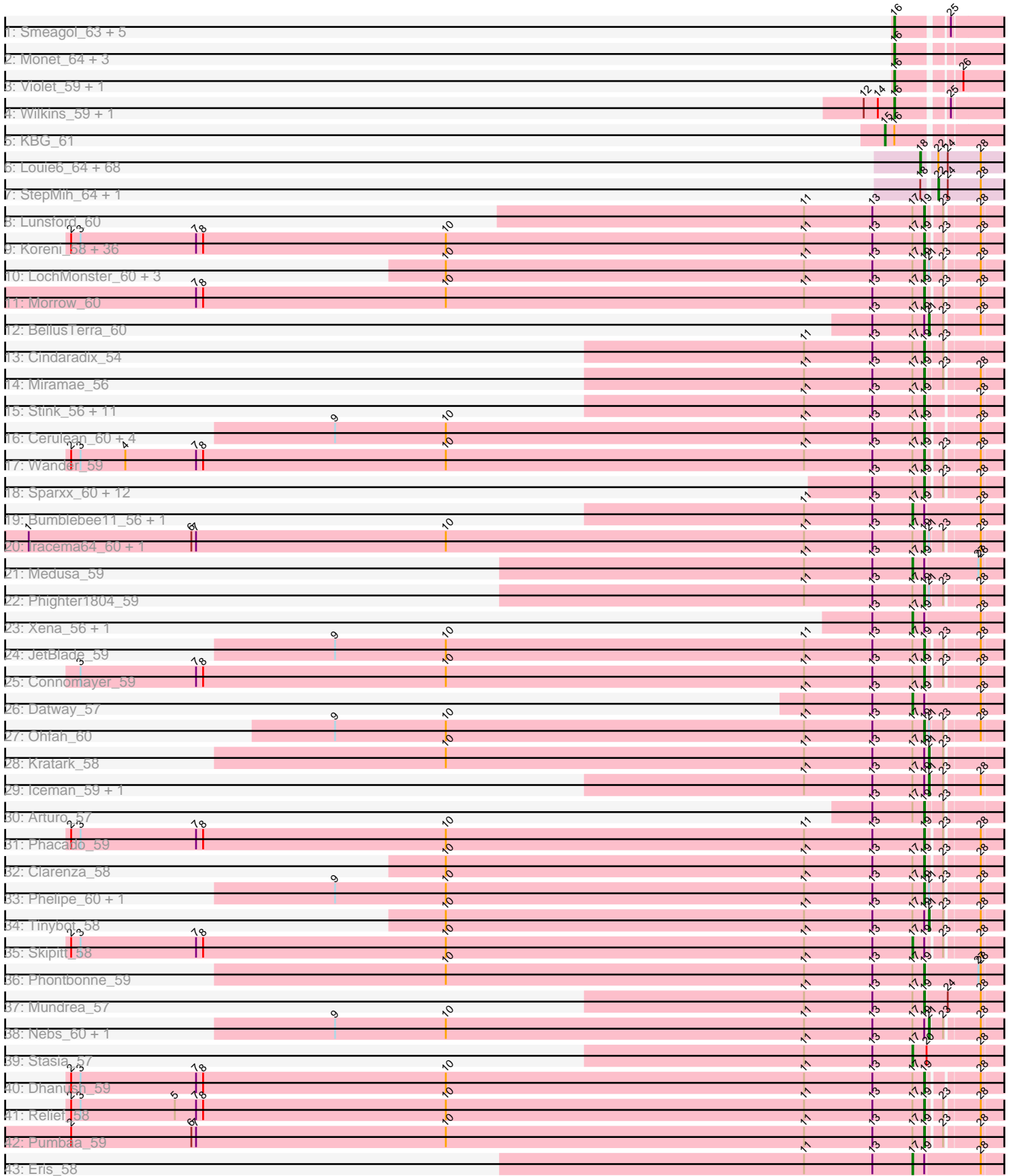


Pham 171215



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 171215 Report

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

Pham number 171215 has 194 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Smeagol_63, Rutherford_63, Slagathor_63, Anglerfish_61, Manatee_61, Arcanine_63
- Track 2 : Monet_64, Treddle_62, Rhynn_59, ILeeKay_63
- Track 3 : Violet_59, Hami1_53
- Track 4 : Wilkins_59, Topgun_59
- Track 5 : KBG_61
- Track 6 : Louie6_64, Bxz2_60, Jobu08_63, Mainiac_65, JeppNRM_66, GingkoMaracino_65, HaveUMetTed_66, Misomonster_66, Grub_65, Cullens_65, Daishi_64, Heliosoles_64, BreSam8_65, GtownJaz_65, Fernando_65, JenCasNa_66, Marie_63, Grif_65, SoilDragon_65, Gemma_64, OlanP_64, P28Green_66, Sabia_65, LugYA_68, Phoebe_66, Ollie_65, Groupthink_66, Reba_65, Soshari_67, MoneyMay_64, HashRod_66, PhishRPhriends_63, Watson_64, Taurus_66, Kalnok_66, DaHudson_64, MadMarie_65, Kalb97_66, Methuselah_60, PGHhamlin_67, Hercules11_65, Pawn_65, MuchMore_68, AgronaGT15_64, EpicPhail_66, Farber_65, Malinsilva_67, Phranny_66, Phoxy_65, Zetzy_64, Wooldri_67, Vix_63, Marius_66, Anubis_68, LarryKay_65, LBerry_66, Pembroke_65, Rummer_64, Spike509_65, MarQuardt_65, PotatoSplit_66, PurpleHaze_65, Dieselweasel_66, AugsMagnumOpus_68, JHC117_63, Manu_65, Tiffany_64, Aglet_66, ACFishhook_63
- Track 7 : StepMih_64, Microwolf_63
- Track 8 : Lunsford_60
- Track 9 : Koreni_58, TygerBlood_59, Millski_58, LittleB_59, Lemur_59, Gadost_59, Avle17_59, Chaph_59, KFPoly_58, Melvin_61, Ruin_59, Funston_58, Alberto7_60, Bruiser_58, TroyPia_60, Burger_57, PeterPeter_59, Kyee_59, Thanksgivukkah_58, Romney_58, LittleGuy_59, Albee_59, Maxo_60, Camperdownii_57, Flux_59, Eapen_59, BubbleTrouble_58, Lorenzo_59, Palestino_58, OKaNui_59, Cocoaberry_59, YoSam321_59, Wilbur_59, Kingmustik0402_59, JoongJeon_58, Mazhar510_59, Kampy_58
- Track 10 : LochMonster_60, Ulysses_58, DirtyDunning_58, Spino_58
- Track 11 : Morrow_60
- Track 12 : BellusTerra_60
- Track 13 : Cindaradix_54
- Track 14 : Miramae_56
- Track 15 : Stink_56, Katalie136_57, AvatarAhPeg_56, Cici_57, Badger_56, Wile_57, AbbysRanger_57, Perplexer_57, Achebe_56, Morpher26_57, PetiteSangsue_57, Shygu2_57

- Track 16 : Cerulean_60, Happiness_58, LHTSCC_61, ChampagnePapi_61, Obama12_60
- Track 17 : Wander_59
- Track 18 : Sparxx_60, Bombshell_59, Sabertooth_59, Eros_59, Broseidon_59, Bartimeaus_59, Baby16_59, Citius_59, Scamp_59, Holli_58, Florean_59, Polymorphads_60, CentreCat_59
- Track 19 : Bumblebee11_56, Backyardigan_55
- Track 20 : Iracema64_60, Cintron_58
- Track 21 : Medusa_59
- Track 22 : Phighter1804_59
- Track 23 : Xena_56, Noelle_58
- Track 24 : JetBlade_59
- Track 25 : Connomayer_59
- Track 26 : Datway_57
- Track 27 : Ohfah_60
- Track 28 : Kratak_58
- Track 29 : Iceman_59, LeoAvram_58
- Track 30 : Arturo_57
- Track 31 : Phacado_59
- Track 32 : Clarenza_58
- Track 33 : Phelipe_60, Abdiel_59
- Track 34 : Tinybot_58
- Track 35 : Skipitt_58
- Track 36 : Phontbonne_59
- Track 37 : Mundrea_57
- Track 38 : Nebs_60, Eurydice_60
- Track 39 : Stasia_57
- Track 40 : Dhanush_59
- Track 41 : Relief_58
- Track 42 : Pumbaa_59
- Track 43 : Eris_58

