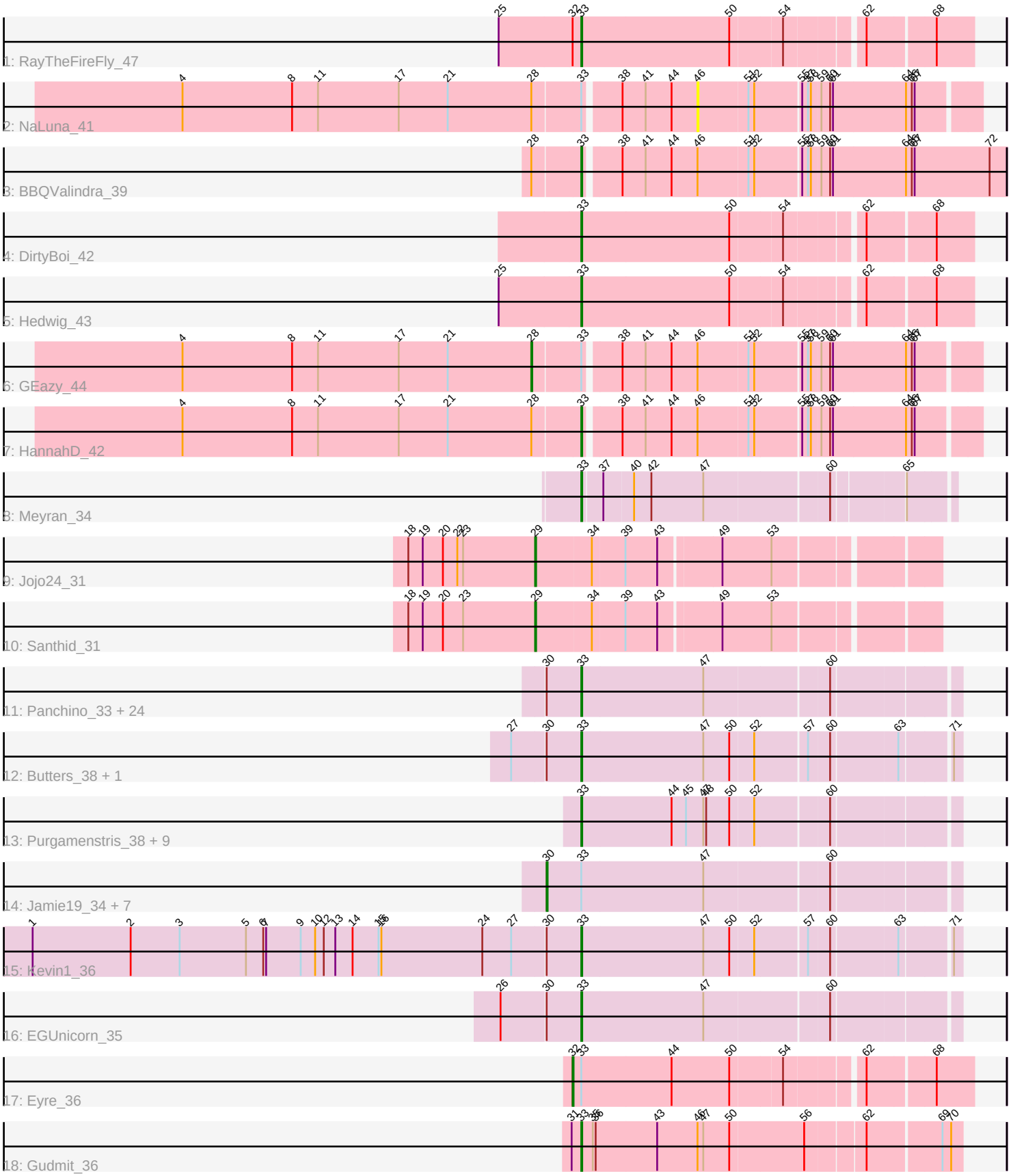
Pham 347655


1: RayTheFireFly_47
2: NaLuna_41
3: BBQValindra_39
4: DirtyBoi_42
5: Hedwig_43
6: GEazy_44
7: HannahD_42
8: Meyran_34
9: Jojo24_31
10: Santhid_31
11: Panchino_33 + 24
12: Butters_38 + 1
13: Purgamenstris_38 + 9
14: Jamie19_34 + 7
15: Kevin1_36
16: EGUnicorn_35
17: Eyre_36
18: Gudmit_36

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 347655 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347655 has 59 members, 2 are drafts.

