, 36299), (47, 36587), (50, 36668), (51, 36734), (53, 36752), (54, 36761), (57, 36776), (58, 36779), (59, 36809), (61, 36839), (62, 36857), (65, 36920), (76, 37106), (77, 37115), (87, 37295), (91, 37397), (93, 37445), (94, 37466), (95, 37469), (97, 37493), (98, 37508), (101, 37541), (108, 37658),

Gene: BobBob_39 Start: 35728, Stop: 37548, Start Num: 6
Candidate Starts for BobBob_39:
(Start: 6 @35728 has 29 MA's), (9, 35737), (Start: 11 @35800 has 1 MA's), (Start: 12 @35803 has 3 MA's), (13, 35812), (15, 35893), (19, 35980), (22, 36019), (27, 36091), (30, 36160), (47, 36448), (50, 36529), (51, 36595), (53, 36613), (54, 36622), (57, 36637), (58, 36640), (59, 36670), (61, 36700), (62, 36718), (65, 36781), (76, 36967), (77, 36976), (87, 37156), (91, 37258), (93, 37309), (94, 37330), (95, 37333), (97, 37357), (98, 37372), (101, 37405), (102, 37456), (107, 37510),

Gene: Brandonk123_43 Start: 36935, Stop: 38683, Start Num: 11
Candidate Starts for Brandonk123_43:
(Start: 6 @36863 has 29 MA's), (9, 36872), (Start: 11 @36935 has 1 MA's), (Start: 12 @36938 has 3 MA's), (13, 36947), (15, 37028), (19, 37115), (22, 37154), (27, 37226), (30, 37295), (47, 37583), (50, 37664), (51, 37730), (53, 37748), (54, 37757), (57, 37772), (58, 37775), (59, 37805), (61, 37835), (62, 37853), (65, 37916), (76, 38102), (77, 38111), (87, 38291), (91, 38393), (93, 38444), (94, 38465), (95, 38468), (97, 38492), (98, 38507), (101, 38540), (102, 38591), (107, 38645),

Gene: Brawn1_38 Start: 35934, Stop: 37754, Start Num: 6
Candidate Starts for Brawn1_38:
(Start: 6 @35934 has 29 MA's), (19, 36186), (22, 36225), (27, 36297), (47, 36654), (50, 36735), (51, 36801), (53, 36819), (54, 36828), (57, 36843), (58, 36846), (59, 36876), (61, 36906), (62, 36924), (65, 36987), (76, 37173), (77, 37182), (87, 37362), (91, 37464), (93, 37515), (94, 37536), (95, 37539), (97, 37563), (98, 37578), (101, 37611), (102, 37662), (107, 37716),

Gene: ChadMasterC_42 Start: 38008, Stop: 39828, Start Num: 6
Candidate Starts for ChadMasterC_42:

(Start: 6 @38008 has 29 MA's), (19, 38260), (22, 38299), (27, 38371), (30, 38440), (47, 38728), (51, 38875), (53, 38893), (54, 38902), (57, 38917), (58, 38920), (59, 38950), (61, 38980), (62, 38998), (65, 39061), (76, 39247), (77, 39256), (87, 39436), (91, 39538), (93, 39589), (94, 39610), (97, 39637), (98, 39652), (101, 39685), (102, 39736), (107, 39790),

Gene: Charming_42 Start: 36364, Stop: 38184, Start Num: 6
Candidate Starts for Charming_42:
(Start: 6 @36364 has 29 MA's), (9, 36373), (Start: 11 @36436 has 1 MA's), (Start: 12 @36439 has 3 MA's), (13, 36448), (15, 36529), (19, 36616), (22, 36655), (27, 36727), (30, 36796), (47, 37084), (50, 37165), (51, 37231), (53, 37249), (54, 37258), (57, 37273), (58, 37276), (59, 37306), (61, 37336), (62, 37354), (65, 37417), (76, 37603), (77, 37612), (87, 37792), (91, 37894), (93, 37945), (94, 37966), (95, 37969), (97, 37993), (98, 38008), (101, 38041), (102, 38092), (107, 38146),

