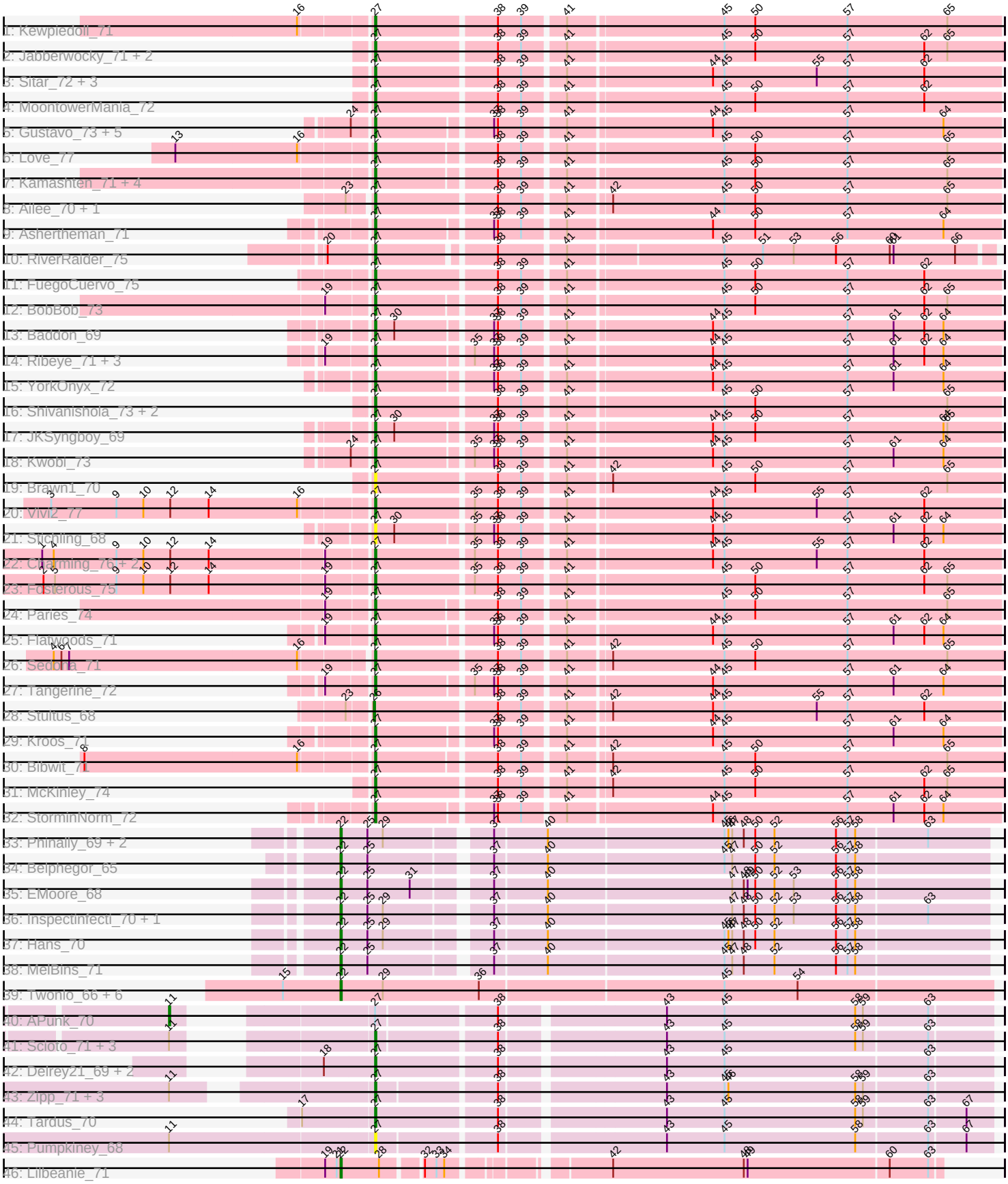
Pham 347511


1: Kewpiedoll_71
2: Jabberwocky_71 + 2
3: Sitar_72 + 3
4: MoontowerMania_72
5: Gustavo_73 + 5
6: Love_77
7: Kamashten_71 + 4
8: Allee_70 + 1
9: Ashertheman_71
10: RiverRaider_75
11: FuegoCuervo_75
12: BobBob_73
13: Baddon_69
14: Ribeye_71 + 3
15: YorkOnyx_72
16: Shivanishola_73 + 2
17: JKSyngboy_69
18: Kwobi_73
19: Brawn1_70
20: Vivi2_77
21: Stickling_68
22: Charming_76 + 2
23: Fosterous_75
24: Paries_74
25: Flatwoods_71
26: Sedona_71
27: Tangerine_72
28: Stultus_68
29: Kroos_71
30: Bibwit_71
31: McKinley_74
32: StorminNorm_72
33: Phinally_69 + 2
34: Belphegor_65
35: EMoore_68
36: Inspectinfecti_70 + 1
37: Hans_70
38: MelBins_71
39: Twonio_66 + 6
40: APunk_70
41: Scioto_71 + 3
42: Delrey21_69 + 2
43: Zipp_71 + 3
44: Tardus_70
45: Pumpkiney_68
46: Lilbeanie_71

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 347511 Report

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

Pham number 347511 has 85 members, 5 are drafts.

