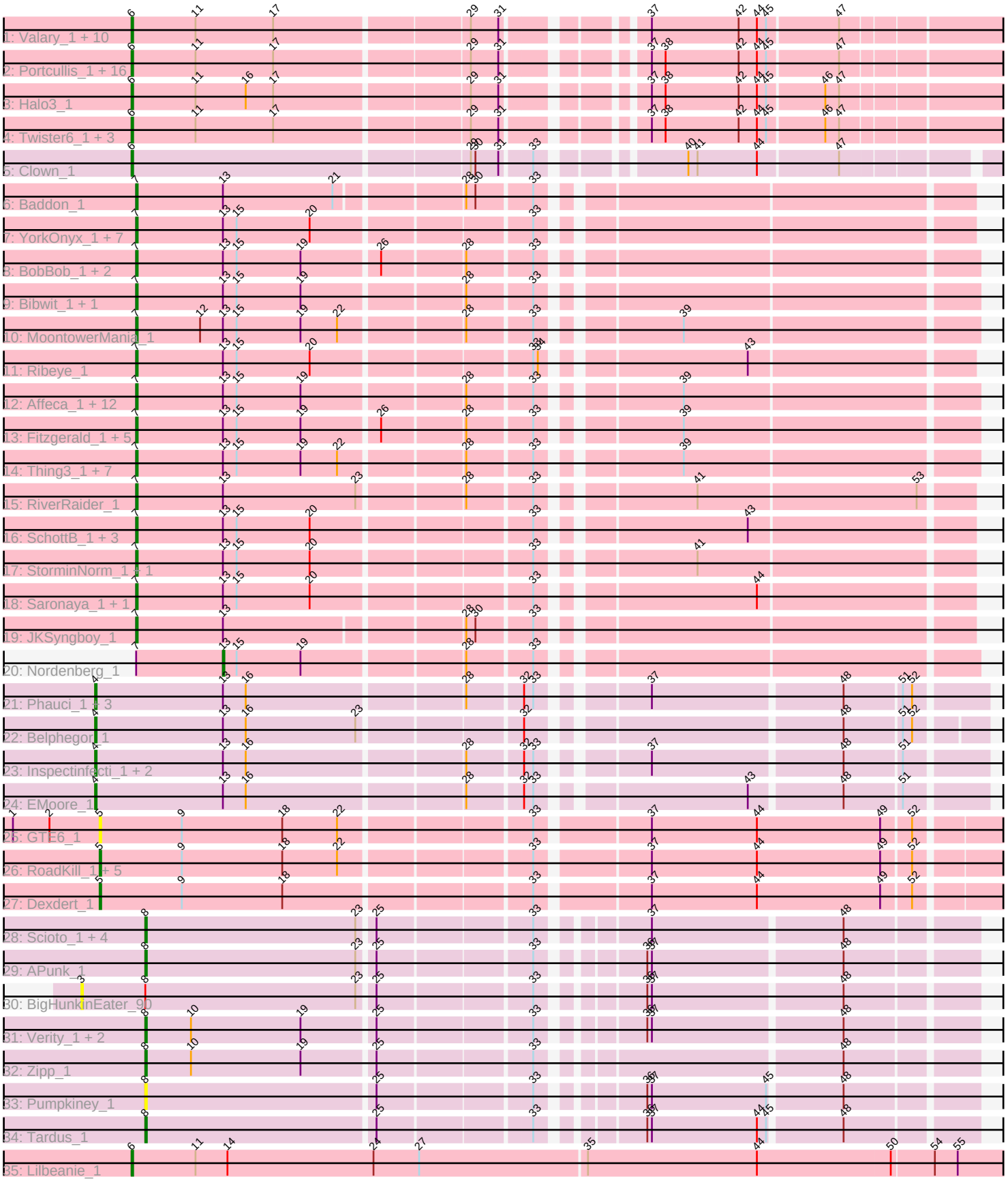
Pham 292635


1: Valary_1 + 10
2: Portcullis_1 + 16
3: Halo3_1
4: Twister6_1 + 3
5: Clown_1
6: Baddon_1
7: YorkOnyx_1 + 7
8: BobBob_1 + 2
9: Bibwit_1 + 1
10: MoontowerMania_1
11: Ribeye_1
12: Affeca_1 + 12
13: Fitzgerald_1 + 5
14: Thing3_1 + 7
15: RiverRaider_1
16: SchottB_1 + 3
17: StorminNorm_1 + 1
18: Saronaya_1 + 1
19: JKSyngboy_1
20: Nordenberg_1
21: Phauci_1 + 3
22: Belphegor_1
23: Inspectinfecti_1 + 2
24: EMoore_1
25: GTE6_1
26: RoadKill_1 + 5
27: Dexdert_1
28: Scioto_1 + 4
29: APunk_1
30: BigHunkinEater_90
31: Verity_1 + 2
32: Zipp_1
33: Pumpkiney_1
34: Tardus_1
35: Lilbeanie_1

