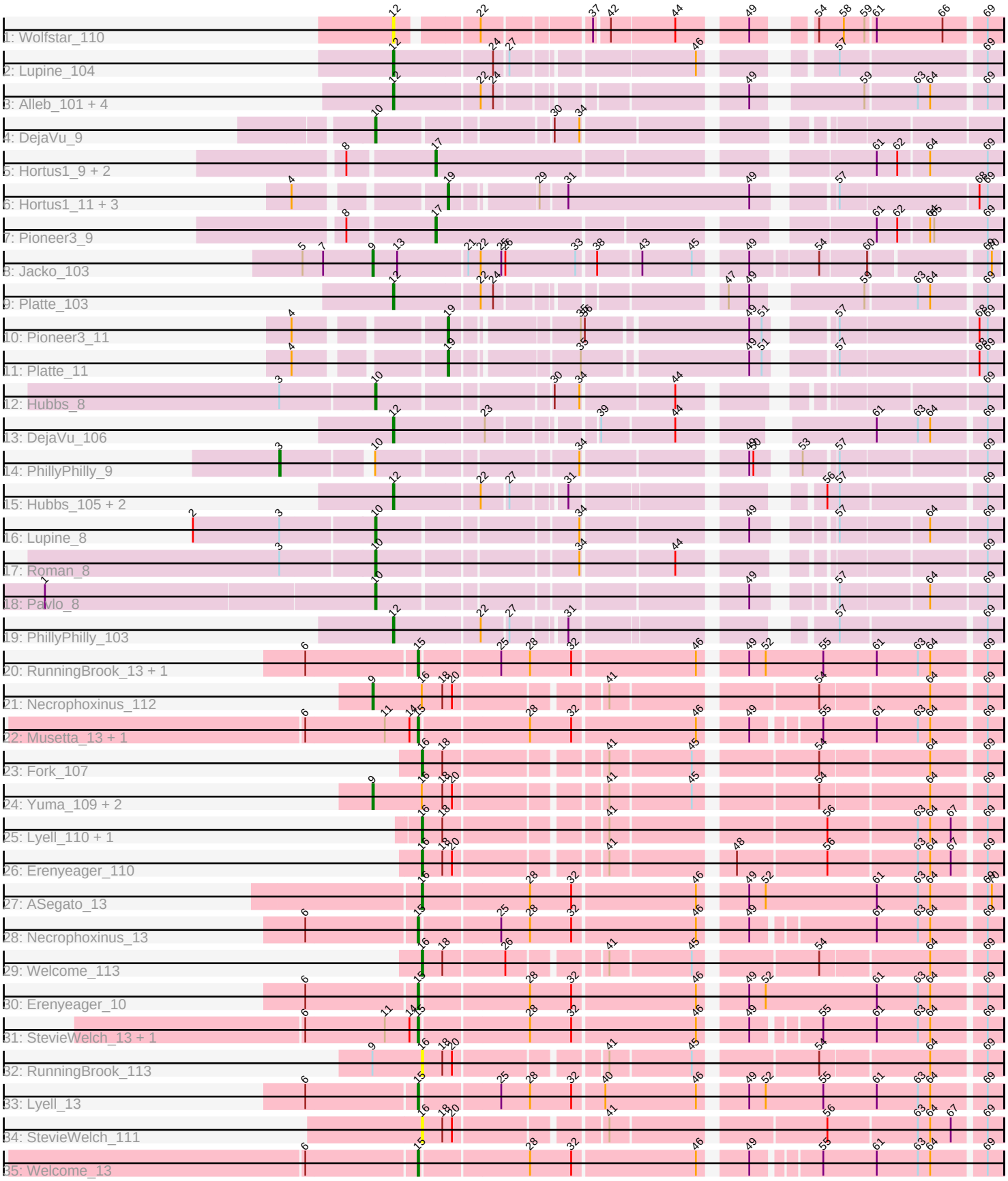
Pham 159225


1: Wolfstar_110
2: Lupine_104
3: Alleb_101 + 4
4: DejaVu_9
5: Hortus1_9 + 2
6: Hortus1_11 + 3
7: Pioneer3_9
8: Jacko_103
9: Platte_103
10: Pioneer3_11
11: Platte_11
12: Hubbs_8
13: DejaVu_106
14: PhillyPhilly_9
15: Hubbs_105 + 2
16: Lupine_8
17: Roman_8
18: Pavlo_8
19: PhillyPhilly_103
20: RunningBrook_13 + 1
21: Necrophoxinus_112
22: Musetta_13 + 1
23: Fork_107
24: Yuma_109 + 2
25: Lyell_110 + 1
26: Erenyeager_110
27: ASegato_13
28: Necrophoxinus_13
29: Welcome_113
30: Erenyeager_10
31: StevieWelch_13 + 1
32: RunningBrook_113
33: Lyell_13
34: StevieWelch_111
35: Welcome_13

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 159225 Report

This analysis was run 05/04/24 on database version 560.

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 159225 has 52 members, 5 are drafts.

Phages represented in each track:
- Track 1 : Wolfstar_110
- Track 2 : Lupine_104
- Track 3 : Alleb_101, OlinDD_104, Tandem_104, Pioneer3_104, Hortus1_104
- Track 4 : DejaVu_9
- Track 5 : Hortus1_9, OlinDD_9, Alleb_10
- Track 6 : Hortus1_11, OlinDD_11, Tandem_11, Alleb_12
- Track 7 : Pioneer3_9
- Track 8 : Jacko_103
- Track 9 : Platte_103
- Track 10 : Pioneer3_11
- Track 11 : Platte_11
- Track 12 : Hubbs_8
- Track 13 : DejaVu_106
- Track 14 : PhillyPhilly_9
- Track 15 : Hubbs_105, Pavlo_106, Roman_107
- Track 16 : Lupine_8
- Track 17 : Roman_8
- Track 18 : Pavlo_8
- Track 19 : PhillyPhilly_103
- Track 20 : RunningBrook_13, DustyDino_13
- Track 21 : Necrophoxinus_112
- Track 22 : Musetta_13, Yuma_13
