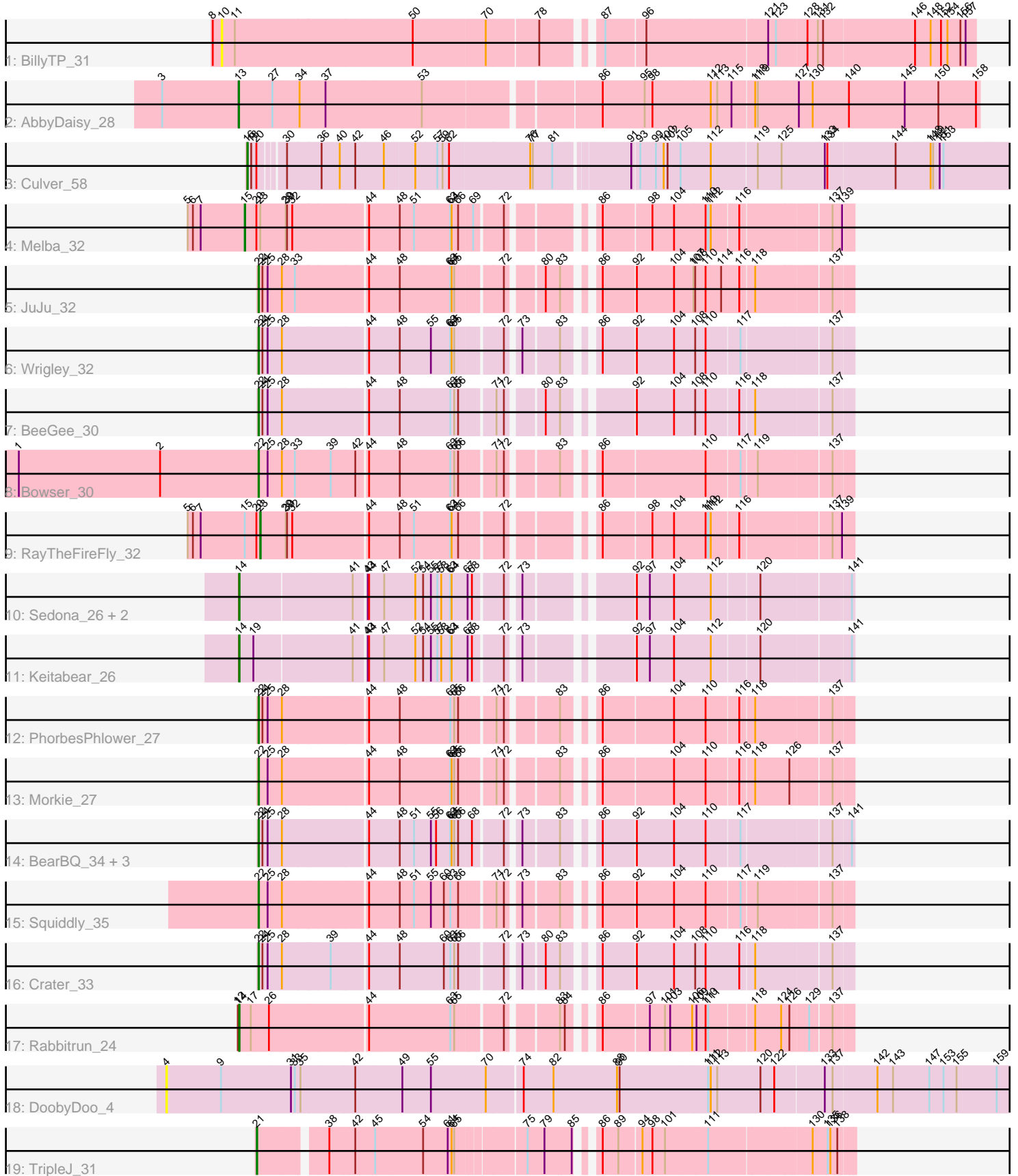


Pham 162131



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 162131 Report

This analysis was run 04/28/24 on database version 559.

Pham number 162131 has 24 members, 2 are drafts.

