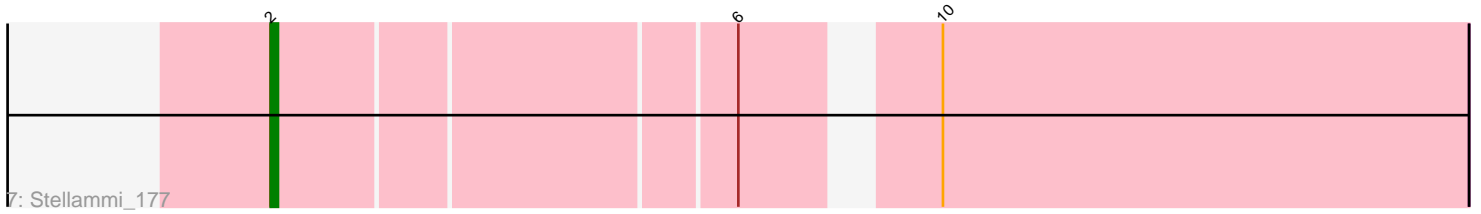
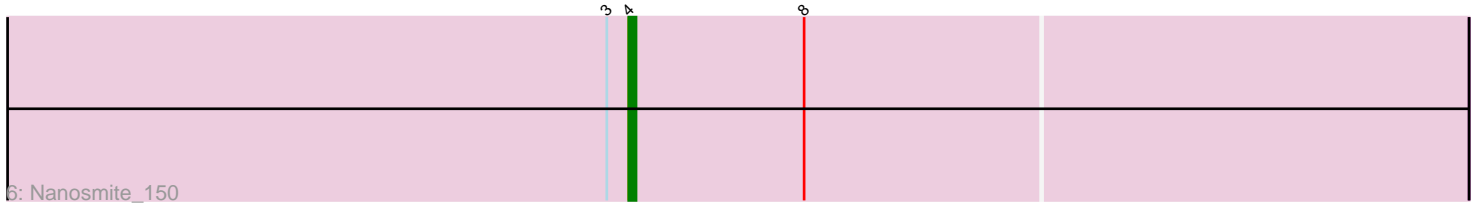
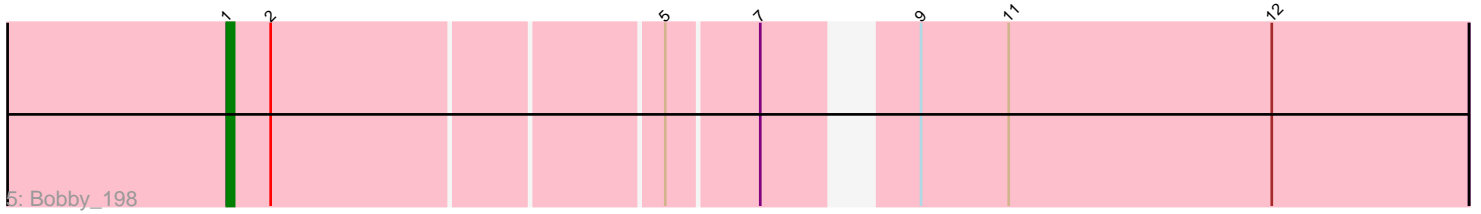
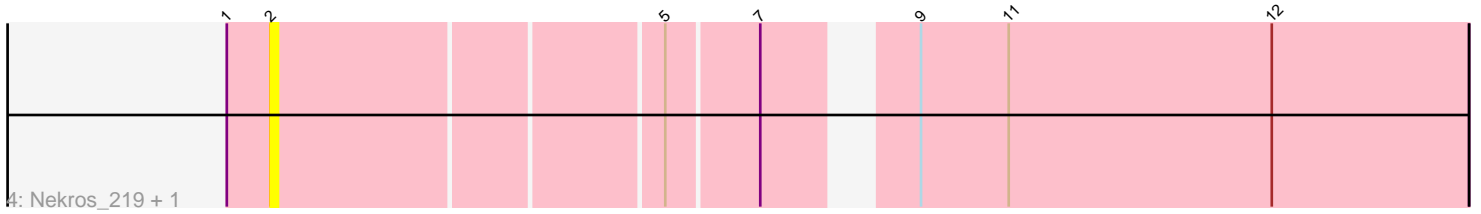
