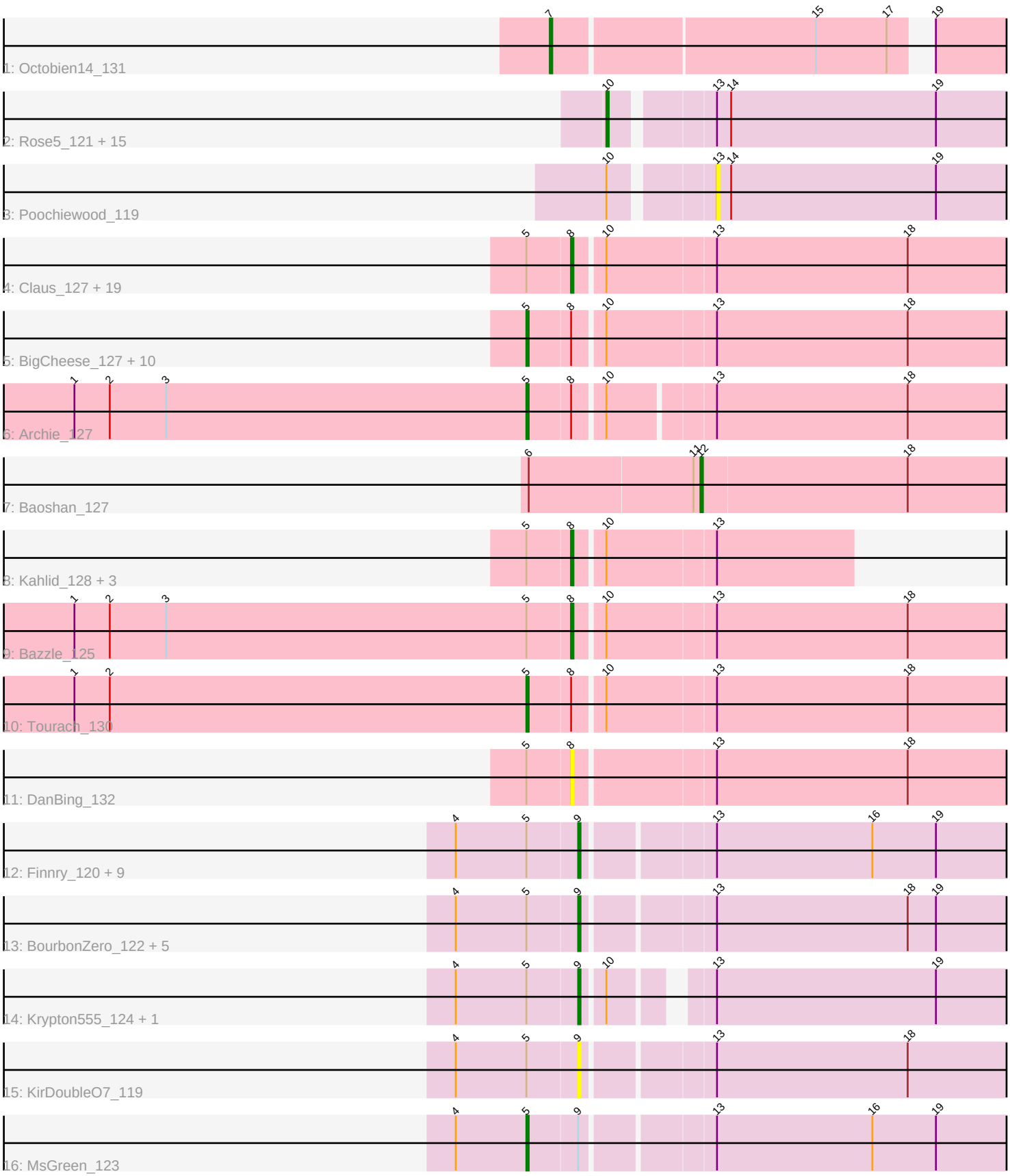
Pham 347541


1: Octobien14_131
2: Rose5_121 + 15
3: Poochiewood_119
4: Claus_127 + 19
5: BigCheese_127 + 10
6: Archie_127
7: Baoshan_127
8: Kahlid_128 + 3
9: Bazzle_125
10: Tourach_130
11: DanBing_132
12: Finnry_120 + 9
13: BourbonZero_122 + 5
14: Krypton555_124 + 1
15: KirDoubleO7_119
16: MsGreen_123

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 347541 Report

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

Pham number 347541 has 78 members, 15 are drafts.

