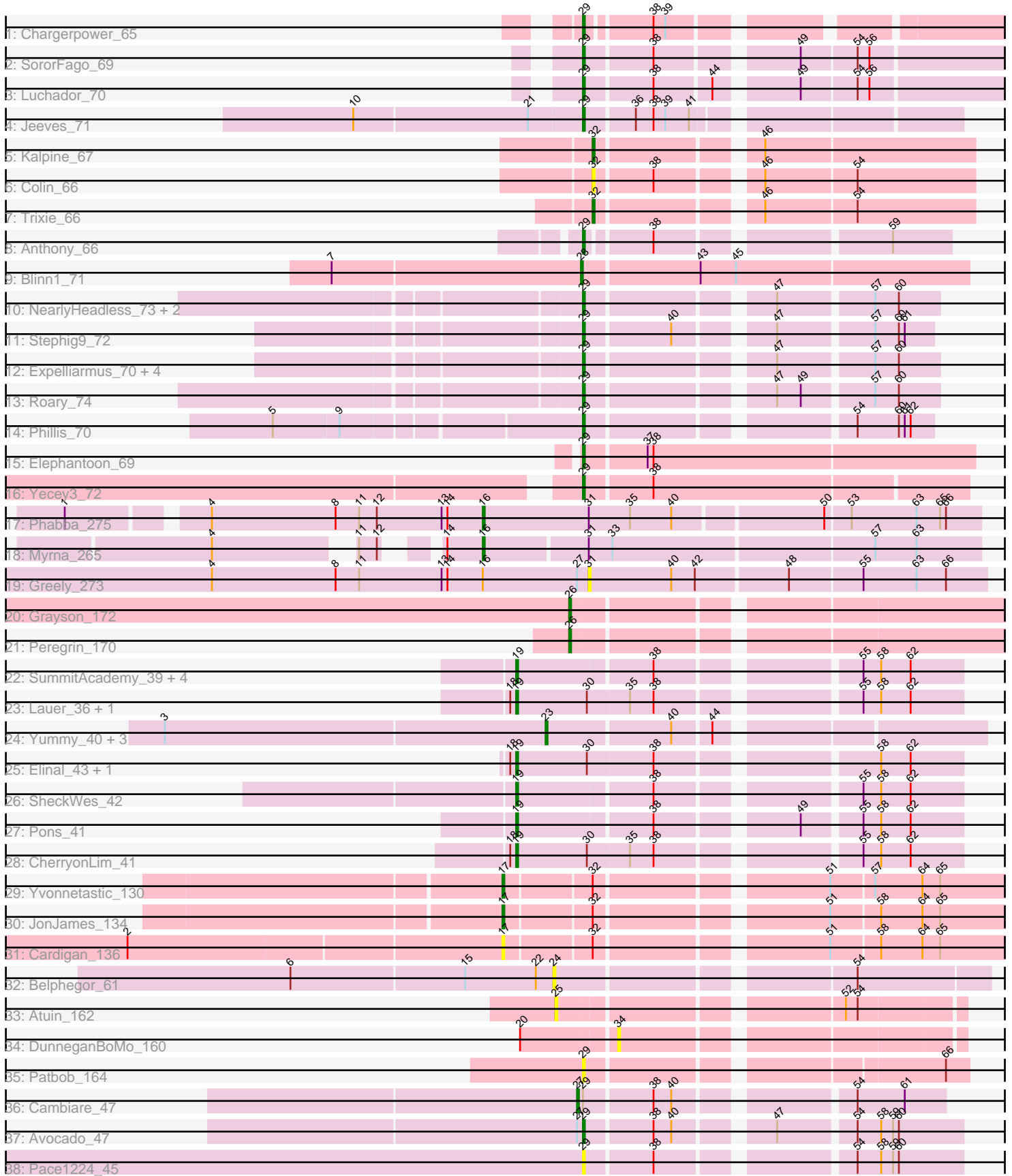


Pham 157920



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 157920 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157920 has 53 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_65
- Track 2 : SororFago\_69
- Track 3 : Luchador\_70
- Track 4 : Jeeves\_71
- Track 5 : Kalpine\_67
- Track 6 : Colin\_66
- Track 7 : Trixie\_66
- Track 8 : Anthony\_66
- Track 9 : Blinn1\_71
- Track 10 : NearlyHeadless\_73, Saintus\_68, Dixon\_72
- Track 11 : Stephig9\_72
- Track 12 : Expelliarmus\_70, Groundhog\_72, Astro\_73, Danforth\_73, Smeadley\_73
- Track 13 : Roary\_74
- Track 14 : Phillis\_70
- Track 15 : Elephantoon\_69
- Track 16 : Yecey3\_72
- Track 17 : Phabba\_275
- Track 18 : Myrna\_265
- Track 19 : Greely\_273
- Track 20 : Grayson\_172
- Track 21 : Peregrin\_170
- Track 22 : SummitAcademy\_39, PotPie\_41, BigChungus\_39, Vine\_42, Feastonyet\_39
- Track 23 : Lauer\_36, Mayweather\_43
- Track 24 : Yummy\_40, Buttrmilkdreams\_40, MScarn\_41, Horseradish\_40
- Track 25 : Elinal\_43, KayGee\_40
- Track 26 : SheckWes\_42
- Track 27 : Pons\_41
- Track 28 : CherryonLim\_41
- Track 29 : Yvonnetastic\_130
- Track 30 : JonJames\_134
- Track 31 : Cardigan\_136
- Track 32 : Belphegor\_61
- Track 33 : Atuin\_162
- Track 34 : DunneganBoMo\_160
- Track 35 : Patbob\_164
- Track 36 : Cambiare\_47

- Track 37 : Avocado\_47
- Track 38 : Pace1224\_45

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

The start number called the most often in the published annotations is 29, it was called in 19 of the 43 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anthony\_66, Astro\_73, Avocado\_47, Chargerpower\_65, Danforth\_73, Dixon\_72, Elephantoon\_69, Expelliarmus\_70, Groundhog\_72, Jeeves\_71, Luchador\_70, NearlyHeadless\_73, Pace1224\_45, Patbob\_164, Phillis\_70, Roary\_74, Saintus\_68, Smeadley\_73, SororFago\_69, Stephig9\_72, Yecy3\_72,

