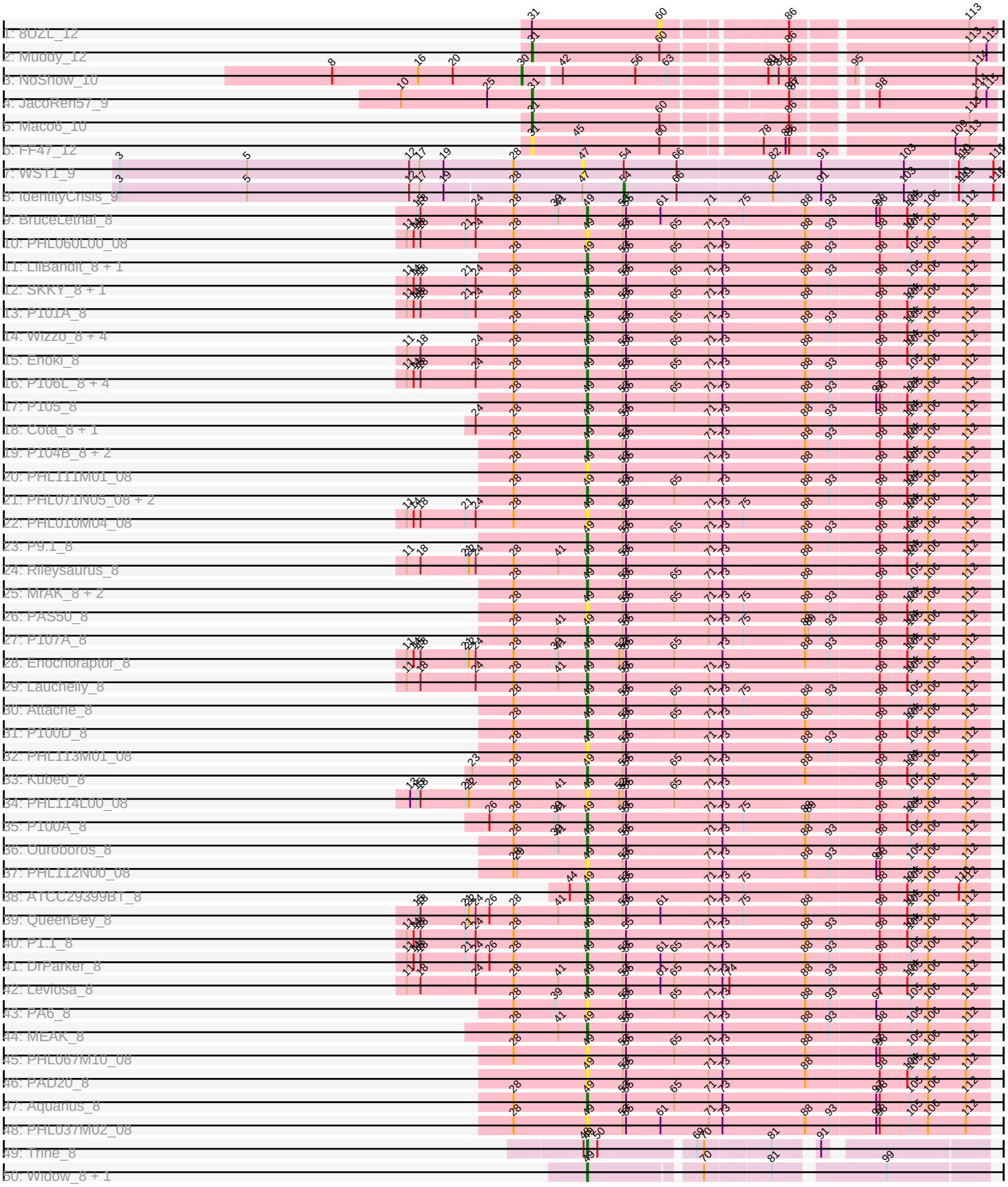
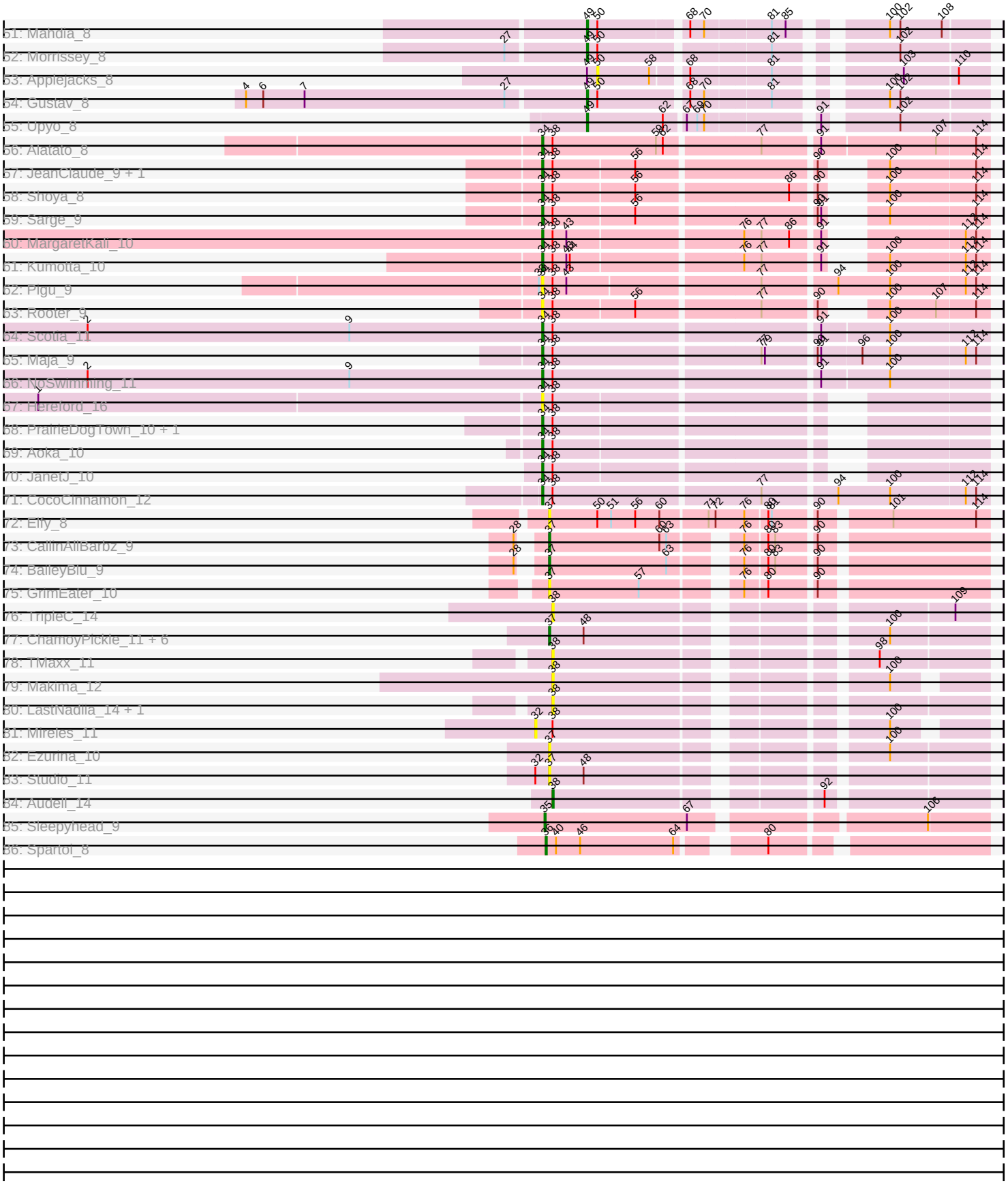
Pham 280247


