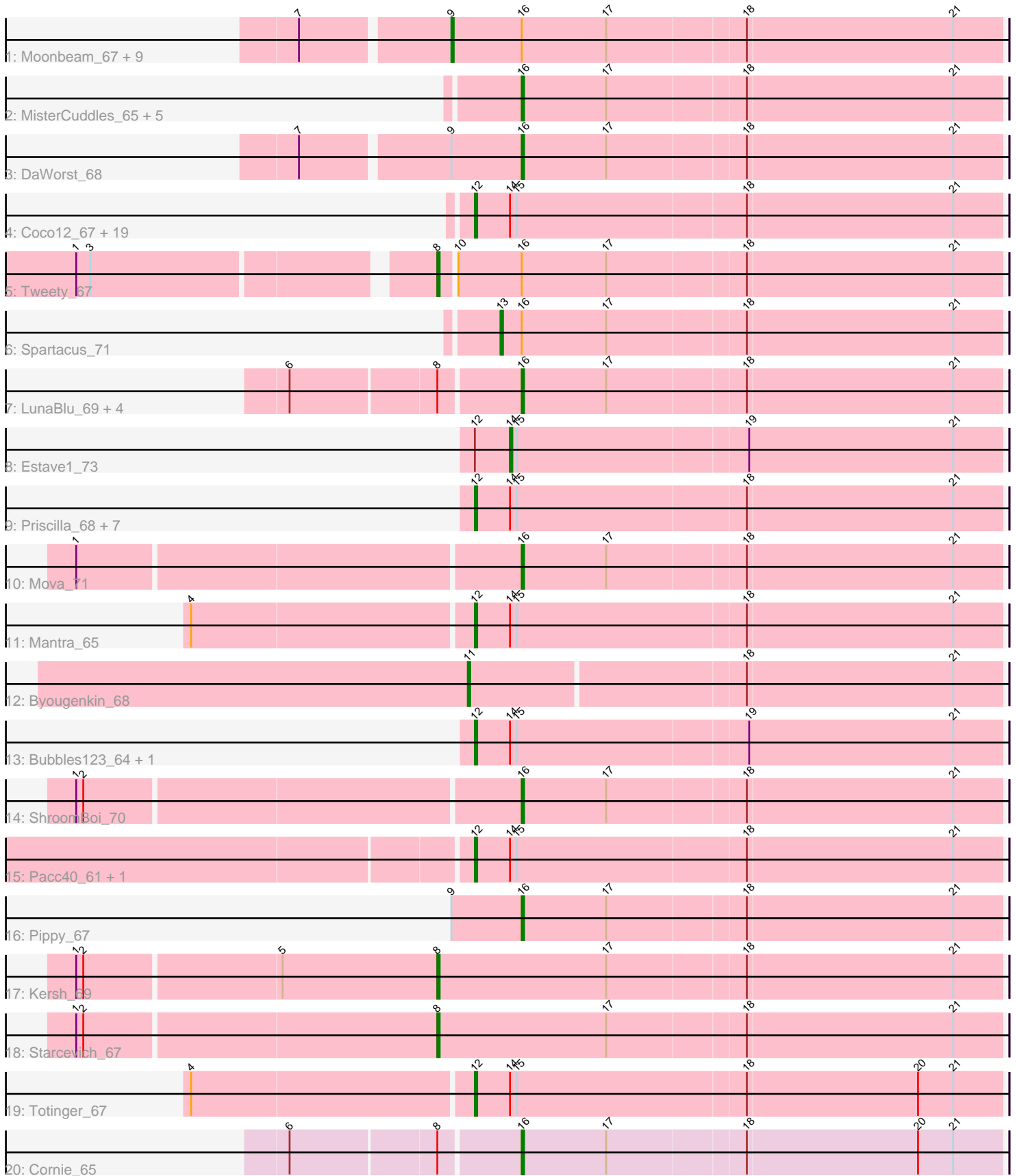


Pham 192559



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 192559 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192559 has 66 members, 0 are drafts.

