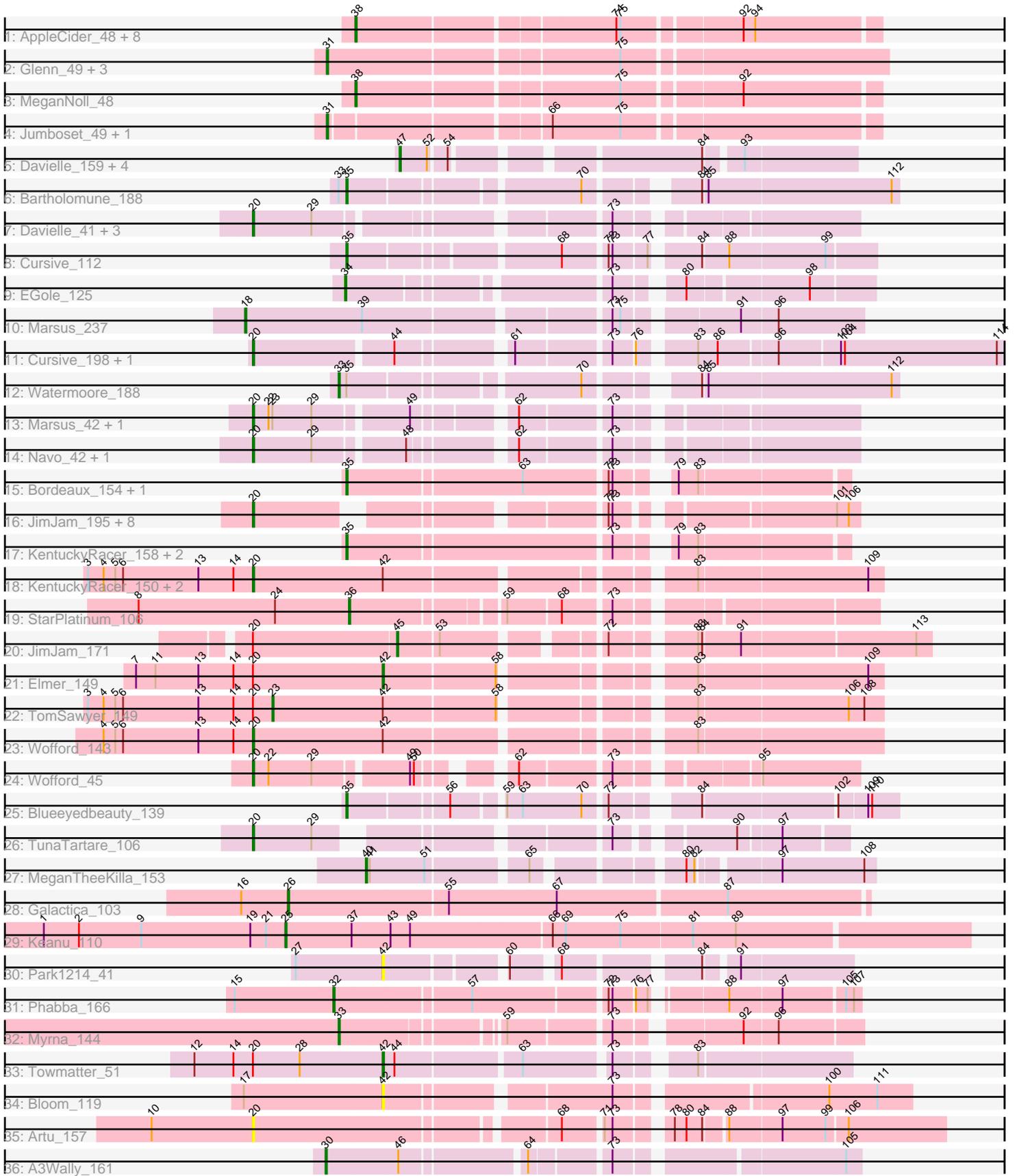


Pham 291129



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 291129 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291129 has 71 members, 4 are drafts.

