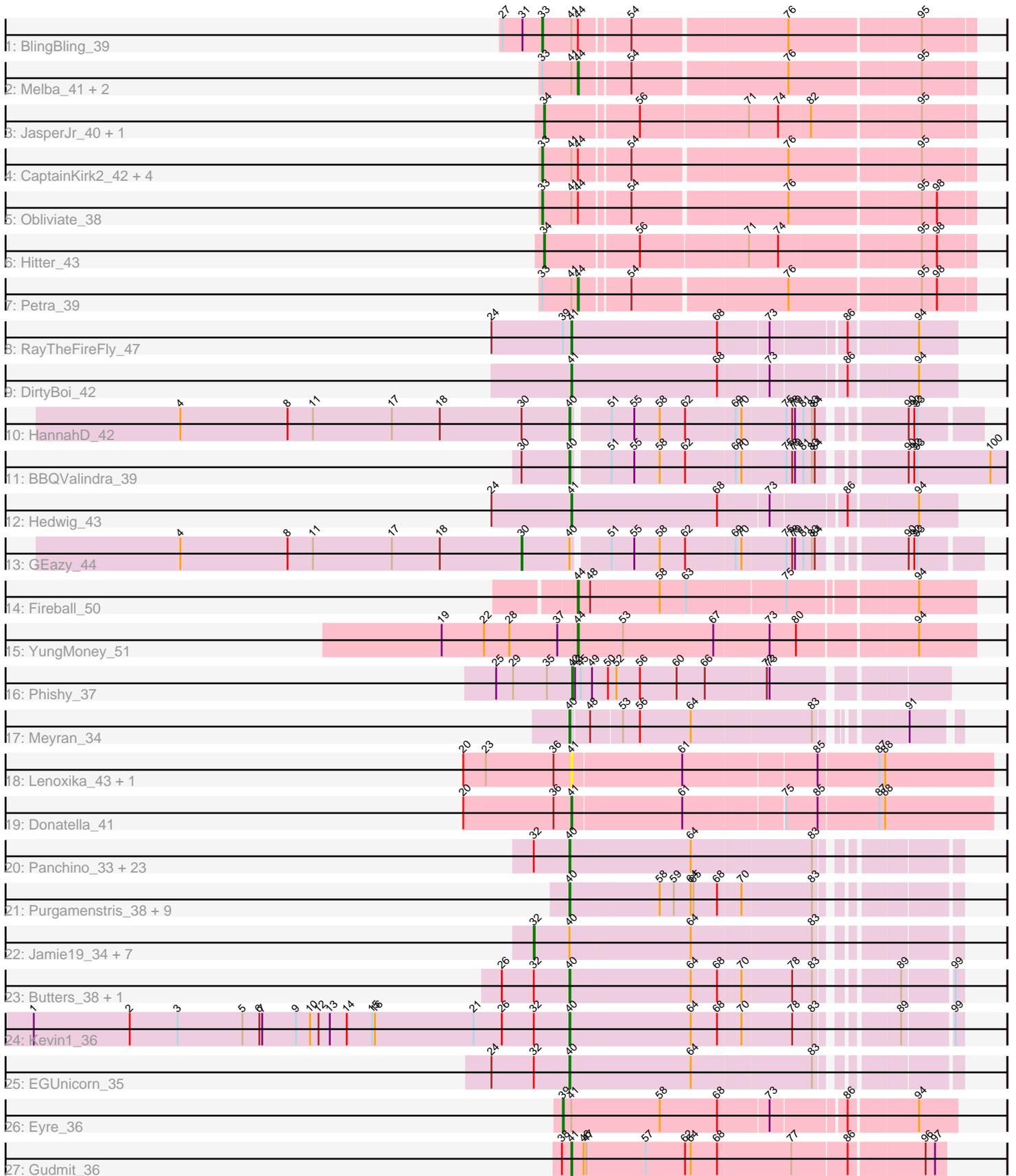Pham 291113

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 291113 Report

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

Pham number 291113 has 75 members, 4 are drafts.

