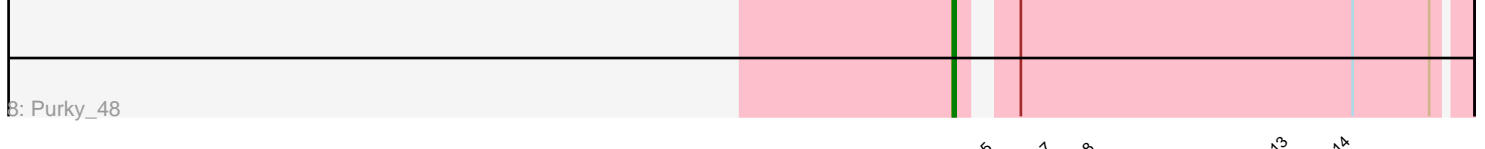
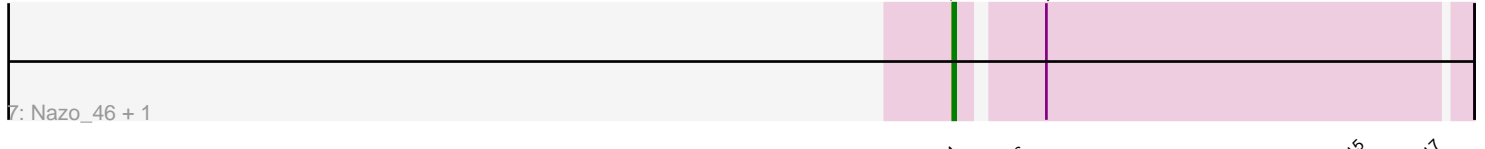
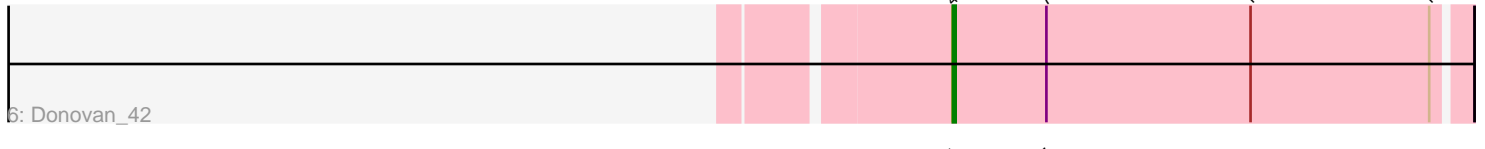
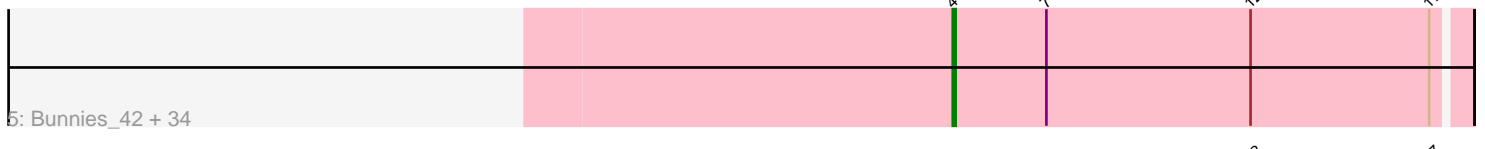
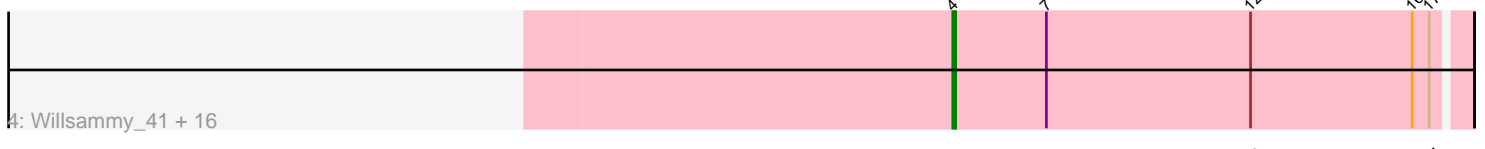
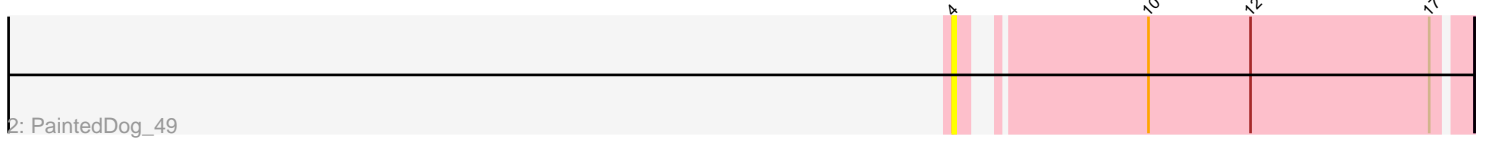
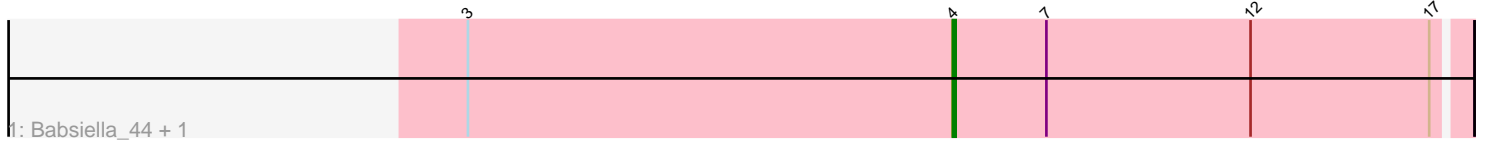