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 292635 Report

This analysis was run 04/18/26 on database version 643.

Pham number 292635 has 119 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Valary_1, Egi03_1, Fireball_1, Arri_1, KimmyK_1, Shinji_1, Gezellig_1, CherryCola_1, Wizard_1, PullumCavea_1, Phlop_1
• Track 2 : Portcullis_1, Nubi_1, Bakery_1, Evamon_1, Togo_1, SmokingBunny_1, Salvador_1, VanDeWege_1, ClamChowder_1, Fugax_1, CoveyB_1, Mutzi_1, PinkCoffee_1, TillyBobJoe_1, YungMoney_1, Barb_1, Danyall_1
• Track 3 : Halo3_1
• Track 4 : Twister6_1, Savbucketdawg_1, RogerDodger_1, Jambalaya_1
• Track 5 : Clown_1
• Track 6 : Baddon_1
• Track 7 : YorkOnyx_1, Kroos_1, Derg_1, Bizzy_1, Kwobi_1, Ashertheman_1, Tangerine_1, Flatwoods_1
• Track 8 : BobBob_1, Brandonk123_1, Angelicage_1
• Track 9 : Bibwit_1, Stultus_1
• Track 10 : MoontowerMania_1
• Track 11 : Ribeye_1
• Track 12 : Affeca_1, McKinley_1, Jabberwocky_1, Love_1, Kewpiedoll_1, Geodirt_1, Charming_1, Tangent_1, Fosterous_1, ChadMasterC_1, Lennon_1, Vivi2_1, Sitar_1
• Track 13 : Fitzgerald_1, Ailee_1, Keitabear_1, Shivanishola_1, Sedona_1, Sanjuju_1
• Track 14 : Thing3_1, Rofo_1, Kamashten_1, Barsten_1, FuegoCuervo_1, McCrothy_1, Galadriel_1, Paries_1
• Track 15 : RiverRaider_1
• Track 16 : SchottB_1, Baumdotcom_1, LilHam_1, Gaea_1
• Track 17 : StorminNorm_1, Tycho_1
• Track 18 : Saronaya_1, Gustavo_1
• Track 19 : JKSyngboy_1
• Track 20 : Nordenberg_1
• Track 21 : Phauci_1, Leonard_1, Hans_1, Phinally_1
• Track 22 : Belphegor_1
• Track 23 : Inspectinfecti_1, Ali17_1, MelBins_1
• Track 24 : EMoore_1
• Track 25 : GTE6_1
• Track 26 : RoadKill_1, Twonlo_1, Chickadee_1, Kwekel_1, EdmundFerry_1, Tiamoceli_1
• Track 27 : Dexdert_1
• Track 28 : Scioto_1, Sampson_1, Natkenzie_1, Abblin_1, ViaConlectus_1
• Track 29 : APunk_1

• Track 30 : BigHunkinEater_90
• Track 31 : Verity_1, DoctorFroggo_1, Delrey21_1
• Track 32 : Zipp_1
• Track 33 : Pumpkiney_1
• Track 34 : Tardus_1
• Track 35 : Lilbeanie_1

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

The start number called the most often in the published annotations is 7, it was called in 52 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Affeca_1, Ailee_1, Angelicage_1, Ashertheman_1, Baddon_1, Barsten_1, Baumdotcom_1, Bibwit_1, Bizzy_1, BobBob_1, Brandonk123_1, ChadMasterC_1, Charming_1, Derg_1, Fitzgerald_1, Flatwoods_1, Fosterous_1, FuegoCuervo_1, Gaea_1, Galadriel_1, Geodirt_1, Gustavo_1, JKSyngboy_1, Jabberwocky_1, Kamashten_1, Keitabear_1, Kewpiedoll_1, Kroos_1, Kwobi_1, Lennon_1, LilHam_1, Love_1, McCrothy_1, McKinley_1, MoontowerMania_1, Paries_1, Ribeye_1, RiverRaider_1, Rofo_1, Sanjuju_1, Saronaya_1, SchottB_1, Sedona_1, Shivanishola_1, Sitar_1, StorminNorm_1, Stultus_1, Tangent_1, Tangerine_1, Thing3_1, Tycho_1, Vivi2_1, YorkOnyx_1,

