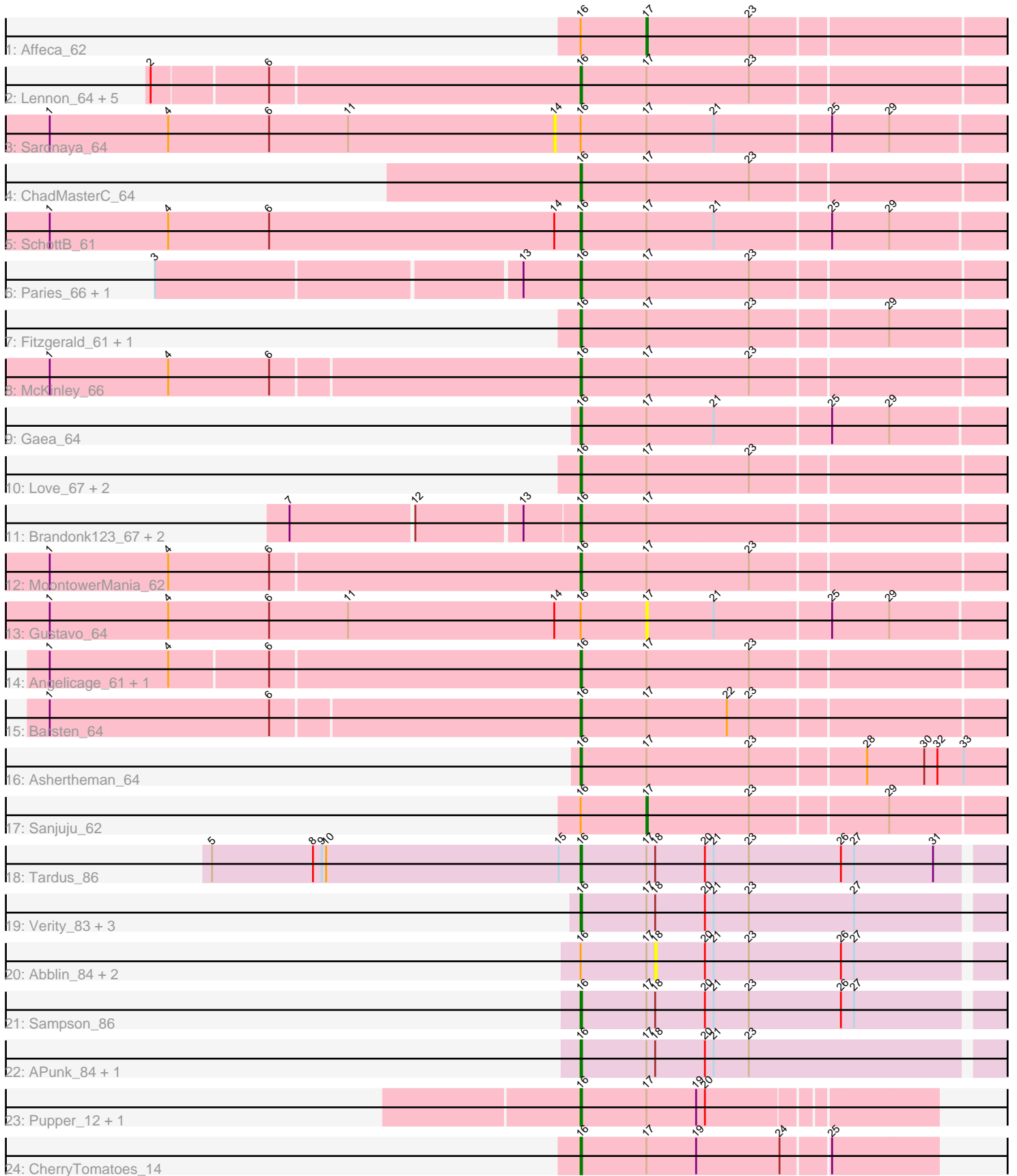


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 196641 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196641 has 43 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Affeca\_62
- Track 2 : Lennon\_64, Geodirt\_63, Sitar\_64, Keitabear\_63, Stultus\_60, Kewpiedoll\_63
- Track 3 : Saronaya\_64
- Track 4 : ChadMasterC\_64
- Track 5 : SchottB\_61
- Track 6 : Paries\_66, Galadriel\_63
- Track 7 : Fitzgerald\_61, Jabberwocky\_61
- Track 8 : McKinley\_66
- Track 9 : Gaea\_64
- Track 10 : Love\_67, RiverRaider\_64, Sedona\_63
- Track 11 : Brandonk123\_67, Kamashten\_62, Thing3\_62
- Track 12 : MoontowerMania\_62
- Track 13 : Gustavo\_64
- Track 14 : Angelicage\_61, Shivanishola\_61
- Track 15 : Barsten\_64
- Track 16 : Ashertheman\_64
- Track 17 : Sanjuju\_62
- Track 18 : Tardus\_86
- Track 19 : Verity\_83, Delrey21\_84, DoctorFroggo\_84, Zipp\_84
- Track 20 : Abblin\_84, Natkenzie\_84, Scioto\_84
- Track 21 : Sampson\_86
- Track 22 : APunk\_84, Zitch\_86
- Track 23 : Pupper\_12, SCentae\_12
- Track 24 : CherryTomatoes\_14

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

The start number called the most often in the published annotations is 16, it was called in 35 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- APunk\_84, Angelicage\_61, Ashertheman\_64, Barsten\_64, Brandonk123\_67, ChadMasterC\_64, CherryTomatoes\_14, Delrey21\_84, DoctorFroggo\_84,

Fitzgerald\_61, Gaea\_64, Galadriel\_63, Geodirt\_63, Jabberwocky\_61, Kamashten\_62, Keitabear\_63, Kewpiedoll\_63, Lennon\_64, Love\_67, McKinley\_66, MoontowerMania\_62, Paries\_66, Pupper\_12, RiverRaider\_64, SCentae\_12, Sampson\_86, SchottB\_61, Sedona\_63, Shivanishola\_61, Sitar\_64, Stultus\_60, Tardus\_86, Thing3\_62, Verity\_83, Zipp\_84, Zitch\_86,

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