Pham 311581



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 311581 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311581 has 66 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Babsiella\_44, HC\_42
- Track 2 : PaintedDog\_49
- Track 3 : Che9c\_57
- Track 4 : Willsammy\_41, StressBall\_42, Xeno\_44, Thespis\_42, Atcoo\_42, Glaske\_42, StevieRay\_42, Brusacoram\_42, PeanutPie\_42, CactusJack\_42, Megiddo\_42, KilKor\_42, Bhagsy\_42, GreaseLightnin\_42, Gavriela\_42, Philonius\_44, Phalm\_42
- Track 5 : Bunnies\_42, Jung\_41, Juniormint\_42, Island3\_43, Camster\_42, Kari\_42, Zilizebeth\_42, Etoile\_42, FirstPlacePfu\_42, Phegasus\_42, Vidya\_42, Shipwreck\_44, Arib1\_42, Malithi\_42, Venti\_42, Jebeks\_43, Phineas\_42, Necropolis\_42, Ksquared\_42, Dynamo\_42, BronnyJr\_42, Polkaroo\_42, GaloreK\_42, Bogie\_44, Bartholomew\_41, Fishburne\_42, Langerak\_42, Techage\_42, Brujita\_43, Chubbello\_42, Mangethe\_42, Pygmy\_44, HUHilltop\_42, Sonah\_42, Majeke\_42
- Track 6 : Donovan\_42
- Track 7 : Nazo\_46, BigNuz\_45
- Track 8 : Purky\_48
- Track 9 : Typha\_63, AuntGwenStacy\_64
- Track 10 : Bipper\_61, Cracklewink\_61
- Track 11 : Hilltopfarm\_63, Faiyaz\_64

