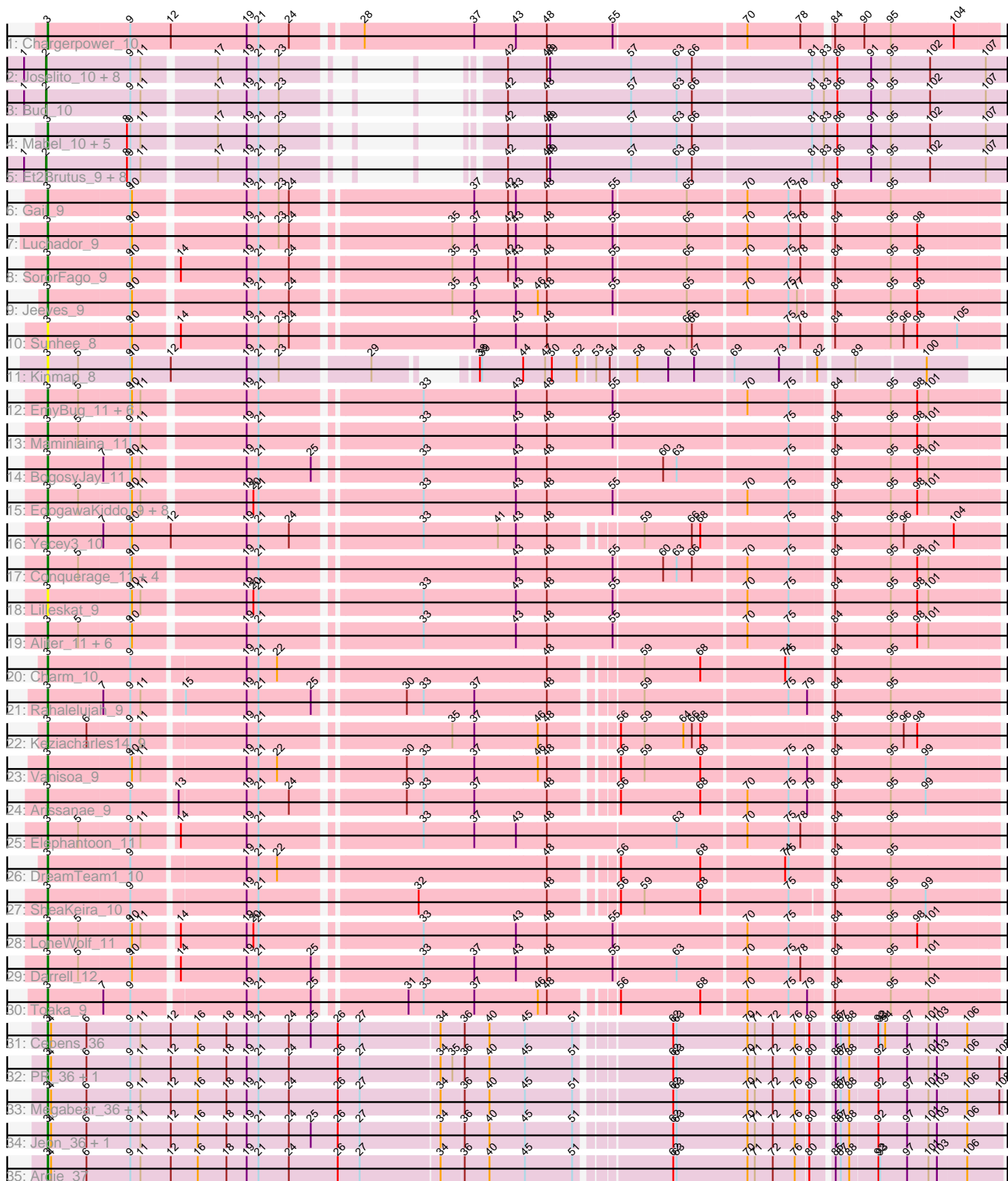


Pham 202872



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 202872 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202872 has 83 members, 11 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_10
- Track 2 : Joselito_10, Aneem_10, Flaverint_10, Timothy_10, Gilberta_10, Bowtie_10, MaCh_10, Bachome_10, Munch_10
- Track 3 : Bud_10
- Track 4 : Mabel_10, Jabith_10, Lucivia_10, Insomnia_10, TinyTimmy_10, Ebony_10
- Track 5 : Et2Brutus_9, Petersenfast_9, Hutc2_10, Salz_10, Fibonacci_10, Sham4_10, Orange_10, Mulciber_10, Snape_10
- Track 6 : Gail_9
- Track 7 : Luchador_9
- Track 8 : SororFago_9
- Track 9 : Jeeves_9
- Track 10 : Sunhee_8
- Track 11 : Kinmap_8
- Track 12 : EmyBug_11, Fayely_11, Phonnegut_11, Beemo_11, Pioneer_11, ExplosioNervosa_11, Qobbit_11
- Track 13 : Maminiaina_11
- Track 14 : BogosyJay_11
- Track 15 : EdogawaKiddo_9, Ugenie5_8, Hanray_10, Holec_10, Jiawan_10, RyeScarlet_12, Scherzo_11, Sachima_9, Onglai_10
- Track 16 : Yecey3_10
- Track 17 : Conquerage_11, Alma_11, Spouty_11, Priya_11, Eidsmoe_11
- Track 18 : Lilleskat_9
- Track 19 : Aliter_11, Myxus_11, Phaeder_11, Catalina_11, Tubs_11, HortumSL17_11, PackMan_11
- Track 20 : Charm_10
- Track 21 : Rahalelujah_9
- Track 22 : Keziacharles14_9
- Track 23 : Vanisoa_9
- Track 24 : Arissanae_9
- Track 25 : Elephantoon_11
- Track 26 : DreamTeam1_10
- Track 27 : SheaKeira_10
- Track 28 : LoneWolf_11
- Track 29 : Darrell_12
- Track 30 : Toaka_9
- Track 31 : Cepens_36
- Track 32 : PR_36, D12_35

