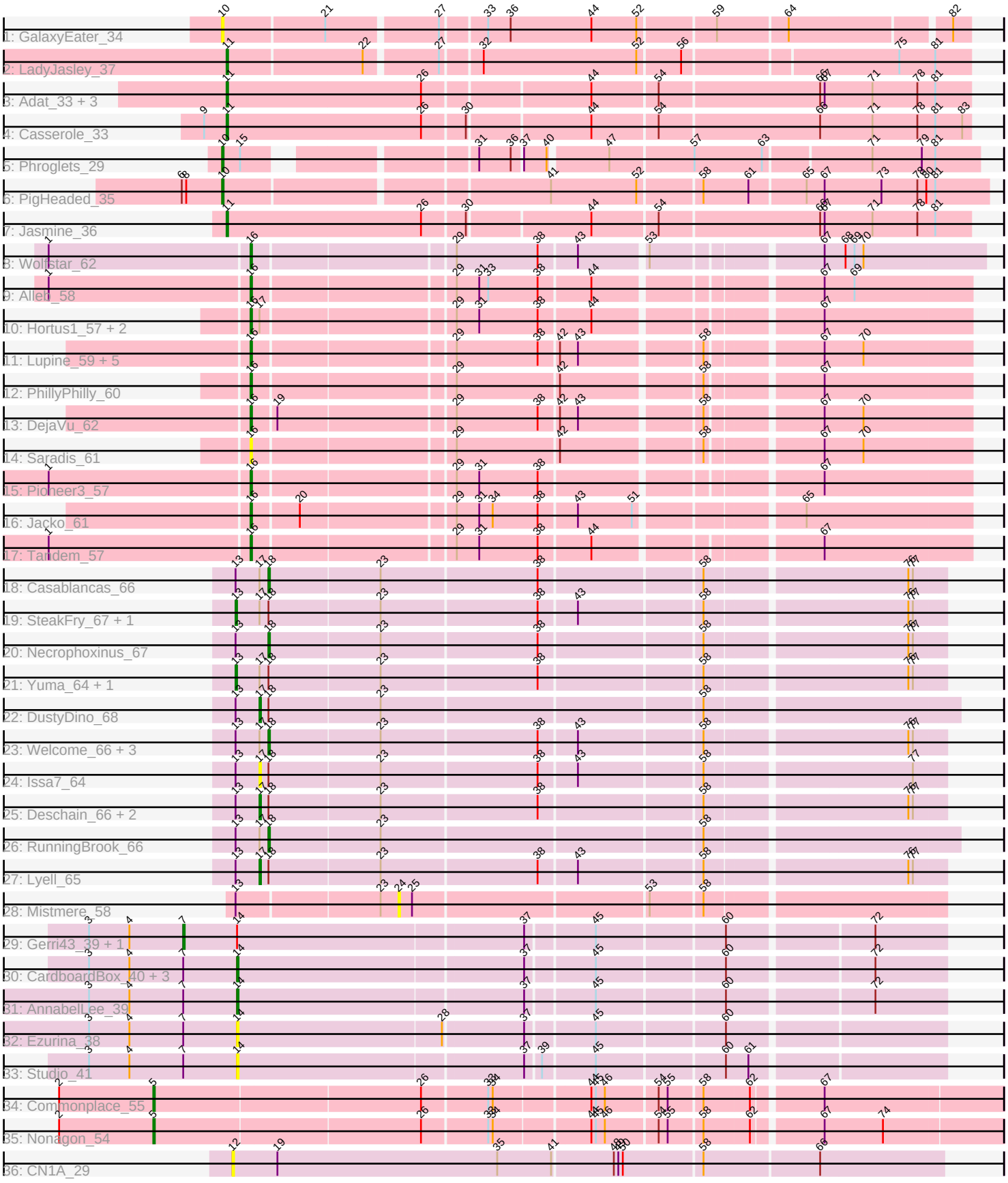
Pham 344039


1: GalaxyEater_34
2: LadyJasley_37
3: Adat_33 + 3
4: Casserole_33
5: Phroglets_29
6: PigHeaded_35
7: Jasmine_36
8: Wolfstar_62
9: Allen_58
10: Hortus1_57 + 2
11: Lupine_59 + 5
12: PhillyPhilly_60
13: DejaVu_62
14: Saradis_61
15: Pioneer3_57
16: Jacko_61
17: Tandem_57
18: Casablancas_66
19: SteakFry_67 + 1
20: Necrophoxinus_67
21: Yuma_64 + 1
22: DustyDino_68
23: Welcome_66 + 3
24: Issa7_64
25: Deschain_66 + 2
26: RunningBrook_66
27: Lyell_65
28: Mistmere_58
29: Gerri43_39 + 1
30: CardboardBox_40 + 3
31: Annabell_ee_39
32: Ezurina_38
33: Studio_41
34: Commonplace_55
35: Nonagon_54
36: CN1A_29

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 344039 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 344039 has 57 members, 12 are drafts.

Phages represented in each track:
- Track 1 : GalaxyEater_34
- Track 2 : LadyJasley_37
- Track 3 : Adat_33, GurgleFerb_33, Nellie_33, Brad_33
- Track 4 : Casserole_33
- Track 5 : Phroglets_29
- Track 6 : PigHeaded_35
- Track 7 : Jasmine_36
- Track 8 : Wolfstar_62
- Track 9 : Alleb_58
- Track 10 : Hortus1_57, OlinDD_57, Platte_57
- Track 11 : Lupine_59, Hubbs_61, Roman_61, Solimine_61, Uterion_64, Pavlo_60
- Track 12 : PhillyPhilly_60
- Track 13 : DejaVu_62
- Track 14 : Saradis_61
- Track 15 : Pioneer3_57
- Track 16 : Jacko_61
- Track 17 : Tandem_57
- Track 18 : Casablancas_66
- Track 19 : SteakFry_67, Shroomer_69
- Track 20 : Necrophoxinus_67
- Track 21 : Yuma_64, ASegato_64
- Track 22 : DustyDino_68
