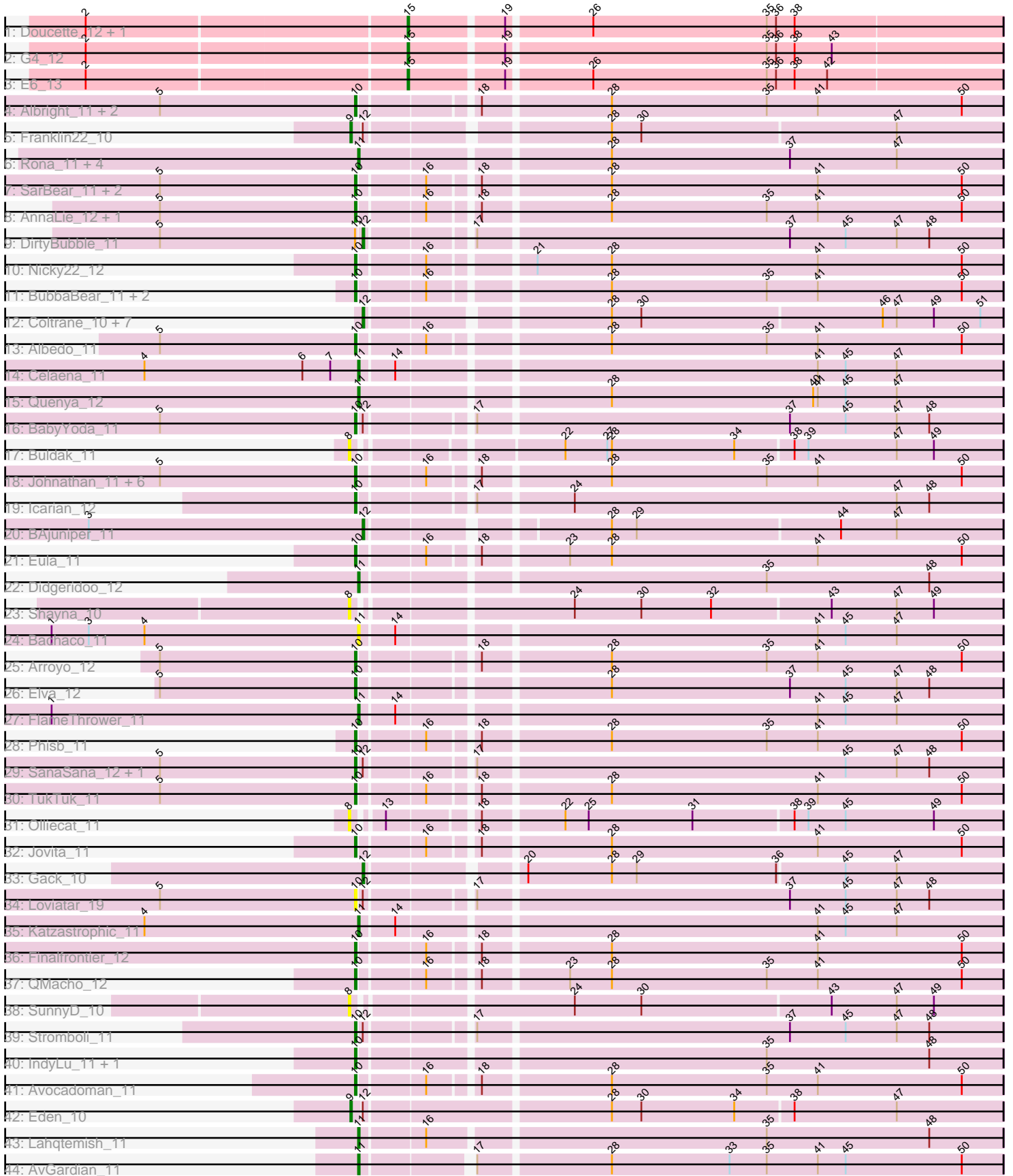


Pham 171431



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 171431 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171431 has 71 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Doucette_12, B22_12
- Track 2 : G4_12
- Track 3 : E6_13
- Track 4 : Albright_11, CroZenni_11, Doobus_11
- Track 5 : Franklin22_10
- Track 6 : Rona_11, ChiliPepper_11, Sharkboy_11, Dismas_11, Kieran_11
- Track 7 : SarBear_11, Slay_11, Swervy_11
- Track 8 : AnnaLie_12, BelmontSKP_12
- Track 9 : DirtyBubble_11
- Track 10 : Nicky22_12
- Track 11 : BubbaBear_11, Kenzers_11, Lynlen_11
- Track 12 : Coltrane_10, Armstrong_10, Brahms_10, Vitas_10, Clayda5_10, Bernstein_10, Rollins_10, Skylord_10
- Track 13 : Albedo_11
- Track 14 : Celaena_11
- Track 15 : Quenya_12
- Track 16 : BabyYoda_11
- Track 17 : Buldak_11
- Track 18 : Johnathan_11, Cashington_11, Abigail_11, SansAfet_11, LimaBean_11, Burritobowl_11, DickRichards_11
- Track 19 : Icarian_12
- Track 20 : BAjuniper_11
- Track 21 : Eula_11
- Track 22 : Didgeridoo_12
- Track 23 : Shayna_10
- Track 24 : Bachaco_11
- Track 25 : Arroyo_12
- Track 26 : Elva_12
- Track 27 : FlameThrower_11
- Track 28 : Phisb_11
- Track 29 : SanaSana_12, Stoor_11
- Track 30 : TukTuk_11
- Track 31 : Olliecat_11
- Track 32 : Jovita_11
- Track 33 : Gack_10
- Track 34 : Loviatar_19
- Track 35 : Katzastrophic_11

- Track 36 : Finalfrontier_12
- Track 37 : QMacho_12
- Track 38 : SunnyD_10
- Track 39 : Stromboli_11
- Track 40 : IndyLu_11, BabyDaisy_12
- Track 41 : Avocadoman_11
- Track 42 : Eden_10
- Track 43 : Lahqtemish_11
- Track 44 : AvGardian_11

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

The start number called the most often in the published annotations is 10, it was called in 35 of the 64 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail_11, Albedo_11, Albright_11, AnnaLie_12, Arroyo_12, Avocadoman_11, BabyDaisy_12, BabyYoda_11, BelmontSKP_12, BubbaBear_11, Burritobowl_11, Cashington_11, CroZenni_11, DickRichards_11, Doobus_11, Elva_12, Eula_11, Finalfrontier_12, Icarian_12, IndyLu_11, Johnathan_11, Jovita_11, Kenzers_11, LimaBean_11, Loviatar_19, Lynlen_11, Nicky22_12, Phisb_11, QMacho_12, SanaSana_12, SansAfet_11, SarBear_11, Slay_11, Stoor_11, Stromboli_11, Swervy_11, TukTuk_11,