Phages represented in each track:

- Track 1 : AppleCider\_48, Bodacious\_46, Nancia\_46, CristinaYang\_46, Suppi\_48, ChewChew\_46, Wawa\_48, BigMack\_46, Canowicakte\_48
- Track 2 : Glenn\_49, PinkFriday\_46, Wayne\_49, Kittykat\_49
- Track 3 : MeganNoll\_48
- Track 4 : Jumboset\_49, Pterodactyl\_46
- Track 5 : Davielle\_159, Persimmon\_159, Navo\_157, Braelyn\_161, WhereRU\_158
- Track 6 : Bartholomune\_188
- Track 7 : Davielle\_41, Persimmon\_40, Leo04\_45, WhereRU\_41
- Track 8 : Cursive\_112
- Track 9 : EGole\_125
- Track 10 : Marsus\_237
- Track 11 : Cursive\_198, Cadmus\_194
- Track 12 : Watermoore\_188
- Track 13 : Marsus\_42, Anedea\_42
- Track 14 : Navo\_42, Braelyn\_43
- Track 15 : Bordeaux\_154, AcciDwight\_163
- Track 16 : JimJam\_195, KentuckyRacer\_193, Amabiko\_192, Wipeout\_181, IchabodCrane\_184, Spilled\_194, Mugiwara\_190, Brizzy\_188, TomSawyer\_193
- Track 17 : KentuckyRacer\_158, StarPlatinum\_159, MulchMansion\_147
- Track 18 : KentuckyRacer\_150, CeilingFan\_148, JimJam\_152
- Track 19 : StarPlatinum\_106
- Track 20 : JimJam\_171
- Track 21 : Elmer\_149
- Track 22 : TomSawyer\_149
- Track 23 : Wofford\_143
- Track 24 : Wofford\_45
- Track 25 : Blueeyedbeauty\_139
- Track 26 : TunaTartare\_106
- Track 27 : MeganTheeKilla\_153
- Track 28 : Galactica\_103
- Track 29 : Keanu\_110
- Track 30 : Park1214\_41
- Track 31 : Phabba\_166
- Track 32 : Myrna\_144
- Track 33 : Towmatter\_51
- Track 34 : Bloom\_119
- Track 35 : Artu\_157

- Track 36 : A3Wally\_161

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

The start number called the most often in the published annotations is 20, it was called in 25 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko\_192, Anedea\_42, Artu\_157, Braelyn\_43, Brizzy\_188, Cadmus\_194, CeilingFan\_148, Cursive\_198, Davielle\_41, IchabodCrane\_184, JimJam\_152, JimJam\_195, KentuckyRacer\_150, KentuckyRacer\_193, Leo04\_45, Marsus\_42, Mugiwara\_190, Navo\_42, Persimmon\_40, Spilled\_194, TomSawyer\_193, TunaTartare\_106, WhereRU\_41, Wipeout\_181, Wofford\_143, Wofford\_45,

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

- Elmer\_149, JimJam\_171, TomSawyer\_149, Towmatter\_51,

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

- A3Wally\_161, AcciDwight\_163, AppleCider\_48, Bartholomune\_188, BigMack\_46, Bloom\_119, Blueeyedbeauty\_139, Bodacious\_46, Bordeaux\_154, Braelyn\_161, Canowicakte\_48, ChewChew\_46, CristinaYang\_46, Cursive\_112, Davielle\_159, EGole\_125, Galactica\_103, Glenn\_49, Jumboset\_49, Keanu\_110, KentuckyRacer\_158, Kittykat\_49, Marsus\_237, MeganNoll\_48, MeganTheeKilla\_153, MulchMansion\_147, Myrna\_144, Nancia\_46, Navo\_157, Park1214\_41, Persimmon\_159, Phabba\_166, PinkFriday\_46, Pterodactyl\_46, StarPlatinum\_106, StarPlatinum\_159, Suppi\_48, Watermoore\_188, Wawa\_48, Wayne\_49, WhereRU\_158,

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

Start 18:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marsus\_237 (BE1),

Start 20:

