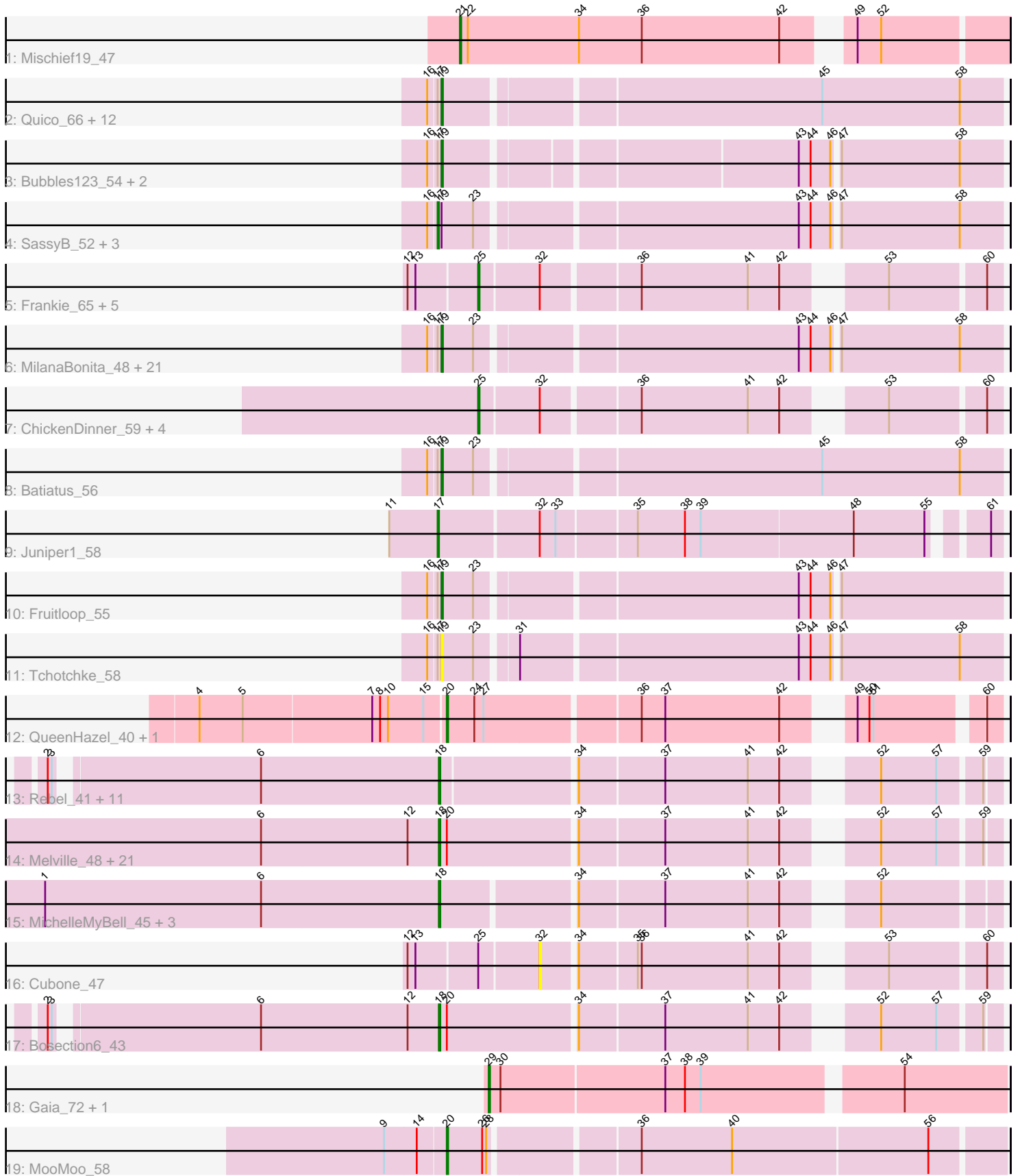


Pham 294588



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 294588 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294588 has 103 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Mischief19_47
- Track 2 : Quico_66, Brushbloom_60, Sandalphon_59, Whatsapiecost_58, Minnie_61, Veteran_54, Girafales_67, Squirty_60, Chevrolet_63, Florinda_69, ArcusAngelus_60, MilleniumForce_61, Ramsey_57
- Track 3 : Bubbles123_54, Ogotogo_63, SuperGrey_61
- Track 4 : SassyB_52, Moonbeam_56, PopTart_52, StAnnes_56
- Track 5 : Frankie_65, LilSpotty_59, LordVader_56, TootsiePop_57, Misha28_57, Awesomesauce_59
- Track 6 : MilanaBonita_48, Phanphagia_55, Tweety_57, XFactor_56, Ardmore_50, Shauna1_56, Hamulus_59, Donkeykong_61, Akhila_49, DLane_53, Bobi_63, Filuzino_56, Okabe_53, Wachhund_59, Emma_59, Flathead_58, Aubs_58, TDanisky_65, Sparkdehlily_65, Phalconet_56, SilverChicken_68, PhesterPhotato_58
- Track 7 : ChickenDinner_59, DocMcStuffins_59, MulchSalad_59, Piper2020_60, Aloeri_60
- Track 8 : Batiatus_56
- Track 9 : Juniper1_58
- Track 10 : Fruitloop_55
- Track 11 : Tchotchke_58
- Track 12 : QueenHazel_40, Xula_39
- Track 13 : Rebel_41, Spinach_49, Purgamenstris_49, Nenae_49, Redi_49, Raymond7_43, Impisi_50, BabeRuth_50, Silvy_43, PhancyPhin_49, ShrimpFriedEgg_49, Aggie_43
- Track 14 : Melville_48, Schnauzer_46, Fulbright_44, Jamie19_43, Tessdabest_46, Parmesanjohn_45, Panchino_42, Phloss_43, Magsby_45, Scitech_42, Silvafighter_46, Tortoise12_44, SpongeBob_43, Gex_45, Xerxes_45, Carcharodon_45, Pipsqueaks_45, Smurph_45, Snekmaggedon_43, Tapioca_47, Duplicity_45, Chewbacca_47
- Track 15 : MichelleMyBell_45, Rubeelu_48, Kevin1_47, Butters_48
- Track 16 : Cubone_47
- Track 17 : Bosection6_43
- Track 18 : Gaia_72, Nebkiss_72
- Track 19 : MooMoo_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 37 of the 93 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila_49, ArcusAngelus_60, Ardmore_50, Aubs_58, Batiatus_56, Bobi_63, Brushbloom_60, Bubbles123_54, Chevrolet_63, DLane_53, Donkeykong_61, Emma_59, Filuzino_56, Flathead_58, Florinda_69, Fruitloop_55, Girafales_67, Hamulus_59, MilanaBonita_48, MilleniumForce_61, Minnie_61, Ogopogo_63, Okabe_53, Phalconet_56, Phanphagia_55, PhesterPhotato_58, Quico_66, Ramsey_57, Sandalphon_59, Shauna1_56, SilverChicken_68, Sparkdehlily_65, Squirty_60, SuperGrey_61, TDanisky_65, Tchotchke_58, Tweety_57, Veteran_54, Wachhund_59, Whatsapiecost_58, XFactor_56,

