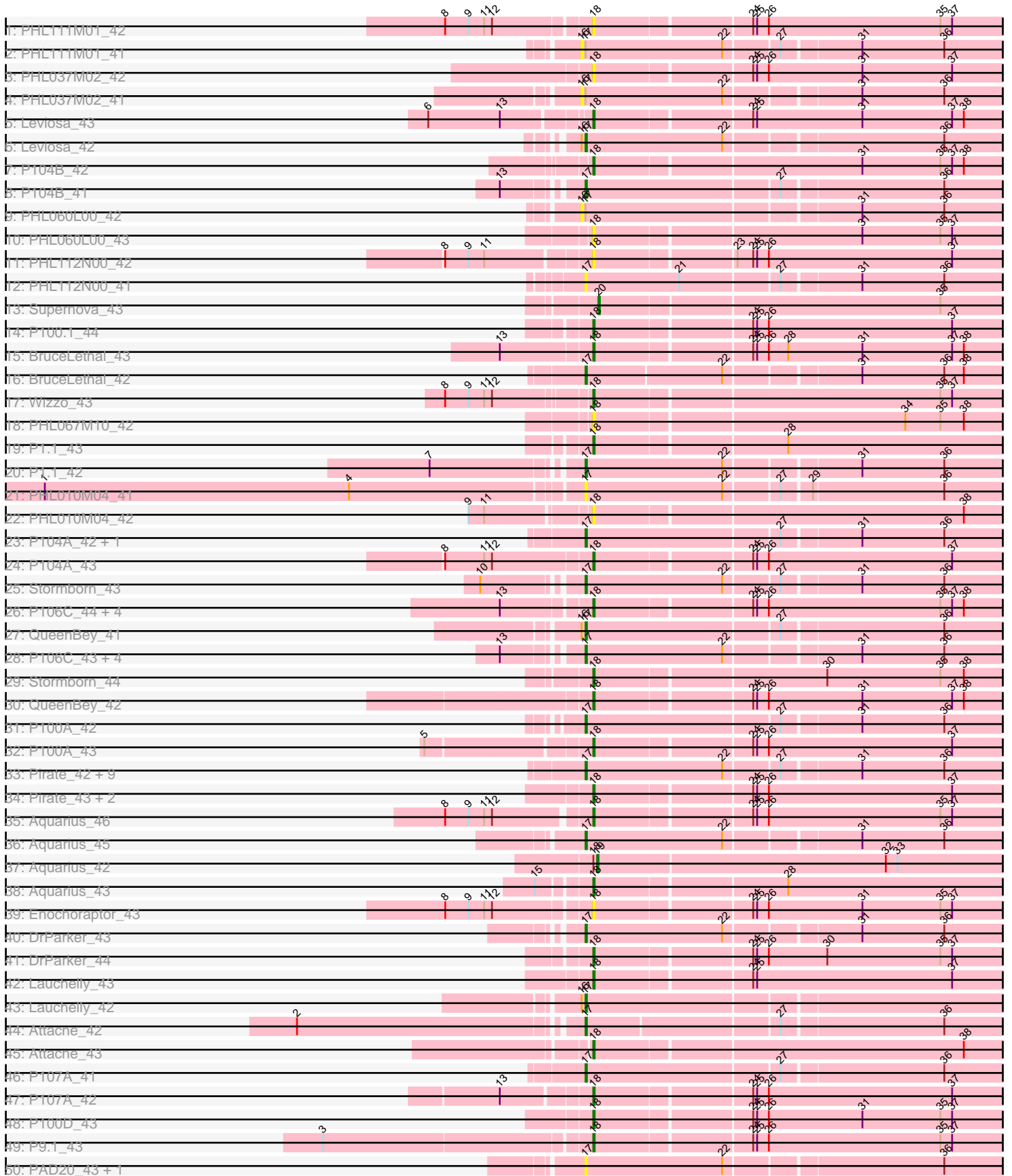
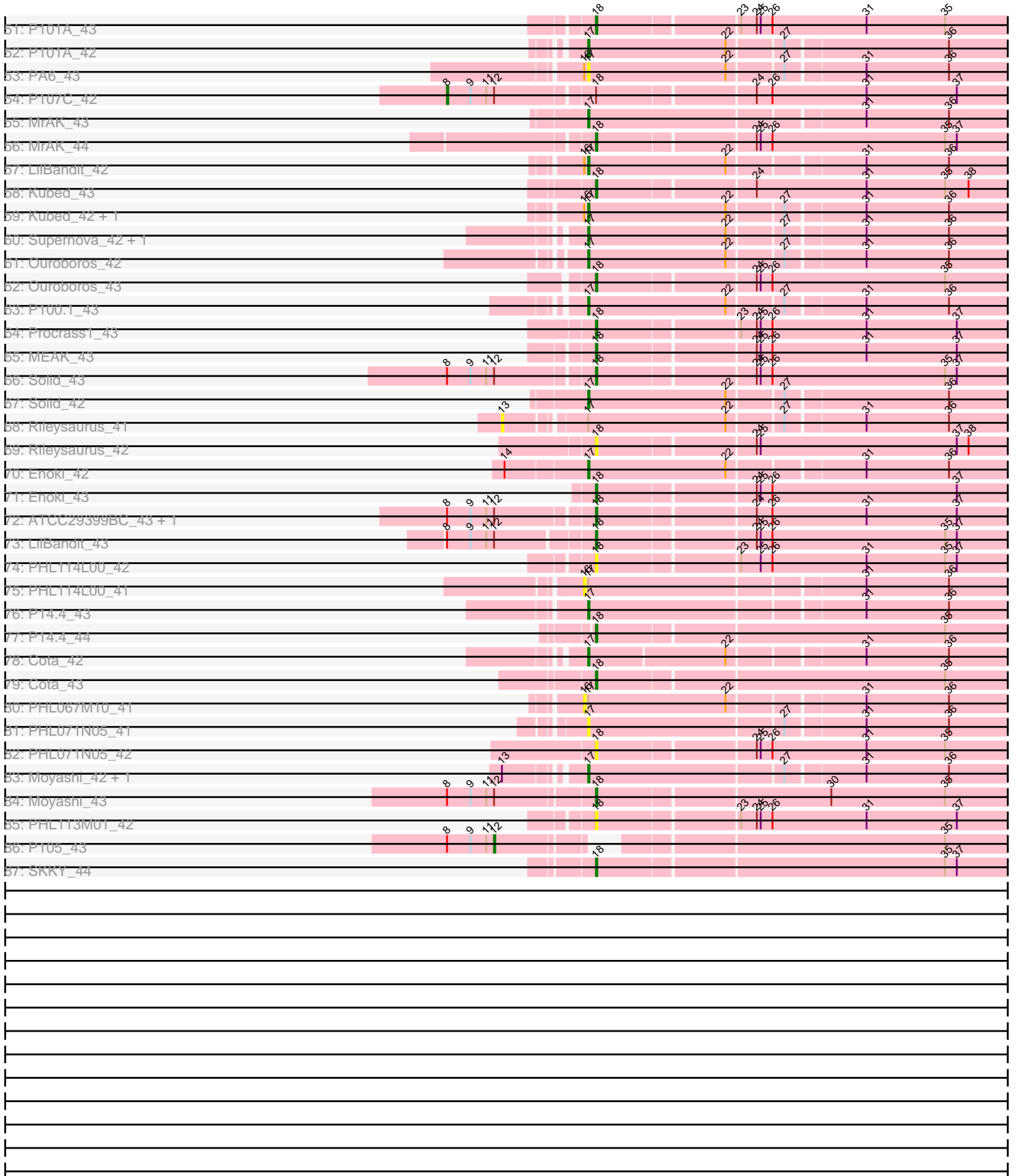