Phages represented in each track:
- Track 1 : Kewpiedoll_71
- Track 2 : Jabberwocky_71, Brandonk123_77, Fitzgerald_71
- Track 3 : Sitar_72, Angelicage_71, Affeca_73, Sanjuju_71
- Track 4 : MoontowerMania_72
- Track 5 : Gustavo_73, Baumdotcom_69, SchottB_69, Saronaya_73, Gaea_72, LilHam_65
- Track 6 : Love_77
- Track 7 : Kamashten_71, Barsten_73, Thing3_71, Galadriel_73, McCrothy_71
- Track 8 : Ailee_70, Lennon_72
- Track 9 : Ashertheman_71
- Track 10 : RiverRaider_75
- Track 11 : FuegoCuervo_75
- Track 12 : BobBob_73
- Track 13 : Baddon_69
- Track 14 : Ribeye_71, Bizzy_72, Derg_65, Tycho_70
- Track 15 : YorkOnyx_72
- Track 16 : Shivanishola_73, Geodirt_71, ChadMasterC_72
- Track 17 : JKSyngboy_69
- Track 18 : Kwobi_73
- Track 19 : Brawn1_70
- Track 20 : Vivi2_77
- Track 21 : Stichling_68
- Track 22 : Charming_76, Rofo_73, Tangent_75
- Track 23 : Fosterous_75
- Track 24 : Paries_74
- Track 25 : Flatwoods_71
- Track 26 : Sedona_71
- Track 27 : Tangerine_72
- Track 28 : Stultus_68
- Track 29 : Kroos_71
- Track 30 : Bibwit_71
- Track 31 : McKinley_74
- Track 32 : StorminNorm_72
- Track 33 : Phinally_69, Leonard_69, Phauci_61
- Track 34 : Belphegor_65
- Track 35 : EMoore_68
- Track 36 : Inspectinfecti_70, Ali17_66

• Track 37 : Hans_70
• Track 38 : MelBins_71
• Track 39 : Twonlo_66, GTE6_69, Tiamoceli_67, EdmundFerry_66, Chickadee_68, Kwekel_68, RoadKill_65
• Track 40 : APunk_70
• Track 41 : Scioto_71, Natkenzie_70, Abblin_70, Sampson_72
• Track 42 : Delrey21_69, Verity_69, DoctorFroggo_69
• Track 43 : Zipp_71, BigHunkinEater_71, ViaConlectus_69, Zitch_72
• Track 44 : Tardus_70
• Track 45 : Pumpkiney_68
• Track 46 : Lilbeanie_71

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

The start number called the most often in the published annotations is 27, it was called in 62 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abblin_70, Affeca_73, Ailee_70, Angelicage_71, Ashertheman_71, Baddon_69, Barsten_73, Baumdotcom_69, Bibwit_71, BigHunkinEater_71, Bizzy_72, BobBob_73, Brandonk123_77, Brawn1_70, ChadMasterC_72, Charming_76, Delrey21_69, Derg_65, DoctorFroggo_69, Fitzgerald_71, Flatwoods_71, Fosterous_75, FuegoCuervo_75, Gaea_72, Galadriel_73, Geodirt_71, Gustavo_73, JKSyngboy_69, Jabberwocky_71, Kamashten_71, Kewpiedoll_71, Kroos_71, Kwobi_73, Lennon_72, LilHam_65, Love_77, McCrothy_71, McKinley_74, MoontowerMania_72, Natkenzie_70, Paries_74, Pumpkiney_68, Ribeye_71, RiverRaider_75, Rofo_73, Sampson_72, Sanjuju_71, Saronaya_73, SchottB_69, Scioto_71, Sedona_71, Shivanishola_73, Sitar_72, Stichling_68, StorminNorm_72, Tangent_75, Tangerine_72, Tardus_70, Thing3_71, Tycho_70, Verity_69, ViaConlectus_69, Vivi2_77, YorkOnyx_72, Zipp_71, Zitch_72,

Genes that have the "Most Annotated" start but do not call it:
• APunk_70,

Genes that do not have the "Most Annotated" start:
• Ali17_66, Belphegor_65, Chickadee_68, EMoore_68, EdmundFerry_66, GTE6_69, Hans_70, Inspectinfecti_70, Kwekel_68, Leonard_69, Lilbeanie_71, MelBins_71, Phauci_61, Phinally_69, RoadKill_65, Stultus_68, Tiamoceli_67, Twonlo_66,

Summary by start number:

Start 11:
• Found in 10 of 85 (11.8%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 10.0% of time when present
• Phage (with cluster) where this start called: APunk_70 (DE4),

Start 22:
• Found in 17 of 85 (20.0%) of genes in pham
• Manual Annotations of this start: 16 of 80

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ali17_66 (DE2), Belphegor_65 (DE2), Chickadee_68 (DE3), EMoore_68 (DE2), EdmundFerry_66 (DE3), GTE6_69 (DE3), Hans_70 (DE2), Inspectinfecti_70 (DE2), Kwekel_68 (DE3), Leonard_69 (DE2), Lilbeanie_71 (DE5), MelBins_71 (DE2), Phauci_61 (DE2), Phinally_69 (DE2), RoadKill_65 (DE3), Tiamoceli_67 (DE3), Twonlo_66 (DE3),

Start 26:
• Found in 1 of 85 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Stultus_68 (DE1),

