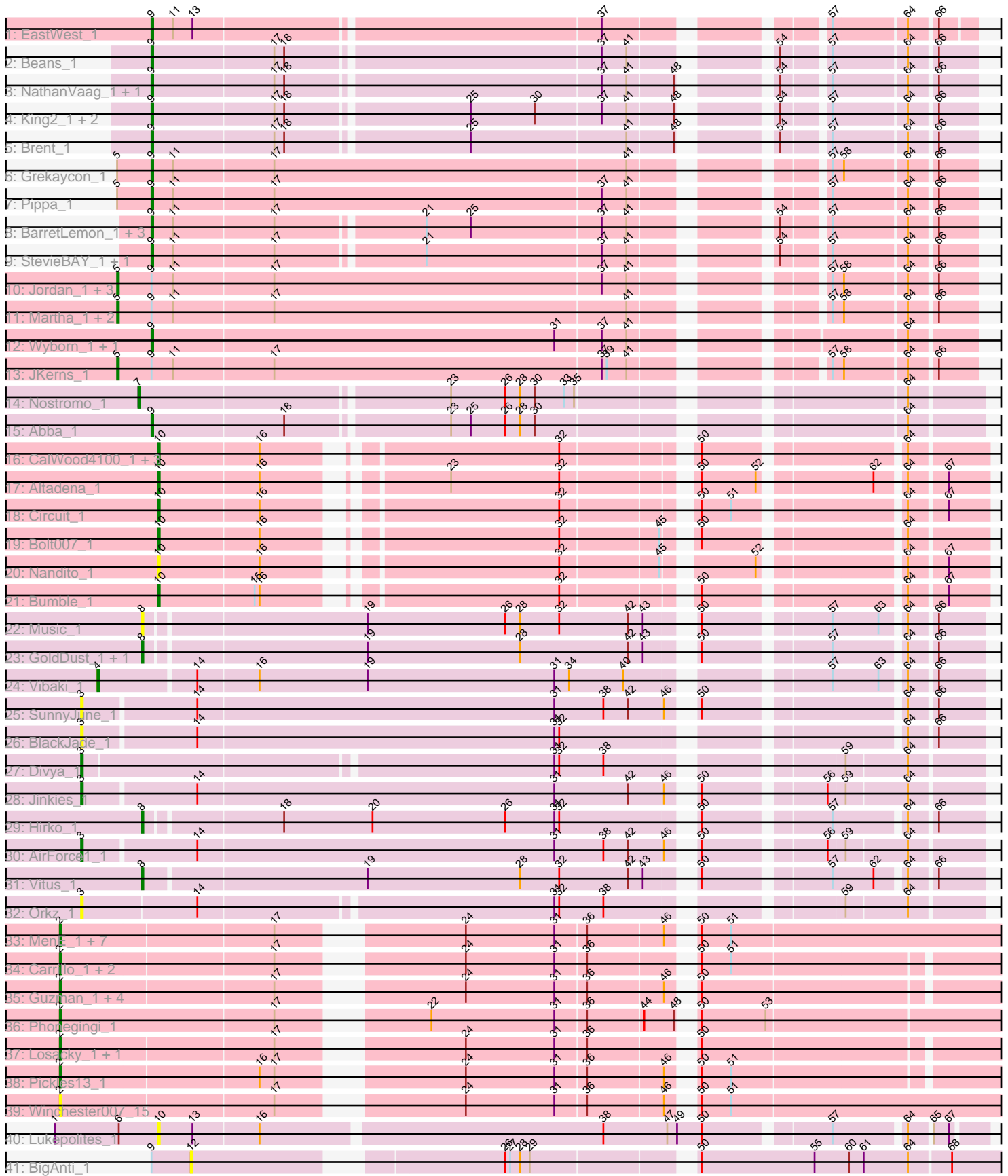


Pham 311547



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 311547 Report

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

Pham number 311547 has 72 members, 19 are drafts.