- Track 33 : Megabear_36, Taptic_36
- Track 34 : Jeon_36, GodPhather_37
- Track 35 : Argie_37

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 54 of the 72 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aliter_11, Alma_11, Argie_37, Arissanae_9, Beemo_11, BogosyJay_11, Catalina_11, Cepens_36, Chargerpower_10, Charm_10, Conquerage_11, D12_35, Darrell_12, DreamTeam1_10, Ebony_10, EdogawaKiddo_9, Eidsmoe_11, Elephantoon_11, EmyBug_11, ExplosioNervosa_11, Fayely_11, Gail_9, GodPhather_37, Hanray_10, Halex_10, HortumSL17_11, Insomnia_10, Jabith_10, Jeeves_9, Jeon_36, Jiawan_10, Keziacharles14_9, Kinmap_8, Lillekat_9, LoneWolf_11, Luchador_9, Lucivia_10, Mabel_10, Maminiaina_11, Megabear_36, Myxus_11, Onglai_10, PR_36, PackMan_11, Phaeder_11, Phonnegut_11, Pioneer_11, Priya_11, Qobbit_11, Rahalelujah_9, RyeScarlet_12, Sachima_9, Scherzo_11, SheaKeira_10, SororFago_9, Spouty_11, Sunhee_8, Taptic_36, TinyTimmy_10, Toaka_9, Tubs_11, Ugenie5_8, Vanisoa_9, Yecy3_10,

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

-

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

- Aneem_10, Bachome_10, Bowtie_10, Bud_10, Et2Brutus_9, Fibonacci_10, Flaverint_10, Gilberta_10, Hutc2_10, Joselito_10, MaCh_10, Mulciber_10, Munch_10, Orange_10, Petersenfast_9, Salz_10, Sham4_10, Snape_10, Timothy_10,

Summary by start number:

Start 2:

- Found in 19 of 83 (22.9%) of genes in pham
- Manual Annotations of this start: 18 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aneem_10 (A11), Bachome_10 (A11), Bowtie_10 (A11), Bud_10 (A11), Et2Brutus_9 (A11), Fibonacci_10 (A11), Flaverint_10 (A11), Gilberta_10 (A11), Hutc2_10 (A11), Joselito_10 (A11), MaCh_10 (A11), Mulciber_10 (A11), Munch_10 (A11), Orange_10 (A11), Petersenfast_9 (A11), Salz_10 (A11), Sham4_10 (A11), Snape_10 (A11), Timothy_10 (A11),

Start 3:

- Found in 64 of 83 (77.1%) of genes in pham
- Manual Annotations of this start: 54 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aliter_11 (A9), Alma_11 (A9), Argie_37 (W), Arissanae_9 (A9), Beemo_11 (A9), BogosyJay_11 (A9), Catalina_11 (A9), Cepens_36 (W), Chargerpower_10 (A), Charm_10 (A9), Conquerage_11 (A9),

D12_35 (W), Darrell_12 (A9), DreamTeam1_10 (A9), Ebony_10 (A11), EdogawaKiddo_9 (A9), Eidsmoe_11 (A9), Elephantoon_11 (A9), EmyBug_11 (A9), ExplosioNervosa_11 (A9), Fayely_11 (A9), Gail_9 (A14), GodPhather_37 (W), Hanray_10 (A9), Halex_10 (A9), HortumSL17_11 (A9), Insomnia_10 (A11), Jabith_10 (A11), Jeeves_9 (A14), Jeon_36 (W), Jiawan_10 (A9), Keziacharles14_9 (A9), Kinmap_8 (A21), Lilleskat_9 (A9), LoneWolf_11 (A9), Luchador_9 (A14), Lucivia_10 (A11), Mabel_10 (A11), Maminiaina_11 (A9), Megabear_36 (W), Myxus_11 (A9), Onglai_10 (A9), PR_36 (W), PackMan_11 (A9), Phaeder_11 (A9), Phonnegut_11 (A9), Pioneer_11 (A9), Priya_11 (A9), Qobbit_11 (A9), Rahalelujah_9 (A9), RyeScarlet_12 (A9), Sachima_9 (A9), Scherzo_11 (A9), SheaKeira_10 (A9), SororFago_9 (A14), Spouty_11 (A9), Sunhee_8 (A14), Taptic_36 (W), TinyTimmy_10 (A11), Toaka_9 (A9), Tubs_11 (A9), Ugenie5_8 (A9), Vanisoa_9 (A9), Yecy3_10 (A9),

Summary by clusters:

There are 6 clusters represented in this pham: A, A21, A11, A14, W, A9,

Info for manual annotations of cluster A:

- Start number 3 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A11:

- Start number 2 was manually annotated 18 times for cluster A11.
- Start number 3 was manually annotated 6 times for cluster A11.

Info for manual annotations of cluster A14:

- Start number 3 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A9:

- Start number 3 was manually annotated 35 times for cluster A9.

