Pham 290909

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51: Birdsong_40
52: BotCity_42
53: Ecliptus_44
54: Kamaru_38 + 1
55: Hnabuloso_40
56: Getalong_44
57: ShawBrad_43 + 6
58: CheeseTouch_41
59: Whitney_45 + 2
60: Periwinkle_46
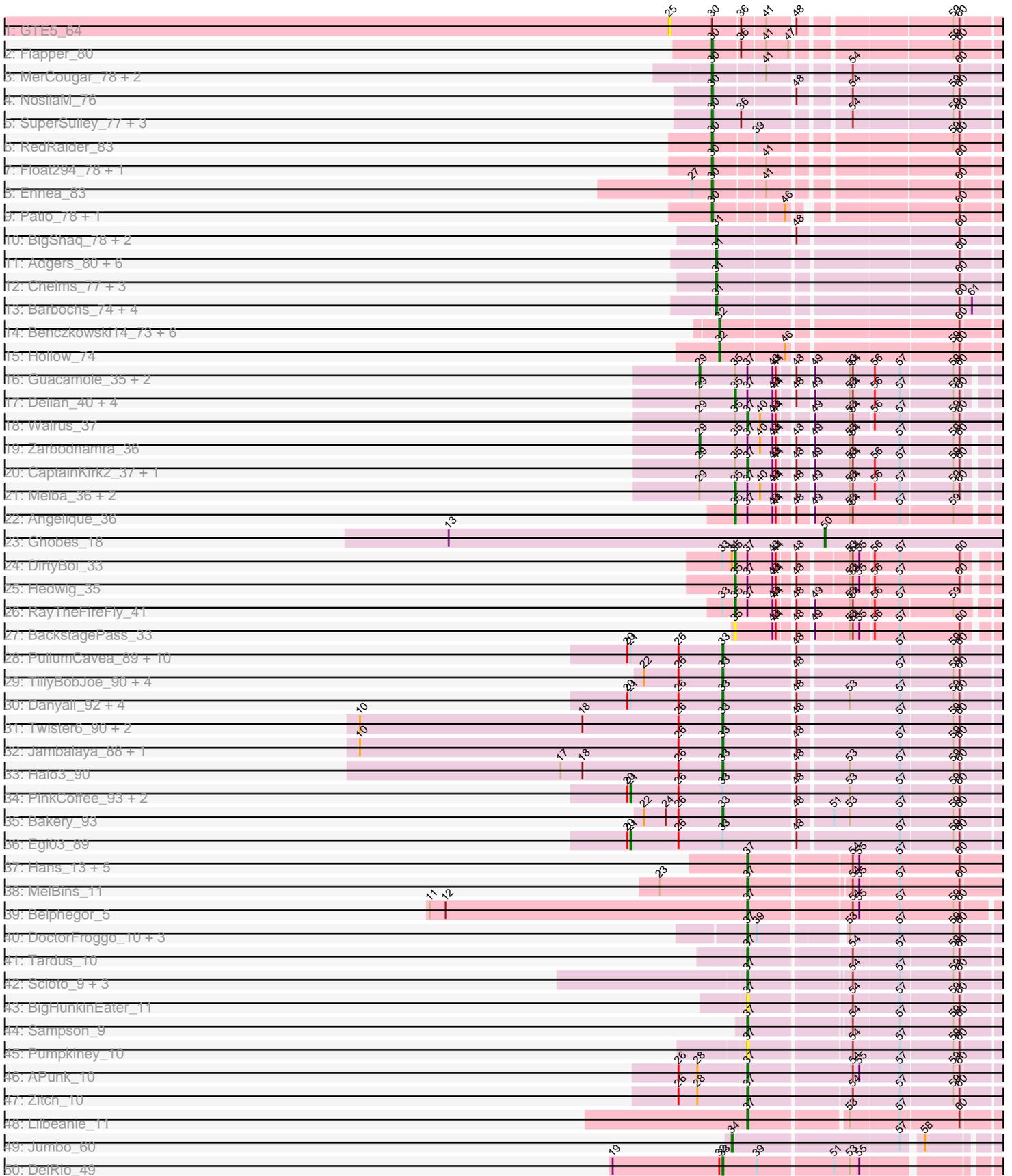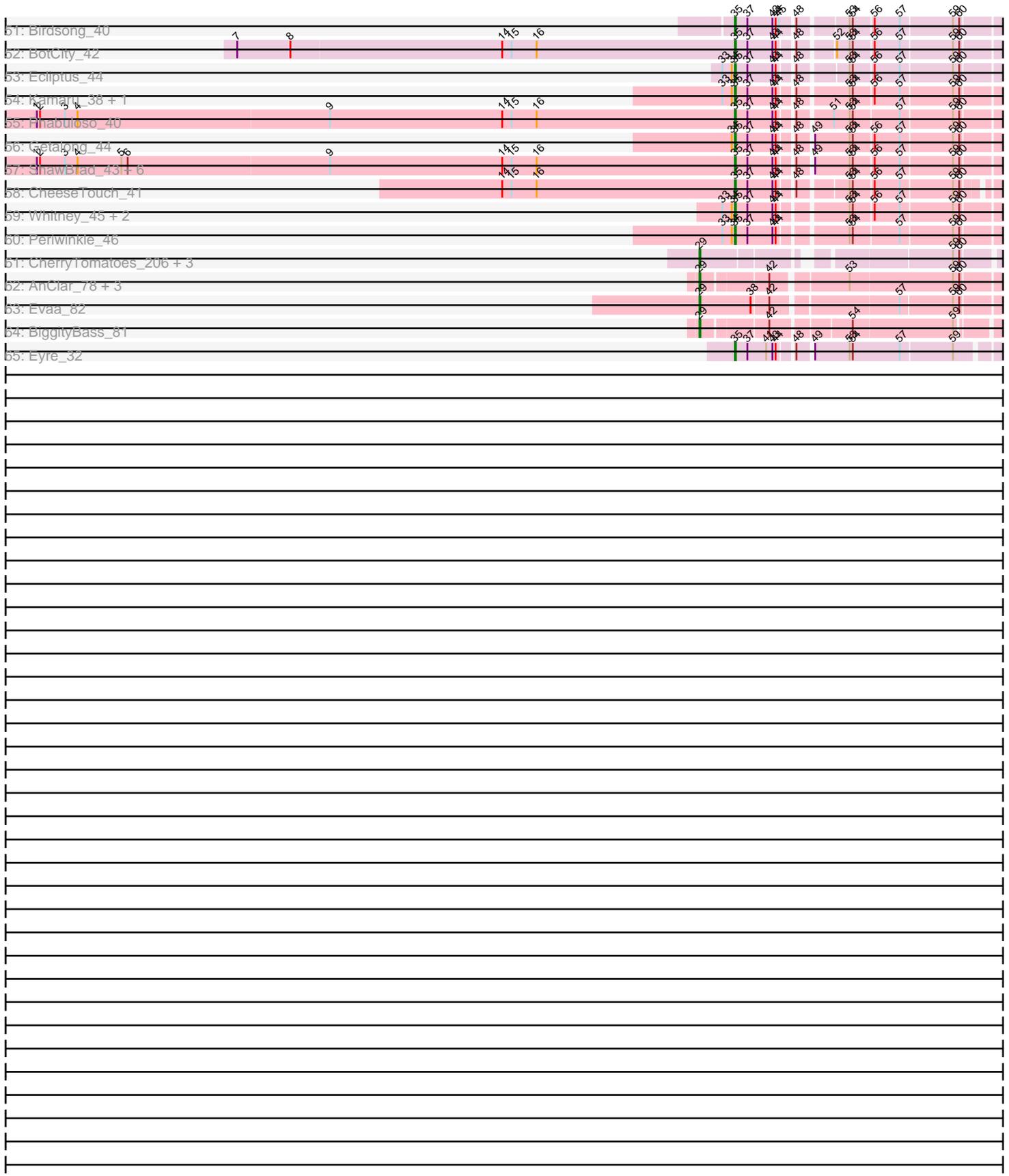61: CherryTomatoes_206 + 3
62: AnClar_78 + 3
63: Evaa_82
64: BiggityBass_81
65: Eyre_32

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 290909 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290909 has 151 members, 13 are drafts.