Start 27:
• Found in 67 of 85 (78.8%) of genes in pham
• Manual Annotations of this start: 62 of 80
• Called 98.5% of time when present
• Phage (with cluster) where this start called: Abblin_70 (DE4), Affeca_73 (DE1), Ailee_70 (DE1), Angelicage_71 (DE1), Ashertheman_71 (DE1), Baddon_69 (DE1), Barsten_73 (DE1), Baumdotcom_69 (DE1), Bibwit_71 (DE1), BigHunkinEater_71 (DE4), Bizzy_72 (DE1), BobBob_73 (DE1), Brandonk123_77 (DE1), Brawn1_70 (DE1), ChadMasterC_72 (DE1), Charming_76 (DE1), Delrey21_69 (DE4), Derg_65 (DE1), DoctorFroggo_69 (DE4), Fitzgerald_71 (DE1), Flatwoods_71 (DE1), Fosterous_75 (DE1), FuegoCuervo_75 (DE1), Gaea_72 (DE1), Galadriel_73 (DE1), Geodirt_71 (DE1), Gustavo_73 (DE1), JKSyngboy_69 (DE1), Jabberwocky_71 (DE1), Kamashten_71 (DE1), Kewpiedoll_71 (DE1), Kroos_71 (DE1), Kwobi_73 (DE1), Lennon_72 (DE1), LilHam_65 (DE1), Love_77 (DE1), McCrothy_71 (DE1), McKinley_74 (DE1), MoontowerMania_72 (DE1), Natkenzie_70 (DE4), Paries_74 (DE1), Pumpkiney_68 (DE4), Ribeye_71 (DE1), RiverRaider_75 (DE1), Rofo_73 (DE1), Sampson_72 (DE4), Sanjuju_71 (DE1), Saronaya_73 (DE1), SchottB_69 (DE1), Scioto_71 (DE4), Sedona_71 (DE1), Shivanishola_73 (DE1), Sitar_72 (DE1), Stichling_68 (DE1), StorminNorm_72 (DE1), Tangent_75 (DE1), Tangerine_72 (DE1), Tardus_70 (DE4), Thing3_71 (DE1), Tycho_70 (DE1), Verity_69 (DE4), ViaConlectus_69 (DE4), Vivi2_77 (DE1), YorkOnyx_72 (DE1), Zipp_71 (DE4), Zitch_72 (DE4),

Summary by clusters:

There are 5 clusters represented in this pham: DE1, DE2, DE3, DE4, DE5,

Info for manual annotations of cluster DE1:
•Start number 26 was manually annotated 1 time for cluster DE1.
•Start number 27 was manually annotated 50 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 22 was manually annotated 9 times for cluster DE2.

Info for manual annotations of cluster DE3:
•Start number 22 was manually annotated 6 times for cluster DE3.

Info for manual annotations of cluster DE4:
•Start number 11 was manually annotated 1 time for cluster DE4.
•Start number 27 was manually annotated 12 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 22 was manually annotated 1 time for cluster DE5.

Gene Information:

Gene: APunk_70 Start: 52521, Stop: 53081, Start Num: 11
Candidate Starts for APunk_70:
(Start: 11 @52521 has 1 MA's), (Start: 27 @52629 has 62 MA's), (38, 52716), (43, 52833), (45, 52878), (58, 52980), (59, 52986), (63, 53034),

Gene: Abblin_70 Start: 52787, Stop: 53239, Start Num: 27
Candidate Starts for Abblin_70:
(Start: 11 @52679 has 1 MA's), (Start: 27 @52787 has 62 MA's), (38, 52874), (43, 52991), (45, 53036), (58, 53138), (59, 53144), (63, 53192),

Gene: Affeca_73 Start: 54755, Stop: 55222, Start Num: 27
Candidate Starts for Affeca_73:
(Start: 27 @54755 has 62 MA's), (38, 54842), (39, 54860), (41, 54890), (44, 54998), (45, 55007), (55, 55079), (57, 55103), (62, 55163),

Gene: Ailee_70 Start: 53740, Stop: 54210, Start Num: 27
Candidate Starts for Ailee_70:
(23, 53725), (Start: 27 @53740 has 62 MA's), (38, 53830), (39, 53848), (41, 53878), (42, 53908), (45, 53995), (50, 54019), (57, 54091), (65, 54169),

Gene: Ali17_66 Start: 51680, Stop: 52162, Start Num: 22
Candidate Starts for Ali17_66:
(Start: 22 @51680 has 16 MA's), (25, 51701), (29, 51713), (37, 51785), (40, 51824), (47, 51965), (48, 51974), (50, 51983), (52, 51998), (53, 52013), (56, 52046), (57, 52055), (58, 52061), (63, 52115),

Gene: Angelicage_71 Start: 54682, Stop: 55149, Start Num: 27
Candidate Starts for Angelicage_71:
(Start: 27 @54682 has 62 MA's), (38, 54769), (39, 54787), (41, 54817), (44, 54925), (45, 54934), (55, 55006), (57, 55030), (62, 55090),

Gene: Ashertheman_71 Start: 52896, Stop: 53363, Start Num: 27
Candidate Starts for Ashertheman_71:
(Start: 27 @52896 has 62 MA's), (37, 52980), (38, 52983), (39, 53001), (41, 53031), (44, 53139), (50, 53172), (57, 53244), (64, 53319),