Gene: CurlyFries_24 Start: 23329, Stop: 25089, Start Num: 7
Candidate Starts for CurlyFries_24:
(Start: 7 @23329 has 11 MA's), (10, 23377), (15, 23491), (23, 23641), (25, 23653), (26, 23668), (28, 23680), (31, 23743), (35, 23839), (36, 23848), (37, 23857), (38, 23863), (40, 23893), (41, 23914), (44, 23962), (47, 24004), (48, 24025), (49, 24031), (58, 24208), (64, 24310), (67, 24352), (68, 24358), (69, 24376), (72, 24406), (74, 24448), (78, 24535), (79, 24547), (80, 24550), (84, 24613), (86, 24646), (89, 24772), (91, 24793), (92, 24808), (93, 24826), (100, 24916), (106, 25015),

Gene: Fairfaxidum_20 Start: 18487, Stop: 20235, Start Num: 7
Candidate Starts for Fairfaxidum_20:
(Start: 7 @18487 has 11 MA's), (19, 18739), (22, 18778), (30, 18919), (32, 18964), (41, 19081), (47, 19174), (52, 19327), (57, 19357), (62, 19438), (65, 19501), (77, 19696), (92, 19969), (94, 20008), (95, 20011), (101, 20083),

Gene: Fitzgerald_40 Start: 37266, Stop: 39086, Start Num: 6
Candidate Starts for Fitzgerald_40:
(Start: 6 @37266 has 29 MA's), (19, 37518), (22, 37557), (27, 37629), (47, 37986), (50, 38067), (51, 38133), (53, 38151), (54, 38160), (57, 38175), (58, 38178), (59, 38208), (61, 38238), (62, 38256), (65, 38319), (76, 38505), (77, 38514), (87, 38694), (91, 38796), (93, 38847), (94, 38868), (97, 38895), (98, 38910), (101, 38943), (102, 38994), (107, 39048),

Gene: FuegoCuervo_44 Start: 35705, Stop: 37516, Start Num: 6
Candidate Starts for FuegoCuervo_44:
(Start: 6 @35705 has 29 MA's), (19, 35957), (22, 35996), (27, 36068), (30, 36137), (47, 36416), (50, 36497), (51, 36563), (53, 36581), (54, 36590), (57, 36605), (58, 36608), (59, 36638), (61, 36668), (62, 36686), (65, 36749), (76, 36935), (77, 36944), (87, 37124), (91, 37226), (93, 37277), (94, 37298), (97, 37325), (98, 37340), (101, 37373), (102, 37424), (107, 37478),

Gene: Galadriel_41 Start: 36631, Stop: 38451, Start Num: 6
Candidate Starts for Galadriel_41:
(Start: 6 @36631 has 29 MA's), (19, 36883), (22, 36922), (24, 36970), (27, 36994), (30, 37063), (47, 37351), (50, 37432), (51, 37498), (53, 37516), (54, 37525), (57, 37540), (58, 37543), (59, 37573), (61, 37603), (62, 37621), (65, 37684), (71, 37750), (76, 37870), (77, 37879), (87, 38059), (91, 38161), (93, 38212), (94, 38233), (96, 38248), (97, 38260), (98, 38275), (101, 38308), (102, 38359), (107, 38413),

Gene: Geodirt_40 Start: 37244, Stop: 39064, Start Num: 6
Candidate Starts for Geodirt_40:
(Start: 6 @37244 has 29 MA's), (19, 37496), (22, 37535), (27, 37607), (47, 37964), (51, 38111), (53, 38129), (54, 38138), (57, 38153), (58, 38156), (59, 38186), (61, 38216), (62, 38234), (65, 38297), (76, 38483), (77, 38492), (87, 38672), (91, 38774), (93, 38825), (94, 38846), (97, 38873), (98, 38888), (101,

