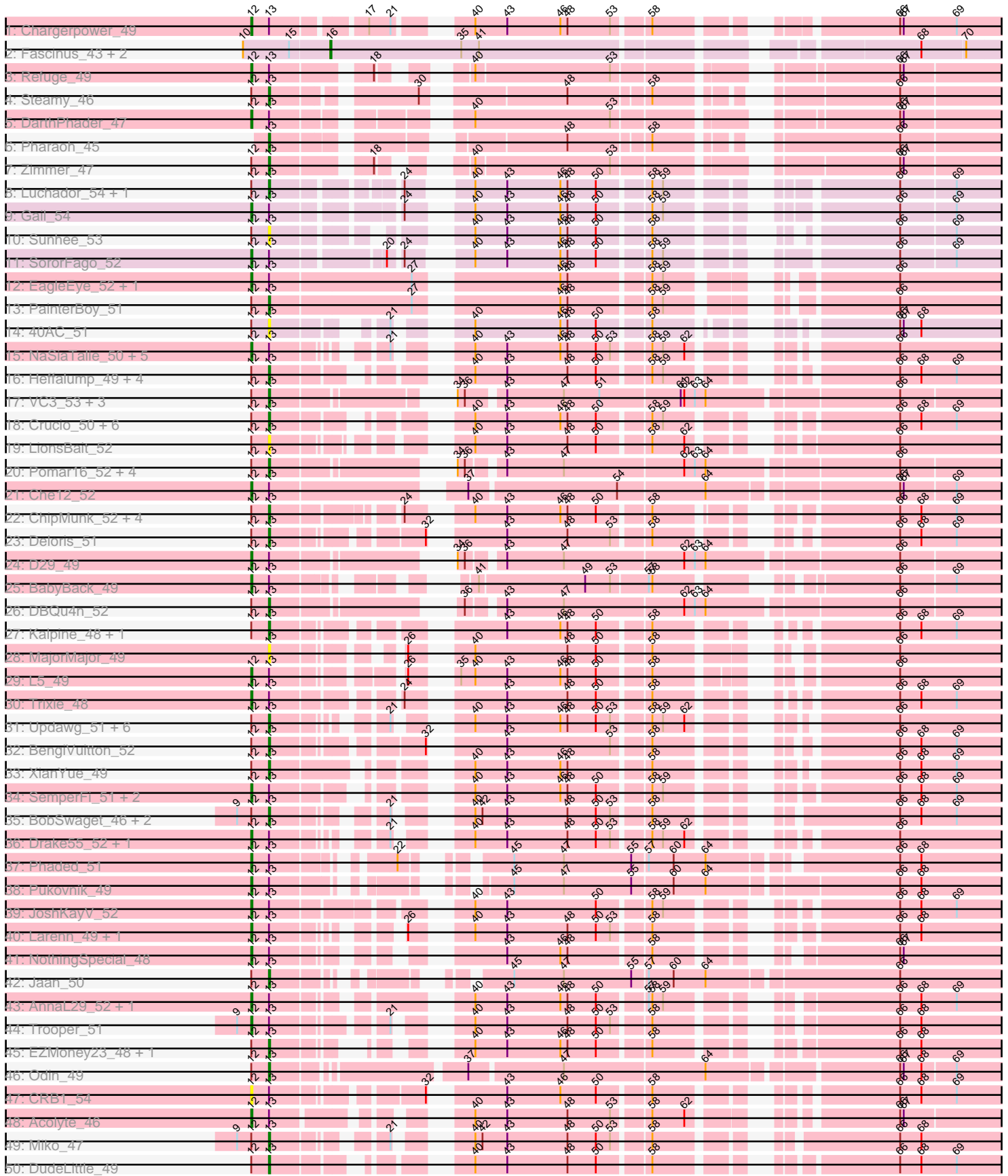
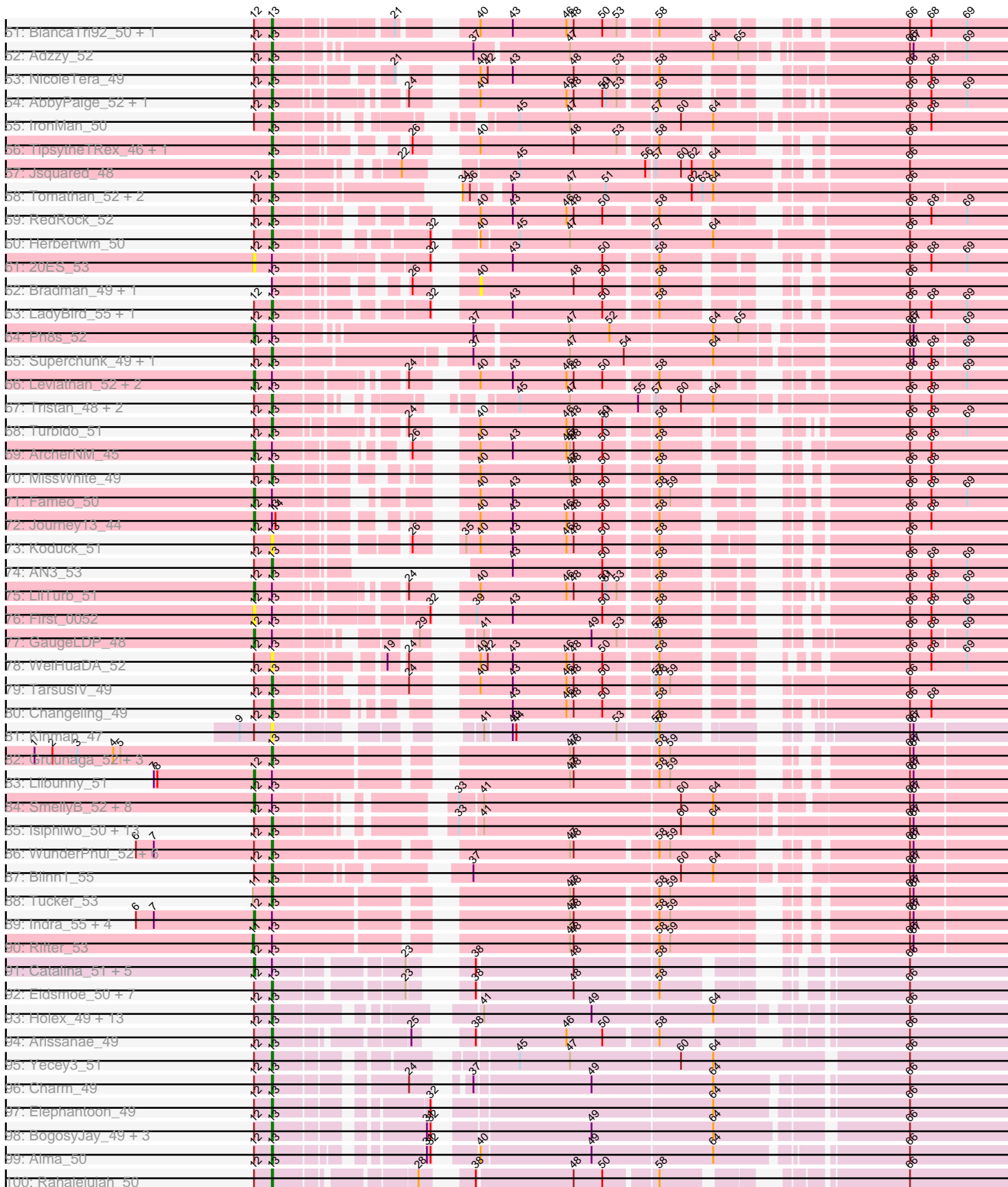


Pham 224280



Pham 224280



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 224280 Report

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

Pham number 224280 has 224 members, 34 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_49
- Track 2 : Fascinus_43, Maroc7_45, Gyzlar_43
- Track 3 : Refuge_49
- Track 4 : Steamy_46
- Track 5 : DarthPhader_47
- Track 6 : Pharaoh_45
- Track 7 : Zimmer_47
- Track 8 : Luchador_54, Jeeves_54
- Track 9 : Gail_54
- Track 10 : Sunhee_53
- Track 11 : SororFago_52
- Track 12 : EagleEye_52, Lucyedi_51
- Track 13 : PainterBoy_51
- Track 14 : 40AC_51
- Track 15 : NaSiaTalie_50, Baehexic_49, Centaur_51, MiculUcigas_50, Flare16_50, WideWale_51
- Track 16 : Heffalump_49, Dalmatian_51, QueenB2_49, Anselm_51, Retro23_51
- Track 17 : VC3_53, C3_48, ANI8_53, AN9_53
- Track 18 : Crucio_50, Georgie2_51, SweetiePie_50, FiringLine_50, SnapTap_50, Power_49, QueenBeesly_50
- Track 19 : LionsBait_52
- Track 20 : Pomar16_52, Travvers_52, Naji_52, D32_51, StarStuff_52
- Track 21 : Che12_52
- Track 22 : ChipMunk_52, Dignity_52, Smeagan_53, KingCyrus_52, Jerm_52
- Track 23 : Deloris_51
- Track 24 : D29_49
- Track 25 : BabyBack_49
- Track 26 : DBQu4n_52
- Track 27 : Kalpine_48, Colin_50
- Track 28 : MajorMajor_49
- Track 29 : L5_49
- Track 30 : Trixie_48
- Track 31 : Updawg_51, Bugsy_52, HarryHoudini_51, Gratitude_50, Terrific_53, Sknot_52, Equemioh13_51
- Track 32 : BengiVuitton_52
- Track 33 : XianYue_49
- Track 34 : SemperFi_51, Echild_50, Benvolio_47

- Track 35 : BobSwaget_46, Rachaly_49, Lokk_47
- Track 36 : Drake55_52, Piro94_50
- Track 37 : Phaded_51
- Track 38 : Pukovnik_49
- Track 39 : JoshKayV_52
- Track 40 : Larenn_49, Malec_50
- Track 41 : NothingSpecial_48
- Track 42 : Jaan_50
- Track 43 : AnnaL29_52, Loser_52
- Track 44 : Trooper_51
- Track 45 : EZMoney23_48, Iwokeuplikedis_53
- Track 46 : Odin_49
- Track 47 : CRB1_54
- Track 48 : Acolyte_46
- Track 49 : Miko_47
- Track 50 : DudeLittle_49
- Track 51 : BiancaTri92_50, Leogania_50
- Track 52 : Adzzy_52
- Track 53 : NicoleTera_49
- Track 54 : AbbyPaige_52, Whabigail7_51
- Track 55 : IronMan_50
- Track 56 : TipsytheTRex_46, Serenity_50
- Track 57 : Jsquared_48
- Track 58 : Tomathan_52, Kerberos_52, Duplo_52
- Track 59 : RedRock_52
- Track 60 : Herbertwm_50
- Track 61 : 20ES_53
- Track 62 : Bradman_49, Quokka_48
- Track 63 : LadyBird_55, VA6_51
- Track 64 : Ph8s_52
- Track 65 : Superchunk_49, Caraxes_50
- Track 66 : Leviathan_52, EvilGenius_52, Agape74_52
- Track 67 : Tristan_48, Bactobuster_49, Landor_50
- Track 68 : Turbido_51
- Track 69 : ArcherNM_45
- Track 70 : MissWhite_49
- Track 71 : Fameo_50
- Track 72 : Journey13_44
- Track 73 : Koduck_51
- Track 74 : AN3_53
- Track 75 : LilTurb_51
- Track 76 : First_0052
- Track 77 : GaugeLDP_48
- Track 78 : WeiHuaDA_52
- Track 79 : TarsusIV_49
- Track 80 : Changeling_49
- Track 81 : Kinmap_47
- Track 82 : Gruunaga_52, Roksolana_53, CloudWang3_52, Koko_53
- Track 83 : Lilbunny_51
- Track 84 : SmellyB_52, JewelBug_53, SuperAwesome_52, Kipper29_52, GreedyLawyer_52, Cookiedough_52, Newrala_52, Hoot_47, Jordennis_52
- Track 85 : Isiphiwo_50, Polyphemus_54, Candra_52, EricB_52, Kazan_53, SuperCallie99_51, VohminGhazi_52, McFly_52, Dorothea_52, Pmask_52,

- Chartreuse_51, Neeharika16_51, DaVinci_51, BABullseye_46
- Track 86 : WunderPhul_52, Garak_54, Temprado_54, Helmet_54, Zaka_52, Yokurt_52, ToneTone_49
 - Track 87 : Blinn1_55
 - Track 88 : Tucker_53
 - Track 89 : Indra_55, Zulu_53, Wiks_51, Hexamo_52, Jeffabunny_52
 - Track 90 : Rifter_53
 - Track 91 : Catalina_51, Myxus_50, EmyBug_49, PackMan_49, HortumSL17_50, Aliter_50
 - Track 92 : Eidsmoe_50, Phaeder_50, Priya_50, Onglai_48, Fayely_50, Tubs_50, Qobbit_50, Spouty_50
 - Track 93 : Horex_49, RyeScarlet_51, Lilleskat_48, Beemo_50, ExplosioNervosa_50, Ugenie5_47, Hanray_48, Jiawan_48, Phonnegut_50, EdogawaKiddo_48, Sachima_47, Conquerage_50, Scherzo_50, Pioneer_50
 - Track 94 : Arissanae_49
 - Track 95 : Yecey3_51
 - Track 96 : Charm_49
 - Track 97 : Elephantoon_49
 - Track 98 : BogosyJay_49, LoneWolf_51, Maminiaina_49, Toaka_50
 - Track 99 : Alma_50
 - Track 100 : Rahalelujah_50
 - Track 101 : Vanisoa_50
 - Track 102 : DreamTeam1_49
 - Track 103 : Keziacharles14_50
 - Track 104 : SheaKeira_49
 - Track 105 : Darrell_52

