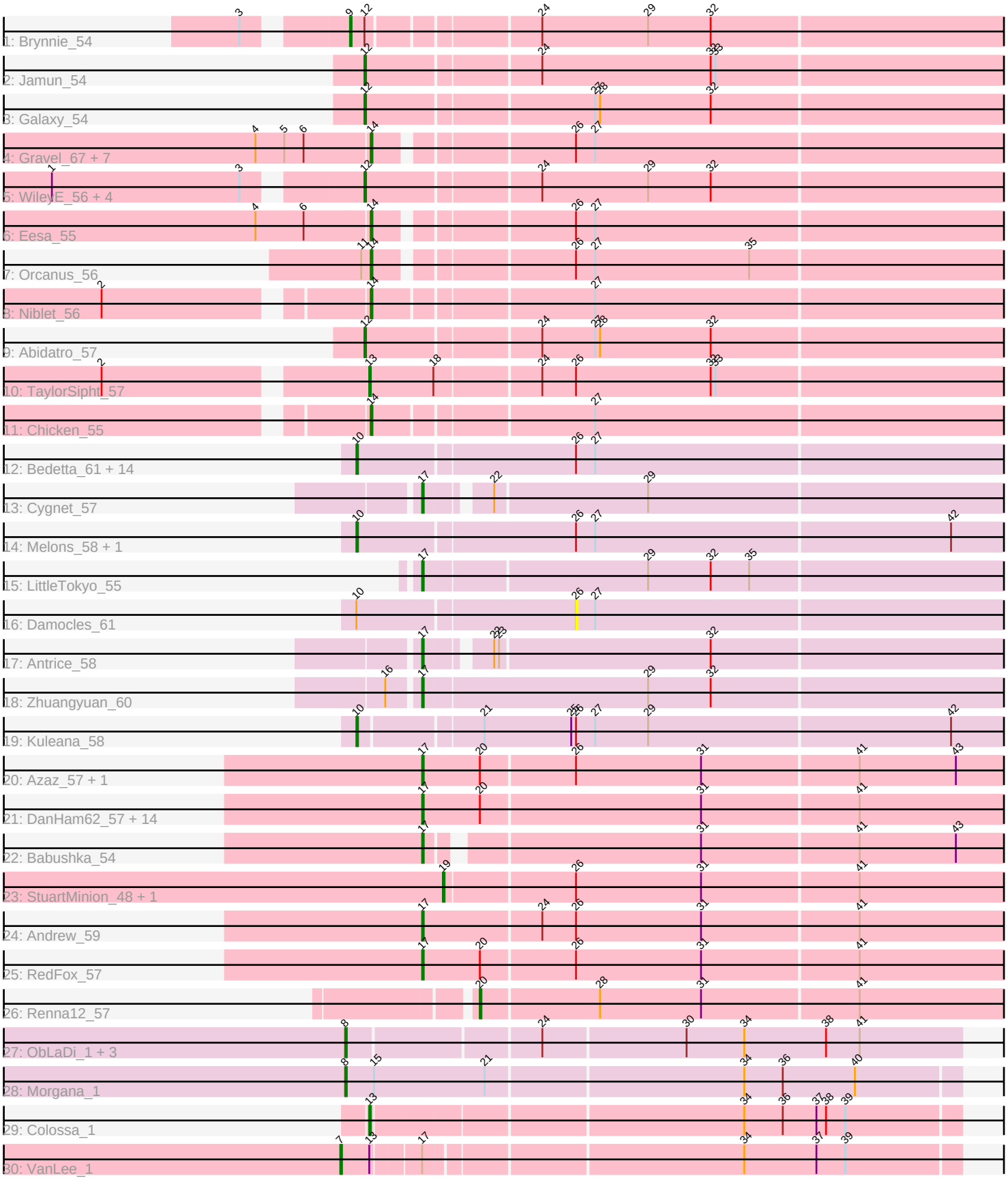
Pham 347556


1: Brynnie_54
2: Jamun_54
3: Galaxy_54
4: Gravel_67 + 7
5: WileyE_56 + 4
6: Eesa_55
7: Orcanus_56
8: Niblet_56
9: Abidatro_57
10: TaylorSipht_57
11: Chicken_55
12: Bedetta_61 + 14
13: Cygnet_57
14: Melons_58 + 1
15: LittleTokyo_55
16: Damocles_61
17: Antrice_58
18: Zhuangyuan_60
19: Kuleana_58
20: Azaz_57 + 1
21: DanHam62_57 + 14
22: Babushka_54
23: StuartMinion_48 + 1
24: Andrew_59
25: RedFox_57
26: Renna12_57
27: ObLaDi_1 + 3
28: Morgana_1
29: Colossa_1
30: VanLee_1

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 347556 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347556 has 75 members, 12 are drafts.

Phages represented in each track:
- Track 1 : Brynnie_54
- Track 2 : Jamun_54
- Track 3 : Galaxy_54
- Track 4 : Gravel_67, Westrich_66, Pelletreau_67, Shen_53, Toad24_58, Zixiang_55, Amanises_58, KendraB23_66
- Track 5 : WileyE_56, Basilisk_55, Chickaboom_56, Ruchi_54, Vulpecula_54
- Track 6 : Eesa_55
- Track 7 : Orcanus_56
- Track 8 : Niblet_56
- Track 9 : Abidatro_57
- Track 10 : TaylorSipht_57
- Track 11 : Chicken_55
- Track 12 : Bedetta_61, Kepler_58, Jerole_57, Amelia_56, Lunar_58, Cote_59, Coral_56, HannahPhantana_58, Polka_56, PhirstandPhine_57, Bibble12_60, Pineda_58, BadWillHunting_62, Colusalem_57, OtsoOtso_57
- Track 13 : Cygnet_57
- Track 14 : Melons_58, Daob_58
- Track 15 : LittleTokyo_55
- Track 16 : Damocles_61
- Track 17 : Antrice_58
- Track 18 : Zhuangyuan_60
- Track 19 : Kuleana_58
- Track 20 : Azaz_57, Leona_56
- Track 21 : DanHam62_57, Fingolfin_57, Amphitrite_57, Juno112_56, AdoptaAdorbs_56, HamCheese_57, Laphuphu24k_55, AmiCi24_56, Glotell_58, Rattail_57, PhluffyCoco_57, Atlantica_57, Camara_57, KHumphrey_57, Oppalora_56
