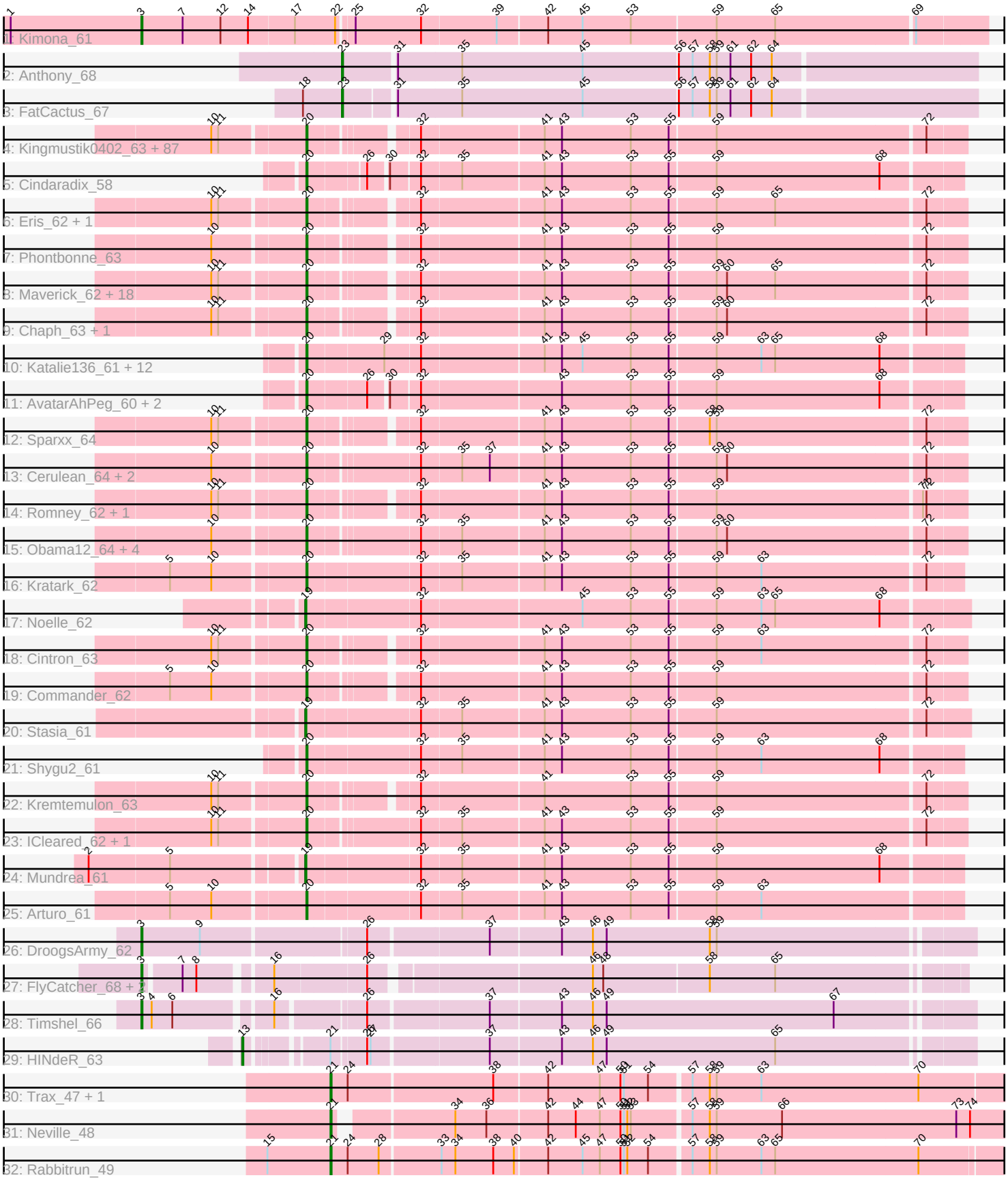
Pham 345441


1: Kimona_61
2: Anthony_68
3: FatCactus_67
4: Kingmustik0402_63 + 87
5: Cindaradix_58
6: Eris_62 + 1
7: Phontbonne_63
8: Maverick_62 + 18
9: Chaph_63 + 1
10: Katalie136_61 + 12
11: AvatarAhPeg_60 + 2
12: Sparxx_64
13: Cerulean_64 + 2
14: Romney_62 + 1
15: Obama12_64 + 4
16: Kratark_62
17: Noelle_62
18: Cintron_63
19: Commander_62
20: Stasia_61
21: Shygu2_61
22: Kremtemulon_63
23: ICleared_62 + 1
24: Mundrea_61
25: Arturo_61
26: DroogsArmy_62
27: FlyCatcher_68 + 2
28: Timshel_66
29: HINdeR_63
30: Trax_47 + 1
31: Neville_48
32: Rabbitrun_49

