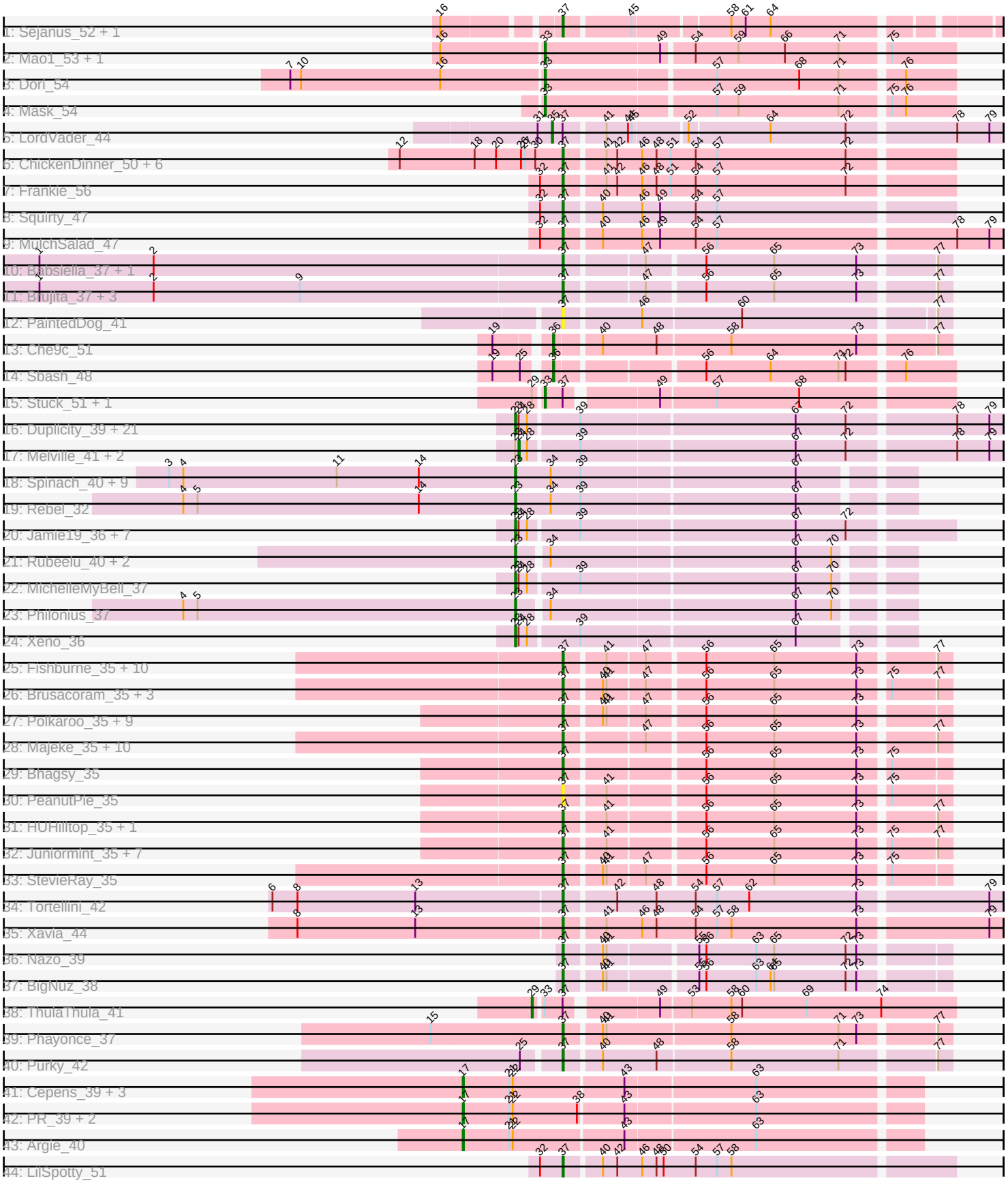
Pham 347361


1: Sejanus_52 + 1
2: Mao1_53 + 1
3: Dori_54
4: Mask_54
5: LordVader_44
6: ChickenDinner_50 + 6
7: Frankie_56
8: Squirty_47
9: MulchSalad_47
10: Babsiella_37 + 1
11: Blujita_37 + 3
12: PaintedDog_41
13: Che9c_51
14: Sbash_48
15: Stuck_51 + 1
16: Duplicity_39 + 21
17: Melville_41 + 2
18: Spinach_40 + 9
19: Rebel_32
20: Jamie19_36 + 7
21: Rubeelu_40 + 2
22: MichelleMyBell_37
23: Philonius_37
24: Xeno_36
25: Fishburne_35 + 10
26: Brusacoram_35 + 3
27: Polkaroo_35 + 9
28: Majeke_35 + 10
29: Bhagsy_35
30: PeanutPie_35
31: HUHilltop_35 + 1
32: Juniormint_35 + 7
33: StevieRay_35
34: Tortellini_42
35: Xavia_44
36: Nazo_39
37: BigNuz_38
38: ThulaThula_41
39: Phayonce_37
40: Purky_42
41: Cepens_39 + 3
42: PR_39 + 2
43: Argie_40
44: LilSpotty_51

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 347361 Report

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

Pham number 347361 has 143 members, 12 are drafts.

Phages represented in each track:
• Track 1 : Sejanus_52, Caterpie_54
• Track 2 : Mao1_53, JohnLord_57
• Track 3 : Dori_54
• Track 4 : Mask_54
• Track 5 : LordVader_44
• Track 6 : ChickenDinner_50, DocMcStuffins_50, Misha28_49, Piper2020_51, TootsiePop_49, Aloeri_51, Awesomesauce_51
• Track 7 : Frankie_56
• Track 8 : Squirty_47
• Track 9 : MulchSalad_47
• Track 10 : Babsiella_37, HC_35
• Track 11 : Brujita_37, Island3_37, QueenHazel_33, Xula_32
• Track 12 : PaintedDog_41
• Track 13 : Che9c_51
• Track 14 : Sbash_48
• Track 15 : Stuck_51, Bluvara_44
• Track 16 : Duplicity_39, Phloss_37, Parmesanjohn_39, Tessdabest_40, Silvy_37, Charlie_37, Chewbacca_40, Gex_39, Journey_37, Aggie_37, Magsby_39, Silvafighter_40, Scitech_36, Smurph_39, Tortoise12_37, Pipsqueaks_39, Schnauzer_39, SkinnyPete_34, Carcharodon_39, Bosection6_37, Fulbright_38, Xerxes_39
• Track 17 : Melville_41, Cubone_37, Tapioca_40
• Track 18 : Spinach_40, Purgamenstris_40, Nenae_40, Redi_40, Hanako_40, Impisi_42, PhancyPhin_40, BabeRuth_41, Raymond7_34, ShrimpFriedEgg_40
• Track 19 : Rebel_32
• Track 20 : Jamie19_36, Panchino_35, Andies_36, Shweta_36, SpongeBob_36, EGUnicorn_37, Phrann_40, Snekmaggedon_36
• Track 21 : Rubeelu_40, Kevin1_38, Butters_40
• Track 22 : MichelleMyBell_37
• Track 23 : Philonius_37
• Track 24 : Xeno_36
• Track 25 : Fishburne_35, Bartholomew_34, Phineas_35, Venti_35, FirstPlacePfu_35, Dynamo_35, BronnyJr_35, Vidya_35, Kari_35, Etoile_35, Zilizebeth_35
• Track 26 : Brusacoram_35, Atcoo_35, GreaseLightnin_35, Thespis_35
• Track 27 : Polkaroo_35, KilKor_35, Phalm_35, Willsammy_34, Gavriela_35, CactusJack_35, Jung_34, Megiddo_35, StressBall_35, Glaske_35

