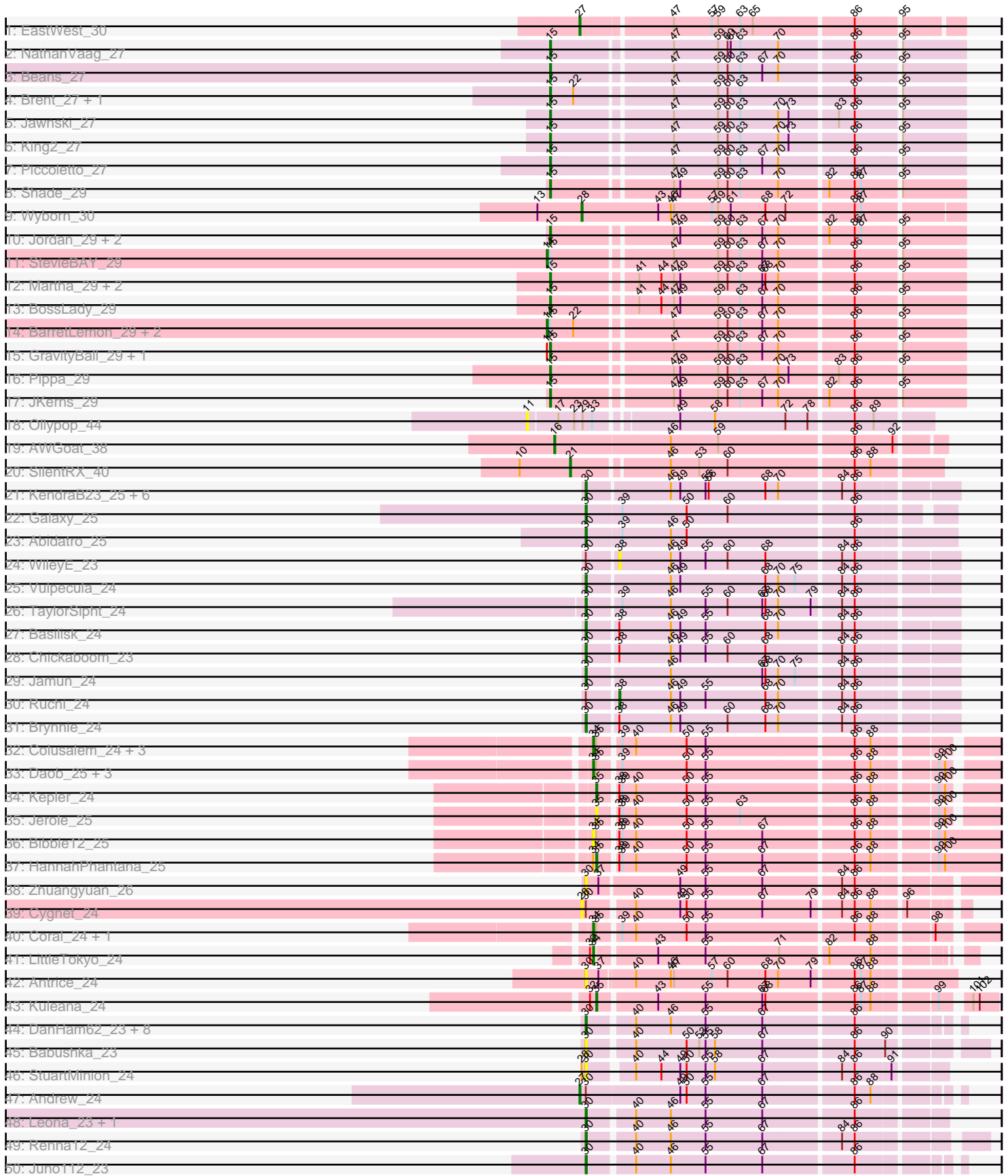
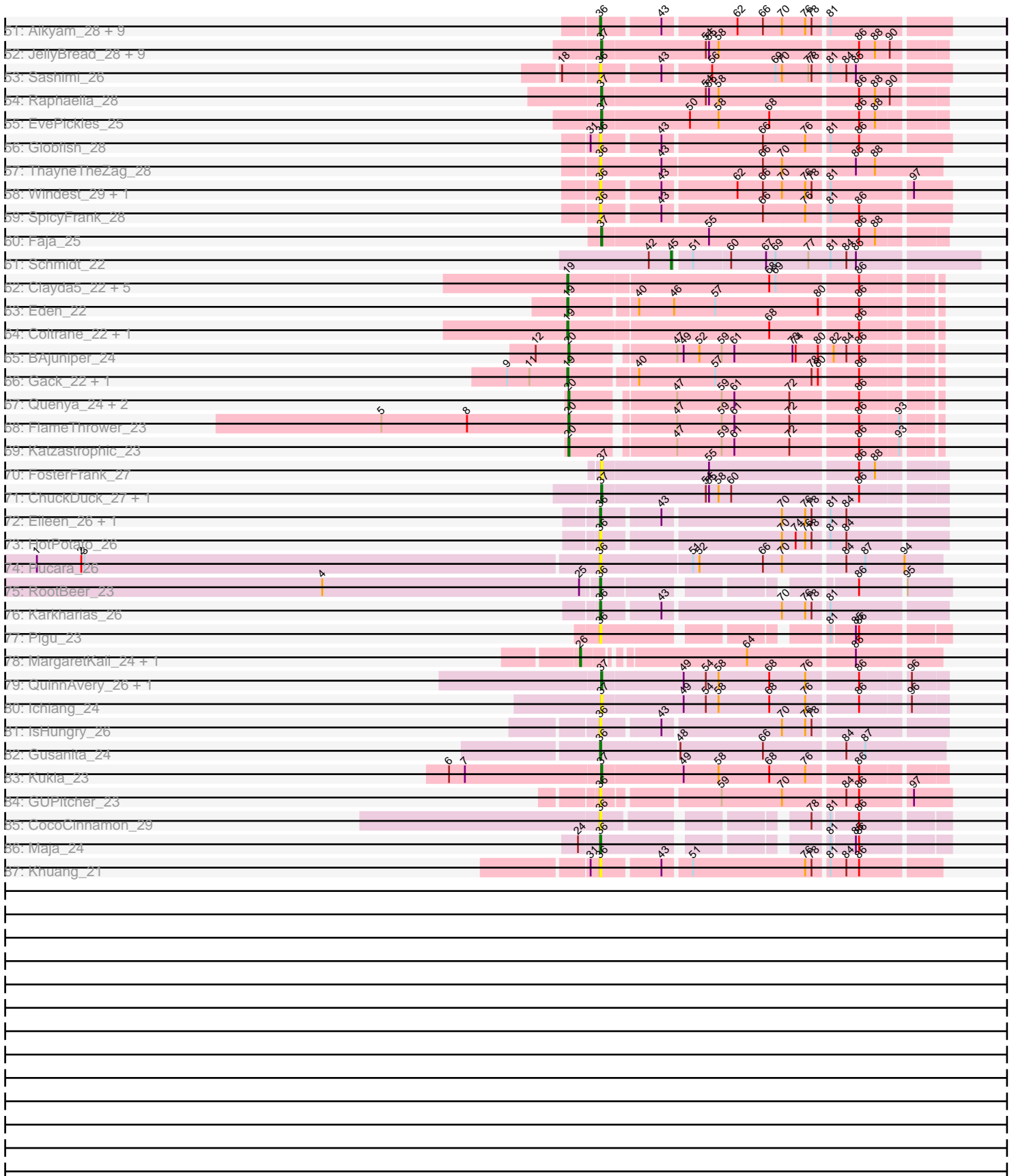


Pham 224360



Pham 224360



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 224360 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224360 has 149 members, 52 are drafts.

