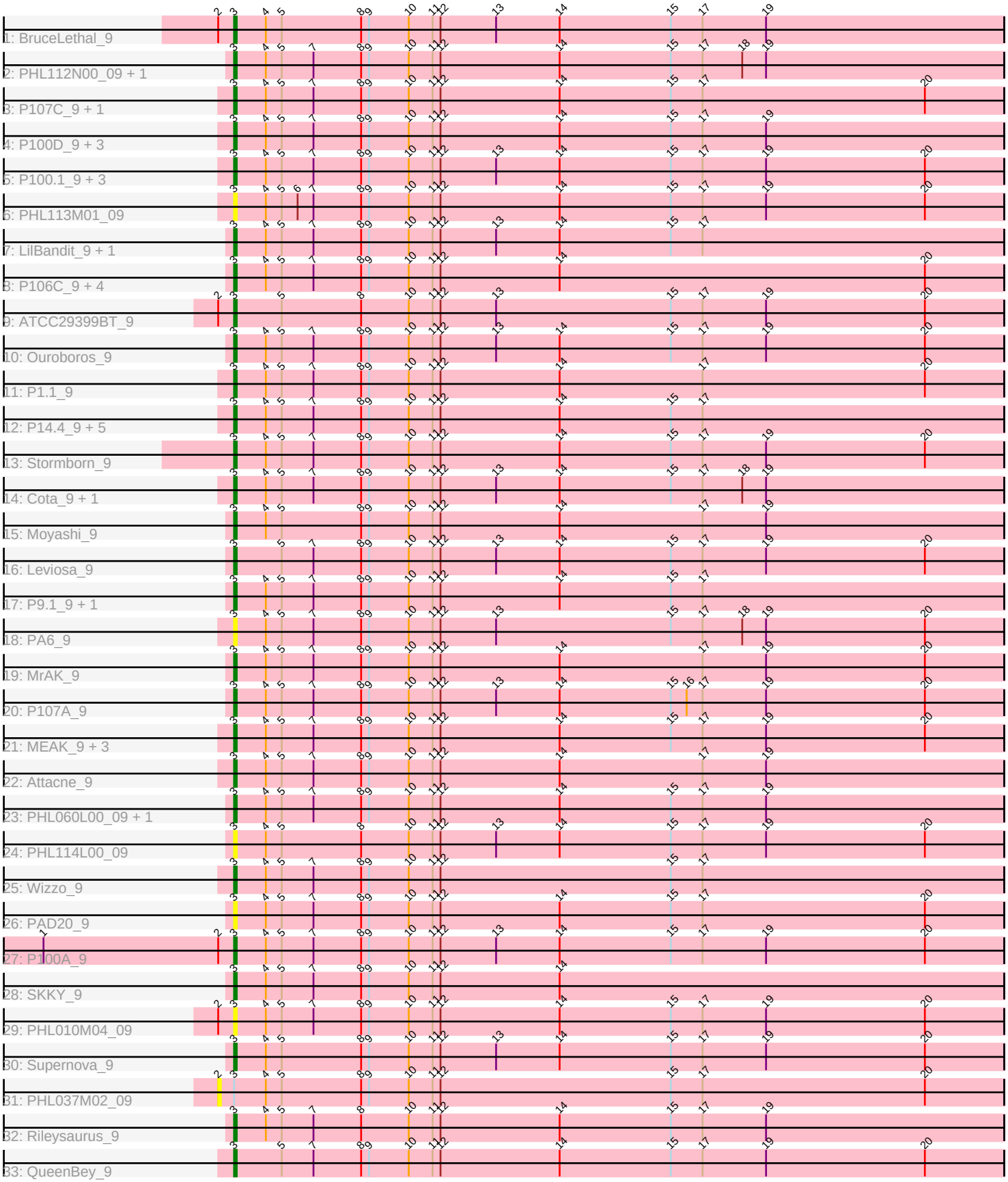
Pham 216210


1: BruceLethal_9
2: PHL112N00_09 + 1
3: P107C_9 + 1
4: P100D_9 + 3
5: P100.1_9 + 3
6: PHL113M01_09
7: LilBandit_9 + 1
8: P106C_9 + 4
9: ATCC29399BT_9
10: Ouroboros_9
11: P1.1_9
12: P14.4_9 + 5
13: Stormborn_9
14: Cota_9 + 1
15: Moyashi_9
16: Leviosa_9
17: P9.1_9 + 1
18: PA6_9
19: MrAK_9
20: P107A_9
21: MEAK_9 + 3
22: Attacne_9
23: PHL060L00_09 + 1
24: PHL114L00_09
25: Wizzo_9
26: PAD20_9
27: P100A_9
28: SKKY_9
29: PHL010M04_09
30: Supernova_9
31: PHL037M02_09
32: Rileysaurus_9
33: QueenBey_9

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 216210 Report

This analysis was run 02/22/25 on database version 588.

Pham number 216210 has 57 members, 12 are drafts.

Phages represented in each track:
- Track 1 : BruceLethal_9
- Track 2 : PHL112N00_09, Kubed_9
- Track 3 : P107C_9, ATCC29399BC_9
- Track 4 : P100D_9, PAS50_9, Enoki_9, PHL067M10_09
- Track 5 : P100.1_9, P101A_9, P105_9, DrParker_9
- Track 6 : PHL113M01_09
- Track 7 : LilBandit_9, P104B_9
- Track 8 : P106C_9, P106L_9, P106A_9, P106I_9, P106M_9
- Track 9 : ATCC29399BT_9
- Track 10 : Ouroboros_9
- Track 11 : P1.1_9
- Track 12 : P14.4_9, P108C_9, Aquarius_9, Enochoraptor_9, Pirate_9, PHL071N05_09
- Track 13 : Stormborn_9
- Track 14 : Cota_9, Keiki_9
- Track 15 : Moyashi_9
- Track 16 : Leviosa_9
- Track 17 : P9.1_9, PHL111M01_09
- Track 18 : PA6_9
- Track 19 : MrAK_9
- Track 20 : P107A_9
- Track 21 : MEAK_9, Solid_9, P104A_9, Procrass1_9