• Track 28 : Majeke_35, Langerak_35, Mangethe_35, Necropolis_35, Donovan_35, Chubbello_35, Arib1_35, Jebeks_36, GaloreK_35, Techage_35, Phegasus_35
• Track 29 : Bhagsy_35
• Track 30 : PeanutPie_35
• Track 31 : HUHilltop_35, Sonah_35
• Track 32 : Juniormint_35, Shipwreck_37, Pygmy_37, Bunnies_35, Camster_35, Bogie_37, Ksquared_35, Malithi_35
• Track 33 : StevieRay_35
• Track 34 : Tortellini_42
• Track 35 : Xavia_44
• Track 36 : Nazo_39
• Track 37 : BigNuz_38
• Track 38 : ThulaThula_41
• Track 39 : Phayonce_37
• Track 40 : Purky_42
• Track 41 : Cepens_39, GodPhather_40, Taptic_39, Jeon_39
• Track 42 : PR_39, Megabear_39, D12_38
• Track 43 : Argie_40
• Track 44 : LilSpotty_51

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

The start number called the most often in the published annotations is 37, it was called in 68 of the 131 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aloeri_51, Arib1_35, Atcoo_35, Awesomesauce_51, Babsiella_37, Bartholomew_34, Bhagsy_35, BigNuz_38, Bogie_37, BronnyJr_35, Brujita_37, Brusacoram_35, Bunnies_35, CactusJack_35, Camster_35, Caterpie_54, ChickenDinner_50, Chubbello_35, DocMcStuffins_50, Donovan_35, Dynamo_35, Etoile_35, FirstPlacePfu_35, Fishburne_35, Frankie_56, GaloreK_35, Gavriela_35, Glaske_35, GreaseLightnin_35, HC_35, HUHilltop_35, Island3_37, Jebeks_36, Jung_34, Juniormint_35, Kari_35, KilKor_35, Ksquared_35, Langerak_35, LilSpotty_51, Majeke_35, Malithi_35, Mangethe_35, Megiddo_35, Misha28_49, MulchSalad_47, Nazo_39, Necropolis_35, PaintedDog_41, PeanutPie_35, Phalm_35, Phayonce_37, Phegasus_35, Phineas_35, Piper2020_51, Polkaroo_35, Purky_42, Pygmy_37, QueenHazel_33, Sejanus_52, Shipwreck_37, Sonah_35, Squirty_47, StevieRay_35, StressBall_35, Techage_35, Thespis_35, TootsiePop_49, Tortellini_42, Venti_35, Vidya_35, Willsammy_34, Xavia_44, Xula_32, Zilizebeth_35,

Genes that have the "Most Annotated" start but do not call it:
• Bluvara_44, LordVader_44, Stuck_51, ThulaThula_41,

Genes that do not have the "Most Annotated" start:
• Aggie_37, Andies_36, Argie_40, BabeRuth_41, Bosection6_37, Butters_40, Carcharodon_39, Cepens_39, Charlie_37, Che9c_51, Chewbacca_40, Cubone_37, D12_38, Dori_54, Duplicity_39, EGUnicorn_37, Fulbright_38, Gex_39, GodPhather_40, Hanako_40, Impisi_42, Jamie19_36, Jeon_39, JohnLord_57, Journey_37, Kevin1_38, Magsby_39, Mao1_53, Mask_54, Megabear_39, Melville_41, MichelleMyBell_37, Nenae_40, PR_39, Panchino_35, Parmesanjohn_39,

PhancyPhin_40, Philonius_37, Phloss_37, Phrann_40, Pipsqueaks_39, Purgamenstris_40, Raymond7_34, Rebel_32, Redi_40, Rubeelu_40, Sbash_48, Schnauzer_39, Scitech_36, ShrimpFriedEgg_40, Shweta_36, Silvafighter_40, Silvy_37, SkinnyPete_34, Smurph_39, Snekmaggedon_36, Spinach_40, SpongeBob_36, Tapioca_40, Taptic_39, Tessdabest_40, Tortoise12_37, Xeno_36, Xerxes_39,

Summary by start number:

Start 17:
• Found in 8 of 143 (5.6%) of genes in pham
• Manual Annotations of this start: 8 of 131
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Argie_40 (W), Cepens_39 (W), D12_38 (W), GodPhather_40 (W), Jeon_39 (W), Megabear_39 (W), PR_39 (W), Taptic_39 (W),

Start 23:
• Found in 50 of 143 (35.0%) of genes in pham
• Manual Annotations of this start: 44 of 131
• Called 94.0% of time when present
• Phage (with cluster) where this start called: Aggie_37 (N), Andies_36 (N), BabeRuth_41 (N), Bosection6_37 (N), Butters_40 (N), Carcharodon_39 (N), Charlie_37 (N), Chewbacca_40 (N), Duplicity_39 (N), EGUnicorn_37 (N), Fulbright_38 (N), Gex_39 (N), Hanako_40 (N), Impisi_42 (N), Jamie19_36 (N), Journey_37 (N), Kevin1_38 (N), Magsby_39 (N), MichelleMyBell_37 (N), Nenae_40 (N), Panchino_35 (N), Parmesanjohn_39 (N), PhancyPhin_40 (N), Philonius_37 (N), Phloss_37 (N), Phrann_40 (N), Pipsqueaks_39 (N), Purgamenstris_40 (N), Raymond7_34 (N), Rebel_32 (N), Redi_40 (N), Rubeelu_40 (N), Schnauzer_39 (N), Scitech_36 (N), ShrimpFriedEgg_40 (N), Shweta_36 (N), Silvafighter_40 (N), Silvy_37 (N), SkinnyPete_34 (N), Smurph_39 (N), Snekmaggedon_36 (N), Spinach_40 (N), SpongeBob_36 (N), Tessdabest_40 (N), Tortoise12_37 (N), Xeno_36 (N), Xerxes_39 (N),

Start 24:
• Found in 35 of 143 (24.5%) of genes in pham
• Manual Annotations of this start: 3 of 131
• Called 8.6% of time when present
• Phage (with cluster) where this start called: Cubone_37 (N), Melville_41 (N), Tapioca_40 (N),

Start 29:
• Found in 3 of 143 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 131
• Called 33.3% of time when present
• Phage (with cluster) where this start called: ThulaThula_41 (P5),

Start 33:
• Found in 7 of 143 (4.9%) of genes in pham
• Manual Annotations of this start: 4 of 131
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Bluvara_44 (I3), Dori_54 (AD), JohnLord_57 (AD), Mao1_53 (AD), Mask_54 (AD), Stuck_51 (I2),

Start 35:
• Found in 1 of 143 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 131
• Called 100.0% of time when present
• Phage (with cluster) where this start called: LordVader_44 (F),

Start 36:
• Found in 2 of 143 (1.4%) of genes in pham
• Manual Annotations of this start: 2 of 131
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Che9c_51 (I2), Sbash_48 (I2),

