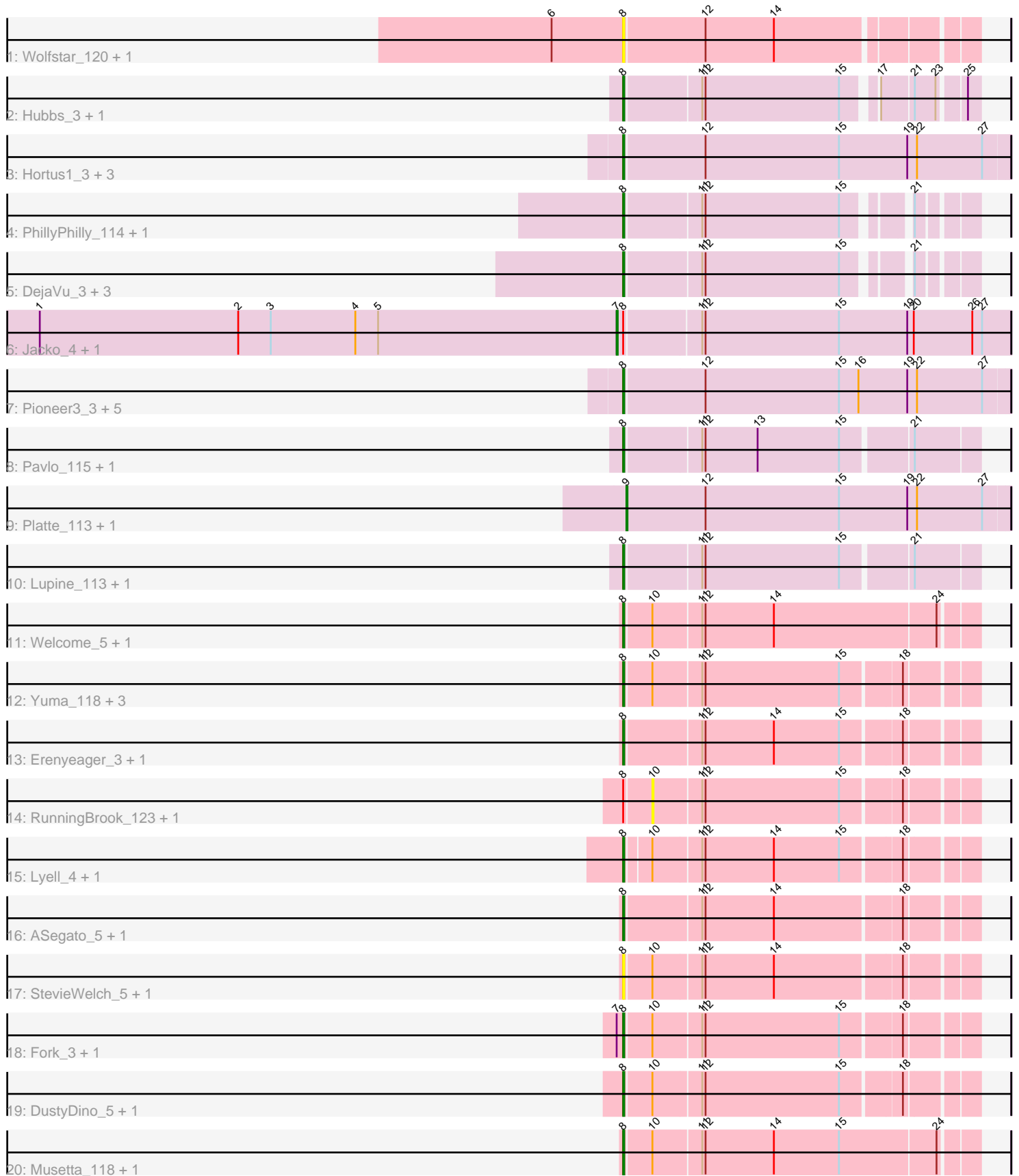


# Pham 145715



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 145715 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 145715 has 50 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Wolfstar\_120, Wolfstar\_4
- Track 2 : Hubbs\_3, Hubbs\_117
- Track 3 : Hortus1\_3, OlinDD\_114, Hortus1\_114, OlinDD\_3
- Track 4 : PhillyPhilly\_114, PhillyPhilly\_4
- Track 5 : DejaVu\_3, DejaVu\_119, Roman\_119, Roman\_3
- Track 6 : Jacko\_4, Jacko\_113
- Track 7 : Pioneer3\_3, Alleb\_4, Alleb\_112, Tandem\_114, Tandem\_3, Pioneer3\_114
- Track 8 : Pavlo\_115, Pavlo\_3
- Track 9 : Platte\_113, Platte\_3
- Track 10 : Lupine\_113, Lupine\_3
- Track 11 : Welcome\_5, Welcome\_122
- Track 12 : Yuma\_118, Necrophoxinus\_5, Yuma\_5, Necrophoxinus\_121
- Track 13 : Erenyeager\_3, Erenyeager\_118
- Track 14 : RunningBrook\_123, RunningBrook\_5
- Track 15 : Lyell\_4, Lyell\_119
- Track 16 : ASegato\_5, ASegato\_119
- Track 17 : StevieWelch\_5, StevieWelch\_123
- Track 18 : Fork\_3, Fork\_115
- Track 19 : DustyDino\_5, DustyDino\_123
- Track 20 : Musetta\_118, Musetta\_5

### ***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 40 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ASegato\_119, ASegato\_5, Alleb\_112, Alleb\_4, DejaVu\_119, DejaVu\_3, DustyDino\_123, DustyDino\_5, Erenyeager\_118, Erenyeager\_3, Fork\_115, Fork\_3, Hortus1\_114, Hortus1\_3, Hubbs\_117, Hubbs\_3, Lupine\_113, Lupine\_3, Lyell\_119,

Lyell\_4, Musetta\_118, Musetta\_5, Necrophoxinus\_121, Necrophoxinus\_5, OlinDD\_114, OlinDD\_3, Pavlo\_115, Pavlo\_3, PhillyPhilly\_114, PhillyPhilly\_4, Pioneer3\_114, Pioneer3\_3, Roman\_119, Roman\_3, StevieWelch\_123, StevieWelch\_5, Tandem\_114, Tandem\_3, Welcome\_122, Welcome\_5, Wolfstar\_120, Wolfstar\_4, Yuma\_118, Yuma\_5,