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

- Cambiare\_47,

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

- Atuin\_162, Belphegor\_61, BigChungus\_39, Blinn1\_71, Buttrmlkdreams\_40, Cardigan\_136, CherryonLim\_41, Colin\_66, DunneganBoMo\_160, Elinal\_43, Feastonyeet\_39, Grayson\_172, Greely\_273, Horseradish\_40, JonJames\_134, Kalpine\_67, KayGee\_40, Lauer\_36, MScarn\_41, Mayweather\_43, Myrna\_265, Peregrin\_170, Phabba\_275, Pons\_41, PotPie\_41, SheckWes\_42, SummitAcademy\_39, Trixie\_66, Vine\_42, Yummy\_40, Yvonnetastic\_130,

### **Summary by start number:**

Start 16:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Myrna\_265 (C2), Phabba\_275 (C2),

Start 17:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cardigan\_136 (DD), JonJames\_134 (DD), Yvonnetastic\_130 (DD),

Start 19:

- Found in 12 of 53 ( 22.6% ) of genes in pham
- Manual Annotations of this start: 10 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigChungus\_39 (CT), CherryonLim\_41 (CT), Elinal\_43 (CT), Feastonyeet\_39 (CT), KayGee\_40 (CT), Lauer\_36 (CT), Mayweather\_43 (CT), Pons\_41 (CT), PotPie\_41 (CT), SheckWes\_42 (CT), SummitAcademy\_39 (CT), Vine\_42 (CT),

Start 23:

- Found in 4 of 53 ( 7.5% ) of genes in pham
- Manual Annotations of this start: 4 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buttrmlkdreams\_40 (CT), Horseradish\_40 (CT), MScarn\_41 (CT), Yummy\_40 (CT),

#### Start 24:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Belphegor\_61 (DE),

#### Start 25:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin\_162 (FC),

#### Start 26:

- Found in 2 of 53 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson\_172 (CB), Peregrin\_170 (CB),