- Track 22 : Attacne_9
- Track 23 : PHL060L00_09, Lauchelly_9
- Track 24 : PHL114L00_09
- Track 25 : Wizzo_9
- Track 26 : PAD20_9
- Track 27 : P100A_9
- Track 28 : SKKY_9
- Track 29 : PHL010M04_09
- Track 30 : Supernova_9
- Track 31 : PHL037M02_09
- Track 32 : Rileysaurus_9
- Track 33 : QueenBey_9

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

The start number called the most often in the published annotations is 3, it was called in 45 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ATCC29399BC_9, ATCC29399BT_9, Aquarius_9, Attacne_9, BruceLethal_9, Cota_9, DrParker_9, Enochoraptor_9, Enoki_9, Keiki_9, Kubed_9, Lauchelly_9, Leviosa_9, LilBandit_9, MEAK_9, Moyashi_9, MrAK_9, Ouroboros_9, P1.1_9, P100.1_9, P100A_9, P100D_9, P101A_9, P104A_9, P104B_9, P105_9, P106A_9, P106C_9, P106I_9, P106L_9, P106M_9, P107A_9, P107C_9, P108C_9, P14.4_9, P9.1_9, PA6_9, PAD20_9, PAS50_9, PHL010M04_09, PHL060L00_09, PHL067M10_09, PHL071N05_09, PHL111M01_09, PHL112N00_09, PHL113M01_09, PHL114L00_09, Pirate_9, Procrass1_9, QueenBey_9, Rileysaurus_9, SKKY_9, Solid_9, Stormborn_9, Supernova_9, Wizzo_9,

Genes that have the "Most Annotated" start but do not call it:
• PHL037M02_09,

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

Summary by start number:

Start 2:
• Found in 5 of 57 (8.8%) of genes in pham
• No Manual Annotations of this start.
• Called 20.0% of time when present
• Phage (with cluster) where this start called: PHL037M02_09 (BU),