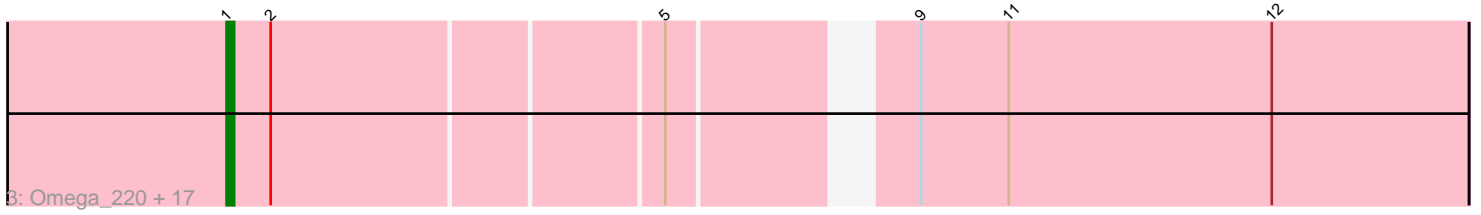
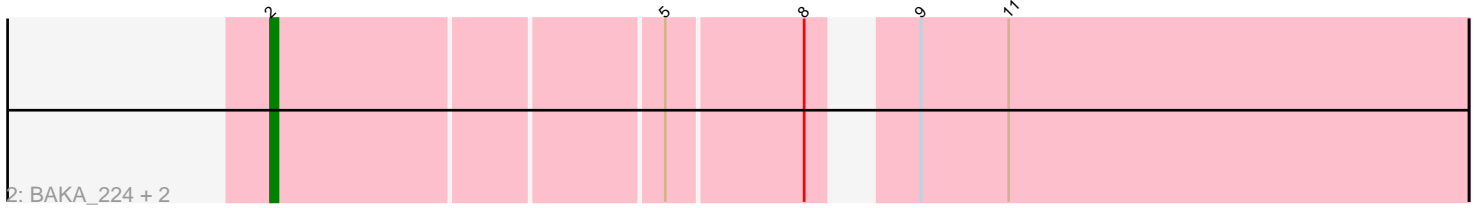
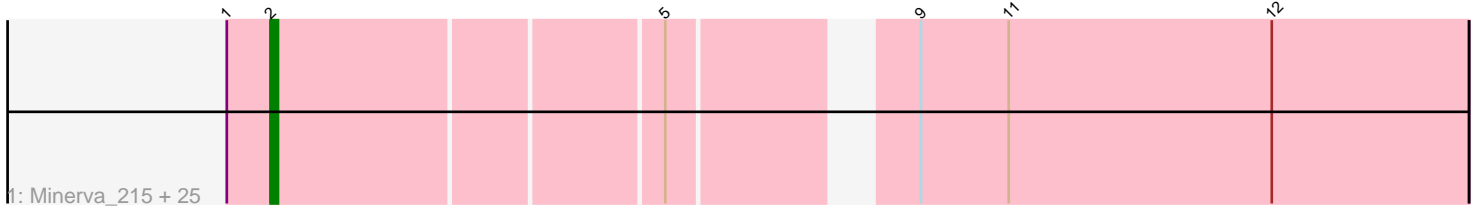