- Found in 30 of 71 ( 42.3% ) of genes in pham
- Manual Annotations of this start: 25 of 67
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Amabiko\_192 (BE2), Anedea\_42 (BE1), Artu\_157 (FC), Braelyn\_43 (BE1), Brizzy\_188 (BE2), Cadmus\_194 (BE1), CeilingFan\_148 (BE2), Cursive\_198 (BE1), Davielle\_41 (BE1), IchabodCrane\_184 (BE2), JimJam\_152 (BE2), JimJam\_195 (BE2), KentuckyRacer\_150 (BE2), KentuckyRacer\_193 (BE2), Leo04\_45 (BE1), Marsus\_42 (BE1), Mugiwara\_190 (BE2), Navo\_42 (BE1), Persimmon\_40 (BE1), Spilled\_194 (BE2), TomSawyer\_193 (BE2), TunaTartare\_106 (BK1), WhereRU\_41 (BE1), Wipeout\_181 (BE2), Wofford\_143 (BE2), Wofford\_45 (BE2),

Start 23:

- Found in 3 of 71 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 33.3% of time when present
- Phage (with cluster) where this start called: TomSawyer\_149 (BE2),

Start 25:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keanu\_110 (BQ),

Start 26:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Galactica\_103 (BQ),

Start 30:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally\_161 (GD1),

Start 31:

- Found in 6 of 71 ( 8.5% ) of genes in pham
- Manual Annotations of this start: 6 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Glenn\_49 (AK), Jumboset\_49 (AK), Kittykat\_49 (AK), PinkFriday\_46 (AK), Pterodactyl\_46 (AK), Wayne\_49 (AK),

Start 32:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phabba\_166 (C2),

Start 33:

- Found in 3 of 71 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 2 of 67
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Myrna\_144 (C2), Watermoore\_188 (BE1),

Start 34:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EGole\_125 (BE1),

Start 35:

- Found in 9 of 71 ( 12.7% ) of genes in pham
- Manual Annotations of this start: 7 of 67
- Called 88.9% of time when present

- Phage (with cluster) where this start called: AcciDwight\_163 (BE2), Bartholomune\_188 (BE1), Blueeyedbeauty\_139 (BK1), Bordeaux\_154 (BE2), Cursive\_112 (BE1), KentuckyRacer\_158 (BE2), MulchMansion\_147 (BE1), StarPlatinum\_159 (BE2),

#### Start 36:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: StarPlatinum\_106 (BE2),

#### Start 38:

- Found in 10 of 71 ( 14.1% ) of genes in pham
- Manual Annotations of this start: 10 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AppleCider\_48 (AK), BigMack\_46 (AK), Bodacious\_46 (AK), Canowicakte\_48 (AK), ChewChew\_46 (AK), CristinaYang\_46 (AK), MeganNoll\_48 (AK), Nancia\_46 (AK), Suppi\_48 (AK), Wawa\_48 (AK),

#### Start 40:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MeganTheeKilla\_153 (BK1),

#### Start 42:

- Found in 9 of 71 ( 12.7% ) of genes in pham
- Manual Annotations of this start: 2 of 67
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Bloom\_119 (FC), Elmer\_149 (BE2), Park1214\_41 (BS), Towmatter\_51 (DL),

#### Start 45:

- Found in 1 of 71 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JimJam\_171 (BE2),

#### Start 47:

- Found in 5 of 71 ( 7.0% ) of genes in pham
- Manual Annotations of this start: 5 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Braelyn\_161 (BE1), Davielle\_159 (BE1), Navo\_157 (BE1), Persimmon\_159 (BE1), WhereRU\_158 (BE1),

### **Summary by clusters:**

There are 10 clusters represented in this pham: GD1, DL, AK, FC, BK1, BS, BE2, C2, BE1, BQ,

Info for manual annotations of cluster AK:

- Start number 31 was manually annotated 6 times for cluster AK.
- Start number 38 was manually annotated 10 times for cluster AK.

Info for manual annotations of cluster BE1:

- Start number 18 was manually annotated 1 time for cluster BE1.
- Start number 20 was manually annotated 10 times for cluster BE1.
- Start number 33 was manually annotated 1 time for cluster BE1.
- Start number 34 was manually annotated 1 time for cluster BE1.
- Start number 35 was manually annotated 3 times for cluster BE1.
- Start number 47 was manually annotated 5 times for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 20 was manually annotated 14 times for cluster BE2.
- Start number 23 was manually annotated 1 time for cluster BE2.
- Start number 35 was manually annotated 3 times for cluster BE2.
- Start number 36 was manually annotated 1 time for cluster BE2.
- Start number 42 was manually annotated 1 time for cluster BE2.
- Start number 45 was manually annotated 1 time for cluster BE2.