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

- Jacko\_113, Jacko\_4, RunningBrook\_123, RunningBrook\_5,

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

- Platte\_113, Platte\_3,

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

Start 7:

- Found in 4 of 50 ( 8.0% ) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jacko\_113 (ED1), Jacko\_4 (ED1),

Start 8:

- Found in 48 of 50 ( 96.0% ) of genes in pham
- Manual Annotations of this start: 40 of 44
- Called 91.7% of time when present
- Phage (with cluster) where this start called: ASegato\_119 (ED2), ASegato\_5 (ED2), Alleb\_112 (ED1), Alleb\_4 (ED1), DejaVu\_119 (ED1), DejaVu\_3 (ED1), DustyDino\_123 (ED2), DustyDino\_5 (ED2), Erenyeager\_118 (ED2), Erenyeager\_3 (ED2), Fork\_115 (ED2), Fork\_3 (ED2), Hortus1\_114 (ED1), Hortus1\_3 (ED1), Hubbs\_117 (ED1), Hubbs\_3 (ED1), Lupine\_113 (ED1), Lupine\_3 (ED1), Lyell\_119 (ED2), Lyell\_4 (ED2), Musetta\_118 (ED2), Musetta\_5 (ED2), Necrophoxinus\_121 (ED2), Necrophoxinus\_5 (ED2), OlinDD\_114 (ED1), OlinDD\_3 (ED1), Pavlo\_115 (ED1), Pavlo\_3 (ED1), PhillyPhilly\_114 (ED1), PhillyPhilly\_4 (ED1), Pioneer3\_114 (ED1), Pioneer3\_3 (ED1), Roman\_119 (ED1), Roman\_3 (ED1), StevieWelch\_123 (ED2), StevieWelch\_5 (ED2), Tandem\_114 (ED1), Tandem\_3 (ED1), Welcome\_122 (ED2), Welcome\_5 (ED2), Wolfstar\_120 (ED), Wolfstar\_4 (ED), Yuma\_118 (ED2), Yuma\_5 (ED2),