Genes that have the "Most Annotated" start but do not call it:
• Nordenberg_1,

Genes that do not have the "Most Annotated" start:
• APunk_1, Abblin_1, Ali17_1, Arri_1, Bakery_1, Barb_1, Belphegor_1, BigHunkinEater_90, CherryCola_1, Chickadee_1, ClamChowder_1, Clown_1, CoveyB_1, Danyall_1, Delrey21_1, Dexdert_1, DoctorFroggo_1, EMoore_1, EdmundFerry_1, Egi03_1, Evamon_1, Fireball_1, Fugax_1, GTE6_1, Gezellig_1, Halo3_1, Hans_1, Inspectinfecti_1, Jambalaya_1, KimmyK_1, Kwekel_1, Leonard_1, Lilbeanie_1, MelBins_1, Mutzi_1, Natkenzie_1, Nubi_1, Phauci_1, Phinally_1, Phlop_1, PinkCoffee_1, Portcullis_1, PullumCavea_1, Pumpkiney_1, RoadKill_1, RogerDodger_1, Salvador_1, Sampson_1, Savbucketdawg_1, Scioto_1, Shinji_1, SmokingBunny_1, Tardus_1, Tiamoceli_1, TillyBobJoe_1, Togo_1, Twister6_1, Twonlo_1, Valary_1, VanDeWege_1, Verity_1, ViaConlectus_1, Wizard_1, YungMoney_1, Zipp_1,

Summary by start number:

Start 3:
• Found in 1 of 119 (0.8%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigHunkinEater_90 (DE4),

Start 4:
• Found in 9 of 119 (7.6%) of genes in pham
• Manual Annotations of this start: 9 of 111

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ali17_1 (DE2), Belphegor_1 (DE2), EMoore_1 (DE2), Hans_1 (DE2), Inspectinfecti_1 (DE2), Leonard_1 (DE2), MelBins_1 (DE2), Phauci_1 (DE2), Phinally_1 (DE2),

Start 5:
• Found in 8 of 119 (6.7%) of genes in pham
• Manual Annotations of this start: 7 of 111
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chickadee_1 (DE3), Dexdert_1 (DE3), EdmundFerry_1 (DE3), GTE6_1 (DE3), Kwekel_1 (DE3), RoadKill_1 (DE3), Tiamoceli_1 (DE3), Twonlo_1 (DE3),

Start 6:
• Found in 35 of 119 (29.4%) of genes in pham
• Manual Annotations of this start: 34 of 111
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arri_1 (DC1), Bakery_1 (DC1), Barb_1 (DC1), CherryCola_1 (DC1), ClamChowder_1 (DC1), Clown_1 (DC2), CoveyB_1 (DC1), Danyall_1 (DC1), Egi03_1 (DC1), Evamon_1 (DC1), Fireball_1 (DC1), Fugax_1 (DC1), Gezellig_1 (DC1), Halo3_1 (DC1), Jambalaya_1 (DC1), KimmyK_1 (DC1), Lilbeanie_1 (DE5), Mutzi_1 (DC1), Nubi_1 (DC1), Phlop_1 (DC1), PinkCoffee_1 (DC1), Portcullis_1 (DC1), PullumCavea_1 (DC1), RogerDodger_1 (DC1), Salvador_1 (DC1), Savbucketdawg_1 (DC1), Shinji_1 (DC1), SmokingBunny_1 (DC1), TillyBobJoe_1 (DC1), Togo_1 (DC1), Twister6_1 (DC1), Valary_1 (DC1), VanDeWege_1 (DC1), Wizard_1 (DC1), YungMoney_1 (DC1),