- Track 22 : Babushka_54
- Track 23 : StuartMinion_48, AlexMinion_56
- Track 24 : Andrew_59
- Track 25 : RedFox_57
- Track 26 : Renna12_57
- Track 27 : ObLaDi_1, ModicumRichard_1, Cafasso_1, Aleemily_1
- Track 28 : Morgana_1
- Track 29 : Colossa_1
- Track 30 : VanLee_1

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

The start number called the most often in the published annotations is 17, it was called in 20 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AdoptaAdorbs_56, AmiCi24_56, Amphitrite_57, Andrew_59, Antrice_58, Atlantica_57, Azaz_57, Babushka_54, Camara_57, Cygnet_57, DanHam62_57, Fingolfin_57, Glotell_58, HamCheese_57, Juno112_56, KHumphrey_57, Laphuphu24k_55, Leona_56, LittleTokyo_55, Oppalora_56, PhluffyCoco_57, Rattail_57, RedFox_57, Zhuangyuan_60,

Genes that have the "Most Annotated" start but do not call it:
• VanLee_1,

Genes that do not have the "Most Annotated" start:
• Abidatro_57, Aleemily_1, AlexMinion_56, Amanises_58, Amelia_56, BadWillHunting_62, Basilisk_55, Bedetta_61, Bibble12_60, Brynnie_54, Cafasso_1, Chickaboom_56, Chicken_55, Colossa_1, Colusalem_57, Coral_56, Cote_59, Damocles_61, Daob_58, Eesa_55, Galaxy_54, Gravel_67, HannahPhantana_58, Jamun_54, Jerole_57, KendraB23_66, Kepler_58, Kuleana_58, Lunar_58, Melons_58, ModicumRichard_1, Morgana_1, Niblet_56, ObLaDi_1, Orcanus_56, OtsoOtso_57, Pelletreau_67, PhirstandPhine_57, Pineda_58, Polka_56, Renna12_57, Ruchi_54, Shen_53, StuartMinion_48, TaylorSipht_57, Toad24_58, Vulpecula_54, Westrich_66, WileyE_56, Zixiang_55,