Phages represented in each track:
• Track 1 : BlingBling_39
• Track 2 : Melba_41, Barco_40, Zilla_41
• Track 3 : JasperJr_40, Guacamole_40
• Track 4 : CaptainKirk2_42, Zarbodnamra_41, Archis_45, MintFen_42, Delian_45
• Track 5 : Obliviate_38
• Track 6 : Hitter_43
• Track 7 : Petra_39
• Track 8 : RayTheFireFly_47
• Track 9 : DirtyBoi_42
• Track 10 : HannahD_42
• Track 11 : BBQValindra_39
• Track 12 : Hedwig_43
• Track 13 : GEazy_44
• Track 14 : Fireball_50
• Track 15 : YungMoney_51
• Track 16 : Phishy_37
• Track 17 : Meyran_34
• Track 18 : Lenoxika_43, ToastyOats_45
• Track 19 : Donatella_41
• Track 20 : Panchino_33, Carcharodon_37, Duplicity_37, Phloss_35, MichelleMyBell_35, Gex_37, Tapioca_38, Silvafighter_38, Aggie_35, Silvy_35, Charlie_35, Magsby_37, Fulbright_36, Melville_39, Phrann_38, Andies_34, Smurph_37, SpongeBob_34, Parmesanjohn_37, Snekmaggedon_34, Tortoise12_35, Xerxes_37, Journey_35, Philonius_35
• Track 21 : Purgamenstris_38, Hanako_38, Spinach_38, Nenae_38, PhancyPhin_38, Impisi_40, Raymond7_32, BabeRuth_39, Redi_38, ShrimpFriedEgg_38
• Track 22 : Jamie19_34, SkinnyPete_32, Bosection6_35, Shweta_34, Xeno_34, Chewbacca_38, Pipsqueaks_37, Schnauzer_37
• Track 23 : Butters_38, Rubeelu_38
• Track 24 : Kevin1_36
• Track 25 : EGUnicorn_35
• Track 26 : Eyre_36
• Track 27 : Gudmit_36

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

The start number called the most often in the published annotations is 40, it was called in 40 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aggie_35, Andies_34, BBQValindra_39, BabeRuth_39, Butters_38, Carcharodon_37, Charlie_35, Duplicity_37, EGUnicorn_35, Fulbright_36, Gex_37, Hanako_38, HannahD_42, Impisi_40, Journey_35, Kevin1_36, Magsby_37, Melville_39, Meyran_34, MichelleMyBell_35, Nenae_38, Panchino_33, Parmesanjohn_37, PhancyPhin_38, Philonius_35, Phloss_35, Phrann_38, Purgamenstris_38, Raymond7_32, Redi_38, Rubeelu_38, ShrimpFriedEgg_38, Silvafighter_38, Silvy_35, Smurph_37, Snekmaggedon_34, Spinach_38, SpongeBob_34, Tapioca_38, Tortoise12_35, Xerxes_37,

Genes that have the "Most Annotated" start but do not call it:
• Bosection6_35, Chewbacca_38, GEazy_44, Jamie19_34, Pipsqueaks_37, Schnauzer_37, Shweta_34, SkinnyPete_32, Xeno_34,

Genes that do not have the "Most Annotated" start:
• Archis_45, Barco_40, BlingBling_39, CaptainKirk2_42, Delian_45, DirtyBoi_42, Donatella_41, Eyre_36, Fireball_50, Guacamole_40, Gudmit_36, Hedwig_43, Hitter_43, JasperJr_40, Lenoxika_43, Melba_41, MintFen_42, Obliviate_38, Petra_39, Phishy_37, RayTheFireFly_47, ToastyOats_45, YungMoney_51, Zarbodnamra_41, Zilla_41,

Summary by start number:

Start 30:
• Found in 3 of 75 (4.0%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 33.3% of time when present
• Phage (with cluster) where this start called: GEazy_44 (DB),

Start 32:
• Found in 36 of 75 (48.0%) of genes in pham
• Manual Annotations of this start: 8 of 71
• Called 22.2% of time when present
• Phage (with cluster) where this start called: Bosection6_35 (N), Chewbacca_38 (N), Jamie19_34 (N), Pipsqueaks_37 (N), Schnauzer_37 (N), Shweta_34 (N), SkinnyPete_32 (N), Xeno_34 (N),

Start 33:
• Found in 11 of 75 (14.7%) of genes in pham
• Manual Annotations of this start: 7 of 71
• Called 63.6% of time when present
• Phage (with cluster) where this start called: Archis_45 (CV), BlingBling_39 (CV), CaptainKirk2_42 (CV), Delian_45 (CV), MintFen_42 (CV), Obliviate_38 (CV), Zarbodnamra_41 (CV),

