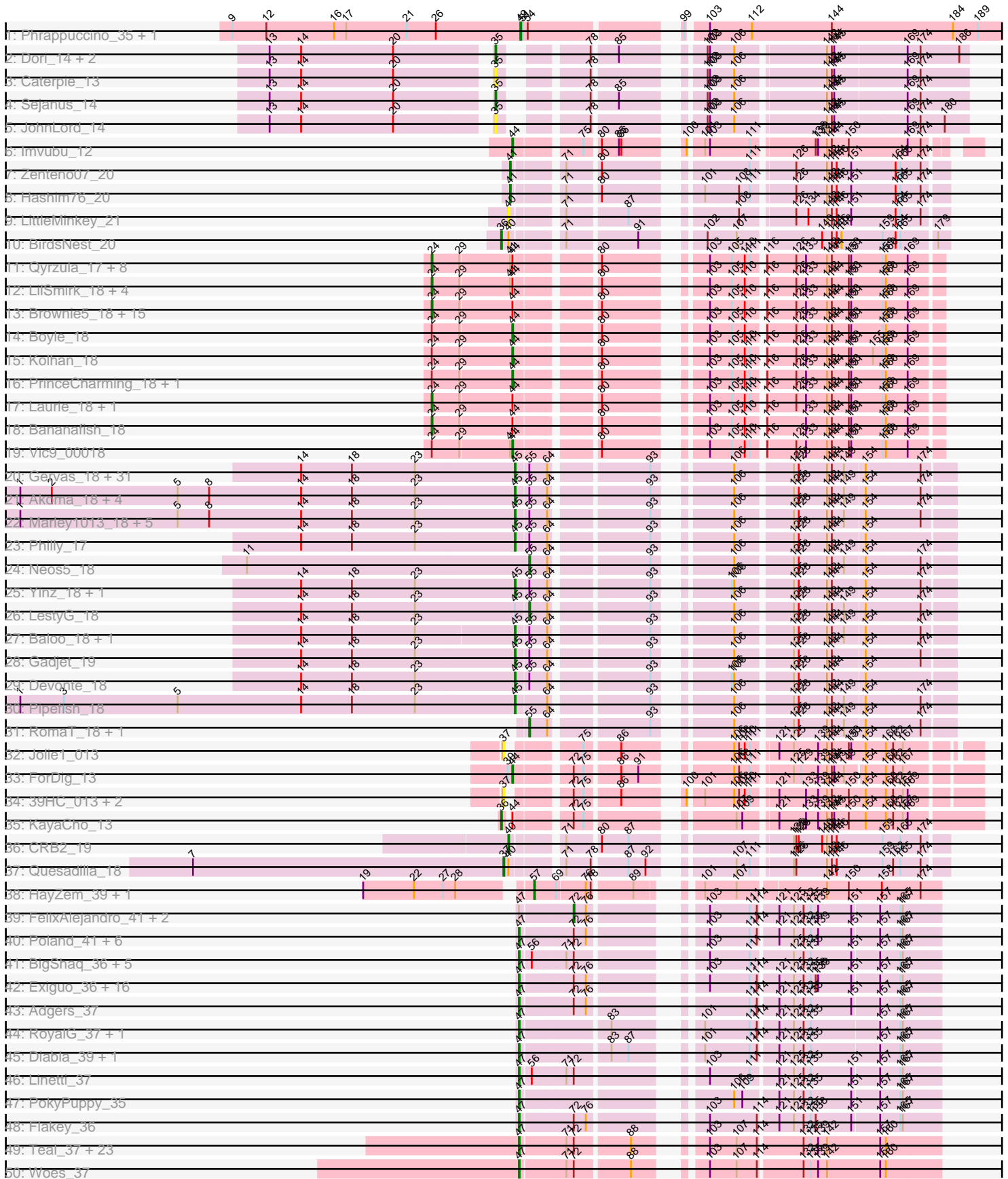
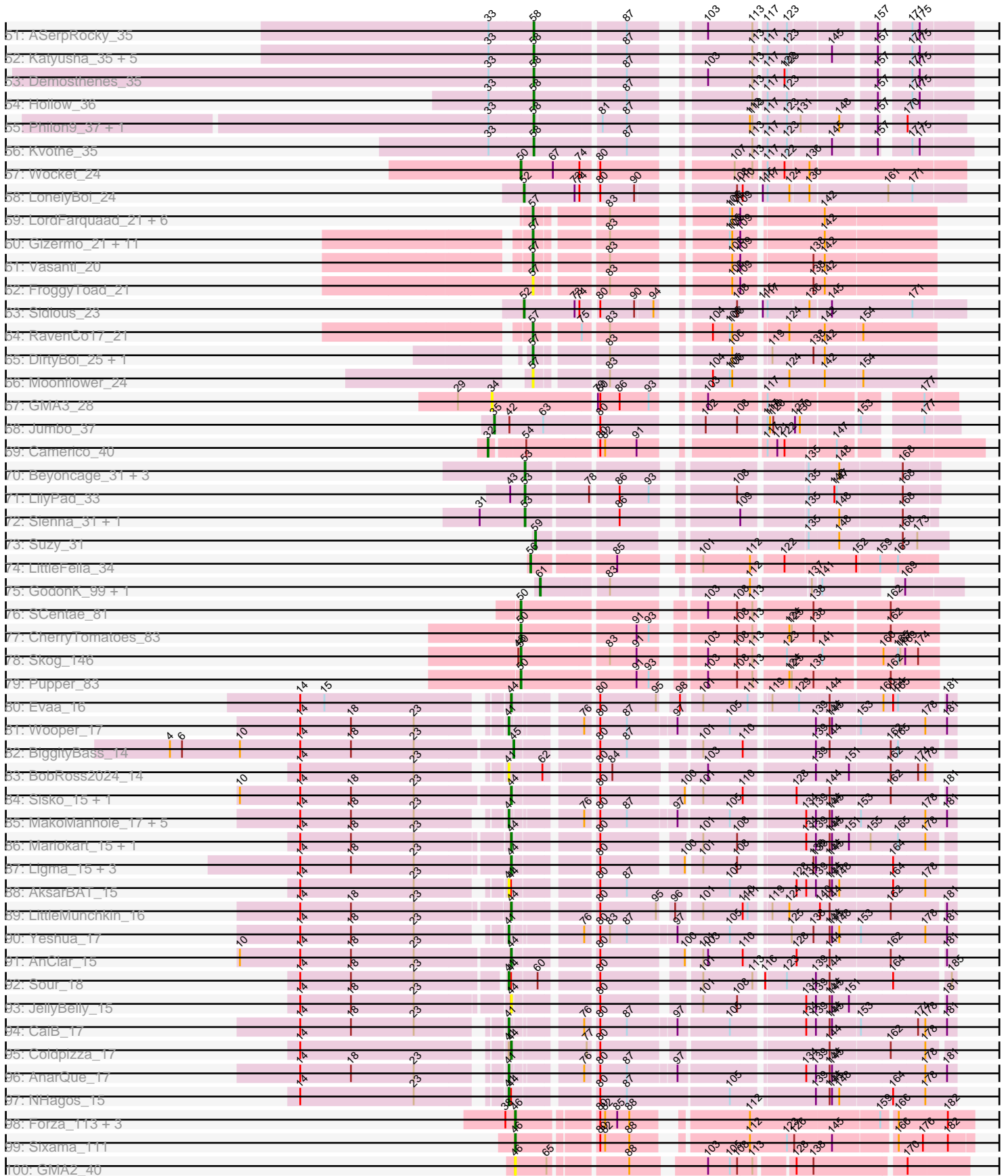


Pham 311169



Pham 311169



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 311169 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311169 has 285 members, 30 are drafts.

Phages represented in each track:

- Track 1 : Phrappuccino_35, Settecandela_35
- Track 2 : Dori_14, Mask_14, Mao1_13
- Track 3 : Caterpie_13
- Track 4 : Sejanus_14
- Track 5 : JohnLord_14
- Track 6 : Imvubu_12
- Track 7 : Zenteno07_20
- Track 8 : Hashim76_20
- Track 9 : LittleMinkey_21
- Track 10 : BirdsNest_20
- Track 11 : Qyrzula_17, Godines_18, Arbiter_18, Kheth_18, Glass_18, Allegro_18, LizLemon_18, Calamitous_18, Holeinone_18
- Track 12 : LilSmirk_18, MasterPo_18, Kaleb_18, TA17A_18, Coffee_18
- Track 13 : Brownie5_18, Rhinoforte_18, Ares_18, Opia_18, Tres_18, Rosebush_18, Eaglehorse_18, ItsyBitsy1_18, Sabella_18, Lephleur_18, FrenchFry_18, West99_18, Blocker23_18, Tinciduntolum_19, Lars_18, Hedgerow_18
- Track 14 : Boyle_18
- Track 15 : Kolhan_18
- Track 16 : PrinceCharming_18, Faze9_18
- Track 17 : Laurie_18, Phantasmagoria_18
- Track 18 : Bananafish_18
- Track 19 : Vic9_00018
- Track 20 : Gervas_18, OrangeOswald_18, HarveySr_18, Jackstina_17, Ben11_17, MmasiCarm_18, SlippinJimmy_18, Corofin_18, SynergyX_18, Tydolla_18, RagingRooster_18, Abinghost_18, Briakila_18, Olivio_17, SwainyDoc_18, Chentzyk_17, Audrey_18, Deenasa_18, Kronus_17, Athena_19, Obutu_18, Mulaychimus_18, Phaedrus_17, Shenandoah_18, Casbah_17, Daisy_18, Kamiyu_18, Rita1961_18, Halfpint_17, Compostia_19, TinyTerror_18, Chandler_18
- Track 21 : Akoma_18, Marlia_18, Yahalom_18, Bernardo_18, Phayeta_18
- Track 22 : Marley1013_18, GlenHope_19, Chalmers_18, Morty007_18, Mortcellus_17, ChaChing_18
- Track 23 : Philly_17
- Track 24 : Neos5_18
- Track 25 : Yinz_18, Heathcliff_18
- Track 26 : LestyG_18
- Track 27 : Baloo_18, Nozo_18
- Track 28 : Gadget_19

- Track 29 : Devonte_18
- Track 30 : Pipefish_18
- Track 31 : RomaT_18, Phlyer_18
- Track 32 : Jolie1_013
- Track 33 : ForDig_13
- Track 34 : 39HC_013, Hosp_011, 40BC_013
- Track 35 : KayaCho_13
- Track 36 : CRB2_19
- Track 37 : Quesadilla_18
- Track 38 : HayZem_39, Amore2_40
- Track 39 : FelixAlejandro_41, Msay19_41, Butterball_40
- Track 40 : Poland_41, CinnamonToast_41, Boneham_40, BirksAndSocks_40, BillyBobJr_41, Barbochs_36, Sombrero_36
- Track 41 : BigShaq_36, PierreThree_36, Chelms_36, Crete_37, BenoitCattle_36, Dakiti_36
- Track 42 : Exiguo_36, Jellybones_40, John316_40, Beaver_40, Worcestershire_36, Breezic_36, Gorko_36, Ekhein_37, RemRem_37, Lizzo_36, GourdThymes_36, Squibbles_36, CathyBurgh_36, Sam12_36, Kelzog_36, Hotorobo_36, Monty_35
- Track 43 : Adgers_37
- Track 44 : RoyalG_37, SteveFrench_36
- Track 45 : Diabla_39, Eggsie_36
- Track 46 : Linetti_37
- Track 47 : PokyPuppy_35
- Track 48 : Flakey_36
- Track 49 : Teal_37, Jams_37, Lidong_37, Sticker17_37, Nimi13_37, Minos_38, Anamika_37, Harambe_37, Lahirium_37, Berries_37, Hail2Pitt_37, Neoovie_37, Guillaume_37, GalacticEye_37, Hello_37, Shelley_37, Charianelly_37, Damp_37, MrWormie_37, Jormungandr_37, Bianmat_37, Newt_38, Kaseim_37, Luker_38
- Track 50 : Woes_37
- Track 51 : ASerpRocky_35
- Track 52 : Katyusha_35, Teech_35, Tredge_35, Benczkowski14_35, Niagara_35, Teatealatte_35
- Track 53 : Demosthenes_35
- Track 54 : Hollow_36
- Track 55 : Philon9_37, Vitaenoi_37
- Track 56 : Kvothe_35
- Track 57 : Wocket_24
- Track 58 : LonelyBoi_24
- Track 59 : LordFarquaad_21, Jalleen_21, Attis_21, Bjanes7_21, Yeet412_21, SoilAssassin_21, Sahara_20
- Track 60 : Gizermo_21, Savage_21, Haley23_21, GemG_21, Cynthia_21, Ebert_21, Sproutie_21, Yinzer_21, Whiteclaw_21, Mocha12_21, Clap_21, TuertoX_21
- Track 61 : Vasanti_20
- Track 62 : FroggyToad_21
- Track 63 : Sidious_23
- Track 64 : RavenCo17_21
- Track 65 : DirtyBoi_25, Hedwig_25
- Track 66 : Moonflower_24
- Track 67 : GMA3_28
- Track 68 : Jumbo_37
- Track 69 : Camerico_40
- Track 70 : Beyoncage_31, Terapin_32, Djokovic_31, BiteSize_31
- Track 71 : LilyPad_33

- Track 72 : Sienna_31, Madi_31
- Track 73 : Suzy_31
- Track 74 : LittleFella_34
- Track 75 : GodonK_99, Phendrix_95
- Track 76 : SCentae_81
- Track 77 : CherryTomatoes_83
- Track 78 : Skog_146
- Track 79 : Pupper_83
- Track 80 : Evaa_16
- Track 81 : Wooper_17
- Track 82 : BiggityBass_14
- Track 83 : BobRoss2024_14
- Track 84 : Sisko_15, Yago84_15
- Track 85 : MakoManhole_17, TraderJ_17, FelixTres_17, CloverMinnie_17, MossRose_17, Blackpen_17
- Track 86 : Mariokart_15, CharlottesWeb_15
- Track 87 : Ligma_15, Axumite_15, Shatter_15, Fresco_15
- Track 88 : AksarBAT_15
- Track 89 : LittleMunchkin_16
- Track 90 : Yeshua_17
- Track 91 : AnClar_15
- Track 92 : Sour_18
- Track 93 : JellyBelly_15
- Track 94 : CaiB_17
- Track 95 : Coldpizza_17
- Track 96 : AnarQue_17
- Track 97 : NHagos_15
- Track 98 : Forza_113, BlueNGold_112, Boopy_113, Mareelih_111
- Track 99 : Sixama_111
- Track 100 : GMA2_40
- Track 101 : DumpTruck_34, Xenia2_35
- Track 102 : Jeon_12
- Track 103 : Argie_13, GodPhather_13
- Track 104 : Megabear_12, Taptic_12
- Track 105 : Cepens_12, D12_12, PR_12
- Track 106 : Trogglehumper_52

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

The start number called the most often in the published annotations is 47, it was called in 58 of the 255 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Adgers_37, Anamika_37, Barbochs_36, Beaver_40, BenoitCattle_36, Berries_37, Bianmat_37, BigShaq_36, BillyBobJr_41, BirksAndSocks_40, Boneham_40, Breezic_36, CathyBurgh_36, Charianelly_37, Chelms_36, CinnamonToast_41, Crete_37, Dakiti_36, Damp_37, Diabla_39, Eggsie_36, Ekhein_37, Exiguo_36, Flakey_36, GalacticEye_37, Gorko_36, GourdThymes_36, Guillaume_37, Hail2Pitt_37, Harambe_37, Hello_37, Hotorobo_36, Jams_37, Jellybones_40, John316_40, Jormungandr_37, Kaseim_37, Kelzog_36, Lahirium_37, Lidong_37,

Linetti_37, Lizzo_36, Luker_38, Minos_38, Monty_35, MrWormie_37, Neevie_37, Newt_38, Nimi13_37, PierreThree_36, PokyPuppy_35, Poland_41, RemRem_37, RoyalG_37, Sam12_36, Shelley_37, Sombrero_36, Squibbles_36, SteveFrench_36, Sticker17_37, Teal_37, Woes_37, Worcestershire_36,