Summary by start number:

Start 7:
• Found in 1 of 75 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: VanLee_1 (KA),

Start 8:
• Found in 5 of 75 (6.7%) of genes in pham
• Manual Annotations of this start: 5 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aleemily_1 (DZ), Cafasso_1 (DZ), ModicumRichard_1 (DZ), Morgana_1 (DZ), ObLaDi_1 (DZ),

Start 9:
• Found in 1 of 75 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Brynnie_54 (AS1),

Start 10:
• Found in 19 of 75 (25.3%) of genes in pham
• Manual Annotations of this start: 15 of 63
• Called 94.7% of time when present

• Phage (with cluster) where this start called: Amelia_56 (AS2), BadWillHunting_62 (AS2), Bedetta_61 (AS2), Bibble12_60 (AS2), Colusalem_57 (AS2), Coral_56 (AS2), Cote_59 (AS2), Daob_58 (AS2), HannahPhantana_58 (AS2), Jerole_57 (AS2), Kepler_58 (AS2), Kuleana_58 (AS2), Lunar_58 (AS2), Melons_58 (AS2), OtsoOtso_57 (AS2), PhirstandPhine_57 (AS2), Pineda_58 (AS2), Polka_56 (AS2),

Start 12:
• Found in 9 of 75 (12.0%) of genes in pham
• Manual Annotations of this start: 8 of 63
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Abidatro_57 (AS1), Basilisk_55 (AS1), Chickaboom_56 (AS1), Galaxy_54 (AS1), Jamun_54 (AS1), Ruchi_54 (AS1), Vulpecula_54 (AS1), WileyE_56 (AS1),

Start 13:
• Found in 3 of 75 (4.0%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Colossa_1 (KA), TaylorSipht_57 (AS1),

Start 14:
• Found in 12 of 75 (16.0%) of genes in pham
• Manual Annotations of this start: 8 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amanises_58 (AS1), Chicken_55 (AS1), Eesa_55 (AS1), Gravel_67 (AS1), KendraB23_66 (AS1), Niblet_56 (AS1), Orcanus_56 (AS1), Pelletreau_67 (AS1), Shen_53 (AS1), Toad24_58 (AS1), Westrich_66 (AS1), Zixiang_55 (AS1),

Start 17:
• Found in 25 of 75 (33.3%) of genes in pham
• Manual Annotations of this start: 20 of 63
• Called 96.0% of time when present
• Phage (with cluster) where this start called: AdoptaAdorbs_56 (AS3), AmiCi24_56 (AS3), Amphitrite_57 (AS3), Andrew_59 (AS3), Antrice_58 (AS2), Atlantica_57 (AS3), Azaz_57 (AS3), Babushka_54 (AS3), Camara_57 (AS3), Cygnet_57 (AS2), DanHam62_57 (AS3), Fingolfin_57 (AS3), Glotell_58 (AS3), HamCheese_57 (AS3), Juno112_56 (AS3), KHumphrey_57 (AS3), Laphuphu24k_55 (AS3), Leona_56 (AS3), LittleTokyo_55 (AS2), Oppalora_56 (AS3), PhluffyCoco_57 (AS3), Rattail_57 (AS3), RedFox_57 (AS3), Zhuangyuan_60 (AS2),

Start 19:
• Found in 2 of 75 (2.7%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AlexMinion_56 (AS3), StuartMinion_48 (AS3),

Start 20:
• Found in 19 of 75 (25.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 5.3% of time when present
• Phage (with cluster) where this start called: Renna12_57 (AS3),