Phages represented in each track:
• Track 1 : Octobien14_131
• Track 2 : Rose5_121, Appletree2_119, CicholasNage_114, Acquire49_120, Calm_127, MAckerman_121, AvadaKedavra_120, UPIE_119, JoeDirt_122, LeBron_119, Zaria_124, Halena_120, Tyson_121, OhShagHennessy_112, Wamburgrxpress_122, Wyatt2_120
• Track 3 : Poochiewood_119
• Track 4 : Claus_127, Gardann_128, Soap141_129, MkaliMitinis3_130, Lewan_130, ZhongYanYuan_125, Hiraya_128, GuuelaD_126, Loadrie_129, Underpass_121, ChengKai98_127, Molivier_119, Vetrix_128, Rossetti_129, Miley16_128, DHan_130, Netyap_126, Sarshaun_130, Finemlucis_128, Zakai_130
• Track 5 : BigCheese_127, Breezona_128, SoJulia_131, Faith1_126, Winky_128, Gabriela_128, Crossroads_131, Itos_128, Nicholasp3_129, DrSeegs_126, Wigglewiggle_129
• Track 6 : Archie_127
• Track 7 : Baoshan_127
• Track 8 : Kahlid_128, LilDestine_125, Wilder_129, Lynnae_129
• Track 9 : Bazzle_125
• Track 10 : Tourach_130
• Track 11 : DanBing_132
• Track 12 : Finnry_120, Kingsolomon_118, Clautastrophe_121, Bellis_122, TriFive_123, Nicholas_118, Jobypre_122, Samty_120, Jubie_122, Lumos_122
• Track 13 : BourbonZero_122, MiniMac_126, Ellson_120, DuncansLeg_122, Lolly9_122, MiniLon_126
• Track 14 : Krypton555_124, Whirlwind_122
• Track 15 : KirDoubleO7_119
• Track 16 : MsGreen_123

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

The start number called the most often in the published annotations is 8, it was called in 16 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Bazzle_125, ChengKai98_127, Claus_127, DHan_130, DanBing_132, Finemlucis_128, Gardann_128, GuuelaD_126, Hiraya_128, Kahlid_128, Lewan_130, LilDestine_125, Loadrie_129, Lynnae_129, Miley16_128, MkaliMitinis3_130, Molivier_119, Netyap_126, Rossetti_129, Sarshaun_130, Soap141_129, Underpass_121, Vetrix_128, Wilder_129, Zakai_130, ZhongYanYuan_125,

Genes that have the "Most Annotated" start but do not call it:
• Archie_127, BigCheese_127, Breezona_128, Crossroads_131, DrSeegs_126, Faith1_126, Gabriela_128, Itos_128, Nicholasp3_129, SoJulia_131, Tourach_130, Wigglewiggle_129, Winky_128,

Genes that do not have the "Most Annotated" start:
• Acquire49_120, Appletree2_119, AvadaKedavra_120, Baoshan_127, Bellis_122, BourbonZero_122, Calm_127, CicholasNage_114, Clautastrophe_121, DuncansLeg_122, Ellson_120, Finnry_120, Halena_120, Jobypre_122, JoeDirt_122, Jubie_122, Kingsolomon_118, KirDoubleO7_119, Krypton555_124, LeBron_119, Lolly9_122, Lumos_122, MAckerman_121, MiniLon_126, MiniMac_126, MsGreen_123, Nicholas_118, Octobien14_131, OhShagHennessy_112, Poochiewood_119, Rose5_121, Samty_120, TriFive_123, Tyson_121, UPIE_119, Wamburgrxpress_122, Whirlwind_122, Wyatt2_120, Zaria_124,

Summary by start number:

Start 5:
• Found in 59 of 78 (75.6%) of genes in pham
• Manual Annotations of this start: 13 of 63
• Called 23.7% of time when present
• Phage (with cluster) where this start called: Archie_127 (L2), BigCheese_127 (L2), Breezona_128 (L2), Crossroads_131 (L2), DrSeegs_126 (L2), Faith1_126 (L2), Gabriela_128 (L2), Itos_128 (L2), MsGreen_123 (L3), Nicholasp3_129 (L2), SoJulia_131 (L2), Tourach_130 (L2), Wigglewiggle_129 (L2), Winky_128 (L2),