Phages represented in each track:
• Track 1 : GTE5_64
• Track 2 : Flapper_80
• Track 3 : MerCougar_78, Outis_76, StarStruck_76
• Track 4 : NosilaM_76
• Track 5 : SuperSulley_77, Kabluna_78, Buggaboo_77, Bonum_79
• Track 6 : RedRaider_83
• Track 7 : Float294_78, Lollipop1437_79
• Track 8 : Ennea_83
• Track 9 : Patio_78, Skysand_80
• Track 10 : BigShaq_78, BenoitCattle_77, Crete_77
• Track 11 : Adgers_80, BirksAndSocks_81, Gorko_76, Beaver_80, Squibbles_76, Boneham_80, Butterball_79
• Track 12 : Chelms_77, Linetti_77, Dakiti_78, PierreThree_76
• Track 13 : Barbochs_74, Kelzog_78, Hotorobo_77, Ekhein_77, GourdThymes_77
• Track 14 : Benczkowski14_73, Niagara_73, Kvothe_72, Tredge_73, Teech_74, Katyusha_72, Teatealatte_74
• Track 15 : Hollow_74
• Track 16 : Guacamole_35, Hitter_38, MintFen_37
• Track 17 : Delian_40, JasperJr_35, Obliviate_33, Mellie_34, PhrostedPhlake_40
• Track 18 : Walrus_37
• Track 19 : Zarbodnamra_36
• Track 20 : CaptainKirk2_37, UmaThurman_32
• Track 21 : Melba_36, BlingBling_34, Archis_40
• Track 22 : Angelique_36
• Track 23 : Ghobes_18
• Track 24 : DirtyBoi_33
• Track 25 : Hedwig_35
• Track 26 : RayTheFireFly_41
• Track 27 : BackstagePass_33
• Track 28 : PullumCavea_89, Wizard_86, Fireball_94, Arri_91, Gezellig_87, Phlop_88, CherryCola_91, KimmyK_89, Valary_92, Portcullis_91, Shinji_90
• Track 29 : TillyBobJoe_90, SmokingBunny_92, Salvador_91, Evamon_91, Togo_91
• Track 30 : Danyall_92, YungMoney_91, Mutzi_91, Nubi_94, Barb_95
• Track 31 : Twister6_90, VanDeWege_93, RogerDodger_94
• Track 32 : Jambalaya_88, Savbucketdawg_86
• Track 33 : Halo3_90
• Track 34 : PinkCoffee_93, CoveyB_93, ClamChowder_94

• Track 35 : Bakery_93
• Track 36 : Egi03_89
• Track 37 : Hans_13, Phauci_4, Ali17_9, Phinally_11, Leonard_11, Inspectinfecti_12
• Track 38 : MelBins_11
• Track 39 : Belphegor_5
• Track 40 : DoctorFroggo_10, Verity_10, Zipp_10, Delrey21_10
• Track 41 : Tardus_10
• Track 42 : Scioto_9, Natkenzie_9, Abblin_9, ViaConlectus_9
• Track 43 : BigHunkinEater_11
• Track 44 : Sampson_9
• Track 45 : Pumpkiney_10
• Track 46 : APunk_10
• Track 47 : Zitch_10
• Track 48 : Lilbeanie_11
• Track 49 : Jumbo_60
• Track 50 : DelRio_49
• Track 51 : Birdsong_40
• Track 52 : BotCity_42
• Track 53 : Ecliptus_44
• Track 54 : Kamaru_38, LitninMcQueen_37
• Track 55 : Phabuloso_40
• Track 56 : Getalong_44
• Track 57 : ShawBrad_43, Frickyeah_43, Holliday_42, Phistory_43, Lutum_43, Kenna_42, Crater_40
• Track 58 : CheeseTouch_41
• Track 59 : Whitney_45, BENtherdunthat_42, Budski_42
• Track 60 : Periwinkle_46
• Track 61 : CherryTomatoes_206, Pupper_204, SCentae_203, Skog_33
• Track 62 : AnClar_78, Sisko_81, LittleMunchkin_81, Yago84_80
• Track 63 : Evaa_82
• Track 64 : BiggityBass_81
• Track 65 : Eyre_32

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

The start number called the most often in the published annotations is 35, it was called in 30 of the 138 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Angelique_36, Archis_40, BENtherdunthat_42, BackstagePass_33, Birdsong_40, BlingBling_34, BotCity_42, Budski_42, CheeseTouch_41, Crater_40, Delian_40, DirtyBoi_33, Ecliptus_44, Eyre_32, Frickyeah_43, Getalong_44, Hedwig_35, Holliday_42, JasperJr_35, Kamaru_38, Kenna_42, LitninMcQueen_37, Lutum_43, Melba_36, Mellie_34, Obliviate_33, Periwinkle_46, Phabuloso_40, Phistory_43, PhrostedPhlake_40, RayTheFireFly_41, ShawBrad_43, Whitney_45,

Genes that have the "Most Annotated" start but do not call it:
• CaptainKirk2_37, Guacamole_35, Hitter_38, MintFen_37, UmaThurman_32, Walrus_37, Zarbodnamra_36,

Genes that do not have the "Most Annotated" start:
• APunk_10, Abblin_9, Adgers_80, Ali17_9, AnClar_78, Arri_91, Bakery_93, Barb_95, Barbochs_74, Beaver_80, Belphegor_5, Benczkowski14_73, BenoitCattle_77, BigHunkinEater_11, BigShaq_78, BiggityBass_81, BirksAndSocks_81, Boneham_80, Bonum_79, Buggaboo_77, Butterball_79, Chelms_77, CherryCola_91, CherryTomatoes_206, ClamChowder_94, CoveyB_93, Crete_77, Dakiti_78, Danyall_92, DelRio_49, Delrey21_10, DoctorFroggo_10, Egi03_89, Ekhein_77, Ennea_83, Evaa_82, Evamon_91, Fireball_94, Flapper_80, Float294_78, GTE5_64, Gezellig_87, Ghobes_18, Gorko_76, GourdThymes_77, Halo3_90, Hans_13, Hollow_74, Hotorobo_77, Inspectinfecti_12, Jambalaya_88, Jumbo_60, Kabluna_78, Katyusha_72, Kelzog_78, KimmyK_89, Kvothe_72, Leonard_11, Lilbeanie_11, Linetti_77, LittleMunchkin_81, Lollipop1437_79, MelBins_11, MerCougar_78, Mutzi_91, Natkenzie_9, Niagara_73, NosilaM_76, Nubi_94, Outis_76, Patio_78, Phauci_4, Phinally_11, Phlop_88, PierreThree_76, PinkCoffee_93, Portcullis_91, PullumCavea_89, Pumpkiney_10, Pupper_204, RedRaider_83, RogerDodger_94, SCentae_203, Salvador_91, Sampson_9, Savbucketdawg_86, Scioto_9, Shinji_90, Sisko_81, Skog_33, Skysand_80, SmokingBunny_92, Squibbles_76, StarStruck_76, SuperSulley_77, Tardus_10, Teatealatte_74, Teech_74, TillyBobJoe_90, Togo_91, Tredge_73, Twister6_90, Valary_92, VanDeWege_93, Verity_10, ViaConlectus_9, Wizard_86, Yago84_80, YungMoney_91, Zipp_10, Zitch_10,

Summary by start number:

Start 21:
• Found in 20 of 151 (13.2%) of genes in pham
• Manual Annotations of this start: 4 of 138
• Called 20.0% of time when present
• Phage (with cluster) where this start called: ClamChowder_94 (DC1), CoveyB_93 (DC1), Egi03_89 (DC1), PinkCoffee_93 (DC1),

Start 25:
• Found in 1 of 151 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GTE5_64 (CR1),

Start 29:
• Found in 25 of 151 (16.6%) of genes in pham
• Manual Annotations of this start: 14 of 138
• Called 56.0% of time when present
• Phage (with cluster) where this start called: AnClar_78 (DR), BiggityBass_81 (DR), CherryTomatoes_206 (DO), Evaa_82 (DR), Guacamole_35 (CV), Hitter_38 (CV), LittleMunchkin_81 (DR), MintFen_37 (CV), Pupper_204 (DO), SCentae_203 (DO), Sisko_81 (DR), Skog_33 (DO), Yago84_80 (DR), Zarbodnamra_36 (CV),

Start 30:
• Found in 16 of 151 (10.6%) of genes in pham
• Manual Annotations of this start: 15 of 138
• Called 93.8% of time when present
• Phage (with cluster) where this start called: Bonum_79 (CR2), Buggaboo_77 (CR2), Ennea_83 (CR3), Flapper_80 (CR1), Float294_78 (CR3), Kabluna_78 (CR2), Lollipop1437_79 (CR3), MerCougar_78 (CR2), NosilaM_76 (CR2), Outis_76 (CR2), Patio_78 (CR3), RedRaider_83 (CR3), Skysand_80 (CR3), StarStruck_76 (CR2),

SuperSulley_77 (CR2),

Start 31:
• Found in 19 of 151 (12.6%) of genes in pham
• Manual Annotations of this start: 17 of 138
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adgers_80 (CS2), Barbochs_74 (CS2), Beaver_80 (CS2), BenoitCattle_77 (CS2), BigShaq_78 (CS2), BirksAndSocks_81 (CS2), Boneham_80 (CS2), Butterball_79 (CS2), Chelms_77 (CS2), Crete_77 (CS2), Dakiti_78 (CS2), Ekhein_77 (CS2), Gorko_76 (CS2), GourdThymes_77 (CS2), Hotorobo_77 (CS2), Kelzog_78 (CS2), Linetti_77 (CS2), PierreThree_76 (CS2), Squibbles_76 (CS2),