Phages represented in each track:
• Track 1 : RayTheFireFly_47
• Track 2 : NaLuna_41
• Track 3 : BBQValindra_39
• Track 4 : DirtyBoi_42
• Track 5 : Hedwig_43
• Track 6 : GEazy_44
• Track 7 : HannahD_42
• Track 8 : Meyran_34
• Track 9 : Jojo24_31
• Track 10 : Santhid_31
• Track 11 : Panchino_33, Duplicity_37, Tapioca_38, Cubone_35, Phloss_35, Phrann_38, MichelleMyBell_35, Gex_37, Carcharodon_37, Silvafighter_38, Fulbright_36, Journey_35, Aggie_35, Silvy_35, Charlie_35, Magsby_37, Melville_39, Andies_34, Smurph_37, Tortoise12_35, SpongeBob_34, Parmesanjohn_37, Snekmaggedon_34, Xerxes_37, Philonius_35
• Track 12 : Butters_38, Rubeelu_38
• Track 13 : Purgamenstris_38, Hanako_38, Spinach_38, PhancyPhin_38, Nenae_38, Raymond7_32, Impisi_40, BabeRuth_39, Redi_38, ShrimpFriedEgg_38
• Track 14 : Jamie19_34, Bosection6_35, SkinnyPete_32, Xeno_34, Shweta_34, Chewbacca_38, Schnauzer_37, Pipsqueaks_37
• Track 15 : Kevin1_36
• Track 16 : EGUnicorn_35
• Track 17 : Eyre_36
• Track 18 : 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 33, it was called in 45 of the 57 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, Cubone_35, DirtyBoi_42, Duplicity_37, EGUnicorn_35, Fulbright_36, Gex_37, Gudmit_36, Hanako_38, HannahD_42, Hedwig_43, 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, RayTheFireFly_47, 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, Eyre_36, GEazy_44, Jamie19_34, NaLuna_41, Pipsqueaks_37, Schnauzer_37, Shweta_34, SkinnyPete_32, Xeno_34,

Genes that do not have the "Most Annotated" start:
• Jojo24_31, Santhid_31,

Summary by start number:

Start 28:
• Found in 4 of 59 (6.8%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 25.0% of time when present
• Phage (with cluster) where this start called: GEazy_44 (DB),

Start 29:
• Found in 2 of 59 (3.4%) of genes in pham
• Manual Annotations of this start: 2 of 57
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jojo24_31 (DY), Santhid_31 (DY),

Start 30:
• Found in 37 of 59 (62.7%) of genes in pham
• Manual Annotations of this start: 8 of 57
• Called 21.6% 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 32:
• Found in 2 of 59 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Eyre_36 (singleton),

Start 33:
• Found in 57 of 59 (96.6%) of genes in pham
• Manual Annotations of this start: 45 of 57
• Called 80.7% 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), Cubone_35 (N), DirtyBoi_42 (DB), Duplicity_37 (N), EGUnicorn_35 (N), Fulbright_36 (N), Gex_37 (N), Gudmit_36 (singleton), Hanako_38 (N), HannahD_42 (DB), Hedwig_43 (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), RayTheFireFly_47 (DB), 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 46:
• Found in 5 of 59 (8.5%) of genes in pham
• No Manual Annotations of this start.
• Called 20.0% of time when present
• Phage (with cluster) where this start called: NaLuna_41 (DB),

Summary by clusters:

There are 5 clusters represented in this pham: DT, DY, DB, singleton, N,

Info for manual annotations of cluster DB:
•Start number 28 was manually annotated 1 time for cluster DB.
•Start number 33 was manually annotated 5 times for cluster DB.

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

Info for manual annotations of cluster DY:
•Start number 29 was manually annotated 2 times for cluster DY.

Info for manual annotations of cluster N:
•Start number 30 was manually annotated 8 times for cluster N.
•Start number 33 was manually annotated 38 times for cluster N.

