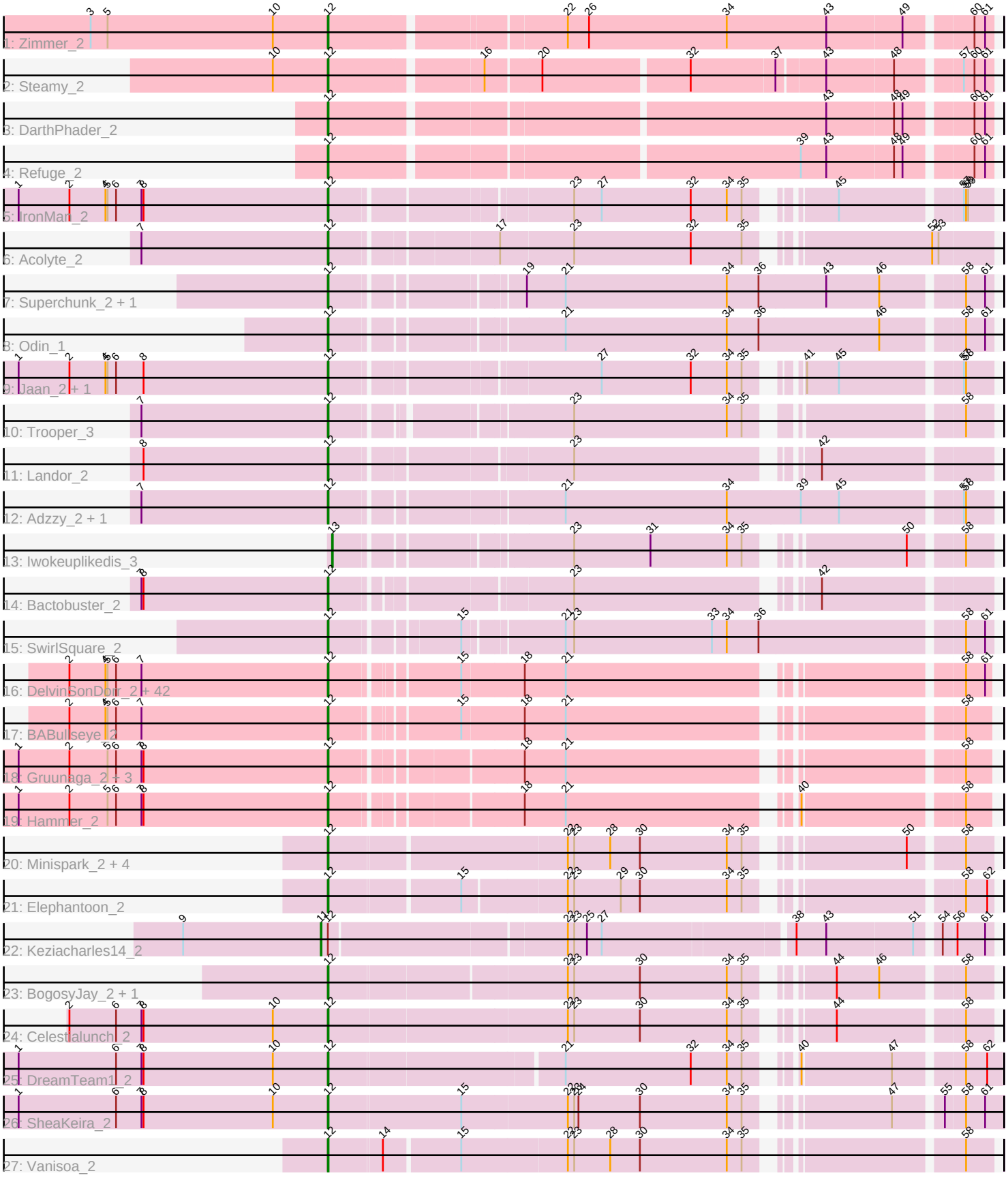
Pham 347528


1: Zimmer_2
2: Steamy_2
3: DarthPhader_2
4: Refuge_2
5: IronMan_2
6: Acolyte_2
7: Superchunk_2 + 1
8: Odin_1
9: Jaan_2 + 1
10: Trooper_3
11: Landor_2
12: Adzzy_2 + 1
13: Iwokeuplikedis_3
14: Bactobuster_2
15: SwirlSquare_2
16: DelvinSonDorr_2 + 42
17: BABullseye_2
18: Gruunaga_2 + 3
19: Hammer_2
20: Minispark_2 + 4
21: Elephantoon_2
22: Keziacharles14_2
23: BogosyJay_2 + 1
24: Celestialunch_2
25: DreamTeam1_2
26: SheaKeira_2
27: Vanisoa_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 347528 Report

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

Pham number 347528 has 80 members, 5 are drafts.

Phages represented in each track:
- Track 1 : Zimmer_2
- Track 2 : Steamy_2
- Track 3 : DarthPhader_2
- Track 4 : Refuge_2
- Track 5 : IronMan_2
- Track 6 : Acolyte_2
- Track 7 : Superchunk_2, Caraxes_2
- Track 8 : Odin_1
- Track 9 : Jaan_2, Phaded_2
- Track 10 : Trooper_3
- Track 11 : Landor_2
- Track 12 : Adzzy_2, Ph8s_2
- Track 13 : Iwokeuplikedis_3
- Track 14 : Bactobuster_2
- Track 15 : SwirlSquare_2
- Track 16 : DelvinSonDorr_2, SmellyB_2, Koko_2, Wiks_2, Indra_2, DaVinci_2, Lilbunny_2, Isiphiwo_2, Helmet_2, ToneTone_2, GreedyLawyer_2, Chartreuse_2, Artemis2UCLA_2, EricB_2, Jordennis_2, Zaka_2, Imbriano_2, Blinn1_2, Temprado_2, Cookiedough_2, Hoot_2, VohminGhazi_2, Priamo_2, SuperAwesome_2, CloudWang3_2, Roksolana_2, Tucker_2, WunderPhul_2, Kazan_2, Garak_2, Newrala_2, Kipper29_2, Dorothea_2, BennyP_2, Hexamo_2, JewelBug_2, Jeffabunny_2, Pmask_2, Neeharika16_2, McFly_2, Candra_2, SuperCallie99_2, BlessJoy_2