- Track 23 : Fork_107
- Track 24 : Yuma_109, ASegato_109, DustyDino_114
- Track 25 : Lyell_110, Musetta_108
- Track 26 : Erenyeager_110
- Track 27 : ASegato_13
- Track 28 : Necrophoxinus_13
- Track 29 : Welcome_113
- Track 30 : Erenyeager_10
- Track 31 : StevieWelch_13, Fork_10
- Track 32 : RunningBrook_113
- Track 33 : Lyell_13

• Track 34 : StevieWelch_111
• Track 35 : Welcome_13

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

The start number called the most often in the published annotations is 12, it was called in 12 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alleb_101, DejaVu_106, Hortus1_104, Hubbs_105, Lupine_104, OlinDD_104, Pavlo_106, PhillyPhilly_103, Pioneer3_104, Platte_103, Roman_107, Tandem_104, Wolfstar_110,

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

Genes that do not have the "Most Annotated" start:
• ASegato_109, ASegato_13, Alleb_10, Alleb_12, DejaVu_9, DustyDino_114, DustyDino_13, Erenyeager_10, Erenyeager_110, Fork_10, Fork_107, Hortus1_11, Hortus1_9, Hubbs_8, Jacko_103, Lupine_8, Lyell_110, Lyell_13, Musetta_108, Musetta_13, Necrophoxinus_112, Necrophoxinus_13, OlinDD_11, OlinDD_9, Pavlo_8, PhillyPhilly_9, Pioneer3_11, Pioneer3_9, Platte_11, Roman_8, RunningBrook_113, RunningBrook_13, StevieWelch_111, StevieWelch_13, Tandem_11, Welcome_113, Welcome_13, Yuma_109, Yuma_13,

Summary by start number:

Start 3:
• Found in 4 of 52 (7.7%) of genes in pham
• Manual Annotations of this start: 1 of 47
• Called 25.0% of time when present
• Phage (with cluster) where this start called: PhillyPhilly_9 (ED1),