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

The start number called the most often in the published annotations is 13, it was called in 122 of the 190 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_51, AN3_53, AN9_53, ANI8_53, AbbyPaige_52, Adzzy_52, Alma_50, Anselm_51, Arissanae_49, BABullseye_46, Bactobuster_49, Beemo_50, BengiVuitton_52, BiancaTri92_50, Blinn1_55, BobSwaget_46, BogosyJay_49, Buggy_52, C3_48, Candra_52, Caraxes_50, Changeling_49, Charm_49, Chartreuse_51, ChipMunk_52, CloudWang3_52, Colin_50, Conquerage_50, Crucio_50, D32_51, DBQu4n_52, DaVinci_51, Dalmatian_51, Deloris_51, Dignity_52, Dorothea_52, DreamTeam1_49, DudeLittle_49, Duplo_52, EZMoney23_48, EdogawaKiddo_48, Eidsmoe_50, Elephantoon_49, Equemioh13_51, EricB_52, ExplosioNervosa_50, Fayely_50, FiringLine_50, Garak_54, Georgie2_51, Gratitude_50, Gruunaga_52, Hanray_48, HarryHoudini_51, Heffalump_49, Helmet_54, Herbertwm_50, Horex_49, IronMan_50, Isiphiwo_50, Iwokeuplikedis_53, Jaan_50, Jeeves_54, Jerm_52, Jiawan_48, Jsquared_48, Kalpine_48, Kazan_53, Kerberos_52, Keziacharles14_50, KingCyrus_52, Kinmap_47, Koduck_51, Koko_53, LadyBird_55, Landor_50, Leogania_50, Lilleskat_48, LionsBait_52, Lökk_47, LoneWolf_51, Luchador_54, MajorMajor_49, Maminiaina_49, McFly_52, Miko_47, MissWhite_49, Naji_52, Neeharika16_51, NicoleTera_49, Odin_49, Onglai_48, PainterBoy_51, Phaeder_50, Pharaoh_45, Phonnegut_50, Pioneer_50, Pmask_52,

Polyphemus_54, Pomar16_52, Power_49, Priya_50, Qobbit_50, QueenB2_49, QueenBeesly_50, Rachaly_49, Rahalelujah_50, RedRock_52, Retro23_51, Roksolana_53, RyeScarlet_51, Sachima_47, Scherzo_50, Serenity_50, SheaKeira_49, Sknot_52, Smeagan_53, SnapTap_50, Spouty_50, StarStuff_52, Steamy_46, Sunhee_53, SuperCallie99_51, Superchunk_49, SweetiePie_50, TarsusIV_49, Temprado_54, Terrific_53, TipsytheTRex_46, Toaka_50, Tomathan_52, ToneTone_49, Travvers_52, Tristan_48, Tubs_50, Tucker_53, Turbido_51, Ugenie5_47, Updawg_51, VA6_51, VC3_53, Vanisoa_50, VohminGhazi_52, WeiHuaDA_52, Whabigail7_51, WunderPhul_52, XianYue_49, Yecey3_51, Yokurt_52, Zaka_52, Zimmer_47,

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

- 20ES_53, Acolyte_46, Agape74_52, Aliter_50, AnnaL29_52, ArcherNM_45, BabyBack_49, Baehexic_49, Benvolio_47, Bradman_49, CRB1_54, Catalina_51, Centaur_51, Chargerpower_49, Che12_52, Cookiedough_52, D29_49, Darrell_52, DarthPhader_47, Drake55_52, EagleEye_52, Echild_50, EmyBug_49, EvilGenius_52, Fameo_50, First_0052, Flare16_50, Gail_54, GaugeLDP_48, GreedyLawyer_52, Hexamo_52, Hoot_47, HortumSL17_50, Indra_55, Jeffabunny_52, JewelBug_53, Jordennis_52, JoshKayV_52, Journey13_44, Kipper29_52, L5_49, Larenn_49, Leviathan_52, LiITurb_51, Lilbunny_51, Loser_52, Lucyedi_51, Malec_50, MiculUcigas_50, Myxus_50, NaSiaTalie_50, Newrala_52, NothingSpecial_48, PackMan_49, Ph8s_52, Phaded_51, Piro94_50, Pukovnik_49, Quokka_48, Refuge_49, Rifter_53, SemperFi_51, SmellyB_52, SororFago_52, SuperAwesome_52, Trixie_48, Trooper_51, WideWale_51, Wiks_51, Zulu_53,

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

- Fascinus_43, Gyzlar_43, Maroc7_45,

Summary by start number:

Start 11:

- Found in 2 of 224 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 190
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Rifter_53 (A6),

Start 12:

- Found in 208 of 224 (92.9%) of genes in pham
- Manual Annotations of this start: 64 of 190
- Called 32.2% of time when present
- Phage (with cluster) where this start called: 20ES_53 (A2), Acolyte_46 (A2), Agape74_52 (A2), Aliter_50 (A9), AnnaL29_52 (A2), ArcherNM_45 (A2), BabyBack_49 (A2), Baehexic_49 (A2), Benvolio_47 (A2), CRB1_54 (A2), Catalina_51 (A9), Centaur_51 (A2), Chargerpower_49 (A), Che12_52 (A2), Cookiedough_52 (A6), D29_49 (A2), Darrell_52 (A9), DarthPhader_47 (A12), Drake55_52 (A2), EagleEye_52 (A16), Echild_50 (A2), EmyBug_49 (A9), EvilGenius_52 (A2), Fameo_50 (A2), First_0052 (A2), Flare16_50 (A2), Gail_54 (A14), GaugeLDP_48 (A2), GreedyLawyer_52 (A6), Hexamo_52 (A6), Hoot_47 (A6), HortumSL17_50 (A9), Indra_55 (A6), Jeffabunny_52 (A6), JewelBug_53 (A6), Jordennis_52 (A6), JoshKayV_52 (A2), Journey13_44 (A2), Kipper29_52 (A6), L5_49 (A2), Larenn_49 (A2), Leviathan_52 (A2), LiITurb_51 (A2), Lilbunny_51 (A6), Loser_52 (A2), Lucyedi_51 (A16), Malec_50 (A2), MiculUcigas_50 (A2), Myxus_50 (A9), NaSiaTalie_50 (A2), Newrala_52 (A6), NothingSpecial_48 (A2), PackMan_49 (A9),

Ph8s_52 (A2), Phaded_51 (A2), Piro94_50 (A2), Pukovnik_49 (A2), Refuge_49 (A12), SemperFi_51 (A2), SmellyB_52 (A6), SororFago_52 (A14), SuperAwesome_52 (A6), Trixie_48 (A2), Trooper_51 (A2), WideWale_51 (A2), Wiks_51 (A6), Zulu_53 (A6),

Start 13:

- Found in 221 of 224 (98.7%) of genes in pham
- Manual Annotations of this start: 122 of 190
- Called 68.3% of time when present
- Phage (with cluster) where this start called: 40AC_51 (A17), AN3_53 (A2), AN9_53 (A2), ANI8_53 (A2), AbbyPaige_52 (A2), Adzzy_52 (A2), Alma_50 (A9), Anselm_51 (A2), Arissanae_49 (A9), BABullseye_46 (A6), Bactobuster_49 (A2), Beemo_50 (A9), BengiVuitton_52 (A2), BiancaTri92_50 (A2), Blinn1_55 (A6), BobSwaget_46 (A2), BogosyJay_49 (A9), Buggy_52 (A2), C3_48 (A2), Candra_52 (A6), Caraxes_50 (A2), Changeling_49 (A2), Charm_49 (A9), Chartreuse_51 (A6), ChipMunk_52 (A2), CloudWang3_52 (A6), Colin_50 (A2), Conquerage_50 (A9), Crucio_50 (A2), D32_51 (A2), DBQu4n_52 (A2), DaVinci_51 (A6), Dalmatian_51 (A2), Deloris_51 (A2), Dignity_52 (A2), Dorothea_52 (A6), DreamTeam1_49 (A9), DudeLittle_49 (A2), Duplo_52 (A2), EZMoney23_48 (A2), EdogawaKiddo_48 (A9), Eidsmoe_50 (A9), Elephantoon_49 (A9), Equemioh13_51 (A2), EricB_52 (A6), ExplosioNervosa_50 (A9), Fayely_50 (A9), FiringLine_50 (A2), Garak_54 (A6), Georgie2_51 (A2), Gratitude_50 (A2), Gruunaga_52 (A6), Hanray_48 (A9), HarryHoudini_51 (A2), Heffalump_49 (A2), Helmet_54 (A6), Herbertwm_50 (A2), Horex_49 (A9), IronMan_50 (A2), Isiphiwo_50 (A6), Iwokeuplikedis_53 (A2), Jaan_50 (A2), Jeeves_54 (A14), Jerm_52 (A2), Jiawan_48 (A9), Jsquared_48 (A2), Kalpine_48 (A2), Kazan_53 (A6), Kerberos_52 (A2), Keziacharles14_50 (A9), KingCyrus_52 (A2), Kinmap_47 (A21), Koduck_51 (A2), Koko_53 (A6), LadyBird_55 (A2), Landor_50 (A2), Leogania_50 (A2), Lilleskat_48 (A9), LionsBait_52 (A2), Lokk_47 (A2), LoneWolf_51 (A9), Luchador_54 (A14), MajorMajor_49 (A2), Maminiaina_49 (A9), McFly_52 (A6), Miko_47 (A2), MissWhite_49 (A2), Naji_52 (A2), Neeharika16_51 (A6), NicoleTera_49 (A2), Odin_49 (A2), Onglai_48 (A9), PainterBoy_51 (A16), Phaeder_50 (A9), Pharaoh_45 (A12), Phonnegut_50 (A9), Pioneer_50 (A9), Pmask_52 (A6), Polyphemus_54 (A6), Pomar16_52 (A2), Power_49 (A2), Priya_50 (A9), Qobbit_50 (A9), QueenB2_49 (A2), QueenBeesly_50 (A2), Rachaly_49 (A2), Rahalelujah_50 (A9), RedRock_52 (A2), Retro23_51 (A2), Roksolana_53 (A6), RyeScarlet_51 (A9), Sachima_47 (A9), Scherzo_50 (A9), Serenity_50 (A2), SheaKeira_49 (A9), Sknot_52 (A2), Smeagan_53 (A2), SnapTap_50 (A2), Spouty_50 (A9), StarStuff_52 (A2), Steamy_46 (A12), Sunhee_53 (A14), SuperCallie99_51 (A6), Superchunk_49 (A2), SweetiePie_50 (A2), TarsusIV_49 (A2), Temprado_54 (A6), Terrific_53 (A2), TopsytheTRex_46 (A2), Toaka_50 (A9), Tomathan_52 (A2), ToneTone_49 (A6), Travvers_52 (A2), Tristan_48 (A2), Tubs_50 (A9), Tucker_53 (A6), Turbido_51 (A2), Ugenie5_47 (A9), Updawg_51 (A2), VA6_51 (A2), VC3_53 (A2), Vanisoa_50 (A9), VohminGhazi_52 (A6), WeiHuaDA_52 (A2), Whabigail7_51 (A2), WunderPhul_52 (A6), XianYue_49 (A2), Yecey3_51 (A9), Yokurt_52 (A6), Zaka_52 (A6), Zimmer_47 (A12),

Start 16:

- Found in 3 of 224 (1.3%) of genes in pham
- Manual Annotations of this start: 3 of 190
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fascinus_43 (A1), Gyzlar_43 (A1), Maroc7_45 (A1),

Start 40:

- Found in 88 of 224 (39.3%) of genes in pham
- No Manual Annotations of this start.
- Called 2.3% of time when present
- Phage (with cluster) where this start called: Bradman_49 (A2), Quokka_48 (A2),

Summary by clusters:

There are 10 clusters represented in this pham: A, A21, A17, A16, A12, A1, A2, A6, A9, A14,

Info for manual annotations of cluster A:

- Start number 12 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 16 was manually annotated 3 times for cluster A1.

Info for manual annotations of cluster A12:

- Start number 12 was manually annotated 2 times for cluster A12.
- Start number 13 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 12 was manually annotated 2 times for cluster A14.
- Start number 13 was manually annotated 2 times for cluster A14.

Info for manual annotations of cluster A16:

- Start number 12 was manually annotated 2 times for cluster A16.
- Start number 13 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:

- Start number 12 was manually annotated 35 times for cluster A2.
- Start number 13 was manually annotated 67 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 11 was manually annotated 1 time for cluster A6.
- Start number 12 was manually annotated 15 times for cluster A6.
- Start number 13 was manually annotated 21 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 12 was manually annotated 7 times for cluster A9.
- Start number 13 was manually annotated 28 times for cluster A9.

