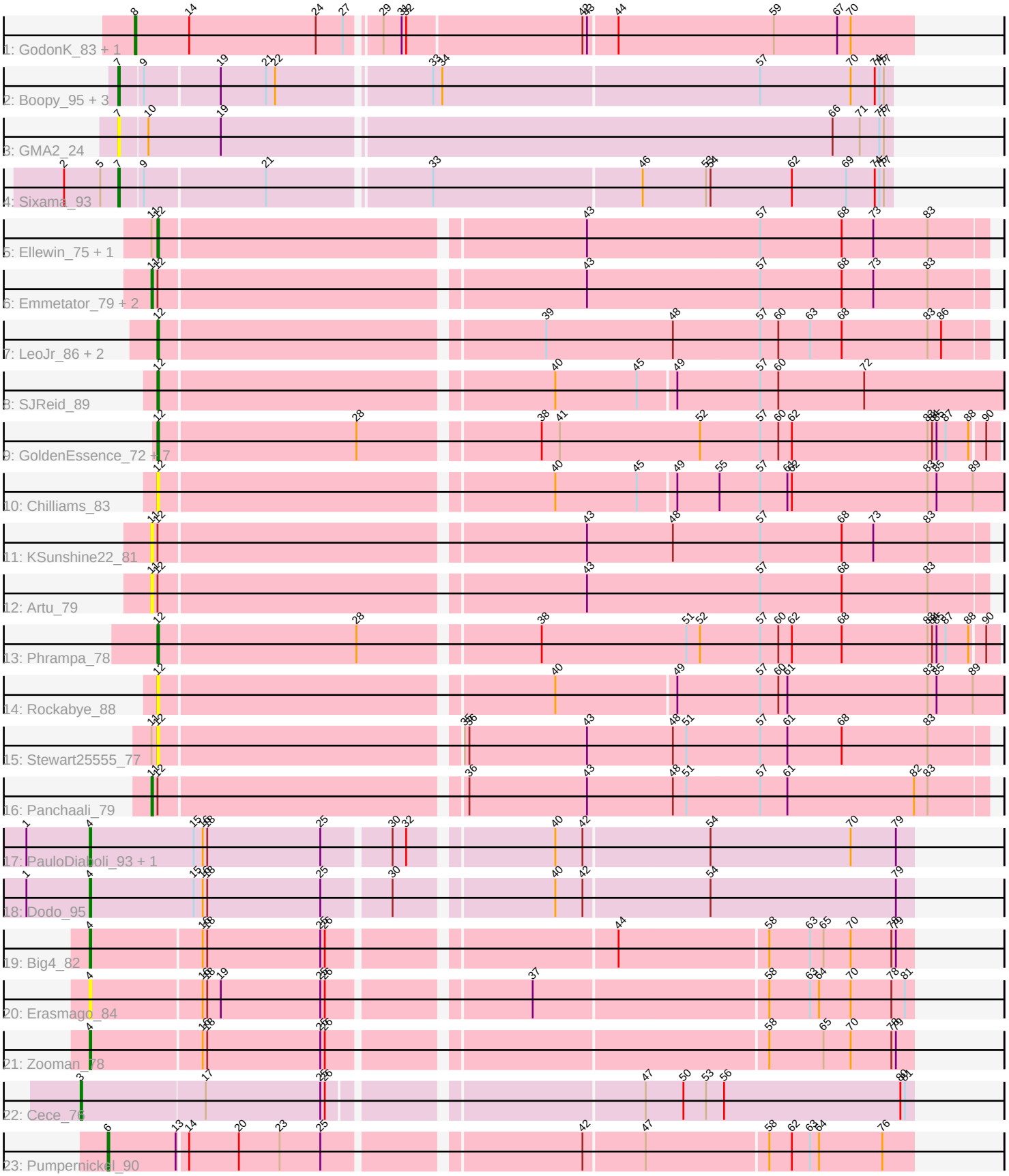
Pham 308886


1: GodonK_83 + 1
2: Boopy_95 + 3
3: GMA2_24
4: Sixama_93
5: Ellewin_75 + 1
6: Emmetator_79 + 2
7: LeoJr_86 + 2
8: SJReid_89
9: GoldenEssence_72 + 7
10: Chilliams_83
11: KSunshine22_81
12: Artu_79
13: Phrampa_78
14: Rockabye_88
15: Stewart25555_77
16: Panchaali_79
17: PauloDiabboli_93 + 1
18: Dodo_95
19: Big4_82
20: Erasmago_84
21: Zooman_78
22: Cece_76
23: Pumpernickel_90