Start 32:
• Found in 9 of 151 (6.0%) of genes in pham
• Manual Annotations of this start: 8 of 138
• Called 88.9% of time when present
• Phage (with cluster) where this start called: Benczkowski14_73 (CS4), Hollow_74 (CS4), Katyusha_72 (CS4), Kvothe_72 (CS4), Niagara_73 (CS4), Teatealatte_74 (CS4), Teech_74 (CS4), Tredge_73 (CS4),

Start 33:
• Found in 42 of 151 (27.8%) of genes in pham
• Manual Annotations of this start: 27 of 138
• Called 69.0% of time when present
• Phage (with cluster) where this start called: Arri_91 (DC1), Bakery_93 (DC1), Barb_95 (DC1), CherryCola_91 (DC1), Danyall_92 (DC1), DelRio_49 (DI), Evamon_91 (DC1), Fireball_94 (DC1), Gezellig_87 (DC1), Halo3_90 (DC1), Jambalaya_88 (DC1), KimmyK_89 (DC1), Mutzi_91 (DC1), Nubi_94 (DC1), Phlop_88 (DC1), Portcullis_91 (DC1), PullumCavea_89 (DC1), RogerDodger_94 (DC1), Salvador_91 (DC1), Savbucketdawg_86 (DC1), Shinji_90 (DC1), SmokingBunny_92 (DC1), TillyBobJoe_90 (DC1), Togo_91 (DC1), Twister6_90 (DC1), Valary_92 (DC1), VanDeWege_93 (DC1), Wizard_86 (DC1), YungMoney_91 (DC1),

Start 34:
• Found in 10 of 151 (6.6%) of genes in pham
• Manual Annotations of this start: 1 of 138
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Jumbo_60 (DF3),

Start 35:
• Found in 40 of 151 (26.5%) of genes in pham
• Manual Annotations of this start: 30 of 138
• Called 82.5% of time when present
• Phage (with cluster) where this start called: Angelique_36 (CY1), Archis_40 (CV), BENtherdunthat_42 (DN1), BackstagePass_33 (DB), Birdsong_40 (DN), BlingBling_34 (CV), BotCity_42 (DN), Budski_42 (DN), CheeseTouch_41 (DN1), Crater_40 (DN3), Delian_40 (CV), DirtyBoi_33 (DB), Ecliptus_44 (DN), Eyre_32 (singleton), Frickyeah_43 (DN1), Getalong_44 (DN1), Hedwig_35 (DB), Holliday_42 (DN1), JasperJr_35 (CV), Kamaru_38 (DN1), Kenna_42 (DN1), LitninMcQueen_37 (DN1), Lutum_43 (DN1), Melba_36 (CV), Mellie_34 (CV), Obliviate_33 (CV), Periwinkle_46 (DN1), Phabuloso_40 (DN1), Phistory_43 (DN1), PhrostedPhlake_40 (CV), RayTheFireFly_41 (DB), ShawBrad_43 (DN1), Whitney_45 (DN1),

Start 37:
- Found in 62 of 151 (41.1%) of genes in pham
- Manual Annotations of this start: 21 of 138
- Called 41.9% of time when present
- Phage (with cluster) where this start called: APunk_10 (DE4), Abblin_9 (DE4), Ali17_9 (DE2), Belphegor_5 (DE2), BigHunkinEater_11 (DE4), CaptainKirk2_37 (CV), Delrey21_10 (DE4), DoctorFroggo_10 (DE4), Hans_13 (DE2), Inspectinfecti_12 (DE2), Leonard_11 (DE2), Lilbeanie_11 (DE5), MelBins_11 (DE2), Natkenzie_9 (DE4), Phauci_4 (DE2), Phinally_11 (DE2), Pumpkiney_10 (DE4), Sampson_9 (DE4), Scioto_9 (DE4), Tardus_10 (DE4), UmaThurman_32 (CV), Verity_10 (DE4), ViaConlectus_9 (DE4), Walrus_37 (CV), Zipp_10 (DE4), Zitch_10 (DE4),

Start 50:
- Found in 1 of 151 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 138
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ghobes_18 (DA),

Summary by clusters:

There are 21 clusters represented in this pham: DO, CR3, singleton, CR1, DN, DI, DB, DE2, DE4, CR2, DF3, DA, CY1, DN1, DE5, DN3, CS4, CS2, DR, CV, DC1,

Info for manual annotations of cluster CR1:
- Start number 30 was manually annotated 1 time for cluster CR1.

Info for manual annotations of cluster CR2:
- Start number 30 was manually annotated 8 times for cluster CR2.

Info for manual annotations of cluster CR3:
- Start number 30 was manually annotated 6 times for cluster CR3.

Info for manual annotations of cluster CS2:
- Start number 31 was manually annotated 17 times for cluster CS2.

Info for manual annotations of cluster CS4:
- Start number 32 was manually annotated 8 times for cluster CS4.

Info for manual annotations of cluster CV:
- Start number 29 was manually annotated 4 times for cluster CV.
- Start number 35 was manually annotated 8 times for cluster CV.
- Start number 37 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster CY1:
- Start number 35 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster DA:
- Start number 50 was manually annotated 1 time for cluster DA.

Info for manual annotations of cluster DB:
- Start number 35 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DC1:
•Start number 21 was manually annotated 4 times for cluster DC1.
•Start number 33 was manually annotated 26 times for cluster DC1.

Info for manual annotations of cluster DE2:
•Start number 37 was manually annotated 8 times for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 37 was manually annotated 9 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 37 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DF3:
•Start number 34 was manually annotated 1 time for cluster DF3.

Info for manual annotations of cluster DI:
•Start number 33 was manually annotated 1 time for cluster DI.

Info for manual annotations of cluster DN:
•Start number 35 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 35 was manually annotated 12 times for cluster DN1.

Info for manual annotations of cluster DN3:
•Start number 35 was manually annotated 1 time for cluster DN3.

Info for manual annotations of cluster DO:
•Start number 29 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DR:
•Start number 29 was manually annotated 6 times for cluster DR.

Gene Information:
Gene: APunk_10 Start: 5832, Stop: 6140, Start Num: 37
Candidate Starts for APunk_10:
(26, 5769), (28, 5787), (Start: 37 @5832 has 21 MA's), (54, 5928), (55, 5934), (57, 5970), (59, 6018), (60, 6024),

Gene: Abblin_9 Start: 5353, Stop: 5655, Start Num: 37
Candidate Starts for Abblin_9:
(Start: 37 @5353 has 21 MA's), (54, 5443), (57, 5485), (59, 5533), (60, 5539),

Gene: Adgers_80 Start: 60593, Stop: 60273, Start Num: 31
Candidate Starts for Adgers_80:
(Start: 31 @60593 has 17 MA's), (60, 60380),

Gene: Ali17_9 Start: 5663, Stop: 5983, Start Num: 37
Candidate Starts for Ali17_9:

(Start: 37 @5663 has 21 MA's), (54, 5753), (55, 5759), (57, 5795), (60, 5852),

Gene: AnClar_78 Start: 60612, Stop: 60265, Start Num: 29
Candidate Starts for AnClar_78:
(Start: 29 @60612 has 14 MA's), (42, 60555), (53, 60489), (59, 60393), (60, 60387),

Gene: Angelique_36 Start: 29622, Stop: 29323, Start Num: 35
Candidate Starts for Angelique_36:
(Start: 35 @29622 has 30 MA's), (Start: 37 @29610 has 21 MA's), (43, 29586), (44, 29583), (48, 29571), (49, 29559), (53, 29526), (54, 29523), (57, 29478), (59, 29430),

Gene: Archis_40 Start: 30536, Stop: 30222, Start Num: 35
Candidate Starts for Archis_40:
(Start: 29 @30569 has 14 MA's), (Start: 35 @30536 has 30 MA's), (Start: 37 @30524 has 21 MA's), (40, 30512), (43, 30500), (44, 30497), (48, 30485), (49, 30473), (53, 30440), (54, 30437), (56, 30416), (57, 30392), (59, 30344), (60, 30338),

Gene: Arri_91 Start: 57646, Stop: 57308, Start Num: 33
Candidate Starts for Arri_91:
(20, 57736), (Start: 21 @57733 has 4 MA's), (26, 57688), (Start: 33 @57646 has 27 MA's), (48, 57580), (57, 57487), (59, 57439), (60, 57433),

Gene: BENtherdunthat_42 Start: 29776, Stop: 29441, Start Num: 35
Candidate Starts for BENtherdunthat_42:
(Start: 33 @29788 has 27 MA's), (Start: 34 @29779 has 1 MA's), (Start: 35 @29776 has 30 MA's), (Start: 37 @29764 has 21 MA's), (43, 29740), (44, 29737), (53, 29680), (54, 29677), (56, 29659), (57, 29635), (59, 29587), (60, 29581),