Phages represented in each track:

- Track 1 : EastWest_1
- Track 2 : Beans_1
- Track 3 : NathanVaag_1, Piccoletto_1
- Track 4 : King2_1, Franzy_1, Jawnski_1
- Track 5 : Brent_1
- Track 6 : Grekaycon_1
- Track 7 : Pippa_1
- Track 8 : BarretLemon_1, BigDome_1, LeeroyJ_1, Timinator_1
- Track 9 : StevieBAY_1, GravityBall_1
- Track 10 : Jordan_1, Shade_1, Sonny_1, Zartrosa_1
- Track 11 : Martha_1, BossLady_1, TaeYoung_1
- Track 12 : Wyborn_1, Sicarius2_1
- Track 13 : JKerns_1
- Track 14 : Nostromo_1
- Track 15 : Abba_1
- Track 16 : CalWood4100_1, Lilmac1015_1, Klevey_1, Prairie_1
- Track 17 : Altadena_1
- Track 18 : Circuit_1
- Track 19 : Bolt007_1
- Track 20 : Nandito_1
- Track 21 : Bumble_1
- Track 22 : Music_1
- Track 23 : GoldDust_1, Gooberta_1
- Track 24 : Vibaki_1
- Track 25 : SunnyJune_1
- Track 26 : BlackJade_1
- Track 27 : Divya_1
- Track 28 : Jinkies_1
- Track 29 : Hirko_1
- Track 30 : AirForce1_1
- Track 31 : Vitus_1
- Track 32 : Orkz_1
- Track 33 : MenE_1, Appa_1, Dropshot_1, PhillyJawn_1, Mariel_1, CookieDog_1, Bush_1, Phingu_1
- Track 34 : Carrillo_1, Antuna_1, Blett_1
- Track 35 : Guzman_1, Jakelyne_1, NCRodriguez_1, Warren_1, ScoobySnack_1
- Track 36 : Phonegingi_1

- Track 37 : Losacky_1, Violeta_1
- Track 38 : Pickles13_1
- Track 39 : Winchester007_15
- Track 40 : Lukepolites_1
- Track 41 : BigAnti_1

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

The start number called the most often in the published annotations is 9, it was called in 18 of the 53 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abba_1, BarretLemon_1, Beans_1, BigDome_1, Brent_1, EastWest_1, Franzy_1, GravityBall_1, Grekaycon_1, Jawnski_1, King2_1, LeeroyJ_1, NathanVaag_1, Piccoletto_1, Pippa_1, Sicarius2_1, StevieBAY_1, Timinator_1, Wyborn_1,

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

- BigAnti_1, BossLady_1, JKerns_1, Jordan_1, Martha_1, Shade_1, Sonny_1, TaeYoung_1, Zartrosa_1,

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

- AirForce1_1, Altadena_1, Antuna_1, Appa_1, BlackJade_1, Blett_1, Bolt007_1, Bumble_1, Bush_1, CalWood4100_1, Carrillo_1, Circuit_1, CookieDog_1, Divya_1, Dropshot_1, GoldDust_1, Gooberta_1, Guzman_1, Hirko_1, Jakelyne_1, Jinkies_1, Klevey_1, Lilmac1015_1, Losacky_1, Lukepolites_1, Mariel_1, MenE_1, Music_1, NCRodriguez_1, Nandito_1, Nostromo_1, Orkz_1, PhillyJawn_1, Phingu_1, Phonegingi_1, Pickles13_1, Prairie_1, ScoobySnack_1, SunnyJune_1, Vibaki_1, Violeta_1, Vitus_1, Warren_1, Winchester007_15,

Summary by start number:

Start 2:

- Found in 21 of 72 (29.2%) of genes in pham
- Manual Annotations of this start: 11 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna_1 (GA), Appa_1 (GA), Blett_1 (GA), Bush_1 (GA), Carrillo_1 (GA), CookieDog_1 (GA), Dropshot_1 (GA), Guzman_1 (GA), Jakelyne_1 (GA), Losacky_1 (GA), Mariel_1 (GA), MenE_1 (GA), NCRodriguez_1 (GA), PhillyJawn_1 (GA), Phingu_1 (GA), Phonegingi_1 (GA), Pickles13_1 (GA), ScoobySnack_1 (GA), Violeta_1 (GA), Warren_1 (GA), Winchester007_15 (GA),

Start 3:

- Found in 6 of 72 (8.3%) of genes in pham
- Manual Annotations of this start: 3 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AirForce1_1 (FL), BlackJade_1 (FL), Divya_1 (FL), Jinkies_1 (FL), Orkz_1 (FL), SunnyJune_1 (FL),

Start 4:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Vibaki_1 (FL),

Start 5:

- Found in 10 of 72 (13.9%) of genes in pham
- Manual Annotations of this start: 8 of 53
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BossLady_1 (AO2), JKerns_1 (AO2), Jordan_1 (AO2), Martha_1 (AO2), Shade_1 (AO2), Sonny_1 (AO2), TaeYoung_1 (AO2), Zartrosa_1 (AO2),