- Track 23 : Welcome_66, HollowPurple_66, Erenyeager_65, StevieWelch_65
- Track 24 : Issa7_64
- Track 25 : Deschain_66, Musetta_65, Fork_61
- Track 26 : RunningBrook_66
- Track 27 : Lyell_65
- Track 28 : Mistmere_58
- Track 29 : Gerri43_39, Roberts_39
- Track 30 : CardboardBox_40, ChamoyPickle_41, ChipsNGuac_39, Neuvillette_39
- Track 31 : AnnabelLee_39
- Track 32 : Ezurina_38
- Track 33 : Studio_41

• Track 34 : Commonplace_55
• Track 35 : Nonagon_54
• Track 36 : CN1A_29

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

The start number called the most often in the published annotations is 16, it was called in 15 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alleb_58, DejaVu_62, Hortus1_57, Hubbs_61, Jacko_61, Lupine_59, OlinDD_57, Pavlo_60, PhillyPhilly_60, Pioneer3_57, Platte_57, Roman_61, Saradis_61, Solimine_61, Tandem_57, Uterion_64, Wolfstar_62,

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

Genes that do not have the "Most Annotated" start:
• ASegato_64, Adat_33, AnnabelLee_39, Brad_33, CN1A_29, CardboardBox_40, Casablancas_66, Casserole_33, ChamoyPickle_41, ChipsNGuac_39, Commonplace_55, Deschain_66, DustyDino_68, Erenyeager_65, Ezurina_38, Fork_61, GalaxyEater_34, Gerri43_39, GurgleFerb_33, HollowPurple_66, Issa7_64, Jasmine_36, LadyJasley_37, Lyell_65, Mistmere_58, Musetta_65, Necrophoxinus_67, Nellie_33, Neuvillette_39, Nonagon_54, Phroglets_29, PigHeaded_35, Roberts_39, RunningBrook_66, Shroomer_69, SteakFry_67, StevieWelch_65, Studio_41, Welcome_66, Yuma_64,