Pham 171325



Pham 171325



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 171325 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171325 has 112 members, 25 are drafts.

Phages represented in each track:

- Track 1 : PHL111M01_42
- Track 2 : PHL111M01_41
- Track 3 : PHL037M02_42
- Track 4 : PHL037M02_41
- Track 5 : Leviosa_43
- Track 6 : Leviosa_42
- Track 7 : P104B_42
- Track 8 : P104B_41
- Track 9 : PHL060L00_42
- Track 10 : PHL060L00_43
- Track 11 : PHL112N00_42
- Track 12 : PHL112N00_41
- Track 13 : Supernova_43
- Track 14 : P100.1_44
- Track 15 : BruceLethal_43
- Track 16 : BruceLethal_42
- Track 17 : Wizzo_43
- Track 18 : PHL067M10_42
- Track 19 : P1.1_43
- Track 20 : P1.1_42
- Track 21 : PHL010M04_41
- Track 22 : PHL010M04_42
- Track 23 : P104A_42, P9.1_42
- Track 24 : P104A_43
- Track 25 : Stormborn_43
- Track 26 : P106C_44, P106A_43, P106L_43, P106M_43, P106I_43
- Track 27 : QueenBey_41
- Track 28 : P106C_43, P106A_42, P106L_42, P106M_42, P106I_42
- Track 29 : Stormborn_44
- Track 30 : QueenBey_42
- Track 31 : P100A_42
- Track 32 : P100A_43
- Track 33 : Pirate_42, PHL113M01_41, P100D_42, MEAK_42, P107C_41, ATCC29399BC_42, Keiki_42, ATCC29399BT_42, P108C_41, Enochoraptor_42
- Track 34 : Pirate_43, Keiki_43, P108C_42
- Track 35 : Aquarius_46
- Track 36 : Aquarius_45

- Track 37 : Aquarius_42
- Track 38 : Aquarius_43
- Track 39 : Enochoraptor_43
- Track 40 : DrParker_43
- Track 41 : DrParker_44
- Track 42 : Lauchelly_43
- Track 43 : Lauchelly_42
- Track 44 : Attacne_42
- Track 45 : Attacne_43
- Track 46 : P107A_41
- Track 47 : P107A_42
- Track 48 : P100D_43
- Track 49 : P9.1_43
- Track 50 : PAD20_43, PAS50_43
- Track 51 : P101A_43
- Track 52 : P101A_42
- Track 53 : PA6_43
- Track 54 : P107C_42
- Track 55 : MrAK_43
- Track 56 : MrAK_44
- Track 57 : LilBandit_42
- Track 58 : Kubed_43
- Track 59 : Kubed_42, Procrass1_42
- Track 60 : Supernova_42, P105_42
- Track 61 : Ouroboros_42
- Track 62 : Ouroboros_43
- Track 63 : P100.1_43
- Track 64 : Procrass1_43
- Track 65 : MEAK_43
- Track 66 : Solid_43
- Track 67 : Solid_42
- Track 68 : Rileysaurus_41
- Track 69 : Rileysaurus_42
- Track 70 : Enoki_42
- Track 71 : Enoki_43
- Track 72 : ATCC29399BC_43, ATCC29399BT_43
- Track 73 : LilBandit_43
- Track 74 : PHL114L00_42
- Track 75 : PHL114L00_41
- Track 76 : P14.4_43
- Track 77 : P14.4_44
- Track 78 : Cota_42
- Track 79 : Cota_43
- Track 80 : PHL067M10_41
- Track 81 : PHL071N05_41
- Track 82 : PHL071N05_42
- Track 83 : Moyashi_42, SKKY_43
- Track 84 : Moyashi_43
- Track 85 : PHL113M01_42
- Track 86 : P105_43
- Track 87 : SKKY_44