- Track 17 : BABullseye_2
- Track 18 : Gruunaga_2, Rifter_2, Gladiator_2, Blue7_2
- Track 19 : Hammer_2
- Track 20 : Minispark_2, Rahalelujah_2, CogOmlette_2, WorldCup_2, Bellris_2
- Track 21 : Elephantoon_2
- Track 22 : Keziacharles14_2
- Track 23 : BogosyJay_2, Maminiaina_2
- Track 24 : Celestialunch_2
- Track 25 : DreamTeam1_2
- Track 26 : SheaKeira_2
- Track 27 : Vanisoa_2

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

The start number called the most often in the published annotations is 12, it was called in 73 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acolyte_2, Adzzy_2, Artemis2UCLA_2, BABullseye_2, Bactobuster_2, Bellris_2, BennyP_2, BlessJoy_2, Blinn1_2, Blue7_2, BogosyJay_2, Candra_2, Caraxes_2, Celestialunch_2, Chartreuse_2, CloudWang3_2, CogOmlette_2, Cookiedough_2, DaVinci_2, DarthPhader_2, DelvinSonDorr_2, Dorothea_2, DreamTeam1_2, Elephantoon_2, EricB_2, Garak_2, Gladiator_2, GreedyLawyer_2, Gruunaga_2, Hammer_2, Helmet_2, Hexamo_2, Hoot_2, Imbriano_2, Indra_2, IronMan_2, Isiphiwo_2, Jaan_2, Jeffabunny_2, JewelBug_2, Jordennis_2, Kazan_2, Kipper29_2, Koko_2, Landor_2, Lilbunny_2, Maminiaina_2, McFly_2, Minispark_2, Neeharika16_2, Newrala_2, Odin_1, Ph8s_2, Phaded_2, Pmask_2, Priamo_2, Rahalelujah_2, Refuge_2, Rifter_2, Roksolana_2, SheaKeira_2, SmellyB_2, Steamy_2, SuperAwesome_2, SuperCallie99_2, Superchunk_2, SwirlSquare_2, Temprado_2, ToneTone_2, Trooper_3, Tucker_2, Vanisoa_2, VohminGhazi_2, Wiks_2, WorldCup_2, WunderPhul_2, Zaka_2, Zimmer_2,

