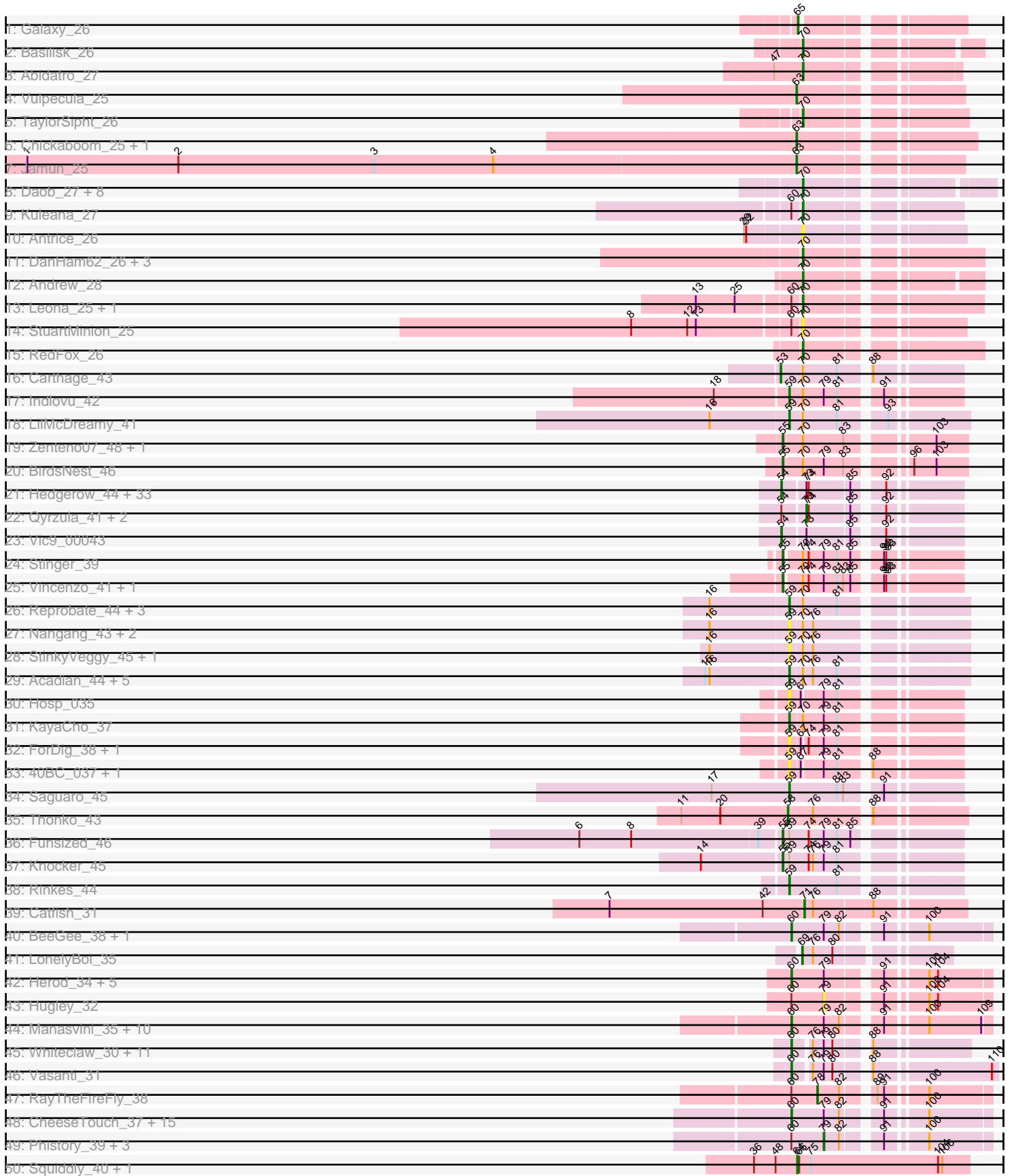
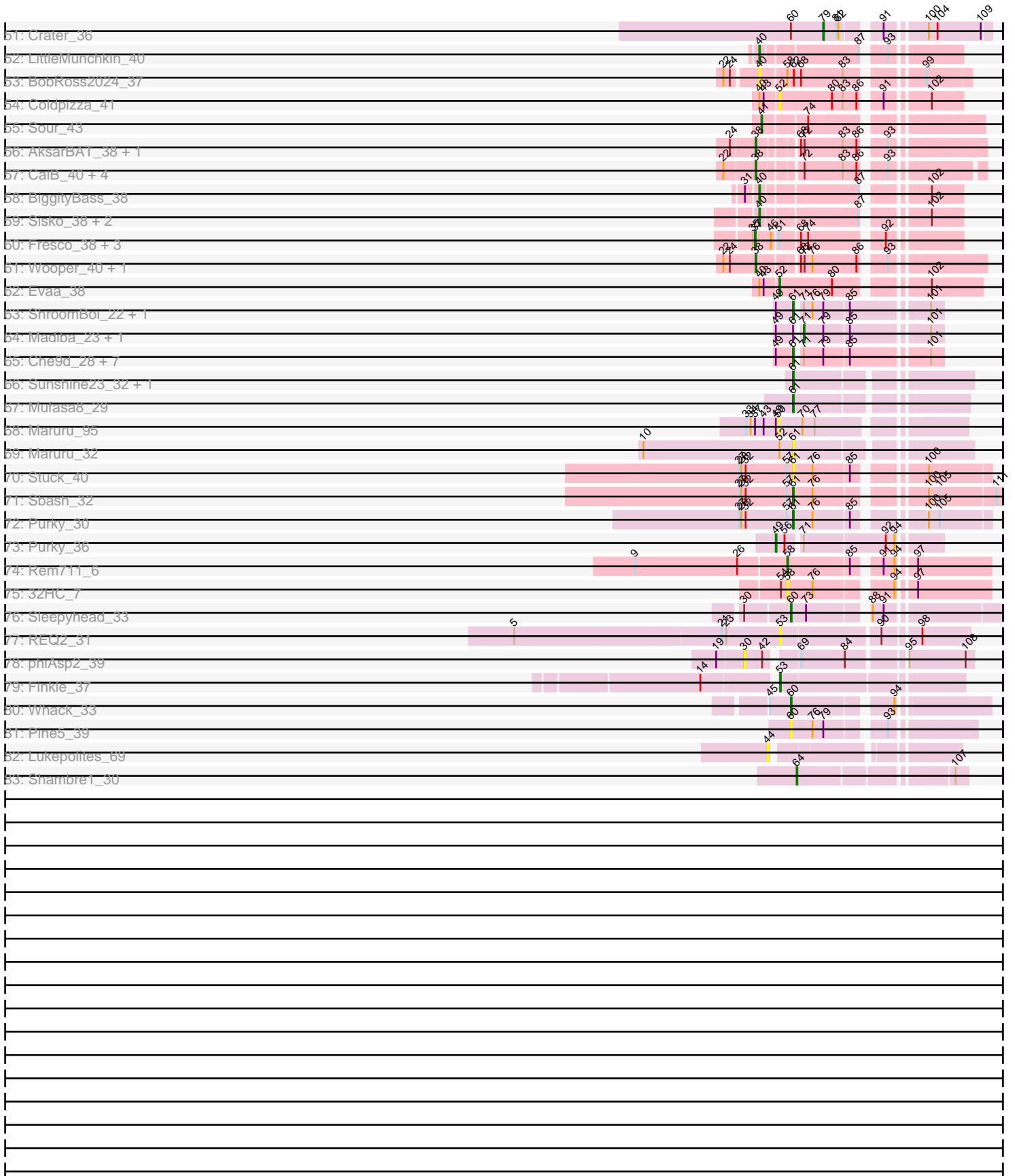


Pham 222880



Pham 222880



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 222880 Report

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

Pham number 222880 has 213 members, 39 are drafts.

Phages represented in each track:

- Track 1 : Galaxy_26
- Track 2 : Basilisk_26
- Track 3 : Abidatro_27
- Track 4 : Vulpecula_25
- Track 5 : TaylorSipht_26
- Track 6 : Chickaboom_25, Brynnie_25
- Track 7 : Jamun_25
- Track 8 : Daob_27, Amelia_27, Melons_27, HannahPhantana_27, Cote_27, Orcanus_26, Coral_26, Lunar_27, Polka_26
- Track 9 : Kuleana_27
- Track 10 : Antrice_26
- Track 11 : DanHam62_26, PhluffyCoco_26, Camara_26, KHumphrey_26
- Track 12 : Andrew_28
- Track 13 : Leona_25, Glotell_27
- Track 14 : StuartMinion_25
- Track 15 : RedFox_26
- Track 16 : Carthage_43
- Track 17 : Indlovu_42
- Track 18 : LilMcDreamy_41
- Track 19 : Zenteno07_48, Hashim76_46
- Track 20 : BirdsNest_46
- Track 21 : Hedgerow_44, Calamitous_44, Coffee_44, Lars_44, Faze9_43, MasterPo_44, Lephleur_44, ItsyBitsy1_44, FrenchFry_44, Tinciduntolum_45, Bananafish_44, Blocker23_44, Kheth_44, Tres_44, Holeinone_44, Kaleb_44, Phantasmagoria_44, LizLemon_44, Kolhan_44, Rhinoforte_44, Godines_44, Ares_44, LilSmirk_44, PrinceCharming_44, Brownie5_44, Boyle_44, Eaglehorse_44, Sabella_43, TA17A_45, Allegro_44, West99_44, Laurie_43, Opia_44, Glass_44
- Track 22 : Qyrzula_41, Arbiter_43, Rosebush_43
- Track 23 : Vic9_00043
- Track 24 : Stinger_39
- Track 25 : Vincenzo_41, AlanGrant_42
- Track 26 : Reprobate_44, Mysterious_45, Nehemiah_43, Phelemich_43
- Track 27 : Nangang_43, Shenyu_43, DigitDog_43
- Track 28 : StinkyVeggy_45, KarasumaRum_45
- Track 29 : Acadian_44, EastView9101_42, Suigeneris_44, Donny_44, SirJeffery_44, Rita130_44
- Track 30 : Hosp_035