Start 7:
• Found in 1 of 78 (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: Octobien14_131 (DU1),

Start 8:
• Found in 39 of 78 (50.0%) of genes in pham
• Manual Annotations of this start: 16 of 63
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Bazzle_125 (L2), ChengKai98_127 (L2), Claus_127 (L2), DHan_130 (L2), DanBing_132 (L2), Finemlucis_128 (L2), Gardann_128 (L2), GuuelaD_126 (L2), Hiraya_128 (L2), Kahlid_128 (L2), Lewan_130 (L2), LilDestine_125 (L2), Loadrie_129 (L2), Lynnae_129 (L2), Miley16_128 (L2), MkaliMitinis3_130 (L2), Molivier_119 (L2), Netyap_126 (L2), Rossetti_129 (L2), Sarshaun_130 (L2), Soap141_129 (L2), Underpass_121 (L2), Vetrix_128 (L2), Wilder_129 (L2), Zakai_130 (L2), ZhongYanYuan_125 (L2),

Start 9:
• Found in 20 of 78 (25.6%) of genes in pham
• Manual Annotations of this start: 16 of 63

• Called 95.0% of time when present
• Phage (with cluster) where this start called: Bellis_122 (L3), BourbonZero_122 (L3), Clautastrophe_121 (L3), DuncansLeg_122 (L3), Ellson_120 (L3), Finnry_120 (L3), Jobypre_122 (L3), Jubie_122 (L3), Kingsolomon_118 (L3), KirDoubleO7_119 (L3), Krypton555_124 (L3), Lolly9_122 (L3), Lumos_122 (L3), MiniLon_126 (L3), MiniMac_126 (L3), Nicholas_118 (L3), Samty_120 (L3), TriFive_123 (L3), Whirlwind_122 (L3),

Start 10:
• Found in 57 of 78 (73.1%) of genes in pham
• Manual Annotations of this start: 16 of 63
• Called 28.1% of time when present
• Phage (with cluster) where this start called: Acquire49_120 (L1), Appletree2_119 (L1), AvadaKedavra_120 (L1), Calm_127 (L1), CicholasNage_114 (L1), Halena_120 (L1), JoeDirt_122 (L1), LeBron_119 (L1), MAckerman_121 (L1), OhShagHennessy_112 (L1), Rose5_121 (L1), Tyson_121 (L1), UPIE_119 (L1), Wamburgrxpress_122 (L1), Wyatt2_120 (L1), Zaria_124 (L1),

Start 12:
• Found in 1 of 78 (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: Baoshan_127 (L2),

Start 13:
• Found in 76 of 78 (97.4%) of genes in pham
• No Manual Annotations of this start.
• Called 1.3% of time when present
• Phage (with cluster) where this start called: Poochiewood_119 (L1),

Summary by clusters:

There are 4 clusters represented in this pham: DU1, L2, L3, L1,

Info for manual annotations of cluster DU1:
•Start number 7 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster L1:
•Start number 10 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 5 was manually annotated 12 times for cluster L2.
•Start number 8 was manually annotated 16 times for cluster L2.
•Start number 12 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L3:
•Start number 5 was manually annotated 1 time for cluster L3.
•Start number 9 was manually annotated 16 times for cluster L3.

Gene Information:

Gene: Acquire49_120 Start: 65386, Stop: 65159, Start Num: 10
Candidate Starts for Acquire49_120:
(Start: 10 @65386 has 16 MA's), (13, 65347), (14, 65341), (19, 65254),

Gene: Appletree2_119 Start: 65427, Stop: 65200, Start Num: 10
Candidate Starts for Appletree2_119:
(Start: 10 @65427 has 16 MA's), (13, 65388), (14, 65382), (19, 65295),

Gene: Archie_127 Start: 68037, Stop: 67777, Start Num: 5
Candidate Starts for Archie_127:
(1, 68229), (2, 68214), (3, 68190), (Start: 5 @68037 has 13 MA's), (Start: 8 @68019 has 16 MA's), (Start: 10 @68007 has 16 MA's), (13, 67965), (18, 67884),

Gene: AvadaKedavra_120 Start: 65500, Stop: 65273, Start Num: 10
Candidate Starts for AvadaKedavra_120:
(Start: 10 @65500 has 16 MA's), (13, 65461), (14, 65455), (19, 65368),