38921), (102, 38972), (107, 39026),

Gene: Gibbles_28 Start: 33502, Stop: 35277, Start Num: 7
Candidate Starts for Gibbles_28:
(Start: 7 @33502 has 11 MA's), (15, 33664), (17, 33688), (18, 33748), (31, 33931), (47, 34192), (49, 34222), (51, 34348), (55, 34381), (57, 34390), (63, 34477), (73, 34624), (75, 34687), (77, 34699), (99, 35098), (103, 35173), (105, 35203), (109, 35227),

Gene: Jabberwocky_40 Start: 37670, Stop: 39490, Start Num: 6
Candidate Starts for Jabberwocky_40:
(Start: 6 @37670 has 29 MA's), (19, 37922), (22, 37961), (27, 38033), (47, 38390), (50, 38471), (51, 38537), (53, 38555), (54, 38564), (57, 38579), (58, 38582), (59, 38612), (61, 38642), (62, 38660), (65, 38723), (76, 38909), (77, 38918), (87, 39098), (91, 39200), (93, 39251), (94, 39272), (97, 39299), (98, 39314), (101, 39347), (102, 39398), (107, 39452),

Gene: JeanGrey_136 Start: 104169, Stop: 105656, Start Num: 7
Candidate Starts for JeanGrey_136:
(Start: 7 @104169 has 11 MA's), (14, 104277), (21, 104442), (22, 104448), (24, 104493), (39, 104742), (42, 104778), (43, 104811), (46, 104838), (52, 105048), (59, 105111), (64, 105183), (82, 105432), (88, 105570), (90, 105642),

Gene: Kamashten_39 Start: 35604, Stop: 37424, Start Num: 6
Candidate Starts for Kamashten_39:
(Start: 6 @35604 has 29 MA's), (19, 35856), (22, 35895), (27, 35967), (30, 36036), (47, 36324), (50, 36405), (51, 36471), (53, 36489), (54, 36498), (57, 36513), (58, 36516), (59, 36546), (61, 36576), (62, 36594), (65, 36657), (76, 36843), (77, 36852), (87, 37032), (91, 37134), (93, 37185), (94, 37206), (95, 37209), (97, 37233), (98, 37248), (101, 37281), (102, 37332), (107, 37386),

Gene: Kampe_29 Start: 33363, Stop: 35138, Start Num: 7
Candidate Starts for Kampe_29:
(Start: 7 @33363 has 11 MA's), (14, 33471), (15, 33525), (17, 33549), (18, 33609), (31, 33792), (47, 34053), (49, 34083), (51, 34209), (55, 34242), (57, 34251), (63, 34338), (73, 34485), (75, 34548), (77, 34560), (81, 34599), (99, 34959), (103, 35034), (105, 35064), (109, 35088),

Gene: Keitabear_41 Start: 37574, Stop: 39385, Start Num: 6
Candidate Starts for Keitabear_41:
(Start: 6 @37574 has 29 MA's), (19, 37826), (22, 37865), (27, 37937), (47, 38285), (51, 38432), (53, 38450), (54, 38459), (57, 38474), (58, 38477), (59, 38507), (61, 38537), (62, 38555), (65, 38618), (76, 38804), (77, 38813), (87, 38993), (91, 39095), (93, 39146), (94, 39167), (97, 39194), (98, 39209), (101, 39242), (102, 39293), (107, 39347), (108, 39359),

Gene: Kewpiedoll_41 Start: 36546, Stop: 38366, Start Num: 6
Candidate Starts for Kewpiedoll_41:
(Start: 6 @36546 has 29 MA's), (19, 36798), (22, 36837), (27, 36909), (30, 36978), (47, 37266), (50, 37347), (51, 37413), (53, 37431), (54, 37440), (57, 37455), (58, 37458), (59, 37488), (61, 37518), (62, 37536), (65, 37599), (76, 37785), (77, 37794), (87, 37974), (91, 38076), (93, 38127), (94, 38148), (97, 38175), (98, 38190), (101, 38223), (102, 38274), (107, 38328),