Phages represented in each track:

- Track 1 : Moonbeam\_67, ByChance\_61, Crumble\_63, Fancypants\_71, Emma\_70, ShowerHandel\_71, Zizzle\_72, BobaPhett\_72, Burwell21\_66, Whouxphf\_65
- Track 2 : MisterCuddles\_65, Ruby\_63, Alexphander\_71, Girr\_65, LilMoolah\_66, Nivrat\_64
- Track 3 : DaWorst\_68
- Track 4 : Coco12\_67, RockyHorror\_68, Saal\_69, Brocalys\_62, Doug\_69, Cerasum\_64, BigPhil\_64, Kingsley\_65, James\_71, LastJedi\_61, Mattes\_71, Gorge\_71, Clifton\_62, DosHalletts\_69, Lizziana\_73, Velveteen\_63, OlympiaSaint\_69, GUmbie\_65, Sarma624\_66, Rita\_74
- Track 5 : Tweety\_67
- Track 6 : Spartacus\_71
- Track 7 : LunaBlu\_69, Zerg\_67, Galactic\_66, Eish\_70, XFactor\_65
- Track 8 : Estave1\_73
- Track 9 : Priscilla\_68, Koella\_62, Cabrinians\_69, SwagPiggett\_73, MinionDave\_67, Spikelee\_75, CaptainTrips\_66, Aubs\_68
- Track 10 : Mova\_71
- Track 11 : Mantra\_65
- Track 12 : Byougenkin\_68
- Track 13 : Bubbles123\_64, Jacob\_67
- Track 14 : ShroomBoi\_70
- Track 15 : Pacc40\_61, GigiOuiOui\_63
- Track 16 : Pippy\_67
- Track 17 : Kersh\_69
- Track 18 : Starcevich\_67
- Track 19 : Totinger\_67
- Track 20 : Cornie\_65

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

The start number called the most often in the published annotations is 12, it was called in 34 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aubs\_68, BigPhil\_64, Brocalys\_62, Bubbles123\_64, Cabrinians\_69, CaptainTrips\_66, Cerasum\_64, Clifton\_62, Coco12\_67, DosHalletts\_69, Doug\_69, GUmbie\_65, GigiOuiOui\_63, Gorge\_71, James\_71, JarcoB\_67, Kingsley\_65, Koella\_62, LastJedi\_61, Lizziana\_73, Mantra\_65, Mattes\_71, MinionDave\_67, OlympiaSaint\_69, Pacc40\_61, Priscilla\_68, Rita\_74, RockyHorror\_68, Saal\_69, Sarma624\_66, Spikelee\_75, SwagPiggett\_73, Totinger\_67, Velveteen\_63,

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

- Estave1\_73,

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

- Alexphander\_71, BobaPhett\_72, Burwell21\_66, ByChance\_61, Byougenkin\_68, Cornie\_65, Crumble\_63, DaWorst\_68, Eish\_70, Emma\_70, Fancypants\_71, Galactic\_66, Girr\_65, Kersh\_69, LilMoolah\_66, LunaBlu\_69, MisterCuddles\_65, Moonbeam\_67, Mova\_71, Nivrat\_64, Pippy\_67, Ruby\_63, ShowerHandel\_71, ShroomBoi\_70, Spartacus\_71, Starcevich\_67, Tweety\_67, Whouxphf\_65, XFactor\_65, Zerg\_67, Zizzle\_72,

### Summary by start number:

Start 8:

- Found in 9 of 66 ( 13.6% ) of genes in pham
- Manual Annotations of this start: 3 of 66
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Kersh\_69 (F1), Starcevich\_67 (F1), Tweety\_67 (F1),

Start 9:

- Found in 12 of 66 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 10 of 66
- Called 83.3% of time when present
- Phage (with cluster) where this start called: BobaPhett\_72 (F1), Burwell21\_66 (F1), ByChance\_61 (F1), Crumble\_63 (F1), Emma\_70 (F1), Fancypants\_71 (F1), Moonbeam\_67 (F1), ShowerHandel\_71 (F1), Whouxphf\_65 (F1), Zizzle\_72 (F1),

Start 11:

- Found in 1 of 66 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Byougenkin\_68 (F1),

Start 12:

- Found in 35 of 66 ( 53.0% ) of genes in pham
- Manual Annotations of this start: 34 of 66
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Aubs\_68 (F1), BigPhil\_64 (F1), Brocalys\_62 (F1), Bubbles123\_64 (F1), Cabrinians\_69 (F1), CaptainTrips\_66 (F1), Cerasum\_64 (F1), Clifton\_62 (F1), Coco12\_67 (F1), DosHalletts\_69 (F1), Doug\_69 (F1), GUmbie\_65 (F1), GigiOuiOui\_63 (F1), Gorge\_71 (F1), James\_71 (F1), JarcoB\_67 (F1), Kingsley\_65 (F1), Koella\_62 (F1), LastJedi\_61 (F1), Lizziana\_73 (F1), Mantra\_65 (F1), Mattes\_71 (F1), MinionDave\_67 (F1), OlympiaSaint\_69 (F1), Pacc40\_61 (F1), Priscilla\_68 (F1), Rita\_74 (F1), RockyHorror\_68 (F1), Saal\_69 (F1), Sarma624\_66 (F1), Spikelee\_75 (F1), SwagPiggett\_73 (F1), Totinger\_67 (F1),

Velveteen\_63 (F1),

Start 13:

- Found in 1 of 66 ( 1.5% ) of genes in pham
- Manual Annotations of this start: 1 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Spartacus\_71 (F1),

Start 14:

- Found in 35 of 66 ( 53.0% ) of genes in pham
- Manual Annotations of this start: 1 of 66
- Called 2.9% of time when present
- Phage (with cluster) where this start called: Estave1\_73 (F1),

Start 16:

- Found in 28 of 66 ( 42.4% ) of genes in pham
- Manual Annotations of this start: 16 of 66
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Alexphander\_71 (F1), Cornie\_65 (F5), DaWorst\_68 (F1), Eish\_70 (F1), Galactic\_66 (F1), Girr\_65 (F1), LilMoolah\_66 (F1), LunaBlu\_69 (F1), MisterCuddles\_65 (F1), Mova\_71 (F1), Nivrat\_64 (F1), Pippy\_67 (F1), Ruby\_63 (F1), ShroomBoi\_70 (F1), XFactor\_65 (F1), Zerg\_67 (F1),

### **Summary by clusters:**

There are 2 clusters represented in this pham: F1, F5,

Info for manual annotations of cluster F1:

- Start number 8 was manually annotated 3 times for cluster F1.
- Start number 9 was manually annotated 10 times for cluster F1.
- Start number 11 was manually annotated 1 time for cluster F1.
- Start number 12 was manually annotated 34 times for cluster F1.
- Start number 13 was manually annotated 1 time for cluster F1.
- Start number 14 was manually annotated 1 time for cluster F1.
- Start number 16 was manually annotated 15 times for cluster F1.

Info for manual annotations of cluster F5:

- Start number 16 was manually annotated 1 time for cluster F5.

### **Gene Information:**

Gene: Alexphander\_71 Start: 45177, Stop: 45377, Start Num: 16

Candidate Starts for Alexphander\_71:

(Start: 16 @45177 has 16 MA's), (17, 45213), (18, 45270), (21, 45357),

Gene: Aubs\_68 Start: 45292, Stop: 45513, Start Num: 12

Candidate Starts for Aubs\_68:

(Start: 12 @45292 has 34 MA's), (Start: 14 @45307 has 1 MA's), (15, 45310), (18, 45406), (21, 45493),

Gene: BigPhil\_64 Start: 42023, Stop: 42244, Start Num: 12

Candidate Starts for BigPhil\_64:

(Start: 12 @42023 has 34 MA's), (Start: 14 @42038 has 1 MA's), (15, 42041), (18, 42137), (21, 42224),

Gene: BobaPhett\_72 Start: 47714, Stop: 47944, Start Num: 9

Candidate Starts for BobaPhett\_72:

(7, 47654), (Start: 9 @47714 has 10 MA's), (Start: 16 @47744 has 16 MA's), (17, 47780), (18, 47837), (21, 47924),

Gene: Brocalys\_62 Start: 43203, Stop: 43424, Start Num: 12

Candidate Starts for Brocalys\_62:

(Start: 12 @43203 has 34 MA's), (Start: 14 @43218 has 1 MA's), (15, 43221), (18, 43317), (21, 43404),

Gene: Bubbles123\_64 Start: 44481, Stop: 44702, Start Num: 12

Candidate Starts for Bubbles123\_64:

(Start: 12 @44481 has 34 MA's), (Start: 14 @44496 has 1 MA's), (15, 44499), (19, 44595), (21, 44682),