Start 26:
• Found in 36 of 75 (48.0%) of genes in pham
• No Manual Annotations of this start.
• Called 2.8% of time when present
• Phage (with cluster) where this start called: Damocles_61 (AS2),

Summary by clusters:

There are 5 clusters represented in this pham: AS3, AS2, AS1, DZ, KA,

Info for manual annotations of cluster AS1:
•Start number 9 was manually annotated 1 time for cluster AS1.
•Start number 12 was manually annotated 8 times for cluster AS1.
•Start number 13 was manually annotated 1 time for cluster AS1.
•Start number 14 was manually annotated 8 times for cluster AS1.

Info for manual annotations of cluster AS2:
•Start number 10 was manually annotated 15 times for cluster AS2.
•Start number 17 was manually annotated 4 times for cluster AS2.

Info for manual annotations of cluster AS3:
•Start number 17 was manually annotated 16 times for cluster AS3.
•Start number 19 was manually annotated 2 times for cluster AS3.
•Start number 20 was manually annotated 1 time for cluster AS3.

Info for manual annotations of cluster DZ:
•Start number 8 was manually annotated 5 times for cluster DZ.

Info for manual annotations of cluster KA:
•Start number 7 was manually annotated 1 time for cluster KA.
•Start number 13 was manually annotated 1 time for cluster KA.

Gene Information:

Gene: Abidatro_57 Start: 35985, Stop: 36374, Start Num: 12
Candidate Starts for Abidatro_57:
(Start: 12 @35985 has 8 MA's), (24, 36087), (27, 36120), (28, 36123), (32, 36192),

Gene: AdoptaAdorbs_56 Start: 34793, Stop: 35152, Start Num: 17
Candidate Starts for AdoptaAdorbs_56:
(Start: 17 @34793 has 20 MA's), (Start: 20 @34829 has 1 MA's), (31, 34964), (41, 35060),

Gene: Aleemily_1 Start: 1, Stop: 372, Start Num: 8
Candidate Starts for Aleemily_1:
(Start: 8 @1 has 5 MA's), (24, 115), (30, 202), (34, 238), (38, 289), (41, 310),

Gene: AlexMinion_56 Start: 34824, Stop: 35168, Start Num: 19
Candidate Starts for AlexMinion_56:
(Start: 19 @34824 has 2 MA's), (26, 34902), (31, 34980), (41, 35076),

Gene: Amanises_58 Start: 36598, Stop: 36975, Start Num: 14
Candidate Starts for Amanises_58:
(4, 36529), (5, 36547), (6, 36559), (Start: 14 @36598 has 8 MA's), (26, 36709), (27, 36721),

Gene: Amelia_56 Start: 33981, Stop: 34379, Start Num: 10
Candidate Starts for Amelia_56:
(Start: 10 @33981 has 15 MA's), (26, 34113), (27, 34125),

Gene: AmiCi24_56 Start: 34902, Stop: 35261, Start Num: 17
Candidate Starts for AmiCi24_56:
(Start: 17 @34902 has 20 MA's), (Start: 20 @34938 has 1 MA's), (31, 35073), (41, 35169),

Gene: Amphitrite_57 Start: 34792, Stop: 35151, Start Num: 17
Candidate Starts for Amphitrite_57:
(Start: 17 @34792 has 20 MA's), (Start: 20 @34828 has 1 MA's), (31, 34963), (41, 35059),

Gene: Andrew_59 Start: 35202, Stop: 35561, Start Num: 17
Candidate Starts for Andrew_59:
(Start: 17 @35202 has 20 MA's), (24, 35274), (26, 35295), (31, 35373), (41, 35469),

Gene: Antrice_58 Start: 35044, Stop: 35391, Start Num: 17
Candidate Starts for Antrice_58:
(Start: 17 @35044 has 20 MA's), (22, 35077), (23, 35080), (32, 35209),

