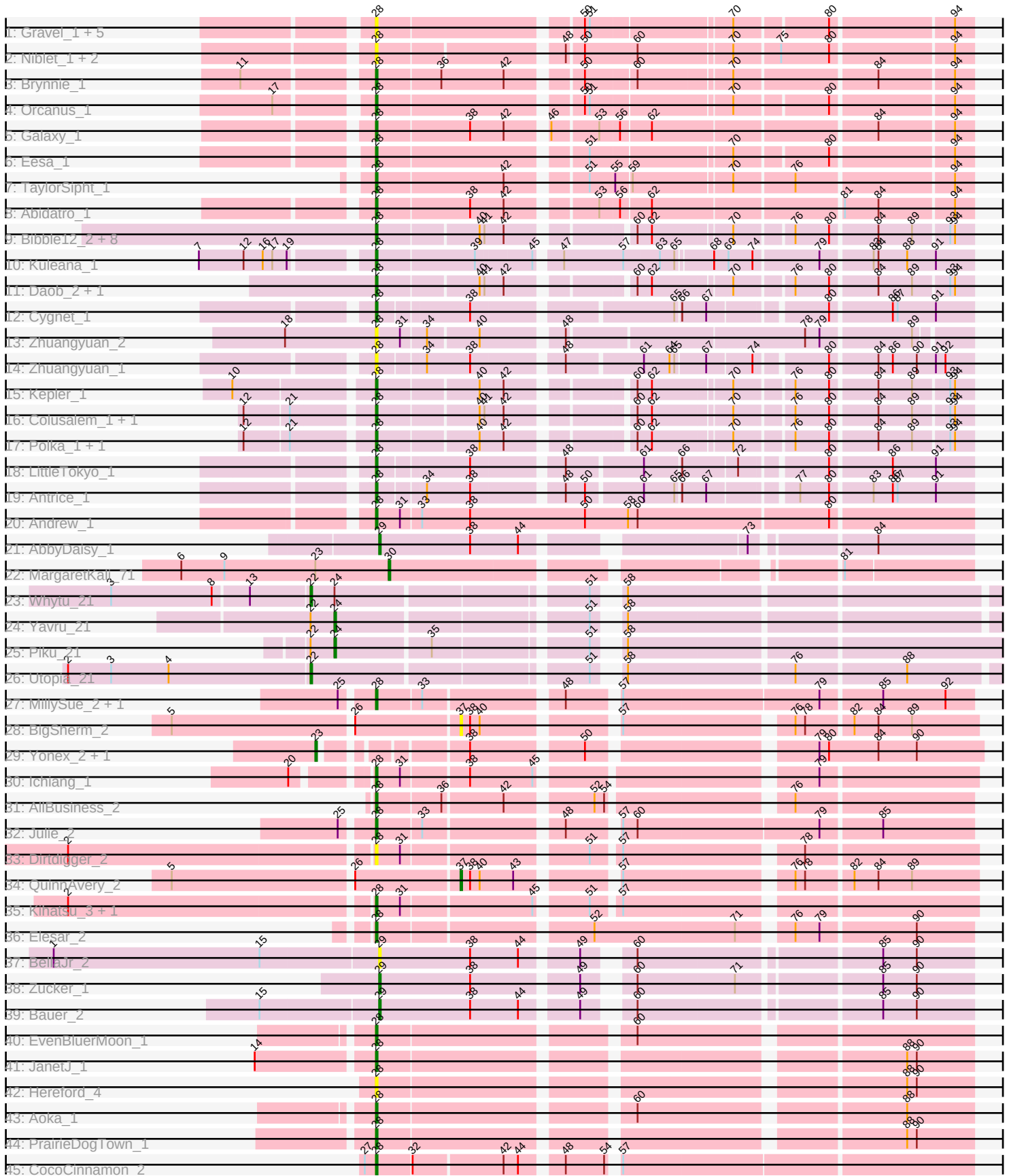




Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 280424 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280424 has 66 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Gravel_1, Amanises_1, Shen_1, KendraB23_1, Pelletreau_1, Westrich_1
- Track 2 : Niblet_1, Chicken_1, Zixiang_1
- Track 3 : Brynnie_1
- Track 4 : Orcanus_1
- Track 5 : Galaxy_1
- Track 6 : Eesa_1
- Track 7 : TaylorSipht_1
- Track 8 : Abidatro_1
- Track 9 : Bibble12_2, Amelia_2, HannahPhantana_2, Pineda_2, Melons_2, Jerole_2, Cote_2, Bedetta_2, Lunar_2
- Track 10 : Kuleana_1
- Track 11 : Daob_2, PhirstandPhine_2
- Track 12 : Cygnet_1
- Track 13 : Zhuangyuan_2
- Track 14 : Zhuangyuan_1
- Track 15 : Kepler_1
- Track 16 : ColusaTem_1, Coral_1
- Track 17 : Polka_1, OtsoOtso_1
- Track 18 : LittleTokyo_1
- Track 19 : Antrice_1
- Track 20 : Andrew_1
- Track 21 : AbbyDaisy_1
- Track 22 : MargaretKali_71
- Track 23 : Whytu_21
- Track 24 : Yavru_21
- Track 25 : Piku_21
- Track 26 : Utopia_21
- Track 27 : MillySue_2, IsHungry_2
- Track 28 : BigSherm_2
- Track 29 : Yonex_2, Ryan_2
- Track 30 : Ichiang_1
- Track 31 : AllBusiness_2
- Track 32 : Julie_2
- Track 33 : DirtDigger_2
- Track 34 : QuinnAvery_2
- Track 35 : Kihatsu_3, ToastyOats_3
- Track 36 : Elesar_2

- Track 37 : BellaJr_2
- Track 38 : Zucker_1
- Track 39 : Bauer_2
- Track 40 : EvenBluerMoon_1
- Track 41 : JanetJ_1
- Track 42 : Hereford_4
- Track 43 : Aoka_1
- Track 44 : PrairieDogTown_1
- Track 45 : CocoCinnamon_2

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