Gene Information:

Gene: Aggie_35 Start: 27766, Stop: 27395, Start Num: 33
Candidate Starts for Aggie_35:
(Start: 30 @27802 has 8 MA's), (Start: 33 @27766 has 45 MA's), (47, 27640), (60, 27517),

Gene: Andies_34 Start: 28284, Stop: 27913, Start Num: 33
Candidate Starts for Andies_34:
(Start: 30 @28320 has 8 MA's), (Start: 33 @28284 has 45 MA's), (47, 28158), (60, 28035),

Gene: BBQValindra_39 Start: 32907, Stop: 32485, Start Num: 33
Candidate Starts for BBQValindra_39:
(Start: 28 @32955 has 1 MA's), (Start: 33 @32907 has 45 MA's), (38, 32874), (41, 32850), (44, 32823), (46, 32796), (51, 32745), (52, 32739), (55, 32694), (57, 32688), (58, 32685), (59, 32676), (60, 32667), (61, 32664), (64, 32589), (66, 32583), (67, 32580), (72, 32502),

Gene: BabeRuth_39 Start: 29411, Stop: 29040, Start Num: 33
Candidate Starts for BabeRuth_39:
(Start: 33 @29411 has 45 MA's), (44, 29318), (45, 29303), (47, 29285), (48, 29282), (50, 29258), (52, 29234), (60, 29162),

Gene: Bosection6_35 Start: 27823, Stop: 27416, Start Num: 30
Candidate Starts for Bosection6_35:
(Start: 30 @27823 has 8 MA's), (Start: 33 @27787 has 45 MA's), (47, 27661), (60, 27538),

Gene: Butters_38 Start: 29838, Stop: 29467, Start Num: 33
Candidate Starts for Butters_38:
(27, 29907), (Start: 30 @29874 has 8 MA's), (Start: 33 @29838 has 45 MA's), (47, 29712), (50, 29685), (52, 29661), (57, 29610), (60, 29589), (63, 29523), (71, 29475),

Gene: Carcharodon_37 Start: 29095, Stop: 28724, Start Num: 33
Candidate Starts for Carcharodon_37:
(Start: 30 @29131 has 8 MA's), (Start: 33 @29095 has 45 MA's), (47, 28969), (60, 28846),

Gene: Charlie_35 Start: 27786, Stop: 27415, Start Num: 33
Candidate Starts for Charlie_35:
(Start: 30 @27822 has 8 MA's), (Start: 33 @27786 has 45 MA's), (47, 27660), (60, 27537),

Gene: Chewbacca_38 Start: 29131, Stop: 28724, Start Num: 30
Candidate Starts for Chewbacca_38:
(Start: 30 @29131 has 8 MA's), (Start: 33 @29095 has 45 MA's), (47, 28969), (60, 28846),

Gene: Cubone_35 Start: 27808, Stop: 27437, Start Num: 33
Candidate Starts for Cubone_35:
(Start: 30 @27844 has 8 MA's), (Start: 33 @27808 has 45 MA's), (47, 27682), (60, 27559),

Gene: DirtyBoi_42 Start: 31803, Stop: 31423, Start Num: 33
Candidate Starts for DirtyBoi_42:
(Start: 33 @31803 has 45 MA's), (50, 31650), (54, 31599), (62, 31527), (68, 31461),

Gene: Duplicity_37 Start: 29104, Stop: 28733, Start Num: 33
Candidate Starts for Duplicity_37:
(Start: 30 @29140 has 8 MA's), (Start: 33 @29104 has 45 MA's), (47, 28978), (60, 28855),

Gene: EGUnicorn_35 Start: 27786, Stop: 27415, Start Num: 33
Candidate Starts for EGUnicorn_35:
(26, 27867), (Start: 30 @27822 has 8 MA's), (Start: 33 @27786 has 45 MA's), (47, 27660), (60, 27537),

Gene: Eyre_36 Start: 27990, Stop: 27601, Start Num: 32
Candidate Starts for Eyre_36:
(Start: 32 @27990 has 1 MA's), (Start: 33 @27981 has 45 MA's), (44, 27888), (50, 27828), (54, 27777), (62, 27705), (68, 27639),

Gene: Fulbright_36 Start: 28184, Stop: 27813, Start Num: 33
Candidate Starts for Fulbright_36:
(Start: 30 @28220 has 8 MA's), (Start: 33 @28184 has 45 MA's), (47, 28058), (60, 27935),

Gene: GEazy_44 Start: 32533, Stop: 32096, Start Num: 28
Candidate Starts for GEazy_44:
(4, 32896), (8, 32782), (11, 32755), (17, 32671), (21, 32620), (Start: 28 @32533 has 1 MA's), (Start: 33 @32485 has 45 MA's), (38, 32452), (41, 32428), (44, 32401), (46, 32374), (51, 32323), (52, 32317), (55, 32272), (57, 32266), (58, 32263), (59, 32254), (60, 32245), (61, 32242), (64, 32167), (66, 32161), (67, 32158),