- Track 31 : KayaCho_37
- Track 32 : ForDig_38, Jolie1_037
- Track 33 : 40BC_037, 39HC_037
- Track 34 : Saguaro_45
- Track 35 : Thonko_43
- Track 36 : Funsized_46
- Track 37 : Knocker_45
- Track 38 : Rinkes_44
- Track 39 : Catfish_31
- Track 40 : BeeGee_38, RavenCo17_36
- Track 41 : LonelyBoi_35
- Track 42 : Herod_34, Eviarto_34, BatStarr_34, Nymphadora_34, TimTam_34, Bosnia_34
- Track 43 : Hugley_32
- Track 44 : Manasvini_35, Suscepit_35, Antonio_35, Zameen_35, Kita_36, Neobush_35, Eudoria_35, Trumpet_35, Tayonia_35, Maridalia_34, Polly_32
- Track 45 : Whiteclaw_30, Clap_30, Savage_30, Sahara_29, Ebert_31, Haley23_30, GemG_30, Sproutie_30, Cynthia_30, Mocha12_30, TuertoX_30, Gizermo_30
- Track 46 : Vasanti_31
- Track 47 : RayTheFireFly_38
- Track 48 : CheeseTouch_37, Getalong_40, Horus_39, Phabuloso_36, Lutum_39, Budski_39, Kenna_38, BearBQ_38, ShawBrad_38, ODay_42, Asapag_39, Holliday_38, Leroy_39, Ecliptus_40, Whitney_42, Periwinkle_42
- Track 49 : Phistory_39, BENtherdunthat_38, Frickyeah_39, Apricot_38
- Track 50 : Squiddly_40, Spooky_39
- Track 51 : Crater_36
- Track 52 : LittleMunchkin_40
- Track 53 : BobRoss2024_37
- Track 54 : Coldpizza_41
- Track 55 : Sour_43
- Track 56 : AksarBAT_38, NHagos_38
- Track 57 : CaiB_40, CloverMinnie_40, MossRose_40, AnarQue_40, MakoManhole_40
- Track 58 : BiggityBass_38
- Track 59 : Sisko_38, AnClar_39, Yago84_38
- Track 60 : Fresco_38, Axumite_38, Shatter_38, Ligma_38
- Track 61 : Wooper_40, Yeshua_40
- Track 62 : Evaa_38
- Track 63 : ShroomBoi_22, Avani_28
- Track 64 : Madiba_23, ThetaBob_24
- Track 65 : Che9d_28, Ogopogo_25, Bipolar_22, Demsculpinboyz_28, Kersh_23, Kenuha5_22, Pollywog_25, Yoshi_28
- Track 66 : Sunshine23_32, Sonali_32
- Track 67 : Mufasa8_29
- Track 68 : Maruru_95
- Track 69 : Maruru_32
- Track 70 : Stuck_40
- Track 71 : Sbash_32
- Track 72 : Purky_30
- Track 73 : Purky_36
- Track 74 : Rem711_6
- Track 75 : 32HC_7
- Track 76 : Sleepyhead_33

- Track 77 : REQ2_31
- Track 78 : phiAsp2_39
- Track 79 : Finkle_37
- Track 80 : Whack_33
- Track 81 : Pine5_39
- Track 82 : Lukepolites_69
- Track 83 : Shambre1_30

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

The start number called the most often in the published annotations is 60, it was called in 49 of the 174 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antonio_35, Asapag_39, BatStarr_34, BearBQ_38, BeeGee_38, Bosnia_34, Budski_39, CheeseTouch_37, Clap_30, Cynthia_30, Ebert_31, Ecliptus_40, Eudoria_35, Eviarto_34, GemG_30, Getalong_40, Gizermo_30, Haley23_30, Herod_34, Holliday_38, Horus_39, Kenna_38, Kita_36, Leroy_39, Lutum_39, Manasvini_35, Maridalia_34, Mocha12_30, Neobush_35, Nymphadora_34, ODay_42, Periwinkle_42, Phabuloso_36, Pine5_39, Polly_32, RavenCo17_36, Sahara_29, Savage_30, ShawBrad_38, Sleepyhead_33, Sproutie_30, Susceptit_35, Tayonia_35, TimTam_34, Trumpet_35, TuertoX_30, Vasanti_31, Whack_33, Whiteclaw_30, Whitney_42, Zameen_35,

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

- Apricot_38, BENtherdunthat_38, Crater_36, Frickyeah_39, Glotell_27, Hugley_32, Kuleana_27, Leona_25, Phistory_39, RayTheFireFly_38, StuartMinion_25,

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

- 32HC_7, 39HC_037, 40BC_037, Abidatro_27, Acadian_44, AksarBAT_38, AlanGrant_42, Allegro_44, Amelia_27, AnClar_39, AnarQue_40, Andrew_28, Antrice_26, Arbiter_43, Ares_44, Avani_28, Axumite_38, Bananafish_44, Basilisk_26, BiggityBass_38, Bipolar_22, BirdsNest_46, Blocker23_44, BobRoss2024_37, Boyle_44, Brownie5_44, Brynnie_25, CaiB_40, Calamitous_44, Camara_26, Carthage_43, Catfish_31, Che9d_28, Chickaboom_25, CloverMinnie_40, Coffee_44, Coldpizza_41, Coral_26, Cote_27, DanHam62_26, Daob_27, Demsculpinboyz_28, DigitDog_43, Donny_44, Eaglehorse_44, EastView9101_42, Evaa_38, Faze9_43, Finkle_37, ForDig_38, FrenchFry_44, Fresco_38, Funsized_46, Galaxy_26, Glass_44, Godines_44, HannahPhantana_27, Hashim76_46, Hedgerow_44, Holeinone_44, Hosp_035, Indlovu_42, ItsyBitsy1_44, Jamun_25, Jolie1_037, KHumphrey_26, Kaleb_44, KarasumaRum_45, KayaCho_37, Kenuha5_22, Kersh_23, Kheth_44, Knocker_45, Kolhan_44, Lars_44, Laurie_43, Lephleur_44, Ligma_38, LilMcDreamy_41, LilSmirk_44, LittleMunchkin_40, LizLemon_44, LonelyBoi_35, Lukepolites_69, Lunar_27, Madiba_23, MakoManhole_40, Maruru_32, Maruru_95, MasterPo_44, Melons_27, MossRose_40, Mufasa8_29, Mysterious_45, NHagos_38, Nangang_43, Nehemiah_43, Ogopogo_25, Opia_44, Orcanus_26, Phantasmagoria_44, Phelemich_43, PhluffyCoco_26, Polka_26, Pollywog_25, PrinceCharming_44, Purky_30, Purky_36, Qyrzula_41, REQ2_31, RedFox_26, Rem711_6, Reprobate_44, Rhinoforte_44, Rinkes_44, Rita130_44, Rosebush_43, Sabella_43, Saguaro_45, Sbash_32, Shambre1_30, Shatter_38, Shenyu_43,

ShroomBoi_22, SirJeffery_44, Sisko_38, Sonali_32, Sour_43, Spooky_39, Squiddly_40, Stinger_39, StinkyVeggy_45, Stuck_40, Suigeneris_44, Sunshine23_32, TA17A_45, TaylorSipht_26, ThetaBob_24, Thonko_43, Tinciduntolum_45, Tres_44, Vic9_00043, Vincenzo_41, Vulpecula_25, West99_44, Wooper_40, Yago84_38, Yeshua_40, Yoshi_28, Zenteno07_48, phiAsp2_39,

Summary by start number:

Start 30:

- Found in 2 of 213 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: phiAsp2_39 (singleton),

Start 37:

- Found in 5 of 213 (2.3%) of genes in pham
- Manual Annotations of this start: 4 of 174
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Axumite_38 (DR), Fresco_38 (DR), Ligma_38 (DR), Shatter_38 (DR),

Start 38:

- Found in 9 of 213 (4.2%) of genes in pham
- Manual Annotations of this start: 7 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AksarBAT_38 (DR), AnarQue_40 (DR), CaiB_40 (DR), CloverMinnie_40 (DR), MakoManhole_40 (DR), MossRose_40 (DR), NHagos_38 (DR), Wooper_40 (DR), Yeshua_40 (DR),

Start 40:

- Found in 8 of 213 (3.8%) of genes in pham
- Manual Annotations of this start: 5 of 174
- Called 75.0% of time when present
- Phage (with cluster) where this start called: AnClar_39 (DR), BiggityBass_38 (DR), BobRoss2024_37 (DR), LittleMunchkin_40 (DR), Sisko_38 (DR), Yago84_38 (DR),

Start 41:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour_43 (DR),

Start 44:

- Found in 1 of 213 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lukepolites_69 (singleton),

Start 49:

- Found in 14 of 213 (6.6%) of genes in pham
- Manual Annotations of this start: 1 of 174
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Purky_36 (P6),

Start 50:

- Found in 1 of 213 (0.5%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru_95 (FG),

Start 52:

- Found in 3 of 213 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 174
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Coldpizza_41 (DR), Evaa_38 (DR),

Start 53:

- Found in 3 of 213 (1.4%) of genes in pham
- Manual Annotations of this start: 2 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Carthage_43 (B1), Finkle_37 (singleton), REQ2_31 (singleton),

Start 54:

- Found in 39 of 213 (18.3%) of genes in pham
- Manual Annotations of this start: 31 of 174
- Called 89.7% of time when present
- Phage (with cluster) where this start called: Allegro_44 (B2), Ares_44 (B2), Bananafish_44 (B2), Blocker23_44 (B2), Boyle_44 (B2), Brownie5_44 (B2), Calamitous_44 (B2), Coffee_44 (B2), Eaglehorse_44 (B2), Faze9_43 (B2), FrenchFry_44 (B2), Glass_44 (B2), Godines_44 (B2), Hedgerow_44 (B2), Holeinone_44 (B2), ItsyBitsy1_44 (B2), Kaleb_44 (B2), Kheth_44 (B2), Kolhan_44 (B2), Lars_44 (B2), Laurie_43 (B2), Lephleur_44 (B2), LilSmirk_44 (B2), LizLemon_44 (B2), MasterPo_44 (B2), Opia_44 (B2), Phantasmagoria_44 (B2), PrinceCharming_44 (B2), Rhinoforte_44 (B2), Sabella_43 (B2), TA17A_45 (B2), Tinciduntolum_45 (B2), Tres_44 (B2), Vic9_00043 (B2), West99_44 (B2),

Start 55:

- Found in 8 of 213 (3.8%) of genes in pham
- Manual Annotations of this start: 8 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_42 (B4), BirdsNest_46 (B13), Funsized_46 (B9), Hashim76_46 (B13), Knocker_45 (B9), Stinger_39 (B4), Vincenzo_41 (B4), Zenteno07_48 (B13),