Summary by start number:

Start 5:
• Found in 2 of 57 (3.5%) of genes in pham
• Manual Annotations of this start: 2 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Commonplace_55 (JD), Nonagon_54 (JD),

Start 7:
• Found in 9 of 57 (15.8%) of genes in pham
• Manual Annotations of this start: 2 of 45
• Called 22.2% of time when present
• Phage (with cluster) where this start called: Gerri43_39 (FR), Roberts_39 (FR),

Start 10:
• Found in 3 of 57 (5.3%) of genes in pham
• Manual Annotations of this start: 2 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GalaxyEater_34 (AV), Phroglets_29 (AV), PigHeaded_35 (AV),

Start 11:

• Found in 7 of 57 (12.3%) of genes in pham
• Manual Annotations of this start: 7 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adat_33 (AV), Brad_33 (AV), Casserole_33 (AV), GurgleFerb_33 (AV), Jasmine_36 (AV), LadyJasley_37 (AV), Nellie_33 (AV),

Start 12:
• Found in 1 of 57 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CN1A_29 (singleton),

Start 13:
• Found in 18 of 57 (31.6%) of genes in pham
• Manual Annotations of this start: 4 of 45
• Called 22.2% of time when present
• Phage (with cluster) where this start called: ASegato_64 (ED2), Shroomer_69 (ED2), SteakFry_67 (ED2), Yuma_64 (ED2),

Start 14:
• Found in 9 of 57 (15.8%) of genes in pham
• Manual Annotations of this start: 2 of 45
• Called 77.8% of time when present
• Phage (with cluster) where this start called: AnnabelLee_39 (FR), CardboardBox_40 (FR), ChamoyPickle_41 (FR), ChipsNGuac_39 (FR), Ezurina_38 (FR), Neuvillette_39 (FR), Studio_41 (FR),

Start 16:
• Found in 17 of 57 (29.8%) of genes in pham
• Manual Annotations of this start: 15 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alleb_58 (ED1), DejaVu_62 (ED1), Hortus1_57 (ED1), Hubbs_61 (ED1), Jacko_61 (ED1), Lupine_59 (ED1), OlinDD_57 (ED1), Pavlo_60 (ED1), PhillyPhilly_60 (ED1), Pioneer3_57 (ED1), Platte_57 (ED1), Roman_61 (ED1), Saradis_61 (ED1), Solimine_61 (ED1), Tandem_57 (ED1), Uterion_64 (ED1), Wolfstar_62 (ED),

Start 17:
• Found in 19 of 57 (33.3%) of genes in pham
• Manual Annotations of this start: 4 of 45
• Called 31.6% of time when present
• Phage (with cluster) where this start called: Deschain_66 (ED2), DustyDino_68 (ED2), Fork_61 (ED2), Issa7_64 (ED2), Lyell_65 (ED2), Musetta_65 (ED2),

Start 18:
• Found in 17 of 57 (29.8%) of genes in pham
• Manual Annotations of this start: 7 of 45
• Called 41.2% of time when present
• Phage (with cluster) where this start called: Casablancas_66 (ED2), Erenyeager_65 (ED2), HollowPurple_66 (ED2), Necrophoxinus_67 (ED2), RunningBrook_66 (ED2), StevieWelch_65 (ED2), Welcome_66 (ED2),

Start 24:
• Found in 1 of 57 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mistmere_58 (ED3),

Summary by clusters:

There are 8 clusters represented in this pham: FR, ED, singleton, ED2, ED3, ED1, AV, JD,

Info for manual annotations of cluster AV:
•Start number 10 was manually annotated 2 times for cluster AV.
•Start number 11 was manually annotated 7 times for cluster AV.