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

- Butterball_40, FelixAlejandro_41, Msay19_41,

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

- 39HC_013, 40BC_013, ASerpRocky_35, Abinghost_18, Akoma_18, AksarBAT_15, Allegro_18, Amore2_40, AnClar_15, AnarQue_17, Arbiter_18, Ares_18, Argie_13, Athena_19, Attis_21, Audrey_18, Axumite_15, Baloo_18, Bananafish_18, Ben11_17, Benczkowski14_35, Bernardo_18, Beyoncage_31, BiggityBass_14, BirdsNest_20, BiteSize_31, Bjaner7_21, Blackpen_17, Blocker23_18, BlueNGold_112, BobRoss2024_14, Boopy_113, Boyle_18, Briakila_18, Brownie5_18, CRB2_19, CaiB_17, Calamitous_18, Camerico_40, Casbah_17, Caterpie_13, Cepens_12, ChaChing_18, Chalmers_18, Chandler_18, CharlottesWeb_15, Chentzyk_17, CherryTomatoes_83, Clap_21, CloverMinnie_17, Coffee_18, Coldpizza_17, Compostia_19, Corofin_18, Cynthia_21, D12_12, Daisy_18, Deenasa_18, Demosthenes_35, Devonte_18, DirtyBoi_25, Djokovic_31, Dori_14, DumpTruck_34, Eaglehorse_18, Ebert_21, Evaa_16, Faze9_18, FelixTres_17, ForDig_13, Forza_113, FrenchFry_18, Fresco_15, FroggyToad_21, GMA2_40, GMA3_28, Gadget_19, GemG_21, Gervas_18, Gizermo_21, Glass_18, GlenHope_19, GodPhather_13, Godines_18, GodonK_99, Haley23_21, Halfpint_17, HarveySr_18, Hashim76_20, HayZem_39, Heathcliff_18, Hedgerow_18, Hedwig_25, Holeinone_18, Hollow_36, Hosp_011, Imvubu_12, ItsyBitsy1_18, Jackstina_17, Jalleen_21, JellyBelly_15, Jeon_12, JohnLord_14, Jolie1_013, Jumbo_37, Kaleb_18, Kamiyu_18, Katyusha_35, KayaCho_13, Kheth_18, Kolhan_18, Kronus_17, Kvothe_35, Lars_18, Laurie_18, Lephleur_18, LestyG_18, Ligma_15, LilSmirk_18, LilyPad_33, LittleFella_34, LittleMinkey_21, LittleMunchkin_16, LizLemon_18, LonelyBoi_24, LordFarquaad_21, Madi_31, MakoManhole_17, Mao1_13, Mareelih_111, Mariokart_15, Marley1013_18, Marlia_18, Mask_14, MasterPo_18, Megabear_12, MmasiCarm_18, Mocha12_21, Moonflower_24, Mortcellus_17, Morty007_18, MossRose_17, Mulaychimus_18, NHagos_15, Neos5_18, Niagara_35, Nozo_18, Obutu_18, Olivio_17, Opia_18, OrangeOswald_18, PR_12, Phaedrus_17, Phantasmagoria_18, Phayeta_18, Phendrix_95, Philly_17, Philon9_37, Phlyer_18, Phrappuccino_35, Pipefish_18, PrinceCharming_18, Pupper_83, Quesadilla_18, Qyrzula_17, RagingRooster_18, RavenCo17_21, Rhinoforte_18, Rita1961_18, RomaT_18, Rosebush_18, SCentae_81, Sabella_18, Sahara_20, Savage_21, Sejanus_14, Settecandela_35, Shatter_15, Shenandoah_18, Sidious_23, Sienna_31, Sisko_15, Sixama_111, Skog_146, SlippinJimmy_18, SoilAssassin_21, Sour_18, Sproutie_21, Suzy_31, SwainyDoc_18, SynergyX_18, TA17A_18, Taptic_12, Teatealatte_35, Teech_35, Terapin_32, Tinciduntolum_19, TinyTerror_18, TraderJ_17, Tredge_35, Tres_18, Trogglehumper_52, TuertoX_21, Tydolla_18, Vasanti_20, Vic9_00018, Vitaenoi_37, West99_18, Whiteclaw_21, Wocket_24, Wooper_17, Xenia2_35, Yago84_15, Yahalom_18, Yeet412_21, Yeshua_17, Yinz_18, Yinzer_21, Zenteno07_20,

Summary by start number:

Start 24:

- Found in 38 of 285 (13.3%) of genes in pham
- Manual Annotations of this start: 32 of 255
- Called 86.8% of time when present

- Phage (with cluster) where this start called: Allegro_18 (B2), Arbiter_18 (B2), Ares_18 (B2), Bananafish_18 (B2), Blocker23_18 (B2), Brownie5_18 (B2), Calamitous_18 (B2), Coffee_18 (B2), Eaglehorse_18 (B2), FrenchFry_18 (B2), Glass_18 (B2), Godines_18 (B2), Hedgerow_18 (B2), Holeinone_18 (B2), ItsyBitsy1_18 (B2), Kaleb_18 (B2), Kheth_18 (B2), Lars_18 (B2), Laurie_18 (B2), Lephleur_18 (B2), LilSmirk_18 (B2), LizLemon_18 (B2), MasterPo_18 (B2), Opia_18 (B2), Phantasmagoria_18 (B2), Qyrzula_17 (B2), Rhinoforte_18 (B2), Rosebush_18 (B2), Sabella_18 (B2), TA17A_18 (B2), Tinciduntolum_19 (B2), Tres_18 (B2), West99_18 (B2),

Start 25:

- Found in 8 of 285 (2.8%) of genes in pham
- Manual Annotations of this start: 3 of 255
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Jeon_12 (W), Megabear_12 (W), Taptic_12 (W),

Start 32:

- Found in 1 of 285 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camerico_40 (DF4),

Start 34:

- Found in 1 of 285 (0.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA3_28 (DF2),

Start 35:

- Found in 7 of 285 (2.5%) of genes in pham
- Manual Annotations of this start: 5 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caterpie_13 (AD), Dori_14 (AD), JohnLord_14 (AD), Jumbo_37 (DF3), Mao1_13 (AD), Mask_14 (AD), Sejanus_14 (AD),

Start 36:

- Found in 2 of 285 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdsNest_20 (B13), KayaCho_13 (B6),

Start 37:

- Found in 5 of 285 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_013 (B6), 40BC_013 (B6), Hosp_011 (B6), Jolie1_013 (B6), Quesadilla_18 (B9),

Start 40:

- Found in 4 of 285 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 255

- Called 50.0% of time when present
- Phage (with cluster) where this start called: CRB2_19 (B9), LittleMinkey_21 (B13),

Start 41:

- Found in 32 of 285 (11.2%) of genes in pham
- Manual Annotations of this start: 12 of 255
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AksarBAT_15 (DR), AnarQue_17 (DR), Blackpen_17 (DR), BobRoss2024_14 (DR), CaiB_17 (DR), CloverMinnie_17 (DR), FelixTres_17 (DR), Hashim76_20 (B13), MakoManhole_17 (DR), MossRose_17 (DR), NHagos_15 (DR), Sour_18 (DR), TraderJ_17 (DR), Wooper_17 (DR), Yeshua_17 (DR), Zenteno07_20 (B13),

Start 44:

- Found in 65 of 285 (22.8%) of genes in pham
- Manual Annotations of this start: 23 of 255
- Called 38.5% of time when present
- Phage (with cluster) where this start called: AnClar_15 (DR), Argie_13 (W), Axumite_15 (DR), Boyle_18 (B2), Cepens_12 (W), CharlottesWeb_15 (DR), Coldpizza_17 (DR), D12_12 (W), Evaa_16 (DR), Faze9_18 (B2), ForDig_13 (B6), Fresco_15 (DR), GodPhather_13 (W), Imvubu_12 (B10), JellyBelly_15 (DR), Kolhan_18 (B2), Ligma_15 (DR), LittleMunchkin_16 (DR), Mariokart_15 (DR), PR_12 (W), PrinceCharming_18 (B2), Shatter_15 (DR), Sisko_15 (DR), Vic9_00018 (B2), Yago84_15 (DR),

Start 45:

- Found in 53 of 285 (18.6%) of genes in pham
- Manual Annotations of this start: 47 of 255
- Called 98.1% of time when present
- Phage (with cluster) where this start called: Abinghost_18 (B3), Akoma_18 (B3), Athena_19 (B3), Audrey_18 (B3), Baloo_18 (B3), Ben11_17 (B3), Bernardo_18 (B3), BiggityBass_14 (DR), Briakila_18 (B3), Casbah_17 (B3), ChaChing_18 (B3), Chalmers_18 (B3), Chandler_18 (B3), Chentzyk_17 (B3), Compostia_19 (B3), Corofin_18 (B3), Daisy_18 (B3), Deenasa_18 (B3), Devonte_18 (B3), Gadget_19 (B3), Gervas_18 (B3), GlenHope_19 (B3), Halfpint_17 (B3), HarveySr_18 (B3), Heathcliff_18 (B3), Jackstina_17 (B3), Kamiyu_18 (B3), Kronus_17 (B3), Marley1013_18 (B3), Marlia_18 (B3), MmasiCarm_18 (B3), Mortcellus_17 (B3), Morty007_18 (B3), Mulaychimus_18 (B3), Nozo_18 (B3), Obutu_18 (B3), Olivio_17 (B3), OrangeOswald_18 (B3), Phaedrus_17 (B3), Phayeta_18 (B3), Philly_17 (B3), Pipefish_18 (B3), RagingRooster_18 (B3), Rita1961_18 (B3), Shenandoah_18 (B3), SlippinJimmy_18 (B3), SwainyDoc_18 (B3), SynergyX_18 (B3), TinyTerror_18 (B3), Tydolla_18 (B3), Yahalom_18 (B3), Yinz_18 (B3),

Start 46:

- Found in 6 of 285 (2.1%) of genes in pham
- Manual Annotations of this start: 5 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BlueNGGold_112 (DS), Boopy_113 (DS), Forza_113 (DS), GMA2_40 (DS), Mareelih_111 (DS), Sixama_111 (DS),

Start 47:

- Found in 66 of 285 (23.2%) of genes in pham
- Manual Annotations of this start: 58 of 255

- Called 95.5% of time when present
- Phage (with cluster) where this start called: Adgers_37 (CS2), Anamika_37 (CS3), Barbochs_36 (CS2), Beaver_40 (CS2), BenoitCattle_36 (CS2), Berries_37 (CS3), Bianmat_37 (CS3), BigShaq_36 (CS2), BillyBobJr_41 (CS2), BirksAndSocks_40 (CS2), Boneham_40 (CS2), Breezic_36 (CS2), CathyBurgh_36 (CS2), Charianelly_37 (CS3), Chelms_36 (CS2), CinnamonToast_41 (CS2), Crete_37 (CS2), Dakiti_36 (CS2), Damp_37 (CS3), Diabla_39 (CS2), Eggsie_36 (CS2), Ekhein_37 (CS2), Exiguo_36 (CS2), Flakey_36 (CS2), GalacticEye_37 (CS3), Gorko_36 (CS2), GourdThymes_36 (CS2), Guillaume_37 (CS3), Hail2Pitt_37 (CS3), Harambe_37 (CS3), Hello_37 (CS3), Hotorobo_36 (CS2), Jams_37 (CS3), Jellybones_40 (CS2), John316_40 (CS2), Jormungandr_37 (CS3), Kaseim_37 (CS3), Kelzog_36 (CS2), Lahirium_37 (CS3), Lidong_37 (CS3), Linetti_37 (CS2), Lizzo_36 (CS2), Luker_38 (CS3), Minos_38 (CS3), Monty_35 (CS2), MrWormie_37 (CS3), Neoevie_37 (CS3), Newt_38 (CS3), Nimi13_37 (CS3), PierreThree_36 (CS2), PokyPuppy_35 (CS2), Poland_41 (CS2), RemRem_37 (CS2), RoyalG_37 (CS2), Sam12_36 (CS2), Shelley_37 (CS3), Sombrero_36 (CS2), Squibbles_36 (CS2), SteveFrench_36 (CS2), Sticker17_37 (CS3), Teal_37 (CS3), Woes_37 (CS3), Worcestershire_36 (CS2),

Start 49:

- Found in 2 of 285 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phrappuccino_35 (AA), Settecandela_35 (AA),

Start 50:

- Found in 5 of 285 (1.8%) of genes in pham
- Manual Annotations of this start: 5 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes_83 (DO), Pupper_83 (DO), SCentae_81 (DO), Skog_146 (DO), Wocket_24 (CV),

Start 52:

- Found in 2 of 285 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LonelyBoi_24 (CY7), Sidious_23 (CZ7),

Start 53:

- Found in 7 of 285 (2.5%) of genes in pham
- Manual Annotations of this start: 7 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_31 (DG1), BiteSize_31 (DG1), Djokovic_31 (DG1), LilyPad_33 (DG1), Madi_31 (DG1), Sienna_31 (DG1), Terapin_32 (DG1),

Start 55:

- Found in 54 of 285 (18.9%) of genes in pham
- Manual Annotations of this start: 4 of 255
- Called 7.4% of time when present
- Phage (with cluster) where this start called: LestyG_18 (B3), Neos5_18 (B3), Phlyer_18 (B3), RomaT_18 (B3),

Start 56:

- Found in 10 of 285 (3.5%) of genes in pham
- Manual Annotations of this start: 3 of 255
- Called 30.0% of time when present
- Phage (with cluster) where this start called: DumpTruck_34 (DV), LittleFella_34 (DG2), Xenia2_35 (DV),

Start 57:

- Found in 27 of 285 (9.5%) of genes in pham
- Manual Annotations of this start: 23 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amore2_40 (CS1), Attis_21 (CZ2), Bjanes7_21 (CZ2), Clap_21 (CZ2), Cynthia_21 (CZ2), DirtyBoi_25 (DB), Ebert_21 (CZ2), FroggyToad_21 (CZ2), GemG_21 (CZ2), Gizermo_21 (CZ2), Haley23_21 (CZ2), HayZem_39 (CS1), Hedwig_25 (DB), Jalleen_21 (CZ2), LordFarquaad_21 (CZ2), Mocha12_21 (CZ2), Moonflower_24 (DB), RavenCo17_21 (CZ8), Sahara_20 (CZ2), Savage_21 (CZ2), SoilAssassin_21 (CZ2), Sproutie_21 (CZ2), TuertoX_21 (CZ2), Vasanti_20 (CZ2), Whiteclaw_21 (CZ2), Yeet412_21 (CZ2), Yinzer_21 (CZ2),

Start 58:

- Found in 12 of 285 (4.2%) of genes in pham
- Manual Annotations of this start: 12 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASerpRocky_35 (CS4), Benczkowski14_35 (CS4), Demosthenes_35 (CS4), Hollow_36 (CS4), Katyusha_35 (CS4), Kvothe_35 (CS4), Niagara_35 (CS4), Philon9_37 (CS4), Teatealatte_35 (CS4), Teech_35 (CS4), Tredge_35 (CS4), Vitaenoi_37 (CS4),

Start 59:

- Found in 1 of 285 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Suzy_31 (DG1),

Start 61:

- Found in 2 of 285 (0.7%) of genes in pham
- Manual Annotations of this start: 2 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GodonK_99 (DK), Phendrix_95 (DK),

Start 66:

- Found in 1 of 285 (0.4%) of genes in pham
- Manual Annotations of this start: 1 of 255
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trogglehumper_52 (singleton),

Start 72:

- Found in 66 of 285 (23.2%) of genes in pham
- Manual Annotations of this start: 3 of 255
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Butterball_40 (CS2), FelixAlejandro_41 (CS2), Msay19_41 (CS2),

Summary by clusters:

There are 30 clusters represented in this pham: DO, singleton, DK, CZ2, DB, CZ7, B13, B10, DV, DR, DS, DF4, DF3, DF2, CZ8, CS4, CS1, CS3, CS2, AA, CY7, AD, DG2, DG1, W, CV, B6, B2, B3, B9,

Info for manual annotations of cluster AA:

- Start number 49 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster AD:

- Start number 35 was manually annotated 4 times for cluster AD.

Info for manual annotations of cluster B10:

- Start number 44 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B13:

- Start number 36 was manually annotated 1 time for cluster B13.
- Start number 41 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 24 was manually annotated 32 times for cluster B2.
- Start number 44 was manually annotated 5 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 45 was manually annotated 46 times for cluster B3.
- Start number 55 was manually annotated 4 times for cluster B3.

Info for manual annotations of cluster B6:

- Start number 36 was manually annotated 1 time for cluster B6.
- Start number 44 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B9:

- Start number 37 was manually annotated 1 time for cluster B9.
- Start number 40 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CS1:

- Start number 57 was manually annotated 2 times for cluster CS1.

Info for manual annotations of cluster CS2:

- Start number 47 was manually annotated 33 times for cluster CS2.
- Start number 72 was manually annotated 3 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 47 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 58 was manually annotated 12 times for cluster CS4.

Info for manual annotations of cluster CV:

- Start number 50 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY7:

- Start number 52 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ2:

- Start number 57 was manually annotated 18 times for cluster CZ2.

Info for manual annotations of cluster CZ7:

- Start number 52 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:

- Start number 57 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DB:

- Start number 57 was manually annotated 2 times for cluster DB.

Info for manual annotations of cluster DF3:

- Start number 35 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DF4:

- Start number 32 was manually annotated 1 time for cluster DF4.

Info for manual annotations of cluster DG1:

- Start number 53 was manually annotated 7 times for cluster DG1.
- Start number 59 was manually annotated 1 time for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 56 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DK:

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

Info for manual annotations of cluster DO:

- Start number 50 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DR:

- Start number 41 was manually annotated 10 times for cluster DR.
- Start number 44 was manually annotated 11 times for cluster DR.
- Start number 45 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DS:

- Start number 46 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster DV:

- Start number 56 was manually annotated 2 times for cluster DV.

Info for manual annotations of cluster W:

- Start number 25 was manually annotated 3 times for cluster W.
- Start number 44 was manually annotated 5 times for cluster W.