Start 34:
• Found in 3 of 75 (4.0%) of genes in pham
• Manual Annotations of this start: 3 of 71
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Guacamole_40 (CV), Hitter_43 (CV), JasperJr_40 (CV),

Start 39:
• Found in 2 of 75 (2.7%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Eyre_36 (singleton),

Start 40:
• Found in 50 of 75 (66.7%) of genes in pham
• Manual Annotations of this start: 40 of 71
• Called 82.0% of time when present
• Phage (with cluster) where this start called: Aggie_35 (N), Andies_34 (N), BBQValindra_39 (DB), BabeRuth_39 (N), Butters_38 (N), Carcharodon_37 (N), Charlie_35 (N), Duplicity_37 (N), EGUnicorn_35 (N), Fulbright_36 (N), Gex_37 (N), Hanako_38 (N), HannahD_42 (DB), Impisi_40 (N), Journey_35 (N), Kevin1_36 (N), Magsby_37 (N), Melville_39 (N), Meyran_34 (DT), MichelleMyBell_35 (N), Nenae_38 (N), Panchino_33 (N), Parmesanjohn_37 (N), PhancyPhin_38 (N), Philonius_35 (N), Phloss_35 (N), Phrann_38 (N), Purgamenstris_38 (N), Raymond7_32 (N), Redi_38 (N), Rubeelu_38 (N), ShrimpFriedEgg_38 (N), Silvafighter_38 (N), Silvy_35 (N), Smurph_37 (N), Snekmaggedon_34 (N), Spinach_38 (N), SpongeBob_34 (N), Tapioca_38 (N), Tortoise12_35 (N), Xerxes_37 (N),

Start 41:
• Found in 19 of 75 (25.3%) of genes in pham
• Manual Annotations of this start: 5 of 71
• Called 36.8% of time when present
• Phage (with cluster) where this start called: DirtyBoi_42 (DB), Donatella_41 (FF), Gudmit_36 (singleton), Hedwig_43 (DB), Lenoxika_43 (FF), RayTheFireFly_47 (DB), ToastyOats_45 (FF),

Start 42:
• Found in 1 of 75 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 71
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phishy_37 (DT),

Start 44:
• Found in 13 of 75 (17.3%) of genes in pham
• Manual Annotations of this start: 5 of 71
• Called 46.2% of time when present
• Phage (with cluster) where this start called: Barco_40 (CV), Fireball_50 (DC1), Melba_41 (CV), Petra_39 (CV), YungMoney_51 (DC1), Zilla_41 (CV),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, DB, N, FF, DT, CV, DC1,

Info for manual annotations of cluster CV:
•Start number 33 was manually annotated 7 times for cluster CV.
•Start number 34 was manually annotated 3 times for cluster CV.
•Start number 44 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster DB:
•Start number 30 was manually annotated 1 time for cluster DB.
•Start number 40 was manually annotated 2 times for cluster DB.
•Start number 41 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DC1:
•Start number 44 was manually annotated 2 times for cluster DC1.

Info for manual annotations of cluster DT:
•Start number 40 was manually annotated 1 time for cluster DT.
•Start number 42 was manually annotated 1 time for cluster DT.

Info for manual annotations of cluster FF:
•Start number 41 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster N:
•Start number 32 was manually annotated 8 times for cluster N.
•Start number 40 was manually annotated 37 times for cluster N.

Gene Information:

Gene: Aggie_35 Start: 27766, Stop: 27395, Start Num: 40
Candidate Starts for Aggie_35:
(Start: 32 @27802 has 8 MA's), (Start: 40 @27766 has 40 MA's), (64, 27640), (83, 27517),

Gene: Andies_34 Start: 28284, Stop: 27913, Start Num: 40
Candidate Starts for Andies_34:
(Start: 32 @28320 has 8 MA's), (Start: 40 @28284 has 40 MA's), (64, 28158), (83, 28035),

Gene: Archis_45 Start: 33058, Stop: 32636, Start Num: 33
Candidate Starts for Archis_45:
(Start: 33 @33058 has 7 MA's), (Start: 41 @33028 has 5 MA's), (Start: 44 @33022 has 5 MA's), (54, 32974), (76, 32821), (95, 32689),