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

The start number called the most often in the published annotations is 19, it was called in 92 of the 192 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbysRanger_57, Abdiel_59, Achebe_56, Albee_59, Alberto7_60, Arturo_57, AvatarAhPeg_56, Avle17_59, Baby16_59, Badger_56, Bartimeaus_59, Bombshell_59, Broseidon_59, Bruiser_58, BubbleTrouble_58, Burger_57, Camperdownii_57, CentreCat_59, Cerulean_60, ChampagnePapi_61, Chaph_59, Cici_57, Cindaradix_54, Cintron_58, Citius_59, Clarenza_58, Cocoaberry_59, Connomayer_59, Dhanush_59, DirtyDunning_58, Eapen_59, Eros_59, Florean_59, Flux_59, Funston_58, Gadost_59, Happiness_58, Holli_58, Iracema64_60, JetBlade_59, JoongJeon_58, KFPoly_58, Kampy_58, Katalie136_57, Kingmustik0402_59, Koreni_58, Kyee_59, LHTSCC_61, Lemur_59, LittleB_59, LittleGuy_59, LochMonster_60, Lorenzo_59, Lunsford_60, Maxo_60, Mazhar510_59, Melvin_61, Millski_58, Miramae_56, Morpher26_57, Morrow_60, Mundrea_57, OKaNui_59, Obama12_60, Ohfah_60, Palestino_58, Perplexer_57, PeterPeter_59,

PetiteSangsue_57, Phacado_59, Phelipe_60, Phighter1804_59, Phontbonne_59, Polymorphads_60, Pumbaa_59, Relief_58, Romney_58, Ruin_59, Sabertooth_59, Scamp_59, Shygu2_57, Sparxx_60, Spino_58, Stink_56, Thanksgivukkah_58, TroyPia_60, TygerBlood_59, Ulysses_58, Wander_59, Wilbur_59, Wile_57, YoSam321_59,

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

- Backyardigan_55, BellusTerra_60, Bumblebee11_56, Datway_57, Eris_58, Eurydice_60, Iceman_59, Kratark_58, LeoAvram_58, Medusa_59, Nebs_60, Noelle_58, Skipitt_58, Tinybot_58, Xena_56,

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

- ACFishhook_63, Aglet_66, AgronaGT15_64, Anglerfish_61, Anubis_68, Arcanine_63, AugsMagnumOpus_68, BreSam8_65, Bxz2_60, Cullens_65, DaHudson_64, Daishi_64, Dieselweasel_66, EpicPhail_66, Farber_65, Fernando_65, Gemma_64, GingkoMaracino_65, Grif_65, Groupthink_66, Grub_65, GtownJaz_65, Hami1_53, HashRod_66, HaveUMetTed_66, Heliosoles_64, Hercules11_65, ILeeKay_63, JHC117_63, JenCasNa_66, JeppNRM_66, Jobu08_63, KBG_61, Kalb97_66, Kalnoky_66, LBerry_66, LarryKay_65, Louie6_64, LugYA_68, MadMarie_65, Mainiac_65, Malinsilva_67, Manatee_61, Manu_65, MarQuardt_65, Marie_63, Marius_66, Methuselah_60, Microwolf_63, Misomonster_66, Monet_64, MoneyMay_64, MuchMore_68, OlanP_64, Ollie_65, P28Green_66, PGHhamlin_67, Pawn_65, Pembroke_65, PhishRPhriends_63, Phoebe_66, Phoxy_65, Phranny_66, PotatoSplit_66, PurpleHaze_65, Reba_65, Rhynn_59, Rummer_64, Rutherford_63, Sabia_65, Slagathor_63, Smeagol_63, SoilDragon_65, Soshari_67, Spike509_65, Stasia_57, StepMih_64, Taurus_66, Tiffany_64, Topgun_59, Treddle_62, Violet_59, Vix_63, Watson_64, Wilkins_59, Wooldri_67, Zetzy_64,

Summary by start number:

Start 15:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 192
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KBG_61 (A1),

Start 16:

- Found in 15 of 194 (7.7%) of genes in pham
- Manual Annotations of this start: 13 of 192
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Anglerfish_61 (A1), Arcanine_63 (A1), Hami1_53 (A1), ILeeKay_63 (A1), Manatee_61 (A1), Monet_64 (A1), Rhynn_59 (A1), Rutherford_63 (A1), Slagathor_63 (A1), Smeagol_63 (A1), Topgun_59 (A1), Treddle_62 (A1), Violet_59 (A1), Wilkins_59 (A1),

Start 17:

- Found in 107 of 194 (55.2%) of genes in pham
- Manual Annotations of this start: 9 of 192
- Called 8.4% of time when present
- Phage (with cluster) where this start called: Backyardigan_55 (A4), Bumblebee11_56 (A4), Datway_57 (A4), Eris_58 (A4), Medusa_59 (A4), Noelle_58 (A4), Skipitt_58 (A4), Stasia_57 (A4), Xena_56 (A4),

Start 18:

- Found in 71 of 194 (36.6%) of genes in pham
- Manual Annotations of this start: 68 of 192
- Called 97.2% of time when present
- Phage (with cluster) where this start called: ACFishhook_63 (A3), Aglet_66 (A3), AgronaGT15_64 (A3), Anubis_68 (A3), AugsMagnumOpus_68 (A3), BreSam8_65 (A3), Bxz2_60 (A3), Cullens_65 (A3), DaHudson_64 (A3), Daishi_64 (A3), Dieselweasel_66 (A3), EpicPhail_66 (A3), Farber_65 (A3), Fernando_65 (A3), Gemma_64 (A3), GingkoMaracino_65 (A3), Grif_65 (A3), Groupthink_66 (A3), Grub_65 (A3), GtownJaz_65 (A3), HashRod_66 (A3), HaveUMetTed_66 (A3), Heliosoles_64 (A3), Hercules11_65 (A3), JHC117_63 (A3), JenCasNa_66 (A3), JeppNRM_66 (A3), Jobu08_63 (A3), Kalb97_66 (A3), Kalnoky_66 (A3), LBerry_66 (A3), LarryKay_65 (A3), Louie6_64 (A3), LugYA_68 (A3), MadMarie_65 (A3), Mainiac_65 (A3), Malinsilva_67 (A3), Manu_65 (A3), MarQuardt_65 (A3), Marie_63 (A3), Marius_66 (A3), Methuselah_60 (A3), Misomonster_66 (A3), MoneyMay_64 (A3), MuchMore_68 (A3), OlanP_64 (A3), Ollie_65 (A3), P28Green_66 (A3), PGHhamlin_67 (A3), Pawn_65 (A3), Pembroke_65 (A3), PhishRPhriends_63 (A3), Phoebe_66 (A3), Phoxy_65 (A3), Phranny_66 (A3), PotatoSplit_66 (A3), PurpleHaze_65 (A3), Reba_65 (A3), Rummer_64 (A3), Sabia_65 (A3), SoilDragon_65 (A3), Soshari_67 (A3), Spike509_65 (A3), Taurus_66 (A3), Tiffany_64 (A3), Vix_63 (A3), Watson_64 (A3), Wooldri_67 (A3), Zetzy_64 (A3),

Start 19:

- Found in 107 of 194 (55.2%) of genes in pham
- Manual Annotations of this start: 92 of 192
- Called 86.0% of time when present
- Phage (with cluster) where this start called: AbbysRanger_57 (A4), Abdiel_59 (A4), Achebe_56 (A4), Albee_59 (A4), Alberto7_60 (A4), Arturo_57 (A4), AvatarAhPeg_56 (A4), Avle17_59 (A4), Baby16_59 (A4), Badger_56 (A4), Bartimeaus_59 (A4), Bombshell_59 (A4), Broseidon_59 (A4), Bruiser_58 (A4), BubbleTrouble_58 (A4), Burger_57 (A4), Camperdownii_57 (A4), CentreCat_59 (A4), Cerulean_60 (A4), ChampagnePapi_61 (A4), Chaph_59 (A4), Cici_57 (A4), Cindaradix_54 (A4), Cintron_58 (A4), Citius_59 (A4), Clarenza_58 (A4), Cocoaberry_59 (A4), Connomayer_59 (A4), Dhanush_59 (A4), DirtyDunning_58 (A4), Eapen_59 (A4), Eros_59 (A4), Floean_59 (A4), Flux_59 (A4), Funston_58 (A4), Gadost_59 (A4), Happiness_58 (A4), Holli_58 (A4), Iracema64_60 (A4), JetBlade_59 (A4), JoongJeon_58 (A4), KFPoly_58 (A4), Kampy_58 (A4), Katalie136_57 (A4), Kingmustik0402_59 (A4), Koreni_58 (A4), Kye_59 (A4), LHTSCC_61 (A4), Lemur_59 (A4), LittleB_59 (A4), LittleGuy_59 (A4), LochMonster_60 (A4), Lorenzo_59 (A4), Lunsford_60 (A4), Maxo_60 (A4), Mazhar510_59 (A4), Melvin_61 (A4), Millski_58 (A4), Miramae_56 (A4), Morpher26_57 (A4), Morrow_60 (A4), Mundrea_57 (A4), OKaNui_59 (A4), Obama12_60 (A4), Ohfah_60 (A4), Palestino_58 (A4), Perplexer_57 (A4), PeterPeter_59 (A4), PetiteSangsue_57 (A4), Phacado_59 (A4), Phelipe_60 (A4), Phighter1804_59 (A4), Phontbonne_59 (A4), Polymorphads_60 (A4), Pumbaa_59 (A4), Relief_58 (A4), Romney_58 (A4), Ruin_59 (A4), Sabertooth_59 (A4), Scamp_59 (A4), Shygu2_57 (A4), Sparxx_60 (A4), Spino_58 (A4), Stink_56 (A4), Thanksgivukkah_58 (A4), TroyPia_60 (A4), TygerBlood_59 (A4), Ulysses_58 (A4), Wander_59 (A4), Wilbur_59 (A4), Wile_57 (A4), YoSam321_59 (A4),