1: 8UZL_12
2: Muddy_12
3: NoShow_10
4: JacoRen57_9
5: Maco6_10
6: FF47_12
7: WST1_9
8: IdentityCrisis_9
9: BruceLethal_8
10: PHL060L00_08
11: LilBandit_8 + 1
12: SKKY_8 + 1
13: P101A_8
14: Wizzo_8 + 4
15: Enoki_8
16: P106L_8 + 4
17: P105_8
18: Cota_8 + 1
19: P104B_8 + 2
20: PHL111M01_08
21: PHL071N05_08 + 2
22: PHL010M04_08
23: P9.1_8
24: Rileysaurus_8
25: MrAK_8 + 2
26: PAS50_8
27: P107A_8
28: Enochoraptor_8
29: Lauchelly_8
30: Attache_8
31: P100D_8
32: PHL113M01_08
33: Kubed_8
34: PHL114L00_08
35: P100A_8
36: Ouroboros_8
37: PHL112N00_08
38: ATCC29399BT_8
39: QueenBey_8
40: P1.1_8
41: DrParker_8
42: Leviosa_8
43: PA6_8
44: MEAK_8
45: PHL067M10_08
46: PAD20_8
47: Aquarius_8
48: PHL037M02_08
49: Trine_8
50: Widow_8 + 1

Pham 280247


51: Mandia_8
52: Morrissey_8
53: Applejacks_8
54: Gustav_8
55: Opyo_8
56: Alatato_8
57: JeanClaude_9 + 1
58: Shoya_8
59: Sarge_9
60: MargaretKali_10
61: Kumotta_10
62: Pigu_9
63: Rooter_9
64: Scotia_11
65: Maja_9
66: NoSwimming_11
67: Hereford_16
68: PrairieDogTown_10 + 1
69: Aoka_10
70: JanetJ_10
71: CocoCinnamon_12
72: Elly_8
73: CallmAllBarbz_9
74: BaileyBlu_9
75: GrimEater_10
76: TripleC_14
77: ChamoyPickle_11 + 6
78: TMaxx_11
79: Makima_12
80: LastNadila_14 + 1
81: Mireles_11
82: Ezurina_10
83: Studio_11
84: Audell_14
85: Sleepyhead_9
86: Spartol_8

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 280247 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280247 has 113 members, 36 are drafts.

Phages represented in each track:
- Track 1 : 8UZL_12
- Track 2 : Muddy_12
- Track 3 : NoShow_10
- Track 4 : JacoRen57_9
- Track 5 : Maco6_10
- Track 6 : FF47_12
- Track 7 : WST1_9
- Track 8 : IdentityCrisis_9
- Track 9 : BruceLethal_8
- Track 10 : PHL060L00_08
- Track 11 : LilBandit_8, P14.4_8
- Track 12 : SKKY_8, Moyashi_8
- Track 13 : P101A_8
- Track 14 : Wizzo_8, Supernova_8, Solid_8, P107C_8, ATCC29399BC_8
- Track 15 : Enoki_8
- Track 16 : P106L_8, P106I_8, P106M_8, P106C_8, P106A_8
- Track 17 : P105_8
- Track 18 : Cota_8, Keiki_8
- Track 19 : P104B_8, Procrass1_8, Stormborn_8
- Track 20 : PHL111M01_08
- Track 21 : PHL071N05_08, P108C_8, Pirate_8
- Track 22 : PHL010M04_08
- Track 23 : P9.1_8
- Track 24 : Rileysaurus_8
- Track 25 : MrAK_8, P100.1_8, P104A_8
- Track 26 : PAS50_8
- Track 27 : P107A_8
- Track 28 : Enochoraptor_8
- Track 29 : Lauchelly_8
- Track 30 : Attacne_8
- Track 31 : P100D_8
- Track 32 : PHL113M01_08
- Track 33 : Kubed_8
- Track 34 : PHL114L00_08
- Track 35 : P100A_8
- Track 36 : Ouroboros_8
- Track 37 : PHL112N00_08

• Track 38 : ATCC29399BT_8
• Track 39 : QueenBey_8
• Track 40 : P1.1_8
• Track 41 : DrParker_8
• Track 42 : Leviosa_8
• Track 43 : PA6_8
• Track 44 : MEAK_8
• Track 45 : PHL067M10_08
• Track 46 : PAD20_8
• Track 47 : Aquarius_8
• Track 48 : PHL037M02_08
• Track 49 : Trine_8
• Track 50 : Widow_8, Puppers_8
• Track 51 : Mahdia_8
• Track 52 : Morrissey_8
• Track 53 : Applejacks_8
• Track 54 : Gustav_8
• Track 55 : Upyo_8
• Track 56 : Alatato_8
• Track 57 : JeanClaude_9, BrayBeast_9
• Track 58 : Shoya_8
• Track 59 : Sarge_9
• Track 60 : MargaretKali_10
• Track 61 : Kumotta_10
• Track 62 : Pigu_9
• Track 63 : Rooter_9
• Track 64 : Scotia_11
• Track 65 : Maja_9
• Track 66 : NoSwimming_11
• Track 67 : Hereford_16
• Track 68 : PrairieDogTown_10, EvenBluerMoon_10
• Track 69 : Aoka_10
• Track 70 : JanetJ_10
• Track 71 : CocoCinnamon_12
• Track 72 : Elfy_8
• Track 73 : CallinAllBarbz_9
• Track 74 : BaileyBlu_9
• Track 75 : GrimEater_10
• Track 76 : TripleC_14
• Track 77 : ChamoyPickle_11, AnnabelLee_11, Roberts_11, Gerri43_11, Neuvillette_11, CardboardBox_11, ChipsNGuac_11
• Track 78 : TMaxx_11
• Track 79 : Makima_12
• Track 80 : LastNadiia_14, Agamotto_13
• Track 81 : Mireles_11
• Track 82 : Ezurina_10
• Track 83 : Studio_11
• Track 84 : Audell_14
• Track 85 : Sleepyhead_9
• Track 86 : Spartoi_8