Gene: Burwell21\_66 Start: 45036, Stop: 45266, Start Num: 9

Candidate Starts for Burwell21\_66:

(7, 44976), (Start: 9 @45036 has 10 MA's), (Start: 16 @45066 has 16 MA's), (17, 45102), (18, 45159), (21, 45246),

Gene: ByChance\_61 Start: 41056, Stop: 41289, Start Num: 9

Candidate Starts for ByChance\_61:

(7, 40996), (Start: 9 @41056 has 10 MA's), (Start: 16 @41086 has 16 MA's), (17, 41122), (18, 41179), (21, 41266),

Gene: Byougenkin\_68 Start: 43105, Stop: 43326, Start Num: 11

Candidate Starts for Byougenkin\_68:

(Start: 11 @43105 has 1 MA's), (18, 43219), (21, 43306),

Gene: Cabrinians\_69 Start: 45124, Stop: 45345, Start Num: 12

Candidate Starts for Cabrinians\_69:

(Start: 12 @45124 has 34 MA's), (Start: 14 @45139 has 1 MA's), (15, 45142), (18, 45238), (21, 45325),

Gene: CaptainTrips\_66 Start: 44859, Stop: 45080, Start Num: 12

Candidate Starts for CaptainTrips\_66:

(Start: 12 @44859 has 34 MA's), (Start: 14 @44874 has 1 MA's), (15, 44877), (18, 44973), (21, 45060),

Gene: Cerasum\_64 Start: 42041, Stop: 42262, Start Num: 12

Candidate Starts for Cerasum\_64:

(Start: 12 @42041 has 34 MA's), (Start: 14 @42056 has 1 MA's), (15, 42059), (18, 42155), (21, 42242),

Gene: Clifton\_62 Start: 43554, Stop: 43775, Start Num: 12

Candidate Starts for Clifton\_62:

(Start: 12 @43554 has 34 MA's), (Start: 14 @43569 has 1 MA's), (15, 43572), (18, 43668), (21, 43755),

Gene: Coco12\_67 Start: 46098, Stop: 46319, Start Num: 12  
Candidate Starts for Coco12\_67:  
(Start: 12 @46098 has 34 MA's), (Start: 14 @46113 has 1 MA's), (15, 46116), (18, 46212), (21, 46299),

Gene: Cornie\_65 Start: 43837, Stop: 44037, Start Num: 16  
Candidate Starts for Cornie\_65:  
(6, 43744), (Start: 8 @43804 has 3 MA's), (Start: 16 @43837 has 16 MA's), (17, 43873), (18, 43930), (20, 44002), (21, 44017),

Gene: Crumble\_63 Start: 41011, Stop: 41244, Start Num: 9  
Candidate Starts for Crumble\_63:  
(7, 40951), (Start: 9 @41011 has 10 MA's), (Start: 16 @41041 has 16 MA's), (17, 41077), (18, 41134), (21, 41221),

Gene: DaWorst\_68 Start: 44644, Stop: 44844, Start Num: 16  
Candidate Starts for DaWorst\_68:  
(7, 44554), (Start: 9 @44614 has 10 MA's), (Start: 16 @44644 has 16 MA's), (17, 44680), (18, 44737), (21, 44824),

Gene: DosHalletts\_69 Start: 46178, Stop: 46399, Start Num: 12  
Candidate Starts for DosHalletts\_69:  
(Start: 12 @46178 has 34 MA's), (Start: 14 @46193 has 1 MA's), (15, 46196), (18, 46292), (21, 46379),

Gene: Doug\_69 Start: 46503, Stop: 46724, Start Num: 12  
Candidate Starts for Doug\_69:  
(Start: 12 @46503 has 34 MA's), (Start: 14 @46518 has 1 MA's), (15, 46521), (18, 46617), (21, 46704),

Gene: Eish\_70 Start: 45432, Stop: 45632, Start Num: 16  
Candidate Starts for Eish\_70:  
(6, 45339), (Start: 8 @45399 has 3 MA's), (Start: 16 @45432 has 16 MA's), (17, 45468), (18, 45525), (21, 45612),

Gene: Emma\_70 Start: 44637, Stop: 44867, Start Num: 9  
Candidate Starts for Emma\_70:  
(7, 44577), (Start: 9 @44637 has 10 MA's), (Start: 16 @44667 has 16 MA's), (17, 44703), (18, 44760), (21, 44847),