Pham 308732



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 308732 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308732 has 52 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Minerva\_215, Squint\_215, Courthouse\_221, Hannaconda\_209, Rearden\_216, Redno2\_209, DmpstrDiver\_217, Marleymoo\_201, Ejimix\_209, Superphikiman\_217, Bagrid\_225, HokkenD\_209, Lucky2013\_213, BronnyJames\_210, Constella\_209, Odette\_219, Nibley\_208, Optimus\_213, ThreeRngTarjay\_217, NihilNomen\_220, Phoebus\_216, Zelink\_210, Hidrated\_205, Duke13\_220, Xiaokay\_206, Hughesyang\_218
- Track 2 : BAKA\_224, Wanda\_216, Klein\_224
- Track 3 : Omega\_220, Pound\_207, JuicyJay\_212, Beem\_219, Porcelain\_216, Dallas\_217, Ariel\_224, Kalah2\_218, MiaZeal\_225, Halley\_221, Dove\_202, EricMillard\_215, Thibault\_192, Bombitas\_202, LittleE\_218, Yeet\_211, Gonephishing\_214, KashFlow\_210
- Track 4 : Nekros\_219, Shaboozey\_216
- Track 5 : Bobby\_198
- Track 6 : Nanosmite\_150
- Track 7 : Stellammi\_177

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

The start number called the most often in the published annotations is 2, it was called in 22 of the 41 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BAKA\_224, Bagrid\_225, BronnyJames\_210, Constella\_209, Courthouse\_221, DmpstrDiver\_217, Duke13\_220, Ejimix\_209, Hannaconda\_209, Hidrated\_205, HokkenD\_209, Hughesyang\_218, Klein\_224, Lucky2013\_213, Marleymoo\_201, Minerva\_215, Nekros\_219, Nibley\_208, NihilNomen\_220, Odette\_219, Optimus\_213, Phoebus\_216, Rearden\_216, Redno2\_209, Shaboozey\_216, Squint\_215, Stellammi\_177, Superphikiman\_217, ThreeRngTarjay\_217, Wanda\_216, Xiaokay\_206, Zelink\_210,

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

- Ariel\_224, Beem\_219, Bobby\_198, Bombitas\_202, Dallas\_217, Dove\_202, EricMillard\_215, Gonephishing\_214, Halley\_221, JuicyJay\_212, Kalah2\_218, KashFlow\_210, LittleE\_218, MiaZeal\_225, Omega\_220, Porcelain\_216, Pound\_207,

Thibault\_192, Yeet\_211,

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

- Nanosmite\_150,

### Summary by start number:

Start 1:

- Found in 47 of 52 ( 90.4% ) of genes in pham
- Manual Annotations of this start: 18 of 41
- Called 40.4% of time when present
- Phage (with cluster) where this start called: Ariel\_224 (J), Beem\_219 (J), Bobby\_198 (J), Bombitas\_202 (J), Dallas\_217 (J), Dove\_202 (J), EricMillard\_215 (J), Gonephishing\_214 (J), Halley\_221 (J), JuicyJay\_212 (J), Kalah2\_218 (J), KashFlow\_210 (J), LittleE\_218 (J), MiaZeal\_225 (J), Omega\_220 (J), Porcelain\_216 (J), Pound\_207 (J), Thibault\_192 (J), Yeet\_211 (J),

Start 2:

- Found in 51 of 52 ( 98.1% ) of genes in pham
- Manual Annotations of this start: 22 of 41
- Called 62.7% of time when present
- Phage (with cluster) where this start called: BAKA\_224 (J), Bagrid\_225 (J), BronnyJames\_210 (J), Constella\_209 (J), Courthouse\_221 (J), DmpstrDiver\_217 (J), Duke13\_220 (J), Ejimix\_209 (J), Hannaconda\_209 (J), Hidrated\_205 (J), HokkenD\_209 (J), Hughesyang\_218 (J), Klein\_224 (J), Lucky2013\_213 (J), Marleymoo\_201 (J), Minerva\_215 (J), Nekros\_219 (J), Nibley\_208 (J), NihilNomen\_220 (J), Odette\_219 (J), Optimus\_213 (J), Phoebus\_216 (J), Rearden\_216 (J), Redno2\_209 (J), Shaboozey\_216 (J), Squint\_215 (J), Stellammi\_177 (UNK), Superphikiman\_217 (J), ThreeRngTarjay\_217 (J), Wanda\_216 (J), Xiaokay\_206 (J), Zelink\_210 (J),

Start 4:

- Found in 1 of 52 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 1 of 41
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nanosmite\_150 (M3),

### Summary by clusters:

There are 3 clusters represented in this pham: UNK, J, M3,

Info for manual annotations of cluster J:

- Start number 1 was manually annotated 18 times for cluster J.
- Start number 2 was manually annotated 21 times for cluster J.