Genes that have the "Most Annotated" start but do not call it:
• Keziacharles14_2,

Genes that do not have the "Most Annotated" start:
• Iwokeuplikedis_3,

Summary by start number:

Start 11:
• Found in 1 of 80 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Keziacharles14_2 (A9),

Start 12:
• Found in 79 of 80 (98.8%) of genes in pham
• Manual Annotations of this start: 73 of 75
• Called 98.7% of time when present
• Phage (with cluster) where this start called: Acolyte_2 (A2), Adzzy_2 (A2), Artemis2UCLA_2 (A6), BABullseye_2 (A6), Bactobuster_2 (A2), Bellris_2 (A9), BennyP_2 (A6), BlessJoy_2 (A6), Blinn1_2 (A6), Blue7_2 (A6), BogosyJay_2 (A9), Candra_2 (A6), Caraxes_2 (A2), Celestialunch_2 (A9), Chartreuse_2 (A6), CloudWang3_2 (A6), CogOmlette_2 (A9), Cookiedough_2 (A6), DaVinci_2 (A6), DarthPhader_2 (A12), DelvinSonDorr_2 (A6), Dorothea_2 (A6), DreamTeam1_2 (A9), Elephantoon_2 (A9), EricB_2 (A6), Garak_2 (A6), Gladiator_2 (A6), GreedyLawyer_2 (A6), Gruunaga_2 (A6), Hammer_2 (A6), Helmet_2 (A6), Hexamo_2 (A6), Hoot_2 (A6), Imbriano_2 (A6), Indra_2 (A6), IronMan_2 (A2), Isiphiwo_2 (A6), Jaan_2 (A2), Jeffabunny_2 (A6), JewelBug_2 (A6), Jordennis_2 (A6), Kazan_2 (A6), Kipper29_2 (A6), Koko_2 (A6), Landor_2 (A2), Lilbunny_2 (A6), Maminiaina_2 (A9), McFly_2 (A6), Minispark_2 (A9), Neeharika16_2 (A6), Newrala_2 (A6), Odin_1 (A2), Ph8s_2 (A2), Phaded_2 (A2), Pmask_2 (A6), Priamo_2 (A6), Rahalelujah_2 (A9), Refuge_2 (A12), Rifter_2 (A6), Roksolana_2 (A6), SheaKeira_2 (A9), SmellyB_2 (A6),

Steamy_2 (A12), SuperAwesome_2 (A6), SuperCallie99_2 (A6), Superchunk_2 (A2), SwirlSquare_2 (A2), Temprado_2 (A6), ToneTone_2 (A6), Trooper_3 (A2), Tucker_2 (A6), Vanisoa_2 (A9), VohminGhazi_2 (A6), Wiks_2 (A6), WorldCup_2 (A9), WunderPhul_2 (A6), Zaka_2 (A6), Zimmer_2 (A12),

Start 13:
• Found in 1 of 80 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 75
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Iwokeuplikedis_3 (A2),

Summary by clusters:

There are 4 clusters represented in this pham: A9, A2, A12, A6,

Info for manual annotations of cluster A12:
•Start number 12 was manually annotated 4 times for cluster A12.

Info for manual annotations of cluster A2:
•Start number 12 was manually annotated 13 times for cluster A2.
•Start number 13 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A6:
•Start number 12 was manually annotated 47 times for cluster A6.

