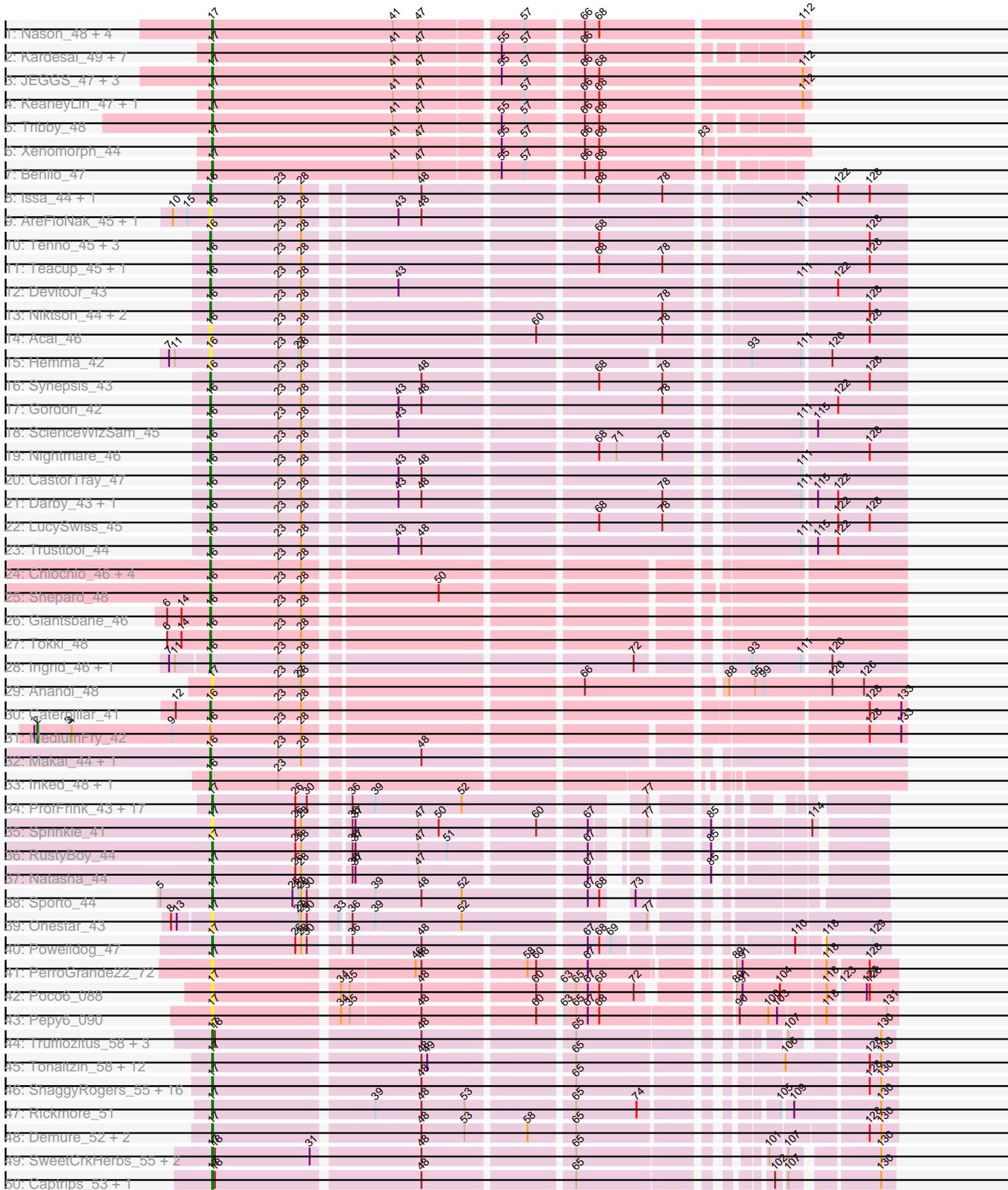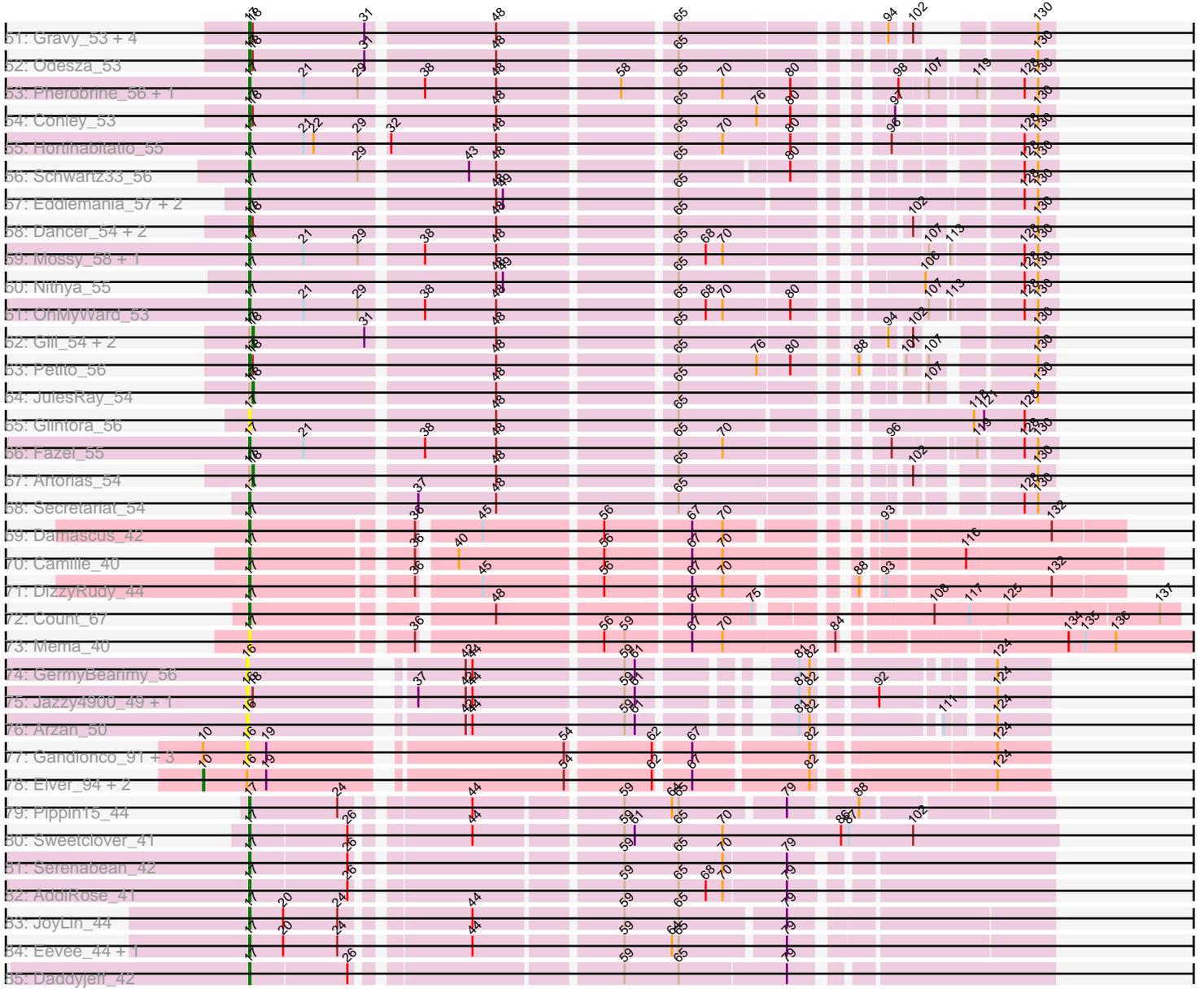Pham 290876

Pham 290876

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 290876 Report

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

Pham number 290876 has 188 members, 44 are drafts.

Phages represented in each track:
• Track 1 : Nason_48, YoshiYama_48, Arcadia_48, Elsa_48, Circum_50
• Track 2 : Kardesai_49, Hankly_47, NapoleonB_48, BenitoAntonio_48, Cheesy_48, Bowling_48, Mooshroom_50, Dynamite_48
• Track 3 : JEGGS_47, Correa_46, Mudcat_45, Heisenberger_47
• Track 4 : KeaneyLin_47, GoCrazy_47
• Track 5 : Tribby_48
• Track 6 : Xenomorph_44
• Track 7 : Benllo_47
• Track 8 : Issa_44, Westerlin_44
• Track 9 : AreFloNak_45, Nivinsha_45
• Track 10 : Tenno_45, CapnMurica_42, Dinallo_44, MiniBagel_44
• Track 11 : Teacup_45, Brunswick_45
• Track 12 : DevitoJr_43
• Track 13 : Niktson_44, ElephantMan_44, Tatanka_43
• Track 14 : Acai_46
• Track 15 : Hemma_42
• Track 16 : Synepsis_43
• Track 17 : Gordon_42
• Track 18 : ScienceWizSam_45
• Track 19 : Nightmare_46
• Track 20 : CastorTray_47
• Track 21 : Darby_43, Breylor17_45
• Track 22 : LucySwiss_45
• Track 23 : Trustiboi_44
• Track 24 : Chlochlo_46, Bouchard_44, LilHuddy_46, Phaby_46, Tipton_46
• Track 25 : Shepard_48
• Track 26 : Giantsbane_46
• Track 27 : Tokki_48
• Track 28 : Ingrid_46, Loretta_46
• Track 29 : Anandi_48
• Track 30 : Caterpillar_41
• Track 31 : MediumFry_42
• Track 32 : Makai_44, Truckee_42
• Track 33 : Inked_48, Zippen_46
• Track 34 : ProfFrink_43, Sloopyjoe_43, Linda_43, Michelle_43, Stayer_43, Djungelskog_43, Egad_43, Boog_42, Raunak_46, BronxBay_43, Salk_43, StarLord_43, Jeremy4pt0_43, HerbBucket_43, Shiba_42, MrAaronian_43,

