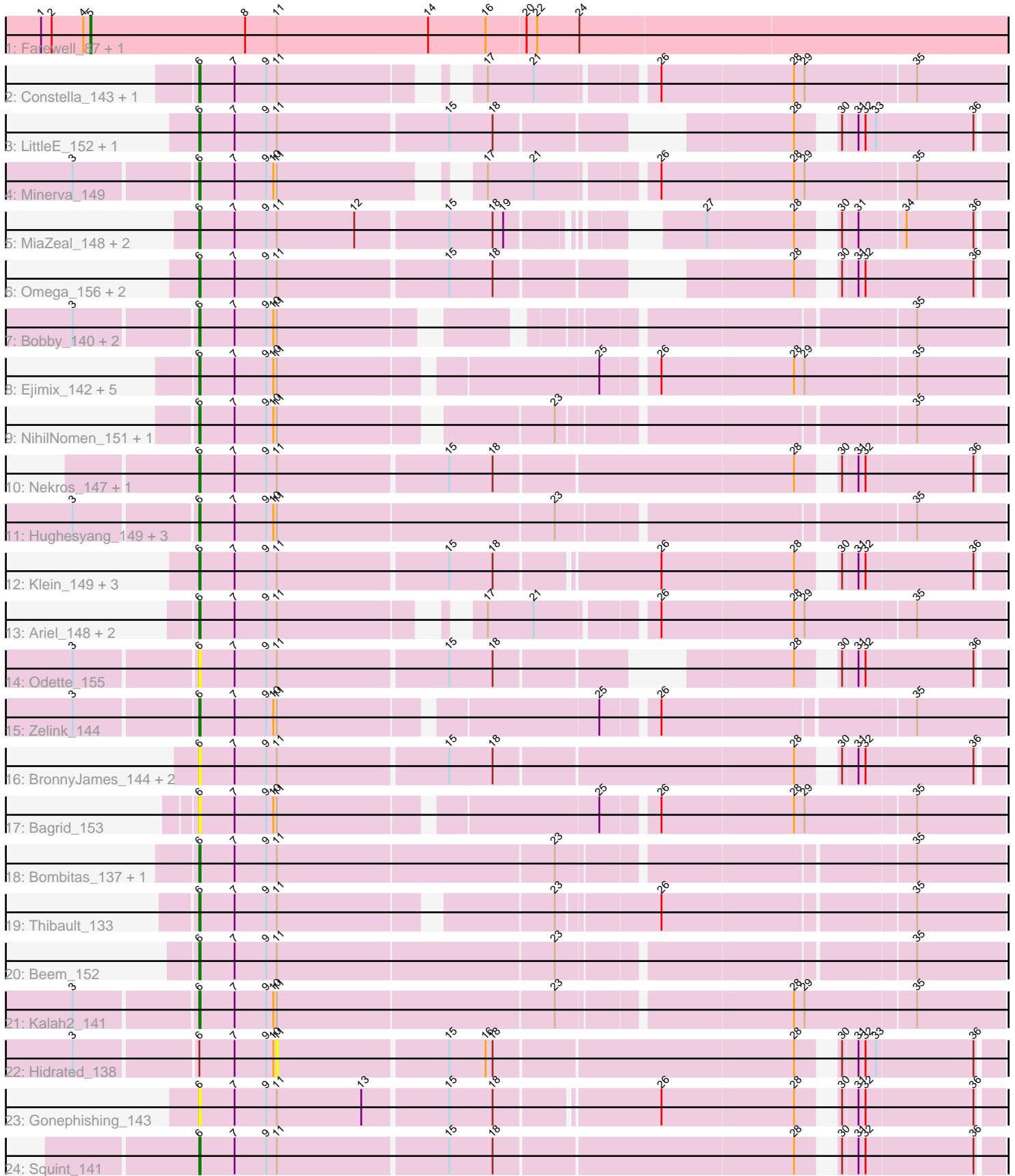


Pham 296652



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 296652 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296652 has 51 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Farewell\_87, Sparky\_86
- Track 2 : Constella\_143, Yeet\_143
- Track 3 : LittleE\_152, HokkenD\_144
- Track 4 : Minerva\_149
- Track 5 : MiaZeal\_148, Porcelain\_145, Lucky2013\_141
- Track 6 : Omega\_156, Optimus\_143, Hannaconda\_143
- Track 7 : Bobby\_140, Marleymoo\_135, Wanda\_149
- Track 8 : Ejimix\_142, DmpstrDiver\_150, Halley\_151, Dallas\_150, Pound\_141, Schatzie\_145
- Track 9 : NihilNomen\_151, Redno2\_144
- Track 10 : Nekros\_147, KashFlow\_149
- Track 11 : Hughesyang\_149, Phoebus\_150, Dove\_136, ThreeRngTarjay\_145
- Track 12 : Klein\_149, EricMillard\_144, BAKA\_152, Duke13\_148
- Track 13 : Ariel\_148, Courthouse\_144, Superphikiman\_146
- Track 14 : Odette\_155
- Track 15 : Zelink\_144
- Track 16 : BronnyJames\_144, Nibley\_143, Shaboozey\_147
- Track 17 : Bagrid\_153
- Track 18 : Bombitas\_137, JuicyJay\_145
- Track 19 : Thibault\_133
- Track 20 : Beem\_152
- Track 21 : Kalah2\_141
- Track 22 : Hidrated\_138
- Track 23 : Gonephishing\_143
- Track 24 : Squint\_141

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

The start number called the most often in the published annotations is 6, it was called in 40 of the 42 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel\_148, BAKA\_152, Bagrid\_153, Beem\_152, Bobby\_140, Bombitas\_137, BronnyJames\_144, Constella\_143, Courthouse\_144, Dallas\_150, DmpstrDiver\_150,

Dove\_136, Duke13\_148, Ejimix\_142, EricMillard\_144, Gonephishing\_143, Halley\_151, Hannaconda\_143, HokkenD\_144, Hughesyang\_149, JuicyJay\_145, Kalah2\_141, KashFlow\_149, Klein\_149, LittleE\_152, Lucky2013\_141, Marleymoo\_135, MiaZeal\_148, Minerva\_149, Nekros\_147, Nibley\_143, NihilNomen\_151, Odette\_155, Omega\_156, Optimus\_143, Phoebus\_150, Porcelain\_145, Pound\_141, Redno2\_144, Schatzie\_145, Shaboozey\_147, Squint\_141, Superphikiman\_146, Thibault\_133, ThreeRngTarjay\_145, Wanda\_149, Yeet\_143, Zelink\_144,