Start 9:
• Found in 6 of 52 (11.5%) of genes in pham
• Manual Annotations of this start: 5 of 47
• Called 83.3% of time when present
• Phage (with cluster) where this start called: ASegato_109 (ED2), DustyDino_114 (ED2), Jacko_103 (ED1), Necrophoxinus_112 (ED2), Yuma_109 (ED2),

Start 10:
• Found in 6 of 52 (11.5%) of genes in pham
• Manual Annotations of this start: 5 of 47
• Called 83.3% of time when present
• Phage (with cluster) where this start called: DejaVu_9 (ED1), Hubbs_8 (ED1), Lupine_8 (ED1), Pavlo_8 (ED1), Roman_8 (ED1),

Start 12:
• Found in 13 of 52 (25.0%) of genes in pham
• Manual Annotations of this start: 12 of 47

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alleb_101 (ED1), DejaVu_106 (ED1), Hortus1_104 (ED1), Hubbs_105 (ED1), Lupine_104 (ED1), OlinDD_104 (ED1), Pavlo_106 (ED1), PhillyPhilly_103 (ED1), Pioneer3_104 (ED1), Platte_103 (ED1), Roman_107 (ED1), Tandem_104 (ED1), Wolfstar_110 (ED),

Start 15:
• Found in 10 of 52 (19.2%) of genes in pham
• Manual Annotations of this start: 8 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DustyDino_13 (ED2), Erenyeager_10 (ED2), Fork_10 (ED2), Lyell_13 (ED2), Musetta_13 (ED2), Necrophoxinus_13 (ED2), RunningBrook_13 (ED2), StevieWelch_13 (ED2), Welcome_13 (ED2), Yuma_13 (ED2),

Start 16:
• Found in 12 of 52 (23.1%) of genes in pham
• Manual Annotations of this start: 6 of 47
• Called 66.7% of time when present
• Phage (with cluster) where this start called: ASegato_13 (ED2), Erenyeager_110 (ED2), Fork_107 (ED2), Lyell_110 (ED2), Musetta_108 (ED2), RunningBrook_113 (ED2), StevieWelch_111 (ED2), Welcome_113 (ED2),

Start 17:
• Found in 4 of 52 (7.7%) of genes in pham
• Manual Annotations of this start: 4 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alleb_10 (ED1), Hortus1_9 (ED1), OlinDD_9 (ED1), Pioneer3_9 (ED1),

Start 19:
• Found in 6 of 52 (11.5%) of genes in pham
• Manual Annotations of this start: 6 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Alleb_12 (ED1), Hortus1_11 (ED1), OlinDD_11 (ED1), Pioneer3_11 (ED1), Platte_11 (ED1), Tandem_11 (ED1),

Summary by clusters:

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

Info for manual annotations of cluster ED1:
•Start number 3 was manually annotated 1 time for cluster ED1.
•Start number 9 was manually annotated 1 time for cluster ED1.
•Start number 10 was manually annotated 5 times for cluster ED1.
•Start number 12 was manually annotated 12 times for cluster ED1.
•Start number 17 was manually annotated 4 times for cluster ED1.
•Start number 19 was manually annotated 6 times for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 9 was manually annotated 4 times for cluster ED2.
•Start number 15 was manually annotated 8 times for cluster ED2.

•Start number 16 was manually annotated 6 times for cluster ED2.

Gene Information:

Gene: ASegato_109 Start: 57290, Stop: 56880, Start Num: 9
Candidate Starts for ASegato_109:
(Start: 9 @57290 has 5 MA's), (Start: 16 @57254 has 6 MA's), (18, 57239), (20, 57233), (41, 57137), (45, 57080), (54, 57002), (64, 56927), (69, 56891),

Gene: ASegato_13 Start: 4659, Stop: 5057, Start Num: 16
Candidate Starts for ASegato_13:
(Start: 16 @4659 has 6 MA's), (28, 4734), (32, 4764), (46, 4851), (49, 4878), (52, 4890), (61, 4971), (63, 5001), (64, 5010), (69, 5046), (70, 5049),