DoctorPepper_42, Spain_46
- Track 35 : Sprinkle_41
- Track 36 : RustyBoy_44
- Track 37 : Natasha_44
- Track 38 : Sporto_44
- Track 39 : Onestar_43
- Track 40 : Powelldog_47
- Track 41 : PerroGrande22_72
- Track 42 : Poco6_088
- Track 43 : Pepy6_090
- Track 44 : Trufflozitus_58, Tairn4Wing_56, ChickyNuggy_56, Avazak_55
- Track 45 : Tonaltzin_58, Duffington_53, Chikenjars_53, EndAve_56, Citrus_54, Luthien_57, AlainaMarie_54, OlgasClover_56, Aflac_54, Figliar_53, Jodelie19_54, TenaciousP_55, BluerMoon_53
- Track 46 : ShaggyRogers_55, Hydrus_57, Gusicorn_56, Madvan_55, Burley_55, CWormy_54, Phepper_56, Dialga_55, Untouchable_56, ArtetaBall_55, Nadmeg_56, Runhaar_55, PestoPenguin_58, Vardy_54, BetterYeti_55, Crocheter_55, Aloe25_57
- Track 47 : Rickmore_51
- Track 48 : Demure_52, Arataki_53, Zeph_57
- Track 49 : SweetCrkHerbs_55, Perkunas_55, Talon44_55
- Track 50 : Captrips_53, Football_56
- Track 51 : Gravy_53, Roney_54, Tanis_54, Capybara_54, Kerry_53
- Track 52 : Odesza_53
- Track 53 : Pherobrine_56, Mysticmoon_56
- Track 54 : Conley_53
- Track 55 : Hortihabitatio_55
- Track 56 : Schwartz33_56
- Track 57 : Eddiemania_57, Kenosha_54, MajinBuu_54
- Track 58 : Dancer_54, Bugg_56, FortCran_54
- Track 59 : Mossy_58, Blanky_55
- Track 60 : Nithya_55
- Track 61 : OhMyWard_53
- Track 62 : Gill_54, NoPickles_53, Magel_55
- Track 63 : Petito_56
- Track 64 : JulesRay_54
- Track 65 : Glintora_56
- Track 66 : Fazel_55
- Track 67 : Artorias_54
- Track 68 : Secretariat_54
- Track 69 : Damascus_42
- Track 70 : Camille_40
- Track 71 : DizzyRudy_44
- Track 72 : Count_67
- Track 73 : Mema_40
- Track 74 : GermyBearimy_56
- Track 75 : Jazzy4900_49, Sunny4976_48
- Track 76 : Arzan_50
- Track 77 : Gandionco_91, JeNeSaisPas_89, Kureo_93, Marianna39_92
- Track 78 : Elver_94, Paella_95, Qui_95
- Track 79 : Pippin15_44
- Track 80 : Sweetclover_41
- Track 81 : Serenabean_42
- Track 82 : AddiRose_41

- Track 83 : JoyLin_44
- Track 84 : Eevee_44, Yotsuba_44
- Track 85 : Daddyjeff_42

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

The start number called the most often in the published annotations is 17, it was called in 102 of the 144 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- AddiRose_41, Aflac_54, AlainaMarie_54, Aloe25_57, Anandi_48, Arataki_53, Arcadia_48, ArtetaBall_55, Avazak_55, BenitoAntonio_48, Benllo_47, BetterYeti_55, Blanky_55, BluerMoon_53, Boog_42, Bowling_48, BronxBay_43, Bugg_56, Burley_55, CWormy_54, Camille_40, Captrips_53, Capybara_54, Cheesy_48, ChickyNuggy_56, Chikenjars_53, Circum_50, Citrus_54, Conley_53, Correa_46, Count_67, Crocheter_55, Daddyjeff_42, Damascus_42, Dancer_54, Demure_52, Dialga_55, DizzyRudy_44, Djungelskog_43, DoctorPepper_42, Duffington_53, Dynamite_48, Eddiemania_57, Eevee_44, Egad_43, Elsa_48, EndAve_56, Fazel_55, Figliar_53, Football_56, FortCran_54, Glintora_56, GoCrazy_47, Gravy_53, Gusicorn_56, Hankly_47, Heisenberger_47, HerbBucket_43, Hortihabitatio_55, Hydrus_57, JEGGS_47, Jeremy4pt0_43, Jodelie19_54, JoyLin_44, Kardesai_49, KeaneyLin_47, Kenosha_54, Kerry_53, Linda_43, Luthien_57, Madvan_55, MajinBuu_54, Mema_40, Michelle_43, Mooshroom_50, Mossy_58, MrAaronian_43, Mudcat_45, Mysticmoon_56, Nadmeg_56, NapoleonB_48, Nason_48, Natasha_44, Nithya_55, Odesza_53, OhMyWard_53, OlgasClover_56, Onestar_43, Pepy6_090, Perkunas_55, PerroGrande22_72, PestoPenguin_58, Petito_56, Phepper_56, Pherobrine_56, Pippin15_44, Poco6_088, Powelldog_47, ProfFrink_43, Raunak_46, Rickmore_51, Roney_54, Runhaar_55, RustyBoy_44, Salk_43, Schwartz33_56, Secretariat_54, Serenabean_42, ShaggyRogers_55, Shiba_42, Sloopyjoe_43, Spain_46, Sporto_44, Sprinkle_41, StarLord_43, Stayer_43, SweetCrkHerbs_55, Sweetclover_41, Tairn4Wing_56, Talon44_55, Tanis_54, TenaciousP_55, Tonaltzin_58, Tribby_48, Trufflozitus_58, Untouchable_56, Vardy_54, Xenomorph_44, YoshiYama_48, Yotsuba_44, Zeph_57,

Genes that have the "Most Annotated" start but do not call it:
- Artorias_54, Gill_54, JulesRay_54, Magel_55, NoPickles_53,

Genes that do not have the "Most Annotated" start:
- Acai_46, AreFloNak_45, Arzan_50, Bouchard_44, Breylor17_45, Brunswick_45, CapnMurica_42, CastorTray_47, Caterpillar_41, Chlochlo_46, Darby_43, DevitoJr_43, Dinallo_44, ElephantMan_44, Elver_94, Gandionco_91, GermyBearimy_56, Giantsbane_46, Gordon_42, Hemma_42, Ingrid_46, Inked_48, Issa_44, Jazzy4900_49, JeNeSaisPas_89, Kureo_93, LilHuddy_46, Loretta_46, LucySwiss_45, Makai_44, Marianna39_92, MediumFry_42, MiniBagel_44, Nightmare_46, Niktson_44, Nivinsha_45, Paella_95, Phaby_46, Qui_95, ScienceWizSam_45, Shepard_48, Sunny4976_48, Synepsis_43, Tatanka_43, Teacup_45, Tenno_45, Tipton_46, Tokki_48, Truckee_42, Trustiboi_44, Westerlin_44, Zippen_46,

Summary by start number:

Start 2:
• Found in 1 of 188 (0.5%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MediumFry_42 (AU4),

Start 10:
• Found in 9 of 188 (4.8%) of genes in pham
• Manual Annotations of this start: 3 of 144
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Elver_94 (FK), Paella_95 (FK), Qui_95 (FK),

Start 16:
• Found in 52 of 188 (27.7%) of genes in pham
• Manual Annotations of this start: 33 of 144
• Called 92.3% of time when present
• Phage (with cluster) where this start called: Acai_46 (AU1), AreFloNak_45 (AU1), Arzan_50 (FI), Bouchard_44 (AU2), Breylor17_45 (AU1), Brunswick_45 (AU1), CapnMurica_42 (AU1), CastorTray_47 (AU1), Caterpillar_41 (AU4), Chlochlo_46 (AU2), Darby_43 (AU1), DevitoJr_43 (AU1), Dinallo_44 (AU1), ElephantMan_44 (AU1), Gandionco_91 (FK), GermyBearimy_56 (FI), Giantsbane_46 (AU2), Gordon_42 (AU1), Hemma_42 (AU1), Ingrid_46 (AU3), Inked_48 (AU7), Issa_44 (AU1), Jazzy4900_49 (FI), JeNeSaisPas_89 (FK), Kureo_93 (FK), LilHuddy_46 (AU2), Loretta_46 (AU3), LucySwiss_45 (AU1), Makai_44 (AU5), Marianna39_92 (FK), MiniBagel_44 (AU1), Nightmare_46 (AU1), Niktson_44 (AU1), Nivinsha_45 (AU1), Phaby_46 (AU2), ScienceWizSam_45 (AU1), Shepard_48 (AU2), Sunny4976_48 (FI), Synepsis_43 (AU1), Tatanka_43 (AU1), Teacup_45 (AU1), Tenno_45 (AU1), Tipton_46 (AU2), Tokki_48 (AU2), Truckee_42 (AU5), Trustiboi_44 (AU1), Westerlin_44 (AU1), Zippen_46 (AU7),