Gene: Estave1\_73 Start: 47498, Stop: 47704, Start Num: 14  
Candidate Starts for Estave1\_73:  
(Start: 12 @47483 has 34 MA's), (Start: 14 @47498 has 1 MA's), (15, 47501), (19, 47597), (21, 47684),

Gene: Fancypants\_71 Start: 45649, Stop: 45879, Start Num: 9  
Candidate Starts for Fancypants\_71:  
(7, 45589), (Start: 9 @45649 has 10 MA's), (Start: 16 @45679 has 16 MA's), (17, 45715), (18, 45772), (21, 45859),

Gene: GUmbie\_65 Start: 44551, Stop: 44772, Start Num: 12  
Candidate Starts for GUmbie\_65:

(Start: 12 @44551 has 34 MA's), (Start: 14 @44566 has 1 MA's), (15, 44569), (18, 44665), (21, 44752),

Gene: Galactic\_66 Start: 44728, Stop: 44928, Start Num: 16

Candidate Starts for Galactic\_66:

(6, 44635), (Start: 8 @44695 has 3 MA's), (Start: 16 @44728 has 16 MA's), (17, 44764), (18, 44821), (21, 44908),

Gene: GigiOuiOui\_63 Start: 43697, Stop: 43918, Start Num: 12

Candidate Starts for GigiOuiOui\_63:

(Start: 12 @43697 has 34 MA's), (Start: 14 @43712 has 1 MA's), (15, 43715), (18, 43811), (21, 43898),

Gene: Girr\_65 Start: 44587, Stop: 44787, Start Num: 16

Candidate Starts for Girr\_65:

(Start: 16 @44587 has 16 MA's), (17, 44623), (18, 44680), (21, 44767),

Gene: Gorge\_71 Start: 46493, Stop: 46714, Start Num: 12

Candidate Starts for Gorge\_71:

(Start: 12 @46493 has 34 MA's), (Start: 14 @46508 has 1 MA's), (15, 46511), (18, 46607), (21, 46694),

Gene: James\_71 Start: 46618, Stop: 46839, Start Num: 12

Candidate Starts for James\_71:

(Start: 12 @46618 has 34 MA's), (Start: 14 @46633 has 1 MA's), (15, 46636), (18, 46732), (21, 46819),

Gene: Jarcob\_67 Start: 45048, Stop: 45269, Start Num: 12

Candidate Starts for Jarcob\_67:

(Start: 12 @45048 has 34 MA's), (Start: 14 @45063 has 1 MA's), (15, 45066), (19, 45162), (21, 45249),

Gene: Kersh\_69 Start: 47054, Stop: 47290, Start Num: 8

Candidate Starts for Kersh\_69:

(1, 46904), (2, 46907), (5, 46988), (Start: 8 @47054 has 3 MA's), (17, 47126), (18, 47183), (21, 47270),

Gene: Kingsley\_65 Start: 44831, Stop: 45052, Start Num: 12

Candidate Starts for Kingsley\_65:

(Start: 12 @44831 has 34 MA's), (Start: 14 @44846 has 1 MA's), (15, 44849), (18, 44945), (21, 45032),

Gene: Koella\_62 Start: 41022, Stop: 41243, Start Num: 12

Candidate Starts for Koella\_62:

(Start: 12 @41022 has 34 MA's), (Start: 14 @41037 has 1 MA's), (15, 41040), (18, 41136), (21, 41223),

Gene: LastJedi\_61 Start: 43597, Stop: 43818, Start Num: 12

Candidate Starts for LastJedi\_61:

(Start: 12 @43597 has 34 MA's), (Start: 14 @43612 has 1 MA's), (15, 43615), (18, 43711), (21, 43798),

Gene: LilMoolah\_66 Start: 45244, Stop: 45444, Start Num: 16

Candidate Starts for LilMoolah\_66:

(Start: 16 @45244 has 16 MA's), (17, 45280), (18, 45337), (21, 45424),

Gene: Lizziana\_73 Start: 46099, Stop: 46320, Start Num: 12

Candidate Starts for Lizziana\_73:

(Start: 12 @46099 has 34 MA's), (Start: 14 @46114 has 1 MA's), (15, 46117), (18, 46213), (21, 46300),