Phages represented in each track:

- Track 1 : EastWest_30
- Track 2 : NathanVaag_27
- Track 3 : Beans_27
- Track 4 : Brent_27, Franzy_27
- Track 5 : Jawnski_27
- Track 6 : King2_27
- Track 7 : Piccoletto_27
- Track 8 : Shade_29
- Track 9 : Wyborn_30
- Track 10 : Jordan_29, Zartrosa_29, Sonny_29
- Track 11 : StevieBAY_29
- Track 12 : Martha_29, TaeYoung_29, Grekaycon_29
- Track 13 : BossLady_29
- Track 14 : BarretLemon_29, Timinator_29, LeeroyJ_29
- Track 15 : GravityBall_29, BigDome_29
- Track 16 : Pippa_29
- Track 17 : JKerns_29
- Track 18 : Ollypop_44
- Track 19 : AWGoat_38
- Track 20 : SilentRX_40
- Track 21 : KendraB23_25, Toad24_25, Pelletreau_25, Orcanus_24, Westrich_25, Gravel_25, Eesa_24
- Track 22 : Galaxy_25
- Track 23 : Abidatro_25
- Track 24 : WileyE_23
- Track 25 : Vulpecula_24
- Track 26 : TaylorSipht_24
- Track 27 : Basilisk_24
- Track 28 : Chickaboom_23
- Track 29 : Jamun_24
- Track 30 : Ruchi_24
- Track 31 : Brynnie_24
- Track 32 : Colusalem_24, Bedetta_25, OtsoOtso_24, Polka_24
- Track 33 : Daob_25, Melons_25, Cote_25, Lunar_25
- Track 34 : Kepler_24
- Track 35 : Jerole_25
- Track 36 : Bible12_25

- Track 37 : HannahPhantana_25
- Track 38 : Zhuangyuan_26
- Track 39 : Cygnet_24
- Track 40 : Coral_24, Amelia_25
- Track 41 : LittleTokyo_24
- Track 42 : Antrice_24
- Track 43 : Kuleana_24
- Track 44 : DanHam62_23, Atlantica_23, HamCheese_23, Camara_23, Glotell_24, KHumphrey_23, PhluffyCoco_23, AmiCi24_23, RedFox_23
- Track 45 : Babushka_23
- Track 46 : StuartMinion_24
- Track 47 : Andrew_24
- Track 48 : Leona_23, Rattail_23
- Track 49 : Renna12_24
- Track 50 : Juno112_23
- Track 51 : Aikyam_28, CookieBear_29, RadFad_28, Richie_28, Auxilium_28, Hillester_28, YoungHarleezy_28, MidnightRain_28, MaterMagnus_28, BenchScraper_28
- Track 52 : JellyBread_28, Isolde_28, Vopal_29, Phrank15_27, MUWow_27, Sakai_28, BillyTP_28, Lawnathon_28, Gorpy_28, AdaS_28
- Track 53 : Sashimi_26
- Track 54 : Raphaella_28
- Track 55 : EvePickles_25
- Track 56 : Globfish_28
- Track 57 : ThayneTheZag_28
- Track 58 : Windest_29, BlueShadow_29
- Track 59 : SpicyFrank_28
- Track 60 : Faja_25
- Track 61 : Schmidt_22
- Track 62 : Clayda5_22, Skylord_22, Rollins_22, Bernstein_22, Armstrong_22, Vitas_22
- Track 63 : Eden_22
- Track 64 : Coltrane_22, Brahms_22
- Track 65 : BAjuniper_24
- Track 66 : Gack_22, Franklin22_23
- Track 67 : Quenya_24, Celaena_23, Bachaco_23
- Track 68 : FlameThrower_23
- Track 69 : Katzastrophic_23
- Track 70 : FosterFrank_27
- Track 71 : ChuckDuck_27, KayMoney_27
- Track 72 : Eileen_26, Peas_26
- Track 73 : HotPotato_26
- Track 74 : Pucara_26
- Track 75 : RootBeer_23
- Track 76 : Karkharias_26
- Track 77 : Pigu_23
- Track 78 : MargaretKali_24, Kumotta_24
- Track 79 : QuinnAvery_26, Halloweekend_24
- Track 80 : Ichiang_24
- Track 81 : IsHungry_26
- Track 82 : Gusanita_24
- Track 83 : Kukla_23
- Track 84 : GUPitcher_23

- Track 85 : CocoCinnamon_29
- Track 86 : Maja_24
- Track 87 : Khuang_21

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

The start number called the most often in the published annotations is 15, it was called in 18 of the 97 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Beans_27, BigDome_29, BossLady_29, Brent_27, Franzy_27, GravityBall_29, Grekaycon_29, JKerns_29, Jawnski_27, Jordan_29, King2_27, Martha_29, NathanVaag_27, Piccoletto_27, Pippa_29, Shade_29, Sonny_29, TaeYoung_29, Zartrosa_29,

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

- BarretLemon_29, LeeroyJ_29, StevieBAY_29, Timinator_29,

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

- AWGoat_38, Abidatro_25, AdaS_28, Aikyam_28, Amelia_25, AmiCi24_23, Andrew_24, Antrice_24, Armstrong_22, Atlantica_23, Auxilium_28, BAJuniper_24, Babushka_23, Bachaco_23, Basilisk_24, Bedetta_25, BenchScraper_28, Bernstein_22, Bibble12_25, BillyTP_28, BlueShadow_29, Brahms_22, Brynnie_24, Camara_23, Celaena_23, Chickaboom_23, ChuckDuck_27, Clayda5_22, CocoCinnamon_29, Coltrane_22, Colusalem_24, CookieBear_29, Coral_24, Cote_25, Cygnet_24, DanHam62_23, Daob_25, EastWest_30, Eden_22, Eesa_24, Eileen_26, EvePickles_25, Faja_25, FlameThrower_23, FosterFrank_27, Franklin22_23, GUPitcher_23, Gack_22, Galaxy_25, Globfish_28, Glotell_24, Gorpy_28, Gravel_25, Gusanita_24, HalloweenWeekend_24, HamCheese_23, HannahPhantana_25, Hillester_28, HotPotato_26, Ichiang_24, IsHungry_26, Isolde_28, Jamun_24, JellyBread_28, Jerole_25, Juno112_23, KHumphrey_23, Karkharias_26, Katzastrophic_23, KayMoney_27, KendraB23_25, Kepler_24, Khuang_21, Kukla_23, Kuleana_24, Kumotta_24, Lawnathon_28, Leona_23, LittleTokyo_24, Lunar_25, MUWow_27, Maja_24, MargaretKali_24, MaterMagnus_28, Melons_25, MidnightRain_28, Ollypop_44, Orcanus_24, OtsoOtso_24, Peas_26, Pelletreau_25, PhluffyCoco_23, Phrank15_27, Pigu_23, Polka_24, Pucara_26, Quenya_24, QuinnAvery_26, RadFad_28, Raphaella_28, Rattail_23, RedFox_23, Renna12_24, Richie_28, Rollins_22, RootBeer_23, Ruchi_24, Sakai_28, Sashimi_26, Schmidt_22, SilentRX_40, Skylord_22, SpicyFrank_28, StuartMinion_24, TaylorSipht_24, ThayneTheZag_28, Toad24_25, Vitas_22, Vopal_29, Vulpecula_24, Westrich_25, WileyE_23, Windest_29, Wyborn_30, YoungHarleezy_28, Zhuangyuan_26,

Summary by start number:

Start 11:

- Found in 3 of 149 (2.0%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Ollypop_44 (AP2),

Start 14:

- Found in 6 of 149 (4.0%) of genes in pham
- Manual Annotations of this start: 4 of 97
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BarretLemon_29 (AO2), LeeroyJ_29 (AO2), StevieBAY_29 (AO2), Timinator_29 (AO2),

Start 15:

- Found in 23 of 149 (15.4%) of genes in pham
- Manual Annotations of this start: 18 of 97
- Called 82.6% of time when present
- Phage (with cluster) where this start called: Beans_27 (AO1), BigDome_29 (AO2), BossLady_29 (AO2), Brent_27 (AO1), Franzy_27 (AO1), GravityBall_29 (AO2), Grekaycon_29 (AO2), JKerns_29 (AO2), Jawnski_27 (AO1), Jordan_29 (AO2), King2_27 (AO1), Martha_29 (AO2), NathanVaag_27 (AO1), Piccoletto_27 (AO1), Pippa_29 (AO2), Shade_29 (AO2), Sonny_29 (AO2), TaeYoung_29 (AO2), Zartrosa_29 (AO2),

Start 16:

- Found in 1 of 149 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_38 (AP4),

Start 19:

- Found in 11 of 149 (7.4%) of genes in pham
- Manual Annotations of this start: 11 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Armstrong_22 (EB), Bernstein_22 (EB), Brahms_22 (EB), Clayda5_22 (EB), Coltrane_22 (EB), Eden_22 (EB), Franklin22_23 (EB), Gack_22 (EB), Rollins_22 (EB), Skylord_22 (EB), Vitas_22 (EB),

Start 20:

- Found in 6 of 149 (4.0%) of genes in pham
- Manual Annotations of this start: 6 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAjuniper_24 (EB), Bachaco_23 (EB), Celaena_23 (EB), FlameThrower_23 (EB), Katzastrophic_23 (EB), Quenya_24 (EB),

Start 21:

- Found in 1 of 149 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SilentRX_40 (AP4),

Start 26:

- Found in 2 of 149 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumotta_24 (FB), MargaretKali_24 (FB),

Start 27:

- Found in 2 of 149 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Andrew_24 (AS3), EastWest_30 (AO),

Start 28:

- Found in 3 of 149 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Cygnet_24 (AS2), Wyborn_30 (AO2),

Start 30:

- Found in 36 of 149 (24.2%) of genes in pham
- Manual Annotations of this start: 16 of 97
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Abidatro_25 (AS1), AmiCi24_23 (AS3), Antrice_24 (AS2), Atlantica_23 (AS3), Babushka_23 (AS3), Basilisk_24 (AS1), Brynnie_24 (AS1), Camara_23 (AS3), Chickaboom_23 (AS1), DanHam62_23 (AS3), Eesa_24 (AS1), Galaxy_25 (AS1), Glotell_24 (AS3), Gravel_25 (AS1), HamCheese_23 (AS3), Jamun_24 (AS1), Juno112_23 (AS3), KHumphrey_23 (AS3), KendraB23_25 (AS1), Leona_23 (AS3), Orcanus_24 (AS1), Pelletreau_25 (AS1), PhluffyCoco_23 (AS3), Rattail_23 (AS3), RedFox_23 (AS3), Renna12_24 (AS3), StuartMinion_24 (AS3), TaylorSipht_24 (AS1), Toad24_25 (AS1), Vulpecula_24 (AS1), Westrich_25 (AS1), Zhuangyuan_26 (AS2),

Start 34:

- Found in 13 of 149 (8.7%) of genes in pham
- Manual Annotations of this start: 8 of 97
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Amelia_25 (AS2), Bedetta_25 (AS2), Bible12_25 (AS2), Colusalem_24 (AS2), Coral_24 (AS2), Cote_25 (AS2), Daob_25 (AS2), LittleTokyo_24 (AS2), Lunar_25 (AS2), Melons_25 (AS2), OtsoOtso_24 (AS2), Polka_24 (AS2),

Start 35:

- Found in 15 of 149 (10.1%) of genes in pham
- Manual Annotations of this start: 3 of 97
- Called 26.7% of time when present
- Phage (with cluster) where this start called: HannahPhantana_25 (AS2), Jerole_25 (AS2), Kepler_24 (AS2), Kuleana_24 (AS2),

Start 36:

- Found in 29 of 149 (19.5%) of genes in pham
- Manual Annotations of this start: 11 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aikyam_28 (AY), Auxilium_28 (AY), BenchScraper_28 (AY), BlueShadow_29 (AY), CocoCinnamon_29 (FO), CookieBear_29 (AY), Eileen_26 (FA), GUPitcher_23 (FJ), Globfish_28 (AY), Gusanita_24 (FF), Hillester_28 (AY), HotPotato_26 (FA), IsHungry_26 (FF), Karkharias_26 (FA), Khuang_21 (FS), Maja_24 (FO), MaterMagnus_28 (AY), MidnightRain_28 (AY), Peas_26 (FA), Pigu_23 (FB), Pucara_26 (FA), RadFad_28 (AY), Richie_28 (AY), RootBeer_23 (FA), Sashimi_26 (AY), SpicyFrank_28 (AY), ThayneTheZag_28 (AY), Windest_29 (AY), YoungHarleezy_28 (AY),

Start 37:

- Found in 22 of 149 (14.8%) of genes in pham
- Manual Annotations of this start: 11 of 97
- Called 90.9% of time when present
- Phage (with cluster) where this start called: AdaS_28 (AY), BillyTP_28 (AY), ChuckDuck_27 (FA), EvePickles_25 (AY), Faja_25 (AY), FosterFrank_27 (FA), Gorpy_28 (AY), Halloween_24 (FF), Ichiang_24 (FF), Isolde_28 (AY), JellyBread_28 (AY), KayMoney_27 (FA), Kukla_23 (FJ), Lawnathon_28 (AY), MUWow_27 (AY), Phrank15_27 (AY), QuinnAvery_26 (FF), Raphaella_28 (AY), Sakai_28 (AY), Vopal_29 (AY),

Start 38:

- Found in 9 of 149 (6.0%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Ruchi_24 (AS1), WileyE_23 (AS1),

Start 45:

- Found in 1 of 149 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 97
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schmidt_22 (CU4),

Summary by clusters:

There are 17 clusters represented in this pham: AS3, AS2, AS1, FS, AO, AO1, AP2, AP4, EB, FA, FB, CU4, AO2, FF, AY, FJ, FO,

Info for manual annotations of cluster AO:

- Start number 27 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 15 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 14 was manually annotated 4 times for cluster AO2.
- Start number 15 was manually annotated 11 times for cluster AO2.
- Start number 28 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AP4:

- Start number 16 was manually annotated 1 time for cluster AP4.
- Start number 21 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AS1:

- Start number 30 was manually annotated 10 times for cluster AS1.
- Start number 38 was manually annotated 1 time for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 34 was manually annotated 8 times for cluster AS2.
- Start number 35 was manually annotated 3 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 27 was manually annotated 1 time for cluster AS3.
- Start number 30 was manually annotated 6 times for cluster AS3.

Info for manual annotations of cluster AY:

- Start number 36 was manually annotated 5 times for cluster AY.
- Start number 37 was manually annotated 8 times for cluster AY.

Info for manual annotations of cluster CU4:

- Start number 45 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster EB:

- Start number 19 was manually annotated 11 times for cluster EB.
- Start number 20 was manually annotated 6 times for cluster EB.

Info for manual annotations of cluster FA:

- Start number 36 was manually annotated 4 times for cluster FA.
- Start number 37 was manually annotated 1 time for cluster FA.

Info for manual annotations of cluster FB:

- Start number 26 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FF:

- Start number 36 was manually annotated 1 time for cluster FF.
- Start number 37 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FJ:

- Start number 37 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster FO:

- Start number 36 was manually annotated 1 time for cluster FO.

Gene Information:

Gene: AWGoat_38 Start: 34355, Stop: 34708, Start Num: 16

Candidate Starts for AWGoat_38:

(Start: 16 @34355 has 1 MA's), (46, 34463), (59, 34508), (86, 34631), (92, 34667),

Gene: Abidatro_25 Start: 18908, Stop: 19243, Start Num: 30

Candidate Starts for Abidatro_25:

(Start: 30 @18908 has 16 MA's), (39, 18941), (46, 18986), (50, 19001), (86, 19154),

Gene: AdaS_28 Start: 20360, Stop: 20668, Start Num: 37

Candidate Starts for AdaS_28:

(Start: 37 @20360 has 11 MA's), (54, 20456), (55, 20459), (58, 20468), (86, 20594), (88, 20609), (90, 20621),

Gene: Aikyam_28 Start: 20431, Stop: 20736, Start Num: 36

Candidate Starts for Aikyam_28:

(Start: 36 @20431 has 11 MA's), (43, 20482), (62, 20548), (66, 20572), (70, 20590), (76, 20611), (78, 20617), (81, 20629),

Gene: Amelia_25 Start: 18043, Stop: 18393, Start Num: 34

Candidate Starts for Amelia_25:

(Start: 34 @18043 has 8 MA's), (Start: 35 @18046 has 3 MA's), (39, 18064), (40, 18076), (50, 18124), (55, 18142), (86, 18277), (88, 18292), (98, 18343),

Gene: AmiCi24_23 Start: 17621, Stop: 17944, Start Num: 30

Candidate Starts for AmiCi24_23:

(Start: 30 @17621 has 16 MA's), (40, 17660), (46, 17693), (55, 17726), (67, 17780), (86, 17861),

Gene: Andrew_24 Start: 18042, Stop: 18377, Start Num: 27

Candidate Starts for Andrew_24:

(Start: 27 @18042 has 2 MA's), (Start: 30 @18048 has 16 MA's), (49, 18135), (50, 18141), (55, 18159), (67, 18213), (86, 18294), (88, 18309),

Gene: Antrice_24 Start: 18536, Stop: 18868, Start Num: 30

Candidate Starts for Antrice_24:

(Start: 30 @18536 has 16 MA's), (Start: 37 @18548 has 11 MA's), (40, 18578), (46, 18611), (47, 18614), (57, 18650), (60, 18665), (68, 18701), (70, 18713), (79, 18743), (86, 18779), (87, 18785), (88, 18794),