- Abblin\_84, Affeca\_62, Gustavo\_64, Natkenzie\_84, Sanjuju\_62, Saronaya\_64, Scioto\_84,

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

- 

### Summary by start number:

Start 14:

- Found in 3 of 43 ( 7.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Saronaya\_64 (DE1),

Start 16:

- Found in 43 of 43 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 35 of 37
- Called 83.7% of time when present
- Phage (with cluster) where this start called: APunk\_84 (DE4), Angelicage\_61 (DE1), Ashertheman\_64 (DE1), Barsten\_64 (DE1), Brandonk123\_67 (DE1), ChadMasterC\_64 (DE1), CherryTomatoes\_14 (DO), Delrey21\_84 (DE4), DoctorFroggo\_84 (DE4), Fitzgerald\_61 (DE1), Gaea\_64 (DE1), Galadriel\_63 (DE1), Geodirt\_63 (DE1), Jabberwocky\_61 (DE1), Kamashten\_62 (DE1), Keitabear\_63 (DE1), Kewpiedoll\_63 (DE1), Lennon\_64 (DE1), Love\_67 (DE1), McKinley\_66 (DE1), MoontowerMania\_62 (DE1), Paries\_66 (DE1), Pupper\_12 (DO), RiverRaider\_64 (DE1), SCentae\_12 (DO), Sampson\_86 (DE4), SchottB\_61 (DE1), Sedona\_63 (DE1), Shivanishola\_61 (DE1), Sitar\_64 (DE1), Stultus\_60 (DE1), Tardus\_86 (DE4), Thing3\_62 (DE1), Verity\_83 (DE4), Zipp\_84 (DE4), Zitch\_86 (DE4),

Start 17:

- Found in 43 of 43 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 2 of 37
- Called 7.0% of time when present
- Phage (with cluster) where this start called: Affeca\_62 (DE1), Gustavo\_64 (DE1), Sanjuju\_62 (DE1),

Start 18:

- Found in 11 of 43 ( 25.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Abblin\_84 (DE4), Natkenzie\_84 (DE4), Scioto\_84 (DE4),

### Summary by clusters:

There are 3 clusters represented in this pham: DO, DE4, DE1,

Info for manual annotations of cluster DE1:

- Start number 16 was manually annotated 24 times for cluster DE1.
- Start number 17 was manually annotated 2 times for cluster DE1.

Info for manual annotations of cluster DE4:

- Start number 16 was manually annotated 8 times for cluster DE4.

