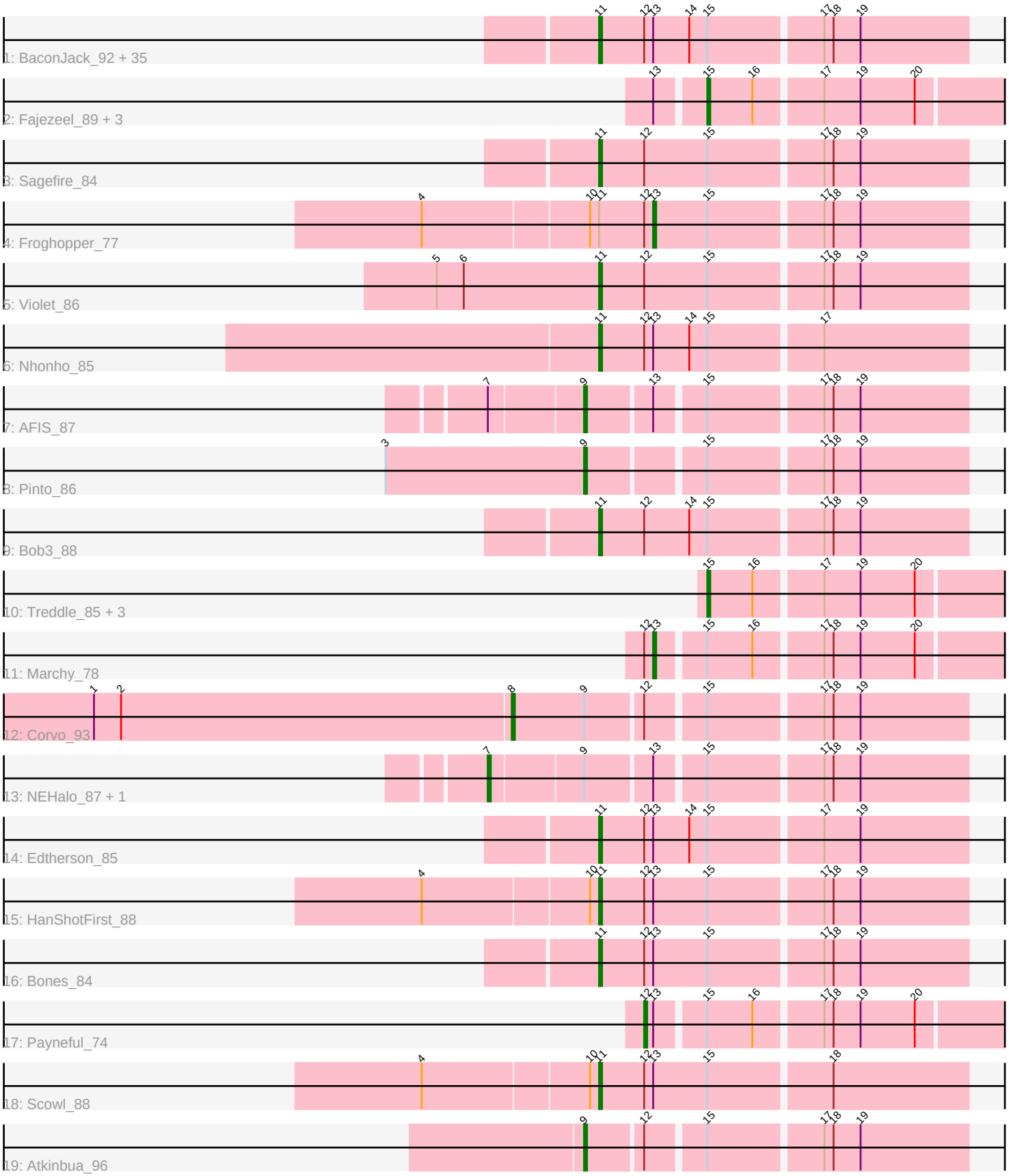
Pham 202949


1: BaconJack_92 + 35
2: Fajezeel_89 + 3
3: Sagefire_84
4: Froghopper_77
5: Violet_86
6: Nhonho_85
7: AFIS_87
8: Pinto_86
9: Bob3_88
10: Treddle_85 + 3
11: Marchy_78
12: Corvo_93
13: NEHalo_87 + 1
14: Edtherson_85
15: HanShotFirst_88
16: Bones_84
17: Payneful_74
18: Scowl_88
19: Atkinbua_96

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 202949 Report

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

Pham number 202949 has 61 members, 2 are drafts.