Start 58:

- Found in 4 of 213 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 174
- Called 75.0% of time when present
- Phage (with cluster) where this start called: 32HC_7 (Z), Rem711_6 (Z), Thonko_43 (B8),

Start 59:

- Found in 27 of 213 (12.7%) of genes in pham
- Manual Annotations of this start: 11 of 174
- Called 92.6% of time when present

- Phage (with cluster) where this start called: 39HC_037 (B6), 40BC_037 (B6), Acadian_44 (B5), DigitDog_43 (B5), Donny_44 (B5), EastView9101_42 (B5), ForDig_38 (B6), Hosp_035 (B6), Indlovu_42 (B11), Jolie1_037 (B6), KarasumaRum_45 (B5), KayaCho_37 (B6), LilMcDreamy_41 (B12), Mysterious_45 (B5), Nangang_43 (B5), Nehemiah_43 (B5), Phelemich_43 (B5), Reprobate_44 (B5), Rinkes_44 (B9), Rita130_44 (B5), Saguaro_45 (B7), Shenyu_43 (B5), SirJeffery_44 (B5), StinkyVeggy_45 (B5), Suigeneris_44 (B5),

Start 60:

- Found in 62 of 213 (29.1%) of genes in pham
- Manual Annotations of this start: 49 of 174
- Called 82.3% of time when present
- Phage (with cluster) where this start called: Antonio_35 (CZ1), Asapag_39 (DN1), BatStarr_34 (CZ1), BearBQ_38 (DN), BeeGee_38 (CY), Bosnia_34 (CZ1), Budski_39 (DN), CheeseTouch_37 (DN1), Clap_30 (CZ2), Cynthia_30 (CZ2), Ebert_31 (CZ2), Ecliptus_40 (DN), Eudoria_35 (CZ1), Eviarto_34 (CZ1), GemG_30 (CZ2), Getalong_40 (DN1), Gizermo_30 (CZ2), Haley23_30 (CZ2), Herod_34 (CZ1), Holliday_38 (DN1), Horus_39 (DN1), Kenna_38 (DN1), Kita_36 (CZ1), Leroy_39 (DN1), Lutum_39 (DN1), Manasvini_35 (CZ1), Maridalia_34 (CZ1), Mocha12_30 (CZ2), Neobush_35 (CZ1), Nymphadora_34 (CZ1), ODay_42 (DN), Periwinkle_42 (DN1), Phabuloso_36 (DN1), Pine5_39 (singleton), Polly_32 (CZ1), RavenCo17_36 (CZ8), Sahara_29 (CZ2), Savage_30 (CZ2), ShawBrad_38 (DN1), Sleepyhead_33 (singleton), Sproutie_30 (CZ2), Suscepit_35 (CZ1), Tayonia_35 (CZ1), TimTam_34 (CZ1), Trumpet_35 (CZ1), TuertoX_30 (CZ2), Vasanti_31 (CZ2), Whack_33 (singleton), Whiteclaw_30 (CZ2), Whitney_42 (DN1), Zameen_35 (CZ1),

Start 61:

- Found in 19 of 213 (8.9%) of genes in pham
- Manual Annotations of this start: 14 of 174
- Called 89.5% of time when present
- Phage (with cluster) where this start called: Avani_28 (F2), Bipolar_22 (F1), Che9d_28 (F2), Demsculpinboyz_28 (F2), Kenuha5_22 (F1), Kersh_23 (F1), Maruru_32 (FG), Mufasa8_29 (FG), Ogopogo_25 (F1), Pollywog_25 (F1), Purky_30 (P6), Sbash_32 (I2), ShroomBoi_22 (F1), Sonali_32 (FG), Stuck_40 (I2), Sunshine23_32 (FG), Yoshi_28 (F2),

Start 63:

- Found in 4 of 213 (1.9%) of genes in pham
- Manual Annotations of this start: 4 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Brynnie_25 (AS1), Chickaboom_25 (AS1), Jamun_25 (AS1), Vulpecula_25 (AS1),

Start 64:

- Found in 3 of 213 (1.4%) of genes in pham
- Manual Annotations of this start: 3 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shambre1_30 (singleton), Spooky_39 (DN2), Squiddly_40 (DN2),

Start 65:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 174

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Galaxy_26 (AS1),

Start 69:

- Found in 2 of 213 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 174
- Called 50.0% of time when present
- Phage (with cluster) where this start called: LonelyBoi_35 (CY),

Start 70:

- Found in 49 of 213 (23.0%) of genes in pham
- Manual Annotations of this start: 18 of 174
- Called 46.9% of time when present
- Phage (with cluster) where this start called: Abidatro_27 (AS1), Amelia_27 (AS2), Andrew_28 (AS3), Antrice_26 (AS2), Basilisk_26 (AS1), Camara_26 (AS3), Coral_26 (AS2), Cote_27 (AS2), DanHam62_26 (AS3), Daob_27 (AS2), Glotell_27 (AS3), HannahPhantana_27 (AS2), KHumphrey_26 (AS3), Kuleana_27 (AS2), Leona_25 (AS3), Lunar_27 (AS2), Melons_27 (AS2), Orcanus_26 (AS1), PhluffyCoco_26 (AS3), Polka_26 (AS2), RedFox_26 (AS3), StuartMinion_25 (AS3), TaylorSipht_26 (AS1),

Start 71:

- Found in 14 of 213 (6.6%) of genes in pham
- Manual Annotations of this start: 3 of 174
- Called 21.4% of time when present
- Phage (with cluster) where this start called: Catfish_31 (CU5), Madiba_23 (F1), ThetaBob_24 (F4),

Start 73:

- Found in 39 of 213 (18.3%) of genes in pham
- Manual Annotations of this start: 3 of 174
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Arbiter_43 (B2), Qyrzula_41 (B2), Rosebush_43 (B2),

Start 78:

- Found in 1 of 213 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 174
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RayTheFireFly_38 (DB),

Start 79:

- Found in 80 of 213 (37.6%) of genes in pham
- Manual Annotations of this start: 4 of 174
- Called 7.5% of time when present
- Phage (with cluster) where this start called: Apricot_38 (DN3), BENtherdunthat_38 (DN1), Crater_36 (DN3), Frickyeah_39 (DN1), Hugley_32 (CZ1), Phistory_39 (DN1),

Summary by clusters:

There are 33 clusters represented in this pham: DN, singleton, CZ2, CZ1, DB, CZ8, B12, B13, B11, DR, CU5, I2, DN1, DN3, DN2, AS3, AS2, AS1, P6, CY, Z, F1, F2, F4, B4, B5, B6, B7, B1, B2, FG, B8, B9,

Info for manual annotations of cluster AS1:

- Start number 63 was manually annotated 4 times for cluster AS1.
- Start number 65 was manually annotated 1 time for cluster AS1.
- Start number 70 was manually annotated 4 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 70 was manually annotated 9 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 70 was manually annotated 5 times for cluster AS3.

Info for manual annotations of cluster B1:

- Start number 53 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B11:

- Start number 59 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 59 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 55 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 54 was manually annotated 31 times for cluster B2.
- Start number 73 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B4:

- Start number 55 was manually annotated 3 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 59 was manually annotated 6 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 59 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 59 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 58 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 55 was manually annotated 2 times for cluster B9.
- Start number 59 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CU5:

- Start number 71 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY:

- Start number 60 was manually annotated 1 time for cluster CY.
- Start number 69 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CZ1:

- Start number 60 was manually annotated 17 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 60 was manually annotated 13 times for cluster CZ2.

Info for manual annotations of cluster CZ8:

- Start number 60 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DB:

- Start number 78 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DN:

- Start number 60 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 60 was manually annotated 11 times for cluster DN1.
- Start number 79 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 64 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 79 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DR:

- Start number 37 was manually annotated 4 times for cluster DR.
- Start number 38 was manually annotated 7 times for cluster DR.
- Start number 40 was manually annotated 5 times for cluster DR.
- Start number 41 was manually annotated 1 time for cluster DR.
- Start number 52 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster F1:

- Start number 61 was manually annotated 6 times for cluster F1.
- Start number 71 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 61 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 71 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FG:

- Start number 61 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster I2:

- Start number 61 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster P6:

- Start number 49 was manually annotated 1 time for cluster P6.
- Start number 61 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Z:

- Start number 58 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_7 Start: 3414, Stop: 3172, Start Num: 58

Candidate Starts for 32HC_7:

(Start: 54 @3423 has 31 MA's), (Start: 58 @3414 has 2 MA's), (76, 3384), (94, 3291), (97, 3273),

Gene: 39HC_037 Start: 36987, Stop: 36790, Start Num: 59

Candidate Starts for 39HC_037:

(Start: 59 @36987 has 11 MA's), (67, 36975), (Start: 79 @36948 has 4 MA's), (81, 36930), (88, 36897),

Gene: 40BC_037 Start: 36987, Stop: 36790, Start Num: 59

Candidate Starts for 40BC_037:

(Start: 59 @36987 has 11 MA's), (67, 36975), (Start: 79 @36948 has 4 MA's), (81, 36930), (88, 36897),

Gene: Abidatro_27 Start: 19710, Stop: 19528, Start Num: 70

Candidate Starts for Abidatro_27:

(47, 19749), (Start: 70 @19710 has 18 MA's),

Gene: Acadian_44 Start: 39648, Stop: 39439, Start Num: 59

Candidate Starts for Acadian_44:

(15, 39762), (16, 39756), (Start: 59 @39648 has 11 MA's), (Start: 70 @39633 has 18 MA's), (76, 39621), (81, 39588),

Gene: AksarBAT_38 Start: 33442, Stop: 33182, Start Num: 38

Candidate Starts for AksarBAT_38:

(24, 33475), (Start: 38 @33442 has 7 MA's), (68, 33400), (72, 33397), (83, 33346), (86, 33328), (93, 33301),

Gene: AlanGrant_42 Start: 39951, Stop: 39745, Start Num: 55

Candidate Starts for AlanGrant_42:

(Start: 55 @39951 has 8 MA's), (Start: 70 @39930 has 18 MA's), (74, 39924), (Start: 79 @39903 has 4 MA's), (81, 39885), (83, 39876), (85, 39867), (91, 39837), (92, 39834), (93, 39831),

Gene: Allegro_44 Start: 39432, Stop: 39226, Start Num: 54

Candidate Starts for Allegro_44:

(Start: 54 @39432 has 31 MA's), (Start: 73 @39405 has 3 MA's), (74, 39402), (85, 39348), (92, 39315),

Gene: Amelia_27 Start: 19057, Stop: 18836, Start Num: 70

Candidate Starts for Amelia_27:

(Start: 70 @19057 has 18 MA's),

Gene: AnClar_39 Start: 35606, Stop: 35379, Start Num: 40

Candidate Starts for AnClar_39:

(Start: 40 @35606 has 5 MA's), (87, 35489), (102, 35420),

Gene: AnarQue_40 Start: 34838, Stop: 34584, Start Num: 38

Candidate Starts for AnarQue_40:

(22, 34880), (Start: 38 @34838 has 7 MA's), (72, 34790), (83, 34739), (86, 34721), (93, 34694),

Gene: Andrew_28 Start: 19161, Stop: 18955, Start Num: 70
Candidate Starts for Andrew_28:
(Start: 70 @19161 has 18 MA's),

Gene: Antonio_35 Start: 29354, Stop: 29118, Start Num: 60
Candidate Starts for Antonio_35:
(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: Antrice_26 Start: 19359, Stop: 19168, Start Num: 70
Candidate Starts for Antrice_26:
(29, 19434), (32, 19431), (Start: 70 @19359 has 18 MA's),

Gene: Apricot_38 Start: 28904, Stop: 28710, Start Num: 79
Candidate Starts for Apricot_38:
(Start: 60 @28946 has 49 MA's), (Start: 79 @28904 has 4 MA's), (82, 28883), (91, 28841), (100, 28793),

Gene: Arbiter_43 Start: 39491, Stop: 39312, Start Num: 73
Candidate Starts for Arbiter_43:
(Start: 54 @39518 has 31 MA's), (Start: 73 @39491 has 3 MA's), (74, 39488), (85, 39434), (92, 39401),

Gene: Ares_44 Start: 39502, Stop: 39296, Start Num: 54
Candidate Starts for Ares_44:
(Start: 54 @39502 has 31 MA's), (Start: 73 @39475 has 3 MA's), (74, 39472), (85, 39418), (92, 39385),

Gene: Asapag_39 Start: 30538, Stop: 30302, Start Num: 60
Candidate Starts for Asapag_39:
(Start: 60 @30538 has 49 MA's), (Start: 79 @30496 has 4 MA's), (82, 30475), (91, 30433), (100, 30385),

Gene: Avani_28 Start: 24082, Stop: 23903, Start Num: 61
Candidate Starts for Avani_28:
(Start: 49 @24106 has 1 MA's), (Start: 61 @24082 has 14 MA's), (Start: 71 @24076 has 3 MA's), (76, 24064), (Start: 79 @24049 has 4 MA's), (85, 24016), (101, 23920),

Gene: Axumite_38 Start: 32837, Stop: 32601, Start Num: 37
Candidate Starts for Axumite_38:
(35, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (68, 32786), (74, 32780), (92, 32690),

Gene: BENtherdunthat_38 Start: 28707, Stop: 28513, Start Num: 79
Candidate Starts for BENtherdunthat_38:
(Start: 60 @28749 has 49 MA's), (Start: 79 @28707 has 4 MA's), (82, 28686), (91, 28644), (100, 28596),

Gene: Bananafish_44 Start: 39438, Stop: 39232, Start Num: 54
Candidate Starts for Bananafish_44:
(Start: 54 @39438 has 31 MA's), (Start: 73 @39411 has 3 MA's), (74, 39408), (85, 39354), (92, 39321),

Gene: Basilisk_26 Start: 20189, Stop: 19986, Start Num: 70
Candidate Starts for Basilisk_26:
(Start: 70 @20189 has 18 MA's),

Gene: BatStarr_34 Start: 29521, Stop: 29285, Start Num: 60
Candidate Starts for BatStarr_34:
(Start: 60 @29521 has 49 MA's), (Start: 79 @29479 has 4 MA's), (91, 29416), (100, 29368), (104, 29356),

Gene: BearBQ_38 Start: 30173, Stop: 29937, Start Num: 60
Candidate Starts for BearBQ_38:
(Start: 60 @30173 has 49 MA's), (Start: 79 @30131 has 4 MA's), (82, 30110), (91, 30068), (100, 30020),

Gene: BeeGee_38 Start: 30304, Stop: 30068, Start Num: 60
Candidate Starts for BeeGee_38:
(Start: 60 @30304 has 49 MA's), (Start: 79 @30262 has 4 MA's), (82, 30241), (91, 30199), (100, 30151),

Gene: BiggityBass_38 Start: 35067, Stop: 34840, Start Num: 40
Candidate Starts for BiggityBass_38:
(31, 35082), (Start: 40 @35067 has 5 MA's), (87, 34950), (102, 34881),

Gene: Bipolar_22 Start: 24352, Stop: 24173, Start Num: 61
Candidate Starts for Bipolar_22:
(Start: 49 @24376 has 1 MA's), (Start: 61 @24352 has 14 MA's), (Start: 71 @24346 has 3 MA's), (Start: 79 @24319 has 4 MA's), (85, 24286), (101, 24190),

Gene: BirdsNest_46 Start: 37877, Stop: 37662, Start Num: 55
Candidate Starts for BirdsNest_46:
(Start: 55 @37877 has 8 MA's), (Start: 70 @37853 has 18 MA's), (Start: 79 @37826 has 4 MA's), (83, 37799), (96, 37733), (103, 37703),

Gene: Blocker23_44 Start: 39556, Stop: 39350, Start Num: 54
Candidate Starts for Blocker23_44:
(Start: 54 @39556 has 31 MA's), (Start: 73 @39529 has 3 MA's), (74, 39526), (85, 39472), (92, 39439),

Gene: BobRoss2024_37 Start: 32952, Stop: 32707, Start Num: 40
Candidate Starts for BobRoss2024_37:
(22, 32994), (24, 32985), (Start: 40 @32952 has 5 MA's), (Start: 58 @32919 has 2 MA's), (62, 32910), (68, 32901), (83, 32847), (99, 32763),

Gene: Bosnia_34 Start: 29521, Stop: 29285, Start Num: 60
Candidate Starts for Bosnia_34:
(Start: 60 @29521 has 49 MA's), (Start: 79 @29479 has 4 MA's), (91, 29416), (100, 29368), (104, 29356),

Gene: Boyle_44 Start: 39557, Stop: 39351, Start Num: 54
Candidate Starts for Boyle_44:
(Start: 54 @39557 has 31 MA's), (Start: 73 @39530 has 3 MA's), (74, 39527), (85, 39473), (92, 39440),

Gene: Brownie5_44 Start: 39563, Stop: 39357, Start Num: 54
Candidate Starts for Brownie5_44:
(Start: 54 @39563 has 31 MA's), (Start: 73 @39536 has 3 MA's), (74, 39533), (85, 39479), (92, 39446),

Gene: Brynnie_25 Start: 19788, Stop: 19591, Start Num: 63

Candidate Starts for Brynnie_25:
(Start: 63 @19788 has 4 MA's),

Gene: Budski_39 Start: 30500, Stop: 30264, Start Num: 60
Candidate Starts for Budski_39:
(Start: 60 @30500 has 49 MA's), (Start: 79 @30458 has 4 MA's), (82, 30437), (91, 30395), (100, 30347),

Gene: CaiB_40 Start: 34824, Stop: 34570, Start Num: 38
Candidate Starts for CaiB_40:
(22, 34866), (Start: 38 @34824 has 7 MA's), (72, 34776), (83, 34725), (86, 34707), (93, 34680),

Gene: Calamitous_44 Start: 39443, Stop: 39237, Start Num: 54
Candidate Starts for Calamitous_44:
(Start: 54 @39443 has 31 MA's), (Start: 73 @39416 has 3 MA's), (74, 39413), (85, 39359), (92, 39326),

Gene: Camara_26 Start: 18733, Stop: 18518, Start Num: 70
Candidate Starts for Camara_26:
(Start: 70 @18733 has 18 MA's),

Gene: Carthage_43 Start: 38107, Stop: 37892, Start Num: 53
Candidate Starts for Carthage_43:
(Start: 53 @38107 has 2 MA's), (Start: 70 @38077 has 18 MA's), (81, 38032), (88, 37999),

Gene: Catfish_31 Start: 25984, Stop: 25784, Start Num: 71
Candidate Starts for Catfish_31:
(7, 26254), (42, 26041), (Start: 71 @25984 has 3 MA's), (76, 25972), (88, 25897),

Gene: Che9d_28 Start: 24090, Stop: 23911, Start Num: 61
Candidate Starts for Che9d_28:
(Start: 49 @24114 has 1 MA's), (Start: 61 @24090 has 14 MA's), (Start: 71 @24084 has 3 MA's), (Start: 79 @24057 has 4 MA's), (85, 24024), (101, 23928),

Gene: CheeseTouch_37 Start: 27100, Stop: 26864, Start Num: 60
Candidate Starts for CheeseTouch_37:
(Start: 60 @27100 has 49 MA's), (Start: 79 @27058 has 4 MA's), (82, 27037), (91, 26995), (100, 26947),

Gene: Chickaboom_25 Start: 18878, Stop: 18663, Start Num: 63
Candidate Starts for Chickaboom_25:
(Start: 63 @18878 has 4 MA's),

Gene: Clap_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for Clap_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: CloverMinnie_40 Start: 34764, Stop: 34510, Start Num: 38
Candidate Starts for CloverMinnie_40:
(22, 34806), (Start: 38 @34764 has 7 MA's), (72, 34716), (83, 34665), (86, 34647), (93, 34620),

Gene: Coffee_44 Start: 39546, Stop: 39340, Start Num: 54
Candidate Starts for Coffee_44:
(Start: 54 @39546 has 31 MA's), (Start: 73 @39519 has 3 MA's), (74, 39516), (85, 39462), (92, 39429),

Gene: Coldpizza_41 Start: 37616, Stop: 37404, Start Num: 52

Candidate Starts for Coldpizza_41:

(Start: 40 @37640 has 5 MA's), (43, 37634), (Start: 52 @37616 has 1 MA's), (80, 37550), (83, 37535), (86, 37517), (91, 37496), (102, 37445),

Gene: Coral_26 Start: 18896, Stop: 18675, Start Num: 70

Candidate Starts for Coral_26:

(Start: 70 @18896 has 18 MA's),

Gene: Cote_27 Start: 19041, Stop: 18820, Start Num: 70

Candidate Starts for Cote_27:

(Start: 70 @19041 has 18 MA's),

Gene: Crater_36 Start: 28423, Stop: 28229, Start Num: 79

Candidate Starts for Crater_36:

(Start: 60 @28465 has 49 MA's), (Start: 79 @28423 has 4 MA's), (81, 28405), (82, 28402), (91, 28360), (100, 28312), (104, 28300), (109, 28240),

Gene: Cynthia_30 Start: 25663, Stop: 25463, Start Num: 60

Candidate Starts for Cynthia_30:

(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: DanHam62_26 Start: 18732, Stop: 18517, Start Num: 70

Candidate Starts for DanHam62_26:

(Start: 70 @18732 has 18 MA's),

Gene: Daob_27 Start: 19046, Stop: 18825, Start Num: 70

Candidate Starts for Daob_27:

(Start: 70 @19046 has 18 MA's),

Gene: Demsculpinboyz_28 Start: 24075, Stop: 23896, Start Num: 61

Candidate Starts for Demsculpinboyz_28:

(Start: 49 @24099 has 1 MA's), (Start: 61 @24075 has 14 MA's), (Start: 71 @24069 has 3 MA's), (Start: 79 @24042 has 4 MA's), (85, 24009), (101, 23913),

Gene: DigitDog_43 Start: 39348, Stop: 39139, Start Num: 59

Candidate Starts for DigitDog_43:

(16, 39456), (Start: 59 @39348 has 11 MA's), (Start: 70 @39333 has 18 MA's), (76, 39321),

Gene: Donny_44 Start: 39653, Stop: 39444, Start Num: 59

Candidate Starts for Donny_44:

(15, 39767), (16, 39761), (Start: 59 @39653 has 11 MA's), (Start: 70 @39638 has 18 MA's), (76, 39626), (81, 39593),

Gene: Eaglehorse_44 Start: 39470, Stop: 39264, Start Num: 54

Candidate Starts for Eaglehorse_44:

(Start: 54 @39470 has 31 MA's), (Start: 73 @39443 has 3 MA's), (74, 39440), (85, 39386), (92, 39353),

Gene: EastView9101_42 Start: 39303, Stop: 39094, Start Num: 59

Candidate Starts for EastView9101_42:

(15, 39417), (16, 39411), (Start: 59 @39303 has 11 MA's), (Start: 70 @39288 has 18 MA's), (76, 39276), (81, 39243),

Gene: Ebert_31 Start: 25587, Stop: 25387, Start Num: 60

Candidate Starts for Ebert_31:

(Start: 60 @25587 has 49 MA's), (76, 25566), (Start: 79 @25551 has 4 MA's), (80, 25539), (88, 25503),

Gene: Ecliptus_40 Start: 31004, Stop: 30768, Start Num: 60

Candidate Starts for Ecliptus_40:

(Start: 60 @31004 has 49 MA's), (Start: 79 @30962 has 4 MA's), (82, 30941), (91, 30899), (100, 30851),

Gene: Eudoria_35 Start: 29354, Stop: 29118, Start Num: 60

Candidate Starts for Eudoria_35:

(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: Evaa_38 Start: 33917, Stop: 33678, Start Num: 52

Candidate Starts for Evaa_38:

(Start: 40 @33941 has 5 MA's), (43, 33935), (Start: 52 @33917 has 1 MA's), (80, 33851), (102, 33746),

Gene: Eviarto_34 Start: 29497, Stop: 29261, Start Num: 60

Candidate Starts for Eviarto_34:

(Start: 60 @29497 has 49 MA's), (Start: 79 @29455 has 4 MA's), (91, 29392), (100, 29344), (104, 29332),

Gene: Faze9_43 Start: 39566, Stop: 39360, Start Num: 54

Candidate Starts for Faze9_43:

(Start: 54 @39566 has 31 MA's), (Start: 73 @39539 has 3 MA's), (74, 39536), (85, 39482), (92, 39449),

Gene: Finkle_37 Start: 29834, Stop: 29601, Start Num: 53

Candidate Starts for Finkle_37:

(14, 29927), (Start: 53 @29834 has 2 MA's),

Gene: ForDig_38 Start: 36976, Stop: 36779, Start Num: 59

Candidate Starts for ForDig_38:

(Start: 59 @36976 has 11 MA's), (67, 36964), (74, 36958), (Start: 79 @36937 has 4 MA's), (81, 36919),

Gene: FrenchFry_44 Start: 39560, Stop: 39354, Start Num: 54

Candidate Starts for FrenchFry_44:

(Start: 54 @39560 has 31 MA's), (Start: 73 @39533 has 3 MA's), (74, 39530), (85, 39476), (92, 39443),

Gene: Fresco_38 Start: 32837, Stop: 32601, Start Num: 37

Candidate Starts for Fresco_38:

(35, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (68, 32786), (74, 32780), (92, 32690),

Gene: Frickyeah_39 Start: 28597, Stop: 28403, Start Num: 79

Candidate Starts for Frickyeah_39:

(Start: 60 @28639 has 49 MA's), (Start: 79 @28597 has 4 MA's), (82, 28576), (91, 28534), (100, 28486),

Gene: Funsized_46 Start: 41756, Stop: 41544, Start Num: 55

Candidate Starts for Funsized_46:

(6, 42029), (8, 41957), (39, 41783), (Start: 55 @41756 has 8 MA's), (Start: 59 @41747 has 11 MA's), (74, 41723), (Start: 79 @41702 has 4 MA's), (81, 41684), (85, 41666),

Gene: Galaxy_26 Start: 19656, Stop: 19465, Start Num: 65
Candidate Starts for Galaxy_26:
(Start: 65 @19656 has 1 MA's),

Gene: GemG_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for GemG_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Getalong_40 Start: 31359, Stop: 31123, Start Num: 60
Candidate Starts for Getalong_40:
(Start: 60 @31359 has 49 MA's), (Start: 79 @31317 has 4 MA's), (82, 31296), (91, 31254), (100, 31206),

Gene: Gizermo_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for Gizermo_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Glass_44 Start: 39560, Stop: 39354, Start Num: 54
Candidate Starts for Glass_44:
(Start: 54 @39560 has 31 MA's), (Start: 73 @39533 has 3 MA's), (74, 39530), (85, 39476), (92, 39443),

Gene: Glotell_27 Start: 18731, Stop: 18516, Start Num: 70
Candidate Starts for Glotell_27:
(13, 18866), (25, 18812), (Start: 60 @18743 has 49 MA's), (Start: 70 @18731 has 18 MA's),

Gene: Godines_44 Start: 39502, Stop: 39296, Start Num: 54
Candidate Starts for Godines_44:
(Start: 54 @39502 has 31 MA's), (Start: 73 @39475 has 3 MA's), (74, 39472), (85, 39418), (92, 39385),

Gene: Haley23_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for Haley23_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: HannahPhantana_27 Start: 19053, Stop: 18832, Start Num: 70
Candidate Starts for HannahPhantana_27:
(Start: 70 @19053 has 18 MA's),

Gene: Hashim76_46 Start: 38349, Stop: 38134, Start Num: 55
Candidate Starts for Hashim76_46:
(Start: 55 @38349 has 8 MA's), (Start: 70 @38325 has 18 MA's), (83, 38271), (103, 38175),

Gene: Hedgerow_44 Start: 39542, Stop: 39336, Start Num: 54
Candidate Starts for Hedgerow_44:
(Start: 54 @39542 has 31 MA's), (Start: 73 @39515 has 3 MA's), (74, 39512), (85, 39458), (92, 39425),

Gene: Herod_34 Start: 29521, Stop: 29285, Start Num: 60
Candidate Starts for Herod_34:
(Start: 60 @29521 has 49 MA's), (Start: 79 @29479 has 4 MA's), (91, 29416), (100, 29368), (104, 29356),

Gene: Holeinone_44 Start: 39422, Stop: 39216, Start Num: 54

Candidate Starts for Holeinone_44:

(Start: 54 @39422 has 31 MA's), (Start: 73 @39395 has 3 MA's), (74, 39392), (85, 39338), (92, 39305),

Gene: Holliday_38 Start: 29214, Stop: 28978, Start Num: 60

Candidate Starts for Holliday_38:

(Start: 60 @29214 has 49 MA's), (Start: 79 @29172 has 4 MA's), (82, 29151), (91, 29109), (100, 29061),

Gene: Horus_39 Start: 30560, Stop: 30324, Start Num: 60

Candidate Starts for Horus_39:

(Start: 60 @30560 has 49 MA's), (Start: 79 @30518 has 4 MA's), (82, 30497), (91, 30455), (100, 30407),

Gene: Hosp_035 Start: 35180, Stop: 34983, Start Num: 59

Candidate Starts for Hosp_035:

(Start: 59 @35180 has 11 MA's), (67, 35168), (Start: 79 @35141 has 4 MA's), (81, 35123),

Gene: Hugley_32 Start: 29478, Stop: 29284, Start Num: 79

Candidate Starts for Hugley_32:

(Start: 60 @29520 has 49 MA's), (Start: 79 @29478 has 4 MA's), (91, 29415), (100, 29367), (104, 29355),

Gene: Indlovu_42 Start: 38503, Stop: 38300, Start Num: 59

Candidate Starts for Indlovu_42:

(18, 38602), (Start: 59 @38503 has 11 MA's), (Start: 70 @38485 has 18 MA's), (Start: 79 @38458 has 4 MA's), (81, 38440), (91, 38392),

Gene: ItsyBitsy1_44 Start: 39424, Stop: 39218, Start Num: 54

Candidate Starts for ItsyBitsy1_44:

(Start: 54 @39424 has 31 MA's), (Start: 73 @39397 has 3 MA's), (74, 39394), (85, 39340), (92, 39307),

Gene: Jamun_25 Start: 19385, Stop: 19188, Start Num: 63

Candidate Starts for Jamun_25:

(1, 20447), (2, 20237), (3, 19964), (4, 19799), (Start: 63 @19385 has 4 MA's),

Gene: Jolie1_037 Start: 36967, Stop: 36770, Start Num: 59

Candidate Starts for Jolie1_037:

(Start: 59 @36967 has 11 MA's), (67, 36955), (74, 36949), (Start: 79 @36928 has 4 MA's), (81, 36910),