Info for manual annotations of cluster M3:

- Start number 4 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster UNK:

- Start number 2 was manually annotated 1 time for cluster UNK.

**Gene Information:**

Gene: Ariel\_224 Start: 103401, Stop: 103243, Start Num: 1

Candidate Starts for Ariel\_224:

(Start: 1 @103401 has 18 MA's), (Start: 2 @103395 has 22 MA's), (5, 103344), (9, 103317), (11, 103305), (12, 103269),

Gene: BAKA\_224 Start: 106720, Stop: 106568, Start Num: 2

Candidate Starts for BAKA\_224:

(Start: 2 @106720 has 22 MA's), (5, 106669), (8, 106651), (9, 106642), (11, 106630),

Gene: Bagrid\_225 Start: 107494, Stop: 107342, Start Num: 2

Candidate Starts for Bagrid\_225:

(Start: 1 @107500 has 18 MA's), (Start: 2 @107494 has 22 MA's), (5, 107443), (9, 107416), (11, 107404), (12, 107368),

Gene: Beem\_219 Start: 106268, Stop: 106110, Start Num: 1

Candidate Starts for Beem\_219:

(Start: 1 @106268 has 18 MA's), (Start: 2 @106262 has 22 MA's), (5, 106211), (9, 106184), (11, 106172), (12, 106136),

Gene: Bobby\_198 Start: 104210, Stop: 104052, Start Num: 1

Candidate Starts for Bobby\_198:

(Start: 1 @104210 has 18 MA's), (Start: 2 @104204 has 22 MA's), (5, 104153), (7, 104141), (9, 104126), (11, 104114), (12, 104078),

Gene: Bombitas\_202 Start: 102757, Stop: 102599, Start Num: 1

Candidate Starts for Bombitas\_202:

(Start: 1 @102757 has 18 MA's), (Start: 2 @102751 has 22 MA's), (5, 102700), (9, 102673), (11, 102661), (12, 102625),

Gene: BronnyJames\_210 Start: 101314, Stop: 101162, Start Num: 2

Candidate Starts for BronnyJames\_210:

(Start: 1 @101320 has 18 MA's), (Start: 2 @101314 has 22 MA's), (5, 101263), (9, 101236), (11, 101224), (12, 101188),

Gene: Constella\_209 Start: 104432, Stop: 104280, Start Num: 2

Candidate Starts for Constella\_209:

(Start: 1 @104438 has 18 MA's), (Start: 2 @104432 has 22 MA's), (5, 104381), (9, 104354), (11, 104342), (12, 104306),

Gene: Courthouse\_221 Start: 104255, Stop: 104103, Start Num: 2

Candidate Starts for Courthouse\_221:

(Start: 1 @104261 has 18 MA's), (Start: 2 @104255 has 22 MA's), (5, 104204), (9, 104177), (11, 104165), (12, 104129),

Gene: Dallas\_217 Start: 105047, Stop: 104889, Start Num: 1

Candidate Starts for Dallas\_217:

(Start: 1 @105047 has 18 MA's), (Start: 2 @105041 has 22 MA's), (5, 104990), (9, 104963), (11, 104951), (12, 104915),

Gene: DmpstrDiver\_217 Start: 104913, Stop: 104761, Start Num: 2

Candidate Starts for DmpstrDiver\_217:

(Start: 1 @104919 has 18 MA's), (Start: 2 @104913 has 22 MA's), (5, 104862), (9, 104835), (11, 104823), (12, 104787),

Gene: Dove\_202 Start: 101379, Stop: 101221, Start Num: 1

Candidate Starts for Dove\_202:

(Start: 1 @101379 has 18 MA's), (Start: 2 @101373 has 22 MA's), (5, 101322), (9, 101295), (11, 101283), (12, 101247),