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

- DirtyBubble_11,

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

- Armstrong_10, AvGardian_11, B22_12, BAjuniper_11, Bachaco_11, Bernstein_10, Brahms_10, Buldak_11, Celaena_11, ChiliPepper_11, Clayda5_10, Coltrane_10, Didgeridoo_12, Dismas_11, Doucette_12, E6_13, Eden_10, FlameThrower_11, Franklin22_10, G4_12, Gack_10, Katzastrophic_11, Kieran_11, Lahqtemish_11, Olliecat_11, Quenya_12, Rollins_10, Rona_11, Sharkboy_11, Shayna_10, Skylord_10, SunnyD_10, Vitas_10,

Summary by start number:

Start 8:

- Found in 4 of 71 (5.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buldak_11 (EB), Olliecat_11 (EB), Shayna_10 (EB), SunnyD_10 (EB),

Start 9:

- Found in 2 of 71 (2.8%) of genes in pham
- Manual Annotations of this start: 2 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Eden_10 (EB), Franklin22_10 (EB),

Start 10:

- Found in 38 of 71 (53.5%) of genes in pham
- Manual Annotations of this start: 35 of 64
- Called 97.4% of time when present
- Phage (with cluster) where this start called: Abigail_11 (EB), Albedo_11 (EB), Albright_11 (EB), AnnaLie_12 (EB), Arroyo_12 (EB), Avocadoman_11 (EB), BabyDaisy_12 (EB), BabyYoda_11 (EB), BelmontSKP_12 (EB), BubbaBear_11 (EB), Burritobowl_11 (EB), Cashington_11 (EB), CroZenni_11 (EB), DickRichards_11 (EB), Doobus_11 (EB), Elva_12 (EB), Eula_11 (EB), Finalfrontier_12 (EB), Icarian_12 (EB), IndyLu_11 (EB), Johnathan_11 (EB), Jovita_11 (EB), Kenzers_11 (EB), LimaBean_11 (EB), Loviatar_19 (EB), Lynlen_11 (EB), Nicky22_12 (EB), Phisb_11 (EB), QMacho_12 (EB), SanaSana_12 (EB), SansAfet_11 (EB), SarBear_11 (EB), Slay_11 (EB), Stoor_11 (EB), Stromboli_11 (EB), Swervy_11 (EB), TukTuk_11 (EB),