Gene: BBQValindra_39 Start: 32907, Stop: 32485, Start Num: 40
Candidate Starts for BBQValindra_39:
(Start: 30 @32955 has 1 MA's), (Start: 40 @32907 has 40 MA's), (51, 32874), (55, 32850), (58, 32823), (62, 32796), (69, 32745), (70, 32739), (75, 32694), (78, 32688), (79, 32685), (81, 32676), (83, 32667), (84, 32664), (90, 32589), (92, 32583), (93, 32580), (100, 32502),

Gene: BabeRuth_39 Start: 29411, Stop: 29040, Start Num: 40
Candidate Starts for BabeRuth_39:
(Start: 40 @29411 has 40 MA's), (58, 29318), (59, 29303), (64, 29285), (65, 29282), (68, 29258), (70, 29234), (83, 29162),

Gene: Barco_40 Start: 32072, Stop: 31686, Start Num: 44
Candidate Starts for Barco_40:
(Start: 33 @32108 has 7 MA's), (Start: 41 @32078 has 5 MA's), (Start: 44 @32072 has 5 MA's), (54, 32024), (76, 31871), (95, 31739),

Gene: BlingBling_39 Start: 33071, Stop: 32649, Start Num: 33
Candidate Starts for BlingBling_39:
(27, 33113), (31, 33092), (Start: 33 @33071 has 7 MA's), (Start: 41 @33041 has 5 MA's), (Start: 44 @33035 has 5 MA's), (54, 32987), (76, 32834), (95, 32702),

Gene: Bosection6_35 Start: 27823, Stop: 27416, Start Num: 32
Candidate Starts for Bosection6_35:
(Start: 32 @27823 has 8 MA's), (Start: 40 @27787 has 40 MA's), (64, 27661), (83, 27538),

Gene: Butters_38 Start: 29838, Stop: 29467, Start Num: 40
Candidate Starts for Butters_38:
(26, 29907), (Start: 32 @29874 has 8 MA's), (Start: 40 @29838 has 40 MA's), (64, 29712), (68, 29685), (70, 29661), (78, 29610), (83, 29589), (89, 29523), (99, 29475),

Gene: CaptainKirk2_42 Start: 32356, Stop: 31934, Start Num: 33
Candidate Starts for CaptainKirk2_42:
(Start: 33 @32356 has 7 MA's), (Start: 41 @32326 has 5 MA's), (Start: 44 @32320 has 5 MA's), (54, 32272), (76, 32119), (95, 31987),

Gene: Carcharodon_37 Start: 29095, Stop: 28724, Start Num: 40
Candidate Starts for Carcharodon_37:
(Start: 32 @29131 has 8 MA's), (Start: 40 @29095 has 40 MA's), (64, 28969), (83, 28846),

Gene: Charlie_35 Start: 27786, Stop: 27415, Start Num: 40
Candidate Starts for Charlie_35:
(Start: 32 @27822 has 8 MA's), (Start: 40 @27786 has 40 MA's), (64, 27660), (83, 27537),

Gene: Chewbacca_38 Start: 29131, Stop: 28724, Start Num: 32
Candidate Starts for Chewbacca_38:
(Start: 32 @29131 has 8 MA's), (Start: 40 @29095 has 40 MA's), (64, 28969), (83, 28846),

Gene: Delian_45 Start: 32354, Stop: 31932, Start Num: 33
Candidate Starts for Delian_45:
(Start: 33 @32354 has 7 MA's), (Start: 41 @32324 has 5 MA's), (Start: 44 @32318 has 5 MA's), (54, 32270), (76, 32117), (95, 31985),

Gene: DirtyBoi_42 Start: 31803, Stop: 31423, Start Num: 41
Candidate Starts for DirtyBoi_42:
(Start: 41 @31803 has 5 MA's), (68, 31650), (73, 31599), (86, 31527), (94, 31461),

Gene: Donatella_41 Start: 30320, Stop: 29892, Start Num: 41
Candidate Starts for Donatella_41:
(20, 30434), (36, 30338), (Start: 41 @30320 has 5 MA's), (61, 30206), (75, 30104), (85, 30071), (87, 30008), (88, 30002),

Gene: Duplicity_37 Start: 29104, Stop: 28733, Start Num: 40
Candidate Starts for Duplicity_37:
(Start: 32 @29140 has 8 MA's), (Start: 40 @29104 has 40 MA's), (64, 28978), (83, 28855),

Gene: EGUnicorn_35 Start: 27786, Stop: 27415, Start Num: 40
Candidate Starts for EGUnicorn_35:
(24, 27867), (Start: 32 @27822 has 8 MA's), (Start: 40 @27786 has 40 MA's), (64, 27660), (83, 27537),