Gene: Baddon_69 Start: 53548, Stop: 54018, Start Num: 27
Candidate Starts for Baddon_69:
(Start: 27 @53548 has 62 MA's), (30, 53563), (37, 53632), (38, 53635), (39, 53653), (41, 53683), (44, 53791), (45, 53800), (57, 53896), (61, 53932), (62, 53956), (64, 53971),

Gene: Barsten_73 Start: 54515, Stop: 54982, Start Num: 27
Candidate Starts for Barsten_73:
(Start: 27 @54515 has 62 MA's), (38, 54602), (39, 54620), (41, 54650), (45, 54767), (50, 54791), (57, 54863), (65, 54941),

Gene: Baumdotcom_69 Start: 52867, Stop: 53334, Start Num: 27
Candidate Starts for Baumdotcom_69:
(24, 52852), (Start: 27 @52867 has 62 MA's), (37, 52951), (38, 52954), (39, 52972), (41, 53002), (44, 53110), (45, 53119), (57, 53215), (64, 53290),

Gene: Belphegor_65 Start: 51428, Stop: 51910, Start Num: 22
Candidate Starts for Belphegor_65:
(Start: 22 @51428 has 16 MA's), (25, 51449), (37, 51533), (40, 51572), (45, 51707), (47, 51713), (50, 51731), (52, 51746), (56, 51794), (57, 51803), (58, 51809),

Gene: Bibwit_71 Start: 53384, Stop: 53854, Start Num: 27
Candidate Starts for Bibwit_71:
(8, 53168), (16, 53333), (Start: 27 @53384 has 62 MA's), (38, 53471), (39, 53489), (41, 53519), (42, 53549), (45, 53636), (50, 53660), (57, 53732), (65, 53810),

Gene: BigHunkinEater_71 Start: 52266, Stop: 52718, Start Num: 27
Candidate Starts for BigHunkinEater_71:
(Start: 11 @52137 has 1 MA's), (Start: 27 @52266 has 62 MA's), (38, 52353), (43, 52470), (45, 52515), (46, 52518), (58, 52617), (59, 52623), (63, 52671),

Gene: Bizzy_72 Start: 52780, Stop: 53247, Start Num: 27
Candidate Starts for Bizzy_72:
(19, 52747), (Start: 27 @52780 has 62 MA's), (35, 52849), (37, 52864), (38, 52867), (39, 52885), (41, 52915), (44, 53023), (45, 53032), (57, 53128), (61, 53164), (62, 53188), (64, 53203),

Gene: BobBob_73 Start: 53918, Stop: 54385, Start Num: 27
Candidate Starts for BobBob_73:
(19, 53885), (Start: 27 @53918 has 62 MA's), (38, 54005), (39, 54023), (41, 54053), (45, 54170), (50, 54194), (57, 54266), (62, 54326), (65, 54344),

Gene: Brandonk123_77 Start: 54387, Stop: 54854, Start Num: 27
Candidate Starts for Brandonk123_77:
(Start: 27 @54387 has 62 MA's), (38, 54474), (39, 54492), (41, 54522), (45, 54639), (50, 54663), (57, 54735), (62, 54795), (65, 54813),

Gene: Brawn1_70 Start: 53524, Stop: 53994, Start Num: 27
Candidate Starts for Brawn1_70:
(Start: 27 @53524 has 62 MA's), (38, 53614), (39, 53632), (41, 53662), (42, 53692), (45, 53779), (50, 53803), (57, 53875), (65, 53953),

Gene: ChadMasterC_72 Start: 55740, Stop: 56210, Start Num: 27
Candidate Starts for ChadMasterC_72:
(Start: 27 @55740 has 62 MA's), (38, 55830), (39, 55848), (41, 55878), (45, 55995), (50, 56019), (57, 56091), (65, 56169),

Gene: Charming_76 Start: 53666, Stop: 54136, Start Num: 27
Candidate Starts for Charming_76:
(1, 53417), (4, 53426), (9, 53474), (10, 53495), (12, 53516), (14, 53546), (19, 53633), (Start: 27 @53666 has 62 MA's), (35, 53738), (38, 53756), (39, 53774), (41, 53804), (44, 53912), (45, 53921), (55, 53993), (57, 54017), (62, 54077),

Gene: Chickadee_68 Start: 49457, Stop: 49957, Start Num: 22
Candidate Starts for Chickadee_68:

(15, 49412), (Start: 22 @49457 has 16 MA's), (29, 49490), (36, 49565), (45, 49751), (54, 49808),

Gene: Delrey21_69 Start: 54127, Stop: 54582, Start Num: 27
Candidate Starts for Delrey21_69:
(18, 54088), (Start: 27 @54127 has 62 MA's), (38, 54217), (43, 54334), (45, 54379), (63, 54535),

Gene: Derg_65 Start: 51580, Stop: 52047, Start Num: 27
Candidate Starts for Derg_65:
(19, 51547), (Start: 27 @51580 has 62 MA's), (35, 51649), (37, 51664), (38, 51667), (39, 51685), (41, 51715), (44, 51823), (45, 51832), (57, 51928), (61, 51964), (62, 51988), (64, 52003),

Gene: DoctorFroggo_69 Start: 54127, Stop: 54582, Start Num: 27
Candidate Starts for DoctorFroggo_69:
(18, 54088), (Start: 27 @54127 has 62 MA's), (38, 54217), (43, 54334), (45, 54379), (63, 54535),