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

The start number called the most often in the published annotations is 17, it was called in 42 of the 87 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ATCC29399BC_42, ATCC29399BT_42, Aquarius_45, Attacne_42, BruceLethal_42, Cota_42, DrParker_43, Enochoraptor_42, Enoki_42, Keiki_42, Kubed_42, Lauchelly_42, Leviosa_42, LilBandit_42, MEAK_42, Moyashi_42, MrAK_43, Ouroboros_42, P1.1_42, P100.1_43, P100A_42, P100D_42, P101A_42, P104A_42, P104B_41, P105_42, P106A_42, P106C_43, P106I_42, P106L_42, P106M_42, P107A_41, P107C_41, P108C_41, P14.4_43, P9.1_42, PA6_43, PAD20_43, PAS50_43, PHL010M04_41, PHL071N05_41, PHL112N00_41, PHL113M01_41, Pirate_42, Procrass1_42, QueenBey_41, SKKY_43, Solid_42, Stormborn_43, Supernova_42,

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

- PHL037M02_41, PHL060L00_42, PHL067M10_41, PHL111M01_41, PHL114L00_41, Rileysaurus_41,

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

- ATCC29399BC_43, ATCC29399BT_43, Aquarius_42, Aquarius_43, Aquarius_46, Attacne_43, BruceLethal_43, Cota_43, DrParker_44, Enochoraptor_43, Enoki_43, Keiki_43, Kubed_43, Lauchelly_43, Leviosa_43, LilBandit_43, MEAK_43, Moyashi_43, MrAK_44, Ouroboros_43, P1.1_43, P100.1_44, P100A_43, P100D_43, P101A_43, P104A_43, P104B_42, P105_43, P106A_43, P106C_44, P106I_43, P106L_43, P106M_43, P107A_42, P107C_42, P108C_42, P14.4_44, P9.1_43, PHL010M04_42, PHL037M02_42, PHL060L00_43, PHL067M10_42, PHL071N05_42, PHL111M01_42, PHL112N00_42, PHL113M01_42, PHL114L00_42, Pirate_43, Procrass1_43, QueenBey_42, Rileysaurus_42, SKKY_44, Solid_43, Stormborn_44, Supernova_43, Wizzo_43,

Summary by start number:

Start 8:

- Found in 13 of 112 (11.6%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 7.7% of time when present
- Phage (with cluster) where this start called: P107C_42 (BU),

Start 12:

- Found in 12 of 112 (10.7%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 8.3% of time when present
- Phage (with cluster) where this start called: P105_43 (BU),

Start 13:

- Found in 17 of 112 (15.2%) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Rileysaurus_41 (BU),

Start 16:

- Found in 12 of 112 (10.7%) of genes in pham
- No Manual Annotations of this start.
- Called 41.7% of time when present
- Phage (with cluster) where this start called: PHL037M02_41 (BU), PHL060L00_42 (BU), PHL067M10_41 (BU), PHL111M01_41 (BU), PHL114L00_41 (BU),

Start 17:

- Found in 56 of 112 (50.0%) of genes in pham
- Manual Annotations of this start: 42 of 87
- Called 89.3% of time when present
- Phage (with cluster) where this start called: ATCC29399BC_42 (BU), ATCC29399BT_42 (BU), Aquarius_45 (BU), Attacne_42 (BU), BruceLethal_42 (BU), Cota_42 (BU), DrParker_43 (BU), Enochoraptor_42 (BU), Enoki_42 (BU), Keiki_42 (BU), Kubed_42 (BU), Lauchelly_42 (BU), Leviosa_42 (BU), LilBandit_42 (BU), MEAK_42 (BU), Moyashi_42 (BU), MrAK_43 (BU), Ouroboros_42 (BU), P1.1_42 (BU), P100.1_43 (BU), P100A_42 (BU), P100D_42 (BU), P101A_42 (BU), P104A_42 (BU), P104B_41 (BU), P105_42 (BU), P106A_42 (BU), P106C_43 (BU), P106I_42 (BU), P106L_42 (BU), P106M_42 (BU), P107A_41 (BU), P107C_41 (BU), P108C_41 (BU), P14.4_43 (BU), P9.1_42 (BU), PA6_43 (BU), PAD20_43 (BU), PAS50_43 (BU), PHL010M04_41 (BU), PHL071N05_41 (BU), PHL112N00_41 (BU), PHL113M01_41 (BU), Pirate_42 (BU), Procrass1_42 (BU), QueenBey_41 (BU), SKKY_43 (BU), Solid_42 (BU), Stormborn_43 (BU), Supernova_42 (BU),

Start 18:

- Found in 54 of 112 (48.2%) of genes in pham
- Manual Annotations of this start: 41 of 87
- Called 96.3% of time when present
- Phage (with cluster) where this start called: ATCC29399BC_43 (BU), ATCC29399BT_43 (BU), Aquarius_43 (BU), Aquarius_46 (BU), Attacne_43 (BU), BruceLethal_43 (BU), Cota_43 (BU), DrParker_44 (BU), Enochoraptor_43 (BU), Enoki_43 (BU), Keiki_43 (BU), Kubed_43 (BU), Lauchelly_43 (BU), Leviosa_43 (BU), LilBandit_43 (BU), MEAK_43 (BU), Moyashi_43 (BU), MrAK_44 (BU), Ouroboros_43 (BU), P1.1_43 (BU), P100.1_44 (BU), P100A_43 (BU), P100D_43 (BU), P101A_43 (BU), P104A_43 (BU), P104B_42 (BU), P106A_43 (BU), P106C_44 (BU), P106I_43 (BU), P106L_43 (BU), P106M_43 (BU), P107A_42 (BU), P108C_42 (BU), P14.4_44 (BU), P9.1_43 (BU), PHL010M04_42 (BU), PHL037M02_42 (BU), PHL060L00_43 (BU), PHL067M10_42 (BU), PHL071N05_42 (BU), PHL111M01_42 (BU), PHL112N00_42 (BU), PHL113M01_42 (BU), PHL114L00_42 (BU), Pirate_43 (BU), Procrass1_43 (BU), QueenBey_42 (BU), Rileysaurus_42 (BU), SKKY_44 (BU), Solid_43 (BU), Stormborn_44 (BU), Wizzo_43 (BU),

Start 19:

- Found in 1 of 112 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aquarius_42 (BU),

Start 20:

- Found in 1 of 112 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 87
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Supernova_43 (BU),

Summary by clusters:

There is one cluster represented in this pham: BU

Info for manual annotations of cluster BU:

- Start number 8 was manually annotated 1 time for cluster BU.
- Start number 12 was manually annotated 1 time for cluster BU.
- Start number 17 was manually annotated 42 times for cluster BU.
- Start number 18 was manually annotated 41 times for cluster BU.
- Start number 19 was manually annotated 1 time for cluster BU.
- Start number 20 was manually annotated 1 time for cluster BU.