Gene: BackstagePass_33 Start: 28562, Stop: 28269, Start Num: 35
Candidate Starts for BackstagePass_33:
(Start: 35 @28562 has 30 MA's), (43, 28526), (44, 28523), (48, 28511), (49, 28499), (53, 28469), (54, 28466), (55, 28460), (56, 28448), (57, 28424), (60, 28367),

Gene: Bakery_93 Start: 59467, Stop: 59129, Start Num: 33
Candidate Starts for Bakery_93:
(22, 59542), (24, 59521), (26, 59509), (Start: 33 @59467 has 27 MA's), (48, 59401), (51, 59371), (53, 59356), (57, 59308), (59, 59260), (60, 59254),

Gene: Barb_95 Start: 58510, Stop: 58172, Start Num: 33
Candidate Starts for Barb_95:
(20, 58600), (Start: 21 @58597 has 4 MA's), (26, 58552), (Start: 33 @58510 has 27 MA's), (48, 58444), (53, 58399), (57, 58351), (59, 58303), (60, 58297),

Gene: Barbochs_74 Start: 59970, Stop: 59629, Start Num: 31
Candidate Starts for Barbochs_74:
(Start: 31 @59970 has 17 MA's), (60, 59757), (61, 59748),

Gene: Beaver_80 Start: 61914, Stop: 61585, Start Num: 31
Candidate Starts for Beaver_80:
(Start: 31 @61914 has 17 MA's), (60, 61701),

Gene: Belphegor_5 Start: 2778, Stop: 3092, Start Num: 37
Candidate Starts for Belphegor_5:

(11, 2478), (12, 2493), (Start: 37 @2778 has 21 MA's), (54, 2871), (55, 2877), (57, 2913), (59, 2964), (60, 2970),

Gene: Benczkowski14_73 Start: 60661, Stop: 60341, Start Num: 32
Candidate Starts for Benczkowski14_73:
(Start: 32 @60661 has 8 MA's), (60, 60451),

Gene: BenoitCattle_77 Start: 60565, Stop: 60242, Start Num: 31
Candidate Starts for BenoitCattle_77:
(Start: 31 @60565 has 17 MA's), (48, 60496), (60, 60346),

Gene: BigHunkinEater_11 Start: 5283, Stop: 5588, Start Num: 37
Candidate Starts for BigHunkinEater_11:
(Start: 37 @5283 has 21 MA's), (54, 5376), (57, 5418), (59, 5466), (60, 5472),

Gene: BigShaq_78 Start: 60737, Stop: 60411, Start Num: 31
Candidate Starts for BigShaq_78:
(Start: 31 @60737 has 17 MA's), (48, 60668), (60, 60524),

Gene: BiggityBass_81 Start: 62080, Stop: 61751, Start Num: 29
Candidate Starts for BiggityBass_81:
(Start: 29 @62080 has 14 MA's), (42, 62023), (54, 61954), (59, 61861),

Gene: Birdsong_40 Start: 30587, Stop: 30261, Start Num: 35
Candidate Starts for Birdsong_40:
(Start: 35 @30587 has 30 MA's), (Start: 37 @30575 has 21 MA's), (43, 30551), (44, 30548), (45, 30545), (48, 30533), (53, 30491), (54, 30488), (56, 30470), (57, 30446), (59, 30398), (60, 30392),

Gene: BirksAndSocks_81 Start: 62036, Stop: 61731, Start Num: 31
Candidate Starts for BirksAndSocks_81:
(Start: 31 @62036 has 17 MA's), (60, 61823),

Gene: BlingBling_34 Start: 30550, Stop: 30248, Start Num: 35
Candidate Starts for BlingBling_34:
(Start: 29 @30583 has 14 MA's), (Start: 35 @30550 has 30 MA's), (Start: 37 @30538 has 21 MA's), (40, 30526), (43, 30514), (44, 30511), (48, 30499), (49, 30487), (53, 30454), (54, 30451), (56, 30430), (57, 30406), (59, 30358), (60, 30352),

Gene: Boneham_80 Start: 61961, Stop: 61656, Start Num: 31
Candidate Starts for Boneham_80:
(Start: 31 @61961 has 17 MA's), (60, 61748),

Gene: Bonum_79 Start: 57724, Stop: 57392, Start Num: 30
Candidate Starts for Bonum_79:
(Start: 30 @57724 has 15 MA's), (36, 57697), (54, 57610), (59, 57520), (60, 57514),

Gene: BotCity_42 Start: 30361, Stop: 30053, Start Num: 35
Candidate Starts for BotCity_42:
(7, 30835), (8, 30784), (14, 30583), (15, 30574), (16, 30550), (Start: 35 @30361 has 30 MA's), (Start: 37 @30349 has 21 MA's), (43, 30325), (44, 30322), (48, 30310), (52, 30280), (53, 30268), (54, 30265), (56, 30247), (57, 30223), (59, 30175), (60, 30169),

Gene: Budski_42 Start: 31521, Stop: 31192, Start Num: 35

Candidate Starts for Budski_42:
(Start: 33 @31533 has 27 MA's), (Start: 34 @31524 has 1 MA's), (Start: 35 @31521 has 30 MA's), (Start: 37 @31509 has 21 MA's), (43, 31485), (44, 31482), (53, 31425), (54, 31422), (56, 31404), (57, 31380), (59, 31332), (60, 31326),

Gene: Buggaboo_77 Start: 58290, Stop: 57958, Start Num: 30
Candidate Starts for Buggaboo_77:
(Start: 30 @58290 has 15 MA's), (36, 58263), (54, 58176), (59, 58086), (60, 58080),

Gene: Butterball_79 Start: 61966, Stop: 61661, Start Num: 31
Candidate Starts for Butterball_79:
(Start: 31 @61966 has 17 MA's), (60, 61753),

Gene: CaptainKirk2_37 Start: 29823, Stop: 29527, Start Num: 37
Candidate Starts for CaptainKirk2_37:
(Start: 29 @29868 has 14 MA's), (Start: 35 @29835 has 30 MA's), (Start: 37 @29823 has 21 MA's), (43, 29799), (44, 29796), (48, 29784), (49, 29772), (53, 29739), (54, 29736), (56, 29715), (57, 29691), (59, 29643), (60, 29637),

Gene: CheeseTouch_41 Start: 28097, Stop: 27792, Start Num: 35
Candidate Starts for CheeseTouch_41:
(14, 28319), (15, 28310), (16, 28286), (Start: 35 @28097 has 30 MA's), (Start: 37 @28085 has 21 MA's), (43, 28061), (44, 28058), (48, 28046), (53, 28004), (54, 28001), (56, 27983), (57, 27959), (59, 27911), (60, 27905),

Gene: Chelms_77 Start: 60667, Stop: 60350, Start Num: 31
Candidate Starts for Chelms_77:
(Start: 31 @60667 has 17 MA's), (60, 60454),

Gene: CherryCola_91 Start: 58059, Stop: 57721, Start Num: 33
Candidate Starts for CherryCola_91:
(20, 58149), (Start: 21 @58146 has 4 MA's), (26, 58101), (Start: 33 @58059 has 27 MA's), (48, 57993), (57, 57900), (59, 57852), (60, 57846),

Gene: CherryTomatoes_206 Start: 140218, Stop: 140541, Start Num: 29
Candidate Starts for CherryTomatoes_206:
(Start: 29 @140218 has 14 MA's), (59, 140422), (60, 140428),

Gene: ClamChowder_94 Start: 58597, Stop: 58172, Start Num: 21
Candidate Starts for ClamChowder_94:
(20, 58600), (Start: 21 @58597 has 4 MA's), (26, 58552), (Start: 33 @58510 has 27 MA's), (48, 58444), (53, 58399), (57, 58351), (59, 58303), (60, 58297),

Gene: CoveyB_93 Start: 58084, Stop: 57659, Start Num: 21
Candidate Starts for CoveyB_93:
(20, 58087), (Start: 21 @58084 has 4 MA's), (26, 58039), (Start: 33 @57997 has 27 MA's), (48, 57931), (53, 57886), (57, 57838), (59, 57790), (60, 57784),

Gene: Crater_40 Start: 29695, Stop: 29378, Start Num: 35
Candidate Starts for Crater_40:
(1, 30361), (2, 30358), (3, 30334), (4, 30322), (5, 30280), (6, 30274), (9, 30082), (14, 29917), (15, 29908), (16, 29884), (Start: 35 @29695 has 30 MA's), (Start: 37 @29683 has 21 MA's), (43, 29659), (44, 29656), (48, 29644), (49, 29632), (53, 29599), (54, 29596), (56, 29578), (57, 29554), (59, 29506),

(60, 29500),

Gene: Crete_77 Start: 60795, Stop: 60469, Start Num: 31
Candidate Starts for Crete_77:
(Start: 31 @60795 has 17 MA's), (48, 60726), (60, 60582),