Phages represented in each track:
• Track 1 : BaconJack_92, Ashballer_89, SkiPole_96, Bexan_85, ProMouse_88, Perseus_88, Marge_85, Lamina13_91, MPlant7149_88, StrongArm_86, Aeneas_93, Barriga_99, Hami1_85, HermioneGrange_92, Tasp14_85, Paphu_84, Beatrix_87, Jorgensen_98, Rutherferd_89, Applejack_86, Sumter_85, Parliament_88, BigMau_89, JackSparrow_90, JC27_92, RidgeCB_87, Smairt_95, Rohr_90, Trouble_88, Paraselene_85, PhrostyMug_92, Nerujay_91, Mule_90, HarryOW_89, StewieG_84, Sunshine924_91
• Track 2 : Fajezeel_89, Acme_90, Greg_89, Watermelon_88
• Track 3 : Sagefire_84
• Track 4 : Froghopper_77
• Track 5 : Violet_86
• Track 6 : Nhonho_85
• Track 7 : AFIS_87
• Track 8 : Pinto_86
• Track 9 : Bob3_88
• Track 10 : Treddle_85, QTRlifeCrisis_84, Monet_88, Buttons_81
• Track 11 : Marchy_78
• Track 12 : Corvo_93
• Track 13 : NEHalo_87, SpikeBT_86
• Track 14 : Edtherson_85
• Track 15 : HanShotFirst_88
• Track 16 : Bones_84
• Track 17 : Payneful_74
• Track 18 : Scowl_88
• Track 19 : Atkinbua_96

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

The start number called the most often in the published annotations is 11, it was called in 42 of the 59 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aeneas_93, Applejack_86, Ashballer_89, BaconJack_92, Barriga_99, Beatrix_87, Bexan_85, BigMau_89, Bob3_88, Bones_84, Edtherson_85, Hami1_85,

HanShotFirst_88, HarryOW_89, HermioneGrange_92, JC27_92, JackSparrow_90, Jorgensen_98, Lamina13_91, MPlant7149_88, Marge_85, Mule_90, Nerujay_91, Nhonho_85, Paphu_84, Paraselene_85, Parliament_88, Perseus_88, PhrostyMug_92, ProMouse_88, RidgeCB_87, Rohr_90, Rutherferd_89, Sagefire_84, Scowl_88, SkiPole_96, Smairt_95, StewieG_84, StrongArm_86, Sumter_85, Sunshine924_91, Tasp14_85, Trouble_88, Violet_86,

Genes that have the "Most Annotated" start but do not call it:
• Froghopper_77,

Genes that do not have the "Most Annotated" start:
• AFIS_87, Acme_90, Atkinbua_96, Buttons_81, Corvo_93, Fajezeel_89, Greg_89, Marchy_78, Monet_88, NEHalo_87, Payneful_74, Pinto_86, QTRlifeCrisis_84, SpikeBT_86, Treddle_85, Watermelon_88,

Summary by start number:

Start 7:
• Found in 3 of 61 (4.9%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 66.7% of time when present
• Phage (with cluster) where this start called: NEHalo_87 (A1), SpikeBT_86 (A1),

Start 8:
• Found in 1 of 61 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Corvo_93 (A1),

Start 9:
• Found in 6 of 61 (9.8%) of genes in pham
• Manual Annotations of this start: 3 of 59
• Called 50.0% of time when present
• Phage (with cluster) where this start called: AFIS_87 (A1), Atkinbua_96 (A1), Pinto_86 (A1),