Start 11:

- Found in 13 of 71 (18.3%) of genes in pham
- Manual Annotations of this start: 12 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AvGardian_11 (EB), Bachaco_11 (EB), Celaena_11 (EB), ChiliPepper_11 (EB), Didgeridoo_12 (EB), Dismas_11 (EB), FlameThrower_11 (EB), Katzastrophic_11 (EB), Kieran_11 (EB), Lahqtemish_11 (EB), Quenya_12 (EB), Rona_11 (EB), Sharkboy_11 (EB),

Start 12:

- Found in 18 of 71 (25.4%) of genes in pham
- Manual Annotations of this start: 11 of 64
- Called 61.1% of time when present
- Phage (with cluster) where this start called: Armstrong_10 (EB), BAjuniper_11 (EB), Bernstein_10 (EB), Brahms_10 (EB), Clayda5_10 (EB), Coltrane_10 (EB), DirtyBubble_11 (EB), Gack_10 (EB), Rollins_10 (EB), Skylord_10 (EB), Vitas_10 (EB),

Start 15:

- Found in 4 of 71 (5.6%) of genes in pham
- Manual Annotations of this start: 4 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22_12 (BW), Doucette_12 (BW), E6_13 (BW), G4_12 (BW),

Summary by clusters:

There are 2 clusters represented in this pham: BW, EB,

Info for manual annotations of cluster BW:

- Start number 15 was manually annotated 4 times for cluster BW.

Info for manual annotations of cluster EB:

- Start number 9 was manually annotated 2 times for cluster EB.
- Start number 10 was manually annotated 35 times for cluster EB.
- Start number 11 was manually annotated 12 times for cluster EB.
- Start number 12 was manually annotated 11 times for cluster EB.

Gene Information:

Gene: Abigail_11 Start: 8030, Stop: 8425, Start Num: 10

Candidate Starts for Abigail_11:

(5, 7904), (Start: 10 @8030 has 35 MA's), (16, 8069), (18, 8096), (28, 8174), (35, 8273), (41, 8306), (50, 8399),

Gene: Albedo_11 Start: 7905, Stop: 8300, Start Num: 10

Candidate Starts for Albedo_11:

(5, 7779), (Start: 10 @7905 has 35 MA's), (16, 7944), (28, 8049), (35, 8148), (41, 8181), (50, 8274),

Gene: Albright_11 Start: 7911, Stop: 8306, Start Num: 10

Candidate Starts for Albright_11:

(5, 7785), (Start: 10 @7911 has 35 MA's), (18, 7977), (28, 8055), (35, 8154), (41, 8187), (50, 8280),

Gene: AnnaLie_12 Start: 8320, Stop: 8715, Start Num: 10

Candidate Starts for AnnaLie_12:

(5, 8194), (Start: 10 @8320 has 35 MA's), (16, 8359), (18, 8386), (28, 8464), (35, 8563), (41, 8596), (50, 8689),

Gene: Armstrong_10 Start: 7692, Stop: 8081, Start Num: 12

Candidate Starts for Armstrong_10:

(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),

Gene: Arroyo_12 Start: 8381, Stop: 8776, Start Num: 10

Candidate Starts for Arroyo_12:

(5, 8255), (Start: 10 @8381 has 35 MA's), (18, 8447), (28, 8525), (35, 8624), (41, 8657), (50, 8750),

Gene: AvGardian_11 Start: 7970, Stop: 8365, Start Num: 11

Candidate Starts for AvGardian_11:

(Start: 11 @7970 has 12 MA's), (17, 8033), (28, 8114), (33, 8189), (35, 8213), (41, 8246), (45, 8264), (50, 8339),

Gene: Avocadoman_11 Start: 7969, Stop: 8364, Start Num: 10

Candidate Starts for Avocadoman_11:

(Start: 10 @7969 has 35 MA's), (16, 8008), (18, 8035), (28, 8113), (35, 8212), (41, 8245), (50, 8338),

Gene: B22_12 Start: 7687, Stop: 8055, Start Num: 15

Candidate Starts for B22_12:

(2, 7486), (Start: 15 @7687 has 4 MA's), (19, 7744), (26, 7795), (35, 7906), (36, 7912), (38, 7924),

Gene: BAjuniper_11 Start: 7857, Stop: 8243, Start Num: 12

Candidate Starts for BAjuniper_11:

(3, 7680), (Start: 12 @7857 has 11 MA's), (28, 7995), (29, 8010), (44, 8139), (47, 8175),

Gene: BabyDaisy_12 Start: 8133, Stop: 8531, Start Num: 10

Candidate Starts for BabyDaisy_12:

(Start: 10 @8133 has 35 MA's), (35, 8379), (48, 8484),

Gene: BabyYoda_11 Start: 8162, Stop: 8557, Start Num: 10

Candidate Starts for BabyYoda_11:

(5, 8036), (Start: 10 @8162 has 35 MA's), (Start: 12 @8165 has 11 MA's), (17, 8225), (37, 8420), (45, 8456), (47, 8489), (48, 8510),

Gene: Bachaco_11 Start: 8051, Stop: 8449, Start Num: 11

Candidate Starts for Bachaco_11:

(1, 7853), (3, 7877), (4, 7913), (Start: 11 @8051 has 12 MA's), (14, 8072), (41, 8330), (45, 8348), (47, 8381),

Gene: BelmontSKP_12 Start: 8320, Stop: 8715, Start Num: 10

Candidate Starts for BelmontSKP_12:

(5, 8194), (Start: 10 @8320 has 35 MA's), (16, 8359), (18, 8386), (28, 8464), (35, 8563), (41, 8596), (50, 8689),

Gene: Bernstein_10 Start: 7752, Stop: 8141, Start Num: 12

Candidate Starts for Bernstein_10:

(Start: 12 @7752 has 11 MA's), (28, 7893), (30, 7911), (46, 8064), (47, 8073), (49, 8097), (51, 8127),

Gene: Brahms_10 Start: 7692, Stop: 8081, Start Num: 12

Candidate Starts for Brahms_10:

(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),

Gene: BubbaBear_11 Start: 7905, Stop: 8300, Start Num: 10

Candidate Starts for BubbaBear_11:

(Start: 10 @7905 has 35 MA's), (16, 7944), (28, 8049), (35, 8148), (41, 8181), (50, 8274),

Gene: Buldak_11 Start: 8189, Stop: 8584, Start Num: 8

Candidate Starts for Buldak_11:

(8, 8189), (22, 8306), (27, 8333), (28, 8336), (34, 8414), (38, 8450), (39, 8459), (47, 8516), (49, 8540),

Gene: Burritobowl_11 Start: 7938, Stop: 8333, Start Num: 10

Candidate Starts for Burritobowl_11:

(5, 7812), (Start: 10 @7938 has 35 MA's), (16, 7977), (18, 8004), (28, 8082), (35, 8181), (41, 8214), (50, 8307),

Gene: Cashington_11 Start: 7928, Stop: 8323, Start Num: 10

Candidate Starts for Cashington_11:

(5, 7802), (Start: 10 @7928 has 35 MA's), (16, 7967), (18, 7994), (28, 8072), (35, 8171), (41, 8204), (50, 8297),

Gene: Celaena_11 Start: 7988, Stop: 8386, Start Num: 11

Candidate Starts for Celaena_11:

(4, 7850), (6, 7952), (7, 7970), (Start: 11 @7988 has 12 MA's), (14, 8009), (41, 8267), (45, 8285), (47, 8318),

Gene: ChiliPepper_11 Start: 8141, Stop: 8542, Start Num: 11

Candidate Starts for ChiliPepper_11:

(Start: 11 @8141 has 12 MA's), (28, 8291), (37, 8405), (47, 8474),

Gene: Clayda5_10 Start: 7692, Stop: 8081, Start Num: 12

Candidate Starts for Clayda5_10:

(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),

Gene: Coltrane_10 Start: 7692, Stop: 8081, Start Num: 12

Candidate Starts for Coltrane_10:

(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),

Gene: CroZenni_11 Start: 7911, Stop: 8306, Start Num: 10

Candidate Starts for CroZenni_11:

(5, 7785), (Start: 10 @7911 has 35 MA's), (18, 7977), (28, 8055), (35, 8154), (41, 8187), (50, 8280),

Gene: DickRichards_11 Start: 8405, Stop: 8800, Start Num: 10

Candidate Starts for DickRichards_11:

(5, 8279), (Start: 10 @8405 has 35 MA's), (16, 8444), (18, 8471), (28, 8549), (35, 8648), (41, 8681), (50, 8774),

Gene: Didgeridoo_12 Start: 8135, Stop: 8533, Start Num: 11

Candidate Starts for Didgeridoo_12:

(Start: 11 @8135 has 12 MA's), (35, 8381), (48, 8486),

Gene: DirtyBubble_11 Start: 8173, Stop: 8565, Start Num: 12

Candidate Starts for DirtyBubble_11:

(5, 8044), (Start: 10 @8170 has 35 MA's), (Start: 12 @8173 has 11 MA's), (17, 8233), (37, 8428), (45, 8464), (47, 8497), (48, 8518),

Gene: Dismas_11 Start: 8141, Stop: 8542, Start Num: 11

Candidate Starts for Dismas_11:

(Start: 11 @8141 has 12 MA's), (28, 8291), (37, 8405), (47, 8474),

Gene: Doobus_11 Start: 8142, Stop: 8537, Start Num: 10

Candidate Starts for Doobus_11:

(5, 8016), (Start: 10 @8142 has 35 MA's), (18, 8208), (28, 8286), (35, 8385), (41, 8418), (50, 8511),

Gene: Doucette_12 Start: 7747, Stop: 8115, Start Num: 15

Candidate Starts for Doucette_12:

(2, 7546), (Start: 15 @7747 has 4 MA's), (19, 7804), (26, 7855), (35, 7966), (36, 7972), (38, 7984),

Gene: E6_13 Start: 7798, Stop: 8166, Start Num: 15

Candidate Starts for E6_13:

(2, 7597), (Start: 15 @7798 has 4 MA's), (19, 7855), (26, 7906), (35, 8017), (36, 8023), (38, 8035), (42, 8056),

Gene: Eden_10 Start: 7777, Stop: 8181, Start Num: 9

Candidate Starts for Eden_10:

(Start: 9 @7777 has 2 MA's), (Start: 12 @7783 has 11 MA's), (28, 7933), (30, 7951), (34, 8011), (38, 8047), (47, 8113),

Gene: Elva_12 Start: 8225, Stop: 8620, Start Num: 10

Candidate Starts for Elva_12:

(5, 8099), (Start: 10 @8225 has 35 MA's), (28, 8369), (37, 8483), (45, 8519), (47, 8552), (48, 8573),

Gene: Eula_11 Start: 7912, Stop: 8307, Start Num: 10

Candidate Starts for Eula_11:

(Start: 10 @7912 has 35 MA's), (16, 7951), (18, 7978), (23, 8029), (28, 8056), (41, 8188), (50, 8281),

Gene: Finalfrontier_12 Start: 8424, Stop: 8819, Start Num: 10

Candidate Starts for Finalfrontier_12:

(Start: 10 @8424 has 35 MA's), (16, 8463), (18, 8490), (28, 8568), (41, 8700), (50, 8793),

Gene: FlameThrower_11 Start: 7876, Stop: 8274, Start Num: 11

Candidate Starts for FlameThrower_11:

(1, 7678), (Start: 11 @7876 has 12 MA's), (14, 7897), (41, 8155), (45, 8173), (47, 8206),

Gene: Franklin22_10 Start: 7758, Stop: 8153, Start Num: 9

Candidate Starts for Franklin22_10:

(Start: 9 @7758 has 2 MA's), (Start: 12 @7764 has 11 MA's), (28, 7905), (30, 7923), (47, 8085),

Gene: G4_12 Start: 7735, Stop: 8103, Start Num: 15

Candidate Starts for G4_12:

(2, 7534), (Start: 15 @7735 has 4 MA's), (19, 7792), (35, 7954), (36, 7960), (38, 7972), (43, 7996),