Start 7:

- Found in 1 of 72 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nostromo_1 (AO3),

Start 8:

- Found in 5 of 72 (6.9%) of genes in pham
- Manual Annotations of this start: 4 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GoldDust_1 (FL), Gooberta_1 (FL), Hirko_1 (FL), Music_1 (FL), Vitus_1 (FL),

Start 9:

- Found in 28 of 72 (38.9%) of genes in pham
- Manual Annotations of this start: 18 of 53
- Called 67.9% of time when present
- Phage (with cluster) where this start called: Abba_1 (AO3), BarretLemon_1 (AO2), Beans_1 (AO1), BigDome_1 (AO2), Brent_1 (AO1), EastWest_1 (AO), Franzy_1 (AO1), GravityBall_1 (AO2), Grekaycon_1 (AO2), Jawnski_1 (AO1), King2_1 (AO1), LeeroyJ_1 (AO2), NathanVaag_1 (AO1), Piccoletto_1 (AO1), Pippa_1 (AO2), Sicarius2_1 (AO2), StevieBAY_1 (AO2), Timinator_1 (AO2), Wyborn_1 (AO2),

Start 10:

- Found in 10 of 72 (13.9%) of genes in pham
- Manual Annotations of this start: 7 of 53
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altadena_1 (FH), Bolt007_1 (FH), Bumble_1 (FH), CalWood4100_1 (FH), Circuit_1 (FH), Klevey_1 (FH), Lilmac1015_1 (FH), Lukepolites_1 (singleton), Nandito_1 (FH), Prairie_1 (FH),

Start 12:

- Found in 1 of 72 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigAnti_1 (singleton),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, GA, AO, AO3, AO2, AO1, FH, FL,

Info for manual annotations of cluster AO:

- Start number 9 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 9 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 5 was manually annotated 8 times for cluster AO2.
- Start number 9 was manually annotated 9 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 7 was manually annotated 1 time for cluster AO3.
- Start number 9 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster FH:

- Start number 10 was manually annotated 7 times for cluster FH.

Info for manual annotations of cluster FL:

- Start number 3 was manually annotated 3 times for cluster FL.
- Start number 4 was manually annotated 1 time for cluster FL.
- Start number 8 was manually annotated 4 times for cluster FL.

Info for manual annotations of cluster GA:

- Start number 2 was manually annotated 11 times for cluster GA.

Gene Information:

Gene: Abba_1 Start: 1, Stop: 459, Start Num: 9

Candidate Starts for Abba_1:

(Start: 9 @1 has 18 MA's), (18, 79), (23, 172), (25, 184), (26, 205), (28, 214), (30, 223), (64, 418),

Gene: AirForce1_1 Start: 1, Stop: 510, Start Num: 3

Candidate Starts for AirForce1_1:

(Start: 3 @1 has 3 MA's), (14, 67), (31, 283), (38, 313), (42, 328), (46, 349), (50, 358), (56, 424), (59, 433), (64, 469),

Gene: Altadena_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Altadena_1:

(Start: 10 @1 has 7 MA's), (16, 61), (23, 151), (32, 217), (50, 286), (52, 319), (62, 379), (64, 394), (67, 415),

Gene: Antuna_1 Start: 1, Stop: 504, Start Num: 2

Candidate Starts for Antuna_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (50, 343), (51, 361),

Gene: Appa_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Appa_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: BarretLemon_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for BarretLemon_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (25, 204), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: Beans_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for Beans_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (37, 286), (41, 301), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: BigAnti_1 Start: 25, Stop: 486, Start Num: 12

Candidate Starts for BigAnti_1:

(Start: 9 @1 has 18 MA's), (12, 25), (26, 187), (27, 190), (28, 196), (29, 202), (50, 289), (55, 358), (60, 379), (61, 388), (64, 415), (68, 439),

Gene: BigDome_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for BigDome_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (25, 204), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: BlackJade_1 Start: 1, Stop: 507, Start Num: 3

Candidate Starts for BlackJade_1:

(Start: 3 @1 has 3 MA's), (14, 67), (31, 283), (32, 286), (64, 466), (66, 481),

Gene: Blett_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Blett_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (50, 343), (51, 361),

Gene: Bolt007_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Bolt007_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (45, 274), (50, 286), (64, 394),

Gene: BossLady_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for BossLady_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: Brent_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for Brent_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (25, 208), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: Bumble_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Bumble_1:

(Start: 10 @1 has 7 MA's), (15, 58), (16, 61), (32, 217), (50, 286), (64, 394), (67, 415),

Gene: Bush_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Bush_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: CalWood4100_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for CalWood4100_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (50, 286), (64, 394),

Gene: Carrillo_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Carrillo_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (50, 343), (51, 361),

Gene: Circuit_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Circuit_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (50, 286), (51, 304), (64, 394), (67, 415),

Gene: CookieDog_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for CookieDog_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Divya_1 Start: 1, Stop: 504, Start Num: 3

Candidate Starts for Divya_1:

(Start: 3 @1 has 3 MA's), (31, 277), (32, 280), (38, 307), (59, 427), (64, 463),

Gene: Dropshot_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Dropshot_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: EastWest_1 Start: 1, Stop: 447, Start Num: 9

Candidate Starts for EastWest_1:

(Start: 9 @1 has 18 MA's), (11, 13), (13, 25), (37, 262), (57, 370), (64, 412), (66, 427),

Gene: Franzy_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for Franzy_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (25, 208), (30, 247), (37, 286), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: GoldDust_1 Start: 1, Stop: 468, Start Num: 8

Candidate Starts for GoldDust_1:

(Start: 8 @1 has 4 MA's), (19, 130), (28, 223), (42, 289), (43, 298), (50, 319), (57, 388), (64, 427), (66, 442),

Gene: Gooberta_1 Start: 1, Stop: 468, Start Num: 8

Candidate Starts for Gooberta_1:

(Start: 8 @1 has 4 MA's), (19, 130), (28, 223), (42, 289), (43, 298), (50, 319), (57, 388), (64, 427), (66, 442),

Gene: GravityBall_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for GravityBall_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: Grekaycon_1 Start: 22, Stop: 480, Start Num: 9

Candidate Starts for Grekaycon_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: Guzman_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Guzman_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343),

Gene: Hirko_1 Start: 1, Stop: 468, Start Num: 8

Candidate Starts for Hirko_1:

(Start: 8 @1 has 4 MA's), (18, 79), (20, 133), (26, 214), (31, 244), (32, 247), (50, 319), (57, 388), (64, 427), (66, 442),

Gene: JKerns_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for JKerns_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (39, 295), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: Jakelyne_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Jakelyne_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343),

Gene: Jawnski_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for Jawnski_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (25, 208), (30, 247), (37, 286), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: Jinkies_1 Start: 1, Stop: 510, Start Num: 3

Candidate Starts for Jinkies_1:

(Start: 3 @1 has 3 MA's), (14, 67), (31, 283), (42, 328), (46, 349), (50, 358), (56, 424), (59, 433), (64, 469),

Gene: Jordan_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for Jordan_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: King2_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for King2_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (25, 208), (30, 247), (37, 286), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: Klevey_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Klevey_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (50, 286), (64, 394),

Gene: LeeroyJ_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for LeeroyJ_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (25, 204), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: Lilmac1015_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Lilmac1015_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (50, 286), (64, 394),

Gene: Losacky_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Losacky_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (50, 343),

Gene: Lukepolites_1 Start: 64, Stop: 534, Start Num: 10

Candidate Starts for Lukepolites_1:

(1, 1), (6, 40), (Start: 10 @64 has 7 MA's), (13, 85), (16, 124), (38, 325), (47, 364), (49, 370), (50, 385), (57, 454), (64, 493), (65, 505), (67, 514),

Gene: Mariel_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Mariel_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Martha_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for Martha_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: MenE_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for MenE_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Music_1 Start: 1, Stop: 468, Start Num: 8

Candidate Starts for Music_1:

(Start: 8 @1 has 4 MA's), (19, 130), (26, 214), (28, 223), (32, 247), (42, 289), (43, 298), (50, 319), (57, 388), (63, 415), (64, 427), (66, 442),

Gene: NCRodriguez_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for NCRodriguez_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343),

Gene: Nandito_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Nandito_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (45, 274), (52, 319), (64, 394), (67, 415),

Gene: NathanVaag_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for NathanVaag_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (37, 286), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: Nostromo_1 Start: 1, Stop: 468, Start Num: 7

Candidate Starts for Nostromo_1:

(Start: 7 @1 has 1 MA's), (23, 181), (26, 214), (28, 223), (30, 232), (33, 250), (35, 256), (64, 427),