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 345441 Report

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

Pham number 345441 has 164 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Kimona_61
• Track 2 : Anthony_68
• Track 3 : FatCactus_67
• Track 4 : Kingmustik0402_63, Skipitt_62, Lunsford_64, Spino_62, BellusTerra_64, LochMonster_64, Morrow_64, Medusa_63, Kampy_62, Eagle_62, TiroTheta9_62, Blackmoor_62, Eros_63, OKaNui_63, Sabertooth_63, DirtyDunning_62, Northrop_61, Clarenza_62, NorthStar_61, Shaka_61, Flux_63, Huxley_62, Rocksand_61, SenorClean_64, Ohfah_64, Iceman_63, KekoraPapaka_61, Koan_60, Melvin_65, Peaches_61, Burger_61, TroyPia_64, Pumbaa_63, Millski_62, Jaykayelowell_60, Eapen_63, BubbleTrouble_62, Deano_61, Taquarus_62, Alberto7_64, Skadoosh_62, HamSlice_60, Roosevelt_61, TinaFeyge_61, KFPoly_62, Phelipe_64, Broseidon_63, Nyxis_62, Abdiel_63, Connomayer_63, Ruin_63, Bartimeaus_63, Polymorphads_64, SteMason_63, Koreni_62, Lorenzo_63, Buckaroo_60, Scamp_63, Wizard007_62, Florean_63, Camperdownii_61, YoSam321_63, LeoAvram_62, Bombshell_63, Eurydice_64, Dhanush_63, Pipcraft_60, Nebs_64, Phighter1804_63, Druantia_62, Relief_62, Annyong_62, CentreCat_63, Junimo_60, TygerBlood_63, Albee_63, Holli_62, LittleGuy_63, Thanksgivukkah_62, Citius_63, Maxo_64, Baby16_63, Lemur_63, MeeZee_62, Rosa24_61, RockieBear_63, Tinybot_62, LappelDuVide_63
• Track 5 : Cindaradix_58
• Track 6 : Eris_62, Iracema64_64
• Track 7 : Phontbonne_63
• Track 8 : Maverick_62, Funston_62, Houdini22_62, PeterPeter_63, Avle17_63, Mazhar510_63, JoongJeon_62, Mayonnaise_61, Bruiser_62, Kyee_63, Palestino_62, Phacado_63, NotAPhaseMom_62, Cocoaberry_63, Nemo27_62, Gadost_63, Sultana_63, Wander_63, Caelakin_62
• Track 9 : Chaph_63, LittleB_63
• Track 10 : Katalie136_61, Bumblebee11_60, AbbysRanger_61, Cici_61, Achebe_60, Datway_61, Perplexer_61, Backyardigan_59, Morpher26_61, Xena_60, PetiteSangsue_61, Wile_61, Badger_60
• Track 11 : AvatarAhPeg_60, Miramae_60, Stink_60
• Track 12 : Sparxx_64
• Track 13 : Cerulean_64, BangNhom_62, SheldonCooper_63
• Track 14 : Romney_62, Wilbur_63
• Track 15 : Obama12_64, Happiness_62, ChampagnePapi_65, LHTSCC_65, JetBlade_63
• Track 16 : Kratark_62
• Track 17 : Noelle_62

• Track 18 : Cintron_63
• Track 19 : Commander_62
• Track 20 : Stasia_61
• Track 21 : Shygu2_61
• Track 22 : Kremtemulon_63
• Track 23 : ICleared_62, Ulysses_62
• Track 24 : Mundrea_61
• Track 25 : Arturo_61
• Track 26 : DroogsArmy_62
• Track 27 : FlyCatcher_68, Sheen_66, Toro_66
• Track 28 : Timshel_66
• Track 29 : HINdeR_63
• Track 30 : Trax_47, LilJank_47
• Track 31 : Neville_48
• Track 32 : Rabbitrun_49