Gene: Dakiti_78 Start: 61535, Stop: 61218, Start Num: 31
Candidate Starts for Dakiti_78:
(Start: 31 @61535 has 17 MA's), (60, 61322),

Gene: Danyall_92 Start: 57691, Stop: 57353, Start Num: 33
Candidate Starts for Danyall_92:
(20, 57781), (Start: 21 @57778 has 4 MA's), (26, 57733), (Start: 33 @57691 has 27 MA's), (48, 57625),
(53, 57580), (57, 57532), (59, 57484), (60, 57478),

Gene: DelRio_49 Start: 36105, Stop: 36449, Start Num: 33
Candidate Starts for DelRio_49:
(19, 36000), (Start: 32 @36102 has 8 MA's), (Start: 33 @36105 has 27 MA's), (39, 36138), (51, 36207),
(53, 36222), (55, 36231),

Gene: Delian_40 Start: 29833, Stop: 29525, Start Num: 35
Candidate Starts for Delian_40:
(Start: 29 @29866 has 14 MA's), (Start: 35 @29833 has 30 MA's), (Start: 37 @29821 has 21 MA's),
(43, 29797), (44, 29794), (48, 29782), (49, 29770), (53, 29737), (54, 29734), (56, 29713), (57, 29689),
(59, 29641), (60, 29635),

Gene: Delrey21_10 Start: 5803, Stop: 6096, Start Num: 37
Candidate Starts for Delrey21_10:
(Start: 37 @5803 has 21 MA's), (39, 5812), (53, 5884), (57, 5929), (59, 5980), (60, 5986),

Gene: DirtyBoi_33 Start: 28465, Stop: 28172, Start Num: 35
Candidate Starts for DirtyBoi_33:
(Start: 33 @28477 has 27 MA's), (Start: 34 @28468 has 1 MA's), (Start: 35 @28465 has 30 MA's),
(Start: 37 @28453 has 21 MA's), (43, 28429), (44, 28426), (48, 28414), (53, 28372), (54, 28369), (55,
28363), (56, 28351), (57, 28327), (60, 28270),

Gene: DoctorFroggo_10 Start: 5803, Stop: 6096, Start Num: 37
Candidate Starts for DoctorFroggo_10:
(Start: 37 @5803 has 21 MA's), (39, 5812), (53, 5884), (57, 5929), (59, 5980), (60, 5986),

Gene: Ecliptus_44 Start: 32044, Stop: 31706, Start Num: 35
Candidate Starts for Ecliptus_44:
(Start: 33 @32056 has 27 MA's), (Start: 34 @32047 has 1 MA's), (Start: 35 @32044 has 30 MA's),
(Start: 37 @32032 has 21 MA's), (43, 32008), (44, 32005), (48, 31993), (53, 31951), (54, 31948), (56,
31930), (57, 31906), (59, 31858), (60, 31852),

Gene: Egi03_89 Start: 57168, Stop: 56743, Start Num: 21
Candidate Starts for Egi03_89:
(20, 57171), (Start: 21 @57168 has 4 MA's), (26, 57123), (Start: 33 @57081 has 27 MA's), (48, 57015),
(57, 56922), (59, 56874), (60, 56868),

Gene: Ekhein_77 Start: 59871, Stop: 59527, Start Num: 31
Candidate Starts for Ekhein_77:

(Start: 31 @59871 has 17 MA's), (60, 59658), (61, 59649),

Gene: Ennea_83 Start: 59022, Stop: 58708, Start Num: 30
Candidate Starts for Ennea_83:
(27, 59040), (Start: 30 @59022 has 15 MA's), (41, 58977), (60, 58815),

Gene: Evaa_82 Start: 60219, Stop: 59869, Start Num: 29
Candidate Starts for Evaa_82:
(Start: 29 @60219 has 14 MA's), (38, 60171), (42, 60156), (57, 60045), (59, 59997), (60, 59991),

Gene: Evamon_91 Start: 57458, Stop: 57120, Start Num: 33
Candidate Starts for Evamon_91:
(22, 57530), (26, 57500), (Start: 33 @57458 has 27 MA's), (48, 57392), (57, 57299), (59, 57251), (60, 57245),

Gene: Eyre_32 Start: 25507, Stop: 25208, Start Num: 35
Candidate Starts for Eyre_32:
(Start: 35 @25507 has 30 MA's), (Start: 37 @25495 has 21 MA's), (41, 25477), (43, 25471), (44, 25468), (48, 25456), (49, 25444), (53, 25411), (54, 25408), (57, 25363), (59, 25315),

Gene: Fireball_94 Start: 57920, Stop: 57582, Start Num: 33
Candidate Starts for Fireball_94:
(20, 58010), (Start: 21 @58007 has 4 MA's), (26, 57962), (Start: 33 @57920 has 27 MA's), (48, 57854), (57, 57761), (59, 57713), (60, 57707),

Gene: Flapper_80 Start: 58306, Stop: 57980, Start Num: 30
Candidate Starts for Flapper_80:
(Start: 30 @58306 has 15 MA's), (36, 58282), (41, 58261), (47, 58240), (59, 58105), (60, 58099),

Gene: Float294_78 Start: 58928, Stop: 58614, Start Num: 30
Candidate Starts for Float294_78:
(Start: 30 @58928 has 15 MA's), (41, 58883), (60, 58721),

Gene: Frickyeah_43 Start: 29647, Stop: 29330, Start Num: 35
Candidate Starts for Frickyeah_43:
(1, 30313), (2, 30310), (3, 30286), (4, 30274), (5, 30232), (6, 30226), (9, 30034), (14, 29869), (15, 29860), (16, 29836), (Start: 35 @29647 has 30 MA's), (Start: 37 @29635 has 21 MA's), (43, 29611), (44, 29608), (48, 29596), (49, 29584), (53, 29551), (54, 29548), (56, 29530), (57, 29506), (59, 29458), (60, 29452),

Gene: GTE5_64 Start: 50838, Stop: 50473, Start Num: 25
Candidate Starts for GTE5_64:
(25, 50838), (Start: 30 @50799 has 15 MA's), (36, 50775), (41, 50754), (48, 50730), (59, 50598), (60, 50592),

Gene: Getalong_44 Start: 32367, Stop: 32050, Start Num: 35
Candidate Starts for Getalong_44:
(Start: 34 @32370 has 1 MA's), (Start: 35 @32367 has 30 MA's), (Start: 37 @32355 has 21 MA's), (43, 32331), (44, 32328), (48, 32316), (49, 32304), (53, 32271), (54, 32268), (56, 32250), (57, 32226), (59, 32178), (60, 32172),

Gene: Gezellig_87 Start: 57304, Stop: 56966, Start Num: 33
Candidate Starts for Gezellig_87:

(20, 57394), (Start: 21 @57391 has 4 MA's), (26, 57346), (Start: 33 @57304 has 27 MA's), (48, 57238), (57, 57145), (59, 57097), (60, 57091),

Gene: Ghobes_18 Start: 16697, Stop: 16407, Start Num: 50
Candidate Starts for Ghobes_18:
(13, 17057), (Start: 50 @16697 has 1 MA's),

Gene: Gorko_76 Start: 59788, Stop: 59468, Start Num: 31
Candidate Starts for Gorko_76:
(Start: 31 @59788 has 17 MA's), (60, 59575),

Gene: GourdThymes_77 Start: 60728, Stop: 60423, Start Num: 31
Candidate Starts for GourdThymes_77:
(Start: 31 @60728 has 17 MA's), (60, 60515), (61, 60506),

Gene: Guacamole_35 Start: 30431, Stop: 30090, Start Num: 29
Candidate Starts for Guacamole_35:
(Start: 29 @30431 has 14 MA's), (Start: 35 @30398 has 30 MA's), (Start: 37 @30386 has 21 MA's), (43, 30362), (44, 30359), (48, 30347), (49, 30335), (53, 30302), (54, 30299), (56, 30278), (57, 30254), (59, 30206), (60, 30200),

Gene: Halo3_90 Start: 58179, Stop: 57841, Start Num: 33
Candidate Starts for Halo3_90:
(17, 58332), (18, 58311), (26, 58221), (Start: 33 @58179 has 27 MA's), (48, 58113), (53, 58068), (57, 58020), (59, 57972), (60, 57966),

Gene: Hans_13 Start: 6198, Stop: 6524, Start Num: 37
Candidate Starts for Hans_13:
(Start: 37 @6198 has 21 MA's), (54, 6291), (55, 6297), (57, 6333), (60, 6390),

Gene: Hedwig_35 Start: 28932, Stop: 28639, Start Num: 35
Candidate Starts for Hedwig_35:
(Start: 35 @28932 has 30 MA's), (Start: 37 @28920 has 21 MA's), (43, 28896), (44, 28893), (48, 28881), (53, 28839), (54, 28836), (55, 28830), (56, 28818), (57, 28794), (60, 28737),