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

- Moonbeam_56, PopTart_52, SassyB_52, StAnnes_56,

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

- Aggie_43, Aloeri_60, Awesomesauce_59, BabeRuth_50, Bosection6_43, Butters_48, Carcharodon_45, Chewbacca_47, ChickenDinner_59, Cubone_47, DocMcStuffins_59, Duplicity_45, Frankie_65, Fulbright_44, Gaia_72, Gex_45, Impisi_50, Jamie19_43, Juniper1_58, Kevin1_47, LilSpotty_59, LordVader_56, Magsby_45, Melville_48, MichelleMyBell_45, Mischief19_47, Misha28_57, MooMoo_58, MulchSalad_59, Nebkiss_72, Nenae_49, Panchino_42, Parmesanjohn_45, PhancyPhin_49, Phloss_43, Piper2020_60, Pipsqueaks_45, Purgamenstris_49, QueenHazel_40, Raymond7_43, Rebel_41, Redi_49, Rubeelu_48, Schnauzer_46, Scitech_42, ShrimpFriedEgg_49, Silvafighter_46, Silvy_43, Smurph_45, Snekmaggedon_43, Spinach_49, SpongeBob_43, Tapioca_47, Tessdabest_46, TootsiePop_57, Tortoise12_44, Xerxes_45, Xula_39,

Summary by start number:

Start 17:

- Found in 46 of 103 (44.7%) of genes in pham
- Manual Annotations of this start: 5 of 93
- Called 10.9% of time when present
- Phage (with cluster) where this start called: Juniper1_58 (F1), Moonbeam_56 (F1), PopTart_52 (F1), SassyB_52 (F1), StAnnes_56 (F1),

Start 18:

- Found in 39 of 103 (37.9%) of genes in pham
- Manual Annotations of this start: 36 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aggie_43 (N), BabeRuth_50 (N), Bosection6_43 (N), Butters_48 (N), Carcharodon_45 (N), Chewbacca_47 (N), Duplicity_45 (N), Fulbright_44 (N), Gex_45 (N), Impisi_50 (N), Jamie19_43 (N), Kevin1_47 (N), Magsby_45 (N), Melville_48 (N), MichelleMyBell_45 (N), Nenae_49 (N), Panchino_42 (N), Parmesanjohn_45 (N), PhancyPhin_49 (N), Phloss_43 (N), Pipsqueaks_45 (N), Purgamenstris_49 (N), Raymond7_43 (N), Rebel_41 (N), Redi_49 (N), Rubeelu_48 (N), Schnauzer_46 (N), Scitech_42 (N), ShrimpFriedEgg_49 (N), Silvafighter_46 (N), Silvy_43 (N), Smurph_45 (N), Snekmaggedon_43 (N), Spinach_49 (N), SpongeBob_43 (N), Tapioca_47 (N), Tessdabest_46 (N), Tortoise12_44 (N), Xerxes_45 (N),

Start 19:

- Found in 45 of 103 (43.7%) of genes in pham
- Manual Annotations of this start: 37 of 93
- Called 91.1% of time when present
- Phage (with cluster) where this start called: Akhila_49 (F1), ArcusAngelus_60 (F1), Ardmore_50 (F1), Aubs_58 (F1), Batiatus_56 (F1), Bobi_63 (F1), Brushbloom_60 (F1), Bubbles123_54 (F1), Chevrolet_63 (F1), DLane_53 (F1), Donkeykong_61 (F1), Emma_59 (F1), Filuzino_56 (F1), Flathead_58 (F1), Florinda_69 (F1), Fruitloop_55 (F1), Girafales_67 (F1), Hamulus_59 (F1), MilanaBonita_48 (F1), MilleniumForce_61 (F1), Minnie_61 (F1), Ogopogo_63 (F1), Okabe_53 (F8), Phalconet_56 (F1), Phanphagia_55 (F1), PhesterPhotato_58 (F1), Quico_66 (F1), Ramsey_57 (F1), Sandalphon_59 (F1), Shauna1_56 (F1), SilverChicken_68 (F2), Sparkdehlily_65 (F1), Squirty_60 (F3), SuperGrey_61 (F1), TDanisky_65 (F1), Tchotchke_58 (F1), Tweety_57 (F1), Veteran_54 (F1), Wachhund_59 (F1), Whatsapiecost_58 (F1), XFactor_56 (F1),

Start 20:

- Found in 26 of 103 (25.2%) of genes in pham
- Manual Annotations of this start: 3 of 93
- Called 11.5% of time when present
- Phage (with cluster) where this start called: MooMoo_58 (singleton), QueenHazel_40 (I1), Xula_39 (I1),

Start 21:

- Found in 1 of 103 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mischief19_47 (BG),

Start 25:

- Found in 12 of 103 (11.7%) of genes in pham
- Manual Annotations of this start: 9 of 93
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Aloeri_60 (F1), Awesomesauce_59 (F1), ChickenDinner_59 (F1), DocMcStuffins_59 (F1), Frankie_65 (F1), LilSpotty_59 (singleton), LordVader_56 (F), Misha28_57 (F1), MulchSalad_59 (F7), Piper2020_60 (F1), TootsiePop_57 (F1),

Start 29:

- Found in 2 of 103 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 93
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_72 (X), Nebkiss_72 (X),

Start 32:

- Found in 13 of 103 (12.6%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Cubone_47 (N),

Summary by clusters:

There are 11 clusters represented in this pham: F1, singleton, BG, F, I1, F7, F2, N, F8, F3, X,

Info for manual annotations of cluster BG:

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

Info for manual annotations of cluster F1:

- Start number 17 was manually annotated 5 times for cluster F1.
- Start number 19 was manually annotated 36 times for cluster F1.
- Start number 25 was manually annotated 8 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 19 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster I1:

- Start number 20 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster N:

- Start number 18 was manually annotated 36 times for cluster N.

Info for manual annotations of cluster X:

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

Gene Information:

Gene: Aggie_43 Start: 30482, Stop: 30862, Start Num: 18

Candidate Starts for Aggie_43:

(2, 30200), (3, 30203), (6, 30347), (Start: 18 @30482 has 36 MA's), (34, 30578), (37, 30641), (41, 30704), (42, 30728), (52, 30779), (57, 30821), (59, 30851),

Gene: Akhila_49 Start: 35492, Stop: 35893, Start Num: 19

Candidate Starts for Akhila_49:

(16, 35483), (Start: 17 @35489 has 5 MA's), (Start: 19 @35492 has 37 MA's), (23, 35516), (43, 35744), (44, 35753), (46, 35768), (47, 35771), (58, 35861),

Gene: Aloeri_60 Start: 39346, Stop: 39699, Start Num: 25

Candidate Starts for Aloeri_60:

(Start: 25 @39346 has 9 MA's), (32, 39388), (36, 39457), (41, 39538), (42, 39562), (53, 39619), (60, 39688),

Gene: ArcusAngelus_60 Start: 40045, Stop: 40452, Start Num: 19

Candidate Starts for ArcusAngelus_60:

(16, 40036), (Start: 17 @40042 has 5 MA's), (Start: 19 @40045 has 37 MA's), (45, 40315), (58, 40420),

Gene: Ardmore_50 Start: 37578, Stop: 37979, Start Num: 19

Candidate Starts for Ardmore_50:

(16, 37569), (Start: 17 @37575 has 5 MA's), (Start: 19 @37578 has 37 MA's), (23, 37602), (43, 37830), (44, 37839), (46, 37854), (47, 37857), (58, 37947),

Gene: Aubs_58 Start: 39742, Stop: 40143, Start Num: 19

Candidate Starts for Aubs_58:

(16, 39733), (Start: 17 @39739 has 5 MA's), (Start: 19 @39742 has 37 MA's), (23, 39766), (43, 39994), (44, 40003), (46, 40018), (47, 40021), (58, 40111),

Gene: Awesomesauce_59 Start: 38429, Stop: 38782, Start Num: 25

Candidate Starts for Awesomesauce_59:

(12, 38378), (13, 38384), (Start: 25 @38429 has 9 MA's), (32, 38471), (36, 38540), (41, 38621), (42, 38645), (53, 38702), (60, 38771),

Gene: BabeRuth_50 Start: 32627, Stop: 33007, Start Num: 18

Candidate Starts for BabeRuth_50:

(2, 32345), (3, 32348), (6, 32492), (Start: 18 @32627 has 36 MA's), (34, 32723), (37, 32786), (41, 32849), (42, 32873), (52, 32924), (57, 32966), (59, 32996),

Gene: Batiatus_56 Start: 39446, Stop: 39853, Start Num: 19

Candidate Starts for Batiatus_56:

(16, 39437), (Start: 17 @39443 has 5 MA's), (Start: 19 @39446 has 37 MA's), (23, 39470), (45, 39716), (58, 39821),

Gene: Bobi_63 Start: 41055, Stop: 41456, Start Num: 19

Candidate Starts for Bobi_63:

(16, 41046), (Start: 17 @41052 has 5 MA's), (Start: 19 @41055 has 37 MA's), (23, 41079), (43, 41307), (44, 41316), (46, 41331), (47, 41334), (58, 41424),

Gene: Bosection6_43 Start: 30372, Stop: 30755, Start Num: 18

Candidate Starts for Bosection6_43:

(2, 30090), (3, 30093), (6, 30237), (12, 30348), (Start: 18 @30372 has 36 MA's), (Start: 20 @30378 has 3 MA's), (34, 30471), (37, 30534), (41, 30597), (42, 30621), (52, 30672), (57, 30714), (59, 30744),

Gene: Brushbloom_60 Start: 40378, Stop: 40785, Start Num: 19

Candidate Starts for Brushbloom_60:

(16, 40369), (Start: 17 @40375 has 5 MA's), (Start: 19 @40378 has 37 MA's), (45, 40648), (58, 40753),

Gene: Bubbles123_54 Start: 39367, Stop: 39762, Start Num: 19

Candidate Starts for Bubbles123_54:

(16, 39358), (Start: 17 @39364 has 5 MA's), (Start: 19 @39367 has 37 MA's), (43, 39613), (44, 39622), (46, 39637), (47, 39640), (58, 39730),

Gene: Butters_48 Start: 32426, Stop: 32803, Start Num: 18

Candidate Starts for Butters_48:

(1, 32126), (6, 32291), (Start: 18 @32426 has 36 MA's), (34, 32519), (37, 32582), (41, 32645), (42, 32669), (52, 32720),

Gene: Carcharodon_45 Start: 31721, Stop: 32104, Start Num: 18

Candidate Starts for Carcharodon_45:

(6, 31586), (12, 31697), (Start: 18 @31721 has 36 MA's), (Start: 20 @31727 has 3 MA's), (34, 31820), (37, 31883), (41, 31946), (42, 31970), (52, 32021), (57, 32063), (59, 32093),