Start 37:
• Found in 79 of 143 (55.2%) of genes in pham
• Manual Annotations of this start: 68 of 131
• Called 94.9% of time when present
• Phage (with cluster) where this start called: Aloeri_51 (F1), Arib1_35 (P1), Atcoo_35 (P1), Awesomesauce_51 (F1), Babsiella_37 (I1), Bartholomew_34 (P1), Bhagsy_35 (P1), BigNuz_38 (P4), Bogie_37 (P1), BronnyJr_35 (P1), Brujita_37 (I1), Brusacoram_35 (P1), Bunnies_35 (P1), CactusJack_35 (P1), Camster_35 (P1), Caterpie_54 (AD), ChickenDinner_50 (F1), Chubbello_35 (P1), DocMcStuffins_50 (F1), Donovan_35 (P1), Dynamo_35 (P1), Etoile_35 (P1), FirstPlacePfu_35 (P1), Fishburne_35 (P1), Frankie_56 (F1), GaloreK_35 (P1), Gavriela_35 (P1), Glaske_35 (P1), GreaseLightnin_35 (P1), HC_35 (I1), HUHilltop_35 (P1), Island3_37 (I1), Jebeks_36 (P1), Jung_34 (P1), Juniormint_35 (P1), Kari_35 (P1), KilKor_35 (P1), Ksquared_35 (P1), Langerak_35 (P1), LilSpotty_51 (singleton), Majeke_35 (P1), Malithi_35 (P1), Mangethe_35 (P1), Megiddo_35 (P1), Misha28_49 (F1), MulchSalad_47 (F7), Nazo_39 (P4), Necropolis_35 (P1), PaintedDog_41 (I1), PeanutPie_35 (P1), Phalm_35 (P1), Phayonce_37 (P5), Phegasus_35 (P1), Phineas_35 (P1), Piper2020_51 (F1), Polkaroo_35 (P1), Purky_42 (P6), Pygmy_37 (P1), QueenHazel_33 (I1), Sejanus_52 (AD), Shipwreck_37 (P1), Sonah_35 (P1), Squirty_47 (F3), StevieRay_35 (P1), StressBall_35 (P1), Techage_35 (P1), Thespis_35 (P1), TootsiePop_49 (F1), Tortellini_42 (P2), Venti_35 (P1), Vidya_35 (P1), Willsammy_34 (P1), Xavia_44 (P3), Xula_32 (I1), Zilizebeth_35 (P1),

Summary by clusters:

There are 17 clusters represented in this pham: P2, F1, singleton, F3, P6, AD, P4, P5, I1, F7, I2, N, P1, F, W, P3, I3,

Info for manual annotations of cluster AD:
•Start number 33 was manually annotated 3 times for cluster AD.
•Start number 37 was manually annotated 1 time for cluster AD.

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

Info for manual annotations of cluster F1:
•Start number 37 was manually annotated 8 times for cluster F1.

Info for manual annotations of cluster F3:
•Start number 37 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F7:
•Start number 37 was manually annotated 1 time for cluster F7.

Info for manual annotations of cluster I1:
•Start number 37 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster I2:
•Start number 33 was manually annotated 1 time for cluster I2.
•Start number 36 was manually annotated 2 times for cluster I2.

Info for manual annotations of cluster N:
•Start number 23 was manually annotated 44 times for cluster N.
•Start number 24 was manually annotated 3 times for cluster N.

Info for manual annotations of cluster P1:
•Start number 37 was manually annotated 44 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 37 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:
•Start number 37 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:
•Start number 37 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 29 was manually annotated 1 time for cluster P5.
•Start number 37 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:
•Start number 37 was manually annotated 1 time for cluster P6.

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

Gene Information:

Gene: Aggie_37 Start: 28130, Stop: 28516, Start Num: 23
Candidate Starts for Aggie_37:
(Start: 23 @28130 has 44 MA's), (Start: 24 @28133 has 3 MA's), (28, 28139), (39, 28178), (67, 28352), (72, 28394), (78, 28478), (79, 28505),

Gene: Aloeri_51 Start: 36456, Stop: 36770, Start Num: 37
Candidate Starts for Aloeri_51:
(12, 36321), (18, 36384), (20, 36402), (26, 36423), (27, 36426), (30, 36435), (Start: 37 @36456 has 68 MA's), (41, 36486), (42, 36495), (46, 36516), (48, 36528), (51, 36540), (54, 36561), (57, 36579), (72, 36687),

Gene: Andies_36 Start: 28648, Stop: 28995, Start Num: 23
Candidate Starts for Andies_36:
(Start: 23 @28648 has 44 MA's), (Start: 24 @28651 has 3 MA's), (28, 28657), (39, 28696), (67, 28870), (72, 28912),

Gene: Argie_40 Start: 39036, Stop: 39404, Start Num: 17
Candidate Starts for Argie_40:
(Start: 17 @39036 has 8 MA's), (21, 39075), (22, 39078), (43, 39168), (63, 39273),

Gene: Arib1_35 Start: 28805, Stop: 29104, Start Num: 37
Candidate Starts for Arib1_35:
(Start: 37 @28805 has 68 MA's), (47, 28865), (56, 28910), (65, 28967), (73, 29036), (77, 29093),

Gene: Atcoo_35 Start: 29289, Stop: 29588, Start Num: 37
Candidate Starts for Atcoo_35:
(Start: 37 @29289 has 68 MA's), (40, 29316), (41, 29319), (47, 29349), (56, 29394), (65, 29451), (73, 29520), (75, 29541), (77, 29577),

Gene: Awesomesauce_51 Start: 35718, Stop: 36032, Start Num: 37
Candidate Starts for Awesomesauce_51:
(12, 35583), (18, 35646), (20, 35664), (26, 35685), (27, 35688), (30, 35697), (Start: 37 @35718 has 68 MA's), (41, 35748), (42, 35757), (46, 35778), (48, 35790), (51, 35802), (54, 35823), (57, 35841), (72, 35949),

Gene: BabeRuth_41 Start: 29773, Stop: 30084, Start Num: 23
Candidate Starts for BabeRuth_41:
(3, 29482), (4, 29494), (11, 29623), (14, 29692), (Start: 23 @29773 has 44 MA's), (34, 29803), (39, 29827), (67, 30001),

Gene: Babsiella_37 Start: 29743, Stop: 30042, Start Num: 37
Candidate Starts for Babsiella_37:
(1, 29308), (2, 29404), (Start: 37 @29743 has 68 MA's), (47, 29803), (56, 29848), (65, 29905), (73, 29974), (77, 30031),

Gene: Bartholomew_34 Start: 28802, Stop: 29101, Start Num: 37
Candidate Starts for Bartholomew_34:
(Start: 37 @28802 has 68 MA's), (41, 28832), (47, 28862), (56, 28907), (65, 28964), (73, 29033), (77, 29090),

Gene: Bhagsy_35 Start: 28795, Stop: 29094, Start Num: 37
Candidate Starts for Bhagsy_35:
(Start: 37 @28795 has 68 MA's), (56, 28900), (65, 28957), (73, 29026), (75, 29047),

Gene: BigNuz_38 Start: 30860, Stop: 31159, Start Num: 37
Candidate Starts for BigNuz_38:
(Start: 37 @30860 has 68 MA's), (40, 30887), (41, 30890), (55, 30959), (56, 30965), (63, 31007), (64, 31019), (65, 31022), (72, 31082), (73, 31091),

Gene: Bluvara_44 Start: 34751, Stop: 35068, Start Num: 33
Candidate Starts for Bluvara_44:
(Start: 29 @34745 has 1 MA's), (Start: 33 @34751 has 4 MA's), (Start: 37 @34766 has 68 MA's), (49, 34832), (57, 34877), (68, 34946),