Gene Information:

Gene: ATCC29399BC_42 Start: 26497, Stop: 26186, Start Num: 17

Candidate Starts for ATCC29399BC_42:

(Start: 17 @26497 has 42 MA's), (22, 26392), (27, 26353), (31, 26296), (36, 26233),

Gene: ATCC29399BC_43 Start: 26845, Stop: 26537, Start Num: 18

Candidate Starts for ATCC29399BC_43:

(Start: 8 @26947 has 1 MA's), (9, 26929), (11, 26917), (Start: 12 @26911 has 1 MA's), (Start: 18 @26845 has 41 MA's), (24, 26731), (26, 26719), (31, 26647), (37, 26578),

Gene: ATCC29399BT_43 Start: 26845, Stop: 26537, Start Num: 18

Candidate Starts for ATCC29399BT_43:

(Start: 8 @26947 has 1 MA's), (9, 26929), (11, 26917), (Start: 12 @26911 has 1 MA's), (Start: 18 @26845 has 41 MA's), (24, 26731), (26, 26719), (31, 26647), (37, 26578),

Gene: ATCC29399BT_42 Start: 26497, Stop: 26186, Start Num: 17

Candidate Starts for ATCC29399BT_42:

(Start: 17 @26497 has 42 MA's), (22, 26392), (27, 26353), (31, 26296), (36, 26233),

Gene: Aquarius_46 Start: 27492, Stop: 27184, Start Num: 18

Candidate Starts for Aquarius_46:

(Start: 8 @27594 has 1 MA's), (9, 27576), (11, 27564), (Start: 12 @27558 has 1 MA's), (Start: 18 @27492 has 41 MA's), (24, 27378), (25, 27375), (26, 27366), (35, 27234), (37, 27225),

Gene: Aquarius_45 Start: 27146, Stop: 26835, Start Num: 17

Candidate Starts for Aquarius_45:

(Start: 17 @27146 has 42 MA's), (22, 27041), (31, 26945), (36, 26882),

Gene: Aquarius_42 Start: 25967, Stop: 25626, Start Num: 19

Candidate Starts for Aquarius_42:

(Start: 18 @25970 has 41 MA's), (Start: 19 @25967 has 1 MA's), (32, 25748), (33, 25739),

Gene: Aquarius_43 Start: 26346, Stop: 26038, Start Num: 18

Candidate Starts for Aquarius_43:

(15, 26382), (Start: 18 @26346 has 41 MA's), (28, 26205),

Gene: Attacne_42 Start: 26006, Stop: 25698, Start Num: 17

Candidate Starts for Attacne_42:
(2, 26213), (Start: 17 @26006 has 42 MA's), (27, 25865), (36, 25745),

Gene: Attacne_43 Start: 26346, Stop: 26038, Start Num: 18
Candidate Starts for Attacne_43:
(Start: 18 @26346 has 41 MA's), (38, 26070),

Gene: BruceLethal_43 Start: 26875, Stop: 26567, Start Num: 18
Candidate Starts for BruceLethal_43:
(13, 26941), (Start: 18 @26875 has 41 MA's), (24, 26761), (25, 26758), (26, 26749), (28, 26734), (31, 26677), (37, 26608), (38, 26599),

Gene: BruceLethal_42 Start: 26527, Stop: 26219, Start Num: 17
Candidate Starts for BruceLethal_42:
(Start: 17 @26527 has 42 MA's), (22, 26425), (31, 26329), (36, 26266), (38, 26251),

Gene: Cota_42 Start: 26564, Stop: 26256, Start Num: 17
Candidate Starts for Cota_42:
(Start: 17 @26564 has 42 MA's), (22, 26462), (31, 26366), (36, 26303),

Gene: Cota_43 Start: 26904, Stop: 26596, Start Num: 18
Candidate Starts for Cota_43:
(Start: 18 @26904 has 41 MA's), (35, 26646),

Gene: DrParker_43 Start: 26979, Stop: 26668, Start Num: 17
Candidate Starts for DrParker_43:
(Start: 17 @26979 has 42 MA's), (22, 26874), (31, 26778), (36, 26715),

Gene: DrParker_44 Start: 27319, Stop: 27011, Start Num: 18
Candidate Starts for DrParker_44:
(Start: 18 @27319 has 41 MA's), (24, 27205), (25, 27202), (26, 27193), (30, 27148), (35, 27061), (37, 27052),

Gene: Enochoraptor_43 Start: 26896, Stop: 26588, Start Num: 18
Candidate Starts for Enochoraptor_43:
(Start: 8 @26998 has 1 MA's), (9, 26980), (11, 26968), (Start: 12 @26962 has 1 MA's), (Start: 18 @26896 has 41 MA's), (24, 26782), (25, 26779), (26, 26770), (31, 26698), (35, 26638), (37, 26629),

Gene: Enochoraptor_42 Start: 26548, Stop: 26237, Start Num: 17
Candidate Starts for Enochoraptor_42:
(Start: 17 @26548 has 42 MA's), (22, 26443), (27, 26404), (31, 26347), (36, 26284),

Gene: Enoki_42 Start: 26552, Stop: 26241, Start Num: 17
Candidate Starts for Enoki_42:
(14, 26612), (Start: 17 @26552 has 42 MA's), (22, 26447), (31, 26351), (36, 26288),

Gene: Enoki_43 Start: 26901, Stop: 26593, Start Num: 18
Candidate Starts for Enoki_43:
(Start: 18 @26901 has 41 MA's), (24, 26787), (25, 26784), (26, 26775), (37, 26634),