Gene: Armstrong_22 Start: 17107, Stop: 17433, Start Num: 19

Candidate Starts for Armstrong_22:

(Start: 19 @17107 has 11 MA's), (68, 17290), (69, 17296), (86, 17368),

Gene: Atlantica_23 Start: 17622, Stop: 17945, Start Num: 30

Candidate Starts for Atlantica_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: Auxilium_28 Start: 20421, Stop: 20726, Start Num: 36

Candidate Starts for Auxilium_28:

(Start: 36 @20421 has 11 MA's), (43, 20472), (62, 20538), (66, 20562), (70, 20580), (76, 20601), (78, 20607), (81, 20619),

Gene: BAjuniper_24 Start: 20341, Stop: 20658, Start Num: 20

Candidate Starts for BAjuniper_24:

(12, 20311), (Start: 20 @20341 has 6 MA's), (47, 20428), (49, 20434), (52, 20449), (59, 20470), (61, 20482), (73, 20536), (74, 20539), (80, 20560), (82, 20569), (84, 20581), (86, 20593),

Gene: Babushka_23 Start: 17682, Stop: 18029, Start Num: 30

Candidate Starts for Babushka_23:

(Start: 30 @17682 has 16 MA's), (40, 17721), (50, 17769), (53, 17781), (55, 17787), (58, 17796), (67, 17841), (86, 17922), (90, 17949),

Gene: Bachaco_23 Start: 20374, Stop: 20691, Start Num: 20

Candidate Starts for Bachaco_23:

(Start: 20 @20374 has 6 MA's), (47, 20461), (59, 20503), (61, 20515), (72, 20566), (86, 20626),

Gene: BarretLemon_29 Start: 25316, Stop: 25687, Start Num: 14

Candidate Starts for BarretLemon_29:

(Start: 14 @25316 has 4 MA's), (Start: 15 @25319 has 18 MA's), (22, 25340), (47, 25424), (59, 25466), (60, 25475), (63, 25487), (67, 25508), (70, 25523), (86, 25589), (95, 25628),

Gene: Basilisk_24 Start: 19320, Stop: 19652, Start Num: 30

Candidate Starts for Basilisk_24:

(Start: 30 @19320 has 16 MA's), (Start: 38 @19347 has 1 MA's), (46, 19395), (49, 19404), (55, 19428), (68, 19485), (70, 19497), (84, 19551), (86, 19563),

Gene: Beans_27 Start: 24983, Stop: 25351, Start Num: 15

Candidate Starts for Beans_27:

(Start: 15 @24983 has 18 MA's), (47, 25088), (59, 25130), (60, 25139), (63, 25151), (67, 25172), (70, 25187), (86, 25253), (95, 25292),

Gene: Bedetta_25 Start: 18047, Stop: 18397, Start Num: 34

Candidate Starts for Bedetta_25:

(Start: 34 @18047 has 8 MA's), (Start: 35 @18050 has 3 MA's), (39, 18068), (40, 18080), (50, 18128), (55, 18146), (86, 18281), (88, 18296),

Gene: BenchScraper_28 Start: 20436, Stop: 20741, Start Num: 36

Candidate Starts for BenchScraper_28:

(Start: 36 @20436 has 11 MA's), (43, 20487), (62, 20553), (66, 20577), (70, 20595), (76, 20616), (78, 20622), (81, 20634),

Gene: Bernstein_22 Start: 17162, Stop: 17488, Start Num: 19

Candidate Starts for Bernstein_22:

(Start: 19 @17162 has 11 MA's), (68, 17345), (69, 17351), (86, 17423),

Gene: Bible12_25 Start: 18034, Stop: 18396, Start Num: 34

Candidate Starts for Bible12_25:

(Start: 34 @18034 has 8 MA's), (Start: 35 @18037 has 3 MA's), (Start: 38 @18052 has 1 MA's), (39, 18055), (40, 18067), (50, 18115), (55, 18133), (67, 18187), (86, 18268), (88, 18283), (99, 18337), (100, 18343),

Gene: BigDome_29 Start: 25311, Stop: 25679, Start Num: 15

Candidate Starts for BigDome_29:

(Start: 14 @25308 has 4 MA's), (Start: 15 @25311 has 18 MA's), (47, 25416), (59, 25458), (60, 25467), (63, 25479), (67, 25500), (70, 25515), (86, 25581), (95, 25620),

Gene: BillyTP_28 Start: 20144, Stop: 20452, Start Num: 37

Candidate Starts for BillyTP_28:

(Start: 37 @20144 has 11 MA's), (54, 20240), (55, 20243), (58, 20252), (86, 20378), (88, 20393), (90, 20405),

Gene: BlueShadow_29 Start: 20421, Stop: 20726, Start Num: 36

Candidate Starts for BlueShadow_29:

(Start: 36 @20421 has 11 MA's), (43, 20472), (62, 20538), (66, 20562), (70, 20580), (76, 20601), (78, 20607), (81, 20619), (97, 20691),

Gene: BossLady_29 Start: 25299, Stop: 25667, Start Num: 15

Candidate Starts for BossLady_29:

(Start: 15 @25299 has 18 MA's), (41, 25371), (44, 25392), (47, 25404), (49, 25410), (59, 25446), (63, 25467), (67, 25488), (70, 25503), (86, 25569), (95, 25608),

Gene: Brahms_22 Start: 17110, Stop: 17436, Start Num: 19

Candidate Starts for Brahms_22:

(Start: 19 @17110 has 11 MA's), (68, 17293), (86, 17371),

Gene: Brent_27 Start: 24986, Stop: 25354, Start Num: 15

Candidate Starts for Brent_27:

(Start: 15 @24986 has 18 MA's), (22, 25007), (47, 25091), (59, 25133), (60, 25142), (63, 25154), (86, 25256), (95, 25295),

Gene: Brynnie_24 Start: 19128, Stop: 19460, Start Num: 30

Candidate Starts for Brynnie_24:

(Start: 30 @19128 has 16 MA's), (Start: 38 @19155 has 1 MA's), (46, 19203), (49, 19212), (60, 19257), (68, 19293), (70, 19305), (84, 19359), (86, 19371),

Gene: Camara_23 Start: 17623, Stop: 17946, Start Num: 30

Candidate Starts for Camara_23:

(Start: 30 @17623 has 16 MA's), (40, 17662), (46, 17695), (55, 17728), (67, 17782), (86, 17863),

Gene: Celaena_23 Start: 20322, Stop: 20639, Start Num: 20

Candidate Starts for Celaena_23:

(Start: 20 @20322 has 6 MA's), (47, 20409), (59, 20451), (61, 20463), (72, 20514), (86, 20574),

Gene: Chickaboom_23 Start: 18049, Stop: 18381, Start Num: 30

Candidate Starts for Chickaboom_23:

(Start: 30 @18049 has 16 MA's), (Start: 38 @18076 has 1 MA's), (46, 18124), (49, 18133), (55, 18157), (60, 18178), (68, 18214), (84, 18280), (86, 18292),

Gene: ChuckDuck_27 Start: 20261, Stop: 20569, Start Num: 37

Candidate Starts for ChuckDuck_27:

(Start: 37 @20261 has 11 MA's), (54, 20357), (55, 20360), (58, 20369), (60, 20381), (86, 20495),

Gene: Clayda5_22 Start: 17113, Stop: 17439, Start Num: 19

Candidate Starts for Clayda5_22:

(Start: 19 @17113 has 11 MA's), (68, 17296), (69, 17302), (86, 17374),

Gene: CocoCinnamon_29 Start: 20011, Stop: 20283, Start Num: 36

Candidate Starts for CocoCinnamon_29:

(Start: 36 @20011 has 11 MA's), (78, 20170), (81, 20182), (86, 20206),

Gene: Coltrane_22 Start: 17110, Stop: 17436, Start Num: 19

Candidate Starts for Coltrane_22:

(Start: 19 @17110 has 11 MA's), (68, 17293), (86, 17371),

Gene: Colusalem_24 Start: 17886, Stop: 18236, Start Num: 34

Candidate Starts for Colusalem_24:

(Start: 34 @17886 has 8 MA's), (Start: 35 @17889 has 3 MA's), (39, 17907), (40, 17919), (50, 17967), (55, 17985), (86, 18120), (88, 18135),