Gene: Hitter_38 Start: 30165, Stop: 29812, Start Num: 29
Candidate Starts for Hitter_38:
(Start: 29 @30165 has 14 MA's), (Start: 35 @30132 has 30 MA's), (Start: 37 @30120 has 21 MA's), (43, 30096), (44, 30093), (48, 30081), (49, 30069), (53, 30036), (54, 30033), (56, 30012), (57, 29988), (59, 29940), (60, 29934),

Gene: Holliday_42 Start: 30222, Stop: 29905, Start Num: 35
Candidate Starts for Holliday_42:
(1, 30888), (2, 30885), (3, 30861), (4, 30849), (5, 30807), (6, 30801), (9, 30609), (14, 30444), (15, 30435), (16, 30411), (Start: 35 @30222 has 30 MA's), (Start: 37 @30210 has 21 MA's), (43, 30186), (44, 30183), (48, 30171), (49, 30159), (53, 30126), (54, 30123), (56, 30105), (57, 30081), (59, 30033), (60, 30027),

Gene: Hollow_74 Start: 60832, Stop: 60512, Start Num: 32
Candidate Starts for Hollow_74:
(Start: 32 @60832 has 8 MA's), (46, 60772), (59, 60628), (60, 60622),

Gene: Hotorobo_77 Start: 60751, Stop: 60410, Start Num: 31

Candidate Starts for Hotorobo_77:
(Start: 31 @60751 has 17 MA's), (60, 60538), (61, 60529),

Gene: Inspectinfecti_12 Start: 6720, Stop: 7040, Start Num: 37
Candidate Starts for Inspectinfecti_12:
(Start: 37 @6720 has 21 MA's), (54, 6810), (55, 6816), (57, 6852), (60, 6909),

Gene: Jambalaya_88 Start: 56761, Stop: 56423, Start Num: 33
Candidate Starts for Jambalaya_88:
(10, 57106), (26, 56803), (Start: 33 @56761 has 27 MA's), (48, 56695), (57, 56602), (59, 56554), (60, 56548),

Gene: JasperJr_35 Start: 30398, Stop: 30090, Start Num: 35
Candidate Starts for JasperJr_35:
(Start: 29 @30431 has 14 MA's), (Start: 35 @30398 has 30 MA's), (Start: 37 @30386 has 21 MA's), (43, 30362), (44, 30359), (48, 30347), (49, 30335), (53, 30302), (54, 30299), (56, 30278), (57, 30254), (59, 30206), (60, 30200),

Gene: Jumbo_60 Start: 54431, Stop: 54102, Start Num: 34
Candidate Starts for Jumbo_60:
(Start: 34 @54431 has 1 MA's), (57, 54281), (58, 54266),

Gene: Kabluna_78 Start: 57062, Stop: 56721, Start Num: 30
Candidate Starts for Kabluna_78:
(Start: 30 @57062 has 15 MA's), (36, 57035), (54, 56948), (59, 56858), (60, 56852),

Gene: Kamaru_38 Start: 29300, Stop: 28986, Start Num: 35
Candidate Starts for Kamaru_38:
(Start: 33 @29312 has 27 MA's), (Start: 34 @29303 has 1 MA's), (Start: 35 @29300 has 30 MA's), (Start: 37 @29288 has 21 MA's), (43, 29264), (44, 29261), (48, 29249), (53, 29204), (54, 29201), (56, 29183), (57, 29159), (59, 29111), (60, 29105),

Gene: Katyusha_72 Start: 60661, Stop: 60341, Start Num: 32
Candidate Starts for Katyusha_72:
(Start: 32 @60661 has 8 MA's), (60, 60451),

Gene: Kelzog_78 Start: 60628, Stop: 60299, Start Num: 31
Candidate Starts for Kelzog_78:
(Start: 31 @60628 has 17 MA's), (60, 60415), (61, 60406),

Gene: Kenna_42 Start: 30558, Stop: 30241, Start Num: 35
Candidate Starts for Kenna_42:
(1, 31224), (2, 31221), (3, 31197), (4, 31185), (5, 31143), (6, 31137), (9, 30945), (14, 30780), (15, 30771), (16, 30747), (Start: 35 @30558 has 30 MA's), (Start: 37 @30546 has 21 MA's), (43, 30522), (44, 30519), (48, 30507), (49, 30495), (53, 30462), (54, 30459), (56, 30441), (57, 30417), (59, 30369), (60, 30363),

Gene: KimmyK_89 Start: 57751, Stop: 57413, Start Num: 33
Candidate Starts for KimmyK_89:
(20, 57841), (Start: 21 @57838 has 4 MA's), (26, 57793), (Start: 33 @57751 has 27 MA's), (48, 57685), (57, 57592), (59, 57544), (60, 57538),

Gene: Kvothe_72 Start: 60503, Stop: 60183, Start Num: 32

Candidate Starts for Kvothe_72:
(Start: 32 @60503 has 8 MA's), (60, 60293),

Gene: Leonard_11 Start: 6315, Stop: 6635, Start Num: 37
Candidate Starts for Leonard_11:
(Start: 37 @6315 has 21 MA's), (54, 6405), (55, 6411), (57, 6447), (60, 6504),

Gene: Lilbeanie_11 Start: 4525, Stop: 4851, Start Num: 37
Candidate Starts for Lilbeanie_11:
(Start: 37 @4525 has 21 MA's), (53, 4612), (57, 4657), (60, 4711),

Gene: Linetti_77 Start: 61689, Stop: 61372, Start Num: 31
Candidate Starts for Linetti_77:
(Start: 31 @61689 has 17 MA's), (60, 61476),

Gene: LitninMcQueen_37 Start: 29049, Stop: 28729, Start Num: 35
Candidate Starts for LitninMcQueen_37:
(Start: 33 @29061 has 27 MA's), (Start: 34 @29052 has 1 MA's), (Start: 35 @29049 has 30 MA's),
(Start: 37 @29037 has 21 MA's), (43, 29013), (44, 29010), (48, 28998), (53, 28953), (54, 28950), (56,
28932), (57, 28908), (59, 28860), (60, 28854),

Gene: LittleMunchkin_81 Start: 61979, Stop: 61644, Start Num: 29
Candidate Starts for LittleMunchkin_81:
(Start: 29 @61979 has 14 MA's), (42, 61922), (53, 61856), (59, 61760), (60, 61754),

Gene: Lollipop1437_79 Start: 58702, Stop: 58388, Start Num: 30
Candidate Starts for Lollipop1437_79:
(Start: 30 @58702 has 15 MA's), (41, 58657), (60, 58495),

Gene: Lutum_43 Start: 30558, Stop: 30241, Start Num: 35
Candidate Starts for Lutum_43:
(1, 31224), (2, 31221), (3, 31197), (4, 31185), (5, 31143), (6, 31137), (9, 30945), (14, 30780), (15,
30771), (16, 30747), (Start: 35 @30558 has 30 MA's), (Start: 37 @30546 has 21 MA's), (43, 30522),
(44, 30519), (48, 30507), (49, 30495), (53, 30462), (54, 30459), (56, 30441), (57, 30417), (59, 30369),
(60, 30363),

Gene: MelBins_11 Start: 6093, Stop: 6413, Start Num: 37
Candidate Starts for MelBins_11:
(23, 6012), (Start: 37 @6093 has 21 MA's), (54, 6183), (55, 6189), (57, 6225), (60, 6282),

Gene: Melba_36 Start: 30375, Stop: 30085, Start Num: 35
Candidate Starts for Melba_36:
(Start: 29 @30408 has 14 MA's), (Start: 35 @30375 has 30 MA's), (Start: 37 @30363 has 21 MA's),
(40, 30351), (43, 30339), (44, 30336), (48, 30324), (49, 30312), (53, 30279), (54, 30276), (56, 30255),
(57, 30231), (59, 30183), (60, 30177),

Gene: Mellie_34 Start: 28646, Stop: 28332, Start Num: 35
Candidate Starts for Mellie_34:
(Start: 29 @28679 has 14 MA's), (Start: 35 @28646 has 30 MA's), (Start: 37 @28634 has 21 MA's),
(43, 28610), (44, 28607), (48, 28595), (49, 28583), (53, 28550), (54, 28547), (56, 28529), (57, 28505),
(59, 28457), (60, 28451),

Gene: MerCougar_78 Start: 58752, Stop: 58420, Start Num: 30

Candidate Starts for MerCougar_78:
(Start: 30 @58752 has 15 MA's), (41, 58707), (54, 58641), (60, 58545),

Gene: MintFen_37 Start: 30482, Stop: 30147, Start Num: 29
Candidate Starts for MintFen_37:
(Start: 29 @30482 has 14 MA's), (Start: 35 @30449 has 30 MA's), (Start: 37 @30437 has 21 MA's),
(43, 30413), (44, 30410), (48, 30398), (49, 30386), (53, 30353), (54, 30350), (56, 30329), (57, 30305),
(59, 30257), (60, 30251),