Start 3:
• Found in 57 of 57 (100.0%) of genes in pham
• Manual Annotations of this start: 45 of 45
• Called 98.2% of time when present
• Phage (with cluster) where this start called: ATCC29399BC_9 (BU), ATCC29399BT_9 (BU), Aquarius_9 (BU), Attacne_9 (BU), BruceLethal_9 (BU), Cota_9 (BU), DrParker_9 (BU), Enochoraptor_9 (BU), Enoki_9 (BU), Keiki_9 (BU), Kubed_9 (BU), Lauchelly_9 (BU), Leviosa_9 (BU), LilBandit_9 (BU), MEAK_9 (BU), Moyashi_9 (BU), MrAK_9 (BU), Ouroboros_9 (BU), P1.1_9 (BU), P100.1_9 (BU), P100A_9 (BU), P100D_9 (BU), P101A_9 (BU), P104A_9 (BU), P104B_9 (BU), P105_9 (BU), P106A_9 (BU), P106C_9 (BU), P106I_9 (BU), P106L_9 (BU), P106M_9 (BU), P107A_9 (BU), P107C_9 (BU), P108C_9 (BU), P14.4_9 (BU), P9.1_9 (BU), PA6_9 (BU), PAD20_9 (BU), PAS50_9 (BU), PHL010M04_09 (BU), PHL060L00_09 (BU), PHL067M10_09 (BU), PHL071N05_09 (BU), PHL111M01_09 (BU), PHL112N00_09 (BU), PHL113M01_09 (BU), PHL114L00_09 (BU), Pirate_9 (BU), Procrass1_9 (BU), QueenBey_9 (BU), Rileysaurus_9 (BU), SKKY_9 (BU), Solid_9 (BU), Stormborn_9 (BU), Supernova_9 (BU), Wizzo_9 (BU),

Summary by clusters:

There is one cluster represented in this pham: BU

Info for manual annotations of cluster BU:
•Start number 3 was manually annotated 45 times for cluster BU.

Gene Information:

Gene: ATCC29399BC_9 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for ATCC29399BC_9:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (7, 6482), (8, 6500), (9, 6503), (10, 6518), (11, 6527), (12, 6530), (14, 6575), (15, 6617), (17, 6629), (20, 6713),

Gene: ATCC29399BT_9 Start: 6448, Stop: 6738, Start Num: 3
Candidate Starts for ATCC29399BT_9:
(2, 6442), (Start: 3 @6448 has 45 MA's), (5, 6466), (8, 6496), (10, 6514), (11, 6523), (12, 6526), (13, 6547), (15, 6613), (17, 6625), (19, 6649), (20, 6709),

Gene: Aquarius_9 Start: 6442, Stop: 6732, Start Num: 3
Candidate Starts for Aquarius_9:
(Start: 3 @6442 has 45 MA's), (4, 6454), (5, 6460), (7, 6472), (8, 6490), (9, 6493), (10, 6508), (11, 6517), (12, 6520), (14, 6565), (15, 6607), (17, 6619),

Gene: Attacne_9 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for Attacne_9:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (17, 6630), (19, 6654),

Gene: BruceLethal_9 Start: 6441, Stop: 6731, Start Num: 3
Candidate Starts for BruceLethal_9:
(2, 6435), (Start: 3 @6441 has 45 MA's), (4, 6453), (5, 6459), (8, 6489), (9, 6492), (10, 6507), (11, 6516), (12, 6519), (13, 6540), (14, 6564), (15, 6606), (17, 6618), (19, 6642),

Gene: Cota_9 Start: 6460, Stop: 6750, Start Num: 3
Candidate Starts for Cota_9:
(Start: 3 @6460 has 45 MA's), (4, 6472), (5, 6478), (7, 6490), (8, 6508), (9, 6511), (10, 6526), (11, 6535), (12, 6538), (13, 6559), (14, 6583), (15, 6625), (17, 6637), (18, 6652), (19, 6661),