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

The start number called the most often in the published annotations is 49, it was called in 52 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ATCC29399BC_8, ATCC29399BT_8, Aquarius_8, Attacne_8, BruceLethal_8, Cota_8, DrParker_8, Enochoraptor_8, Enoki_8, Gustav_8, Keiki_8, Kubed_8, Lauchelly_8, Leviosa_8, LilBandit_8, MEAK_8, Mahdia_8, Morrissey_8, Moyashi_8, MrAK_8, Ouroboros_8, P1.1_8, P100.1_8, P100A_8, P100D_8, P101A_8, P104A_8, P104B_8, P105_8, P106A_8, P106C_8, P106I_8, P106L_8, P106M_8, P107A_8, P107C_8, P108C_8, P14.4_8, P9.1_8, PA6_8, PAD20_8, PAS50_8, PHL010M04_08, PHL037M02_08, PHL060L00_08, PHL067M10_08, PHL071N05_08, PHL111M01_08, PHL112N00_08, PHL113M01_08, PHL114L00_08, Pirate_8, Procrass1_8, Puppers_8, QueenBey_8, Rileysaurus_8, SKKY_8, Solid_8, Stormborn_8, Supernova_8, Trine_8, Upyo_8, Widow_8, Wizzo_8,

Genes that have the "Most Annotated" start but do not call it:
• Applejacks_8,

Genes that do not have the "Most Annotated" start:
• 8UZL_12, Agamotto_13, Alatato_8, AnnabelLee_11, Aoka_10, Audell_14, BaileyBlu_9, BrayBeast_9, CallinAllBarbz_9, CardboardBox_11, ChamoyPickle_11, ChipsNGuac_11, CocoCinnamon_12, Elfy_8, EvenBluerMoon_10, Ezurina_10, FF47_12, Gerri43_11, GrimEater_10, Hereford_16, IdentityCrisis_9, JacoRen57_9, JanetJ_10, JeanClaude_9, Kumotta_10, LastNadiia_14, Maco6_10, Maja_9, Makima_12, MargaretKali_10, Mireles_11, Muddy_12, Neuvillette_11, NoShow_10, NoSwimming_11, Pigu_9, PrairieDogTown_10, Roberts_11, Rooter_9, Sarge_9, Scotia_11, Shoya_8, Sleepyhead_9, Spartoi_8, Studio_11, TMaxx_11, TripleC_14, WST1_9,

Summary by start number:

Start 30:
• Found in 1 of 113 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: NoShow_10 (AB),

Start 31:
• Found in 5 of 113 (4.4%) of genes in pham
• Manual Annotations of this start: 3 of 77
• Called 80.0% of time when present
• Phage (with cluster) where this start called: FF47_12 (AB), JacoRen57_9 (AB), Maco6_10 (AB), Muddy_12 (AB),

Start 32:
• Found in 2 of 113 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Mireles_11 (FR),

Start 34:
• Found in 18 of 113 (15.9%) of genes in pham
• Manual Annotations of this start: 14 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alatato_8 (FB), Aoka_10 (FO), BrayBeast_9 (FB), CocoCinnamon_12 (FO), EvenBluerMoon_10 (FO), Hereford_16 (FO), JanetJ_10 (FO), JeanClaude_9 (FB), Kumotta_10 (FB), Maja_9 (FO), MargaretKali_10 (FB), NoSwimming_11 (FO), Pigu_9 (FB), PrairieDogTown_10 (FO), Rooter_9 (FB), Sarge_9 (FB), Scotia_11 (FO), Shoya_8 (FB),

Start 35:
• Found in 1 of 113 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sleepyhead_9 (singleton),

Start 36:
• Found in 1 of 113 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Spartoi_8 (singleton),

Start 37:
• Found in 13 of 113 (11.5%) of genes in pham
• Manual Annotations of this start: 3 of 77
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AnnabelLee_11 (FR), BaileyBlu_9 (FP), CallinAllBarbz_9 (FP), CardboardBox_11 (FR), ChamoyPickle_11 (FR), ChipsNGuac_11 (FR), Elfy_8 (FP), Ezurina_10 (FR), Gerri43_11 (FR), GrimEater_10 (FP), Neuvillette_11 (FR), Roberts_11 (FR), Studio_11 (FR),

Start 38:
• Found in 25 of 113 (22.1%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 24.0% of time when present
• Phage (with cluster) where this start called: Agamotto_13 (FR), Audell_14 (FR), LastNadiia_14 (FR), Makima_12 (FR), TMaxx_11 (FR), TripleC_14 (FR),

Start 47:
• Found in 2 of 113 (1.8%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: WST1_9 (AJ),

Start 49:
• Found in 65 of 113 (57.5%) of genes in pham
• Manual Annotations of this start: 52 of 77
• Called 98.5% of time when present
• Phage (with cluster) where this start called: ATCC29399BC_8 (BU), ATCC29399BT_8 (BU), Aquarius_8 (BU), Attacne_8 (BU), BruceLethal_8 (BU), Cota_8 (BU), DrParker_8 (BU), Enochoraptor_8 (BU), Enoki_8 (BU), Gustav_8 (CD), Keiki_8 (BU), Kubed_8 (BU), Lauchelly_8 (BU), Leviosa_8 (BU), LilBandit_8 (BU), MEAK_8 (BU), Mahdia_8 (CD), Morrissey_8 (CD), Moyashi_8 (BU), MrAK_8 (BU),

Ouroboros_8 (BU), P1.1_8 (BU), P100.1_8 (BU), P100A_8 (BU), P100D_8 (BU), P101A_8 (BU), P104A_8 (BU), P104B_8 (BU), P105_8 (BU), P106A_8 (BU), P106C_8 (BU), P106I_8 (BU), P106L_8 (BU), P106M_8 (BU), P107A_8 (BU), P107C_8 (BU), P108C_8 (BU), P14.4_8 (BU), P9.1_8 (BU), PA6_8 (BU), PAD20_8 (BU), PAS50_8 (BU), PHL010M04_08 (BU), PHL037M02_08 (BU), PHL060L00_08 (BU), PHL067M10_08 (BU), PHL071N05_08 (BU), PHL111M01_08 (BU), PHL112N00_08 (BU), PHL113M01_08 (BU), PHL114L00_08 (BU), Pirate_8 (BU), Procrass1_8 (BU), Puppers_8 (CD), QueenBey_8 (BU), Rileysaurus_8 (BU), SKKY_8 (BU), Solid_8 (BU), Stormborn_8 (BU), Supernova_8 (BU), Trine_8 (CD), Upyo_8 (CD), Widow_8 (CD), Wizzo_8 (BU),

Start 50:
• Found in 6 of 113 (5.3%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Applejacks_8 (CD),

Start 54:
• Found in 2 of 113 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 77
• Called 50.0% of time when present
• Phage (with cluster) where this start called: IdentityCrisis_9 (AJ),

Start 60:
• Found in 6 of 113 (5.3%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: 8UZL_12 (AB),

Summary by clusters:

There are 9 clusters represented in this pham: FP, FR, AB, AJ, singleton, CD, BU, FB, FO,

Info for manual annotations of cluster AB:
•Start number 30 was manually annotated 1 time for cluster AB.
•Start number 31 was manually annotated 3 times for cluster AB.

Info for manual annotations of cluster AJ:
•Start number 54 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster BU:
•Start number 49 was manually annotated 45 times for cluster BU.

