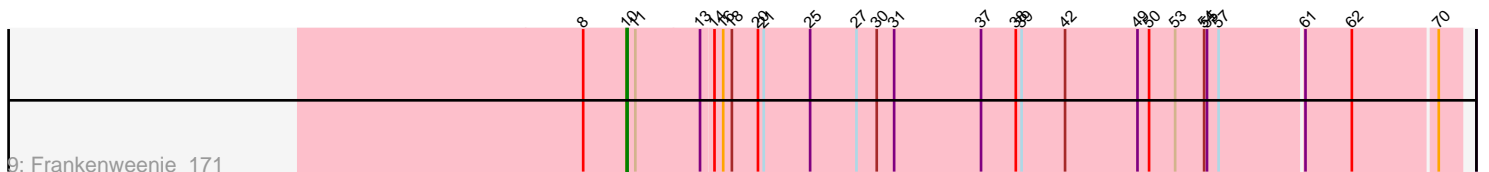
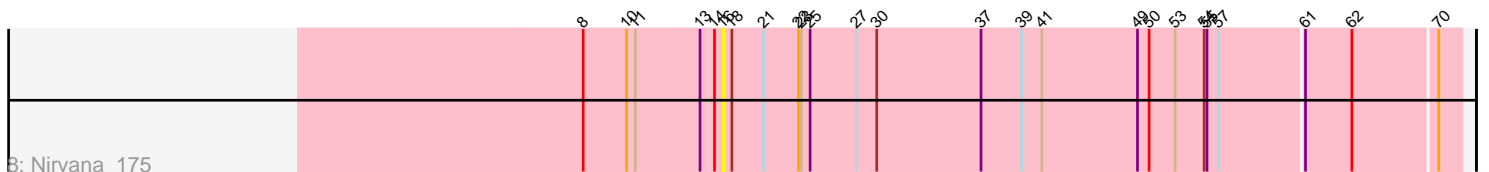
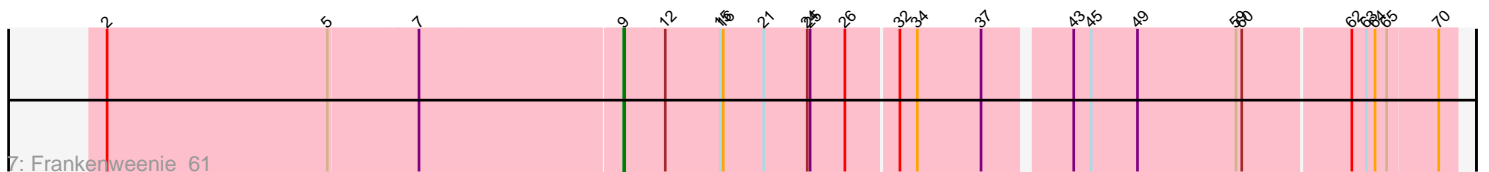
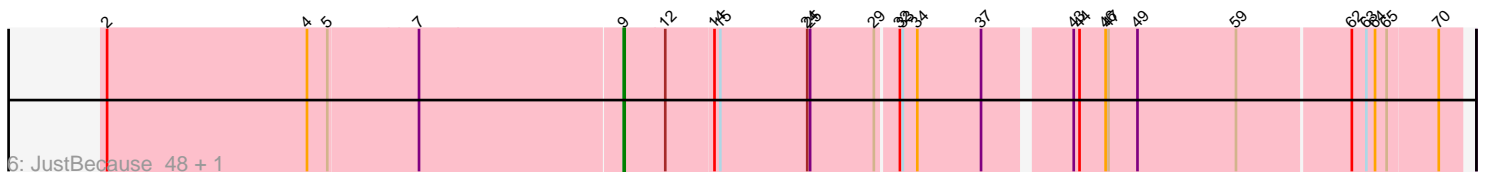
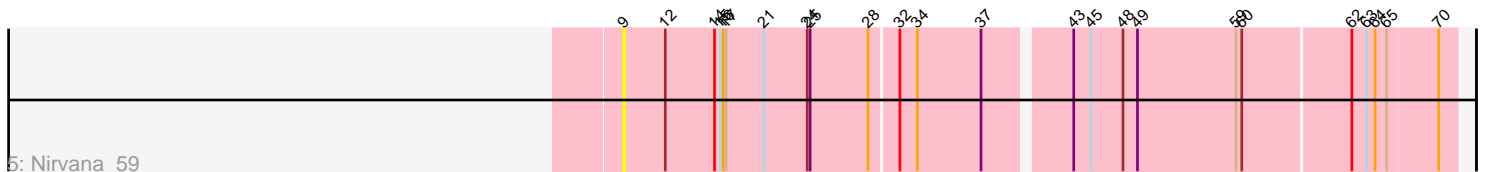