Gene: Gack_10 Start: 7830, Stop: 8219, Start Num: 12

Candidate Starts for Gack_10:

(Start: 12 @7830 has 11 MA's), (20, 7917), (28, 7971), (29, 7986), (36, 8076), (45, 8118), (47, 8151),

Gene: Icarian_12 Start: 8152, Stop: 8547, Start Num: 10

Candidate Starts for Icarian_12:

(Start: 10 @8152 has 35 MA's), (17, 8215), (24, 8272), (47, 8479), (48, 8500),

Gene: IndyLu_11 Start: 7957, Stop: 8355, Start Num: 10

Candidate Starts for IndyLu_11:

(Start: 10 @7957 has 35 MA's), (35, 8203), (48, 8308),

Gene: Johnathan_11 Start: 7911, Stop: 8306, Start Num: 10

Candidate Starts for Johnathan_11:

(5, 7785), (Start: 10 @7911 has 35 MA's), (16, 7950), (18, 7977), (28, 8055), (35, 8154), (41, 8187), (50, 8280),

Gene: Jovita_11 Start: 8013, Stop: 8408, Start Num: 10

Candidate Starts for Jovita_11:

(Start: 10 @8013 has 35 MA's), (16, 8052), (18, 8079), (28, 8157), (41, 8289), (50, 8382),

Gene: Katzastrophic_11 Start: 8051, Stop: 8449, Start Num: 11

Candidate Starts for Katzastrophic_11:

(4, 7913), (Start: 11 @8051 has 12 MA's), (14, 8072), (41, 8330), (45, 8348), (47, 8381),

Gene: Kenzers_11 Start: 7928, Stop: 8323, Start Num: 10

Candidate Starts for Kenzers_11:

(Start: 10 @7928 has 35 MA's), (16, 7967), (28, 8072), (35, 8171), (41, 8204), (50, 8297),

Gene: Kieran_11 Start: 8144, Stop: 8545, Start Num: 11

Candidate Starts for Kieran_11:

(Start: 11 @8144 has 12 MA's), (28, 8294), (37, 8408), (47, 8477),

Gene: Lahqtemish_11 Start: 8003, Stop: 8401, Start Num: 11

Candidate Starts for Lahqtemish_11:

(Start: 11 @8003 has 12 MA's), (16, 8042), (35, 8249), (48, 8354),

Gene: LimaBean_11 Start: 7911, Stop: 8306, Start Num: 10

Candidate Starts for LimaBean_11:

(5, 7785), (Start: 10 @7911 has 35 MA's), (16, 7950), (18, 7977), (28, 8055), (35, 8154), (41, 8187), (50, 8280),

Gene: Loviatar_19 Start: 8231, Stop: 8626, Start Num: 10

Candidate Starts for Loviatar_19:

(5, 8105), (Start: 10 @8231 has 35 MA's), (Start: 12 @8234 has 11 MA's), (17, 8294), (37, 8489), (45, 8525), (47, 8558), (48, 8579),

Gene: Lynlen_11 Start: 7928, Stop: 8323, Start Num: 10

Candidate Starts for Lynlen_11:

(Start: 10 @7928 has 35 MA's), (16, 7967), (28, 8072), (35, 8171), (41, 8204), (50, 8297),

Gene: Nicky22_12 Start: 8359, Stop: 8754, Start Num: 10

Candidate Starts for Nicky22_12:

(Start: 10 @8359 has 35 MA's), (16, 8398), (21, 8455), (28, 8503), (41, 8635), (50, 8728),

Gene: Olliecat_11 Start: 8144, Stop: 8536, Start Num: 8

Candidate Starts for Olliecat_11:

(8, 8144), (13, 8159), (18, 8210), (22, 8258), (25, 8273), (31, 8339), (38, 8402), (39, 8411), (45, 8435), (49, 8492),

Gene: Phisb_11 Start: 7905, Stop: 8300, Start Num: 10

Candidate Starts for Phisb_11:

(Start: 10 @7905 has 35 MA's), (16, 7944), (18, 7971), (28, 8049), (35, 8148), (41, 8181), (50, 8274),

Gene: QMacho_12 Start: 8395, Stop: 8790, Start Num: 10

Candidate Starts for QMacho_12:

(Start: 10 @8395 has 35 MA's), (16, 8434), (18, 8461), (23, 8512), (28, 8539), (35, 8638), (41, 8671), (50, 8764),