Gene: Duke13\_220 Start: 105713, Stop: 105561, Start Num: 2

Candidate Starts for Duke13\_220:

(Start: 1 @105719 has 18 MA's), (Start: 2 @105713 has 22 MA's), (5, 105662), (9, 105635), (11, 105623), (12, 105587),

Gene: Ejimix\_209 Start: 104667, Stop: 104515, Start Num: 2

Candidate Starts for Ejimix\_209:

(Start: 1 @104673 has 18 MA's), (Start: 2 @104667 has 22 MA's), (5, 104616), (9, 104589), (11, 104577), (12, 104541),

Gene: EricMillard\_215 Start: 106392, Stop: 106234, Start Num: 1

Candidate Starts for EricMillard\_215:

(Start: 1 @106392 has 18 MA's), (Start: 2 @106386 has 22 MA's), (5, 106335), (9, 106308), (11, 106296), (12, 106260),

Gene: Gonephishing\_214 Start: 103878, Stop: 103720, Start Num: 1

Candidate Starts for Gonephishing\_214:

(Start: 1 @103878 has 18 MA's), (Start: 2 @103872 has 22 MA's), (5, 103821), (9, 103794), (11, 103782), (12, 103746),

Gene: Halley\_221 Start: 105286, Stop: 105128, Start Num: 1

Candidate Starts for Halley\_221:

(Start: 1 @105286 has 18 MA's), (Start: 2 @105280 has 22 MA's), (5, 105229), (9, 105202), (11, 105190), (12, 105154),

Gene: Hannaconda\_209 Start: 104700, Stop: 104548, Start Num: 2

Candidate Starts for Hannaconda\_209:

(Start: 1 @104706 has 18 MA's), (Start: 2 @104700 has 22 MA's), (5, 104649), (9, 104622), (11, 104610), (12, 104574),

Gene: Hidrated\_205 Start: 105939, Stop: 105787, Start Num: 2

Candidate Starts for Hidrated\_205:

(Start: 1 @105945 has 18 MA's), (Start: 2 @105939 has 22 MA's), (5, 105888), (9, 105861), (11, 105849), (12, 105813),

Gene: HokkenD\_209 Start: 106195, Stop: 106043, Start Num: 2

Candidate Starts for HokkenD\_209:

(Start: 1 @106201 has 18 MA's), (Start: 2 @106195 has 22 MA's), (5, 106144), (9, 106117), (11, 106105), (12, 106069),

Gene: Hughesyang\_218 Start: 105940, Stop: 105788, Start Num: 2

Candidate Starts for Hughesyang\_218:

(Start: 1 @105946 has 18 MA's), (Start: 2 @105940 has 22 MA's), (5, 105889), (9, 105862), (11, 105850), (12, 105814),

Gene: JuicyJay\_212 Start: 106217, Stop: 106059, Start Num: 1  
Candidate Starts for JuicyJay\_212:  
(Start: 1 @106217 has 18 MA's), (Start: 2 @106211 has 22 MA's), (5, 106160), (9, 106133), (11, 106121), (12, 106085),

Gene: Kalah2\_218 Start: 107008, Stop: 106850, Start Num: 1  
Candidate Starts for Kalah2\_218:  
(Start: 1 @107008 has 18 MA's), (Start: 2 @107002 has 22 MA's), (5, 106951), (9, 106924), (11, 106912), (12, 106876),

Gene: KashFlow\_210 Start: 104600, Stop: 104442, Start Num: 1  
Candidate Starts for KashFlow\_210:  
(Start: 1 @104600 has 18 MA's), (Start: 2 @104594 has 22 MA's), (5, 104543), (9, 104516), (11, 104504), (12, 104468),

Gene: Klein\_224 Start: 105426, Stop: 105274, Start Num: 2  
Candidate Starts for Klein\_224:  
(Start: 2 @105426 has 22 MA's), (5, 105375), (8, 105357), (9, 105348), (11, 105336),