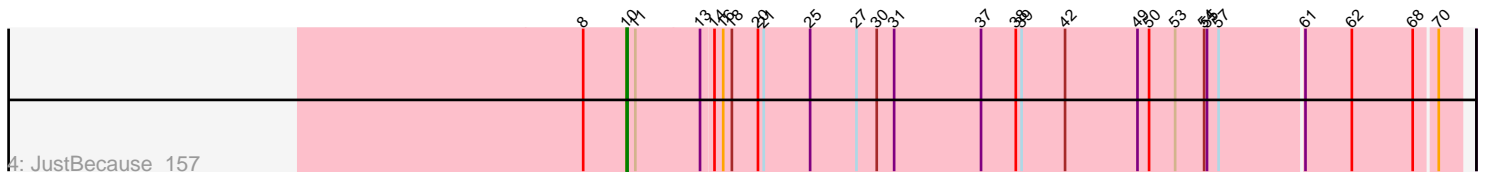
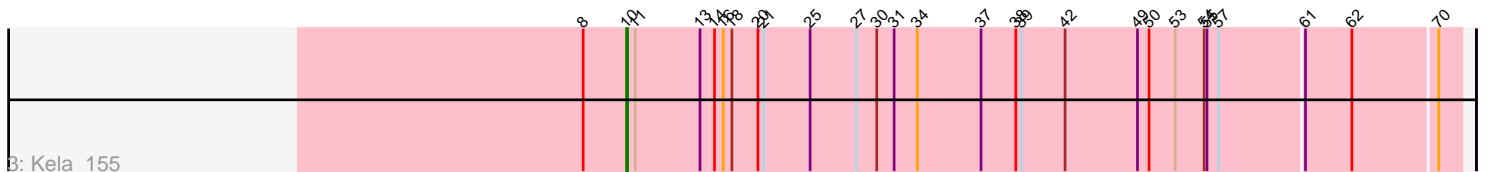
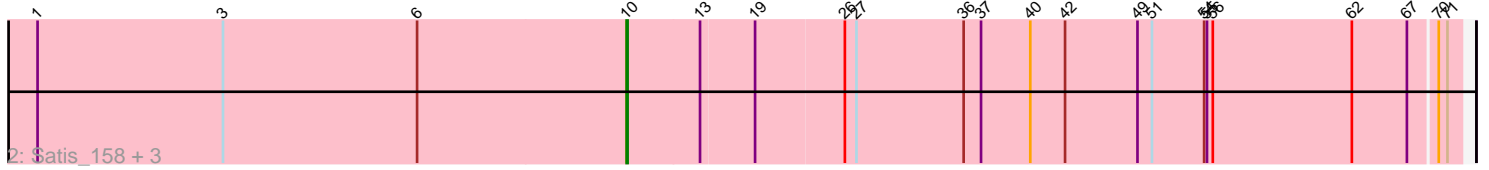
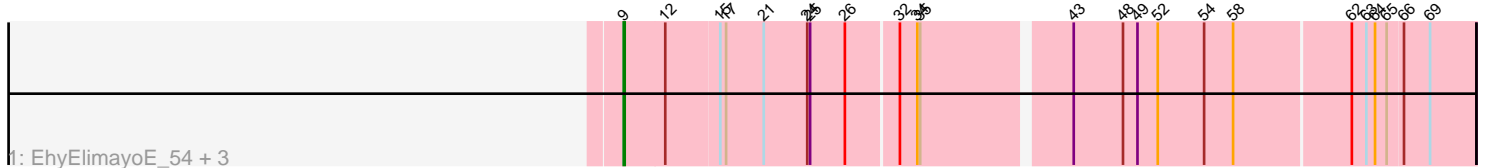