Info for manual annotations of cluster A9:
•Start number 11 was manually annotated 1 time for cluster A9.
•Start number 12 was manually annotated 9 times for cluster A9.

Gene Information:

Gene: Acolyte_2 Start: 1047, Stop: 1907, Start Num: 12
Candidate Starts for Acolyte_2:
(7, 783), (Start: 12 @1047 has 73 MA's), (17, 1263), (23, 1365), (32, 1530), (35, 1602), (52, 1824), (53, 1833),

Gene: Adzzy_2 Start: 1061, Stop: 1945, Start Num: 12
Candidate Starts for Adzzy_2:
(7, 797), (Start: 12 @1061 has 73 MA's), (21, 1361), (34, 1589), (39, 1691), (45, 1745), (57, 1904), (58, 1907),

Gene: Artemis2UCLA_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Artemis2UCLA_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: BABullseye_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for BABullseye_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890),

Gene: Bactobuster_2 Start: 1058, Stop: 1891, Start Num: 12
Candidate Starts for Bactobuster_2:
(7, 794), (8, 797), (Start: 12 @1058 has 73 MA's), (23, 1364), (42, 1667),

Gene: Bellris_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for Bellris_2:
(Start: 12 @1027 has 73 MA's), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (50, 1780), (58, 1849),

Gene: BennyP_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for BennyP_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: BlessJoy_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for BlessJoy_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Blinn1_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Blinn1_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Blue7_2 Start: 1081, Stop: 1914, Start Num: 12
Candidate Starts for Blue7_2:
(1, 643), (2, 715), (5, 769), (6, 781), (7, 817), (8, 820), (Start: 12 @1081 has 73 MA's), (18, 1321), (21, 1378), (58, 1879),

Gene: BogosyJay_2 Start: 1030, Stop: 1887, Start Num: 12
Candidate Starts for BogosyJay_2:
(Start: 12 @1030 has 73 MA's), (22, 1351), (23, 1360), (30, 1453), (34, 1576), (35, 1597), (44, 1684), (46, 1744), (58, 1849),

Gene: Candra_2 Start: 1122, Stop: 1958, Start Num: 12
Candidate Starts for Candra_2:
(2, 756), (4, 807), (5, 810), (6, 822), (7, 858), (Start: 12 @1122 has 73 MA's), (15, 1281), (18, 1365), (21, 1422), (58, 1923), (61, 1950),

Gene: Caraxes_2 Start: 1061, Stop: 1939, Start Num: 12
Candidate Starts for Caraxes_2:
(Start: 12 @1061 has 73 MA's), (19, 1301), (21, 1355), (34, 1583), (36, 1628), (43, 1721), (46, 1796), (58, 1901), (61, 1928),

Gene: Celestialunch_2 Start: 1024, Stop: 1890, Start Num: 12
Candidate Starts for Celestialunch_2:
(2, 658), (6, 724), (7, 760), (8, 763), (10, 946), (Start: 12 @1024 has 73 MA's), (22, 1354), (23, 1363), (30, 1456), (34, 1579), (35, 1600), (44, 1687), (58, 1852),

Gene: Chartreuse_2 Start: 1090, Stop: 1926, Start Num: 12
Candidate Starts for Chartreuse_2:
(2, 724), (4, 775), (5, 778), (6, 790), (7, 826), (Start: 12 @1090 has 73 MA's), (15, 1249), (18, 1333), (21, 1390), (58, 1891), (61, 1918),

Gene: CloudWang3_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for CloudWang3_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: CogOmlette_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for CogOmlette_2:
(Start: 12 @1027 has 73 MA's), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (50, 1780), (58, 1849),

Gene: Cookiedough_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Cookiedough_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: DaVinci_2 Start: 1090, Stop: 1926, Start Num: 12
Candidate Starts for DaVinci_2:
(2, 724), (4, 775), (5, 778), (6, 790), (7, 826), (Start: 12 @1090 has 73 MA's), (15, 1249), (18, 1333), (21, 1390), (58, 1891), (61, 1918),