Gene: Chevrolet_63 Start: 40046, Stop: 40453, Start Num: 19

Candidate Starts for Chevrolet_63:

(16, 40037), (Start: 17 @40043 has 5 MA's), (Start: 19 @40046 has 37 MA's), (45, 40316), (58, 40421),

Gene: Chewbacca_47 Start: 31721, Stop: 32104, Start Num: 18

Candidate Starts for Chewbacca_47:

(6, 31586), (12, 31697), (Start: 18 @31721 has 36 MA's), (Start: 20 @31727 has 3 MA's), (34, 31820), (37, 31883), (41, 31946), (42, 31970), (52, 32021), (57, 32063), (59, 32093),

Gene: ChickenDinner_59 Start: 39346, Stop: 39699, Start Num: 25

Candidate Starts for ChickenDinner_59:

(Start: 25 @39346 has 9 MA's), (32, 39388), (36, 39457), (41, 39538), (42, 39562), (53, 39619), (60, 39688),

Gene: Cubone_47 Start: 30625, Stop: 30936, Start Num: 32

Candidate Starts for Cubone_47:

(12, 30532), (13, 30538), (Start: 25 @30583 has 9 MA's), (32, 30625), (34, 30649), (35, 30691), (36, 30694), (41, 30775), (42, 30799), (53, 30856), (60, 30925),

Gene: DLane_53 Start: 38102, Stop: 38503, Start Num: 19

Candidate Starts for DLane_53:

(16, 38093), (Start: 17 @38099 has 5 MA's), (Start: 19 @38102 has 37 MA's), (23, 38126), (43, 38354), (44, 38363), (46, 38378), (47, 38381), (58, 38471),

Gene: DocMcStuffins_59 Start: 39346, Stop: 39699, Start Num: 25

Candidate Starts for DocMcStuffins_59:

(Start: 25 @39346 has 9 MA's), (32, 39388), (36, 39457), (41, 39538), (42, 39562), (53, 39619), (60, 39688),

Gene: Donkeykong_61 Start: 41997, Stop: 42398, Start Num: 19

Candidate Starts for Donkeykong_61:

(16, 41988), (Start: 17 @41994 has 5 MA's), (Start: 19 @41997 has 37 MA's), (23, 42021), (43, 42249), (44, 42258), (46, 42273), (47, 42276), (58, 42366),

Gene: Duplicity_45 Start: 31730, Stop: 32113, Start Num: 18

Candidate Starts for Duplicity_45:

(6, 31595), (12, 31706), (Start: 18 @31730 has 36 MA's), (Start: 20 @31736 has 3 MA's), (34, 31829), (37, 31892), (41, 31955), (42, 31979), (52, 32030), (57, 32072), (59, 32102),

Gene: Emma_59 Start: 39114, Stop: 39515, Start Num: 19

Candidate Starts for Emma_59:

(16, 39105), (Start: 17 @39111 has 5 MA's), (Start: 19 @39114 has 37 MA's), (23, 39138), (43, 39366), (44, 39375), (46, 39390), (47, 39393), (58, 39483),

Gene: Filuzino_56 Start: 38404, Stop: 38805, Start Num: 19

Candidate Starts for Filuzino_56:

(16, 38395), (Start: 17 @38401 has 5 MA's), (Start: 19 @38404 has 37 MA's), (23, 38428), (43, 38656), (44, 38665), (46, 38680), (47, 38683), (58, 38773),

Gene: Flathead_58 Start: 39871, Stop: 40272, Start Num: 19

Candidate Starts for Flathead_58:

(16, 39862), (Start: 17 @39868 has 5 MA's), (Start: 19 @39871 has 37 MA's), (23, 39895), (43, 40123), (44, 40132), (46, 40147), (47, 40150), (58, 40240),

Gene: Florinda_69 Start: 41495, Stop: 41902, Start Num: 19
Candidate Starts for Florinda_69:
(16, 41486), (Start: 17 @41492 has 5 MA's), (Start: 19 @41495 has 37 MA's), (45, 41765), (58, 41870),

Gene: Frankie_65 Start: 41824, Stop: 42177, Start Num: 25
Candidate Starts for Frankie_65:
(12, 41773), (13, 41779), (Start: 25 @41824 has 9 MA's), (32, 41866), (36, 41935), (41, 42016), (42, 42040), (53, 42097), (60, 42166),

Gene: Fruitloop_55 Start: 39718, Stop: 40119, Start Num: 19
Candidate Starts for Fruitloop_55:
(16, 39709), (Start: 17 @39715 has 5 MA's), (Start: 19 @39718 has 37 MA's), (23, 39742), (43, 39970), (44, 39979), (46, 39994), (47, 39997),

Gene: Fulbright_44 Start: 30810, Stop: 31193, Start Num: 18
Candidate Starts for Fulbright_44:
(6, 30675), (12, 30786), (Start: 18 @30810 has 36 MA's), (Start: 20 @30816 has 3 MA's), (34, 30909), (37, 30972), (41, 31035), (42, 31059), (52, 31110), (57, 31152), (59, 31182),

Gene: Gaia_72 Start: 46921, Stop: 47298, Start Num: 29
Candidate Starts for Gaia_72:
(Start: 29 @46921 has 2 MA's), (30, 46930), (37, 47053), (38, 47068), (39, 47080), (54, 47221),

Gene: Gex_45 Start: 31737, Stop: 32120, Start Num: 18
Candidate Starts for Gex_45:
(6, 31602), (12, 31713), (Start: 18 @31737 has 36 MA's), (Start: 20 @31743 has 3 MA's), (34, 31836), (37, 31899), (41, 31962), (42, 31986), (52, 32037), (57, 32079), (59, 32109),

Gene: Girafales_67 Start: 41286, Stop: 41693, Start Num: 19
Candidate Starts for Girafales_67:
(16, 41277), (Start: 17 @41283 has 5 MA's), (Start: 19 @41286 has 37 MA's), (45, 41556), (58, 41661),