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 308886 Report

This analysis was run 06/27/26 on database version 652.

Pham number 308886 has 40 members, 14 are drafts.

Phages represented in each track:
• Track 1 : GodonK_83, Phendrix_81
• Track 2 : Boopy_95, BlueNGold_94, Forza_95, Mareelih_93
• Track 3 : GMA2_24
• Track 4 : Sixama_93
• Track 5 : Ellewin_75, DunneganBoMo_76
• Track 6 : Emmetator_79, BooTeria_83, WaddleDee_74
• Track 7 : LeoJr_86, Atuin_81, ReginaGlobina_86
• Track 8 : SJReid_89
• Track 9 : GoldenEssence_72, Patbob_85, Bloom_90, FrostedClock_89, FloraSnap32_86, Racecar_87, Talia1610_86, Mimi_86
• Track 10 : Chilliams_83
• Track 11 : KSunshine22_81
• Track 12 : Artu_79
• Track 13 : Phrampa_78
• Track 14 : Rockabye_88
• Track 15 : Stewart25555_77
• Track 16 : Panchaali_79
• Track 17 : PauloDiaboli_93, A3Wally_93
• Track 18 : Dodo_95
• Track 19 : Big4_82
• Track 20 : Erasmago_84
• Track 21 : Zooman_78
• Track 22 : Cece_76
• Track 23 : Pumpernickel_90

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 10 of the 26 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Atuin_81, Bloom_90, Chilliams_83, DunneganBoMo_76, Ellewin_75, FloraSnap32_86, FrostedClock_89, GoldenEssence_72, LeoJr_86, Mimi_86, Patbob_85, Phrampa_78, Racecar_87, ReginaGlobina_86, Rockabye_88,

SJReid_89, Stewart25555_77, Talia1610_86,

Genes that have the "Most Annotated" start but do not call it:
• Artu_79, BooTeria_83, Emmetator_79, KSunshine22_81, Panchaali_79, WaddleDee_74,

Genes that do not have the "Most Annotated" start:
• A3Wally_93, Big4_82, BlueNGold_94, Boopy_95, Cece_76, Dodo_95, Erasmago_84, Forza_95, GMA2_24, GodonK_83, Mareelih_93, PauloDiaboli_93, Phendrix_81, Pumpernickel_90, Sixama_93, Zooman_78,

Summary by start number:

Start 3:
• Found in 1 of 40 (2.5%) of genes in pham
• Manual Annotations of this start: 1 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cece_76 (GD3),

Start 4:
• Found in 6 of 40 (15.0%) of genes in pham
• Manual Annotations of this start: 5 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_93 (GD1), Big4_82 (GD2), Dodo_95 (GD1), Erasmago_84 (GD2), PauloDiaboli_93 (GD1), Zooman_78 (GD2),

Start 6:
• Found in 1 of 40 (2.5%) of genes in pham
• Manual Annotations of this start: 1 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pumpernickel_90 (GD4),

Start 7:
• Found in 6 of 40 (15.0%) of genes in pham
• Manual Annotations of this start: 5 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlueNGold_94 (DS), Boopy_95 (DS), Forza_95 (DS), GMA2_24 (DS), Mareelih_93 (DS), Sixama_93 (DS),

Start 8:
• Found in 2 of 40 (5.0%) of genes in pham
• Manual Annotations of this start: 2 of 26
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GodonK_83 (DK), Phendrix_81 (DK),