Gene: Bogie_37 Start: 30585, Stop: 30884, Start Num: 37
Candidate Starts for Bogie_37:
(Start: 37 @30585 has 68 MA's), (41, 30615), (56, 30690), (65, 30747), (73, 30816), (75, 30837), (77, 30873),

Gene: Bosection6_37 Start: 28151, Stop: 28537, Start Num: 23
Candidate Starts for Bosection6_37:
(Start: 23 @28151 has 44 MA's), (Start: 24 @28154 has 3 MA's), (28, 28160), (39, 28199), (67, 28373), (72, 28415), (78, 28499), (79, 28526),

Gene: BronnyJr_35 Start: 29299, Stop: 29598, Start Num: 37
Candidate Starts for BronnyJr_35:
(Start: 37 @29299 has 68 MA's), (41, 29329), (47, 29359), (56, 29404), (65, 29461), (73, 29530), (77, 29587),

Gene: Brujita_37 Start: 30641, Stop: 30940, Start Num: 37
Candidate Starts for Brujita_37:
(1, 30206), (2, 30302), (9, 30425), (Start: 37 @30641 has 68 MA's), (47, 30701), (56, 30746), (65, 30803), (73, 30872), (77, 30929),

Gene: Brusacoram_35 Start: 28795, Stop: 29094, Start Num: 37
Candidate Starts for Brusacoram_35:
(Start: 37 @28795 has 68 MA's), (40, 28822), (41, 28825), (47, 28855), (56, 28900), (65, 28957), (73, 29026), (75, 29047), (77, 29083),

Gene: Bunnies_35 Start: 28816, Stop: 29115, Start Num: 37
Candidate Starts for Bunnies_35:
(Start: 37 @28816 has 68 MA's), (41, 28846), (56, 28921), (65, 28978), (73, 29047), (75, 29068), (77, 29104),

Gene: Butters_40 Start: 30199, Stop: 30501, Start Num: 23
Candidate Starts for Butters_40:
(Start: 23 @30199 has 44 MA's), (34, 30220), (67, 30418), (70, 30448),

Gene: CactusJack_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for CactusJack_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: Camster_35 Start: 28832, Stop: 29131, Start Num: 37
Candidate Starts for Camster_35:
(Start: 37 @28832 has 68 MA's), (41, 28862), (56, 28937), (65, 28994), (73, 29063), (75, 29084), (77, 29120),

Gene: Carcharodon_39 Start: 29459, Stop: 29845, Start Num: 23
Candidate Starts for Carcharodon_39:
(Start: 23 @29459 has 44 MA's), (Start: 24 @29462 has 3 MA's), (28, 29468), (39, 29507), (67, 29681), (72, 29723), (78, 29807), (79, 29834),

Gene: Caterpie_54 Start: 45036, Stop: 45362, Start Num: 37
Candidate Starts for Caterpie_54:
(16, 44952), (Start: 37 @45036 has 68 MA's), (45, 45087), (58, 45162), (61, 45174), (64, 45195),

Gene: Cepens_39 Start: 38751, Stop: 39119, Start Num: 17
Candidate Starts for Cepens_39:
(Start: 17 @38751 has 8 MA's), (21, 38790), (22, 38793), (43, 38883), (63, 38988),

Gene: Charlie_37 Start: 28150, Stop: 28536, Start Num: 23
Candidate Starts for Charlie_37:
(Start: 23 @28150 has 44 MA's), (Start: 24 @28153 has 3 MA's), (28, 28159), (39, 28198), (67, 28372), (72, 28414), (78, 28498), (79, 28525),

Gene: Che9c_51 Start: 40069, Stop: 40380, Start Num: 36
Candidate Starts for Che9c_51:
(19, 40030), (Start: 36 @40069 has 2 MA's), (40, 40102), (48, 40147), (58, 40207), (73, 40312), (77, 40369),

Gene: Chewbacca_40 Start: 29459, Stop: 29845, Start Num: 23
Candidate Starts for Chewbacca_40:
(Start: 23 @29459 has 44 MA's), (Start: 24 @29462 has 3 MA's), (28, 29468), (39, 29507), (67, 29681), (72, 29723), (78, 29807), (79, 29834),

Gene: ChickenDinner_50 Start: 36456, Stop: 36770, Start Num: 37
Candidate Starts for ChickenDinner_50:
(12, 36321), (18, 36384), (20, 36402), (26, 36423), (27, 36426), (30, 36435), (Start: 37 @36456 has 68 MA's), (41, 36486), (42, 36495), (46, 36516), (48, 36528), (51, 36540), (54, 36561), (57, 36579), (72, 36687),

Gene: Chubbello_35 Start: 28798, Stop: 29097, Start Num: 37
Candidate Starts for Chubbello_35:
(Start: 37 @28798 has 68 MA's), (47, 28858), (56, 28903), (65, 28960), (73, 29029), (77, 29086),

Gene: Cubone_37 Start: 28175, Stop: 28558, Start Num: 24
Candidate Starts for Cubone_37:
(Start: 23 @28172 has 44 MA's), (Start: 24 @28175 has 3 MA's), (28, 28181), (39, 28220), (67, 28394), (72, 28436), (78, 28520), (79, 28547),

Gene: D12_38 Start: 39299, Stop: 39667, Start Num: 17
Candidate Starts for D12_38:
(Start: 17 @39299 has 8 MA's), (21, 39338), (22, 39341), (38, 39395), (43, 39431), (63, 39536),

Gene: DocMcStuffins_50 Start: 36456, Stop: 36770, Start Num: 37
Candidate Starts for DocMcStuffins_50:
(12, 36321), (18, 36384), (20, 36402), (26, 36423), (27, 36426), (30, 36435), (Start: 37 @36456 has 68 MA's), (41, 36486), (42, 36495), (46, 36516), (48, 36528), (51, 36540), (54, 36561), (57, 36579), (72, 36687),

Gene: Donovan_35 Start: 28821, Stop: 29120, Start Num: 37
Candidate Starts for Donovan_35:
(Start: 37 @28821 has 68 MA's), (47, 28881), (56, 28926), (65, 28983), (73, 29052), (77, 29109),

Gene: Dori_54 Start: 46186, Stop: 46512, Start Num: 33
Candidate Starts for Dori_54:
(7, 45976), (10, 45985), (16, 46102), (Start: 33 @46186 has 4 MA's), (57, 46321), (68, 46390), (71, 46423), (76, 46471),

Gene: Duplicity_39 Start: 29468, Stop: 29854, Start Num: 23
Candidate Starts for Duplicity_39:
(Start: 23 @29468 has 44 MA's), (Start: 24 @29471 has 3 MA's), (28, 29477), (39, 29516), (67, 29690), (72, 29732), (78, 29816), (79, 29843),

Gene: Dynamo_35 Start: 29210, Stop: 29509, Start Num: 37
Candidate Starts for Dynamo_35:
(Start: 37 @29210 has 68 MA's), (41, 29240), (47, 29270), (56, 29315), (65, 29372), (73, 29441), (77, 29498),

Gene: EGUnicorn_37 Start: 28151, Stop: 28498, Start Num: 23
Candidate Starts for EGUnicorn_37:
(Start: 23 @28151 has 44 MA's), (Start: 24 @28154 has 3 MA's), (28, 28160), (39, 28199), (67, 28373), (72, 28415),

Gene: Etoile_35 Start: 28802, Stop: 29101, Start Num: 37
Candidate Starts for Etoile_35:
(Start: 37 @28802 has 68 MA's), (41, 28832), (47, 28862), (56, 28907), (65, 28964), (73, 29033), (77, 29090),