Info for manual annotations of cluster DO:

- Start number 16 was manually annotated 3 times for cluster DO.

### **Gene Information:**

Gene: APunk\_84 Start: 57342, Stop: 57623, Start Num: 16

Candidate Starts for APunk\_84:

(Start: 16 @57342 has 35 MA's), (Start: 17 @57387 has 2 MA's), (18, 57393), (20, 57426), (21, 57432), (23, 57456),

Gene: Abblin\_84 Start: 57551, Stop: 57781, Start Num: 18

Candidate Starts for Abblin\_84:

(Start: 16 @57500 has 35 MA's), (Start: 17 @57545 has 2 MA's), (18, 57551), (20, 57584), (21, 57590), (23, 57614), (26, 57677), (27, 57686),

Gene: Affeca\_62 Start: 50082, Stop: 50321, Start Num: 17

Candidate Starts for Affeca\_62:

(Start: 16 @50037 has 35 MA's), (Start: 17 @50082 has 2 MA's), (23, 50151),

Gene: Angelicage\_61 Start: 49989, Stop: 50273, Start Num: 16

Candidate Starts for Angelicage\_61:

(1, 49632), (4, 49713), (6, 49779), (Start: 16 @49989 has 35 MA's), (Start: 17 @50034 has 2 MA's), (23, 50103),

Gene: Ashertheman\_64 Start: 49167, Stop: 49451, Start Num: 16

Candidate Starts for Ashertheman\_64:

(Start: 16 @49167 has 35 MA's), (Start: 17 @49212 has 2 MA's), (23, 49281), (28, 49356), (30, 49395), (32, 49404), (33, 49422),

Gene: Barsten\_64 Start: 50125, Stop: 50409, Start Num: 16

Candidate Starts for Barsten\_64:

(1, 49768), (6, 49918), (Start: 16 @50125 has 35 MA's), (Start: 17 @50170 has 2 MA's), (22, 50224), (23, 50239),

Gene: Brandonk123\_67 Start: 49918, Stop: 50202, Start Num: 16

Candidate Starts for Brandonk123\_67:

(7, 49735), (12, 49816), (13, 49885), (Start: 16 @49918 has 35 MA's), (Start: 17 @49963 has 2 MA's),

Gene: ChadMasterC\_64 Start: 51638, Stop: 51922, Start Num: 16

Candidate Starts for ChadMasterC\_64:

(Start: 16 @51638 has 35 MA's), (Start: 17 @51683 has 2 MA's), (23, 51752),

Gene: CherryTomatoes\_14 Start: 4328, Stop: 4564, Start Num: 16

Candidate Starts for CherryTomatoes\_14:

(Start: 16 @4328 has 35 MA's), (Start: 17 @4373 has 2 MA's), (19, 4406), (24, 4463), (25, 4493),

Gene: Delrey21\_84 Start: 58911, Stop: 59192, Start Num: 16

Candidate Starts for Delrey21\_84:

(Start: 16 @58911 has 35 MA's), (Start: 17 @58956 has 2 MA's), (18, 58962), (20, 58995), (21, 59001), (23, 59025), (27, 59097),

Gene: DoctorFroggo\_84 Start: 58911, Stop: 59192, Start Num: 16

Candidate Starts for DoctorFroggo\_84:

(Start: 16 @58911 has 35 MA's), (Start: 17 @58956 has 2 MA's), (18, 58962), (20, 58995), (21, 59001), (23, 59025), (27, 59097),

Gene: Fitzgerald\_61 Start: 50359, Stop: 50643, Start Num: 16

Candidate Starts for Fitzgerald\_61:

(Start: 16 @50359 has 35 MA's), (Start: 17 @50404 has 2 MA's), (23, 50473), (29, 50563),

Gene: Gaea\_64 Start: 48940, Stop: 49224, Start Num: 16

Candidate Starts for Gaea\_64:

(Start: 16 @48940 has 35 MA's), (Start: 17 @48985 has 2 MA's), (21, 49030), (25, 49108), (29, 49147),

Gene: Galadriel\_63 Start: 50552, Stop: 50836, Start Num: 16

Candidate Starts for Galadriel\_63:

(3, 50273), (13, 50513), (Start: 16 @50552 has 35 MA's), (Start: 17 @50597 has 2 MA's), (23, 50666),

Gene: Geodirt\_63 Start: 50703, Stop: 50987, Start Num: 16

Candidate Starts for Geodirt\_63:

(2, 50418), (6, 50493), (Start: 16 @50703 has 35 MA's), (Start: 17 @50748 has 2 MA's), (23, 50817),

Gene: Gustavo\_64 Start: 49658, Stop: 49897, Start Num: 17

Candidate Starts for Gustavo\_64:

(1, 49250), (4, 49331), (6, 49400), (11, 49454), (14, 49595), (Start: 16 @49613 has 35 MA's), (Start: 17 @49658 has 2 MA's), (21, 49703), (25, 49781), (29, 49820),

Gene: Jabberwocky\_61 Start: 50593, Stop: 50877, Start Num: 16

Candidate Starts for Jabberwocky\_61:

(Start: 16 @50593 has 35 MA's), (Start: 17 @50638 has 2 MA's), (23, 50707), (29, 50797),

Gene: Kamashten\_62 Start: 49351, Stop: 49635, Start Num: 16

Candidate Starts for Kamashten\_62:

(7, 49168), (12, 49249), (13, 49318), (Start: 16 @49351 has 35 MA's), (Start: 17 @49396 has 2 MA's),

Gene: Keitabear\_63 Start: 51257, Stop: 51541, Start Num: 16

Candidate Starts for Keitabear\_63:

(2, 50972), (6, 51047), (Start: 16 @51257 has 35 MA's), (Start: 17 @51302 has 2 MA's), (23, 51371),

Gene: Kewpiedoll\_63 Start: 50615, Stop: 50899, Start Num: 16

Candidate Starts for Kewpiedoll\_63:

(2, 50330), (6, 50405), (Start: 16 @50615 has 35 MA's), (Start: 17 @50660 has 2 MA's), (23, 50729),

Gene: Lennon\_64 Start: 51406, Stop: 51690, Start Num: 16

Candidate Starts for Lennon\_64:

(2, 51121), (6, 51196), (Start: 16 @51406 has 35 MA's), (Start: 17 @51451 has 2 MA's), (23, 51520),

Gene: Love\_67 Start: 50477, Stop: 50761, Start Num: 16

Candidate Starts for Love\_67:

(Start: 16 @50477 has 35 MA's), (Start: 17 @50522 has 2 MA's), (23, 50591),

Gene: McKinley\_66 Start: 50477, Stop: 50761, Start Num: 16

Candidate Starts for McKinley\_66:

(1, 50120), (4, 50201), (6, 50270), (Start: 16 @50477 has 35 MA's), (Start: 17 @50522 has 2 MA's), (23, 50591),

Gene: MoontowerMania\_62 Start: 50638, Stop: 50922, Start Num: 16

Candidate Starts for MoontowerMania\_62:

(1, 50278), (4, 50359), (6, 50428), (Start: 16 @50638 has 35 MA's), (Start: 17 @50683 has 2 MA's), (23, 50752),

Gene: Natkenzie\_84 Start: 57551, Stop: 57781, Start Num: 18

Candidate Starts for Natkenzie\_84:

(Start: 16 @57500 has 35 MA's), (Start: 17 @57545 has 2 MA's), (18, 57551), (20, 57584), (21, 57590), (23, 57614), (26, 57677), (27, 57686),

Gene: Paries\_66 Start: 50738, Stop: 51022, Start Num: 16

Candidate Starts for Paries\_66:

(3, 50459), (13, 50699), (Start: 16 @50738 has 35 MA's), (Start: 17 @50783 has 2 MA's), (23, 50852),

Gene: Pupper\_12 Start: 4107, Stop: 4337, Start Num: 16

Candidate Starts for Pupper\_12:

(Start: 16 @4107 has 35 MA's), (Start: 17 @4152 has 2 MA's), (19, 4185), (20, 4191),

Gene: RiverRaider\_64 Start: 48088, Stop: 48372, Start Num: 16

Candidate Starts for RiverRaider\_64:

(Start: 16 @48088 has 35 MA's), (Start: 17 @48133 has 2 MA's), (23, 48202),

Gene: SCentae\_12 Start: 4106, Stop: 4336, Start Num: 16

Candidate Starts for SCentae\_12:

(Start: 16 @4106 has 35 MA's), (Start: 17 @4151 has 2 MA's), (19, 4184), (20, 4190),

Gene: Sampson\_86 Start: 57651, Stop: 57932, Start Num: 16

Candidate Starts for Sampson\_86:

(Start: 16 @57651 has 35 MA's), (Start: 17 @57696 has 2 MA's), (18, 57702), (20, 57735), (21, 57741), (23, 57765), (26, 57828), (27, 57837),

Gene: Sanjuju\_62 Start: 50536, Stop: 50775, Start Num: 17

Candidate Starts for Sanjuju\_62:

(Start: 16 @50491 has 35 MA's), (Start: 17 @50536 has 2 MA's), (23, 50605), (29, 50695),

Gene: Saronaya\_64 Start: 49595, Stop: 49897, Start Num: 14

Candidate Starts for Saronaya\_64:

(1, 49250), (4, 49331), (6, 49400), (11, 49454), (14, 49595), (Start: 16 @49613 has 35 MA's), (Start: 17 @49658 has 2 MA's), (21, 49703), (25, 49781), (29, 49820),

Gene: SchottB\_61 Start: 49523, Stop: 49807, Start Num: 16

Candidate Starts for SchottB\_61:

(1, 49160), (4, 49241), (6, 49310), (14, 49505), (Start: 16 @49523 has 35 MA's), (Start: 17 @49568 has 2 MA's), (21, 49613), (25, 49691), (29, 49730),

Gene: Scioto\_84 Start: 57552, Stop: 57782, Start Num: 18

Candidate Starts for Scioto\_84:

(Start: 16 @57501 has 35 MA's), (Start: 17 @57546 has 2 MA's), (18, 57552), (20, 57585), (21, 57591), (23, 57615), (26, 57678), (27, 57687),

Gene: Sedona\_63 Start: 51205, Stop: 51489, Start Num: 16

Candidate Starts for Sedona\_63:

(Start: 16 @51205 has 35 MA's), (Start: 17 @51250 has 2 MA's), (23, 51319),

Gene: Shivanishola\_61 Start: 48244, Stop: 48528, Start Num: 16

Candidate Starts for Shivanishola\_61:

(1, 47887), (4, 47968), (6, 48037), (Start: 16 @48244 has 35 MA's), (Start: 17 @48289 has 2 MA's), (23, 48358),

Gene: Sitar\_64 Start: 51115, Stop: 51399, Start Num: 16

Candidate Starts for Sitar\_64:

(2, 50830), (6, 50905), (Start: 16 @51115 has 35 MA's), (Start: 17 @51160 has 2 MA's), (23, 51229),

Gene: Stultus\_60 Start: 49377, Stop: 49661, Start Num: 16

Candidate Starts for Stultus\_60:

(2, 49092), (6, 49167), (Start: 16 @49377 has 35 MA's), (Start: 17 @49422 has 2 MA's), (23, 49491),

Gene: Tardus\_86 Start: 57993, Stop: 58274, Start Num: 16

Candidate Starts for Tardus\_86:

(5, 57741), (8, 57810), (9, 57816), (10, 57819), (15, 57978), (Start: 16 @57993 has 35 MA's), (Start: 17 @58038 has 2 MA's), (18, 58044), (20, 58077), (21, 58083), (23, 58107), (26, 58170), (27, 58179), (31, 58233),

Gene: Thing3\_62 Start: 49351, Stop: 49635, Start Num: 16

Candidate Starts for Thing3\_62:

(7, 49168), (12, 49249), (13, 49318), (Start: 16 @49351 has 35 MA's), (Start: 17 @49396 has 2 MA's),

Gene: Verity\_83 Start: 58773, Stop: 59054, Start Num: 16

Candidate Starts for Verity\_83:

(Start: 16 @58773 has 35 MA's), (Start: 17 @58818 has 2 MA's), (18, 58824), (20, 58857), (21, 58863), (23, 58887), (27, 58959),

Gene: Zipp\_84 Start: 58654, Stop: 58935, Start Num: 16

Candidate Starts for Zipp\_84:

(Start: 16 @58654 has 35 MA's), (Start: 17 @58699 has 2 MA's), (18, 58705), (20, 58738), (21, 58744), (23, 58768), (27, 58840),

Gene: Zitch\_86 Start: 56966, Stop: 57247, Start Num: 16

Candidate Starts for Zitch\_86:

(Start: 16 @56966 has 35 MA's), (Start: 17 @57011 has 2 MA's), (18, 57017), (20, 57050), (21, 57056), (23, 57080),