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

Info for manual annotations of cluster ED1:
•Start number 16 was manually annotated 14 times for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 13 was manually annotated 4 times for cluster ED2.
•Start number 17 was manually annotated 4 times for cluster ED2.
•Start number 18 was manually annotated 7 times for cluster ED2.

Info for manual annotations of cluster FR:
•Start number 7 was manually annotated 2 times for cluster FR.
•Start number 14 was manually annotated 2 times for cluster FR.

Info for manual annotations of cluster JD:
•Start number 5 was manually annotated 2 times for cluster JD.

Gene Information:

Gene: ASegato_64 Start: 36670, Stop: 36224, Start Num: 13
Candidate Starts for ASegato_64:
(Start: 13 @36670 has 4 MA's), (Start: 17 @36655 has 4 MA's), (Start: 18 @36649 has 7 MA's), (23, 36577), (38, 36475), (58, 36373), (76, 36247), (77, 36244),

Gene: Adat_33 Start: 29536, Stop: 29057, Start Num: 11
Candidate Starts for Adat_33:
(Start: 11 @29536 has 7 MA's), (26, 29407), (44, 29302), (54, 29260), (66, 29155), (67, 29152), (71, 29122), (78, 29092), (81, 29080),

Gene: Alleb_58 Start: 36582, Stop: 36139, Start Num: 16
Candidate Starts for Alleb_58:
(1, 36714), (Start: 16 @36582 has 15 MA's), (29, 36456), (31, 36441), (33, 36435), (38, 36402), (44, 36369), (67, 36234), (69, 36216),

Gene: AnnabelLee_39 Start: 26816, Stop: 26370, Start Num: 14
Candidate Starts for AnnabelLee_39:
(3, 26915), (4, 26888), (Start: 7 @26852 has 2 MA's), (Start: 14 @26816 has 2 MA's), (37, 26630), (45, 26588), (60, 26507), (72, 26417),

Gene: Brad_33 Start: 29534, Stop: 29055, Start Num: 11
Candidate Starts for Brad_33:
(Start: 11 @29534 has 7 MA's), (26, 29405), (44, 29300), (54, 29258), (66, 29153), (67, 29150), (71, 29120), (78, 29090), (81, 29078),

Gene: CN1A_29 Start: 18265, Stop: 18729, Start Num: 12
Candidate Starts for CN1A_29:
(12, 18265), (19, 18295), (35, 18442), (41, 18478), (48, 18517), (49, 18520), (50, 18523), (58, 18574), (66, 18649),

Gene: CardboardBox_40 Start: 26819, Stop: 26373, Start Num: 14
Candidate Starts for CardboardBox_40:
(3, 26918), (4, 26891), (Start: 7 @26855 has 2 MA's), (Start: 14 @26819 has 2 MA's), (37, 26633), (45, 26591), (60, 26510), (72, 26420),

Gene: Casablancas_66 Start: 36389, Stop: 35964, Start Num: 18
Candidate Starts for Casablancas_66:
(Start: 13 @36410 has 4 MA's), (Start: 17 @36395 has 4 MA's), (Start: 18 @36389 has 7 MA's), (23, 36317), (38, 36215), (58, 36113), (76, 35987), (77, 35984),

Gene: Casserole_33 Start: 30729, Stop: 30250, Start Num: 11
Candidate Starts for Casserole_33:
(9, 30744), (Start: 11 @30729 has 7 MA's), (26, 30600), (30, 30573), (44, 30495), (54, 30453), (66, 30348), (71, 30315), (78, 30285), (81, 30273), (83, 30255),

Gene: ChamoyPickle_41 Start: 27359, Stop: 26913, Start Num: 14
Candidate Starts for ChamoyPickle_41:
(3, 27458), (4, 27431), (Start: 7 @27395 has 2 MA's), (Start: 14 @27359 has 2 MA's), (37, 27173), (45, 27131), (60, 27050), (72, 26960),