Start 21:

- Found in 17 of 194 (8.8%) of genes in pham
- Manual Annotations of this start: 7 of 192

- Called 41.2% of time when present
- Phage (with cluster) where this start called: BellusTerra_60 (A4), Eurydice_60 (A4), Iceman_59 (A4), Kratark_58 (A4), LeoAvram_58 (A4), Nebs_60 (A4), Tinybot_58 (A4),

Start 22:

- Found in 71 of 194 (36.6%) of genes in pham
- Manual Annotations of this start: 2 of 192
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Microwolf_63 (A3), StepMih_64 (A3),

Summary by clusters:

There are 3 clusters represented in this pham: A1, A3, A4,

Info for manual annotations of cluster A1:

- Start number 15 was manually annotated 1 time for cluster A1.
- Start number 16 was manually annotated 13 times for cluster A1.

Info for manual annotations of cluster A3:

- Start number 18 was manually annotated 68 times for cluster A3.
- Start number 22 was manually annotated 2 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 17 was manually annotated 9 times for cluster A4.
- Start number 19 was manually annotated 92 times for cluster A4.
- Start number 21 was manually annotated 7 times for cluster A4.

Gene Information:

Gene: ACFishhook_63 Start: 39664, Stop: 39560, Start Num: 18

Candidate Starts for ACFishhook_63:

(Start: 18 @39664 has 68 MA's), (Start: 22 @39649 has 2 MA's), (24, 39637), (28, 39595),

Gene: AbbysRanger_57 Start: 38899, Stop: 38798, Start Num: 19

Candidate Starts for AbbysRanger_57:

(11, 39052), (13, 38965), (Start: 17 @38914 has 9 MA's), (Start: 19 @38899 has 92 MA's), (28, 38830),

Gene: Abdiel_59 Start: 39049, Stop: 38960, Start Num: 19

Candidate Starts for Abdiel_59:

(9, 39799), (10, 39658), (11, 39202), (13, 39115), (Start: 17 @39064 has 9 MA's), (Start: 19 @39049 has 92 MA's), (Start: 21 @39046 has 7 MA's), (23, 39031), (28, 38992),

Gene: Achebe_56 Start: 38882, Stop: 38781, Start Num: 19

Candidate Starts for Achebe_56:

(11, 39035), (13, 38948), (Start: 17 @38897 has 9 MA's), (Start: 19 @38882 has 92 MA's), (28, 38813),

Gene: Aglet_66 Start: 39707, Stop: 39603, Start Num: 18

Candidate Starts for Aglet_66:

(Start: 18 @39707 has 68 MA's), (Start: 22 @39692 has 2 MA's), (24, 39680), (28, 39638),

Gene: AgronaGT15_64 Start: 39555, Stop: 39451, Start Num: 18

Candidate Starts for AgronaGT15_64:

(Start: 18 @39555 has 68 MA's), (Start: 22 @39540 has 2 MA's), (24, 39528), (28, 39486),

Gene: Albee_59 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for Albee_59:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Alberto7_60 Start: 39382, Stop: 39296, Start Num: 19

Candidate Starts for Alberto7_60:

(2, 40468), (3, 40456), (7, 40309), (8, 40300), (10, 39991), (11, 39535), (13, 39448), (Start: 17 @39397 has 9 MA's), (Start: 19 @39382 has 92 MA's), (23, 39367), (28, 39328),

Gene: Anglerfish_61 Start: 41309, Stop: 41190, Start Num: 16

Candidate Starts for Anglerfish_61:

(Start: 16 @41309 has 13 MA's), (25, 41252),

Gene: Anubis_68 Start: 39593, Stop: 39489, Start Num: 18

Candidate Starts for Anubis_68:

(Start: 18 @39593 has 68 MA's), (Start: 22 @39578 has 2 MA's), (24, 39566), (28, 39524),

Gene: Arcanine_63 Start: 42033, Stop: 41914, Start Num: 16

Candidate Starts for Arcanine_63:

(Start: 16 @42033 has 13 MA's), (25, 41976),

Gene: Arturo_57 Start: 39160, Stop: 39071, Start Num: 19

Candidate Starts for Arturo_57:

(13, 39226), (Start: 17 @39175 has 9 MA's), (Start: 19 @39160 has 92 MA's), (23, 39142),

Gene: AugsMagnumOpus_68 Start: 39698, Stop: 39594, Start Num: 18

Candidate Starts for AugsMagnumOpus_68:

(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: AvatarAhPeg_56 Start: 38672, Stop: 38583, Start Num: 19

Candidate Starts for AvatarAhPeg_56:

(11, 38825), (13, 38738), (Start: 17 @38687 has 9 MA's), (Start: 19 @38672 has 92 MA's), (28, 38615),

Gene: Avle17_59 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Avle17_59:

(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Baby16_59 Start: 39056, Stop: 38970, Start Num: 19

Candidate Starts for Baby16_59:

(13, 39122), (Start: 17 @39071 has 9 MA's), (Start: 19 @39056 has 92 MA's), (23, 39041), (28, 39002),

Gene: Backyardigan_55 Start: 38930, Stop: 38814, Start Num: 17

Candidate Starts for Backyardigan_55:

(11, 39068), (13, 38981), (Start: 17 @38930 has 9 MA's), (Start: 19 @38915 has 92 MA's), (28, 38846),

Gene: Badger_56 Start: 38883, Stop: 38782, Start Num: 19

Candidate Starts for Badger_56:

(11, 39036), (13, 38949), (Start: 17 @38898 has 9 MA's), (Start: 19 @38883 has 92 MA's), (28, 38814),

Gene: Bartimeaus_59 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Bartimeaus_59:

(13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: BellusTerra_60 Start: 39046, Stop: 38960, Start Num: 21

Candidate Starts for BellusTerra_60:

(13, 39115), (Start: 17 @39064 has 9 MA's), (Start: 19 @39049 has 92 MA's), (Start: 21 @39046 has 7 MA's), (23, 39031), (28, 38992),

Gene: Bombshell_59 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Bombshell_59:

(13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: BreSam8_65 Start: 39700, Stop: 39596, Start Num: 18

Candidate Starts for BreSam8_65:

(Start: 18 @39700 has 68 MA's), (Start: 22 @39685 has 2 MA's), (24, 39673), (28, 39631),

Gene: Broseidon_59 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Broseidon_59:

(13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Bruiser_58 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for Bruiser_58:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: BubbleTrouble_58 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for BubbleTrouble_58:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Bumblebee11_56 Start: 38900, Stop: 38784, Start Num: 17

Candidate Starts for Bumblebee11_56:

(11, 39038), (13, 38951), (Start: 17 @38900 has 9 MA's), (Start: 19 @38885 has 92 MA's), (28, 38816),

Gene: Burger_57 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for Burger_57:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Bxz2_60 Start: 39741, Stop: 39637, Start Num: 18

Candidate Starts for Bxz2_60:

(Start: 18 @39741 has 68 MA's), (Start: 22 @39726 has 2 MA's), (24, 39714), (28, 39672),

Gene: Camperdownii_57 Start: 38719, Stop: 38633, Start Num: 19

Candidate Starts for Camperdownii_57:

(2, 39805), (3, 39793), (7, 39646), (8, 39637), (10, 39328), (11, 38872), (13, 38785), (Start: 17 @38734 has 9 MA's), (Start: 19 @38719 has 92 MA's), (23, 38704), (28, 38665),