Gene: EMoore_68 Start: 53300, Stop: 53782, Start Num: 22
Candidate Starts for EMoore_68:
(Start: 22 @53300 has 16 MA's), (25, 53321), (31, 53354), (37, 53405), (40, 53444), (47, 53585), (48, 53594), (49, 53597), (50, 53603), (52, 53618), (53, 53633), (56, 53666), (57, 53675), (58, 53681),

Gene: EdmundFerry_66 Start: 49005, Stop: 49505, Start Num: 22
Candidate Starts for EdmundFerry_66:
(15, 48960), (Start: 22 @49005 has 16 MA's), (29, 49038), (36, 49113), (45, 49299), (54, 49356),

Gene: Fitzgerald_71 Start: 54530, Stop: 54997, Start Num: 27
Candidate Starts for Fitzgerald_71:
(Start: 27 @54530 has 62 MA's), (38, 54617), (39, 54635), (41, 54665), (45, 54782), (50, 54806), (57, 54878), (62, 54938), (65, 54956),

Gene: Flatwoods_71 Start: 52089, Stop: 52556, Start Num: 27
Candidate Starts for Flatwoods_71:
(19, 52056), (Start: 27 @52089 has 62 MA's), (37, 52173), (38, 52176), (39, 52194), (41, 52224), (44, 52332), (45, 52341), (57, 52437), (61, 52473), (62, 52497), (64, 52512),

Gene: Fosterous_75 Start: 54660, Stop: 55130, Start Num: 27
Candidate Starts for Fosterous_75:
(2, 54411), (5, 54420), (9, 54468), (10, 54489), (12, 54510), (14, 54540), (19, 54627), (Start: 27 @54660 has 62 MA's), (35, 54732), (38, 54750), (39, 54768), (41, 54798), (45, 54915), (50, 54939), (57, 55011), (62, 55071), (65, 55089),

Gene: FuegoCuervo_75 Start: 54114, Stop: 54584, Start Num: 27
Candidate Starts for FuegoCuervo_75:
(Start: 27 @54114 has 62 MA's), (38, 54204), (39, 54222), (41, 54252), (45, 54369), (50, 54393), (57, 54465), (62, 54525),

Gene: GTE6_69 Start: 50250, Stop: 50750, Start Num: 22
Candidate Starts for GTE6_69:
(15, 50205), (Start: 22 @50250 has 16 MA's), (29, 50283), (36, 50358), (45, 50544), (54, 50601),

Gene: Gaea_72 Start: 52676, Stop: 53143, Start Num: 27
Candidate Starts for Gaea_72:
(24, 52661), (Start: 27 @52676 has 62 MA's), (37, 52760), (38, 52763), (39, 52781), (41, 52811), (44, 52919), (45, 52928), (57, 53024), (64, 53099),

Gene: Galadriel_73 Start: 54623, Stop: 55090, Start Num: 27
Candidate Starts for Galadriel_73:
(Start: 27 @54623 has 62 MA's), (38, 54710), (39, 54728), (41, 54758), (45, 54875), (50, 54899), (57, 54971), (65, 55049),

Gene: Geodirt_71 Start: 54989, Stop: 55459, Start Num: 27
Candidate Starts for Geodirt_71:
(Start: 27 @54989 has 62 MA's), (38, 55079), (39, 55097), (41, 55127), (45, 55244), (50, 55268), (57, 55340), (65, 55418),

Gene: Gustavo_73 Start: 53661, Stop: 54128, Start Num: 27
Candidate Starts for Gustavo_73:
(24, 53646), (Start: 27 @53661 has 62 MA's), (37, 53745), (38, 53748), (39, 53766), (41, 53796), (44, 53904), (45, 53913), (57, 54009), (64, 54084),

Gene: Hans_70 Start: 52553, Stop: 53035, Start Num: 22
Candidate Starts for Hans_70:
(Start: 22 @52553 has 16 MA's), (25, 52574), (29, 52586), (37, 52658), (40, 52697), (45, 52832), (46, 52835), (47, 52838), (48, 52847), (50, 52856), (52, 52871), (56, 52919), (57, 52928), (58, 52934),

Gene: Inspectinfecti_70 Start: 52524, Stop: 53006, Start Num: 22
Candidate Starts for Inspectinfecti_70:
(Start: 22 @52524 has 16 MA's), (25, 52545), (29, 52557), (37, 52629), (40, 52668), (47, 52809), (48, 52818), (50, 52827), (52, 52842), (53, 52857), (56, 52890), (57, 52899), (58, 52905), (63, 52959),

Gene: JKSyngboy_69 Start: 53569, Stop: 54036, Start Num: 27
Candidate Starts for JKSyngboy_69:
(Start: 27 @53569 has 62 MA's), (30, 53584), (37, 53653), (38, 53656), (39, 53674), (41, 53704), (44, 53812), (45, 53821), (50, 53845), (57, 53917), (64, 53992), (65, 53995),

Gene: Jabberwocky_71 Start: 54753, Stop: 55226, Start Num: 27
Candidate Starts for Jabberwocky_71:
(Start: 27 @54753 has 62 MA's), (38, 54843), (39, 54861), (41, 54891), (45, 55008), (50, 55032), (57, 55104), (62, 55164), (65, 55182),

Gene: Kamashten_71 Start: 53749, Stop: 54216, Start Num: 27
Candidate Starts for Kamashten_71:
(Start: 27 @53749 has 62 MA's), (38, 53836), (39, 53854), (41, 53884), (45, 54001), (50, 54025), (57, 54097), (65, 54175),