Gene: Atlantica_57 Start: 34904, Stop: 35263, Start Num: 17
Candidate Starts for Atlantica_57:
(Start: 17 @34904 has 20 MA's), (Start: 20 @34940 has 1 MA's), (31, 35075), (41, 35171),

Gene: Azaz_57 Start: 34988, Stop: 35347, Start Num: 17
Candidate Starts for Azaz_57:
(Start: 17 @34988 has 20 MA's), (Start: 20 @35024 has 1 MA's), (26, 35081), (31, 35159), (41, 35255), (43, 35315),

Gene: Babushka_54 Start: 34718, Stop: 35062, Start Num: 17
Candidate Starts for Babushka_54:
(Start: 17 @34718 has 20 MA's), (31, 34874), (41, 34970), (43, 35030),

Gene: BadWillHunting_62 Start: 33848, Stop: 34246, Start Num: 10
Candidate Starts for BadWillHunting_62:
(Start: 10 @33848 has 15 MA's), (26, 33980), (27, 33992),

Gene: Basilisk_55 Start: 35212, Stop: 35601, Start Num: 12
Candidate Starts for Basilisk_55:
(1, 35035), (3, 35152), (Start: 12 @35212 has 8 MA's), (24, 35314), (29, 35380), (32, 35419),

Gene: Bedetta_61 Start: 34141, Stop: 34539, Start Num: 10
Candidate Starts for Bedetta_61:
(Start: 10 @34141 has 15 MA's), (26, 34273), (27, 34285),

Gene: Bibble12_60 Start: 33976, Stop: 34374, Start Num: 10
Candidate Starts for Bibble12_60:
(Start: 10 @33976 has 15 MA's), (26, 34108), (27, 34120),

Gene: Brynnie_54 Start: 35104, Stop: 35496, Start Num: 9
Candidate Starts for Brynnie_54:
(3, 35053), (Start: 9 @35104 has 1 MA's), (Start: 12 @35113 has 8 MA's), (24, 35209), (29, 35275), (32, 35314),

Gene: Cafasso_1 Start: 1, Stop: 372, Start Num: 8
Candidate Starts for Cafasso_1:
(Start: 8 @1 has 5 MA's), (24, 115), (30, 202), (34, 238), (38, 289), (41, 310),

Gene: Camara_57 Start: 34795, Stop: 35154, Start Num: 17
Candidate Starts for Camara_57:
(Start: 17 @34795 has 20 MA's), (Start: 20 @34831 has 1 MA's), (31, 34966), (41, 35062),

Gene: Chickaboom_56 Start: 35548, Stop: 35937, Start Num: 12
Candidate Starts for Chickaboom_56:
(1, 35371), (3, 35488), (Start: 12 @35548 has 8 MA's), (24, 35650), (29, 35716), (32, 35755),

Gene: Chicken_55 Start: 35906, Stop: 36289, Start Num: 14
Candidate Starts for Chicken_55:
(Start: 14 @35906 has 8 MA's), (27, 36035),

Gene: Colossa_1 Start: 17, Stop: 370, Start Num: 13
Candidate Starts for Colossa_1:
(Start: 13 @17 has 2 MA's), (34, 239), (36, 263), (37, 284), (38, 290), (39, 302),

Gene: Colusalem_57 Start: 33958, Stop: 34356, Start Num: 10
Candidate Starts for Colusalem_57:
(Start: 10 @33958 has 15 MA's), (26, 34090), (27, 34102),

Gene: Coral_56 Start: 33886, Stop: 34284, Start Num: 10
Candidate Starts for Coral_56:
(Start: 10 @33886 has 15 MA's), (26, 34018), (27, 34030),

Gene: Cote_59 Start: 34319, Stop: 34717, Start Num: 10
Candidate Starts for Cote_59:
(Start: 10 @34319 has 15 MA's), (26, 34451), (27, 34463),

Gene: Cygnet_57 Start: 35648, Stop: 35995, Start Num: 17
Candidate Starts for Cygnet_57:
(Start: 17 @35648 has 20 MA's), (22, 35681), (29, 35774),