Gene: CentreCat_59 Start: 39048, Stop: 38962, Start Num: 19

Candidate Starts for CentreCat_59:

(13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (23, 39033), (28, 38994),

Gene: Cerulean_60 Start: 39449, Stop: 39363, Start Num: 19

Candidate Starts for Cerulean_60:

(9, 40199), (10, 40058), (11, 39602), (13, 39515), (Start: 17 @39464 has 9 MA's), (Start: 19 @39449 has 92 MA's), (28, 39395),

Gene: ChampagnePapi_61 Start: 39448, Stop: 39362, Start Num: 19

Candidate Starts for ChampagnePapi_61:

(9, 40198), (10, 40057), (11, 39601), (13, 39514), (Start: 17 @39463 has 9 MA's), (Start: 19 @39448 has 92 MA's), (28, 39394),

Gene: Chaph_59 Start: 39056, Stop: 38970, Start Num: 19

Candidate Starts for Chaph_59:

(2, 40142), (3, 40130), (7, 39983), (8, 39974), (10, 39665), (11, 39209), (13, 39122), (Start: 17 @39071 has 9 MA's), (Start: 19 @39056 has 92 MA's), (23, 39041), (28, 39002),

Gene: Cici_57 Start: 38900, Stop: 38799, Start Num: 19

Candidate Starts for Cici_57:

(11, 39053), (13, 38966), (Start: 17 @38915 has 9 MA's), (Start: 19 @38900 has 92 MA's), (28, 38831),

Gene: Cindaradix_54 Start: 38518, Stop: 38429, Start Num: 19

Candidate Starts for Cindaradix_54:

(11, 38671), (13, 38584), (Start: 17 @38533 has 9 MA's), (Start: 19 @38518 has 92 MA's), (23, 38500),

Gene: Cintron_58 Start: 39025, Stop: 38936, Start Num: 19

Candidate Starts for Cintron_58:

(1, 40165), (6, 39958), (7, 39952), (10, 39634), (11, 39178), (13, 39091), (Start: 17 @39040 has 9 MA's), (Start: 19 @39025 has 92 MA's), (Start: 21 @39022 has 7 MA's), (23, 39007), (28, 38968),

Gene: Citius_59 Start: 39066, Stop: 38980, Start Num: 19

Candidate Starts for Citius_59:

(13, 39132), (Start: 17 @39081 has 9 MA's), (Start: 19 @39066 has 92 MA's), (23, 39051), (28, 39012),

Gene: Clarenza_58 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Clarenza_58:

(10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Cocoaberry_59 Start: 39049, Stop: 38963, Start Num: 19
Candidate Starts for Cocoaberry_59:
(2, 40135), (3, 40123), (7, 39976), (8, 39967), (10, 39658), (11, 39202), (13, 39115), (Start: 17 @39064 has 9 MA's), (Start: 19 @39049 has 92 MA's), (23, 39034), (28, 38995),

Gene: Connomayer_59 Start: 39045, Stop: 38959, Start Num: 19
Candidate Starts for Connomayer_59:
(3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Cullens_65 Start: 39706, Stop: 39602, Start Num: 18
Candidate Starts for Cullens_65:
(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: DaHudson_64 Start: 39699, Stop: 39595, Start Num: 18
Candidate Starts for DaHudson_64:
(Start: 18 @39699 has 68 MA's), (Start: 22 @39684 has 2 MA's), (24, 39672), (28, 39630),

Gene: Daishi_64 Start: 38575, Stop: 38471, Start Num: 18
Candidate Starts for Daishi_64:
(Start: 18 @38575 has 68 MA's), (Start: 22 @38560 has 2 MA's), (24, 38548), (28, 38506),

Gene: Datway_57 Start: 38886, Stop: 38770, Start Num: 17
Candidate Starts for Datway_57:
(11, 39024), (13, 38937), (Start: 17 @38886 has 9 MA's), (Start: 19 @38871 has 92 MA's), (28, 38802),

Gene: Dhanush_59 Start: 39048, Stop: 38962, Start Num: 19
Candidate Starts for Dhanush_59:
(2, 40134), (3, 40122), (7, 39975), (8, 39966), (10, 39657), (11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (28, 38994),

Gene: Dieselweasel_66 Start: 39709, Stop: 39605, Start Num: 18
Candidate Starts for Dieselweasel_66:
(Start: 18 @39709 has 68 MA's), (Start: 22 @39694 has 2 MA's), (24, 39682), (28, 39640),

Gene: DirtyDunning_58 Start: 39060, Stop: 38971, Start Num: 19
Candidate Starts for DirtyDunning_58:
(10, 39669), (11, 39213), (13, 39126), (Start: 17 @39075 has 9 MA's), (Start: 19 @39060 has 92 MA's), (Start: 21 @39057 has 7 MA's), (23, 39042), (28, 39003),

Gene: Eapen_59 Start: 39040, Stop: 38954, Start Num: 19
Candidate Starts for Eapen_59:
(2, 40126), (3, 40114), (7, 39967), (8, 39958), (10, 39649), (11, 39193), (13, 39106), (Start: 17 @39055 has 9 MA's), (Start: 19 @39040 has 92 MA's), (23, 39025), (28, 38986),

Gene: EpicPhail_66 Start: 39710, Stop: 39606, Start Num: 18
Candidate Starts for EpicPhail_66:
(Start: 18 @39710 has 68 MA's), (Start: 22 @39695 has 2 MA's), (24, 39683), (28, 39641),

Gene: Eris_58 Start: 39075, Stop: 38959, Start Num: 17
Candidate Starts for Eris_58:

(11, 39213), (13, 39126), (Start: 17 @39075 has 9 MA's), (Start: 19 @39060 has 92 MA's), (28, 38991),

Gene: Eros_59 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Eros_59:

(13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Eurydice_60 Start: 39042, Stop: 38956, Start Num: 21

Candidate Starts for Eurydice_60:

(9, 39795), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (Start: 21 @39042 has 7 MA's), (23, 39027), (28, 38988),

Gene: Farber_65 Start: 39696, Stop: 39592, Start Num: 18

Candidate Starts for Farber_65:

(Start: 18 @39696 has 68 MA's), (Start: 22 @39681 has 2 MA's), (24, 39669), (28, 39627),

Gene: Fernando_65 Start: 39706, Stop: 39602, Start Num: 18

Candidate Starts for Fernando_65:

(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: Florean_59 Start: 39044, Stop: 38958, Start Num: 19

Candidate Starts for Florean_59:

(13, 39110), (Start: 17 @39059 has 9 MA's), (Start: 19 @39044 has 92 MA's), (23, 39029), (28, 38990),

Gene: Flux_59 Start: 39044, Stop: 38958, Start Num: 19

Candidate Starts for Flux_59:

(2, 40130), (3, 40118), (7, 39971), (8, 39962), (10, 39653), (11, 39197), (13, 39110), (Start: 17 @39059 has 9 MA's), (Start: 19 @39044 has 92 MA's), (23, 39029), (28, 38990),

Gene: Funston_58 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for Funston_58:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Gadost_59 Start: 39049, Stop: 38963, Start Num: 19

Candidate Starts for Gadost_59:

(2, 40135), (3, 40123), (7, 39976), (8, 39967), (10, 39658), (11, 39202), (13, 39115), (Start: 17 @39064 has 9 MA's), (Start: 19 @39049 has 92 MA's), (23, 39034), (28, 38995),

Gene: Gemma_64 Start: 39588, Stop: 39484, Start Num: 18

Candidate Starts for Gemma_64:

(Start: 18 @39588 has 68 MA's), (Start: 22 @39573 has 2 MA's), (24, 39561), (28, 39519),

Gene: GingkoMaracino_65 Start: 39592, Stop: 39488, Start Num: 18

Candidate Starts for GingkoMaracino_65:

(Start: 18 @39592 has 68 MA's), (Start: 22 @39577 has 2 MA's), (24, 39565), (28, 39523),

Gene: Grif_65 Start: 39781, Stop: 39677, Start Num: 18

Candidate Starts for Grif_65:

(Start: 18 @39781 has 68 MA's), (Start: 22 @39766 has 2 MA's), (24, 39754), (28, 39712),

Gene: Groupthink_66 Start: 39592, Stop: 39488, Start Num: 18
Candidate Starts for Groupthink_66:
(Start: 18 @39592 has 68 MA's), (Start: 22 @39577 has 2 MA's), (24, 39565), (28, 39523),

