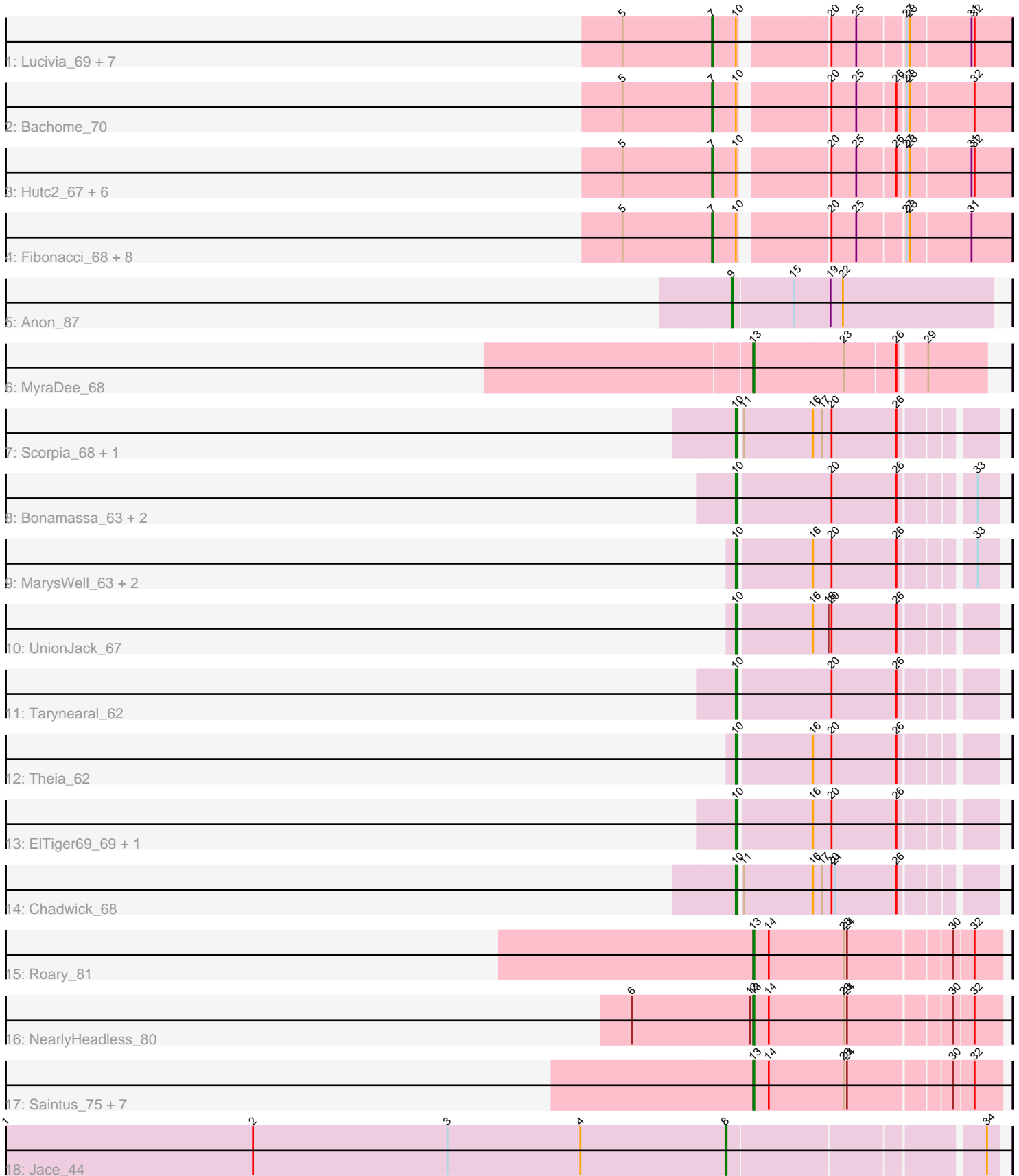


Pham 169884



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 169884 Report

This analysis was run 07/09/24 on database version 566.