Gene Information:

Gene: 20ES_53 Start: 34234, Stop: 33689, Start Num: 12

Candidate Starts for 20ES_53:

(Start: 12 @34234 has 64 MA's), (Start: 13 @34219 has 122 MA's), (32, 34108), (43, 34063), (50, 33988), (58, 33949), (66, 33799), (68, 33781), (69, 33751),

Gene: 40AC_51 Start: 34942, Stop: 34445, Start Num: 13

Candidate Starts for 40AC_51:

(Start: 12 @34957 has 64 MA's), (Start: 13 @34942 has 122 MA's), (21, 34873), (40, 34837), (46, 34765), (48, 34759), (50, 34735), (58, 34696), (66, 34552), (67, 34549), (68, 34534),

Gene: AN3_53 Start: 34524, Stop: 34060, Start Num: 13

Candidate Starts for AN3_53:

(Start: 12 @34539 has 64 MA's), (Start: 13 @34524 has 122 MA's), (43, 34434), (50, 34359), (58, 34320), (66, 34170), (68, 34152), (69, 34122),

Gene: AN9_53 Start: 33887, Stop: 33309, Start Num: 13

Candidate Starts for AN9_53:

(Start: 12 @33902 has 64 MA's), (Start: 13 @33887 has 122 MA's), (34, 33773), (36, 33767), (43, 33740), (47, 33692), (51, 33662), (61, 33596), (62, 33593), (63, 33584), (64, 33575), (66, 33422),

Gene: ANI8_53 Start: 33887, Stop: 33309, Start Num: 13

Candidate Starts for ANI8_53:

(Start: 12 @33902 has 64 MA's), (Start: 13 @33887 has 122 MA's), (34, 33773), (36, 33767), (43, 33740), (47, 33692), (51, 33662), (61, 33596), (62, 33593), (63, 33584), (64, 33575), (66, 33422),

Gene: AbbyPaige_52 Start: 34144, Stop: 33626, Start Num: 13

Candidate Starts for AbbyPaige_52:

(Start: 12 @34159 has 64 MA's), (Start: 13 @34144 has 122 MA's), (24, 34060), (40, 34024), (46, 33952), (48, 33946), (50, 33922), (51, 33919), (53, 33910), (58, 33883), (66, 33736), (68, 33718), (69, 33688),

Gene: Acolyte_46 Start: 33097, Stop: 32558, Start Num: 12

Candidate Starts for Acolyte_46:

(Start: 12 @33097 has 64 MA's), (Start: 13 @33082 has 122 MA's), (40, 32968), (43, 32941), (48, 32890), (53, 32854), (58, 32827), (62, 32800), (66, 32671), (67, 32668),

Gene: Adzzy_52 Start: 32649, Stop: 32053, Start Num: 13

Candidate Starts for Adzzy_52:

(Start: 12 @32664 has 64 MA's), (Start: 13 @32649 has 122 MA's), (37, 32496), (47, 32421), (64, 32304), (65, 32283), (66, 32163), (67, 32160), (69, 32118),

Gene: Agape74_52 Start: 34153, Stop: 33611, Start Num: 12

Candidate Starts for Agape74_52:

(Start: 12 @34153 has 64 MA's), (Start: 13 @34138 has 122 MA's), (24, 34051), (40, 34015), (43, 33988), (46, 33943), (48, 33937), (50, 33913), (58, 33874), (66, 33721), (68, 33703), (69, 33673),

Gene: Aliter_50 Start: 33562, Stop: 33032, Start Num: 12

Candidate Starts for Aliter_50:

(Start: 12 @33562 has 64 MA's), (Start: 13 @33547 has 122 MA's), (23, 33454), (38, 33430), (48, 33352), (58, 33289), (66, 33139),

Gene: Alma_50 Start: 33745, Stop: 33188, Start Num: 13

Candidate Starts for Alma_50:

(Start: 12 @33760 has 64 MA's), (Start: 13 @33745 has 122 MA's), (31, 33649), (32, 33646), (40, 33625), (49, 33535), (64, 33436), (66, 33295),

Gene: AnnaL29_52 Start: 34705, Stop: 34160, Start Num: 12

Candidate Starts for AnnaL29_52:

(Start: 12 @34705 has 64 MA's), (Start: 13 @34690 has 122 MA's), (40, 34570), (43, 34543), (46, 34498), (48, 34492), (50, 34468), (57, 34432), (58, 34429), (59, 34420), (66, 34273), (68, 34255), (69, 34225),

Gene: Anselm_51 Start: 34069, Stop: 33545, Start Num: 13

Candidate Starts for Anselm_51:

(Start: 12 @34084 has 64 MA's), (Start: 13 @34069 has 122 MA's), (40, 33955), (43, 33928), (48, 33877), (50, 33853), (58, 33814), (59, 33805), (66, 33655), (68, 33637), (69, 33607),

Gene: ArcherNM_45 Start: 33685, Stop: 33152, Start Num: 12

Candidate Starts for ArcherNM_45:

(Start: 12 @33685 has 64 MA's), (Start: 13 @33670 has 122 MA's), (26, 33595), (40, 33562), (43, 33535), (46, 33490), (47, 33487), (48, 33484), (50, 33460), (58, 33421), (66, 33265), (68, 33247),

Gene: Arissanae_49 Start: 34251, Stop: 33733, Start Num: 13

Candidate Starts for Arissanae_49:

(Start: 12 @34266 has 64 MA's), (Start: 13 @34251 has 122 MA's), (25, 34158), (38, 34137), (46, 34065), (50, 34035), (58, 33996), (66, 33840),

Gene: BABullseye_46 Start: 30456, Stop: 29878, Start Num: 13

Candidate Starts for BABullseye_46:

(Start: 12 @30471 has 64 MA's), (Start: 13 @30456 has 122 MA's), (33, 30345), (41, 30327), (60, 30165), (64, 30138), (66, 29988), (67, 29985),

Gene: BabyBack_49 Start: 34396, Stop: 33866, Start Num: 12

Candidate Starts for BabyBack_49:

(Start: 12 @34396 has 64 MA's), (Start: 13 @34381 has 122 MA's), (41, 34276), (49, 34189), (53, 34168), (57, 34138), (58, 34135), (66, 33976), (69, 33931),

Gene: Bactobuster_49 Start: 34631, Stop: 34086, Start Num: 13

Candidate Starts for Bactobuster_49:

(Start: 12 @34646 has 64 MA's), (Start: 13 @34631 has 122 MA's), (45, 34502), (47, 34460), (55, 34403), (57, 34391), (60, 34370), (64, 34343), (66, 34193), (68, 34175),

Gene: Baehexic_49 Start: 33840, Stop: 33316, Start Num: 12

Candidate Starts for Baehexic_49:

(Start: 12 @33840 has 64 MA's), (Start: 13 @33825 has 122 MA's), (21, 33756), (40, 33720), (43, 33693), (46, 33648), (48, 33642), (50, 33618), (53, 33606), (58, 33579), (59, 33570), (62, 33552), (66, 33429),

Gene: Beemo_50 Start: 33717, Stop: 33154, Start Num: 13

Candidate Starts for Beemo_50:

(Start: 12 @33732 has 64 MA's), (Start: 13 @33717 has 122 MA's), (41, 33591), (49, 33501), (64, 33402), (66, 33261),

Gene: BengiVuitton_52 Start: 34166, Stop: 33642, Start Num: 13

Candidate Starts for BengiVuitton_52:

(Start: 12 @34181 has 64 MA's), (Start: 13 @34166 has 122 MA's), (32, 34061), (43, 34016), (53, 33929), (58, 33902), (66, 33752), (68, 33734), (69, 33704),

Gene: Benvolio_47 Start: 33106, Stop: 32576, Start Num: 12

Candidate Starts for Benvolio_47:

(Start: 12 @33106 has 64 MA's), (Start: 13 @33091 has 122 MA's), (40, 32977), (43, 32950), (46, 32905), (48, 32899), (50, 32875), (58, 32836), (59, 32827), (66, 32686), (68, 32668), (69, 32638),

Gene: BiancaTri92_50 Start: 34471, Stop: 33944, Start Num: 13

Candidate Starts for BiancaTri92_50:

(Start: 12 @34486 has 64 MA's), (Start: 13 @34471 has 122 MA's), (21, 34387), (40, 34345), (43, 34318), (46, 34273), (48, 34267), (50, 34243), (53, 34231), (58, 34204), (66, 34054), (68, 34036), (69, 34006),

Gene: Blinn1_55 Start: 32877, Stop: 32299, Start Num: 13

Candidate Starts for Blinn1_55:

(Start: 12 @32892 has 64 MA's), (Start: 13 @32877 has 122 MA's), (37, 32748), (60, 32577), (64, 32550), (66, 32409), (67, 32406),

Gene: BobSwaget_46 Start: 32491, Stop: 31973, Start Num: 13

Candidate Starts for BobSwaget_46:

(9, 32518), (Start: 12 @32506 has 64 MA's), (Start: 13 @32491 has 122 MA's), (21, 32419), (40, 32383), (42, 32377), (43, 32356), (48, 32305), (50, 32281), (53, 32269), (58, 32242), (66, 32083), (68, 32065), (69, 32035),

Gene: BogosyJay_49 Start: 33444, Stop: 32878, Start Num: 13

Candidate Starts for BogosyJay_49:

(Start: 12 @33459 has 64 MA's), (Start: 13 @33444 has 122 MA's), (31, 33342), (32, 33339), (49, 33228), (64, 33129), (66, 32985),

Gene: Bradman_49 Start: 32541, Stop: 32137, Start Num: 40

Candidate Starts for Bradman_49:

(Start: 13 @32652 has 122 MA's), (26, 32574), (40, 32541), (48, 32463), (50, 32439), (58, 32400), (66, 32247),

Gene: Buggy_52 Start: 34195, Stop: 33686, Start Num: 13

Candidate Starts for Buggy_52:

(Start: 12 @34210 has 64 MA's), (Start: 13 @34195 has 122 MA's), (21, 34126), (40, 34090), (43, 34063), (46, 34018), (48, 34012), (50, 33988), (53, 33976), (58, 33949), (59, 33940), (62, 33922), (66, 33799),

Gene: C3_48 Start: 33887, Stop: 33309, Start Num: 13

Candidate Starts for C3_48:

(Start: 12 @33902 has 64 MA's), (Start: 13 @33887 has 122 MA's), (34, 33773), (36, 33767), (43, 33740), (47, 33692), (51, 33662), (61, 33596), (62, 33593), (63, 33584), (64, 33575), (66, 33422),

Gene: CRB1_54 Start: 34574, Stop: 34032, Start Num: 12

Candidate Starts for CRB1_54:

(Start: 12 @34574 has 64 MA's), (Start: 13 @34559 has 122 MA's), (32, 34454), (43, 34409), (46, 34364), (50, 34334), (58, 34295), (66, 34142), (68, 34124), (69, 34094),

Gene: Candra_52 Start: 32814, Stop: 32242, Start Num: 13

Candidate Starts for Candra_52:

(Start: 12 @32829 has 64 MA's), (Start: 13 @32814 has 122 MA's), (33, 32703), (41, 32685), (60, 32523), (64, 32496), (66, 32352), (67, 32349),

Gene: Caraxes_50 Start: 32358, Stop: 31759, Start Num: 13

Candidate Starts for Caraxes_50:

(Start: 12 @32373 has 64 MA's), (Start: 13 @32358 has 122 MA's), (37, 32208), (47, 32133), (54, 32088), (64, 32016), (66, 31869), (67, 31866), (68, 31851), (69, 31824),

Gene: Catalina_51 Start: 33635, Stop: 33105, Start Num: 12

Candidate Starts for Catalina_51:

(Start: 12 @33635 has 64 MA's), (Start: 13 @33620 has 122 MA's), (23, 33527), (38, 33503), (48, 33425), (58, 33362), (66, 33212),

Gene: Centaur_51 Start: 34057, Stop: 33533, Start Num: 12

Candidate Starts for Centaur_51:

(Start: 12 @34057 has 64 MA's), (Start: 13 @34042 has 122 MA's), (21, 33973), (40, 33937), (43, 33910), (46, 33865), (48, 33859), (50, 33835), (53, 33823), (58, 33796), (59, 33787), (62, 33769), (66, 33646),

Gene: Changeling_49 Start: 34250, Stop: 33735, Start Num: 13

Candidate Starts for Changeling_49:

(Start: 12 @34265 has 64 MA's), (Start: 13 @34250 has 122 MA's), (43, 34115), (46, 34070), (48, 34064), (50, 34040), (58, 34001), (66, 33848), (68, 33830),

Gene: Chargerpower_49 Start: 32641, Stop: 32096, Start Num: 12

Candidate Starts for Chargerpower_49:

(Start: 12 @32641 has 64 MA's), (Start: 13 @32626 has 122 MA's), (17, 32557), (21, 32539), (40, 32497), (43, 32470), (46, 32425), (48, 32419), (53, 32383), (58, 32356), (66, 32200), (67, 32197), (69, 32152),

