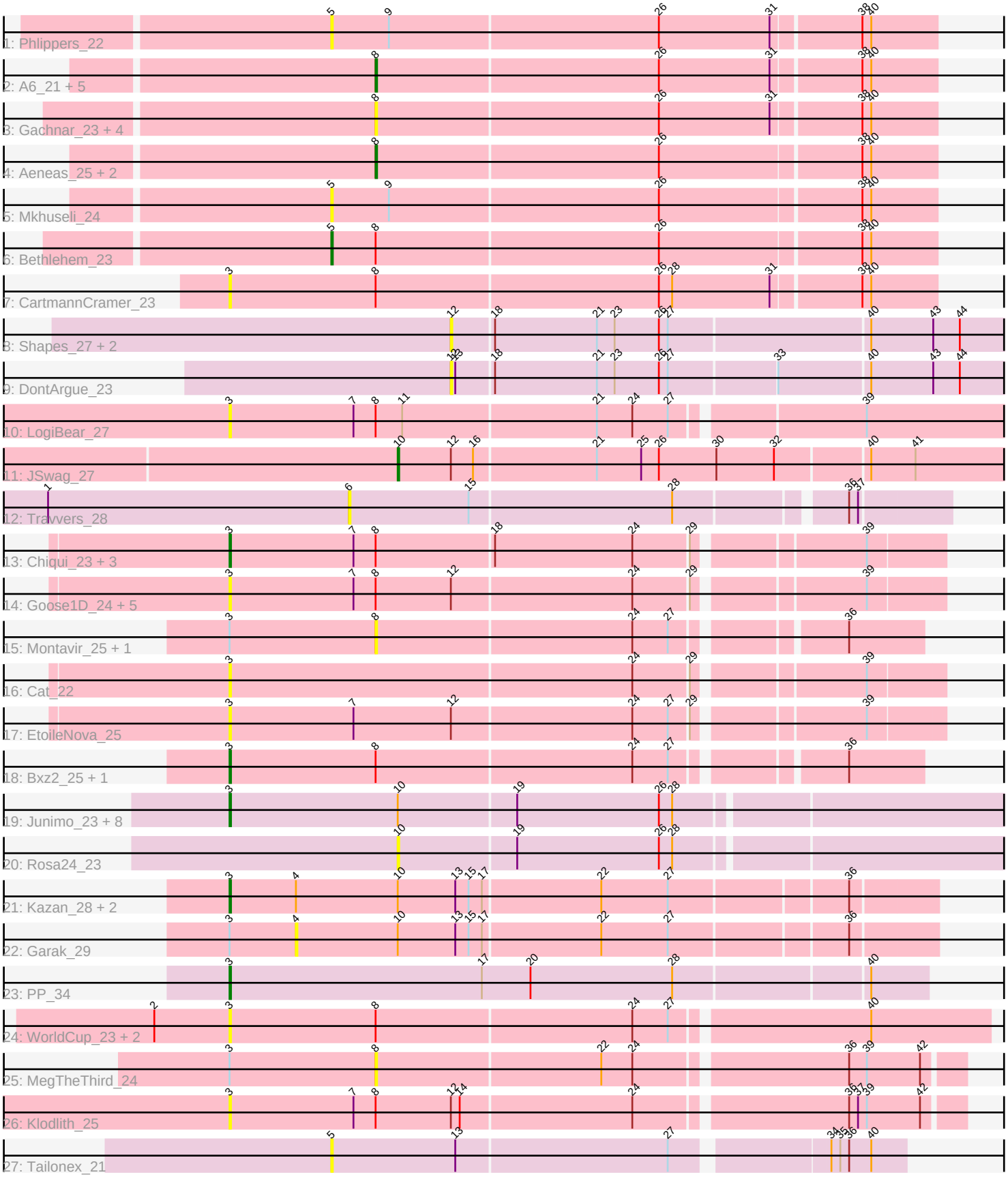
Pham 345743


1: Phlippers_22
2: A6_21 + 5
3: Gachnar_23 + 4
4: Aeneas_25 + 2
5: Mkhuseli_24
6: Bethlehem_23
7: CartmannCramer_23
8: Shapes_27 + 2
9: DontArgue_23
10: LogiBear_27
11: JSwag_27
12: Travvers_28
13: Chiqui_23 + 3
14: Goose1D_24 + 5
15: Montavir_25 + 1
16: Cat_22
17: EtoileNova_25
18: Bxz2_25 + 1
19: Junimo_23 + 8
20: Rosa24_23
21: Kazan_28 + 2
22: Garak_29
23: PP_34
24: WorldCup_23 + 2
25: MegTheThird_24
26: Klodlith_25
27: Tailonex_21

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 345743 Report

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

Pham number 345743 has 62 members, 46 are drafts.