Gene: ChipsNGuac_39 Start: 26819, Stop: 26373, Start Num: 14
Candidate Starts for ChipsNGuac_39:
(3, 26918), (4, 26891), (Start: 7 @26855 has 2 MA's), (Start: 14 @26819 has 2 MA's), (37, 26633), (45, 26591), (60, 26510), (72, 26420),

Gene: Commonplace_55 Start: 36094, Stop: 35558, Start Num: 5
Candidate Starts for Commonplace_55:
(2, 36157), (Start: 5 @36094 has 2 MA's), (26, 35920), (33, 35878), (34, 35875), (44, 35815), (45, 35812), (46, 35806), (54, 35773), (55, 35767), (58, 35746), (62, 35716), (67, 35674),

Gene: DejaVu_62 Start: 36569, Stop: 36126, Start Num: 16
Candidate Starts for DejaVu_62:
(Start: 16 @36569 has 15 MA's), (19, 36554), (29, 36443), (38, 36389), (42, 36377), (43, 36365), (58, 36290), (67, 36221), (70, 36197),

Gene: Deschain_66 Start: 37059, Stop: 36628, Start Num: 17
Candidate Starts for Deschain_66:

(Start: 13 @37074 has 4 MA's), (Start: 17 @37059 has 4 MA's), (Start: 18 @37053 has 7 MA's), (23, 36981), (38, 36879), (58, 36777), (76, 36651), (77, 36648),

Gene: DustyDino_68 Start: 37618, Stop: 37178, Start Num: 17
Candidate Starts for DustyDino_68:
(Start: 13 @37633 has 4 MA's), (Start: 17 @37618 has 4 MA's), (Start: 18 @37612 has 7 MA's), (23, 37540), (58, 37336),

Gene: Erenyeager_65 Start: 36644, Stop: 36219, Start Num: 18
Candidate Starts for Erenyeager_65:
(Start: 13 @36665 has 4 MA's), (Start: 17 @36650 has 4 MA's), (Start: 18 @36644 has 7 MA's), (23, 36572), (38, 36470), (43, 36446), (58, 36368), (76, 36242), (77, 36239),

Gene: Ezurina_38 Start: 27906, Stop: 27460, Start Num: 14
Candidate Starts for Ezurina_38:
(3, 28005), (4, 27978), (Start: 7 @27942 has 2 MA's), (Start: 14 @27906 has 2 MA's), (28, 27771), (37, 27720), (45, 27678), (60, 27597),

Gene: Fork_61 Start: 36305, Stop: 35874, Start Num: 17
Candidate Starts for Fork_61:
(Start: 13 @36320 has 4 MA's), (Start: 17 @36305 has 4 MA's), (Start: 18 @36299 has 7 MA's), (23, 36227), (38, 36125), (58, 36023), (76, 35897), (77, 35894),

Gene: GalaxyEater_34 Start: 30877, Stop: 30413, Start Num: 10
Candidate Starts for GalaxyEater_34:
(Start: 10 @30877 has 2 MA's), (21, 30811), (27, 30742), (33, 30715), (36, 30700), (44, 30646), (52, 30616), (59, 30568), (64, 30523), (82, 30424),

Gene: Gerri43_39 Start: 26855, Stop: 26373, Start Num: 7
Candidate Starts for Gerri43_39:
(3, 26918), (4, 26891), (Start: 7 @26855 has 2 MA's), (Start: 14 @26819 has 2 MA's), (37, 26633), (45, 26591), (60, 26510), (72, 26420),

Gene: GurgleFerb_33 Start: 29535, Stop: 29056, Start Num: 11
Candidate Starts for GurgleFerb_33:
(Start: 11 @29535 has 7 MA's), (26, 29406), (44, 29301), (54, 29259), (66, 29154), (67, 29151), (71, 29121), (78, 29091), (81, 29079),