Gene: Baoshan_127 Start: 67729, Stop: 67535, Start Num: 12
Candidate Starts for Baoshan_127:
(6, 67801), (11, 67732), (Start: 12 @67729 has 1 MA's), (18, 67642),

Gene: Bazzle_125 Start: 68196, Stop: 67951, Start Num: 8
Candidate Starts for Bazzle_125:
(1, 68406), (2, 68391), (3, 68367), (Start: 5 @68214 has 13 MA's), (Start: 8 @68196 has 16 MA's), (Start: 10 @68184 has 16 MA's), (13, 68139), (18, 68058),

Gene: Bellis_122 Start: 66993, Stop: 66754, Start Num: 9
Candidate Starts for Bellis_122:
(4, 67044), (Start: 5 @67014 has 13 MA's), (Start: 9 @66993 has 16 MA's), (13, 66942), (16, 66876), (19, 66849),

Gene: BigCheese_127 Start: 67971, Stop: 67708, Start Num: 5
Candidate Starts for BigCheese_127:
(Start: 5 @67971 has 13 MA's), (Start: 8 @67953 has 16 MA's), (Start: 10 @67941 has 16 MA's), (13, 67896), (18, 67815),

Gene: BourbonZero_122 Start: 67259, Stop: 67020, Start Num: 9
Candidate Starts for BourbonZero_122:
(4, 67310), (Start: 5 @67280 has 13 MA's), (Start: 9 @67259 has 16 MA's), (13, 67208), (18, 67127), (19, 67115),

Gene: Breezona_128 Start: 68306, Stop: 68043, Start Num: 5
Candidate Starts for Breezona_128:
(Start: 5 @68306 has 13 MA's), (Start: 8 @68288 has 16 MA's), (Start: 10 @68276 has 16 MA's), (13, 68231), (18, 68150),

Gene: Calm_127 Start: 66601, Stop: 66374, Start Num: 10
Candidate Starts for Calm_127:
(Start: 10 @66601 has 16 MA's), (13, 66562), (14, 66556), (19, 66469),

Gene: ChengKai98_127 Start: 67904, Stop: 67659, Start Num: 8
Candidate Starts for ChengKai98_127:

(Start: 5 @67922 has 13 MA's), (Start: 8 @67904 has 16 MA's), (Start: 10 @67892 has 16 MA's), (13, 67847), (18, 67766),

Gene: CicholasNage_114 Start: 65731, Stop: 65504, Start Num: 10
Candidate Starts for CicholasNage_114:
(Start: 10 @65731 has 16 MA's), (13, 65692), (14, 65686), (19, 65599),

Gene: Claus_127 Start: 67856, Stop: 67611, Start Num: 8
Candidate Starts for Claus_127:
(Start: 5 @67874 has 13 MA's), (Start: 8 @67856 has 16 MA's), (Start: 10 @67844 has 16 MA's), (13, 67799), (18, 67718),

Gene: Clautastrophe_121 Start: 67103, Stop: 66864, Start Num: 9
Candidate Starts for Clautastrophe_121:
(4, 67154), (Start: 5 @67124 has 13 MA's), (Start: 9 @67103 has 16 MA's), (13, 67052), (16, 66986), (19, 66959),

Gene: Crossroads_131 Start: 68238, Stop: 67975, Start Num: 5
Candidate Starts for Crossroads_131:
(Start: 5 @68238 has 13 MA's), (Start: 8 @68220 has 16 MA's), (Start: 10 @68208 has 16 MA's), (13, 68163), (18, 68082),

Gene: DHan_130 Start: 68359, Stop: 68114, Start Num: 8
Candidate Starts for DHan_130:
(Start: 5 @68377 has 13 MA's), (Start: 8 @68359 has 16 MA's), (Start: 10 @68347 has 16 MA's), (13, 68302), (18, 68221),

Gene: DanBing_132 Start: 68654, Stop: 68409, Start Num: 8
Candidate Starts for DanBing_132:
(Start: 5 @68672 has 13 MA's), (Start: 8 @68654 has 16 MA's), (13, 68597), (18, 68516),

Gene: DrSeegs_126 Start: 68306, Stop: 68043, Start Num: 5
Candidate Starts for DrSeegs_126:
(Start: 5 @68306 has 13 MA's), (Start: 8 @68288 has 16 MA's), (Start: 10 @68276 has 16 MA's), (13, 68231), (18, 68150),