Phages represented in each track:
• Track 1 : Phlippers_22
• Track 2 : A6_21, BK1_21, CatBus_24, Iqorha_22, DirtDevil_24, Inyanga_22
• Track 3 : Gachnar_23, Teodoridan_21, Whitspit_24, Sandaddy_22, Blackflame_23
• Track 4 : Aeneas_25, U2_23, PhrostyMug_23
• Track 5 : Mkhuseli_24
• Track 6 : Bethlehem_23
• Track 7 : CartmannCramer_23
• Track 8 : Shapes_27, Rowdy_27, DustyMartin_27
• Track 9 : DontArgue_23
• Track 10 : LogiBear_27
• Track 11 : JSwag_27
• Track 12 : Travvers_28
• Track 13 : Chiqui_23, Roimos_24, B1_22, BabyJohn_23
• Track 14 : Goose1D_24, Shep_24, Marchesa_24, Goose1X_24, SaturnRing_24, Zarafa_24
• Track 15 : Montavir_25, Croquant_27
• Track 16 : Cat_22
• Track 17 : EtoileNova_25
• Track 18 : Bxz2_25, Anubis_28
• Track 19 : Junimo_23, KekoraPapaka_23, Rocksand_24, Skadoosh_24, NorthStar_24, Buckaroo_23, LeoAvram_24, Northrop_24, Kingmustik0402_24
• Track 20 : Rosa24_23
• Track 21 : Kazan_28, DelvinSonDorr_27, DaVinci_28
• Track 22 : Garak_29
• Track 23 : PP_34
• Track 24 : WorldCup_23, Minispark_23, CogOmlette_23
• Track 25 : MegTheThird_24
• Track 26 : Klodlith_25
• Track 27 : Tailonex_21

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

The start number called the most often in the published annotations is 3, it was called in 9 of the 16 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Anubis_28, B1_22, BabyJohn_23, Buckaroo_23, Bxz2_25, CartmannCramer_23, Cat_22, Chiqui_23, CogOmlette_23, DaVinci_28, DelvinSonDorr_27, EtoileNova_25, Goose1D_24, Goose1X_24, Junimo_23, Kazan_28, KekoraPapaka_23, Kingmustik0402_24, Klodlith_25, LeoAvram_24, LogiBear_27, Marchesa_24, Minispark_23, NorthStar_24, Northrop_24, PP_34, Rocksand_24, Roimos_24, SaturnRing_24, Shep_24, Skadoosh_24, WorldCup_23, Zarafa_24,

Genes that have the "Most Annotated" start but do not call it:
• Croquant_27, Garak_29, MegTheThird_24, Montavir_25,

Genes that do not have the "Most Annotated" start:
• A6_21, Aeneas_25, BK1_21, Bethlehem_23, Blackflame_23, CatBus_24, DirtDevil_24, DontArgue_23, DustyMartin_27, Gachnar_23, Inyanga_22, Iqorha_22, JSwag_27, Mkhuseli_24, Phlippers_22, PhrostyMug_23, Rosa24_23, Rowdy_27, Sandaddy_22, Shapes_27, Tailonex_21, Teodoridan_21, Travvers_28, U2_23, Whitspit_24,

Summary by start number:

Start 3:
• Found in 37 of 62 (59.7%) of genes in pham
• Manual Annotations of this start: 9 of 16
• Called 89.2% of time when present
• Phage (with cluster) where this start called: Anubis_28 (A3), B1_22 (A3), BabyJohn_23 (A3), Buckaroo_23 (A4), Bxz2_25 (A3), CartmannCramer_23 (A1), Cat_22 (A3), Chiqui_23 (A3), CogOmlette_23 (A9), DaVinci_28 (A6), DelvinSonDorr_27 (A6), EtoileNova_25 (A3), Goose1D_24 (A3), Goose1X_24 (A3), Junimo_23 (A4), Kazan_28 (A6), KekoraPapaka_23 (A4), Kingmustik0402_24 (A4), Klodlith_25 (A9), LeoAvram_24 (A4), LogiBear_27 (A15), Marchesa_24 (A3), Minispark_23 (A9), NorthStar_24 (A4), Northrop_24 (A4), PP_34 (A7), Rocksand_24 (A4), Roimos_24 (A3), SaturnRing_24 (A3), Shep_24 (A3), Skadoosh_24 (A4), WorldCup_23 (A9), Zarafa_24 (A3),

Start 4:
• Found in 4 of 62 (6.5%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Garak_29 (A6),

Start 5:
• Found in 4 of 62 (6.5%) of genes in pham
• Manual Annotations of this start: 1 of 16
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bethlehem_23 (A1), Mkhuseli_24 (A1), Phlippers_22 (A1), Tailonex_21 (singleton),

Start 6:
• Found in 1 of 62 (1.6%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Travvers_28 (A2),

Start 8:
• Found in 36 of 62 (58.1%) of genes in pham
• Manual Annotations of this start: 5 of 16
• Called 47.2% of time when present
• Phage (with cluster) where this start called: A6_21 (A1), Aeneas_25 (A1), BK1_21 (A1), Blackflame_23 (A1), CatBus_24 (A1), Croquant_27 (A3), DirtDevil_24 (A1), Gachnar_23 (A1), Inyanga_22 (A1), Iqorha_22 (A1), MegTheThird_24 (A9), Montavir_25 (A3), PhrostyMug_23 (A1), Sandaddy_22 (A1), Teodoridan_21 (A1), U2_23 (A1), Whitspit_24 (A1),

Start 10:
• Found in 15 of 62 (24.2%) of genes in pham
• Manual Annotations of this start: 1 of 16
• Called 13.3% of time when present
• Phage (with cluster) where this start called: JSwag_27 (A15), Rosa24_23 (A4),

Start 12:
• Found in 13 of 62 (21.0%) of genes in pham
• No Manual Annotations of this start.
• Called 30.8% of time when present
• Phage (with cluster) where this start called: DontArgue_23 (A10), DustyMartin_27 (A10), Rowdy_27 (A10), Shapes_27 (A10),

Summary by clusters:

There are 10 clusters represented in this pham: A15, singleton, A10, A1, A3, A2, A4, A7, A6, A9,

Info for manual annotations of cluster A1:
•Start number 5 was manually annotated 1 time for cluster A1.
•Start number 8 was manually annotated 5 times for cluster A1.

Info for manual annotations of cluster A15:
•Start number 10 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A3:
•Start number 3 was manually annotated 3 times for cluster A3.

Info for manual annotations of cluster A4:
•Start number 3 was manually annotated 3 times for cluster A4.

Info for manual annotations of cluster A6:
•Start number 3 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster A7:
•Start number 3 was manually annotated 1 time for cluster A7.

Gene Information:

Gene: A6_21 Start: 15547, Stop: 15918, Start Num: 8
Candidate Starts for A6_21:
(Start: 8 @15547 has 5 MA's), (26, 15736), (31, 15811), (38, 15868), (40, 15874),

Gene: Aeneas_25 Start: 16311, Stop: 16682, Start Num: 8
Candidate Starts for Aeneas_25:
(Start: 8 @16311 has 5 MA's), (26, 16500), (38, 16632), (40, 16638),

Gene: Anubis_28 Start: 15419, Stop: 15865, Start Num: 3
Candidate Starts for Anubis_28:
(Start: 3 @15419 has 9 MA's), (Start: 8 @15518 has 5 MA's), (24, 15689), (27, 15713), (36, 15815),

Gene: B1_22 Start: 14712, Stop: 15173, Start Num: 3
Candidate Starts for B1_22:
(Start: 3 @14712 has 9 MA's), (7, 14796), (Start: 8 @14811 has 5 MA's), (18, 14889), (24, 14982), (29, 15018), (39, 15123),