Pham number 169884 has 52 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Lucivia\_69, Orange\_67, Flaverint\_69, Bowtie\_69, Sham4\_68, Timothy\_68, Munch\_68, Aneem\_69
- Track 2 : Bachome\_70
- Track 3 : Hutc2\_67, Petersenfast\_66, Jabith\_69, Insomnia\_69, TinyTimmy\_66, Bud\_67, Joselito\_69
- Track 4 : Fibonacci\_68, MaCh\_68, Mulciber\_67, Salz\_67, Snape\_68, Ebony\_68, Gilberta\_69, Et2Brutus\_67, Mabel\_68
- Track 5 : Anon\_87
- Track 6 : MyraDee\_68
- Track 7 : Scorpia\_68, PetterN\_72
- Track 8 : Bonamassa\_63, George\_60, Milcery\_63
- Track 9 : MarysWell\_63, Dublin\_63, Micasa\_61
- Track 10 : UnionJack\_67
- Track 11 : Tarynearal\_62
- Track 12 : Theia\_62
- Track 13 : EITiger69\_69, Naca\_66
- Track 14 : Chadwick\_68
- Track 15 : Roary\_81
- Track 16 : NearlyHeadless\_80
- Track 17 : Saintus\_75, Groundhog\_77, Expelliarmus\_76, Astro\_79, Dixon\_78, Stephig9\_78, Danforth\_80, Smeadley\_79
- Track 18 : Jace\_44

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

The start number called the most often in the published annotations is 7, it was called in 23 of the 49 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aneem\_69, Bachome\_70, Bowtie\_69, Bud\_67, Ebony\_68, Et2Brutus\_67, Fibonacci\_68, Flaverint\_69, Gilberta\_69, Hutc2\_67, Insomnia\_69, Jabith\_69, Joselito\_69, Lucivia\_69, MaCh\_68, Mabel\_68, Mulciber\_67, Munch\_68, Orange\_67, Petersenfast\_66, Salz\_67, Sham4\_68, Snape\_68, Timothy\_68, TinyTimmy\_66,

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

- 

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

- Anon\_87, Astro\_79, Bonamassa\_63, Chadwick\_68, Danforth\_80, Dixon\_78, Dublin\_63, ElTiger69\_69, Expelliarmus\_76, George\_60, Groundhog\_77, Jace\_44, MarysWell\_63, Micasa\_61, Milcery\_63, MyraDee\_68, Naca\_66, NearlyHeadless\_80, PetterN\_72, Roary\_81, Saintus\_75, Scorpia\_68, Smeadley\_79, Stepfig9\_78, Tarynearal\_62, Theia\_62, UnionJack\_67,

### Summary by start number:

Start 7:

- Found in 25 of 52 ( 48.1% ) of genes in pham
- Manual Annotations of this start: 23 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem\_69 (A11), Bachome\_70 (A11), Bowtie\_69 (A11), Bud\_67 (A11), Ebony\_68 (A11), Et2Brutus\_67 (A11), Fibonacci\_68 (A11), Flaverint\_69 (A11), Gilberta\_69 (A11), Hutc2\_67 (A11), Insomnia\_69 (A11), Jabith\_69 (A11), Joselito\_69 (A11), Lucivia\_69 (A11), MaCh\_68 (A11), Mabel\_68 (A11), Mulciber\_67 (A11), Munch\_68 (A11), Orange\_67 (A11), Petersenfast\_66 (A11), Salz\_67 (A11), Sham4\_68 (A11), Snape\_68 (A11), Timothy\_68 (A11), TinyTimmy\_66 (A11),

Start 8:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jace\_44 (singleton),

Start 9:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anon\_87 (A15),

Start 10:

- Found in 39 of 52 ( 75.0% ) of genes in pham
- Manual Annotations of this start: 13 of 49
- Called 35.9% of time when present
- Phage (with cluster) where this start called: Bonamassa\_63 (A5), Chadwick\_68 (A5), Dublin\_63 (A5), ElTiger69\_69 (A5), George\_60 (A5), MarysWell\_63 (A5), Micasa\_61 (A5), Milcery\_63 (A5), Naca\_66 (A5), PetterN\_72 (A5), Scorpia\_68 (A5), Tarynearal\_62 (A5), Theia\_62 (A5), UnionJack\_67 (A5),

Start 13:

- Found in 11 of 52 ( 21.2% ) of genes in pham
- Manual Annotations of this start: 11 of 49
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astro\_79 (A8), Danforth\_80 (A8), Dixon\_78 (A8), Expelliarmus\_76 (A8), Groundhog\_77 (A8), MyraDee\_68 (A18), NearlyHeadless\_80 (A8), Roary\_81 (A8), Saintus\_75 (A8), Smeadley\_79 (A8), Stepfig9\_78 (A8),

## Summary by clusters:

There are 6 clusters represented in this pham: A15, singleton, A11, A18, A5, A8,

Info for manual annotations of cluster A11:

- Start number 7 was manually annotated 23 times for cluster A11.

Info for manual annotations of cluster A15:

- Start number 9 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A18:

- Start number 13 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A5:

- Start number 10 was manually annotated 13 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 13 was manually annotated 10 times for cluster A8.

## Gene Information:

Gene: Aneem\_69 Start: 41746, Stop: 41486, Start Num: 7

Candidate Starts for Aneem\_69:

(5, 41827), (Start: 7 @41746 has 23 MA's), (Start: 10 @41725 has 13 MA's), (20, 41650), (25, 41626), (27, 41584), (28, 41581), (31, 41524), (32, 41521),

Gene: Anon\_87 Start: 47141, Stop: 46893, Start Num: 9

Candidate Starts for Anon\_87:

(Start: 9 @47141 has 1 MA's), (15, 47084), (19, 47048), (22, 47036),

Gene: Astro\_79 Start: 43758, Stop: 43531, Start Num: 13

Candidate Starts for Astro\_79:

(Start: 13 @43758 has 11 MA's), (14, 43743), (23, 43671), (24, 43668), (30, 43575), (32, 43557),

Gene: Bachome\_70 Start: 41742, Stop: 41482, Start Num: 7

Candidate Starts for Bachome\_70:

(5, 41823), (Start: 7 @41742 has 23 MA's), (Start: 10 @41721 has 13 MA's), (20, 41646), (25, 41622), (26, 41586), (27, 41580), (28, 41577), (32, 41517),

Gene: Bonamassa\_63 Start: 41386, Stop: 41156, Start Num: 10

Candidate Starts for Bonamassa\_63:

(Start: 10 @41386 has 13 MA's), (20, 41299), (26, 41236), (33, 41176),

Gene: Bowtie\_69 Start: 41753, Stop: 41493, Start Num: 7

Candidate Starts for Bowtie\_69:

(5, 41834), (Start: 7 @41753 has 23 MA's), (Start: 10 @41732 has 13 MA's), (20, 41657), (25, 41633), (27, 41591), (28, 41588), (31, 41531), (32, 41528),

Gene: Bud\_67 Start: 41300, Stop: 41040, Start Num: 7

Candidate Starts for Bud\_67:

(5, 41381), (Start: 7 @41300 has 23 MA's), (Start: 10 @41279 has 13 MA's), (20, 41204), (25, 41180), (26, 41144), (27, 41138), (28, 41135), (31, 41078), (32, 41075),

Gene: Chadwick\_68 Start: 41682, Stop: 41452, Start Num: 10

Candidate Starts for Chadwick\_68:

(Start: 10 @41682 has 13 MA's), (11, 41679), (16, 41613), (17, 41604), (20, 41595), (21, 41592), (26, 41532),

Gene: Danforth\_80 Start: 43835, Stop: 43608, Start Num: 13

Candidate Starts for Danforth\_80:

(Start: 13 @43835 has 11 MA's), (14, 43820), (23, 43748), (24, 43745), (30, 43652), (32, 43634),

Gene: Dixon\_78 Start: 43317, Stop: 43090, Start Num: 13

Candidate Starts for Dixon\_78:

(Start: 13 @43317 has 11 MA's), (14, 43302), (23, 43230), (24, 43227), (30, 43134), (32, 43116),

Gene: Dublin\_63 Start: 41343, Stop: 41113, Start Num: 10

Candidate Starts for Dublin\_63:

(Start: 10 @41343 has 13 MA's), (16, 41274), (20, 41256), (26, 41193), (33, 41133),