Gene Information:

Gene: 39HC_013 Start: 13570, Stop: 14058, Start Num: 37

Candidate Starts for 39HC_013:

(Start: 37 @13570 has 1 MA's), (Start: 72 @13627 has 3 MA's), (75, 13639), (86, 13678), (100, 13732), (101, 13747), (106, 13783), (108, 13789), (110, 13795), (111, 13801), (121, 13825), (133, 13858), (139, 13873), (142, 13882), (144, 13888), (150, 13909), (154, 13927), (160, 13951), (162, 13960), (167, 13972), (169, 13978),

Gene: 40BC_013 Start: 13570, Stop: 14058, Start Num: 37

Candidate Starts for 40BC_013:

(Start: 37 @13570 has 1 MA's), (Start: 72 @13627 has 3 MA's), (75, 13639), (86, 13678), (100, 13732), (101, 13747), (106, 13783), (108, 13789), (110, 13795), (111, 13801), (121, 13825), (133, 13858), (139, 13873), (142, 13882), (144, 13888), (150, 13909), (154, 13927), (160, 13951), (162, 13960), (167, 13972), (169, 13978),

Gene: ASerpRocky_35 Start: 41389, Stop: 41841, Start Num: 58

Candidate Starts for ASerpRocky_35:

(33, 41335), (Start: 58 @41389 has 12 MA's), (87, 41494), (103, 41557), (113, 41611), (117, 41623), (123, 41647), (157, 41743), (171, 41770), (175, 41779),

Gene: Abinghost_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for Abinghost_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (149, 15336), (154, 15360), (174, 15426),

Gene: Adgers_37 Start: 39896, Stop: 40342, Start Num: 47

Candidate Starts for Adgers_37:

(Start: 47 @39896 has 58 MA's), (Start: 72 @39956 has 3 MA's), (76, 39971), (111, 40121), (114, 40130), (121, 40151), (125, 40169), (132, 40181), (135, 40190), (151, 40238), (157, 40271), (165, 40295), (167, 40298),

Gene: Akoma_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for Akoma_18:

(1, 14391), (2, 14430), (5, 14586), (8, 14625), (14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (149, 15336), (154, 15360), (174, 15426),

Gene: AksarBAT_15 Start: 13222, Stop: 13728, Start Num: 41

Candidate Starts for AksarBAT_15:

(14, 12991), (23, 13132), (Start: 41 @13222 has 12 MA's), (Start: 44 @13225 has 23 MA's), (80, 13312), (87, 13345), (105, 13468), (128, 13537), (134, 13549), (139, 13561), (144, 13576), (145, 13579), (148, 13588), (164, 13651), (178, 13690),

Gene: Allegro_18 Start: 16139, Stop: 16681, Start Num: 24

Candidate Starts for Allegro_18:

(Start: 24 @16139 has 32 MA's), (29, 16172), (Start: 41 @16232 has 12 MA's), (Start: 44 @16235 has 23 MA's), (80, 16319), (103, 16418), (105, 16445), (110, 16460), (111, 16466), (116, 16478), (126, 16511), (133, 16523), (142, 16547), (144, 16553), (150, 16574), (151, 16577), (159, 16613), (160, 16616), (169, 16643),

Gene: Amore2_40 Start: 40418, Stop: 40843, Start Num: 57

Candidate Starts for Amore2_40:

(19, 40229), (22, 40292), (27, 40328), (28, 40343), (Start: 57 @40418 has 23 MA's), (69, 40445), (76, 40478), (78, 40484), (89, 40529), (101, 40571), (107, 40610), (142, 40709), (150, 40736), (158,

40775), (174, 40820),

Gene: AnClar_15 Start: 14164, Stop: 14637, Start Num: 44

Candidate Starts for AnClar_15:

(10, 13834), (14, 13909), (18, 13972), (23, 14050), (Start: 44 @14164 has 23 MA's), (80, 14248), (100, 14338), (101, 14353), (103, 14359), (110, 14401), (128, 14455), (144, 14494), (162, 14566), (181, 14626),

Gene: Anamika_37 Start: 42271, Stop: 42723, Start Num: 47

Candidate Starts for Anamika_37:

(Start: 47 @42271 has 58 MA's), (71, 42325), (Start: 72 @42334 has 3 MA's), (88, 42397), (103, 42451), (107, 42484), (114, 42508), (132, 42559), (135, 42568), (139, 42577), (142, 42586), (157, 42652), (160, 42658),

Gene: AnarQue_17 Start: 14776, Stop: 15270, Start Num: 41

Candidate Starts for AnarQue_17:

(14, 14545), (18, 14608), (23, 14686), (Start: 41 @14776 has 12 MA's), (76, 14848), (80, 14860), (87, 14893), (97, 14950), (134, 15091), (139, 15103), (144, 15118), (145, 15121), (178, 15232), (181, 15259),

Gene: Arbiter_18 Start: 16226, Stop: 16768, Start Num: 24

Candidate Starts for Arbiter_18:

(Start: 24 @16226 has 32 MA's), (29, 16259), (Start: 41 @16319 has 12 MA's), (Start: 44 @16322 has 23 MA's), (80, 16406), (103, 16505), (105, 16532), (110, 16547), (111, 16553), (116, 16565), (126, 16598), (133, 16610), (142, 16634), (144, 16640), (150, 16661), (151, 16664), (159, 16700), (160, 16703), (169, 16730),

Gene: Ares_18 Start: 16139, Stop: 16681, Start Num: 24

Candidate Starts for Ares_18:

(Start: 24 @16139 has 32 MA's), (29, 16172), (Start: 44 @16235 has 23 MA's), (80, 16319), (103, 16418), (105, 16445), (110, 16460), (116, 16478), (126, 16511), (133, 16523), (142, 16547), (144, 16553), (150, 16574), (151, 16577), (159, 16613), (160, 16616), (169, 16643),

Gene: Argie_13 Start: 14276, Stop: 14797, Start Num: 44

Candidate Starts for Argie_13:

(Start: 25 @14180 has 3 MA's), (30, 14213), (Start: 44 @14276 has 23 MA's), (64, 14312), (83, 14372), (103, 14459), (106, 14489), (125, 14549), (128, 14555), (129, 14558), (142, 14588), (144, 14594), (155, 14642), (159, 14654), (169, 14684), (187, 14753), (188, 14762),

Gene: Athena_19 Start: 15766, Stop: 16227, Start Num: 45

Candidate Starts for Athena_19:

(14, 15502), (18, 15565), (23, 15643), (Start: 45 @15766 has 47 MA's), (Start: 55 @15781 has 4 MA's), (64, 15802), (93, 15910), (106, 15979), (125, 16039), (128, 16045), (142, 16078), (144, 16084), (149, 16099), (154, 16123), (174, 16189),

Gene: Attis_21 Start: 18545, Stop: 18967, Start Num: 57

Candidate Starts for Attis_21:

(Start: 57 @18545 has 23 MA's), (83, 18620), (105, 18731), (106, 18734), (109, 18743), (142, 18833),

Gene: Audrey_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for Audrey_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (149,

15336), (154, 15360), (174, 15426),

Gene: Axumite_15 Start: 13329, Stop: 13802, Start Num: 44

Candidate Starts for Axumite_15:

(14, 13077), (18, 13140), (23, 13218), (Start: 44 @13329 has 23 MA's), (80, 13413), (100, 13503), (101, 13518), (108, 13560), (138, 13641), (139, 13644), (144, 13659), (145, 13662), (164, 13734),

Gene: Baloo_18 Start: 15000, Stop: 15461, Start Num: 45

Candidate Starts for Baloo_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15000 has 47 MA's), (Start: 55 @15015 has 4 MA's), (64, 15036), (93, 15144), (106, 15213), (125, 15273), (128, 15279), (142, 15312), (144, 15318), (149, 15333), (154, 15357), (174, 15423),

Gene: Bananafish_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Bananafish_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Barbochs_36 Start: 39735, Stop: 40181, Start Num: 47

Candidate Starts for Barbochs_36:

(Start: 47 @39735 has 58 MA's), (Start: 72 @39795 has 3 MA's), (76, 39810), (103, 39912), (111, 39960), (114, 39969), (121, 39990), (125, 40008), (132, 40020), (135, 40029), (139, 40038), (151, 40077), (157, 40110), (165, 40134), (167, 40137),

Gene: Beaver_40 Start: 41782, Stop: 42228, Start Num: 47

Candidate Starts for Beaver_40:

(Start: 47 @41782 has 58 MA's), (Start: 72 @41842 has 3 MA's), (76, 41857), (103, 41959), (111, 42007), (114, 42016), (121, 42037), (125, 42055), (132, 42067), (135, 42076), (138, 42082), (139, 42085), (151, 42124), (157, 42157), (165, 42181), (167, 42184),

Gene: Ben11_17 Start: 14827, Stop: 15288, Start Num: 45

Candidate Starts for Ben11_17:

(14, 14563), (18, 14626), (23, 14704), (Start: 45 @14827 has 47 MA's), (Start: 55 @14842 has 4 MA's), (64, 14863), (93, 14971), (106, 15040), (125, 15100), (128, 15106), (142, 15139), (144, 15145), (149, 15160), (154, 15184), (174, 15250),

Gene: Benczkowski14_35 Start: 41422, Stop: 41874, Start Num: 58

Candidate Starts for Benczkowski14_35:

(33, 41368), (Start: 58 @41422 has 12 MA's), (87, 41527), (113, 41644), (117, 41656), (123, 41680), (145, 41728), (157, 41776), (171, 41803), (175, 41812),

Gene: BenoitCattle_36 Start: 39840, Stop: 40286, Start Num: 47

Candidate Starts for BenoitCattle_36:

(Start: 47 @39840 has 58 MA's), (Start: 56 @39852 has 3 MA's), (71, 39891), (Start: 72 @39900 has 3 MA's), (103, 40017), (111, 40065), (125, 40113), (132, 40125), (135, 40134), (151, 40182), (157, 40215), (165, 40239), (167, 40242),

Gene: Bernardo_18 Start: 15002, Stop: 15463, Start Num: 45

Candidate Starts for Bernardo_18:

(1, 14390), (2, 14429), (5, 14585), (8, 14624), (14, 14738), (18, 14801), (23, 14879), (Start: 45 @15002 has 47 MA's), (Start: 55 @15017 has 4 MA's), (64, 15038), (93, 15146), (106, 15215), (125, 15275), (128, 15281), (142, 15314), (144, 15320), (149, 15335), (154, 15359), (174, 15425),

Gene: Berries_37 Start: 42242, Stop: 42694, Start Num: 47

Candidate Starts for Berries_37:

(Start: 47 @42242 has 58 MA's), (71, 42296), (Start: 72 @42305 has 3 MA's), (88, 42368), (103, 42422), (107, 42455), (114, 42479), (132, 42530), (135, 42539), (139, 42548), (142, 42557), (157, 42623), (160, 42629),

Gene: Beyoncage_31 Start: 27530, Stop: 27976, Start Num: 53

Candidate Starts for Beyoncage_31:

(Start: 53 @27530 has 7 MA's), (135, 27824), (148, 27860), (168, 27935),

Gene: Bianmat_37 Start: 42282, Stop: 42734, Start Num: 47

Candidate Starts for Bianmat_37:

(Start: 47 @42282 has 58 MA's), (71, 42336), (Start: 72 @42345 has 3 MA's), (88, 42408), (103, 42462), (107, 42495), (114, 42519), (132, 42570), (135, 42579), (139, 42588), (142, 42597), (157, 42663), (160, 42669),

Gene: BigShaq_36 Start: 39845, Stop: 40291, Start Num: 47

Candidate Starts for BigShaq_36:

(Start: 47 @39845 has 58 MA's), (Start: 56 @39857 has 3 MA's), (71, 39896), (Start: 72 @39905 has 3 MA's), (103, 40022), (111, 40070), (125, 40118), (132, 40130), (135, 40139), (151, 40187), (157, 40220), (165, 40244), (167, 40247),

Gene: BiggityBass_14 Start: 13261, Stop: 13734, Start Num: 45

Candidate Starts for BiggityBass_14:

(4, 12841), (6, 12856), (10, 12928), (14, 13003), (18, 13066), (23, 13144), (Start: 45 @13261 has 47 MA's), (80, 13345), (87, 13378), (101, 13450), (110, 13498), (139, 13576), (144, 13591), (162, 13663), (165, 13672),

Gene: BillyBobJr_41 Start: 41813, Stop: 42259, Start Num: 47

Candidate Starts for BillyBobJr_41:

(Start: 47 @41813 has 58 MA's), (Start: 72 @41873 has 3 MA's), (76, 41888), (103, 41990), (111, 42038), (114, 42047), (121, 42068), (125, 42086), (132, 42098), (135, 42107), (139, 42116), (151, 42155), (157, 42188), (165, 42212), (167, 42215),

Gene: BirdsNest_20 Start: 14291, Stop: 14755, Start Num: 36

Candidate Starts for BirdsNest_20:

(Start: 36 @14291 has 2 MA's), (Start: 40 @14300 has 1 MA's), (71, 14348), (91, 14429), (102, 14480), (107, 14516), (140, 14606), (144, 14618), (146, 14624), (148, 14630), (159, 14681), (164, 14696), (165, 14702), (179, 14741),

Gene: BirksAndSocks_40 Start: 41760, Stop: 42206, Start Num: 47

Candidate Starts for BirksAndSocks_40:

(Start: 47 @41760 has 58 MA's), (Start: 72 @41820 has 3 MA's), (76, 41835), (103, 41937), (111, 41985), (114, 41994), (121, 42015), (125, 42033), (132, 42045), (135, 42054), (139, 42063), (151, 42102), (157, 42135), (165, 42159), (167, 42162),

Gene: BiteSize_31 Start: 27530, Stop: 27976, Start Num: 53

Candidate Starts for BiteSize_31:

(Start: 53 @27530 has 7 MA's), (135, 27824), (148, 27860), (168, 27935),

Gene: Bjaner7_21 Start: 18545, Stop: 18967, Start Num: 57

Candidate Starts for Bjaner7_21:

(Start: 57 @18545 has 23 MA's), (83, 18620), (105, 18731), (106, 18734), (109, 18743), (142, 18833),

Gene: Blackpen_17 Start: 14193, Stop: 14687, Start Num: 41

Candidate Starts for Blackpen_17:

(14, 13962), (18, 14025), (23, 14103), (Start: 41 @14193 has 12 MA's), (76, 14265), (80, 14277), (87, 14310), (97, 14367), (105, 14427), (134, 14508), (139, 14520), (144, 14535), (145, 14538), (153, 14571), (178, 14649), (181, 14676),

Gene: Blocker23_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for Blocker23_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: BlueNGold_112 Start: 69605, Stop: 70102, Start Num: 46

Candidate Starts for BlueNGold_112:

(38, 69593), (Start: 46 @69605 has 5 MA's), (80, 69692), (82, 69698), (85, 69713), (88, 69728), (112, 69842), (159, 69998), (166, 70013), (182, 70070),

Gene: BobRoss2024_14 Start: 13152, Stop: 13616, Start Num: 41

Candidate Starts for BobRoss2024_14:

(14, 12921), (23, 13062), (Start: 41 @13152 has 12 MA's), (62, 13191), (80, 13239), (84, 13254), (103, 13356), (139, 13479), (151, 13518), (162, 13566), (174, 13599), (178, 13608),

Gene: Boneham_40 Start: 41759, Stop: 42205, Start Num: 47

Candidate Starts for Boneham_40:

(Start: 47 @41759 has 58 MA's), (Start: 72 @41819 has 3 MA's), (76, 41834), (103, 41936), (111, 41984), (114, 41993), (121, 42014), (125, 42032), (132, 42044), (135, 42053), (139, 42062), (151, 42101), (157, 42134), (165, 42158), (167, 42161),

Gene: Boopy_113 Start: 69617, Stop: 70114, Start Num: 46

Candidate Starts for Boopy_113:

(38, 69605), (Start: 46 @69617 has 5 MA's), (80, 69704), (82, 69710), (85, 69725), (88, 69740), (112, 69854), (159, 70010), (166, 70025), (182, 70082),

Gene: Boyle_18 Start: 16353, Stop: 16799, Start Num: 44

Candidate Starts for Boyle_18:

(Start: 24 @16257 has 32 MA's), (29, 16290), (Start: 44 @16353 has 23 MA's), (80, 16437), (103, 16536), (105, 16563), (110, 16578), (116, 16596), (126, 16629), (133, 16641), (142, 16665), (144, 16671), (150, 16692), (151, 16695), (159, 16731), (160, 16734), (169, 16761),

Gene: Breezic_36 Start: 39748, Stop: 40194, Start Num: 47

Candidate Starts for Breezic_36:

(Start: 47 @39748 has 58 MA's), (Start: 72 @39808 has 3 MA's), (76, 39823), (103, 39925), (111, 39973), (114, 39982), (121, 40003), (125, 40021), (132, 40033), (135, 40042), (138, 40048), (139, 40051), (151, 40090), (157, 40123), (165, 40147), (167, 40150),

Gene: Briakila_18 Start: 15768, Stop: 16229, Start Num: 45

Candidate Starts for Briakila_18:

(14, 15504), (18, 15567), (23, 15645), (Start: 45 @15768 has 47 MA's), (Start: 55 @15783 has 4 MA's), (64, 15804), (93, 15912), (106, 15981), (125, 16041), (128, 16047), (142, 16080), (144, 16086), (149, 16101), (154, 16125), (174, 16191),

Gene: Brownie5_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for Brownie5_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Butterball_40 Start: 41819, Stop: 42205, Start Num: 72

Candidate Starts for Butterball_40:

(Start: 47 @41759 has 58 MA's), (Start: 72 @41819 has 3 MA's), (76, 41834), (103, 41936), (111, 41984), (114, 41993), (121, 42014), (125, 42032), (132, 42044), (135, 42053), (139, 42062), (151, 42101), (157, 42134), (165, 42158), (167, 42161),

Gene: CRB2_19 Start: 16553, Stop: 17008, Start Num: 40

Candidate Starts for CRB2_19:

(Start: 40 @16553 has 1 MA's), (71, 16601), (80, 16637), (87, 16670), (125, 16826), (126, 16829), (128, 16832), (140, 16859), (142, 16865), (144, 16871), (146, 16877), (159, 16934), (165, 16955), (174, 16979),