Gene: BK1_21 Start: 15547, Stop: 15918, Start Num: 8
Candidate Starts for BK1_21:
(Start: 8 @15547 has 5 MA's), (26, 15736), (31, 15811), (38, 15868), (40, 15874),

Gene: BabyJohn_23 Start: 15302, Stop: 15763, Start Num: 3
Candidate Starts for BabyJohn_23:
(Start: 3 @15302 has 9 MA's), (7, 15386), (Start: 8 @15401 has 5 MA's), (18, 15479), (24, 15572), (29, 15608), (39, 15713),

Gene: Bethlehem_23 Start: 17213, Stop: 17614, Start Num: 5
Candidate Starts for Bethlehem_23:
(Start: 5 @17213 has 1 MA's), (Start: 8 @17243 has 5 MA's), (26, 17432), (38, 17564), (40, 17570),

Gene: Blackflame_23 Start: 15998, Stop: 16369, Start Num: 8
Candidate Starts for Blackflame_23:
(Start: 8 @15998 has 5 MA's), (26, 16187), (31, 16262), (38, 16319), (40, 16325),

Gene: Buckaroo_23 Start: 15425, Stop: 15970, Start Num: 3
Candidate Starts for Buckaroo_23:
(Start: 3 @15425 has 9 MA's), (Start: 10 @15539 has 1 MA's), (19, 15617), (26, 15713), (28, 15722),

Gene: Bxz2_25 Start: 15627, Stop: 16073, Start Num: 3
Candidate Starts for Bxz2_25:
(Start: 3 @15627 has 9 MA's), (Start: 8 @15726 has 5 MA's), (24, 15897), (27, 15921), (36, 16023),

Gene: CartmannCramer_23 Start: 17708, Stop: 18178, Start Num: 3
Candidate Starts for CartmannCramer_23:
(Start: 3 @17708 has 9 MA's), (Start: 8 @17807 has 5 MA's), (26, 17996), (28, 18005), (31, 18071), (38, 18128), (40, 18134),

Gene: CatBus_24 Start: 17004, Stop: 17375, Start Num: 8
Candidate Starts for CatBus_24:
(Start: 8 @17004 has 5 MA's), (26, 17193), (31, 17268), (38, 17325), (40, 17331),

Gene: Cat_22 Start: 14897, Stop: 15358, Start Num: 3
Candidate Starts for Cat_22:
(Start: 3 @14897 has 9 MA's), (24, 15167), (29, 15203), (39, 15308),

Gene: Chiqui_23 Start: 15302, Stop: 15763, Start Num: 3
Candidate Starts for Chiqui_23:
(Start: 3 @15302 has 9 MA's), (7, 15386), (Start: 8 @15401 has 5 MA's), (18, 15479), (24, 15572), (29, 15608), (39, 15713),

Gene: CogOmlette_23 Start: 15039, Stop: 15539, Start Num: 3
Candidate Starts for CogOmlette_23:
(2, 14988), (Start: 3 @15039 has 9 MA's), (Start: 8 @15138 has 5 MA's), (24, 15309), (27, 15333), (40, 15459),

Gene: Croquant_27 Start: 15630, Stop: 15977, Start Num: 8
Candidate Starts for Croquant_27:
(Start: 3 @15531 has 9 MA's), (Start: 8 @15630 has 5 MA's), (24, 15801), (27, 15825), (36, 15927),

Gene: DaVinci_28 Start: 16279, Stop: 16743, Start Num: 3
Candidate Starts for DaVinci_28:
(Start: 3 @16279 has 9 MA's), (4, 16324), (Start: 10 @16393 has 1 MA's), (13, 16432), (15, 16441), (17, 16450), (22, 16528), (27, 16573), (36, 16687),

Gene: DelvinSonDorr_27 Start: 16271, Stop: 16735, Start Num: 3
Candidate Starts for DelvinSonDorr_27:
(Start: 3 @16271 has 9 MA's), (4, 16316), (Start: 10 @16385 has 1 MA's), (13, 16424), (15, 16433), (17, 16442), (22, 16520), (27, 16565), (36, 16679),