Gene: DuncansLeg_122 Start: 67285, Stop: 67046, Start Num: 9
Candidate Starts for DuncansLeg_122:
(4, 67336), (Start: 5 @67306 has 13 MA's), (Start: 9 @67285 has 16 MA's), (13, 67234), (18, 67153), (19, 67141),

Gene: Ellson_120 Start: 67541, Stop: 67302, Start Num: 9
Candidate Starts for Ellson_120:
(4, 67592), (Start: 5 @67562 has 13 MA's), (Start: 9 @67541 has 16 MA's), (13, 67490), (18, 67409), (19, 67397),

Gene: Faith1_126 Start: 67614, Stop: 67351, Start Num: 5
Candidate Starts for Faith1_126:
(Start: 5 @67614 has 13 MA's), (Start: 8 @67596 has 16 MA's), (Start: 10 @67584 has 16 MA's), (13, 67539), (18, 67458),

Gene: Finemlucis_128 Start: 69047, Stop: 68802, Start Num: 8
Candidate Starts for Finemlucis_128:

(Start: 5 @69065 has 13 MA's), (Start: 8 @69047 has 16 MA's), (Start: 10 @69035 has 16 MA's), (13, 68990), (18, 68909),

Gene: Finnry_120 Start: 67341, Stop: 67102, Start Num: 9
Candidate Starts for Finnry_120:
(4, 67392), (Start: 5 @67362 has 13 MA's), (Start: 9 @67341 has 16 MA's), (13, 67290), (16, 67224), (19, 67197),

Gene: Gabriela_128 Start: 67402, Stop: 67139, Start Num: 5
Candidate Starts for Gabriela_128:
(Start: 5 @67402 has 13 MA's), (Start: 8 @67384 has 16 MA's), (Start: 10 @67372 has 16 MA's), (13, 67327), (18, 67246),

Gene: Gardann_128 Start: 68061, Stop: 67816, Start Num: 8
Candidate Starts for Gardann_128:
(Start: 5 @68079 has 13 MA's), (Start: 8 @68061 has 16 MA's), (Start: 10 @68049 has 16 MA's), (13, 68004), (18, 67923),

Gene: GuuelaD_126 Start: 67948, Stop: 67703, Start Num: 8
Candidate Starts for GuuelaD_126:
(Start: 5 @67966 has 13 MA's), (Start: 8 @67948 has 16 MA's), (Start: 10 @67936 has 16 MA's), (13, 67891), (18, 67810),

Gene: Halena_120 Start: 65374, Stop: 65147, Start Num: 10
Candidate Starts for Halena_120:
(Start: 10 @65374 has 16 MA's), (13, 65335), (14, 65329), (19, 65242),

Gene: Hiraya_128 Start: 68126, Stop: 67878, Start Num: 8
Candidate Starts for Hiraya_128:
(Start: 5 @68144 has 13 MA's), (Start: 8 @68126 has 16 MA's), (Start: 10 @68111 has 16 MA's), (13, 68066), (18, 67985),

Gene: Itos_128 Start: 66520, Stop: 66257, Start Num: 5
Candidate Starts for Itos_128:
(Start: 5 @66520 has 13 MA's), (Start: 8 @66502 has 16 MA's), (Start: 10 @66490 has 16 MA's), (13, 66445), (18, 66364),

Gene: Jobypre_122 Start: 67101, Stop: 66862, Start Num: 9
Candidate Starts for Jobypre_122:
(4, 67152), (Start: 5 @67122 has 13 MA's), (Start: 9 @67101 has 16 MA's), (13, 67050), (16, 66984), (19, 66957),

Gene: JoeDirt_122 Start: 66605, Stop: 66378, Start Num: 10
Candidate Starts for JoeDirt_122:
(Start: 10 @66605 has 16 MA's), (13, 66566), (14, 66560), (19, 66473),

Gene: Jubie_122 Start: 67236, Stop: 66997, Start Num: 9
Candidate Starts for Jubie_122:
(4, 67287), (Start: 5 @67257 has 13 MA's), (Start: 9 @67236 has 16 MA's), (13, 67185), (16, 67119), (19, 67092),

Gene: Kahlid_128 Start: 67898, Stop: 67728, Start Num: 8
Candidate Starts for Kahlid_128:

(Start: 5 @67916 has 13 MA's), (Start: 8 @67898 has 16 MA's), (Start: 10 @67886 has 16 MA's), (13, 67841),

Gene: Kingsolomon_118 Start: 67097, Stop: 66858, Start Num: 9
Candidate Starts for Kingsolomon_118:
(4, 67148), (Start: 5 @67118 has 13 MA's), (Start: 9 @67097 has 16 MA's), (13, 67046), (16, 66980), (19, 66953),

Gene: KirDoubleO7_119 Start: 67232, Stop: 66993, Start Num: 9
Candidate Starts for KirDoubleO7_119:
(4, 67283), (Start: 5 @67253 has 13 MA's), (Start: 9 @67232 has 16 MA's), (13, 67181), (18, 67100),

Gene: Krypton555_124 Start: 67480, Stop: 67250, Start Num: 9
Candidate Starts for Krypton555_124:
(4, 67531), (Start: 5 @67501 has 13 MA's), (Start: 9 @67480 has 16 MA's), (Start: 10 @67471 has 16 MA's), (13, 67438), (19, 67345),

Gene: LeBron_119 Start: 64990, Stop: 64763, Start Num: 10
Candidate Starts for LeBron_119:
(Start: 10 @64990 has 16 MA's), (13, 64951), (14, 64945), (19, 64858),

Gene: Lewan_130 Start: 68579, Stop: 68334, Start Num: 8
Candidate Starts for Lewan_130:
(Start: 5 @68597 has 13 MA's), (Start: 8 @68579 has 16 MA's), (Start: 10 @68567 has 16 MA's), (13, 68522), (18, 68441),

Gene: LilDestine_125 Start: 67068, Stop: 66898, Start Num: 8
Candidate Starts for LilDestine_125:
(Start: 5 @67086 has 13 MA's), (Start: 8 @67068 has 16 MA's), (Start: 10 @67056 has 16 MA's), (13, 67011),

Gene: Loadrie_129 Start: 68611, Stop: 68366, Start Num: 8
Candidate Starts for Loadrie_129:
(Start: 5 @68629 has 13 MA's), (Start: 8 @68611 has 16 MA's), (Start: 10 @68599 has 16 MA's), (13, 68554), (18, 68473),

Gene: Lolly9_122 Start: 67634, Stop: 67395, Start Num: 9
Candidate Starts for Lolly9_122:
(4, 67685), (Start: 5 @67655 has 13 MA's), (Start: 9 @67634 has 16 MA's), (13, 67583), (18, 67502), (19, 67490),

Gene: Lumos_122 Start: 67098, Stop: 66859, Start Num: 9
Candidate Starts for Lumos_122:
(4, 67149), (Start: 5 @67119 has 13 MA's), (Start: 9 @67098 has 16 MA's), (13, 67047), (16, 66981), (19, 66954),

Gene: Lynnae_129 Start: 67711, Stop: 67541, Start Num: 8
Candidate Starts for Lynnae_129:
(Start: 5 @67729 has 13 MA's), (Start: 8 @67711 has 16 MA's), (Start: 10 @67699 has 16 MA's), (13, 67654),

Gene: MAckerman_121 Start: 65367, Stop: 65140, Start Num: 10
Candidate Starts for MAckerman_121:

(Start: 10 @65367 has 16 MA's), (13, 65328), (14, 65322), (19, 65235),

Gene: Miley16_128 Start: 68288, Stop: 68043, Start Num: 8
Candidate Starts for Miley16_128:
(Start: 5 @68306 has 13 MA's), (Start: 8 @68288 has 16 MA's), (Start: 10 @68276 has 16 MA's), (13, 68231), (18, 68150),

Gene: MiniLon_126 Start: 67635, Stop: 67396, Start Num: 9
Candidate Starts for MiniLon_126:
(4, 67686), (Start: 5 @67656 has 13 MA's), (Start: 9 @67635 has 16 MA's), (13, 67584), (18, 67503), (19, 67491),

Gene: MiniMac_126 Start: 67637, Stop: 67398, Start Num: 9
Candidate Starts for MiniMac_126:
(4, 67688), (Start: 5 @67658 has 13 MA's), (Start: 9 @67637 has 16 MA's), (13, 67586), (18, 67505), (19, 67493),