Gene: Eyre_36 Start: 27990, Stop: 27601, Start Num: 39
Candidate Starts for Eyre_36:
(Start: 39 @27990 has 1 MA's), (Start: 41 @27981 has 5 MA's), (58, 27888), (68, 27828), (73, 27777), (86, 27705), (94, 27639),

Gene: Fireball_50 Start: 40315, Stop: 39920, Start Num: 44
Candidate Starts for Fireball_50:
(Start: 44 @40315 has 5 MA's), (48, 40303), (58, 40231), (63, 40204), (75, 40102), (94, 39979),

Gene: Fulbright_36 Start: 28184, Stop: 27813, Start Num: 40
Candidate Starts for Fulbright_36:
(Start: 32 @28220 has 8 MA's), (Start: 40 @28184 has 40 MA's), (64, 28058), (83, 27935),

Gene: GEazy_44 Start: 32533, Stop: 32096, Start Num: 30
Candidate Starts for GEazy_44:
(4, 32896), (8, 32782), (11, 32755), (17, 32671), (18, 32620), (Start: 30 @32533 has 1 MA's), (Start: 40 @32485 has 40 MA's), (51, 32452), (55, 32428), (58, 32401), (62, 32374), (69, 32323), (70, 32317), (75, 32272), (78, 32266), (79, 32263), (81, 32254), (83, 32245), (84, 32242), (90, 32167), (92, 32161), (93, 32158),

Gene: Gex_37 Start: 29111, Stop: 28740, Start Num: 40
Candidate Starts for Gex_37:
(Start: 32 @29147 has 8 MA's), (Start: 40 @29111 has 40 MA's), (64, 28985), (83, 28862),

Gene: Guacamole_40 Start: 32920, Stop: 32501, Start Num: 34
Candidate Starts for Guacamole_40:
(Start: 34 @32920 has 3 MA's), (56, 32830), (71, 32725), (74, 32695), (82, 32662), (95, 32554),

Gene: Gudmit_36 Start: 27005, Stop: 26628, Start Num: 41
Candidate Starts for Gudmit_36:
(38, 27014), (Start: 41 @27005 has 5 MA's), (46, 26993), (47, 26990), (57, 26927), (62, 26885), (64, 26879), (68, 26852), (77, 26777), (86, 26720), (96, 26648), (97, 26639),

Gene: Hanako_38 Start: 29410, Stop: 29039, Start Num: 40
Candidate Starts for Hanako_38:
(Start: 40 @29410 has 40 MA's), (58, 29317), (59, 29302), (64, 29284), (65, 29281), (68, 29257), (70, 29233), (83, 29161),

Gene: HannahD_42 Start: 31852, Stop: 31463, Start Num: 40
Candidate Starts for HannahD_42:
(4, 32263), (8, 32149), (11, 32122), (17, 32038), (18, 31987), (Start: 30 @31900 has 1 MA's), (Start: 40 @31852 has 40 MA's), (51, 31819), (55, 31795), (58, 31768), (62, 31741), (69, 31690), (70, 31684), (75, 31639), (78, 31633), (79, 31630), (81, 31621), (83, 31612), (84, 31609), (90, 31534), (92, 31528), (93, 31525),

Gene: Hedwig_43 Start: 32226, Stop: 31846, Start Num: 41
Candidate Starts for Hedwig_43:
(24, 32310), (Start: 41 @32226 has 5 MA's), (68, 32073), (73, 32022), (86, 31950), (94, 31884),

Gene: Hitter_43 Start: 32564, Stop: 32145, Start Num: 34
Candidate Starts for Hitter_43:
(Start: 34 @32564 has 3 MA's), (56, 32474), (71, 32369), (74, 32339), (95, 32198), (98, 32183),

Gene: Impisi_40 Start: 29966, Stop: 29595, Start Num: 40
Candidate Starts for Impisi_40:
(Start: 40 @29966 has 40 MA's), (58, 29873), (59, 29858), (64, 29840), (65, 29837), (68, 29813), (70, 29789), (83, 29717),

Gene: Jamie19_34 Start: 28201, Stop: 27794, Start Num: 32
Candidate Starts for Jamie19_34:
(Start: 32 @28201 has 8 MA's), (Start: 40 @28165 has 40 MA's), (64, 28039), (83, 27916),