Gene: FirstPlacePfu_35 Start: 28834, Stop: 29133, Start Num: 37
Candidate Starts for FirstPlacePfu_35:
(Start: 37 @28834 has 68 MA's), (41, 28864), (47, 28894), (56, 28939), (65, 28996), (73, 29065), (77, 29122),

Gene: Fishburne_35 Start: 28802, Stop: 29101, Start Num: 37
Candidate Starts for Fishburne_35:
(Start: 37 @28802 has 68 MA's), (41, 28832), (47, 28862), (56, 28907), (65, 28964), (73, 29033), (77, 29090),

Gene: Frankie_56 Start: 38493, Stop: 38807, Start Num: 37
Candidate Starts for Frankie_56:
(32, 38475), (Start: 37 @38493 has 68 MA's), (41, 38523), (42, 38532), (46, 38553), (48, 38565), (51, 38577), (54, 38598), (57, 38616), (72, 38724),

Gene: Fulbright_38 Start: 28548, Stop: 28934, Start Num: 23
Candidate Starts for Fulbright_38:
(Start: 23 @28548 has 44 MA's), (Start: 24 @28551 has 3 MA's), (28, 28557), (39, 28596), (67, 28770), (72, 28812), (78, 28896), (79, 28923),

Gene: GaloreK_35 Start: 28795, Stop: 29094, Start Num: 37
Candidate Starts for GaloreK_35:
(Start: 37 @28795 has 68 MA's), (47, 28855), (56, 28900), (65, 28957), (73, 29026), (77, 29083),

Gene: Gavriela_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for Gavriela_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: Gex_39 Start: 29475, Stop: 29861, Start Num: 23
Candidate Starts for Gex_39:
(Start: 23 @29475 has 44 MA's), (Start: 24 @29478 has 3 MA's), (28, 29484), (39, 29523), (67, 29697), (72, 29739), (78, 29823), (79, 29850),

Gene: Glaske_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for Glaske_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: GodPhather_40 Start: 39515, Stop: 39883, Start Num: 17
Candidate Starts for GodPhather_40:
(Start: 17 @39515 has 8 MA's), (21, 39554), (22, 39557), (43, 39647), (63, 39752),

Gene: GreaseLightnin_35 Start: 29042, Stop: 29341, Start Num: 37
Candidate Starts for GreaseLightnin_35:
(Start: 37 @29042 has 68 MA's), (40, 29069), (41, 29072), (47, 29102), (56, 29147), (65, 29204), (73, 29273), (75, 29294), (77, 29330),

Gene: HC_35 Start: 28524, Stop: 28823, Start Num: 37
Candidate Starts for HC_35:
(1, 28089), (2, 28185), (Start: 37 @28524 has 68 MA's), (47, 28584), (56, 28629), (65, 28686), (73, 28755), (77, 28812),

Gene: HUHilltop_35 Start: 28832, Stop: 29131, Start Num: 37
Candidate Starts for HUHilltop_35:
(Start: 37 @28832 has 68 MA's), (41, 28862), (56, 28937), (65, 28994), (73, 29063), (77, 29120),

Gene: Hanako_40 Start: 29772, Stop: 30083, Start Num: 23
Candidate Starts for Hanako_40:
(3, 29481), (4, 29493), (11, 29622), (14, 29691), (Start: 23 @29772 has 44 MA's), (34, 29802), (39, 29826), (67, 30000),

Gene: Impisi_42 Start: 30328, Stop: 30639, Start Num: 23
Candidate Starts for Impisi_42:
(3, 30037), (4, 30049), (11, 30178), (14, 30247), (Start: 23 @30328 has 44 MA's), (34, 30358), (39, 30382), (67, 30556),

Gene: Island3_37 Start: 30641, Stop: 30940, Start Num: 37
Candidate Starts for Island3_37:
(1, 30206), (2, 30302), (9, 30425), (Start: 37 @30641 has 68 MA's), (47, 30701), (56, 30746), (65, 30803), (73, 30872), (77, 30929),

Gene: Jamie19_36 Start: 28529, Stop: 28876, Start Num: 23
Candidate Starts for Jamie19_36:
(Start: 23 @28529 has 44 MA's), (Start: 24 @28532 has 3 MA's), (28, 28538), (39, 28577), (67, 28751), (72, 28793),

Gene: Jebeks_36 Start: 28787, Stop: 29086, Start Num: 37
Candidate Starts for Jebeks_36:
(Start: 37 @28787 has 68 MA's), (47, 28847), (56, 28892), (65, 28949), (73, 29018), (77, 29075),

Gene: Jeon_39 Start: 39257, Stop: 39625, Start Num: 17
Candidate Starts for Jeon_39:
(Start: 17 @39257 has 8 MA's), (21, 39296), (22, 39299), (43, 39389), (63, 39494),

Gene: JohnLord_57 Start: 45472, Stop: 45798, Start Num: 33

Candidate Starts for JohnLord_57:
(16, 45388), (Start: 33 @45472 has 4 MA's), (49, 45565), (54, 45589), (59, 45625), (66, 45664), (71, 45709), (75, 45745),

Gene: Journey_37 Start: 28150, Stop: 28536, Start Num: 23
Candidate Starts for Journey_37:
(Start: 23 @28150 has 44 MA's), (Start: 24 @28153 has 3 MA's), (28, 28159), (39, 28198), (67, 28372), (72, 28414), (78, 28498), (79, 28525),

Gene: Jung_34 Start: 28763, Stop: 29062, Start Num: 37
Candidate Starts for Jung_34:
(Start: 37 @28763 has 68 MA's), (40, 28790), (41, 28793), (47, 28823), (56, 28868), (65, 28925), (73, 28994),

Gene: Juniormint_35 Start: 28838, Stop: 29137, Start Num: 37
Candidate Starts for Juniormint_35:
(Start: 37 @28838 has 68 MA's), (41, 28868), (56, 28943), (65, 29000), (73, 29069), (75, 29090), (77, 29126),

Gene: Kari_35 Start: 28799, Stop: 29098, Start Num: 37
Candidate Starts for Kari_35:
(Start: 37 @28799 has 68 MA's), (41, 28829), (47, 28859), (56, 28904), (65, 28961), (73, 29030), (77, 29087),

Gene: Kevin1_38 Start: 29378, Stop: 29680, Start Num: 23
Candidate Starts for Kevin1_38:
(Start: 23 @29378 has 44 MA's), (34, 29399), (67, 29597), (70, 29627),

Gene: KilKor_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for KilKor_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: Ksquared_35 Start: 28816, Stop: 29115, Start Num: 37
Candidate Starts for Ksquared_35:
(Start: 37 @28816 has 68 MA's), (41, 28846), (56, 28921), (65, 28978), (73, 29047), (75, 29068), (77, 29104),

Gene: Langerak_35 Start: 28815, Stop: 29114, Start Num: 37
Candidate Starts for Langerak_35:
(Start: 37 @28815 has 68 MA's), (47, 28875), (56, 28920), (65, 28977), (73, 29046), (77, 29103),

Gene: LilSpotty_51 Start: 34951, Stop: 35265, Start Num: 37
Candidate Starts for LilSpotty_51:
(32, 34933), (Start: 37 @34951 has 68 MA's), (40, 34978), (42, 34990), (46, 35011), (48, 35023), (50, 35029), (54, 35056), (57, 35074), (58, 35086),