Gene: Alleb_101 Start: 56509, Stop: 56129, Start Num: 12
Candidate Starts for Alleb_101:
(Start: 12 @56509 has 12 MA's), (22, 56449), (24, 56440), (49, 56287), (59, 56221), (63, 56185), (64, 56176), (69, 56140),

Gene: Alleb_12 Start: 4351, Stop: 4713, Start Num: 19
Candidate Starts for Alleb_12:
(4, 4258), (Start: 19 @4351 has 6 MA's), (29, 4405), (31, 4423), (49, 4555), (57, 4600), (68, 4696), (69, 4702),

Gene: Alleb_10 Start: 3636, Stop: 4010, Start Num: 17
Candidate Starts for Alleb_10:
(8, 3576), (Start: 17 @3636 has 4 MA's), (61, 3921), (62, 3936), (64, 3957), (69, 3999),

Gene: DejaVu_9 Start: 3447, Stop: 3833, Start Num: 10
Candidate Starts for DejaVu_9:
(Start: 10 @3447 has 5 MA's), (30, 3561), (34, 3579),

Gene: DejaVu_106 Start: 56615, Stop: 56235, Start Num: 12
Candidate Starts for DejaVu_106:
(Start: 12 @56615 has 12 MA's), (23, 56552), (39, 56486), (44, 56435), (61, 56321), (63, 56291), (64, 56282), (69, 56246),

Gene: DustyDino_13 Start: 4681, Stop: 5079, Start Num: 15
Candidate Starts for DustyDino_13:
(6, 4603), (Start: 15 @4681 has 8 MA's), (25, 4735), (28, 4756), (32, 4786), (46, 4873), (49, 4900), (52, 4912), (55, 4954), (61, 4993), (63, 5023), (64, 5032), (69, 5068),

Gene: DustyDino_114 Start: 58143, Stop: 57733, Start Num: 9
Candidate Starts for DustyDino_114:
(Start: 9 @58143 has 5 MA's), (Start: 16 @58107 has 6 MA's), (18, 58092), (20, 58086), (41, 57990), (45, 57933), (54, 57855), (64, 57780), (69, 57744),

Gene: Erenyeager_110 Start: 57108, Stop: 56731, Start Num: 16
Candidate Starts for Erenyeager_110:
(Start: 16 @57108 has 6 MA's), (18, 57093), (20, 57087), (41, 56991), (48, 56913), (56, 56850), (63, 56787), (64, 56778), (67, 56763), (69, 56742),

Gene: Erenyeager_10 Start: 4052, Stop: 4450, Start Num: 15
Candidate Starts for Erenyeager_10:
(6, 3974), (Start: 15 @4052 has 8 MA's), (28, 4127), (32, 4157), (46, 4244), (49, 4271), (52, 4283), (61, 4364), (63, 4394), (64, 4403), (69, 4439),

Gene: Fork_107 Start: 57132, Stop: 56758, Start Num: 16
Candidate Starts for Fork_107:
(Start: 16 @57132 has 6 MA's), (18, 57117), (41, 57015), (45, 56958), (54, 56880), (64, 56805), (69, 56769),

Gene: Fork_10 Start: 3946, Stop: 4332, Start Num: 15
Candidate Starts for Fork_10:
(6, 3865), (11, 3922), (14, 3940), (Start: 15 @3946 has 8 MA's), (28, 4021), (32, 4051), (46, 4138), (49, 4165), (55, 4207), (61, 4246), (63, 4276), (64, 4285), (69, 4321),

Gene: Hortus1_9 Start: 3590, Stop: 3964, Start Num: 17
Candidate Starts for Hortus1_9:
(8, 3530), (Start: 17 @3590 has 4 MA's), (61, 3875), (62, 3890), (64, 3911), (69, 3953),

Gene: Hortus1_11 Start: 4305, Stop: 4667, Start Num: 19
Candidate Starts for Hortus1_11:
(4, 4212), (Start: 19 @4305 has 6 MA's), (29, 4359), (31, 4377), (49, 4509), (57, 4554), (68, 4650), (69, 4656),