Gene: HollowPurple_66 Start: 36855, Stop: 36430, Start Num: 18
Candidate Starts for HollowPurple_66:
(Start: 13 @36876 has 4 MA's), (Start: 17 @36861 has 4 MA's), (Start: 18 @36855 has 7 MA's), (23, 36783), (38, 36681), (43, 36657), (58, 36579), (76, 36453), (77, 36450),

Gene: Hortus1_57 Start: 36572, Stop: 36129, Start Num: 16
Candidate Starts for Hortus1_57:
(Start: 16 @36572 has 15 MA's), (Start: 17 @36566 has 4 MA's), (29, 36446), (31, 36431), (38, 36392), (44, 36359), (67, 36224),

Gene: Hubbs_61 Start: 36777, Stop: 36334, Start Num: 16
Candidate Starts for Hubbs_61:
(Start: 16 @36777 has 15 MA's), (29, 36651), (38, 36597), (42, 36585), (43, 36573), (58, 36498), (67, 36429), (70, 36405),

Gene: Issa7_64 Start: 36312, Stop: 35881, Start Num: 17
Candidate Starts for Issa7_64:
(Start: 13 @36327 has 4 MA's), (Start: 17 @36312 has 4 MA's), (Start: 18 @36306 has 7 MA's), (23, 36234), (38, 36132), (43, 36108), (58, 36030), (77, 35901),

Gene: Jacko_61 Start: 35556, Stop: 35110, Start Num: 16
Candidate Starts for Jacko_61:
(Start: 16 @35556 has 15 MA's), (20, 35526), (29, 35430), (31, 35415), (34, 35406), (38, 35376), (43, 35352), (51, 35316), (65, 35217),

Gene: Jasmine_36 Start: 31411, Stop: 30932, Start Num: 11
Candidate Starts for Jasmine_36:
(Start: 11 @31411 has 7 MA's), (26, 31282), (30, 31255), (44, 31177), (54, 31135), (66, 31030), (67, 31027), (71, 30997), (78, 30967), (81, 30955),

Gene: LadyJasley_37 Start: 30740, Stop: 30273, Start Num: 11
Candidate Starts for LadyJasley_37:
(Start: 11 @30740 has 7 MA's), (22, 30653), (27, 30608), (32, 30584), (52, 30482), (56, 30455), (75, 30320), (81, 30296),

Gene: Lupine_59 Start: 35983, Stop: 35540, Start Num: 16
Candidate Starts for Lupine_59:
(Start: 16 @35983 has 15 MA's), (29, 35857), (38, 35803), (42, 35791), (43, 35779), (58, 35704), (67, 35635), (70, 35611),

Gene: Lyell_65 Start: 36564, Stop: 36133, Start Num: 17
Candidate Starts for Lyell_65:
(Start: 13 @36579 has 4 MA's), (Start: 17 @36564 has 4 MA's), (Start: 18 @36558 has 7 MA's), (23, 36486), (38, 36384), (43, 36360), (58, 36282), (76, 36156), (77, 36153),

Gene: Mistmere_58 Start: 35322, Stop: 34981, Start Num: 24
Candidate Starts for Mistmere_58:
(Start: 13 @35424 has 4 MA's), (23, 35334), (24, 35322), (25, 35313), (53, 35163), (58, 35130),

Gene: Musetta_65 Start: 37025, Stop: 36594, Start Num: 17
Candidate Starts for Musetta_65:
(Start: 13 @37040 has 4 MA's), (Start: 17 @37025 has 4 MA's), (Start: 18 @37019 has 7 MA's), (23, 36947), (38, 36845), (58, 36743), (76, 36617), (77, 36614),

Gene: Necrophoxinus_67 Start: 37253, Stop: 36828, Start Num: 18
Candidate Starts for Necrophoxinus_67:
(Start: 13 @37274 has 4 MA's), (Start: 18 @37253 has 7 MA's), (23, 37181), (38, 37079), (58, 36977), (76, 36851), (77, 36848),