Info for manual annotations of cluster CD:
•Start number 49 was manually annotated 7 times for cluster CD.

Info for manual annotations of cluster FB:
•Start number 34 was manually annotated 6 times for cluster FB.

Info for manual annotations of cluster FO:
•Start number 34 was manually annotated 8 times for cluster FO.

Info for manual annotations of cluster FP:
•Start number 37 was manually annotated 2 times for cluster FP.

Info for manual annotations of cluster FR:
•Start number 37 was manually annotated 1 time for cluster FR.
•Start number 38 was manually annotated 1 time for cluster FR.

Gene Information:

Gene: 8UZL_12 Start: 8333, Stop: 8596, Start Num: 60
Candidate Starts for 8UZL_12:
(Start: 31 @8222 has 3 MA's), (60, 8333), (86, 8429), (113, 8573),

Gene: ATCC29399BC_8 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for ATCC29399BC_8:
(28, 6035), (Start: 49 @6098 has 52 MA's), (53, 6128), (55, 6131), (65, 6173), (71, 6203), (73, 6215), (88, 6287), (93, 6308), (98, 6350), (104, 6374), (105, 6377), (106, 6392), (112, 6425),

Gene: ATCC29399BT_8 Start: 6095, Stop: 6442, Start Num: 49
Candidate Starts for ATCC29399BT_8:
(44, 6080), (Start: 49 @6095 has 52 MA's), (53, 6125), (55, 6128), (71, 6200), (73, 6212), (75, 6230), (98, 6347), (104, 6371), (105, 6374), (106, 6389), (110, 6416), (112, 6422),

Gene: Agamotto_13 Start: 10199, Stop: 10531, Start Num: 38
Candidate Starts for Agamotto_13:
(Start: 38 @10199 has 1 MA's),

Gene: Alatato_8 Start: 6552, Stop: 6920, Start Num: 34
Candidate Starts for Alatato_8:
(Start: 34 @6552 has 14 MA's), (Start: 38 @6561 has 1 MA's), (59, 6651), (62, 6657), (77, 6735), (91, 6780), (107, 6876), (114, 6909),

Gene: AnnabelLee_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for AnnabelLee_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: Aoka_10 Start: 8106, Stop: 8438, Start Num: 34
Candidate Starts for Aoka_10:
(Start: 34 @8106 has 14 MA's), (Start: 38 @8115 has 1 MA's),

Gene: Applejacks_8 Start: 6532, Stop: 6825, Start Num: 50
Candidate Starts for Applejacks_8:
(Start: 49 @6523 has 52 MA's), (50, 6532), (58, 6577), (68, 6601), (81, 6667), (103, 6754), (110, 6799),

Gene: Aquarius_8 Start: 6088, Stop: 6435, Start Num: 49
Candidate Starts for Aquarius_8:
(28, 6025), (Start: 49 @6088 has 52 MA's), (53, 6118), (55, 6121), (65, 6163), (71, 6193), (73, 6205), (97, 6337), (98, 6340), (105, 6367), (106, 6382), (112, 6415),

Gene: Attacne_8 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for Attacne_8:

(28, 6036), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (65, 6174), (71, 6204), (73, 6216), (75, 6234), (88, 6288), (93, 6309), (98, 6351), (105, 6378), (106, 6393), (112, 6426),

Gene: Audell_14 Start: 10469, Stop: 10801, Start Num: 38
Candidate Starts for Audell_14:
(Start: 38 @10469 has 1 MA's), (92, 10673),

Gene: BaileyBlu_9 Start: 6175, Stop: 6513, Start Num: 37
Candidate Starts for BaileyBlu_9:
(28, 6163), (Start: 37 @6175 has 3 MA's), (63, 6277), (76, 6322), (80, 6340), (83, 6346), (90, 6376),

Gene: BrayBeast_9 Start: 7001, Stop: 7333, Start Num: 34
Candidate Starts for BrayBeast_9:
(Start: 34 @7001 has 14 MA's), (Start: 38 @7010 has 1 MA's), (56, 7079), (90, 7223), (100, 7250), (114, 7322),

Gene: BruceLethal_8 Start: 6088, Stop: 6435, Start Num: 49
Candidate Starts for BruceLethal_8:
(15, 5941), (18, 5944), (24, 5992), (28, 6025), (39, 6061), (41, 6064), (Start: 49 @6088 has 52 MA's), (53, 6118), (55, 6121), (61, 6151), (71, 6193), (75, 6223), (88, 6277), (93, 6298), (97, 6337), (98, 6340), (104, 6364), (105, 6367), (106, 6382), (112, 6415),

Gene: CallinAllBarbz_9 Start: 6185, Stop: 6523, Start Num: 37
Candidate Starts for CallinAllBarbz_9:
(28, 6173), (Start: 37 @6185 has 3 MA's), (60, 6281), (63, 6287), (76, 6332), (80, 6350), (83, 6356), (90, 6386),

Gene: CardboardBox_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for CardboardBox_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: ChamoyPickle_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for ChamoyPickle_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: ChipsNGuac_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for ChipsNGuac_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: CocoCinnamon_12 Start: 8205, Stop: 8576, Start Num: 34
Candidate Starts for CocoCinnamon_12:
(Start: 34 @8205 has 14 MA's), (Start: 38 @8214 has 1 MA's), (77, 8388), (94, 8448), (100, 8493), (112, 8556), (114, 8565),

Gene: Cota_8 Start: 6106, Stop: 6453, Start Num: 49
Candidate Starts for Cota_8:
(24, 6010), (28, 6043), (Start: 49 @6106 has 52 MA's), (53, 6136), (55, 6139), (71, 6211), (73, 6223), (88, 6295), (93, 6316), (98, 6358), (104, 6382), (105, 6385), (106, 6400), (112, 6433),

Gene: DrParker_8 Start: 6113, Stop: 6460, Start Num: 49
Candidate Starts for DrParker_8:
(11, 5957), (14, 5963), (15, 5966), (18, 5969), (21, 6008), (24, 6017), (26, 6029), (28, 6050), (Start: 49 @6113 has 52 MA's), (53, 6143), (55, 6146), (61, 6176), (65, 6188), (71, 6218), (73, 6230), (88, 6302),

(93, 6323), (98, 6365), (105, 6392), (106, 6407), (112, 6440),

Gene: Elfy_8 Start: 6109, Stop: 6465, Start Num: 37
Candidate Starts for Elfy_8:
(Start: 37 @6109 has 3 MA's), (50, 6151), (51, 6163), (56, 6184), (60, 6205), (71, 6244), (72, 6250), (76, 6274), (80, 6292), (81, 6295), (90, 6328), (101, 6382), (114, 6454),

Gene: Enochoraptor_8 Start: 6109, Stop: 6456, Start Num: 49
Candidate Starts for Enochoraptor_8:
(11, 5953), (14, 5959), (15, 5962), (18, 5965), (21, 6004), (22, 6007), (24, 6013), (28, 6046), (39, 6082), (41, 6085), (Start: 49 @6109 has 52 MA's), (52, 6136), (53, 6139), (55, 6142), (65, 6184), (73, 6226), (88, 6298), (93, 6319), (98, 6361), (104, 6385), (105, 6388), (106, 6403), (112, 6436),