Start 11:
• Found in 9 of 40 (22.5%) of genes in pham
• Manual Annotations of this start: 2 of 26
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Artu_79 (FC), BooTeria_83 (FC), Emmetator_79 (FC), KSunshine22_81 (FC), Panchaali_79 (FC), WaddleDee_74 (FC),

Start 12:
• Found in 24 of 40 (60.0%) of genes in pham
• Manual Annotations of this start: 10 of 26
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Atuin_81 (FC), Bloom_90 (FC), Chilliams_83 (FC), DunneganBoMo_76 (FC), Ellewin_75 (FC), FloraSnap32_86 (FC), FrostedClock_89 (FC), GoldenEssence_72 (FC), LeoJr_86 (FC), Mimi_86 (FC), Patbob_85 (FC), Phrampa_78 (FC), Racecar_87 (FC), ReginaGlobina_86 (FC), Rockabye_88 (FC), SJReid_89 (FC), Stewart25555_77 (FC), Talia1610_86 (FC),

Summary by clusters:

There are 7 clusters represented in this pham: GD1, GD2, GD3, GD4, DK, FC, DS,

Info for manual annotations of cluster DK:
•Start number 8 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DS:
•Start number 7 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster FC:
•Start number 11 was manually annotated 2 times for cluster FC.
•Start number 12 was manually annotated 10 times for cluster FC.

Info for manual annotations of cluster GD1:
•Start number 4 was manually annotated 3 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 4 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 3 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 6 was manually annotated 1 time for cluster GD4.

Gene Information:

Gene: A3Wally_93 Start: 50163, Stop: 50687, Start Num: 4
Candidate Starts for A3Wally_93:
(1, 50121), (Start: 4 @50163 has 5 MA's), (15, 50232), (16, 50238), (18, 50241), (25, 50316), (30, 50358), (32, 50367), (40, 50454), (42, 50472), (54, 50553), (70, 50646), (79, 50676),

Gene: Artu_79 Start: 48846, Stop: 49382, Start Num: 11
Candidate Starts for Artu_79:
(Start: 11 @48846 has 2 MA's), (Start: 12 @48849 has 10 MA's), (43, 49119), (57, 49233), (68, 49287), (83, 49344),

Gene: Atuin_81 Start: 51497, Stop: 52030, Start Num: 12
Candidate Starts for Atuin_81:

(Start: 12 @51497 has 10 MA's), (39, 51740), (48, 51824), (57, 51881), (60, 51893), (63, 51914), (68, 51935), (83, 51992), (86, 52001),

Gene: Big4_82 Start: 49196, Stop: 49714, Start Num: 4
Candidate Starts for Big4_82:
(Start: 4 @49196 has 5 MA's), (16, 49268), (18, 49271), (25, 49346), (26, 49349), (44, 49523), (58, 49619), (63, 49646), (65, 49655), (70, 49673), (78, 49700), (79, 49703),

Gene: Bloom_90 Start: 52882, Stop: 53421, Start Num: 12
Candidate Starts for Bloom_90:
(Start: 12 @52882 has 10 MA's), (28, 53011), (38, 53122), (41, 53134), (52, 53227), (57, 53266), (60, 53278), (62, 53287), (83, 53377), (84, 53380), (85, 53383), (87, 53389), (88, 53404), (90, 53413),

Gene: BlueNGold_94 Start: 51477, Stop: 51971, Start Num: 7
Candidate Starts for BlueNGold_94:
(Start: 7 @51477 has 5 MA's), (9, 51492), (19, 51540), (21, 51570), (22, 51576), (33, 51672), (34, 51678), (57, 51885), (70, 51945), (74, 51960), (75, 51963), (77, 51966),

Gene: BooTeria_83 Start: 48914, Stop: 49450, Start Num: 11
Candidate Starts for BooTeria_83:
(Start: 11 @48914 has 2 MA's), (Start: 12 @48917 has 10 MA's), (43, 49187), (57, 49301), (68, 49355), (73, 49376), (83, 49412),