Gene: Gex_37 Start: 29111, Stop: 28740, Start Num: 33
Candidate Starts for Gex_37:
(Start: 30 @29147 has 8 MA's), (Start: 33 @29111 has 45 MA's), (47, 28985), (60, 28862),

Gene: Gudmit_36 Start: 27005, Stop: 26628, Start Num: 33
Candidate Starts for Gudmit_36:
(31, 27014), (Start: 33 @27005 has 45 MA's), (35, 26993), (36, 26990), (43, 26927), (46, 26885), (47, 26879), (50, 26852), (56, 26777), (62, 26720), (69, 26648), (70, 26639),

Gene: Hanako_38 Start: 29410, Stop: 29039, Start Num: 33
Candidate Starts for Hanako_38:
(Start: 33 @29410 has 45 MA's), (44, 29317), (45, 29302), (47, 29284), (48, 29281), (50, 29257), (52, 29233), (60, 29161),

Gene: HannahD_42 Start: 31852, Stop: 31463, Start Num: 33
Candidate Starts for HannahD_42:
(4, 32263), (8, 32149), (11, 32122), (17, 32038), (21, 31987), (Start: 28 @31900 has 1 MA's), (Start: 33 @31852 has 45 MA's), (38, 31819), (41, 31795), (44, 31768), (46, 31741), (51, 31690), (52, 31684), (55, 31639), (57, 31633), (58, 31630), (59, 31621), (60, 31612), (61, 31609), (64, 31534), (66, 31528), (67, 31525),

Gene: Hedwig_43 Start: 32226, Stop: 31846, Start Num: 33
Candidate Starts for Hedwig_43:
(25, 32310), (Start: 33 @32226 has 45 MA's), (50, 32073), (54, 32022), (62, 31950), (68, 31884),

Gene: Impisi_40 Start: 29966, Stop: 29595, Start Num: 33
Candidate Starts for Impisi_40:
(Start: 33 @29966 has 45 MA's), (44, 29873), (45, 29858), (47, 29840), (48, 29837), (50, 29813), (52, 29789), (60, 29717),

Gene: Jamie19_34 Start: 28201, Stop: 27794, Start Num: 30
Candidate Starts for Jamie19_34:
(Start: 30 @28201 has 8 MA's), (Start: 33 @28165 has 45 MA's), (47, 28039), (60, 27916),

Gene: Jojo24_31 Start: 26167, Stop: 25778, Start Num: 29
Candidate Starts for Jojo24_31:
(18, 26299), (19, 26284), (20, 26263), (22, 26248), (23, 26242), (Start: 29 @26167 has 2 MA's), (34, 26110), (39, 26077), (43, 26044), (49, 25984), (53, 25933),

Gene: Journey_35 Start: 27786, Stop: 27415, Start Num: 33
Candidate Starts for Journey_35:
(Start: 30 @27822 has 8 MA's), (Start: 33 @27786 has 45 MA's), (47, 27660), (60, 27537),

Gene: Kevin1_36 Start: 29017, Stop: 28646, Start Num: 33
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), (24, 29116), (27, 29086), (Start: 30 @29053 has 8 MA's), (Start: 33 @29017 has 45 MA's), (47, 28891), (50, 28864), (52, 28840), (57, 28789), (60, 28768), (63, 28702), (71, 28654),

Gene: Magsby_37 Start: 29112, Stop: 28741, Start Num: 33
Candidate Starts for Magsby_37:
(Start: 30 @29148 has 8 MA's), (Start: 33 @29112 has 45 MA's), (47, 28986), (60, 28863),

Gene: Melville_39 Start: 29096, Stop: 28725, Start Num: 33
Candidate Starts for Melville_39:
(Start: 30 @29132 has 8 MA's), (Start: 33 @29096 has 45 MA's), (47, 28970), (60, 28847),

Gene: Meyran_34 Start: 30905, Stop: 30549, Start Num: 33
Candidate Starts for Meyran_34:
(Start: 33 @30905 has 45 MA's), (37, 30887), (40, 30857), (42, 30839), (47, 30785), (60, 30662), (65, 30593),