Gene: Damocles_61 Start: 34249, Stop: 34515, Start Num: 26
Candidate Starts for Damocles_61:
(Start: 10 @34117 has 15 MA's), (26, 34249), (27, 34261),

Gene: DanHam62_57 Start: 34903, Stop: 35262, Start Num: 17
Candidate Starts for DanHam62_57:
(Start: 17 @34903 has 20 MA's), (Start: 20 @34939 has 1 MA's), (31, 35074), (41, 35170),

Gene: Daob_58 Start: 34330, Stop: 34728, Start Num: 10
Candidate Starts for Daob_58:
(Start: 10 @34330 has 15 MA's), (26, 34462), (27, 34474), (42, 34693),

Gene: Eesa_55 Start: 36339, Stop: 36716, Start Num: 14
Candidate Starts for Eesa_55:
(4, 36270), (6, 36300), (Start: 14 @36339 has 8 MA's), (26, 36450), (27, 36462),

Gene: Fingolfin_57 Start: 34906, Stop: 35265, Start Num: 17
Candidate Starts for Fingolfin_57:
(Start: 17 @34906 has 20 MA's), (Start: 20 @34942 has 1 MA's), (31, 35077), (41, 35173),

Gene: Galaxy_54 Start: 34402, Stop: 34791, Start Num: 12
Candidate Starts for Galaxy_54:
(Start: 12 @34402 has 8 MA's), (27, 34537), (28, 34540), (32, 34609),

Gene: Glotell_58 Start: 34950, Stop: 35309, Start Num: 17
Candidate Starts for Glotell_58:
(Start: 17 @34950 has 20 MA's), (Start: 20 @34986 has 1 MA's), (31, 35121), (41, 35217),

Gene: Gravel_67 Start: 36912, Stop: 37289, Start Num: 14
Candidate Starts for Gravel_67:
(4, 36843), (5, 36861), (6, 36873), (Start: 14 @36912 has 8 MA's), (26, 37023), (27, 37035),

Gene: HamCheese_57 Start: 34890, Stop: 35249, Start Num: 17
Candidate Starts for HamCheese_57:
(Start: 17 @34890 has 20 MA's), (Start: 20 @34926 has 1 MA's), (31, 35061), (41, 35157),

Gene: HannahPhantana_58 Start: 33976, Stop: 34374, Start Num: 10
Candidate Starts for HannahPhantana_58:
(Start: 10 @33976 has 15 MA's), (26, 34108), (27, 34120),

Gene: Jamun_54 Start: 35634, Stop: 36023, Start Num: 12
Candidate Starts for Jamun_54:
(Start: 12 @35634 has 8 MA's), (24, 35736), (32, 35841), (33, 35844),

Gene: Jerole_57 Start: 34100, Stop: 34498, Start Num: 10
Candidate Starts for Jerole_57:
(Start: 10 @34100 has 15 MA's), (26, 34232), (27, 34244),

Gene: Juno112_56 Start: 34906, Stop: 35265, Start Num: 17
Candidate Starts for Juno112_56:
(Start: 17 @34906 has 20 MA's), (Start: 20 @34942 has 1 MA's), (31, 35077), (41, 35173),

Gene: KHumphrey_57 Start: 34794, Stop: 35153, Start Num: 17
Candidate Starts for KHumphrey_57:
(Start: 17 @34794 has 20 MA's), (Start: 20 @34830 has 1 MA's), (31, 34965), (41, 35061),

Gene: KendraB23_66 Start: 36600, Stop: 36977, Start Num: 14
Candidate Starts for KendraB23_66:
(4, 36531), (5, 36549), (6, 36561), (Start: 14 @36600 has 8 MA's), (26, 36711), (27, 36723),

Gene: Kepler_58 Start: 34097, Stop: 34495, Start Num: 10
Candidate Starts for Kepler_58:
(Start: 10 @34097 has 15 MA's), (26, 34229), (27, 34241),

Gene: Kuleana_58 Start: 34415, Stop: 34810, Start Num: 10

Candidate Starts for Kuleana_58:
(Start: 10 @34415 has 15 MA's), (21, 34487), (25, 34541), (26, 34544), (27, 34556), (29, 34589), (42, 34775),