Phages represented in each track:

- Track 1 : BillyTP\_31
- Track 2 : AbbyDaisy\_28
- Track 3 : Culver\_58
- Track 4 : Melba\_32
- Track 5 : JuJu\_32
- Track 6 : Wrigley\_32
- Track 7 : BeeGee\_30
- Track 8 : Bowser\_30
- Track 9 : RayTheFireFly\_32
- Track 10 : Sedona\_26, Bibwit\_25, Stultus\_24
- Track 11 : Keitabear\_26
- Track 12 : PhorbesPhlower\_27
- Track 13 : Morkie\_27
- Track 14 : BearBQ\_34, Lutum\_35, Kenna\_34, Apricot\_34
- Track 15 : Squiddly\_35
- Track 16 : Crater\_33
- Track 17 : Rabbitrun\_24
- Track 18 : DoobyDoo\_4
- Track 19 : TripleJ\_31

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

The start number called the most often in the published annotations is 22, it was called in 12 of the 22 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Apricot\_34, BearBQ\_34, BeeGee\_30, Bowser\_30, Crater\_33, JuJu\_32, Kenna\_34, Lutum\_35, Morkie\_27, PhorbesPhlower\_27, Squiddly\_35, Wrigley\_32,

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

- 

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

- AbbyDaisy\_28, Bibwit\_25, BillyTP\_31, Culver\_58, DoobyDoo\_4, Keitabear\_26, Melba\_32, Rabbitrun\_24, RayTheFireFly\_32, Sedona\_26, Stultus\_24, TripleJ\_31,

### Summary by start number:

#### Start 4:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DoobyDoo\_4 (DV),

#### Start 10:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BillyTP\_31 (AY),

#### Start 13:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy\_28 (AY),

#### Start 14:

- Found in 5 of 24 ( 20.8% ) of genes in pham
- Manual Annotations of this start: 5 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bibwit\_25 (DE1), Keitabear\_26 (DE1), Rabbitrun\_24 (DU2), Sedona\_26 (DE1), Stultus\_24 (DE1),

#### Start 15:

- Found in 2 of 24 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Melba\_32 (CV),

#### Start 16:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Culver\_58 (CQ1),

#### Start 21:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TripleJ\_31 (FJ),

#### Start 22:

- Found in 12 of 24 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 12 of 22
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Apricot\_34 (DN3), BearBQ\_34 (DN), BeeGee\_30 (CY), Bowser\_30 (DB), Crater\_33 (DN3), JuJu\_32 (CV), Kenna\_34 (DN1), Lutum\_35 (DN1), Morkie\_27 (DH), PhorbesPhlower\_27 (DH), Squiddly\_35 (DN2), Wrigley\_32 (CY),

Start 23:

- Found in 2 of 24 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 1 of 22
- Called 50.0% of time when present
- Phage (with cluster) where this start called: RayTheFireFly\_32 (DB),

### **Summary by clusters:**

There are 14 clusters represented in this pham: DN, DH, DE1, DB, CV, DV, CY, DN1, DN3, DN2, AY, FJ, DU2, CQ1,

Info for manual annotations of cluster AY:

- Start number 13 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster CQ1:

- Start number 16 was manually annotated 1 time for cluster CQ1.

Info for manual annotations of cluster CV:

- Start number 15 was manually annotated 1 time for cluster CV.
- Start number 22 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY:

- Start number 22 was manually annotated 2 times for cluster CY.

Info for manual annotations of cluster DB:

- Start number 22 was manually annotated 1 time for cluster DB.
- Start number 23 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DE1:

- Start number 14 was manually annotated 4 times for cluster DE1.

Info for manual annotations of cluster DH:

- Start number 22 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DN:

- Start number 22 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 22 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 22 was manually annotated 1 time for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 22 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DU2:

- Start number 14 was manually annotated 1 time for cluster DU2.

Info for manual annotations of cluster FJ:

•Start number 21 was manually annotated 1 time for cluster FJ.