Gene: Hortus1_104 Start: 57265, Stop: 56885, Start Num: 12
Candidate Starts for Hortus1_104:
(Start: 12 @57265 has 12 MA's), (22, 57205), (24, 57196), (49, 57043), (59, 56977), (63, 56941), (64, 56932), (69, 56896),

Gene: Hubbs_8 Start: 3631, Stop: 4017, Start Num: 10
Candidate Starts for Hubbs_8:
(Start: 3 @3574 has 1 MA's), (Start: 10 @3631 has 5 MA's), (30, 3745), (34, 3763), (44, 3826), (69, 4006),

Gene: Hubbs_105 Start: 56879, Stop: 56505, Start Num: 12
Candidate Starts for Hubbs_105:
(Start: 12 @56879 has 12 MA's), (22, 56819), (27, 56801), (31, 56768), (56, 56624), (57, 56615), (69, 56516),

Gene: Jacko_103 Start: 55408, Stop: 54995, Start Num: 9
Candidate Starts for Jacko_103:
(5, 55459), (7, 55444), (Start: 9 @55408 has 5 MA's), (13, 55390), (21, 55342), (22, 55333), (25, 55318), (26, 55315), (33, 55264), (38, 55252), (43, 55222), (45, 55186), (49, 55156), (54, 55111), (60, 55078), (69, 55003), (70, 55000),

Gene: Lupine_104 Start: 56423, Stop: 56046, Start Num: 12
Candidate Starts for Lupine_104:
(Start: 12 @56423 has 12 MA's), (24, 56354), (27, 56345), (46, 56225), (57, 56156), (69, 56057),

Gene: Lupine_8 Start: 3428, Stop: 3817, Start Num: 10
Candidate Starts for Lupine_8:

(2, 3308), (Start: 3 @3371 has 1 MA's), (Start: 10 @3428 has 5 MA's), (34, 3560), (49, 3665), (57, 3707), (64, 3767), (69, 3806),

Gene: Lyell_110 Start: 57057, Stop: 56680, Start Num: 16
Candidate Starts for Lyell_110:
(Start: 16 @57057 has 6 MA's), (18, 57042), (41, 56940), (56, 56799), (63, 56736), (64, 56727), (67, 56712), (69, 56691),

Gene: Lyell_13 Start: 4396, Stop: 4794, Start Num: 15
Candidate Starts for Lyell_13:
(6, 4318), (Start: 15 @4396 has 8 MA's), (25, 4450), (28, 4471), (32, 4501), (40, 4522), (46, 4588), (49, 4615), (52, 4627), (55, 4669), (61, 4708), (63, 4738), (64, 4747), (69, 4783),

Gene: Musetta_13 Start: 4656, Stop: 5042, Start Num: 15
Candidate Starts for Musetta_13:
(6, 4575), (11, 4632), (14, 4650), (Start: 15 @4656 has 8 MA's), (28, 4731), (32, 4761), (46, 4848), (49, 4875), (55, 4917), (61, 4956), (63, 4986), (64, 4995), (69, 5031),

Gene: Musetta_108 Start: 57298, Stop: 56921, Start Num: 16
Candidate Starts for Musetta_108:
(Start: 16 @57298 has 6 MA's), (18, 57283), (41, 57181), (56, 57040), (63, 56977), (64, 56968), (67, 56953), (69, 56932),

Gene: Necrophoxinus_112 Start: 57987, Stop: 57577, Start Num: 9
Candidate Starts for Necrophoxinus_112:
(Start: 9 @57987 has 5 MA's), (Start: 16 @57951 has 6 MA's), (18, 57936), (20, 57930), (41, 57834), (54, 57699), (64, 57624), (69, 57588),

Gene: Necrophoxinus_13 Start: 4772, Stop: 5158, Start Num: 15
Candidate Starts for Necrophoxinus_13:
(6, 4694), (Start: 15 @4772 has 8 MA's), (25, 4826), (28, 4847), (32, 4877), (46, 4964), (49, 4991), (61, 5072), (63, 5102), (64, 5111), (69, 5147),