Gene: DrParker_9 Start: 6467, Stop: 6757, Start Num: 3
Candidate Starts for DrParker_9:
(Start: 3 @6467 has 45 MA's), (4, 6479), (5, 6485), (7, 6497), (8, 6515), (9, 6518), (10, 6533), (11, 6542), (12, 6545), (13, 6566), (14, 6590), (15, 6632), (17, 6644), (19, 6668), (20, 6728),

Gene: Enochoraptor_9 Start: 6463, Stop: 6753, Start Num: 3
Candidate Starts for Enochoraptor_9:
(Start: 3 @6463 has 45 MA's), (4, 6475), (5, 6481), (7, 6493), (8, 6511), (9, 6514), (10, 6529), (11, 6538), (12, 6541), (14, 6586), (15, 6628), (17, 6640),

Gene: Enoki_9 Start: 6448, Stop: 6738, Start Num: 3
Candidate Starts for Enoki_9:
(Start: 3 @6448 has 45 MA's), (4, 6460), (5, 6466), (7, 6478), (8, 6496), (9, 6499), (10, 6514), (11, 6523), (12, 6526), (14, 6571), (15, 6613), (17, 6625), (19, 6649),

Gene: Keiki_9 Start: 6460, Stop: 6750, Start Num: 3

Candidate Starts for Keiki_9:
(Start: 3 @6460 has 45 MA's), (4, 6472), (5, 6478), (7, 6490), (8, 6508), (9, 6511), (10, 6526), (11, 6535), (12, 6538), (13, 6559), (14, 6583), (15, 6625), (17, 6637), (18, 6652), (19, 6661),

Gene: Kubed_9 Start: 6450, Stop: 6740, Start Num: 3
Candidate Starts for Kubed_9:
(Start: 3 @6450 has 45 MA's), (4, 6462), (5, 6468), (7, 6480), (8, 6498), (9, 6501), (10, 6516), (11, 6525), (12, 6528), (14, 6573), (15, 6615), (17, 6627), (18, 6642), (19, 6651),

Gene: Lauchelly_9 Start: 6445, Stop: 6735, Start Num: 3
Candidate Starts for Lauchelly_9:
(Start: 3 @6445 has 45 MA's), (4, 6457), (5, 6463), (7, 6475), (8, 6493), (9, 6496), (10, 6511), (11, 6520), (12, 6523), (14, 6568), (15, 6610), (17, 6622), (19, 6646),

Gene: Leviosa_9 Start: 6466, Stop: 6756, Start Num: 3
Candidate Starts for Leviosa_9:
(Start: 3 @6466 has 45 MA's), (5, 6484), (7, 6496), (8, 6514), (9, 6517), (10, 6532), (11, 6541), (12, 6544), (13, 6565), (14, 6589), (15, 6631), (17, 6643), (19, 6667), (20, 6727),

Gene: LilBandit_9 Start: 6450, Stop: 6740, Start Num: 3
Candidate Starts for LilBandit_9:
(Start: 3 @6450 has 45 MA's), (4, 6462), (5, 6468), (7, 6480), (8, 6498), (9, 6501), (10, 6516), (11, 6525), (12, 6528), (13, 6549), (14, 6573), (15, 6615), (17, 6627),

Gene: MEAK_9 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for MEAK_9:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (7, 6482), (8, 6500), (9, 6503), (10, 6518), (11, 6527), (12, 6530), (14, 6575), (15, 6617), (17, 6629), (19, 6653), (20, 6713),

Gene: Moyashi_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for Moyashi_9:
(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (17, 6647), (19, 6671),

Gene: MrAK_9 Start: 6479, Stop: 6769, Start Num: 3
Candidate Starts for MrAK_9:
(Start: 3 @6479 has 45 MA's), (4, 6491), (5, 6497), (7, 6509), (8, 6527), (9, 6530), (10, 6545), (11, 6554), (12, 6557), (14, 6602), (17, 6656), (19, 6680), (20, 6740),

Gene: Ouroboros_9 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for Ouroboros_9:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (13, 6552), (14, 6576), (15, 6618), (17, 6630), (19, 6654), (20, 6714),

Gene: P1.1_9 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for P1.1_9:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (17, 6630), (20, 6714),