Start 11:
• Found in 45 of 61 (73.8%) of genes in pham
• Manual Annotations of this start: 42 of 59
• Called 97.8% of time when present
• Phage (with cluster) where this start called: Aeneas_93 (A1), Applejack_86 (A1), Ashballer_89 (A1), BaconJack_92 (A1), Barriga_99 (A1), Beatrix_87 (A1), Bexan_85 (A1), BigMau_89 (A1), Bob3_88 (A1), Bones_84 (A1), Edtherson_85 (A1), Hami1_85 (A1), HanShotFirst_88 (A1), HarryOW_89 (A1), HermioneGrange_92 (A1), JC27_92 (A1), JackSparrow_90 (A1), Jorgensen_98 (A1), Lamina13_91 (A1), MPlant7149_88 (A1), Marge_85 (A1), Mule_90 (A1), Nerujay_91 (A1), Nhonho_85 (A1), Paphu_84 (A1), Paraselene_85 (A1), Parliament_88 (A1), Perseus_88 (A1), PhrostyMug_92 (A1), ProMouse_88 (A1), RidgeCB_87 (A1), Rohr_90 (A1), Rutherferd_89 (A1), Sagefire_84 (A1), Scowl_88 (A1), SkiPole_96 (A1), Smairt_95 (A1), StewieG_84 (A1), StrongArm_86 (A1), Sumter_85 (A1), Sunshine924_91 (A1), Tasp14_85 (A1), Trouble_88 (A1), Violet_86 (A1),

Start 12:

• Found in 49 of 61 (80.3%) of genes in pham
• Manual Annotations of this start: 1 of 59
• Called 2.0% of time when present
• Phage (with cluster) where this start called: Payneful_74 (A1),

Start 13:
• Found in 51 of 61 (83.6%) of genes in pham
• Manual Annotations of this start: 2 of 59
• Called 3.9% of time when present
• Phage (with cluster) where this start called: Froghopper_77 (A1), Marchy_78 (A1),

Start 15:
• Found in 61 of 61 (100.0%) of genes in pham
• Manual Annotations of this start: 8 of 59
• Called 13.1% of time when present
• Phage (with cluster) where this start called: Acme_90 (A1), Buttons_81 (A1), Fajezeel_89 (A1), Greg_89 (A1), Monet_88 (A1), QTRlifeCrisis_84 (A1), Treddle_85 (A1), Watermelon_88 (A1),

Summary by clusters:

There is one cluster represented in this pham: A1

Info for manual annotations of cluster A1:
•Start number 7 was manually annotated 2 times for cluster A1.
•Start number 8 was manually annotated 1 time for cluster A1.
•Start number 9 was manually annotated 3 times for cluster A1.
•Start number 11 was manually annotated 42 times for cluster A1.
•Start number 12 was manually annotated 1 time for cluster A1.
•Start number 13 was manually annotated 2 times for cluster A1.
•Start number 15 was manually annotated 8 times for cluster A1.

Gene Information:

Gene: AFIS_87 Start: 51060, Stop: 50941, Start Num: 9
Candidate Starts for AFIS_87:
(Start: 7 @51090 has 2 MA's), (Start: 9 @51060 has 3 MA's), (Start: 13 @51039 has 2 MA's), (Start: 15 @51024 has 8 MA's), (17, 50988), (18, 50985), (19, 50976),

Gene: Acme_90 Start: 51093, Stop: 50980, Start Num: 15
Candidate Starts for Acme_90:
(Start: 13 @51108 has 2 MA's), (Start: 15 @51093 has 8 MA's), (16, 51078), (17, 51057), (19, 51045), (20, 51027),

Gene: Aeneas_93 Start: 51837, Stop: 51718, Start Num: 11
Candidate Starts for Aeneas_93:
(Start: 11 @51837 has 42 MA's), (Start: 12 @51822 has 1 MA's), (Start: 13 @51819 has 2 MA's), (14, 51807), (Start: 15 @51801 has 8 MA's), (17, 51765), (18, 51762), (19, 51753),

Gene: Applejack_86 Start: 47776, Stop: 47657, Start Num: 11
Candidate Starts for Applejack_86:

(Start: 11 @47776 has 42 MA's), (Start: 12 @47761 has 1 MA's), (Start: 13 @47758 has 2 MA's), (14, 47746), (Start: 15 @47740 has 8 MA's), (17, 47704), (18, 47701), (19, 47692),