Gene: MkaliMitinis3_130 Start: 67984, Stop: 67739, Start Num: 8
Candidate Starts for MkaliMitinis3_130:
(Start: 5 @68002 has 13 MA's), (Start: 8 @67984 has 16 MA's), (Start: 10 @67972 has 16 MA's), (13, 67927), (18, 67846),

Gene: Molivier_119 Start: 63181, Stop: 62936, Start Num: 8
Candidate Starts for Molivier_119:
(Start: 5 @63199 has 13 MA's), (Start: 8 @63181 has 16 MA's), (Start: 10 @63169 has 16 MA's), (13, 63124), (18, 63043),

Gene: MsGreen_123 Start: 67121, Stop: 66861, Start Num: 5
Candidate Starts for MsGreen_123:
(4, 67151), (Start: 5 @67121 has 13 MA's), (Start: 9 @67100 has 16 MA's), (13, 67049), (16, 66983), (19, 66956),

Gene: Netyap_126 Start: 68002, Stop: 67757, Start Num: 8
Candidate Starts for Netyap_126:
(Start: 5 @68020 has 13 MA's), (Start: 8 @68002 has 16 MA's), (Start: 10 @67990 has 16 MA's), (13, 67945), (18, 67864),

Gene: Nicholas_118 Start: 67097, Stop: 66858, Start Num: 9
Candidate Starts for Nicholas_118:
(4, 67148), (Start: 5 @67118 has 13 MA's), (Start: 9 @67097 has 16 MA's), (13, 67046), (16, 66980), (19, 66953),

Gene: Nicholasp3_129 Start: 68079, Stop: 67816, Start Num: 5
Candidate Starts for Nicholasp3_129:
(Start: 5 @68079 has 13 MA's), (Start: 8 @68061 has 16 MA's), (Start: 10 @68049 has 16 MA's), (13, 68004), (18, 67923),

Gene: Octobien14_131 Start: 69849, Stop: 69610, Start Num: 7
Candidate Starts for Octobien14_131:
(Start: 7 @69849 has 1 MA's), (15, 69741), (17, 69711), (19, 69702),

Gene: OhShagHennessy_112 Start: 64152, Stop: 63925, Start Num: 10
Candidate Starts for OhShagHennessy_112:

(Start: 10 @64152 has 16 MA's), (13, 64113), (14, 64107), (19, 64020),

Gene: Poochiewood_119 Start: 66784, Stop: 66596, Start Num: 13
Candidate Starts for Poochiewood_119:
(Start: 10 @66823 has 16 MA's), (13, 66784), (14, 66778), (19, 66691),

Gene: Rose5_121 Start: 65664, Stop: 65437, Start Num: 10
Candidate Starts for Rose5_121:
(Start: 10 @65664 has 16 MA's), (13, 65625), (14, 65619), (19, 65532),

Gene: Rossetti_129 Start: 68236, Stop: 67991, Start Num: 8
Candidate Starts for Rossetti_129:
(Start: 5 @68254 has 13 MA's), (Start: 8 @68236 has 16 MA's), (Start: 10 @68224 has 16 MA's), (13, 68179), (18, 68098),

Gene: Samty_120 Start: 67084, Stop: 66845, Start Num: 9
Candidate Starts for Samty_120:
(4, 67135), (Start: 5 @67105 has 13 MA's), (Start: 9 @67084 has 16 MA's), (13, 67033), (16, 66967), (19, 66940),

Gene: Sarshaun_130 Start: 68955, Stop: 68710, Start Num: 8
Candidate Starts for Sarshaun_130:
(Start: 5 @68973 has 13 MA's), (Start: 8 @68955 has 16 MA's), (Start: 10 @68943 has 16 MA's), (13, 68898), (18, 68817),

Gene: SoJulia_131 Start: 70082, Stop: 69819, Start Num: 5
Candidate Starts for SoJulia_131:
(Start: 5 @70082 has 13 MA's), (Start: 8 @70064 has 16 MA's), (Start: 10 @70052 has 16 MA's), (13, 70007), (18, 69926),

Gene: Soap141_129 Start: 68955, Stop: 68710, Start Num: 8
Candidate Starts for Soap141_129:
(Start: 5 @68973 has 13 MA's), (Start: 8 @68955 has 16 MA's), (Start: 10 @68943 has 16 MA's), (13, 68898), (18, 68817),