Gene: DirtDevil_24 Start: 16812, Stop: 17183, Start Num: 8
Candidate Starts for DirtDevil_24:
(Start: 8 @16812 has 5 MA's), (26, 17001), (31, 17076), (38, 17133), (40, 17139),

Gene: DontArgue_23 Start: 13643, Stop: 14041, Start Num: 12
Candidate Starts for DontArgue_23:
(12, 13643), (13, 13646), (18, 13670), (21, 13739), (23, 13751), (26, 13781), (27, 13787), (33, 13856), (40, 13916), (43, 13958), (44, 13976),

Gene: DustyMartin_27 Start: 15449, Stop: 15850, Start Num: 12
Candidate Starts for DustyMartin_27:
(12, 15449), (18, 15476), (21, 15545), (23, 15557), (26, 15587), (27, 15593), (40, 15725), (43, 15767), (44, 15785),

Gene: EtoileNova_25 Start: 15586, Stop: 16047, Start Num: 3
Candidate Starts for EtoileNova_25:
(Start: 3 @15586 has 9 MA's), (7, 15670), (12, 15736), (24, 15856), (27, 15880), (29, 15892), (39, 15997),

Gene: Gachnar_23 Start: 16002, Stop: 16373, Start Num: 8
Candidate Starts for Gachnar_23:
(Start: 8 @16002 has 5 MA's), (26, 16191), (31, 16266), (38, 16323), (40, 16329),

Gene: Garak_29 Start: 16321, Stop: 16740, Start Num: 4
Candidate Starts for Garak_29:

(Start: 3 @16276 has 9 MA's), (4, 16321), (Start: 10 @16390 has 1 MA's), (13, 16429), (15, 16438), (17, 16447), (22, 16525), (27, 16570), (36, 16684),

Gene: Goose1D_24 Start: 14288, Stop: 14749, Start Num: 3
Candidate Starts for Goose1D_24:
(Start: 3 @14288 has 9 MA's), (7, 14372), (Start: 8 @14387 has 5 MA's), (12, 14438), (24, 14558), (29, 14594), (39, 14699),

Gene: Goose1X_24 Start: 14360, Stop: 14821, Start Num: 3
Candidate Starts for Goose1X_24:
(Start: 3 @14360 has 9 MA's), (7, 14444), (Start: 8 @14459 has 5 MA's), (12, 14510), (24, 14630), (29, 14666), (39, 14771),

Gene: Inyanga_22 Start: 15755, Stop: 16126, Start Num: 8
Candidate Starts for Inyanga_22:
(Start: 8 @15755 has 5 MA's), (26, 15944), (31, 16019), (38, 16076), (40, 16082),

Gene: Iqorha_22 Start: 15754, Stop: 16125, Start Num: 8
Candidate Starts for Iqorha_22:
(Start: 8 @15754 has 5 MA's), (26, 15943), (31, 16018), (38, 16075), (40, 16081),

Gene: JSwag_27 Start: 15383, Stop: 15838, Start Num: 10
Candidate Starts for JSwag_27:
(Start: 10 @15383 has 1 MA's), (12, 15419), (16, 15434), (21, 15515), (25, 15545), (26, 15557), (30, 15596), (32, 15635), (40, 15695), (41, 15725),

Gene: Junimo_23 Start: 15421, Stop: 15966, Start Num: 3
Candidate Starts for Junimo_23:
(Start: 3 @15421 has 9 MA's), (Start: 10 @15535 has 1 MA's), (19, 15613), (26, 15709), (28, 15718),

Gene: Kazan_28 Start: 16284, Stop: 16748, Start Num: 3
Candidate Starts for Kazan_28:
(Start: 3 @16284 has 9 MA's), (4, 16329), (Start: 10 @16398 has 1 MA's), (13, 16437), (15, 16446), (17, 16455), (22, 16533), (27, 16578), (36, 16692),

Gene: KekoraPapaka_23 Start: 15421, Stop: 15966, Start Num: 3
Candidate Starts for KekoraPapaka_23:
(Start: 3 @15421 has 9 MA's), (Start: 10 @15535 has 1 MA's), (19, 15613), (26, 15709), (28, 15718),