Gene: Ashballer_89 Start: 50239, Stop: 50120, Start Num: 11
Candidate Starts for Ashballer_89:
(Start: 11 @50239 has 42 MA's), (Start: 12 @50224 has 1 MA's), (Start: 13 @50221 has 2 MA's), (14, 50209), (Start: 15 @50203 has 8 MA's), (17, 50167), (18, 50164), (19, 50155),

Gene: Atkinbua_96 Start: 51905, Stop: 51786, Start Num: 9
Candidate Starts for Atkinbua_96:
(Start: 9 @51905 has 3 MA's), (Start: 12 @51887 has 1 MA's), (Start: 15 @51869 has 8 MA's), (17, 51833), (18, 51830), (19, 51821),

Gene: BaconJack_92 Start: 51788, Stop: 51669, Start Num: 11
Candidate Starts for BaconJack_92:
(Start: 11 @51788 has 42 MA's), (Start: 12 @51773 has 1 MA's), (Start: 13 @51770 has 2 MA's), (14, 51758), (Start: 15 @51752 has 8 MA's), (17, 51716), (18, 51713), (19, 51704),

Gene: Barriga_99 Start: 51578, Stop: 51459, Start Num: 11
Candidate Starts for Barriga_99:
(Start: 11 @51578 has 42 MA's), (Start: 12 @51563 has 1 MA's), (Start: 13 @51560 has 2 MA's), (14, 51548), (Start: 15 @51542 has 8 MA's), (17, 51506), (18, 51503), (19, 51494),

Gene: Beatrix_87 Start: 50434, Stop: 50312, Start Num: 11
Candidate Starts for Beatrix_87:
(Start: 11 @50434 has 42 MA's), (Start: 12 @50419 has 1 MA's), (Start: 13 @50416 has 2 MA's), (14, 50404), (Start: 15 @50398 has 8 MA's), (17, 50359), (18, 50356), (19, 50347),

Gene: Bexan_85 Start: 50210, Stop: 50088, Start Num: 11
Candidate Starts for Bexan_85:
(Start: 11 @50210 has 42 MA's), (Start: 12 @50195 has 1 MA's), (Start: 13 @50192 has 2 MA's), (14, 50180), (Start: 15 @50174 has 8 MA's), (17, 50135), (18, 50132), (19, 50123),

Gene: BigMau_89 Start: 50799, Stop: 50680, Start Num: 11
Candidate Starts for BigMau_89:
(Start: 11 @50799 has 42 MA's), (Start: 12 @50784 has 1 MA's), (Start: 13 @50781 has 2 MA's), (14, 50769), (Start: 15 @50763 has 8 MA's), (17, 50727), (18, 50724), (19, 50715),

Gene: Bob3_88 Start: 50233, Stop: 50114, Start Num: 11
Candidate Starts for Bob3_88:
(Start: 11 @50233 has 42 MA's), (Start: 12 @50218 has 1 MA's), (14, 50203), (Start: 15 @50197 has 8 MA's), (17, 50161), (18, 50158), (19, 50149),

Gene: Bones_84 Start: 50684, Stop: 50565, Start Num: 11
Candidate Starts for Bones_84:
(Start: 11 @50684 has 42 MA's), (Start: 12 @50669 has 1 MA's), (Start: 13 @50666 has 2 MA's), (Start: 15 @50648 has 8 MA's), (17, 50612), (18, 50609), (19, 50600),

Gene: Buttons_81 Start: 47302, Stop: 47189, Start Num: 15
Candidate Starts for Buttons_81:
(Start: 15 @47302 has 8 MA's), (16, 47287), (17, 47266), (19, 47254), (20, 47236),

Gene: Corvo_93 Start: 52736, Stop: 52593, Start Num: 8

Candidate Starts for Corvo_93:
(1, 52874), (2, 52865), (Start: 8 @52736 has 1 MA's), (Start: 9 @52712 has 3 MA's), (Start: 12 @52694 has 1 MA's), (Start: 15 @52676 has 8 MA's), (17, 52640), (18, 52637), (19, 52628),

Gene: Edtherson_85 Start: 49478, Stop: 49359, Start Num: 11
Candidate Starts for Edtherson_85:
(Start: 11 @49478 has 42 MA's), (Start: 12 @49463 has 1 MA's), (Start: 13 @49460 has 2 MA's), (14, 49448), (Start: 15 @49442 has 8 MA's), (17, 49406), (19, 49394),