Gene: DarthPhader_2 Start: 1060, Stop: 1938, Start Num: 12
Candidate Starts for DarthPhader_2:
(Start: 12 @1060 has 73 MA's), (43, 1723), (48, 1816), (49, 1828), (60, 1912), (61, 1927),

Gene: DelvinSonDorr_2 Start: 1091, Stop: 1927, Start Num: 12
Candidate Starts for DelvinSonDorr_2:
(2, 725), (4, 776), (5, 779), (6, 791), (7, 827), (Start: 12 @1091 has 73 MA's), (15, 1250), (18, 1334), (21, 1391), (58, 1892), (61, 1919),

Gene: Dorothea_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Dorothea_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: DreamTeam1_2 Start: 1027, Stop: 1893, Start Num: 12
Candidate Starts for DreamTeam1_2:
(1, 589), (6, 727), (7, 763), (8, 766), (10, 949), (Start: 12 @1027 has 73 MA's), (21, 1342), (32, 1519), (34, 1570), (35, 1591), (40, 1633), (47, 1756), (58, 1843), (62, 1873),

Gene: Elephantoon_2 Start: 1029, Stop: 1880, Start Num: 12
Candidate Starts for Elephantoon_2:
(Start: 12 @1029 has 73 MA's), (15, 1203), (22, 1344), (23, 1353), (29, 1419), (30, 1446), (34, 1569), (35, 1590), (58, 1842), (62, 1872),

Gene: EricB_2 Start: 1090, Stop: 1926, Start Num: 12
Candidate Starts for EricB_2:
(2, 724), (4, 775), (5, 778), (6, 790), (7, 826), (Start: 12 @1090 has 73 MA's), (15, 1249), (18, 1333), (21, 1390), (58, 1891), (61, 1918),

Gene: Garak_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Garak_2:

(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Gladiator_2 Start: 1082, Stop: 1915, Start Num: 12
Candidate Starts for Gladiator_2:
(1, 644), (2, 716), (5, 770), (6, 782), (7, 818), (8, 821), (Start: 12 @1082 has 73 MA's), (18, 1322), (21, 1379), (58, 1880),

Gene: GreedyLawyer_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for GreedyLawyer_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Gruunaga_2 Start: 1082, Stop: 1915, Start Num: 12
Candidate Starts for Gruunaga_2:
(1, 644), (2, 716), (5, 770), (6, 782), (7, 818), (8, 821), (Start: 12 @1082 has 73 MA's), (18, 1322), (21, 1379), (58, 1880),

Gene: Hammer_2 Start: 1081, Stop: 1914, Start Num: 12
Candidate Starts for Hammer_2:
(1, 643), (2, 715), (5, 769), (6, 781), (7, 817), (8, 820), (Start: 12 @1081 has 73 MA's), (18, 1321), (21, 1378), (40, 1669), (58, 1879),

Gene: Helmet_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Helmet_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Hexamo_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Hexamo_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Hoot_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Hoot_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Imbriano_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Imbriano_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Indra_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Indra_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: IronMan_2 Start: 1060, Stop: 1899, Start Num: 12
Candidate Starts for IronMan_2:
(1, 622), (2, 694), (4, 745), (5, 748), (6, 760), (7, 796), (8, 799), (Start: 12 @1060 has 73 MA's), (23, 1372), (27, 1411), (32, 1537), (34, 1588), (35, 1609), (45, 1699), (57, 1858), (58, 1861), (59, 1864),

Gene: Isiphiwo_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Isiphiwo_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Iwokeuplikedis_3 Start: 1328, Stop: 2149, Start Num: 13
Candidate Starts for Iwokeuplikedis_3:
(Start: 13 @1328 has 1 MA's), (23, 1625), (31, 1733), (34, 1841), (35, 1862), (50, 2045), (58, 2111),