Gene: Mutzi_91 Start: 58651, Stop: 58313, Start Num: 33
Candidate Starts for Mutzi_91:
(20, 58741), (Start: 21 @58738 has 4 MA's), (26, 58693), (Start: 33 @58651 has 27 MA's), (48, 58585),
(53, 58540), (57, 58492), (59, 58444), (60, 58438),

Gene: Natkenzie_9 Start: 5353, Stop: 5655, Start Num: 37
Candidate Starts for Natkenzie_9:
(Start: 37 @5353 has 21 MA's), (54, 5443), (57, 5485), (59, 5533), (60, 5539),

Gene: Niagara_73 Start: 60594, Stop: 60274, Start Num: 32
Candidate Starts for Niagara_73:
(Start: 32 @60594 has 8 MA's), (60, 60384),

Gene: NosilaM_76 Start: 57364, Stop: 57035, Start Num: 30
Candidate Starts for NosilaM_76:
(Start: 30 @57364 has 15 MA's), (48, 57295), (54, 57253), (59, 57163), (60, 57157),

Gene: Nubi_94 Start: 57714, Stop: 57376, Start Num: 33
Candidate Starts for Nubi_94:
(20, 57804), (Start: 21 @57801 has 4 MA's), (26, 57756), (Start: 33 @57714 has 27 MA's), (48, 57648),
(53, 57603), (57, 57555), (59, 57507), (60, 57501),

Gene: Obliviate_33 Start: 28822, Stop: 28514, Start Num: 35
Candidate Starts for Obliviate_33:
(Start: 29 @28855 has 14 MA's), (Start: 35 @28822 has 30 MA's), (Start: 37 @28810 has 21 MA's),
(43, 28786), (44, 28783), (48, 28771), (49, 28759), (53, 28726), (54, 28723), (56, 28702), (57, 28678),
(59, 28630), (60, 28624),

Gene: Outis_76 Start: 57844, Stop: 57512, Start Num: 30
Candidate Starts for Outis_76:
(Start: 30 @57844 has 15 MA's), (41, 57799), (54, 57733), (60, 57637),

Gene: Patio_78 Start: 57925, Stop: 57620, Start Num: 30
Candidate Starts for Patio_78:
(Start: 30 @57925 has 15 MA's), (46, 57865), (60, 57727),

Gene: Periwinkle_46 Start: 32013, Stop: 31696, Start Num: 35
Candidate Starts for Periwinkle_46:
(Start: 33 @32025 has 27 MA's), (Start: 34 @32016 has 1 MA's), (Start: 35 @32013 has 30 MA's),
(Start: 37 @32001 has 21 MA's), (43, 31977), (44, 31974), (53, 31917), (54, 31914), (57, 31872), (59,
31824), (60, 31818),

Gene: Phabuloso_40 Start: 30274, Stop: 29954, Start Num: 35
Candidate Starts for Phabuloso_40:

(1, 30940), (2, 30937), (3, 30913), (4, 30901), (9, 30661), (14, 30496), (15, 30487), (16, 30463), (Start: 35 @30274 has 30 MA's), (Start: 37 @30262 has 21 MA's), (43, 30238), (44, 30235), (48, 30223), (51, 30193), (53, 30178), (54, 30175), (57, 30133), (59, 30085), (60, 30079),

Gene: Phauci_4 Start: 2839, Stop: 3165, Start Num: 37
Candidate Starts for Phauci_4:
(Start: 37 @2839 has 21 MA's), (54, 2932), (55, 2938), (57, 2974), (60, 3031),

Gene: Phinally_11 Start: 6312, Stop: 6632, Start Num: 37
Candidate Starts for Phinally_11:
(Start: 37 @6312 has 21 MA's), (54, 6402), (55, 6408), (57, 6444), (60, 6501),

Gene: Phistory_43 Start: 30909, Stop: 30592, Start Num: 35
Candidate Starts for Phistory_43:
(1, 31575), (2, 31572), (3, 31548), (4, 31536), (5, 31494), (6, 31488), (9, 31296), (14, 31131), (15, 31122), (16, 31098), (Start: 35 @30909 has 30 MA's), (Start: 37 @30897 has 21 MA's), (43, 30873), (44, 30870), (48, 30858), (49, 30846), (53, 30813), (54, 30810), (56, 30792), (57, 30768), (59, 30720), (60, 30714),

Gene: Phlop_88 Start: 57354, Stop: 57016, Start Num: 33
Candidate Starts for Phlop_88:
(20, 57444), (Start: 21 @57441 has 4 MA's), (26, 57396), (Start: 33 @57354 has 27 MA's), (48, 57288), (57, 57195), (59, 57147), (60, 57141),

Gene: PhrostedPhlake_40 Start: 30630, Stop: 30334, Start Num: 35
Candidate Starts for PhrostedPhlake_40:
(Start: 29 @30663 has 14 MA's), (Start: 35 @30630 has 30 MA's), (Start: 37 @30618 has 21 MA's), (43, 30594), (44, 30591), (48, 30579), (49, 30567), (53, 30534), (54, 30531), (56, 30510), (57, 30486), (59, 30438), (60, 30432),

Gene: PierreThree_76 Start: 61166, Stop: 60849, Start Num: 31
Candidate Starts for PierreThree_76:
(Start: 31 @61166 has 17 MA's), (60, 60953),

Gene: PinkCoffee_93 Start: 57642, Stop: 57217, Start Num: 21
Candidate Starts for PinkCoffee_93:
(20, 57645), (Start: 21 @57642 has 4 MA's), (26, 57597), (Start: 33 @57555 has 27 MA's), (48, 57489), (53, 57444), (57, 57396), (59, 57348), (60, 57342),

Gene: Portcullis_91 Start: 57360, Stop: 57022, Start Num: 33
Candidate Starts for Portcullis_91:
(20, 57450), (Start: 21 @57447 has 4 MA's), (26, 57402), (Start: 33 @57360 has 27 MA's), (48, 57294), (57, 57201), (59, 57153), (60, 57147),

Gene: PullumCavea_89 Start: 57531, Stop: 57193, Start Num: 33
Candidate Starts for PullumCavea_89:
(20, 57621), (Start: 21 @57618 has 4 MA's), (26, 57573), (Start: 33 @57531 has 27 MA's), (48, 57465), (57, 57372), (59, 57324), (60, 57318),

Gene: Pumpkiney_10 Start: 4586, Stop: 4891, Start Num: 37
Candidate Starts for Pumpkiney_10:
(Start: 37 @4586 has 21 MA's), (54, 4679), (57, 4721), (59, 4769), (60, 4775),

Gene: Pupper_204 Start: 140080, Stop: 140403, Start Num: 29
Candidate Starts for Pupper_204:
(Start: 29 @140080 has 14 MA's), (59, 140284), (60, 140290),

Gene: RayTheFireFly_41 Start: 30859, Stop: 30572, Start Num: 35
Candidate Starts for RayTheFireFly_41:
(Start: 33 @30871 has 27 MA's), (Start: 35 @30859 has 30 MA's), (Start: 37 @30847 has 21 MA's),
(43, 30823), (44, 30820), (48, 30808), (49, 30796), (53, 30763), (54, 30760), (56, 30742), (57, 30718),
(59, 30670),

Gene: RedRaider_83 Start: 60073, Stop: 59747, Start Num: 30
Candidate Starts for RedRaider_83:
(Start: 30 @60073 has 15 MA's), (39, 60037), (59, 59872), (60, 59866),

Gene: RogerDodger_94 Start: 58119, Stop: 57781, Start Num: 33
Candidate Starts for RogerDodger_94:
(10, 58464), (18, 58251), (26, 58161), (Start: 33 @58119 has 27 MA's), (48, 58053), (57, 57960), (59,
57912), (60, 57906),

Gene: SCentae_203 Start: 140271, Stop: 140594, Start Num: 29
Candidate Starts for SCentae_203:
(Start: 29 @140271 has 14 MA's), (59, 140475), (60, 140481),

Gene: Salvador_91 Start: 57456, Stop: 57118, Start Num: 33
Candidate Starts for Salvador_91:
(22, 57528), (26, 57498), (Start: 33 @57456 has 27 MA's), (48, 57390), (57, 57297), (59, 57249), (60,
57243),

Gene: Sampson_9 Start: 5298, Stop: 5600, Start Num: 37
Candidate Starts for Sampson_9:
(Start: 37 @5298 has 21 MA's), (54, 5388), (57, 5430), (59, 5478), (60, 5484),

Gene: Savbucketdawg_86 Start: 56798, Stop: 56460, Start Num: 33
Candidate Starts for Savbucketdawg_86:
(10, 57143), (26, 56840), (Start: 33 @56798 has 27 MA's), (48, 56732), (57, 56639), (59, 56591), (60,
56585),