The start number called the most often in the published annotations is 28, it was called in 34 of the 44 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro_1, AllBusiness_2, Amanises_1, Amelia_2, Andrew_1, Antrice_1, Aoka_1, Bedetta_2, Bibble12_2, Brynnie_1, Chicken_1, CocoCinnamon_2, Colusalem_1, Coral_1, Cote_2, Cygnet_1, Daob_2, Dirdigger_2, Eesa_1, Elesar_2, EvenBluerMoon_1, Galaxy_1, Gravel_1, HannahPhantana_2, Hereford_4, Ichiang_1, IsHungry_2, JanetJ_1, Jerole_2, Julie_2, KendraB23_1, Kepler_1, Kihatsu_3, Kuleana_1, LittleTokyo_1, Lunar_2, Melons_2, MillySue_2, Niblet_1, Orcanus_1, OtsoOtso_1, Pelletreau_1, PhirstandPhine_2, Pineda_2, Polka_1, PrairieDogTown_1, Shen_1, TaylorSipht_1, ToastyOats_3, Westrich_1, Zhuangyuan_1, Zhuangyuan_2, Zixiang_1,

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

-

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

- AbbyDaisy_1, Bauer_2, BellaJr_2, BigSherm_2, MargaretKali_71, Piku_21, QuinnAvery_2, Ryan_2, Utopia_21, Whytu_21, Yavru_21, Yonex_2, Zucker_1,

Summary by start number:

Start 22:

- Found in 4 of 66 (6.1%) of genes in pham
- Manual Annotations of this start: 2 of 44
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Utopia_21 (FE), Whytu_21 (FE),

Start 23:

- Found in 3 of 66 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Ryan_2 (FF), Yonex_2 (FF),

Start 24:

- Found in 3 of 66 (4.5%) of genes in pham
- Manual Annotations of this start: 2 of 44

- Called 66.7% of time when present
- Phage (with cluster) where this start called: Piku_21 (FE), Yavru_21 (FE),

Start 28:

- Found in 53 of 66 (80.3%) of genes in pham
- Manual Annotations of this start: 34 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro_1 (AS1), AllBusiness_2 (FF), Amanises_1 (AS1), Amelia_2 (AS2), Andrew_1 (AS3), Antrice_1 (AS2), Aoka_1 (FO), Bedetta_2 (AS2), Bibble12_2 (AS2), Brynnie_1 (AS1), Chicken_1 (AS1), CocoCinnamon_2 (FO), Colusalem_1 (AS2), Coral_1 (AS2), Cote_2 (AS2), Cygnet_1 (AS2), Daob_2 (AS2), Dirdigger_2 (FF), Eesa_1 (AS1), Elesar_2 (FF), EvenBluerMoon_1 (FO), Galaxy_1 (AS1), Gravel_1 (AS1), HannahPhantana_2 (AS2), Hereford_4 (FO), Ichiang_1 (FF), IsHungry_2 (FF), JanetJ_1 (FO), Jerole_2 (AS2), Julie_2 (FF), KendraB23_1 (AS1), Kepler_1 (AS2), Kihatsu_3 (FF), Kuleana_1 (AS2), LittleTokyo_1 (AS2), Lunar_2 (AS2), Melons_2 (AS2), MillySue_2 (FF), Niblet_1 (AS1), Orcanus_1 (AS1), OtsoOtso_1 (AS2), Pelletreau_1 (AS1), PhirstandPhone_2 (AS2), Pineda_2 (AS2), Polka_1 (AS2), PrairieDogTown_1 (FO), Shen_1 (AS1), TaylorSipht_1 (AS1), ToastyOats_3 (FF), Westrich_1 (AS1), Zhuangyuan_1 (AS2), Zhuangyuan_2 (AS2), Zixiang_1 (AS1),

Start 29:

- Found in 4 of 66 (6.1%) of genes in pham
- Manual Annotations of this start: 3 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_1 (AY), Bauer_2 (FN), BellaJr_2 (FN), Zucker_1 (FN),

Start 30:

- Found in 1 of 66 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MargaretKali_71 (FB),

Start 37:

- Found in 2 of 66 (3.0%) of genes in pham
- Manual Annotations of this start: 1 of 44
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigSherm_2 (FF), QuinnAvery_2 (FF),

Summary by clusters:

There are 9 clusters represented in this pham: AS3, AS2, AS1, FB, FE, FF, AY, FN, FO,

Info for manual annotations of cluster AS1:

- Start number 28 was manually annotated 6 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 28 was manually annotated 16 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 28 was manually annotated 1 time for cluster AS3.

Info for manual annotations of cluster AY:

- Start number 29 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster FB:

- Start number 30 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FE:

- Start number 22 was manually annotated 2 times for cluster FE.
- Start number 24 was manually annotated 2 times for cluster FE.

Info for manual annotations of cluster FF:

- Start number 23 was manually annotated 1 time for cluster FF.
- Start number 28 was manually annotated 6 times for cluster FF.
- Start number 37 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FN:

- Start number 29 was manually annotated 2 times for cluster FN.

Info for manual annotations of cluster FO:

- Start number 28 was manually annotated 5 times for cluster FO.

Gene Information:

Gene: AbbyDaisy_1 Start: 69, Stop: 401, Start Num: 29

Candidate Starts for AbbyDaisy_1:

(Start: 29 @69 has 3 MA's), (38, 126), (44, 156), (73, 273), (84, 342),

Gene: Abidatro_1 Start: 98, Stop: 442, Start Num: 28

Candidate Starts for Abidatro_1:

(Start: 28 @98 has 34 MA's), (38, 155), (42, 176), (53, 224), (56, 236), (62, 254), (81, 365), (84, 386), (94, 431),

Gene: AllBusiness_2 Start: 425, Stop: 763, Start Num: 28

Candidate Starts for AllBusiness_2:

(Start: 28 @425 has 34 MA's), (36, 464), (42, 500), (52, 548), (54, 554), (76, 656),

Gene: Amanises_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Amanises_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: Amelia_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Amelia_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Andrew_1 Start: 98, Stop: 463, Start Num: 28

Candidate Starts for Andrew_1:

(Start: 28 @98 has 34 MA's), (31, 113), (33, 125), (38, 155), (50, 227), (58, 254), (60, 260), (80, 377),

Gene: Antrice_1 Start: 92, Stop: 430, Start Num: 28

Candidate Starts for Antrice_1:

(Start: 28 @92 has 34 MA's), (34, 119), (38, 146), (48, 197), (50, 209), (61, 242), (65, 260), (66, 263), (67, 278), (77, 326), (80, 344), (83, 368), (86, 380), (87, 383), (91, 407),

Gene: Aoka_1 Start: 69, Stop: 407, Start Num: 28

Candidate Starts for Aoka_1:

(Start: 28 @69 has 34 MA's), (60, 213), (88, 366),

Gene: Bauer_2 Start: 736, Stop: 1071, Start Num: 29

Candidate Starts for Bauer_2:

(15, 664), (Start: 29 @736 has 3 MA's), (38, 793), (44, 823), (49, 853), (60, 874), (85, 1015), (90, 1036),

Gene: Bedetta_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Bedetta_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: BellaJr_2 Start: 735, Stop: 1070, Start Num: 29

Candidate Starts for BellaJr_2:

(1, 534), (15, 663), (Start: 29 @735 has 3 MA's), (38, 792), (44, 822), (49, 852), (60, 873), (85, 1014), (90, 1035),

Gene: Bibble12_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Bibble12_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: BigSherm_2 Start: 377, Stop: 667, Start Num: 37

Candidate Starts for BigSherm_2:

(5, 206), (26, 314), (Start: 37 @377 has 1 MA's), (38, 383), (40, 389), (57, 461), (76, 557), (78, 563), (82, 590), (84, 605), (89, 626),

Gene: Brynnie_1 Start: 98, Stop: 439, Start Num: 28

Candidate Starts for Brynnie_1:

(11, 26), (Start: 28 @98 has 34 MA's), (36, 137), (42, 176), (50, 215), (60, 245), (70, 299), (84, 383), (94, 428),

Gene: Chicken_1 Start: 98, Stop: 439, Start Num: 28

Candidate Starts for Chicken_1:

(Start: 28 @98 has 34 MA's), (48, 203), (50, 212), (60, 245), (70, 299), (75, 326), (80, 356), (94, 428),

Gene: CocoCinnamon_2 Start: 287, Stop: 631, Start Num: 28

Candidate Starts for CocoCinnamon_2:

(27, 281), (Start: 28 @287 has 34 MA's), (32, 308), (42, 362), (44, 371), (48, 392), (54, 416), (57, 419),

Gene: Colusalem_1 Start: 100, Stop: 432, Start Num: 28

Candidate Starts for Colusalem_1:

(12, 28), (21, 55), (Start: 28 @100 has 34 MA's), (40, 160), (41, 163), (42, 175), (60, 241), (62, 250), (70, 295), (76, 328), (80, 349), (84, 376), (89, 397), (93, 418), (94, 421),

Gene: Coral_1 Start: 100, Stop: 432, Start Num: 28

Candidate Starts for Coral_1:

(12, 28), (21, 55), (Start: 28 @100 has 34 MA's), (40, 160), (41, 163), (42, 175), (60, 241), (62, 250), (70, 295), (76, 328), (80, 349), (84, 376), (89, 397), (93, 418), (94, 421),

Gene: Cote_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Cote_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Cygnet_1 Start: 92, Stop: 430, Start Num: 28

Candidate Starts for Cygnet_1:

(Start: 28 @92 has 34 MA's), (38, 146), (65, 260), (66, 263), (67, 278), (80, 344), (86, 380), (87, 383), (91, 407),

Gene: Daob_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Daob_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Dirtdigger_2 Start: 468, Stop: 809, Start Num: 28

Candidate Starts for Dirtdigger_2:

(2, 285), (Start: 28 @468 has 34 MA's), (31, 483), (51, 588), (57, 603), (78, 705),

Gene: Eesa_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Eesa_1:

(Start: 28 @97 has 34 MA's), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: Elesar_2 Start: 346, Stop: 690, Start Num: 28

Candidate Starts for Elesar_2:

(Start: 28 @346 has 34 MA's), (52, 469), (71, 556), (76, 583), (79, 598), (90, 655),

Gene: EvenBluerMoon_1 Start: 69, Stop: 407, Start Num: 28

Candidate Starts for EvenBluerMoon_1:

(Start: 28 @69 has 34 MA's), (60, 213),

Gene: Galaxy_1 Start: 98, Stop: 442, Start Num: 28

Candidate Starts for Galaxy_1:

(Start: 28 @98 has 34 MA's), (38, 155), (42, 176), (46, 197), (53, 224), (56, 236), (62, 254), (84, 386), (94, 431),

Gene: Gravel_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Gravel_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: HannahPhantana_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for HannahPhantana_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Hereford_4 Start: 250, Stop: 588, Start Num: 28

Candidate Starts for Hereford_4:

(Start: 28 @250 has 34 MA's), (88, 547), (90, 553),

Gene: Ichiang_1 Start: 90, Stop: 431, Start Num: 28

Candidate Starts for Ichiang_1:

(20, 51), (Start: 28 @90 has 34 MA's), (31, 105), (38, 144), (45, 183), (79, 336),

Gene: IsHungry_2 Start: 328, Stop: 672, Start Num: 28

Candidate Starts for IsHungry_2:

(25, 310), (Start: 28 @328 has 34 MA's), (33, 355), (48, 433), (57, 460), (79, 580), (85, 616), (92, 655),

Gene: JanetJ_1 Start: 70, Stop: 408, Start Num: 28

Candidate Starts for JanetJ_1:

(14, 1), (Start: 28 @70 has 34 MA's), (88, 367), (90, 373),

Gene: Jerole_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Jerole_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Julie_2 Start: 328, Stop: 672, Start Num: 28

Candidate Starts for Julie_2:

(25, 310), (Start: 28 @328 has 34 MA's), (33, 355), (48, 433), (57, 460), (60, 469), (79, 580), (85, 616),

Gene: KendraB23_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for KendraB23_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: Kepler_1 Start: 99, Stop: 431, Start Num: 28

Candidate Starts for Kepler_1:

(10, 21), (Start: 28 @99 has 34 MA's), (40, 159), (42, 174), (60, 240), (62, 249), (70, 294), (76, 327), (80, 348), (84, 375), (89, 396), (93, 417), (94, 420),

Gene: Kihatsu_3 Start: 685, Stop: 1026, Start Num: 28

Candidate Starts for Kihatsu_3:

(2, 502), (Start: 28 @685 has 34 MA's), (31, 700), (45, 778), (51, 805), (57, 820),

Gene: Kuleana_1 Start: 97, Stop: 444, Start Num: 28

Candidate Starts for Kuleana_1:

(7, 1), (12, 28), (16, 40), (17, 46), (19, 55), (Start: 28 @97 has 34 MA's), (39, 157), (45, 190), (47, 202), (57, 238), (63, 259), (65, 268), (68, 289), (69, 298), (74, 313), (79, 352), (83, 382), (84, 385), (88, 403), (91, 421),

Gene: LittleTokyo_1 Start: 92, Stop: 430, Start Num: 28

Candidate Starts for LittleTokyo_1:

(Start: 28 @92 has 34 MA's), (38, 146), (48, 197), (61, 242), (66, 263), (72, 296), (80, 344), (86, 380), (91, 407),

Gene: Lunar_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Lunar_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: MargaretKali_71 Start: 38297, Stop: 38623, Start Num: 30

Candidate Starts for MargaretKali_71:

(6, 38168), (9, 38195), (Start: 23 @38252 has 1 MA's), (Start: 30 @38297 has 1 MA's), (81, 38546),

Gene: Melons_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Melons_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: MillySue_2 Start: 328, Stop: 672, Start Num: 28

Candidate Starts for MillySue_2:

(25, 310), (Start: 28 @328 has 34 MA's), (33, 355), (48, 433), (57, 460), (79, 580), (85, 616), (92, 655),

Gene: Niblet_1 Start: 98, Stop: 439, Start Num: 28

Candidate Starts for Niblet_1:

(Start: 28 @98 has 34 MA's), (48, 203), (50, 212), (60, 245), (70, 299), (75, 326), (80, 356), (94, 428),

Gene: Orcanus_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Orcanus_1:

(17, 46), (Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: OtsoOtso_1 Start: 100, Stop: 432, Start Num: 28

Candidate Starts for OtsoOtso_1:

(12, 28), (21, 55), (Start: 28 @100 has 34 MA's), (40, 160), (42, 175), (60, 241), (62, 250), (70, 295), (76, 328), (80, 349), (84, 376), (89, 397), (93, 418), (94, 421),

Gene: Pelletreau_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Pelletreau_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: PhirstandPhine_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for PhirstandPhine_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Piku_21 Start: 15071, Stop: 15454, Start Num: 24

Candidate Starts for Piku_21:

(Start: 22 @15056 has 2 MA's), (Start: 24 @15071 has 2 MA's), (35, 15128), (51, 15215), (58, 15224),

Gene: Pineda_2 Start: 264, Stop: 596, Start Num: 28

Candidate Starts for Pineda_2:

(Start: 28 @264 has 34 MA's), (40, 324), (41, 327), (42, 339), (60, 405), (62, 414), (70, 459), (76, 492), (80, 513), (84, 540), (89, 561), (93, 582), (94, 585),