Gene: Grub_65 Start: 39698, Stop: 39594, Start Num: 18
Candidate Starts for Grub_65:
(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: GtownJaz_65 Start: 39708, Stop: 39604, Start Num: 18
Candidate Starts for GtownJaz_65:
(Start: 18 @39708 has 68 MA's), (Start: 22 @39693 has 2 MA's), (24, 39681), (28, 39639),

Gene: Hami1_53 Start: 36682, Stop: 36563, Start Num: 16
Candidate Starts for Hami1_53:
(Start: 16 @36682 has 13 MA's), (26, 36613),

Gene: Happiness_58 Start: 39031, Stop: 38945, Start Num: 19
Candidate Starts for Happiness_58:
(9, 39781), (10, 39640), (11, 39184), (13, 39097), (Start: 17 @39046 has 9 MA's), (Start: 19 @39031 has 92 MA's), (28, 38977),

Gene: HashRod_66 Start: 39734, Stop: 39630, Start Num: 18
Candidate Starts for HashRod_66:
(Start: 18 @39734 has 68 MA's), (Start: 22 @39719 has 2 MA's), (24, 39707), (28, 39665),

Gene: HaveUMetTed_66 Start: 39577, Stop: 39473, Start Num: 18
Candidate Starts for HaveUMetTed_66:
(Start: 18 @39577 has 68 MA's), (Start: 22 @39562 has 2 MA's), (24, 39550), (28, 39508),

Gene: Heliosoles_64 Start: 39595, Stop: 39491, Start Num: 18
Candidate Starts for Heliosoles_64:
(Start: 18 @39595 has 68 MA's), (Start: 22 @39580 has 2 MA's), (24, 39568), (28, 39526),

Gene: Hercules11_65 Start: 39715, Stop: 39611, Start Num: 18
Candidate Starts for Hercules11_65:
(Start: 18 @39715 has 68 MA's), (Start: 22 @39700 has 2 MA's), (24, 39688), (28, 39646),

Gene: Holli_58 Start: 38835, Stop: 38749, Start Num: 19
Candidate Starts for Holli_58:
(13, 38901), (Start: 17 @38850 has 9 MA's), (Start: 19 @38835 has 92 MA's), (23, 38820), (28, 38781),

Gene: ILeeKay_63 Start: 40898, Stop: 40779, Start Num: 16
Candidate Starts for ILeeKay_63:
(Start: 16 @40898 has 13 MA's),

Gene: Iceman_59 Start: 39331, Stop: 39245, Start Num: 21
Candidate Starts for Iceman_59:
(11, 39487), (13, 39400), (Start: 17 @39349 has 9 MA's), (Start: 19 @39334 has 92 MA's), (Start: 21 @39331 has 7 MA's), (23, 39316), (28, 39277),

Gene: Iracema64_60 Start: 39312, Stop: 39223, Start Num: 19
Candidate Starts for Iracema64_60:

(1, 40452), (6, 40245), (7, 40239), (10, 39921), (11, 39465), (13, 39378), (Start: 17 @39327 has 9 MA's), (Start: 19 @39312 has 92 MA's), (Start: 21 @39309 has 7 MA's), (23, 39294), (28, 39255),

Gene: JHC117_63 Start: 39705, Stop: 39601, Start Num: 18

Candidate Starts for JHC117_63:

(Start: 18 @39705 has 68 MA's), (Start: 22 @39690 has 2 MA's), (24, 39678), (28, 39636),

Gene: JenCasNa_66 Start: 39706, Stop: 39602, Start Num: 18

Candidate Starts for JenCasNa_66:

(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: JeppNRM_66 Start: 39593, Stop: 39489, Start Num: 18

Candidate Starts for JeppNRM_66:

(Start: 18 @39593 has 68 MA's), (Start: 22 @39578 has 2 MA's), (24, 39566), (28, 39524),

Gene: JetBlade_59 Start: 39039, Stop: 38953, Start Num: 19

Candidate Starts for JetBlade_59:

(9, 39789), (10, 39648), (11, 39192), (13, 39105), (Start: 17 @39054 has 9 MA's), (Start: 19 @39039 has 92 MA's), (23, 39024), (28, 38985),

Gene: Jobu08_63 Start: 39538, Stop: 39434, Start Num: 18

Candidate Starts for Jobu08_63:

(Start: 18 @39538 has 68 MA's), (Start: 22 @39523 has 2 MA's), (24, 39511), (28, 39469),

Gene: JoongJeon_58 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for JoongJeon_58:

(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: KBG_61 Start: 42353, Stop: 42222, Start Num: 15

Candidate Starts for KBG_61:

(Start: 15 @42353 has 1 MA's), (Start: 16 @42341 has 13 MA's),

Gene: KFPoly_58 Start: 39039, Stop: 38953, Start Num: 19

Candidate Starts for KFPoly_58:

(2, 40125), (3, 40113), (7, 39966), (8, 39957), (10, 39648), (11, 39192), (13, 39105), (Start: 17 @39054 has 9 MA's), (Start: 19 @39039 has 92 MA's), (23, 39024), (28, 38985),

Gene: Kalb97_66 Start: 39591, Stop: 39487, Start Num: 18

Candidate Starts for Kalb97_66:

(Start: 18 @39591 has 68 MA's), (Start: 22 @39576 has 2 MA's), (24, 39564), (28, 39522),

Gene: Kalnoky_66 Start: 39589, Stop: 39485, Start Num: 18

Candidate Starts for Kalnoky_66:

(Start: 18 @39589 has 68 MA's), (Start: 22 @39574 has 2 MA's), (24, 39562), (28, 39520),

Gene: Kampy_58 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Kampy_58:

(2, 40133), (3, 40121), (7, 39974), (8, 39965), (10, 39656), (11, 39200), (13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Katalie136_57 Start: 38885, Stop: 38784, Start Num: 19

Candidate Starts for Katalie136_57:

(11, 39038), (13, 38951), (Start: 17 @38900 has 9 MA's), (Start: 19 @38885 has 92 MA's), (28, 38816),

Gene: Kingmustik0402_59 Start: 39034, Stop: 38948, Start Num: 19

Candidate Starts for Kingmustik0402_59:

(2, 40120), (3, 40108), (7, 39961), (8, 39952), (10, 39643), (11, 39187), (13, 39100), (Start: 17 @39049 has 9 MA's), (Start: 19 @39034 has 92 MA's), (23, 39019), (28, 38980),

Gene: Koreni_58 Start: 38726, Stop: 38640, Start Num: 19

Candidate Starts for Koreni_58:

(2, 39812), (3, 39800), (7, 39653), (8, 39644), (10, 39335), (11, 38879), (13, 38792), (Start: 17 @38741 has 9 MA's), (Start: 19 @38726 has 92 MA's), (23, 38711), (28, 38672),

Gene: Kratark_58 Start: 39040, Stop: 38954, Start Num: 21

Candidate Starts for Kratark_58:

(10, 39652), (11, 39196), (13, 39109), (Start: 17 @39058 has 9 MA's), (Start: 19 @39043 has 92 MA's), (Start: 21 @39040 has 7 MA's), (23, 39025),

Gene: Kyee_59 Start: 39043, Stop: 38957, Start Num: 19

Candidate Starts for Kyee_59:

(2, 40129), (3, 40117), (7, 39970), (8, 39961), (10, 39652), (11, 39196), (13, 39109), (Start: 17 @39058 has 9 MA's), (Start: 19 @39043 has 92 MA's), (23, 39028), (28, 38989),

Gene: LBerry_66 Start: 39710, Stop: 39606, Start Num: 18

Candidate Starts for LBerry_66:

(Start: 18 @39710 has 68 MA's), (Start: 22 @39695 has 2 MA's), (24, 39683), (28, 39641),

Gene: LHTSCC_61 Start: 39448, Stop: 39362, Start Num: 19

Candidate Starts for LHTSCC_61:

(9, 40198), (10, 40057), (11, 39601), (13, 39514), (Start: 17 @39463 has 9 MA's), (Start: 19 @39448 has 92 MA's), (28, 39394),

Gene: LarryKay_65 Start: 39736, Stop: 39632, Start Num: 18

Candidate Starts for LarryKay_65:

(Start: 18 @39736 has 68 MA's), (Start: 22 @39721 has 2 MA's), (24, 39709), (28, 39667),

Gene: Lemur_59 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Lemur_59:

(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: LeoAvram_58 Start: 39045, Stop: 38959, Start Num: 21

Candidate Starts for LeoAvram_58:

(11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (Start: 21 @39045 has 7 MA's), (23, 39030), (28, 38991),

Gene: LittleB_59 Start: 39046, Stop: 38960, Start Num: 19

Candidate Starts for LittleB_59:

(2, 40132), (3, 40120), (7, 39973), (8, 39964), (10, 39655), (11, 39199), (13, 39112), (Start: 17 @39061 has 9 MA's), (Start: 19 @39046 has 92 MA's), (23, 39031), (28, 38992),

Gene: LittleGuy_59 Start: 38941, Stop: 38855, Start Num: 19

Candidate Starts for LittleGuy_59:

(2, 40027), (3, 40015), (7, 39868), (8, 39859), (10, 39550), (11, 39094), (13, 39007), (Start: 17 @38956 has 9 MA's), (Start: 19 @38941 has 92 MA's), (23, 38926), (28, 38887),

Gene: LochMonster_60 Start: 39284, Stop: 39195, Start Num: 19

Candidate Starts for LochMonster_60:

(10, 39893), (11, 39437), (13, 39350), (Start: 17 @39299 has 9 MA's), (Start: 19 @39284 has 92 MA's), (Start: 21 @39281 has 7 MA's), (23, 39266), (28, 39227),

Gene: Lorenzo_59 Start: 39045, Stop: 38959, Start Num: 19

Candidate Starts for Lorenzo_59:

(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Louie6_64 Start: 39735, Stop: 39631, Start Num: 18

Candidate Starts for Louie6_64:

(Start: 18 @39735 has 68 MA's), (Start: 22 @39720 has 2 MA's), (24, 39708), (28, 39666),

Gene: LugYA_68 Start: 39707, Stop: 39603, Start Num: 18

Candidate Starts for LugYA_68:

(Start: 18 @39707 has 68 MA's), (Start: 22 @39692 has 2 MA's), (24, 39680), (28, 39638),

Gene: Lunsford_60 Start: 39039, Stop: 38953, Start Num: 19

Candidate Starts for Lunsford_60:

(11, 39192), (13, 39105), (Start: 17 @39054 has 9 MA's), (Start: 19 @39039 has 92 MA's), (23, 39024), (28, 38985),

Gene: MadMarie_65 Start: 39708, Stop: 39604, Start Num: 18

Candidate Starts for MadMarie_65:

(Start: 18 @39708 has 68 MA's), (Start: 22 @39693 has 2 MA's), (24, 39681), (28, 39639),

Gene: Mainiac_65 Start: 39700, Stop: 39596, Start Num: 18

Candidate Starts for Mainiac_65:

(Start: 18 @39700 has 68 MA's), (Start: 22 @39685 has 2 MA's), (24, 39673), (28, 39631),

Gene: Malinsilva_67 Start: 39698, Stop: 39594, Start Num: 18

Candidate Starts for Malinsilva_67:

(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: Manatee_61 Start: 40655, Stop: 40536, Start Num: 16

Candidate Starts for Manatee_61:

(Start: 16 @40655 has 13 MA's), (25, 40598),

Gene: Manu_65 Start: 39592, Stop: 39488, Start Num: 18

Candidate Starts for Manu_65:

(Start: 18 @39592 has 68 MA's), (Start: 22 @39577 has 2 MA's), (24, 39565), (28, 39523),

Gene: MarQuardt_65 Start: 39708, Stop: 39604, Start Num: 18

Candidate Starts for MarQuardt_65:

(Start: 18 @39708 has 68 MA's), (Start: 22 @39693 has 2 MA's), (24, 39681), (28, 39639),

Gene: Marie_63 Start: 39706, Stop: 39602, Start Num: 18

Candidate Starts for Marie_63:

(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: Marius_66 Start: 39589, Stop: 39485, Start Num: 18

Candidate Starts for Marius_66:

(Start: 18 @39589 has 68 MA's), (Start: 22 @39574 has 2 MA's), (24, 39562), (28, 39520),

Gene: Maxo_60 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Maxo_60:

(2, 40133), (3, 40121), (7, 39974), (8, 39965), (10, 39656), (11, 39200), (13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Mazhar510_59 Start: 39046, Stop: 38960, Start Num: 19

Candidate Starts for Mazhar510_59:

(2, 40132), (3, 40120), (7, 39973), (8, 39964), (10, 39655), (11, 39199), (13, 39112), (Start: 17 @39061 has 9 MA's), (Start: 19 @39046 has 92 MA's), (23, 39031), (28, 38992),

Gene: Medusa_59 Start: 39074, Stop: 38958, Start Num: 17

Candidate Starts for Medusa_59:

(11, 39212), (13, 39125), (Start: 17 @39074 has 9 MA's), (Start: 19 @39059 has 92 MA's), (27, 38993), (28, 38990),

Gene: Melvin_61 Start: 39040, Stop: 38954, Start Num: 19

Candidate Starts for Melvin_61:

(2, 40126), (3, 40114), (7, 39967), (8, 39958), (10, 39649), (11, 39193), (13, 39106), (Start: 17 @39055 has 9 MA's), (Start: 19 @39040 has 92 MA's), (23, 39025), (28, 38986),

Gene: Methuselah_60 Start: 39730, Stop: 39626, Start Num: 18

Candidate Starts for Methuselah_60:

(Start: 18 @39730 has 68 MA's), (Start: 22 @39715 has 2 MA's), (24, 39703), (28, 39661),

Gene: Microwolf_63 Start: 39707, Stop: 39618, Start Num: 22

Candidate Starts for Microwolf_63:

(Start: 18 @39722 has 68 MA's), (Start: 22 @39707 has 2 MA's), (24, 39695), (28, 39653),

Gene: Millski_58 Start: 39046, Stop: 38960, Start Num: 19

Candidate Starts for Millski_58:

(2, 40132), (3, 40120), (7, 39973), (8, 39964), (10, 39655), (11, 39199), (13, 39112), (Start: 17 @39061 has 9 MA's), (Start: 19 @39046 has 92 MA's), (23, 39031), (28, 38992),

Gene: Miramae_56 Start: 38334, Stop: 38245, Start Num: 19

Candidate Starts for Miramae_56:

(11, 38487), (13, 38400), (Start: 17 @38349 has 9 MA's), (Start: 19 @38334 has 92 MA's), (23, 38316), (28, 38277),

Gene: Misomonster_66 Start: 39733, Stop: 39629, Start Num: 18

Candidate Starts for Misomonster_66:

(Start: 18 @39733 has 68 MA's), (Start: 22 @39718 has 2 MA's), (24, 39706), (28, 39664),

Gene: Monet_64 Start: 42789, Stop: 42670, Start Num: 16

Candidate Starts for Monet_64:

(Start: 16 @42789 has 13 MA's),

Gene: MoneyMay_64 Start: 39706, Stop: 39602, Start Num: 18

Candidate Starts for MoneyMay_64:

(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: Morpher26_57 Start: 38906, Stop: 38805, Start Num: 19

Candidate Starts for Morpher26_57:

(11, 39059), (13, 38972), (Start: 17 @38921 has 9 MA's), (Start: 19 @38906 has 92 MA's), (28, 38837),

Gene: Morrow_60 Start: 39051, Stop: 38965, Start Num: 19

Candidate Starts for Morrow_60:

(7, 39978), (8, 39969), (10, 39660), (11, 39204), (13, 39117), (Start: 17 @39066 has 9 MA's), (Start: 19 @39051 has 92 MA's), (23, 39036), (28, 38997),

Gene: MuchMore_68 Start: 39698, Stop: 39594, Start Num: 18

Candidate Starts for MuchMore_68:

(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: Mundrea_57 Start: 38898, Stop: 38797, Start Num: 19

Candidate Starts for Mundrea_57:

(11, 39051), (13, 38964), (Start: 17 @38913 has 9 MA's), (Start: 19 @38898 has 92 MA's), (24, 38871), (28, 38829),

Gene: Nebs_60 Start: 39045, Stop: 38959, Start Num: 21

Candidate Starts for Nebs_60:

(9, 39798), (10, 39657), (11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (Start: 21 @39045 has 7 MA's), (23, 39030), (28, 38991),

Gene: Noelle_58 Start: 39222, Stop: 39106, Start Num: 17

Candidate Starts for Noelle_58:

(13, 39273), (Start: 17 @39222 has 9 MA's), (Start: 19 @39207 has 92 MA's), (28, 39138),

Gene: OKaNui_59 Start: 39095, Stop: 39009, Start Num: 19

Candidate Starts for OKaNui_59:

(2, 40181), (3, 40169), (7, 40022), (8, 40013), (10, 39704), (11, 39248), (13, 39161), (Start: 17 @39110 has 9 MA's), (Start: 19 @39095 has 92 MA's), (23, 39080), (28, 39041),