Start 7:
• Found in 54 of 119 (45.4%) of genes in pham
• Manual Annotations of this start: 52 of 111
• Called 98.1% of time when present
• Phage (with cluster) where this start called: Affeca_1 (DE1), Ailee_1 (DE1), Angelicage_1 (DE1), Ashertheman_1 (DE1), Baddon_1 (DE1), Barsten_1 (DE1), Baumdotcom_1 (DE1), Bibwit_1 (DE1), Bizzy_1 (DE1), BobBob_1 (DE1), Brandonk123_1 (DE1), ChadMasterC_1 (DE1), Charming_1 (DE1), Derg_1 (DE1), Fitzgerald_1 (DE1), Flatwoods_1 (DE1), Fosterous_1 (DE1), FuegoCuervo_1 (DE1), Gaea_1 (DE1), Galadriel_1 (DE1), Geodirt_1 (DE1), Gustavo_1 (DE1), JKSyngboy_1 (DE1), Jabberwocky_1 (DE1), Kamashten_1 (DE1), Keitabear_1 (DE1), Kewpiedoll_1 (DE1), Kroos_1 (DE1), Kwobi_1 (DE1), Lennon_1 (DE1), LilHam_1 (DE1), Love_1 (DE1), McCrothy_1 (DE1), McKinley_1 (DE1), MoontowerMania_1 (DE1), Paries_1 (DE1), Ribeye_1 (DE1), RiverRaider_1 (DE1), Rofo_1 (DE1), Sanjuju_1 (DE1), Saronaya_1 (DE1), SchottB_1 (DE1), Sedona_1 (DE1), Shivanishola_1 (DE1), Sitar_1 (DE1), StorminNorm_1 (DE1), Stultus_1 (DE1), Tangent_1 (DE1), Tangerine_1 (DE1), Thing3_1 (DE1), Tycho_1 (DE1), Vivi2_1 (DE1), YorkOnyx_1 (DE1),

Start 8:
• Found in 13 of 119 (10.9%) of genes in pham
• Manual Annotations of this start: 8 of 111
• Called 92.3% of time when present
• Phage (with cluster) where this start called: APunk_1 (DE4), Abblin_1 (DE4), Delrey21_1 (DE4), DoctorFroggo_1 (DE4), Natkenzie_1 (DE4), Pumpkiney_1 (DE4), Sampson_1 (DE4), Scioto_1 (DE4), Tardus_1 (DE4), Verity_1 (DE4), ViaConlectus_1

(DE4), Zipp_1 (DE4),

Start 13:
• Found in 63 of 119 (52.9%) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 1.6% of time when present
• Phage (with cluster) where this start called: Nordenberg_1 (DE1),

Summary by clusters:

There are 7 clusters represented in this pham: DE1, DE2, DE3, DE4, DE5, DC2, DC1,

Info for manual annotations of cluster DC1:
•Start number 6 was manually annotated 32 times for cluster DC1.

Info for manual annotations of cluster DC2:
•Start number 6 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DE1:
•Start number 7 was manually annotated 52 times for cluster DE1.
•Start number 13 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 4 was manually annotated 9 times for cluster DE2.

Info for manual annotations of cluster DE3:
•Start number 5 was manually annotated 7 times for cluster DE3.

Info for manual annotations of cluster DE4:
•Start number 8 was manually annotated 8 times for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 6 was manually annotated 1 time for cluster DE5.

Gene Information:

Gene: APunk_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for APunk_1:
(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (36, 295), (37, 298), (48, 418),

Gene: Abblin_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Abblin_1:
(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (37, 298), (48, 418),

Gene: Affeca_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Affeca_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Ailee_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Ailee_1:

(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Ali17_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Ali17_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487),

Gene: Angelicage_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Angelicage_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247),

Gene: Arri_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Arri_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Ashertheman_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Ashertheman_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Baddon_1 Start: 1, Stop: 504, Start Num: 7
Candidate Starts for Baddon_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (21, 130), (28, 205), (30, 211), (33, 244),

Gene: Bakery_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Bakery_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Barb_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Barb_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Barsten_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Barsten_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Baumdotcom_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Baumdotcom_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (43, 367),

Gene: Belphegor_1 Start: 1, Stop: 534, Start Num: 4
Candidate Starts for Belphegor_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (23, 172), (32, 268), (48, 451), (51, 487), (52, 493),

Gene: Bibwit_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Bibwit_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247),

Gene: BigHunkinEater_90 Start: 58891, Stop: 498, Start Num: 3
Candidate Starts for BigHunkinEater_90:
(3, 58891), (Start: 8 @58933 has 8 MA's), (23, 59071), (25, 59080), (33, 59173), (36, 59227), (37, 59230), (48, 59350),