Info for manual annotations of cluster W:

- Start number 3 was manually annotated 8 times for cluster W.

Gene Information:

Gene: Aliter_11 Start: 6074, Stop: 7654, Start Num: 3

Candidate Starts for Aliter_11:

(Start: 3 @6074 has 54 MA's), (5, 6125), (9, 6215), (10, 6218), (19, 6404), (21, 6425), (33, 6686), (43, 6848), (48, 6899), (55, 7016), (70, 7241), (75, 7313), (84, 7373), (95, 7469), (98, 7514), (101, 7532),

Gene: Alma_11 Start: 6153, Stop: 7733, Start Num: 3

Candidate Starts for Alma_11:

(Start: 3 @6153 has 54 MA's), (5, 6204), (9, 6294), (10, 6297), (19, 6483), (21, 6504), (43, 6927), (48, 6978), (55, 7095), (60, 7179), (63, 7203), (66, 7230), (70, 7320), (75, 7392), (84, 7452), (95, 7548), (98, 7593), (101, 7611),

Gene: Aneem_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Aneem_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Argie_37 Start: 36368, Stop: 37990, Start Num: 3

Candidate Starts for Argie_37:

(Start: 3 @36368 has 54 MA's), (4, 36374), (6, 36437), (9, 36515), (11, 36533), (12, 36587), (16, 36635), (18, 36686), (19, 36722), (21, 36743), (24, 36797), (26, 36884), (27, 36923), (34, 37061), (36, 37100), (40, 37142), (45, 37205), (51, 37289), (62, 37436), (63, 37442), (70, 37568), (71, 37580), (72, 37610), (76, 37649), (80, 37670), (85, 37703), (87, 37712), (88, 37727), (92, 37775), (93, 37778), (97, 37826), (101, 37862), (103, 37877), (106, 37928),

Gene: Arissanae_9 Start: 4305, Stop: 5855, Start Num: 3

Candidate Starts for Arissanae_9:

(Start: 3 @4305 has 54 MA's), (9, 4446), (13, 4518), (19, 4635), (21, 4656), (24, 4707), (30, 4887), (33, 4917), (37, 5007), (48, 5130), (56, 5226), (68, 5367), (70, 5442), (75, 5514), (79, 5544), (84, 5574), (95, 5670), (99, 5730),

Gene: Bachome_10 Start: 6221, Stop: 7621, Start Num: 2

Candidate Starts for Bachome_10:

(1, 6182), (Start: 2 @6221 has 18 MA's), (9, 6368), (11, 6386), (17, 6506), (19, 6557), (21, 6578), (23, 6611), (42, 6758), (48, 6821), (49, 6827), (57, 6971), (63, 7052), (66, 7079), (81, 7283), (83, 7304), (86, 7328), (91, 7388), (95, 7421), (102, 7487), (107, 7583),

Gene: Beemo_11 Start: 6180, Stop: 7760, Start Num: 3

Candidate Starts for Beemo_11:

(Start: 3 @6180 has 54 MA's), (5, 6231), (9, 6321), (10, 6324), (11, 6339), (19, 6510), (21, 6531), (33, 6792), (43, 6954), (48, 7005), (55, 7122), (70, 7347), (75, 7419), (84, 7479), (95, 7575), (98, 7620), (101, 7638),

Gene: BogosyJay_11 Start: 5937, Stop: 7517, Start Num: 3

Candidate Starts for BogosyJay_11:

(Start: 3 @5937 has 54 MA's), (7, 6030), (9, 6078), (10, 6081), (11, 6096), (19, 6267), (21, 6288), (25, 6378), (33, 6549), (43, 6711), (48, 6762), (60, 6963), (63, 6987), (75, 7176), (84, 7236), (95, 7332), (98, 7377), (101, 7395),

Gene: Bowtie_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Bowtie_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Bud_10 Start: 6230, Stop: 7630, Start Num: 2

Candidate Starts for Bud_10:

(1, 6191), (Start: 2 @6230 has 18 MA's), (9, 6377), (11, 6395), (17, 6515), (19, 6566), (21, 6587), (23, 6620), (42, 6767), (48, 6830), (57, 6980), (63, 7061), (66, 7088), (81, 7292), (83, 7313), (86, 7337), (91, 7397), (95, 7430), (102, 7496), (107, 7592),

Gene: Catalina_11 Start: 6147, Stop: 7727, Start Num: 3

Candidate Starts for Catalina_11:

(Start: 3 @6147 has 54 MA's), (5, 6198), (9, 6288), (10, 6291), (19, 6477), (21, 6498), (33, 6759), (43, 6921), (48, 6972), (55, 7089), (70, 7314), (75, 7386), (84, 7446), (95, 7542), (98, 7587), (101, 7605),

Gene: Cepens_36 Start: 36083, Stop: 37705, Start Num: 3

Candidate Starts for Cepens_36:

(Start: 3 @36083 has 54 MA's), (4, 36089), (6, 36152), (9, 36230), (11, 36248), (12, 36302), (16, 36350), (18, 36401), (19, 36437), (21, 36458), (24, 36512), (25, 36551), (26, 36599), (27, 36638), (34, 36776), (36, 36815), (40, 36857), (45, 36920), (51, 37004), (62, 37151), (63, 37157), (70, 37283), (71, 37295), (72, 37325), (76, 37364), (80, 37385), (85, 37418), (87, 37427), (88, 37442), (92, 37490), (93, 37493), (94, 37502), (97, 37541), (101, 37577), (103, 37592), (106, 37643),