Gene: Charm_49 Start: 33504, Stop: 32941, Start Num: 13

Candidate Starts for Charm_49:

(Start: 12 @33519 has 64 MA's), (Start: 13 @33504 has 122 MA's), (24, 33414), (37, 33384), (49, 33291), (64, 33192), (66, 33048),

Gene: Chartreuse_51 Start: 32174, Stop: 31602, Start Num: 13

Candidate Starts for Chartreuse_51:

(Start: 12 @32189 has 64 MA's), (Start: 13 @32174 has 122 MA's), (33, 32063), (41, 32045), (60, 31883), (64, 31856), (66, 31712), (67, 31709),

Gene: Che12_52 Start: 32805, Stop: 32197, Start Num: 12

Candidate Starts for Che12_52:

(Start: 12 @32805 has 64 MA's), (Start: 13 @32790 has 122 MA's), (37, 32649), (54, 32529), (64, 32457), (66, 32307), (67, 32304), (69, 32262),

Gene: ChipMunk_52 Start: 35413, Stop: 34883, Start Num: 13

Candidate Starts for ChipMunk_52:

(Start: 12 @35428 has 64 MA's), (Start: 13 @35413 has 122 MA's), (24, 35323), (40, 35287), (43, 35260), (46, 35215), (48, 35209), (50, 35185), (58, 35146), (66, 34993), (68, 34975), (69, 34945),

Gene: CloudWang3_52 Start: 32568, Stop: 32023, Start Num: 13

Candidate Starts for CloudWang3_52:

(1, 32766), (2, 32751), (3, 32730), (4, 32700), (5, 32694), (Start: 13 @32568 has 122 MA's), (47, 32358), (48, 32355), (58, 32292), (59, 32283), (66, 32133), (67, 32130),

Gene: Colin_50 Start: 34033, Stop: 33509, Start Num: 13

Candidate Starts for Colin_50:

(Start: 12 @34048 has 64 MA's), (Start: 13 @34033 has 122 MA's), (43, 33886), (46, 33841), (48, 33835), (50, 33811), (58, 33772), (66, 33619), (68, 33601), (69, 33571),

Gene: Conquerage_50 Start: 33691, Stop: 33128, Start Num: 13

Candidate Starts for Conquerage_50:

(Start: 12 @33706 has 64 MA's), (Start: 13 @33691 has 122 MA's), (41, 33565), (49, 33475), (64, 33376), (66, 33235),

Gene: Cookiedough_52 Start: 32808, Stop: 32215, Start Num: 12

Candidate Starts for Cookiedough_52:

(Start: 12 @32808 has 64 MA's), (Start: 13 @32793 has 122 MA's), (33, 32682), (41, 32664), (60, 32502), (64, 32475), (66, 32325), (67, 32322),

Gene: Crucio_50 Start: 33650, Stop: 33129, Start Num: 13

Candidate Starts for Crucio_50:

(Start: 12 @33665 has 64 MA's), (Start: 13 @33650 has 122 MA's), (40, 33536), (43, 33509), (46, 33464), (48, 33458), (50, 33434), (58, 33395), (59, 33386), (66, 33239), (68, 33221), (69, 33191),

Gene: D29_49 Start: 33484, Stop: 32891, Start Num: 12

Candidate Starts for D29_49:

(Start: 12 @33484 has 64 MA's), (Start: 13 @33469 has 122 MA's), (34, 33352), (36, 33346), (43, 33322), (47, 33274), (62, 33175), (63, 33166), (64, 33157), (66, 33004),

Gene: D32_51 Start: 33469, Stop: 32891, Start Num: 13

Candidate Starts for D32_51:

(Start: 12 @33484 has 64 MA's), (Start: 13 @33469 has 122 MA's), (34, 33352), (36, 33346), (43, 33322), (47, 33274), (62, 33175), (63, 33166), (64, 33157), (66, 33004),

Gene: DBQu4n_52 Start: 33468, Stop: 32890, Start Num: 13

Candidate Starts for DBQu4n_52:

(Start: 12 @33483 has 64 MA's), (Start: 13 @33468 has 122 MA's), (36, 33345), (43, 33321), (47, 33273), (62, 33174), (63, 33165), (64, 33156), (66, 33003),

Gene: DaVinci_51 Start: 32228, Stop: 31656, Start Num: 13

Candidate Starts for DaVinci_51:

(Start: 12 @32243 has 64 MA's), (Start: 13 @32228 has 122 MA's), (33, 32117), (41, 32099), (60, 31937), (64, 31910), (66, 31766), (67, 31763),

Gene: Dalmatian_51 Start: 34042, Stop: 33521, Start Num: 13

Candidate Starts for Dalmatian_51:

(Start: 12 @34057 has 64 MA's), (Start: 13 @34042 has 122 MA's), (40, 33928), (43, 33901), (48, 33850), (50, 33826), (58, 33787), (59, 33778), (66, 33631), (68, 33613), (69, 33583),

Gene: Darrell_52 Start: 34335, Stop: 33751, Start Num: 12

Candidate Starts for Darrell_52:

(Start: 12 @34335 has 64 MA's), (Start: 13 @34320 has 122 MA's), (32, 34215), (49, 34104), (64, 34005), (66, 33858),

Gene: DarthPhader_47 Start: 34512, Stop: 33961, Start Num: 12

Candidate Starts for DarthPhader_47:

(Start: 12 @34512 has 64 MA's), (Start: 13 @34497 has 122 MA's), (40, 34371), (53, 34257), (66, 34062), (67, 34059),

Gene: Deloris_51 Start: 33835, Stop: 33311, Start Num: 13

Candidate Starts for Deloris_51:

(Start: 12 @33850 has 64 MA's), (Start: 13 @33835 has 122 MA's), (32, 33730), (43, 33685), (48, 33634), (53, 33598), (58, 33571), (66, 33421), (68, 33403), (69, 33373),

Gene: Dignity_52 Start: 34218, Stop: 33691, Start Num: 13

Candidate Starts for Dignity_52:

(Start: 12 @34233 has 64 MA's), (Start: 13 @34218 has 122 MA's), (24, 34131), (40, 34095), (43, 34068), (46, 34023), (48, 34017), (50, 33993), (58, 33954), (66, 33801), (68, 33783), (69, 33753),

Gene: Dorothea_52 Start: 32797, Stop: 32225, Start Num: 13

Candidate Starts for Dorothea_52:

(Start: 12 @32812 has 64 MA's), (Start: 13 @32797 has 122 MA's), (33, 32686), (41, 32668), (60, 32506), (64, 32479), (66, 32335), (67, 32332),

Gene: Drake55_52 Start: 34136, Stop: 33609, Start Num: 12

Candidate Starts for Drake55_52:

(Start: 12 @34136 has 64 MA's), (Start: 13 @34121 has 122 MA's), (21, 34052), (40, 34016), (43, 33989), (48, 33938), (50, 33914), (53, 33902), (58, 33875), (59, 33866), (62, 33848), (66, 33722),

Gene: DreamTeam1_49 Start: 33360, Stop: 32815, Start Num: 13

Candidate Starts for DreamTeam1_49:

(Start: 12 @33375 has 64 MA's), (Start: 13 @33360 has 122 MA's), (37, 33258), (49, 33165), (64, 33066), (66, 32922),

Gene: DudeLittle_49 Start: 33784, Stop: 33263, Start Num: 13

Candidate Starts for DudeLittle_49:

(Start: 12 @33799 has 64 MA's), (Start: 13 @33784 has 122 MA's), (40, 33670), (43, 33643), (48, 33592), (50, 33568), (58, 33529), (66, 33373), (68, 33355), (69, 33325),

Gene: Duplo_52 Start: 33506, Stop: 32928, Start Num: 13

Candidate Starts for Duplo_52:

(Start: 12 @33521 has 64 MA's), (Start: 13 @33506 has 122 MA's), (34, 33389), (36, 33383), (43, 33359), (47, 33311), (51, 33281), (62, 33212), (63, 33203), (64, 33194), (66, 33041),

Gene: EZMoney23_48 Start: 33569, Stop: 33063, Start Num: 13

Candidate Starts for EZMoney23_48:

(Start: 12 @33584 has 64 MA's), (Start: 13 @33569 has 122 MA's), (40, 33476), (43, 33449), (46, 33404), (48, 33398), (50, 33374), (58, 33335), (66, 33176), (68, 33158),

Gene: EagleEye_52 Start: 33301, Stop: 32738, Start Num: 12

Candidate Starts for EagleEye_52:

(Start: 12 @33301 has 64 MA's), (Start: 13 @33286 has 122 MA's), (27, 33169), (46, 33067), (48, 33061), (58, 32998), (59, 32989), (66, 32845),

Gene: Echild_50 Start: 33130, Stop: 32600, Start Num: 12

Candidate Starts for Echild_50:

(Start: 12 @33130 has 64 MA's), (Start: 13 @33115 has 122 MA's), (40, 33001), (43, 32974), (46, 32929), (48, 32923), (50, 32899), (58, 32860), (59, 32851), (66, 32710), (68, 32692), (69, 32662),

Gene: EdogawaKiddo_48 Start: 33668, Stop: 33105, Start Num: 13

Candidate Starts for EdogawaKiddo_48:

(Start: 12 @33683 has 64 MA's), (Start: 13 @33668 has 122 MA's), (41, 33542), (49, 33452), (64, 33353), (66, 33212),

Gene: Eidsmoe_50 Start: 33683, Stop: 33168, Start Num: 13

Candidate Starts for Eidsmoe_50:

(Start: 12 @33698 has 64 MA's), (Start: 13 @33683 has 122 MA's), (23, 33590), (38, 33566), (48, 33488), (58, 33425), (66, 33275),

Gene: Elephantoon_49 Start: 33065, Stop: 32502, Start Num: 13

Candidate Starts for Elephantoon_49:

(Start: 12 @33080 has 64 MA's), (Start: 13 @33065 has 122 MA's), (32, 32963), (64, 32753), (66, 32609),

Gene: EmyBug_49 Start: 33700, Stop: 33170, Start Num: 12

Candidate Starts for EmyBug_49:

(Start: 12 @33700 has 64 MA's), (Start: 13 @33685 has 122 MA's), (23, 33592), (38, 33568), (48, 33490), (58, 33427), (66, 33277),

Gene: Equemioh13_51 Start: 33944, Stop: 33435, Start Num: 13

Candidate Starts for Equemioh13_51:

(Start: 12 @33959 has 64 MA's), (Start: 13 @33944 has 122 MA's), (21, 33875), (40, 33839), (43, 33812), (46, 33767), (48, 33761), (50, 33737), (53, 33725), (58, 33698), (59, 33689), (62, 33671), (66, 33548),

Gene: EricB_52 Start: 32771, Stop: 32199, Start Num: 13

Candidate Starts for EricB_52:

(Start: 12 @32786 has 64 MA's), (Start: 13 @32771 has 122 MA's), (33, 32660), (41, 32642), (60, 32480), (64, 32453), (66, 32309), (67, 32306),

Gene: EvilGenius_52 Start: 35429, Stop: 34887, Start Num: 12

Candidate Starts for EvilGenius_52:

(Start: 12 @35429 has 64 MA's), (Start: 13 @35414 has 122 MA's), (24, 35327), (40, 35291), (43, 35264), (46, 35219), (48, 35213), (50, 35189), (58, 35150), (66, 34997), (68, 34979), (69, 34949),

Gene: ExplosioNervosa_50 Start: 33751, Stop: 33188, Start Num: 13

Candidate Starts for ExplosioNervosa_50:

(Start: 12 @33766 has 64 MA's), (Start: 13 @33751 has 122 MA's), (41, 33625), (49, 33535), (64, 33436), (66, 33295),

Gene: Fameo_50 Start: 33969, Stop: 33436, Start Num: 12

Candidate Starts for Fameo_50:

(Start: 12 @33969 has 64 MA's), (Start: 13 @33954 has 122 MA's), (40, 33840), (43, 33813), (48, 33762), (50, 33738), (58, 33699), (59, 33690), (66, 33546), (68, 33528), (69, 33498),

Gene: Fascinus_43 Start: 34815, Stop: 34276, Start Num: 16

Candidate Starts for Fascinus_43:

(10, 34887), (15, 34848), (Start: 16 @34815 has 3 MA's), (35, 34704), (41, 34689), (68, 34365), (70, 34329),

Gene: Fayely_50 Start: 33652, Stop: 33137, Start Num: 13

Candidate Starts for Fayely_50:

(Start: 12 @33667 has 64 MA's), (Start: 13 @33652 has 122 MA's), (23, 33559), (38, 33535), (48, 33457), (58, 33394), (66, 33244),

Gene: FiringLine_50 Start: 33631, Stop: 33110, Start Num: 13

Candidate Starts for FiringLine_50:

(Start: 12 @33646 has 64 MA's), (Start: 13 @33631 has 122 MA's), (40, 33517), (43, 33490), (46, 33445), (48, 33439), (50, 33415), (58, 33376), (59, 33367), (66, 33220), (68, 33202), (69, 33172),

Gene: First_0052 Start: 34110, Stop: 33565, Start Num: 12

Candidate Starts for First_0052:

(Start: 12 @34110 has 64 MA's), (Start: 13 @34095 has 122 MA's), (32, 33984), (39, 33969), (43, 33939), (50, 33864), (58, 33825), (66, 33675), (68, 33657), (69, 33627),

Gene: Flare16_50 Start: 33718, Stop: 33194, Start Num: 12

Candidate Starts for Flare16_50:

(Start: 12 @33718 has 64 MA's), (Start: 13 @33703 has 122 MA's), (21, 33634), (40, 33598), (43, 33571), (46, 33526), (48, 33520), (50, 33496), (53, 33484), (58, 33457), (59, 33448), (62, 33430), (66, 33307),

Gene: Gail_54 Start: 34735, Stop: 34187, Start Num: 12

Candidate Starts for Gail_54:

(Start: 12 @34735 has 64 MA's), (Start: 13 @34720 has 122 MA's), (24, 34630), (40, 34594), (43, 34567), (46, 34522), (48, 34516), (50, 34492), (58, 34453), (59, 34444), (66, 34297), (69, 34252),

Gene: Garak_54 Start: 32912, Stop: 32364, Start Num: 13

Candidate Starts for Garak_54:

(6, 33026), (7, 33011), (Start: 12 @32927 has 64 MA's), (Start: 13 @32912 has 122 MA's), (47, 32702), (48, 32699), (58, 32636), (59, 32627), (66, 32474), (67, 32471),

Gene: GaugeLDP_48 Start: 33987, Stop: 33457, Start Num: 12

Candidate Starts for GaugeLDP_48:

(Start: 12 @33987 has 64 MA's), (Start: 13 @33972 has 122 MA's), (29, 33888), (41, 33867), (49, 33780), (53, 33759), (57, 33729), (58, 33726), (66, 33567), (68, 33549), (69, 33522),

Gene: Georgie2_51 Start: 33676, Stop: 33155, Start Num: 13

Candidate Starts for Georgie2_51:

(Start: 12 @33691 has 64 MA's), (Start: 13 @33676 has 122 MA's), (40, 33562), (43, 33535), (46, 33490), (48, 33484), (50, 33460), (58, 33421), (59, 33412), (66, 33265), (68, 33247), (69, 33217),

Gene: Gratitude_50 Start: 33944, Stop: 33435, Start Num: 13

Candidate Starts for Gratitude_50:

(Start: 12 @33959 has 64 MA's), (Start: 13 @33944 has 122 MA's), (21, 33875), (40, 33839), (43, 33812), (46, 33767), (48, 33761), (50, 33737), (53, 33725), (58, 33698), (59, 33689), (62, 33671), (66, 33548),

Gene: GreedyLawyer_52 Start: 32793, Stop: 32206, Start Num: 12

Candidate Starts for GreedyLawyer_52:

(Start: 12 @32793 has 64 MA's), (Start: 13 @32778 has 122 MA's), (33, 32667), (41, 32649), (60, 32487), (64, 32460), (66, 32316), (67, 32313),

Gene: Gruunaga_52 Start: 32771, Stop: 32226, Start Num: 13

Candidate Starts for Gruunaga_52:

(1, 32969), (2, 32954), (3, 32933), (4, 32903), (5, 32897), (Start: 13 @32771 has 122 MA's), (47, 32561), (48, 32558), (58, 32495), (59, 32486), (66, 32336), (67, 32333),

Gene: Gyzlar_43 Start: 33635, Stop: 33096, Start Num: 16
Candidate Starts for Gyzlar_43:
(10, 33707), (15, 33668), (Start: 16 @33635 has 3 MA's), (35, 33524), (41, 33509), (68, 33185), (70, 33149),

Gene: Hanray_48 Start: 33672, Stop: 33109, Start Num: 13
Candidate Starts for Hanray_48:
(Start: 12 @33687 has 64 MA's), (Start: 13 @33672 has 122 MA's), (41, 33546), (49, 33456), (64, 33357), (66, 33216),

Gene: HarryHoudini_51 Start: 34130, Stop: 33618, Start Num: 13
Candidate Starts for HarryHoudini_51:
(Start: 12 @34145 has 64 MA's), (Start: 13 @34130 has 122 MA's), (21, 34061), (40, 34025), (43, 33998), (46, 33953), (48, 33947), (50, 33923), (53, 33911), (58, 33884), (59, 33875), (62, 33857), (66, 33731),

Gene: Heffalump_49 Start: 34422, Stop: 33904, Start Num: 13
Candidate Starts for Heffalump_49:
(Start: 12 @34437 has 64 MA's), (Start: 13 @34422 has 122 MA's), (40, 34308), (43, 34281), (48, 34230), (50, 34206), (58, 34167), (59, 34158), (66, 34014), (68, 33996), (69, 33966),

Gene: Helmet_54 Start: 32912, Stop: 32364, Start Num: 13
Candidate Starts for Helmet_54:
(6, 33026), (7, 33011), (Start: 12 @32927 has 64 MA's), (Start: 13 @32912 has 122 MA's), (47, 32702), (48, 32699), (58, 32636), (59, 32627), (66, 32474), (67, 32471),

Gene: Herbertwm_50 Start: 33563, Stop: 32988, Start Num: 13
Candidate Starts for Herbertwm_50:
(Start: 12 @33578 has 64 MA's), (Start: 13 @33563 has 122 MA's), (32, 33458), (40, 33437), (45, 33407), (47, 33365), (57, 33296), (64, 33248), (66, 33095),

Gene: Hexamo_52 Start: 32557, Stop: 31985, Start Num: 12
Candidate Starts for Hexamo_52:
(6, 32656), (7, 32641), (Start: 12 @32557 has 64 MA's), (Start: 13 @32542 has 122 MA's), (47, 32332), (48, 32329), (58, 32266), (59, 32257), (66, 32095), (67, 32092),

Gene: Horex_49 Start: 33688, Stop: 33128, Start Num: 13
Candidate Starts for Horex_49:
(Start: 12 @33703 has 64 MA's), (Start: 13 @33688 has 122 MA's), (41, 33562), (49, 33472), (64, 33373), (66, 33235),

Gene: Hoot_47 Start: 30644, Stop: 30057, Start Num: 12
Candidate Starts for Hoot_47:
(Start: 12 @30644 has 64 MA's), (Start: 13 @30629 has 122 MA's), (33, 30518), (41, 30500), (60, 30338), (64, 30311), (66, 30167), (67, 30164),

Gene: HortumSL17_50 Start: 33634, Stop: 33104, Start Num: 12
Candidate Starts for HortumSL17_50:
(Start: 12 @33634 has 64 MA's), (Start: 13 @33619 has 122 MA's), (23, 33526), (38, 33502), (48, 33424), (58, 33361), (66, 33211),

Gene: Indra_55 Start: 32928, Stop: 32365, Start Num: 12
Candidate Starts for Indra_55:

(6, 33027), (7, 33012), (Start: 12 @32928 has 64 MA's), (Start: 13 @32913 has 122 MA's), (47, 32703), (48, 32700), (58, 32637), (59, 32628), (66, 32475), (67, 32472),

Gene: IronMan_50 Start: 34814, Stop: 34269, Start Num: 13

Candidate Starts for IronMan_50:

(Start: 12 @34829 has 64 MA's), (Start: 13 @34814 has 122 MA's), (45, 34685), (47, 34643), (57, 34574), (60, 34553), (64, 34526), (66, 34376), (68, 34358),

Gene: Isiphiwo_50 Start: 32318, Stop: 31740, Start Num: 13

Candidate Starts for Isiphiwo_50:

(Start: 12 @32333 has 64 MA's), (Start: 13 @32318 has 122 MA's), (33, 32207), (41, 32189), (60, 32027), (64, 32000), (66, 31850), (67, 31847),

Gene: Iwokeuplikedis_53 Start: 33759, Stop: 33244, Start Num: 13

Candidate Starts for Iwokeuplikedis_53:

(Start: 12 @33774 has 64 MA's), (Start: 13 @33759 has 122 MA's), (40, 33648), (43, 33621), (46, 33576), (48, 33570), (50, 33546), (58, 33507), (66, 33351), (68, 33333),

Gene: Jaan_50 Start: 34986, Stop: 34435, Start Num: 13

Candidate Starts for Jaan_50:

(Start: 12 @35001 has 64 MA's), (Start: 13 @34986 has 122 MA's), (45, 34854), (47, 34812), (55, 34755), (57, 34743), (60, 34722), (64, 34695), (66, 34542),

Gene: Jeeves_54 Start: 33492, Stop: 32962, Start Num: 13

Candidate Starts for Jeeves_54:

(Start: 12 @33507 has 64 MA's), (Start: 13 @33492 has 122 MA's), (24, 33405), (40, 33372), (43, 33345), (46, 33300), (48, 33294), (50, 33270), (58, 33231), (59, 33222), (66, 33072), (69, 33027),

Gene: Jeffabunny_52 Start: 32584, Stop: 32021, Start Num: 12

Candidate Starts for Jeffabunny_52:

(6, 32683), (7, 32668), (Start: 12 @32584 has 64 MA's), (Start: 13 @32569 has 122 MA's), (47, 32359), (48, 32356), (58, 32293), (59, 32284), (66, 32131), (67, 32128),

Gene: Jerm_52 Start: 34210, Stop: 33683, Start Num: 13

Candidate Starts for Jerm_52:

(Start: 12 @34225 has 64 MA's), (Start: 13 @34210 has 122 MA's), (24, 34123), (40, 34087), (43, 34060), (46, 34015), (48, 34009), (50, 33985), (58, 33946), (66, 33793), (68, 33775), (69, 33745),

Gene: JewelBug_53 Start: 32963, Stop: 32376, Start Num: 12

Candidate Starts for JewelBug_53:

(Start: 12 @32963 has 64 MA's), (Start: 13 @32948 has 122 MA's), (33, 32837), (41, 32819), (60, 32657), (64, 32630), (66, 32486), (67, 32483),

Gene: Jiawan_48 Start: 33704, Stop: 33141, Start Num: 13

Candidate Starts for Jiawan_48:

(Start: 12 @33719 has 64 MA's), (Start: 13 @33704 has 122 MA's), (41, 33578), (49, 33488), (64, 33389), (66, 33248),

Gene: Jordennis_52 Start: 32489, Stop: 31890, Start Num: 12

Candidate Starts for Jordennis_52:

(Start: 12 @32489 has 64 MA's), (Start: 13 @32474 has 122 MA's), (33, 32351), (41, 32333), (60, 32171), (64, 32144), (66, 32000), (67, 31997),

Gene: JoshKayV_52 Start: 34313, Stop: 33765, Start Num: 12

Candidate Starts for JoshKayV_52:

(Start: 12 @34313 has 64 MA's), (Start: 13 @34298 has 122 MA's), (40, 34169), (43, 34142), (50, 34067), (58, 34028), (59, 34019), (66, 33875), (68, 33857), (69, 33827),

Gene: Journey13_44 Start: 32029, Stop: 31511, Start Num: 12

Candidate Starts for Journey13_44:

(Start: 12 @32029 has 64 MA's), (Start: 13 @32014 has 122 MA's), (14, 32011), (40, 31906), (43, 31879), (46, 31834), (48, 31828), (50, 31804), (58, 31765), (66, 31615), (68, 31597),

Gene: Jsquared_48 Start: 32621, Stop: 32070, Start Num: 13

Candidate Starts for Jsquared_48:

(Start: 13 @32621 has 122 MA's), (22, 32543), (45, 32477), (56, 32372), (57, 32366), (60, 32345), (62, 32336), (64, 32318), (66, 32180),

Gene: Kalpine_48 Start: 33928, Stop: 33407, Start Num: 13

Candidate Starts for Kalpine_48:

(Start: 12 @33943 has 64 MA's), (Start: 13 @33928 has 122 MA's), (43, 33781), (46, 33736), (48, 33730), (50, 33706), (58, 33667), (66, 33517), (68, 33499), (69, 33469),

Gene: Kazan_53 Start: 32784, Stop: 32212, Start Num: 13

Candidate Starts for Kazan_53:

(Start: 12 @32799 has 64 MA's), (Start: 13 @32784 has 122 MA's), (33, 32673), (41, 32655), (60, 32493), (64, 32466), (66, 32322), (67, 32319),

Gene: Kerberos_52 Start: 33468, Stop: 32890, Start Num: 13

Candidate Starts for Kerberos_52:

(Start: 12 @33483 has 64 MA's), (Start: 13 @33468 has 122 MA's), (34, 33351), (36, 33345), (43, 33321), (47, 33273), (51, 33243), (62, 33174), (63, 33165), (64, 33156), (66, 33003),

Gene: Keziacharles14_50 Start: 34743, Stop: 34183, Start Num: 13

Candidate Starts for Keziacharles14_50:

(Start: 12 @34758 has 64 MA's), (Start: 13 @34743 has 122 MA's), (31, 34641), (32, 34638), (40, 34620), (64, 34431), (66, 34290),

Gene: KingCyrus_52 Start: 35409, Stop: 34882, Start Num: 13

Candidate Starts for KingCyrus_52:

(Start: 12 @35424 has 64 MA's), (Start: 13 @35409 has 122 MA's), (24, 35322), (40, 35286), (43, 35259), (46, 35214), (48, 35208), (50, 35184), (58, 35145), (66, 34992), (68, 34974), (69, 34944),

Gene: Kinmap_47 Start: 32221, Stop: 31706, Start Num: 13

Candidate Starts for Kinmap_47:

(9, 32248), (Start: 12 @32236 has 64 MA's), (Start: 13 @32221 has 122 MA's), (41, 32110), (43, 32089), (44, 32086), (53, 32002), (57, 31972), (58, 31969), (66, 31816), (67, 31813),

Gene: Kipper29_52 Start: 32812, Stop: 32225, Start Num: 12

Candidate Starts for Kipper29_52:

(Start: 12 @32812 has 64 MA's), (Start: 13 @32797 has 122 MA's), (33, 32686), (41, 32668), (60, 32506), (64, 32479), (66, 32335), (67, 32332),

Gene: Koduck_51 Start: 32906, Stop: 32382, Start Num: 13

Candidate Starts for Koduck_51:

(Start: 12 @32921 has 64 MA's), (Start: 13 @32906 has 122 MA's), (26, 32819), (35, 32798), (40, 32786), (43, 32759), (46, 32714), (48, 32708), (50, 32684), (58, 32645), (66, 32492),

Gene: Koko_53 Start: 32908, Stop: 32351, Start Num: 13

Candidate Starts for Koko_53:

(1, 33106), (2, 33091), (3, 33070), (4, 33040), (5, 33034), (Start: 13 @32908 has 122 MA's), (47, 32698), (48, 32695), (58, 32632), (59, 32623), (66, 32461), (67, 32458),

Gene: L5_49 Start: 32996, Stop: 32457, Start Num: 12

Candidate Starts for L5_49:

(Start: 12 @32996 has 64 MA's), (Start: 13 @32981 has 122 MA's), (26, 32894), (35, 32873), (40, 32861), (43, 32834), (46, 32789), (48, 32783), (50, 32759), (58, 32720), (66, 32567),

Gene: LadyBird_55 Start: 34524, Stop: 34000, Start Num: 13

Candidate Starts for LadyBird_55:

(Start: 12 @34539 has 64 MA's), (Start: 13 @34524 has 122 MA's), (32, 34419), (43, 34374), (50, 34299), (58, 34260), (66, 34110), (68, 34092), (69, 34062),

Gene: Landor_50 Start: 34892, Stop: 34347, Start Num: 13

Candidate Starts for Landor_50:

(Start: 12 @34907 has 64 MA's), (Start: 13 @34892 has 122 MA's), (45, 34763), (47, 34721), (55, 34664), (57, 34652), (60, 34631), (64, 34604), (66, 34454), (68, 34436),

Gene: Larenn_49 Start: 33825, Stop: 33295, Start Num: 12

Candidate Starts for Larenn_49:

(Start: 12 @33825 has 64 MA's), (Start: 13 @33810 has 122 MA's), (26, 33738), (40, 33705), (43, 33678), (48, 33627), (50, 33603), (53, 33591), (58, 33564), (66, 33408), (68, 33390),

Gene: Leogania_50 Start: 34849, Stop: 34322, Start Num: 13

Candidate Starts for Leogania_50:

(Start: 12 @34864 has 64 MA's), (Start: 13 @34849 has 122 MA's), (21, 34765), (40, 34723), (43, 34696), (46, 34651), (48, 34645), (50, 34621), (53, 34609), (58, 34582), (66, 34432), (68, 34414), (69, 34384),

Gene: Leviathan_52 Start: 34282, Stop: 33740, Start Num: 12

Candidate Starts for Leviathan_52:

(Start: 12 @34282 has 64 MA's), (Start: 13 @34267 has 122 MA's), (24, 34180), (40, 34144), (43, 34117), (46, 34072), (48, 34066), (50, 34042), (58, 34003), (66, 33850), (68, 33832), (69, 33802),

Gene: LilTurb_51 Start: 34106, Stop: 33573, Start Num: 12

Candidate Starts for LilTurb_51:

(Start: 12 @34106 has 64 MA's), (Start: 13 @34091 has 122 MA's), (24, 34007), (40, 33971), (46, 33899), (48, 33893), (50, 33869), (51, 33866), (53, 33857), (58, 33830), (66, 33683), (68, 33665), (69, 33635),

Gene: Lilbunny_51 Start: 32558, Stop: 31995, Start Num: 12

Candidate Starts for Lilbunny_51:

(7, 32642), (8, 32639), (Start: 12 @32558 has 64 MA's), (Start: 13 @32543 has 122 MA's), (47, 32333), (48, 32330), (58, 32267), (59, 32258), (66, 32105), (67, 32102),

Gene: Lilleskat_48 Start: 33621, Stop: 33058, Start Num: 13

Candidate Starts for Lilleskat_48:

(Start: 12 @33636 has 64 MA's), (Start: 13 @33621 has 122 MA's), (41, 33495), (49, 33405), (64, 33306), (66, 33165),

Gene: LionsBait_52 Start: 35183, Stop: 34656, Start Num: 13

Candidate Starts for LionsBait_52:

(Start: 12 @35198 has 64 MA's), (Start: 13 @35183 has 122 MA's), (40, 35069), (43, 35042), (48, 34991), (50, 34967), (58, 34928), (62, 34901), (66, 34769),

Gene: Lokk_47 Start: 33016, Stop: 32498, Start Num: 13

Candidate Starts for Lokk_47:

(9, 33043), (Start: 12 @33031 has 64 MA's), (Start: 13 @33016 has 122 MA's), (21, 32944), (40, 32908), (42, 32902), (43, 32881), (48, 32830), (50, 32806), (53, 32794), (58, 32767), (66, 32608), (68, 32590), (69, 32560),

Gene: LoneWolf_51 Start: 33659, Stop: 33093, Start Num: 13

Candidate Starts for LoneWolf_51:

(Start: 12 @33674 has 64 MA's), (Start: 13 @33659 has 122 MA's), (31, 33557), (32, 33554), (49, 33443), (64, 33344), (66, 33200),

Gene: Loser_52 Start: 34655, Stop: 34110, Start Num: 12

Candidate Starts for Loser_52:

(Start: 12 @34655 has 64 MA's), (Start: 13 @34640 has 122 MA's), (40, 34520), (43, 34493), (46, 34448), (48, 34442), (50, 34418), (57, 34382), (58, 34379), (59, 34370), (66, 34223), (68, 34205), (69, 34175),

Gene: Luchador_54 Start: 35277, Stop: 34750, Start Num: 13

Candidate Starts for Luchador_54:

(Start: 12 @35292 has 64 MA's), (Start: 13 @35277 has 122 MA's), (24, 35190), (40, 35157), (43, 35130), (46, 35085), (48, 35079), (50, 35055), (58, 35016), (59, 35007), (66, 34860), (69, 34815),

Gene: Lucyedi_51 Start: 33497, Stop: 32934, Start Num: 12

Candidate Starts for Lucyedi_51:

(Start: 12 @33497 has 64 MA's), (Start: 13 @33482 has 122 MA's), (27, 33365), (46, 33263), (48, 33257), (58, 33194), (59, 33185), (66, 33041),

Gene: MajorMajor_49 Start: 32652, Stop: 32137, Start Num: 13

Candidate Starts for MajorMajor_49:

(Start: 13 @32652 has 122 MA's), (26, 32574), (40, 32541), (48, 32463), (50, 32439), (58, 32400), (66, 32247),

Gene: Malec_50 Start: 34392, Stop: 33859, Start Num: 12

Candidate Starts for Malec_50:

(Start: 12 @34392 has 64 MA's), (Start: 13 @34377 has 122 MA's), (26, 34305), (40, 34272), (43, 34245), (48, 34194), (50, 34170), (53, 34158), (58, 34131), (66, 33972), (68, 33954),

Gene: Maminiaina_49 Start: 33426, Stop: 32860, Start Num: 13

Candidate Starts for Maminiaina_49:

(Start: 12 @33441 has 64 MA's), (Start: 13 @33426 has 122 MA's), (31, 33324), (32, 33321), (49, 33210), (64, 33111), (66, 32967),

Gene: Maroc7_45 Start: 35124, Stop: 34585, Start Num: 16

Candidate Starts for Maroc7_45:

(10, 35196), (15, 35157), (Start: 16 @35124 has 3 MA's), (35, 35013), (41, 34998), (68, 34674), (70, 34638),

Gene: McFly_52 Start: 32778, Stop: 32206, Start Num: 13

Candidate Starts for McFly_52:

(Start: 12 @32793 has 64 MA's), (Start: 13 @32778 has 122 MA's), (33, 32667), (41, 32649), (60, 32487), (64, 32460), (66, 32316), (67, 32313),

Gene: MiculUcigas_50 Start: 33618, Stop: 33094, Start Num: 12

Candidate Starts for MiculUcigas_50:

(Start: 12 @33618 has 64 MA's), (Start: 13 @33603 has 122 MA's), (21, 33534), (40, 33498), (43, 33471), (46, 33426), (48, 33420), (50, 33396), (53, 33384), (58, 33357), (59, 33348), (62, 33330), (66, 33207),

Gene: Miko_47 Start: 33800, Stop: 33279, Start Num: 13

Candidate Starts for Miko_47:

(9, 33827), (Start: 12 @33815 has 64 MA's), (Start: 13 @33800 has 122 MA's), (21, 33728), (40, 33692), (42, 33686), (43, 33665), (48, 33614), (50, 33590), (53, 33578), (58, 33551), (66, 33392), (68, 33374),

Gene: MissWhite_49 Start: 32171, Stop: 31665, Start Num: 13

Candidate Starts for MissWhite_49:

(Start: 12 @32186 has 64 MA's), (Start: 13 @32171 has 122 MA's), (40, 32063), (47, 31988), (48, 31985), (50, 31961), (58, 31922), (66, 31775), (68, 31757),

Gene: Myxus_50 Start: 33634, Stop: 33104, Start Num: 12

Candidate Starts for Myxus_50:

(Start: 12 @33634 has 64 MA's), (Start: 13 @33619 has 122 MA's), (23, 33526), (38, 33502), (48, 33424), (58, 33361), (66, 33211),

Gene: NaSiaTalie_50 Start: 33715, Stop: 33191, Start Num: 12

Candidate Starts for NaSiaTalie_50:

(Start: 12 @33715 has 64 MA's), (Start: 13 @33700 has 122 MA's), (21, 33631), (40, 33595), (43, 33568), (46, 33523), (48, 33517), (50, 33493), (53, 33481), (58, 33454), (59, 33445), (62, 33427), (66, 33304),

Gene: Naji_52 Start: 33469, Stop: 32891, Start Num: 13

Candidate Starts for Naji_52:

(Start: 12 @33484 has 64 MA's), (Start: 13 @33469 has 122 MA's), (34, 33352), (36, 33346), (43, 33322), (47, 33274), (62, 33175), (63, 33166), (64, 33157), (66, 33004),

Gene: Neeharika16_51 Start: 32238, Stop: 31666, Start Num: 13

Candidate Starts for Neeharika16_51:

(Start: 12 @32253 has 64 MA's), (Start: 13 @32238 has 122 MA's), (33, 32127), (41, 32109), (60, 31947), (64, 31920), (66, 31776), (67, 31773),

Gene: Newrala_52 Start: 32795, Stop: 32214, Start Num: 12

Candidate Starts for Newrala_52:

(Start: 12 @32795 has 64 MA's), (Start: 13 @32780 has 122 MA's), (33, 32669), (41, 32651), (60, 32489), (64, 32462), (66, 32324), (67, 32321),

Gene: NicoleTera_49 Start: 33986, Stop: 33456, Start Num: 13

Candidate Starts for NicoleTera_49:

(Start: 12 @34001 has 64 MA's), (Start: 13 @33986 has 122 MA's), (21, 33908), (40, 33872), (42, 33866), (43, 33845), (48, 33794), (53, 33758), (58, 33731), (66, 33569), (68, 33551),

Gene: NothingSpecial_48 Start: 34231, Stop: 33707, Start Num: 12

Candidate Starts for NothingSpecial_48:

(Start: 12 @34231 has 64 MA's), (Start: 13 @34216 has 122 MA's), (43, 34084), (46, 34039), (48, 34033), (58, 33970), (66, 33817), (67, 33814),

Gene: Odin_49 Start: 32519, Stop: 31926, Start Num: 13

Candidate Starts for Odin_49:

(Start: 12 @32534 has 64 MA's), (Start: 13 @32519 has 122 MA's), (37, 32375), (47, 32300), (64, 32183), (66, 32036), (67, 32033), (68, 32018), (69, 31991),

Gene: Onglai_48 Start: 31960, Stop: 31445, Start Num: 13

Candidate Starts for Onglai_48:

(Start: 12 @31975 has 64 MA's), (Start: 13 @31960 has 122 MA's), (23, 31867), (38, 31843), (48, 31765), (58, 31702), (66, 31552),

Gene: PackMan_49 Start: 33634, Stop: 33104, Start Num: 12

Candidate Starts for PackMan_49:

(Start: 12 @33634 has 64 MA's), (Start: 13 @33619 has 122 MA's), (23, 33526), (38, 33502), (48, 33424), (58, 33361), (66, 33211),

Gene: PainterBoy_51 Start: 33419, Stop: 32871, Start Num: 13

Candidate Starts for PainterBoy_51:

(Start: 12 @33434 has 64 MA's), (Start: 13 @33419 has 122 MA's), (27, 33302), (46, 33200), (48, 33194), (58, 33131), (59, 33122), (66, 32978),

Gene: Ph8s_52 Start: 33102, Stop: 32488, Start Num: 12

Candidate Starts for Ph8s_52:

(Start: 12 @33102 has 64 MA's), (Start: 13 @33087 has 122 MA's), (37, 32934), (47, 32859), (52, 32826), (64, 32742), (65, 32721), (66, 32598), (67, 32595), (69, 32553),

Gene: Phaded_51 Start: 34886, Stop: 34329, Start Num: 12

Candidate Starts for Phaded_51:

(Start: 12 @34886 has 64 MA's), (Start: 13 @34871 has 122 MA's), (22, 34793), (45, 34736), (47, 34694), (55, 34637), (57, 34625), (60, 34604), (64, 34577), (66, 34436), (68, 34418),

Gene: Phaeder_50 Start: 33619, Stop: 33104, Start Num: 13

Candidate Starts for Phaeder_50:

(Start: 12 @33634 has 64 MA's), (Start: 13 @33619 has 122 MA's), (23, 33526), (38, 33502), (48, 33424), (58, 33361), (66, 33211),

Gene: Pharaoh_45 Start: 33439, Stop: 32915, Start Num: 13

Candidate Starts for Pharaoh_45:

(Start: 13 @33439 has 122 MA's), (48, 33241), (58, 33178), (66, 33016),

Gene: Phonnegut_50 Start: 33716, Stop: 33153, Start Num: 13

Candidate Starts for Phonnegut_50:

(Start: 12 @33731 has 64 MA's), (Start: 13 @33716 has 122 MA's), (41, 33590), (49, 33500), (64, 33401), (66, 33260),

Gene: Pioneer_50 Start: 33716, Stop: 33153, Start Num: 13

Candidate Starts for Pioneer_50:

(Start: 12 @33731 has 64 MA's), (Start: 13 @33716 has 122 MA's), (41, 33590), (49, 33500), (64, 33401), (66, 33260),

Gene: Piro94_50 Start: 34062, Stop: 33535, Start Num: 12

Candidate Starts for Piro94_50:

(Start: 12 @34062 has 64 MA's), (Start: 13 @34047 has 122 MA's), (21, 33978), (40, 33942), (43, 33915), (48, 33864), (50, 33840), (53, 33828), (58, 33801), (59, 33792), (62, 33774), (66, 33648),

Gene: Pmask_52 Start: 32781, Stop: 32215, Start Num: 13

Candidate Starts for Pmask_52:

(Start: 12 @32796 has 64 MA's), (Start: 13 @32781 has 122 MA's), (33, 32670), (41, 32652), (60, 32490), (64, 32463), (66, 32325), (67, 32322),

Gene: Polyphemus_54 Start: 33163, Stop: 32591, Start Num: 13

Candidate Starts for Polyphemus_54:

(Start: 12 @33178 has 64 MA's), (Start: 13 @33163 has 122 MA's), (33, 33052), (41, 33034), (60, 32872), (64, 32845), (66, 32701), (67, 32698),

Gene: Pomar16_52 Start: 33509, Stop: 32931, Start Num: 13

Candidate Starts for Pomar16_52:

(Start: 12 @33524 has 64 MA's), (Start: 13 @33509 has 122 MA's), (34, 33392), (36, 33386), (43, 33362), (47, 33314), (62, 33215), (63, 33206), (64, 33197), (66, 33044),

Gene: Power_49 Start: 33684, Stop: 33163, Start Num: 13

Candidate Starts for Power_49:

(Start: 12 @33699 has 64 MA's), (Start: 13 @33684 has 122 MA's), (40, 33570), (43, 33543), (46, 33498), (48, 33492), (50, 33468), (58, 33429), (59, 33420), (66, 33273), (68, 33255), (69, 33225),

Gene: Priya_50 Start: 33686, Stop: 33171, Start Num: 13

Candidate Starts for Priya_50:

(Start: 12 @33701 has 64 MA's), (Start: 13 @33686 has 122 MA's), (23, 33593), (38, 33569), (48, 33491), (58, 33428), (66, 33278),

Gene: Pukovnik_49 Start: 34501, Stop: 33938, Start Num: 12

Candidate Starts for Pukovnik_49:

(Start: 12 @34501 has 64 MA's), (Start: 13 @34486 has 122 MA's), (45, 34354), (47, 34312), (55, 34255), (60, 34222), (64, 34195), (66, 34045), (68, 34027),

Gene: Qobbit_50 Start: 33648, Stop: 33133, Start Num: 13

Candidate Starts for Qobbit_50:

(Start: 12 @33663 has 64 MA's), (Start: 13 @33648 has 122 MA's), (23, 33555), (38, 33531), (48, 33453), (58, 33390), (66, 33240),

Gene: QueenB2_49 Start: 33638, Stop: 33120, Start Num: 13

Candidate Starts for QueenB2_49:

(Start: 12 @33653 has 64 MA's), (Start: 13 @33638 has 122 MA's), (40, 33524), (43, 33497), (48, 33446), (50, 33422), (58, 33383), (59, 33374), (66, 33230), (68, 33212), (69, 33182),

Gene: QueenBeesly_50 Start: 33631, Stop: 33110, Start Num: 13

Candidate Starts for QueenBeesly_50:

(Start: 12 @33646 has 64 MA's), (Start: 13 @33631 has 122 MA's), (40, 33517), (43, 33490), (46, 33445), (48, 33439), (50, 33415), (58, 33376), (59, 33367), (66, 33220), (68, 33202), (69, 33172),

Gene: Quokka_48 Start: 32541, Stop: 32137, Start Num: 40

Candidate Starts for Quokka_48:

(Start: 13 @32652 has 122 MA's), (26, 32574), (40, 32541), (48, 32463), (50, 32439), (58, 32400), (66, 32247),

Gene: Rachaly_49 Start: 33948, Stop: 33430, Start Num: 13

Candidate Starts for Rachaly_49:

(9, 33975), (Start: 12 @33963 has 64 MA's), (Start: 13 @33948 has 122 MA's), (21, 33876), (40, 33840), (42, 33834), (43, 33813), (48, 33762), (50, 33738), (53, 33726), (58, 33699), (66, 33540), (68, 33522), (69, 33492),

Gene: Rahalelujah_50 Start: 33197, Stop: 32670, Start Num: 13

Candidate Starts for Rahalelujah_50:

(Start: 12 @33212 has 64 MA's), (Start: 13 @33197 has 122 MA's), (28, 33098), (38, 33074), (48, 32996), (50, 32972), (58, 32933), (66, 32777),

Gene: RedRock_52 Start: 34849, Stop: 34322, Start Num: 13

Candidate Starts for RedRock_52:

(Start: 12 @34864 has 64 MA's), (Start: 13 @34849 has 122 MA's), (40, 34735), (43, 34708), (46, 34663), (48, 34657), (50, 34633), (58, 34594), (66, 34435), (68, 34417), (69, 34387),

Gene: Refuge_49 Start: 34874, Stop: 34341, Start Num: 12

Candidate Starts for Refuge_49:

(Start: 12 @34874 has 64 MA's), (Start: 13 @34859 has 122 MA's), (18, 34790), (40, 34748), (53, 34637), (66, 34442), (67, 34439),

Gene: Retro23_51 Start: 34038, Stop: 33517, Start Num: 13

Candidate Starts for Retro23_51:

(Start: 12 @34053 has 64 MA's), (Start: 13 @34038 has 122 MA's), (40, 33924), (43, 33897), (48, 33846), (50, 33822), (58, 33783), (59, 33774), (66, 33627), (68, 33609), (69, 33579),

Gene: Rifter_53 Start: 32329, Stop: 31766, Start Num: 11

Candidate Starts for Rifter_53:

(Start: 11 @32329 has 1 MA's), (Start: 13 @32314 has 122 MA's), (47, 32104), (48, 32101), (58, 32038), (59, 32029), (66, 31876), (67, 31873),

Gene: Roksolana_53 Start: 32814, Stop: 32257, Start Num: 13

Candidate Starts for Roksolana_53:

(1, 33012), (2, 32997), (3, 32976), (4, 32946), (5, 32940), (Start: 13 @32814 has 122 MA's), (47, 32604), (48, 32601), (58, 32538), (59, 32529), (66, 32367), (67, 32364),

Gene: RyeScarlet_51 Start: 33691, Stop: 33128, Start Num: 13

Candidate Starts for RyeScarlet_51:

(Start: 12 @33706 has 64 MA's), (Start: 13 @33691 has 122 MA's), (41, 33565), (49, 33475), (64, 33376), (66, 33235),

Gene: Sachima_47 Start: 33601, Stop: 33038, Start Num: 13

Candidate Starts for Sachima_47:

(Start: 12 @33616 has 64 MA's), (Start: 13 @33601 has 122 MA's), (41, 33475), (49, 33385), (64, 33286), (66, 33145),

Gene: Scherzo_50 Start: 33905, Stop: 33342, Start Num: 13

Candidate Starts for Scherzo_50:

(Start: 12 @33920 has 64 MA's), (Start: 13 @33905 has 122 MA's), (41, 33779), (49, 33689), (64, 33590), (66, 33449),

Gene: SemperFi_51 Start: 33914, Stop: 33378, Start Num: 12

Candidate Starts for SemperFi_51:

(Start: 12 @33914 has 64 MA's), (Start: 13 @33899 has 122 MA's), (40, 33785), (43, 33758), (46, 33713), (48, 33707), (50, 33683), (58, 33644), (59, 33635), (66, 33488), (68, 33470), (69, 33440),

Gene: Serenity_50 Start: 32842, Stop: 32324, Start Num: 13

Candidate Starts for Serenity_50:

(Start: 13 @32842 has 122 MA's), (26, 32764), (40, 32731), (48, 32653), (53, 32617), (58, 32590), (66, 32434),

Gene: SheaKeira_49 Start: 33305, Stop: 32739, Start Num: 13

Candidate Starts for SheaKeira_49:

(Start: 12 @33320 has 64 MA's), (Start: 13 @33305 has 122 MA's), (24, 33215), (37, 33182), (64, 32990), (66, 32846),

Gene: Sknot_52 Start: 33703, Stop: 33194, Start Num: 13

Candidate Starts for Sknot_52:

(Start: 12 @33718 has 64 MA's), (Start: 13 @33703 has 122 MA's), (21, 33634), (40, 33598), (43, 33571), (46, 33526), (48, 33520), (50, 33496), (53, 33484), (58, 33457), (59, 33448), (62, 33430), (66, 33307),

Gene: Smeagan_53 Start: 34354, Stop: 33827, Start Num: 13

Candidate Starts for Smeagan_53:

(Start: 12 @34369 has 64 MA's), (Start: 13 @34354 has 122 MA's), (24, 34267), (40, 34231), (43, 34204), (46, 34159), (48, 34153), (50, 34129), (58, 34090), (66, 33937), (68, 33919), (69, 33889),

Gene: SmellyB_52 Start: 32793, Stop: 32206, Start Num: 12

Candidate Starts for SmellyB_52:

(Start: 12 @32793 has 64 MA's), (Start: 13 @32778 has 122 MA's), (33, 32667), (41, 32649), (60, 32487), (64, 32460), (66, 32316), (67, 32313),

Gene: SnapTap_50 Start: 33710, Stop: 33189, Start Num: 13

Candidate Starts for SnapTap_50:

(Start: 12 @33725 has 64 MA's), (Start: 13 @33710 has 122 MA's), (40, 33596), (43, 33569), (46, 33524), (48, 33518), (50, 33494), (58, 33455), (59, 33446), (66, 33299), (68, 33281), (69, 33251),

Gene: SororFago_52 Start: 34625, Stop: 34074, Start Num: 12

Candidate Starts for SororFago_52:

(Start: 12 @34625 has 64 MA's), (Start: 13 @34610 has 122 MA's), (20, 34526), (24, 34517), (40, 34484), (43, 34457), (46, 34412), (48, 34406), (50, 34382), (58, 34343), (59, 34334), (66, 34184), (69, 34139),

Gene: Spouty_50 Start: 33685, Stop: 33170, Start Num: 13

Candidate Starts for Spouty_50:

(Start: 12 @33700 has 64 MA's), (Start: 13 @33685 has 122 MA's), (23, 33592), (38, 33568), (48, 33490), (58, 33427), (66, 33277),

Gene: StarStuff_52 Start: 33471, Stop: 32893, Start Num: 13

Candidate Starts for StarStuff_52:

(Start: 12 @33486 has 64 MA's), (Start: 13 @33471 has 122 MA's), (34, 33354), (36, 33348), (43, 33324), (47, 33276), (62, 33177), (63, 33168), (64, 33159), (66, 33006),