Gene: Fajezeel_89 Start: 50383, Stop: 50270, Start Num: 15
Candidate Starts for Fajezeel_89:
(Start: 13 @50398 has 2 MA's), (Start: 15 @50383 has 8 MA's), (16, 50368), (17, 50347), (19, 50335), (20, 50317),

Gene: Froghopper_77 Start: 46958, Stop: 46857, Start Num: 13
Candidate Starts for Froghopper_77:
(4, 47033), (10, 46979), (Start: 11 @46976 has 42 MA's), (Start: 12 @46961 has 1 MA's), (Start: 13 @46958 has 2 MA's), (Start: 15 @46940 has 8 MA's), (17, 46904), (18, 46901), (19, 46892),

Gene: Greg_89 Start: 50383, Stop: 50270, Start Num: 15
Candidate Starts for Greg_89:
(Start: 13 @50398 has 2 MA's), (Start: 15 @50383 has 8 MA's), (16, 50368), (17, 50347), (19, 50335), (20, 50317),

Gene: Hami1_85 Start: 45856, Stop: 45737, Start Num: 11
Candidate Starts for Hami1_85:
(Start: 11 @45856 has 42 MA's), (Start: 12 @45841 has 1 MA's), (Start: 13 @45838 has 2 MA's), (14, 45826), (Start: 15 @45820 has 8 MA's), (17, 45784), (18, 45781), (19, 45772),

Gene: HanShotFirst_88 Start: 51140, Stop: 51021, Start Num: 11
Candidate Starts for HanShotFirst_88:
(4, 51197), (10, 51143), (Start: 11 @51140 has 42 MA's), (Start: 12 @51125 has 1 MA's), (Start: 13 @51122 has 2 MA's), (Start: 15 @51104 has 8 MA's), (17, 51068), (18, 51065), (19, 51056),

Gene: HarryOW_89 Start: 51080, Stop: 50961, Start Num: 11
Candidate Starts for HarryOW_89:
(Start: 11 @51080 has 42 MA's), (Start: 12 @51065 has 1 MA's), (Start: 13 @51062 has 2 MA's), (14, 51050), (Start: 15 @51044 has 8 MA's), (17, 51008), (18, 51005), (19, 50996),

Gene: HermioneGrange_92 Start: 51294, Stop: 51175, Start Num: 11
Candidate Starts for HermioneGrange_92:
(Start: 11 @51294 has 42 MA's), (Start: 12 @51279 has 1 MA's), (Start: 13 @51276 has 2 MA's), (14, 51264), (Start: 15 @51258 has 8 MA's), (17, 51222), (18, 51219), (19, 51210),

Gene: JC27_92 Start: 50311, Stop: 50192, Start Num: 11
Candidate Starts for JC27_92:
(Start: 11 @50311 has 42 MA's), (Start: 12 @50296 has 1 MA's), (Start: 13 @50293 has 2 MA's), (14, 50281), (Start: 15 @50275 has 8 MA's), (17, 50239), (18, 50236), (19, 50227),

Gene: JackSparrow_90 Start: 49749, Stop: 49630, Start Num: 11
Candidate Starts for JackSparrow_90:
(Start: 11 @49749 has 42 MA's), (Start: 12 @49734 has 1 MA's), (Start: 13 @49731 has 2 MA's), (14, 49719), (Start: 15 @49713 has 8 MA's), (17, 49677), (18, 49674), (19, 49665),

Gene: Jorgensen_98 Start: 51770, Stop: 51651, Start Num: 11
Candidate Starts for Jorgensen_98:
(Start: 11 @51770 has 42 MA's), (Start: 12 @51755 has 1 MA's), (Start: 13 @51752 has 2 MA's), (14, 51740), (Start: 15 @51734 has 8 MA's), (17, 51698), (18, 51695), (19, 51686),

Gene: Lamina13_91 Start: 51403, Stop: 51284, Start Num: 11
Candidate Starts for Lamina13_91:
(Start: 11 @51403 has 42 MA's), (Start: 12 @51388 has 1 MA's), (Start: 13 @51385 has 2 MA's), (14, 51373), (Start: 15 @51367 has 8 MA's), (17, 51331), (18, 51328), (19, 51319),