Gene: P100.1_9 Start: 6443, Stop: 6733, Start Num: 3
Candidate Starts for P100.1_9:
(Start: 3 @6443 has 45 MA's), (4, 6455), (5, 6461), (7, 6473), (8, 6491), (9, 6494), (10, 6509), (11, 6518), (12, 6521), (13, 6542), (14, 6566), (15, 6608), (17, 6620), (19, 6644), (20, 6704),

Gene: P100A_9 Start: 6464, Stop: 6754, Start Num: 3
Candidate Starts for P100A_9:
(1, 6392), (2, 6458), (Start: 3 @6464 has 45 MA's), (4, 6476), (5, 6482), (7, 6494), (8, 6512), (9, 6515), (10, 6530), (11, 6539), (12, 6542), (13, 6563), (14, 6587), (15, 6629), (17, 6641), (19, 6665), (20, 6725),

Gene: P100D_9 Start: 6447, Stop: 6737, Start Num: 3
Candidate Starts for P100D_9:
(Start: 3 @6447 has 45 MA's), (4, 6459), (5, 6465), (7, 6477), (8, 6495), (9, 6498), (10, 6513), (11, 6522), (12, 6525), (14, 6570), (15, 6612), (17, 6624), (19, 6648),

Gene: P101A_9 Start: 6446, Stop: 6736, Start Num: 3
Candidate Starts for P101A_9:
(Start: 3 @6446 has 45 MA's), (4, 6458), (5, 6464), (7, 6476), (8, 6494), (9, 6497), (10, 6512), (11, 6521), (12, 6524), (13, 6545), (14, 6569), (15, 6611), (17, 6623), (19, 6647), (20, 6707),

Gene: P104A_9 Start: 6448, Stop: 6738, Start Num: 3
Candidate Starts for P104A_9:
(Start: 3 @6448 has 45 MA's), (4, 6460), (5, 6466), (7, 6478), (8, 6496), (9, 6499), (10, 6514), (11, 6523), (12, 6526), (14, 6571), (15, 6613), (17, 6625), (19, 6649), (20, 6709),

Gene: P104B_9 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for P104B_9:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (7, 6482), (8, 6500), (9, 6503), (10, 6518), (11, 6527), (12, 6530), (13, 6551), (14, 6575), (15, 6617), (17, 6629),

Gene: P105_9 Start: 6442, Stop: 6732, Start Num: 3
Candidate Starts for P105_9:
(Start: 3 @6442 has 45 MA's), (4, 6454), (5, 6460), (7, 6472), (8, 6490), (9, 6493), (10, 6508), (11, 6517), (12, 6520), (13, 6541), (14, 6565), (15, 6607), (17, 6619), (19, 6643), (20, 6703),

Gene: P106A_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for P106A_9:
(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (7, 6500), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (20, 6731),

Gene: P106C_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for P106C_9:
(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (7, 6500), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (20, 6731),

Gene: P106I_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for P106I_9:
(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (7, 6500), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (20, 6731),

Gene: P106L_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for P106L_9:
(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (7, 6500), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (20, 6731),

Gene: P106M_9 Start: 6470, Stop: 6760, Start Num: 3
Candidate Starts for P106M_9:

(Start: 3 @6470 has 45 MA's), (4, 6482), (5, 6488), (7, 6500), (8, 6518), (9, 6521), (10, 6536), (11, 6545), (12, 6548), (14, 6593), (20, 6731),

Gene: P107A_9 Start: 6456, Stop: 6746, Start Num: 3
Candidate Starts for P107A_9:
(Start: 3 @6456 has 45 MA's), (4, 6468), (5, 6474), (7, 6486), (8, 6504), (9, 6507), (10, 6522), (11, 6531), (12, 6534), (13, 6555), (14, 6579), (15, 6621), (16, 6627), (17, 6633), (19, 6657), (20, 6717),

Gene: P107C_9 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for P107C_9:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (7, 6482), (8, 6500), (9, 6503), (10, 6518), (11, 6527), (12, 6530), (14, 6575), (15, 6617), (17, 6629), (20, 6713),