Gene: Hamulus_59 Start: 39858, Stop: 40259, Start Num: 19
Candidate Starts for Hamulus_59:
(16, 39849), (Start: 17 @39855 has 5 MA's), (Start: 19 @39858 has 37 MA's), (23, 39882), (43, 40110), (44, 40119), (46, 40134), (47, 40137), (58, 40227),

Gene: Impisi_50 Start: 32424, Stop: 32804, Start Num: 18
Candidate Starts for Impisi_50:
(2, 32142), (3, 32145), (6, 32289), (Start: 18 @32424 has 36 MA's), (34, 32520), (37, 32583), (41, 32646), (42, 32670), (52, 32721), (57, 32763), (59, 32793),

Gene: Jamie19_43 Start: 30918, Stop: 31301, Start Num: 18
Candidate Starts for Jamie19_43:
(6, 30783), (12, 30894), (Start: 18 @30918 has 36 MA's), (Start: 20 @30924 has 3 MA's), (34, 31017), (37, 31080), (41, 31143), (42, 31167), (52, 31218), (57, 31260), (59, 31290),

Gene: Juniper1_58 Start: 40048, Stop: 40446, Start Num: 17
Candidate Starts for Juniper1_58:
(11, 40012), (Start: 17 @40048 has 5 MA's), (32, 40120), (33, 40132), (35, 40189), (38, 40225), (39, 40237), (48, 40351), (55, 40405), (61, 40438),

Gene: Kevin1_47 Start: 31862, Stop: 32239, Start Num: 18

Candidate Starts for Kevin1_47:

(1, 31562), (6, 31727), (Start: 18 @31862 has 36 MA's), (34, 31955), (37, 32018), (41, 32081), (42, 32105), (52, 32156),

Gene: LilSpotty_59 Start: 37743, Stop: 38096, Start Num: 25

Candidate Starts for LilSpotty_59:

(12, 37692), (13, 37698), (Start: 25 @37743 has 9 MA's), (32, 37785), (36, 37854), (41, 37935), (42, 37959), (53, 38016), (60, 38085),

Gene: LordVader_56 Start: 35185, Stop: 35538, Start Num: 25

Candidate Starts for LordVader_56:

(12, 35134), (13, 35140), (Start: 25 @35185 has 9 MA's), (32, 35227), (36, 35296), (41, 35377), (42, 35401), (53, 35458), (60, 35527),

Gene: Magsby_45 Start: 31738, Stop: 32121, Start Num: 18

Candidate Starts for Magsby_45:

(6, 31603), (12, 31714), (Start: 18 @31738 has 36 MA's), (Start: 20 @31744 has 3 MA's), (34, 31837), (37, 31900), (41, 31963), (42, 31987), (52, 32038), (57, 32080), (59, 32110),

Gene: Melville_48 Start: 31722, Stop: 32105, Start Num: 18

Candidate Starts for Melville_48:

(6, 31587), (12, 31698), (Start: 18 @31722 has 36 MA's), (Start: 20 @31728 has 3 MA's), (34, 31821), (37, 31884), (41, 31947), (42, 31971), (52, 32022), (57, 32064), (59, 32094),

Gene: MichelleMyBell_45 Start: 30673, Stop: 31050, Start Num: 18

Candidate Starts for MichelleMyBell_45:

(1, 30373), (6, 30538), (Start: 18 @30673 has 36 MA's), (34, 30766), (37, 30829), (41, 30892), (42, 30916), (52, 30967),

Gene: MilanaBonita_48 Start: 35492, Stop: 35893, Start Num: 19

Candidate Starts for MilanaBonita_48:

(16, 35483), (Start: 17 @35489 has 5 MA's), (Start: 19 @35492 has 37 MA's), (23, 35516), (43, 35744), (44, 35753), (46, 35768), (47, 35771), (58, 35861),

Gene: MilleniumForce_61 Start: 41581, Stop: 41988, Start Num: 19

Candidate Starts for MilleniumForce_61:

(16, 41572), (Start: 17 @41578 has 5 MA's), (Start: 19 @41581 has 37 MA's), (45, 41851), (58, 41956),

Gene: Minnie_61 Start: 40883, Stop: 41290, Start Num: 19

Candidate Starts for Minnie_61:

(16, 40874), (Start: 17 @40880 has 5 MA's), (Start: 19 @40883 has 37 MA's), (45, 41153), (58, 41258),

Gene: Mischief19_47 Start: 42321, Stop: 41932, Start Num: 21

Candidate Starts for Mischief19_47:

(Start: 21 @42321 has 1 MA's), (22, 42315), (34, 42231), (36, 42183), (42, 42078), (49, 42042), (52, 42024),

Gene: Misha28_57 Start: 38434, Stop: 38787, Start Num: 25

Candidate Starts for Misha28_57:

(12, 38383), (13, 38389), (Start: 25 @38434 has 9 MA's), (32, 38476), (36, 38545), (41, 38626), (42, 38650), (53, 38707), (60, 38776),

Gene: MooMoo_58 Start: 39220, Stop: 39621, Start Num: 20

Candidate Starts for MooMoo_58:

(9, 39175), (14, 39199), (Start: 20 @39220 has 3 MA's), (26, 39247), (28, 39250), (36, 39352), (40, 39421), (56, 39568),

Gene: Moonbeam_56 Start: 39040, Stop: 39444, Start Num: 17

Candidate Starts for Moonbeam_56:

(16, 39034), (Start: 17 @39040 has 5 MA's), (Start: 19 @39043 has 37 MA's), (23, 39067), (43, 39295), (44, 39304), (46, 39319), (47, 39322), (58, 39412),

Gene: MulchSalad_59 Start: 37668, Stop: 38021, Start Num: 25

Candidate Starts for MulchSalad_59:

(Start: 25 @37668 has 9 MA's), (32, 37710), (36, 37779), (41, 37860), (42, 37884), (53, 37941), (60, 38010),

Gene: Nebkiss_72 Start: 45532, Stop: 45909, Start Num: 29

Candidate Starts for Nebkiss_72:

(Start: 29 @45532 has 2 MA's), (30, 45541), (37, 45664), (38, 45679), (39, 45691), (54, 45832),