Gene: CaiB_17 Start: 14761, Stop: 15255, Start Num: 41

Candidate Starts for CaiB_17:

(14, 14530), (18, 14593), (23, 14671), (Start: 41 @14761 has 12 MA's), (76, 14833), (80, 14845), (87, 14878), (97, 14935), (105, 14995), (134, 15076), (139, 15088), (144, 15103), (145, 15106), (153, 15139), (174, 15208), (178, 15217), (181, 15244),

Gene: Calamitous_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Calamitous_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 41 @16229 has 12 MA's), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (111, 16463), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Camerico_40 Start: 43256, Stop: 43774, Start Num: 32

Candidate Starts for Camerico_40:

(Start: 32 @43256 has 1 MA's), (54, 43295), (80, 43376), (82, 43382), (91, 43421), (117, 43538), (121, 43550), (122, 43559), (147, 43616),

Gene: Casbah_17 Start: 14855, Stop: 15316, Start Num: 45

Candidate Starts for Casbah_17:

(14, 14591), (18, 14654), (23, 14732), (Start: 45 @14855 has 47 MA's), (Start: 55 @14870 has 4 MA's), (64, 14891), (93, 14999), (106, 15068), (125, 15128), (128, 15134), (142, 15167), (144, 15173), (149, 15188), (154, 15212), (174, 15278),

Gene: Caterpie_13 Start: 12164, Stop: 12646, Start Num: 35

Candidate Starts for Caterpie_13:

(13, 11906), (14, 11945), (20, 12059), (Start: 35 @12164 has 5 MA's), (78, 12242), (102, 12344), (103, 12347), (106, 12377), (142, 12476), (144, 12482), (145, 12485), (169, 12572), (174, 12587),

Gene: CathyBurgh_36 Start: 40602, Stop: 41048, Start Num: 47

Candidate Starts for CathyBurgh_36:

(Start: 47 @40602 has 58 MA's), (Start: 72 @40662 has 3 MA's), (76, 40677), (103, 40779), (111, 40827), (114, 40836), (121, 40857), (125, 40875), (132, 40887), (135, 40896), (138, 40902), (139, 40905), (151, 40944), (157, 40977), (165, 41001), (167, 41004),

Gene: Cepens_12 Start: 14000, Stop: 14521, Start Num: 44

Candidate Starts for Cepens_12:

(Start: 25 @13904 has 3 MA's), (30, 13937), (Start: 44 @14000 has 23 MA's), (64, 14036), (83, 14096), (103, 14183), (106, 14213), (125, 14273), (128, 14279), (129, 14282), (142, 14312), (144, 14318), (155, 14366), (159, 14378), (187, 14477), (188, 14486),

Gene: ChaChing_18 Start: 15018, Stop: 15479, Start Num: 45

Candidate Starts for ChaChing_18:

(1, 14406), (5, 14601), (8, 14640), (14, 14754), (18, 14817), (23, 14895), (Start: 45 @15018 has 47 MA's), (Start: 55 @15033 has 4 MA's), (64, 15054), (93, 15162), (106, 15231), (125, 15291), (128, 15297), (142, 15330), (144, 15336), (149, 15351), (154, 15375), (174, 15441),

Gene: Chalmers_18 Start: 15811, Stop: 16272, Start Num: 45

Candidate Starts for Chalmers_18:

(1, 15199), (5, 15394), (8, 15433), (14, 15547), (18, 15610), (23, 15688), (Start: 45 @15811 has 47 MA's), (Start: 55 @15826 has 4 MA's), (64, 15847), (93, 15955), (106, 16024), (125, 16084), (128, 16090), (142, 16123), (144, 16129), (149, 16144), (154, 16168), (174, 16234),

Gene: Chandler_18 Start: 15777, Stop: 16238, Start Num: 45

Candidate Starts for Chandler_18:

(14, 15513), (18, 15576), (23, 15654), (Start: 45 @15777 has 47 MA's), (Start: 55 @15792 has 4 MA's), (64, 15813), (93, 15921), (106, 15990), (125, 16050), (128, 16056), (142, 16089), (144, 16095), (149, 16110), (154, 16134), (174, 16200),

Gene: Charianelly_37 Start: 41992, Stop: 42444, Start Num: 47

Candidate Starts for Charianelly_37:

(Start: 47 @41992 has 58 MA's), (71, 42046), (Start: 72 @42055 has 3 MA's), (88, 42118), (103, 42172), (107, 42205), (114, 42229), (132, 42280), (135, 42289), (139, 42298), (142, 42307), (157, 42373), (160, 42379),

Gene: CharlottesWeb_15 Start: 13239, Stop: 13712, Start Num: 44

Candidate Starts for CharlottesWeb_15:

(14, 12993), (18, 13056), (23, 13134), (Start: 44 @13239 has 23 MA's), (80, 13323), (101, 13428), (108, 13470), (134, 13542), (139, 13554), (144, 13569), (145, 13572), (151, 13593), (155, 13617), (165, 13650), (178, 13683),

Gene: Chelms_36 Start: 39848, Stop: 40294, Start Num: 47

Candidate Starts for Chelms_36:

(Start: 47 @39848 has 58 MA's), (Start: 56 @39860 has 3 MA's), (71, 39899), (Start: 72 @39908 has 3 MA's), (103, 40025), (111, 40073), (125, 40121), (132, 40133), (135, 40142), (151, 40190), (157, 40223), (165, 40247), (167, 40250),

Gene: Chentzyk_17 Start: 14873, Stop: 15334, Start Num: 45

Candidate Starts for Chentzyk_17:

(14, 14609), (18, 14672), (23, 14750), (Start: 45 @14873 has 47 MA's), (Start: 55 @14888 has 4 MA's), (64, 14909), (93, 15017), (106, 15086), (125, 15146), (128, 15152), (142, 15185), (144, 15191), (149, 15206), (154, 15230), (174, 15296),

Gene: CherryTomatoes_83 Start: 31959, Stop: 32417, Start Num: 50

Candidate Starts for CherryTomatoes_83:

(Start: 50 @31959 has 5 MA's), (91, 32091), (93, 32106), (108, 32190), (113, 32208), (124, 32244), (125, 32247), (138, 32274), (162, 32361),

Gene: CinnamonToast_41 Start: 41813, Stop: 42259, Start Num: 47

Candidate Starts for CinnamonToast_41:

(Start: 47 @41813 has 58 MA's), (Start: 72 @41873 has 3 MA's), (76, 41888), (103, 41990), (111, 42038), (114, 42047), (121, 42068), (125, 42086), (132, 42098), (135, 42107), (139, 42116), (151, 42155), (157, 42188), (165, 42212), (167, 42215),

Gene: Clap_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Clap_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: CloverMinnie_17 Start: 14701, Stop: 15195, Start Num: 41

Candidate Starts for CloverMinnie_17:

(14, 14470), (18, 14533), (23, 14611), (Start: 41 @14701 has 12 MA's), (76, 14773), (80, 14785), (87, 14818), (97, 14875), (105, 14935), (134, 15016), (139, 15028), (144, 15043), (145, 15046), (153, 15079), (178, 15157), (181, 15184),

Gene: Coffee_18 Start: 16253, Stop: 16795, Start Num: 24

Candidate Starts for Coffee_18:

(Start: 24 @16253 has 32 MA's), (29, 16286), (Start: 41 @16346 has 12 MA's), (Start: 44 @16349 has 23 MA's), (80, 16433), (103, 16532), (105, 16559), (110, 16574), (116, 16592), (126, 16625), (133, 16637), (142, 16661), (144, 16667), (150, 16688), (151, 16691), (159, 16727), (160, 16730), (169, 16757),

Gene: Coldpizza_17 Start: 15302, Stop: 15778, Start Num: 44

Candidate Starts for Coldpizza_17:

(14, 15068), (Start: 41 @15299 has 12 MA's), (Start: 44 @15302 has 23 MA's), (77, 15380), (80, 15389), (144, 15635), (162, 15707), (178, 15749),

Gene: Compostia_19 Start: 15436, Stop: 15897, Start Num: 45

Candidate Starts for Compostia_19:

(14, 15172), (18, 15235), (23, 15313), (Start: 45 @15436 has 47 MA's), (Start: 55 @15451 has 4 MA's), (64, 15472), (93, 15580), (106, 15649), (125, 15709), (128, 15715), (142, 15748), (144, 15754), (149, 15769), (154, 15793), (174, 15859),

Gene: Corofin_18 Start: 15028, Stop: 15489, Start Num: 45

Candidate Starts for Corofin_18:

(14, 14764), (18, 14827), (23, 14905), (Start: 45 @15028 has 47 MA's), (Start: 55 @15043 has 4 MA's), (64, 15064), (93, 15172), (106, 15241), (125, 15301), (128, 15307), (142, 15340), (144, 15346), (149, 15361), (154, 15385), (174, 15451),

Gene: Crete_37 Start: 40111, Stop: 40557, Start Num: 47

Candidate Starts for Crete_37:

(Start: 47 @40111 has 58 MA's), (Start: 56 @40123 has 3 MA's), (71, 40162), (Start: 72 @40171 has 3 MA's), (103, 40288), (111, 40336), (125, 40384), (132, 40396), (135, 40405), (151, 40453), (157, 40486), (165, 40510), (167, 40513),

Gene: Cynthia_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Cynthia_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: D12_12 Start: 13993, Stop: 14514, Start Num: 44

Candidate Starts for D12_12:

(Start: 25 @13897 has 3 MA's), (30, 13930), (Start: 44 @13993 has 23 MA's), (64, 14029), (83, 14089), (103, 14176), (106, 14206), (125, 14266), (128, 14272), (129, 14275), (142, 14305), (144, 14311), (155, 14359), (159, 14371), (187, 14470), (188, 14479),

Gene: Daisy_18 Start: 15024, Stop: 15485, Start Num: 45

Candidate Starts for Daisy_18:

(14, 14760), (18, 14823), (23, 14901), (Start: 45 @15024 has 47 MA's), (Start: 55 @15039 has 4 MA's), (64, 15060), (93, 15168), (106, 15237), (125, 15297), (128, 15303), (142, 15336), (144, 15342), (149, 15357), (154, 15381), (174, 15447),

Gene: Dakiti_36 Start: 40716, Stop: 41162, Start Num: 47

Candidate Starts for Dakiti_36:

(Start: 47 @40716 has 58 MA's), (Start: 56 @40728 has 3 MA's), (71, 40767), (Start: 72 @40776 has 3 MA's), (103, 40893), (111, 40941), (125, 40989), (132, 41001), (135, 41010), (151, 41058), (157, 41091), (165, 41115), (167, 41118),

Gene: Damp_37 Start: 41156, Stop: 41608, Start Num: 47

Candidate Starts for Damp_37:

(Start: 47 @41156 has 58 MA's), (71, 41210), (Start: 72 @41219 has 3 MA's), (88, 41282), (103, 41336), (107, 41369), (114, 41393), (132, 41444), (135, 41453), (139, 41462), (142, 41471), (157, 41537), (160, 41543),

Gene: Deenasa_18 Start: 15766, Stop: 16227, Start Num: 45

Candidate Starts for Deenasa_18:

(14, 15502), (18, 15565), (23, 15643), (Start: 45 @15766 has 47 MA's), (Start: 55 @15781 has 4 MA's), (64, 15802), (93, 15910), (106, 15979), (125, 16039), (128, 16045), (142, 16078), (144, 16084), (149, 16099), (154, 16123), (174, 16189),

Gene: Demosthenes_35 Start: 41362, Stop: 41814, Start Num: 58

Candidate Starts for Demosthenes_35:

(33, 41308), (Start: 58 @41362 has 12 MA's), (87, 41467), (103, 41530), (113, 41584), (117, 41596), (122, 41617), (123, 41620), (157, 41716), (171, 41743), (175, 41752),

Gene: Devonte_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for Devonte_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (105, 15213), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (154, 15360),

Gene: Diabla_39 Start: 41597, Stop: 42043, Start Num: 47

Candidate Starts for Diabla_39:

(Start: 47 @41597 has 58 MA's), (83, 41696), (87, 41717), (101, 41768), (111, 41822), (114, 41831), (121, 41852), (125, 41870), (132, 41882), (135, 41891), (157, 41972), (165, 41996), (167, 41999),

Gene: DirtyBoi_25 Start: 21195, Stop: 21617, Start Num: 57

Candidate Starts for DirtyBoi_25:

(Start: 57 @21195 has 23 MA's), (83, 21270), (106, 21384), (119, 21420), (138, 21471), (142, 21483),

Gene: Djokovic_31 Start: 27529, Stop: 27975, Start Num: 53

Candidate Starts for Djokovic_31:

(Start: 53 @27529 has 7 MA's), (135, 27823), (148, 27859), (168, 27934),

Gene: Dori_14 Start: 11980, Stop: 12462, Start Num: 35

Candidate Starts for Dori_14:

(13, 11722), (14, 11761), (20, 11875), (Start: 35 @11980 has 5 MA's), (78, 12058), (85, 12085), (102, 12160), (103, 12163), (106, 12193), (142, 12292), (144, 12298), (145, 12301), (169, 12388), (174, 12403), (186, 12451),

Gene: DumpTruck_34 Start: 29956, Stop: 30408, Start Num: 56

Candidate Starts for DumpTruck_34:

(Start: 56 @29956 has 3 MA's), (62, 29971), (87, 30061), (88, 30064), (91, 30073), (99, 30109), (106, 30163), (108, 30169), (132, 30235), (148, 30280), (159, 30328), (160, 30331), (164, 30343), (172, 30370),

Gene: Eaglehorse_18 Start: 16160, Stop: 16702, Start Num: 24

Candidate Starts for Eaglehorse_18:

(Start: 24 @16160 has 32 MA's), (29, 16193), (Start: 44 @16256 has 23 MA's), (80, 16340), (103, 16439), (105, 16466), (110, 16481), (116, 16499), (126, 16532), (133, 16544), (142, 16568), (144, 16574), (150, 16595), (151, 16598), (159, 16634), (160, 16637), (169, 16664),

Gene: Ebert_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Ebert_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Eggsie_36 Start: 39866, Stop: 40312, Start Num: 47

Candidate Starts for Eggsie_36:

(Start: 47 @39866 has 58 MA's), (83, 39965), (87, 39986), (101, 40037), (111, 40091), (114, 40100), (121, 40121), (125, 40139), (132, 40151), (135, 40160), (157, 40241), (165, 40265), (167, 40268),

Gene: Ekhein_37 Start: 39730, Stop: 40176, Start Num: 47

Candidate Starts for Ekhein_37:

(Start: 47 @39730 has 58 MA's), (Start: 72 @39790 has 3 MA's), (76, 39805), (103, 39907), (111, 39955), (114, 39964), (121, 39985), (125, 40003), (132, 40015), (135, 40024), (138, 40030), (139, 40033), (151, 40072), (157, 40105), (165, 40129), (167, 40132),

Gene: Evaa_16 Start: 14619, Stop: 15095, Start Num: 44

Candidate Starts for Evaa_16:

(14, 14385), (15, 14415), (Start: 44 @14619 has 23 MA's), (80, 14706), (95, 14775), (98, 14790), (101, 14811), (111, 14865), (119, 14883), (129, 14916), (144, 14952), (160, 15015), (164, 15027), (165, 15033), (181, 15084),

Gene: Exiguo_36 Start: 39742, Stop: 40188, Start Num: 47

Candidate Starts for Exiguo_36:

(Start: 47 @39742 has 58 MA's), (Start: 72 @39802 has 3 MA's), (76, 39817), (103, 39919), (111, 39967), (114, 39976), (121, 39997), (125, 40015), (132, 40027), (135, 40036), (138, 40042), (139, 40045), (151, 40084), (157, 40117), (165, 40141), (167, 40144),

Gene: Faze9_18 Start: 16349, Stop: 16795, Start Num: 44

Candidate Starts for Faze9_18:

(Start: 24 @16253 has 32 MA's), (29, 16286), (Start: 44 @16349 has 23 MA's), (80, 16433), (103, 16532), (105, 16559), (110, 16574), (111, 16580), (116, 16592), (126, 16625), (133, 16637), (142, 16661), (144, 16667), (150, 16688), (151, 16691), (159, 16727), (160, 16730), (169, 16757),

Gene: FelixAlejandro_41 Start: 42017, Stop: 42403, Start Num: 72

Candidate Starts for FelixAlejandro_41:

(Start: 47 @41957 has 58 MA's), (Start: 72 @42017 has 3 MA's), (76, 42032), (103, 42134), (111, 42182), (114, 42191), (121, 42212), (125, 42230), (132, 42242), (135, 42251), (139, 42260), (151, 42299), (157, 42332), (165, 42356), (167, 42359),

Gene: FelixTres_17 Start: 14764, Stop: 15258, Start Num: 41

Candidate Starts for FelixTres_17:

(14, 14533), (18, 14596), (23, 14674), (Start: 41 @14764 has 12 MA's), (76, 14836), (80, 14848), (87, 14881), (97, 14938), (105, 14998), (134, 15079), (139, 15091), (144, 15106), (145, 15109), (153, 15142), (178, 15220), (181, 15247),

Gene: Flakey_36 Start: 40606, Stop: 41052, Start Num: 47

Candidate Starts for Flakey_36:

(Start: 47 @40606 has 58 MA's), (Start: 72 @40666 has 3 MA's), (76, 40681), (103, 40783), (114, 40840), (121, 40861), (125, 40879), (132, 40891), (135, 40900), (138, 40906), (151, 40948), (157, 40981), (165, 41005), (167, 41008),