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

- Hidrated\_138,

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

- Farewell\_87, Sparky\_86,

### Summary by start number:

Start 5:

- Found in 2 of 51 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 2 of 42
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell\_87 (AF), Sparky\_86 (AF),

Start 6:

- Found in 49 of 51 ( 96.1% ) of genes in pham
- Manual Annotations of this start: 40 of 42
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Ariel\_148 (J), BAKA\_152 (J), Bagrid\_153 (J), Beem\_152 (J), Bobby\_140 (J), Bombitas\_137 (J), BronnyJames\_144 (J), Constella\_143 (J), Courthouse\_144 (J), Dallas\_150 (J), DmpstrDiver\_150 (J), Dove\_136 (J), Duke13\_148 (J), Ejimix\_142 (J), EricMillard\_144 (J), Gonephishing\_143 (J), Halley\_151 (J), Hannaconda\_143 (J), HokkenD\_144 (J), Hughesyang\_149 (J), JuicyJay\_145 (J), Kalah2\_141 (J), KashFlow\_149 (J), Klein\_149 (J), LittleE\_152 (J), Lucky2013\_141 (J), Marleymoo\_135 (J), MiaZeal\_148 (J), Minerva\_149 (J), Nekros\_147 (J), Nibley\_143 (J), NihilNomen\_151 (J), Odette\_155 (J), Omega\_156 (J), Optimus\_143 (J), Phoebus\_150 (J), Porcelain\_145 (J), Pound\_141 (J), Redno2\_144 (J), Schatzie\_145 (J), Shaboozey\_147 (J), Squint\_141 (J), Superphikiman\_146 (J), Thibault\_133 (J), ThreeRngTarjay\_145 (J), Wanda\_149 (J), Yeet\_143 (J), Zelink\_144 (J),

Start 11:

- Found in 51 of 51 ( 100.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.0% of time when present
- Phage (with cluster) where this start called: Hidrated\_138 (J),

### Summary by clusters:

There are 2 clusters represented in this pham: J, AF,

Info for manual annotations of cluster AF:

- Start number 5 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster J:

•Start number 6 was manually annotated 40 times for cluster J.