Gene: Nenae_49 Start: 32629, Stop: 33009, Start Num: 18

Candidate Starts for Nenae_49:

(2, 32347), (3, 32350), (6, 32494), (Start: 18 @32629 has 36 MA's), (34, 32725), (37, 32788), (41, 32851), (42, 32875), (52, 32926), (57, 32968), (59, 32998),

Gene: Ogotogo_63 Start: 39889, Stop: 40284, Start Num: 19

Candidate Starts for Ogotogo_63:

(16, 39880), (Start: 17 @39886 has 5 MA's), (Start: 19 @39889 has 37 MA's), (43, 40135), (44, 40144), (46, 40159), (47, 40162), (58, 40252),

Gene: Okabe_53 Start: 35812, Stop: 36213, Start Num: 19

Candidate Starts for Okabe_53:

(16, 35803), (Start: 17 @35809 has 5 MA's), (Start: 19 @35812 has 37 MA's), (23, 35836), (43, 36064), (44, 36073), (46, 36088), (47, 36091), (58, 36181),

Gene: Panchino_42 Start: 32264, Stop: 32647, Start Num: 18

Candidate Starts for Panchino_42:

(6, 32129), (12, 32240), (Start: 18 @32264 has 36 MA's), (Start: 20 @32270 has 3 MA's), (34, 32363), (37, 32426), (41, 32489), (42, 32513), (52, 32564), (57, 32606), (59, 32636),

Gene: Parmesanjohn_45 Start: 31741, Stop: 32124, Start Num: 18

Candidate Starts for Parmesanjohn_45:

(6, 31606), (12, 31717), (Start: 18 @31741 has 36 MA's), (Start: 20 @31747 has 3 MA's), (34, 31840), (37, 31903), (41, 31966), (42, 31990), (52, 32041), (57, 32083), (59, 32113),

Gene: Phalconet_56 Start: 38170, Stop: 38571, Start Num: 19

Candidate Starts for Phalconet_56:

(16, 38161), (Start: 17 @38167 has 5 MA's), (Start: 19 @38170 has 37 MA's), (23, 38194), (43, 38422), (44, 38431), (46, 38446), (47, 38449), (58, 38539),

Gene: PhancyPhin_49 Start: 32623, Stop: 33003, Start Num: 18

Candidate Starts for PhancyPhin_49:

(2, 32341), (3, 32344), (6, 32488), (Start: 18 @32623 has 36 MA's), (34, 32719), (37, 32782), (41, 32845), (42, 32869), (52, 32920), (57, 32962), (59, 32992),

Gene: Phanphagia_55 Start: 39761, Stop: 40162, Start Num: 19

Candidate Starts for Phanphagia_55:

(16, 39752), (Start: 17 @39758 has 5 MA's), (Start: 19 @39761 has 37 MA's), (23, 39785), (43, 40013), (44, 40022), (46, 40037), (47, 40040), (58, 40130),

Gene: PhesterPhotato_58 Start: 38987, Stop: 39388, Start Num: 19

Candidate Starts for PhesterPhotato_58:

(16, 38978), (Start: 17 @38984 has 5 MA's), (Start: 19 @38987 has 37 MA's), (23, 39011), (43, 39239), (44, 39248), (46, 39263), (47, 39266), (58, 39356),

Gene: Phloss_43 Start: 31148, Stop: 31531, Start Num: 18

Candidate Starts for Phloss_43:

(6, 31013), (12, 31124), (Start: 18 @31148 has 36 MA's), (Start: 20 @31154 has 3 MA's), (34, 31247), (37, 31310), (41, 31373), (42, 31397), (52, 31448), (57, 31490), (59, 31520),

Gene: Piper2020_60 Start: 39329, Stop: 39682, Start Num: 25

Candidate Starts for Piper2020_60:

(Start: 25 @39329 has 9 MA's), (32, 39371), (36, 39440), (41, 39521), (42, 39545), (53, 39602), (60, 39671),

Gene: Pipsqueaks_45 Start: 31718, Stop: 32101, Start Num: 18

Candidate Starts for Pipsqueaks_45:

(6, 31583), (12, 31694), (Start: 18 @31718 has 36 MA's), (Start: 20 @31724 has 3 MA's), (34, 31817), (37, 31880), (41, 31943), (42, 31967), (52, 32018), (57, 32060), (59, 32090),

Gene: PopTart_52 Start: 37792, Stop: 38196, Start Num: 17

Candidate Starts for PopTart_52:

(16, 37786), (Start: 17 @37792 has 5 MA's), (Start: 19 @37795 has 37 MA's), (23, 37819), (43, 38047), (44, 38056), (46, 38071), (47, 38074), (58, 38164),

Gene: Purgamenstris_49 Start: 32627, Stop: 33007, Start Num: 18

Candidate Starts for Purgamenstris_49:

(2, 32345), (3, 32348), (6, 32492), (Start: 18 @32627 has 36 MA's), (34, 32723), (37, 32786), (41, 32849), (42, 32873), (52, 32924), (57, 32966), (59, 32996),

Gene: QueenHazel_40 Start: 31055, Stop: 31426, Start Num: 20

Candidate Starts for QueenHazel_40:

(4, 30872), (5, 30905), (7, 31001), (8, 31007), (10, 31013), (15, 31040), (Start: 20 @31055 has 3 MA's), (24, 31076), (27, 31082), (36, 31193), (37, 31211), (42, 31298), (49, 31331), (50, 31340), (51, 31343), (60, 31415),

Gene: Quico_66 Start: 41315, Stop: 41722, Start Num: 19

Candidate Starts for Quico_66:

(16, 41306), (Start: 17 @41312 has 5 MA's), (Start: 19 @41315 has 37 MA's), (45, 41585), (58, 41690),

Gene: Ramsey_57 Start: 39737, Stop: 40144, Start Num: 19

Candidate Starts for Ramsey_57:

(16, 39728), (Start: 17 @39734 has 5 MA's), (Start: 19 @39737 has 37 MA's), (45, 40007), (58, 40112),