Gene: ForDig_13 Start: 13572, Stop: 14057, Start Num: 44

Candidate Starts for ForDig_13:

(39, 13566), (Start: 44 @13572 has 23 MA's), (Start: 72 @13629 has 3 MA's), (75, 13641), (86, 13680), (91, 13701), (106, 13785), (108, 13791), (111, 13803), (125, 13845), (129, 13854), (139, 13875), (142, 13884), (144, 13890), (145, 13893), (149, 13905), (154, 13926), (160, 13950), (162, 13959), (167, 13971),

Gene: Forza_113 Start: 69533, Stop: 70030, Start Num: 46

Candidate Starts for Forza_113:

(38, 69521), (Start: 46 @69533 has 5 MA's), (80, 69620), (82, 69626), (85, 69641), (88, 69656), (112, 69770), (159, 69926), (166, 69941), (182, 69998),

Gene: FrenchFry_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for FrenchFry_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Fresco_15 Start: 13329, Stop: 13802, Start Num: 44

Candidate Starts for Fresco_15:

(14, 13077), (18, 13140), (23, 13218), (Start: 44 @13329 has 23 MA's), (80, 13413), (100, 13503), (101, 13518), (108, 13560), (138, 13641), (139, 13644), (144, 13659), (145, 13662), (164, 13734),

Gene: FroggyToad_21 Start: 18617, Stop: 19039, Start Num: 57

Candidate Starts for FroggyToad_21:

(Start: 57 @18617 has 23 MA's), (83, 18692), (106, 18806), (109, 18815), (138, 18893), (142, 18905),

Gene: GMA2_40 Start: 42184, Stop: 42681, Start Num: 46

Candidate Starts for GMA2_40:

(Start: 46 @42184 has 5 MA's), (65, 42223), (88, 42307), (103, 42385), (105, 42412), (108, 42421), (113, 42439), (128, 42481), (138, 42502), (170, 42607),

Gene: GMA3_28 Start: 36944, Stop: 37429, Start Num: 34

Candidate Starts for GMA3_28:

(29, 36902), (34, 36944), (79, 37061), (80, 37064), (86, 37088), (93, 37124), (103, 37160), (117, 37226), (177, 37391),

Gene: Gadget_19 Start: 15007, Stop: 15468, Start Num: 45

Candidate Starts for Gadget_19:

(14, 14743), (18, 14806), (23, 14884), (Start: 45 @15007 has 47 MA's), (Start: 55 @15022 has 4 MA's), (64, 15043), (93, 15151), (106, 15220), (125, 15280), (128, 15286), (142, 15319), (144, 15325), (154, 15364), (174, 15430),

Gene: GalacticEye_37 Start: 41954, Stop: 42406, Start Num: 47

Candidate Starts for GalacticEye_37:

(Start: 47 @41954 has 58 MA's), (71, 42008), (Start: 72 @42017 has 3 MA's), (88, 42080), (103, 42134), (107, 42167), (114, 42191), (132, 42242), (135, 42251), (139, 42260), (142, 42269), (157, 42335), (160, 42341),

Gene: GemG_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for GemG_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Gervas_18 Start: 14986, Stop: 15447, Start Num: 45

Candidate Starts for Gervas_18:

(14, 14722), (18, 14785), (23, 14863), (Start: 45 @14986 has 47 MA's), (Start: 55 @15001 has 4 MA's), (64, 15022), (93, 15130), (106, 15199), (125, 15259), (128, 15265), (142, 15298), (144, 15304), (149, 15319), (154, 15343), (174, 15409),

Gene: Gizermo_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Gizermo_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Glass_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for Glass_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 41 @16349 has 12 MA's), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (111, 16583), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: GlenHope_19 Start: 14993, Stop: 15454, Start Num: 45

Candidate Starts for GlenHope_19:

(1, 14381), (5, 14576), (8, 14615), (14, 14729), (18, 14792), (23, 14870), (Start: 45 @14993 has 47 MA's), (Start: 55 @15008 has 4 MA's), (64, 15029), (93, 15137), (106, 15206), (125, 15266), (128, 15272), (142, 15305), (144, 15311), (149, 15326), (154, 15350), (174, 15416),

Gene: GodPhather_13 Start: 14258, Stop: 14779, Start Num: 44

Candidate Starts for GodPhather_13:

(Start: 25 @14162 has 3 MA's), (30, 14195), (Start: 44 @14258 has 23 MA's), (64, 14294), (83, 14354), (103, 14441), (106, 14471), (125, 14531), (128, 14537), (129, 14540), (142, 14570), (144, 14576), (155, 14624), (159, 14636), (169, 14666), (187, 14735), (188, 14744),

Gene: Godines_18 Start: 16139, Stop: 16693, Start Num: 24

Candidate Starts for Godines_18:

(Start: 24 @16139 has 32 MA's), (29, 16172), (Start: 41 @16232 has 12 MA's), (Start: 44 @16235 has 23 MA's), (80, 16331), (103, 16430), (105, 16457), (110, 16472), (111, 16478), (116, 16490), (126, 16523), (133, 16535), (142, 16559), (144, 16565), (150, 16586), (151, 16589), (159, 16625), (160, 16628), (169, 16655),

Gene: GodonK_99 Start: 60239, Stop: 60676, Start Num: 61

Candidate Starts for GodonK_99:

(Start: 61 @60239 has 2 MA's), (83, 60314), (112, 60449), (137, 60515), (141, 60524), (169, 60608),

Gene: Gorko_36 Start: 39734, Stop: 40180, Start Num: 47

Candidate Starts for Gorko_36:

(Start: 47 @39734 has 58 MA's), (Start: 72 @39794 has 3 MA's), (76, 39809), (103, 39911), (111, 39959), (114, 39968), (121, 39989), (125, 40007), (132, 40019), (135, 40028), (138, 40034), (139, 40037), (151, 40076), (157, 40109), (165, 40133), (167, 40136),

Gene: GourdThymes_36 Start: 40608, Stop: 41054, Start Num: 47

Candidate Starts for GourdThymes_36:

(Start: 47 @40608 has 58 MA's), (Start: 72 @40668 has 3 MA's), (76, 40683), (103, 40785), (111, 40833), (114, 40842), (121, 40863), (125, 40881), (132, 40893), (135, 40902), (138, 40908), (139, 40911), (151, 40950), (157, 40983), (165, 41007), (167, 41010),

Gene: Guillaume_37 Start: 42004, Stop: 42456, Start Num: 47

Candidate Starts for Guillaume_37:

(Start: 47 @42004 has 58 MA's), (71, 42058), (Start: 72 @42067 has 3 MA's), (88, 42130), (103, 42184), (107, 42217), (114, 42241), (132, 42292), (135, 42301), (139, 42310), (142, 42319), (157, 42385), (160, 42391),

Gene: Hail2Pitt_37 Start: 42480, Stop: 42932, Start Num: 47

Candidate Starts for Hail2Pitt_37:

(Start: 47 @42480 has 58 MA's), (71, 42534), (Start: 72 @42543 has 3 MA's), (88, 42606), (103, 42660), (107, 42693), (114, 42717), (132, 42768), (135, 42777), (139, 42786), (142, 42795), (157, 42861), (160, 42867),

Gene: Haley23_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Haley23_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Halfpint_17 Start: 14828, Stop: 15289, Start Num: 45

Candidate Starts for Halfpint_17:

(14, 14564), (18, 14627), (23, 14705), (Start: 45 @14828 has 47 MA's), (Start: 55 @14843 has 4 MA's), (64, 14864), (93, 14972), (106, 15041), (125, 15101), (128, 15107), (142, 15140), (144, 15146), (149, 15161), (154, 15185), (174, 15251),

Gene: Harambe_37 Start: 42271, Stop: 42723, Start Num: 47

Candidate Starts for Harambe_37:

(Start: 47 @42271 has 58 MA's), (71, 42325), (Start: 72 @42334 has 3 MA's), (88, 42397), (103, 42451), (107, 42484), (114, 42508), (132, 42559), (135, 42568), (139, 42577), (142, 42586), (157, 42652), (160, 42658),

Gene: HarveySr_18 Start: 14980, Stop: 15441, Start Num: 45

Candidate Starts for HarveySr_18:

(14, 14716), (18, 14779), (23, 14857), (Start: 45 @14980 has 47 MA's), (Start: 55 @14995 has 4 MA's), (64, 15016), (93, 15124), (106, 15193), (125, 15253), (128, 15259), (142, 15292), (144, 15298), (149, 15313), (154, 15337), (174, 15403),

Gene: Hashim76_20 Start: 14543, Stop: 14998, Start Num: 41

Candidate Starts for Hashim76_20:

(Start: 41 @14543 has 12 MA's), (71, 14591), (80, 14627), (101, 14720), (108, 14762), (111, 14774), (126, 14819), (142, 14855), (144, 14861), (146, 14867), (151, 14885), (164, 14939), (165, 14945),

(174, 14969),

Gene: HayZem_39 Start: 40415, Stop: 40840, Start Num: 57

Candidate Starts for HayZem_39:

(19, 40226), (22, 40289), (27, 40325), (28, 40340), (Start: 57 @40415 has 23 MA's), (69, 40442), (76, 40475), (78, 40481), (89, 40526), (101, 40568), (107, 40607), (142, 40706), (150, 40733), (158, 40772), (174, 40817),

Gene: Heathcliff_18 Start: 14965, Stop: 15426, Start Num: 45

Candidate Starts for Heathcliff_18:

(14, 14701), (18, 14764), (23, 14842), (Start: 45 @14965 has 47 MA's), (Start: 55 @14980 has 4 MA's), (64, 15001), (93, 15109), (105, 15175), (106, 15178), (125, 15238), (128, 15244), (142, 15277), (144, 15283), (154, 15322), (174, 15388),

Gene: Hedgerow_18 Start: 16238, Stop: 16780, Start Num: 24

Candidate Starts for Hedgerow_18:

(Start: 24 @16238 has 32 MA's), (29, 16271), (Start: 44 @16334 has 23 MA's), (80, 16418), (103, 16517), (105, 16544), (110, 16559), (116, 16577), (126, 16610), (133, 16622), (142, 16646), (144, 16652), (150, 16673), (151, 16676), (159, 16712), (160, 16715), (169, 16742),

Gene: Hedwig_25 Start: 21191, Stop: 21613, Start Num: 57

Candidate Starts for Hedwig_25:

(Start: 57 @21191 has 23 MA's), (83, 21266), (106, 21380), (119, 21416), (138, 21467), (142, 21479),

Gene: Hello_37 Start: 42233, Stop: 42685, Start Num: 47

Candidate Starts for Hello_37:

(Start: 47 @42233 has 58 MA's), (71, 42287), (Start: 72 @42296 has 3 MA's), (88, 42359), (103, 42413), (107, 42446), (114, 42470), (132, 42521), (135, 42530), (139, 42539), (142, 42548), (157, 42614), (160, 42620),

Gene: Holeinone_18 Start: 16138, Stop: 16680, Start Num: 24

Candidate Starts for Holeinone_18:

(Start: 24 @16138 has 32 MA's), (29, 16171), (Start: 41 @16231 has 12 MA's), (Start: 44 @16234 has 23 MA's), (80, 16318), (103, 16417), (105, 16444), (110, 16459), (111, 16465), (116, 16477), (126, 16510), (133, 16522), (142, 16546), (144, 16552), (150, 16573), (151, 16576), (159, 16612), (160, 16615), (169, 16642),

Gene: Hollow_36 Start: 41768, Stop: 42220, Start Num: 58

Candidate Starts for Hollow_36:

(33, 41714), (Start: 58 @41768 has 12 MA's), (87, 41873), (113, 41990), (117, 42002), (123, 42026), (157, 42122), (171, 42149), (175, 42158),

Gene: Hosp_011 Start: 11772, Stop: 12260, Start Num: 37

Candidate Starts for Hosp_011:

(Start: 37 @11772 has 1 MA's), (Start: 72 @11829 has 3 MA's), (75, 11841), (86, 11880), (100, 11934), (101, 11949), (106, 11985), (108, 11991), (110, 11997), (111, 12003), (121, 12027), (133, 12060), (139, 12075), (142, 12084), (144, 12090), (150, 12111), (154, 12129), (160, 12153), (162, 12162), (167, 12174), (169, 12180),

Gene: Hotorobo_36 Start: 40613, Stop: 41059, Start Num: 47

Candidate Starts for Hotorobo_36:

(Start: 47 @40613 has 58 MA's), (Start: 72 @40673 has 3 MA's), (76, 40688), (103, 40790), (111, 40838), (114, 40847), (121, 40868), (125, 40886), (132, 40898), (135, 40907), (138, 40913), (139,

40916), (151, 40955), (157, 40988), (165, 41012), (167, 41015),

Gene: Imvubu_12 Start: 12561, Stop: 13034, Start Num: 44

Candidate Starts for Imvubu_12:

(Start: 44 @12561 has 23 MA's), (75, 12630), (80, 12645), (85, 12666), (86, 12669), (100, 12723), (101, 12738), (103, 12744), (111, 12792), (138, 12861), (139, 12864), (142, 12873), (144, 12879), (150, 12900), (169, 12969), (174, 12984),

Gene: ItsyBitsy1_18 Start: 16130, Stop: 16672, Start Num: 24

Candidate Starts for ItsyBitsy1_18:

(Start: 24 @16130 has 32 MA's), (29, 16163), (Start: 44 @16226 has 23 MA's), (80, 16310), (103, 16409), (105, 16436), (110, 16451), (116, 16469), (126, 16502), (133, 16514), (142, 16538), (144, 16544), (150, 16565), (151, 16568), (159, 16604), (160, 16607), (169, 16634),

Gene: Jackstina_17 Start: 14929, Stop: 15390, Start Num: 45

Candidate Starts for Jackstina_17:

(14, 14665), (18, 14728), (23, 14806), (Start: 45 @14929 has 47 MA's), (Start: 55 @14944 has 4 MA's), (64, 14965), (93, 15073), (106, 15142), (125, 15202), (128, 15208), (142, 15241), (144, 15247), (149, 15262), (154, 15286), (174, 15352),

Gene: Jalleen_21 Start: 18191, Stop: 18613, Start Num: 57

Candidate Starts for Jalleen_21:

(Start: 57 @18191 has 23 MA's), (83, 18266), (105, 18377), (106, 18380), (109, 18389), (142, 18479),

Gene: Jams_37 Start: 41442, Stop: 41894, Start Num: 47

Candidate Starts for Jams_37:

(Start: 47 @41442 has 58 MA's), (71, 41496), (Start: 72 @41505 has 3 MA's), (88, 41568), (103, 41622), (107, 41655), (114, 41679), (132, 41730), (135, 41739), (139, 41748), (142, 41757), (157, 41823), (160, 41829),

Gene: JellyBelly_15 Start: 13239, Stop: 13712, Start Num: 44

Candidate Starts for JellyBelly_15:

(14, 12993), (18, 13056), (23, 13134), (Start: 44 @13239 has 23 MA's), (80, 13323), (101, 13428), (108, 13470), (134, 13542), (139, 13554), (144, 13569), (145, 13572), (151, 13593), (181, 13701),

Gene: Jellybones_40 Start: 41818, Stop: 42264, Start Num: 47

Candidate Starts for Jellybones_40:

(Start: 47 @41818 has 58 MA's), (Start: 72 @41878 has 3 MA's), (76, 41893), (103, 41995), (111, 42043), (114, 42052), (121, 42073), (125, 42091), (132, 42103), (135, 42112), (138, 42118), (139, 42121), (151, 42160), (157, 42193), (165, 42217), (167, 42220),

Gene: Jeon_12 Start: 13904, Stop: 14521, Start Num: 25

Candidate Starts for Jeon_12:

(Start: 25 @13904 has 3 MA's), (30, 13937), (Start: 44 @14000 has 23 MA's), (64, 14036), (103, 14183), (106, 14213), (125, 14273), (128, 14279), (129, 14282), (142, 14312), (144, 14318), (155, 14366), (159, 14378), (187, 14477), (188, 14486),

Gene: John316_40 Start: 41771, Stop: 42217, Start Num: 47

Candidate Starts for John316_40:

(Start: 47 @41771 has 58 MA's), (Start: 72 @41831 has 3 MA's), (76, 41846), (103, 41948), (111, 41996), (114, 42005), (121, 42026), (125, 42044), (132, 42056), (135, 42065), (138, 42071), (139, 42074), (151, 42113), (157, 42146), (165, 42170), (167, 42173),

Gene: JohnLord_14 Start: 11683, Stop: 12165, Start Num: 35

Candidate Starts for JohnLord_14:

(13, 11425), (14, 11464), (20, 11578), (Start: 35 @11683 has 5 MA's), (78, 11761), (102, 11863), (103, 11866), (106, 11896), (142, 11995), (144, 12001), (145, 12004), (169, 12091), (174, 12106), (180, 12136),

Gene: Jolie1_013 Start: 13551, Stop: 14030, Start Num: 37

Candidate Starts for Jolie1_013:

(Start: 37 @13551 has 1 MA's), (75, 13620), (86, 13659), (106, 13764), (108, 13770), (110, 13776), (111, 13782), (121, 13806), (125, 13824), (139, 13854), (142, 13863), (144, 13869), (150, 13890), (151, 13893), (154, 13908), (160, 13932), (162, 13941), (167, 13953),

Gene: Jormungandr_37 Start: 41986, Stop: 42438, Start Num: 47

Candidate Starts for Jormungandr_37:

(Start: 47 @41986 has 58 MA's), (71, 42040), (Start: 72 @42049 has 3 MA's), (88, 42112), (103, 42166), (107, 42199), (114, 42223), (132, 42274), (135, 42283), (139, 42292), (142, 42301), (157, 42367), (160, 42373),

Gene: Jumbo_37 Start: 42278, Stop: 42769, Start Num: 35

Candidate Starts for Jumbo_37:

(Start: 35 @42278 has 5 MA's), (42, 42296), (63, 42338), (80, 42398), (102, 42491), (108, 42530), (117, 42560), (118, 42563), (120, 42566), (127, 42593), (130, 42599), (153, 42665), (177, 42728),

Gene: Kaleb_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for Kaleb_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 41 @16349 has 12 MA's), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Kamiyu_18 Start: 14974, Stop: 15435, Start Num: 45

Candidate Starts for Kamiyu_18:

(14, 14710), (18, 14773), (23, 14851), (Start: 45 @14974 has 47 MA's), (Start: 55 @14989 has 4 MA's), (64, 15010), (93, 15118), (106, 15187), (125, 15247), (128, 15253), (142, 15286), (144, 15292), (149, 15307), (154, 15331), (174, 15397),

Gene: Kaseim_37 Start: 41427, Stop: 41879, Start Num: 47

Candidate Starts for Kaseim_37:

(Start: 47 @41427 has 58 MA's), (71, 41481), (Start: 72 @41490 has 3 MA's), (88, 41553), (103, 41607), (107, 41640), (114, 41664), (132, 41715), (135, 41724), (139, 41733), (142, 41742), (157, 41808), (160, 41814),

Gene: Katyusha_35 Start: 41422, Stop: 41874, Start Num: 58

Candidate Starts for Katyusha_35:

(33, 41368), (Start: 58 @41422 has 12 MA's), (87, 41527), (113, 41644), (117, 41656), (123, 41680), (145, 41728), (157, 41776), (171, 41803), (175, 41812),

Gene: KayaCho_13 Start: 13548, Stop: 14048, Start Num: 36

Candidate Starts for KayaCho_13:

(Start: 36 @13548 has 2 MA's), (Start: 44 @13554 has 23 MA's), (Start: 72 @13611 has 3 MA's), (75, 13623), (107, 13770), (109, 13776), (121, 13809), (133, 13842), (139, 13857), (142, 13866), (144, 13872), (145, 13875), (150, 13893), (154, 13911), (160, 13935), (162, 13944), (167, 13956), (169, 13962),

Gene: Kelzog_36 Start: 40620, Stop: 41066, Start Num: 47

Candidate Starts for Kelzog_36:

(Start: 47 @40620 has 58 MA's), (Start: 72 @40680 has 3 MA's), (76, 40695), (103, 40797), (111, 40845), (114, 40854), (121, 40875), (125, 40893), (132, 40905), (135, 40914), (138, 40920), (139, 40923), (151, 40962), (157, 40995), (165, 41019), (167, 41022),

Gene: Kheth_18 Start: 16139, Stop: 16681, Start Num: 24

Candidate Starts for Kheth_18:

(Start: 24 @16139 has 32 MA's), (29, 16172), (Start: 41 @16232 has 12 MA's), (Start: 44 @16235 has 23 MA's), (80, 16319), (103, 16418), (105, 16445), (110, 16460), (111, 16466), (116, 16478), (126, 16511), (133, 16523), (142, 16547), (144, 16553), (150, 16574), (151, 16577), (159, 16613), (160, 16616), (169, 16643),

Gene: Kolhan_18 Start: 16232, Stop: 16678, Start Num: 44

Candidate Starts for Kolhan_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (111, 16463), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (155, 16598), (159, 16610), (160, 16613), (169, 16640),

Gene: Kronus_17 Start: 15586, Stop: 16047, Start Num: 45

Candidate Starts for Kronus_17:

(14, 15322), (18, 15385), (23, 15463), (Start: 45 @15586 has 47 MA's), (Start: 55 @15601 has 4 MA's), (64, 15622), (93, 15730), (106, 15799), (125, 15859), (128, 15865), (142, 15898), (144, 15904), (149, 15919), (154, 15943), (174, 16009),

Gene: Kvothe_35 Start: 41321, Stop: 41773, Start Num: 58

Candidate Starts for Kvothe_35:

(33, 41267), (Start: 58 @41321 has 12 MA's), (87, 41426), (113, 41543), (117, 41555), (123, 41579), (145, 41627), (157, 41675), (171, 41702), (175, 41711),

Gene: Lahirium_37 Start: 42508, Stop: 42960, Start Num: 47

Candidate Starts for Lahirium_37:

(Start: 47 @42508 has 58 MA's), (71, 42562), (Start: 72 @42571 has 3 MA's), (88, 42634), (103, 42688), (107, 42721), (114, 42745), (132, 42796), (135, 42805), (139, 42814), (142, 42823), (157, 42889), (160, 42895),

Gene: Lars_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for Lars_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Laurie_18 Start: 16134, Stop: 16676, Start Num: 24

Candidate Starts for Laurie_18:

(Start: 24 @16134 has 32 MA's), (29, 16167), (Start: 44 @16230 has 23 MA's), (80, 16314), (103, 16413), (105, 16440), (110, 16455), (111, 16461), (116, 16473), (126, 16506), (133, 16518), (142, 16542), (144, 16548), (150, 16569), (151, 16572), (159, 16608), (160, 16611), (169, 16638),

Gene: Lephleur_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Lephleur_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: LestyG_18 Start: 15022, Stop: 15468, Start Num: 55

Candidate Starts for LestyG_18:

(14, 14743), (18, 14806), (23, 14884), (Start: 45 @15007 has 47 MA's), (Start: 55 @15022 has 4 MA's), (64, 15043), (93, 15151), (106, 15220), (125, 15280), (128, 15286), (142, 15319), (144, 15325), (149, 15340), (154, 15364), (174, 15430),

Gene: Lidong_37 Start: 42242, Stop: 42694, Start Num: 47

Candidate Starts for Lidong_37:

(Start: 47 @42242 has 58 MA's), (71, 42296), (Start: 72 @42305 has 3 MA's), (88, 42368), (103, 42422), (107, 42455), (114, 42479), (132, 42530), (135, 42539), (139, 42548), (142, 42557), (157, 42623), (160, 42629),

Gene: Ligma_15 Start: 13329, Stop: 13802, Start Num: 44

Candidate Starts for Ligma_15:

(14, 13077), (18, 13140), (23, 13218), (Start: 44 @13329 has 23 MA's), (80, 13413), (100, 13503), (101, 13518), (108, 13560), (138, 13641), (139, 13644), (144, 13659), (145, 13662), (164, 13734),

Gene: LilSmirk_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for LilSmirk_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 41 @16229 has 12 MA's), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: LilyPad_33 Start: 28336, Stop: 28782, Start Num: 53

Candidate Starts for LilyPad_33:

(43, 28318), (Start: 53 @28336 has 7 MA's), (78, 28408), (86, 28438), (93, 28474), (108, 28555), (135, 28630), (146, 28660), (147, 28663), (168, 28741),

Gene: Linetti_37 Start: 40842, Stop: 41288, Start Num: 47

Candidate Starts for Linetti_37:

(Start: 47 @40842 has 58 MA's), (Start: 56 @40854 has 3 MA's), (71, 40893), (Start: 72 @40902 has 3 MA's), (103, 41019), (111, 41067), (121, 41097), (125, 41115), (132, 41127), (135, 41136), (151, 41184), (157, 41217), (165, 41241), (167, 41244),

Gene: LittleFella_34 Start: 30149, Stop: 30583, Start Num: 56

Candidate Starts for LittleFella_34:

(Start: 56 @30149 has 3 MA's), (85, 30239), (101, 30317), (112, 30374), (122, 30407), (152, 30491), (159, 30518), (165, 30539),

Gene: LittleMinkey_21 Start: 14722, Stop: 15177, Start Num: 40

Candidate Starts for LittleMinkey_21:

(Start: 40 @14722 has 1 MA's), (71, 14770), (87, 14839), (108, 14941), (126, 14998), (134, 15013), (142, 15034), (144, 15040), (146, 15046), (151, 15064), (164, 15118), (165, 15124), (174, 15148),

Gene: LittleMunchkin_16 Start: 14770, Stop: 15246, Start Num: 44

Candidate Starts for LittleMunchkin_16:

(14, 14521), (18, 14584), (23, 14662), (Start: 44 @14770 has 23 MA's), (80, 14857), (95, 14926), (96, 14935), (101, 14962), (110, 15010), (111, 15016), (119, 15034), (124, 15055), (140, 15091), (144,

15103), (162, 15175), (181, 15235),

Gene: LizLemon_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for LizLemon_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 41 @16349 has 12 MA's), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (111, 16583), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Lizzo_36 Start: 40602, Stop: 41048, Start Num: 47

Candidate Starts for Lizzo_36:

(Start: 47 @40602 has 58 MA's), (Start: 72 @40662 has 3 MA's), (76, 40677), (103, 40779), (111, 40827), (114, 40836), (121, 40857), (125, 40875), (132, 40887), (135, 40896), (138, 40902), (139, 40905), (151, 40944), (157, 40977), (165, 41001), (167, 41004),

Gene: LonelyBoi_24 Start: 21255, Stop: 21728, Start Num: 52

Candidate Starts for LonelyBoi_24:

(Start: 52 @21255 has 2 MA's), (73, 21315), (74, 21321), (80, 21336), (90, 21378), (108, 21465), (110, 21471), (115, 21489), (117, 21495), (124, 21522), (136, 21543), (161, 21636), (171, 21666),

Gene: LordFarquaad_21 Start: 18545, Stop: 18967, Start Num: 57

Candidate Starts for LordFarquaad_21:

(Start: 57 @18545 has 23 MA's), (83, 18620), (105, 18731), (106, 18734), (109, 18743), (142, 18833),

Gene: Luker_38 Start: 42461, Stop: 42913, Start Num: 47

Candidate Starts for Luker_38:

(Start: 47 @42461 has 58 MA's), (71, 42515), (Start: 72 @42524 has 3 MA's), (88, 42587), (103, 42641), (107, 42674), (114, 42698), (132, 42749), (135, 42758), (139, 42767), (142, 42776), (157, 42842), (160, 42848),

Gene: Madi_31 Start: 27530, Stop: 27973, Start Num: 53

Candidate Starts for Madi_31:

(31, 27476), (Start: 53 @27530 has 7 MA's), (86, 27632), (109, 27752), (135, 27824), (148, 27860), (168, 27935),

Gene: MakoManhole_17 Start: 14779, Stop: 15273, Start Num: 41

Candidate Starts for MakoManhole_17:

(14, 14548), (18, 14611), (23, 14689), (Start: 41 @14779 has 12 MA's), (76, 14851), (80, 14863), (87, 14896), (97, 14953), (105, 15013), (134, 15094), (139, 15106), (144, 15121), (145, 15124), (153, 15157), (178, 15235), (181, 15262),

Gene: Mao1_13 Start: 12376, Stop: 12858, Start Num: 35

Candidate Starts for Mao1_13:

(13, 12118), (14, 12157), (20, 12271), (Start: 35 @12376 has 5 MA's), (78, 12454), (85, 12481), (102, 12556), (103, 12559), (106, 12589), (142, 12688), (144, 12694), (145, 12697), (169, 12784), (174, 12799), (186, 12847),

Gene: Mareelih_111 Start: 69035, Stop: 69532, Start Num: 46

Candidate Starts for Mareelih_111:

(38, 69023), (Start: 46 @69035 has 5 MA's), (80, 69122), (82, 69128), (85, 69143), (88, 69158), (112, 69272), (159, 69428), (166, 69443), (182, 69500),

Gene: Mariokart_15 Start: 13238, Stop: 13711, Start Num: 44

Candidate Starts for Mariokart_15:

(14, 12992), (18, 13055), (23, 13133), (Start: 44 @13238 has 23 MA's), (80, 13322), (101, 13427), (108, 13469), (134, 13541), (139, 13553), (144, 13568), (145, 13571), (151, 13592), (155, 13616), (165, 13649), (178, 13682),

Gene: Marley1013_18 Start: 15787, Stop: 16248, Start Num: 45

Candidate Starts for Marley1013_18:

(1, 15175), (5, 15370), (8, 15409), (14, 15523), (18, 15586), (23, 15664), (Start: 45 @15787 has 47 MA's), (Start: 55 @15802 has 4 MA's), (64, 15823), (93, 15931), (106, 16000), (125, 16060), (128, 16066), (142, 16099), (144, 16105), (149, 16120), (154, 16144), (174, 16210),

Gene: Marlia_18 Start: 14989, Stop: 15450, Start Num: 45

Candidate Starts for Marlia_18:

(1, 14377), (2, 14416), (5, 14572), (8, 14611), (14, 14725), (18, 14788), (23, 14866), (Start: 45 @14989 has 47 MA's), (Start: 55 @15004 has 4 MA's), (64, 15025), (93, 15133), (106, 15202), (125, 15262), (128, 15268), (142, 15301), (144, 15307), (149, 15322), (154, 15346), (174, 15412),

Gene: Mask_14 Start: 12377, Stop: 12859, Start Num: 35

Candidate Starts for Mask_14:

(13, 12119), (14, 12158), (20, 12272), (Start: 35 @12377 has 5 MA's), (78, 12455), (85, 12482), (102, 12557), (103, 12560), (106, 12590), (142, 12689), (144, 12695), (145, 12698), (169, 12785), (174, 12800), (186, 12848),

Gene: MasterPo_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for MasterPo_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 41 @16229 has 12 MA's), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Megabear_12 Start: 13847, Stop: 14464, Start Num: 25

Candidate Starts for Megabear_12:

(Start: 25 @13847 has 3 MA's), (30, 13880), (Start: 44 @13943 has 23 MA's), (64, 13979), (83, 14039), (103, 14126), (106, 14156), (125, 14216), (128, 14222), (129, 14225), (142, 14255), (144, 14261), (155, 14309), (159, 14321), (183, 14402), (187, 14420), (188, 14429),

Gene: Minos_38 Start: 41984, Stop: 42436, Start Num: 47

Candidate Starts for Minos_38:

(Start: 47 @41984 has 58 MA's), (71, 42038), (Start: 72 @42047 has 3 MA's), (88, 42110), (103, 42164), (107, 42197), (114, 42221), (132, 42272), (135, 42281), (139, 42290), (142, 42299), (157, 42365), (160, 42371),

Gene: MmasiCarm_18 Start: 15000, Stop: 15461, Start Num: 45

Candidate Starts for MmasiCarm_18:

(14, 14736), (18, 14799), (23, 14877), (Start: 45 @15000 has 47 MA's), (Start: 55 @15015 has 4 MA's), (64, 15036), (93, 15144), (106, 15213), (125, 15273), (128, 15279), (142, 15312), (144, 15318), (149, 15333), (154, 15357), (174, 15423),

Gene: Mocha12_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Mocha12_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Monty_35 Start: 39752, Stop: 40198, Start Num: 47

Candidate Starts for Monty_35:

(Start: 47 @39752 has 58 MA's), (Start: 72 @39812 has 3 MA's), (76, 39827), (103, 39929), (111, 39977), (114, 39986), (121, 40007), (125, 40025), (132, 40037), (135, 40046), (138, 40052), (139, 40055), (151, 40094), (157, 40127), (165, 40151), (167, 40154),

Gene: Moonflower_24 Start: 21289, Stop: 21714, Start Num: 57

Candidate Starts for Moonflower_24:

(Start: 57 @21289 has 23 MA's), (83, 21364), (104, 21457), (105, 21478), (106, 21481), (124, 21538), (142, 21580), (154, 21625),

Gene: Mortcellus_17 Start: 15641, Stop: 16102, Start Num: 45

Candidate Starts for Mortcellus_17:

(1, 15029), (5, 15224), (8, 15263), (14, 15377), (18, 15440), (23, 15518), (Start: 45 @15641 has 47 MA's), (Start: 55 @15656 has 4 MA's), (64, 15677), (93, 15785), (106, 15854), (125, 15914), (128, 15920), (142, 15953), (144, 15959), (149, 15974), (154, 15998), (174, 16064),

Gene: Morty007_18 Start: 15787, Stop: 16248, Start Num: 45

Candidate Starts for Morty007_18:

(1, 15175), (5, 15370), (8, 15409), (14, 15523), (18, 15586), (23, 15664), (Start: 45 @15787 has 47 MA's), (Start: 55 @15802 has 4 MA's), (64, 15823), (93, 15931), (106, 16000), (125, 16060), (128, 16066), (142, 16099), (144, 16105), (149, 16120), (154, 16144), (174, 16210),

Gene: MossRose_17 Start: 14758, Stop: 15252, Start Num: 41

Candidate Starts for MossRose_17:

(14, 14527), (18, 14590), (23, 14668), (Start: 41 @14758 has 12 MA's), (76, 14830), (80, 14842), (87, 14875), (97, 14932), (105, 14992), (134, 15073), (139, 15085), (144, 15100), (145, 15103), (153, 15136), (178, 15214), (181, 15241),

Gene: MrWormie_37 Start: 41145, Stop: 41597, Start Num: 47

Candidate Starts for MrWormie_37:

(Start: 47 @41145 has 58 MA's), (71, 41199), (Start: 72 @41208 has 3 MA's), (88, 41271), (103, 41325), (107, 41358), (114, 41382), (132, 41433), (135, 41442), (139, 41451), (142, 41460), (157, 41526), (160, 41532),