Gene: MPlant7149_88 Start: 49524, Stop: 49405, Start Num: 11
Candidate Starts for MPlant7149_88:
(Start: 11 @49524 has 42 MA's), (Start: 12 @49509 has 1 MA's), (Start: 13 @49506 has 2 MA's), (14, 49494), (Start: 15 @49488 has 8 MA's), (17, 49452), (18, 49449), (19, 49440),

Gene: Marchy_78 Start: 46264, Stop: 46136, Start Num: 13
Candidate Starts for Marchy_78:
(Start: 12 @46267 has 1 MA's), (Start: 13 @46264 has 2 MA's), (Start: 15 @46249 has 8 MA's), (16, 46234), (17, 46213), (18, 46210), (19, 46201), (20, 46183),

Gene: Marge_85 Start: 49414, Stop: 49295, Start Num: 11
Candidate Starts for Marge_85:
(Start: 11 @49414 has 42 MA's), (Start: 12 @49399 has 1 MA's), (Start: 13 @49396 has 2 MA's), (14, 49384), (Start: 15 @49378 has 8 MA's), (17, 49342), (18, 49339), (19, 49330),

Gene: Monet_88 Start: 50314, Stop: 50201, Start Num: 15
Candidate Starts for Monet_88:
(Start: 15 @50314 has 8 MA's), (16, 50299), (17, 50278), (19, 50266), (20, 50248),

Gene: Mule_90 Start: 49618, Stop: 49499, Start Num: 11
Candidate Starts for Mule_90:
(Start: 11 @49618 has 42 MA's), (Start: 12 @49603 has 1 MA's), (Start: 13 @49600 has 2 MA's), (14, 49588), (Start: 15 @49582 has 8 MA's), (17, 49546), (18, 49543), (19, 49534),

Gene: NEHalo_87 Start: 49900, Stop: 49751, Start Num: 7
Candidate Starts for NEHalo_87:
(Start: 7 @49900 has 2 MA's), (Start: 9 @49870 has 3 MA's), (Start: 13 @49849 has 2 MA's), (Start: 15 @49834 has 8 MA's), (17, 49798), (18, 49795), (19, 49786),

Gene: Nerujay_91 Start: 51366, Stop: 51247, Start Num: 11
Candidate Starts for Nerujay_91:
(Start: 11 @51366 has 42 MA's), (Start: 12 @51351 has 1 MA's), (Start: 13 @51348 has 2 MA's), (14, 51336), (Start: 15 @51330 has 8 MA's), (17, 51294), (18, 51291), (19, 51282),

Gene: Nhonho_85 Start: 50231, Stop: 50112, Start Num: 11
Candidate Starts for Nhonho_85:
(Start: 11 @50231 has 42 MA's), (Start: 12 @50216 has 1 MA's), (Start: 13 @50213 has 2 MA's), (14, 50201), (Start: 15 @50195 has 8 MA's), (17, 50159),

Gene: Paphu_84 Start: 48742, Stop: 48629, Start Num: 11
Candidate Starts for Paphu_84:

(Start: 11 @48742 has 42 MA's), (Start: 12 @48727 has 1 MA's), (Start: 13 @48724 has 2 MA's), (14, 48712), (Start: 15 @48706 has 8 MA's), (17, 48670), (18, 48667), (19, 48658),

Gene: Paraselene_85 Start: 49155, Stop: 49036, Start Num: 11
Candidate Starts for Paraselene_85:
(Start: 11 @49155 has 42 MA's), (Start: 12 @49140 has 1 MA's), (Start: 13 @49137 has 2 MA's), (14, 49125), (Start: 15 @49119 has 8 MA's), (17, 49083), (18, 49080), (19, 49071),

Gene: Parliament_88 Start: 51886, Stop: 51767, Start Num: 11
Candidate Starts for Parliament_88:
(Start: 11 @51886 has 42 MA's), (Start: 12 @51871 has 1 MA's), (Start: 13 @51868 has 2 MA's), (14, 51856), (Start: 15 @51850 has 8 MA's), (17, 51814), (18, 51811), (19, 51802),