Start 17:
• Found in 136 of 188 (72.3%) of genes in pham
• Manual Annotations of this start: 102 of 144
• Called 96.3% of time when present
• Phage (with cluster) where this start called: AddiRose_41 (JA), Aflac_54 (DJ), AlainaMarie_54 (DJ), Aloe25_57 (DJ), Anandi_48 (AU4), Arataki_53 (DJ), Arcadia_48 (AM), ArtetaBall_55 (DJ), Avazak_55 (DJ), BenitoAntonio_48 (AM), Benllo_47 (AM), BetterYeti_55 (DJ), Blanky_55 (DJ), BluerMoon_53 (DJ), Boog_42 (AW), Bowling_48 (AM), BronxBay_43 (AW), Bugg_56 (DJ), Burley_55 (DJ), CWormy_54 (DJ), Camille_40 (EL), Captrips_53 (DJ), Capybara_54 (DJ), Cheesy_48 (AM), ChickyNuggy_56 (DJ), Chikenjars_53 (DJ), Circum_50 (AM), Citrus_54 (DJ), Conley_53 (DJ), Correa_46 (AM), Count_67 (EL), Crocheter_55 (DJ), Daddyjeff_42 (JA), Damascus_42 (EL), Dancer_54 (DJ), Demure_52 (DJ), Dialga_55 (DJ), DizzyRudy_44 (EL), Djungelskog_43 (AW), DoctorPepper_42 (AW), Duffington_53 (DJ), Dynamite_48 (AM), Eddiemania_57 (DJ), Eevee_44 (JA), Egad_43 (AW), Elsa_48 (AM), EndAve_56 (DJ), Fazel_55 (DJ), Figliar_53 (DJ), Football_56 (DJ), FortCran_54 (DJ), Glintora_56 (DJ), GoCrazy_47 (AM), Gravy_53 (DJ), Gusicorn_56 (DJ), Hankly_47 (AM), Heisenberger_47 (AM), HerbBucket_43 (AW), Hortihabitatio_55 (DJ), Hydrus_57 (DJ), JEGGS_47 (AM), Jeremy4pt0_43 (AW), Jodelie19_54 (DJ), JoyLin_44 (JA), Kardesai_49 (AM), KeaneyLin_47 (AM), Kenosha_54 (DJ), Kerry_53 (DJ), Linda_43 (AW), Luthien_57 (DJ), Madvan_55 (DJ),

MajinBuu_54 (DJ), Mema_40 (EL), Michelle_43 (AW), Mooshroom_50 (AM), Mossy_58 (DJ), MrAaronian_43 (AW), Mudcat_45 (AM), Mysticmoon_56 (DJ), Nadmeg_56 (DJ), NapoleonB_48 (AM), Nason_48 (AM), Natasha_44 (AW), Nithya_55 (DJ), Odesza_53 (DJ), OhMyWard_53 (DJ), OlgasClover_56 (DJ), Onestar_43 (AW), Pepy6_090 (CC), Perkunas_55 (DJ), PerroGrande22_72 (CC), PestoPenguin_58 (DJ), Petito_56 (DJ), Phepper_56 (DJ), Pherobrine_56 (DJ), Pippin15_44 (JA), Poco6_088 (CC), Powelldog_47 (AW), ProfFrink_43 (AW), Raunak_46 (AW), Rickmore_51 (DJ), Roney_54 (DJ), Runhaar_55 (DJ), RustyBoy_44 (AW), Salk_43 (AW), Schwartz33_56 (DJ), Secretariat_54 (DJ), Serenabean_42 (JA), ShaggyRogers_55 (DJ), Shiba_42 (AW), Sloopyjoe_43 (AW), Spain_46 (AW), Sporto_44 (AW), Sprinkle_41 (AW), StarLord_43 (AW), Stayer_43 (AW), SweetCrkHerbs_55 (DJ), Sweetclover_41 (JA), Tairn4Wing_56 (DJ), Talon44_55 (DJ), Tanis_54 (DJ), TenaciousP_55 (DJ), Tonaltzin_58 (DJ), Tribby_48 (AM), Trufflozitus_58 (DJ), Untouchable_56 (DJ), Vardy_54 (DJ), Xenomorph_44 (AM), YoshiYama_48 (AM), Yotsuba_44 (JA), Zeph_57 (DJ),

Start 18:
• Found in 27 of 188 (14.4%) of genes in pham
• Manual Annotations of this start: 5 of 144
• Called 18.5% of time when present
• Phage (with cluster) where this start called: Artorias_54 (DJ), Gill_54 (DJ), JulesRay_54 (DJ), Magel_55 (DJ), NoPickles_53 (DJ),

Summary by clusters:

There are 14 clusters represented in this pham: EL, DJ, AU7, CC, AM, AU1, AU3, AU2, AU5, AU4, AW, FI, FK, JA,

Info for manual annotations of cluster AM:
•Start number 17 was manually annotated 21 times for cluster AM.

Info for manual annotations of cluster AU1:
•Start number 16 was manually annotated 19 times for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 16 was manually annotated 7 times for cluster AU2.

Info for manual annotations of cluster AU3:
•Start number 16 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:
•Start number 2 was manually annotated 1 time for cluster AU4.
•Start number 16 was manually annotated 1 time for cluster AU4.

Info for manual annotations of cluster AU5:
•Start number 16 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU7:
•Start number 16 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AW:
•Start number 17 was manually annotated 18 times for cluster AW.

Info for manual annotations of cluster DJ:
•Start number 17 was manually annotated 51 times for cluster DJ.
•Start number 18 was manually annotated 5 times for cluster DJ.

Info for manual annotations of cluster EL:
•Start number 17 was manually annotated 4 times for cluster EL.

Info for manual annotations of cluster FK:
•Start number 10 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster JA:
•Start number 17 was manually annotated 8 times for cluster JA.

Gene Information:

Gene: Acai_46 Start: 33525, Stop: 34184, Start Num: 16
Candidate Starts for Acai_46:
(Start: 16 @33525 has 33 MA's), (23, 33594), (28, 33618), (60, 33837), (78, 33960), (128, 34146),

Gene: AddiRose_41 Start: 30292, Stop: 30936, Start Num: 17
Candidate Starts for AddiRose_41:
(Start: 17 @30292 has 102 MA's), (26, 30376), (59, 30583), (65, 30631), (68, 30655), (70, 30670), (79, 30724),

Gene: Aflac_54 Start: 37624, Stop: 38262, Start Num: 17
Candidate Starts for Aflac_54:
(Start: 17 @37624 has 102 MA's), (48, 37831), (49, 37837), (65, 37975), (106, 38155), (128, 38233), (130, 38245),

Gene: AlainaMarie_54 Start: 37610, Stop: 38248, Start Num: 17
Candidate Starts for AlainaMarie_54:
(Start: 17 @37610 has 102 MA's), (48, 37817), (49, 37823), (65, 37961), (106, 38141), (128, 38219), (130, 38231),

Gene: Aloe25_57 Start: 37709, Stop: 38344, Start Num: 17
Candidate Starts for Aloe25_57:
(Start: 17 @37709 has 102 MA's), (48, 37916), (65, 38060), (128, 38315), (130, 38327),

Gene: Anandi_48 Start: 33821, Stop: 34489, Start Num: 17
Candidate Starts for Anandi_48:
(Start: 17 @33821 has 102 MA's), (23, 33890), (27, 33911), (28, 33914), (66, 34175), (88, 34307), (95, 34331), (99, 34340), (120, 34412), (126, 34445),

Gene: Arataki_53 Start: 36745, Stop: 37380, Start Num: 17
Candidate Starts for Arataki_53:
(Start: 17 @36745 has 102 MA's), (48, 36952), (53, 36997), (58, 37054), (65, 37096), (128, 37351), (130, 37363),

Gene: Arcadia_48 Start: 31859, Stop: 32455, Start Num: 17

Candidate Starts for Arcadia_48:
(Start: 17 @31859 has 102 MA's), (41, 32048), (47, 32075), (57, 32174), (66, 32228), (68, 32243), (112, 32447),

Gene: AreFloNak_45 Start: 33292, Stop: 33951, Start Num: 16
Candidate Starts for AreFloNak_45:
(Start: 10 @33253 has 3 MA's), (15, 33268), (Start: 16 @33292 has 33 MA's), (23, 33361), (28, 33385), (43, 33469), (48, 33493), (111, 33847),

Gene: ArtetaBall_55 Start: 37934, Stop: 38569, Start Num: 17
Candidate Starts for ArtetaBall_55:
(Start: 17 @37934 has 102 MA's), (48, 38141), (65, 38285), (128, 38540), (130, 38552),

Gene: Artorias_54 Start: 36960, Stop: 37574, Start Num: 18
Candidate Starts for Artorias_54:
(Start: 17 @36957 has 102 MA's), (Start: 18 @36960 has 5 MA's), (48, 37164), (65, 37308), (102, 37473), (130, 37560),

Gene: Arzan_50 Start: 33168, Stop: 33752, Start Num: 16
Candidate Starts for Arzan_50:
(Start: 16 @33168 has 33 MA's), (42, 33333), (44, 33339), (59, 33465), (61, 33474), (81, 33576), (82, 33585), (111, 33672), (124, 33708),

Gene: Avazak_55 Start: 37284, Stop: 37901, Start Num: 17
Candidate Starts for Avazak_55:
(Start: 17 @37284 has 102 MA's), (Start: 18 @37287 has 5 MA's), (48, 37491), (65, 37635), (107, 37809), (130, 37887),

Gene: BenitoAntonio_48 Start: 31423, Stop: 31992, Start Num: 17
Candidate Starts for BenitoAntonio_48:
(Start: 17 @31423 has 102 MA's), (41, 31612), (47, 31639), (55, 31714), (57, 31738), (66, 31792),

Gene: Benllo_47 Start: 32107, Stop: 32676, Start Num: 17
Candidate Starts for Benllo_47:
(Start: 17 @32107 has 102 MA's), (41, 32296), (47, 32323), (55, 32398), (57, 32422), (66, 32476), (68, 32491),

Gene: BetterYeti_55 Start: 37708, Stop: 38343, Start Num: 17
Candidate Starts for BetterYeti_55:
(Start: 17 @37708 has 102 MA's), (48, 37915), (65, 38059), (128, 38314), (130, 38326),

Gene: Blanky_55 Start: 39240, Stop: 39881, Start Num: 17
Candidate Starts for Blanky_55:
(Start: 17 @39240 has 102 MA's), (21, 39288), (29, 39336), (38, 39384), (48, 39447), (65, 39591), (68, 39615), (70, 39630), (107, 39780), (113, 39795), (128, 39852), (130, 39864),

Gene: BluerMoon_53 Start: 37653, Stop: 38291, Start Num: 17
Candidate Starts for BluerMoon_53:
(Start: 17 @37653 has 102 MA's), (48, 37860), (49, 37866), (65, 38004), (106, 38184), (128, 38262), (130, 38274),