Gene: Boopy_95 Start: 51489, Stop: 51983, Start Num: 7
Candidate Starts for Boopy_95:
(Start: 7 @51489 has 5 MA's), (9, 51504), (19, 51552), (21, 51582), (22, 51588), (33, 51684), (34, 51690), (57, 51897), (70, 51957), (74, 51972), (75, 51975), (77, 51978),

Gene: Cece_76 Start: 45150, Stop: 45674, Start Num: 3
Candidate Starts for Cece_76:
(Start: 3 @45150 has 1 MA's), (17, 45231), (25, 45306), (26, 45309), (47, 45498), (50, 45522), (53, 45537), (56, 45549), (80, 45666), (81, 45669),

Gene: Chilliams_83 Start: 54759, Stop: 55301, Start Num: 12
Candidate Starts for Chilliams_83:
(Start: 12 @54759 has 10 MA's), (40, 55008), (45, 55062), (49, 55086), (55, 55113), (57, 55140), (61, 55158), (62, 55161), (83, 55251), (85, 55257), (89, 55281),

Gene: Dodo_95 Start: 50485, Stop: 51009, Start Num: 4
Candidate Starts for Dodo_95:
(1, 50443), (Start: 4 @50485 has 5 MA's), (15, 50554), (16, 50560), (18, 50563), (25, 50638), (30, 50680), (40, 50776), (42, 50794), (54, 50875), (79, 50998),

Gene: DunneganBoMo_76 Start: 48342, Stop: 48875, Start Num: 12
Candidate Starts for DunneganBoMo_76:
(Start: 11 @48339 has 2 MA's), (Start: 12 @48342 has 10 MA's), (43, 48612), (57, 48726), (68, 48780), (73, 48801), (83, 48837),

Gene: Ellewin_75 Start: 47937, Stop: 48470, Start Num: 12
Candidate Starts for Ellewin_75:
(Start: 11 @47934 has 2 MA's), (Start: 12 @47937 has 10 MA's), (43, 48207), (57, 48321), (68, 48375), (73, 48396), (83, 48432),

Gene: Emmetator_79 Start: 49086, Stop: 49622, Start Num: 11
Candidate Starts for Emmetator_79:
(Start: 11 @49086 has 2 MA's), (Start: 12 @49089 has 10 MA's), (43, 49359), (57, 49473), (68, 49527), (73, 49548), (83, 49584),

Gene: Erasmago_84 Start: 46801, Stop: 47319, Start Num: 4
Candidate Starts for Erasmago_84:
(Start: 4 @46801 has 5 MA's), (16, 46873), (18, 46876), (19, 46885), (25, 46951), (26, 46954), (37, 47074), (58, 47224), (63, 47251), (64, 47257), (70, 47278), (78, 47305), (81, 47314),

Gene: FloraSnap32_86 Start: 51919, Stop: 52458, Start Num: 12
Candidate Starts for FloraSnap32_86:
(Start: 12 @51919 has 10 MA's), (28, 52048), (38, 52159), (41, 52171), (52, 52264), (57, 52303), (60, 52315), (62, 52324), (83, 52414), (84, 52417), (85, 52420), (87, 52426), (88, 52441), (90, 52450),

Gene: Forza_95 Start: 51405, Stop: 51899, Start Num: 7
Candidate Starts for Forza_95:
(Start: 7 @51405 has 5 MA's), (9, 51420), (19, 51468), (21, 51498), (22, 51504), (33, 51600), (34, 51606), (57, 51813), (70, 51873), (74, 51888), (75, 51891), (77, 51894),

Gene: FrostedClock_89 Start: 52370, Stop: 52909, Start Num: 12
Candidate Starts for FrostedClock_89:
(Start: 12 @52370 has 10 MA's), (28, 52499), (38, 52610), (41, 52622), (52, 52715), (57, 52754), (60, 52766), (62, 52775), (83, 52865), (84, 52868), (85, 52871), (87, 52877), (88, 52892), (90, 52901),