Gene: Nellie_33 Start: 29536, Stop: 29057, Start Num: 11
Candidate Starts for Nellie_33:
(Start: 11 @29536 has 7 MA's), (26, 29407), (44, 29302), (54, 29260), (66, 29155), (67, 29152), (71, 29122), (78, 29092), (81, 29080),

Gene: Neuvillette_39 Start: 26819, Stop: 26373, Start Num: 14
Candidate Starts for Neuvillette_39:
(3, 26918), (4, 26891), (Start: 7 @26855 has 2 MA's), (Start: 14 @26819 has 2 MA's), (37, 26633), (45, 26591), (60, 26510), (72, 26420),

Gene: Nonagon_54 Start: 35800, Stop: 35264, Start Num: 5
Candidate Starts for Nonagon_54:
(2, 35863), (Start: 5 @35800 has 2 MA's), (26, 35626), (33, 35584), (34, 35581), (44, 35521), (45, 35518), (46, 35512), (54, 35479), (55, 35473), (58, 35452), (62, 35422), (67, 35380), (74, 35341),

Gene: OlinDD_57 Start: 36571, Stop: 36128, Start Num: 16
Candidate Starts for OlinDD_57:
(Start: 16 @36571 has 15 MA's), (Start: 17 @36565 has 4 MA's), (29, 36445), (31, 36430), (38, 36391), (44, 36358), (67, 36223),

Gene: Pavlo_60 Start: 36628, Stop: 36185, Start Num: 16
Candidate Starts for Pavlo_60:
(Start: 16 @36628 has 15 MA's), (29, 36502), (38, 36448), (42, 36436), (43, 36424), (58, 36349), (67, 36280), (70, 36256),

Gene: PhillyPhilly_60 Start: 36162, Stop: 35719, Start Num: 16
Candidate Starts for PhillyPhilly_60:
(Start: 16 @36162 has 15 MA's), (29, 36036), (42, 35970), (58, 35883), (67, 35814),

Gene: Phroglets_29 Start: 29140, Stop: 28685, Start Num: 10
Candidate Starts for Phroglets_29:
(Start: 10 @29140 has 2 MA's), (15, 29128), (31, 28999), (36, 28978), (37, 28972), (40, 28957), (47, 28921), (57, 28867), (63, 28822), (71, 28756), (79, 28723), (81, 28714),

Gene: PigHeaded_35 Start: 29523, Stop: 29038, Start Num: 10
Candidate Starts for PigHeaded_35:
(6, 29550), (8, 29547), (Start: 10 @29523 has 2 MA's), (41, 29319), (52, 29262), (58, 29223), (61, 29193), (65, 29157), (67, 29145), (73, 29109), (78, 29085), (80, 29079), (81, 29073),

Gene: Pioneer3_57 Start: 36579, Stop: 36136, Start Num: 16
Candidate Starts for Pioneer3_57:
(1, 36711), (Start: 16 @36579 has 15 MA's), (29, 36453), (31, 36438), (38, 36399), (67, 36231),

Gene: Platte_57 Start: 36364, Stop: 35921, Start Num: 16
Candidate Starts for Platte_57:
(Start: 16 @36364 has 15 MA's), (Start: 17 @36358 has 4 MA's), (29, 36238), (31, 36223), (38, 36184), (44, 36151), (67, 36016),

Gene: Roberts_39 Start: 26855, Stop: 26373, Start Num: 7
Candidate Starts for Roberts_39:
(3, 26918), (4, 26891), (Start: 7 @26855 has 2 MA's), (Start: 14 @26819 has 2 MA's), (37, 26633), (45, 26591), (60, 26510), (72, 26420),

Gene: Roman_61 Start: 36625, Stop: 36182, Start Num: 16
Candidate Starts for Roman_61:
(Start: 16 @36625 has 15 MA's), (29, 36499), (38, 36445), (42, 36433), (43, 36421), (58, 36346), (67, 36277), (70, 36253),