Gene: OlinDD_11 Start: 4304, Stop: 4666, Start Num: 19
Candidate Starts for OlinDD_11:
(4, 4211), (Start: 19 @4304 has 6 MA's), (29, 4358), (31, 4376), (49, 4508), (57, 4553), (68, 4649), (69, 4655),

Gene: OlinDD_104 Start: 57270, Stop: 56890, Start Num: 12
Candidate Starts for OlinDD_104:
(Start: 12 @57270 has 12 MA's), (22, 57210), (24, 57201), (49, 57048), (59, 56982), (63, 56946), (64, 56937), (69, 56901),

Gene: OlinDD_9 Start: 3589, Stop: 3963, Start Num: 17
Candidate Starts for OlinDD_9:
(8, 3529), (Start: 17 @3589 has 4 MA's), (61, 3874), (62, 3889), (64, 3910), (69, 3952),

Gene: Pavlo_106 Start: 57274, Stop: 56900, Start Num: 12
Candidate Starts for Pavlo_106:
(Start: 12 @57274 has 12 MA's), (22, 57214), (27, 57196), (31, 57163), (56, 57019), (57, 57010), (69, 56911),

Gene: Pavlo_8 Start: 3702, Stop: 4091, Start Num: 10

Candidate Starts for Pavlo_8:
(1, 3465), (Start: 10 @3702 has 5 MA's), (49, 3939), (57, 3981), (64, 4041), (69, 4080),

Gene: PhillyPhilly_9 Start: 3491, Stop: 3940, Start Num: 3
Candidate Starts for PhillyPhilly_9:
(Start: 3 @3491 has 1 MA's), (Start: 10 @3548 has 5 MA's), (34, 3680), (49, 3785), (50, 3788), (53, 3809), (57, 3830), (69, 3929),

Gene: PhillyPhilly_103 Start: 56263, Stop: 55889, Start Num: 12
Candidate Starts for PhillyPhilly_103:
(Start: 12 @56263 has 12 MA's), (22, 56203), (27, 56185), (31, 56152), (57, 55999), (69, 55900),

Gene: Pioneer3_9 Start: 3622, Stop: 3996, Start Num: 17
Candidate Starts for Pioneer3_9:
(8, 3562), (Start: 17 @3622 has 4 MA's), (61, 3907), (62, 3922), (64, 3943), (65, 3946), (69, 3985),

Gene: Pioneer3_11 Start: 4337, Stop: 4690, Start Num: 19
Candidate Starts for Pioneer3_11:
(4, 4244), (Start: 19 @4337 has 6 MA's), (35, 4418), (36, 4421), (49, 4532), (51, 4541), (57, 4577), (68, 4673), (69, 4679),

Gene: Pioneer3_104 Start: 57068, Stop: 56688, Start Num: 12
Candidate Starts for Pioneer3_104:
(Start: 12 @57068 has 12 MA's), (22, 57008), (24, 56999), (49, 56846), (59, 56780), (63, 56744), (64, 56735), (69, 56699),

Gene: Platte_103 Start: 56852, Stop: 56472, Start Num: 12
Candidate Starts for Platte_103:
(Start: 12 @56852 has 12 MA's), (22, 56792), (24, 56783), (47, 56645), (49, 56630), (59, 56564), (63, 56528), (64, 56519), (69, 56483),

Gene: Platte_11 Start: 4138, Stop: 4491, Start Num: 19
Candidate Starts for Platte_11:
(4, 4045), (Start: 19 @4138 has 6 MA's), (35, 4219), (49, 4333), (51, 4342), (57, 4378), (68, 4474), (69, 4480),

Gene: Roman_8 Start: 3340, Stop: 3726, Start Num: 10
Candidate Starts for Roman_8:
(Start: 3 @3283 has 1 MA's), (Start: 10 @3340 has 5 MA's), (34, 3472), (44, 3535), (69, 3715),