Gene: GMA2_24 Start: 21753, Stop: 22253, Start Num: 7
Candidate Starts for GMA2_24:
(Start: 7 @21753 has 5 MA's), (10, 21771), (19, 21819), (66, 22215), (71, 22233), (75, 22245), (77, 22248),

Gene: GodonK_83 Start: 43126, Stop: 43626, Start Num: 8
Candidate Starts for GodonK_83:
(Start: 8 @43126 has 2 MA's), (14, 43162), (24, 43246), (27, 43264), (29, 43282), (31, 43294), (32, 43297), (42, 43411), (43, 43414), (44, 43432), (59, 43534), (67, 43576), (70, 43585),

Gene: GoldenEssence_72 Start: 46675, Stop: 47214, Start Num: 12
Candidate Starts for GoldenEssence_72:
(Start: 12 @46675 has 10 MA's), (28, 46804), (38, 46915), (41, 46927), (52, 47020), (57, 47059), (60, 47071), (62, 47080), (83, 47170), (84, 47173), (85, 47176), (87, 47182), (88, 47197), (90, 47206),

Gene: KSunshine22_81 Start: 49573, Stop: 50109, Start Num: 11
Candidate Starts for KSunshine22_81:
(Start: 11 @49573 has 2 MA's), (Start: 12 @49576 has 10 MA's), (43, 49846), (48, 49903), (57, 49960), (68, 50014), (73, 50035), (83, 50071),

Gene: LeoJr_86 Start: 51625, Stop: 52158, Start Num: 12
Candidate Starts for LeoJr_86:
(Start: 12 @51625 has 10 MA's), (39, 51868), (48, 51952), (57, 52009), (60, 52021), (63, 52042), (68, 52063), (83, 52120), (86, 52129),

Gene: Mareelih_93 Start: 50907, Stop: 51401, Start Num: 7
Candidate Starts for Mareelih_93:

(Start: 7 @50907 has 5 MA's), (9, 50922), (19, 50970), (21, 51000), (22, 51006), (33, 51102), (34, 51108), (57, 51315), (70, 51375), (74, 51390), (75, 51393), (77, 51396),

Gene: Mimi_86 Start: 52229, Stop: 52768, Start Num: 12
Candidate Starts for Mimi_86:
(Start: 12 @52229 has 10 MA's), (28, 52358), (38, 52469), (41, 52481), (52, 52574), (57, 52613), (60, 52625), (62, 52634), (83, 52724), (84, 52727), (85, 52730), (87, 52736), (88, 52751), (90, 52760),

Gene: Panchaali_79 Start: 49334, Stop: 49870, Start Num: 11
Candidate Starts for Panchaali_79:
(Start: 11 @49334 has 2 MA's), (Start: 12 @49337 has 10 MA's), (36, 49529), (43, 49607), (48, 49664), (51, 49673), (57, 49721), (61, 49739), (82, 49823), (83, 49832),

Gene: Patbob_85 Start: 53101, Stop: 53640, Start Num: 12
Candidate Starts for Patbob_85:
(Start: 12 @53101 has 10 MA's), (28, 53230), (38, 53341), (41, 53353), (52, 53446), (57, 53485), (60, 53497), (62, 53506), (83, 53596), (84, 53599), (85, 53602), (87, 53608), (88, 53623), (90, 53632),

Gene: PauloDiaboli_93 Start: 49520, Stop: 50044, Start Num: 4
Candidate Starts for PauloDiaboli_93:
(1, 49478), (Start: 4 @49520 has 5 MA's), (15, 49589), (16, 49595), (18, 49598), (25, 49673), (30, 49715), (32, 49724), (40, 49811), (42, 49829), (54, 49910), (70, 50003), (79, 50033),

Gene: Phendrix_81 Start: 42994, Stop: 43494, Start Num: 8
Candidate Starts for Phendrix_81:
(Start: 8 @42994 has 2 MA's), (14, 43030), (24, 43114), (27, 43132), (29, 43150), (31, 43162), (32, 43165), (42, 43279), (43, 43282), (44, 43300), (59, 43402), (67, 43444), (70, 43453),