Gene: Lennon_41 Start: 37361, Stop: 39172, Start Num: 6
Candidate Starts for Lennon_41:
(Start: 6 @37361 has 29 MA's), (19, 37613), (22, 37652), (27, 37724), (30, 37793), (47, 38072), (51, 38219), (53, 38237), (54, 38246), (57, 38261), (58, 38264), (59, 38294), (61, 38324), (62, 38342), (65, 38405), (76, 38591), (77, 38600), (87, 38780), (91, 38882), (93, 38933), (94, 38954), (97, 38981), (98,

38996), (101, 39029), (102, 39080), (107, 39134),

Gene: Love_45 Start: 37797, Stop: 39617, Start Num: 6
Candidate Starts for Love_45:
(Start: 6 @37797 has 29 MA's), (9, 37806), (Start: 11 @37869 has 1 MA's), (Start: 12 @37872 has 3 MA's), (13, 37881), (15, 37962), (19, 38049), (22, 38088), (27, 38160), (30, 38229), (47, 38517), (50, 38598), (51, 38664), (53, 38682), (54, 38691), (57, 38706), (58, 38709), (59, 38739), (61, 38769), (62, 38787), (65, 38850), (76, 39036), (77, 39045), (87, 39225), (91, 39327), (93, 39378), (94, 39399), (96, 39414), (97, 39426), (98, 39441), (101, 39474), (102, 39525), (107, 39579),

Gene: McCrothy_41 Start: 36955, Stop: 38775, Start Num: 6
Candidate Starts for McCrothy_41:
(Start: 6 @36955 has 29 MA's), (19, 37207), (22, 37246), (24, 37294), (27, 37318), (30, 37387), (47, 37675), (50, 37756), (51, 37822), (53, 37840), (54, 37849), (57, 37864), (58, 37867), (59, 37897), (61, 37927), (62, 37945), (65, 38008), (71, 38074), (76, 38194), (77, 38203), (87, 38383), (91, 38485), (93, 38536), (94, 38557), (96, 38572), (97, 38584), (98, 38599), (101, 38632), (102, 38683), (107, 38737),

Gene: McKinley_43 Start: 37170, Stop: 38990, Start Num: 6
Candidate Starts for McKinley_43:
(Start: 6 @37170 has 29 MA's), (19, 37422), (22, 37461), (27, 37533), (47, 37890), (51, 38037), (53, 38055), (54, 38064), (57, 38079), (58, 38082), (59, 38112), (61, 38142), (62, 38160), (65, 38223), (76, 38409), (77, 38418), (87, 38598), (91, 38700), (93, 38751), (94, 38772), (95, 38775), (97, 38799), (98, 38814), (101, 38847), (102, 38898), (107, 38952),

Gene: MoontowerMania_41 Start: 37005, Stop: 38825, Start Num: 6
Candidate Starts for MoontowerMania_41:
(Start: 6 @37005 has 29 MA's), (19, 37257), (22, 37296), (27, 37368), (47, 37725), (51, 37872), (53, 37890), (54, 37899), (57, 37914), (58, 37917), (59, 37947), (61, 37977), (62, 37995), (65, 38058), (76, 38244), (77, 38253), (87, 38433), (91, 38535), (93, 38586), (94, 38607), (97, 38634), (98, 38649), (101, 38682), (102, 38733), (107, 38787),

Gene: Nordenberg_36 Start: 36065, Stop: 37810, Start Num: 12
Candidate Starts for Nordenberg_36:
(Start: 6 @35990 has 29 MA's), (9, 35999), (Start: 11 @36062 has 1 MA's), (Start: 12 @36065 has 3 MA's), (13, 36074), (15, 36155), (19, 36242), (20, 36248), (22, 36281), (27, 36353), (30, 36422), (47, 36710), (50, 36791), (51, 36857), (53, 36875), (54, 36884), (57, 36899), (58, 36902), (59, 36932), (61, 36962), (62, 36980), (65, 37043), (76, 37229), (77, 37238), (87, 37418), (91, 37520), (93, 37571), (94, 37592), (95, 37595), (97, 37619), (98, 37634), (101, 37667), (102, 37718), (107, 37772), (108, 37784),