Info for manual annotations of cluster BK1:

- Start number 20 was manually annotated 1 time for cluster BK1.
- Start number 35 was manually annotated 1 time for cluster BK1.
- Start number 40 was manually annotated 1 time for cluster BK1.

Info for manual annotations of cluster BQ:

- Start number 25 was manually annotated 1 time for cluster BQ.
- Start number 26 was manually annotated 1 time for cluster BQ.

Info for manual annotations of cluster C2:

- Start number 32 was manually annotated 1 time for cluster C2.
- Start number 33 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster DL:

- Start number 42 was manually annotated 1 time for cluster DL.

Info for manual annotations of cluster GD1:

- Start number 30 was manually annotated 1 time for cluster GD1.

**Gene Information:**

Gene: A3Wally\_161 Start: 93240, Stop: 93602, Start Num: 30

Candidate Starts for A3Wally\_161:

(Start: 30 @93240 has 1 MA's), (46, 93294), (64, 93381), (73, 93435), (105, 93591),

Gene: AcciDwight\_163 Start: 88123, Stop: 88467, Start Num: 35

Candidate Starts for AcciDwight\_163:

(Start: 35 @88123 has 7 MA's), (63, 88252), (72, 88312), (73, 88315), (79, 88345), (83, 88360),

Gene: Amabiko\_192 Start: 96212, Stop: 96601, Start Num: 20

Candidate Starts for Amabiko\_192:

(Start: 20 @96212 has 25 MA's), (72, 96437), (73, 96440), (101, 96584), (106, 96593),

Gene: Anedea\_42 Start: 21646, Stop: 22047, Start Num: 20

Candidate Starts for Anedea\_42:

(Start: 20 @21646 has 25 MA's), (22, 21658), (Start: 23 @21661 has 1 MA's), (29, 21691), (49, 21757), (62, 21820), (73, 21883),

Gene: AppleCider\_48 Start: 35943, Stop: 36317, Start Num: 38

Candidate Starts for AppleCider\_48:

(Start: 38 @35943 has 10 MA's), (74, 36129), (75, 36132), (92, 36216), (94, 36225),

Gene: Artu\_157 Start: 108175, Stop: 108654, Start Num: 20

Candidate Starts for Artu\_157:

(10, 108097), (Start: 20 @108175 has 25 MA's), (68, 108391), (71, 108418), (73, 108424), (78, 108457), (80, 108466), (84, 108478), (88, 108493), (97, 108532), (99, 108565), (106, 108580),

Gene: Bartholomune\_188 Start: 98185, Stop: 98556, Start Num: 35

Candidate Starts for Bartholomune\_188:

(Start: 33 @98179 has 2 MA's), (Start: 35 @98185 has 7 MA's), (70, 98344), (84, 98410), (85, 98413), (112, 98551),

Gene: BigMack\_46 Start: 34816, Stop: 35190, Start Num: 38

Candidate Starts for BigMack\_46:

(Start: 38 @34816 has 10 MA's), (74, 35002), (75, 35005), (92, 35089), (94, 35098),

Gene: Bloom\_119 Start: 91780, Stop: 92142, Start Num: 42

Candidate Starts for Bloom\_119:

(17, 91675), (Start: 42 @91780 has 2 MA's), (73, 91936), (100, 92080), (111, 92116),

Gene: Blueeyedbeauty\_139 Start: 79396, Stop: 79761, Start Num: 35

Candidate Starts for Blueeyedbeauty\_139:

(Start: 35 @79396 has 7 MA's), (56, 79465), (59, 79498), (63, 79510), (70, 79555), (72, 79570), (84, 79621), (102, 79717), (109, 79738), (110, 79741),

Gene: Bodacious\_46 Start: 34773, Stop: 35147, Start Num: 38

Candidate Starts for Bodacious\_46:

(Start: 38 @34773 has 10 MA's), (74, 34959), (75, 34962), (92, 35046), (94, 35055),