Gene: RunningBrook_66 Start: 37612, Stop: 37178, Start Num: 18
Candidate Starts for RunningBrook_66:
(Start: 13 @37633 has 4 MA's), (Start: 17 @37618 has 4 MA's), (Start: 18 @37612 has 7 MA's), (23, 37540), (58, 37336),

Gene: Saradis_61 Start: 36221, Stop: 35778, Start Num: 16
Candidate Starts for Saradis_61:
(Start: 16 @36221 has 15 MA's), (29, 36095), (42, 36029), (58, 35942), (67, 35873), (70, 35849),

Gene: Shroomer_69 Start: 36810, Stop: 36364, Start Num: 13
Candidate Starts for Shroomer_69:
(Start: 13 @36810 has 4 MA's), (Start: 17 @36795 has 4 MA's), (Start: 18 @36789 has 7 MA's), (23, 36717), (38, 36615), (43, 36591), (58, 36513), (76, 36387), (77, 36384),

Gene: Solimine_61 Start: 36635, Stop: 36192, Start Num: 16
Candidate Starts for Solimine_61:
(Start: 16 @36635 has 15 MA's), (29, 36509), (38, 36455), (42, 36443), (43, 36431), (58, 36356), (67, 36287), (70, 36263),

Gene: SteakFry_67 Start: 36876, Stop: 36430, Start Num: 13
Candidate Starts for SteakFry_67:
(Start: 13 @36876 has 4 MA's), (Start: 17 @36861 has 4 MA's), (Start: 18 @36855 has 7 MA's), (23, 36783), (38, 36681), (43, 36657), (58, 36579), (76, 36453), (77, 36450),

Gene: StevieWelch_65 Start: 36644, Stop: 36219, Start Num: 18
Candidate Starts for StevieWelch_65:
(Start: 13 @36665 has 4 MA's), (Start: 17 @36650 has 4 MA's), (Start: 18 @36644 has 7 MA's), (23, 36572), (38, 36470), (43, 36446), (58, 36368), (76, 36242), (77, 36239),

Gene: Studio_41 Start: 28182, Stop: 27736, Start Num: 14
Candidate Starts for Studio_41:
(3, 28281), (4, 28254), (Start: 7 @28218 has 2 MA's), (Start: 14 @28182 has 2 MA's), (37, 27996), (39, 27987), (45, 27954), (60, 27873), (61, 27858),

Gene: Tandem_57 Start: 36518, Stop: 36075, Start Num: 16
Candidate Starts for Tandem_57:
(1, 36650), (Start: 16 @36518 has 15 MA's), (29, 36392), (31, 36377), (38, 36338), (44, 36305), (67, 36170),

Gene: Uterion_64 Start: 36730, Stop: 36287, Start Num: 16
Candidate Starts for Uterion_64:
(Start: 16 @36730 has 15 MA's), (29, 36604), (38, 36550), (42, 36538), (43, 36526), (58, 36451), (67, 36382), (70, 36358),

Gene: Welcome_66 Start: 37004, Stop: 36579, Start Num: 18
Candidate Starts for Welcome_66:
(Start: 13 @37025 has 4 MA's), (Start: 17 @37010 has 4 MA's), (Start: 18 @37004 has 7 MA's), (23, 36932), (38, 36830), (43, 36806), (58, 36728), (76, 36602), (77, 36599),

Gene: Wolfstar_62 Start: 37671, Stop: 37219, Start Num: 16
Candidate Starts for Wolfstar_62:
(1, 37803), (Start: 16 @37671 has 15 MA's), (29, 37545), (38, 37491), (43, 37467), (53, 37425), (67, 37323), (68, 37311), (69, 37305), (70, 37299),

Gene: Yuma_64 Start: 36594, Stop: 36148, Start Num: 13
Candidate Starts for Yuma_64:

(Start: 13 @36594 has 4 MA's), (Start: 17 @36579 has 4 MA's), (Start: 18 @36573 has 7 MA's), (23, 36501), (38, 36399), (58, 36297), (76, 36171), (77, 36168),