Gene: Orchid_29 Start: 33363, Stop: 35138, Start Num: 7
Candidate Starts for Orchid_29:
(Start: 7 @33363 has 11 MA's), (14, 33471), (15, 33525), (17, 33549), (18, 33609), (31, 33792), (47, 34053), (49, 34083), (51, 34209), (55, 34242), (57, 34251), (63, 34338), (73, 34485), (75, 34548), (77, 34560), (81, 34599), (99, 34959), (103, 35034), (105, 35064), (109, 35088),

Gene: Paries_44 Start: 37534, Stop: 39279, Start Num: 12
Candidate Starts for Paries_44:
(Start: 6 @37459 has 29 MA's), (9, 37468), (Start: 11 @37531 has 1 MA's), (Start: 12 @37534 has 3 MA's), (13, 37543), (15, 37624), (19, 37711), (22, 37750), (27, 37822), (30, 37891), (47, 38179), (50, 38260), (51, 38326), (53, 38344), (54, 38353), (57, 38368), (58, 38371), (59, 38401), (61, 38431), (62, 38449), (65, 38512), (76, 38698), (77, 38707), (87, 38887), (91, 38989), (93, 39040), (94, 39061), (96, 39076), (97, 39088), (98, 39103), (101, 39136), (102, 39187), (107, 39241),

Gene: PatrickStar_29 Start: 33363, Stop: 35138, Start Num: 7
Candidate Starts for PatrickStar_29:
(Start: 7 @33363 has 11 MA's), (14, 33471), (15, 33525), (17, 33549), (18, 33609), (31, 33792), (47, 34053), (49, 34083), (51, 34209), (55, 34242), (57, 34251), (63, 34338), (73, 34485), (75, 34548), (77, 34560), (81, 34599), (99, 34959), (103, 35034), (105, 35064), (109, 35088),

Gene: PrincePatrick_20 Start: 18483, Stop: 20231, Start Num: 7
Candidate Starts for PrincePatrick_20:
(Start: 7 @18483 has 11 MA's), (19, 18735), (22, 18774), (30, 18915), (32, 18960), (41, 19077), (47, 19170), (52, 19323), (57, 19353), (62, 19434), (65, 19497), (77, 19692), (92, 19965), (94, 20004), (95, 20007), (101, 20079),

Gene: RegnumDei_25 Start: 24081, Stop: 25841, Start Num: 7
Candidate Starts for RegnumDei_25:
(Start: 7 @24081 has 11 MA's), (10, 24129), (15, 24243), (23, 24393), (25, 24405), (26, 24420), (31, 24495), (35, 24591), (36, 24600), (37, 24609), (40, 24645), (47, 24756), (49, 24783), (58, 24960), (64, 25062), (67, 25104), (68, 25110), (69, 25128), (72, 25158), (74, 25200), (78, 25287), (79, 25299), (84, 25365), (86, 25398), (89, 25524), (91, 25545), (93, 25578), (100, 25668), (106, 25767),

Gene: RiverRaider_42 Start: 35486, Stop: 37306, Start Num: 6
Candidate Starts for RiverRaider_42:
(Start: 6 @35486 has 29 MA's), (19, 35738), (22, 35777), (27, 35849), (30, 35918), (47, 36206), (51, 36353), (54, 36380), (57, 36395), (58, 36398), (59, 36428), (61, 36458), (62, 36476), (65, 36539), (76, 36725), (77, 36734), (87, 36914), (91, 37016), (93, 37067), (94, 37088), (95, 37091), (96, 37103), (97, 37115), (98, 37130), (101, 37163), (102, 37214), (107, 37268),