Gene: Boog_42 Start: 30697, Stop: 31257, Start Num: 17
Candidate Starts for Boog_42:

(Start: 17 @30697 has 102 MA's), (26, 30784), (30, 30796), (36, 30826), (39, 30850), (52, 30940), (77, 31099),

Gene: Bouchard_44 Start: 33214, Stop: 33864, Start Num: 16
Candidate Starts for Bouchard_44:
(Start: 16 @33214 has 33 MA's), (23, 33283), (28, 33307),

Gene: Bowling_48 Start: 31632, Stop: 32201, Start Num: 17
Candidate Starts for Bowling_48:
(Start: 17 @31632 has 102 MA's), (41, 31821), (47, 31848), (55, 31923), (57, 31947), (66, 32001),

Gene: Breylor17_45 Start: 34090, Stop: 34749, Start Num: 16
Candidate Starts for Breylor17_45:
(Start: 16 @34090 has 33 MA's), (23, 34159), (28, 34183), (43, 34267), (48, 34291), (78, 34525), (111, 34645), (115, 34657), (122, 34678),

Gene: BronxBay_43 Start: 30995, Stop: 31555, Start Num: 17
Candidate Starts for BronxBay_43:
(Start: 17 @30995 has 102 MA's), (26, 31082), (30, 31094), (36, 31124), (39, 31148), (52, 31238), (77, 31397),

Gene: Brunswick_45 Start: 33172, Stop: 33831, Start Num: 16
Candidate Starts for Brunswick_45:
(Start: 16 @33172 has 33 MA's), (23, 33241), (28, 33265), (68, 33541), (78, 33607), (128, 33793),

Gene: Bugg_56 Start: 37002, Stop: 37619, Start Num: 17
Candidate Starts for Bugg_56:
(Start: 17 @37002 has 102 MA's), (Start: 18 @37005 has 5 MA's), (48, 37209), (65, 37353), (102, 37518), (130, 37605),

Gene: Burley_55 Start: 37396, Stop: 38031, Start Num: 17
Candidate Starts for Burley_55:
(Start: 17 @37396 has 102 MA's), (48, 37603), (65, 37747), (128, 38002), (130, 38014),

Gene: CWormy_54 Start: 37347, Stop: 37982, Start Num: 17
Candidate Starts for CWormy_54:
(Start: 17 @37347 has 102 MA's), (48, 37554), (65, 37698), (128, 37953), (130, 37965),

Gene: Camille_40 Start: 28210, Stop: 28920, Start Num: 17
Candidate Starts for Camille_40:
(Start: 17 @28210 has 102 MA's), (36, 28339), (40, 28366), (56, 28486), (67, 28558), (70, 28585), (116, 28756),

Gene: CapnMurica_42 Start: 34070, Stop: 34729, Start Num: 16
Candidate Starts for CapnMurica_42:
(Start: 16 @34070 has 33 MA's), (23, 34139), (28, 34163), (68, 34439), (128, 34691),

Gene: Captrips_53 Start: 36432, Stop: 37049, Start Num: 17
Candidate Starts for Captrips_53:
(Start: 17 @36432 has 102 MA's), (Start: 18 @36435 has 5 MA's), (48, 36639), (65, 36783), (102, 36948), (107, 36957), (130, 37035),

Gene: Capybara_54 Start: 36783, Stop: 37382, Start Num: 17

Candidate Starts for Capybara_54:
(Start: 17 @36783 has 102 MA's), (Start: 18 @36786 has 5 MA's), (31, 36885), (48, 36990), (65, 37134), (94, 37284), (102, 37299), (130, 37368),

Gene: CastorTray_47 Start: 33900, Stop: 34559, Start Num: 16
Candidate Starts for CastorTray_47:
(Start: 16 @33900 has 33 MA's), (23, 33969), (28, 33993), (43, 34077), (48, 34101), (111, 34455),

Gene: Caterpillar_41 Start: 32360, Stop: 33028, Start Num: 16
Candidate Starts for Caterpillar_41:
(12, 32324), (Start: 16 @32360 has 33 MA's), (23, 32429), (28, 32453), (128, 32990), (133, 33023),

Gene: Cheesy_48 Start: 31608, Stop: 32177, Start Num: 17
Candidate Starts for Cheesy_48:
(Start: 17 @31608 has 102 MA's), (41, 31797), (47, 31824), (55, 31899), (57, 31923), (66, 31977),

Gene: ChickyNuggy_56 Start: 37041, Stop: 37658, Start Num: 17
Candidate Starts for ChickyNuggy_56:
(Start: 17 @37041 has 102 MA's), (Start: 18 @37044 has 5 MA's), (48, 37248), (65, 37392), (107, 37566), (130, 37644),

Gene: Chikenjars_53 Start: 37622, Stop: 38260, Start Num: 17
Candidate Starts for Chikenjars_53:
(Start: 17 @37622 has 102 MA's), (48, 37829), (49, 37835), (65, 37973), (106, 38153), (128, 38231), (130, 38243),

Gene: Chlochlo_46 Start: 33279, Stop: 33929, Start Num: 16
Candidate Starts for Chlochlo_46:
(Start: 16 @33279 has 33 MA's), (23, 33348), (28, 33372),

Gene: Circum_50 Start: 32270, Stop: 32866, Start Num: 17
Candidate Starts for Circum_50:
(Start: 17 @32270 has 102 MA's), (41, 32459), (47, 32486), (57, 32585), (66, 32639), (68, 32654), (112, 32858),

Gene: Citrus_54 Start: 37900, Stop: 38538, Start Num: 17
Candidate Starts for Citrus_54:
(Start: 17 @37900 has 102 MA's), (48, 38107), (49, 38113), (65, 38251), (106, 38431), (128, 38509), (130, 38521),

Gene: Conley_53 Start: 37570, Stop: 38184, Start Num: 17
Candidate Starts for Conley_53:
(Start: 17 @37570 has 102 MA's), (Start: 18 @37573 has 5 MA's), (48, 37777), (65, 37921), (76, 37990), (80, 38017), (97, 38074), (130, 38170),

Gene: Correa_46 Start: 30727, Stop: 31323, Start Num: 17
Candidate Starts for Correa_46:
(Start: 17 @30727 has 102 MA's), (41, 30916), (47, 30943), (55, 31018), (57, 31042), (66, 31096), (68, 31111), (112, 31315),

Gene: Count_67 Start: 45298, Stop: 46026, Start Num: 17
Candidate Starts for Count_67:

(Start: 17 @45298 has 102 MA's), (48, 45487), (67, 45646), (75, 45697), (108, 45814), (117, 45844), (125, 45877), (137, 46009),

Gene: Crocheter_55 Start: 37792, Stop: 38427, Start Num: 17
Candidate Starts for Crocheter_55:
(Start: 17 @37792 has 102 MA's), (48, 37999), (65, 38143), (128, 38398), (130, 38410),

Gene: Daddyjeff_42 Start: 30571, Stop: 31212, Start Num: 17
Candidate Starts for Daddyjeff_42:
(Start: 17 @30571 has 102 MA's), (26, 30655), (59, 30862), (65, 30910), (79, 31003),

Gene: Damascus_42 Start: 29644, Stop: 30312, Start Num: 17
Candidate Starts for Damascus_42:
(Start: 17 @29644 has 102 MA's), (36, 29773), (45, 29821), (56, 29920), (67, 29992), (70, 30019), (93, 30118), (132, 30250),

Gene: Dancer_54 Start: 36692, Stop: 37309, Start Num: 17
Candidate Starts for Dancer_54:
(Start: 17 @36692 has 102 MA's), (Start: 18 @36695 has 5 MA's), (48, 36899), (65, 37043), (102, 37208), (130, 37295),

Gene: Darby_43 Start: 33072, Stop: 33731, Start Num: 16
Candidate Starts for Darby_43:
(Start: 16 @33072 has 33 MA's), (23, 33141), (28, 33165), (43, 33249), (48, 33273), (78, 33507), (111, 33627), (115, 33639), (122, 33660),

Gene: Demure_52 Start: 36745, Stop: 37380, Start Num: 17
Candidate Starts for Demure_52:
(Start: 17 @36745 has 102 MA's), (48, 36952), (53, 36997), (58, 37054), (65, 37096), (128, 37351), (130, 37363),

Gene: DevitoJr_43 Start: 33260, Stop: 33919, Start Num: 16
Candidate Starts for DevitoJr_43:
(Start: 16 @33260 has 33 MA's), (23, 33329), (28, 33353), (43, 33437), (111, 33815), (122, 33848),

Gene: Dialga_55 Start: 37961, Stop: 38596, Start Num: 17
Candidate Starts for Dialga_55:
(Start: 17 @37961 has 102 MA's), (48, 38168), (65, 38312), (128, 38567), (130, 38579),

Gene: Dinallo_44 Start: 34379, Stop: 35038, Start Num: 16
Candidate Starts for Dinallo_44:
(Start: 16 @34379 has 33 MA's), (23, 34448), (28, 34472), (68, 34748), (128, 35000),

Gene: DizzyRudy_44 Start: 29531, Stop: 30199, Start Num: 17
Candidate Starts for DizzyRudy_44:
(Start: 17 @29531 has 102 MA's), (36, 29660), (45, 29708), (56, 29807), (67, 29879), (70, 29906), (88, 29993), (93, 30005), (132, 30137),

Gene: Djungelskog_43 Start: 30994, Stop: 31554, Start Num: 17
Candidate Starts for Djungelskog_43:
(Start: 17 @30994 has 102 MA's), (26, 31081), (30, 31093), (36, 31123), (39, 31147), (52, 31237), (77, 31396),