Gene: Orkz_1 Start: 1, Stop: 504, Start Num: 3

Candidate Starts for Orkz_1:

(Start: 3 @1 has 3 MA's), (14, 70), (31, 277), (32, 280), (38, 307), (59, 427), (64, 463),

Gene: PhillyJawn_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for PhillyJawn_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Phingu_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Phingu_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Phonegingi_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Phonegingi_1:

(Start: 2 @1 has 11 MA's), (17, 130), (22, 199), (31, 274), (36, 292), (44, 325), (48, 343), (50, 346), (53, 385),

Gene: Piccoletto_1 Start: 25, Stop: 474, Start Num: 9

Candidate Starts for Piccoletto_1:

(Start: 9 @25 has 18 MA's), (17, 97), (18, 103), (37, 286), (41, 301), (48, 328), (54, 370), (57, 394), (64, 436), (66, 451),

Gene: Pickles13_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Pickles13_1:

(Start: 2 @1 has 11 MA's), (16, 118), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343), (51, 361),

Gene: Pippa_1 Start: 22, Stop: 480, Start Num: 9

Candidate Starts for Pippa_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (41, 307), (57, 400), (64, 442), (66, 457),

Gene: Prairie_1 Start: 1, Stop: 438, Start Num: 10

Candidate Starts for Prairie_1:

(Start: 10 @1 has 7 MA's), (16, 61), (32, 217), (50, 286), (64, 394),

Gene: ScoobySnack_1 Start: 1, Stop: 510, Start Num: 2

Candidate Starts for ScoobySnack_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343),

Gene: Shade_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for Shade_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: Sicarius2_1 Start: 1, Stop: 462, Start Num: 9

Candidate Starts for Sicarius2_1:

(Start: 9 @1 has 18 MA's), (31, 244), (37, 271), (41, 286), (64, 424),

Gene: Sonny_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for Sonny_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: StevieBAY_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for StevieBAY_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: SunnyJune_1 Start: 1, Stop: 507, Start Num: 3

Candidate Starts for SunnyJune_1:

(Start: 3 @1 has 3 MA's), (14, 67), (31, 283), (38, 313), (42, 328), (46, 349), (50, 358), (64, 466), (66, 481),

Gene: TaeYoung_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for TaeYoung_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),

Gene: Timinator_1 Start: 21, Stop: 470, Start Num: 9

Candidate Starts for Timinator_1:

(Start: 9 @21 has 18 MA's), (11, 33), (17, 93), (21, 177), (25, 204), (37, 282), (41, 297), (54, 366), (57, 390), (64, 432), (66, 447),

Gene: Vibaki_1 Start: 1, Stop: 498, Start Num: 4

Candidate Starts for Vibaki_1:

(Start: 4 @1 has 1 MA's), (14, 58), (16, 94), (19, 160), (31, 274), (34, 283), (40, 316), (57, 418), (63, 445), (64, 457), (66, 472),

Gene: Violeta_1 Start: 1, Stop: 513, Start Num: 2

Candidate Starts for Violeta_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (50, 343),

Gene: Vitus_1 Start: 1, Stop: 471, Start Num: 8

Candidate Starts for Vitus_1:

(Start: 8 @1 has 4 MA's), (19, 133), (28, 226), (32, 250), (42, 292), (43, 301), (50, 322), (57, 391), (62, 415), (64, 430), (66, 445),

Gene: Warren_1 Start: 1, Stop: 522, Start Num: 2

Candidate Starts for Warren_1:

(Start: 2 @1 has 11 MA's), (17, 127), (24, 217), (31, 271), (36, 289), (46, 334), (50, 343),

Gene: Winchester007_15 Start: 5978, Stop: 6499, Start Num: 2

Candidate Starts for Winchester007_15:

(Start: 2 @5978 has 11 MA's), (17, 6104), (24, 6194), (31, 6248), (36, 6266), (46, 6311), (50, 6320), (51, 6338),

Gene: Wyborn_1 Start: 1, Stop: 462, Start Num: 9

Candidate Starts for Wyborn_1:

(Start: 9 @1 has 18 MA's), (31, 244), (37, 271), (41, 286), (64, 424),

Gene: Zartrosa_1 Start: 1, Stop: 480, Start Num: 5

Candidate Starts for Zartrosa_1:

(Start: 5 @1 has 8 MA's), (Start: 9 @22 has 18 MA's), (11, 34), (17, 94), (37, 292), (41, 307), (57, 400), (58, 406), (64, 442), (66, 457),