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

The start number called the most often in the published annotations is 4, it was called in 53 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arib1\_42, Atcoo\_42, Babsiella\_44, Bartholomew\_41, Bhagsy\_42, BigNuz\_45, Bogie\_44, BronnyJr\_42, Brujita\_43, Brusacoram\_42, Bunnies\_42, CactusJack\_42, Camster\_42, Che9c\_57, Chubbello\_42, Donovan\_42, Dynamo\_42, Etoile\_42, FirstPlacePfu\_42, Fishburne\_42, GaloreK\_42, Gavriela\_42, Glaske\_42, GreaseLightnin\_42, HC\_42, HUHilltop\_42, Island3\_43, Jebeks\_43, Jung\_41, Juniormint\_42, Kari\_42, KilKor\_42, Ksquared\_42, Langerak\_42, Majeke\_42, Malithi\_42, Mangethe\_42, Megiddo\_42, Nazo\_46, Necropolis\_42, PaintedDog\_49, PeanutPie\_42, Phalm\_42, Phegasus\_42, Philonius\_44, Phineas\_42, Polkaroo\_42,

Purky\_48, Pygmy\_44, Shipwreck\_44, Sonah\_42, StevieRay\_42, StressBall\_42, Techage\_42, Thespis\_42, Venti\_42, Vidya\_42, Willsammy\_41, Xeno\_44, Zilizebeth\_42,

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

- 

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

- AuntGwenStacy\_64, Bipper\_61, Cracklewink\_61, Faiyaz\_64, Hilltopfarm\_63, Typha\_63,

### Summary by start number:

Start 4:

- Found in 60 of 66 ( 90.9% ) of genes in pham
- Manual Annotations of this start: 53 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1\_42 (P1), Atcoo\_42 (P1), Babsiella\_44 (I1), Bartholomew\_41 (P1), Bhagsy\_42 (P1), BigNuz\_45 (P4), Bogie\_44 (P1), BronnyJr\_42 (P1), Brujita\_43 (I1), Brusacoram\_42 (P1), Bunnies\_42 (P1), CactusJack\_42 (P1), Camster\_42 (P1), Che9c\_57 (I2), Chubbello\_42 (P1), Donovan\_42 (P1), Dynamo\_42 (P1), Etoile\_42 (P1), FirstPlacePfu\_42 (P1), Fishburne\_42 (P1), GaloreK\_42 (P1), Gavriela\_42 (P1), Glaske\_42 (P1), GreaseLightnin\_42 (P1), HC\_42 (I1), HUHilltop\_42 (P1), Island3\_43 (I1), Jebeks\_43 (P1), Jung\_41 (P1), Juniormint\_42 (P1), Kari\_42 (P1), KilKor\_42 (P1), Ksquared\_42 (P1), Langerak\_42 (P1), Majeke\_42 (P1), Malithi\_42 (P1), Mangethe\_42 (P1), Megiddo\_42 (P1), Nazo\_46 (P4), Necropolis\_42 (P1), PaintedDog\_49 (I1), PeanutPie\_42 (P1), Phalm\_42 (P1), Phegasus\_42 (P1), Philonius\_44 (N), Phineas\_42 (P1), Polkaroo\_42 (P1), Purky\_48 (P6), Pygmy\_44 (P1), Shipwreck\_44 (P1), Sonah\_42 (P1), StevieRay\_42 (P1), StressBall\_42 (P1), Techage\_42 (P1), Thespis\_42 (P1), Venti\_42 (P1), Vidya\_42 (P1), Willsammy\_41 (P1), Xeno\_44 (N), Zilizebeth\_42 (P1),

Start 5:

- Found in 6 of 66 ( 9.1% ) of genes in pham
- Manual Annotations of this start: 6 of 59
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AuntGwenStacy\_64 (Y), Bipper\_61 (Y), Cracklewink\_61 (Y), Faiyaz\_64 (Y), Hilltopfarm\_63 (Y), Typha\_63 (Y),

### Summary by clusters:

There are 7 clusters represented in this pham: P1, P6, P4, I1, I2, N, Y,

Info for manual annotations of cluster I1:

- Start number 4 was manually annotated 4 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 4 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:

- Start number 4 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 4 was manually annotated 43 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 4 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P6:

- Start number 4 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 5 was manually annotated 6 times for cluster Y.