Gene: Keiki_43 Start: 26829, Stop: 26521, Start Num: 18
Candidate Starts for Keiki_43:
(Start: 18 @26829 has 41 MA's), (24, 26715), (25, 26712), (26, 26703), (37, 26562),

Gene: Keiki_42 Start: 26481, Stop: 26170, Start Num: 17

Candidate Starts for Keiki_42:

(Start: 17 @26481 has 42 MA's), (22, 26376), (27, 26337), (31, 26280), (36, 26217),

Gene: Kubed_43 Start: 26888, Stop: 26580, Start Num: 18

Candidate Starts for Kubed_43:

(Start: 18 @26888 has 41 MA's), (24, 26774), (31, 26690), (35, 26630), (38, 26612),

Gene: Kubed_42 Start: 26543, Stop: 26232, Start Num: 17

Candidate Starts for Kubed_42:

(16, 26546), (Start: 17 @26543 has 42 MA's), (22, 26438), (27, 26399), (31, 26342), (36, 26279),

Gene: Lauchelly_43 Start: 26925, Stop: 26617, Start Num: 18

Candidate Starts for Lauchelly_43:

(Start: 18 @26925 has 41 MA's), (24, 26811), (25, 26808), (37, 26658),

Gene: Lauchelly_42 Start: 26581, Stop: 26270, Start Num: 17

Candidate Starts for Lauchelly_42:

(16, 26584), (Start: 17 @26581 has 42 MA's),

Gene: Leviosa_43 Start: 26899, Stop: 26591, Start Num: 18

Candidate Starts for Leviosa_43:

(6, 27013), (13, 26959), (Start: 18 @26899 has 41 MA's), (24, 26785), (25, 26782), (31, 26701), (37, 26632), (38, 26623),

Gene: Leviosa_42 Start: 26560, Stop: 26249, Start Num: 17

Candidate Starts for Leviosa_42:

(16, 26563), (Start: 17 @26560 has 42 MA's), (22, 26455), (36, 26296),

Gene: LilBandit_42 Start: 26368, Stop: 26057, Start Num: 17

Candidate Starts for LilBandit_42:

(16, 26371), (Start: 17 @26368 has 42 MA's), (22, 26263), (31, 26167), (36, 26104),

Gene: LilBandit_43 Start: 26713, Stop: 26405, Start Num: 18

Candidate Starts for LilBandit_43:

(Start: 8 @26815 has 1 MA's), (9, 26797), (11, 26785), (Start: 12 @26779 has 1 MA's), (Start: 18 @26713 has 41 MA's), (24, 26599), (25, 26596), (26, 26587), (35, 26455), (37, 26446),

Gene: MEAK_42 Start: 26235, Stop: 25924, Start Num: 17

Candidate Starts for MEAK_42:

(Start: 17 @26235 has 42 MA's), (22, 26130), (27, 26091), (31, 26034), (36, 25971),

Gene: MEAK_43 Start: 26583, Stop: 26275, Start Num: 18

Candidate Starts for MEAK_43:

(Start: 18 @26583 has 41 MA's), (24, 26469), (25, 26466), (26, 26457), (31, 26385), (37, 26316),

Gene: Moyashi_42 Start: 26340, Stop: 26029, Start Num: 17

Candidate Starts for Moyashi_42:

(13, 26391), (Start: 17 @26340 has 42 MA's), (27, 26196), (31, 26139), (36, 26076),

Gene: Moyashi_43 Start: 26680, Stop: 26372, Start Num: 18

Candidate Starts for Moyashi_43:

(Start: 8 @26785 has 1 MA's), (9, 26767), (11, 26755), (Start: 12 @26749 has 1 MA's), (Start: 18 @26680 has 41 MA's), (30, 26509), (35, 26422),

Gene: MrAK_43 Start: 26725, Stop: 26414, Start Num: 17
Candidate Starts for MrAK_43:
(Start: 17 @26725 has 42 MA's), (31, 26524), (36, 26461),

Gene: MrAK_44 Start: 27073, Stop: 26765, Start Num: 18
Candidate Starts for MrAK_44:
(Start: 18 @27073 has 41 MA's), (24, 26959), (25, 26956), (26, 26947), (35, 26815), (37, 26806),

Gene: Ouroboros_42 Start: 26549, Stop: 26238, Start Num: 17
Candidate Starts for Ouroboros_42:
(Start: 17 @26549 has 42 MA's), (22, 26444), (27, 26405), (31, 26348), (36, 26285),

Gene: Ouroboros_43 Start: 26890, Stop: 26582, Start Num: 18
Candidate Starts for Ouroboros_43:
(Start: 18 @26890 has 41 MA's), (24, 26776), (25, 26773), (26, 26764), (35, 26632),

Gene: P1.1_43 Start: 26926, Stop: 26618, Start Num: 18
Candidate Starts for P1.1_43:
(Start: 18 @26926 has 41 MA's), (28, 26785),

Gene: P1.1_42 Start: 26586, Stop: 26275, Start Num: 17
Candidate Starts for P1.1_42:
(7, 26691), (Start: 17 @26586 has 42 MA's), (22, 26481), (31, 26385), (36, 26322),

Gene: P100.1_44 Start: 27194, Stop: 26886, Start Num: 18
Candidate Starts for P100.1_44:
(Start: 18 @27194 has 41 MA's), (24, 27080), (25, 27077), (26, 27068), (37, 26927),

Gene: P100.1_43 Start: 26854, Stop: 26543, Start Num: 17
Candidate Starts for P100.1_43:
(Start: 17 @26854 has 42 MA's), (22, 26749), (27, 26710), (31, 26653), (36, 26590),

Gene: P100A_42 Start: 26559, Stop: 26248, Start Num: 17
Candidate Starts for P100A_42:
(Start: 17 @26559 has 42 MA's), (27, 26415), (31, 26358), (36, 26295),