Gene: Kewpiedoll_71 Start: 54676, Stop: 55146, Start Num: 27
Candidate Starts for Kewpiedoll_71:
(16, 54625), (Start: 27 @54676 has 62 MA's), (38, 54766), (39, 54784), (41, 54814), (45, 54931), (50, 54955), (57, 55027), (65, 55105),

Gene: Kroos_71 Start: 53215, Stop: 53682, Start Num: 27
Candidate Starts for Kroos_71:
(Start: 27 @53215 has 62 MA's), (37, 53299), (38, 53302), (39, 53320), (41, 53350), (44, 53458), (45, 53467), (57, 53563), (61, 53599), (64, 53638),

Gene: Kwekel_68 Start: 49370, Stop: 49870, Start Num: 22
Candidate Starts for Kwekel_68:

(15, 49325), (Start: 22 @49370 has 16 MA's), (29, 49403), (36, 49478), (45, 49664), (54, 49721),

Gene: Kwobi_73 Start: 53480, Stop: 53947, Start Num: 27
Candidate Starts for Kwobi_73:
(24, 53465), (Start: 27 @53480 has 62 MA's), (35, 53549), (37, 53564), (38, 53567), (39, 53585), (41, 53615), (44, 53723), (45, 53732), (57, 53828), (61, 53864), (64, 53903),

Gene: Lennon_72 Start: 55403, Stop: 55873, Start Num: 27
Candidate Starts for Lennon_72:
(23, 55388), (Start: 27 @55403 has 62 MA's), (38, 55493), (39, 55511), (41, 55541), (42, 55571), (45, 55658), (50, 55682), (57, 55754), (65, 55832),

Gene: Leonard_69 Start: 52587, Stop: 53069, Start Num: 22
Candidate Starts for Leonard_69:
(Start: 22 @52587 has 16 MA's), (25, 52608), (29, 52620), (37, 52692), (40, 52731), (45, 52866), (46, 52869), (47, 52872), (48, 52881), (50, 52890), (52, 52905), (56, 52953), (57, 52962), (58, 52968), (63, 53022),

Gene: LilHam_65 Start: 50562, Stop: 51029, Start Num: 27
Candidate Starts for LilHam_65:
(24, 50547), (Start: 27 @50562 has 62 MA's), (37, 50646), (38, 50649), (39, 50667), (41, 50697), (44, 50805), (45, 50814), (57, 50910), (64, 50985),

Gene: Lilbeanie_71 Start: 48552, Stop: 48977, Start Num: 22
Candidate Starts for Lilbeanie_71:
(19, 48540), (21, 48549), (Start: 22 @48552 has 16 MA's), (28, 48582), (32, 48609), (33, 48618), (34, 48624), (42, 48726), (48, 48828), (49, 48831), (60, 48939), (63, 48969),

Gene: Love_77 Start: 55148, Stop: 55615, Start Num: 27
Candidate Starts for Love_77:
(13, 55004), (16, 55097), (Start: 27 @55148 has 62 MA's), (38, 55235), (39, 55253), (41, 55283), (45, 55400), (50, 55424), (57, 55496), (65, 55574),

Gene: McCrothy_71 Start: 55189, Stop: 55656, Start Num: 27
Candidate Starts for McCrothy_71:
(Start: 27 @55189 has 62 MA's), (38, 55276), (39, 55294), (41, 55324), (45, 55441), (50, 55465), (57, 55537), (65, 55615),

Gene: McKinley_74 Start: 54263, Stop: 54736, Start Num: 27
Candidate Starts for McKinley_74:
(Start: 27 @54263 has 62 MA's), (38, 54353), (39, 54371), (41, 54401), (42, 54431), (45, 54518), (50, 54542), (57, 54614), (62, 54674), (65, 54692),

Gene: MelBins_71 Start: 52795, Stop: 53277, Start Num: 22
Candidate Starts for MelBins_71:
(Start: 22 @52795 has 16 MA's), (25, 52816), (37, 52900), (40, 52939), (45, 53074), (47, 53080), (48, 53089), (52, 53113), (56, 53161), (57, 53170), (58, 53176),

Gene: MoontowerMania_72 Start: 55099, Stop: 55569, Start Num: 27
Candidate Starts for MoontowerMania_72:
(Start: 27 @55099 has 62 MA's), (38, 55189), (39, 55207), (41, 55237), (45, 55354), (50, 55378), (57, 55450), (62, 55510),

Gene: Natkenzie_70 Start: 52787, Stop: 53239, Start Num: 27
Candidate Starts for Natkenzie_70:
(Start: 11 @52679 has 1 MA's), (Start: 27 @52787 has 62 MA's), (38, 52874), (43, 52991), (45, 53036), (58, 53138), (59, 53144), (63, 53192),

Gene: Paries_74 Start: 54767, Stop: 55234, Start Num: 27
Candidate Starts for Paries_74:
(19, 54734), (Start: 27 @54767 has 62 MA's), (38, 54854), (39, 54872), (41, 54902), (45, 55019), (50, 55043), (57, 55115), (65, 55193),