### ***Gene Information:***

Gene: Arib1\_42 Start: 31087, Stop: 31266, Start Num: 4

Candidate Starts for Arib1\_42:

(Start: 4 @31087 has 53 MA's), (7, 31120), (12, 31192), (17, 31255),

Gene: Atcoo\_42 Start: 31558, Stop: 31737, Start Num: 4

Candidate Starts for Atcoo\_42:

(Start: 4 @31558 has 53 MA's), (7, 31591), (12, 31663), (16, 31720), (17, 31726),

Gene: AuntGwenStacy\_64 Start: 44994, Stop: 45164, Start Num: 5

Candidate Starts for AuntGwenStacy\_64:

(Start: 5 @44994 has 6 MA's), (7, 45015), (8, 45030), (13, 45096), (14, 45117),

Gene: Babsiella\_44 Start: 31939, Stop: 32118, Start Num: 4

Candidate Starts for Babsiella\_44:

(3, 31768), (Start: 4 @31939 has 53 MA's), (7, 31972), (12, 32044), (17, 32107),

Gene: Bartholomew\_41 Start: 31081, Stop: 31260, Start Num: 4

Candidate Starts for Bartholomew\_41:

(Start: 4 @31081 has 53 MA's), (7, 31114), (12, 31186), (17, 31249),

Gene: Bhagsy\_42 Start: 31073, Stop: 31252, Start Num: 4

Candidate Starts for Bhagsy\_42:

(Start: 4 @31073 has 53 MA's), (7, 31106), (12, 31178), (16, 31235), (17, 31241),

Gene: BigNuz\_45 Start: 33157, Stop: 33330, Start Num: 4

Candidate Starts for BigNuz\_45:

(Start: 4 @33157 has 53 MA's), (7, 33184),

Gene: Bipper\_61 Start: 43465, Stop: 43635, Start Num: 5

Candidate Starts for Bipper\_61:

(Start: 5 @43465 has 6 MA's), (7, 43486), (9, 43516), (11, 43528), (13, 43567),

Gene: Bogie\_44 Start: 32848, Stop: 33027, Start Num: 4

Candidate Starts for Bogie\_44:

(Start: 4 @32848 has 53 MA's), (7, 32881), (12, 32953), (17, 33016),

Gene: BronnyJr\_42 Start: 31578, Stop: 31757, Start Num: 4

Candidate Starts for BronnyJr\_42:

(Start: 4 @31578 has 53 MA's), (7, 31611), (12, 31683), (17, 31746),

Gene: Brujita\_43 Start: 32747, Stop: 32926, Start Num: 4

Candidate Starts for Brujita\_43:

(Start: 4 @32747 has 53 MA's), (7, 32780), (12, 32852), (17, 32915),

Gene: Brusacoram\_42 Start: 31064, Stop: 31243, Start Num: 4

Candidate Starts for Brusacoram\_42:

(Start: 4 @31064 has 53 MA's), (7, 31097), (12, 31169), (16, 31226), (17, 31232),

Gene: Bunnies\_42 Start: 31088, Stop: 31267, Start Num: 4

Candidate Starts for Bunnies\_42:

(Start: 4 @31088 has 53 MA's), (7, 31121), (12, 31193), (17, 31256),

Gene: CactusJack\_42 Start: 31328, Stop: 31507, Start Num: 4

Candidate Starts for CactusJack\_42:

(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Camster\_42 Start: 31095, Stop: 31274, Start Num: 4

Candidate Starts for Camster\_42:

(Start: 4 @31095 has 53 MA's), (7, 31128), (12, 31200), (17, 31263),

Gene: Che9c\_57 Start: 42169, Stop: 42339, Start Num: 4

Candidate Starts for Che9c\_57:

(1, 41866), (2, 41878), (Start: 4 @42169 has 53 MA's), (6, 42184), (15, 42301), (17, 42328),