Gene: Scioto_9 Start: 5353, Stop: 5655, Start Num: 37
Candidate Starts for Scioto_9:
(Start: 37 @5353 has 21 MA's), (54, 5443), (57, 5485), (59, 5533), (60, 5539),

Gene: ShawBrad_43 Start: 30132, Stop: 29815, Start Num: 35
Candidate Starts for ShawBrad_43:
(1, 30798), (2, 30795), (3, 30771), (4, 30759), (5, 30717), (6, 30711), (9, 30519), (14, 30354), (15,
30345), (16, 30321), (Start: 35 @30132 has 30 MA's), (Start: 37 @30120 has 21 MA's), (43, 30096),
(44, 30093), (48, 30081), (49, 30069), (53, 30036), (54, 30033), (56, 30015), (57, 29991), (59, 29943),
(60, 29937),

Gene: Shinji_90 Start: 57537, Stop: 57199, Start Num: 33
Candidate Starts for Shinji_90:
(20, 57627), (Start: 21 @57624 has 4 MA's), (26, 57579), (Start: 33 @57537 has 27 MA's), (48, 57471),
(57, 57378), (59, 57330), (60, 57324),

Gene: Sisko_81 Start: 60938, Stop: 60591, Start Num: 29
Candidate Starts for Sisko_81:
(Start: 29 @60938 has 14 MA's), (42, 60881), (53, 60815), (59, 60719), (60, 60713),

Gene: Skog_33 Start: 15580, Stop: 15906, Start Num: 29
Candidate Starts for Skog_33:
(Start: 29 @15580 has 14 MA's), (59, 15784), (60, 15790),

Gene: Skysand_80 Start: 58588, Stop: 58283, Start Num: 30
Candidate Starts for Skysand_80:
(Start: 30 @58588 has 15 MA's), (46, 58528), (60, 58390),

Gene: SmokingBunny_92 Start: 58452, Stop: 58114, Start Num: 33
Candidate Starts for SmokingBunny_92:
(22, 58524), (26, 58494), (Start: 33 @58452 has 27 MA's), (48, 58386), (57, 58293), (59, 58245), (60, 58239),

Gene: Squibbles_76 Start: 60731, Stop: 60402, Start Num: 31
Candidate Starts for Squibbles_76:
(Start: 31 @60731 has 17 MA's), (60, 60518),

Gene: StarStruck_76 Start: 57844, Stop: 57512, Start Num: 30
Candidate Starts for StarStruck_76:
(Start: 30 @57844 has 15 MA's), (41, 57799), (54, 57733), (60, 57637),

Gene: SuperSulley_77 Start: 58290, Stop: 57958, Start Num: 30
Candidate Starts for SuperSulley_77:
(Start: 30 @58290 has 15 MA's), (36, 58263), (54, 58176), (59, 58086), (60, 58080),

Gene: Tardus_10 Start: 4552, Stop: 4857, Start Num: 37
Candidate Starts for Tardus_10:
(Start: 37 @4552 has 21 MA's), (54, 4645), (57, 4687), (59, 4735), (60, 4741),

Gene: Teatealatte_74 Start: 60491, Stop: 60171, Start Num: 32
Candidate Starts for Teatealatte_74:
(Start: 32 @60491 has 8 MA's), (60, 60281),

Gene: Teech_74 Start: 60307, Stop: 59987, Start Num: 32
Candidate Starts for Teech_74:
(Start: 32 @60307 has 8 MA's), (60, 60097),

Gene: TillyBobJoe_90 Start: 57675, Stop: 57337, Start Num: 33
Candidate Starts for TillyBobJoe_90:
(22, 57747), (26, 57717), (Start: 33 @57675 has 27 MA's), (48, 57609), (57, 57516), (59, 57468), (60, 57462),

Gene: Togo_91 Start: 58452, Stop: 58114, Start Num: 33
Candidate Starts for Togo_91:
(22, 58524), (26, 58494), (Start: 33 @58452 has 27 MA's), (48, 58386), (57, 58293), (59, 58245), (60, 58239),

Gene: Tredge_73 Start: 60491, Stop: 60171, Start Num: 32
Candidate Starts for Tredge_73:

(Start: 32 @60491 has 8 MA's), (60, 60281),

Gene: Twister6_90 Start: 56801, Stop: 56463, Start Num: 33
Candidate Starts for Twister6_90:
(10, 57146), (18, 56933), (26, 56843), (Start: 33 @56801 has 27 MA's), (48, 56735), (57, 56642), (59, 56594), (60, 56588),

Gene: UmaThurman_32 Start: 29419, Stop: 29123, Start Num: 37
Candidate Starts for UmaThurman_32:
(Start: 29 @29464 has 14 MA's), (Start: 35 @29431 has 30 MA's), (Start: 37 @29419 has 21 MA's), (43, 29395), (44, 29392), (48, 29380), (49, 29368), (53, 29335), (54, 29332), (56, 29311), (57, 29287), (59, 29239), (60, 29233),

Gene: Valary_92 Start: 58444, Stop: 58106, Start Num: 33
Candidate Starts for Valary_92:
(20, 58534), (Start: 21 @58531 has 4 MA's), (26, 58486), (Start: 33 @58444 has 27 MA's), (48, 58378), (57, 58285), (59, 58237), (60, 58231),

Gene: VanDeWege_93 Start: 57969, Stop: 57631, Start Num: 33
Candidate Starts for VanDeWege_93:
(10, 58314), (18, 58101), (26, 58011), (Start: 33 @57969 has 27 MA's), (48, 57903), (57, 57810), (59, 57762), (60, 57756),

Gene: Verity_10 Start: 5803, Stop: 6096, Start Num: 37
Candidate Starts for Verity_10:
(Start: 37 @5803 has 21 MA's), (39, 5812), (53, 5884), (57, 5929), (59, 5980), (60, 5986),

Gene: ViaConlectus_9 Start: 5353, Stop: 5655, Start Num: 37
Candidate Starts for ViaConlectus_9:
(Start: 37 @5353 has 21 MA's), (54, 5443), (57, 5485), (59, 5533), (60, 5539),

Gene: Walrus_37 Start: 30012, Stop: 29710, Start Num: 37
Candidate Starts for Walrus_37:
(Start: 29 @30057 has 14 MA's), (Start: 35 @30024 has 30 MA's), (Start: 37 @30012 has 21 MA's), (40, 30000), (43, 29988), (44, 29985), (49, 29961), (53, 29928), (54, 29925), (56, 29907), (57, 29883), (59, 29835), (60, 29829),

Gene: Whitney_45 Start: 33551, Stop: 33234, Start Num: 35
Candidate Starts for Whitney_45:
(Start: 33 @33563 has 27 MA's), (Start: 34 @33554 has 1 MA's), (Start: 35 @33551 has 30 MA's), (Start: 37 @33539 has 21 MA's), (43, 33515), (44, 33512), (53, 33455), (54, 33452), (56, 33434), (57, 33410), (59, 33362), (60, 33356),

Gene: Wizard_86 Start: 57304, Stop: 56966, Start Num: 33
Candidate Starts for Wizard_86:
(20, 57394), (Start: 21 @57391 has 4 MA's), (26, 57346), (Start: 33 @57304 has 27 MA's), (48, 57238), (57, 57145), (59, 57097), (60, 57091),

Gene: Yago84_80 Start: 60646, Stop: 60299, Start Num: 29
Candidate Starts for Yago84_80:
(Start: 29 @60646 has 14 MA's), (42, 60589), (53, 60523), (59, 60427), (60, 60421),

Gene: YungMoney_91 Start: 59491, Stop: 59153, Start Num: 33

Candidate Starts for YungMoney_91:
(20, 59581), (Start: 21 @59578 has 4 MA's), (26, 59533), (Start: 33 @59491 has 27 MA's), (48, 59425), (53, 59380), (57, 59332), (59, 59284), (60, 59278),

Gene: Zarbodnamra_36 Start: 29888, Stop: 29547, Start Num: 29
Candidate Starts for Zarbodnamra_36:
(Start: 29 @29888 has 14 MA's), (Start: 35 @29855 has 30 MA's), (Start: 37 @29843 has 21 MA's), (40, 29831), (43, 29819), (44, 29816), (48, 29804), (49, 29792), (53, 29759), (54, 29756), (57, 29711), (59, 29663), (60, 29657),

Gene: Zipp_10 Start: 5948, Stop: 6241, Start Num: 37
Candidate Starts for Zipp_10:
(Start: 37 @5948 has 21 MA's), (39, 5957), (53, 6029), (57, 6074), (59, 6125), (60, 6131),

Gene: Zitch_10 Start: 5089, Stop: 5394, Start Num: 37
Candidate Starts for Zitch_10:
(26, 5026), (28, 5044), (Start: 37 @5089 has 21 MA's), (54, 5182), (57, 5224), (59, 5272), (60, 5278),