Gene: LordVader_44 Start: 31714, Stop: 32067, Start Num: 35
Candidate Starts for LordVader_44:
(31, 31702), (Start: 35 @31714 has 1 MA's), (Start: 37 @31723 has 68 MA's), (41, 31753), (44, 31771), (45, 31774), (52, 31816), (64, 31882), (72, 31945), (78, 32029), (79, 32056),

Gene: Magsby_39 Start: 29476, Stop: 29862, Start Num: 23

Candidate Starts for Magsby_39:
(Start: 23 @29476 has 44 MA's), (Start: 24 @29479 has 3 MA's), (28, 29485), (39, 29524), (67, 29698), (72, 29740), (78, 29824), (79, 29851),

Gene: Majeke_35 Start: 28840, Stop: 29139, Start Num: 37
Candidate Starts for Majeke_35:
(Start: 37 @28840 has 68 MA's), (47, 28900), (56, 28945), (65, 29002), (73, 29071), (77, 29128),

Gene: Malithi_35 Start: 28725, Stop: 29024, Start Num: 37
Candidate Starts for Malithi_35:
(Start: 37 @28725 has 68 MA's), (41, 28755), (56, 28830), (65, 28887), (73, 28956), (75, 28977), (77, 29013),

Gene: Mangethe_35 Start: 28840, Stop: 29139, Start Num: 37
Candidate Starts for Mangethe_35:
(Start: 37 @28840 has 68 MA's), (47, 28900), (56, 28945), (65, 29002), (73, 29071), (77, 29128),

Gene: Mao1_53 Start: 44475, Stop: 44801, Start Num: 33
Candidate Starts for Mao1_53:
(16, 44391), (Start: 33 @44475 has 4 MA's), (49, 44568), (54, 44592), (59, 44628), (66, 44667), (71, 44712), (75, 44748),

Gene: Mask_54 Start: 47033, Stop: 47359, Start Num: 33
Candidate Starts for Mask_54:
(Start: 33 @47033 has 4 MA's), (57, 47168), (59, 47186), (71, 47270), (75, 47306), (76, 47318),

Gene: Megabear_39 Start: 38672, Stop: 39040, Start Num: 17
Candidate Starts for Megabear_39:
(Start: 17 @38672 has 8 MA's), (21, 38711), (22, 38714), (38, 38768), (43, 38804), (63, 38909),

Gene: Megiddo_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for Megiddo_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: Melville_41 Start: 29463, Stop: 29846, Start Num: 24
Candidate Starts for Melville_41:
(Start: 23 @29460 has 44 MA's), (Start: 24 @29463 has 3 MA's), (28, 29469), (39, 29508), (67, 29682), (72, 29724), (78, 29808), (79, 29835),

Gene: MichelleMyBell_37 Start: 28467, Stop: 28772, Start Num: 23
Candidate Starts for MichelleMyBell_37:
(Start: 23 @28467 has 44 MA's), (Start: 24 @28470 has 3 MA's), (28, 28476), (39, 28515), (67, 28689), (70, 28719),

Gene: Misha28_49 Start: 35723, Stop: 36037, Start Num: 37
Candidate Starts for Misha28_49:
(12, 35588), (18, 35651), (20, 35669), (26, 35690), (27, 35693), (30, 35702), (Start: 37 @35723 has 68 MA's), (41, 35753), (42, 35762), (46, 35783), (48, 35795), (51, 35807), (54, 35828), (57, 35846), (72, 35954),

Gene: MulchSalad_47 Start: 34298, Stop: 34651, Start Num: 37
Candidate Starts for MulchSalad_47:

(32, 34280), (Start: 37 @34298 has 68 MA's), (40, 34325), (46, 34358), (49, 34373), (54, 34403), (57, 34421), (78, 34613), (79, 34640),

Gene: Nazo_39 Start: 30862, Stop: 31161, Start Num: 37
Candidate Starts for Nazo_39:
(Start: 37 @30862 has 68 MA's), (40, 30889), (41, 30892), (55, 30961), (56, 30967), (63, 31009), (65, 31024), (72, 31084), (73, 31093),

Gene: Necropolis_35 Start: 28799, Stop: 29098, Start Num: 37
Candidate Starts for Necropolis_35:
(Start: 37 @28799 has 68 MA's), (47, 28859), (56, 28904), (65, 28961), (73, 29030), (77, 29087),

Gene: Nenae_40 Start: 29775, Stop: 30086, Start Num: 23
Candidate Starts for Nenae_40:
(3, 29484), (4, 29496), (11, 29625), (14, 29694), (Start: 23 @29775 has 44 MA's), (34, 29805), (39, 29829), (67, 30003),

Gene: PR_39 Start: 39276, Stop: 39644, Start Num: 17
Candidate Starts for PR_39:
(Start: 17 @39276 has 8 MA's), (21, 39315), (22, 39318), (38, 39372), (43, 39408), (63, 39513),

Gene: PaintedDog_41 Start: 31419, Stop: 31721, Start Num: 37
Candidate Starts for PaintedDog_41:
(Start: 37 @31419 has 68 MA's), (46, 31479), (60, 31560), (77, 31710),

Gene: Panchino_35 Start: 29875, Stop: 30222, Start Num: 23
Candidate Starts for Panchino_35:
(Start: 23 @29875 has 44 MA's), (Start: 24 @29878 has 3 MA's), (28, 29884), (39, 29923), (67, 30097), (72, 30139),

Gene: Parmesanjohn_39 Start: 29479, Stop: 29865, Start Num: 23
Candidate Starts for Parmesanjohn_39:
(Start: 23 @29479 has 44 MA's), (Start: 24 @29482 has 3 MA's), (28, 29488), (39, 29527), (67, 29701), (72, 29743), (78, 29827), (79, 29854),

Gene: PeanutPie_35 Start: 28795, Stop: 29094, Start Num: 37
Candidate Starts for PeanutPie_35:
(Start: 37 @28795 has 68 MA's), (41, 28825), (56, 28900), (65, 28957), (73, 29026), (75, 29047),

Gene: Phalm_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for Phalm_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: PhancyPhin_40 Start: 29769, Stop: 30080, Start Num: 23
Candidate Starts for PhancyPhin_40:
(3, 29478), (4, 29490), (11, 29619), (14, 29688), (Start: 23 @29769 has 44 MA's), (34, 29799), (39, 29823), (67, 29997),

Gene: Phayonce_37 Start: 30764, Stop: 31069, Start Num: 37
Candidate Starts for Phayonce_37:
(15, 30656), (Start: 37 @30764 has 68 MA's), (40, 30791), (41, 30794), (58, 30896), (71, 30986), (73, 31001), (77, 31058),

Gene: Phegasus_35 Start: 28807, Stop: 29106, Start Num: 37
Candidate Starts for Phegasus_35:
(Start: 37 @28807 has 68 MA's), (47, 28867), (56, 28912), (65, 28969), (73, 29038), (77, 29095),

Gene: Philonius_37 Start: 28138, Stop: 28440, Start Num: 23
Candidate Starts for Philonius_37:
(4, 27859), (5, 27871), (Start: 23 @28138 has 44 MA's), (34, 28159), (67, 28357), (70, 28387),

Gene: Phineas_35 Start: 29170, Stop: 29469, Start Num: 37
Candidate Starts for Phineas_35:
(Start: 37 @29170 has 68 MA's), (41, 29200), (47, 29230), (56, 29275), (65, 29332), (73, 29401), (77, 29458),