Gene: Tourach_130 Start: 69507, Stop: 69244, Start Num: 5
Candidate Starts for Tourach_130:
(1, 69699), (2, 69684), (Start: 5 @69507 has 13 MA's), (Start: 8 @69489 has 16 MA's), (Start: 10 @69477 has 16 MA's), (13, 69432), (18, 69351),

Gene: TriFive_123 Start: 67214, Stop: 66975, Start Num: 9
Candidate Starts for TriFive_123:
(4, 67265), (Start: 5 @67235 has 13 MA's), (Start: 9 @67214 has 16 MA's), (13, 67163), (16, 67097), (19, 67070),

Gene: Tyson_121 Start: 66094, Stop: 65867, Start Num: 10
Candidate Starts for Tyson_121:
(Start: 10 @66094 has 16 MA's), (13, 66055), (14, 66049), (19, 65962),

Gene: UPIE_119 Start: 65331, Stop: 65104, Start Num: 10
Candidate Starts for UPIE_119:
(Start: 10 @65331 has 16 MA's), (13, 65292), (14, 65286), (19, 65199),

Gene: Underpass_121 Start: 63101, Stop: 62856, Start Num: 8
Candidate Starts for Underpass_121:
(Start: 5 @63119 has 13 MA's), (Start: 8 @63101 has 16 MA's), (Start: 10 @63089 has 16 MA's), (13, 63044), (18, 62963),

Gene: Vetrix_128 Start: 68598, Stop: 68353, Start Num: 8
Candidate Starts for Vetrix_128:
(Start: 5 @68616 has 13 MA's), (Start: 8 @68598 has 16 MA's), (Start: 10 @68586 has 16 MA's), (13, 68541), (18, 68460),

Gene: Wamburgrxpress_122 Start: 65997, Stop: 65770, Start Num: 10
Candidate Starts for Wamburgrxpress_122:
(Start: 10 @65997 has 16 MA's), (13, 65958), (14, 65952), (19, 65865),

Gene: Whirlwind_122 Start: 67361, Stop: 67131, Start Num: 9
Candidate Starts for Whirlwind_122:
(4, 67412), (Start: 5 @67382 has 13 MA's), (Start: 9 @67361 has 16 MA's), (Start: 10 @67352 has 16 MA's), (13, 67319), (19, 67226),

Gene: Wigglewiggle_129 Start: 68212, Stop: 67949, Start Num: 5
Candidate Starts for Wigglewiggle_129:
(Start: 5 @68212 has 13 MA's), (Start: 8 @68194 has 16 MA's), (Start: 10 @68182 has 16 MA's), (13, 68137), (18, 68056),

Gene: Wilder_129 Start: 67752, Stop: 67582, Start Num: 8
Candidate Starts for Wilder_129:
(Start: 5 @67770 has 13 MA's), (Start: 8 @67752 has 16 MA's), (Start: 10 @67740 has 16 MA's), (13, 67695),

Gene: Winky_128 Start: 68307, Stop: 68044, Start Num: 5
Candidate Starts for Winky_128:
(Start: 5 @68307 has 13 MA's), (Start: 8 @68289 has 16 MA's), (Start: 10 @68277 has 16 MA's), (13, 68232), (18, 68151),

Gene: Wyatt2_120 Start: 65757, Stop: 65530, Start Num: 10
Candidate Starts for Wyatt2_120:
(Start: 10 @65757 has 16 MA's), (13, 65718), (14, 65712), (19, 65625),

Gene: Zakai_130 Start: 67999, Stop: 67754, Start Num: 8
Candidate Starts for Zakai_130:
(Start: 5 @68017 has 13 MA's), (Start: 8 @67999 has 16 MA's), (Start: 10 @67987 has 16 MA's), (13, 67942), (18, 67861),

Gene: Zaria_124 Start: 66066, Stop: 65839, Start Num: 10
Candidate Starts for Zaria_124:
(Start: 10 @66066 has 16 MA's), (13, 66027), (14, 66021), (19, 65934),

Gene: ZhongYanYuan_125 Start: 67479, Stop: 67234, Start Num: 8
Candidate Starts for ZhongYanYuan_125:
(Start: 5 @67497 has 13 MA's), (Start: 8 @67479 has 16 MA's), (Start: 10 @67467 has 16 MA's), (13, 67422), (18, 67341),