Gene: CookieBear_29 Start: 20421, Stop: 20726, Start Num: 36

Candidate Starts for CookieBear_29:

(Start: 36 @20421 has 11 MA's), (43, 20472), (62, 20538), (66, 20562), (70, 20580), (76, 20601), (78, 20607), (81, 20619),

Gene: Coral_24 Start: 17882, Stop: 18232, Start Num: 34

Candidate Starts for Coral_24:

(Start: 34 @17882 has 8 MA's), (Start: 35 @17885 has 3 MA's), (39, 17903), (40, 17915), (50, 17963), (55, 17981), (86, 18116), (88, 18131), (98, 18182),

Gene: Cote_25 Start: 18034, Stop: 18384, Start Num: 34

Candidate Starts for Cote_25:

(Start: 34 @18034 has 8 MA's), (Start: 35 @18037 has 3 MA's), (39, 18055), (50, 18115), (55, 18133), (86, 18268), (88, 18283), (99, 18337), (100, 18343),

Gene: Cygnet_24 Start: 18684, Stop: 19016, Start Num: 28

Candidate Starts for Cygnet_24:

(Start: 28 @18684 has 1 MA's), (Start: 30 @18687 has 16 MA's), (40, 18726), (49, 18768), (50, 18774), (55, 18792), (67, 18846), (79, 18891), (84, 18915), (86, 18927), (88, 18942), (96, 18969),

Gene: DanHam62_23 Start: 17622, Stop: 17945, Start Num: 30

Candidate Starts for DanHam62_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: Daob_25 Start: 18039, Stop: 18389, Start Num: 34

Candidate Starts for Daob_25:

(Start: 34 @18039 has 8 MA's), (Start: 35 @18042 has 3 MA's), (39, 18060), (50, 18120), (55, 18138), (86, 18273), (88, 18288), (99, 18342), (100, 18348),

Gene: EastWest_30 Start: 25176, Stop: 25514, Start Num: 27

Candidate Starts for EastWest_30:

(Start: 27 @25176 has 2 MA's), (47, 25257), (57, 25293), (59, 25299), (63, 25320), (65, 25332), (86, 25422), (95, 25461),

Gene: Eden_22 Start: 17389, Stop: 17712, Start Num: 19

Candidate Starts for Eden_22:

(Start: 19 @17389 has 11 MA's), (40, 17446), (46, 17479), (57, 17518), (80, 17614), (86, 17647),

Gene: Eesa_24 Start: 19277, Stop: 19609, Start Num: 30

Candidate Starts for Eesa_24:

(Start: 30 @19277 has 16 MA's), (46, 19352), (49, 19361), (55, 19385), (56, 19388), (68, 19442), (70, 19454), (84, 19508), (86, 19520),

Gene: Eileen_26 Start: 20113, Stop: 20415, Start Num: 36

Candidate Starts for Eileen_26:

(Start: 36 @20113 has 11 MA's), (43, 20164), (70, 20272), (76, 20293), (78, 20299), (81, 20311), (84, 20326),

Gene: EvePickles_25 Start: 18992, Stop: 19300, Start Num: 37

Candidate Starts for EvePickles_25:

(Start: 37 @18992 has 11 MA's), (50, 19073), (58, 19100), (68, 19148), (86, 19226), (88, 19241),

Gene: Faja_25 Start: 18886, Stop: 19194, Start Num: 37

Candidate Starts for Faja_25:

(Start: 37 @18886 has 11 MA's), (55, 18985), (86, 19120), (88, 19135),

Gene: FlameThrower_23 Start: 19859, Stop: 20176, Start Num: 20

Candidate Starts for FlameThrower_23:

(5, 19682), (8, 19763), (Start: 20 @19859 has 6 MA's), (47, 19946), (59, 19988), (61, 20000), (72, 20051), (86, 20111), (93, 20147),

Gene: FosterFrank_27 Start: 20334, Stop: 20642, Start Num: 37

Candidate Starts for FosterFrank_27:

(Start: 37 @20334 has 11 MA's), (55, 20433), (86, 20568), (88, 20583),

Gene: Franklin22_23 Start: 17574, Stop: 17897, Start Num: 19

Candidate Starts for Franklin22_23:

(9, 17517), (11, 17538), (Start: 19 @17574 has 11 MA's), (40, 17631), (57, 17703), (78, 17793), (80, 17799), (86, 17832),

Gene: Franzy_27 Start: 24985, Stop: 25353, Start Num: 15

Candidate Starts for Franzy_27:

(Start: 15 @24985 has 18 MA's), (22, 25006), (47, 25090), (59, 25132), (60, 25141), (63, 25153), (86, 25255), (95, 25294),

Gene: GUPitcher_23 Start: 18548, Stop: 18850, Start Num: 36

Candidate Starts for GUPitcher_23:

(Start: 36 @18548 has 11 MA's), (59, 18647), (70, 18704), (84, 18758), (86, 18770), (97, 18815),

Gene: Gack_22 Start: 17460, Stop: 17783, Start Num: 19

Candidate Starts for Gack_22:

(9, 17403), (11, 17424), (Start: 19 @17460 has 11 MA's), (40, 17517), (57, 17589), (78, 17679), (80, 17685), (86, 17718),

Gene: Galaxy_25 Start: 19013, Stop: 19336, Start Num: 30

Candidate Starts for Galaxy_25:

(Start: 30 @19013 has 16 MA's), (39, 19046), (50, 19106), (60, 19145), (86, 19259),

Gene: Globfish_28 Start: 20655, Stop: 20960, Start Num: 36

Candidate Starts for Globfish_28:

(31, 20646), (Start: 36 @20655 has 11 MA's), (43, 20706), (66, 20796), (76, 20835), (81, 20853), (86, 20880),

Gene: Glotell_24 Start: 17620, Stop: 17943, Start Num: 30

Candidate Starts for Glotell_24:

(Start: 30 @17620 has 16 MA's), (40, 17659), (46, 17692), (55, 17725), (67, 17779), (86, 17860),

Gene: Gorpy_28 Start: 20369, Stop: 20677, Start Num: 37

Candidate Starts for Gorpy_28:

(Start: 37 @20369 has 11 MA's), (54, 20465), (55, 20468), (58, 20477), (86, 20603), (88, 20618), (90, 20630),

Gene: Gravel_25 Start: 19183, Stop: 19515, Start Num: 30

Candidate Starts for Gravel_25:

(Start: 30 @19183 has 16 MA's), (46, 19258), (49, 19267), (55, 19291), (56, 19294), (68, 19348), (70, 19360), (84, 19414), (86, 19426),

Gene: GravityBall_29 Start: 25318, Stop: 25686, Start Num: 15

Candidate Starts for GravityBall_29:

(Start: 14 @25315 has 4 MA's), (Start: 15 @25318 has 18 MA's), (47, 25423), (59, 25465), (60, 25474), (63, 25486), (67, 25507), (70, 25522), (86, 25588), (95, 25627),

Gene: Grekaycon_29 Start: 25245, Stop: 25613, Start Num: 15

Candidate Starts for Grekaycon_29:

(Start: 15 @25245 has 18 MA's), (41, 25317), (44, 25338), (47, 25350), (49, 25356), (59, 25392), (60, 25401), (63, 25413), (67, 25434), (68, 25437), (70, 25449), (86, 25515), (95, 25554),

Gene: Gusanita_24 Start: 19423, Stop: 19737, Start Num: 36

Candidate Starts for Gusanita_24:

(Start: 36 @19423 has 11 MA's), (48, 19495), (66, 19573), (84, 19645), (87, 19663),

Gene: Halloweekend_24 Start: 19350, Stop: 19658, Start Num: 37

Candidate Starts for Halloweekend_24:

(Start: 37 @19350 has 11 MA's), (49, 19425), (54, 19446), (58, 19458), (68, 19506), (76, 19539), (86, 19584), (96, 19626),

Gene: HamCheese_23 Start: 17622, Stop: 17930, Start Num: 30

Candidate Starts for HamCheese_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: HannahPhantana_25 Start: 18037, Stop: 18396, Start Num: 35

Candidate Starts for HannahPhantana_25:

(Start: 34 @18034 has 8 MA's), (Start: 35 @18037 has 3 MA's), (Start: 38 @18052 has 1 MA's), (39, 18055), (40, 18067), (50, 18115), (55, 18133), (67, 18187), (86, 18268), (88, 18283), (99, 18337), (100, 18343),

Gene: Hillester_28 Start: 20421, Stop: 20726, Start Num: 36

Candidate Starts for Hillester_28:

(Start: 36 @20421 has 11 MA's), (43, 20472), (62, 20538), (66, 20562), (70, 20580), (76, 20601), (78, 20607), (81, 20619),

Gene: HotPotato_26 Start: 20119, Stop: 20421, Start Num: 36

Candidate Starts for HotPotato_26:

(Start: 36 @20119 has 11 MA's), (70, 20278), (74, 20290), (76, 20299), (78, 20305), (81, 20317), (84, 20332),

Gene: Ichiang_24 Start: 19369, Stop: 19677, Start Num: 37

Candidate Starts for Ichiang_24:

(Start: 37 @19369 has 11 MA's), (49, 19444), (54, 19465), (58, 19477), (68, 19525), (76, 19558), (86, 19603), (96, 19645),

Gene: IsHungry_26 Start: 19976, Stop: 20278, Start Num: 36

Candidate Starts for IsHungry_26:

(Start: 36 @19976 has 11 MA's), (43, 20027), (70, 20135), (76, 20156), (78, 20162),

Gene: Isolde_28 Start: 20195, Stop: 20503, Start Num: 37

Candidate Starts for Isolde_28:

(Start: 37 @20195 has 11 MA's), (54, 20291), (55, 20294), (58, 20303), (86, 20429), (88, 20444), (90, 20456),

Gene: JKerns_29 Start: 25272, Stop: 25640, Start Num: 15

Candidate Starts for JKerns_29:

(Start: 15 @25272 has 18 MA's), (47, 25377), (49, 25383), (59, 25419), (60, 25428), (63, 25440), (67, 25461), (70, 25476), (82, 25518), (86, 25542), (95, 25581),

Gene: Jamun_24 Start: 18726, Stop: 19058, Start Num: 30

Candidate Starts for Jamun_24:

(Start: 30 @18726 has 16 MA's), (46, 18801), (67, 18888), (68, 18891), (70, 18903), (75, 18918), (84, 18957), (86, 18969),

Gene: Jawnski_27 Start: 24995, Stop: 25363, Start Num: 15

Candidate Starts for Jawnski_27:

(Start: 15 @24995 has 18 MA's), (47, 25100), (59, 25142), (60, 25151), (63, 25163), (70, 25199), (73, 25208), (83, 25250), (86, 25265), (95, 25304),

Gene: JellyBread_28 Start: 20353, Stop: 20661, Start Num: 37

Candidate Starts for JellyBread_28:

(Start: 37 @20353 has 11 MA's), (54, 20449), (55, 20452), (58, 20461), (86, 20587), (88, 20602), (90, 20614),

Gene: Jerole_25 Start: 18034, Stop: 18381, Start Num: 35

Candidate Starts for Jerole_25:

(Start: 35 @18034 has 3 MA's), (Start: 38 @18049 has 1 MA's), (39, 18052), (40, 18064), (50, 18112), (55, 18130), (63, 18163), (86, 18265), (88, 18280), (99, 18334), (100, 18340),

Gene: Jordan_29 Start: 25242, Stop: 25610, Start Num: 15

Candidate Starts for Jordan_29:

(Start: 15 @25242 has 18 MA's), (47, 25347), (49, 25353), (59, 25389), (60, 25398), (63, 25410), (67, 25431), (70, 25446), (82, 25488), (86, 25512), (87, 25518), (95, 25551),

Gene: Juno112_23 Start: 17622, Stop: 17945, Start Num: 30

Candidate Starts for Juno112_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: KHumphrey_23 Start: 17620, Stop: 17943, Start Num: 30

Candidate Starts for KHumphrey_23:

(Start: 30 @17620 has 16 MA's), (40, 17659), (46, 17692), (55, 17725), (67, 17779), (86, 17860),

Gene: Karkharias_26 Start: 20115, Stop: 20417, Start Num: 36

Candidate Starts for Karkharias_26:

(Start: 36 @20115 has 11 MA's), (43, 20166), (70, 20274), (76, 20295), (78, 20301), (81, 20313),

Gene: Katzastrophic_23 Start: 19980, Stop: 20297, Start Num: 20

Candidate Starts for Katzastrophic_23:

(Start: 20 @19980 has 6 MA's), (47, 20067), (59, 20109), (61, 20121), (72, 20172), (86, 20232), (93, 20268),

Gene: KayMoney_27 Start: 20265, Stop: 20573, Start Num: 37

Candidate Starts for KayMoney_27:

(Start: 37 @20265 has 11 MA's), (54, 20361), (55, 20364), (58, 20373), (60, 20385), (86, 20499),

Gene: KendraB23_25 Start: 19185, Stop: 19517, Start Num: 30

Candidate Starts for KendraB23_25:

(Start: 30 @19185 has 16 MA's), (46, 19260), (49, 19269), (55, 19293), (56, 19296), (68, 19350), (70, 19362), (84, 19416), (86, 19428),

Gene: Kepler_24 Start: 17872, Stop: 18219, Start Num: 35

Candidate Starts for Kepler_24:

(Start: 35 @17872 has 3 MA's), (Start: 38 @17887 has 1 MA's), (39, 17890), (40, 17902), (50, 17950), (55, 17968), (86, 18103), (88, 18118), (99, 18172), (100, 18178),

Gene: Khuang_21 Start: 17688, Stop: 17984, Start Num: 36

Candidate Starts for Khuang_21:

(31, 17679), (Start: 36 @17688 has 11 MA's), (43, 17739), (51, 17763), (76, 17868), (78, 17874), (81, 17886), (84, 17901), (86, 17913),

Gene: King2_27 Start: 24982, Stop: 25350, Start Num: 15

Candidate Starts for King2_27:

(Start: 15 @24982 has 18 MA's), (47, 25087), (59, 25129), (60, 25138), (63, 25150), (70, 25186), (73, 25195), (86, 25252), (95, 25291),

Gene: Kukla_23 Start: 18379, Stop: 18687, Start Num: 37

Candidate Starts for Kukla_23:

(6, 18238), (7, 18253), (Start: 37 @18379 has 11 MA's), (49, 18454), (58, 18487), (68, 18535), (76, 18568), (86, 18613),

Gene: Kuleana_24 Start: 17910, Stop: 18254, Start Num: 35

Candidate Starts for Kuleana_24:

(32, 17904), (Start: 35 @17910 has 3 MA's), (43, 17961), (55, 18006), (67, 18060), (68, 18063), (86, 18141), (87, 18147), (88, 18156), (99, 18210), (101, 18231), (102, 18237),

Gene: Kumotta_24 Start: 18861, Stop: 19166, Start Num: 26

Candidate Starts for Kumotta_24:

(Start: 26 @18861 has 2 MA's), (64, 18996), (85, 19092),

Gene: Lawnathon_28 Start: 20289, Stop: 20597, Start Num: 37

Candidate Starts for Lawnathon_28:

(Start: 37 @20289 has 11 MA's), (54, 20385), (55, 20388), (58, 20397), (86, 20523), (88, 20538), (90, 20550),

Gene: LeeroyJ_29 Start: 25315, Stop: 25686, Start Num: 14

Candidate Starts for LeeroyJ_29:

(Start: 14 @25315 has 4 MA's), (Start: 15 @25318 has 18 MA's), (22, 25339), (47, 25423), (59, 25465), (60, 25474), (63, 25486), (67, 25507), (70, 25522), (86, 25588), (95, 25627),

Gene: Leona_23 Start: 17683, Stop: 18000, Start Num: 30

Candidate Starts for Leona_23:

(Start: 30 @17683 has 16 MA's), (40, 17722), (46, 17755), (55, 17788), (67, 17842), (86, 17923),

Gene: LittleTokyo_24 Start: 17866, Stop: 18186, Start Num: 34

Candidate Starts for LittleTokyo_24:

(32, 17863), (Start: 34 @17866 has 8 MA's), (43, 17917), (55, 17962), (71, 18031), (82, 18073), (88, 18112),

Gene: Lunar_25 Start: 18034, Stop: 18384, Start Num: 34

Candidate Starts for Lunar_25:

(Start: 34 @18034 has 8 MA's), (Start: 35 @18037 has 3 MA's), (39, 18055), (50, 18115), (55, 18133), (86, 18268), (88, 18283), (99, 18337), (100, 18343),

Gene: MUWow_27 Start: 20453, Stop: 20761, Start Num: 37

Candidate Starts for MUWow_27:

(Start: 37 @20453 has 11 MA's), (54, 20549), (55, 20552), (58, 20561), (86, 20687), (88, 20702), (90, 20714),

Gene: Maja_24 Start: 18850, Stop: 19128, Start Num: 36

Candidate Starts for Maja_24:

(24, 18832), (Start: 36 @18850 has 11 MA's), (81, 19027), (85, 19048), (86, 19051),

Gene: MargaretKali_24 Start: 18496, Stop: 18801, Start Num: 26

Candidate Starts for MargaretKali_24:

(Start: 26 @18496 has 2 MA's), (64, 18631), (85, 18727),

Gene: Martha_29 Start: 25246, Stop: 25614, Start Num: 15

Candidate Starts for Martha_29:

(Start: 15 @25246 has 18 MA's), (41, 25318), (44, 25339), (47, 25351), (49, 25357), (59, 25393), (60, 25402), (63, 25414), (67, 25435), (68, 25438), (70, 25450), (86, 25516), (95, 25555),

Gene: MaterMagnus_28 Start: 20431, Stop: 20736, Start Num: 36

Candidate Starts for MaterMagnus_28:

(Start: 36 @20431 has 11 MA's), (43, 20482), (62, 20548), (66, 20572), (70, 20590), (76, 20611), (78, 20617), (81, 20629),

Gene: Melons_25 Start: 18034, Stop: 18384, Start Num: 34

Candidate Starts for Melons_25:

(Start: 34 @18034 has 8 MA's), (Start: 35 @18037 has 3 MA's), (39, 18055), (50, 18115), (55, 18133), (86, 18268), (88, 18283), (99, 18337), (100, 18343),

Gene: MidnightRain_28 Start: 20420, Stop: 20725, Start Num: 36

Candidate Starts for MidnightRain_28:

(Start: 36 @20420 has 11 MA's), (43, 20471), (62, 20537), (66, 20561), (70, 20579), (76, 20600), (78, 20606), (81, 20618),

Gene: NathanVaag_27 Start: 24958, Stop: 25326, Start Num: 15

Candidate Starts for NathanVaag_27:

(Start: 15 @24958 has 18 MA's), (47, 25063), (59, 25105), (60, 25114), (61, 25117), (63, 25126), (70, 25162), (86, 25228), (95, 25267),

Gene: Ollypop_44 Start: 35786, Stop: 36139, Start Num: 11

Candidate Starts for Ollypop_44:

(11, 35786), (17, 35813), (23, 35828), (29, 35834), (33, 35843), (49, 35912), (58, 35945), (72, 36011), (78, 36032), (86, 36071), (89, 36089),

Gene: Orcanus_24 Start: 18977, Stop: 19309, Start Num: 30

Candidate Starts for Orcanus_24:

(Start: 30 @18977 has 16 MA's), (46, 19052), (49, 19061), (55, 19085), (56, 19088), (68, 19142), (70, 19154), (84, 19208), (86, 19220),

Gene: OtsoOtso_24 Start: 17889, Stop: 18239, Start Num: 34

Candidate Starts for OtsoOtso_24:

(Start: 34 @17889 has 8 MA's), (Start: 35 @17892 has 3 MA's), (39, 17910), (40, 17922), (50, 17970), (55, 17988), (86, 18123), (88, 18138),

Gene: Peas_26 Start: 20113, Stop: 20415, Start Num: 36

Candidate Starts for Peas_26:

(Start: 36 @20113 has 11 MA's), (43, 20164), (70, 20272), (76, 20293), (78, 20299), (81, 20311), (84, 20326),

Gene: Pelletreau_25 Start: 19183, Stop: 19515, Start Num: 30

Candidate Starts for Pelletreau_25:

(Start: 30 @19183 has 16 MA's), (46, 19258), (49, 19267), (55, 19291), (56, 19294), (68, 19348), (70, 19360), (84, 19414), (86, 19426),

Gene: PhluffyCoco_23 Start: 17622, Stop: 17930, Start Num: 30

Candidate Starts for PhluffyCoco_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: Phrank15_27 Start: 20294, Stop: 20602, Start Num: 37

Candidate Starts for Phrank15_27:

(Start: 37 @20294 has 11 MA's), (54, 20390), (55, 20393), (58, 20402), (86, 20528), (88, 20543), (90, 20555),

Gene: Piccoletto_27 Start: 24960, Stop: 25328, Start Num: 15

Candidate Starts for Piccoletto_27:

(Start: 15 @24960 has 18 MA's), (47, 25065), (59, 25107), (60, 25116), (63, 25128), (67, 25149), (70, 25164), (86, 25230), (95, 25269),

Gene: Pigu_23 Start: 17919, Stop: 18197, Start Num: 36

Candidate Starts for Pigu_23:

(Start: 36 @17919 has 11 MA's), (81, 18096), (85, 18117), (86, 18120),

Gene: Pippa_29 Start: 25371, Stop: 25739, Start Num: 15

Candidate Starts for Pippa_29:

(Start: 15 @25371 has 18 MA's), (47, 25476), (49, 25482), (59, 25518), (60, 25527), (63, 25539), (70, 25575), (73, 25584), (83, 25626), (86, 25641), (95, 25680),

Gene: Polka_24 Start: 17889, Stop: 18239, Start Num: 34

Candidate Starts for Polka_24:

(Start: 34 @17889 has 8 MA's), (Start: 35 @17892 has 3 MA's), (39, 17910), (40, 17922), (50, 17970), (55, 17988), (86, 18123), (88, 18138),

Gene: Pucara_26 Start: 20288, Stop: 20599, Start Num: 36

Candidate Starts for Pucara_26:

(1, 19760), (2, 19802), (3, 19805), (Start: 36 @20288 has 11 MA's), (51, 20372), (52, 20378), (66, 20438), (70, 20456), (84, 20510), (87, 20528), (94, 20564),

Gene: Quenya_24 Start: 19845, Stop: 20162, Start Num: 20

Candidate Starts for Quenya_24:

(Start: 20 @19845 has 6 MA's), (47, 19932), (59, 19974), (61, 19986), (72, 20037), (86, 20097),

Gene: QuinnAvery_26 Start: 19733, Stop: 20041, Start Num: 37

Candidate Starts for QuinnAvery_26:

(Start: 37 @19733 has 11 MA's), (49, 19808), (54, 19829), (58, 19841), (68, 19889), (76, 19922), (86, 19967), (96, 20009),

Gene: RadFad_28 Start: 20421, Stop: 20726, Start Num: 36

Candidate Starts for RadFad_28:

(Start: 36 @20421 has 11 MA's), (43, 20472), (62, 20538), (66, 20562), (70, 20580), (76, 20601), (78, 20607), (81, 20619),

Gene: Raphaella_28 Start: 20360, Stop: 20668, Start Num: 37

Candidate Starts for Raphaella_28:

(Start: 37 @20360 has 11 MA's), (54, 20456), (55, 20459), (58, 20468), (86, 20594), (88, 20609), (90, 20621),

Gene: Rattail_23 Start: 17683, Stop: 18000, Start Num: 30

Candidate Starts for Rattail_23:

(Start: 30 @17683 has 16 MA's), (40, 17722), (46, 17755), (55, 17788), (67, 17842), (86, 17923),

Gene: RedFox_23 Start: 17622, Stop: 17945, Start Num: 30

Candidate Starts for RedFox_23:

(Start: 30 @17622 has 16 MA's), (40, 17661), (46, 17694), (55, 17727), (67, 17781), (86, 17862),

Gene: Renna12_24 Start: 17975, Stop: 18319, Start Num: 30

Candidate Starts for Renna12_24:

(Start: 30 @17975 has 16 MA's), (40, 18014), (46, 18047), (55, 18080), (67, 18134), (84, 18203), (86, 18215),

Gene: Richie_28 Start: 20436, Stop: 20741, Start Num: 36

Candidate Starts for Richie_28:

(Start: 36 @20436 has 11 MA's), (43, 20487), (62, 20553), (66, 20577), (70, 20595), (76, 20616), (78, 20622), (81, 20634),

Gene: Rollins_22 Start: 17162, Stop: 17488, Start Num: 19

Candidate Starts for Rollins_22:

(Start: 19 @17162 has 11 MA's), (68, 17345), (69, 17351), (86, 17423),

Gene: RootBeer_23 Start: 17990, Stop: 18268, Start Num: 36

Candidate Starts for RootBeer_23:

(4, 17732), (25, 17975), (Start: 36 @17990 has 11 MA's), (86, 18188), (95, 18227),