Gene: RobinSparkles_32 Start: 34280, Stop: 36055, Start Num: 7
Candidate Starts for RobinSparkles_32:
(Start: 7 @34280 has 11 MA's), (14, 34388), (15, 34442), (17, 34466), (18, 34526), (31, 34709), (47, 34970), (49, 35000), (51, 35126), (55, 35159), (57, 35168), (63, 35255), (73, 35402), (75, 35465), (77, 35477), (81, 35516), (99, 35876), (103, 35951), (105, 35981), (109, 36005),

Gene: Rofo_42 Start: 36785, Stop: 38605, Start Num: 6
Candidate Starts for Rofo_42:
(Start: 6 @36785 has 29 MA's), (9, 36794), (Start: 11 @36857 has 1 MA's), (Start: 12 @36860 has 3 MA's), (13, 36869), (15, 36950), (19, 37037), (22, 37076), (27, 37148), (30, 37217), (47, 37505), (50, 37586), (51, 37652), (53, 37670), (54, 37679), (57, 37694), (58, 37697), (59, 37727), (61, 37757), (62, 37775), (65, 37838), (76, 38024), (77, 38033), (87, 38213), (91, 38315), (93, 38366), (94, 38387), (95, 38390), (97, 38414), (98, 38429), (101, 38462), (102, 38513), (107, 38567),

Gene: Sanjuju_40 Start: 37399, Stop: 39219, Start Num: 6
Candidate Starts for Sanjuju_40:
(Start: 6 @37399 has 29 MA's), (19, 37651), (22, 37690), (27, 37762), (47, 38119), (50, 38200), (51, 38266), (53, 38284), (54, 38293), (57, 38308), (58, 38311), (59, 38341), (61, 38371), (62, 38389), (65, 38452), (76, 38638), (77, 38647), (87, 38827), (91, 38929), (93, 38980), (94, 39001), (97, 39028), (98, 39043), (101, 39076), (102, 39127), (107, 39181),

Gene: Sedona_41 Start: 37310, Stop: 39121, Start Num: 6
Candidate Starts for Sedona_41:
(Start: 6 @37310 has 29 MA's), (19, 37562), (22, 37601), (27, 37673), (30, 37742), (47, 38021), (51, 38168), (53, 38186), (54, 38195), (57, 38210), (58, 38213), (59, 38243), (61, 38273), (62, 38291), (65, 38354), (76, 38540), (77, 38549), (87, 38729), (91, 38831), (93, 38882), (94, 38903), (97, 38930), (98, 38945), (101, 38978), (102, 39029), (107, 39083), (108, 39095),

Gene: Shagrat_27 Start: 25305, Stop: 27068, Start Num: 7
Candidate Starts for Shagrat_27:
(2, 25209), (Start: 7 @25305 has 11 MA's), (15, 25467), (23, 25617), (25, 25629), (26, 25644), (29, 25674), (31, 25719), (35, 25815), (36, 25824), (37, 25833), (40, 25869), (41, 25890), (44, 25938), (47, 25980), (49, 26010), (64, 26289), (68, 26337), (69, 26355), (72, 26385), (73, 26418), (74, 26427), (78, 26514), (79, 26526), (80, 26529), (84, 26592), (86, 26625), (89, 26751), (93, 26805), (106, 26994),

Gene: Shivanishola_41 Start: 35666, Stop: 37486, Start Num: 6
Candidate Starts for Shivanishola_41:
(Start: 6 @35666 has 29 MA's), (19, 35918), (22, 35957), (24, 36005), (27, 36029), (30, 36098), (47, 36386), (50, 36467), (51, 36533), (53, 36551), (54, 36560), (57, 36575), (58, 36578), (59, 36608), (61, 36638), (62, 36656), (65, 36719), (76, 36905), (77, 36914), (87, 37094), (91, 37196), (93, 37247), (94, 37268), (95, 37271), (97, 37295), (98, 37310), (101, 37343), (102, 37394), (107, 37448),