#### Start 27:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Cambiare\_47 (G2),

#### Start 28:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 43
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Blinn1\_71 (A6),

#### Start 29:

- Found in 22 of 53 ( 41.5% ) of genes in pham
- Manual Annotations of this start: 19 of 43
- Called 95.5% of time when present
- Phage (with cluster) where this start called: Anthony\_66 (A20), Astro\_73 (A8), Avocado\_47 (G2), Chargerpower\_65 (A), Danforth\_73 (A8), Dixon\_72 (A8), Elephantoon\_69 (A9), Expelliarmus\_70 (A8), Groundhog\_72 (A8), Jeeves\_71 (A14), Luchador\_70 (A14), NearlyHeadless\_73 (A8), Pace1224\_45 (G2), Patbob\_164 (FC), Phillis\_70 (A8), Roary\_74 (A8), Saintus\_68 (A8), Smeadley\_73 (A8), SororFago\_69 (A14), Stephig9\_72 (A8), Yecey3\_72 (A9),

#### Start 31:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Greely\_273 (C2),

Start 32:

- Found in 6 of 53 ( 11.3% ) of genes in pham
- Manual Annotations of this start: 2 of 43
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Colin\_66 (A2), Kalpine\_67 (A2), Trixie\_66 (A2),

Start 34:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DunneganBoMo\_160 (FC),

**Summary by clusters:**

There are 14 clusters represented in this pham: A20, A14, G2, CB, DD, DE, FC, A, A6, C2, A9, A8, A2, CT,

Info for manual annotations of cluster A:

- Start number 29 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A14:

- Start number 29 was manually annotated 3 times for cluster A14.

Info for manual annotations of cluster A2:

- Start number 32 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 29 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A6:

- Start number 28 was manually annotated 1 time for cluster A6.

Info for manual annotations of cluster A8:

- Start number 29 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 29 was manually annotated 2 times for cluster A9.

Info for manual annotations of cluster C2:

- Start number 16 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CB:

- Start number 26 was manually annotated 2 times for cluster CB.

Info for manual annotations of cluster CT:

- Start number 19 was manually annotated 10 times for cluster CT.
- Start number 23 was manually annotated 4 times for cluster CT.

Info for manual annotations of cluster DD:

- Start number 17 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster G2:

- Start number 27 was manually annotated 1 time for cluster G2.
- Start number 29 was manually annotated 1 time for cluster G2.

**Gene Information:**

Gene: Anthony\_66 Start: 40829, Stop: 40665, Start Num: 29

Candidate Starts for Anthony\_66:

(Start: 29 @40829 has 19 MA's), (38, 40799), (59, 40694),

Gene: Astro\_73 Start: 40939, Stop: 40778, Start Num: 29

Candidate Starts for Astro\_73:

(Start: 29 @40939 has 19 MA's), (47, 40855), (57, 40810), (60, 40798),

Gene: Atuin\_162 Start: 110180, Stop: 110365, Start Num: 25

Candidate Starts for Atuin\_162:

(25, 110180), (52, 110309), (54, 110315),

Gene: Avocado\_47 Start: 37189, Stop: 37362, Start Num: 29

Candidate Starts for Avocado\_47:

(Start: 27 @37186 has 1 MA's), (Start: 29 @37189 has 19 MA's), (38, 37222), (40, 37231), (47, 37273), (54, 37309), (58, 37321), (59, 37327), (60, 37330),

Gene: Belphegor\_61 Start: 49602, Stop: 49805, Start Num: 24

Candidate Starts for Belphegor\_61:

(6, 49470), (15, 49557), (22, 49593), (24, 49602), (54, 49740),

Gene: BigChungus\_39 Start: 28782, Stop: 28576, Start Num: 19

Candidate Starts for BigChungus\_39:

(Start: 19 @28782 has 10 MA's), (38, 28716), (55, 28626), (58, 28617), (62, 28602),

Gene: Blinn1\_71 Start: 39967, Stop: 39776, Start Num: 28

Candidate Starts for Blinn1\_71:

(7, 40087), (Start: 28 @39967 has 1 MA's), (43, 39910), (45, 39892),

Gene: Buttrmlkdreams\_40 Start: 27645, Stop: 27442, Start Num: 23

Candidate Starts for Buttrmlkdreams\_40:

(3, 27837), (Start: 23 @27645 has 4 MA's), (40, 27585), (44, 27567),

Gene: Cambiare\_47 Start: 37281, Stop: 37448, Start Num: 27

Candidate Starts for Cambiare\_47:

(Start: 27 @37281 has 1 MA's), (Start: 29 @37284 has 19 MA's), (38, 37317), (40, 37326), (54, 37404), (61, 37428),

Gene: Cardigan\_136 Start: 76837, Stop: 77085, Start Num: 17

Candidate Starts for Cardigan\_136:

(2, 76651), (Start: 17 @76837 has 2 MA's), (Start: 32 @76879 has 2 MA's), (51, 76984), (58, 77008), (64, 77029), (65, 77038),

Gene: Chargerpower\_65 Start: 39591, Stop: 39409, Start Num: 29

Candidate Starts for Chargerpower\_65:  
(Start: 29 @39591 has 19 MA's), (38, 39561), (39, 39555),

Gene: CherryonLim\_41 Start: 29932, Stop: 29723, Start Num: 19  
Candidate Starts for CherryonLim\_41:  
(18, 29935), (Start: 19 @29932 has 10 MA's), (30, 29896), (35, 29875), (38, 29863), (55, 29773), (58, 29764), (62, 29749),

Gene: Colin\_66 Start: 42014, Stop: 41838, Start Num: 32  
Candidate Starts for Colin\_66:  
(Start: 32 @42014 has 2 MA's), (38, 41987), (46, 41942), (54, 41897),

Gene: Danforth\_73 Start: 40987, Stop: 40826, Start Num: 29  
Candidate Starts for Danforth\_73:  
(Start: 29 @40987 has 19 MA's), (47, 40903), (57, 40858), (60, 40846),

Gene: Dixon\_72 Start: 40507, Stop: 40346, Start Num: 29  
Candidate Starts for Dixon\_72:  
(Start: 29 @40507 has 19 MA's), (47, 40423), (57, 40378), (60, 40366),

Gene: DunneganBoMo\_160 Start: 107120, Stop: 107278, Start Num: 34  
Candidate Starts for DunneganBoMo\_160:  
(20, 107075), (34, 107120),

Gene: Elephantoon\_69 Start: 40932, Stop: 40738, Start Num: 29  
Candidate Starts for Elephantoon\_69:  
(Start: 29 @40932 has 19 MA's), (37, 40902), (38, 40899),

Gene: Elinal\_43 Start: 29167, Stop: 28958, Start Num: 19  
Candidate Starts for Elinal\_43:  
(18, 29170), (Start: 19 @29167 has 10 MA's), (30, 29131), (38, 29098), (58, 28999), (62, 28984),

Gene: Expelliarmus\_70 Start: 40711, Stop: 40550, Start Num: 29  
Candidate Starts for Expelliarmus\_70:  
(Start: 29 @40711 has 19 MA's), (47, 40627), (57, 40582), (60, 40570),

Gene: Feastonyeet\_39 Start: 28782, Stop: 28576, Start Num: 19  
Candidate Starts for Feastonyeet\_39:  
(Start: 19 @28782 has 10 MA's), (38, 28716), (55, 28626), (58, 28617), (62, 28602),

Gene: Grayson\_172 Start: 92452, Stop: 92664, Start Num: 26  
Candidate Starts for Grayson\_172:  
(Start: 26 @92452 has 2 MA's),

Gene: Greely\_273 Start: 162469, Stop: 162666, Start Num: 31  
Candidate Starts for Greely\_273:  
(4, 162277), (8, 162340), (11, 162352), (13, 162394), (14, 162397), (Start: 16 @162415 has 2 MA's),  
(Start: 27 @162463 has 1 MA's), (31, 162469), (40, 162511), (42, 162523), (48, 162568), (55, 162604), (63, 162631), (66, 162646),