Gene: DoctorPepper_42 Start: 30699, Stop: 31259, Start Num: 17
Candidate Starts for DoctorPepper_42:
(Start: 17 @30699 has 102 MA's), (26, 30786), (30, 30798), (36, 30828), (39, 30852), (52, 30942), (77, 31101),

Gene: Duffington_53 Start: 37317, Stop: 37955, Start Num: 17
Candidate Starts for Duffington_53:
(Start: 17 @37317 has 102 MA's), (48, 37524), (49, 37530), (65, 37668), (106, 37848), (128, 37926), (130, 37938),

Gene: Dynamite_48 Start: 31823, Stop: 32392, Start Num: 17
Candidate Starts for Dynamite_48:
(Start: 17 @31823 has 102 MA's), (41, 32012), (47, 32039), (55, 32114), (57, 32138), (66, 32192),

Gene: Eddiemania_57 Start: 38537, Stop: 39172, Start Num: 17
Candidate Starts for Eddiemania_57:
(Start: 17 @38537 has 102 MA's), (48, 38744), (49, 38750), (65, 38888), (128, 39143), (130, 39155),

Gene: Eevee_44 Start: 33674, Stop: 34315, Start Num: 17
Candidate Starts for Eevee_44:
(Start: 17 @33674 has 102 MA's), (20, 33704), (24, 33752), (44, 33848), (59, 33968), (64, 34010), (65, 34016), (79, 34103),

Gene: Egad_43 Start: 30996, Stop: 31556, Start Num: 17
Candidate Starts for Egad_43:
(Start: 17 @30996 has 102 MA's), (26, 31083), (30, 31095), (36, 31125), (39, 31149), (52, 31239), (77, 31398),

Gene: ElephantMan_44 Start: 33745, Stop: 34404, Start Num: 16
Candidate Starts for ElephantMan_44:
(Start: 16 @33745 has 33 MA's), (23, 33814), (28, 33838), (78, 34180), (128, 34366),

Gene: Elsa_48 Start: 31859, Stop: 32455, Start Num: 17
Candidate Starts for Elsa_48:
(Start: 17 @31859 has 102 MA's), (41, 32048), (47, 32075), (57, 32174), (66, 32228), (68, 32243), (112, 32447),

Gene: Elver_94 Start: 52859, Stop: 53530, Start Num: 10
Candidate Starts for Elver_94:
(Start: 10 @52859 has 3 MA's), (Start: 16 @52898 has 33 MA's), (19, 52913), (54, 53150), (62, 53219), (67, 53246), (82, 53342), (124, 53486),

Gene: EndAve_56 Start: 37790, Stop: 38428, Start Num: 17
Candidate Starts for EndAve_56:
(Start: 17 @37790 has 102 MA's), (48, 37997), (49, 38003), (65, 38141), (106, 38321), (128, 38399), (130, 38411),

Gene: Fazel_55 Start: 37262, Stop: 37894, Start Num: 17
Candidate Starts for Fazel_55:
(Start: 17 @37262 has 102 MA's), (21, 37310), (38, 37406), (48, 37469), (65, 37613), (70, 37652), (96, 37766), (119, 37829), (128, 37865), (130, 37877),

Gene: Figliar_53 Start: 37692, Stop: 38330, Start Num: 17

Candidate Starts for Figliar_53:
(Start: 17 @37692 has 102 MA's), (48, 37899), (49, 37905), (65, 38043), (106, 38223), (128, 38301), (130, 38313),

Gene: Football_56 Start: 36838, Stop: 37455, Start Num: 17
Candidate Starts for Football_56:
(Start: 17 @36838 has 102 MA's), (Start: 18 @36841 has 5 MA's), (48, 37045), (65, 37189), (102, 37354), (107, 37363), (130, 37441),

Gene: FortCran_54 Start: 36957, Stop: 37574, Start Num: 17
Candidate Starts for FortCran_54:
(Start: 17 @36957 has 102 MA's), (Start: 18 @36960 has 5 MA's), (48, 37164), (65, 37308), (102, 37473), (130, 37560),

Gene: Gandionco_91 Start: 51754, Stop: 52386, Start Num: 16
Candidate Starts for Gandionco_91:
(Start: 10 @51715 has 3 MA's), (Start: 16 @51754 has 33 MA's), (19, 51769), (54, 52006), (62, 52075), (67, 52102), (82, 52198), (124, 52342),

Gene: GermyBearimy_56 Start: 34512, Stop: 35096, Start Num: 16
Candidate Starts for GermyBearimy_56:
(Start: 16 @34512 has 33 MA's), (42, 34677), (44, 34683), (59, 34809), (61, 34818), (81, 34920), (82, 34929), (124, 35052),

Gene: Giantsbane_46 Start: 32465, Stop: 33115, Start Num: 16
Candidate Starts for Giantsbane_46:
(6, 32420), (14, 32435), (Start: 16 @32465 has 33 MA's), (23, 32534), (28, 32558),

Gene: Gill_54 Start: 36803, Stop: 37399, Start Num: 18
Candidate Starts for Gill_54:
(Start: 17 @36800 has 102 MA's), (Start: 18 @36803 has 5 MA's), (31, 36902), (48, 37007), (65, 37151), (94, 37301), (102, 37316), (130, 37385),

Gene: Glintora_56 Start: 38232, Stop: 38879, Start Num: 17
Candidate Starts for Glintora_56:
(Start: 17 @38232 has 102 MA's), (48, 38439), (65, 38583), (118, 38808), (121, 38817), (128, 38853),

Gene: GoCrazy_47 Start: 31735, Stop: 32331, Start Num: 17
Candidate Starts for GoCrazy_47:
(Start: 17 @31735 has 102 MA's), (41, 31924), (47, 31951), (57, 32050), (66, 32104), (68, 32119), (112, 32323),

Gene: Gordon_42 Start: 33925, Stop: 34584, Start Num: 16
Candidate Starts for Gordon_42:
(Start: 16 @33925 has 33 MA's), (23, 33994), (28, 34018), (43, 34102), (48, 34126), (78, 34360), (122, 34513),

Gene: Gravy_53 Start: 36473, Stop: 37072, Start Num: 17
Candidate Starts for Gravy_53:
(Start: 17 @36473 has 102 MA's), (Start: 18 @36476 has 5 MA's), (31, 36575), (48, 36680), (65, 36824), (94, 36974), (102, 36989), (130, 37058),

Gene: Gusicorn_56 Start: 37709, Stop: 38344, Start Num: 17

Candidate Starts for Gusicorn_56:
(Start: 17 @37709 has 102 MA's), (48, 37916), (65, 38060), (128, 38315), (130, 38327),

Gene: Hankly_47 Start: 31036, Stop: 31605, Start Num: 17
Candidate Starts for Hankly_47:
(Start: 17 @31036 has 102 MA's), (41, 31225), (47, 31252), (55, 31327), (57, 31351), (66, 31405),

Gene: Heisenberger_47 Start: 31299, Stop: 31895, Start Num: 17
Candidate Starts for Heisenberger_47:
(Start: 17 @31299 has 102 MA's), (41, 31488), (47, 31515), (55, 31590), (57, 31614), (66, 31668), (68, 31683), (112, 31887),

Gene: Hemma_42 Start: 30335, Stop: 30985, Start Num: 16
Candidate Starts for Hemma_42:
(7, 30293), (11, 30299), (Start: 16 @30335 has 33 MA's), (23, 30404), (27, 30425), (28, 30428), (93, 30830), (111, 30881), (120, 30908),

Gene: HerbBucket_43 Start: 30696, Stop: 31256, Start Num: 17
Candidate Starts for HerbBucket_43:
(Start: 17 @30696 has 102 MA's), (26, 30783), (30, 30795), (36, 30825), (39, 30849), (52, 30939), (77, 31098),

Gene: Hortihabitatio_55 Start: 37498, Stop: 38130, Start Num: 17
Candidate Starts for Hortihabitatio_55:
(Start: 17 @37498 has 102 MA's), (21, 37546), (22, 37555), (29, 37594), (32, 37612), (48, 37705), (65, 37849), (70, 37888), (80, 37945), (96, 38002), (128, 38101), (130, 38113),

Gene: Hydrus_57 Start: 38564, Stop: 39199, Start Num: 17
Candidate Starts for Hydrus_57:
(Start: 17 @38564 has 102 MA's), (48, 38771), (65, 38915), (128, 39170), (130, 39182),

Gene: Ingrid_46 Start: 33203, Stop: 33853, Start Num: 16
Candidate Starts for Ingrid_46:
(7, 33164), (11, 33170), (Start: 16 @33203 has 33 MA's), (23, 33272), (28, 33296), (72, 33608), (93, 33698), (111, 33749), (120, 33776),

Gene: Inked_48 Start: 34345, Stop: 34989, Start Num: 16
Candidate Starts for Inked_48:
(Start: 16 @34345 has 33 MA's), (23, 34414),

Gene: Issa_44 Start: 33364, Stop: 34023, Start Num: 16
Candidate Starts for Issa_44:
(Start: 16 @33364 has 33 MA's), (23, 33433), (28, 33457), (48, 33565), (68, 33733), (78, 33799), (122, 33952), (128, 33985),

Gene: JEGGS_47 Start: 31353, Stop: 31949, Start Num: 17
Candidate Starts for JEGGS_47:
(Start: 17 @31353 has 102 MA's), (41, 31542), (47, 31569), (55, 31644), (57, 31668), (66, 31722), (68, 31737), (112, 31941),

Gene: Jazzy4900_49 Start: 33968, Stop: 34558, Start Num: 16
Candidate Starts for Jazzy4900_49:

(Start: 16 @33968 has 33 MA's), (Start: 18 @33971 has 5 MA's), (37, 34091), (42, 34133), (44, 34139), (59, 34265), (61, 34274), (81, 34376), (82, 34385), (92, 34427), (124, 34514),