Gene: Ruchi_24 Start: 19293, Stop: 19598, Start Num: 38

Candidate Starts for Ruchi_24:

(Start: 30 @19266 has 16 MA's), (Start: 38 @19293 has 1 MA's), (46, 19341), (49, 19350), (55, 19374), (68, 19431), (70, 19443), (84, 19497), (86, 19509),

Gene: Sakai_28 Start: 20369, Stop: 20677, Start Num: 37

Candidate Starts for Sakai_28:

(Start: 37 @20369 has 11 MA's), (54, 20465), (55, 20468), (58, 20477), (86, 20603), (88, 20618), (90, 20630),

Gene: Sashimi_26 Start: 18795, Stop: 19100, Start Num: 36

Candidate Starts for Sashimi_26:

(18, 18762), (Start: 36 @18795 has 11 MA's), (43, 18846), (56, 18888), (69, 18948), (70, 18954), (77, 18978), (78, 18981), (81, 18993), (84, 19008), (85, 19017),

Gene: Schmidt_22 Start: 17098, Stop: 17373, Start Num: 45

Candidate Starts for Schmidt_22:

(42, 17077), (Start: 45 @17098 has 1 MA's), (51, 17113), (60, 17146), (67, 17179), (69, 17188), (77, 17218), (81, 17239), (84, 17254), (85, 17263),

Gene: Shade_29 Start: 25212, Stop: 25580, Start Num: 15

Candidate Starts for Shade_29:

(Start: 15 @25212 has 18 MA's), (47, 25317), (49, 25323), (59, 25359), (60, 25368), (63, 25380), (70, 25416), (82, 25458), (86, 25482), (87, 25488), (95, 25521),

Gene: SilentRX_40 Start: 35414, Stop: 35743, Start Num: 21

Candidate Starts for SilentRX_40:

(10, 35366), (Start: 21 @35414 has 1 MA's), (46, 35498), (53, 35525), (60, 35552), (86, 35666), (88, 35681),

Gene: Skylord_22 Start: 17110, Stop: 17436, Start Num: 19

Candidate Starts for Skylord_22:

(Start: 19 @17110 has 11 MA's), (68, 17293), (69, 17299), (86, 17371),

Gene: Sonny_29 Start: 25242, Stop: 25610, Start Num: 15

Candidate Starts for Sonny_29:

(Start: 15 @25242 has 18 MA's), (47, 25347), (49, 25353), (59, 25389), (60, 25398), (63, 25410), (67, 25431), (70, 25446), (82, 25488), (86, 25512), (87, 25518), (95, 25551),

Gene: SpicyFrank_28 Start: 20656, Stop: 20961, Start Num: 36

Candidate Starts for SpicyFrank_28:

(Start: 36 @20656 has 11 MA's), (43, 20707), (66, 20797), (76, 20836), (81, 20854), (86, 20881),

Gene: StevieBAY_29 Start: 25315, Stop: 25686, Start Num: 14

Candidate Starts for StevieBAY_29:

(Start: 14 @25315 has 4 MA's), (Start: 15 @25318 has 18 MA's), (47, 25423), (59, 25465), (60, 25474), (63, 25486), (67, 25507), (70, 25522), (86, 25588), (95, 25627),

Gene: StuartMinion_24 Start: 17655, Stop: 17969, Start Num: 30

Candidate Starts for StuartMinion_24:

(Start: 28 @17652 has 1 MA's), (Start: 30 @17655 has 16 MA's), (40, 17691), (44, 17715), (49, 17733), (50, 17739), (55, 17757), (58, 17766), (67, 17811), (84, 17880), (86, 17892), (91, 17925),

Gene: TaeYoung_29 Start: 25246, Stop: 25614, Start Num: 15

Candidate Starts for TaeYoung_29:

(Start: 15 @25246 has 18 MA's), (41, 25318), (44, 25339), (47, 25351), (49, 25357), (59, 25393), (60, 25402), (63, 25414), (67, 25435), (68, 25438), (70, 25450), (86, 25516), (95, 25555),

Gene: TaylorSipht_24 Start: 18002, Stop: 18337, Start Num: 30

Candidate Starts for TaylorSipht_24:

(Start: 30 @18002 has 16 MA's), (39, 18032), (46, 18077), (55, 18110), (60, 18131), (67, 18164), (68, 18167), (70, 18179), (79, 18209), (84, 18233), (86, 18245),

Gene: ThayneTheZag_28 Start: 20519, Stop: 20830, Start Num: 36

Candidate Starts for ThayneTheZag_28:

(Start: 36 @20519 has 11 MA's), (43, 20576), (66, 20669), (70, 20687), (85, 20750), (88, 20768),

Gene: Timinator_29 Start: 25315, Stop: 25686, Start Num: 14

Candidate Starts for Timinator_29:

(Start: 14 @25315 has 4 MA's), (Start: 15 @25318 has 18 MA's), (22, 25339), (47, 25423), (59, 25465), (60, 25474), (63, 25486), (67, 25507), (70, 25522), (86, 25588), (95, 25627),

Gene: Toad24_25 Start: 19184, Stop: 19516, Start Num: 30

Candidate Starts for Toad24_25:

(Start: 30 @19184 has 16 MA's), (46, 19259), (49, 19268), (55, 19292), (56, 19295), (68, 19349), (70, 19361), (84, 19415), (86, 19427),

Gene: Vitas_22 Start: 17102, Stop: 17428, Start Num: 19

Candidate Starts for Vitas_22:

(Start: 19 @17102 has 11 MA's), (68, 17285), (69, 17291), (86, 17363),

Gene: Vopal_29 Start: 20432, Stop: 20740, Start Num: 37

Candidate Starts for Vopal_29:

(Start: 37 @20432 has 11 MA's), (54, 20528), (55, 20531), (58, 20540), (86, 20666), (88, 20681), (90, 20693),

Gene: Vulpecula_24 Start: 18724, Stop: 19056, Start Num: 30

Candidate Starts for Vulpecula_24:

(Start: 30 @18724 has 16 MA's), (46, 18799), (49, 18808), (68, 18889), (70, 18901), (75, 18916), (84, 18955), (86, 18967),

Gene: Westrich_25 Start: 19173, Stop: 19505, Start Num: 30

Candidate Starts for Westrich_25:

(Start: 30 @19173 has 16 MA's), (46, 19248), (49, 19257), (55, 19281), (56, 19284), (68, 19338), (70, 19350), (84, 19404), (86, 19416),

Gene: WileyE_23 Start: 18076, Stop: 18381, Start Num: 38

Candidate Starts for WileyE_23:

(Start: 30 @18049 has 16 MA's), (Start: 38 @18076 has 1 MA's), (46, 18124), (49, 18133), (55, 18157), (60, 18178), (68, 18214), (84, 18280), (86, 18292),

Gene: Windest_29 Start: 20486, Stop: 20791, Start Num: 36

Candidate Starts for Windest_29:

(Start: 36 @20486 has 11 MA's), (43, 20537), (62, 20603), (66, 20627), (70, 20645), (76, 20666), (78, 20672), (81, 20684), (97, 20756),

Gene: Wyborn_30 Start: 25584, Stop: 25931, Start Num: 28

Candidate Starts for Wyborn_30:

(13, 25542), (Start: 28 @25584 has 1 MA's), (43, 25656), (46, 25668), (47, 25671), (57, 25707), (59, 25713), (61, 25725), (68, 25758), (72, 25776), (86, 25836), (87, 25842),

Gene: YoungHarleezy_28 Start: 20434, Stop: 20739, Start Num: 36

Candidate Starts for YoungHarleezy_28:

(Start: 36 @20434 has 11 MA's), (43, 20485), (62, 20551), (66, 20575), (70, 20593), (76, 20614), (78, 20620), (81, 20632),

Gene: Zartrosa_29 Start: 25236, Stop: 25604, Start Num: 15

Candidate Starts for Zartrosa_29:

(Start: 15 @25236 has 18 MA's), (47, 25341), (49, 25347), (59, 25383), (60, 25392), (63, 25404), (67, 25425), (70, 25440), (82, 25482), (86, 25506), (87, 25512), (95, 25545),

Gene: Zhuangyuan_26 Start: 18457, Stop: 18819, Start Num: 30

Candidate Starts for Zhuangyuan_26:

(Start: 30 @18457 has 16 MA's), (Start: 37 @18469 has 11 MA's), (49, 18541), (55, 18565), (67, 18619), (84, 18688), (86, 18700),