Gene: KHumphrey_26 Start: 18730, Stop: 18515, Start Num: 70

Candidate Starts for KHumphrey_26:

(Start: 70 @18730 has 18 MA's),

Gene: Kaleb_44 Start: 39557, Stop: 39351, Start Num: 54

Candidate Starts for Kaleb_44:

(Start: 54 @39557 has 31 MA's), (Start: 73 @39530 has 3 MA's), (74, 39527), (85, 39473), (92, 39440),

Gene: KarasumaRum_45 Start: 39790, Stop: 39581, Start Num: 59

Candidate Starts for KarasumaRum_45:

(16, 39898), (Start: 59 @39790 has 11 MA's), (Start: 70 @39775 has 18 MA's), (76, 39763),

Gene: KayaCho_37 Start: 36966, Stop: 36766, Start Num: 59

Candidate Starts for KayaCho_37:

(Start: 59 @36966 has 11 MA's), (Start: 70 @36951 has 18 MA's), (Start: 79 @36924 has 4 MA's), (81, 36906),

Gene: Kenna_38 Start: 29550, Stop: 29314, Start Num: 60

Candidate Starts for Kenna_38:

(Start: 60 @29550 has 49 MA's), (Start: 79 @29508 has 4 MA's), (82, 29487), (91, 29445), (100, 29397),

Gene: Kenuha5_22 Start: 24468, Stop: 24289, Start Num: 61

Candidate Starts for Kenuha5_22:

(Start: 49 @24492 has 1 MA's), (Start: 61 @24468 has 14 MA's), (Start: 71 @24462 has 3 MA's), (Start: 79 @24435 has 4 MA's), (85, 24402), (101, 24306),

Gene: Kersh_23 Start: 24511, Stop: 24332, Start Num: 61

Candidate Starts for Kersh_23:

(Start: 49 @24535 has 1 MA's), (Start: 61 @24511 has 14 MA's), (Start: 71 @24505 has 3 MA's), (Start: 79 @24478 has 4 MA's), (85, 24445), (101, 24349),

Gene: Kheth_44 Start: 39445, Stop: 39239, Start Num: 54

Candidate Starts for Kheth_44:

(Start: 54 @39445 has 31 MA's), (Start: 73 @39418 has 3 MA's), (74, 39415), (85, 39361), (92, 39328),

Gene: Kita_36 Start: 29363, Stop: 29127, Start Num: 60

Candidate Starts for Kita_36:

(Start: 60 @29363 has 49 MA's), (Start: 79 @29321 has 4 MA's), (82, 29300), (91, 29258), (100, 29210), (109, 29138),

Gene: Knocker_45 Start: 40870, Stop: 40658, Start Num: 55

Candidate Starts for Knocker_45:

(14, 40978), (Start: 55 @40870 has 8 MA's), (Start: 59 @40861 has 11 MA's), (74, 40837), (76, 40831), (Start: 79 @40816 has 4 MA's), (81, 40798),

Gene: Kolhan_44 Start: 39436, Stop: 39230, Start Num: 54

Candidate Starts for Kolhan_44:

(Start: 54 @39436 has 31 MA's), (Start: 73 @39409 has 3 MA's), (74, 39406), (85, 39352), (92, 39319),

Gene: Kuleana_27 Start: 19065, Stop: 18880, Start Num: 70

Candidate Starts for Kuleana_27:

(Start: 60 @19077 has 49 MA's), (Start: 70 @19065 has 18 MA's),

Gene: Lars_44 Start: 39547, Stop: 39341, Start Num: 54

Candidate Starts for Lars_44:

(Start: 54 @39547 has 31 MA's), (Start: 73 @39520 has 3 MA's), (74, 39517), (85, 39463), (92, 39430),

Gene: Laurie_43 Start: 38946, Stop: 38740, Start Num: 54

Candidate Starts for Laurie_43:

(Start: 54 @38946 has 31 MA's), (Start: 73 @38919 has 3 MA's), (74, 38916), (85, 38862), (92, 38829),

Gene: Leona_25 Start: 18655, Stop: 18440, Start Num: 70

Candidate Starts for Leona_25:

(13, 18790), (25, 18736), (Start: 60 @18667 has 49 MA's), (Start: 70 @18655 has 18 MA's),

Gene: Lephleur_44 Start: 39440, Stop: 39234, Start Num: 54

Candidate Starts for Lephleur_44:

(Start: 54 @39440 has 31 MA's), (Start: 73 @39413 has 3 MA's), (74, 39410), (85, 39356), (92, 39323),

Gene: Leroy_39 Start: 30561, Stop: 30325, Start Num: 60

Candidate Starts for Leroy_39:

(Start: 60 @30561 has 49 MA's), (Start: 79 @30519 has 4 MA's), (82, 30498), (91, 30456), (100, 30408),

Gene: Ligma_38 Start: 32837, Stop: 32601, Start Num: 37

Candidate Starts for Ligma_38:

(35, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (68, 32786), (74, 32780), (92, 32690),

Gene: LilMcDreamy_41 Start: 38754, Stop: 38542, Start Num: 59

Candidate Starts for LilMcDreamy_41:

(16, 38862), (Start: 59 @38754 has 11 MA's), (Start: 70 @38736 has 18 MA's), (81, 38691), (93, 38637),

Gene: LilSmirk_44 Start: 39434, Stop: 39228, Start Num: 54

Candidate Starts for LilSmirk_44:

(Start: 54 @39434 has 31 MA's), (Start: 73 @39407 has 3 MA's), (74, 39404), (85, 39350), (92, 39317),

Gene: LittleMunchkin_40 Start: 36172, Stop: 35945, Start Num: 40

Candidate Starts for LittleMunchkin_40:

(Start: 40 @36172 has 5 MA's), (87, 36055), (93, 36031),

Gene: LizLemon_44 Start: 39556, Stop: 39350, Start Num: 54

Candidate Starts for LizLemon_44:

(Start: 54 @39556 has 31 MA's), (Start: 73 @39529 has 3 MA's), (74, 39526), (85, 39472), (92, 39439),

Gene: LonelyBoi_35 Start: 30866, Stop: 30690, Start Num: 69

Candidate Starts for LonelyBoi_35:

(Start: 69 @30866 has 1 MA's), (76, 30851), (80, 30824),

Gene: Lukepolites_69 Start: 44405, Stop: 44190, Start Num: 44

Candidate Starts for Lukepolites_69:

(44, 44405),

Gene: Lunar_27 Start: 19041, Stop: 18820, Start Num: 70

Candidate Starts for Lunar_27:

(Start: 70 @19041 has 18 MA's),

Gene: Lutum_39 Start: 29550, Stop: 29314, Start Num: 60

Candidate Starts for Lutum_39:

(Start: 60 @29550 has 49 MA's), (Start: 79 @29508 has 4 MA's), (82, 29487), (91, 29445), (100, 29397),

Gene: Madiba_23 Start: 24209, Stop: 24036, Start Num: 71

Candidate Starts for Madiba_23:

(Start: 49 @24239 has 1 MA's), (Start: 61 @24215 has 14 MA's), (Start: 71 @24209 has 3 MA's), (Start: 79 @24182 has 4 MA's), (85, 24149), (101, 24053),

Gene: MakoManhole_40 Start: 34842, Stop: 34588, Start Num: 38
Candidate Starts for MakoManhole_40:
(22, 34884), (Start: 38 @34842 has 7 MA's), (72, 34794), (83, 34743), (86, 34725), (93, 34698),

Gene: Manasvini_35 Start: 29355, Stop: 29119, Start Num: 60
Candidate Starts for Manasvini_35:
(Start: 60 @29355 has 49 MA's), (Start: 79 @29313 has 4 MA's), (82, 29292), (91, 29250), (100, 29202), (109, 29130),

Gene: Maridalia_34 Start: 29354, Stop: 29118, Start Num: 60
Candidate Starts for Maridalia_34:
(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: Maruru_95 Start: 57307, Stop: 57080, Start Num: 50
Candidate Starts for Maruru_95:
(33, 57349), (34, 57343), (Start: 37 @57337 has 4 MA's), (43, 57325), (Start: 49 @57310 has 1 MA's), (50, 57307), (Start: 70 @57274 has 18 MA's), (77, 57259),

Gene: Maruru_32 Start: 29698, Stop: 29486, Start Num: 61
Candidate Starts for Maruru_32:
(10, 29905), (Start: 52 @29716 has 1 MA's), (Start: 61 @29698 has 14 MA's),

Gene: MasterPo_44 Start: 39443, Stop: 39237, Start Num: 54
Candidate Starts for MasterPo_44:
(Start: 54 @39443 has 31 MA's), (Start: 73 @39416 has 3 MA's), (74, 39413), (85, 39359), (92, 39326),

Gene: Melons_27 Start: 19041, Stop: 18820, Start Num: 70
Candidate Starts for Melons_27:
(Start: 70 @19041 has 18 MA's),

Gene: Mocha12_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for Mocha12_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: MossRose_40 Start: 34821, Stop: 34567, Start Num: 38
Candidate Starts for MossRose_40:
(22, 34863), (Start: 38 @34821 has 7 MA's), (72, 34773), (83, 34722), (86, 34704), (93, 34677),

Gene: Mufasa8_29 Start: 27032, Stop: 26823, Start Num: 61
Candidate Starts for Mufasa8_29:
(Start: 61 @27032 has 14 MA's),

Gene: Mysterious_45 Start: 39920, Stop: 39711, Start Num: 59
Candidate Starts for Mysterious_45:
(16, 40028), (Start: 59 @39920 has 11 MA's), (Start: 70 @39905 has 18 MA's), (81, 39860),

Gene: NHagos_38 Start: 33445, Stop: 33185, Start Num: 38
Candidate Starts for NHagos_38:
(24, 33478), (Start: 38 @33445 has 7 MA's), (68, 33403), (72, 33400), (83, 33349), (86, 33331), (93, 33304),

Gene: Nangang_43 Start: 39713, Stop: 39504, Start Num: 59

Candidate Starts for Nangang_43:

(16, 39821), (Start: 59 @39713 has 11 MA's), (Start: 70 @39698 has 18 MA's), (76, 39686),

Gene: Nehemiah_43 Start: 39920, Stop: 39711, Start Num: 59

Candidate Starts for Nehemiah_43:

(16, 40028), (Start: 59 @39920 has 11 MA's), (Start: 70 @39905 has 18 MA's), (81, 39860),