Gene: Phloss_37 Start: 28886, Stop: 29272, Start Num: 23
Candidate Starts for Phloss_37:
(Start: 23 @28886 has 44 MA's), (Start: 24 @28889 has 3 MA's), (28, 28895), (39, 28934), (67, 29108), (72, 29150), (78, 29234), (79, 29261),

Gene: Phrann_40 Start: 30555, Stop: 30902, Start Num: 23
Candidate Starts for Phrann_40:
(Start: 23 @30555 has 44 MA's), (Start: 24 @30558 has 3 MA's), (28, 30564), (39, 30603), (67, 30777), (72, 30819),

Gene: Piper2020_51 Start: 36439, Stop: 36753, Start Num: 37
Candidate Starts for Piper2020_51:
(12, 36304), (18, 36367), (20, 36385), (26, 36406), (27, 36409), (30, 36418), (Start: 37 @36439 has 68 MA's), (41, 36469), (42, 36478), (46, 36499), (48, 36511), (51, 36523), (54, 36544), (57, 36562), (72, 36670),

Gene: Pipsqueaks_39 Start: 29456, Stop: 29842, Start Num: 23
Candidate Starts for Pipsqueaks_39:
(Start: 23 @29456 has 44 MA's), (Start: 24 @29459 has 3 MA's), (28, 29465), (39, 29504), (67, 29678), (72, 29720), (78, 29804), (79, 29831),

Gene: Polkaroo_35 Start: 28813, Stop: 29112, Start Num: 37
Candidate Starts for Polkaroo_35:
(Start: 37 @28813 has 68 MA's), (40, 28840), (41, 28843), (47, 28873), (56, 28918), (65, 28975), (73, 29044),

Gene: Purgamenstris_40 Start: 29773, Stop: 30084, Start Num: 23
Candidate Starts for Purgamenstris_40:
(3, 29482), (4, 29494), (11, 29623), (14, 29692), (Start: 23 @29773 has 44 MA's), (34, 29803), (39, 29827), (67, 30001),

Gene: Purky_42 Start: 31473, Stop: 31778, Start Num: 37
Candidate Starts for Purky_42:
(25, 31446), (Start: 37 @31473 has 68 MA's), (40, 31500), (48, 31545), (58, 31605), (71, 31695), (77, 31767),

Gene: Pygmy_37 Start: 30641, Stop: 30940, Start Num: 37
Candidate Starts for Pygmy_37:

(Start: 37 @30641 has 68 MA's), (41, 30671), (56, 30746), (65, 30803), (73, 30872), (75, 30893), (77, 30929),

Gene: QueenHazel_33 Start: 28677, Stop: 28976, Start Num: 37
Candidate Starts for QueenHazel_33:
(1, 28242), (2, 28338), (9, 28461), (Start: 37 @28677 has 68 MA's), (47, 28737), (56, 28782), (65, 28839), (73, 28908), (77, 28965),

Gene: Raymond7_34 Start: 29585, Stop: 29896, Start Num: 23
Candidate Starts for Raymond7_34:
(3, 29294), (4, 29306), (11, 29435), (14, 29504), (Start: 23 @29585 has 44 MA's), (34, 29615), (39, 29639), (67, 29813),

Gene: Rebel_32 Start: 25903, Stop: 26214, Start Num: 23
Candidate Starts for Rebel_32:
(4, 25624), (5, 25636), (14, 25822), (Start: 23 @25903 has 44 MA's), (34, 25933), (39, 25957), (67, 26131),

Gene: Redi_40 Start: 29772, Stop: 30083, Start Num: 23
Candidate Starts for Redi_40:
(3, 29481), (4, 29493), (11, 29622), (14, 29691), (Start: 23 @29772 has 44 MA's), (34, 29802), (39, 29826), (67, 30000),

Gene: Rubeelu_40 Start: 30199, Stop: 30501, Start Num: 23
Candidate Starts for Rubeelu_40:
(Start: 23 @30199 has 44 MA's), (34, 30220), (67, 30418), (70, 30448),

Gene: Sbash_48 Start: 37773, Stop: 38084, Start Num: 36
Candidate Starts for Sbash_48:
(19, 37734), (25, 37755), (Start: 36 @37773 has 2 MA's), (56, 37884), (64, 37938), (71, 37995), (72, 38001), (76, 38043),

Gene: Schnauzer_39 Start: 29479, Stop: 29865, Start Num: 23
Candidate Starts for Schnauzer_39:
(Start: 23 @29479 has 44 MA's), (Start: 24 @29482 has 3 MA's), (28, 29488), (39, 29527), (67, 29701), (72, 29743), (78, 29827), (79, 29854),

Gene: Scitech_36 Start: 27327, Stop: 27713, Start Num: 23
Candidate Starts for Scitech_36:
(Start: 23 @27327 has 44 MA's), (Start: 24 @27330 has 3 MA's), (28, 27336), (39, 27375), (67, 27549), (72, 27591), (78, 27675), (79, 27702),

Gene: Sejanus_52 Start: 45964, Stop: 46290, Start Num: 37
Candidate Starts for Sejanus_52:
(16, 45880), (Start: 37 @45964 has 68 MA's), (45, 46015), (58, 46090), (61, 46102), (64, 46123),

Gene: Shipwreck_37 Start: 30616, Stop: 30915, Start Num: 37
Candidate Starts for Shipwreck_37:
(Start: 37 @30616 has 68 MA's), (41, 30646), (56, 30721), (65, 30778), (73, 30847), (75, 30868), (77, 30904),

Gene: ShrimpFriedEgg_40 Start: 29772, Stop: 30083, Start Num: 23
Candidate Starts for ShrimpFriedEgg_40:

(3, 29481), (4, 29493), (11, 29622), (14, 29691), (Start: 23 @29772 has 44 MA's), (34, 29802), (39, 29826), (67, 30000),

Gene: Shweta_36 Start: 28659, Stop: 29006, Start Num: 23
Candidate Starts for Shweta_36:
(Start: 23 @28659 has 44 MA's), (Start: 24 @28662 has 3 MA's), (28, 28668), (39, 28707), (67, 28881), (72, 28923),

Gene: Silvafighter_40 Start: 29452, Stop: 29838, Start Num: 23
Candidate Starts for Silvafighter_40:
(Start: 23 @29452 has 44 MA's), (Start: 24 @29455 has 3 MA's), (28, 29461), (39, 29500), (67, 29674), (72, 29716), (78, 29800), (79, 29827),

Gene: Silvy_37 Start: 28130, Stop: 28516, Start Num: 23
Candidate Starts for Silvy_37:
(Start: 23 @28130 has 44 MA's), (Start: 24 @28133 has 3 MA's), (28, 28139), (39, 28178), (67, 28352), (72, 28394), (78, 28478), (79, 28505),

Gene: SkinnyPete_34 Start: 27190, Stop: 27576, Start Num: 23
Candidate Starts for SkinnyPete_34:
(Start: 23 @27190 has 44 MA's), (Start: 24 @27193 has 3 MA's), (28, 27199), (39, 27238), (67, 27412), (72, 27454), (78, 27538), (79, 27565),

Gene: Smurph_39 Start: 29479, Stop: 29865, Start Num: 23
Candidate Starts for Smurph_39:
(Start: 23 @29479 has 44 MA's), (Start: 24 @29482 has 3 MA's), (28, 29488), (39, 29527), (67, 29701), (72, 29743), (78, 29827), (79, 29854),

Gene: Snekmaggedon_36 Start: 28529, Stop: 28876, Start Num: 23
Candidate Starts for Snekmaggedon_36:
(Start: 23 @28529 has 44 MA's), (Start: 24 @28532 has 3 MA's), (28, 28538), (39, 28577), (67, 28751), (72, 28793),