Gene: Laphuphu24k_55 Start: 34890, Stop: 35249, Start Num: 17
Candidate Starts for Laphuphu24k_55:
(Start: 17 @34890 has 20 MA's), (Start: 20 @34926 has 1 MA's), (31, 35061), (41, 35157),

Gene: Leona_56 Start: 34989, Stop: 35348, Start Num: 17
Candidate Starts for Leona_56:
(Start: 17 @34989 has 20 MA's), (Start: 20 @35025 has 1 MA's), (26, 35082), (31, 35160), (41, 35256), (43, 35316),

Gene: LittleTokyo_55 Start: 33618, Stop: 33974, Start Num: 17
Candidate Starts for LittleTokyo_55:
(Start: 17 @33618 has 20 MA's), (29, 33753), (32, 33792), (35, 33816),

Gene: Lunar_58 Start: 34009, Stop: 34407, Start Num: 10
Candidate Starts for Lunar_58:
(Start: 10 @34009 has 15 MA's), (26, 34141), (27, 34153),

Gene: Melons_58 Start: 33823, Stop: 34221, Start Num: 10
Candidate Starts for Melons_58:
(Start: 10 @33823 has 15 MA's), (26, 33955), (27, 33967), (42, 34186),

Gene: ModicumRichard_1 Start: 1, Stop: 372, Start Num: 8
Candidate Starts for ModicumRichard_1:
(Start: 8 @1 has 5 MA's), (24, 115), (30, 202), (34, 238), (38, 289), (41, 310),

Gene: Morgana_1 Start: 1, Stop: 375, Start Num: 8
Candidate Starts for Morgana_1:
(Start: 8 @1 has 5 MA's), (15, 19), (21, 88), (34, 244), (36, 268), (40, 313),

Gene: Niblet_56 Start: 36203, Stop: 36586, Start Num: 14
Candidate Starts for Niblet_56:
(2, 36056), (Start: 14 @36203 has 8 MA's), (27, 36332),

Gene: ObLaDi_1 Start: 1, Stop: 372, Start Num: 8
Candidate Starts for ObLaDi_1:
(Start: 8 @1 has 5 MA's), (24, 115), (30, 202), (34, 238), (38, 289), (41, 310),

Gene: Oppalora_56 Start: 34904, Stop: 35263, Start Num: 17
Candidate Starts for Oppalora_56:
(Start: 17 @34904 has 20 MA's), (Start: 20 @34940 has 1 MA's), (31, 35075), (41, 35171),

Gene: Orcanus_56 Start: 36030, Stop: 36407, Start Num: 14
Candidate Starts for Orcanus_56:
(11, 36024), (Start: 14 @36030 has 8 MA's), (26, 36141), (27, 36153), (35, 36249),

Gene: OtsoOtso_57 Start: 33831, Stop: 34229, Start Num: 10
Candidate Starts for OtsoOtso_57:
(Start: 10 @33831 has 15 MA's), (26, 33963), (27, 33975),

Gene: Pelletreau_67 Start: 36912, Stop: 37289, Start Num: 14
Candidate Starts for Pelletreau_67:
(4, 36843), (5, 36861), (6, 36873), (Start: 14 @36912 has 8 MA's), (26, 37023), (27, 37035),

Gene: PhirstandPhine_57 Start: 33969, Stop: 34367, Start Num: 10
Candidate Starts for PhirstandPhine_57:
(Start: 10 @33969 has 15 MA's), (26, 34101), (27, 34113),

Gene: PhluffyCoco_57 Start: 35005, Stop: 35364, Start Num: 17
Candidate Starts for PhluffyCoco_57:
(Start: 17 @35005 has 20 MA's), (Start: 20 @35041 has 1 MA's), (31, 35176), (41, 35272),

Gene: Pineda_58 Start: 34138, Stop: 34536, Start Num: 10
Candidate Starts for Pineda_58:
(Start: 10 @34138 has 15 MA's), (26, 34270), (27, 34282),