Gene: Ebony\_68 Start: 41317, Stop: 41057, Start Num: 7

Candidate Starts for Ebony\_68:

(5, 41398), (Start: 7 @41317 has 23 MA's), (Start: 10 @41296 has 13 MA's), (20, 41221), (25, 41197), (27, 41155), (28, 41152), (31, 41095),

Gene: EITiger69\_69 Start: 42424, Stop: 42194, Start Num: 10

Candidate Starts for EITiger69\_69:

(Start: 10 @42424 has 13 MA's), (16, 42355), (20, 42337), (26, 42274),

Gene: Et2Brutus\_67 Start: 41280, Stop: 41020, Start Num: 7

Candidate Starts for Et2Brutus\_67:

(5, 41361), (Start: 7 @41280 has 23 MA's), (Start: 10 @41259 has 13 MA's), (20, 41184), (25, 41160), (27, 41118), (28, 41115), (31, 41058),

Gene: Expelliarmus\_76 Start: 43531, Stop: 43304, Start Num: 13

Candidate Starts for Expelliarmus\_76:

(Start: 13 @43531 has 11 MA's), (14, 43516), (23, 43444), (24, 43441), (30, 43348), (32, 43330),

Gene: Fibonacci\_68 Start: 41286, Stop: 41026, Start Num: 7

Candidate Starts for Fibonacci\_68:

(5, 41367), (Start: 7 @41286 has 23 MA's), (Start: 10 @41265 has 13 MA's), (20, 41190), (25, 41166), (27, 41124), (28, 41121), (31, 41064),

Gene: Flaverint\_69 Start: 41744, Stop: 41484, Start Num: 7

Candidate Starts for Flaverint\_69:

(5, 41825), (Start: 7 @41744 has 23 MA's), (Start: 10 @41723 has 13 MA's), (20, 41648), (25, 41624), (27, 41582), (28, 41579), (31, 41522), (32, 41519),

Gene: George\_60 Start: 41130, Stop: 40900, Start Num: 10

Candidate Starts for George\_60:

(Start: 10 @41130 has 13 MA's), (20, 41043), (26, 40980), (33, 40920),

Gene: Gilberta\_69 Start: 41737, Stop: 41477, Start Num: 7

Candidate Starts for Gilberta\_69:

(5, 41818), (Start: 7 @41737 has 23 MA's), (Start: 10 @41716 has 13 MA's), (20, 41641), (25, 41617), (27, 41575), (28, 41572), (31, 41515),

Gene: Groundhog\_77 Start: 43587, Stop: 43366, Start Num: 13

Candidate Starts for Groundhog\_77:

(Start: 13 @43587 has 11 MA's), (14, 43572), (23, 43500), (24, 43497), (30, 43404), (32, 43386),

Gene: Hutc2\_67 Start: 41286, Stop: 41026, Start Num: 7

Candidate Starts for Hutc2\_67:

(5, 41367), (Start: 7 @41286 has 23 MA's), (Start: 10 @41265 has 13 MA's), (20, 41190), (25, 41166), (26, 41130), (27, 41124), (28, 41121), (31, 41064), (32, 41061),

Gene: Insomnia\_69 Start: 41725, Stop: 41465, Start Num: 7

Candidate Starts for Insomnia\_69:

(5, 41806), (Start: 7 @41725 has 23 MA's), (Start: 10 @41704 has 13 MA's), (20, 41629), (25, 41605), (26, 41569), (27, 41563), (28, 41560), (31, 41503), (32, 41500),

Gene: Jabith\_69 Start: 41742, Stop: 41482, Start Num: 7

Candidate Starts for Jabith\_69:

(5, 41823), (Start: 7 @41742 has 23 MA's), (Start: 10 @41721 has 13 MA's), (20, 41646), (25, 41622), (26, 41586), (27, 41580), (28, 41577), (31, 41520), (32, 41517),

Gene: Jace\_44 Start: 31248, Stop: 31490, Start Num: 8

Candidate Starts for Jace\_44:

(1, 30549), (2, 30789), (3, 30978), (4, 31107), (Start: 8 @31248 has 1 MA's), (34, 31479),

Gene: Joselito\_69 Start: 41762, Stop: 41502, Start Num: 7

Candidate Starts for Joselito\_69:

(5, 41843), (Start: 7 @41762 has 23 MA's), (Start: 10 @41741 has 13 MA's), (20, 41666), (25, 41642), (26, 41606), (27, 41600), (28, 41597), (31, 41540), (32, 41537),

Gene: Lucivia\_69 Start: 41795, Stop: 41535, Start Num: 7

Candidate Starts for Lucivia\_69:

(5, 41876), (Start: 7 @41795 has 23 MA's), (Start: 10 @41774 has 13 MA's), (20, 41699), (25, 41675), (27, 41633), (28, 41630), (31, 41573), (32, 41570),

Gene: MaCh\_68 Start: 41741, Stop: 41481, Start Num: 7

Candidate Starts for MaCh\_68:

(5, 41822), (Start: 7 @41741 has 23 MA's), (Start: 10 @41720 has 13 MA's), (20, 41645), (25, 41621), (27, 41579), (28, 41576), (31, 41519),

Gene: Mabel\_68 Start: 41742, Stop: 41482, Start Num: 7

Candidate Starts for Mabel\_68:

(5, 41823), (Start: 7 @41742 has 23 MA's), (Start: 10 @41721 has 13 MA's), (20, 41646), (25, 41622), (27, 41580), (28, 41577), (31, 41520),

Gene: MarysWell\_63 Start: 41586, Stop: 41356, Start Num: 10

Candidate Starts for MarysWell\_63:

(Start: 10 @41586 has 13 MA's), (16, 41517), (20, 41499), (26, 41436), (33, 41376),

Gene: Micasa\_61 Start: 41308, Stop: 41078, Start Num: 10

Candidate Starts for Micasa\_61:

(Start: 10 @41308 has 13 MA's), (16, 41239), (20, 41221), (26, 41158), (33, 41098),

Gene: Milcery\_63 Start: 41098, Stop: 40868, Start Num: 10

Candidate Starts for Milcery\_63:

(Start: 10 @41098 has 13 MA's), (20, 41011), (26, 40948), (33, 40888),

Gene: Mulciber\_67 Start: 41283, Stop: 41023, Start Num: 7

Candidate Starts for Mulciber\_67:

(5, 41364), (Start: 7 @41283 has 23 MA's), (Start: 10 @41262 has 13 MA's), (20, 41187), (25, 41163), (27, 41121), (28, 41118), (31, 41061),

Gene: Munch\_68 Start: 41746, Stop: 41486, Start Num: 7

Candidate Starts for Munch\_68:

(5, 41827), (Start: 7 @41746 has 23 MA's), (Start: 10 @41725 has 13 MA's), (20, 41650), (25, 41626), (27, 41584), (28, 41581), (31, 41524), (32, 41521),

Gene: MyraDee\_68 Start: 40150, Stop: 39935, Start Num: 13

Candidate Starts for MyraDee\_68:

(Start: 13 @40150 has 11 MA's), (23, 40063), (26, 40015), (29, 39991),

Gene: Naca\_66 Start: 42496, Stop: 42266, Start Num: 10

Candidate Starts for Naca\_66:

(Start: 10 @42496 has 13 MA's), (16, 42427), (20, 42409), (26, 42346),

Gene: NearlyHeadless\_80 Start: 43601, Stop: 43374, Start Num: 13

Candidate Starts for NearlyHeadless\_80:

(6, 43718), (12, 43604), (Start: 13 @43601 has 11 MA's), (14, 43586), (23, 43514), (24, 43511), (30, 43418), (32, 43400),

Gene: Orange\_67 Start: 41295, Stop: 41035, Start Num: 7

Candidate Starts for Orange\_67:

(5, 41376), (Start: 7 @41295 has 23 MA's), (Start: 10 @41274 has 13 MA's), (20, 41199), (25, 41175), (27, 41133), (28, 41130), (31, 41073), (32, 41070),

Gene: Petersenfast\_66 Start: 41294, Stop: 41034, Start Num: 7

Candidate Starts for Petersenfast\_66:

(5, 41375), (Start: 7 @41294 has 23 MA's), (Start: 10 @41273 has 13 MA's), (20, 41198), (25, 41174), (26, 41138), (27, 41132), (28, 41129), (31, 41072), (32, 41069),