Gene: Bordeaux\_154 Start: 87839, Stop: 88183, Start Num: 35

Candidate Starts for Bordeaux\_154:

(Start: 35 @87839 has 7 MA's), (63, 87968), (72, 88028), (73, 88031), (79, 88061), (83, 88076),

Gene: Braelyn\_43 Start: 22198, Stop: 22599, Start Num: 20

Candidate Starts for Braelyn\_43:

(Start: 20 @22198 has 25 MA's), (29, 22243), (48, 22306), (62, 22372), (73, 22435),

Gene: Braelyn\_161 Start: 91079, Stop: 91384, Start Num: 47

Candidate Starts for Braelyn\_161:

(Start: 47 @91079 has 5 MA's), (52, 91100), (54, 91112), (84, 91277), (93, 91301),

Gene: Brizzy\_188 Start: 96656, Stop: 97045, Start Num: 20

Candidate Starts for Brizzy\_188:

(Start: 20 @96656 has 25 MA's), (72, 96881), (73, 96884), (101, 97028), (106, 97037),

Gene: Cadmus\_194 Start: 103833, Stop: 104354, Start Num: 20  
Candidate Starts for Cadmus\_194:  
(Start: 20 @103833 has 25 MA's), (44, 103935), (61, 104010), (73, 104076), (76, 104091), (83, 104127), (86, 104142), (96, 104184), (103, 104229), (104, 104232), (114, 104349),

Gene: Canowicakte\_48 Start: 35978, Stop: 36352, Start Num: 38  
Candidate Starts for Canowicakte\_48:  
(Start: 38 @35978 has 10 MA's), (74, 36164), (75, 36167), (92, 36251), (94, 36260),

Gene: CeilingFan\_148 Start: 86515, Stop: 86958, Start Num: 20  
Candidate Starts for CeilingFan\_148:  
(3, 86389), (4, 86401), (5, 86410), (6, 86416), (13, 86473), (14, 86500), (Start: 20 @86515 has 25 MA's), (Start: 42 @86614 has 2 MA's), (83, 86821), (109, 86947),

Gene: ChewChew\_46 Start: 34904, Stop: 35278, Start Num: 38  
Candidate Starts for ChewChew\_46:  
(Start: 38 @34904 has 10 MA's), (74, 35090), (75, 35093), (92, 35177), (94, 35186),

Gene: CristinaYang\_46 Start: 34900, Stop: 35274, Start Num: 38  
Candidate Starts for CristinaYang\_46:  
(Start: 38 @34900 has 10 MA's), (74, 35086), (75, 35089), (92, 35173), (94, 35182),

Gene: Cursive\_112 Start: 77217, Stop: 77573, Start Num: 35  
Candidate Starts for Cursive\_112:  
(Start: 35 @77217 has 7 MA's), (68, 77361), (72, 77391), (73, 77394), (77, 77418), (84, 77448), (88, 77466), (99, 77538),

Gene: Cursive\_198 Start: 103181, Stop: 103702, Start Num: 20  
Candidate Starts for Cursive\_198:  
(Start: 20 @103181 has 25 MA's), (44, 103283), (61, 103358), (73, 103424), (76, 103439), (83, 103475), (86, 103490), (96, 103532), (103, 103577), (104, 103580), (114, 103697),

Gene: Davielle\_159 Start: 90528, Stop: 90833, Start Num: 47  
Candidate Starts for Davielle\_159:  
(Start: 47 @90528 has 5 MA's), (52, 90549), (54, 90561), (84, 90726), (93, 90750),

Gene: Davielle\_41 Start: 21615, Stop: 22016, Start Num: 20  
Candidate Starts for Davielle\_41:  
(Start: 20 @21615 has 25 MA's), (29, 21660), (73, 21852),

Gene: EGole\_125 Start: 82153, Stop: 82503, Start Num: 34  
Candidate Starts for EGole\_125:  
(Start: 34 @82153 has 1 MA's), (73, 82330), (80, 82369), (98, 82456),

Gene: Elmer\_149 Start: 88649, Stop: 88993, Start Num: 42  
Candidate Starts for Elmer\_149:  
(7, 88460), (11, 88475), (13, 88508), (14, 88535), (Start: 20 @88550 has 25 MA's), (Start: 42 @88649 has 2 MA's), (58, 88733), (83, 88856), (109, 88982),