Gene: JeNeSaisPas_89 Start: 52328, Stop: 52960, Start Num: 16
Candidate Starts for JeNeSaisPas_89:
(Start: 10 @52289 has 3 MA's), (Start: 16 @52328 has 33 MA's), (19, 52343), (54, 52580), (62, 52649), (67, 52676), (82, 52772), (124, 52916),

Gene: Jeremy4pt0_43 Start: 30694, Stop: 31254, Start Num: 17
Candidate Starts for Jeremy4pt0_43:
(Start: 17 @30694 has 102 MA's), (26, 30781), (30, 30793), (36, 30823), (39, 30847), (52, 30937), (77, 31096),

Gene: Jodelie19_54 Start: 39096, Stop: 39734, Start Num: 17
Candidate Starts for Jodelie19_54:
(Start: 17 @39096 has 102 MA's), (48, 39303), (49, 39309), (65, 39447), (106, 39627), (128, 39705), (130, 39717),

Gene: JoyLin_44 Start: 33794, Stop: 34435, Start Num: 17
Candidate Starts for JoyLin_44:
(Start: 17 @33794 has 102 MA's), (20, 33824), (24, 33872), (44, 33968), (59, 34088), (65, 34136), (79, 34223),

Gene: JulesRay_54 Start: 36969, Stop: 37583, Start Num: 18
Candidate Starts for JulesRay_54:
(Start: 17 @36966 has 102 MA's), (Start: 18 @36969 has 5 MA's), (48, 37173), (65, 37317), (107, 37491), (130, 37569),

Gene: Kardesai_49 Start: 32007, Stop: 32576, Start Num: 17
Candidate Starts for Kardesai_49:
(Start: 17 @32007 has 102 MA's), (41, 32196), (47, 32223), (55, 32298), (57, 32322), (66, 32376),

Gene: KeaneyLin_47 Start: 31735, Stop: 32331, Start Num: 17
Candidate Starts for KeaneyLin_47:
(Start: 17 @31735 has 102 MA's), (41, 31924), (47, 31951), (57, 32050), (66, 32104), (68, 32119), (112, 32323),

Gene: Kenosha_54 Start: 38023, Stop: 38658, Start Num: 17
Candidate Starts for Kenosha_54:
(Start: 17 @38023 has 102 MA's), (48, 38230), (49, 38236), (65, 38374), (128, 38629), (130, 38641),

Gene: Kerry_53 Start: 36473, Stop: 37072, Start Num: 17
Candidate Starts for Kerry_53:
(Start: 17 @36473 has 102 MA's), (Start: 18 @36476 has 5 MA's), (31, 36575), (48, 36680), (65, 36824), (94, 36974), (102, 36989), (130, 37058),

Gene: Kureo_93 Start: 51908, Stop: 52540, Start Num: 16
Candidate Starts for Kureo_93:
(Start: 10 @51869 has 3 MA's), (Start: 16 @51908 has 33 MA's), (19, 51923), (54, 52160), (62, 52229), (67, 52256), (82, 52352), (124, 52496),

Gene: LilHuddy_46 Start: 33411, Stop: 34067, Start Num: 16
Candidate Starts for LilHuddy_46:

(Start: 16 @33411 has 33 MA's), (23, 33480), (28, 33504),

Gene: Linda_43 Start: 30992, Stop: 31552, Start Num: 17
Candidate Starts for Linda_43:
(Start: 17 @30992 has 102 MA's), (26, 31079), (30, 31091), (36, 31121), (39, 31145), (52, 31235), (77, 31394),

Gene: Loretta_46 Start: 33203, Stop: 33853, Start Num: 16
Candidate Starts for Loretta_46:
(7, 33164), (11, 33170), (Start: 16 @33203 has 33 MA's), (23, 33272), (28, 33296), (72, 33608), (93, 33698), (111, 33749), (120, 33776),

Gene: LucySwiss_45 Start: 33166, Stop: 33825, Start Num: 16
Candidate Starts for LucySwiss_45:
(Start: 16 @33166 has 33 MA's), (23, 33235), (28, 33259), (68, 33535), (78, 33601), (122, 33754), (128, 33787),

Gene: Luthien_57 Start: 37788, Stop: 38426, Start Num: 17
Candidate Starts for Luthien_57:
(Start: 17 @37788 has 102 MA's), (48, 37995), (49, 38001), (65, 38139), (106, 38319), (128, 38397), (130, 38409),

Gene: Madvan_55 Start: 37433, Stop: 38068, Start Num: 17
Candidate Starts for Madvan_55:
(Start: 17 @37433 has 102 MA's), (48, 37640), (65, 37784), (128, 38039), (130, 38051),

Gene: Magel_55 Start: 36719, Stop: 37315, Start Num: 18
Candidate Starts for Magel_55:
(Start: 17 @36716 has 102 MA's), (Start: 18 @36719 has 5 MA's), (31, 36818), (48, 36923), (65, 37067), (94, 37217), (102, 37232), (130, 37301),

Gene: MajinBuu_54 Start: 37725, Stop: 38363, Start Num: 17
Candidate Starts for MajinBuu_54:
(Start: 17 @37725 has 102 MA's), (48, 37932), (49, 37938), (65, 38076), (128, 38334), (130, 38346),

Gene: Makai_44 Start: 33397, Stop: 34047, Start Num: 16
Candidate Starts for Makai_44:
(Start: 16 @33397 has 33 MA's), (23, 33466), (28, 33490), (48, 33598),

Gene: Marianna39_92 Start: 52323, Stop: 52955, Start Num: 16
Candidate Starts for Marianna39_92:
(Start: 10 @52284 has 3 MA's), (Start: 16 @52323 has 33 MA's), (19, 52338), (54, 52575), (62, 52644), (67, 52671), (82, 52767), (124, 52911),

Gene: MediumFry_42 Start: 32492, Stop: 33331, Start Num: 2
Candidate Starts for MediumFry_42:
(1, 32489), (Start: 2 @32492 has 1 MA's), (3, 32525), (4, 32528), (9, 32633), (Start: 16 @32672 has 33 MA's), (23, 32741), (28, 32765), (128, 33293), (133, 33326),

Gene: Mema_40 Start: 30943, Stop: 31716, Start Num: 17
Candidate Starts for Mema_40:
(Start: 17 @30943 has 102 MA's), (36, 31072), (56, 31219), (59, 31237), (67, 31291), (70, 31318), (84, 31405), (134, 31576), (135, 31591), (136, 31618),

Gene: Michelle_43 Start: 30994, Stop: 31554, Start Num: 17
Candidate Starts for Michelle_43:
(Start: 17 @30994 has 102 MA's), (26, 31081), (30, 31093), (36, 31123), (39, 31147), (52, 31237), (77, 31396),

Gene: MiniBagel_44 Start: 34052, Stop: 34711, Start Num: 16
Candidate Starts for MiniBagel_44:
(Start: 16 @34052 has 33 MA's), (23, 34121), (28, 34145), (68, 34421), (128, 34673),

Gene: Mooshroom_50 Start: 32007, Stop: 32576, Start Num: 17
Candidate Starts for Mooshroom_50:
(Start: 17 @32007 has 102 MA's), (41, 32196), (47, 32223), (55, 32298), (57, 32322), (66, 32376),

Gene: Mossy_58 Start: 39452, Stop: 40093, Start Num: 17
Candidate Starts for Mossy_58:
(Start: 17 @39452 has 102 MA's), (21, 39500), (29, 39548), (38, 39596), (48, 39659), (65, 39803), (68, 39827), (70, 39842), (107, 39992), (113, 40007), (128, 40064), (130, 40076),

Gene: MrAaronian_43 Start: 30994, Stop: 31554, Start Num: 17
Candidate Starts for MrAaronian_43:
(Start: 17 @30994 has 102 MA's), (26, 31081), (30, 31093), (36, 31123), (39, 31147), (52, 31237), (77, 31396),

Gene: Mudcat_45 Start: 32712, Stop: 33308, Start Num: 17
Candidate Starts for Mudcat_45:
(Start: 17 @32712 has 102 MA's), (41, 32901), (47, 32928), (55, 33003), (57, 33027), (66, 33081), (68, 33096), (112, 33300),

Gene: Mysticmoon_56 Start: 38307, Stop: 38939, Start Num: 17
Candidate Starts for Mysticmoon_56:
(Start: 17 @38307 has 102 MA's), (21, 38355), (29, 38403), (38, 38451), (48, 38514), (58, 38616), (65, 38658), (70, 38697), (80, 38754), (98, 38817), (107, 38838), (119, 38874), (128, 38910), (130, 38922),

Gene: Nadmeg_56 Start: 38679, Stop: 39314, Start Num: 17
Candidate Starts for Nadmeg_56:
(Start: 17 @38679 has 102 MA's), (48, 38886), (65, 39030), (128, 39285), (130, 39297),

Gene: NapoleonB_48 Start: 31823, Stop: 32392, Start Num: 17
Candidate Starts for NapoleonB_48:
(Start: 17 @31823 has 102 MA's), (41, 32012), (47, 32039), (55, 32114), (57, 32138), (66, 32192),

Gene: Nason_48 Start: 31859, Stop: 32455, Start Num: 17
Candidate Starts for Nason_48:
(Start: 17 @31859 has 102 MA's), (41, 32048), (47, 32075), (57, 32174), (66, 32228), (68, 32243), (112, 32447),

Gene: Natasha_44 Start: 30712, Stop: 31287, Start Num: 17
Candidate Starts for Natasha_44:
(Start: 17 @30712 has 102 MA's), (26, 30799), (28, 30805), (36, 30841), (37, 30844), (47, 30910), (67, 31069), (85, 31147),

Gene: Nightmare_46 Start: 34312, Stop: 34971, Start Num: 16

Candidate Starts for Nightmare_46:
(Start: 16 @34312 has 33 MA's), (23, 34381), (28, 34405), (68, 34681), (71, 34699), (78, 34747), (128, 34933),

Gene: Niktson_44 Start: 33745, Stop: 34404, Start Num: 16
Candidate Starts for Niktson_44:
(Start: 16 @33745 has 33 MA's), (23, 33814), (28, 33838), (78, 34180), (128, 34366),