Gene: Chubbello\_42 Start: 31077, Stop: 31256, Start Num: 4

Candidate Starts for Chubbello\_42:

(Start: 4 @31077 has 53 MA's), (7, 31110), (12, 31182), (17, 31245),

Gene: Cracklewink\_61 Start: 43446, Stop: 43616, Start Num: 5

Candidate Starts for Cracklewink\_61:

(Start: 5 @43446 has 6 MA's), (7, 43467), (9, 43497), (11, 43509), (13, 43548),

Gene: Donovan\_42 Start: 31104, Stop: 31283, Start Num: 4

Candidate Starts for Donovan\_42:

(Start: 4 @31104 has 53 MA's), (7, 31137), (12, 31209), (17, 31272),

Gene: Dynamo\_42 Start: 31489, Stop: 31668, Start Num: 4

Candidate Starts for Dynamo\_42:

(Start: 4 @31489 has 53 MA's), (7, 31522), (12, 31594), (17, 31657),

Gene: Etoile\_42 Start: 31081, Stop: 31260, Start Num: 4

Candidate Starts for Etoile\_42:

(Start: 4 @31081 has 53 MA's), (7, 31114), (12, 31186), (17, 31249),

Gene: Faiyaz\_64 Start: 44984, Stop: 45154, Start Num: 5

Candidate Starts for Faiyaz\_64:

(Start: 5 @44984 has 6 MA's), (7, 45005), (8, 45020), (13, 45086), (14, 45107),

Gene: FirstPlacePfu\_42 Start: 31113, Stop: 31292, Start Num: 4

Candidate Starts for FirstPlacePfu\_42:

(Start: 4 @31113 has 53 MA's), (7, 31146), (12, 31218), (17, 31281),

Gene: Fishburne\_42 Start: 31081, Stop: 31260, Start Num: 4

Candidate Starts for Fishburne\_42:

(Start: 4 @31081 has 53 MA's), (7, 31114), (12, 31186), (17, 31249),

Gene: GaloreK\_42 Start: 31077, Stop: 31256, Start Num: 4

Candidate Starts for GaloreK\_42:

(Start: 4 @31077 has 53 MA's), (7, 31110), (12, 31182), (17, 31245),

Gene: Gavriela\_42 Start: 31328, Stop: 31507, Start Num: 4

Candidate Starts for Gavriela\_42:

(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Glaske\_42 Start: 31328, Stop: 31507, Start Num: 4

Candidate Starts for Glaske\_42:

(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: GreaseLightnin\_42 Start: 31317, Stop: 31496, Start Num: 4

Candidate Starts for GreaseLightnin\_42:

(Start: 4 @31317 has 53 MA's), (7, 31350), (12, 31422), (16, 31479), (17, 31485),

Gene: HC\_42 Start: 30720, Stop: 30899, Start Num: 4

Candidate Starts for HC\_42:

(3, 30549), (Start: 4 @30720 has 53 MA's), (7, 30753), (12, 30825), (17, 30888),

Gene: HUHilltop\_42 Start: 31105, Stop: 31284, Start Num: 4

Candidate Starts for HUHilltop\_42:

(Start: 4 @31105 has 53 MA's), (7, 31138), (12, 31210), (17, 31273),

Gene: Hilltopfarm\_63 Start: 44686, Stop: 44856, Start Num: 5

Candidate Starts for Hilltopfarm\_63:

(Start: 5 @44686 has 6 MA's), (7, 44707), (8, 44722), (13, 44788), (14, 44809),

Gene: Island3\_43 Start: 32747, Stop: 32926, Start Num: 4

Candidate Starts for Island3\_43:

(Start: 4 @32747 has 53 MA's), (7, 32780), (12, 32852), (17, 32915),

Gene: Jebeks\_43 Start: 31066, Stop: 31245, Start Num: 4

Candidate Starts for Jebeks\_43:

(Start: 4 @31066 has 53 MA's), (7, 31099), (12, 31171), (17, 31234),

Gene: Jung\_41 Start: 31035, Stop: 31214, Start Num: 4

Candidate Starts for Jung\_41:

(Start: 4 @31035 has 53 MA's), (7, 31068), (12, 31140), (17, 31203),

Gene: Juniormint\_42 Start: 31110, Stop: 31289, Start Num: 4

Candidate Starts for Juniormint\_42:

(Start: 4 @31110 has 53 MA's), (7, 31143), (12, 31215), (17, 31278),

Gene: Kari\_42 Start: 31078, Stop: 31257, Start Num: 4

Candidate Starts for Kari\_42:

(Start: 4 @31078 has 53 MA's), (7, 31111), (12, 31183), (17, 31246),

Gene: KilKor\_42 Start: 31328, Stop: 31507, Start Num: 4  
Candidate Starts for KilKor\_42:  
(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Ksquared\_42 Start: 31088, Stop: 31267, Start Num: 4  
Candidate Starts for Ksquared\_42:  
(Start: 4 @31088 has 53 MA's), (7, 31121), (12, 31193), (17, 31256),

Gene: Langerak\_42 Start: 31097, Stop: 31276, Start Num: 4  
Candidate Starts for Langerak\_42:  
(Start: 4 @31097 has 53 MA's), (7, 31130), (12, 31202), (17, 31265),

Gene: Majeke\_42 Start: 31122, Stop: 31301, Start Num: 4  
Candidate Starts for Majeke\_42:  
(Start: 4 @31122 has 53 MA's), (7, 31155), (12, 31227), (17, 31290),

Gene: Malithi\_42 Start: 30997, Stop: 31176, Start Num: 4  
Candidate Starts for Malithi\_42:  
(Start: 4 @30997 has 53 MA's), (7, 31030), (12, 31102), (17, 31165),

Gene: Mangethe\_42 Start: 31122, Stop: 31301, Start Num: 4  
Candidate Starts for Mangethe\_42:  
(Start: 4 @31122 has 53 MA's), (7, 31155), (12, 31227), (17, 31290),

Gene: Megiddo\_42 Start: 31328, Stop: 31507, Start Num: 4  
Candidate Starts for Megiddo\_42:  
(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Nazo\_46 Start: 33354, Stop: 33527, Start Num: 4  
Candidate Starts for Nazo\_46:  
(Start: 4 @33354 has 53 MA's), (7, 33381),

Gene: Necropolis\_42 Start: 31078, Stop: 31257, Start Num: 4  
Candidate Starts for Necropolis\_42:  
(Start: 4 @31078 has 53 MA's), (7, 31111), (12, 31183), (17, 31246),

Gene: PaintedDog\_49 Start: 33907, Stop: 34074, Start Num: 4  
Candidate Starts for PaintedDog\_49:  
(Start: 4 @33907 has 53 MA's), (10, 33964), (12, 34000), (17, 34063),

Gene: PeanutPie\_42 Start: 31073, Stop: 31252, Start Num: 4  
Candidate Starts for PeanutPie\_42:  
(Start: 4 @31073 has 53 MA's), (7, 31106), (12, 31178), (16, 31235), (17, 31241),

Gene: Phalm\_42 Start: 31328, Stop: 31507, Start Num: 4  
Candidate Starts for Phalm\_42:  
(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Phegasus\_42 Start: 31089, Stop: 31268, Start Num: 4  
Candidate Starts for Phegasus\_42:  
(Start: 4 @31089 has 53 MA's), (7, 31122), (12, 31194), (17, 31257),

Gene: Philonius\_44 Start: 30180, Stop: 30359, Start Num: 4  
Candidate Starts for Philonius\_44:  
(Start: 4 @30180 has 53 MA's), (7, 30213), (12, 30285), (16, 30342), (17, 30348),