Gene: JasperJr_40 Start: 32920, Stop: 32501, Start Num: 34
Candidate Starts for JasperJr_40:
(Start: 34 @32920 has 3 MA's), (56, 32830), (71, 32725), (74, 32695), (82, 32662), (95, 32554),

Gene: Journey_35 Start: 27786, Stop: 27415, Start Num: 40
Candidate Starts for Journey_35:
(Start: 32 @27822 has 8 MA's), (Start: 40 @27786 has 40 MA's), (64, 27660), (83, 27537),

Gene: Kevin1_36 Start: 29017, Stop: 28646, Start Num: 40
Candidate Starts for Kevin1_36:
(1, 29584), (2, 29482), (3, 29431), (5, 29362), (6, 29344), (7, 29341), (9, 29305), (10, 29290), (12, 29281), (13, 29269), (14, 29251), (15, 29224), (16, 29221), (21, 29116), (26, 29086), (Start: 32 @29053 has 8 MA's), (Start: 40 @29017 has 40 MA's), (64, 28891), (68, 28864), (70, 28840), (78, 28789), (83, 28768), (89, 28702), (99, 28654),

Gene: Lenoxika_43 Start: 30210, Stop: 29782, Start Num: 41
Candidate Starts for Lenoxika_43:
(20, 30324), (23, 30300), (36, 30228), (Start: 41 @30210 has 5 MA's), (61, 30096), (85, 29961), (87, 29898), (88, 29892),

Gene: Magsby_37 Start: 29112, Stop: 28741, Start Num: 40
Candidate Starts for Magsby_37:
(Start: 32 @29148 has 8 MA's), (Start: 40 @29112 has 40 MA's), (64, 28986), (83, 28863),

Gene: Melba_41 Start: 32860, Stop: 32474, Start Num: 44
Candidate Starts for Melba_41:
(Start: 33 @32896 has 7 MA's), (Start: 41 @32866 has 5 MA's), (Start: 44 @32860 has 5 MA's), (54, 32812), (76, 32659), (95, 32527),

Gene: Melville_39 Start: 29096, Stop: 28725, Start Num: 40
Candidate Starts for Melville_39:
(Start: 32 @29132 has 8 MA's), (Start: 40 @29096 has 40 MA's), (64, 28970), (83, 28847),

Gene: Meyran_34 Start: 30905, Stop: 30549, Start Num: 40
Candidate Starts for Meyran_34:
(Start: 40 @30905 has 40 MA's), (48, 30887), (53, 30857), (56, 30839), (64, 30785), (83, 30662), (91, 30593),

Gene: MichelleMyBell_35 Start: 28103, Stop: 27732, Start Num: 40
Candidate Starts for MichelleMyBell_35:
(Start: 32 @28139 has 8 MA's), (Start: 40 @28103 has 40 MA's), (64, 27977), (83, 27854),

Gene: MintFen_42 Start: 32970, Stop: 32548, Start Num: 33
Candidate Starts for MintFen_42:

(Start: 33 @32970 has 7 MA's), (Start: 41 @32940 has 5 MA's), (Start: 44 @32934 has 5 MA's), (54, 32886), (76, 32733), (95, 32601),

Gene: Nenae_38 Start: 29413, Stop: 29042, Start Num: 40
Candidate Starts for Nenae_38:
(Start: 40 @29413 has 40 MA's), (58, 29320), (59, 29305), (64, 29287), (65, 29284), (68, 29260), (70, 29236), (83, 29164),

Gene: Obliviate_38 Start: 31257, Stop: 30835, Start Num: 33
Candidate Starts for Obliviate_38:
(Start: 33 @31257 has 7 MA's), (Start: 41 @31227 has 5 MA's), (Start: 44 @31221 has 5 MA's), (54, 31173), (76, 31020), (95, 30888), (98, 30873),

Gene: Panchino_33 Start: 29511, Stop: 29140, Start Num: 40
Candidate Starts for Panchino_33:
(Start: 32 @29547 has 8 MA's), (Start: 40 @29511 has 40 MA's), (64, 29385), (83, 29262),

Gene: Parmesanjohn_37 Start: 29115, Stop: 28744, Start Num: 40
Candidate Starts for Parmesanjohn_37:
(Start: 32 @29151 has 8 MA's), (Start: 40 @29115 has 40 MA's), (64, 28989), (83, 28866),