Gene: Jaan_2 Start: 1059, Stop: 1895, Start Num: 12
Candidate Starts for Jaan_2:
(1, 621), (2, 693), (4, 744), (5, 747), (6, 759), (8, 798), (Start: 12 @1059 has 73 MA's), (27, 1407), (32, 1533), (34, 1584), (35, 1605), (41, 1650), (45, 1695), (57, 1854), (58, 1857),

Gene: Jeffabunny_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Jeffabunny_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: JewelBug_2 Start: 1090, Stop: 1926, Start Num: 12
Candidate Starts for JewelBug_2:
(2, 724), (4, 775), (5, 778), (6, 790), (7, 826), (Start: 12 @1090 has 73 MA's), (15, 1249), (18, 1333), (21, 1390), (58, 1891), (61, 1918),

Gene: Jordennis_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Jordennis_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Kazan_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Kazan_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Keziacharles14_2 Start: 1017, Stop: 1907, Start Num: 11
Candidate Starts for Keziacharles14_2:
(9, 822), (Start: 11 @1017 has 1 MA's), (Start: 12 @1026 has 73 MA's), (22, 1347), (23, 1356), (25, 1374), (27, 1395), (38, 1650), (43, 1692), (51, 1812), (54, 1839), (56, 1857), (61, 1896),

Gene: Kipper29_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Kipper29_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Koko_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Koko_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Landor_2 Start: 1058, Stop: 1897, Start Num: 12
Candidate Starts for Landor_2:
(8, 797), (Start: 12 @1058 has 73 MA's), (23, 1370), (42, 1673),

Gene: Lilbunny_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Lilbunny_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Maminiaina_2 Start: 1030, Stop: 1887, Start Num: 12
Candidate Starts for Maminiaina_2:
(Start: 12 @1030 has 73 MA's), (22, 1351), (23, 1360), (30, 1453), (34, 1576), (35, 1597), (44, 1684), (46, 1744), (58, 1849),

Gene: McFly_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for McFly_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Minispark_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for Minispark_2:
(Start: 12 @1027 has 73 MA's), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (50, 1780), (58, 1849),

Gene: Neeharika16_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Neeharika16_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Newrala_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Newrala_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Odin_1 Start: 1060, Stop: 1938, Start Num: 12
Candidate Starts for Odin_1:
(Start: 12 @1060 has 73 MA's), (21, 1354), (34, 1582), (36, 1627), (46, 1795), (58, 1900), (61, 1927),

Gene: Ph8s_2 Start: 1061, Stop: 1945, Start Num: 12
Candidate Starts for Ph8s_2:
(7, 797), (Start: 12 @1061 has 73 MA's), (21, 1361), (34, 1589), (39, 1691), (45, 1745), (57, 1904), (58, 1907),

Gene: Phaded_2 Start: 1058, Stop: 1894, Start Num: 12
Candidate Starts for Phaded_2:
(1, 620), (2, 692), (4, 743), (5, 746), (6, 758), (8, 797), (Start: 12 @1058 has 73 MA's), (27, 1406), (32, 1532), (34, 1583), (35, 1604), (41, 1649), (45, 1694), (57, 1853), (58, 1856),

Gene: Pmask_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Pmask_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Priamo_2 Start: 1104, Stop: 1940, Start Num: 12
Candidate Starts for Priamo_2:
(2, 738), (4, 789), (5, 792), (6, 804), (7, 840), (Start: 12 @1104 has 73 MA's), (15, 1263), (18, 1347), (21, 1404), (58, 1905), (61, 1932),

Gene: Rahalelujah_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for Rahalelujah_2:
(Start: 12 @1027 has 73 MA's), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (50, 1780), (58, 1849),

Gene: Refuge_2 Start: 1061, Stop: 1939, Start Num: 12
Candidate Starts for Refuge_2:
(Start: 12 @1061 has 73 MA's), (39, 1688), (43, 1724), (48, 1817), (49, 1829), (60, 1913), (61, 1928),