Gene: Chargerpower_10 Start: 4583, Stop: 6187, Start Num: 3

Candidate Starts for Chargerpower_10:

(Start: 3 @4583 has 54 MA's), (9, 4724), (12, 4796), (19, 4931), (21, 4952), (24, 5003), (28, 5108), (37, 5303), (43, 5375), (48, 5426), (55, 5543), (70, 5768), (78, 5861), (84, 5906), (90, 5957), (95, 6002), (104, 6110),

Gene: Charm_10 Start: 4360, Stop: 5916, Start Num: 3

Candidate Starts for Charm_10:

(Start: 3 @4360 has 54 MA's), (9, 4501), (19, 4690), (21, 4711), (22, 4741), (48, 5185), (59, 5323), (68, 5422), (74, 5563), (75, 5569), (84, 5635), (95, 5731),

Gene: Conquerage_11 Start: 6176, Stop: 7756, Start Num: 3

Candidate Starts for Conquerage_11:

(Start: 3 @6176 has 54 MA's), (5, 6227), (9, 6317), (10, 6320), (19, 6506), (21, 6527), (43, 6950), (48, 7001), (55, 7118), (60, 7202), (63, 7226), (66, 7253), (70, 7343), (75, 7415), (84, 7475), (95, 7571), (98, 7616), (101, 7634),

Gene: D12_35 Start: 36653, Stop: 38275, Start Num: 3

Candidate Starts for D12_35:

(Start: 3 @36653 has 54 MA's), (4, 36659), (6, 36722), (9, 36800), (11, 36818), (12, 36872), (16, 36920), (18, 36971), (19, 37007), (21, 37028), (24, 37082), (26, 37169), (27, 37208), (34, 37346), (35, 37367), (36, 37385), (40, 37427), (45, 37490), (51, 37574), (62, 37721), (63, 37727), (70, 37853), (71, 37865), (72, 37895), (76, 37934), (80, 37955), (85, 37988), (87, 37997), (88, 38012), (92, 38060), (97, 38111), (101, 38147), (103, 38162), (106, 38213), (108, 38270),

Gene: Darrell_12 Start: 6369, Stop: 7949, Start Num: 3

Candidate Starts for Darrell_12:

(Start: 3 @6369 has 54 MA's), (5, 6420), (9, 6510), (10, 6513), (14, 6582), (19, 6699), (21, 6720), (25, 6810), (33, 6981), (37, 7071), (43, 7143), (48, 7194), (55, 7311), (63, 7419), (70, 7536), (75, 7608), (78, 7629), (84, 7668), (95, 7764), (101, 7827),

Gene: DreamTeam1_10 Start: 4360, Stop: 5916, Start Num: 3

Candidate Starts for DreamTeam1_10:

(Start: 3 @4360 has 54 MA's), (9, 4501), (19, 4690), (21, 4711), (22, 4741), (48, 5185), (56, 5281), (68, 5422), (74, 5563), (75, 5569), (84, 5635), (95, 5731),

Gene: Ebony_10 Start: 6285, Stop: 7682, Start Num: 3

Candidate Starts for Ebony_10:

(Start: 3 @6285 has 54 MA's), (8, 6423), (9, 6429), (11, 6447), (17, 6567), (19, 6618), (21, 6639), (23, 6672), (42, 6819), (48, 6882), (49, 6888), (57, 7032), (63, 7113), (66, 7140), (81, 7344), (83, 7365), (86, 7389), (91, 7449), (95, 7482), (102, 7548), (107, 7644),

Gene: EdogawaKiddo_9 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for EdogawaKiddo_9:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (11, 6305), (19, 6476), (20, 6488), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Eidsmoe_11 Start: 6176, Stop: 7756, Start Num: 3

Candidate Starts for Eidsmoe_11:

(Start: 3 @6176 has 54 MA's), (5, 6227), (9, 6317), (10, 6320), (19, 6506), (21, 6527), (43, 6950), (48, 7001), (55, 7118), (60, 7202), (63, 7226), (66, 7253), (70, 7343), (75, 7415), (84, 7475), (95, 7571), (98, 7616), (101, 7634),

Gene: Elephantoon_11 Start: 5798, Stop: 7378, Start Num: 3

Candidate Starts for Elephantoon_11:

(Start: 3 @5798 has 54 MA's), (5, 5849), (9, 5939), (11, 5957), (14, 6011), (19, 6128), (21, 6149), (33, 6410), (37, 6500), (43, 6572), (48, 6623), (63, 6848), (70, 6965), (75, 7037), (78, 7058), (84, 7097), (95, 7193),

Gene: EmyBug_11 Start: 6176, Stop: 7756, Start Num: 3

Candidate Starts for EmyBug_11:

(Start: 3 @6176 has 54 MA's), (5, 6227), (9, 6317), (10, 6320), (11, 6335), (19, 6506), (21, 6527), (33, 6788), (43, 6950), (48, 7001), (55, 7118), (70, 7343), (75, 7415), (84, 7475), (95, 7571), (98, 7616), (101, 7634),

Gene: Et2Brutus_9 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Et2Brutus_9:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: ExplosioNervosa_11 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for ExplosioNervosa_11:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98, 7619), (101, 7637),

Gene: Fayely_11 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for Fayely_11:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98, 7619), (101, 7637),

Gene: Fibonacci_10 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Fibonacci_10:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: Flaverint_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Flaverint_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Gail_9 Start: 4567, Stop: 6147, Start Num: 3