Gene: Payneful_74 Start: 45359, Stop: 45228, Start Num: 12
Candidate Starts for Payneful_74:
(Start: 12 @45359 has 1 MA's), (Start: 13 @45356 has 2 MA's), (Start: 15 @45341 has 8 MA's), (16, 45326), (17, 45305), (18, 45302), (19, 45293), (20, 45275),

Gene: Perseus_88 Start: 51414, Stop: 51295, Start Num: 11
Candidate Starts for Perseus_88:
(Start: 11 @51414 has 42 MA's), (Start: 12 @51399 has 1 MA's), (Start: 13 @51396 has 2 MA's), (14, 51384), (Start: 15 @51378 has 8 MA's), (17, 51342), (18, 51339), (19, 51330),

Gene: PhrostyMug_92 Start: 51788, Stop: 51669, Start Num: 11
Candidate Starts for PhrostyMug_92:
(Start: 11 @51788 has 42 MA's), (Start: 12 @51773 has 1 MA's), (Start: 13 @51770 has 2 MA's), (14, 51758), (Start: 15 @51752 has 8 MA's), (17, 51716), (18, 51713), (19, 51704),

Gene: Pinto_86 Start: 49930, Stop: 49811, Start Num: 9
Candidate Starts for Pinto_86:
(3, 49996), (Start: 9 @49930 has 3 MA's), (Start: 15 @49894 has 8 MA's), (17, 49858), (18, 49855), (19, 49846),

Gene: ProMouse_88 Start: 48867, Stop: 48748, Start Num: 11
Candidate Starts for ProMouse_88:
(Start: 11 @48867 has 42 MA's), (Start: 12 @48852 has 1 MA's), (Start: 13 @48849 has 2 MA's), (14, 48837), (Start: 15 @48831 has 8 MA's), (17, 48795), (18, 48792), (19, 48783),

Gene: QTRlifeCrisis_84 Start: 48537, Stop: 48424, Start Num: 15
Candidate Starts for QTRlifeCrisis_84:
(Start: 15 @48537 has 8 MA's), (16, 48522), (17, 48501), (19, 48489), (20, 48471),

Gene: RidgeCB_87 Start: 48862, Stop: 48743, Start Num: 11
Candidate Starts for RidgeCB_87:
(Start: 11 @48862 has 42 MA's), (Start: 12 @48847 has 1 MA's), (Start: 13 @48844 has 2 MA's), (14, 48832), (Start: 15 @48826 has 8 MA's), (17, 48790), (18, 48787), (19, 48778),

Gene: Rohr_90 Start: 51614, Stop: 51495, Start Num: 11
Candidate Starts for Rohr_90:
(Start: 11 @51614 has 42 MA's), (Start: 12 @51599 has 1 MA's), (Start: 13 @51596 has 2 MA's), (14, 51584), (Start: 15 @51578 has 8 MA's), (17, 51542), (18, 51539), (19, 51530),

Gene: Rutherferd_89 Start: 50322, Stop: 50203, Start Num: 11

Candidate Starts for Rutherferd_89:
(Start: 11 @50322 has 42 MA's), (Start: 12 @50307 has 1 MA's), (Start: 13 @50304 has 2 MA's), (14, 50292), (Start: 15 @50286 has 8 MA's), (17, 50250), (18, 50247), (19, 50238),

Gene: Sagefire_84 Start: 49758, Stop: 49639, Start Num: 11
Candidate Starts for Sagefire_84:
(Start: 11 @49758 has 42 MA's), (Start: 12 @49743 has 1 MA's), (Start: 15 @49722 has 8 MA's), (17, 49686), (18, 49683), (19, 49674),

Gene: Scowl_88 Start: 50444, Stop: 50325, Start Num: 11
Candidate Starts for Scowl_88:
(4, 50501), (10, 50447), (Start: 11 @50444 has 42 MA's), (Start: 12 @50429 has 1 MA's), (Start: 13 @50426 has 2 MA's), (Start: 15 @50408 has 8 MA's), (18, 50369),

Gene: SkiPole_96 Start: 51151, Stop: 51032, Start Num: 11
Candidate Starts for SkiPole_96:
(Start: 11 @51151 has 42 MA's), (Start: 12 @51136 has 1 MA's), (Start: 13 @51133 has 2 MA's), (14, 51121), (Start: 15 @51115 has 8 MA's), (17, 51079), (18, 51076), (19, 51067),