Gene: Rifter_2 Start: 1081, Stop: 1914, Start Num: 12
Candidate Starts for Rifter_2:
(1, 643), (2, 715), (5, 769), (6, 781), (7, 817), (8, 820), (Start: 12 @1081 has 73 MA's), (18, 1321), (21, 1378), (58, 1879),

Gene: Roksolana_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Roksolana_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: SheaKeira_2 Start: 1027, Stop: 1908, Start Num: 12
Candidate Starts for SheaKeira_2:
(1, 589), (6, 727), (7, 763), (8, 766), (10, 949), (Start: 12 @1027 has 73 MA's), (15, 1210), (22, 1357), (23, 1366), (24, 1372), (30, 1459), (34, 1582), (35, 1603), (47, 1768), (55, 1828), (58, 1855), (61, 1882),

Gene: SmellyB_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for SmellyB_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Steamy_2 Start: 1041, Stop: 1910, Start Num: 12
Candidate Starts for Steamy_2:
(10, 963), (Start: 12 @1041 has 73 MA's), (16, 1242), (20, 1317), (32, 1515), (37, 1632), (43, 1695), (48, 1788), (57, 1869), (60, 1884), (61, 1899),

Gene: SuperAwesome_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for SuperAwesome_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: SuperCallie99_2 Start: 1090, Stop: 1926, Start Num: 12
Candidate Starts for SuperCallie99_2:
(2, 724), (4, 775), (5, 778), (6, 790), (7, 826), (Start: 12 @1090 has 73 MA's), (15, 1249), (18, 1333), (21, 1390), (58, 1891), (61, 1918),

Gene: Superchunk_2 Start: 1061, Stop: 1939, Start Num: 12
Candidate Starts for Superchunk_2:
(Start: 12 @1061 has 73 MA's), (19, 1301), (21, 1355), (34, 1583), (36, 1628), (43, 1721), (46, 1796), (58, 1901), (61, 1928),

Gene: SwirlSquare_2 Start: 1063, Stop: 1938, Start Num: 12
Candidate Starts for SwirlSquare_2:

(Start: 12 @1063 has 73 MA's), (15, 1225), (21, 1354), (23, 1366), (33, 1561), (34, 1582), (36, 1627), (58, 1900), (61, 1927),

Gene: Temprado_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Temprado_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: ToneTone_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for ToneTone_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Trooper_3 Start: 1334, Stop: 2155, Start Num: 12
Candidate Starts for Trooper_3:
(7, 1070), (Start: 12 @1334 has 73 MA's), (23, 1628), (34, 1844), (35, 1865), (58, 2117),

Gene: Tucker_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Tucker_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Vanisoa_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for Vanisoa_2:
(Start: 12 @1027 has 73 MA's), (14, 1099), (15, 1201), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (58, 1849),

Gene: VohminGhazi_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for VohminGhazi_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Wiks_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Wiks_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: WorldCup_2 Start: 1027, Stop: 1887, Start Num: 12
Candidate Starts for WorldCup_2:
(Start: 12 @1027 has 73 MA's), (22, 1348), (23, 1357), (28, 1408), (30, 1450), (34, 1573), (35, 1594), (50, 1780), (58, 1849),

Gene: WunderPhul_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for WunderPhul_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Zaka_2 Start: 1089, Stop: 1925, Start Num: 12
Candidate Starts for Zaka_2:
(2, 723), (4, 774), (5, 777), (6, 789), (7, 825), (Start: 12 @1089 has 73 MA's), (15, 1248), (18, 1332), (21, 1389), (58, 1890), (61, 1917),

Gene: Zimmer_2 Start: 1061, Stop: 1948, Start Num: 12

Candidate Starts for Zimmer_2:
(3, 725), (5, 749), (10, 983), (Start: 12 @1061 has 73 MA's), (22, 1367), (26, 1397), (34, 1592), (43, 1733), (49, 1838), (60, 1922), (61, 1937),