Gene: Msay19_41 Start: 42008, Stop: 42394, Start Num: 72

Candidate Starts for Msay19_41:

(Start: 47 @41948 has 58 MA's), (Start: 72 @42008 has 3 MA's), (76, 42023), (103, 42125), (111, 42173), (114, 42182), (121, 42203), (125, 42221), (132, 42233), (135, 42242), (139, 42251), (151, 42290), (157, 42323), (165, 42347), (167, 42350),

Gene: Mulaychimus_18 Start: 14980, Stop: 15441, Start Num: 45

Candidate Starts for Mulaychimus_18:

(14, 14716), (18, 14779), (23, 14857), (Start: 45 @14980 has 47 MA's), (Start: 55 @14995 has 4 MA's), (64, 15016), (93, 15124), (106, 15193), (125, 15253), (128, 15259), (142, 15292), (144, 15298), (149, 15313), (154, 15337), (174, 15403),

Gene: NHagos_15 Start: 13225, Stop: 13731, Start Num: 41

Candidate Starts for NHagos_15:

(14, 12994), (23, 13135), (Start: 41 @13225 has 12 MA's), (Start: 44 @13228 has 23 MA's), (80, 13315), (87, 13348), (105, 13471), (139, 13564), (144, 13579), (145, 13582), (148, 13591), (164, 13654), (178, 13693),

Gene: Neoevie_37 Start: 42247, Stop: 42699, Start Num: 47

Candidate Starts for Neoevie_37:

(Start: 47 @42247 has 58 MA's), (71, 42301), (Start: 72 @42310 has 3 MA's), (88, 42373), (103, 42427), (107, 42460), (114, 42484), (132, 42535), (135, 42544), (139, 42553), (142, 42562), (157, 42628), (160, 42634),

Gene: Neos5_18 Start: 15810, Stop: 16256, Start Num: 55

Candidate Starts for Neos5_18:

(11, 15462), (Start: 55 @15810 has 4 MA's), (64, 15831), (93, 15939), (106, 16008), (125, 16068), (128, 16074), (142, 16107), (144, 16113), (149, 16128), (154, 16152), (174, 16218),

Gene: Newt_38 Start: 42475, Stop: 42927, Start Num: 47

Candidate Starts for Newt_38:

(Start: 47 @42475 has 58 MA's), (71, 42529), (Start: 72 @42538 has 3 MA's), (88, 42601), (103, 42655), (107, 42688), (114, 42712), (132, 42763), (135, 42772), (139, 42781), (142, 42790), (157, 42856), (160, 42862),

Gene: Niagara_35 Start: 41379, Stop: 41831, Start Num: 58

Candidate Starts for Niagara_35:

(33, 41325), (Start: 58 @41379 has 12 MA's), (87, 41484), (113, 41601), (117, 41613), (123, 41637), (145, 41685), (157, 41733), (171, 41760), (175, 41769),

Gene: Nimi13_37 Start: 41993, Stop: 42445, Start Num: 47

Candidate Starts for Nimi13_37:

(Start: 47 @41993 has 58 MA's), (71, 42047), (Start: 72 @42056 has 3 MA's), (88, 42119), (103, 42173), (107, 42206), (114, 42230), (132, 42281), (135, 42290), (139, 42299), (142, 42308), (157, 42374), (160, 42380),

Gene: Nozo_18 Start: 15765, Stop: 16226, Start Num: 45

Candidate Starts for Nozo_18:

(14, 15504), (18, 15567), (23, 15645), (Start: 45 @15765 has 47 MA's), (Start: 55 @15780 has 4 MA's), (64, 15801), (93, 15909), (106, 15978), (125, 16038), (128, 16044), (142, 16077), (144, 16083), (149, 16098), (154, 16122), (174, 16188),

Gene: Obutu_18 Start: 14998, Stop: 15459, Start Num: 45

Candidate Starts for Obutu_18:

(14, 14734), (18, 14797), (23, 14875), (Start: 45 @14998 has 47 MA's), (Start: 55 @15013 has 4 MA's), (64, 15034), (93, 15142), (106, 15211), (125, 15271), (128, 15277), (142, 15310), (144, 15316), (149, 15331), (154, 15355), (174, 15421),

Gene: Olivio_17 Start: 14852, Stop: 15313, Start Num: 45

Candidate Starts for Olivio_17:

(14, 14588), (18, 14651), (23, 14729), (Start: 45 @14852 has 47 MA's), (Start: 55 @14867 has 4 MA's), (64, 14888), (93, 14996), (106, 15065), (125, 15125), (128, 15131), (142, 15164), (144, 15170), (149, 15185), (154, 15209), (174, 15275),

Gene: Opia_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Opia_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: OrangeOswald_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for OrangeOswald_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (149, 15336), (154, 15360), (174, 15426),

Gene: PR_12 Start: 13970, Stop: 14491, Start Num: 44

Candidate Starts for PR_12:

(Start: 25 @13874 has 3 MA's), (30, 13907), (Start: 44 @13970 has 23 MA's), (64, 14006), (83, 14066), (103, 14153), (106, 14183), (125, 14243), (128, 14249), (129, 14252), (142, 14282), (144, 14288), (155, 14336), (159, 14348), (187, 14447), (188, 14456),

Gene: Phaedrus_17 Start: 14921, Stop: 15382, Start Num: 45

Candidate Starts for Phaedrus_17:

(14, 14657), (18, 14720), (23, 14798), (Start: 45 @14921 has 47 MA's), (Start: 55 @14936 has 4 MA's), (64, 14957), (93, 15065), (106, 15134), (125, 15194), (128, 15200), (142, 15233), (144, 15239), (149, 15254), (154, 15278), (174, 15344),

Gene: Phantasmagoria_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Phantasmagoria_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (111, 16463), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Phayeta_18 Start: 14879, Stop: 15340, Start Num: 45

Candidate Starts for Phayeta_18:

(1, 14267), (2, 14306), (5, 14462), (8, 14501), (14, 14615), (18, 14678), (23, 14756), (Start: 45 @14879 has 47 MA's), (Start: 55 @14894 has 4 MA's), (64, 14915), (93, 15023), (106, 15092), (125, 15152), (128, 15158), (142, 15191), (144, 15197), (149, 15212), (154, 15236), (174, 15302),

Gene: Phendrix_95 Start: 60482, Stop: 60919, Start Num: 61

Candidate Starts for Phendrix_95:

(Start: 61 @60482 has 2 MA's), (83, 60557), (112, 60692), (137, 60758), (141, 60767), (169, 60851),

Gene: Philly_17 Start: 14869, Stop: 15330, Start Num: 45

Candidate Starts for Philly_17:

(14, 14605), (18, 14668), (23, 14746), (Start: 45 @14869 has 47 MA's), (Start: 55 @14884 has 4 MA's), (64, 14905), (93, 15013), (106, 15082), (125, 15142), (128, 15148), (142, 15181), (144, 15187), (154, 15226),

Gene: Philon9_37 Start: 42589, Stop: 43029, Start Num: 58

Candidate Starts for Philon9_37:

(33, 42535), (Start: 58 @42589 has 12 MA's), (81, 42661), (87, 42691), (112, 42805), (113, 42808), (117, 42820), (123, 42844), (131, 42859), (148, 42901), (157, 42940), (170, 42961),

Gene: Phlyer_18 Start: 15753, Stop: 16199, Start Num: 55

Candidate Starts for Phlyer_18:

(Start: 55 @15753 has 4 MA's), (64, 15774), (93, 15882), (106, 15951), (125, 16011), (128, 16017), (142, 16050), (144, 16056), (149, 16071), (154, 16095), (174, 16161),

Gene: Phrappuccino_35 Start: 18939, Stop: 19493, Start Num: 49

Candidate Starts for Phrappuccino_35:

(9, 18582), (12, 18624), (16, 18708), (17, 18723), (21, 18798), (26, 18834), (Start: 49 @18939 has 2 MA's), (51, 18942), (54, 18948), (99, 19104), (103, 19125), (112, 19176), (144, 19275), (184, 19425), (189, 19455),

Gene: PierreThree_36 Start: 40713, Stop: 41159, Start Num: 47

Candidate Starts for PierreThree_36:

(Start: 47 @40713 has 58 MA's), (Start: 56 @40725 has 3 MA's), (71, 40764), (Start: 72 @40773 has 3 MA's), (103, 40890), (111, 40938), (125, 40986), (132, 40998), (135, 41007), (151, 41055), (157, 41088), (165, 41112), (167, 41115),

Gene: Pipefish_18 Start: 15887, Stop: 16348, Start Num: 45

Candidate Starts for Pipefish_18:

(1, 15275), (3, 15329), (5, 15470), (14, 15623), (18, 15686), (23, 15764), (Start: 45 @15887 has 47 MA's), (64, 15923), (93, 16031), (106, 16100), (125, 16160), (128, 16166), (142, 16199), (144, 16205), (149, 16220), (154, 16244), (174, 16310),

Gene: PokyPuppy_35 Start: 40656, Stop: 41102, Start Num: 47

Candidate Starts for PokyPuppy_35:

(Start: 47 @40656 has 58 MA's), (106, 40863), (109, 40872), (121, 40911), (125, 40929), (132, 40941), (135, 40950), (151, 40998), (157, 41031), (165, 41055), (167, 41058),

Gene: Poland_41 Start: 41927, Stop: 42373, Start Num: 47

Candidate Starts for Poland_41:

(Start: 47 @41927 has 58 MA's), (Start: 72 @41987 has 3 MA's), (76, 42002), (103, 42104), (111, 42152), (114, 42161), (121, 42182), (125, 42200), (132, 42212), (135, 42221), (139, 42230), (151, 42269), (157, 42302), (165, 42326), (167, 42329),

Gene: PrinceCharming_18 Start: 16352, Stop: 16798, Start Num: 44

Candidate Starts for PrinceCharming_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (111, 16583), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Pupper_83 Start: 32143, Stop: 32601, Start Num: 50

Candidate Starts for Pupper_83:

(Start: 50 @32143 has 5 MA's), (91, 32275), (93, 32290), (103, 32338), (108, 32374), (113, 32392), (124, 32428), (125, 32431), (138, 32458), (162, 32545),

Gene: Quesadilla_18 Start: 16370, Stop: 16834, Start Num: 37

Candidate Starts for Quesadilla_18:

(7, 15986), (Start: 37 @16370 has 1 MA's), (Start: 40 @16376 has 1 MA's), (71, 16427), (78, 16457), (87, 16496), (92, 16517), (107, 16595), (111, 16610), (125, 16652), (126, 16655), (142, 16691), (144, 16697), (146, 16703), (159, 16760), (162, 16772), (165, 16781), (174, 16805),

Gene: Qyrzula_17 Start: 16226, Stop: 16768, Start Num: 24

Candidate Starts for Qyrzula_17:

(Start: 24 @16226 has 32 MA's), (29, 16259), (Start: 41 @16319 has 12 MA's), (Start: 44 @16322 has 23 MA's), (80, 16406), (103, 16505), (105, 16532), (110, 16547), (111, 16553), (116, 16565), (126, 16598), (133, 16610), (142, 16634), (144, 16640), (150, 16661), (151, 16664), (159, 16700), (160, 16703), (169, 16730),

Gene: RagingRooster_18 Start: 15004, Stop: 15465, Start Num: 45

Candidate Starts for RagingRooster_18:

(14, 14740), (18, 14803), (23, 14881), (Start: 45 @15004 has 47 MA's), (Start: 55 @15019 has 4 MA's), (64, 15040), (93, 15148), (106, 15217), (125, 15277), (128, 15283), (142, 15316), (144, 15322), (149, 15337), (154, 15361), (174, 15427),

Gene: RavenCo17_21 Start: 19444, Stop: 19869, Start Num: 57

Candidate Starts for RavenCo17_21:

(Start: 57 @19444 has 23 MA's), (75, 19495), (83, 19522), (104, 19612), (105, 19633), (106, 19636), (124, 19693), (142, 19735), (154, 19780),

Gene: RemRem_37 Start: 39742, Stop: 40188, Start Num: 47

Candidate Starts for RemRem_37:

(Start: 47 @39742 has 58 MA's), (Start: 72 @39802 has 3 MA's), (76, 39817), (103, 39919), (111, 39967), (114, 39976), (121, 39997), (125, 40015), (132, 40027), (135, 40036), (138, 40042), (139, 40045), (151, 40084), (157, 40117), (165, 40141), (167, 40144),

Gene: Rhinoforte_18 Start: 16253, Stop: 16795, Start Num: 24

Candidate Starts for Rhinoforte_18:

(Start: 24 @16253 has 32 MA's), (29, 16286), (Start: 44 @16349 has 23 MA's), (80, 16433), (103, 16532), (105, 16559), (110, 16574), (116, 16592), (126, 16625), (133, 16637), (142, 16661), (144, 16667), (150, 16688), (151, 16691), (159, 16727), (160, 16730), (169, 16757),

Gene: Rita1961_18 Start: 14999, Stop: 15460, Start Num: 45

Candidate Starts for Rita1961_18:

(14, 14735), (18, 14798), (23, 14876), (Start: 45 @14999 has 47 MA's), (Start: 55 @15014 has 4 MA's), (64, 15035), (93, 15143), (106, 15212), (125, 15272), (128, 15278), (142, 15311), (144, 15317), (149, 15332), (154, 15356), (174, 15422),

Gene: RomaT_18 Start: 15800, Stop: 16246, Start Num: 55

Candidate Starts for RomaT_18:

(Start: 55 @15800 has 4 MA's), (64, 15821), (93, 15929), (106, 15998), (125, 16058), (128, 16064), (142, 16097), (144, 16103), (149, 16118), (154, 16142), (174, 16208),

Gene: Rosebush_18 Start: 16253, Stop: 16795, Start Num: 24

Candidate Starts for Rosebush_18:

(Start: 24 @16253 has 32 MA's), (29, 16286), (Start: 44 @16349 has 23 MA's), (80, 16433), (103, 16532), (105, 16559), (110, 16574), (116, 16592), (126, 16625), (133, 16637), (142, 16661), (144, 16667), (150, 16688), (151, 16691), (159, 16727), (160, 16730), (169, 16757),

Gene: RoyalG_37 Start: 40209, Stop: 40655, Start Num: 47

Candidate Starts for RoyalG_37:

(Start: 47 @40209 has 58 MA's), (83, 40308), (101, 40380), (111, 40434), (114, 40443), (121, 40464), (125, 40482), (132, 40494), (135, 40503), (157, 40584), (165, 40608), (167, 40611),

Gene: SCentae_81 Start: 31817, Stop: 32275, Start Num: 50

Candidate Starts for SCentae_81:

(Start: 50 @31817 has 5 MA's), (103, 32012), (108, 32048), (113, 32066), (138, 32132), (162, 32219),

Gene: Sabella_18 Start: 16139, Stop: 16681, Start Num: 24

Candidate Starts for Sabella_18:

(Start: 24 @16139 has 32 MA's), (29, 16172), (Start: 44 @16235 has 23 MA's), (80, 16319), (103, 16418), (105, 16445), (110, 16460), (116, 16478), (126, 16511), (133, 16523), (142, 16547), (144, 16553), (150, 16574), (151, 16577), (159, 16613), (160, 16616), (169, 16643),

Gene: Sahara_20 Start: 18224, Stop: 18646, Start Num: 57

Candidate Starts for Sahara_20:

(Start: 57 @18224 has 23 MA's), (83, 18299), (105, 18410), (106, 18413), (109, 18422), (142, 18512),

Gene: Sam12_36 Start: 39742, Stop: 40188, Start Num: 47

Candidate Starts for Sam12_36:

(Start: 47 @39742 has 58 MA's), (Start: 72 @39802 has 3 MA's), (76, 39817), (103, 39919), (111, 39967), (114, 39976), (121, 39997), (125, 40015), (132, 40027), (135, 40036), (138, 40042), (139, 40045), (151, 40084), (157, 40117), (165, 40141), (167, 40144),

Gene: Savage_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Savage_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Sejanus_14 Start: 13310, Stop: 13792, Start Num: 35

Candidate Starts for Sejanus_14:

(13, 13052), (14, 13091), (20, 13205), (Start: 35 @13310 has 5 MA's), (78, 13388), (85, 13415), (102, 13490), (103, 13493), (106, 13523), (142, 13622), (144, 13628), (145, 13631), (169, 13718), (174, 13733),

Gene: Settecandela_35 Start: 18939, Stop: 19493, Start Num: 49

Candidate Starts for Settecandela_35:

(9, 18582), (12, 18624), (16, 18708), (17, 18723), (21, 18798), (26, 18834), (Start: 49 @18939 has 2 MA's), (51, 18942), (54, 18948), (99, 19104), (103, 19125), (112, 19176), (144, 19275), (184, 19425), (189, 19455),

Gene: Shatter_15 Start: 13329, Stop: 13802, Start Num: 44

Candidate Starts for Shatter_15:

(14, 13077), (18, 13140), (23, 13218), (Start: 44 @13329 has 23 MA's), (80, 13413), (100, 13503), (101, 13518), (108, 13560), (138, 13641), (139, 13644), (144, 13659), (145, 13662), (164, 13734),

Gene: Shelley_37 Start: 41469, Stop: 41921, Start Num: 47

Candidate Starts for Shelley_37:

(Start: 47 @41469 has 58 MA's), (71, 41523), (Start: 72 @41532 has 3 MA's), (88, 41595), (103, 41649), (107, 41682), (114, 41706), (132, 41757), (135, 41766), (139, 41775), (142, 41784), (157, 41850), (160, 41856),