Gene: Enoki_8 Start: 6094, Stop: 6441, Start Num: 49
Candidate Starts for Enoki_8:
(11, 5938), (18, 5950), (24, 5998), (28, 6031), (Start: 49 @6094 has 52 MA's), (53, 6124), (55, 6127), (65, 6169), (71, 6199), (73, 6211), (88, 6283), (98, 6346), (104, 6370), (105, 6373), (106, 6388), (112, 6421),

Gene: EvenBluerMoon_10 Start: 8140, Stop: 8472, Start Num: 34
Candidate Starts for EvenBluerMoon_10:
(Start: 34 @8140 has 14 MA's), (Start: 38 @8149 has 1 MA's),

Gene: Ezurina_10 Start: 6694, Stop: 7029, Start Num: 37
Candidate Starts for Ezurina_10:
(Start: 37 @6694 has 3 MA's), (100, 6946),

Gene: FF47_12 Start: 8188, Stop: 8562, Start Num: 31
Candidate Starts for FF47_12:
(Start: 31 @8188 has 3 MA's), (45, 8227), (60, 8299), (78, 8374), (85, 8392), (86, 8395), (109, 8527), (113, 8539),

Gene: Gerri43_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for Gerri43_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: GrimEater_10 Start: 6187, Stop: 6525, Start Num: 37
Candidate Starts for GrimEater_10:
(Start: 37 @6187 has 3 MA's), (57, 6265), (76, 6334), (80, 6352), (90, 6388),

Gene: Gustav_8 Start: 6587, Stop: 6892, Start Num: 49
Candidate Starts for Gustav_8:
(4, 6296), (6, 6311), (7, 6347), (27, 6521), (Start: 49 @6587 has 52 MA's), (50, 6596), (68, 6668), (70, 6680), (81, 6734), (100, 6809), (102, 6818),

Gene: Hereford_16 Start: 8285, Stop: 8617, Start Num: 34
Candidate Starts for Hereford_16:
(1, 7853), (Start: 34 @8285 has 14 MA's), (Start: 38 @8294 has 1 MA's),

Gene: IdentityCrisis_9 Start: 7458, Stop: 7778, Start Num: 54
Candidate Starts for IdentityCrisis_9:
(3, 7023), (5, 7134), (12, 7275), (17, 7284), (19, 7305), (28, 7362), (47, 7422), (Start: 54 @7458 has 1 MA's), (66, 7503), (82, 7584), (91, 7626), (103, 7698), (110, 7743), (111, 7746), (116, 7773),

Gene: JacoRen57_9 Start: 7271, Stop: 7642, Start Num: 31
Candidate Starts for JacoRen57_9:
(10, 7157), (25, 7232), (Start: 31 @7271 has 3 MA's), (86, 7481), (87, 7484), (98, 7541), (114, 7625), (115, 7634),

Gene: JanetJ_10 Start: 7922, Stop: 8254, Start Num: 34
Candidate Starts for JanetJ_10:
(Start: 34 @7922 has 14 MA's), (Start: 38 @7931 has 1 MA's),

Gene: JeanClaude_9 Start: 6908, Stop: 7240, Start Num: 34
Candidate Starts for JeanClaude_9:
(Start: 34 @6908 has 14 MA's), (Start: 38 @6917 has 1 MA's), (56, 6986), (90, 7130), (100, 7157), (114, 7229),

Gene: Keiki_8 Start: 6106, Stop: 6453, Start Num: 49
Candidate Starts for Keiki_8:
(24, 6010), (28, 6043), (Start: 49 @6106 has 52 MA's), (53, 6136), (55, 6139), (71, 6211), (73, 6223), (88, 6295), (93, 6316), (98, 6358), (104, 6382), (105, 6385), (106, 6400), (112, 6433),

Gene: Kubed_8 Start: 6096, Stop: 6443, Start Num: 49
Candidate Starts for Kubed_8:
(23, 5997), (28, 6033), (Start: 49 @6096 has 52 MA's), (53, 6126), (55, 6129), (65, 6171), (71, 6201), (73, 6213), (88, 6285), (98, 6348), (104, 6372), (105, 6375), (106, 6390), (112, 6423),

Gene: Kumotta_10 Start: 7839, Stop: 8171, Start Num: 34
Candidate Starts for Kumotta_10:
(Start: 34 @7839 has 14 MA's), (Start: 38 @7848 has 1 MA's), (43, 7860), (44, 7863), (76, 8004), (77, 8019), (91, 8064), (100, 8088), (112, 8151), (114, 8160),

Gene: LastNadiia_14 Start: 9421, Stop: 9753, Start Num: 38
Candidate Starts for LastNadiia_14:
(Start: 38 @9421 has 1 MA's),

Gene: Lauchelly_8 Start: 6091, Stop: 6438, Start Num: 49
Candidate Starts for Lauchelly_8:
(11, 5935), (18, 5947), (24, 5995), (28, 6028), (41, 6067), (Start: 49 @6091 has 52 MA's), (53, 6121), (55, 6124), (71, 6196), (73, 6208), (98, 6343), (104, 6367), (105, 6370), (106, 6385), (112, 6418),

Gene: Leviosa_8 Start: 6112, Stop: 6459, Start Num: 49
Candidate Starts for Leviosa_8:
(11, 5956), (18, 5968), (24, 6016), (28, 6049), (41, 6088), (Start: 49 @6112 has 52 MA's), (53, 6142), (55, 6145), (61, 6175), (65, 6187), (71, 6217), (73, 6229), (74, 6235), (88, 6301), (93, 6322), (98, 6364), (104, 6388), (105, 6391), (106, 6406), (112, 6439),

Gene: LilBandit_8 Start: 6096, Stop: 6443, Start Num: 49
Candidate Starts for LilBandit_8:
(28, 6033), (Start: 49 @6096 has 52 MA's), (53, 6126), (55, 6129), (65, 6171), (71, 6201), (73, 6213), (88, 6285), (93, 6306), (98, 6348), (105, 6375), (106, 6390), (112, 6423),

Gene: MEAK_8 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for MEAK_8:

(28, 6035), (41, 6074), (Start: 49 @6098 has 52 MA's), (53, 6128), (55, 6131), (71, 6203), (73, 6215), (88, 6287), (93, 6308), (98, 6350), (105, 6377), (106, 6392), (112, 6425),

Gene: Maco6_10 Start: 7480, Stop: 7854, Start Num: 31
Candidate Starts for Maco6_10:
(Start: 31 @7480 has 3 MA's), (60, 7591), (86, 7687), (113, 7831),

Gene: Mahdia_8 Start: 6589, Stop: 6891, Start Num: 49
Candidate Starts for Mahdia_8:
(Start: 49 @6589 has 52 MA's), (50, 6598), (68, 6667), (70, 6679), (81, 6733), (85, 6745), (100, 6808), (102, 6817), (108, 6853),