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 198478 Report

This analysis was run 01/18/25 on database version 583.

Pham number 198478 has 16 members, 2 are drafts.

Phages represented in each track:

- Track 1 : EhyElimayoE\_54, Kradal\_54, Satis\_54, Quantum\_53
- Track 2 : Satis\_158, EhyElimayoE\_159, Quantum\_157, Kradal\_158
- Track 3 : Kela\_155
- Track 4 : JustBecause\_157
- Track 5 : Nirvana\_59
- Track 6 : JustBecause\_48, Kela\_49
- Track 7 : Frankenweenie\_61
- Track 8 : Nirvana\_175
- Track 9 : Frankenweenie\_171

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

The start number called the most often in the published annotations is 10, it was called in 7 of the 14 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- EhyElimayoE\_159, Frankenweenie\_171, JustBecause\_157, Kela\_155, Kradal\_158, Quantum\_157, Satis\_158,

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

- Nirvana\_175,

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

- EhyElimayoE\_54, Frankenweenie\_61, JustBecause\_48, Kela\_49, Kradal\_54, Nirvana\_59, Quantum\_53, Satis\_54,

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

Start 9:

- Found in 8 of 16 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 7 of 14
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_54 (BM), Frankenweenie\_61 (BM), JustBecause\_48 (BM), Kela\_49 (BM), Kradal\_54 (BM),

Nirvana\_59 (BM), Quantum\_53 (BM), Satis\_54 (BM),

Start 10:

- Found in 8 of 16 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 7 of 14
- Called 87.5% of time when present
- Phage (with cluster) where this start called: EhyElimayoE\_159 (BM), Frankenweenie\_171 (BM), JustBecause\_157 (BM), Kela\_155 (BM), Kradal\_158 (BM), Quantum\_157 (BM), Satis\_158 (BM),

Start 16:

- Found in 6 of 16 ( 37.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Nirvana\_175 (BM),

### Summary by clusters:

There is one cluster represented in this pham: BM

Info for manual annotations of cluster BM:

- Start number 9 was manually annotated 7 times for cluster BM.
- Start number 10 was manually annotated 7 times for cluster BM.

### Gene Information:

Gene: EhyElimayoE\_54 Start: 29864, Stop: 30712, Start Num: 9

Candidate Starts for EhyElimayoE\_54:

(Start: 9 @29864 has 7 MA's), (12, 29906), (15, 29960), (17, 29966), (21, 30005), (24, 30050), (25, 30053), (26, 30089), (32, 30140), (34, 30158), (35, 30161), (43, 30305), (48, 30356), (49, 30371), (52, 30392), (54, 30440), (58, 30470), (62, 30587), (63, 30602), (64, 30611), (65, 30623), (66, 30638), (69, 30665),

Gene: EhyElimayoE\_159 Start: 104778, Stop: 105629, Start Num: 10

Candidate Starts for EhyElimayoE\_159:

(1, 104169), (3, 104361), (6, 104562), (Start: 10 @104778 has 7 MA's), (13, 104853), (19, 104907), (26, 104997), (27, 105009), (36, 105120), (37, 105138), (40, 105189), (42, 105225), (49, 105300), (51, 105315), (54, 105369), (55, 105372), (56, 105378), (62, 105522), (67, 105579), (70, 105606), (71, 105615),

Gene: Frankenweenie\_61 Start: 32449, Stop: 33279, Start Num: 9

Candidate Starts for Frankenweenie\_61:

(2, 31924), (5, 32152), (7, 32242), (Start: 9 @32449 has 7 MA's), (12, 32491), (15, 32548), (16, 32551), (21, 32593), (24, 32638), (25, 32641), (26, 32677), (32, 32728), (34, 32746), (37, 32812), (43, 32893), (45, 32911), (49, 32959), (59, 33061), (60, 33067), (62, 33175), (63, 33190), (64, 33199), (65, 33211), (70, 33262),

Gene: Frankenweenie\_171 Start: 112935, Stop: 113783, Start Num: 10

Candidate Starts for Frankenweenie\_171:

(8, 112890), (Start: 10 @112935 has 7 MA's), (11, 112944), (13, 113010), (14, 113022), (16, 113031), (18, 113040), (20, 113067), (21, 113073), (25, 113121), (27, 113169), (30, 113190), (31, 113208), (37,

113298), (38, 113334), (39, 113340), (42, 113385), (49, 113460), (50, 113472), (53, 113499), (54, 113529), (55, 113532), (57, 113544), (61, 113628), (62, 113676), (70, 113760),

Gene: JustBecause\_157 Start: 101920, Stop: 102768, Start Num: 10

Candidate Starts for JustBecause\_157:

(8, 101875), (Start: 10 @101920 has 7 MA's), (11, 101929), (13, 101995), (14, 102007), (16, 102016), (18, 102025), (20, 102052), (21, 102058), (25, 102106), (27, 102154), (30, 102175), (31, 102193), (37, 102283), (38, 102319), (39, 102325), (42, 102370), (49, 102445), (50, 102457), (53, 102484), (54, 102514), (55, 102517), (57, 102529), (61, 102613), (62, 102661), (68, 102724), (70, 102745),

Gene: JustBecause\_48 Start: 27086, Stop: 27919, Start Num: 9

Candidate Starts for JustBecause\_48:

(2, 26561), (4, 26768), (5, 26789), (7, 26879), (Start: 9 @27086 has 7 MA's), (12, 27128), (14, 27176), (15, 27182), (24, 27272), (25, 27275), (29, 27341), (32, 27362), (33, 27365), (34, 27380), (37, 27446), (43, 27527), (44, 27533), (46, 27560), (47, 27563), (49, 27593), (59, 27695), (62, 27809), (63, 27824), (64, 27833), (65, 27845), (70, 27896),

Gene: Kela\_155 Start: 101794, Stop: 102642, Start Num: 10

Candidate Starts for Kela\_155:

(8, 101749), (Start: 10 @101794 has 7 MA's), (11, 101803), (13, 101869), (14, 101881), (16, 101890), (18, 101899), (20, 101926), (21, 101932), (25, 101980), (27, 102028), (30, 102049), (31, 102067), (34, 102091), (37, 102157), (38, 102193), (39, 102199), (42, 102244), (49, 102319), (50, 102331), (53, 102358), (54, 102388), (55, 102391), (57, 102403), (61, 102487), (62, 102535), (70, 102619),

Gene: Kela\_49 Start: 26951, Stop: 27784, Start Num: 9

Candidate Starts for Kela\_49:

(2, 26426), (4, 26633), (5, 26654), (7, 26744), (Start: 9 @26951 has 7 MA's), (12, 26993), (14, 27041), (15, 27047), (24, 27137), (25, 27140), (29, 27206), (32, 27227), (33, 27230), (34, 27245), (37, 27311), (43, 27392), (44, 27398), (46, 27425), (47, 27428), (49, 27458), (59, 27560), (62, 27674), (63, 27689), (64, 27698), (65, 27710), (70, 27761),

Gene: Kradal\_54 Start: 29864, Stop: 30712, Start Num: 9

Candidate Starts for Kradal\_54:

(Start: 9 @29864 has 7 MA's), (12, 29906), (15, 29960), (17, 29966), (21, 30005), (24, 30050), (25, 30053), (26, 30089), (32, 30140), (34, 30158), (35, 30161), (43, 30305), (48, 30356), (49, 30371), (52, 30392), (54, 30440), (58, 30470), (62, 30587), (63, 30602), (64, 30611), (65, 30623), (66, 30638), (69, 30665),