Gene: P108C_9 Start: 6456, Stop: 6746, Start Num: 3
Candidate Starts for P108C_9:
(Start: 3 @6456 has 45 MA's), (4, 6468), (5, 6474), (7, 6486), (8, 6504), (9, 6507), (10, 6522), (11, 6531), (12, 6534), (14, 6579), (15, 6621), (17, 6633),

Gene: P14.4_9 Start: 6447, Stop: 6737, Start Num: 3
Candidate Starts for P14.4_9:
(Start: 3 @6447 has 45 MA's), (4, 6459), (5, 6465), (7, 6477), (8, 6495), (9, 6498), (10, 6513), (11, 6522), (12, 6525), (14, 6570), (15, 6612), (17, 6624),

Gene: P9.1_9 Start: 6445, Stop: 6735, Start Num: 3
Candidate Starts for P9.1_9:
(Start: 3 @6445 has 45 MA's), (4, 6457), (5, 6463), (7, 6475), (8, 6493), (9, 6496), (10, 6511), (11, 6520), (12, 6523), (14, 6568), (15, 6610), (17, 6622),

Gene: PA6_9 Start: 6455, Stop: 6745, Start Num: 3
Candidate Starts for PA6_9:
(Start: 3 @6455 has 45 MA's), (4, 6467), (5, 6473), (7, 6485), (8, 6503), (9, 6506), (10, 6521), (11, 6530), (12, 6533), (13, 6554), (15, 6620), (17, 6632), (18, 6647), (19, 6656), (20, 6716),

Gene: PAD20_9 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for PAD20_9:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (15, 6618), (17, 6630), (20, 6714),

Gene: PAS50_9 Start: 6450, Stop: 6740, Start Num: 3
Candidate Starts for PAS50_9:
(Start: 3 @6450 has 45 MA's), (4, 6462), (5, 6468), (7, 6480), (8, 6498), (9, 6501), (10, 6516), (11, 6525), (12, 6528), (14, 6573), (15, 6615), (17, 6627), (19, 6651),

Gene: PHL010M04_09 Start: 6444, Stop: 6734, Start Num: 3
Candidate Starts for PHL010M04_09:
(2, 6438), (Start: 3 @6444 has 45 MA's), (4, 6456), (5, 6462), (7, 6474), (8, 6492), (9, 6495), (10, 6510), (11, 6519), (12, 6522), (14, 6567), (15, 6609), (17, 6621), (19, 6645), (20, 6705),

Gene: PHL037M02_09 Start: 6444, Stop: 6740, Start Num: 2
Candidate Starts for PHL037M02_09:
(2, 6444), (Start: 3 @6450 has 45 MA's), (4, 6462), (5, 6468), (8, 6498), (9, 6501), (10, 6516), (11, 6525), (12, 6528), (15, 6615), (17, 6627), (20, 6711),

Gene: PHL060L00_09 Start: 6443, Stop: 6733, Start Num: 3
Candidate Starts for PHL060L00_09:
(Start: 3 @6443 has 45 MA's), (4, 6455), (5, 6461), (7, 6473), (8, 6491), (9, 6494), (10, 6509), (11, 6518), (12, 6521), (14, 6566), (15, 6608), (17, 6620), (19, 6644),

Gene: PHL067M10_09 Start: 6447, Stop: 6737, Start Num: 3
Candidate Starts for PHL067M10_09:
(Start: 3 @6447 has 45 MA's), (4, 6459), (5, 6465), (7, 6477), (8, 6495), (9, 6498), (10, 6513), (11, 6522), (12, 6525), (14, 6570), (15, 6612), (17, 6624), (19, 6648),

Gene: PHL071N05_09 Start: 6449, Stop: 6739, Start Num: 3
Candidate Starts for PHL071N05_09:
(Start: 3 @6449 has 45 MA's), (4, 6461), (5, 6467), (7, 6479), (8, 6497), (9, 6500), (10, 6515), (11, 6524), (12, 6527), (14, 6572), (15, 6614), (17, 6626),