**Gene Information:**

Gene: Ariel\_148 Start: 76053, Stop: 76664, Start Num: 6

Candidate Starts for Ariel\_148:

(Start: 6 @76053 has 40 MA's), (7, 76083), (9, 76110), (11, 76119), (17, 76251), (21, 76290), (26, 76380), (28, 76491), (29, 76500), (35, 76590),

Gene: BAKA\_152 Start: 80701, Stop: 81333, Start Num: 6

Candidate Starts for BAKA\_152:

(Start: 6 @80701 has 40 MA's), (7, 80731), (9, 80758), (11, 80767), (15, 80908), (18, 80944), (26, 81073), (28, 81184), (30, 81205), (31, 81217), (32, 81223), (36, 81313),

Gene: Bagrid\_153 Start: 81396, Stop: 82040, Start Num: 6

Candidate Starts for Bagrid\_153:

(Start: 6 @81396 has 40 MA's), (7, 81426), (9, 81453), (10, 81459), (11, 81462), (25, 81714), (26, 81756), (28, 81867), (29, 81876), (35, 81966),

Gene: Beem\_152 Start: 80814, Stop: 81461, Start Num: 6

Candidate Starts for Beem\_152:

(Start: 6 @80814 has 40 MA's), (7, 80844), (9, 80871), (11, 80880), (23, 81111), (35, 81387),

Gene: Bobby\_140 Start: 80853, Stop: 81458, Start Num: 6

Candidate Starts for Bobby\_140:

(3, 80754), (Start: 6 @80853 has 40 MA's), (7, 80883), (9, 80910), (10, 80916), (11, 80919), (35, 81384),

Gene: Bombitas\_137 Start: 77667, Stop: 78314, Start Num: 6

Candidate Starts for Bombitas\_137:

(Start: 6 @77667 has 40 MA's), (7, 77697), (9, 77724), (11, 77733), (23, 77964), (35, 78240),

Gene: BronnyJames\_144 Start: 76976, Stop: 77614, Start Num: 6

Candidate Starts for BronnyJames\_144:

(Start: 6 @76976 has 40 MA's), (7, 77006), (9, 77033), (11, 77042), (15, 77183), (18, 77219), (28, 77465), (30, 77486), (31, 77498), (32, 77504), (36, 77594),

Gene: Constella\_143 Start: 78912, Stop: 79523, Start Num: 6

Candidate Starts for Constella\_143:

(Start: 6 @78912 has 40 MA's), (7, 78942), (9, 78969), (11, 78978), (17, 79110), (21, 79149), (26, 79239), (28, 79350), (29, 79359), (35, 79449),

Gene: Courthouse\_144 Start: 75911, Stop: 76522, Start Num: 6

Candidate Starts for Courthouse\_144:

(Start: 6 @75911 has 40 MA's), (7, 75941), (9, 75968), (11, 75977), (17, 76109), (21, 76148), (26, 76238), (28, 76349), (29, 76358), (35, 76448),

Gene: Dallas\_150 Start: 79726, Stop: 80370, Start Num: 6

Candidate Starts for Dallas\_150:

(Start: 6 @79726 has 40 MA's), (7, 79756), (9, 79783), (10, 79789), (11, 79792), (25, 80044), (26, 80086), (28, 80197), (29, 80206), (35, 80296),

Gene: DmpstrDiver\_150 Start: 79645, Stop: 80289, Start Num: 6

Candidate Starts for DmpstrDiver\_150:

(Start: 6 @79645 has 40 MA's), (7, 79675), (9, 79702), (10, 79708), (11, 79711), (25, 79963), (26, 80005), (28, 80116), (29, 80125), (35, 80215),

Gene: Dove\_136 Start: 75830, Stop: 76477, Start Num: 6

Candidate Starts for Dove\_136:

(3, 75731), (Start: 6 @75830 has 40 MA's), (7, 75860), (9, 75887), (10, 75893), (11, 75896), (23, 76127), (35, 76403),

Gene: Duke13\_148 Start: 78986, Stop: 79618, Start Num: 6

Candidate Starts for Duke13\_148:

(Start: 6 @78986 has 40 MA's), (7, 79016), (9, 79043), (11, 79052), (15, 79193), (18, 79229), (26, 79358), (28, 79469), (30, 79490), (31, 79502), (32, 79508), (36, 79598),

Gene: Ejimix\_142 Start: 79794, Stop: 80438, Start Num: 6

Candidate Starts for Ejimix\_142:

(Start: 6 @79794 has 40 MA's), (7, 79824), (9, 79851), (10, 79857), (11, 79860), (25, 80112), (26, 80154), (28, 80265), (29, 80274), (35, 80364),

Gene: EricMillard\_144 Start: 80338, Stop: 80970, Start Num: 6

Candidate Starts for EricMillard\_144:

(Start: 6 @80338 has 40 MA's), (7, 80368), (9, 80395), (11, 80404), (15, 80545), (18, 80581), (26, 80710), (28, 80821), (30, 80842), (31, 80854), (32, 80860), (36, 80950),

Gene: Farewell\_87 Start: 56708, Stop: 57493, Start Num: 5

Candidate Starts for Farewell\_87:

(1, 56666), (2, 56675), (4, 56702), (Start: 5 @56708 has 2 MA's), (8, 56840), (11, 56867), (14, 56996), (16, 57044), (20, 57077), (22, 57086), (24, 57122),

Gene: Gonephishing\_143 Start: 77978, Stop: 78610, Start Num: 6

Candidate Starts for Gonephishing\_143:

(Start: 6 @77978 has 40 MA's), (7, 78008), (9, 78035), (11, 78044), (13, 78116), (15, 78185), (18, 78221), (26, 78350), (28, 78461), (30, 78482), (31, 78494), (32, 78500), (36, 78590),

Gene: Halley\_151 Start: 80110, Stop: 80754, Start Num: 6

Candidate Starts for Halley\_151:

(Start: 6 @80110 has 40 MA's), (7, 80140), (9, 80167), (10, 80173), (11, 80176), (25, 80428), (26, 80470), (28, 80581), (29, 80590), (35, 80680),

Gene: Hannaconda\_143 Start: 78905, Stop: 79543, Start Num: 6

Candidate Starts for Hannaconda\_143:

(Start: 6 @78905 has 40 MA's), (7, 78935), (9, 78962), (11, 78971), (15, 79112), (18, 79148), (28, 79394), (30, 79415), (31, 79427), (32, 79433), (36, 79523),

Gene: Hidrated\_138 Start: 79356, Stop: 79928, Start Num: 11

Candidate Starts for Hidrated\_138:

(3, 79191), (Start: 6 @79290 has 40 MA's), (7, 79320), (9, 79347), (10, 79353), (11, 79356), (15, 79497), (16, 79527), (18, 79533), (28, 79779), (30, 79800), (31, 79812), (32, 79818), (33, 79827), (36, 79908),

Gene: HokkenD\_144 Start: 81241, Stop: 81879, Start Num: 6

Candidate Starts for HokkenD\_144:

(Start: 6 @81241 has 40 MA's), (7, 81271), (9, 81298), (11, 81307), (15, 81448), (18, 81484), (28, 81730), (30, 81751), (31, 81763), (32, 81769), (33, 81778), (36, 81859),

Gene: Hughesyang\_149 Start: 80466, Stop: 81113, Start Num: 6

Candidate Starts for Hughesyang\_149:

(3, 80367), (Start: 6 @80466 has 40 MA's), (7, 80496), (9, 80523), (10, 80529), (11, 80532), (23, 80763), (35, 81039),

Gene: JuicyJay\_145 Start: 81392, Stop: 82039, Start Num: 6

Candidate Starts for JuicyJay\_145:

(Start: 6 @81392 has 40 MA's), (7, 81422), (9, 81449), (11, 81458), (23, 81689), (35, 81965),

Gene: Kalah2\_141 Start: 79587, Stop: 80243, Start Num: 6

Candidate Starts for Kalah2\_141:

(3, 79488), (Start: 6 @79587 has 40 MA's), (7, 79617), (9, 79644), (10, 79650), (11, 79653), (23, 79884), (28, 80070), (29, 80079), (35, 80169),

Gene: KashFlow\_149 Start: 78904, Stop: 79542, Start Num: 6

Candidate Starts for KashFlow\_149:

(Start: 6 @78904 has 40 MA's), (7, 78934), (9, 78961), (11, 78970), (15, 79111), (18, 79147), (28, 79393), (30, 79414), (31, 79426), (32, 79432), (36, 79522),

Gene: Klein\_149 Start: 79476, Stop: 80108, Start Num: 6

Candidate Starts for Klein\_149:

(Start: 6 @79476 has 40 MA's), (7, 79506), (9, 79533), (11, 79542), (15, 79683), (18, 79719), (26, 79848), (28, 79959), (30, 79980), (31, 79992), (32, 79998), (36, 80088),

Gene: LittleE\_152 Start: 80401, Stop: 80988, Start Num: 6

Candidate Starts for LittleE\_152:

(Start: 6 @80401 has 40 MA's), (7, 80431), (9, 80458), (11, 80467), (15, 80608), (18, 80644), (28, 80839), (30, 80860), (31, 80872), (32, 80878), (33, 80887), (36, 80968),

Gene: Lucky2013\_141 Start: 75313, Stop: 75900, Start Num: 6

Candidate Starts for Lucky2013\_141:

(Start: 6 @75313 has 40 MA's), (7, 75343), (9, 75370), (11, 75379), (12, 75445), (15, 75520), (18, 75556), (19, 75565), (27, 75682), (28, 75754), (30, 75775), (31, 75787), (34, 75823), (36, 75880),

Gene: Marleymoo\_135 Start: 76599, Stop: 77204, Start Num: 6

Candidate Starts for Marleymoo\_135:

(3, 76500), (Start: 6 @76599 has 40 MA's), (7, 76629), (9, 76656), (10, 76662), (11, 76665), (35, 77130),

Gene: MiaZeal\_148 Start: 76460, Stop: 77047, Start Num: 6

Candidate Starts for MiaZeal\_148:

(Start: 6 @76460 has 40 MA's), (7, 76490), (9, 76517), (11, 76526), (12, 76592), (15, 76667), (18, 76703), (19, 76712), (27, 76829), (28, 76901), (30, 76922), (31, 76934), (34, 76970), (36, 77027),

Gene: Minerva\_149 Start: 79448, Stop: 80062, Start Num: 6

Candidate Starts for Minerva\_149:

(3, 79349), (Start: 6 @79448 has 40 MA's), (7, 79478), (9, 79505), (10, 79511), (11, 79514), (17, 79649), (21, 79688), (26, 79778), (28, 79889), (29, 79898), (35, 79988),

Gene: Nekros\_147 Start: 79298, Stop: 79936, Start Num: 6

Candidate Starts for Nekros\_147:

(Start: 6 @79298 has 40 MA's), (7, 79328), (9, 79355), (11, 79364), (15, 79505), (18, 79541), (28, 79787), (30, 79808), (31, 79820), (32, 79826), (36, 79916),

Gene: Nibley\_143 Start: 76553, Stop: 77191, Start Num: 6

Candidate Starts for Nibley\_143:

(Start: 6 @76553 has 40 MA's), (7, 76583), (9, 76610), (11, 76619), (15, 76760), (18, 76796), (28, 77042), (30, 77063), (31, 77075), (32, 77081), (36, 77171),

Gene: NihilNomen\_151 Start: 79340, Stop: 79963, Start Num: 6

Candidate Starts for NihilNomen\_151:

(Start: 6 @79340 has 40 MA's), (7, 79370), (9, 79397), (10, 79403), (11, 79406), (23, 79616), (35, 79889),

Gene: Odette\_155 Start: 82069, Stop: 82656, Start Num: 6

Candidate Starts for Odette\_155:

(3, 81970), (Start: 6 @82069 has 40 MA's), (7, 82099), (9, 82126), (11, 82135), (15, 82276), (18, 82312), (28, 82507), (30, 82528), (31, 82540), (32, 82546), (36, 82636),

Gene: Omega\_156 Start: 81565, Stop: 82152, Start Num: 6

Candidate Starts for Omega\_156:

(Start: 6 @81565 has 40 MA's), (7, 81595), (9, 81622), (11, 81631), (15, 81772), (18, 81808), (28, 82003), (30, 82024), (31, 82036), (32, 82042), (36, 82132),

Gene: Optimus\_143 Start: 79074, Stop: 79661, Start Num: 6

Candidate Starts for Optimus\_143:

(Start: 6 @79074 has 40 MA's), (7, 79104), (9, 79131), (11, 79140), (15, 79281), (18, 79317), (28, 79512), (30, 79533), (31, 79545), (32, 79551), (36, 79641),

Gene: Phoebus\_150 Start: 81820, Stop: 82467, Start Num: 6

Candidate Starts for Phoebus\_150:

(3, 81721), (Start: 6 @81820 has 40 MA's), (7, 81850), (9, 81877), (10, 81883), (11, 81886), (23, 82117), (35, 82393),