Start 9:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Platte\_113 (ED1), Platte\_3 (ED1),

Start 10:

- Found in 18 of 50 ( 36.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: RunningBrook\_123 (ED2), RunningBrook\_5 (ED2),

### **Summary by clusters:**

There are 3 clusters represented in this pham: ED2, ED, ED1,

Info for manual annotations of cluster ED1:

- Start number 7 was manually annotated 2 times for cluster ED1.
- Start number 8 was manually annotated 22 times for cluster ED1.
- Start number 9 was manually annotated 2 times for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 8 was manually annotated 18 times for cluster ED2.

### ***Gene Information:***

Gene: ASegato\_5 Start: 1712, Stop: 1410, Start Num: 8

Candidate Starts for ASegato\_5:

(Start: 8 @1712 has 40 MA's), (11, 1646), (12, 1643), (14, 1580), (18, 1469),

Gene: ASegato\_119 Start: 61161, Stop: 60859, Start Num: 8

Candidate Starts for ASegato\_119:

(Start: 8 @61161 has 40 MA's), (11, 61095), (12, 61092), (14, 61029), (18, 60918),

Gene: Alleb\_4 Start: 1423, Stop: 1073, Start Num: 8

Candidate Starts for Alleb\_4:

(Start: 8 @1423 has 40 MA's), (12, 1351), (15, 1228), (16, 1210), (19, 1165), (22, 1156), (27, 1096),

Gene: Alleb\_112 Start: 60902, Stop: 60552, Start Num: 8

Candidate Starts for Alleb\_112:

(Start: 8 @60902 has 40 MA's), (12, 60830), (15, 60707), (16, 60689), (19, 60644), (22, 60635), (27, 60575),

Gene: DejaVu\_3 Start: 1239, Stop: 955, Start Num: 8

Candidate Starts for DejaVu\_3:

(Start: 8 @1239 has 40 MA's), (11, 1173), (12, 1170), (15, 1047), (21, 1002),

Gene: DejaVu\_119 Start: 61619, Stop: 61335, Start Num: 8

Candidate Starts for DejaVu\_119:

(Start: 8 @61619 has 40 MA's), (11, 61553), (12, 61550), (15, 61427), (21, 61382),

Gene: DustyDino\_5 Start: 1629, Stop: 1327, Start Num: 8

Candidate Starts for DustyDino\_5:

(Start: 8 @1629 has 40 MA's), (10, 1605), (11, 1563), (12, 1560), (15, 1437), (18, 1386),

Gene: DustyDino\_123 Start: 61719, Stop: 61417, Start Num: 8

Candidate Starts for DustyDino\_123:

(Start: 8 @61719 has 40 MA's), (10, 61695), (11, 61653), (12, 61650), (15, 61527), (18, 61476),

Gene: Erenyeager\_3 Start: 1515, Stop: 1213, Start Num: 8

Candidate Starts for Erenyeager\_3:

(Start: 8 @1515 has 40 MA's), (11, 1449), (12, 1446), (14, 1383), (15, 1323), (18, 1272),

Gene: Erenyeager\_118 Start: 61176, Stop: 60874, Start Num: 8

Candidate Starts for Erenyeager\_118:

(Start: 8 @61176 has 40 MA's), (11, 61110), (12, 61107), (14, 61044), (15, 60984), (18, 60933),

Gene: Fork\_3 Start: 1517, Stop: 1215, Start Num: 8

Candidate Starts for Fork\_3:

(Start: 7 @1523 has 2 MA's), (Start: 8 @1517 has 40 MA's), (10, 1493), (11, 1451), (12, 1448), (15, 1325), (18, 1274),

Gene: Fork\_115 Start: 60508, Stop: 60206, Start Num: 8

Candidate Starts for Fork\_115:

(Start: 7 @60514 has 2 MA's), (Start: 8 @60508 has 40 MA's), (10, 60484), (11, 60442), (12, 60439), (15, 60316), (18, 60265),

Gene: Hortus1\_3 Start: 1296, Stop: 946, Start Num: 8

Candidate Starts for Hortus1\_3:

(Start: 8 @1296 has 40 MA's), (12, 1224), (15, 1101), (19, 1038), (22, 1029), (27, 969),

Gene: Hortus1\_114 Start: 61256, Stop: 60906, Start Num: 8

Candidate Starts for Hortus1\_114:

(Start: 8 @61256 has 40 MA's), (12, 61184), (15, 61061), (19, 60998), (22, 60989), (27, 60929),

Gene: Hubbs\_3 Start: 1446, Stop: 1153, Start Num: 8

Candidate Starts for Hubbs\_3:

(Start: 8 @1446 has 40 MA's), (11, 1380), (12, 1377), (15, 1254), (17, 1230), (21, 1203), (23, 1185), (25, 1164),

Gene: Hubbs\_117 Start: 61845, Stop: 61552, Start Num: 8

Candidate Starts for Hubbs\_117:

(Start: 8 @61845 has 40 MA's), (11, 61779), (12, 61776), (15, 61653), (17, 61629), (21, 61602), (23, 61584), (25, 61563),

Gene: Jacko\_4 Start: 1369, Stop: 1013, Start Num: 7

Candidate Starts for Jacko\_4:

(1, 1900), (2, 1717), (3, 1687), (4, 1609), (5, 1588), (Start: 7 @1369 has 2 MA's), (Start: 8 @1363 has 40 MA's), (11, 1297), (12, 1294), (15, 1171), (19, 1108), (20, 1102), (26, 1048), (27, 1039),

Gene: Jacko\_113 Start: 59762, Stop: 59406, Start Num: 7

Candidate Starts for Jacko\_113:

(1, 60293), (2, 60110), (3, 60080), (4, 60002), (5, 59981), (Start: 7 @59762 has 2 MA's), (Start: 8 @59756 has 40 MA's), (11, 59690), (12, 59687), (15, 59564), (19, 59501), (20, 59495), (26, 59441), (27, 59432),

Gene: Lupine\_113 Start: 60525, Stop: 60217, Start Num: 8

Candidate Starts for Lupine\_113:

(Start: 8 @60525 has 40 MA's), (11, 60459), (12, 60456), (15, 60333), (21, 60273),

Gene: Lupine\_3 Start: 1252, Stop: 944, Start Num: 8

Candidate Starts for Lupine\_3:

(Start: 8 @1252 has 40 MA's), (11, 1186), (12, 1183), (15, 1060), (21, 1000),

Gene: Lyell\_4 Start: 1502, Stop: 1203, Start Num: 8

Candidate Starts for Lyell\_4:

(Start: 8 @1502 has 40 MA's), (10, 1481), (11, 1439), (12, 1436), (14, 1373), (15, 1313), (18, 1262),

Gene: Lyell\_119 Start: 60669, Stop: 60370, Start Num: 8  
Candidate Starts for Lyell\_119:  
(Start: 8 @60669 has 40 MA's), (10, 60648), (11, 60606), (12, 60603), (14, 60540), (15, 60480), (18, 60429),