**Gene Information:**

Gene: AbbyDaisy\_28 Start: 20899, Stop: 22527, Start Num: 13

Candidate Starts for AbbyDaisy\_28:

(3, 20722), (Start: 13 @20899 has 1 MA's), (27, 20977), (34, 21037), (37, 21097), (53, 21316), (86, 21685), (95, 21781), (98, 21799), (112, 21928), (113, 21943), (115, 21976), (118, 22018), (119, 22024), (127, 22111), (130, 22141), (140, 22225), (145, 22354), (150, 22432), (158, 22519),

Gene: Apricot\_34 Start: 26509, Stop: 27699, Start Num: 22

Candidate Starts for Apricot\_34:

(Start: 22 @26509 has 12 MA's), (24, 26518), (25, 26530), (28, 26557), (44, 26740), (48, 26806), (51, 26839), (55, 26875), (56, 26887), (63, 26920), (64, 26923), (65, 26929), (66, 26938), (68, 26965), (72, 27025), (73, 27049), (83, 27124), (86, 27175), (92, 27247), (104, 27331), (110, 27400), (117, 27475), (137, 27658), (141, 27694),

Gene: BearBQ\_34 Start: 27736, Stop: 28926, Start Num: 22

Candidate Starts for BearBQ\_34:

(Start: 22 @27736 has 12 MA's), (24, 27745), (25, 27757), (28, 27784), (44, 27967), (48, 28033), (51, 28066), (55, 28102), (56, 28114), (63, 28147), (64, 28150), (65, 28156), (66, 28165), (68, 28192), (72, 28252), (73, 28276), (83, 28351), (86, 28402), (92, 28474), (104, 28558), (110, 28627), (117, 28702), (137, 28885), (141, 28921),

Gene: BeeGee\_30 Start: 25229, Stop: 26419, Start Num: 22

Candidate Starts for BeeGee\_30:

(Start: 22 @25229 has 12 MA's), (24, 25238), (25, 25250), (28, 25277), (44, 25460), (48, 25526), (63, 25640), (65, 25649), (66, 25658), (71, 25730), (72, 25745), (80, 25814), (83, 25844), (92, 25967), (104, 26051), (108, 26096), (110, 26120), (116, 26192), (118, 26219), (137, 26378),

Gene: Bibwit\_25 Start: 19805, Stop: 21040, Start Num: 14

Candidate Starts for Bibwit\_25:

(Start: 14 @19805 has 5 MA's), (41, 20051), (43, 20075), (44, 20078), (47, 20108), (52, 20180), (54, 20198), (55, 20213), (57, 20228), (58, 20237), (63, 20258), (64, 20261), (67, 20294), (68, 20303), (72, 20363), (73, 20387), (92, 20588), (97, 20618), (104, 20672), (112, 20753), (120, 20852), (141, 21035),

Gene: BillyTP\_31 Start: 21164, Stop: 22786, Start Num: 10

Candidate Starts for BillyTP\_31:

(8, 21143), (10, 21164), (11, 21194), (50, 21596), (70, 21755), (78, 21869), (87, 21974), (96, 22061), (121, 22328), (123, 22346), (128, 22412), (131, 22433), (132, 22442), (146, 22649), (148, 22682), (152, 22706), (154, 22721), (156, 22751), (157, 22763),

Gene: Bowser\_30 Start: 24790, Stop: 25980, Start Num: 22

Candidate Starts for Bowser\_30:

(1, 24235), (2, 24562), (Start: 22 @24790 has 12 MA's), (25, 24811), (28, 24838), (33, 24868), (39, 24946), (42, 25000), (44, 25021), (48, 25087), (63, 25201), (65, 25210), (66, 25219), (71, 25291), (72, 25306), (83, 25405), (86, 25456), (110, 25681), (117, 25756), (119, 25786), (137, 25939),

Gene: Crater\_33 Start: 26484, Stop: 27677, Start Num: 22

Candidate Starts for Crater\_33:

(Start: 22 @26484 has 12 MA's), (24, 26493), (25, 26505), (28, 26532), (39, 26640), (44, 26715), (48, 26781), (60, 26880), (63, 26895), (65, 26904), (66, 26913), (72, 27000), (73, 27024), (80, 27069), (83, 27099), (86, 27150), (92, 27222), (104, 27306), (108, 27351), (110, 27375), (116, 27450), (118, 27477), (137, 27636),

Gene: Culver\_58 Start: 35790, Stop: 37457, Start Num: 16

Candidate Starts for Culver\_58:

(Start: 16 @35790 has 1 MA's), (18, 35799), (20, 35811), (30, 35859), (36, 35934), (40, 35976), (42, 36009), (46, 36075), (52, 36144), (57, 36195), (59, 36207), (62, 36222), (76, 36405), (77, 36411), (81, 36453), (91, 36609), (93, 36624), (99, 36660), (100, 36678), (102, 36687), (105, 36717), (112, 36786), (119, 36888), (125, 36939), (133, 37038), (134, 37044), (144, 37197), (148, 37272), (149, 37278), (151, 37293), (153, 37302),