Gene: Maja_9 Start: 7424, Stop: 7792, Start Num: 34
Candidate Starts for Maja_9:
(Start: 34 @7424 has 14 MA's), (Start: 38 @7433 has 1 MA's), (77, 7607), (79, 7610), (90, 7649), (91, 7652), (96, 7685), (100, 7709), (112, 7772), (114, 7781),

Gene: Makima_12 Start: 8520, Stop: 8837, Start Num: 38
Candidate Starts for Makima_12:
(Start: 38 @8520 has 1 MA's), (100, 8769),

Gene: MargaretKali_10 Start: 7474, Stop: 7806, Start Num: 34
Candidate Starts for MargaretKali_10:
(Start: 34 @7474 has 14 MA's), (Start: 38 @7483 has 1 MA's), (43, 7495), (76, 7639), (77, 7654), (86, 7678), (91, 7699), (112, 7786), (114, 7795),

Gene: Mireles_11 Start: 6901, Stop: 7233, Start Num: 32
Candidate Starts for Mireles_11:
(32, 6901), (Start: 38 @6916 has 1 MA's), (100, 7165),

Gene: Morrissey_8 Start: 6562, Stop: 6867, Start Num: 49
Candidate Starts for Morrissey_8:
(27, 6496), (Start: 49 @6562 has 52 MA's), (50, 6571), (81, 6709), (102, 6793),

Gene: Moyashi_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for Moyashi_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (21, 6011), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: MrAK_8 Start: 6125, Stop: 6472, Start Num: 49
Candidate Starts for MrAK_8:
(28, 6062), (Start: 49 @6125 has 52 MA's), (53, 6155), (55, 6158), (65, 6200), (71, 6230), (73, 6242), (88, 6314), (98, 6377), (105, 6404), (106, 6419), (112, 6452),

Gene: Muddy_12 Start: 8430, Stop: 8804, Start Num: 31
Candidate Starts for Muddy_12:
(Start: 31 @8430 has 3 MA's), (60, 8541), (86, 8637), (113, 8781), (115, 8796),

Gene: Neuvillette_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for Neuvillette_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: NoShow_10 Start: 7573, Stop: 7956, Start Num: 30
Candidate Starts for NoShow_10:
(8, 7408), (16, 7483), (20, 7513), (Start: 30 @7573 has 1 MA's), (42, 7603), (56, 7666), (63, 7693), (80, 7771), (81, 7774), (84, 7780), (86, 7789), (95, 7834), (114, 7933),

Gene: NoSwimming_11 Start: 9047, Stop: 9415, Start Num: 34
Candidate Starts for NoSwimming_11:
(2, 8651), (9, 8879), (Start: 34 @9047 has 14 MA's), (Start: 38 @9056 has 1 MA's), (91, 9275), (100, 9332),

Gene: Ouroboros_8 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for Ouroboros_8:
(28, 6036), (39, 6072), (41, 6075), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (93, 6309), (98, 6351), (105, 6378), (106, 6393), (112, 6426),

Gene: P1.1_8 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for P1.1_8:
(11, 5943), (14, 5949), (15, 5952), (18, 5955), (21, 5994), (24, 6003), (28, 6036), (Start: 49 @6099 has 52 MA's), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (93, 6309), (98, 6351), (104, 6375), (105, 6378), (106, 6393), (112, 6426),

Gene: P100.1_8 Start: 6089, Stop: 6436, Start Num: 49
Candidate Starts for P100.1_8:
(28, 6026), (Start: 49 @6089 has 52 MA's), (53, 6119), (55, 6122), (65, 6164), (71, 6194), (73, 6206), (88, 6278), (98, 6341), (105, 6368), (106, 6383), (112, 6416),

Gene: P100A_8 Start: 6111, Stop: 6458, Start Num: 49
Candidate Starts for P100A_8:
(26, 6027), (28, 6048), (39, 6084), (41, 6087), (Start: 49 @6111 has 52 MA's), (53, 6141), (55, 6144), (71, 6216), (73, 6228), (75, 6246), (88, 6300), (89, 6303), (98, 6363), (104, 6387), (105, 6390), (106, 6405), (112, 6438),

Gene: P100D_8 Start: 6093, Stop: 6440, Start Num: 49
Candidate Starts for P100D_8:
(28, 6030), (Start: 49 @6093 has 52 MA's), (53, 6123), (55, 6126), (65, 6168), (71, 6198), (73, 6210), (88, 6282), (98, 6345), (104, 6369), (105, 6372), (106, 6387), (112, 6420),

Gene: P101A_8 Start: 6092, Stop: 6439, Start Num: 49
Candidate Starts for P101A_8:
(11, 5936), (14, 5942), (15, 5945), (18, 5948), (21, 5987), (24, 5996), (28, 6029), (Start: 49 @6092 has 52 MA's), (53, 6122), (55, 6125), (65, 6167), (71, 6197), (73, 6209), (88, 6281), (98, 6344), (104, 6368), (105, 6371), (106, 6386), (112, 6419),

Gene: P104A_8 Start: 6094, Stop: 6441, Start Num: 49
Candidate Starts for P104A_8:
(28, 6031), (Start: 49 @6094 has 52 MA's), (53, 6124), (55, 6127), (65, 6169), (71, 6199), (73, 6211), (88, 6283), (98, 6346), (105, 6373), (106, 6388), (112, 6421),

Gene: P104B_8 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for P104B_8:
(28, 6035), (Start: 49 @6098 has 52 MA's), (53, 6128), (55, 6131), (71, 6203), (73, 6215), (88, 6287), (93, 6308), (98, 6350), (104, 6374), (105, 6377), (106, 6392), (112, 6425),

Gene: P105_8 Start: 6088, Stop: 6435, Start Num: 49
Candidate Starts for P105_8:
(28, 6025), (Start: 49 @6088 has 52 MA's), (53, 6118), (55, 6121), (65, 6163), (71, 6193), (73, 6205), (88, 6277), (93, 6298), (97, 6337), (98, 6340), (104, 6364), (105, 6367), (106, 6382), (112, 6415),

Gene: P106A_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for P106A_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: P106C_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for P106C_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: P106I_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for P106I_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: P106L_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for P106L_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: P106M_8 Start: 6116, Stop: 6463, Start Num: 49
Candidate Starts for P106M_8:
(11, 5960), (14, 5966), (15, 5969), (18, 5972), (24, 6020), (28, 6053), (Start: 49 @6116 has 52 MA's), (53, 6146), (55, 6149), (65, 6191), (71, 6221), (73, 6233), (88, 6305), (93, 6326), (98, 6368), (105, 6395), (106, 6410), (112, 6443),

Gene: P107A_8 Start: 6102, Stop: 6449, Start Num: 49
Candidate Starts for P107A_8:
(28, 6039), (41, 6078), (Start: 49 @6102 has 52 MA's), (53, 6132), (55, 6135), (71, 6207), (73, 6219), (75, 6237), (88, 6291), (89, 6294), (93, 6312), (98, 6354), (104, 6378), (105, 6381), (106, 6396), (112, 6429),