Gene: Polka_56 Start: 33831, Stop: 34229, Start Num: 10
Candidate Starts for Polka_56:
(Start: 10 @33831 has 15 MA's), (26, 33963), (27, 33975),

Gene: Rattail_57 Start: 35090, Stop: 35449, Start Num: 17
Candidate Starts for Rattail_57:
(Start: 17 @35090 has 20 MA's), (Start: 20 @35126 has 1 MA's), (31, 35261), (41, 35357),

Gene: RedFox_57 Start: 35003, Stop: 35362, Start Num: 17
Candidate Starts for RedFox_57:
(Start: 17 @35003 has 20 MA's), (Start: 20 @35039 has 1 MA's), (26, 35096), (31, 35174), (41, 35270),

Gene: Renna12_57 Start: 35155, Stop: 35478, Start Num: 20
Candidate Starts for Renna12_57:
(Start: 20 @35155 has 1 MA's), (28, 35227), (31, 35290), (41, 35386),

Gene: Ruchi_54 Start: 35134, Stop: 35523, Start Num: 12
Candidate Starts for Ruchi_54:
(1, 34957), (3, 35074), (Start: 12 @35134 has 8 MA's), (24, 35236), (29, 35302), (32, 35341),

Gene: Shen_53 Start: 34512, Stop: 34889, Start Num: 14
Candidate Starts for Shen_53:
(4, 34443), (5, 34461), (6, 34473), (Start: 14 @34512 has 8 MA's), (26, 34623), (27, 34635),

Gene: StuartMinion_48 Start: 31723, Stop: 32067, Start Num: 19
Candidate Starts for StuartMinion_48:
(Start: 19 @31723 has 2 MA's), (26, 31801), (31, 31879), (41, 31975),

Gene: TaylorSipht_57 Start: 35813, Stop: 36202, Start Num: 13
Candidate Starts for TaylorSipht_57:
(2, 35663), (Start: 13 @35813 has 2 MA's), (18, 35852), (24, 35915), (26, 35936), (32, 36020), (33, 36023),

Gene: Toad24_58 Start: 36652, Stop: 37029, Start Num: 14
Candidate Starts for Toad24_58:
(4, 36583), (5, 36601), (6, 36613), (Start: 14 @36652 has 8 MA's), (26, 36763), (27, 36775),

Gene: VanLee_1 Start: 1, Stop: 366, Start Num: 7
Candidate Starts for VanLee_1:
(Start: 7 @1 has 1 MA's), (Start: 13 @19 has 2 MA's), (Start: 17 @46 has 20 MA's), (34, 235), (37, 280), (39, 298),

Gene: Vulpecula_54 Start: 34794, Stop: 35183, Start Num: 12
Candidate Starts for Vulpecula_54:
(1, 34617), (3, 34734), (Start: 12 @34794 has 8 MA's), (24, 34896), (29, 34962), (32, 35001),

Gene: Westrich_66 Start: 36836, Stop: 37213, Start Num: 14
Candidate Starts for Westrich_66:
(4, 36767), (5, 36785), (6, 36797), (Start: 14 @36836 has 8 MA's), (26, 36947), (27, 36959),

Gene: WileyE_56 Start: 35548, Stop: 35937, Start Num: 12
Candidate Starts for WileyE_56:
(1, 35371), (3, 35488), (Start: 12 @35548 has 8 MA's), (24, 35650), (29, 35716), (32, 35755),

Gene: Zhuangyuan_60 Start: 35698, Stop: 36057, Start Num: 17
Candidate Starts for Zhuangyuan_60:
(16, 35680), (Start: 17 @35698 has 20 MA's), (29, 35836), (32, 35875),

Gene: Zixiang_55 Start: 36016, Stop: 36393, Start Num: 14
Candidate Starts for Zixiang_55:
(4, 35947), (5, 35965), (6, 35977), (Start: 14 @36016 has 8 MA's), (26, 36127), (27, 36139),