Gene: Quenya_12 Start: 8046, Stop: 8447, Start Num: 11

Candidate Starts for Quenya_12:

(Start: 11 @8046 has 12 MA's), (28, 8196), (40, 8325), (41, 8328), (45, 8346), (47, 8379),

Gene: Rollins_10 Start: 7752, Stop: 8141, Start Num: 12

Candidate Starts for Rollins_10:

(Start: 12 @7752 has 11 MA's), (28, 7893), (30, 7911), (46, 8064), (47, 8073), (49, 8097), (51, 8127),

Gene: Rona_11 Start: 8141, Stop: 8542, Start Num: 11

Candidate Starts for Rona_11:

(Start: 11 @8141 has 12 MA's), (28, 8291), (37, 8405), (47, 8474),

Gene: SanaSana_12 Start: 8160, Stop: 8555, Start Num: 10

Candidate Starts for SanaSana_12:

(5, 8034), (Start: 10 @8160 has 35 MA's), (Start: 12 @8163 has 11 MA's), (17, 8223), (45, 8454), (47, 8487), (48, 8508),

Gene: SansAfet_11 Start: 7922, Stop: 8317, Start Num: 10

Candidate Starts for SansAfet_11:

(5, 7796), (Start: 10 @7922 has 35 MA's), (16, 7961), (18, 7988), (28, 8066), (35, 8165), (41, 8198), (50, 8291),

Gene: SarBear_11 Start: 7888, Stop: 8283, Start Num: 10

Candidate Starts for SarBear_11:

(5, 7762), (Start: 10 @7888 has 35 MA's), (16, 7927), (18, 7954), (28, 8032), (41, 8164), (50, 8257),

Gene: Sharkboy_11 Start: 8140, Stop: 8541, Start Num: 11
Candidate Starts for Sharkboy_11:
(Start: 11 @8140 has 12 MA's), (28, 8290), (37, 8404), (47, 8473),

Gene: Shayna_10 Start: 7746, Stop: 8147, Start Num: 8
Candidate Starts for Shayna_10:
(8, 7746), (24, 7875), (30, 7917), (32, 7962), (43, 8037), (47, 8079), (49, 8103),

Gene: Skylord_10 Start: 7692, Stop: 8081, Start Num: 12
Candidate Starts for Skylord_10:
(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),

Gene: Slay_11 Start: 8364, Stop: 8759, Start Num: 10
Candidate Starts for Slay_11:
(5, 8238), (Start: 10 @8364 has 35 MA's), (16, 8403), (18, 8430), (28, 8508), (41, 8640), (50, 8733),

Gene: Stoor_11 Start: 8157, Stop: 8552, Start Num: 10
Candidate Starts for Stoor_11:
(5, 8031), (Start: 10 @8157 has 35 MA's), (Start: 12 @8160 has 11 MA's), (17, 8220), (45, 8451), (47, 8484), (48, 8505),

Gene: Stromboli_11 Start: 8161, Stop: 8556, Start Num: 10
Candidate Starts for Stromboli_11:
(Start: 10 @8161 has 35 MA's), (Start: 12 @8164 has 11 MA's), (17, 8224), (37, 8419), (45, 8455), (47, 8488), (48, 8509),

Gene: SunnyD_10 Start: 7746, Stop: 8147, Start Num: 8
Candidate Starts for SunnyD_10:
(8, 7746), (24, 7875), (30, 7917), (43, 8037), (47, 8079), (49, 8103),

Gene: Swervy_11 Start: 7888, Stop: 8283, Start Num: 10
Candidate Starts for Swervy_11:
(5, 7762), (Start: 10 @7888 has 35 MA's), (16, 7927), (18, 7954), (28, 8032), (41, 8164), (50, 8257),

Gene: TukTuk_11 Start: 7948, Stop: 8343, Start Num: 10
Candidate Starts for TukTuk_11:
(5, 7822), (Start: 10 @7948 has 35 MA's), (16, 7987), (18, 8014), (28, 8092), (41, 8224), (50, 8317),

Gene: Vitas_10 Start: 7692, Stop: 8081, Start Num: 12
Candidate Starts for Vitas_10:
(Start: 12 @7692 has 11 MA's), (28, 7833), (30, 7851), (46, 8004), (47, 8013), (49, 8037), (51, 8067),