Gene: P100A_43 Start: 26901, Stop: 26593, Start Num: 18
Candidate Starts for P100A_43:
(5, 27015), (Start: 18 @26901 has 41 MA's), (24, 26787), (25, 26784), (26, 26775), (37, 26634),

Gene: P100D_43 Start: 26888, Stop: 26580, Start Num: 18
Candidate Starts for P100D_43:
(Start: 18 @26888 has 41 MA's), (24, 26774), (25, 26771), (26, 26762), (31, 26690), (35, 26630), (37, 26621),

Gene: P100D_42 Start: 26540, Stop: 26229, Start Num: 17
Candidate Starts for P100D_42:
(Start: 17 @26540 has 42 MA's), (22, 26435), (27, 26396), (31, 26339), (36, 26276),

Gene: P101A_43 Start: 26913, Stop: 26605, Start Num: 18

Candidate Starts for P101A_43:

(Start: 18 @26913 has 41 MA's), (23, 26811), (24, 26799), (25, 26796), (26, 26787), (31, 26715), (35, 26655),

Gene: P101A_42 Start: 26574, Stop: 26263, Start Num: 17

Candidate Starts for P101A_42:

(Start: 17 @26574 has 42 MA's), (22, 26469), (27, 26430), (36, 26310),

Gene: P104A_42 Start: 26335, Stop: 26024, Start Num: 17

Candidate Starts for P104A_42:

(Start: 17 @26335 has 42 MA's), (27, 26191), (31, 26134), (36, 26071),

Gene: P104A_43 Start: 26683, Stop: 26375, Start Num: 18

Candidate Starts for P104A_43:

(Start: 8 @26788 has 1 MA's), (11, 26758), (Start: 12 @26752 has 1 MA's), (Start: 18 @26683 has 41 MA's), (24, 26569), (25, 26566), (26, 26557), (37, 26416),

Gene: P104B_42 Start: 26887, Stop: 26579, Start Num: 18

Candidate Starts for P104B_42:

(Start: 18 @26887 has 41 MA's), (31, 26689), (35, 26629), (37, 26620), (38, 26611),

Gene: P104B_41 Start: 26547, Stop: 26236, Start Num: 17

Candidate Starts for P104B_41:

(13, 26598), (Start: 17 @26547 has 42 MA's), (27, 26403), (36, 26283),

Gene: P105_42 Start: 26217, Stop: 25906, Start Num: 17

Candidate Starts for P105_42:

(Start: 17 @26217 has 42 MA's), (22, 26112), (27, 26073), (31, 26016), (36, 25953),

Gene: P105_43 Start: 26599, Stop: 26249, Start Num: 12

Candidate Starts for P105_43:

(Start: 8 @26635 has 1 MA's), (9, 26617), (11, 26605), (Start: 12 @26599 has 1 MA's), (35, 26299),

Gene: P106A_42 Start: 27017, Stop: 26706, Start Num: 17

Candidate Starts for P106A_42:

(13, 27068), (Start: 17 @27017 has 42 MA's), (22, 26912), (31, 26816), (36, 26753),

Gene: P106A_43 Start: 27357, Stop: 27049, Start Num: 18

Candidate Starts for P106A_43:

(13, 27420), (Start: 18 @27357 has 41 MA's), (24, 27243), (25, 27240), (26, 27231), (35, 27099), (37, 27090), (38, 27081),

Gene: P106C_44 Start: 27273, Stop: 26965, Start Num: 18

Candidate Starts for P106C_44:

(13, 27336), (Start: 18 @27273 has 41 MA's), (24, 27159), (25, 27156), (26, 27147), (35, 27015), (37, 27006), (38, 26997),

Gene: P106C_43 Start: 26933, Stop: 26622, Start Num: 17

Candidate Starts for P106C_43:

(13, 26984), (Start: 17 @26933 has 42 MA's), (22, 26828), (31, 26732), (36, 26669),

Gene: P106I_42 Start: 26762, Stop: 26451, Start Num: 17

Candidate Starts for P106I_42:

(13, 26813), (Start: 17 @26762 has 42 MA's), (22, 26657), (31, 26561), (36, 26498),

Gene: P106I_43 Start: 27102, Stop: 26794, Start Num: 18

Candidate Starts for P106I_43:

(13, 27165), (Start: 18 @27102 has 41 MA's), (24, 26988), (25, 26985), (26, 26976), (35, 26844), (37, 26835), (38, 26826),

Gene: P106L_43 Start: 27273, Stop: 26965, Start Num: 18

Candidate Starts for P106L_43:

(13, 27336), (Start: 18 @27273 has 41 MA's), (24, 27159), (25, 27156), (26, 27147), (35, 27015), (37, 27006), (38, 26997),

Gene: P106L_42 Start: 26933, Stop: 26622, Start Num: 17

Candidate Starts for P106L_42:

(13, 26984), (Start: 17 @26933 has 42 MA's), (22, 26828), (31, 26732), (36, 26669),

Gene: P106M_42 Start: 26933, Stop: 26622, Start Num: 17

Candidate Starts for P106M_42:

(13, 26984), (Start: 17 @26933 has 42 MA's), (22, 26828), (31, 26732), (36, 26669),

Gene: P106M_43 Start: 27273, Stop: 26965, Start Num: 18

Candidate Starts for P106M_43:

(13, 27336), (Start: 18 @27273 has 41 MA's), (24, 27159), (25, 27156), (26, 27147), (35, 27015), (37, 27006), (38, 26997),

Gene: P107A_41 Start: 26574, Stop: 26263, Start Num: 17

Candidate Starts for P107A_41:

(Start: 17 @26574 has 42 MA's), (27, 26430), (36, 26310),

Gene: P107A_42 Start: 26922, Stop: 26614, Start Num: 18

Candidate Starts for P107A_42:

(13, 26982), (Start: 18 @26922 has 41 MA's), (24, 26808), (25, 26805), (26, 26796), (37, 26655),

Gene: P107C_42 Start: 26947, Stop: 26537, Start Num: 8

Candidate Starts for P107C_42:

(Start: 8 @26947 has 1 MA's), (9, 26929), (11, 26917), (Start: 12 @26911 has 1 MA's), (Start: 18 @26845 has 41 MA's), (24, 26731), (26, 26719), (31, 26647), (37, 26578),

Gene: P107C_41 Start: 26497, Stop: 26186, Start Num: 17

Candidate Starts for P107C_41:

(Start: 17 @26497 has 42 MA's), (22, 26392), (27, 26353), (31, 26296), (36, 26233),

Gene: P108C_41 Start: 26541, Stop: 26230, Start Num: 17

Candidate Starts for P108C_41:

(Start: 17 @26541 has 42 MA's), (22, 26436), (27, 26397), (31, 26340), (36, 26277),

Gene: P108C_42 Start: 26889, Stop: 26581, Start Num: 18

Candidate Starts for P108C_42:

(Start: 18 @26889 has 41 MA's), (24, 26775), (25, 26772), (26, 26763), (37, 26622),

Gene: P14.4_43 Start: 26934, Stop: 26623, Start Num: 17

Candidate Starts for P14.4_43:

(Start: 17 @26934 has 42 MA's), (31, 26733), (36, 26670),

Gene: P14.4_44 Start: 27280, Stop: 26972, Start Num: 18

Candidate Starts for P14.4_44:

(Start: 18 @27280 has 41 MA's), (35, 27022),

Gene: P9.1_43 Start: 26928, Stop: 26620, Start Num: 18

Candidate Starts for P9.1_43:

(3, 27120), (Start: 18 @26928 has 41 MA's), (24, 26814), (25, 26811), (26, 26802), (35, 26670), (37, 26661),

Gene: P9.1_42 Start: 26580, Stop: 26269, Start Num: 17

Candidate Starts for P9.1_42:

(Start: 17 @26580 has 42 MA's), (27, 26436), (31, 26379), (36, 26316),

Gene: PA6_43 Start: 26933, Stop: 26622, Start Num: 17

Candidate Starts for PA6_43:

(16, 26936), (Start: 17 @26933 has 42 MA's), (22, 26828), (27, 26789), (31, 26732), (36, 26669),

Gene: PAD20_43 Start: 26311, Stop: 26000, Start Num: 17

Candidate Starts for PAD20_43:

(Start: 17 @26311 has 42 MA's), (22, 26206), (36, 26047),

Gene: PAS50_43 Start: 26932, Stop: 26621, Start Num: 17

Candidate Starts for PAS50_43:

(Start: 17 @26932 has 42 MA's), (22, 26827), (36, 26668),

Gene: PHL010M04_41 Start: 26546, Stop: 26235, Start Num: 17

Candidate Starts for PHL010M04_41:

(1, 26951), (4, 26717), (Start: 17 @26546 has 42 MA's), (22, 26441), (27, 26402), (29, 26381), (36, 26282),

Gene: PHL010M04_42 Start: 26890, Stop: 26549, Start Num: 18

Candidate Starts for PHL010M04_42:

(9, 26974), (11, 26962), (Start: 18 @26890 has 41 MA's), (38, 26614),

Gene: PHL037M02_42 Start: 26882, Stop: 26574, Start Num: 18

Candidate Starts for PHL037M02_42:

(Start: 18 @26882 has 41 MA's), (24, 26768), (25, 26765), (26, 26756), (31, 26684), (37, 26615),

Gene: PHL037M02_41 Start: 26541, Stop: 26227, Start Num: 16

Candidate Starts for PHL037M02_41:

(16, 26541), (Start: 17 @26538 has 42 MA's), (22, 26433), (31, 26337), (36, 26274),

Gene: PHL060L00_42 Start: 26774, Stop: 26460, Start Num: 16

Candidate Starts for PHL060L00_42:

(16, 26774), (Start: 17 @26771 has 42 MA's), (31, 26570), (36, 26507),

Gene: PHL060L00_43 Start: 27116, Stop: 26808, Start Num: 18

Candidate Starts for PHL060L00_43:

(Start: 18 @27116 has 41 MA's), (31, 26918), (35, 26858), (37, 26849),

Gene: PHL067M10_42 Start: 26852, Stop: 26544, Start Num: 18

Candidate Starts for PHL067M10_42:

(Start: 18 @26852 has 41 MA's), (34, 26621), (35, 26594), (38, 26576),

Gene: PHL067M10_41 Start: 26510, Stop: 26196, Start Num: 16

Candidate Starts for PHL067M10_41:

(16, 26510), (Start: 17 @26507 has 42 MA's), (22, 26402), (31, 26306), (36, 26243),

Gene: PHL071N05_41 Start: 26570, Stop: 26259, Start Num: 17

Candidate Starts for PHL071N05_41:

(Start: 17 @26570 has 42 MA's), (27, 26426), (31, 26369), (36, 26306),

Gene: PHL071N05_42 Start: 26913, Stop: 26605, Start Num: 18

Candidate Starts for PHL071N05_42:

(Start: 18 @26913 has 41 MA's), (24, 26799), (25, 26796), (26, 26787), (31, 26715), (35, 26655),

Gene: PHL111M01_42 Start: 26614, Stop: 26306, Start Num: 18

Candidate Starts for PHL111M01_42:

(Start: 8 @26719 has 1 MA's), (9, 26701), (11, 26689), (Start: 12 @26683 has 1 MA's), (Start: 18 @26614 has 41 MA's), (24, 26500), (25, 26497), (26, 26488), (35, 26356), (37, 26347),

Gene: PHL111M01_41 Start: 26272, Stop: 25958, Start Num: 16

Candidate Starts for PHL111M01_41:

(16, 26272), (Start: 17 @26269 has 42 MA's), (22, 26164), (27, 26125), (31, 26068), (36, 26005),

Gene: PHL112N00_42 Start: 26900, Stop: 26592, Start Num: 18

Candidate Starts for PHL112N00_42:

(Start: 8 @27002 has 1 MA's), (9, 26984), (11, 26972), (Start: 18 @26900 has 41 MA's), (23, 26798), (24, 26786), (25, 26783), (26, 26774), (37, 26633),

Gene: PHL112N00_41 Start: 26555, Stop: 26244, Start Num: 17

Candidate Starts for PHL112N00_41:

(Start: 17 @26555 has 42 MA's), (21, 26483), (27, 26411), (31, 26354), (36, 26291),

Gene: PHL113M01_41 Start: 26279, Stop: 25968, Start Num: 17

Candidate Starts for PHL113M01_41:

(Start: 17 @26279 has 42 MA's), (22, 26174), (27, 26135), (31, 26078), (36, 26015),

Gene: PHL113M01_42 Start: 26627, Stop: 26319, Start Num: 18

Candidate Starts for PHL113M01_42:

(Start: 18 @26627 has 41 MA's), (23, 26525), (24, 26513), (25, 26510), (26, 26501), (31, 26429), (37, 26360),

Gene: PHL114L00_42 Start: 26844, Stop: 26536, Start Num: 18

Candidate Starts for PHL114L00_42:

(Start: 18 @26844 has 41 MA's), (23, 26742), (25, 26727), (26, 26718), (31, 26646), (35, 26586), (37, 26577),

Gene: PHL114L00_41 Start: 26503, Stop: 26189, Start Num: 16

Candidate Starts for PHL114L00_41:

(16, 26503), (Start: 17 @26500 has 42 MA's), (31, 26299), (36, 26236),

Gene: Pirate_42 Start: 26466, Stop: 26155, Start Num: 17

Candidate Starts for Pirate_42:

(Start: 17 @26466 has 42 MA's), (22, 26361), (27, 26322), (31, 26265), (36, 26202),

Gene: Pirate_43 Start: 26814, Stop: 26506, Start Num: 18

Candidate Starts for Pirate_43:

(Start: 18 @26814 has 41 MA's), (24, 26700), (25, 26697), (26, 26688), (37, 26547),

Gene: Procrass1_42 Start: 26493, Stop: 26182, Start Num: 17

Candidate Starts for Procrass1_42:

(16, 26496), (Start: 17 @26493 has 42 MA's), (22, 26388), (27, 26349), (31, 26292), (36, 26229),

Gene: Procrass1_43 Start: 26838, Stop: 26530, Start Num: 18

Candidate Starts for Procrass1_43:

(Start: 18 @26838 has 41 MA's), (23, 26736), (24, 26724), (25, 26721), (26, 26712), (31, 26640), (37, 26571),

Gene: QueenBey_41 Start: 26515, Stop: 26204, Start Num: 17

Candidate Starts for QueenBey_41:

(16, 26518), (Start: 17 @26515 has 42 MA's), (27, 26371), (36, 26251),

Gene: QueenBey_42 Start: 26859, Stop: 26551, Start Num: 18

Candidate Starts for QueenBey_42:

(Start: 18 @26859 has 41 MA's), (24, 26745), (25, 26742), (26, 26733), (31, 26661), (37, 26592), (38, 26583),

Gene: Rileysaurus_41 Start: 26618, Stop: 26253, Start Num: 13

Candidate Starts for Rileysaurus_41:

(13, 26618), (Start: 17 @26564 has 42 MA's), (22, 26459), (27, 26420), (31, 26363), (36, 26300),

Gene: Rileysaurus_42 Start: 26907, Stop: 26599, Start Num: 18

Candidate Starts for Rileysaurus_42:

(Start: 18 @26907 has 41 MA's), (24, 26793), (25, 26790), (37, 26640), (38, 26631),

Gene: SKKY_43 Start: 26680, Stop: 26372, Start Num: 17

Candidate Starts for SKKY_43:

(13, 26731), (Start: 17 @26680 has 42 MA's), (27, 26539), (31, 26482), (36, 26419),

Gene: SKKY_44 Start: 27020, Stop: 26712, Start Num: 18

Candidate Starts for SKKY_44:

(Start: 18 @27020 has 41 MA's), (35, 26762), (37, 26753),

Gene: Solid_43 Start: 26889, Stop: 26581, Start Num: 18

Candidate Starts for Solid_43:

(Start: 8 @26991 has 1 MA's), (9, 26973), (11, 26961), (Start: 12 @26955 has 1 MA's), (Start: 18 @26889 has 41 MA's), (24, 26775), (25, 26772), (26, 26763), (35, 26631), (37, 26622),

Gene: Solid_42 Start: 26541, Stop: 26230, Start Num: 17

Candidate Starts for Solid_42:

(Start: 17 @26541 has 42 MA's), (22, 26436), (27, 26397), (36, 26277),

Gene: Stormborn_43 Start: 26408, Stop: 26097, Start Num: 17

Candidate Starts for Stormborn_43:

(10, 26474), (Start: 17 @26408 has 42 MA's), (22, 26303), (27, 26264), (31, 26207), (36, 26144),

Gene: Stormborn_44 Start: 26748, Stop: 26440, Start Num: 18

Candidate Starts for Stormborn_44:

(Start: 18 @26748 has 41 MA's), (30, 26577), (35, 26490), (38, 26472),

Gene: Supernova_43 Start: 26630, Stop: 26325, Start Num: 20

Candidate Starts for Supernova_43:

(Start: 20 @26630 has 1 MA's), (35, 26375),

Gene: Supernova_42 Start: 26293, Stop: 25982, Start Num: 17

Candidate Starts for Supernova_42:

(Start: 17 @26293 has 42 MA's), (22, 26188), (27, 26149), (31, 26092), (36, 26029),

Gene: Wizzo_43 Start: 26858, Stop: 26550, Start Num: 18

Candidate Starts for Wizzo_43:

(Start: 8 @26960 has 1 MA's), (9, 26942), (11, 26930), (Start: 12 @26924 has 1 MA's), (Start: 18 @26858 has 41 MA's), (35, 26600), (37, 26591),