Gene: Kingmustik0402_24 Start: 15413, Stop: 15958, Start Num: 3
Candidate Starts for Kingmustik0402_24:
(Start: 3 @15413 has 9 MA's), (Start: 10 @15527 has 1 MA's), (19, 15605), (26, 15701), (28, 15710),

Gene: Klodlith_25 Start: 15093, Stop: 15572, Start Num: 3
Candidate Starts for Klodlith_25:
(Start: 3 @15093 has 9 MA's), (7, 15177), (Start: 8 @15192 has 5 MA's), (12, 15243), (14, 15249), (24, 15363), (36, 15498), (37, 15504), (39, 15510), (42, 15546),

Gene: LeoAvram_24 Start: 15418, Stop: 15963, Start Num: 3
Candidate Starts for LeoAvram_24:
(Start: 3 @15418 has 9 MA's), (Start: 10 @15532 has 1 MA's), (19, 15610), (26, 15706), (28, 15715),

Gene: LogiBear_27 Start: 16020, Stop: 16553, Start Num: 3

Candidate Starts for LogiBear_27:
(Start: 3 @16020 has 9 MA's), (7, 16104), (Start: 8 @16119 has 5 MA's), (11, 16137), (21, 16266), (24, 16290), (27, 16314), (39, 16434),

Gene: Marchesa_24 Start: 15084, Stop: 15545, Start Num: 3
Candidate Starts for Marchesa_24:
(Start: 3 @15084 has 9 MA's), (7, 15168), (Start: 8 @15183 has 5 MA's), (12, 15234), (24, 15354), (29, 15390), (39, 15495),

Gene: MegTheThird_24 Start: 15183, Stop: 15563, Start Num: 8
Candidate Starts for MegTheThird_24:
(Start: 3 @15084 has 9 MA's), (Start: 8 @15183 has 5 MA's), (22, 15333), (24, 15354), (36, 15489), (39, 15501), (42, 15537),

Gene: Minispark_23 Start: 15039, Stop: 15539, Start Num: 3
Candidate Starts for Minispark_23:
(2, 14988), (Start: 3 @15039 has 9 MA's), (Start: 8 @15138 has 5 MA's), (24, 15309), (27, 15333), (40, 15459),

Gene: Mkhuseli_24 Start: 16008, Stop: 16409, Start Num: 5
Candidate Starts for Mkhuseli_24:
(Start: 5 @16008 has 1 MA's), (9, 16047), (26, 16227), (38, 16359), (40, 16365),

Gene: Montavir_25 Start: 15632, Stop: 15979, Start Num: 8
Candidate Starts for Montavir_25:
(Start: 3 @15533 has 9 MA's), (Start: 8 @15632 has 5 MA's), (24, 15803), (27, 15827), (36, 15929),

Gene: NorthStar_24 Start: 15421, Stop: 15966, Start Num: 3
Candidate Starts for NorthStar_24:
(Start: 3 @15421 has 9 MA's), (Start: 10 @15535 has 1 MA's), (19, 15613), (26, 15709), (28, 15718),

Gene: Northrop_24 Start: 15417, Stop: 15962, Start Num: 3
Candidate Starts for Northrop_24:
(Start: 3 @15417 has 9 MA's), (Start: 10 @15531 has 1 MA's), (19, 15609), (26, 15705), (28, 15714),

Gene: PP_34 Start: 21309, Stop: 21773, Start Num: 3
Candidate Starts for PP_34:
(Start: 3 @21309 has 9 MA's), (17, 21480), (20, 21513), (28, 21609), (40, 21735),

Gene: Phlippers_22 Start: 16908, Stop: 17309, Start Num: 5
Candidate Starts for Phlippers_22:
(Start: 5 @16908 has 1 MA's), (9, 16947), (26, 17127), (31, 17202), (38, 17259), (40, 17265),

Gene: PhrostyMug_23 Start: 16015, Stop: 16386, Start Num: 8
Candidate Starts for PhrostyMug_23:
(Start: 8 @16015 has 5 MA's), (26, 16204), (38, 16336), (40, 16342),

Gene: Rocksand_24 Start: 15417, Stop: 15962, Start Num: 3
Candidate Starts for Rocksand_24:
(Start: 3 @15417 has 9 MA's), (Start: 10 @15531 has 1 MA's), (19, 15609), (26, 15705), (28, 15714),