Gene: Kradal\_158 Start: 104775, Stop: 105626, Start Num: 10

Candidate Starts for Kradal\_158:

(1, 104166), (3, 104358), (6, 104559), (Start: 10 @104775 has 7 MA's), (13, 104850), (19, 104904), (26, 104994), (27, 105006), (36, 105117), (37, 105135), (40, 105186), (42, 105222), (49, 105297), (51, 105312), (54, 105366), (55, 105369), (56, 105375), (62, 105519), (67, 105576), (70, 105603), (71, 105612),

Gene: Nirvana\_59 Start: 31848, Stop: 32678, Start Num: 9

Candidate Starts for Nirvana\_59:

(Start: 9 @31848 has 7 MA's), (12, 31890), (14, 31941), (15, 31947), (16, 31950), (17, 31953), (21, 31992), (24, 32037), (25, 32040), (28, 32100), (32, 32127), (34, 32145), (37, 32211), (43, 32292), (45, 32310), (48, 32343), (49, 32358), (59, 32460), (60, 32466), (62, 32574), (63, 32589), (64, 32598), (65, 32610), (70, 32661),

Gene: Nirvana\_175 Start: 111442, Stop: 112194, Start Num: 16

Candidate Starts for Nirvana\_175:

(8, 111301), (Start: 10 @111346 has 7 MA's), (11, 111355), (13, 111421), (14, 111433), (16, 111442), (18, 111451), (21, 111484), (22, 111520), (23, 111523), (25, 111532), (27, 111580), (30, 111601), (37, 111709), (39, 111751), (41, 111772), (49, 111871), (50, 111883), (53, 111910), (54, 111940), (55, 111943), (57, 111955), (61, 112039), (62, 112087), (70, 112171),

Gene: Quantum\_53 Start: 29864, Stop: 30712, Start Num: 9

Candidate Starts for Quantum\_53:

(Start: 9 @29864 has 7 MA's), (12, 29906), (15, 29960), (17, 29966), (21, 30005), (24, 30050), (25, 30053), (26, 30089), (32, 30140), (34, 30158), (35, 30161), (43, 30305), (48, 30356), (49, 30371), (52, 30392), (54, 30440), (58, 30470), (62, 30587), (63, 30602), (64, 30611), (65, 30623), (66, 30638), (69, 30665),

Gene: Quantum\_157 Start: 104775, Stop: 105626, Start Num: 10

Candidate Starts for Quantum\_157:

(1, 104166), (3, 104358), (6, 104559), (Start: 10 @104775 has 7 MA's), (13, 104850), (19, 104904), (26, 104994), (27, 105006), (36, 105117), (37, 105135), (40, 105186), (42, 105222), (49, 105297), (51, 105312), (54, 105366), (55, 105369), (56, 105375), (62, 105519), (67, 105576), (70, 105603), (71, 105612),

Gene: Satis\_158 Start: 104771, Stop: 105622, Start Num: 10

Candidate Starts for Satis\_158:

(1, 104162), (3, 104354), (6, 104555), (Start: 10 @104771 has 7 MA's), (13, 104846), (19, 104900), (26, 104990), (27, 105002), (36, 105113), (37, 105131), (40, 105182), (42, 105218), (49, 105293), (51, 105308), (54, 105362), (55, 105365), (56, 105371), (62, 105515), (67, 105572), (70, 105599), (71, 105608),

Gene: Satis\_54 Start: 29860, Stop: 30708, Start Num: 9

Candidate Starts for Satis\_54:

(Start: 9 @29860 has 7 MA's), (12, 29902), (15, 29956), (17, 29962), (21, 30001), (24, 30046), (25, 30049), (26, 30085), (32, 30136), (34, 30154), (35, 30157), (43, 30301), (48, 30352), (49, 30367), (52, 30388), (54, 30436), (58, 30466), (62, 30583), (63, 30598), (64, 30607), (65, 30619), (66, 30634), (69, 30661),