Gene: Smairt_95 Start: 52805, Stop: 52686, Start Num: 11
Candidate Starts for Smairt_95:
(Start: 11 @52805 has 42 MA's), (Start: 12 @52790 has 1 MA's), (Start: 13 @52787 has 2 MA's), (14, 52775), (Start: 15 @52769 has 8 MA's), (17, 52733), (18, 52730), (19, 52721),

Gene: SpikeBT_86 Start: 49544, Stop: 49395, Start Num: 7
Candidate Starts for SpikeBT_86:
(Start: 7 @49544 has 2 MA's), (Start: 9 @49514 has 3 MA's), (Start: 13 @49493 has 2 MA's), (Start: 15 @49478 has 8 MA's), (17, 49442), (18, 49439), (19, 49430),

Gene: StewieG_84 Start: 47394, Stop: 47275, Start Num: 11
Candidate Starts for StewieG_84:
(Start: 11 @47394 has 42 MA's), (Start: 12 @47379 has 1 MA's), (Start: 13 @47376 has 2 MA's), (14, 47364), (Start: 15 @47358 has 8 MA's), (17, 47322), (18, 47319), (19, 47310),

Gene: StrongArm_86 Start: 50338, Stop: 50216, Start Num: 11
Candidate Starts for StrongArm_86:
(Start: 11 @50338 has 42 MA's), (Start: 12 @50323 has 1 MA's), (Start: 13 @50320 has 2 MA's), (14, 50308), (Start: 15 @50302 has 8 MA's), (17, 50263), (18, 50260), (19, 50251),

Gene: Sumter_85 Start: 50800, Stop: 50681, Start Num: 11
Candidate Starts for Sumter_85:
(Start: 11 @50800 has 42 MA's), (Start: 12 @50785 has 1 MA's), (Start: 13 @50782 has 2 MA's), (14, 50770), (Start: 15 @50764 has 8 MA's), (17, 50728), (18, 50725), (19, 50716),

Gene: Sunshine924_91 Start: 49336, Stop: 49217, Start Num: 11
Candidate Starts for Sunshine924_91:
(Start: 11 @49336 has 42 MA's), (Start: 12 @49321 has 1 MA's), (Start: 13 @49318 has 2 MA's), (14, 49306), (Start: 15 @49300 has 8 MA's), (17, 49264), (18, 49261), (19, 49252),

Gene: Tasp14_85 Start: 49566, Stop: 49447, Start Num: 11
Candidate Starts for Tasp14_85:
(Start: 11 @49566 has 42 MA's), (Start: 12 @49551 has 1 MA's), (Start: 13 @49548 has 2 MA's), (14, 49536), (Start: 15 @49530 has 8 MA's), (17, 49494), (18, 49491), (19, 49482),

Gene: Treddle_85 Start: 49958, Stop: 49845, Start Num: 15
Candidate Starts for Treddle_85:
(Start: 15 @49958 has 8 MA's), (16, 49943), (17, 49922), (19, 49910), (20, 49892),

Gene: Trouble_88 Start: 50243, Stop: 50124, Start Num: 11
Candidate Starts for Trouble_88:
(Start: 11 @50243 has 42 MA's), (Start: 12 @50228 has 1 MA's), (Start: 13 @50225 has 2 MA's), (14, 50213), (Start: 15 @50207 has 8 MA's), (17, 50171), (18, 50168), (19, 50159),

Gene: Violet_86 Start: 50848, Stop: 50729, Start Num: 11
Candidate Starts for Violet_86:
(5, 50902), (6, 50893), (Start: 11 @50848 has 42 MA's), (Start: 12 @50833 has 1 MA's), (Start: 15 @50812 has 8 MA's), (17, 50776), (18, 50773), (19, 50764),

Gene: Watermelon_88 Start: 50262, Stop: 50149, Start Num: 15
Candidate Starts for Watermelon_88:
(Start: 13 @50277 has 2 MA's), (Start: 15 @50262 has 8 MA's), (16, 50247), (17, 50226), (19, 50214), (20, 50196),