Gene: Obama12_60 Start: 39432, Stop: 39346, Start Num: 19

Candidate Starts for Obama12_60:

(9, 40182), (10, 40041), (11, 39585), (13, 39498), (Start: 17 @39447 has 9 MA's), (Start: 19 @39432 has 92 MA's), (28, 39378),

Gene: Ohfah_60 Start: 39048, Stop: 38959, Start Num: 19

Candidate Starts for Ohfah_60:

(9, 39798), (10, 39657), (11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (Start: 21 @39045 has 7 MA's), (23, 39030), (28, 38991),

Gene: OlanP_64 Start: 39765, Stop: 39661, Start Num: 18

Candidate Starts for OlanP_64:

(Start: 18 @39765 has 68 MA's), (Start: 22 @39750 has 2 MA's), (24, 39738), (28, 39696),

Gene: Ollie_65 Start: 39577, Stop: 39473, Start Num: 18

Candidate Starts for Ollie_65:

(Start: 18 @39577 has 68 MA's), (Start: 22 @39562 has 2 MA's), (24, 39550), (28, 39508),

Gene: P28Green_66 Start: 39709, Stop: 39605, Start Num: 18
Candidate Starts for P28Green_66:
(Start: 18 @39709 has 68 MA's), (Start: 22 @39694 has 2 MA's), (24, 39682), (28, 39640),

Gene: PGHhamlin_67 Start: 39698, Stop: 39594, Start Num: 18
Candidate Starts for PGHhamlin_67:
(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: Palestino_58 Start: 39045, Stop: 38959, Start Num: 19
Candidate Starts for Palestino_58:
(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Pawn_65 Start: 39596, Stop: 39492, Start Num: 18
Candidate Starts for Pawn_65:
(Start: 18 @39596 has 68 MA's), (Start: 22 @39581 has 2 MA's), (24, 39569), (28, 39527),

Gene: Pembroke_65 Start: 39707, Stop: 39603, Start Num: 18
Candidate Starts for Pembroke_65:
(Start: 18 @39707 has 68 MA's), (Start: 22 @39692 has 2 MA's), (24, 39680), (28, 39638),

Gene: Perplexer_57 Start: 38882, Stop: 38781, Start Num: 19
Candidate Starts for Perplexer_57:
(11, 39035), (13, 38948), (Start: 17 @38897 has 9 MA's), (Start: 19 @38882 has 92 MA's), (28, 38813),

Gene: PeterPeter_59 Start: 39042, Stop: 38956, Start Num: 19
Candidate Starts for PeterPeter_59:
(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: PetiteSangsue_57 Start: 38885, Stop: 38784, Start Num: 19
Candidate Starts for PetiteSangsue_57:
(11, 39038), (13, 38951), (Start: 17 @38900 has 9 MA's), (Start: 19 @38885 has 92 MA's), (28, 38816),

Gene: Phacado_59 Start: 39044, Stop: 38958, Start Num: 19
Candidate Starts for Phacado_59:
(2, 40130), (3, 40118), (7, 39971), (8, 39962), (10, 39653), (11, 39197), (13, 39110), (Start: 19 @39044 has 92 MA's), (23, 39029), (28, 38990),

Gene: Phelipe_60 Start: 39048, Stop: 38959, Start Num: 19
Candidate Starts for Phelipe_60:
(9, 39798), (10, 39657), (11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (Start: 21 @39045 has 7 MA's), (23, 39030), (28, 38991),

Gene: Phighter1804_59 Start: 39109, Stop: 39020, Start Num: 19
Candidate Starts for Phighter1804_59:
(11, 39262), (13, 39175), (Start: 17 @39124 has 9 MA's), (Start: 19 @39109 has 92 MA's), (Start: 21 @39106 has 7 MA's), (23, 39091), (28, 39052),

Gene: PhishRPhriends_63 Start: 38773, Stop: 38669, Start Num: 18
Candidate Starts for PhishRPhriends_63:

(Start: 18 @38773 has 68 MA's), (Start: 22 @38758 has 2 MA's), (24, 38746), (28, 38704),

Gene: Phoebe_66 Start: 39699, Stop: 39595, Start Num: 18

Candidate Starts for Phoebe_66:

(Start: 18 @39699 has 68 MA's), (Start: 22 @39684 has 2 MA's), (24, 39672), (28, 39630),

Gene: Phontbonne_59 Start: 38951, Stop: 38850, Start Num: 19

Candidate Starts for Phontbonne_59:

(10, 39560), (11, 39104), (13, 39017), (Start: 17 @38966 has 9 MA's), (Start: 19 @38951 has 92 MA's), (27, 38885), (28, 38882),

Gene: Phoxy_65 Start: 39731, Stop: 39627, Start Num: 18

Candidate Starts for Phoxy_65:

(Start: 18 @39731 has 68 MA's), (Start: 22 @39716 has 2 MA's), (24, 39704), (28, 39662),

Gene: Phranny_66 Start: 39578, Stop: 39474, Start Num: 18

Candidate Starts for Phranny_66:

(Start: 18 @39578 has 68 MA's), (Start: 22 @39563 has 2 MA's), (24, 39551), (28, 39509),

Gene: Polymorphads_60 Start: 39038, Stop: 38952, Start Num: 19

Candidate Starts for Polymorphads_60:

(13, 39104), (Start: 17 @39053 has 9 MA's), (Start: 19 @39038 has 92 MA's), (23, 39023), (28, 38984),

Gene: PotatoSplit_66 Start: 39710, Stop: 39606, Start Num: 18

Candidate Starts for PotatoSplit_66:

(Start: 18 @39710 has 68 MA's), (Start: 22 @39695 has 2 MA's), (24, 39683), (28, 39641),

Gene: Pumbaa_59 Start: 38990, Stop: 38904, Start Num: 19

Candidate Starts for Pumbaa_59:

(2, 40076), (6, 39923), (7, 39917), (10, 39599), (11, 39143), (13, 39056), (Start: 17 @39005 has 9 MA's), (Start: 19 @38990 has 92 MA's), (23, 38975), (28, 38936),

Gene: PurpleHaze_65 Start: 39591, Stop: 39487, Start Num: 18

Candidate Starts for PurpleHaze_65:

(Start: 18 @39591 has 68 MA's), (Start: 22 @39576 has 2 MA's), (24, 39564), (28, 39522),

Gene: Reba_65 Start: 39251, Stop: 39147, Start Num: 18

Candidate Starts for Reba_65:

(Start: 18 @39251 has 68 MA's), (Start: 22 @39236 has 2 MA's), (24, 39224), (28, 39182),

Gene: Relief_58 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Relief_58:

(2, 40128), (3, 40116), (5, 39996), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Rhynn_59 Start: 40477, Stop: 40358, Start Num: 16

Candidate Starts for Rhynn_59:

(Start: 16 @40477 has 13 MA's),

Gene: Romney_58 Start: 39042, Stop: 38956, Start Num: 19

Candidate Starts for Romney_58:

(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Ruin_59 Start: 39038, Stop: 38952, Start Num: 19

Candidate Starts for Ruin_59:

(2, 40124), (3, 40112), (7, 39965), (8, 39956), (10, 39647), (11, 39191), (13, 39104), (Start: 17 @39053 has 9 MA's), (Start: 19 @39038 has 92 MA's), (23, 39023), (28, 38984),

Gene: Rummer_64 Start: 39734, Stop: 39630, Start Num: 18

Candidate Starts for Rummer_64:

(Start: 18 @39734 has 68 MA's), (Start: 22 @39719 has 2 MA's), (24, 39707), (28, 39665),

Gene: Rutherferd_63 Start: 42293, Stop: 42174, Start Num: 16

Candidate Starts for Rutherferd_63:

(Start: 16 @42293 has 13 MA's), (25, 42236),

Gene: Sabertooth_59 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Sabertooth_59:

(13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Sabia_65 Start: 39715, Stop: 39611, Start Num: 18

Candidate Starts for Sabia_65:

(Start: 18 @39715 has 68 MA's), (Start: 22 @39700 has 2 MA's), (24, 39688), (28, 39646),

Gene: Scamp_59 Start: 39047, Stop: 38961, Start Num: 19

Candidate Starts for Scamp_59:

(13, 39113), (Start: 17 @39062 has 9 MA's), (Start: 19 @39047 has 92 MA's), (23, 39032), (28, 38993),

Gene: Shygu2_57 Start: 38936, Stop: 38835, Start Num: 19

Candidate Starts for Shygu2_57:

(11, 39089), (13, 39002), (Start: 17 @38951 has 9 MA's), (Start: 19 @38936 has 92 MA's), (28, 38867),