Gene: Phineas\_42 Start: 31440, Stop: 31619, Start Num: 4  
Candidate Starts for Phineas\_42:  
(Start: 4 @31440 has 53 MA's), (7, 31473), (12, 31545), (17, 31608),

Gene: Polkaroo\_42 Start: 31085, Stop: 31264, Start Num: 4  
Candidate Starts for Polkaroo\_42:  
(Start: 4 @31085 has 53 MA's), (7, 31118), (12, 31190), (17, 31253),

Gene: Purky\_48 Start: 33570, Stop: 33740, Start Num: 4  
Candidate Starts for Purky\_48:  
(Start: 4 @33570 has 53 MA's), (6, 33585), (15, 33702), (17, 33729),

Gene: Pygmy\_44 Start: 32904, Stop: 33083, Start Num: 4  
Candidate Starts for Pygmy\_44:  
(Start: 4 @32904 has 53 MA's), (7, 32937), (12, 33009), (17, 33072),

Gene: Shipwreck\_44 Start: 32879, Stop: 33058, Start Num: 4  
Candidate Starts for Shipwreck\_44:  
(Start: 4 @32879 has 53 MA's), (7, 32912), (12, 32984), (17, 33047),

Gene: Sonah\_42 Start: 31067, Stop: 31246, Start Num: 4  
Candidate Starts for Sonah\_42:  
(Start: 4 @31067 has 53 MA's), (7, 31100), (12, 31172), (17, 31235),

Gene: StevieRay\_42 Start: 31030, Stop: 31209, Start Num: 4  
Candidate Starts for StevieRay\_42:  
(Start: 4 @31030 has 53 MA's), (7, 31063), (12, 31135), (16, 31192), (17, 31198),

Gene: StressBall\_42 Start: 31328, Stop: 31507, Start Num: 4  
Candidate Starts for StressBall\_42:  
(Start: 4 @31328 has 53 MA's), (7, 31361), (12, 31433), (16, 31490), (17, 31496),

Gene: Techage\_42 Start: 31107, Stop: 31286, Start Num: 4  
Candidate Starts for Techage\_42:  
(Start: 4 @31107 has 53 MA's), (7, 31140), (12, 31212), (17, 31275),

Gene: Thespis\_42 Start: 31064, Stop: 31243, Start Num: 4  
Candidate Starts for Thespis\_42:  
(Start: 4 @31064 has 53 MA's), (7, 31097), (12, 31169), (16, 31226), (17, 31232),

Gene: Typha\_63 Start: 44994, Stop: 45164, Start Num: 5  
Candidate Starts for Typha\_63:  
(Start: 5 @44994 has 6 MA's), (7, 45015), (8, 45030), (13, 45096), (14, 45117),

Gene: Venti\_42 Start: 31081, Stop: 31260, Start Num: 4  
Candidate Starts for Venti\_42:  
(Start: 4 @31081 has 53 MA's), (7, 31114), (12, 31186), (17, 31249),

Gene: Vidya\_42 Start: 31114, Stop: 31293, Start Num: 4

Candidate Starts for Vidya\_42:

(Start: 4 @31114 has 53 MA's), (7, 31147), (12, 31219), (17, 31282),

Gene: Willsammy\_41 Start: 30811, Stop: 30990, Start Num: 4

Candidate Starts for Willsammy\_41:

(Start: 4 @30811 has 53 MA's), (7, 30844), (12, 30916), (16, 30973), (17, 30979),

Gene: Xeno\_44 Start: 30406, Stop: 30585, Start Num: 4

Candidate Starts for Xeno\_44:

(Start: 4 @30406 has 53 MA's), (7, 30439), (12, 30511), (16, 30568), (17, 30574),

Gene: Zilizebeth\_42 Start: 31113, Stop: 31292, Start Num: 4

Candidate Starts for Zilizebeth\_42:

(Start: 4 @31113 has 53 MA's), (7, 31146), (12, 31218), (17, 31281),