Gene: Phrampa_78 Start: 49829, Stop: 50368, Start Num: 12
Candidate Starts for Phrampa_78:
(Start: 12 @49829 has 10 MA's), (28, 49958), (38, 50069), (51, 50165), (52, 50174), (57, 50213), (60, 50225), (62, 50234), (68, 50267), (83, 50324), (84, 50327), (85, 50330), (87, 50336), (88, 50351), (90, 50360),

Gene: Pumpernickel_90 Start: 50912, Stop: 51418, Start Num: 6
Candidate Starts for Pumpernickel_90:
(Start: 6 @50912 has 1 MA's), (13, 50957), (14, 50963), (20, 50996), (23, 51023), (25, 51050), (42, 51206), (47, 51245), (58, 51323), (62, 51338), (63, 51350), (64, 51356), (76, 51398),

Gene: Racecar_87 Start: 52882, Stop: 53421, Start Num: 12
Candidate Starts for Racecar_87:
(Start: 12 @52882 has 10 MA's), (28, 53011), (38, 53122), (41, 53134), (52, 53227), (57, 53266), (60, 53278), (62, 53287), (83, 53377), (84, 53380), (85, 53383), (87, 53389), (88, 53404), (90, 53413),

Gene: ReginaGlobina_86 Start: 52378, Stop: 52911, Start Num: 12
Candidate Starts for ReginaGlobina_86:
(Start: 12 @52378 has 10 MA's), (39, 52621), (48, 52705), (57, 52762), (60, 52774), (63, 52795), (68, 52816), (83, 52873), (86, 52882),

Gene: Rockabye_88 Start: 55112, Stop: 55654, Start Num: 12
Candidate Starts for Rockabye_88:
(Start: 12 @55112 has 10 MA's), (40, 55361), (49, 55439), (57, 55493), (60, 55505), (61, 55511), (83, 55604), (85, 55610), (89, 55634),

Gene: SJReid_89 Start: 54194, Stop: 54736, Start Num: 12
Candidate Starts for SJReid_89:
(Start: 12 @54194 has 10 MA's), (40, 54443), (45, 54497), (49, 54521), (57, 54575), (60, 54587), (72, 54644),

Gene: Sixama_93 Start: 51015, Stop: 51509, Start Num: 7
Candidate Starts for Sixama_93:
(2, 50979), (5, 51003), (Start: 7 @51015 has 5 MA's), (9, 51030), (21, 51108), (33, 51210), (46, 51345), (53, 51387), (54, 51390), (62, 51444), (69, 51480), (74, 51498), (75, 51501), (77, 51504),

Gene: Stewart25555_77 Start: 48759, Stop: 49292, Start Num: 12
Candidate Starts for Stewart25555_77:
(Start: 11 @48756 has 2 MA's), (Start: 12 @48759 has 10 MA's), (35, 48948), (36, 48951), (43, 49029), (48, 49086), (51, 49095), (57, 49143), (61, 49161), (68, 49197), (83, 49254),

Gene: Talia1610_86 Start: 52247, Stop: 52786, Start Num: 12
Candidate Starts for Talia1610_86:
(Start: 12 @52247 has 10 MA's), (28, 52376), (38, 52487), (41, 52499), (52, 52592), (57, 52631), (60, 52643), (62, 52652), (83, 52742), (84, 52745), (85, 52748), (87, 52754), (88, 52769), (90, 52778),

Gene: WaddleDee_74 Start: 48194, Stop: 48730, Start Num: 11
Candidate Starts for WaddleDee_74:
(Start: 11 @48194 has 2 MA's), (Start: 12 @48197 has 10 MA's), (43, 48467), (57, 48581), (68, 48635), (73, 48656), (83, 48692),

Gene: Zooman_78 Start: 47850, Stop: 48368, Start Num: 4
Candidate Starts for Zooman_78:
(Start: 4 @47850 has 5 MA's), (16, 47922), (18, 47925), (25, 48000), (26, 48003), (58, 48273), (65, 48309), (70, 48327), (78, 48354), (79, 48357),