Gene: PHL111M01_09 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for PHL111M01_09:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (15, 6618), (17, 6630),

Gene: PHL112N00_09 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for PHL112N00_09:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (15, 6618), (17, 6630), (18, 6645), (19, 6654),

Gene: PHL113M01_09 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for PHL113M01_09:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (6, 6477), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (15, 6618), (17, 6630), (19, 6654), (20, 6714),

Gene: PHL114L00_09 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for PHL114L00_09:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (8, 6500), (10, 6518), (11, 6527), (12, 6530), (13, 6551), (14, 6575), (15, 6617), (17, 6629), (19, 6653), (20, 6713),

Gene: Pirate_9 Start: 6445, Stop: 6735, Start Num: 3
Candidate Starts for Pirate_9:
(Start: 3 @6445 has 45 MA's), (4, 6457), (5, 6463), (7, 6475), (8, 6493), (9, 6496), (10, 6511), (11, 6520), (12, 6523), (14, 6568), (15, 6610), (17, 6622),

Gene: Procrass1_9 Start: 6452, Stop: 6742, Start Num: 3
Candidate Starts for Procrass1_9:
(Start: 3 @6452 has 45 MA's), (4, 6464), (5, 6470), (7, 6482), (8, 6500), (9, 6503), (10, 6518), (11, 6527), (12, 6530), (14, 6575), (15, 6617), (17, 6629), (19, 6653), (20, 6713),

Gene: QueenBey_9 Start: 6446, Stop: 6736, Start Num: 3
Candidate Starts for QueenBey_9:
(Start: 3 @6446 has 45 MA's), (5, 6464), (7, 6476), (8, 6494), (9, 6497), (10, 6512), (11, 6521), (12, 6524), (14, 6569), (15, 6611), (17, 6623), (19, 6647), (20, 6707),

Gene: Rileysaurus_9 Start: 6441, Stop: 6731, Start Num: 3
Candidate Starts for Rileysaurus_9:

(Start: 3 @6441 has 45 MA's), (4, 6453), (5, 6459), (7, 6471), (8, 6489), (10, 6507), (11, 6516), (12, 6519), (14, 6564), (15, 6606), (17, 6618), (19, 6642),

Gene: SKKY_9 Start: 6477, Stop: 6767, Start Num: 3
Candidate Starts for SKKY_9:
(Start: 3 @6477 has 45 MA's), (4, 6489), (5, 6495), (7, 6507), (8, 6525), (9, 6528), (10, 6543), (11, 6552), (12, 6555), (14, 6600),

Gene: Solid_9 Start: 6453, Stop: 6743, Start Num: 3
Candidate Starts for Solid_9:
(Start: 3 @6453 has 45 MA's), (4, 6465), (5, 6471), (7, 6483), (8, 6501), (9, 6504), (10, 6519), (11, 6528), (12, 6531), (14, 6576), (15, 6618), (17, 6630), (19, 6654), (20, 6714),

Gene: Stormborn_9 Start: 6448, Stop: 6738, Start Num: 3
Candidate Starts for Stormborn_9:
(Start: 3 @6448 has 45 MA's), (4, 6460), (5, 6466), (7, 6478), (8, 6496), (9, 6499), (10, 6514), (11, 6523), (12, 6526), (14, 6571), (15, 6613), (17, 6625), (19, 6649), (20, 6709),

Gene: Supernova_9 Start: 6445, Stop: 6735, Start Num: 3
Candidate Starts for Supernova_9:
(Start: 3 @6445 has 45 MA's), (4, 6457), (5, 6463), (8, 6493), (9, 6496), (10, 6511), (11, 6520), (12, 6523), (13, 6544), (14, 6568), (15, 6610), (17, 6622), (19, 6646), (20, 6706),

Gene: Wizzo_9 Start: 6457, Stop: 6747, Start Num: 3
Candidate Starts for Wizzo_9:
(Start: 3 @6457 has 45 MA's), (4, 6469), (5, 6475), (7, 6487), (8, 6505), (9, 6508), (10, 6523), (11, 6532), (12, 6535), (15, 6622), (17, 6634),