Gene: Phauci_61 Start: 49630, Stop: 50112, Start Num: 22
Candidate Starts for Phauci_61:
(Start: 22 @49630 has 16 MA's), (25, 49651), (29, 49663), (37, 49735), (40, 49774), (45, 49909), (46, 49912), (47, 49915), (48, 49924), (50, 49933), (52, 49948), (56, 49996), (57, 50005), (58, 50011), (63, 50065),

Gene: Phinally_69 Start: 52584, Stop: 53066, Start Num: 22
Candidate Starts for Phinally_69:
(Start: 22 @52584 has 16 MA's), (25, 52605), (29, 52617), (37, 52689), (40, 52728), (45, 52863), (46, 52866), (47, 52869), (48, 52878), (50, 52887), (52, 52902), (56, 52950), (57, 52959), (58, 52965), (63, 53019),

Gene: Pumpkiney_68 Start: 51153, Stop: 51605, Start Num: 27
Candidate Starts for Pumpkiney_68:
(Start: 11 @50997 has 1 MA's), (Start: 27 @51153 has 62 MA's), (38, 51240), (43, 51357), (45, 51402), (58, 51504), (63, 51558), (67, 51585),

Gene: Ribeye_71 Start: 52819, Stop: 53286, Start Num: 27
Candidate Starts for Ribeye_71:
(19, 52786), (Start: 27 @52819 has 62 MA's), (35, 52888), (37, 52903), (38, 52906), (39, 52924), (41, 52954), (44, 53062), (45, 53071), (57, 53167), (61, 53203), (62, 53227), (64, 53242),

Gene: RiverRaider_75 Start: 52799, Stop: 53251, Start Num: 27
Candidate Starts for RiverRaider_75:
(20, 52766), (Start: 27 @52799 has 62 MA's), (38, 52883), (41, 52931), (45, 53045), (51, 53075), (53, 53099), (56, 53132), (60, 53174), (61, 53177), (66, 53225),

Gene: RoadKill_65 Start: 48875, Stop: 49375, Start Num: 22
Candidate Starts for RoadKill_65:
(15, 48830), (Start: 22 @48875 has 16 MA's), (29, 48908), (36, 48983), (45, 49169), (54, 49226),

Gene: Rofo_73 Start: 54242, Stop: 54712, Start Num: 27
Candidate Starts for Rofo_73:
(1, 53993), (4, 54002), (9, 54050), (10, 54071), (12, 54092), (14, 54122), (19, 54209), (Start: 27 @54242 has 62 MA's), (35, 54314), (38, 54332), (39, 54350), (41, 54380), (44, 54488), (45, 54497), (55, 54569), (57, 54593), (62, 54653),

Gene: Sampson_72 Start: 52938, Stop: 53390, Start Num: 27
Candidate Starts for Sampson_72:
(Start: 11 @52830 has 1 MA's), (Start: 27 @52938 has 62 MA's), (38, 53025), (43, 53142), (45, 53187), (58, 53289), (59, 53295), (63, 53343),

Gene: Sanjuju_71 Start: 54617, Stop: 55087, Start Num: 27

Candidate Starts for Sanjuju_71:
(Start: 27 @54617 has 62 MA's), (38, 54707), (39, 54725), (41, 54755), (44, 54863), (45, 54872), (55, 54944), (57, 54968), (62, 55028),

Gene: Saronaya_73 Start: 53661, Stop: 54128, Start Num: 27
Candidate Starts for Saronaya_73:
(24, 53646), (Start: 27 @53661 has 62 MA's), (37, 53745), (38, 53748), (39, 53766), (41, 53796), (44, 53904), (45, 53913), (57, 54009), (64, 54084),

Gene: SchottB_69 Start: 53282, Stop: 53749, Start Num: 27
Candidate Starts for SchottB_69:
(24, 53267), (Start: 27 @53282 has 62 MA's), (37, 53366), (38, 53369), (39, 53387), (41, 53417), (44, 53525), (45, 53534), (57, 53630), (64, 53705),

Gene: Scioto_71 Start: 52788, Stop: 53240, Start Num: 27
Candidate Starts for Scioto_71:
(Start: 11 @52680 has 1 MA's), (Start: 27 @52788 has 62 MA's), (38, 52875), (43, 52992), (45, 53037), (58, 53139), (59, 53145), (63, 53193),

Gene: Sedona_71 Start: 55187, Stop: 55660, Start Num: 27
Candidate Starts for Sedona_71:
(4, 54950), (6, 54956), (7, 54962), (16, 55139), (Start: 27 @55187 has 62 MA's), (38, 55277), (39, 55295), (41, 55325), (42, 55355), (45, 55442), (50, 55466), (57, 55538), (65, 55616),

Gene: Shivanishola_73 Start: 52967, Stop: 53437, Start Num: 27
Candidate Starts for Shivanishola_73:
(Start: 27 @52967 has 62 MA's), (38, 53057), (39, 53075), (41, 53105), (45, 53222), (50, 53246), (57, 53318), (65, 53396),

Gene: Sitar_72 Start: 55161, Stop: 55631, Start Num: 27
Candidate Starts for Sitar_72:
(Start: 27 @55161 has 62 MA's), (38, 55251), (39, 55269), (41, 55299), (44, 55407), (45, 55416), (55, 55488), (57, 55512), (62, 55572),

Gene: Stichling_68 Start: 52409, Stop: 52876, Start Num: 27
Candidate Starts for Stichling_68:
(Start: 27 @52409 has 62 MA's), (30, 52424), (35, 52478), (37, 52493), (38, 52496), (39, 52514), (41, 52544), (44, 52652), (45, 52661), (57, 52757), (61, 52793), (62, 52817), (64, 52832),