Gene: Groundhog\_72 Start: 40917, Stop: 40756, Start Num: 29  
Candidate Starts for Groundhog\_72:  
(Start: 29 @40917 has 19 MA's), (47, 40833), (57, 40788), (60, 40776),

Gene: Horseradish\_40 Start: 27173, Stop: 26970, Start Num: 23  
Candidate Starts for Horseradish\_40:  
(3, 27365), (Start: 23 @27173 has 4 MA's), (40, 27113), (44, 27095),

Gene: Jeeves\_71 Start: 41042, Stop: 40869, Start Num: 29  
Candidate Starts for Jeeves\_71:  
(10, 41156), (21, 41069), (Start: 29 @41042 has 19 MA's), (36, 41018), (38, 41009), (39, 41003), (41, 40991),

Gene: JonJames\_134 Start: 77470, Stop: 77718, Start Num: 17  
Candidate Starts for JonJames\_134:  
(Start: 17 @77470 has 2 MA's), (Start: 32 @77512 has 2 MA's), (51, 77617), (58, 77641), (64, 77662), (65, 77671),

Gene: Kalpine\_67 Start: 42195, Stop: 42019, Start Num: 32  
Candidate Starts for Kalpine\_67:  
(Start: 32 @42195 has 2 MA's), (46, 42123),

Gene: KayGee\_40 Start: 29167, Stop: 28958, Start Num: 19  
Candidate Starts for KayGee\_40:  
(18, 29170), (Start: 19 @29167 has 10 MA's), (30, 29131), (38, 29098), (58, 28999), (62, 28984),

Gene: Lauer\_36 Start: 29997, Stop: 29788, Start Num: 19  
Candidate Starts for Lauer\_36:  
(18, 30000), (Start: 19 @29997 has 10 MA's), (30, 29961), (35, 29940), (38, 29928), (55, 29838), (58, 29829), (62, 29814),

Gene: Luchador\_70 Start: 42522, Stop: 42328, Start Num: 29  
Candidate Starts for Luchador\_70:  
(Start: 29 @42522 has 19 MA's), (38, 42489), (44, 42462), (49, 42426), (54, 42399), (56, 42393),

Gene: MScarn\_41 Start: 27313, Stop: 27110, Start Num: 23  
Candidate Starts for MScarn\_41:  
(3, 27505), (Start: 23 @27313 has 4 MA's), (40, 27253), (44, 27235),

Gene: Mayweather\_43 Start: 29791, Stop: 29582, Start Num: 19  
Candidate Starts for Mayweather\_43:  
(18, 29794), (Start: 19 @29791 has 10 MA's), (30, 29755), (35, 29734), (38, 29722), (55, 29632), (58, 29623), (62, 29608),

Gene: Myrna\_265 Start: 162813, Stop: 163058, Start Num: 16  
Candidate Starts for Myrna\_265:  
(4, 162711), (11, 162771), (12, 162780), (14, 162795), (Start: 16 @162813 has 2 MA's), (31, 162864), (33, 162876), (57, 163005), (63, 163026),

Gene: NearlyHeadless\_73 Start: 40753, Stop: 40592, Start Num: 29  
Candidate Starts for NearlyHeadless\_73:  
(Start: 29 @40753 has 19 MA's), (47, 40669), (57, 40624), (60, 40612),

Gene: Pace1224\_45 Start: 36103, Stop: 36276, Start Num: 29  
Candidate Starts for Pace1224\_45:  
(Start: 29 @36103 has 19 MA's), (38, 36136), (54, 36223), (58, 36235), (59, 36241), (60, 36244),



Gene: Patbob\_164 Start: 111552, Stop: 111728, Start Num: 29

Candidate Starts for Patbob\_164:

(Start: 29 @111552 has 19 MA's), (66, 111717),

Gene: Peregrin\_170 Start: 91883, Stop: 92095, Start Num: 26

Candidate Starts for Peregrin\_170:

(Start: 26 @91883 has 2 MA's),

Gene: Phabba\_275 Start: 161775, Stop: 162020, Start Num: 16

Candidate Starts for Phabba\_275:

(1, 161574), (4, 161637), (8, 161700), (11, 161712), (12, 161721), (13, 161754), (14, 161757), (Start: 16 @161775 has 2 MA's), (31, 161829), (35, 161850), (40, 161871), (50, 161943), (53, 161955), (63, 161988), (65, 162000), (66, 162003),

Gene: Phillis\_70 Start: 40207, Stop: 40049, Start Num: 29

Candidate Starts for Phillis\_70:

(5, 40354), (9, 40321), (Start: 29 @40207 has 19 MA's), (54, 40087), (60, 40066), (61, 40063), (62, 40060),

Gene: Pons\_41 Start: 29139, Stop: 28933, Start Num: 19

Candidate Starts for Pons\_41:

(Start: 19 @29139 has 10 MA's), (38, 29073), (49, 29010), (55, 28983), (58, 28974), (62, 28959),

Gene: PotPie\_41 Start: 30073, Stop: 29867, Start Num: 19

Candidate Starts for PotPie\_41:

(Start: 19 @30073 has 10 MA's), (38, 30007), (55, 29917), (58, 29908), (62, 29893),

Gene: Roary\_74 Start: 40972, Stop: 40811, Start Num: 29

Candidate Starts for Roary\_74:

(Start: 29 @40972 has 19 MA's), (47, 40888), (49, 40876), (57, 40843), (60, 40831),

Gene: Saintus\_68 Start: 37637, Stop: 37476, Start Num: 29

Candidate Starts for Saintus\_68:

(Start: 29 @37637 has 19 MA's), (47, 37553), (57, 37508), (60, 37496),

Gene: SheckWes\_42 Start: 28660, Stop: 28454, Start Num: 19

Candidate Starts for SheckWes\_42:

(Start: 19 @28660 has 10 MA's), (38, 28594), (55, 28504), (58, 28495), (62, 28480),

Gene: Smeadley\_73 Start: 40833, Stop: 40672, Start Num: 29

Candidate Starts for Smeadley\_73:

(Start: 29 @40833 has 19 MA's), (47, 40749), (57, 40704), (60, 40692),

Gene: SororFago\_69 Start: 42242, Stop: 42048, Start Num: 29

Candidate Starts for SororFago\_69:

(Start: 29 @42242 has 19 MA's), (38, 42209), (49, 42146), (54, 42119), (56, 42113),

Gene: Stephig9\_72 Start: 40770, Stop: 40612, Start Num: 29

Candidate Starts for Stephig9\_72:

(Start: 29 @40770 has 19 MA's), (40, 40728), (47, 40686), (57, 40641), (60, 40629), (61, 40626),

Gene: SummitAcademy\_39 Start: 28702, Stop: 28496, Start Num: 19

Candidate Starts for SummitAcademy\_39:

(Start: 19 @28702 has 10 MA's), (38, 28636), (55, 28546), (58, 28537), (62, 28522),

Gene: Trixie\_66 Start: 41830, Stop: 41654, Start Num: 32

Candidate Starts for Trixie\_66:

(Start: 32 @41830 has 2 MA's), (46, 41758), (54, 41713),

Gene: Vine\_42 Start: 29438, Stop: 29232, Start Num: 19

Candidate Starts for Vine\_42:

(Start: 19 @29438 has 10 MA's), (38, 29372), (55, 29282), (58, 29273), (62, 29258),

Gene: Yecey3\_72 Start: 41315, Stop: 41127, Start Num: 29

Candidate Starts for Yecey3\_72:

(Start: 29 @41315 has 19 MA's), (38, 41282),

Gene: Yummy\_40 Start: 27287, Stop: 27084, Start Num: 23

Candidate Starts for Yummy\_40:

(3, 27479), (Start: 23 @27287 has 4 MA's), (40, 27227), (44, 27209),

Gene: Yvonnetastic\_130 Start: 73750, Stop: 73998, Start Num: 17

Candidate Starts for Yvonnetastic\_130:

(Start: 17 @73750 has 2 MA's), (Start: 32 @73792 has 2 MA's), (51, 73897), (57, 73918), (64, 73942), (65, 73951),