Candidate Starts for Gail_9:

(Start: 3 @4567 has 54 MA's), (9, 4708), (10, 4711), (19, 4897), (21, 4918), (23, 4951), (24, 4969), (37, 5269), (42, 5329), (43, 5341), (48, 5392), (55, 5509), (65, 5635), (70, 5734), (75, 5806), (78, 5827), (84, 5869), (95, 5965),

Gene: Gilberta_10 Start: 6221, Stop: 7621, Start Num: 2

Candidate Starts for Gilberta_10:

(1, 6182), (Start: 2 @6221 has 18 MA's), (9, 6368), (11, 6386), (17, 6506), (19, 6557), (21, 6578), (23, 6611), (42, 6758), (48, 6821), (49, 6827), (57, 6971), (63, 7052), (66, 7079), (81, 7283), (83, 7304), (86, 7328), (91, 7388), (95, 7421), (102, 7487), (107, 7583),

Gene: GodPhather_37 Start: 36847, Stop: 38469, Start Num: 3

Candidate Starts for GodPhather_37:

(Start: 3 @36847 has 54 MA's), (4, 36853), (6, 36916), (9, 36994), (11, 37012), (12, 37066), (16, 37114), (18, 37165), (19, 37201), (21, 37222), (24, 37276), (25, 37315), (26, 37363), (27, 37402), (34, 37540), (36, 37579), (40, 37621), (45, 37684), (51, 37768), (62, 37915), (63, 37921), (70, 38047), (71, 38059), (72, 38089), (76, 38128), (80, 38149), (85, 38182), (87, 38191), (88, 38206), (92, 38254), (97, 38305), (101, 38341), (103, 38356), (106, 38407),

Gene: Hanray_10 Start: 6182, Stop: 7762, Start Num: 3

Candidate Starts for Hanray_10:

(Start: 3 @6182 has 54 MA's), (5, 6233), (9, 6323), (10, 6326), (11, 6341), (19, 6512), (20, 6524), (21, 6533), (33, 6794), (43, 6956), (48, 7007), (55, 7124), (70, 7349), (75, 7421), (84, 7481), (95, 7577), (98, 7622), (101, 7640),

Gene: Holec_10 Start: 6182, Stop: 7762, Start Num: 3

Candidate Starts for Holec_10:

(Start: 3 @6182 has 54 MA's), (5, 6233), (9, 6323), (10, 6326), (11, 6341), (19, 6512), (20, 6524), (21, 6533), (33, 6794), (43, 6956), (48, 7007), (55, 7124), (70, 7349), (75, 7421), (84, 7481), (95, 7577), (98, 7622), (101, 7640),

Gene: HortumSL17_11 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for HortumSL17_11:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (19, 6476), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Hutc2_10 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Hutc2_10:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: Insomnia_10 Start: 6279, Stop: 7676, Start Num: 3

Candidate Starts for Insomnia_10:

(Start: 3 @6279 has 54 MA's), (8, 6417), (9, 6423), (11, 6441), (17, 6561), (19, 6612), (21, 6633), (23, 6666), (42, 6813), (48, 6876), (49, 6882), (57, 7026), (63, 7107), (66, 7134), (81, 7338), (83, 7359), (86, 7383), (91, 7443), (95, 7476), (102, 7542), (107, 7638),

Gene: Jabith_10 Start: 6279, Stop: 7676, Start Num: 3

Candidate Starts for Jabith_10:

(Start: 3 @6279 has 54 MA's), (8, 6417), (9, 6423), (11, 6441), (17, 6561), (19, 6612), (21, 6633), (23, 6666), (42, 6813), (48, 6876), (49, 6882), (57, 7026), (63, 7107), (66, 7134), (81, 7338), (83, 7359), (86, 7383), (91, 7443), (95, 7476), (102, 7542), (107, 7638),

Gene: Jeeves_9 Start: 4583, Stop: 6160, Start Num: 3

Candidate Starts for Jeeves_9:

(Start: 3 @4583 has 54 MA's), (9, 4724), (10, 4727), (19, 4913), (21, 4934), (24, 4985), (35, 5246), (37, 5285), (43, 5357), (46, 5393), (48, 5408), (55, 5525), (65, 5651), (70, 5750), (75, 5822), (77, 5837), (84, 5882), (95, 5978), (98, 6023),

Gene: Jeon_36 Start: 36589, Stop: 38211, Start Num: 3

Candidate Starts for Jeon_36:

(Start: 3 @36589 has 54 MA's), (4, 36595), (6, 36658), (9, 36736), (11, 36754), (12, 36808), (16, 36856), (18, 36907), (19, 36943), (21, 36964), (24, 37018), (25, 37057), (26, 37105), (27, 37144), (34, 37282), (36, 37321), (40, 37363), (45, 37426), (51, 37510), (62, 37657), (63, 37663), (70, 37789), (71, 37801), (72, 37831), (76, 37870), (80, 37891), (85, 37924), (87, 37933), (88, 37948), (92, 37996), (97, 38047), (101, 38083), (103, 38098), (106, 38149),

Gene: Jiawan_10 Start: 6182, Stop: 7762, Start Num: 3

Candidate Starts for Jiawan_10:

(Start: 3 @6182 has 54 MA's), (5, 6233), (9, 6323), (10, 6326), (11, 6341), (19, 6512), (20, 6524), (21, 6533), (33, 6794), (43, 6956), (48, 7007), (55, 7124), (70, 7349), (75, 7421), (84, 7481), (95, 7577), (98, 7622), (101, 7640),