Gene: Sonah_35 Start: 28788, Stop: 29087, Start Num: 37
Candidate Starts for Sonah_35:
(Start: 37 @28788 has 68 MA's), (41, 28818), (56, 28893), (65, 28950), (73, 29019), (77, 29076),

Gene: Spinach_40 Start: 29772, Stop: 30083, Start Num: 23
Candidate Starts for Spinach_40:
(3, 29481), (4, 29493), (11, 29622), (14, 29691), (Start: 23 @29772 has 44 MA's), (34, 29802), (39, 29826), (67, 30000),

Gene: SpongeBob_36 Start: 28529, Stop: 28876, Start Num: 23
Candidate Starts for SpongeBob_36:
(Start: 23 @28529 has 44 MA's), (Start: 24 @28532 has 3 MA's), (28, 28538), (39, 28577), (67, 28751), (72, 28793),

Gene: Squirty_47 Start: 34608, Stop: 34922, Start Num: 37
Candidate Starts for Squirty_47:
(32, 34590), (Start: 37 @34608 has 68 MA's), (40, 34635), (46, 34668), (49, 34683), (54, 34713), (57, 34731),

Gene: StevieRay_35 Start: 28755, Stop: 29054, Start Num: 37

Candidate Starts for StevieRay_35:
(Start: 37 @28755 has 68 MA's), (40, 28782), (41, 28785), (47, 28815), (56, 28860), (65, 28917), (73, 28986), (75, 29007),

Gene: StressBall_35 Start: 29056, Stop: 29355, Start Num: 37
Candidate Starts for StressBall_35:
(Start: 37 @29056 has 68 MA's), (40, 29083), (41, 29086), (47, 29116), (56, 29161), (65, 29218), (73, 29287),

Gene: Stuck_51 Start: 39604, Stop: 39921, Start Num: 33
Candidate Starts for Stuck_51:
(Start: 29 @39598 has 1 MA's), (Start: 33 @39604 has 4 MA's), (Start: 37 @39619 has 68 MA's), (49, 39685), (57, 39730), (68, 39799),

Gene: Tapioca_40 Start: 29448, Stop: 29831, Start Num: 24
Candidate Starts for Tapioca_40:
(Start: 23 @29445 has 44 MA's), (Start: 24 @29448 has 3 MA's), (28, 29454), (39, 29493), (67, 29667), (72, 29709), (78, 29793), (79, 29820),

Gene: Taptic_39 Start: 38672, Stop: 39040, Start Num: 17
Candidate Starts for Taptic_39:
(Start: 17 @38672 has 8 MA's), (21, 38711), (22, 38714), (43, 38804), (63, 38909),

Gene: Techage_35 Start: 28825, Stop: 29124, Start Num: 37
Candidate Starts for Techage_35:
(Start: 37 @28825 has 68 MA's), (47, 28885), (56, 28930), (65, 28987), (73, 29056), (77, 29113),

Gene: Tessdabest_40 Start: 29476, Stop: 29862, Start Num: 23
Candidate Starts for Tessdabest_40:
(Start: 23 @29476 has 44 MA's), (Start: 24 @29479 has 3 MA's), (28, 29485), (39, 29524), (67, 29698), (72, 29740), (78, 29824), (79, 29851),

Gene: Thespis_35 Start: 28795, Stop: 29094, Start Num: 37
Candidate Starts for Thespis_35:
(Start: 37 @28795 has 68 MA's), (40, 28822), (41, 28825), (47, 28855), (56, 28900), (65, 28957), (73, 29026), (75, 29047), (77, 29083),

Gene: ThulaThula_41 Start: 32851, Stop: 33183, Start Num: 29
Candidate Starts for ThulaThula_41:
(Start: 29 @32851 has 1 MA's), (Start: 33 @32857 has 4 MA's), (Start: 37 @32872 has 68 MA's), (49, 32938), (53, 32962), (58, 32995), (60, 33004), (69, 33058), (74, 33121),

Gene: TootsiePop_49 Start: 35723, Stop: 36037, Start Num: 37
Candidate Starts for TootsiePop_49:
(12, 35588), (18, 35651), (20, 35669), (26, 35690), (27, 35693), (30, 35702), (Start: 37 @35723 has 68 MA's), (41, 35753), (42, 35762), (46, 35783), (48, 35795), (51, 35807), (54, 35828), (57, 35846), (72, 35954),

Gene: Tortellini_42 Start: 35456, Stop: 35809, Start Num: 37
Candidate Starts for Tortellini_42:
(6, 35216), (8, 35237), (13, 35336), (Start: 37 @35456 has 68 MA's), (42, 35495), (48, 35528), (54, 35561), (57, 35579), (62, 35606), (73, 35696), (79, 35798),

Gene: Tortoise12_37 Start: 28162, Stop: 28548, Start Num: 23
Candidate Starts for Tortoise12_37:
(Start: 23 @28162 has 44 MA's), (Start: 24 @28165 has 3 MA's), (28, 28171), (39, 28210), (67, 28384), (72, 28426), (78, 28510), (79, 28537),

Gene: Venti_35 Start: 28802, Stop: 29101, Start Num: 37
Candidate Starts for Venti_35:
(Start: 37 @28802 has 68 MA's), (41, 28832), (47, 28862), (56, 28907), (65, 28964), (73, 29033), (77, 29090),

Gene: Vidya_35 Start: 28835, Stop: 29134, Start Num: 37
Candidate Starts for Vidya_35:
(Start: 37 @28835 has 68 MA's), (41, 28865), (47, 28895), (56, 28940), (65, 28997), (73, 29066), (77, 29123),

Gene: Willsammy_34 Start: 28539, Stop: 28838, Start Num: 37
Candidate Starts for Willsammy_34:
(Start: 37 @28539 has 68 MA's), (40, 28566), (41, 28569), (47, 28599), (56, 28644), (65, 28701), (73, 28770),

Gene: Xavia_44 Start: 36039, Stop: 36392, Start Num: 37
Candidate Starts for Xavia_44:
(8, 35820), (13, 35919), (Start: 37 @36039 has 68 MA's), (41, 36069), (46, 36099), (48, 36111), (54, 36144), (57, 36162), (58, 36174), (73, 36279), (79, 36381),

Gene: Xeno_36 Start: 27916, Stop: 28221, Start Num: 23
Candidate Starts for Xeno_36:
(Start: 23 @27916 has 44 MA's), (Start: 24 @27919 has 3 MA's), (28, 27925), (39, 27964), (67, 28138),

Gene: Xerxes_39 Start: 29476, Stop: 29862, Start Num: 23
Candidate Starts for Xerxes_39:
(Start: 23 @29476 has 44 MA's), (Start: 24 @29479 has 3 MA's), (28, 29485), (39, 29524), (67, 29698), (72, 29740), (78, 29824), (79, 29851),

Gene: Xula_32 Start: 28201, Stop: 28500, Start Num: 37
Candidate Starts for Xula_32:
(1, 27766), (2, 27862), (9, 27985), (Start: 37 @28201 has 68 MA's), (47, 28261), (56, 28306), (65, 28363), (73, 28432), (77, 28489),

Gene: Zilizebeth_35 Start: 28834, Stop: 29133, Start Num: 37
Candidate Starts for Zilizebeth_35:
(Start: 37 @28834 has 68 MA's), (41, 28864), (47, 28894), (56, 28939), (65, 28996), (73, 29065), (77, 29122),