Gene: Roimos_24 Start: 15002, Stop: 15463, Start Num: 3
Candidate Starts for Roimos_24:

(Start: 3 @15002 has 9 MA's), (7, 15086), (Start: 8 @15101 has 5 MA's), (18, 15179), (24, 15272), (29, 15308), (39, 15413),

Gene: Rosa24_23 Start: 15507, Stop: 15938, Start Num: 10
Candidate Starts for Rosa24_23:
(Start: 10 @15507 has 1 MA's), (19, 15585), (26, 15681), (28, 15690),

Gene: Rowdy_27 Start: 15449, Stop: 15850, Start Num: 12
Candidate Starts for Rowdy_27:
(12, 15449), (18, 15476), (21, 15545), (23, 15557), (26, 15587), (27, 15593), (40, 15725), (43, 15767), (44, 15785),

Gene: Sandaddy_22 Start: 15945, Stop: 16316, Start Num: 8
Candidate Starts for Sandaddy_22:
(Start: 8 @15945 has 5 MA's), (26, 16134), (31, 16209), (38, 16266), (40, 16272),

Gene: SaturnRing_24 Start: 15033, Stop: 15494, Start Num: 3
Candidate Starts for SaturnRing_24:
(Start: 3 @15033 has 9 MA's), (7, 15117), (Start: 8 @15132 has 5 MA's), (12, 15183), (24, 15303), (29, 15339), (39, 15444),

Gene: Shapes_27 Start: 15449, Stop: 15850, Start Num: 12
Candidate Starts for Shapes_27:
(12, 15449), (18, 15476), (21, 15545), (23, 15557), (26, 15587), (27, 15593), (40, 15725), (43, 15767), (44, 15785),

Gene: Shep_24 Start: 14288, Stop: 14749, Start Num: 3
Candidate Starts for Shep_24:
(Start: 3 @14288 has 9 MA's), (7, 14372), (Start: 8 @14387 has 5 MA's), (12, 14438), (24, 14558), (29, 14594), (39, 14699),

Gene: Skadoosh_24 Start: 15421, Stop: 15966, Start Num: 3
Candidate Starts for Skadoosh_24:
(Start: 3 @15421 has 9 MA's), (Start: 10 @15535 has 1 MA's), (19, 15613), (26, 15709), (28, 15718),

Gene: Tailonex_21 Start: 14580, Stop: 14951, Start Num: 5
Candidate Starts for Tailonex_21:
(Start: 5 @14580 has 1 MA's), (13, 14664), (27, 14805), (34, 14901), (35, 14907), (36, 14913), (40, 14928),

Gene: Teodoridan_21 Start: 15353, Stop: 15724, Start Num: 8
Candidate Starts for Teodoridan_21:
(Start: 8 @15353 has 5 MA's), (26, 15542), (31, 15617), (38, 15674), (40, 15680),

Gene: Travvers_28 Start: 16132, Stop: 16518, Start Num: 6
Candidate Starts for Travvers_28:
(1, 15928), (6, 16132), (15, 16213), (28, 16348), (36, 16453), (37, 16459),

Gene: U2_23 Start: 16127, Stop: 16498, Start Num: 8
Candidate Starts for U2_23:
(Start: 8 @16127 has 5 MA's), (26, 16316), (38, 16448), (40, 16454),

Gene: Whitspit_24 Start: 16630, Stop: 17001, Start Num: 8

Candidate Starts for Whitspit_24:
(Start: 8 @16630 has 5 MA's), (26, 16819), (31, 16894), (38, 16951), (40, 16957),

Gene: WorldCup_23 Start: 15039, Stop: 15539, Start Num: 3
Candidate Starts for WorldCup_23:
(2, 14988), (Start: 3 @15039 has 9 MA's), (Start: 8 @15138 has 5 MA's), (24, 15309), (27, 15333), (40, 15459),

Gene: Zarafa_24 Start: 15095, Stop: 15556, Start Num: 3
Candidate Starts for Zarafa_24:
(Start: 3 @15095 has 9 MA's), (7, 15179), (Start: 8 @15194 has 5 MA's), (12, 15245), (24, 15365), (29, 15401), (39, 15506),