Gene: Joselito_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Joselito_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Keziacharles14_9 Start: 4347, Stop: 5900, Start Num: 3

Candidate Starts for Keziacharles14_9:

(Start: 3 @4347 has 54 MA's), (6, 4413), (9, 4488), (11, 4506), (19, 4677), (21, 4698), (35, 5010), (37, 5049), (46, 5157), (48, 5172), (56, 5268), (59, 5310), (64, 5379), (66, 5394), (68, 5409), (84, 5619), (95, 5715), (96, 5736), (98, 5760),

Gene: Kinmap_8 Start: 4508, Stop: 5944, Start Num: 3

Candidate Starts for Kinmap_8:

(Start: 3 @4508 has 54 MA's), (5, 4559), (9, 4652), (10, 4655), (12, 4724), (19, 4859), (21, 4880), (23, 4913), (29, 5060), (38, 5159), (39, 5162), (44, 5231), (47, 5267), (50, 5279), (52, 5321), (53, 5348), (54, 5372), (58, 5414), (61, 5468), (67, 5513), (69, 5573), (73, 5648), (82, 5705), (89, 5762), (100, 5873),

Gene: Lilleskat_9 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for Lilleskat_9:

(Start: 3 @6146 has 54 MA's), (9, 6287), (10, 6290), (11, 6305), (19, 6476), (20, 6488), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: LoneWolf_11 Start: 5993, Stop: 7573, Start Num: 3

Candidate Starts for LoneWolf_11:

(Start: 3 @5993 has 54 MA's), (5, 6044), (9, 6134), (10, 6137), (11, 6152), (14, 6206), (19, 6323), (20, 6335), (21, 6344), (33, 6605), (43, 6767), (48, 6818), (55, 6935), (70, 7160), (75, 7232), (84, 7292), (95, 7388), (98, 7433), (101, 7451),

Gene: Luchador_9 Start: 4568, Stop: 6148, Start Num: 3

Candidate Starts for Luchador_9:

(Start: 3 @4568 has 54 MA's), (9, 4709), (10, 4712), (19, 4898), (21, 4919), (23, 4952), (24, 4970), (35, 5231), (37, 5270), (42, 5330), (43, 5342), (48, 5393), (55, 5510), (65, 5636), (70, 5735), (75, 5807), (78, 5828), (84, 5870), (95, 5966), (98, 6011),

Gene: Lucivia_10 Start: 6276, Stop: 7673, Start Num: 3

Candidate Starts for Lucivia_10:

(Start: 3 @6276 has 54 MA's), (8, 6414), (9, 6420), (11, 6438), (17, 6558), (19, 6609), (21, 6630), (23, 6663), (42, 6810), (48, 6873), (49, 6879), (57, 7023), (63, 7104), (66, 7131), (81, 7335), (83, 7356), (86, 7380), (91, 7440), (95, 7473), (102, 7539), (107, 7635),

Gene: MaCh_10 Start: 6221, Stop: 7621, Start Num: 2

Candidate Starts for MaCh_10:

(1, 6182), (Start: 2 @6221 has 18 MA's), (9, 6368), (11, 6386), (17, 6506), (19, 6557), (21, 6578), (23, 6611), (42, 6758), (48, 6821), (49, 6827), (57, 6971), (63, 7052), (66, 7079), (81, 7283), (83, 7304), (86, 7328), (91, 7388), (95, 7421), (102, 7487), (107, 7583),

Gene: Mabel_10 Start: 6291, Stop: 7688, Start Num: 3

Candidate Starts for Mabel_10:

(Start: 3 @6291 has 54 MA's), (8, 6429), (9, 6435), (11, 6453), (17, 6573), (19, 6624), (21, 6645), (23, 6678), (42, 6825), (48, 6888), (49, 6894), (57, 7038), (63, 7119), (66, 7146), (81, 7350), (83, 7371), (86, 7395), (91, 7455), (95, 7488), (102, 7554), (107, 7650),

Gene: Maminiaina_11 Start: 5916, Stop: 7496, Start Num: 3

Candidate Starts for Maminiaina_11:

(Start: 3 @5916 has 54 MA's), (5, 5967), (9, 6057), (11, 6075), (19, 6246), (21, 6267), (33, 6528), (43, 6690), (48, 6741), (55, 6858), (75, 7155), (84, 7215), (95, 7311), (98, 7356), (101, 7374),

Gene: Megabear_36 Start: 36026, Stop: 37648, Start Num: 3

Candidate Starts for Megabear_36:

(Start: 3 @36026 has 54 MA's), (4, 36032), (6, 36095), (9, 36173), (11, 36191), (12, 36245), (16, 36293), (18, 36344), (19, 36380), (21, 36401), (24, 36455), (26, 36542), (27, 36581), (34, 36719), (36, 36758), (40, 36800), (45, 36863), (51, 36947), (62, 37094), (63, 37100), (70, 37226), (71, 37238), (72, 37268), (76, 37307), (80, 37328), (85, 37361), (87, 37370), (88, 37385), (92, 37433), (97, 37484), (101, 37520), (103, 37535), (106, 37586), (108, 37643),

Gene: Mulciber_10 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Mulciber_10:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: Munch_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Munch_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Myxus_11 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for Myxus_11:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (19, 6476), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Onglai_10 Start: 4512, Stop: 6092, Start Num: 3

Candidate Starts for Onglai_10:

(Start: 3 @4512 has 54 MA's), (5, 4563), (9, 4653), (10, 4656), (11, 4671), (19, 4842), (20, 4854), (21, 4863), (33, 5124), (43, 5286), (48, 5337), (55, 5454), (70, 5679), (75, 5751), (84, 5811), (95, 5907), (98, 5952), (101, 5970),

Gene: Orange_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Orange_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (8, 6365), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: PR_36 Start: 36630, Stop: 38252, Start Num: 3

Candidate Starts for PR_36:

(Start: 3 @36630 has 54 MA's), (4, 36636), (6, 36699), (9, 36777), (11, 36795), (12, 36849), (16, 36897), (18, 36948), (19, 36984), (21, 37005), (24, 37059), (26, 37146), (27, 37185), (34, 37323), (35, 37344), (36, 37362), (40, 37404), (45, 37467), (51, 37551), (62, 37698), (63, 37704), (70, 37830), (71, 37842), (72, 37872), (76, 37911), (80, 37932), (85, 37965), (87, 37974), (88, 37989), (92, 38037), (97, 38088), (101, 38124), (103, 38139), (106, 38190), (108, 38247),

Gene: PackMan_11 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for PackMan_11:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (19, 6476), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Petersenfast_9 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Petersenfast_9:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: Phaeder_11 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for Phaeder_11:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (19, 6476), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Phonnegut_11 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for Phonnegut_11:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98, 7619), (101, 7637),

Gene: Pioneer_11 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for Pioneer_11:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98, 7619), (101, 7637),

Gene: Priya_11 Start: 6177, Stop: 7757, Start Num: 3

Candidate Starts for Priya_11:

(Start: 3 @6177 has 54 MA's), (5, 6228), (9, 6318), (10, 6321), (19, 6507), (21, 6528), (43, 6951), (48, 7002), (55, 7119), (60, 7203), (63, 7227), (66, 7254), (70, 7344), (75, 7416), (84, 7476), (95, 7572), (98, 7617), (101, 7635),

Gene: Qobbit_11 Start: 6176, Stop: 7756, Start Num: 3

Candidate Starts for Qobbit_11:

(Start: 3 @6176 has 54 MA's), (5, 6227), (9, 6317), (10, 6320), (11, 6335), (19, 6506), (21, 6527), (33, 6788), (43, 6950), (48, 7001), (55, 7118), (70, 7343), (75, 7415), (84, 7475), (95, 7571), (98, 7616), (101, 7634),

Gene: Rahalelujah_9 Start: 4273, Stop: 5823, Start Num: 3

Candidate Starts for Rahalelujah_9:

(Start: 3 @4273 has 54 MA's), (7, 4366), (9, 4414), (11, 4432), (15, 4495), (19, 4603), (21, 4624), (25, 4714), (30, 4855), (33, 4885), (37, 4975), (48, 5098), (59, 5236), (75, 5482), (79, 5512), (84, 5542), (95, 5638),

Gene: RyeScarlet_12 Start: 6182, Stop: 7762, Start Num: 3

Candidate Starts for RyeScarlet_12:

(Start: 3 @6182 has 54 MA's), (5, 6233), (9, 6323), (10, 6326), (11, 6341), (19, 6512), (20, 6524), (21, 6533), (33, 6794), (43, 6956), (48, 7007), (55, 7124), (70, 7349), (75, 7421), (84, 7481), (95, 7577), (98, 7622), (101, 7640),

Gene: Sachima_9 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for Sachima_9:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (11, 6305), (19, 6476), (20, 6488), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Salz_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Salz_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (8, 6365), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: Scherzo_11 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for Scherzo_11:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (20, 6521), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98, 7619), (101, 7637),

Gene: Sham4_10 Start: 6227, Stop: 7627, Start Num: 2

Candidate Starts for Sham4_10:

(1, 6188), (Start: 2 @6227 has 18 MA's), (8, 6368), (9, 6374), (11, 6392), (17, 6512), (19, 6563), (21, 6584), (23, 6617), (42, 6764), (48, 6827), (49, 6833), (57, 6977), (63, 7058), (66, 7085), (81, 7289), (83, 7310), (86, 7334), (91, 7394), (95, 7427), (102, 7493), (107, 7589),

Gene: SheaKeira_10 Start: 4377, Stop: 5927, Start Num: 3

Candidate Starts for SheaKeira_10:

(Start: 3 @4377 has 54 MA's), (9, 4518), (19, 4707), (21, 4728), (32, 4980), (48, 5202), (56, 5298), (59, 5340), (68, 5439), (75, 5586), (84, 5646), (95, 5742), (99, 5802),

Gene: Snape_10 Start: 6230, Stop: 7630, Start Num: 2

Candidate Starts for Snape_10:

(1, 6191), (Start: 2 @6230 has 18 MA's), (8, 6371), (9, 6377), (11, 6395), (17, 6515), (19, 6566), (21, 6587), (23, 6620), (42, 6767), (48, 6830), (49, 6836), (57, 6980), (63, 7061), (66, 7088), (81, 7292), (83, 7313), (86, 7337), (91, 7397), (95, 7430), (102, 7496), (107, 7592),

Gene: SororFago_9 Start: 4555, Stop: 6138, Start Num: 3

Candidate Starts for SororFago_9:

(Start: 3 @4555 has 54 MA's), (9, 4696), (10, 4699), (14, 4768), (19, 4885), (21, 4906), (24, 4957), (35, 5218), (37, 5257), (42, 5317), (43, 5329), (48, 5380), (55, 5497), (65, 5623), (70, 5722), (75, 5794), (78, 5815), (84, 5860), (95, 5956), (98, 6001),

Gene: Spouty_11 Start: 6176, Stop: 7756, Start Num: 3

Candidate Starts for Spouty_11:

(Start: 3 @6176 has 54 MA's), (5, 6227), (9, 6317), (10, 6320), (19, 6506), (21, 6527), (43, 6950), (48, 7001), (55, 7118), (60, 7202), (63, 7226), (66, 7253), (70, 7343), (75, 7415), (84, 7475), (95, 7571), (98, 7616), (101, 7634),

Gene: Sunhee_8 Start: 4574, Stop: 6157, Start Num: 3

Candidate Starts for Sunhee_8:

(Start: 3 @4574 has 54 MA's), (9, 4715), (10, 4718), (14, 4787), (19, 4904), (21, 4925), (23, 4958), (24, 4976), (37, 5276), (43, 5348), (48, 5399), (65, 5642), (66, 5651), (75, 5813), (78, 5834), (84, 5876), (95, 5972), (96, 5993), (98, 6017), (105, 6086),

Gene: Taptic_36 Start: 36026, Stop: 37648, Start Num: 3

Candidate Starts for Taptic_36:

(Start: 3 @36026 has 54 MA's), (4, 36032), (6, 36095), (9, 36173), (11, 36191), (12, 36245), (16, 36293), (18, 36344), (19, 36380), (21, 36401), (24, 36455), (26, 36542), (27, 36581), (34, 36719), (36, 36758), (40, 36800), (45, 36863), (51, 36947), (62, 37094), (63, 37100), (70, 37226), (71, 37238), (72, 37268), (76, 37307), (80, 37328), (85, 37361), (87, 37370), (88, 37385), (92, 37433), (97, 37484), (101, 37520), (103, 37535), (106, 37586), (108, 37643),

Gene: Timothy_10 Start: 6224, Stop: 7624, Start Num: 2

Candidate Starts for Timothy_10:

(1, 6185), (Start: 2 @6224 has 18 MA's), (9, 6371), (11, 6389), (17, 6509), (19, 6560), (21, 6581), (23, 6614), (42, 6761), (48, 6824), (49, 6830), (57, 6974), (63, 7055), (66, 7082), (81, 7286), (83, 7307), (86, 7331), (91, 7391), (95, 7424), (102, 7490), (107, 7586),

Gene: TinyTimmy_10 Start: 6279, Stop: 7676, Start Num: 3

Candidate Starts for TinyTimmy_10:

(Start: 3 @6279 has 54 MA's), (8, 6417), (9, 6423), (11, 6441), (17, 6561), (19, 6612), (21, 6633), (23, 6666), (42, 6813), (48, 6876), (49, 6882), (57, 7026), (63, 7107), (66, 7134), (81, 7338), (83, 7359), (86, 7383), (91, 7443), (95, 7476), (102, 7542), (107, 7638),

Gene: Toaka_9 Start: 4553, Stop: 6103, Start Num: 3

Candidate Starts for Toaka_9:

(Start: 3 @4553 has 54 MA's), (7, 4646), (9, 4694), (19, 4883), (21, 4904), (25, 4994), (31, 5138), (33, 5165), (37, 5255), (46, 5363), (48, 5378), (56, 5474), (68, 5615), (70, 5690), (75, 5762), (79, 5792), (84, 5822), (95, 5918), (101, 5981),

Gene: Tubs_11 Start: 6146, Stop: 7726, Start Num: 3

Candidate Starts for Tubs_11:

(Start: 3 @6146 has 54 MA's), (5, 6197), (9, 6287), (10, 6290), (19, 6476), (21, 6497), (33, 6758), (43, 6920), (48, 6971), (55, 7088), (70, 7313), (75, 7385), (84, 7445), (95, 7541), (98, 7586), (101, 7604),

Gene: Ugenie5_8 Start: 6179, Stop: 7759, Start Num: 3

Candidate Starts for Ugenie5_8:

(Start: 3 @6179 has 54 MA's), (5, 6230), (9, 6320), (10, 6323), (11, 6338), (19, 6509), (20, 6521), (21, 6530), (33, 6791), (43, 6953), (48, 7004), (55, 7121), (70, 7346), (75, 7418), (84, 7478), (95, 7574), (98,

7619), (101, 7637),

Gene: Vanisoa_9 Start: 4264, Stop: 5814, Start Num: 3

Candidate Starts for Vanisoa_9:

(Start: 3 @4264 has 54 MA's), (9, 4405), (10, 4408), (11, 4423), (19, 4594), (21, 4615), (22, 4645), (30, 4846), (33, 4876), (37, 4966), (46, 5074), (48, 5089), (56, 5185), (59, 5227), (68, 5326), (75, 5473), (79, 5503), (84, 5533), (95, 5629), (99, 5689),

Gene: Yecey3_10 Start: 4341, Stop: 5915, Start Num: 3

Candidate Starts for Yecey3_10:

(Start: 3 @4341 has 54 MA's), (7, 4434), (9, 4482), (10, 4485), (12, 4554), (19, 4689), (21, 4710), (24, 4761), (33, 4971), (41, 5103), (43, 5133), (48, 5184), (59, 5322), (66, 5406), (68, 5421), (75, 5568), (84, 5634), (95, 5730), (96, 5751), (104, 5838),