Gene: Neobush_35 Start: 29354, Stop: 29118, Start Num: 60

Candidate Starts for Neobush_35:

(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: Nymphadora_34 Start: 29521, Stop: 29285, Start Num: 60

Candidate Starts for Nymphadora_34:

(Start: 60 @29521 has 49 MA's), (Start: 79 @29479 has 4 MA's), (91, 29416), (100, 29368), (104, 29356),

Gene: ODay_42 Start: 31024, Stop: 30788, Start Num: 60

Candidate Starts for ODay_42:

(Start: 60 @31024 has 49 MA's), (Start: 79 @30982 has 4 MA's), (82, 30961), (91, 30919), (100, 30871),

Gene: Ogopogo_25 Start: 24675, Stop: 24496, Start Num: 61

Candidate Starts for Ogopogo_25:

(Start: 49 @24699 has 1 MA's), (Start: 61 @24675 has 14 MA's), (Start: 71 @24669 has 3 MA's), (Start: 79 @24642 has 4 MA's), (85, 24609), (101, 24513),

Gene: Opia_44 Start: 39429, Stop: 39223, Start Num: 54

Candidate Starts for Opia_44:

(Start: 54 @39429 has 31 MA's), (Start: 73 @39402 has 3 MA's), (74, 39399), (85, 39345), (92, 39312),

Gene: Orcanus_26 Start: 19951, Stop: 19748, Start Num: 70

Candidate Starts for Orcanus_26:

(Start: 70 @19951 has 18 MA's),

Gene: Periwinkle_42 Start: 31005, Stop: 30769, Start Num: 60

Candidate Starts for Periwinkle_42:

(Start: 60 @31005 has 49 MA's), (Start: 79 @30963 has 4 MA's), (82, 30942), (91, 30900), (100, 30852),

Gene: Phabuloso_36 Start: 29262, Stop: 29026, Start Num: 60

Candidate Starts for Phabuloso_36:

(Start: 60 @29262 has 49 MA's), (Start: 79 @29220 has 4 MA's), (82, 29199), (91, 29157), (100, 29109),

Gene: Phantasmagoria_44 Start: 39441, Stop: 39235, Start Num: 54

Candidate Starts for Phantasmagoria_44:

(Start: 54 @39441 has 31 MA's), (Start: 73 @39414 has 3 MA's), (74, 39411), (85, 39357), (92, 39324),

Gene: Phelemich_43 Start: 39919, Stop: 39710, Start Num: 59

Candidate Starts for Phelemich_43:

(16, 40027), (Start: 59 @39919 has 11 MA's), (Start: 70 @39904 has 18 MA's), (81, 39859),

Gene: Phistory_39 Start: 29860, Stop: 29666, Start Num: 79

Candidate Starts for Phistory_39:

(Start: 60 @29902 has 49 MA's), (Start: 79 @29860 has 4 MA's), (82, 29839), (91, 29797), (100, 29749),

Gene: PhluffyCoco_26 Start: 18717, Stop: 18502, Start Num: 70

Candidate Starts for PhluffyCoco_26:

(Start: 70 @18717 has 18 MA's),

Gene: Pine5_39 Start: 32324, Stop: 32103, Start Num: 60

Candidate Starts for Pine5_39:

(Start: 60 @32324 has 49 MA's), (76, 32294), (Start: 79 @32279 has 4 MA's), (93, 32210),

Gene: Polka_26 Start: 18904, Stop: 18683, Start Num: 70

Candidate Starts for Polka_26:

(Start: 70 @18904 has 18 MA's),

Gene: Polly_32 Start: 28797, Stop: 28561, Start Num: 60

Candidate Starts for Polly_32:

(Start: 60 @28797 has 49 MA's), (Start: 79 @28755 has 4 MA's), (82, 28734), (91, 28692), (100, 28644), (109, 28572),

Gene: Pollywog_25 Start: 25545, Stop: 25366, Start Num: 61

Candidate Starts for Pollywog_25:

(Start: 49 @25569 has 1 MA's), (Start: 61 @25545 has 14 MA's), (Start: 71 @25539 has 3 MA's), (Start: 79 @25512 has 4 MA's), (85, 25479), (101, 25383),

Gene: PrinceCharming_44 Start: 39549, Stop: 39343, Start Num: 54

Candidate Starts for PrinceCharming_44:

(Start: 54 @39549 has 31 MA's), (Start: 73 @39522 has 3 MA's), (74, 39519), (85, 39465), (92, 39432),

Gene: Purky_30 Start: 26584, Stop: 26351, Start Num: 61

Candidate Starts for Purky_30:

(27, 26659), (28, 26656), (32, 26650), (57, 26593), (Start: 61 @26584 has 14 MA's), (76, 26560), (85, 26512), (100, 26434), (105, 26419),

Gene: Purky_36 Start: 28450, Stop: 28653, Start Num: 49

Candidate Starts for Purky_36:

(Start: 49 @28450 has 1 MA's), (56, 28462), (Start: 71 @28480 has 3 MA's), (92, 28588), (94, 28600),

Gene: Qyrzula_41 Start: 39560, Stop: 39381, Start Num: 73

Candidate Starts for Qyrzula_41:

(Start: 54 @39587 has 31 MA's), (Start: 73 @39560 has 3 MA's), (74, 39557), (85, 39503), (92, 39470),

Gene: REQ2_31 Start: 26798, Stop: 26559, Start Num: 53

Candidate Starts for REQ2_31:

(5, 27161), (21, 26879), (23, 26873), (Start: 53 @26798 has 2 MA's), (90, 26669), (98, 26624),

Gene: RavenCo17_36 Start: 30180, Stop: 29944, Start Num: 60

Candidate Starts for RavenCo17_36:

(Start: 60 @30180 has 49 MA's), (Start: 79 @30138 has 4 MA's), (82, 30117), (91, 30075), (100, 30027),

Gene: RayTheFireFly_38 Start: 29870, Stop: 29667, Start Num: 78
Candidate Starts for RayTheFireFly_38:
(Start: 60 @29903 has 49 MA's), (Start: 78 @29870 has 1 MA's), (82, 29840), (89, 29807), (91, 29798),
(100, 29750),

Gene: RedFox_26 Start: 18732, Stop: 18517, Start Num: 70
Candidate Starts for RedFox_26:
(Start: 70 @18732 has 18 MA's),

Gene: Rem711_6 Start: 3521, Stop: 3279, Start Num: 58
Candidate Starts for Rem711_6:
(9, 3722), (26, 3584), (Start: 58 @3521 has 2 MA's), (85, 3443), (91, 3413), (94, 3398), (97, 3380),

Gene: Reprobate_44 Start: 39924, Stop: 39715, Start Num: 59
Candidate Starts for Reprobate_44:
(16, 40032), (Start: 59 @39924 has 11 MA's), (Start: 70 @39909 has 18 MA's), (81, 39864),

Gene: Rhinoforte_44 Start: 39550, Stop: 39344, Start Num: 54
Candidate Starts for Rhinoforte_44:
(Start: 54 @39550 has 31 MA's), (Start: 73 @39523 has 3 MA's), (74, 39520), (85, 39466), (92, 39433),

Gene: Rinkes_44 Start: 40426, Stop: 40223, Start Num: 59
Candidate Starts for Rinkes_44:
(Start: 59 @40426 has 11 MA's), (81, 40363),

Gene: Rita130_44 Start: 39651, Stop: 39442, Start Num: 59
Candidate Starts for Rita130_44:
(15, 39765), (16, 39759), (Start: 59 @39651 has 11 MA's), (Start: 70 @39636 has 18 MA's), (76,
39624), (81, 39591),

Gene: Rosebush_43 Start: 39530, Stop: 39351, Start Num: 73
Candidate Starts for Rosebush_43:
(Start: 54 @39557 has 31 MA's), (Start: 73 @39530 has 3 MA's), (74, 39527), (85, 39473), (92, 39440),

Gene: Sabella_43 Start: 39434, Stop: 39228, Start Num: 54
Candidate Starts for Sabella_43:
(Start: 54 @39434 has 31 MA's), (Start: 73 @39407 has 3 MA's), (74, 39404), (85, 39350), (92, 39317),

Gene: Saguaro_45 Start: 40648, Stop: 40445, Start Num: 59
Candidate Starts for Saguaro_45:
(17, 40756), (Start: 59 @40648 has 11 MA's), (81, 40585), (83, 40576), (91, 40537),

Gene: Sahara_29 Start: 25333, Stop: 25133, Start Num: 60
Candidate Starts for Sahara_29:
(Start: 60 @25333 has 49 MA's), (76, 25312), (Start: 79 @25297 has 4 MA's), (80, 25285), (88, 25249),

Gene: Savage_30 Start: 25663, Stop: 25463, Start Num: 60
Candidate Starts for Savage_30:
(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Sbash_32 Start: 28849, Stop: 28601, Start Num: 61
Candidate Starts for Sbash_32:

(27, 28924), (28, 28921), (32, 28915), (57, 28858), (Start: 61 @28849 has 14 MA's), (76, 28825), (100, 28699), (105, 28684), (111, 28609),

Gene: Shambre1_30 Start: 22778, Stop: 22578, Start Num: 64
Candidate Starts for Shambre1_30:
(Start: 64 @22778 has 3 MA's), (107, 22595),

Gene: Shatter_38 Start: 32837, Stop: 32601, Start Num: 37
Candidate Starts for Shatter_38:
(35, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (68, 32786), (74, 32780), (92, 32690),

Gene: ShawBrad_38 Start: 29124, Stop: 28888, Start Num: 60
Candidate Starts for ShawBrad_38:
(Start: 60 @29124 has 49 MA's), (Start: 79 @29082 has 4 MA's), (82, 29061), (91, 29019), (100, 28971),

Gene: Shenyu_43 Start: 39713, Stop: 39504, Start Num: 59
Candidate Starts for Shenyu_43:
(16, 39821), (Start: 59 @39713 has 11 MA's), (Start: 70 @39698 has 18 MA's), (76, 39686),

Gene: ShroomBoi_22 Start: 24354, Stop: 24175, Start Num: 61
Candidate Starts for ShroomBoi_22:
(Start: 49 @24378 has 1 MA's), (Start: 61 @24354 has 14 MA's), (Start: 71 @24348 has 3 MA's), (76, 24336), (Start: 79 @24321 has 4 MA's), (85, 24288), (101, 24192),