Gene: MichelleMyBell_35 Start: 28103, Stop: 27732, Start Num: 33
Candidate Starts for MichelleMyBell_35:
(Start: 30 @28139 has 8 MA's), (Start: 33 @28103 has 45 MA's), (47, 27977), (60, 27854),

Gene: NaLuna_41 Start: 31741, Stop: 31463, Start Num: 46
Candidate Starts for NaLuna_41:
(4, 32263), (8, 32149), (11, 32122), (17, 32038), (21, 31987), (Start: 28 @31900 has 1 MA's), (Start: 33 @31852 has 45 MA's), (38, 31819), (41, 31795), (44, 31768), (46, 31741), (51, 31690), (52, 31684), (55, 31639), (57, 31633), (58, 31630), (59, 31621), (60, 31612), (61, 31609), (64, 31534), (66, 31528), (67, 31525),

Gene: Nenae_38 Start: 29413, Stop: 29042, Start Num: 33
Candidate Starts for Nenae_38:
(Start: 33 @29413 has 45 MA's), (44, 29320), (45, 29305), (47, 29287), (48, 29284), (50, 29260), (52, 29236), (60, 29164),

Gene: Panchino_33 Start: 29511, Stop: 29140, Start Num: 33
Candidate Starts for Panchino_33:
(Start: 30 @29547 has 8 MA's), (Start: 33 @29511 has 45 MA's), (47, 29385), (60, 29262),

Gene: Parmesanjohn_37 Start: 29115, Stop: 28744, Start Num: 33
Candidate Starts for Parmesanjohn_37:
(Start: 30 @29151 has 8 MA's), (Start: 33 @29115 has 45 MA's), (47, 28989), (60, 28866),

Gene: PhancyPhin_38 Start: 29407, Stop: 29036, Start Num: 33
Candidate Starts for PhancyPhin_38:
(Start: 33 @29407 has 45 MA's), (44, 29314), (45, 29299), (47, 29281), (48, 29278), (50, 29254), (52, 29230), (60, 29158),

Gene: Philonius_35 Start: 27777, Stop: 27406, Start Num: 33
Candidate Starts for Philonius_35:
(Start: 30 @27813 has 8 MA's), (Start: 33 @27777 has 45 MA's), (47, 27651), (60, 27528),

Gene: Phloss_35 Start: 28522, Stop: 28151, Start Num: 33
Candidate Starts for Phloss_35:
(Start: 30 @28558 has 8 MA's), (Start: 33 @28522 has 45 MA's), (47, 28396), (60, 28273),

Gene: Phrann_38 Start: 30191, Stop: 29820, Start Num: 33
Candidate Starts for Phrann_38:
(Start: 30 @30227 has 8 MA's), (Start: 33 @30191 has 45 MA's), (47, 30065), (60, 29942),

Gene: Pipsqueaks_37 Start: 29128, Stop: 28721, Start Num: 30
Candidate Starts for Pipsqueaks_37:

(Start: 30 @29128 has 8 MA's), (Start: 33 @29092 has 45 MA's), (47, 28966), (60, 28843),

Gene: Purgamenstris_38 Start: 29411, Stop: 29040, Start Num: 33
Candidate Starts for Purgamenstris_38:
(Start: 33 @29411 has 45 MA's), (44, 29318), (45, 29303), (47, 29285), (48, 29282), (50, 29258), (52, 29234), (60, 29162),

Gene: RayTheFireFly_47 Start: 33400, Stop: 33020, Start Num: 33
Candidate Starts for RayTheFireFly_47:
(25, 33484), (Start: 32 @33409 has 1 MA's), (Start: 33 @33400 has 45 MA's), (50, 33247), (54, 33196), (62, 33124), (68, 33058),

Gene: Raymond7_32 Start: 29223, Stop: 28852, Start Num: 33
Candidate Starts for Raymond7_32:
(Start: 33 @29223 has 45 MA's), (44, 29130), (45, 29115), (47, 29097), (48, 29094), (50, 29070), (52, 29046), (60, 28974),

Gene: Redi_38 Start: 29410, Stop: 29039, Start Num: 33
Candidate Starts for Redi_38:
(Start: 33 @29410 has 45 MA's), (44, 29317), (45, 29302), (47, 29284), (48, 29281), (50, 29257), (52, 29233), (60, 29161),