Gene: Petra_39 Start: 31580, Stop: 31194, Start Num: 44
Candidate Starts for Petra_39:
(Start: 33 @31616 has 7 MA's), (Start: 41 @31586 has 5 MA's), (Start: 44 @31580 has 5 MA's), (54, 31532), (76, 31379), (95, 31247), (98, 31232),

Gene: PhancyPhin_38 Start: 29407, Stop: 29036, Start Num: 40
Candidate Starts for PhancyPhin_38:
(Start: 40 @29407 has 40 MA's), (58, 29314), (59, 29299), (64, 29281), (65, 29278), (68, 29254), (70, 29230), (83, 29158),

Gene: Philonius_35 Start: 27777, Stop: 27406, Start Num: 40
Candidate Starts for Philonius_35:
(Start: 32 @27813 has 8 MA's), (Start: 40 @27777 has 40 MA's), (64, 27651), (83, 27528),

Gene: Phishy_37 Start: 31530, Stop: 31159, Start Num: 42
Candidate Starts for Phishy_37:
(25, 31611), (29, 31593), (35, 31557), (Start: 42 @31530 has 1 MA's), (43, 31527), (45, 31521), (49, 31509), (50, 31494), (52, 31485), (56, 31461), (60, 31422), (66, 31392), (72, 31329), (73, 31326),

Gene: Phloss_35 Start: 28522, Stop: 28151, Start Num: 40
Candidate Starts for Phloss_35:
(Start: 32 @28558 has 8 MA's), (Start: 40 @28522 has 40 MA's), (64, 28396), (83, 28273),

Gene: Phrann_38 Start: 30191, Stop: 29820, Start Num: 40
Candidate Starts for Phrann_38:
(Start: 32 @30227 has 8 MA's), (Start: 40 @30191 has 40 MA's), (64, 30065), (83, 29942),

Gene: Pipsqueaks_37 Start: 29128, Stop: 28721, Start Num: 32
Candidate Starts for Pipsqueaks_37:
(Start: 32 @29128 has 8 MA's), (Start: 40 @29092 has 40 MA's), (64, 28966), (83, 28843),

Gene: Purgamenstris_38 Start: 29411, Stop: 29040, Start Num: 40

Candidate Starts for Purgamenstris_38:
(Start: 40 @29411 has 40 MA's), (58, 29318), (59, 29303), (64, 29285), (65, 29282), (68, 29258), (70, 29234), (83, 29162),

Gene: RayTheFireFly_47 Start: 33400, Stop: 33020, Start Num: 41
Candidate Starts for RayTheFireFly_47:
(24, 33484), (Start: 39 @33409 has 1 MA's), (Start: 41 @33400 has 5 MA's), (68, 33247), (73, 33196), (86, 33124), (94, 33058),

Gene: Raymond7_32 Start: 29223, Stop: 28852, Start Num: 40
Candidate Starts for Raymond7_32:
(Start: 40 @29223 has 40 MA's), (58, 29130), (59, 29115), (64, 29097), (65, 29094), (68, 29070), (70, 29046), (83, 28974),

Gene: Redi_38 Start: 29410, Stop: 29039, Start Num: 40
Candidate Starts for Redi_38:
(Start: 40 @29410 has 40 MA's), (58, 29317), (59, 29302), (64, 29284), (65, 29281), (68, 29257), (70, 29233), (83, 29161),

Gene: Rubeelu_38 Start: 29838, Stop: 29467, Start Num: 40
Candidate Starts for Rubeelu_38:
(26, 29907), (Start: 32 @29874 has 8 MA's), (Start: 40 @29838 has 40 MA's), (64, 29712), (68, 29685), (70, 29661), (78, 29610), (83, 29589), (89, 29523), (99, 29475),

Gene: Schnauzer_37 Start: 29151, Stop: 28744, Start Num: 32
Candidate Starts for Schnauzer_37:
(Start: 32 @29151 has 8 MA's), (Start: 40 @29115 has 40 MA's), (64, 28989), (83, 28866),

Gene: ShrimpFriedEgg_38 Start: 29410, Stop: 29039, Start Num: 40
Candidate Starts for ShrimpFriedEgg_38:
(Start: 40 @29410 has 40 MA's), (58, 29317), (59, 29302), (64, 29284), (65, 29281), (68, 29257), (70, 29233), (83, 29161),

Gene: Shweta_34 Start: 28331, Stop: 27924, Start Num: 32
Candidate Starts for Shweta_34:
(Start: 32 @28331 has 8 MA's), (Start: 40 @28295 has 40 MA's), (64, 28169), (83, 28046),