Gene: Musetta\_118 Start: 61518, Stop: 61207, Start Num: 8  
Candidate Starts for Musetta\_118:  
(Start: 8 @61518 has 40 MA's), (10, 61494), (11, 61452), (12, 61449), (14, 61386), (15, 61326), (24, 61239),

Gene: Musetta\_5 Start: 1723, Stop: 1412, Start Num: 8  
Candidate Starts for Musetta\_5:  
(Start: 8 @1723 has 40 MA's), (10, 1699), (11, 1657), (12, 1654), (14, 1591), (15, 1531), (24, 1444),

Gene: Necrophoxinus\_5 Start: 1536, Stop: 1234, Start Num: 8  
Candidate Starts for Necrophoxinus\_5:  
(Start: 8 @1536 has 40 MA's), (10, 1512), (11, 1470), (12, 1467), (15, 1344), (18, 1293),

Gene: Necrophoxinus\_121 Start: 61779, Stop: 61477, Start Num: 8  
Candidate Starts for Necrophoxinus\_121:  
(Start: 8 @61779 has 40 MA's), (10, 61755), (11, 61713), (12, 61710), (15, 61587), (18, 61536),

Gene: OlinDD\_114 Start: 61261, Stop: 60911, Start Num: 8  
Candidate Starts for OlinDD\_114:  
(Start: 8 @61261 has 40 MA's), (12, 61189), (15, 61066), (19, 61003), (22, 60994), (27, 60934),

Gene: OlinDD\_3 Start: 1296, Stop: 946, Start Num: 8  
Candidate Starts for OlinDD\_3:  
(Start: 8 @1296 has 40 MA's), (12, 1224), (15, 1101), (19, 1038), (22, 1029), (27, 969),

Gene: Pavlo\_115 Start: 61593, Stop: 61285, Start Num: 8  
Candidate Starts for Pavlo\_115:  
(Start: 8 @61593 has 40 MA's), (11, 61527), (12, 61524), (13, 61476), (15, 61401), (21, 61341),

Gene: Pavlo\_3 Start: 1337, Stop: 1029, Start Num: 8  
Candidate Starts for Pavlo\_3:  
(Start: 8 @1337 has 40 MA's), (11, 1271), (12, 1268), (13, 1220), (15, 1145), (21, 1085),

Gene: PhillyPhilly\_114 Start: 61149, Stop: 60865, Start Num: 8  
Candidate Starts for PhillyPhilly\_114:  
(Start: 8 @61149 has 40 MA's), (11, 61083), (12, 61080), (15, 60957), (21, 60912),

Gene: PhillyPhilly\_4 Start: 1660, Stop: 1376, Start Num: 8  
Candidate Starts for PhillyPhilly\_4:  
(Start: 8 @1660 has 40 MA's), (11, 1594), (12, 1591), (15, 1468), (21, 1423),

Gene: Pioneer3\_3 Start: 1329, Stop: 979, Start Num: 8  
Candidate Starts for Pioneer3\_3:  
(Start: 8 @1329 has 40 MA's), (12, 1257), (15, 1134), (16, 1116), (19, 1071), (22, 1062), (27, 1002),

Gene: Pioneer3\_114 Start: 61092, Stop: 60742, Start Num: 8  
Candidate Starts for Pioneer3\_114:

(Start: 8 @61092 has 40 MA's), (12, 61020), (15, 60897), (16, 60879), (19, 60834), (22, 60825), (27, 60765),

Gene: Platte\_113 Start: 60877, Stop: 60527, Start Num: 9

Candidate Starts for Platte\_113:

(Start: 9 @60877 has 2 MA's), (12, 60805), (15, 60682), (19, 60619), (22, 60610), (27, 60550),

Gene: Platte\_3 Start: 1329, Stop: 979, Start Num: 9

Candidate Starts for Platte\_3:

(Start: 9 @1329 has 2 MA's), (12, 1257), (15, 1134), (19, 1071), (22, 1062), (27, 1002),

Gene: Roman\_119 Start: 62530, Stop: 62246, Start Num: 8

Candidate Starts for Roman\_119:

(Start: 8 @62530 has 40 MA's), (11, 62464), (12, 62461), (15, 62338), (21, 62293),

Gene: Roman\_3 Start: 1443, Stop: 1159, Start Num: 8

Candidate Starts for Roman\_3:

(Start: 8 @1443 has 40 MA's), (11, 1377), (12, 1374), (15, 1251), (21, 1206),

Gene: RunningBrook\_123 Start: 61695, Stop: 61417, Start Num: 10

Candidate Starts for RunningBrook\_123:

(Start: 8 @61719 has 40 MA's), (10, 61695), (11, 61653), (12, 61650), (15, 61527), (18, 61476),

Gene: RunningBrook\_5 Start: 1605, Stop: 1327, Start Num: 10

Candidate Starts for RunningBrook\_5:

(Start: 8 @1629 has 40 MA's), (10, 1605), (11, 1563), (12, 1560), (15, 1437), (18, 1386),

Gene: StevieWelch\_5 Start: 1609, Stop: 1307, Start Num: 8

Candidate Starts for StevieWelch\_5:

(Start: 8 @1609 has 40 MA's), (10, 1585), (11, 1543), (12, 1540), (14, 1477), (18, 1366),

Gene: StevieWelch\_123 Start: 61855, Stop: 61553, Start Num: 8

Candidate Starts for StevieWelch\_123:

(Start: 8 @61855 has 40 MA's), (10, 61831), (11, 61789), (12, 61786), (14, 61723), (18, 61612),

Gene: Tandem\_114 Start: 61172, Stop: 60822, Start Num: 8

Candidate Starts for Tandem\_114:

(Start: 8 @61172 has 40 MA's), (12, 61100), (15, 60977), (16, 60959), (19, 60914), (22, 60905), (27, 60845),

Gene: Tandem\_3 Start: 1329, Stop: 979, Start Num: 8

Candidate Starts for Tandem\_3:

(Start: 8 @1329 has 40 MA's), (12, 1257), (15, 1134), (16, 1116), (19, 1071), (22, 1062), (27, 1002),

Gene: Welcome\_5 Start: 1723, Stop: 1412, Start Num: 8

Candidate Starts for Welcome\_5:

(Start: 8 @1723 has 40 MA's), (10, 1699), (11, 1657), (12, 1654), (14, 1591), (24, 1444),

Gene: Welcome\_122 Start: 61867, Stop: 61556, Start Num: 8

Candidate Starts for Welcome\_122:

(Start: 8 @61867 has 40 MA's), (10, 61843), (11, 61801), (12, 61798), (14, 61735), (24, 61588),

Gene: Wolfstar\_120 Start: 62761, Stop: 62459, Start Num: 8

Candidate Starts for Wolfstar\_120:

(6, 62827), (Start: 8 @62761 has 40 MA's), (12, 62689), (14, 62626),

Gene: Wolfstar\_4 Start: 1620, Stop: 1318, Start Num: 8

Candidate Starts for Wolfstar\_4:

(6, 1686), (Start: 8 @1620 has 40 MA's), (12, 1548), (14, 1485),

Gene: Yuma\_118 Start: 60670, Stop: 60368, Start Num: 8

Candidate Starts for Yuma\_118:

(Start: 8 @60670 has 40 MA's), (10, 60646), (11, 60604), (12, 60601), (15, 60478), (18, 60427),

Gene: Yuma\_5 Start: 1619, Stop: 1317, Start Num: 8

Candidate Starts for Yuma\_5:

(Start: 8 @1619 has 40 MA's), (10, 1595), (11, 1553), (12, 1550), (15, 1427), (18, 1376),