Gene: DoobyDoo\_4 Start: 3407, Stop: 5302, Start Num: 4

Candidate Starts for DoobyDoo\_4:

(4, 3407), (9, 3533), (31, 3692), (33, 3701), (35, 3713), (42, 3833), (49, 3938), (55, 4004), (70, 4127), (74, 4202), (82, 4268), (88, 4415), (90, 4421), (111, 4622), (112, 4628), (113, 4643), (120, 4742), (122, 4772), (133, 4880), (137, 4898), (142, 4997), (143, 5033), (147, 5114), (153, 5147), (155, 5177), (159, 5270),

Gene: JuJu\_32 Start: 26098, Stop: 27291, Start Num: 22

Candidate Starts for JuJu\_32:

(Start: 22 @26098 has 12 MA's), (24, 26107), (25, 26119), (28, 26146), (33, 26176), (44, 26329), (48, 26395), (63, 26509), (64, 26512), (65, 26518), (72, 26614), (80, 26683), (83, 26713), (86, 26764), (92, 26836), (104, 26920), (107, 26962), (108, 26965), (110, 26989), (114, 27025), (116, 27064), (118, 27091), (137, 27250),

Gene: Keitabear\_26 Start: 21513, Stop: 22748, Start Num: 14

Candidate Starts for Keitabear\_26:

(Start: 14 @21513 has 5 MA's), (19, 21546), (41, 21759), (43, 21783), (44, 21786), (47, 21816), (52, 21888), (54, 21906), (55, 21921), (57, 21936), (58, 21945), (63, 21966), (64, 21969), (67, 22002), (68, 22011), (72, 22071), (73, 22095), (92, 22296), (97, 22326), (104, 22380), (112, 22461), (120, 22560), (141, 22743),

Gene: Kenna\_34 Start: 27113, Stop: 28303, Start Num: 22

Candidate Starts for Kenna\_34:

(Start: 22 @27113 has 12 MA's), (24, 27122), (25, 27134), (28, 27161), (44, 27344), (48, 27410), (51, 27443), (55, 27479), (56, 27491), (63, 27524), (64, 27527), (65, 27533), (66, 27542), (68, 27569), (72, 27629), (73, 27653), (83, 27728), (86, 27779), (92, 27851), (104, 27935), (110, 28004), (117, 28079), (137, 28262), (141, 28298),

Gene: Lutum\_35 Start: 27113, Stop: 28303, Start Num: 22

Candidate Starts for Lutum\_35:

(Start: 22 @27113 has 12 MA's), (24, 27122), (25, 27134), (28, 27161), (44, 27344), (48, 27410), (51, 27443), (55, 27479), (56, 27491), (63, 27524), (64, 27527), (65, 27533), (66, 27542), (68, 27569), (72, 27629), (73, 27653), (83, 27728), (86, 27779), (92, 27851), (104, 27935), (110, 28004), (117, 28079), (137, 28262), (141, 28298),

Gene: Melba\_32 Start: 26502, Stop: 27728, Start Num: 15

Candidate Starts for Melba\_32:

(5, 26370), (6, 26382), (7, 26400), (Start: 15 @26502 has 1 MA's), (20, 26529), (Start: 23 @26538 has 1 MA's), (29, 26595), (30, 26598), (32, 26610), (44, 26769), (48, 26835), (51, 26868), (63, 26949), (64, 26952), (66, 26967), (69, 26997), (72, 27054), (86, 27204), (98, 27312), (104, 27360), (110, 27429), (111, 27435), (112, 27441), (116, 27501), (137, 27687), (139, 27705),

Gene: Morkie\_27 Start: 22599, Stop: 23789, Start Num: 22

Candidate Starts for Morkie\_27:

(Start: 22 @22599 has 12 MA's), (25, 22620), (28, 22647), (44, 22830), (48, 22896), (63, 23010), (64, 23013), (65, 23019), (66, 23028), (71, 23100), (72, 23115), (83, 23214), (86, 23265), (104, 23421), (110, 23490), (116, 23562), (118, 23589), (126, 23664), (137, 23748),

Gene: PhorbesPhlower\_27 Start: 22599, Stop: 23789, Start Num: 22

Candidate Starts for PhorbesPhlower\_27:

(Start: 22 @22599 has 12 MA's), (24, 22608), (25, 22620), (28, 22647), (44, 22830), (48, 22896), (63, 23010), (65, 23019), (66, 23028), (71, 23100), (72, 23115), (83, 23214), (86, 23265), (104, 23421), (110, 23490), (116, 23562), (118, 23589), (137, 23748),

Gene: Rabbitrun\_24 Start: 13450, Stop: 14688, Start Num: 14

Candidate Starts for Rabbitrun\_24:

(12, 13447), (Start: 14 @13450 has 5 MA's), (17, 13477), (26, 13519), (44, 13729), (63, 13909), (65, 13918), (72, 14014), (83, 14113), (84, 14122), (86, 14164), (97, 14266), (101, 14299), (103, 14311), (106, 14359), (109, 14368), (110, 14389), (111, 14395), (118, 14488), (124, 14545), (126, 14563), (129, 14602), (137, 14647),

Gene: RayTheFireFly\_32 Start: 26526, Stop: 27716, Start Num: 23

Candidate Starts for RayTheFireFly\_32:

(5, 26358), (6, 26370), (7, 26388), (Start: 15 @26490 has 1 MA's), (20, 26517), (Start: 23 @26526 has 1 MA's), (29, 26583), (30, 26586), (32, 26598), (44, 26757), (48, 26823), (51, 26856), (63, 26937), (64, 26940), (66, 26955), (72, 27042), (86, 27192), (98, 27300), (104, 27348), (110, 27417), (111, 27423), (112, 27429), (116, 27489), (137, 27675), (139, 27693),

Gene: Sedona\_26 Start: 21245, Stop: 22480, Start Num: 14

Candidate Starts for Sedona\_26:

(Start: 14 @21245 has 5 MA's), (41, 21491), (43, 21515), (44, 21518), (47, 21548), (52, 21620), (54, 21638), (55, 21653), (57, 21668), (58, 21677), (63, 21698), (64, 21701), (67, 21734), (68, 21743), (72, 21803), (73, 21827), (92, 22028), (97, 22058), (104, 22112), (112, 22193), (120, 22292), (141, 22475),

Gene: Squiddly\_35 Start: 26868, Stop: 28058, Start Num: 22

Candidate Starts for Squiddly\_35:

(Start: 22 @26868 has 12 MA's), (25, 26889), (28, 26916), (44, 27099), (48, 27165), (51, 27198), (55, 27234), (60, 27264), (63, 27279), (66, 27297), (71, 27369), (72, 27384), (73, 27408), (83, 27483), (86, 27534), (92, 27606), (104, 27690), (110, 27759), (117, 27834), (119, 27864), (137, 28017),

Gene: Stultus\_24 Start: 19224, Stop: 20459, Start Num: 14

Candidate Starts for Stultus\_24:

(Start: 14 @19224 has 5 MA's), (41, 19470), (43, 19494), (44, 19497), (47, 19527), (52, 19599), (54, 19617), (55, 19632), (57, 19647), (58, 19656), (63, 19677), (64, 19680), (67, 19713), (68, 19722), (72, 19782), (73, 19806), (92, 20007), (97, 20037), (104, 20091), (112, 20172), (120, 20271), (141, 20454),

Gene: TripleJ\_31 Start: 23130, Stop: 24341, Start Num: 21

Candidate Starts for TripleJ\_31:

(Start: 21 @23130 has 1 MA's), (38, 23265), (42, 23322), (45, 23364), (54, 23472), (61, 23526), (64, 23535), (65, 23541), (75, 23685), (79, 23724), (85, 23784), (86, 23808), (89, 23844), (94, 23892), (98,

23910), (101, 23937), (111, 24033), (130, 24255), (135, 24285), (136, 24291), (138, 24306),

Gene: Wrigley\_32 Start: 26121, Stop: 27311, Start Num: 22

Candidate Starts for Wrigley\_32:

(Start: 22 @26121 has 12 MA's), (24, 26130), (25, 26142), (28, 26169), (44, 26352), (48, 26418), (55, 26487), (63, 26532), (64, 26535), (65, 26541), (72, 26637), (73, 26661), (83, 26736), (86, 26787), (92, 26859), (104, 26943), (108, 26988), (110, 27012), (117, 27087), (137, 27270),