Gene: Silvafighter_38 Start: 29088, Stop: 28717, Start Num: 40
Candidate Starts for Silvafighter_38:
(Start: 32 @29124 has 8 MA's), (Start: 40 @29088 has 40 MA's), (64, 28962), (83, 28839),

Gene: Silvy_35 Start: 27766, Stop: 27395, Start Num: 40
Candidate Starts for Silvy_35:
(Start: 32 @27802 has 8 MA's), (Start: 40 @27766 has 40 MA's), (64, 27640), (83, 27517),

Gene: SkinnyPete_32 Start: 26862, Stop: 26455, Start Num: 32
Candidate Starts for SkinnyPete_32:
(Start: 32 @26862 has 8 MA's), (Start: 40 @26826 has 40 MA's), (64, 26700), (83, 26577),

Gene: Smurph_37 Start: 29115, Stop: 28744, Start Num: 40
Candidate Starts for Smurph_37:
(Start: 32 @29151 has 8 MA's), (Start: 40 @29115 has 40 MA's), (64, 28989), (83, 28866),

Gene: Snekmaggedon_34 Start: 28165, Stop: 27794, Start Num: 40
Candidate Starts for Snekmaggedon_34:
(Start: 32 @28201 has 8 MA's), (Start: 40 @28165 has 40 MA's), (64, 28039), (83, 27916),

Gene: Spinach_38 Start: 29410, Stop: 29039, Start Num: 40
Candidate Starts for Spinach_38:
(Start: 40 @29410 has 40 MA's), (58, 29317), (59, 29302), (64, 29284), (65, 29281), (68, 29257), (70, 29233), (83, 29161),

Gene: SpongeBob_34 Start: 28165, Stop: 27794, Start Num: 40
Candidate Starts for SpongeBob_34:
(Start: 32 @28201 has 8 MA's), (Start: 40 @28165 has 40 MA's), (64, 28039), (83, 27916),

Gene: Tapioca_38 Start: 29081, Stop: 28710, Start Num: 40
Candidate Starts for Tapioca_38:
(Start: 32 @29117 has 8 MA's), (Start: 40 @29081 has 40 MA's), (64, 28955), (83, 28832),

Gene: ToastyOats_45 Start: 30397, Stop: 29969, Start Num: 41
Candidate Starts for ToastyOats_45:
(20, 30511), (23, 30487), (36, 30415), (Start: 41 @30397 has 5 MA's), (61, 30283), (85, 30148), (87, 30085), (88, 30079),

Gene: Tortoise12_35 Start: 27798, Stop: 27427, Start Num: 40
Candidate Starts for Tortoise12_35:
(Start: 32 @27834 has 8 MA's), (Start: 40 @27798 has 40 MA's), (64, 27672), (83, 27549),

Gene: Xeno_34 Start: 27588, Stop: 27181, Start Num: 32
Candidate Starts for Xeno_34:
(Start: 32 @27588 has 8 MA's), (Start: 40 @27552 has 40 MA's), (64, 27426), (83, 27303),

Gene: Xerxes_37 Start: 29112, Stop: 28741, Start Num: 40
Candidate Starts for Xerxes_37:
(Start: 32 @29148 has 8 MA's), (Start: 40 @29112 has 40 MA's), (64, 28986), (83, 28863),

Gene: YungMoney_51 Start: 42233, Stop: 41832, Start Num: 44
Candidate Starts for YungMoney_51:
(19, 42377), (22, 42332), (28, 42305), (37, 42254), (Start: 44 @42233 has 5 MA's), (53, 42188), (67, 42092), (73, 42035), (80, 42008), (94, 41891),

Gene: Zarbodnamra_41 Start: 32378, Stop: 31956, Start Num: 33
Candidate Starts for Zarbodnamra_41:
(Start: 33 @32378 has 7 MA's), (Start: 41 @32348 has 5 MA's), (Start: 44 @32342 has 5 MA's), (54, 32294), (76, 32141), (95, 32009),

Gene: Zilla_41 Start: 32089, Stop: 31703, Start Num: 44
Candidate Starts for Zilla_41:
(Start: 33 @32125 has 7 MA's), (Start: 41 @32095 has 5 MA's), (Start: 44 @32089 has 5 MA's), (54, 32041), (76, 31888), (95, 31756),