Gene: Steamy_46 Start: 33175, Stop: 32648, Start Num: 13

Candidate Starts for Steamy_46:

(Start: 12 @33190 has 64 MA's), (Start: 13 @33175 has 122 MA's), (30, 33073), (48, 32971), (58, 32908), (66, 32749),

Gene: Sunhee_53 Start: 33028, Stop: 32519, Start Num: 13

Candidate Starts for Sunhee_53:

(Start: 12 @33043 has 64 MA's), (Start: 13 @33028 has 122 MA's), (40, 32914), (43, 32887), (46, 32842), (48, 32836), (50, 32812), (58, 32773), (66, 32629), (69, 32584),

Gene: SuperAwesome_52 Start: 32807, Stop: 32214, Start Num: 12

Candidate Starts for SuperAwesome_52:

(Start: 12 @32807 has 64 MA's), (Start: 13 @32792 has 122 MA's), (33, 32681), (41, 32663), (60, 32501), (64, 32474), (66, 32324), (67, 32321),

Gene: SuperCallie99_51 Start: 32665, Stop: 32087, Start Num: 13

Candidate Starts for SuperCallie99_51:

(Start: 12 @32680 has 64 MA's), (Start: 13 @32665 has 122 MA's), (33, 32554), (41, 32536), (60, 32374), (64, 32347), (66, 32197), (67, 32194),

Gene: Superchunk_49 Start: 32358, Stop: 31759, Start Num: 13

Candidate Starts for Superchunk_49:

(Start: 12 @32373 has 64 MA's), (Start: 13 @32358 has 122 MA's), (37, 32208), (47, 32133), (54, 32088), (64, 32016), (66, 31869), (67, 31866), (68, 31851), (69, 31824),

Gene: SweetiePie_50 Start: 33842, Stop: 33318, Start Num: 13

Candidate Starts for SweetiePie_50:

(Start: 12 @33857 has 64 MA's), (Start: 13 @33842 has 122 MA's), (40, 33728), (43, 33701), (46, 33656), (48, 33650), (50, 33626), (58, 33587), (59, 33578), (66, 33428), (68, 33410), (69, 33380),

Gene: TarsusIV_49 Start: 33682, Stop: 33143, Start Num: 13

Candidate Starts for TarsusIV_49:

(Start: 12 @33697 has 64 MA's), (Start: 13 @33682 has 122 MA's), (24, 33598), (40, 33562), (43, 33535), (46, 33490), (48, 33484), (50, 33460), (57, 33424), (58, 33421), (59, 33412), (66, 33256),

Gene: Temprado_54 Start: 32912, Stop: 32364, Start Num: 13

Candidate Starts for Temprado_54:

(6, 33026), (7, 33011), (Start: 12 @32927 has 64 MA's), (Start: 13 @32912 has 122 MA's), (47, 32702), (48, 32699), (58, 32636), (59, 32627), (66, 32474), (67, 32471),

Gene: Terrific_53 Start: 34057, Stop: 33548, Start Num: 13

Candidate Starts for Terrific_53:

(Start: 12 @34072 has 64 MA's), (Start: 13 @34057 has 122 MA's), (21, 33988), (40, 33952), (43, 33925), (46, 33880), (48, 33874), (50, 33850), (53, 33838), (58, 33811), (59, 33802), (62, 33784), (66, 33661),

Gene: TipsytheTRex_46 Start: 32912, Stop: 32397, Start Num: 13

Candidate Starts for TipsytheTRex_46:

(Start: 13 @32912 has 122 MA's), (26, 32834), (40, 32801), (48, 32723), (53, 32687), (58, 32660), (66, 32507),

Gene: Toaka_50 Start: 33510, Stop: 32944, Start Num: 13

Candidate Starts for Toaka_50:

(Start: 12 @33525 has 64 MA's), (Start: 13 @33510 has 122 MA's), (31, 33411), (32, 33408), (49, 33297), (64, 33198), (66, 33051),

Gene: Tomathan_52 Start: 33468, Stop: 32890, Start Num: 13

Candidate Starts for Tomathan_52:

(Start: 12 @33483 has 64 MA's), (Start: 13 @33468 has 122 MA's), (34, 33351), (36, 33345), (43, 33321), (47, 33273), (51, 33243), (62, 33174), (63, 33165), (64, 33156), (66, 33003),

Gene: ToneTone_49 Start: 32472, Stop: 31927, Start Num: 13

Candidate Starts for ToneTone_49:

(6, 32586), (7, 32571), (Start: 12 @32487 has 64 MA's), (Start: 13 @32472 has 122 MA's), (47, 32262), (48, 32259), (58, 32196), (59, 32187), (66, 32037), (67, 32034),

Gene: Travvers_52 Start: 33468, Stop: 32890, Start Num: 13

Candidate Starts for Travvers_52:

(Start: 12 @33483 has 64 MA's), (Start: 13 @33468 has 122 MA's), (34, 33351), (36, 33345), (43, 33321), (47, 33273), (62, 33174), (63, 33165), (64, 33156), (66, 33003),

Gene: Tristan_48 Start: 34678, Stop: 34133, Start Num: 13

Candidate Starts for Tristan_48:

(Start: 12 @34693 has 64 MA's), (Start: 13 @34678 has 122 MA's), (45, 34549), (47, 34507), (55, 34450), (57, 34438), (60, 34417), (64, 34390), (66, 34240), (68, 34222),

Gene: Trixie_48 Start: 33814, Stop: 33275, Start Num: 12

Candidate Starts for Trixie_48:

(Start: 12 @33814 has 64 MA's), (Start: 13 @33799 has 122 MA's), (24, 33712), (43, 33649), (48, 33598), (50, 33574), (58, 33535), (66, 33385), (68, 33367), (69, 33337),

Gene: Trooper_51 Start: 34077, Stop: 33538, Start Num: 12

Candidate Starts for Trooper_51:

(9, 34089), (Start: 12 @34077 has 64 MA's), (Start: 13 @34062 has 122 MA's), (21, 33984), (40, 33948), (43, 33921), (48, 33870), (50, 33846), (53, 33834), (58, 33807), (66, 33651), (68, 33633),

Gene: Tubs_50 Start: 33619, Stop: 33104, Start Num: 13

Candidate Starts for Tubs_50:

(Start: 12 @33634 has 64 MA's), (Start: 13 @33619 has 122 MA's), (23, 33526), (38, 33502), (48, 33424), (58, 33361), (66, 33211),

Gene: Tucker_53 Start: 32940, Stop: 32392, Start Num: 13

Candidate Starts for Tucker_53:

(Start: 11 @32955 has 1 MA's), (Start: 13 @32940 has 122 MA's), (47, 32730), (48, 32727), (58, 32664), (59, 32655), (66, 32502), (67, 32499),

Gene: Turbido_51 Start: 34088, Stop: 33570, Start Num: 13

Candidate Starts for Turbido_51:

(Start: 12 @34103 has 64 MA's), (Start: 13 @34088 has 122 MA's), (24, 34004), (40, 33968), (46, 33896), (48, 33890), (50, 33866), (51, 33863), (58, 33827), (66, 33680), (68, 33662), (69, 33632),

Gene: Ugenie5_47 Start: 33904, Stop: 33341, Start Num: 13

Candidate Starts for Ugenie5_47:

(Start: 12 @33919 has 64 MA's), (Start: 13 @33904 has 122 MA's), (41, 33778), (49, 33688), (64, 33589), (66, 33448),

Gene: Updawg_51 Start: 33944, Stop: 33435, Start Num: 13

Candidate Starts for Updawg_51:

(Start: 12 @33959 has 64 MA's), (Start: 13 @33944 has 122 MA's), (21, 33875), (40, 33839), (43, 33812), (46, 33767), (48, 33761), (50, 33737), (53, 33725), (58, 33698), (59, 33689), (62, 33671), (66, 33548),

Gene: VA6_51 Start: 34058, Stop: 33534, Start Num: 13

Candidate Starts for VA6_51:

(Start: 12 @34073 has 64 MA's), (Start: 13 @34058 has 122 MA's), (32, 33953), (43, 33908), (50, 33833), (58, 33794), (66, 33644), (68, 33626), (69, 33596),

Gene: VC3_53 Start: 33887, Stop: 33309, Start Num: 13

Candidate Starts for VC3_53:

(Start: 12 @33902 has 64 MA's), (Start: 13 @33887 has 122 MA's), (34, 33773), (36, 33767), (43, 33740), (47, 33692), (51, 33662), (61, 33596), (62, 33593), (63, 33584), (64, 33575), (66, 33422),

Gene: Vanisoa_50 Start: 34540, Stop: 33974, Start Num: 13

Candidate Starts for Vanisoa_50:

(Start: 12 @34555 has 64 MA's), (Start: 13 @34540 has 122 MA's), (37, 34429), (64, 34234), (66, 34081),

Gene: VohminGhazi_52 Start: 32779, Stop: 32207, Start Num: 13

Candidate Starts for VohminGhazi_52:

(Start: 12 @32794 has 64 MA's), (Start: 13 @32779 has 122 MA's), (33, 32668), (41, 32650), (60, 32488), (64, 32461), (66, 32317), (67, 32314),

Gene: WeiHuaDA_52 Start: 34601, Stop: 34083, Start Num: 13

Candidate Starts for WeiHuaDA_52:

(Start: 12 @34616 has 64 MA's), (Start: 13 @34601 has 122 MA's), (19, 34529), (24, 34517), (40, 34481), (42, 34475), (43, 34454), (46, 34409), (48, 34403), (50, 34379), (58, 34340), (66, 34193), (68, 34175), (69, 34145),

Gene: Whabigail7_51 Start: 34073, Stop: 33555, Start Num: 13

Candidate Starts for Whabigail7_51:

(Start: 12 @34088 has 64 MA's), (Start: 13 @34073 has 122 MA's), (24, 33989), (40, 33953), (46, 33881), (48, 33875), (50, 33851), (51, 33848), (53, 33839), (58, 33812), (66, 33665), (68, 33647), (69, 33617),

Gene: WideWale_51 Start: 33959, Stop: 33435, Start Num: 12

Candidate Starts for WideWale_51:

(Start: 12 @33959 has 64 MA's), (Start: 13 @33944 has 122 MA's), (21, 33875), (40, 33839), (43, 33812), (46, 33767), (48, 33761), (50, 33737), (53, 33725), (58, 33698), (59, 33689), (62, 33671), (66, 33548),

Gene: Wiks_51 Start: 32558, Stop: 31995, Start Num: 12

Candidate Starts for Wiks_51:

(6, 32657), (7, 32642), (Start: 12 @32558 has 64 MA's), (Start: 13 @32543 has 122 MA's), (47, 32333), (48, 32330), (58, 32267), (59, 32258), (66, 32105), (67, 32102),

Gene: WunderPhul_52 Start: 32541, Stop: 31993, Start Num: 13

Candidate Starts for WunderPhul_52:

(6, 32655), (7, 32640), (Start: 12 @32556 has 64 MA's), (Start: 13 @32541 has 122 MA's), (47, 32331), (48, 32328), (58, 32265), (59, 32256), (66, 32103), (67, 32100),

Gene: XianYue_49 Start: 33430, Stop: 32909, Start Num: 13

Candidate Starts for XianYue_49:

(Start: 12 @33445 has 64 MA's), (Start: 13 @33430 has 122 MA's), (40, 33310), (43, 33283), (46, 33238), (48, 33232), (58, 33169), (66, 33019), (68, 33001), (69, 32971),

Gene: Yecey3_51 Start: 33196, Stop: 32624, Start Num: 13

Candidate Starts for Yecey3_51:

(Start: 12 @33211 has 64 MA's), (Start: 13 @33196 has 122 MA's), (45, 33043), (47, 33001), (60, 32911), (64, 32884), (66, 32731),

Gene: Yokurt_52 Start: 32543, Stop: 31995, Start Num: 13

Candidate Starts for Yokurt_52:

(6, 32657), (7, 32642), (Start: 12 @32558 has 64 MA's), (Start: 13 @32543 has 122 MA's), (47, 32333), (48, 32330), (58, 32267), (59, 32258), (66, 32105), (67, 32102),

Gene: Zaka_52 Start: 32543, Stop: 31995, Start Num: 13

Candidate Starts for Zaka_52:

(6, 32657), (7, 32642), (Start: 12 @32558 has 64 MA's), (Start: 13 @32543 has 122 MA's), (47, 32333), (48, 32330), (58, 32267), (59, 32258), (66, 32105), (67, 32102),

Gene: Zimmer_47 Start: 34365, Stop: 33847, Start Num: 13

Candidate Starts for Zimmer_47:

(Start: 12 @34380 has 64 MA's), (Start: 13 @34365 has 122 MA's), (18, 34296), (40, 34257), (53, 34146), (66, 33948), (67, 33945),

Gene: Zulu_53 Start: 32936, Stop: 32373, Start Num: 12

Candidate Starts for Zulu_53:

(6, 33035), (7, 33020), (Start: 12 @32936 has 64 MA's), (Start: 13 @32921 has 122 MA's), (47, 32711), (48, 32708), (58, 32645), (59, 32636), (66, 32483), (67, 32480),