Gene: Raymond7_43 Start: 32415, Stop: 32795, Start Num: 18

Candidate Starts for Raymond7_43:

(2, 32133), (3, 32136), (6, 32280), (Start: 18 @32415 has 36 MA's), (34, 32511), (37, 32574), (41, 32637), (42, 32661), (52, 32712), (57, 32754), (59, 32784),

Gene: Rebel_41 Start: 28757, Stop: 29137, Start Num: 18

Candidate Starts for Rebel_41:

(2, 28475), (3, 28478), (6, 28622), (Start: 18 @28757 has 36 MA's), (34, 28853), (37, 28916), (41, 28979), (42, 29003), (52, 29054), (57, 29096), (59, 29126),

Gene: Redi_49 Start: 32626, Stop: 33006, Start Num: 18

Candidate Starts for Redi_49:

(2, 32344), (3, 32347), (6, 32491), (Start: 18 @32626 has 36 MA's), (34, 32722), (37, 32785), (41, 32848), (42, 32872), (52, 32923), (57, 32965), (59, 32995),

Gene: Rubeelu_48 Start: 32426, Stop: 32803, Start Num: 18

Candidate Starts for Rubeelu_48:

(1, 32126), (6, 32291), (Start: 18 @32426 has 36 MA's), (34, 32519), (37, 32582), (41, 32645), (42, 32669), (52, 32720),

Gene: Sandalphon_59 Start: 39861, Stop: 40268, Start Num: 19

Candidate Starts for Sandalphon_59:

(16, 39852), (Start: 17 @39858 has 5 MA's), (Start: 19 @39861 has 37 MA's), (45, 40131), (58, 40236),

Gene: SassyB_52 Start: 37792, Stop: 38196, Start Num: 17

Candidate Starts for SassyB_52:

(16, 37786), (Start: 17 @37792 has 5 MA's), (Start: 19 @37795 has 37 MA's), (23, 37819), (43, 38047), (44, 38056), (46, 38071), (47, 38074), (58, 38164),

Gene: Schnauzer_46 Start: 31741, Stop: 32124, Start Num: 18

Candidate Starts for Schnauzer_46:

(6, 31606), (12, 31717), (Start: 18 @31741 has 36 MA's), (Start: 20 @31747 has 3 MA's), (34, 31840), (37, 31903), (41, 31966), (42, 31990), (52, 32041), (57, 32083), (59, 32113),

Gene: Scitech_42 Start: 29757, Stop: 30140, Start Num: 18

Candidate Starts for Scitech_42:

(6, 29622), (12, 29733), (Start: 18 @29757 has 36 MA's), (Start: 20 @29763 has 3 MA's), (34, 29856), (37, 29919), (41, 29982), (42, 30006), (52, 30057), (57, 30099), (59, 30129),

Gene: Shauna1_56 Start: 39670, Stop: 40071, Start Num: 19

Candidate Starts for Shauna1_56:

(16, 39661), (Start: 17 @39667 has 5 MA's), (Start: 19 @39670 has 37 MA's), (23, 39694), (43, 39922), (44, 39931), (46, 39946), (47, 39949), (58, 40039),

Gene: ShrimpFriedEgg_49 Start: 32626, Stop: 33006, Start Num: 18

Candidate Starts for ShrimpFriedEgg_49:

(2, 32344), (3, 32347), (6, 32491), (Start: 18 @32626 has 36 MA's), (34, 32722), (37, 32785), (41, 32848), (42, 32872), (52, 32923), (57, 32965), (59, 32995),

Gene: Silvafighter_46 Start: 31714, Stop: 32097, Start Num: 18

Candidate Starts for Silvafighter_46:

(6, 31579), (12, 31690), (Start: 18 @31714 has 36 MA's), (Start: 20 @31720 has 3 MA's), (34, 31813), (37, 31876), (41, 31939), (42, 31963), (52, 32014), (57, 32056), (59, 32086),

Gene: SilverChicken_68 Start: 39450, Stop: 39851, Start Num: 19

Candidate Starts for SilverChicken_68:

(16, 39441), (Start: 17 @39447 has 5 MA's), (Start: 19 @39450 has 37 MA's), (23, 39474), (43, 39702), (44, 39711), (46, 39726), (47, 39729), (58, 39819),

Gene: Silvy_43 Start: 30482, Stop: 30862, Start Num: 18

Candidate Starts for Silvy_43:

(2, 30200), (3, 30203), (6, 30347), (Start: 18 @30482 has 36 MA's), (34, 30578), (37, 30641), (41, 30704), (42, 30728), (52, 30779), (57, 30821), (59, 30851),

Gene: Smurph_45 Start: 31741, Stop: 32124, Start Num: 18

Candidate Starts for Smurph_45:

(6, 31606), (12, 31717), (Start: 18 @31741 has 36 MA's), (Start: 20 @31747 has 3 MA's), (34, 31840), (37, 31903), (41, 31966), (42, 31990), (52, 32041), (57, 32083), (59, 32113),

Gene: Snekmaggedon_43 Start: 30918, Stop: 31301, Start Num: 18

Candidate Starts for Snekmaggedon_43:

(6, 30783), (12, 30894), (Start: 18 @30918 has 36 MA's), (Start: 20 @30924 has 3 MA's), (34, 31017), (37, 31080), (41, 31143), (42, 31167), (52, 31218), (57, 31260), (59, 31290),

Gene: Sparkdehlily_65 Start: 40681, Stop: 41082, Start Num: 19

Candidate Starts for Sparkdehlily_65:

(16, 40672), (Start: 17 @40678 has 5 MA's), (Start: 19 @40681 has 37 MA's), (23, 40705), (43, 40933), (44, 40942), (46, 40957), (47, 40960), (58, 41050),

Gene: Spinach_49 Start: 32626, Stop: 33006, Start Num: 18

Candidate Starts for Spinach_49:

(2, 32344), (3, 32347), (6, 32491), (Start: 18 @32626 has 36 MA's), (34, 32722), (37, 32785), (41, 32848), (42, 32872), (52, 32923), (57, 32965), (59, 32995),