Gene: Sitar_41 Start: 37361, Stop: 39172, Start Num: 6
Candidate Starts for Sitar_41:
(Start: 6 @37361 has 29 MA's), (19, 37613), (22, 37652), (27, 37724), (30, 37793), (47, 38072), (51, 38219), (53, 38237), (54, 38246), (57, 38261), (58, 38264), (59, 38294), (61, 38324), (62, 38342), (65, 38405), (76, 38591), (77, 38600), (87, 38780), (91, 38882), (93, 38933), (94, 38954), (97, 38981), (98, 38996), (101, 39029), (102, 39080), (107, 39134),

Gene: StorminNorm_41 Start: 36006, Stop: 37814, Start Num: 5
Candidate Starts for StorminNorm_41:
(Start: 5 @36006 has 1 MA's), (19, 36261), (22, 36300), (27, 36372), (30, 36441), (33, 36513), (47, 36720), (54, 36891), (56, 36900), (57, 36906), (58, 36909), (59, 36939), (61, 36969), (65, 37050), (70, 37110), (76, 37236), (77, 37245), (91, 37527), (93, 37575), (94, 37596), (95, 37599), (96, 37611), (97, 37623), (98, 37638), (101, 37671), (108, 37788),

Gene: Stultus_40 Start: 36311, Stop: 38122, Start Num: 6
Candidate Starts for Stultus_40:
(Start: 6 @36311 has 29 MA's), (19, 36563), (22, 36602), (27, 36674), (47, 37022), (51, 37169), (53, 37187), (54, 37196), (57, 37211), (58, 37214), (59, 37244), (61, 37274), (62, 37292), (65, 37355), (76, 37541), (77, 37550), (87, 37730), (91, 37832), (93, 37883), (94, 37904), (97, 37931), (98, 37946), (101, 37979), (102, 38030), (107, 38084),

Gene: Tangent_42 Start: 36376, Stop: 38196, Start Num: 6
Candidate Starts for Tangent_42:
(Start: 6 @36376 has 29 MA's), (9, 36385), (Start: 11 @36448 has 1 MA's), (Start: 12 @36451 has 3 MA's), (13, 36460), (15, 36541), (19, 36628), (22, 36667), (27, 36739), (30, 36808), (47, 37096), (50, 37177), (51, 37243), (53, 37261), (54, 37270), (57, 37285), (58, 37288), (59, 37318), (61, 37348), (62, 37366), (65, 37429), (76, 37615), (77, 37624), (87, 37804), (91, 37906), (93, 37957), (94, 37978), (95, 37981), (97, 38005), (98, 38020), (101, 38053), (102, 38104), (107, 38158),

Gene: Thing3_39 Start: 35604, Stop: 37424, Start Num: 6
Candidate Starts for Thing3_39:
(Start: 6 @35604 has 29 MA's), (19, 35856), (22, 35895), (27, 35967), (30, 36036), (47, 36324), (50, 36405), (51, 36471), (53, 36489), (54, 36498), (57, 36513), (58, 36516), (59, 36546), (61, 36576), (62, 36594), (65, 36657), (76, 36843), (77, 36852), (87, 37032), (91, 37134), (93, 37185), (94, 37206), (95, 37209), (97, 37233), (98, 37248), (101, 37281), (102, 37332), (107, 37386),

Gene: Vivi2_44 Start: 37477, Stop: 39222, Start Num: 12
Candidate Starts for Vivi2_44:

(Start: 6 @37402 has 29 MA's), (9, 37411), (Start: 11 @37474 has 1 MA's), (Start: 12 @37477 has 3 MA's), (13, 37486), (15, 37567), (19, 37654), (22, 37693), (27, 37765), (30, 37834), (47, 38122), (50, 38203), (51, 38269), (53, 38287), (54, 38296), (56, 38305), (57, 38311), (58, 38314), (59, 38344), (61, 38374), (62, 38392), (65, 38455), (76, 38641), (77, 38650), (87, 38830), (91, 38932), (93, 38983), (94, 39004), (95, 39007), (97, 39031), (98, 39046), (101, 39079), (102, 39130), (107, 39184),