Gene: StorminNorm_72 Start: 53449, Stop: 53916, Start Num: 27
Candidate Starts for StorminNorm_72:
(Start: 27 @53449 has 62 MA's), (37, 53533), (38, 53536), (39, 53554), (41, 53584), (44, 53692), (45, 53701), (57, 53797), (61, 53833), (62, 53857), (64, 53872),

Gene: Stultus_68 Start: 53408, Stop: 53878, Start Num: 26
Candidate Starts for Stultus_68:
(23, 53393), (Start: 26 @53408 has 1 MA's), (38, 53498), (39, 53516), (41, 53546), (42, 53576), (44, 53654), (45, 53663), (55, 53735), (57, 53759), (62, 53819),

Gene: Tangent_75 Start: 53947, Stop: 54417, Start Num: 27
Candidate Starts for Tangent_75:
(1, 53698), (4, 53707), (9, 53755), (10, 53776), (12, 53797), (14, 53827), (19, 53914), (Start: 27 @53947 has 62 MA's), (35, 54019), (38, 54037), (39, 54055), (41, 54085), (44, 54193), (45, 54202),

(55, 54274), (57, 54298), (62, 54358),

Gene: Tangerine_72 Start: 52955, Stop: 53422, Start Num: 27
Candidate Starts for Tangerine_72:
(19, 52922), (Start: 27 @52955 has 62 MA's), (35, 53024), (37, 53039), (38, 53042), (39, 53060), (41, 53090), (44, 53198), (45, 53207), (57, 53303), (61, 53339), (64, 53378),

Gene: Tardus_70 Start: 52842, Stop: 53297, Start Num: 27
Candidate Starts for Tardus_70:
(17, 52788), (Start: 27 @52842 has 62 MA's), (38, 52932), (43, 53049), (45, 53094), (58, 53196), (59, 53202), (63, 53250), (67, 53277),

Gene: Thing3_71 Start: 53749, Stop: 54216, Start Num: 27
Candidate Starts for Thing3_71:
(Start: 27 @53749 has 62 MA's), (38, 53836), (39, 53854), (41, 53884), (45, 54001), (50, 54025), (57, 54097), (65, 54175),

Gene: Tiamoceli_67 Start: 50337, Stop: 50837, Start Num: 22
Candidate Starts for Tiamoceli_67:
(15, 50292), (Start: 22 @50337 has 16 MA's), (29, 50370), (36, 50445), (45, 50631), (54, 50688),

Gene: Twonlo_66 Start: 49429, Stop: 49929, Start Num: 22
Candidate Starts for Twonlo_66:
(15, 49384), (Start: 22 @49429 has 16 MA's), (29, 49462), (36, 49537), (45, 49723), (54, 49780),

Gene: Tycho_70 Start: 52768, Stop: 53235, Start Num: 27
Candidate Starts for Tycho_70:
(19, 52735), (Start: 27 @52768 has 62 MA's), (35, 52837), (37, 52852), (38, 52855), (39, 52873), (41, 52903), (44, 53011), (45, 53020), (57, 53116), (61, 53152), (62, 53176), (64, 53191),

Gene: Verity_69 Start: 54127, Stop: 54582, Start Num: 27
Candidate Starts for Verity_69:
(18, 54088), (Start: 27 @54127 has 62 MA's), (38, 54217), (43, 54334), (45, 54379), (63, 54535),

Gene: ViaConlectus_69 Start: 51742, Stop: 52194, Start Num: 27
Candidate Starts for ViaConlectus_69:
(Start: 11 @51613 has 1 MA's), (Start: 27 @51742 has 62 MA's), (38, 51829), (43, 51946), (45, 51991), (46, 51994), (58, 52093), (59, 52099), (63, 52147),

Gene: Vivi2_77 Start: 55003, Stop: 55473, Start Num: 27
Candidate Starts for Vivi2_77:
(3, 54760), (9, 54811), (10, 54832), (12, 54853), (14, 54883), (16, 54952), (Start: 27 @55003 has 62 MA's), (35, 55075), (38, 55093), (39, 55111), (41, 55141), (44, 55249), (45, 55258), (55, 55330), (57, 55354), (62, 55414),

Gene: YorkOnyx_72 Start: 52969, Stop: 53439, Start Num: 27
Candidate Starts for YorkOnyx_72:
(Start: 27 @52969 has 62 MA's), (37, 53053), (38, 53056), (39, 53074), (41, 53104), (44, 53212), (45, 53221), (57, 53317), (61, 53353), (64, 53392),

Gene: Zipp_71 Start: 54166, Stop: 54618, Start Num: 27
Candidate Starts for Zipp_71:

(Start: 11 @54037 has 1 MA's), (Start: 27 @54166 has 62 MA's), (38, 54253), (43, 54370), (45, 54415), (46, 54418), (58, 54517), (59, 54523), (63, 54571),

Gene: Zitch_72 Start: 52448, Stop: 52903, Start Num: 27
Candidate Starts for Zitch_72:
(Start: 11 @52319 has 1 MA's), (Start: 27 @52448 has 62 MA's), (38, 52538), (43, 52655), (45, 52700), (46, 52703), (58, 52802), (59, 52808), (63, 52856),