Gene: Galactica\_103 Start: 72510, Stop: 72941, Start Num: 26  
Candidate Starts for Galactica\_103:  
(16, 72474), (Start: 26 @72510 has 1 MA's), (55, 72630), (67, 72711), (87, 72837),

Gene: Glenn\_49 Start: 36170, Stop: 36574, Start Num: 31

Candidate Starts for Glenn\_49:

(Start: 31 @36170 has 6 MA's), (75, 36380),

Gene: IchabodCrane\_184 Start: 95913, Stop: 96302, Start Num: 20

Candidate Starts for IchabodCrane\_184:

(Start: 20 @95913 has 25 MA's), (72, 96138), (73, 96141), (101, 96285), (106, 96294),

Gene: JimJam\_195 Start: 97834, Stop: 98223, Start Num: 20

Candidate Starts for JimJam\_195:

(Start: 20 @97834 has 25 MA's), (72, 98059), (73, 98062), (101, 98206), (106, 98215),

Gene: JimJam\_171 Start: 92515, Stop: 92871, Start Num: 45

Candidate Starts for JimJam\_171:

(Start: 20 @92407 has 25 MA's), (Start: 45 @92515 has 1 MA's), (53, 92545), (72, 92647), (83, 92701), (84, 92704), (91, 92731), (113, 92860),

Gene: JimJam\_152 Start: 87443, Stop: 87886, Start Num: 20

Candidate Starts for JimJam\_152:

(3, 87317), (4, 87329), (5, 87338), (6, 87344), (13, 87401), (14, 87428), (Start: 20 @87443 has 25 MA's), (Start: 42 @87542 has 2 MA's), (83, 87749), (109, 87875),

Gene: Jumboset\_49 Start: 36068, Stop: 36457, Start Num: 31

Candidate Starts for Jumboset\_49:

(Start: 31 @36068 has 6 MA's), (66, 36221), (75, 36272),

Gene: Keanu\_110 Start: 78255, Stop: 78767, Start Num: 25

Candidate Starts for Keanu\_110:

(1, 78069), (2, 78096), (9, 78144), (19, 78228), (21, 78240), (Start: 25 @78255 has 1 MA's), (37, 78306), (43, 78336), (49, 78351), (66, 78456), (69, 78465), (75, 78507), (81, 78561), (89, 78594),

Gene: KentuckyRacer\_158 Start: 88711, Stop: 89055, Start Num: 35

Candidate Starts for KentuckyRacer\_158:

(Start: 35 @88711 has 7 MA's), (73, 88903), (79, 88933), (83, 88948),

Gene: KentuckyRacer\_150 Start: 87011, Stop: 87454, Start Num: 20

Candidate Starts for KentuckyRacer\_150:

(3, 86885), (4, 86897), (5, 86906), (6, 86912), (13, 86969), (14, 86996), (Start: 20 @87011 has 25 MA's), (Start: 42 @87110 has 2 MA's), (83, 87317), (109, 87443),

Gene: KentuckyRacer\_193 Start: 97580, Stop: 97969, Start Num: 20

Candidate Starts for KentuckyRacer\_193:

(Start: 20 @97580 has 25 MA's), (72, 97805), (73, 97808), (101, 97952), (106, 97961),

Gene: Kittykat\_49 Start: 35170, Stop: 35559, Start Num: 31

Candidate Starts for Kittykat\_49:

(Start: 31 @35170 has 6 MA's), (75, 35374),

Gene: Leo04\_45 Start: 23281, Stop: 23682, Start Num: 20

Candidate Starts for Leo04\_45:

(Start: 20 @23281 has 25 MA's), (29, 23326), (73, 23518),

Gene: Marsus\_237 Start: 116691, Stop: 117125, Start Num: 18

Candidate Starts for Marsus\_237:

(Start: 18 @116691 has 1 MA's), (39, 116781), (73, 116952), (75, 116958), (91, 117033), (96, 117060),

Gene: Marsus\_42 Start: 21346, Stop: 21747, Start Num: 20

Candidate Starts for Marsus\_42:

(Start: 20 @21346 has 25 MA's), (22, 21358), (Start: 23 @21361 has 1 MA's), (29, 21391), (49, 21457), (62, 21520), (73, 21583),

Gene: MeganNoll\_48 Start: 36135, Stop: 36509, Start Num: 38

Candidate Starts for MeganNoll\_48:

(Start: 38 @36135 has 10 MA's), (75, 36324), (92, 36408),

Gene: MeganTheeKilla\_153 Start: 84120, Stop: 84458, Start Num: 40

Candidate Starts for MeganTheeKilla\_153:

(Start: 40 @84120 has 1 MA's), (41, 84123), (51, 84165), (65, 84234), (80, 84327), (82, 84333), (97, 84387), (108, 84450),

Gene: Mugiwara\_190 Start: 97213, Stop: 97602, Start Num: 20

Candidate Starts for Mugiwara\_190:

(Start: 20 @97213 has 25 MA's), (72, 97438), (73, 97441), (101, 97585), (106, 97594),

Gene: MulchMansion\_147 Start: 87054, Stop: 87398, Start Num: 35

Candidate Starts for MulchMansion\_147:

(Start: 35 @87054 has 7 MA's), (73, 87246), (79, 87276), (83, 87291),

Gene: Myrna\_144 Start: 92033, Stop: 92380, Start Num: 33

Candidate Starts for Myrna\_144:

(Start: 33 @92033 has 2 MA's), (59, 92141), (73, 92213), (92, 92294), (96, 92318),

Gene: Nancia\_46 Start: 34773, Stop: 35147, Start Num: 38

Candidate Starts for Nancia\_46:

(Start: 38 @34773 has 10 MA's), (74, 34959), (75, 34962), (92, 35046), (94, 35055),

Gene: Navo\_42 Start: 22093, Stop: 22494, Start Num: 20

Candidate Starts for Navo\_42:

(Start: 20 @22093 has 25 MA's), (29, 22138), (48, 22201), (62, 22267), (73, 22330),

Gene: Navo\_157 Start: 90460, Stop: 90765, Start Num: 47

Candidate Starts for Navo\_157:

(Start: 47 @90460 has 5 MA's), (52, 90481), (54, 90493), (84, 90658), (93, 90682),

Gene: Park1214\_41 Start: 12803, Stop: 13108, Start Num: 42

Candidate Starts for Park1214\_41:

(27, 12737), (Start: 42 @12803 has 2 MA's), (60, 12884), (68, 12914), (84, 13004), (91, 13025),

Gene: Persimmon\_159 Start: 89776, Stop: 90081, Start Num: 47

Candidate Starts for Persimmon\_159:

(Start: 47 @89776 has 5 MA's), (52, 89797), (54, 89809), (84, 89974), (93, 89998),

Gene: Persimmon\_40 Start: 21025, Stop: 21426, Start Num: 20

Candidate Starts for Persimmon\_40:

(Start: 20 @21025 has 25 MA's), (29, 21070), (73, 21262),

Gene: Phabba\_166 Start: 92816, Stop: 93178, Start Num: 32  
Candidate Starts for Phabba\_166:  
(15, 92741), (Start: 32 @92816 has 1 MA's), (57, 92915), (72, 93011), (73, 93014), (76, 93029), (77, 93038), (88, 93083), (97, 93122), (105, 93167), (107, 93173),

Gene: PinkFriday\_46 Start: 35018, Stop: 35407, Start Num: 31  
Candidate Starts for PinkFriday\_46:  
(Start: 31 @35018 has 6 MA's), (75, 35222),

Gene: Pterodactyl\_46 Start: 34733, Stop: 35122, Start Num: 31  
Candidate Starts for Pterodactyl\_46:  
(Start: 31 @34733 has 6 MA's), (66, 34886), (75, 34937),

Gene: Spilled\_194 Start: 96766, Stop: 97155, Start Num: 20  
Candidate Starts for Spilled\_194:  
(Start: 20 @96766 has 25 MA's), (72, 96991), (73, 96994), (101, 97138), (106, 97147),