Gene: Rubeelu_38 Start: 29838, Stop: 29467, Start Num: 33
Candidate Starts for Rubeelu_38:
(27, 29907), (Start: 30 @29874 has 8 MA's), (Start: 33 @29838 has 45 MA's), (47, 29712), (50, 29685), (52, 29661), (57, 29610), (60, 29589), (63, 29523), (71, 29475),

Gene: Santhid_31 Start: 24886, Stop: 24497, Start Num: 29
Candidate Starts for Santhid_31:
(18, 25018), (19, 25003), (20, 24982), (23, 24961), (Start: 29 @24886 has 2 MA's), (34, 24829), (39, 24796), (43, 24763), (49, 24703), (53, 24652),

Gene: Schnauzer_37 Start: 29151, Stop: 28744, Start Num: 30
Candidate Starts for Schnauzer_37:
(Start: 30 @29151 has 8 MA's), (Start: 33 @29115 has 45 MA's), (47, 28989), (60, 28866),

Gene: ShrimpFriedEgg_38 Start: 29410, Stop: 29039, Start Num: 33
Candidate Starts for ShrimpFriedEgg_38:
(Start: 33 @29410 has 45 MA's), (44, 29317), (45, 29302), (47, 29284), (48, 29281), (50, 29257), (52, 29233), (60, 29161),

Gene: Shweta_34 Start: 28331, Stop: 27924, Start Num: 30
Candidate Starts for Shweta_34:
(Start: 30 @28331 has 8 MA's), (Start: 33 @28295 has 45 MA's), (47, 28169), (60, 28046),

Gene: Silvafighter_38 Start: 29088, Stop: 28717, Start Num: 33
Candidate Starts for Silvafighter_38:
(Start: 30 @29124 has 8 MA's), (Start: 33 @29088 has 45 MA's), (47, 28962), (60, 28839),

Gene: Silvy_35 Start: 27766, Stop: 27395, Start Num: 33
Candidate Starts for Silvy_35:
(Start: 30 @27802 has 8 MA's), (Start: 33 @27766 has 45 MA's), (47, 27640), (60, 27517),

Gene: SkinnyPete_32 Start: 26862, Stop: 26455, Start Num: 30
Candidate Starts for SkinnyPete_32:
(Start: 30 @26862 has 8 MA's), (Start: 33 @26826 has 45 MA's), (47, 26700), (60, 26577),

Gene: Smurph_37 Start: 29115, Stop: 28744, Start Num: 33
Candidate Starts for Smurph_37:
(Start: 30 @29151 has 8 MA's), (Start: 33 @29115 has 45 MA's), (47, 28989), (60, 28866),

Gene: Snekmaggedon_34 Start: 28165, Stop: 27794, Start Num: 33
Candidate Starts for Snekmaggedon_34:
(Start: 30 @28201 has 8 MA's), (Start: 33 @28165 has 45 MA's), (47, 28039), (60, 27916),

Gene: Spinach_38 Start: 29410, Stop: 29039, Start Num: 33
Candidate Starts for Spinach_38:
(Start: 33 @29410 has 45 MA's), (44, 29317), (45, 29302), (47, 29284), (48, 29281), (50, 29257), (52, 29233), (60, 29161),

Gene: SpongeBob_34 Start: 28165, Stop: 27794, Start Num: 33
Candidate Starts for SpongeBob_34:
(Start: 30 @28201 has 8 MA's), (Start: 33 @28165 has 45 MA's), (47, 28039), (60, 27916),

Gene: Tapioca_38 Start: 29081, Stop: 28710, Start Num: 33
Candidate Starts for Tapioca_38:
(Start: 30 @29117 has 8 MA's), (Start: 33 @29081 has 45 MA's), (47, 28955), (60, 28832),

Gene: Tortoise12_35 Start: 27798, Stop: 27427, Start Num: 33
Candidate Starts for Tortoise12_35:
(Start: 30 @27834 has 8 MA's), (Start: 33 @27798 has 45 MA's), (47, 27672), (60, 27549),

Gene: Xeno_34 Start: 27588, Stop: 27181, Start Num: 30
Candidate Starts for Xeno_34:
(Start: 30 @27588 has 8 MA's), (Start: 33 @27552 has 45 MA's), (47, 27426), (60, 27303),

Gene: Xerxes_37 Start: 29112, Stop: 28741, Start Num: 33
Candidate Starts for Xerxes_37:
(Start: 30 @29148 has 8 MA's), (Start: 33 @29112 has 45 MA's), (47, 28986), (60, 28863),