Gene: SirJeffery_44 Start: 39650, Stop: 39441, Start Num: 59
Candidate Starts for SirJeffery_44:
(15, 39764), (16, 39758), (Start: 59 @39650 has 11 MA's), (Start: 70 @39635 has 18 MA's), (76, 39623), (81, 39590),

Gene: Sisko_38 Start: 33610, Stop: 33383, Start Num: 40
Candidate Starts for Sisko_38:
(Start: 40 @33610 has 5 MA's), (87, 33493), (102, 33424),

Gene: Sleepyhead_33 Start: 26741, Stop: 26493, Start Num: 60
Candidate Starts for Sleepyhead_33:
(30, 26798), (Start: 60 @26741 has 49 MA's), (Start: 73 @26723 has 3 MA's), (88, 26651), (91, 26636),

Gene: Sonali_32 Start: 30335, Stop: 30120, Start Num: 61
Candidate Starts for Sonali_32:
(Start: 61 @30335 has 14 MA's),

Gene: Sour_43 Start: 37566, Stop: 37306, Start Num: 41
Candidate Starts for Sour_43:
(Start: 41 @37566 has 1 MA's), (74, 37515),

Gene: Spooky_39 Start: 29741, Stop: 29508, Start Num: 64
Candidate Starts for Spooky_39:
(36, 29801), (48, 29771), (Start: 64 @29741 has 3 MA's), (66, 29738), (75, 29723), (104, 29549), (106, 29543),

Gene: Sproutie_30 Start: 25663, Stop: 25463, Start Num: 60

Candidate Starts for Sproutie_30:

(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Squiddly_40 Start: 31125, Stop: 30892, Start Num: 64

Candidate Starts for Squiddly_40:

(36, 31185), (48, 31155), (Start: 64 @31125 has 3 MA's), (66, 31122), (75, 31107), (104, 30933), (106, 30927),

Gene: Stinger_39 Start: 37776, Stop: 37570, Start Num: 55

Candidate Starts for Stinger_39:

(Start: 55 @37776 has 8 MA's), (Start: 70 @37755 has 18 MA's), (74, 37749), (Start: 79 @37728 has 4 MA's), (81, 37710), (85, 37692), (91, 37662), (92, 37659), (93, 37656),

Gene: StinkyVeggy_45 Start: 39790, Stop: 39581, Start Num: 59

Candidate Starts for StinkyVeggy_45:

(16, 39898), (Start: 59 @39790 has 11 MA's), (Start: 70 @39775 has 18 MA's), (76, 39763),

Gene: StuartMinion_25 Start: 18294, Stop: 18103, Start Num: 70

Candidate Starts for StuartMinion_25:

(8, 18519), (12, 18441), (13, 18429), (Start: 60 @18306 has 49 MA's), (Start: 70 @18294 has 18 MA's),

Gene: Stuck_40 Start: 31182, Stop: 30949, Start Num: 61

Candidate Starts for Stuck_40:

(27, 31257), (28, 31254), (32, 31248), (57, 31191), (Start: 61 @31182 has 14 MA's), (76, 31158), (85, 31110), (100, 31032),

Gene: Suigeneris_44 Start: 39653, Stop: 39444, Start Num: 59

Candidate Starts for Suigeneris_44:

(15, 39767), (16, 39761), (Start: 59 @39653 has 11 MA's), (Start: 70 @39638 has 18 MA's), (76, 39626), (81, 39593),

Gene: Sunshine23_32 Start: 29942, Stop: 29730, Start Num: 61

Candidate Starts for Sunshine23_32:

(Start: 61 @29942 has 14 MA's),

Gene: Suscepit_35 Start: 29355, Stop: 29119, Start Num: 60

Candidate Starts for Suscepit_35:

(Start: 60 @29355 has 49 MA's), (Start: 79 @29313 has 4 MA's), (82, 29292), (91, 29250), (100, 29202), (109, 29130),

Gene: TA17A_45 Start: 39424, Stop: 39218, Start Num: 54

Candidate Starts for TA17A_45:

(Start: 54 @39424 has 31 MA's), (Start: 73 @39397 has 3 MA's), (74, 39394), (85, 39340), (92, 39307),

Gene: TaylorSipht_26 Start: 18969, Stop: 18775, Start Num: 70

Candidate Starts for TaylorSipht_26:

(Start: 70 @18969 has 18 MA's),

Gene: Tayonia_35 Start: 29354, Stop: 29118, Start Num: 60

Candidate Starts for Tayonia_35:

(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: ThetaBob_24 Start: 24665, Stop: 24492, Start Num: 71

Candidate Starts for ThetaBob_24:

(Start: 49 @24695 has 1 MA's), (Start: 61 @24671 has 14 MA's), (Start: 71 @24665 has 3 MA's),
(Start: 79 @24638 has 4 MA's), (85, 24605), (101, 24509),

Gene: Thonko_43 Start: 36961, Stop: 36752, Start Num: 58

Candidate Starts for Thonko_43:

(11, 37108), (20, 37054), (Start: 58 @36961 has 2 MA's), (76, 36931), (88, 36865),

Gene: TimTam_34 Start: 29521, Stop: 29285, Start Num: 60

Candidate Starts for TimTam_34:

(Start: 60 @29521 has 49 MA's), (Start: 79 @29479 has 4 MA's), (91, 29416), (100, 29368), (104,
29356),

Gene: Tinciduntolum_45 Start: 39562, Stop: 39356, Start Num: 54

Candidate Starts for Tinciduntolum_45:

(Start: 54 @39562 has 31 MA's), (Start: 73 @39535 has 3 MA's), (74, 39532), (85, 39478), (92, 39445),

Gene: Tres_44 Start: 39437, Stop: 39231, Start Num: 54

Candidate Starts for Tres_44:

(Start: 54 @39437 has 31 MA's), (Start: 73 @39410 has 3 MA's), (74, 39407), (85, 39353), (92, 39320),

Gene: Trumpet_35 Start: 29355, Stop: 29119, Start Num: 60

Candidate Starts for Trumpet_35:

(Start: 60 @29355 has 49 MA's), (Start: 79 @29313 has 4 MA's), (82, 29292), (91, 29250), (100,
29202), (109, 29130),

Gene: TuertoX_30 Start: 25663, Stop: 25463, Start Num: 60

Candidate Starts for TuertoX_30:

(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Vasanti_31 Start: 26204, Stop: 25965, Start Num: 60

Candidate Starts for Vasanti_31:

(Start: 60 @26204 has 49 MA's), (76, 26183), (Start: 79 @26168 has 4 MA's), (80, 26156), (88, 26120),
(110, 25973),

Gene: Vic9_00043 Start: 39943, Stop: 39737, Start Num: 54

Candidate Starts for Vic9_00043:

(Start: 54 @39943 has 31 MA's), (Start: 73 @39916 has 3 MA's), (85, 39859), (92, 39826),

Gene: Vincenzo_41 Start: 39951, Stop: 39745, Start Num: 55

Candidate Starts for Vincenzo_41:

(Start: 55 @39951 has 8 MA's), (Start: 70 @39930 has 18 MA's), (74, 39924), (Start: 79 @39903 has 4
MA's), (81, 39885), (83, 39876), (85, 39867), (91, 39837), (92, 39834), (93, 39831),

Gene: Vulpecula_25 Start: 19383, Stop: 19186, Start Num: 63

Candidate Starts for Vulpecula_25:

(Start: 63 @19383 has 4 MA's),

Gene: West99_44 Start: 39557, Stop: 39351, Start Num: 54

Candidate Starts for West99_44:

(Start: 54 @39557 has 31 MA's), (Start: 73 @39530 has 3 MA's), (74, 39527), (85, 39473), (92, 39440),

Gene: Whack_33 Start: 28160, Stop: 27924, Start Num: 60

Candidate Starts for Whack_33:

(45, 28187), (Start: 60 @28160 has 49 MA's), (94, 28040),

Gene: Whiteclaw_30 Start: 25663, Stop: 25463, Start Num: 60

Candidate Starts for Whiteclaw_30:

(Start: 60 @25663 has 49 MA's), (76, 25642), (Start: 79 @25627 has 4 MA's), (80, 25615), (88, 25579),

Gene: Whitney_42 Start: 32542, Stop: 32306, Start Num: 60

Candidate Starts for Whitney_42:

(Start: 60 @32542 has 49 MA's), (Start: 79 @32500 has 4 MA's), (82, 32479), (91, 32437), (100, 32389),

Gene: Wooper_40 Start: 34857, Stop: 34591, Start Num: 38

Candidate Starts for Wooper_40:

(22, 34902), (24, 34893), (Start: 38 @34857 has 7 MA's), (68, 34809), (72, 34806), (76, 34797), (86, 34737), (93, 34710),

Gene: Yago84_38 Start: 33684, Stop: 33457, Start Num: 40

Candidate Starts for Yago84_38:

(Start: 40 @33684 has 5 MA's), (87, 33567), (102, 33498),

Gene: Yeshua_40 Start: 34834, Stop: 34568, Start Num: 38

Candidate Starts for Yeshua_40:

(22, 34879), (24, 34870), (Start: 38 @34834 has 7 MA's), (68, 34786), (72, 34783), (76, 34774), (86, 34714), (93, 34687),

Gene: Yoshi_28 Start: 24080, Stop: 23901, Start Num: 61

Candidate Starts for Yoshi_28:

(Start: 49 @24104 has 1 MA's), (Start: 61 @24080 has 14 MA's), (Start: 71 @24074 has 3 MA's), (Start: 79 @24047 has 4 MA's), (85, 24014), (101, 23918),

Gene: Zameen_35 Start: 29354, Stop: 29118, Start Num: 60

Candidate Starts for Zameen_35:

(Start: 60 @29354 has 49 MA's), (Start: 79 @29312 has 4 MA's), (82, 29291), (91, 29249), (100, 29201), (109, 29129),

Gene: Zenteno07_48 Start: 38553, Stop: 38338, Start Num: 55

Candidate Starts for Zenteno07_48:

(Start: 55 @38553 has 8 MA's), (Start: 70 @38529 has 18 MA's), (83, 38475), (103, 38379),

Gene: phiAsp2_39 Start: 33131, Stop: 33403, Start Num: 30

Candidate Starts for phiAsp2_39:

(19, 33095), (30, 33131), (42, 33155), (Start: 69 @33191 has 1 MA's), (84, 33251), (95, 33317), (108, 33392),