Gene: Polka_1 Start: 100, Stop: 432, Start Num: 28

Candidate Starts for Polka_1:

(12, 28), (21, 55), (Start: 28 @100 has 34 MA's), (40, 160), (42, 175), (60, 241), (62, 250), (70, 295), (76, 328), (80, 349), (84, 376), (89, 397), (93, 418), (94, 421),

Gene: PrairieDogTown_1 Start: 71, Stop: 409, Start Num: 28

Candidate Starts for PrairieDogTown_1:

(Start: 28 @71 has 34 MA's), (88, 368), (90, 374),

Gene: QuinnAvery_2 Start: 377, Stop: 667, Start Num: 37

Candidate Starts for QuinnAvery_2:

(5, 206), (26, 314), (Start: 37 @377 has 1 MA's), (38, 383), (40, 389), (43, 410), (57, 461), (76, 557), (78, 563), (82, 590), (84, 605), (89, 626),

Gene: Ryan_2 Start: 306, Stop: 668, Start Num: 23

Candidate Starts for Ryan_2:

(Start: 23 @306 has 1 MA's), (38, 378), (50, 441), (79, 567), (80, 573), (84, 603), (90, 627),

Gene: Shen_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Shen_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: TaylorSipht_1 Start: 118, Stop: 459, Start Num: 28

Candidate Starts for TaylorSipht_1:

(Start: 28 @118 has 34 MA's), (42, 196), (51, 238), (55, 253), (59, 262), (70, 319), (76, 355), (94, 448),

Gene: ToastyOats_3 Start: 685, Stop: 1026, Start Num: 28

Candidate Starts for ToastyOats_3:

(2, 502), (Start: 28 @685 has 34 MA's), (31, 700), (45, 778), (51, 805), (57, 820),

Gene: Utopia_21 Start: 14585, Stop: 14977, Start Num: 22

Candidate Starts for Utopia_21:

(2, 14435), (3, 14462), (4, 14498), (Start: 22 @14585 has 2 MA's), (51, 14744), (58, 14753), (76, 14852), (88, 14918),

Gene: Westrich_1 Start: 97, Stop: 435, Start Num: 28

Candidate Starts for Westrich_1:

(Start: 28 @97 has 34 MA's), (50, 214), (51, 217), (70, 298), (80, 352), (94, 424),

Gene: Whytu_21 Start: 14626, Stop: 15018, Start Num: 22

Candidate Starts for Whytu_21:

(3, 14506), (8, 14569), (13, 14590), (Start: 22 @14626 has 2 MA's), (Start: 24 @14641 has 2 MA's), (51, 14785), (58, 14794),

Gene: Yavru_21 Start: 14451, Stop: 14828, Start Num: 24

Candidate Starts for Yavru_21:

(Start: 22 @14436 has 2 MA's), (Start: 24 @14451 has 2 MA's), (51, 14595), (58, 14604),

Gene: Yonex_2 Start: 306, Stop: 668, Start Num: 23

Candidate Starts for Yonex_2:

(Start: 23 @306 has 1 MA's), (38, 378), (50, 441), (79, 567), (80, 573), (84, 603), (90, 627),

Gene: Zhuangyuan_2 Start: 439, Stop: 780, Start Num: 28

Candidate Starts for Zhuangyuan_2:

(18, 382), (Start: 28 @439 has 34 MA's), (31, 454), (34, 469), (40, 499), (48, 544), (78, 685), (79, 694), (89, 748),

Gene: Zhuangyuan_1 Start: 92, Stop: 430, Start Num: 28

Candidate Starts for Zhuangyuan_1:

(Start: 28 @92 has 34 MA's), (34, 119), (38, 146), (48, 197), (61, 242), (64, 257), (65, 260), (67, 278), (74, 305), (80, 344), (84, 371), (86, 380), (90, 395), (91, 407), (92, 413),

Gene: Zixiang_1 Start: 98, Stop: 439, Start Num: 28

Candidate Starts for Zixiang_1:

(Start: 28 @98 has 34 MA's), (48, 203), (50, 212), (60, 245), (70, 299), (75, 326), (80, 356), (94, 428),

Gene: Zucker_1 Start: 39, Stop: 374, Start Num: 29

Candidate Starts for Zucker_1:

(Start: 29 @39 has 3 MA's), (38, 96), (49, 156), (60, 177), (71, 237), (85, 318), (90, 339),