Gene: Porcelain\_145 Start: 76259, Stop: 76846, Start Num: 6

Candidate Starts for Porcelain\_145:

(Start: 6 @76259 has 40 MA's), (7, 76289), (9, 76316), (11, 76325), (12, 76391), (15, 76466), (18, 76502), (19, 76511), (27, 76628), (28, 76700), (30, 76721), (31, 76733), (34, 76769), (36, 76826),

Gene: Pound\_141 Start: 79053, Stop: 79697, Start Num: 6

Candidate Starts for Pound\_141:

(Start: 6 @79053 has 40 MA's), (7, 79083), (9, 79110), (10, 79116), (11, 79119), (25, 79371), (26, 79413), (28, 79524), (29, 79533), (35, 79623),

Gene: Redno2\_144 Start: 77342, Stop: 77965, Start Num: 6

Candidate Starts for Redno2\_144:

(Start: 6 @77342 has 40 MA's), (7, 77372), (9, 77399), (10, 77405), (11, 77408), (23, 77618), (35, 77891),

Gene: Schatzie\_145 Start: 79902, Stop: 80546, Start Num: 6

Candidate Starts for Schatzie\_145:

(Start: 6 @79902 has 40 MA's), (7, 79932), (9, 79959), (10, 79965), (11, 79968), (25, 80220), (26, 80262), (28, 80373), (29, 80382), (35, 80472),

Gene: Shaboozey\_147 Start: 76997, Stop: 77635, Start Num: 6

Candidate Starts for Shaboozey\_147:

(Start: 6 @76997 has 40 MA's), (7, 77027), (9, 77054), (11, 77063), (15, 77204), (18, 77240), (28, 77486), (30, 77507), (31, 77519), (32, 77525), (36, 77615),

Gene: Sparky\_86 Start: 58302, Stop: 59087, Start Num: 5

Candidate Starts for Sparky\_86:

(1, 58260), (2, 58269), (4, 58296), (Start: 5 @58302 has 2 MA's), (8, 58434), (11, 58461), (14, 58590), (16, 58638), (20, 58671), (22, 58680), (24, 58716),

Gene: Squint\_141 Start: 75693, Stop: 76331, Start Num: 6

Candidate Starts for Squint\_141:

(Start: 6 @75693 has 40 MA's), (7, 75723), (9, 75750), (11, 75759), (15, 75900), (18, 75936), (28, 76182), (30, 76203), (31, 76215), (32, 76221), (36, 76311),

Gene: Superphikiman\_146 Start: 76193, Stop: 76804, Start Num: 6

Candidate Starts for Superphikiman\_146:

(Start: 6 @76193 has 40 MA's), (7, 76223), (9, 76250), (11, 76259), (17, 76391), (21, 76430), (26, 76520), (28, 76631), (29, 76640), (35, 76730),

Gene: Thibault\_133 Start: 76788, Stop: 77420, Start Num: 6

Candidate Starts for Thibault\_133:

(Start: 6 @76788 has 40 MA's), (7, 76818), (9, 76845), (11, 76854), (23, 77064), (26, 77145), (35, 77346),

Gene: ThreeRngTarjay\_145 Start: 80411, Stop: 81058, Start Num: 6

Candidate Starts for ThreeRngTarjay\_145:

(3, 80312), (Start: 6 @80411 has 40 MA's), (7, 80441), (9, 80468), (10, 80474), (11, 80477), (23, 80708), (35, 80984),

Gene: Wanda\_149 Start: 77928, Stop: 78533, Start Num: 6

Candidate Starts for Wanda\_149:

(3, 77829), (Start: 6 @77928 has 40 MA's), (7, 77958), (9, 77985), (10, 77991), (11, 77994), (35, 78459),

Gene: Yeet\_143 Start: 79298, Stop: 79909, Start Num: 6

Candidate Starts for Yeet\_143:

(Start: 6 @79298 has 40 MA's), (7, 79328), (9, 79355), (11, 79364), (17, 79496), (21, 79535), (26, 79625), (28, 79736), (29, 79745), (35, 79835),

Gene: Zelink\_144 Start: 80740, Stop: 81375, Start Num: 6

Candidate Starts for Zelink\_144:

(3, 80641), (Start: 6 @80740 has 40 MA's), (7, 80770), (9, 80797), (10, 80803), (11, 80806), (25, 81058), (26, 81100), (35, 81301),