Gene: Skipitt_58 Start: 39054, Stop: 38953, Start Num: 17

Candidate Starts for Skipitt_58:

(2, 40125), (3, 40113), (7, 39966), (8, 39957), (10, 39648), (11, 39192), (13, 39105), (Start: 17 @39054 has 9 MA's), (Start: 19 @39039 has 92 MA's), (23, 39024), (28, 38985),

Gene: Slagathor_63 Start: 42929, Stop: 42810, Start Num: 16

Candidate Starts for Slagathor_63:

(Start: 16 @42929 has 13 MA's), (25, 42872),

Gene: Smeagol_63 Start: 42752, Stop: 42633, Start Num: 16

Candidate Starts for Smeagol_63:

(Start: 16 @42752 has 13 MA's), (25, 42695),

Gene: SoilDragon_65 Start: 39154, Stop: 39050, Start Num: 18

Candidate Starts for SoilDragon_65:

(Start: 18 @39154 has 68 MA's), (Start: 22 @39139 has 2 MA's), (24, 39127), (28, 39085),

Gene: Soshari_67 Start: 39730, Stop: 39626, Start Num: 18

Candidate Starts for Soshari_67:

(Start: 18 @39730 has 68 MA's), (Start: 22 @39715 has 2 MA's), (24, 39703), (28, 39661),

Gene: Sparxx_60 Start: 39040, Stop: 38954, Start Num: 19

Candidate Starts for Sparxx_60:

(13, 39106), (Start: 17 @39055 has 9 MA's), (Start: 19 @39040 has 92 MA's), (23, 39025), (28, 38986),

Gene: Spike509_65 Start: 39731, Stop: 39627, Start Num: 18

Candidate Starts for Spike509_65:

(Start: 18 @39731 has 68 MA's), (Start: 22 @39716 has 2 MA's), (24, 39704), (28, 39662),

Gene: Spino_58 Start: 39048, Stop: 38959, Start Num: 19

Candidate Starts for Spino_58:

(10, 39657), (11, 39201), (13, 39114), (Start: 17 @39063 has 9 MA's), (Start: 19 @39048 has 92 MA's), (Start: 21 @39045 has 7 MA's), (23, 39030), (28, 38991),

Gene: Stasia_57 Start: 38828, Stop: 38709, Start Num: 17

Candidate Starts for Stasia_57:

(11, 38966), (13, 38879), (Start: 17 @38828 has 9 MA's), (20, 38810), (28, 38741),

Gene: StepMih_64 Start: 39685, Stop: 39596, Start Num: 22

Candidate Starts for StepMih_64:

(Start: 18 @39700 has 68 MA's), (Start: 22 @39685 has 2 MA's), (24, 39673), (28, 39631),

Gene: Stink_56 Start: 38614, Stop: 38525, Start Num: 19

Candidate Starts for Stink_56:

(11, 38767), (13, 38680), (Start: 17 @38629 has 9 MA's), (Start: 19 @38614 has 92 MA's), (28, 38557),

Gene: Taurus_66 Start: 39706, Stop: 39602, Start Num: 18

Candidate Starts for Taurus_66:

(Start: 18 @39706 has 68 MA's), (Start: 22 @39691 has 2 MA's), (24, 39679), (28, 39637),

Gene: Thanksgivukkah_58 Start: 39043, Stop: 38957, Start Num: 19

Candidate Starts for Thanksgivukkah_58:

(2, 40129), (3, 40117), (7, 39970), (8, 39961), (10, 39652), (11, 39196), (13, 39109), (Start: 17 @39058 has 9 MA's), (Start: 19 @39043 has 92 MA's), (23, 39028), (28, 38989),

Gene: Tiffany_64 Start: 39592, Stop: 39488, Start Num: 18

Candidate Starts for Tiffany_64:

(Start: 18 @39592 has 68 MA's), (Start: 22 @39577 has 2 MA's), (24, 39565), (28, 39523),

Gene: Tinybot_58 Start: 39072, Stop: 38986, Start Num: 21

Candidate Starts for Tinybot_58:

(10, 39684), (11, 39228), (13, 39141), (Start: 17 @39090 has 9 MA's), (Start: 19 @39075 has 92 MA's), (Start: 21 @39072 has 7 MA's), (23, 39057), (28, 39018),

Gene: Topgun_59 Start: 39781, Stop: 39662, Start Num: 16

Candidate Starts for Topgun_59:

(12, 39820), (14, 39802), (Start: 16 @39781 has 13 MA's), (25, 39724),

Gene: Treddle_62 Start: 42301, Stop: 42182, Start Num: 16

Candidate Starts for Treddle_62:
(Start: 16 @42301 has 13 MA's),

Gene: TroyPia_60 Start: 39043, Stop: 38957, Start Num: 19
Candidate Starts for TroyPia_60:
(2, 40129), (3, 40117), (7, 39970), (8, 39961), (10, 39652), (11, 39196), (13, 39109), (Start: 17 @39058 has 9 MA's), (Start: 19 @39043 has 92 MA's), (23, 39028), (28, 38989),

Gene: TygerBlood_59 Start: 39045, Stop: 38959, Start Num: 19
Candidate Starts for TygerBlood_59:
(2, 40131), (3, 40119), (7, 39972), (8, 39963), (10, 39654), (11, 39198), (13, 39111), (Start: 17 @39060 has 9 MA's), (Start: 19 @39045 has 92 MA's), (23, 39030), (28, 38991),

Gene: Ulysses_58 Start: 38725, Stop: 38636, Start Num: 19
Candidate Starts for Ulysses_58:
(10, 39334), (11, 38878), (13, 38791), (Start: 17 @38740 has 9 MA's), (Start: 19 @38725 has 92 MA's), (Start: 21 @38722 has 7 MA's), (23, 38707), (28, 38668),

Gene: Violet_59 Start: 42659, Stop: 42540, Start Num: 16
Candidate Starts for Violet_59:
(Start: 16 @42659 has 13 MA's), (26, 42590),

Gene: Vix_63 Start: 39789, Stop: 39685, Start Num: 18
Candidate Starts for Vix_63:
(Start: 18 @39789 has 68 MA's), (Start: 22 @39774 has 2 MA's), (24, 39762), (28, 39720),

Gene: Wander_59 Start: 39042, Stop: 38956, Start Num: 19
Candidate Starts for Wander_59:
(2, 40128), (3, 40116), (4, 40059), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Watson_64 Start: 39698, Stop: 39594, Start Num: 18
Candidate Starts for Watson_64:
(Start: 18 @39698 has 68 MA's), (Start: 22 @39683 has 2 MA's), (24, 39671), (28, 39629),

Gene: Wilbur_59 Start: 39042, Stop: 38956, Start Num: 19
Candidate Starts for Wilbur_59:
(2, 40128), (3, 40116), (7, 39969), (8, 39960), (10, 39651), (11, 39195), (13, 39108), (Start: 17 @39057 has 9 MA's), (Start: 19 @39042 has 92 MA's), (23, 39027), (28, 38988),

Gene: Wile_57 Start: 38916, Stop: 38815, Start Num: 19
Candidate Starts for Wile_57:
(11, 39069), (13, 38982), (Start: 17 @38931 has 9 MA's), (Start: 19 @38916 has 92 MA's), (28, 38847),

Gene: Wilkins_59 Start: 39711, Stop: 39592, Start Num: 16
Candidate Starts for Wilkins_59:
(12, 39750), (14, 39732), (Start: 16 @39711 has 13 MA's), (25, 39654),

Gene: Wooldri_67 Start: 39618, Stop: 39514, Start Num: 18
Candidate Starts for Wooldri_67:
(Start: 18 @39618 has 68 MA's), (Start: 22 @39603 has 2 MA's), (24, 39591), (28, 39549),

Gene: Xena_56 Start: 38897, Stop: 38781, Start Num: 17

Candidate Starts for Xena_56:

(13, 38948), (Start: 17 @38897 has 9 MA's), (Start: 19 @38882 has 92 MA's), (28, 38813),

Gene: YoSam321_59 Start: 39039, Stop: 38953, Start Num: 19

Candidate Starts for YoSam321_59:

(2, 40125), (3, 40113), (7, 39966), (8, 39957), (10, 39648), (11, 39192), (13, 39105), (Start: 17 @39054 has 9 MA's), (Start: 19 @39039 has 92 MA's), (23, 39024), (28, 38985),

Gene: Zetzy_64 Start: 39269, Stop: 39165, Start Num: 18

Candidate Starts for Zetzy_64:

(Start: 18 @39269 has 68 MA's), (Start: 22 @39254 has 2 MA's), (24, 39242), (28, 39200),