Gene: SpongeBob_43 Start: 30918, Stop: 31301, Start Num: 18

Candidate Starts for SpongeBob_43:

(6, 30783), (12, 30894), (Start: 18 @30918 has 36 MA's), (Start: 20 @30924 has 3 MA's), (34, 31017), (37, 31080), (41, 31143), (42, 31167), (52, 31218), (57, 31260), (59, 31290),

Gene: Squirty_60 Start: 40442, Stop: 40849, Start Num: 19

Candidate Starts for Squirty_60:

(16, 40433), (Start: 17 @40439 has 5 MA's), (Start: 19 @40442 has 37 MA's), (45, 40712), (58, 40817),

Gene: StAnnes_56 Start: 39845, Stop: 40249, Start Num: 17

Candidate Starts for StAnnes_56:

(16, 39839), (Start: 17 @39845 has 5 MA's), (Start: 19 @39848 has 37 MA's), (23, 39872), (43, 40100), (44, 40109), (46, 40124), (47, 40127), (58, 40217),

Gene: SuperGrey_61 Start: 41156, Stop: 41557, Start Num: 19

Candidate Starts for SuperGrey_61:

(16, 41147), (Start: 17 @41153 has 5 MA's), (Start: 19 @41156 has 37 MA's), (43, 41408), (44, 41417), (46, 41432), (47, 41435), (58, 41525),

Gene: TDanisky_65 Start: 40681, Stop: 41082, Start Num: 19

Candidate Starts for TDanisky_65:

(16, 40672), (Start: 17 @40678 has 5 MA's), (Start: 19 @40681 has 37 MA's), (23, 40705), (43, 40933), (44, 40942), (46, 40957), (47, 40960), (58, 41050),

Gene: Tapioca_47 Start: 31707, Stop: 32090, Start Num: 18

Candidate Starts for Tapioca_47:

(6, 31572), (12, 31683), (Start: 18 @31707 has 36 MA's), (Start: 20 @31713 has 3 MA's), (34, 31806), (37, 31869), (41, 31932), (42, 31956), (52, 32007), (57, 32049), (59, 32079),

Gene: Tchotchke_58 Start: 39073, Stop: 39474, Start Num: 19

Candidate Starts for Tchotchke_58:

(16, 39064), (Start: 17 @39070 has 5 MA's), (Start: 19 @39073 has 37 MA's), (23, 39097), (31, 39121), (43, 39325), (44, 39334), (46, 39349), (47, 39352), (58, 39442),

Gene: Tessdabest_46 Start: 31738, Stop: 32121, Start Num: 18

Candidate Starts for Tessdabest_46:

(6, 31603), (12, 31714), (Start: 18 @31738 has 36 MA's), (Start: 20 @31744 has 3 MA's), (34, 31837), (37, 31900), (41, 31963), (42, 31987), (52, 32038), (57, 32080), (59, 32110),

Gene: TootsiePop_57 Start: 38434, Stop: 38787, Start Num: 25

Candidate Starts for TootsiePop_57:

(12, 38383), (13, 38389), (Start: 25 @38434 has 9 MA's), (32, 38476), (36, 38545), (41, 38626), (42, 38650), (53, 38707), (60, 38776),

Gene: Tortoise12_44 Start: 30424, Stop: 30807, Start Num: 18

Candidate Starts for Tortoise12_44:

(6, 30289), (12, 30400), (Start: 18 @30424 has 36 MA's), (Start: 20 @30430 has 3 MA's), (34, 30523), (37, 30586), (41, 30649), (42, 30673), (52, 30724), (57, 30766), (59, 30796),

Gene: Tweety_57 Start: 40472, Stop: 40873, Start Num: 19

Candidate Starts for Tweety_57:

(16, 40463), (Start: 17 @40469 has 5 MA's), (Start: 19 @40472 has 37 MA's), (23, 40496), (43, 40724), (44, 40733), (46, 40748), (47, 40751), (58, 40841),

Gene: Veteran_54 Start: 38058, Stop: 38465, Start Num: 19

Candidate Starts for Veteran_54:

(16, 38049), (Start: 17 @38055 has 5 MA's), (Start: 19 @38058 has 37 MA's), (45, 38328), (58, 38433),

Gene: Wachhund_59 Start: 39272, Stop: 39673, Start Num: 19

Candidate Starts for Wachhund_59:

(16, 39263), (Start: 17 @39269 has 5 MA's), (Start: 19 @39272 has 37 MA's), (23, 39296), (43, 39524), (44, 39533), (46, 39548), (47, 39551), (58, 39641),

Gene: Whatsapiecost_58 Start: 38556, Stop: 38963, Start Num: 19

Candidate Starts for Whatsapiecost_58:

(16, 38547), (Start: 17 @38553 has 5 MA's), (Start: 19 @38556 has 37 MA's), (45, 38826), (58, 38931),

Gene: XFactor_56 Start: 38361, Stop: 38762, Start Num: 19

Candidate Starts for XFactor_56:

(16, 38352), (Start: 17 @38358 has 5 MA's), (Start: 19 @38361 has 37 MA's), (23, 38385), (43, 38613), (44, 38622), (46, 38637), (47, 38640), (58, 38730),

Gene: Xerxes_45 Start: 31738, Stop: 32121, Start Num: 18

Candidate Starts for Xerxes_45:

(6, 31603), (12, 31714), (Start: 18 @31738 has 36 MA's), (Start: 20 @31744 has 3 MA's), (34, 31837), (37, 31900), (41, 31963), (42, 31987), (52, 32038), (57, 32080), (59, 32110),

Gene: Xula_39 Start: 30657, Stop: 31028, Start Num: 20

Candidate Starts for Xula_39:

(4, 30474), (5, 30507), (7, 30603), (8, 30609), (10, 30615), (15, 30642), (Start: 20 @30657 has 3 MA's),
(24, 30678), (27, 30684), (36, 30795), (37, 30813), (42, 30900), (49, 30933), (50, 30942), (51, 30945),
(60, 31017),