Gene: P107C_8 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for P107C_8:
(28, 6035), (Start: 49 @6098 has 52 MA's), (53, 6128), (55, 6131), (65, 6173), (71, 6203), (73, 6215), (88, 6287), (93, 6308), (98, 6350), (104, 6374), (105, 6377), (106, 6392), (112, 6425),

Gene: P108C_8 Start: 6102, Stop: 6449, Start Num: 49
Candidate Starts for P108C_8:
(28, 6039), (Start: 49 @6102 has 52 MA's), (53, 6132), (55, 6135), (65, 6177), (73, 6219), (88, 6291), (93, 6312), (98, 6354), (104, 6378), (105, 6381), (106, 6396), (112, 6429),

Gene: P14.4_8 Start: 6093, Stop: 6440, Start Num: 49
Candidate Starts for P14.4_8:

(28, 6030), (Start: 49 @6093 has 52 MA's), (53, 6123), (55, 6126), (65, 6168), (71, 6198), (73, 6210), (88, 6282), (93, 6303), (98, 6345), (105, 6372), (106, 6387), (112, 6420),

Gene: P9.1_8 Start: 6091, Stop: 6438, Start Num: 49
Candidate Starts for P9.1_8:
(Start: 49 @6091 has 52 MA's), (53, 6121), (55, 6124), (65, 6166), (71, 6196), (73, 6208), (88, 6280), (93, 6301), (98, 6343), (104, 6367), (105, 6370), (106, 6385), (112, 6418),

Gene: PA6_8 Start: 6101, Stop: 6448, Start Num: 49
Candidate Starts for PA6_8:
(28, 6038), (39, 6074), (Start: 49 @6101 has 52 MA's), (53, 6131), (55, 6134), (65, 6176), (71, 6206), (73, 6218), (88, 6290), (93, 6311), (97, 6350), (105, 6380), (106, 6395), (112, 6428),

Gene: PAD20_8 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for PAD20_8:
(Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (98, 6351), (104, 6375), (105, 6378), (106, 6393), (112, 6426),

Gene: PAS50_8 Start: 6096, Stop: 6443, Start Num: 49
Candidate Starts for PAS50_8:
(28, 6033), (Start: 49 @6096 has 52 MA's), (53, 6126), (55, 6129), (65, 6171), (71, 6201), (73, 6213), (75, 6231), (88, 6285), (93, 6306), (98, 6348), (104, 6372), (105, 6375), (106, 6390), (112, 6423),

Gene: PHL010M04_08 Start: 6091, Stop: 6438, Start Num: 49
Candidate Starts for PHL010M04_08:
(11, 5935), (14, 5941), (18, 5947), (21, 5986), (24, 5995), (28, 6028), (Start: 49 @6091 has 52 MA's), (53, 6121), (55, 6124), (71, 6196), (73, 6208), (75, 6226), (88, 6280), (98, 6343), (104, 6367), (105, 6370), (106, 6385), (112, 6418),

Gene: PHL037M02_08 Start: 6097, Stop: 6444, Start Num: 49
Candidate Starts for PHL037M02_08:
(28, 6034), (Start: 49 @6097 has 52 MA's), (53, 6127), (55, 6130), (61, 6160), (71, 6202), (73, 6214), (88, 6286), (93, 6307), (97, 6346), (98, 6349), (105, 6376), (106, 6391), (112, 6424),

Gene: PHL060L00_08 Start: 6089, Stop: 6436, Start Num: 49
Candidate Starts for PHL060L00_08:
(11, 5933), (14, 5939), (15, 5942), (18, 5945), (21, 5984), (24, 5993), (28, 6026), (Start: 49 @6089 has 52 MA's), (53, 6119), (55, 6122), (65, 6164), (71, 6194), (73, 6206), (88, 6278), (93, 6299), (98, 6341), (104, 6365), (105, 6368), (106, 6383), (112, 6416),

Gene: PHL067M10_08 Start: 6093, Stop: 6440, Start Num: 49
Candidate Starts for PHL067M10_08:
(28, 6030), (Start: 49 @6093 has 52 MA's), (53, 6123), (55, 6126), (65, 6168), (71, 6198), (73, 6210), (88, 6282), (97, 6342), (98, 6345), (105, 6372), (106, 6387), (112, 6420),

Gene: PHL071N05_08 Start: 6095, Stop: 6442, Start Num: 49
Candidate Starts for PHL071N05_08:
(28, 6032), (Start: 49 @6095 has 52 MA's), (53, 6125), (55, 6128), (65, 6170), (73, 6212), (88, 6284), (93, 6305), (98, 6347), (104, 6371), (105, 6374), (106, 6389), (112, 6422),

Gene: PHL111M01_08 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for PHL111M01_08:

(28, 6036), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (98, 6351), (104, 6375), (105, 6378), (106, 6393), (112, 6426),

Gene: PHL112N00_08 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for PHL112N00_08:
(28, 6036), (29, 6039), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (93, 6309), (97, 6348), (98, 6351), (105, 6378), (106, 6393), (112, 6426),

Gene: PHL113M01_08 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for PHL113M01_08:
(28, 6036), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (71, 6204), (73, 6216), (88, 6288), (93, 6309), (98, 6351), (105, 6378), (106, 6393), (112, 6426),

Gene: PHL114L00_08 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for PHL114L00_08:
(13, 5945), (15, 5951), (18, 5954), (21, 5993), (22, 5996), (28, 6035), (41, 6074), (Start: 49 @6098 has 52 MA's), (52, 6125), (53, 6128), (55, 6131), (65, 6173), (71, 6203), (73, 6215), (98, 6350), (105, 6377), (106, 6392), (112, 6425),

Gene: Pigu_9 Start: 6514, Stop: 6882, Start Num: 34
Candidate Starts for Pigu_9:
(33, 6511), (Start: 34 @6514 has 14 MA's), (Start: 38 @6523 has 1 MA's), (43, 6535), (77, 6694), (94, 6754), (100, 6799), (112, 6862), (114, 6871),

Gene: Pirate_8 Start: 6091, Stop: 6438, Start Num: 49
Candidate Starts for Pirate_8:
(28, 6028), (Start: 49 @6091 has 52 MA's), (53, 6121), (55, 6124), (65, 6166), (73, 6208), (88, 6280), (93, 6301), (98, 6343), (104, 6367), (105, 6370), (106, 6385), (112, 6418),

Gene: PrairieDogTown_10 Start: 8142, Stop: 8474, Start Num: 34
Candidate Starts for PrairieDogTown_10:
(Start: 34 @8142 has 14 MA's), (Start: 38 @8151 has 1 MA's),

Gene: Procrass1_8 Start: 6098, Stop: 6445, Start Num: 49
Candidate Starts for Procrass1_8:
(28, 6035), (Start: 49 @6098 has 52 MA's), (53, 6128), (55, 6131), (71, 6203), (73, 6215), (88, 6287), (93, 6308), (98, 6350), (104, 6374), (105, 6377), (106, 6392), (112, 6425),