Gene: Bizzy_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Bizzy_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: BobBob_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for BobBob_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247),

Gene: Brandonk123_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Brandonk123_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247),

Gene: ChadMasterC_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for ChadMasterC_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Charming_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Charming_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: CherryCola_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for CherryCola_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Chickadee_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for Chickadee_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: ClamChowder_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for ClamChowder_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Clown_1 Start: 1, Stop: 522, Start Num: 6
Candidate Starts for Clown_1:
(Start: 6 @1 has 34 MA's), (29, 214), (30, 217), (31, 232), (33, 250), (40, 328), (41, 334), (44, 373), (47, 424),

Gene: CoveyB_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for CoveyB_1:

(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Danyall_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Danyall_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Delrey21_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Delrey21_1:
(Start: 8 @1 has 8 MA's), (10, 31), (19, 103), (25, 148), (33, 241), (36, 295), (37, 298), (48, 418),

Gene: Derg_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Derg_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Dexdert_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for Dexdert_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: DoctorFroggo_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for DoctorFroggo_1:
(Start: 8 @1 has 8 MA's), (10, 31), (19, 103), (25, 148), (33, 241), (36, 295), (37, 298), (48, 418),

Gene: EMoore_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for EMoore_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (43, 394), (48, 451), (51, 487),

Gene: EdmundFerry_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for EdmundFerry_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: Egi03_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Egi03_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Evamon_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Evamon_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Fireball_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Fireball_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Fitzgerald_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Fitzgerald_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Flatwoods_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Flatwoods_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Fosterous_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Fosterous_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: FuegoCuervo_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for FuegoCuervo_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Fugax_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Fugax_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: GTE6_1 Start: 65, Stop: 625, Start Num: 5
Candidate Starts for GTE6_1:
(1, 8), (2, 32), (Start: 5 @65 has 7 MA's), (9, 119), (18, 185), (22, 221), (33, 335), (37, 401), (44, 470), (49, 551), (52, 569),

Gene: Gaea_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Gaea_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (43, 367),

Gene: Galadriel_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Galadriel_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Geodirt_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Geodirt_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Gezellig_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Gezellig_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Gustavo_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Gustavo_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (44, 373),

Gene: Halo3_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Halo3_1:
(Start: 6 @1 has 34 MA's), (11, 43), (16, 76), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (46, 415), (47, 424),

Gene: Hans_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Hans_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487), (52, 493),

Gene: Inspectinfecti_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Inspectinfecti_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487),

Gene: JKSyngboy_1 Start: 1, Stop: 504, Start Num: 7
Candidate Starts for JKSyngboy_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (28, 205), (30, 211), (33, 244),

Gene: Jabberwocky_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Jabberwocky_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Jambalaya_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Jambalaya_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (46, 415), (47, 424),

Gene: Kamashten_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Kamashten_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Keitabear_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Keitabear_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Kewpiedoll_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Kewpiedoll_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: KimmyK_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for KimmyK_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Kroos_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Kroos_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Kwekel_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for Kwekel_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: Kwobi_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Kwobi_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Lennon_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Lennon_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Leonard_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Leonard_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487), (52, 493),

Gene: LilHam_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for LilHam_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (43, 367),

Gene: Lilbeanie_1 Start: 1, Stop: 591, Start Num: 6
Candidate Starts for Lilbeanie_1:
(Start: 6 @1 has 34 MA's), (11, 43), (14, 64), (24, 160), (27, 190), (35, 298), (44, 409), (50, 496), (54, 523), (55, 538),

Gene: Love_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Love_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: McCrothy_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for McCrothy_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: McKinley_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for McKinley_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: MelBins_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for MelBins_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487),

Gene: MoontowerMania_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for MoontowerMania_1:
(Start: 7 @1 has 52 MA's), (12, 43), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Mutzi_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Mutzi_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Natkenzie_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Natkenzie_1:
(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (37, 298), (48, 418),

Gene: Nordenberg_1 Start: 58, Stop: 510, Start Num: 13
Candidate Starts for Nordenberg_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247),

Gene: Nubi_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Nubi_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Paries_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Paries_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Phauci_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Phauci_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487), (52, 493),