Gene: LittleE\_218 Start: 105198, Stop: 105040, Start Num: 1  
Candidate Starts for LittleE\_218:  
(Start: 1 @105198 has 18 MA's), (Start: 2 @105192 has 22 MA's), (5, 105141), (9, 105114), (11, 105102), (12, 105066),

Gene: Lucky2013\_213 Start: 101653, Stop: 101501, Start Num: 2  
Candidate Starts for Lucky2013\_213:  
(Start: 1 @101659 has 18 MA's), (Start: 2 @101653 has 22 MA's), (5, 101602), (9, 101575), (11, 101563), (12, 101527),

Gene: Marleymoo\_201 Start: 103184, Stop: 103032, Start Num: 2  
Candidate Starts for Marleymoo\_201:  
(Start: 1 @103190 has 18 MA's), (Start: 2 @103184 has 22 MA's), (5, 103133), (9, 103106), (11, 103094), (12, 103058),

Gene: MiaZeal\_225 Start: 103798, Stop: 103640, Start Num: 1  
Candidate Starts for MiaZeal\_225:  
(Start: 1 @103798 has 18 MA's), (Start: 2 @103792 has 22 MA's), (5, 103741), (9, 103714), (11, 103702), (12, 103666),

Gene: Minerva\_215 Start: 103506, Stop: 103354, Start Num: 2  
Candidate Starts for Minerva\_215:  
(Start: 1 @103512 has 18 MA's), (Start: 2 @103506 has 22 MA's), (5, 103455), (9, 103428), (11, 103416), (12, 103380),

Gene: Nanosmite\_150 Start: 73377, Stop: 73264, Start Num: 4  
Candidate Starts for Nanosmite\_150:  
(3, 73380), (Start: 4 @73377 has 1 MA's), (8, 73353),

Gene: Nekros\_219 Start: 105598, Stop: 105446, Start Num: 2  
Candidate Starts for Nekros\_219:  
(Start: 1 @105604 has 18 MA's), (Start: 2 @105598 has 22 MA's), (5, 105547), (7, 105535), (9, 105520), (11, 105508), (12, 105472),

Gene: Nibley\_208 Start: 100891, Stop: 100739, Start Num: 2

Candidate Starts for Nibley\_208:

(Start: 1 @100897 has 18 MA's), (Start: 2 @100891 has 22 MA's), (5, 100840), (9, 100813), (11, 100801), (12, 100765),

Gene: NihilNomen\_220 Start: 104461, Stop: 104309, Start Num: 2

Candidate Starts for NihilNomen\_220:

(Start: 1 @104467 has 18 MA's), (Start: 2 @104461 has 22 MA's), (5, 104410), (9, 104383), (11, 104371), (12, 104335),

Gene: Odette\_219 Start: 106351, Stop: 106199, Start Num: 2

Candidate Starts for Odette\_219:

(Start: 1 @106357 has 18 MA's), (Start: 2 @106351 has 22 MA's), (5, 106300), (9, 106273), (11, 106261), (12, 106225),

Gene: Omega\_220 Start: 105996, Stop: 105838, Start Num: 1

Candidate Starts for Omega\_220:

(Start: 1 @105996 has 18 MA's), (Start: 2 @105990 has 22 MA's), (5, 105939), (9, 105912), (11, 105900), (12, 105864),

Gene: Optimus\_213 Start: 104768, Stop: 104616, Start Num: 2

Candidate Starts for Optimus\_213:

(Start: 1 @104774 has 18 MA's), (Start: 2 @104768 has 22 MA's), (5, 104717), (9, 104690), (11, 104678), (12, 104642),

Gene: Phoebus\_216 Start: 107712, Stop: 107560, Start Num: 2

Candidate Starts for Phoebus\_216:

(Start: 1 @107718 has 18 MA's), (Start: 2 @107712 has 22 MA's), (5, 107661), (9, 107634), (11, 107622), (12, 107586),

Gene: Porcelain\_216 Start: 102606, Stop: 102448, Start Num: 1

Candidate Starts for Porcelain\_216:

(Start: 1 @102606 has 18 MA's), (Start: 2 @102600 has 22 MA's), (5, 102549), (9, 102522), (11, 102510), (12, 102474),

Gene: Pound\_207 Start: 103700, Stop: 103542, Start Num: 1

Candidate Starts for Pound\_207:

(Start: 1 @103700 has 18 MA's), (Start: 2 @103694 has 22 MA's), (5, 103643), (9, 103616), (11, 103604), (12, 103568),

Gene: Rearden\_216 Start: 103029, Stop: 102877, Start Num: 2

Candidate Starts for Rearden\_216:

(Start: 1 @103035 has 18 MA's), (Start: 2 @103029 has 22 MA's), (5, 102978), (9, 102951), (11, 102939), (12, 102903),

Gene: Redno2\_209 Start: 102101, Stop: 101949, Start Num: 2

Candidate Starts for Redno2\_209:

(Start: 1 @102107 has 18 MA's), (Start: 2 @102101 has 22 MA's), (5, 102050), (9, 102023), (11, 102011), (12, 101975),

Gene: Shaboozey\_216 Start: 102162, Stop: 102010, Start Num: 2

Candidate Starts for Shaboozey\_216:

(Start: 1 @102168 has 18 MA's), (Start: 2 @102162 has 22 MA's), (5, 102111), (7, 102099), (9, 102084), (11, 102072), (12, 102036),

Gene: Squint\_215 Start: 103152, Stop: 103000, Start Num: 2

Candidate Starts for Squint\_215:

(Start: 1 @103158 has 18 MA's), (Start: 2 @103152 has 22 MA's), (5, 103101), (9, 103074), (11, 103062), (12, 103026),

Gene: Stellammi\_177 Start: 79317, Stop: 79165, Start Num: 2

Candidate Starts for Stellammi\_177:

(Start: 2 @79317 has 22 MA's), (6, 79257), (10, 79236),

Gene: Superphikiman\_217 Start: 103216, Stop: 103064, Start Num: 2

Candidate Starts for Superphikiman\_217:

(Start: 1 @103222 has 18 MA's), (Start: 2 @103216 has 22 MA's), (5, 103165), (9, 103138), (11, 103126), (12, 103090),

Gene: Thibault\_192 Start: 100191, Stop: 100033, Start Num: 1

Candidate Starts for Thibault\_192:

(Start: 1 @100191 has 18 MA's), (Start: 2 @100185 has 22 MA's), (5, 100134), (9, 100107), (11, 100095), (12, 100059),

Gene: ThreeRngTarjay\_217 Start: 106705, Stop: 106553, Start Num: 2

Candidate Starts for ThreeRngTarjay\_217:

(Start: 1 @106711 has 18 MA's), (Start: 2 @106705 has 22 MA's), (5, 106654), (9, 106627), (11, 106615), (12, 106579),

Gene: Wanda\_216 Start: 103056, Stop: 102904, Start Num: 2

Candidate Starts for Wanda\_216:

(Start: 2 @103056 has 22 MA's), (5, 103005), (8, 102987), (9, 102978), (11, 102966),

Gene: Xiaokay\_206 Start: 104533, Stop: 104381, Start Num: 2

Candidate Starts for Xiaokay\_206:

(Start: 1 @104539 has 18 MA's), (Start: 2 @104533 has 22 MA's), (5, 104482), (9, 104455), (11, 104443), (12, 104407),

Gene: Yeet\_211 Start: 104306, Stop: 104148, Start Num: 1

Candidate Starts for Yeet\_211:

(Start: 1 @104306 has 18 MA's), (Start: 2 @104300 has 22 MA's), (5, 104249), (9, 104222), (11, 104210), (12, 104174),

Gene: Zelink\_210 Start: 104438, Stop: 104286, Start Num: 2

Candidate Starts for Zelink\_210:

(Start: 1 @104444 has 18 MA's), (Start: 2 @104438 has 22 MA's), (5, 104387), (9, 104360), (11, 104348), (12, 104312),