Gene: Shenandoah_18 Start: 14982, Stop: 15443, Start Num: 45

Candidate Starts for Shenandoah_18:

(14, 14718), (18, 14781), (23, 14859), (Start: 45 @14982 has 47 MA's), (Start: 55 @14997 has 4 MA's), (64, 15018), (93, 15126), (106, 15195), (125, 15255), (128, 15261), (142, 15294), (144, 15300), (149, 15315), (154, 15339), (174, 15405),

Gene: Sidious_23 Start: 20906, Stop: 21379, Start Num: 52

Candidate Starts for Sidious_23:

(Start: 52 @20906 has 2 MA's), (73, 20966), (74, 20972), (80, 20987), (90, 21029), (94, 21050), (108, 21116), (115, 21140), (117, 21146), (136, 21194), (145, 21218), (171, 21317),

Gene: Sienna_31 Start: 27530, Stop: 27973, Start Num: 53

Candidate Starts for Sienna_31:

(31, 27476), (Start: 53 @27530 has 7 MA's), (86, 27632), (109, 27752), (135, 27824), (148, 27860), (168, 27935),

Gene: Sisko_15 Start: 13672, Stop: 14145, Start Num: 44

Candidate Starts for Sisko_15:

(10, 13342), (14, 13417), (18, 13480), (23, 13558), (Start: 44 @13672 has 23 MA's), (80, 13756), (100, 13846), (101, 13861), (110, 13909), (128, 13963), (144, 14002), (162, 14074), (181, 14134),

Gene: Sixama_111 Start: 69070, Stop: 69564, Start Num: 46

Candidate Starts for Sixama_111:

(Start: 46 @69070 has 5 MA's), (80, 69157), (82, 69163), (88, 69193), (112, 69307), (123, 69352), (126, 69361), (145, 69406), (166, 69478), (176, 69508), (182, 69535),

Gene: Skog_146 Start: 61230, Stop: 61688, Start Num: 50

Candidate Starts for Skog_146:

(48, 61227), (Start: 50 @61230 has 5 MA's), (83, 61329), (91, 61362), (103, 61425), (108, 61461), (113, 61479), (123, 61512), (141, 61554), (160, 61623), (165, 61641), (167, 61644), (169, 61650), (174, 61665),

Gene: SlippinJimmy_18 Start: 15768, Stop: 16229, Start Num: 45

Candidate Starts for SlippinJimmy_18:

(14, 15504), (18, 15567), (23, 15645), (Start: 45 @15768 has 47 MA's), (Start: 55 @15783 has 4 MA's), (64, 15804), (93, 15912), (106, 15981), (125, 16041), (128, 16047), (142, 16080), (144, 16086), (149, 16101), (154, 16125), (174, 16191),

Gene: SoilAssassin_21 Start: 18545, Stop: 18967, Start Num: 57

Candidate Starts for SoilAssassin_21:

(Start: 57 @18545 has 23 MA's), (83, 18620), (105, 18731), (106, 18734), (109, 18743), (142, 18833),

Gene: Sombrero_36 Start: 39744, Stop: 40190, Start Num: 47

Candidate Starts for Sombrero_36:

(Start: 47 @39744 has 58 MA's), (Start: 72 @39804 has 3 MA's), (76, 39819), (103, 39921), (111, 39969), (114, 39978), (121, 39999), (125, 40017), (132, 40029), (135, 40038), (139, 40047), (151, 40086), (157, 40119), (165, 40143), (167, 40146),

Gene: Sour_18 Start: 15094, Stop: 15573, Start Num: 41

Candidate Starts for Sour_18:

(14, 14854), (18, 14917), (23, 14995), (Start: 41 @15094 has 12 MA's), (Start: 44 @15097 has 23 MA's), (60, 15127), (80, 15184), (101, 15289), (113, 15349), (116, 15355), (123, 15379), (139, 15415), (144, 15430), (164, 15505), (185, 15568),

Gene: Sproutie_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Sproutie_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Squibbles_36 Start: 40605, Stop: 41051, Start Num: 47

Candidate Starts for Squibbles_36:

(Start: 47 @40605 has 58 MA's), (Start: 72 @40665 has 3 MA's), (76, 40680), (103, 40782), (111, 40830), (114, 40839), (121, 40860), (125, 40878), (132, 40890), (135, 40899), (138, 40905), (139, 40908), (151, 40947), (157, 40980), (165, 41004), (167, 41007),

Gene: SteveFrench_36 Start: 40449, Stop: 40895, Start Num: 47

Candidate Starts for SteveFrench_36:

(Start: 47 @40449 has 58 MA's), (83, 40548), (101, 40620), (111, 40674), (114, 40683), (121, 40704), (125, 40722), (132, 40734), (135, 40743), (157, 40824), (165, 40848), (167, 40851),

Gene: Sticker17_37 Start: 41984, Stop: 42436, Start Num: 47

Candidate Starts for Sticker17_37:

(Start: 47 @41984 has 58 MA's), (71, 42038), (Start: 72 @42047 has 3 MA's), (88, 42110), (103, 42164), (107, 42197), (114, 42221), (132, 42272), (135, 42281), (139, 42290), (142, 42299), (157, 42365), (160, 42371),

Gene: Suzy_31 Start: 28673, Stop: 29122, Start Num: 59

Candidate Starts for Suzy_31:

(Start: 59 @28673 has 1 MA's), (135, 28955), (148, 28991), (168, 29066), (173, 29084),

Gene: SwainyDoc_18 Start: 15001, Stop: 15462, Start Num: 45

Candidate Starts for SwainyDoc_18:

(14, 14737), (18, 14800), (23, 14878), (Start: 45 @15001 has 47 MA's), (Start: 55 @15016 has 4 MA's), (64, 15037), (93, 15145), (106, 15214), (125, 15274), (128, 15280), (142, 15313), (144, 15319), (149, 15334), (154, 15358), (174, 15424),

Gene: SynergyX_18 Start: 15004, Stop: 15465, Start Num: 45

Candidate Starts for SynergyX_18:

(14, 14740), (18, 14803), (23, 14881), (Start: 45 @15004 has 47 MA's), (Start: 55 @15019 has 4 MA's), (64, 15040), (93, 15148), (106, 15217), (125, 15277), (128, 15283), (142, 15316), (144, 15322), (149, 15337), (154, 15361), (174, 15427),

Gene: TA17A_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for TA17A_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 41 @16229 has 12 MA's), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Taptic_12 Start: 13847, Stop: 14464, Start Num: 25

Candidate Starts for Taptic_12:

(Start: 25 @13847 has 3 MA's), (30, 13880), (Start: 44 @13943 has 23 MA's), (64, 13979), (83, 14039), (103, 14126), (106, 14156), (125, 14216), (128, 14222), (129, 14225), (142, 14255), (144, 14261), (155, 14309), (159, 14321), (183, 14402), (187, 14420), (188, 14429),

Gene: Teal_37 Start: 42452, Stop: 42904, Start Num: 47

Candidate Starts for Teal_37:

(Start: 47 @42452 has 58 MA's), (71, 42506), (Start: 72 @42515 has 3 MA's), (88, 42578), (103, 42632), (107, 42665), (114, 42689), (132, 42740), (135, 42749), (139, 42758), (142, 42767), (157, 42833), (160, 42839),

Gene: Teatealatte_35 Start: 41324, Stop: 41776, Start Num: 58

Candidate Starts for Teatealatte_35:

(33, 41270), (Start: 58 @41324 has 12 MA's), (87, 41429), (113, 41546), (117, 41558), (123, 41582), (145, 41630), (157, 41678), (171, 41705), (175, 41714),

Gene: Teech_35 Start: 41125, Stop: 41577, Start Num: 58

Candidate Starts for Teech_35:

(33, 41071), (Start: 58 @41125 has 12 MA's), (87, 41230), (113, 41347), (117, 41359), (123, 41383), (145, 41431), (157, 41479), (171, 41506), (175, 41515),

Gene: Terapin_32 Start: 27531, Stop: 27977, Start Num: 53

Candidate Starts for Terapin_32:

(Start: 53 @27531 has 7 MA's), (135, 27825), (148, 27861), (168, 27936),

Gene: Tinciduntolum_19 Start: 16255, Stop: 16797, Start Num: 24

Candidate Starts for Tinciduntolum_19:

(Start: 24 @16255 has 32 MA's), (29, 16288), (Start: 44 @16351 has 23 MA's), (80, 16435), (103, 16534), (105, 16561), (110, 16576), (116, 16594), (126, 16627), (133, 16639), (142, 16663), (144, 16669), (150, 16690), (151, 16693), (159, 16729), (160, 16732), (169, 16759),

Gene: TinyTerror_18 Start: 15003, Stop: 15464, Start Num: 45

Candidate Starts for TinyTerror_18:

(14, 14739), (18, 14802), (23, 14880), (Start: 45 @15003 has 47 MA's), (Start: 55 @15018 has 4 MA's), (64, 15039), (93, 15147), (106, 15216), (125, 15276), (128, 15282), (142, 15315), (144, 15321), (149, 15336), (154, 15360), (174, 15426),

Gene: TraderJ_17 Start: 14761, Stop: 15255, Start Num: 41

Candidate Starts for TraderJ_17:

(14, 14530), (18, 14593), (23, 14671), (Start: 41 @14761 has 12 MA's), (76, 14833), (80, 14845), (87, 14878), (97, 14935), (105, 14995), (134, 15076), (139, 15088), (144, 15103), (145, 15106), (153, 15139), (178, 15217), (181, 15244),

Gene: Tredge_35 Start: 41324, Stop: 41776, Start Num: 58

Candidate Starts for Tredge_35:

(33, 41270), (Start: 58 @41324 has 12 MA's), (87, 41429), (113, 41546), (117, 41558), (123, 41582), (145, 41630), (157, 41678), (171, 41705), (175, 41714),

Gene: Tres_18 Start: 16136, Stop: 16678, Start Num: 24

Candidate Starts for Tres_18:

(Start: 24 @16136 has 32 MA's), (29, 16169), (Start: 44 @16232 has 23 MA's), (80, 16316), (103, 16415), (105, 16442), (110, 16457), (116, 16475), (126, 16508), (133, 16520), (142, 16544), (144, 16550), (150, 16571), (151, 16574), (159, 16610), (160, 16613), (169, 16640),

Gene: Trogglehumper_52 Start: 46526, Stop: 47011, Start Num: 66

Candidate Starts for Trogglehumper_52:

(Start: 66 @46526 has 1 MA's), (68, 46532), (70, 46544), (103, 46685), (112, 46736), (130, 46787), (143, 46817), (156, 46868), (163, 46889),

Gene: TuertoX_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for TuertoX_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Tydolla_18 Start: 15741, Stop: 16202, Start Num: 45

Candidate Starts for Tydolla_18:

(14, 15477), (18, 15540), (23, 15618), (Start: 45 @15741 has 47 MA's), (Start: 55 @15756 has 4 MA's), (64, 15777), (93, 15885), (106, 15954), (125, 16014), (128, 16020), (142, 16053), (144, 16059), (149, 16074), (154, 16098), (174, 16164),

Gene: Vasanti_20 Start: 18106, Stop: 18528, Start Num: 57

Candidate Starts for Vasanti_20:

(Start: 57 @18106 has 23 MA's), (83, 18181), (106, 18295), (109, 18304), (138, 18382), (142, 18394),

Gene: Vic9_00018 Start: 16672, Stop: 17118, Start Num: 44

Candidate Starts for Vic9_00018:

(Start: 24 @16576 has 32 MA's), (29, 16609), (Start: 41 @16669 has 12 MA's), (Start: 44 @16672 has 23 MA's), (80, 16756), (103, 16855), (105, 16882), (110, 16897), (111, 16903), (116, 16915), (126, 16948), (133, 16960), (142, 16984), (144, 16990), (150, 17011), (151, 17014), (159, 17050), (160,

17053), (169, 17080),

Gene: Vitaenoi_37 Start: 42588, Stop: 43028, Start Num: 58

Candidate Starts for Vitaenoi_37:

(33, 42534), (Start: 58 @42588 has 12 MA's), (81, 42660), (87, 42690), (112, 42804), (113, 42807), (117, 42819), (123, 42843), (131, 42858), (148, 42900), (157, 42939), (170, 42960),

Gene: West99_18 Start: 16256, Stop: 16798, Start Num: 24

Candidate Starts for West99_18:

(Start: 24 @16256 has 32 MA's), (29, 16289), (Start: 44 @16352 has 23 MA's), (80, 16436), (103, 16535), (105, 16562), (110, 16577), (116, 16595), (126, 16628), (133, 16640), (142, 16664), (144, 16670), (150, 16691), (151, 16694), (159, 16730), (160, 16733), (169, 16760),

Gene: Whiteclaw_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Whiteclaw_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Wocket_24 Start: 20570, Stop: 21052, Start Num: 50

Candidate Starts for Wocket_24:

(Start: 50 @20570 has 5 MA's), (67, 20609), (74, 20642), (80, 20657), (107, 20786), (113, 20807), (117, 20819), (122, 20840), (136, 20867),

Gene: Woes_37 Start: 42503, Stop: 42955, Start Num: 47

Candidate Starts for Woes_37:

(Start: 47 @42503 has 58 MA's), (71, 42557), (Start: 72 @42566 has 3 MA's), (88, 42629), (103, 42683), (107, 42716), (114, 42740), (132, 42791), (135, 42800), (139, 42809), (142, 42818), (157, 42884), (160, 42890),

Gene: Wooper_17 Start: 14767, Stop: 15261, Start Num: 41

Candidate Starts for Wooper_17:

(14, 14536), (18, 14599), (23, 14677), (Start: 41 @14767 has 12 MA's), (76, 14839), (80, 14851), (87, 14884), (97, 14941), (105, 15001), (139, 15094), (144, 15109), (145, 15112), (153, 15145), (178, 15223), (181, 15250),

Gene: Worcestershire_36 Start: 39744, Stop: 40190, Start Num: 47

Candidate Starts for Worcestershire_36:

(Start: 47 @39744 has 58 MA's), (Start: 72 @39804 has 3 MA's), (76, 39819), (103, 39921), (111, 39969), (114, 39978), (121, 39999), (125, 40017), (132, 40029), (135, 40038), (138, 40044), (139, 40047), (151, 40086), (157, 40119), (165, 40143), (167, 40146),

Gene: Xenia2_35 Start: 30001, Stop: 30453, Start Num: 56

Candidate Starts for Xenia2_35:

(Start: 56 @30001 has 3 MA's), (62, 30016), (87, 30106), (88, 30109), (91, 30118), (99, 30154), (106, 30208), (108, 30214), (132, 30280), (148, 30325), (159, 30373), (160, 30376), (164, 30388), (172, 30415),

Gene: Yago84_15 Start: 13681, Stop: 14154, Start Num: 44

Candidate Starts for Yago84_15:

(10, 13351), (14, 13426), (18, 13489), (23, 13567), (Start: 44 @13681 has 23 MA's), (80, 13765), (100, 13855), (101, 13870), (110, 13918), (128, 13972), (144, 14011), (162, 14083), (181, 14143),

Gene: Yahalom_18 Start: 15015, Stop: 15476, Start Num: 45

Candidate Starts for Yahalom_18:

(1, 14403), (2, 14442), (5, 14598), (8, 14637), (14, 14751), (18, 14814), (23, 14892), (Start: 45 @15015 has 47 MA's), (Start: 55 @15030 has 4 MA's), (64, 15051), (93, 15159), (106, 15228), (125, 15288), (128, 15294), (142, 15327), (144, 15333), (149, 15348), (154, 15372), (174, 15438),

Gene: Yeet412_21 Start: 18545, Stop: 18967, Start Num: 57

Candidate Starts for Yeet412_21:

(Start: 57 @18545 has 23 MA's), (83, 18620), (105, 18731), (106, 18734), (109, 18743), (142, 18833),

Gene: Yeshua_17 Start: 14744, Stop: 15238, Start Num: 41

Candidate Starts for Yeshua_17:

(14, 14513), (18, 14576), (23, 14654), (Start: 41 @14744 has 12 MA's), (76, 14816), (80, 14828), (83, 14840), (87, 14861), (97, 14918), (105, 14978), (125, 15041), (138, 15068), (144, 15086), (145, 15089), (148, 15098), (153, 15122), (178, 15200), (181, 15227),

Gene: Yinz_18 Start: 15042, Stop: 15503, Start Num: 45

Candidate Starts for Yinz_18:

(14, 14778), (18, 14841), (23, 14919), (Start: 45 @15042 has 47 MA's), (Start: 55 @15057 has 4 MA's), (64, 15078), (93, 15186), (105, 15252), (106, 15255), (125, 15315), (128, 15321), (142, 15354), (144, 15360), (154, 15399), (174, 15465),

Gene: Yinzer_21 Start: 18552, Stop: 18974, Start Num: 57

Candidate Starts for Yinzer_21:

(Start: 57 @18552 has 23 MA's), (83, 18627), (105, 18738), (106, 18741), (109, 18750), (142, 18840),

Gene: Zenteno07_20 Start: 14497, Stop: 14952, Start Num: 41

Candidate Starts for Zenteno07_20:

(Start: 41 @14497 has 12 MA's), (71, 14545), (80, 14581), (111, 14728), (126, 14773), (142, 14809), (144, 14815), (146, 14821), (151, 14839), (164, 14893), (165, 14899), (174, 14923),