Gene: Phinally_1 Start: 1, Stop: 537, Start Num: 4
Candidate Starts for Phinally_1:
(Start: 4 @1 has 9 MA's), (Start: 13 @85 has 1 MA's), (16, 100), (28, 235), (32, 268), (33, 274), (37, 331), (48, 451), (51, 487), (52, 493),

Gene: Phlop_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Phlop_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: PinkCoffee_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for PinkCoffee_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Portcullis_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Portcullis_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: PullumCavea_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for PullumCavea_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Pumpkiney_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Pumpkiney_1:
(Start: 8 @1 has 8 MA's), (25, 148), (33, 241), (36, 295), (37, 298), (45, 373), (48, 418),

Gene: Ribeye_1 Start: 1, Stop: 507, Start Num: 7

Candidate Starts for Ribeye_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (34, 250), (43, 367),

Gene: RiverRaider_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for RiverRaider_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (23, 145), (28, 208), (33, 247), (41, 334), (53, 475),

Gene: RoadKill_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for RoadKill_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: Rofo_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Rofo_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: RogerDodger_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for RogerDodger_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (46, 415), (47, 424),

Gene: Salvador_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Salvador_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Sampson_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Sampson_1:
(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (37, 298), (48, 418),

Gene: Sanjuju_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Sanjuju_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Saronaya_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Saronaya_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (44, 373),

Gene: Savbucketdawg_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Savbucketdawg_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (46, 415), (47, 424),

Gene: SchottB_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for SchottB_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (43, 367),

Gene: Scioto_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Scioto_1:

(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (37, 298), (48, 418),

Gene: Sedona_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Sedona_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Shinji_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Shinji_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Shivanishola_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Shivanishola_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (26, 157), (28, 208), (33, 247), (39, 325),

Gene: Sitar_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Sitar_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: SmokingBunny_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for SmokingBunny_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: StorminNorm_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for StorminNorm_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (41, 334),

Gene: Stultus_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Stultus_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247),

Gene: Tangent_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Tangent_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Tangerine_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Tangerine_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: Tardus_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Tardus_1:
(Start: 8 @1 has 8 MA's), (25, 148), (33, 241), (36, 295), (37, 298), (44, 367), (45, 373), (48, 418),

Gene: Thing3_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Thing3_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (22, 133), (28, 208), (33, 247), (39, 325),

Gene: Tiamoceli_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for Tiamoceli_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: TillyBobJoe_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for TillyBobJoe_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Togo_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Togo_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Twister6_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Twister6_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (46, 415), (47, 424),

Gene: Twonlo_1 Start: 1, Stop: 561, Start Num: 5
Candidate Starts for Twonlo_1:
(Start: 5 @1 has 7 MA's), (9, 55), (18, 121), (22, 157), (33, 271), (37, 337), (44, 406), (49, 487), (52, 505),

Gene: Tycho_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for Tycho_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247), (41, 334),

Gene: Valary_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for Valary_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: VanDeWege_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for VanDeWege_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Verity_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Verity_1:
(Start: 8 @1 has 8 MA's), (10, 31), (19, 103), (25, 148), (33, 241), (36, 295), (37, 298), (48, 418),

Gene: ViaConlectus_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for ViaConlectus_1:
(Start: 8 @1 has 8 MA's), (23, 139), (25, 148), (33, 241), (37, 298), (48, 418),

Gene: Vivi2_1 Start: 1, Stop: 510, Start Num: 7
Candidate Starts for Vivi2_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (19, 109), (28, 208), (33, 247), (39, 325),

Gene: Wizard_1 Start: 1, Stop: 531, Start Num: 6

Candidate Starts for Wizard_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: YorkOnyx_1 Start: 1, Stop: 507, Start Num: 7
Candidate Starts for YorkOnyx_1:
(Start: 7 @1 has 52 MA's), (Start: 13 @58 has 1 MA's), (15, 67), (20, 115), (33, 247),

Gene: YungMoney_1 Start: 1, Stop: 531, Start Num: 6
Candidate Starts for YungMoney_1:
(Start: 6 @1 has 34 MA's), (11, 43), (17, 94), (29, 214), (31, 232), (37, 304), (38, 313), (42, 361), (44, 373), (45, 379), (47, 424),

Gene: Zipp_1 Start: 1, Stop: 498, Start Num: 8
Candidate Starts for Zipp_1:
(Start: 8 @1 has 8 MA's), (10, 31), (19, 103), (25, 148), (33, 241), (48, 418),