Gene: Roman_107 Start: 57323, Stop: 56949, Start Num: 12
Candidate Starts for Roman_107:
(Start: 12 @57323 has 12 MA's), (22, 57263), (27, 57245), (31, 57212), (56, 57068), (57, 57059), (69, 56960),

Gene: RunningBrook_13 Start: 4681, Stop: 5079, Start Num: 15
Candidate Starts for RunningBrook_13:
(6, 4603), (Start: 15 @4681 has 8 MA's), (25, 4735), (28, 4756), (32, 4786), (46, 4873), (49, 4900), (52, 4912), (55, 4954), (61, 4993), (63, 5023), (64, 5032), (69, 5068),

Gene: RunningBrook_113 Start: 58107, Stop: 57733, Start Num: 16
Candidate Starts for RunningBrook_113:

(Start: 9 @58143 has 5 MA's), (Start: 16 @58107 has 6 MA's), (18, 58092), (20, 58086), (41, 57990), (45, 57933), (54, 57855), (64, 57780), (69, 57744),

Gene: StevieWelch_13 Start: 4573, Stop: 4959, Start Num: 15
Candidate Starts for StevieWelch_13:
(6, 4492), (11, 4549), (14, 4567), (Start: 15 @4573 has 8 MA's), (28, 4648), (32, 4678), (46, 4765), (49, 4792), (55, 4834), (61, 4873), (63, 4903), (64, 4912), (69, 4948),

Gene: StevieWelch_111 Start: 57350, Stop: 56973, Start Num: 16
Candidate Starts for StevieWelch_111:
(Start: 16 @57350 has 6 MA's), (18, 57335), (20, 57329), (41, 57233), (56, 57092), (63, 57029), (64, 57020), (67, 57005), (69, 56984),

Gene: Tandem_104 Start: 57148, Stop: 56768, Start Num: 12
Candidate Starts for Tandem_104:
(Start: 12 @57148 has 12 MA's), (22, 57088), (24, 57079), (49, 56926), (59, 56860), (63, 56824), (64, 56815), (69, 56779),

Gene: Tandem_11 Start: 4242, Stop: 4604, Start Num: 19
Candidate Starts for Tandem_11:
(4, 4149), (Start: 19 @4242 has 6 MA's), (29, 4296), (31, 4314), (49, 4446), (57, 4491), (68, 4587), (69, 4593),

Gene: Welcome_113 Start: 57947, Stop: 57573, Start Num: 16
Candidate Starts for Welcome_113:
(Start: 16 @57947 has 6 MA's), (18, 57932), (26, 57890), (41, 57830), (45, 57773), (54, 57695), (64, 57620), (69, 57584),

Gene: Welcome_13 Start: 4652, Stop: 5038, Start Num: 15
Candidate Starts for Welcome_13:
(6, 4574), (Start: 15 @4652 has 8 MA's), (28, 4727), (32, 4757), (46, 4844), (49, 4871), (55, 4913), (61, 4952), (63, 4982), (64, 4991), (69, 5027),

Gene: Wolfstar_110 Start: 58799, Stop: 58431, Start Num: 12
Candidate Starts for Wolfstar_110:
(Start: 12 @58799 has 12 MA's), (22, 58748), (37, 58679), (42, 58670), (44, 58625), (49, 58583), (54, 58556), (58, 58538), (59, 58523), (61, 58517), (66, 58469), (69, 58442),

Gene: Yuma_109 Start: 57104, Stop: 56694, Start Num: 9
Candidate Starts for Yuma_109:
(Start: 9 @57104 has 5 MA's), (Start: 16 @57068 has 6 MA's), (18, 57053), (20, 57047), (41, 56951), (45, 56894), (54, 56816), (64, 56741), (69, 56705),

Gene: Yuma_13 Start: 4555, Stop: 4941, Start Num: 15
Candidate Starts for Yuma_13:
(6, 4474), (11, 4531), (14, 4549), (Start: 15 @4555 has 8 MA's), (28, 4630), (32, 4660), (46, 4747), (49, 4774), (55, 4816), (61, 4855), (63, 4885), (64, 4894), (69, 4930),