Gene: StarPlatinum\_106 Start: 73373, Stop: 73726, Start Num: 36  
Candidate Starts for StarPlatinum\_106:  
(8, 73211), (24, 73316), (Start: 36 @73373 has 1 MA's), (59, 73475), (68, 73514), (73, 73547),

Gene: StarPlatinum\_159 Start: 89611, Stop: 89955, Start Num: 35  
Candidate Starts for StarPlatinum\_159:  
(Start: 35 @89611 has 7 MA's), (73, 89803), (79, 89833), (83, 89848),

Gene: Suppi\_48 Start: 35978, Stop: 36352, Start Num: 38  
Candidate Starts for Suppi\_48:  
(Start: 38 @35978 has 10 MA's), (74, 36164), (75, 36167), (92, 36251), (94, 36260),

Gene: TomSawyer\_149 Start: 86660, Stop: 87088, Start Num: 23  
Candidate Starts for TomSawyer\_149:  
(3, 86519), (4, 86531), (5, 86540), (6, 86546), (13, 86603), (14, 86630), (Start: 20 @86645 has 25 MA's), (Start: 23 @86660 has 1 MA's), (Start: 42 @86744 has 2 MA's), (58, 86828), (83, 86951), (106, 87062), (108, 87074),

Gene: TomSawyer\_193 Start: 97685, Stop: 98074, Start Num: 20  
Candidate Starts for TomSawyer\_193:  
(Start: 20 @97685 has 25 MA's), (72, 97910), (73, 97913), (101, 98057), (106, 98066),

Gene: Towmatter\_51 Start: 41131, Stop: 41451, Start Num: 42  
Candidate Starts for Towmatter\_51:  
(12, 40987), (14, 41017), (Start: 20 @41032 has 25 MA's), (28, 41068), (Start: 42 @41131 has 2 MA's), (44, 41140), (63, 41230), (73, 41290), (83, 41338),

Gene: TunaTartare\_106 Start: 73259, Stop: 73636, Start Num: 20  
Candidate Starts for TunaTartare\_106:  
(Start: 20 @73259 has 25 MA's), (29, 73304), (73, 73487), (90, 73559), (97, 73589),

Gene: Watermoore\_188 Start: 100639, Stop: 101016, Start Num: 33  
Candidate Starts for Watermoore\_188:  
(Start: 33 @100639 has 2 MA's), (Start: 35 @100645 has 7 MA's), (70, 100804), (84, 100870), (85, 100873), (112, 101011),

Gene: Wawa\_48 Start: 35937, Stop: 36311, Start Num: 38  
Candidate Starts for Wawa\_48:  
(Start: 38 @35937 has 10 MA's), (74, 36123), (75, 36126), (92, 36210), (94, 36219),

Gene: Wayne\_49 Start: 36024, Stop: 36443, Start Num: 31  
Candidate Starts for Wayne\_49:  
(Start: 31 @36024 has 6 MA's), (75, 36234),

Gene: WhereRU\_158 Start: 90528, Stop: 90833, Start Num: 47  
Candidate Starts for WhereRU\_158:  
(Start: 47 @90528 has 5 MA's), (52, 90549), (54, 90561), (84, 90726), (93, 90750),

Gene: WhereRU\_41 Start: 21615, Stop: 22016, Start Num: 20  
Candidate Starts for WhereRU\_41:  
(Start: 20 @21615 has 25 MA's), (29, 21660), (73, 21852),

Gene: Wipeout\_181 Start: 97029, Stop: 97418, Start Num: 20  
Candidate Starts for Wipeout\_181:  
(Start: 20 @97029 has 25 MA's), (72, 97254), (73, 97257), (101, 97401), (106, 97410),

Gene: Wofford\_143 Start: 88534, Stop: 88977, Start Num: 20  
Candidate Starts for Wofford\_143:  
(4, 88420), (5, 88429), (6, 88435), (13, 88492), (14, 88519), (Start: 20 @88534 has 25 MA's), (Start: 42 @88633 has 2 MA's), (83, 88840),

Gene: Wofford\_45 Start: 23131, Stop: 23520, Start Num: 20  
Candidate Starts for Wofford\_45:  
(Start: 20 @23131 has 25 MA's), (22, 23143), (29, 23176), (49, 23242), (50, 23245), (62, 23293), (73, 23356), (95, 23446),