Gene: PetterN\_72 Start: 42468, Stop: 42238, Start Num: 10

Candidate Starts for PetterN\_72:

(Start: 10 @42468 has 13 MA's), (11, 42465), (16, 42399), (17, 42390), (20, 42381), (26, 42318),

Gene: Roary\_81 Start: 43837, Stop: 43610, Start Num: 13

Candidate Starts for Roary\_81:

(Start: 13 @43837 has 11 MA's), (14, 43822), (23, 43750), (24, 43747), (30, 43654), (32, 43636),

Gene: Saintus\_75 Start: 40485, Stop: 40258, Start Num: 13

Candidate Starts for Saintus\_75:

(Start: 13 @40485 has 11 MA's), (14, 40470), (23, 40398), (24, 40395), (30, 40302), (32, 40284),

Gene: Salz\_67 Start: 41209, Stop: 40949, Start Num: 7

Candidate Starts for Salz\_67:

(5, 41290), (Start: 7 @41209 has 23 MA's), (Start: 10 @41188 has 13 MA's), (20, 41113), (25, 41089), (27, 41047), (28, 41044), (31, 40987),

Gene: Scorpia\_68 Start: 42039, Stop: 41809, Start Num: 10

Candidate Starts for Scorpia\_68:

(Start: 10 @42039 has 13 MA's), (11, 42036), (16, 41970), (17, 41961), (20, 41952), (26, 41889),

Gene: Sham4\_68 Start: 41293, Stop: 41033, Start Num: 7

Candidate Starts for Sham4\_68:

(5, 41374), (Start: 7 @41293 has 23 MA's), (Start: 10 @41272 has 13 MA's), (20, 41197), (25, 41173), (27, 41131), (28, 41128), (31, 41071), (32, 41068),

Gene: Smeadley\_79 Start: 43653, Stop: 43426, Start Num: 13

Candidate Starts for Smeadley\_79:

(Start: 13 @43653 has 11 MA's), (14, 43638), (23, 43566), (24, 43563), (30, 43470), (32, 43452),

Gene: Snape\_68 Start: 41285, Stop: 41025, Start Num: 7

Candidate Starts for Snape\_68:

(5, 41366), (Start: 7 @41285 has 23 MA's), (Start: 10 @41264 has 13 MA's), (20, 41189), (25, 41165), (27, 41123), (28, 41120), (31, 41063),

Gene: Stephig9\_78 Start: 43592, Stop: 43365, Start Num: 13

Candidate Starts for Stephig9\_78:

(Start: 13 @43592 has 11 MA's), (14, 43577), (23, 43505), (24, 43502), (30, 43409), (32, 43391),

Gene: Tarynearal\_62 Start: 41084, Stop: 40854, Start Num: 10

Candidate Starts for Tarynearal\_62:

(Start: 10 @41084 has 13 MA's), (20, 40997), (26, 40934),

Gene: Theia\_62 Start: 41570, Stop: 41340, Start Num: 10

Candidate Starts for Theia\_62:

(Start: 10 @41570 has 13 MA's), (16, 41501), (20, 41483), (26, 41420),

Gene: Timothy\_68 Start: 41262, Stop: 41002, Start Num: 7

Candidate Starts for Timothy\_68:

(5, 41343), (Start: 7 @41262 has 23 MA's), (Start: 10 @41241 has 13 MA's), (20, 41166), (25, 41142), (27, 41100), (28, 41097), (31, 41040), (32, 41037),

Gene: TinyTimmy\_66 Start: 41255, Stop: 40995, Start Num: 7

Candidate Starts for TinyTimmy\_66:

(5, 41336), (Start: 7 @41255 has 23 MA's), (Start: 10 @41234 has 13 MA's), (20, 41159), (25, 41135), (26, 41099), (27, 41093), (28, 41090), (31, 41033), (32, 41030),

Gene: UnionJack\_67 Start: 41521, Stop: 41291, Start Num: 10

Candidate Starts for UnionJack\_67:

(Start: 10 @41521 has 13 MA's), (16, 41452), (18, 41437), (20, 41434), (26, 41371),