Gene: Nithya_55 Start: 37534, Stop: 38172, Start Num: 17
Candidate Starts for Nithya_55:
(Start: 17 @37534 has 102 MA's), (48, 37741), (49, 37747), (65, 37885), (106, 38065), (128, 38143), (130, 38155),

Gene: Nivinsha_45 Start: 33292, Stop: 33951, Start Num: 16
Candidate Starts for Nivinsha_45:
(Start: 10 @33253 has 3 MA's), (15, 33268), (Start: 16 @33292 has 33 MA's), (23, 33361), (28, 33385), (43, 33469), (48, 33493), (111, 33847),

Gene: NoPickles_53 Start: 36141, Stop: 36737, Start Num: 18
Candidate Starts for NoPickles_53:
(Start: 17 @36138 has 102 MA's), (Start: 18 @36141 has 5 MA's), (31, 36240), (48, 36345), (65, 36489), (94, 36639), (102, 36654), (130, 36723),

Gene: Odesza_53 Start: 36528, Stop: 37145, Start Num: 17
Candidate Starts for Odesza_53:
(Start: 17 @36528 has 102 MA's), (Start: 18 @36531 has 5 MA's), (31, 36630), (48, 36735), (65, 36879), (130, 37131),

Gene: OhMyWard_53 Start: 38645, Stop: 39286, Start Num: 17
Candidate Starts for OhMyWard_53:
(Start: 17 @38645 has 102 MA's), (21, 38693), (29, 38741), (38, 38789), (48, 38852), (65, 38996), (68, 39020), (70, 39035), (80, 39092), (107, 39185), (113, 39200), (128, 39257), (130, 39269),

Gene: OlgasClover_56 Start: 38677, Stop: 39315, Start Num: 17
Candidate Starts for OlgasClover_56:
(Start: 17 @38677 has 102 MA's), (48, 38884), (49, 38890), (65, 39028), (106, 39208), (128, 39286), (130, 39298),

Gene: Onestar_43 Start: 30682, Stop: 31287, Start Num: 17
Candidate Starts for Onestar_43:
(8, 30643), (13, 30649), (Start: 17 @30682 has 102 MA's), (27, 30772), (28, 30775), (30, 30781), (33, 30802), (36, 30811), (39, 30835), (52, 30925), (77, 31084),

Gene: Paella_95 Start: 53449, Stop: 54120, Start Num: 10
Candidate Starts for Paella_95:
(Start: 10 @53449 has 3 MA's), (Start: 16 @53488 has 33 MA's), (19, 53503), (54, 53740), (62, 53809), (67, 53836), (82, 53932), (124, 54076),

Gene: Pepy6_090 Start: 47253, Stop: 47894, Start Num: 17
Candidate Starts for Pepy6_090:
(Start: 17 @47253 has 102 MA's), (34, 47376), (35, 47385), (48, 47457), (60, 47568), (63, 47589), (65, 47601), (67, 47613), (68, 47625), (90, 47742), (100, 47772), (103, 47781), (118, 47826), (131, 47883),

Gene: Perkunas_55 Start: 36810, Stop: 37424, Start Num: 17
Candidate Starts for Perkunas_55:
(Start: 17 @36810 has 102 MA's), (Start: 18 @36813 has 5 MA's), (31, 36912), (48, 37017), (65, 37161), (101, 37317), (107, 37332), (130, 37410),

Gene: PerroGrande22_72 Start: 49695, Stop: 50330, Start Num: 17
Candidate Starts for PerroGrande22_72:
(Start: 17 @49695 has 102 MA's), (46, 49893), (48, 49899), (58, 50001), (60, 50010), (67, 50055), (89, 50172), (91, 50178), (118, 50262), (128, 50301),

Gene: PestoPenguin_58 Start: 37709, Stop: 38344, Start Num: 17
Candidate Starts for PestoPenguin_58:
(Start: 17 @37709 has 102 MA's), (48, 37916), (65, 38060), (128, 38315), (130, 38327),

Gene: Petito_56 Start: 38630, Stop: 39244, Start Num: 17
Candidate Starts for Petito_56:
(Start: 17 @38630 has 102 MA's), (Start: 18 @38633 has 5 MA's), (48, 38837), (65, 38981), (76, 39050), (80, 39077), (88, 39116), (101, 39137), (107, 39152), (130, 39230),

Gene: Phaby_46 Start: 33645, Stop: 34295, Start Num: 16
Candidate Starts for Phaby_46:
(Start: 16 @33645 has 33 MA's), (23, 33714), (28, 33738),

Gene: Phepper_56 Start: 37695, Stop: 38330, Start Num: 17
Candidate Starts for Phepper_56:
(Start: 17 @37695 has 102 MA's), (48, 37902), (65, 38046), (128, 38301), (130, 38313),

Gene: Pherobrine_56 Start: 38600, Stop: 39232, Start Num: 17
Candidate Starts for Pherobrine_56:
(Start: 17 @38600 has 102 MA's), (21, 38648), (29, 38696), (38, 38744), (48, 38807), (58, 38909), (65, 38951), (70, 38990), (80, 39047), (98, 39110), (107, 39131), (119, 39167), (128, 39203), (130, 39215),

Gene: Pippin15_44 Start: 30581, Stop: 31216, Start Num: 17
Candidate Starts for Pippin15_44:
(Start: 17 @30581 has 102 MA's), (24, 30659), (44, 30755), (59, 30875), (64, 30917), (65, 30923), (79, 31010), (88, 31058),

Gene: Poco6_088 Start: 49493, Stop: 50125, Start Num: 17
Candidate Starts for Poco6_088:
(Start: 17 @49493 has 102 MA's), (34, 49616), (35, 49625), (48, 49697), (60, 49808), (63, 49829), (65, 49841), (67, 49853), (68, 49865), (72, 49901), (89, 49967), (91, 49973), (104, 50012), (118, 50057), (123, 50069), (127, 50093), (128, 50096),

Gene: Powelldog_47 Start: 31692, Stop: 32306, Start Num: 17
Candidate Starts for Powelldog_47:
(Start: 17 @31692 has 102 MA's), (26, 31779), (28, 31785), (30, 31791), (36, 31821), (48, 31893), (67, 32049), (68, 32061), (69, 32073), (110, 32217), (118, 32241), (129, 32289),

Gene: ProfFrink_43 Start: 30995, Stop: 31555, Start Num: 17
Candidate Starts for ProfFrink_43:
(Start: 17 @30995 has 102 MA's), (26, 31082), (30, 31094), (36, 31124), (39, 31148), (52, 31238), (77, 31397),

Gene: Qui_95 Start: 53449, Stop: 54120, Start Num: 10
Candidate Starts for Qui_95:
(Start: 10 @53449 has 3 MA's), (Start: 16 @53488 has 33 MA's), (19, 53503), (54, 53740), (62, 53809), (67, 53836), (82, 53932), (124, 54076),

Gene: Raunak_46 Start: 30692, Stop: 31252, Start Num: 17
Candidate Starts for Raunak_46:
(Start: 17 @30692 has 102 MA's), (26, 30779), (30, 30791), (36, 30821), (39, 30845), (52, 30935), (77, 31094),

Gene: Rickmore_51 Start: 35485, Stop: 36111, Start Num: 17
Candidate Starts for Rickmore_51:
(Start: 17 @35485 has 102 MA's), (39, 35644), (48, 35692), (53, 35737), (65, 35836), (74, 35899), (105, 36004), (109, 36013), (130, 36094),

Gene: Roney_54 Start: 36826, Stop: 37425, Start Num: 17
Candidate Starts for Roney_54:
(Start: 17 @36826 has 102 MA's), (Start: 18 @36829 has 5 MA's), (31, 36928), (48, 37033), (65, 37177), (94, 37327), (102, 37342), (130, 37411),

Gene: Runhaar_55 Start: 37495, Stop: 38130, Start Num: 17
Candidate Starts for Runhaar_55:
(Start: 17 @37495 has 102 MA's), (48, 37702), (65, 37846), (128, 38101), (130, 38113),

Gene: RustyBoy_44 Start: 30693, Stop: 31268, Start Num: 17
Candidate Starts for RustyBoy_44:
(Start: 17 @30693 has 102 MA's), (26, 30780), (28, 30786), (36, 30822), (37, 30825), (47, 30891), (51, 30921), (67, 31050), (85, 31128),

Gene: Salk_43 Start: 30992, Stop: 31552, Start Num: 17
Candidate Starts for Salk_43:
(Start: 17 @30992 has 102 MA's), (26, 31079), (30, 31091), (36, 31121), (39, 31145), (52, 31235), (77, 31394),

Gene: Schwartz33_56 Start: 37627, Stop: 38241, Start Num: 17
Candidate Starts for Schwartz33_56:
(Start: 17 @37627 has 102 MA's), (29, 37723), (43, 37810), (48, 37834), (65, 37978), (80, 38068), (128, 38212), (130, 38224),

Gene: ScienceWizSam_45 Start: 33402, Stop: 34061, Start Num: 16
Candidate Starts for ScienceWizSam_45:
(Start: 16 @33402 has 33 MA's), (23, 33471), (28, 33495), (43, 33579), (111, 33957), (115, 33969),

Gene: Secretariat_54 Start: 36535, Stop: 37155, Start Num: 17
Candidate Starts for Secretariat_54:
(Start: 17 @36535 has 102 MA's), (37, 36673), (48, 36742), (65, 36886), (128, 37126), (130, 37138),

Gene: Serenabean_42 Start: 30574, Stop: 31215, Start Num: 17
Candidate Starts for Serenabean_42:
(Start: 17 @30574 has 102 MA's), (26, 30658), (59, 30865), (65, 30913), (70, 30952), (79, 31006),

Gene: ShaggyRogers_55 Start: 37445, Stop: 38080, Start Num: 17
Candidate Starts for ShaggyRogers_55:

(Start: 17 @37445 has 102 MA's), (48, 37652), (65, 37796), (128, 38051), (130, 38063),

Gene: Shepard_48 Start: 33483, Stop: 34139, Start Num: 16
Candidate Starts for Shepard_48:
(Start: 16 @33483 has 33 MA's), (23, 33552), (28, 33576), (50, 33702),

Gene: Shiba_42 Start: 30692, Stop: 31252, Start Num: 17
Candidate Starts for Shiba_42:
(Start: 17 @30692 has 102 MA's), (26, 30779), (30, 30791), (36, 30821), (39, 30845), (52, 30935), (77, 31094),

Gene: Sloopyjoe_43 Start: 30996, Stop: 31556, Start Num: 17
Candidate Starts for Sloopyjoe_43:
(Start: 17 @30996 has 102 MA's), (26, 31083), (30, 31095), (36, 31125), (39, 31149), (52, 31239), (77, 31398),

Gene: Spain_46 Start: 30994, Stop: 31554, Start Num: 17
Candidate Starts for Spain_46:
(Start: 17 @30994 has 102 MA's), (26, 31081), (30, 31093), (36, 31123), (39, 31147), (52, 31237), (77, 31396),

Gene: Sporto_44 Start: 32458, Stop: 33057, Start Num: 17
Candidate Starts for Sporto_44:
(5, 32404), (Start: 17 @32458 has 102 MA's), (25, 32542), (27, 32548), (28, 32551), (30, 32557), (39, 32611), (48, 32659), (52, 32701), (67, 32824), (68, 32836), (73, 32848),

Gene: Sprinkle_41 Start: 30831, Stop: 31406, Start Num: 17
Candidate Starts for Sprinkle_41:
(Start: 17 @30831 has 102 MA's), (26, 30918), (28, 30924), (36, 30960), (37, 30963), (47, 31029), (50, 31050), (60, 31143), (67, 31188), (77, 31224), (85, 31266), (114, 31341),

Gene: StarLord_43 Start: 30995, Stop: 31555, Start Num: 17
Candidate Starts for StarLord_43:
(Start: 17 @30995 has 102 MA's), (26, 31082), (30, 31094), (36, 31124), (39, 31148), (52, 31238), (77, 31397),

Gene: Stayer_43 Start: 30992, Stop: 31552, Start Num: 17
Candidate Starts for Stayer_43:
(Start: 17 @30992 has 102 MA's), (26, 31079), (30, 31091), (36, 31121), (39, 31145), (52, 31235), (77, 31394),

Gene: Sunny4976_48 Start: 33968, Stop: 34558, Start Num: 16
Candidate Starts for Sunny4976_48:
(Start: 16 @33968 has 33 MA's), (Start: 18 @33971 has 5 MA's), (37, 34091), (42, 34133), (44, 34139), (59, 34265), (61, 34274), (81, 34376), (82, 34385), (92, 34427), (124, 34514),

Gene: SweetCrkHerbs_55 Start: 36502, Stop: 37116, Start Num: 17
Candidate Starts for SweetCrkHerbs_55:
(Start: 17 @36502 has 102 MA's), (Start: 18 @36505 has 5 MA's), (31, 36604), (48, 36709), (65, 36853), (101, 37009), (107, 37024), (130, 37102),

Gene: Sweetclover_41 Start: 29341, Stop: 30015, Start Num: 17
Candidate Starts for Sweetclover_41:

(Start: 17 @29341 has 102 MA's), (26, 29425), (44, 29512), (59, 29632), (61, 29641), (65, 29680), (70, 29719), (86, 29824), (87, 29830), (102, 29887),

Gene: Synepsis_43 Start: 33411, Stop: 34073, Start Num: 16
Candidate Starts for Synepsis_43:
(Start: 16 @33411 has 33 MA's), (23, 33480), (28, 33504), (48, 33612), (68, 33780), (78, 33846), (128, 34035),

Gene: Tairn4Wing_56 Start: 36785, Stop: 37402, Start Num: 17
Candidate Starts for Tairn4Wing_56:
(Start: 17 @36785 has 102 MA's), (Start: 18 @36788 has 5 MA's), (48, 36992), (65, 37136), (107, 37310), (130, 37388),

Gene: Talon44_55 Start: 36844, Stop: 37458, Start Num: 17
Candidate Starts for Talon44_55:
(Start: 17 @36844 has 102 MA's), (Start: 18 @36847 has 5 MA's), (31, 36946), (48, 37051), (65, 37195), (101, 37351), (107, 37366), (130, 37444),

Gene: Tanis_54 Start: 36646, Stop: 37245, Start Num: 17
Candidate Starts for Tanis_54:
(Start: 17 @36646 has 102 MA's), (Start: 18 @36649 has 5 MA's), (31, 36748), (48, 36853), (65, 36997), (94, 37147), (102, 37162), (130, 37231),

Gene: Tatanka_43 Start: 33581, Stop: 34243, Start Num: 16
Candidate Starts for Tatanka_43:
(Start: 16 @33581 has 33 MA's), (23, 33650), (28, 33674), (78, 34016), (128, 34205),

Gene: Teacup_45 Start: 33771, Stop: 34433, Start Num: 16
Candidate Starts for Teacup_45:
(Start: 16 @33771 has 33 MA's), (23, 33840), (28, 33864), (68, 34140), (78, 34206), (128, 34395),

Gene: TenaciousP_55 Start: 39058, Stop: 39696, Start Num: 17
Candidate Starts for TenaciousP_55:
(Start: 17 @39058 has 102 MA's), (48, 39265), (49, 39271), (65, 39409), (106, 39589), (128, 39667), (130, 39679),

Gene: Tenno_45 Start: 34060, Stop: 34719, Start Num: 16
Candidate Starts for Tenno_45:
(Start: 16 @34060 has 33 MA's), (23, 34129), (28, 34153), (68, 34429), (128, 34681),

Gene: Tipton_46 Start: 33617, Stop: 34267, Start Num: 16
Candidate Starts for Tipton_46:
(Start: 16 @33617 has 33 MA's), (23, 33686), (28, 33710),

Gene: Tokki_48 Start: 33269, Stop: 33919, Start Num: 16
Candidate Starts for Tokki_48:
(6, 33224), (14, 33239), (Start: 16 @33269 has 33 MA's), (23, 33338), (28, 33362),

Gene: Tonaltzin_58 Start: 37628, Stop: 38266, Start Num: 17
Candidate Starts for Tonaltzin_58:
(Start: 17 @37628 has 102 MA's), (48, 37835), (49, 37841), (65, 37979), (106, 38159), (128, 38237), (130, 38249),

Gene: Tribby_48 Start: 31560, Stop: 32129, Start Num: 17
Candidate Starts for Tribby_48:
(Start: 17 @31560 has 102 MA's), (41, 31749), (47, 31776), (55, 31851), (57, 31875), (66, 31929), (68, 31944),

Gene: Truckee_42 Start: 33185, Stop: 33835, Start Num: 16
Candidate Starts for Truckee_42:
(Start: 16 @33185 has 33 MA's), (23, 33254), (28, 33278), (48, 33386),

Gene: Trufflozitus_58 Start: 37308, Stop: 37925, Start Num: 17
Candidate Starts for Trufflozitus_58:
(Start: 17 @37308 has 102 MA's), (Start: 18 @37311 has 5 MA's), (48, 37515), (65, 37659), (107, 37833), (130, 37911),

Gene: Trustiboi_44 Start: 33620, Stop: 34279, Start Num: 16
Candidate Starts for Trustiboi_44:
(Start: 16 @33620 has 33 MA's), (23, 33689), (28, 33713), (43, 33797), (48, 33821), (111, 34175), (115, 34187), (122, 34208),

Gene: Untouchable_56 Start: 38044, Stop: 38679, Start Num: 17
Candidate Starts for Untouchable_56:
(Start: 17 @38044 has 102 MA's), (48, 38251), (65, 38395), (128, 38650), (130, 38662),

Gene: Vardy_54 Start: 37385, Stop: 38020, Start Num: 17
Candidate Starts for Vardy_54:
(Start: 17 @37385 has 102 MA's), (48, 37592), (65, 37736), (128, 37991), (130, 38003),

Gene: Westerlin_44 Start: 34882, Stop: 35541, Start Num: 16
Candidate Starts for Westerlin_44:
(Start: 16 @34882 has 33 MA's), (23, 34951), (28, 34975), (48, 35083), (68, 35251), (78, 35317), (122, 35470), (128, 35503),

Gene: Xenomorph_44 Start: 31272, Stop: 31862, Start Num: 17
Candidate Starts for Xenomorph_44:
(Start: 17 @31272 has 102 MA's), (41, 31461), (47, 31488), (55, 31563), (57, 31587), (66, 31641), (68, 31656), (83, 31755),

Gene: YoshiYama_48 Start: 31854, Stop: 32450, Start Num: 17
Candidate Starts for YoshiYama_48:
(Start: 17 @31854 has 102 MA's), (41, 32043), (47, 32070), (57, 32169), (66, 32223), (68, 32238), (112, 32442),

Gene: Yotsuba_44 Start: 33812, Stop: 34453, Start Num: 17
Candidate Starts for Yotsuba_44:
(Start: 17 @33812 has 102 MA's), (20, 33842), (24, 33890), (44, 33986), (59, 34106), (64, 34148), (65, 34154), (79, 34241),

Gene: Zeph_57 Start: 38532, Stop: 39167, Start Num: 17
Candidate Starts for Zeph_57:
(Start: 17 @38532 has 102 MA's), (48, 38739), (53, 38784), (58, 38841), (65, 38883), (128, 39138), (130, 39150),

Gene: Zippen_46 Start: 34044, Stop: 34688, Start Num: 16

Candidate Starts for Zippen_46:
(Start: 16 @34044 has 33 MA's), (23, 34113),