Gene: LunaBlu\_69 Start: 45387, Stop: 45587, Start Num: 16

Candidate Starts for LunaBlu\_69:

(6, 45294), (Start: 8 @45354 has 3 MA's), (Start: 16 @45387 has 16 MA's), (17, 45423), (18, 45480), (21, 45567),

Gene: Mantra\_65 Start: 44857, Stop: 45078, Start Num: 12

Candidate Starts for Mantra\_65:

(4, 44740), (Start: 12 @44857 has 34 MA's), (Start: 14 @44872 has 1 MA's), (15, 44875), (18, 44971), (21, 45058),

Gene: Mattes\_71 Start: 46618, Stop: 46839, Start Num: 12

Candidate Starts for Mattes\_71:

(Start: 12 @46618 has 34 MA's), (Start: 14 @46633 has 1 MA's), (15, 46636), (18, 46732), (21, 46819),

Gene: MinionDave\_67 Start: 45395, Stop: 45616, Start Num: 12

Candidate Starts for MinionDave\_67:

(Start: 12 @45395 has 34 MA's), (Start: 14 @45410 has 1 MA's), (15, 45413), (18, 45509), (21, 45596),

Gene: MisterCuddles\_65 Start: 44587, Stop: 44787, Start Num: 16

Candidate Starts for MisterCuddles\_65:

(Start: 16 @44587 has 16 MA's), (17, 44623), (18, 44680), (21, 44767),

Gene: Moonbeam\_67 Start: 44566, Stop: 44796, Start Num: 9

Candidate Starts for Moonbeam\_67:

(7, 44506), (Start: 9 @44566 has 10 MA's), (Start: 16 @44596 has 16 MA's), (17, 44632), (18, 44689), (21, 44776),

Gene: Mova\_71 Start: 44506, Stop: 44706, Start Num: 16

Candidate Starts for Mova\_71:

(1, 44323), (Start: 16 @44506 has 16 MA's), (17, 44542), (18, 44599), (21, 44686),

Gene: Nivrat\_64 Start: 45117, Stop: 45317, Start Num: 16

Candidate Starts for Nivrat\_64:

(Start: 16 @45117 has 16 MA's), (17, 45153), (18, 45210), (21, 45297),

Gene: OlympiaSaint\_69 Start: 45560, Stop: 45781, Start Num: 12

Candidate Starts for OlympiaSaint\_69:

(Start: 12 @45560 has 34 MA's), (Start: 14 @45575 has 1 MA's), (15, 45578), (18, 45674), (21, 45761),

Gene: Pacc40\_61 Start: 45123, Stop: 45344, Start Num: 12

Candidate Starts for Pacc40\_61:



(Start: 12 @45123 has 34 MA's), (Start: 14 @45138 has 1 MA's), (15, 45141), (18, 45237), (21, 45324),

Gene: Pippy\_67 Start: 44354, Stop: 44554, Start Num: 16

Candidate Starts for Pippy\_67:

(Start: 9 @44324 has 10 MA's), (Start: 16 @44354 has 16 MA's), (17, 44390), (18, 44447), (21, 44534),

Gene: Priscilla\_68 Start: 45134, Stop: 45355, Start Num: 12

Candidate Starts for Priscilla\_68:

(Start: 12 @45134 has 34 MA's), (Start: 14 @45149 has 1 MA's), (15, 45152), (18, 45248), (21, 45335),

Gene: Rita\_74 Start: 45986, Stop: 46207, Start Num: 12

Candidate Starts for Rita\_74:

(Start: 12 @45986 has 34 MA's), (Start: 14 @46001 has 1 MA's), (15, 46004), (18, 46100), (21, 46187),

Gene: RockyHorror\_68 Start: 44439, Stop: 44660, Start Num: 12

Candidate Starts for RockyHorror\_68:

(Start: 12 @44439 has 34 MA's), (Start: 14 @44454 has 1 MA's), (15, 44457), (18, 44553), (21, 44640),

Gene: Ruby\_63 Start: 44588, Stop: 44788, Start Num: 16

Candidate Starts for Ruby\_63:

(Start: 16 @44588 has 16 MA's), (17, 44624), (18, 44681), (21, 44768),

Gene: Saal\_69 Start: 46312, Stop: 46533, Start Num: 12

Candidate Starts for Saal\_69:

(Start: 12 @46312 has 34 MA's), (Start: 14 @46327 has 1 MA's), (15, 46330), (18, 46426), (21, 46513),

Gene: Sarma624\_66 Start: 42023, Stop: 42244, Start Num: 12

Candidate Starts for Sarma624\_66:

(Start: 12 @42023 has 34 MA's), (Start: 14 @42038 has 1 MA's), (15, 42041), (18, 42137), (21, 42224),

Gene: ShowerHandel\_71 Start: 44996, Stop: 45229, Start Num: 9

Candidate Starts for ShowerHandel\_71:

(7, 44936), (Start: 9 @44996 has 10 MA's), (Start: 16 @45026 has 16 MA's), (17, 45062), (18, 45119), (21, 45206),

Gene: ShroomBoi\_70 Start: 45075, Stop: 45275, Start Num: 16

Candidate Starts for ShroomBoi\_70:

(1, 44892), (2, 44895), (Start: 16 @45075 has 16 MA's), (17, 45111), (18, 45168), (21, 45255),

Gene: Spartacus\_71 Start: 46163, Stop: 46372, Start Num: 13

Candidate Starts for Spartacus\_71:

(Start: 13 @46163 has 1 MA's), (Start: 16 @46172 has 16 MA's), (17, 46208), (18, 46265), (21, 46352),

Gene: Spikelee\_75 Start: 46711, Stop: 46932, Start Num: 12

Candidate Starts for Spikelee\_75:

(Start: 12 @46711 has 34 MA's), (Start: 14 @46726 has 1 MA's), (15, 46729), (18, 46825), (21, 46912),

Gene: Starcevich\_67 Start: 45325, Stop: 45561, Start Num: 8

Candidate Starts for Starcevich\_67:

(1, 45175), (2, 45178), (Start: 8 @45325 has 3 MA's), (17, 45397), (18, 45454), (21, 45541),

Gene: SwagPigglett\_73 Start: 47353, Stop: 47574, Start Num: 12

Candidate Starts for SwagPigglett\_73:

(Start: 12 @47353 has 34 MA's), (Start: 14 @47368 has 1 MA's), (15, 47371), (18, 47467), (21, 47554),

Gene: Totinger\_67 Start: 44193, Stop: 44414, Start Num: 12

Candidate Starts for Totinger\_67:

(4, 44076), (Start: 12 @44193 has 34 MA's), (Start: 14 @44208 has 1 MA's), (15, 44211), (18, 44307), (20, 44379), (21, 44394),

Gene: Tweety\_67 Start: 44108, Stop: 44341, Start Num: 8

Candidate Starts for Tweety\_67:

(1, 43967), (3, 43973), (Start: 8 @44108 has 3 MA's), (10, 44114), (Start: 16 @44141 has 16 MA's), (17, 44177), (18, 44234), (21, 44321),

Gene: Velveteen\_63 Start: 42023, Stop: 42244, Start Num: 12

Candidate Starts for Velveteen\_63:

(Start: 12 @42023 has 34 MA's), (Start: 14 @42038 has 1 MA's), (15, 42041), (18, 42137), (21, 42224),

Gene: Whouxphf\_65 Start: 44903, Stop: 45133, Start Num: 9

Candidate Starts for Whouxphf\_65:

(7, 44843), (Start: 9 @44903 has 10 MA's), (Start: 16 @44933 has 16 MA's), (17, 44969), (18, 45026), (21, 45113),

Gene: XFactor\_65 Start: 43727, Stop: 43927, Start Num: 16

Candidate Starts for XFactor\_65:

(6, 43634), (Start: 8 @43694 has 3 MA's), (Start: 16 @43727 has 16 MA's), (17, 43763), (18, 43820), (21, 43907),

Gene: Zerg\_67 Start: 44571, Stop: 44771, Start Num: 16

Candidate Starts for Zerg\_67:

(6, 44478), (Start: 8 @44538 has 3 MA's), (Start: 16 @44571 has 16 MA's), (17, 44607), (18, 44664), (21, 44751),

Gene: Zizzle\_72 Start: 46629, Stop: 46862, Start Num: 9

Candidate Starts for Zizzle\_72:

(7, 46569), (Start: 9 @46629 has 10 MA's), (Start: 16 @46659 has 16 MA's), (17, 46695), (18, 46752), (21, 46839),