Gene: Puppers_8 Start: 6487, Stop: 6804, Start Num: 49
Candidate Starts for Puppers_8:
(Start: 49 @6487 has 52 MA's), (70, 6577), (81, 6631), (99, 6718),

Gene: QueenBey_8 Start: 6092, Stop: 6439, Start Num: 49
Candidate Starts for QueenBey_8:
(15, 5945), (18, 5948), (21, 5987), (22, 5990), (24, 5996), (26, 6008), (28, 6029), (41, 6068), (Start: 49 @6092 has 52 MA's), (53, 6122), (55, 6125), (61, 6155), (71, 6197), (73, 6209), (75, 6227), (88, 6281), (98, 6344), (104, 6368), (105, 6371), (106, 6386), (112, 6419),

Gene: Rileysaurus_8 Start: 6087, Stop: 6434, Start Num: 49
Candidate Starts for Rileysaurus_8:
(11, 5931), (18, 5943), (21, 5982), (22, 5985), (24, 5991), (28, 6024), (41, 6063), (Start: 49 @6087 has 52 MA's), (53, 6117), (55, 6120), (71, 6192), (73, 6204), (88, 6276), (98, 6339), (104, 6363), (105, 6366), (106, 6381), (112, 6414),

Gene: Roberts_11 Start: 7129, Stop: 7464, Start Num: 37
Candidate Starts for Roberts_11:
(Start: 37 @7129 has 3 MA's), (48, 7159), (100, 7381),

Gene: Rooter_9 Start: 6545, Stop: 6877, Start Num: 34
Candidate Starts for Rooter_9:
(Start: 34 @6545 has 14 MA's), (Start: 38 @6554 has 1 MA's), (56, 6623), (77, 6725), (90, 6767), (100, 6794), (107, 6833), (114, 6866),

Gene: SKKY_8 Start: 6123, Stop: 6470, Start Num: 49
Candidate Starts for SKKY_8:
(11, 5967), (14, 5973), (15, 5976), (18, 5979), (21, 6018), (24, 6027), (28, 6060), (Start: 49 @6123 has 52 MA's), (53, 6153), (55, 6156), (65, 6198), (71, 6228), (73, 6240), (88, 6312), (93, 6333), (98, 6375), (105, 6402), (106, 6417), (112, 6450),

Gene: Sarge_9 Start: 6912, Stop: 7244, Start Num: 34
Candidate Starts for Sarge_9:
(Start: 34 @6912 has 14 MA's), (Start: 38 @6921 has 1 MA's), (56, 6990), (90, 7134), (91, 7137), (100, 7161), (114, 7233),

Gene: Scotia_11 Start: 9053, Stop: 9421, Start Num: 34
Candidate Starts for Scotia_11:
(2, 8657), (9, 8885), (Start: 34 @9053 has 14 MA's), (Start: 38 @9062 has 1 MA's), (91, 9281), (100, 9338),

Gene: Shoya_8 Start: 6548, Stop: 6880, Start Num: 34
Candidate Starts for Shoya_8:
(Start: 34 @6548 has 14 MA's), (Start: 38 @6557 has 1 MA's), (56, 6626), (86, 6752), (90, 6770), (100, 6797), (114, 6869),

Gene: Sleepyhead_9 Start: 6893, Stop: 7246, Start Num: 35
Candidate Starts for Sleepyhead_9:
(Start: 35 @6893 has 1 MA's), (67, 7016), (106, 7196),

Gene: Solid_8 Start: 6099, Stop: 6446, Start Num: 49
Candidate Starts for Solid_8:
(28, 6036), (Start: 49 @6099 has 52 MA's), (53, 6129), (55, 6132), (65, 6174), (71, 6204), (73, 6216), (88, 6288), (93, 6309), (98, 6351), (104, 6375), (105, 6378), (106, 6393), (112, 6426),

Gene: Spartoi_8 Start: 6006, Stop: 6344, Start Num: 36
Candidate Starts for Spartoi_8:
(Start: 36 @6006 has 1 MA's), (40, 6015), (46, 6036), (64, 6117), (80, 6174),

Gene: Stormborn_8 Start: 6095, Stop: 6442, Start Num: 49
Candidate Starts for Stormborn_8:
(28, 6032), (Start: 49 @6095 has 52 MA's), (53, 6125), (55, 6128), (71, 6200), (73, 6212), (88, 6284), (93, 6305), (98, 6347), (104, 6371), (105, 6374), (106, 6389), (112, 6422),

Gene: Studio_11 Start: 6885, Stop: 7220, Start Num: 37
Candidate Starts for Studio_11:
(32, 6873), (Start: 37 @6885 has 3 MA's), (48, 6915),

Gene: Supernova_8 Start: 6091, Stop: 6438, Start Num: 49
Candidate Starts for Supernova_8:
(28, 6028), (Start: 49 @6091 has 52 MA's), (53, 6121), (55, 6124), (65, 6166), (71, 6196), (73, 6208), (88, 6280), (93, 6301), (98, 6343), (104, 6367), (105, 6370), (106, 6385), (112, 6418),

Gene: TMaxx_11 Start: 7008, Stop: 7340, Start Num: 38
Candidate Starts for TMaxx_11:
(Start: 38 @7008 has 1 MA's), (98, 7248),

Gene: Trine_8 Start: 6505, Stop: 6810, Start Num: 49
Candidate Starts for Trine_8:
(48, 6502), (Start: 49 @6505 has 52 MA's), (50, 6514), (69, 6592), (70, 6598), (81, 6652), (91, 6682),

Gene: TripleC_14 Start: 10502, Stop: 10834, Start Num: 38
Candidate Starts for TripleC_14:
(Start: 38 @10502 has 1 MA's), (109, 10805),

Gene: Upyo_8 Start: 6522, Stop: 6830, Start Num: 49
Candidate Starts for Upyo_8:
(Start: 49 @6522 has 52 MA's), (62, 6588), (67, 6603), (69, 6612), (70, 6618), (91, 6702), (102, 6756),

Gene: WST1_9 Start: 7425, Stop: 7781, Start Num: 47
Candidate Starts for WST1_9:
(3, 7023), (5, 7134), (12, 7275), (17, 7284), (19, 7305), (28, 7365), (47, 7425), (Start: 54 @7461 has 1 MA's), (66, 7506), (82, 7587), (91, 7629), (103, 7701), (110, 7746), (111, 7749), (116, 7776),

Gene: Widow_8 Start: 6478, Stop: 6795, Start Num: 49
Candidate Starts for Widow_8:
(Start: 49 @6478 has 52 MA's), (70, 6568), (81, 6622), (99, 6709),

Gene: Wizzo_8 Start: 6103, Stop: 6450, Start Num: 49
Candidate Starts for Wizzo_8:
(28, 6040), (Start: 49 @6103 has 52 MA's), (53, 6133), (55, 6136), (65, 6178), (71, 6208), (73, 6220), (88, 6292), (93, 6313), (98, 6355), (104, 6379), (105, 6382), (106, 6397), (112, 6430),