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

The start number called the most often in the published annotations is 20, it was called in 141 of the 155 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbysRanger_61, Abdiel_63, Achebe_60, Albee_63, Alberto7_64, Annyong_62, Arturo_61, AvatarAhPeg_60, Avle17_63, Baby16_63, Backyardigan_59, Badger_60, BangNhom_62, Bartimeaus_63, BellusTerra_64, Blackmoor_62, Bombshell_63, Broseidon_63, Bruiser_62, BubbleTrouble_62, Buckaroo_60, Bumblebee11_60, Burger_61, Caelakin_62, Camperdownii_61, CentreCat_63, Cerulean_64, ChampagnePapi_65, Chaph_63, Cici_61, Cindaradix_58, Cintron_63, Citius_63, Clarenza_62, Cocoaberry_63, Commander_62, Connomayer_63, Datway_61, Deano_61, Dhanush_63, DirtyDunning_62, Druantia_62, Eagle_62, Eapen_63, Eris_62, Eros_63, Eurydice_64, Florean_63, Flux_63, Funston_62, Gadost_63, HamSlice_60, Happiness_62, Holli_62, Houdini22_62, Huxley_62, ICleared_62, Iceman_63, Iracema64_64, Jaykayelowell_60, JetBlade_63, JoongJeon_62, Junimo_60, KFPoly_62, Kampy_62, Katalie136_61, KekoraPapaka_61, Kingmustik0402_63, Koan_60, Koreni_62, Kratark_62, Kremtemulon_63, Kyee_63, LHTSCC_65, LappelDuVide_63, Lemur_63, LeoAvram_62, LittleB_63, LittleGuy_63, LochMonster_64, Lorenzo_63, Lunsford_64, Maverick_62, Maxo_64, Mayonnaise_61, Mazhar510_63, Medusa_63, MeeZee_62, Melvin_65, Millski_62, Miramae_60, Morpher26_61, Morrow_64, Nebs_64, Nemo27_62, NorthStar_61, Northrop_61, NotAPhaseMom_62, Nyxis_62, OKaNui_63, Obama12_64, Ohfah_64, Palestino_62, Peaches_61, Perplexer_61, PeterPeter_63, PetiteSangsue_61, Phacado_63, Phelipe_64, Phighter1804_63, Phontbonne_63, Pipcraft_60, Polymorphads_64, Pumbaa_63, Relief_62, RockieBear_63, Rocksand_61, Romney_62, Roosevelt_61, Rosa24_61, Ruin_63, Sabertooth_63, Scamp_63, SenorClean_64, Shaka_61, SheldonCooper_63, Shygu2_61, Skadoosh_62, Skipitt_62, Sparxx_64, Spino_62, SteMason_63, Stink_60, Sultana_63, Taquarus_62, Thanksgivukkah_62, TinaFeyge_61, Tinybot_62, TiroTheta9_62, TroyPia_64, TygerBlood_63, Ulysses_62, Wander_63, Wilbur_63, Wile_61, Wizard007_62, Xena_60, YoSam321_63,

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

Genes that do not have the "Most Annotated" start:
• Anthony_68, DroogsArmy_62, FatCactus_67, FlyCatcher_68, HINdeR_63, Kimona_61, LilJank_47, Mundrea_61, Neville_48, Noelle_62, Rabbitrun_49, Sheen_66, Stasia_61, Timshel_66, Toro_66, Trax_47,

Summary by start number:

Start 3:
• Found in 6 of 164 (3.7%) of genes in pham
• Manual Annotations of this start: 4 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DroogsArmy_62 (A7), FlyCatcher_68 (A7), Kimona_61 (A19), Sheen_66 (A7), Timshel_66 (A7), Toro_66 (A7),

Start 13:
• Found in 1 of 164 (0.6%) of genes in pham
• Manual Annotations of this start: 1 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: HINdeR_63 (A7),

Start 19:
• Found in 3 of 164 (1.8%) of genes in pham
• Manual Annotations of this start: 3 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mundrea_61 (A4), Noelle_62 (A4), Stasia_61 (A4),

Start 20:
• Found in 148 of 164 (90.2%) of genes in pham
• Manual Annotations of this start: 141 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AbbysRanger_61 (A4), Abdiel_63 (A4), Achebe_60 (A4), Albee_63 (A4), Alberto7_64 (A4), Annyong_62 (A4), Arturo_61 (A4), AvatarAhPeg_60 (A4), Avle17_63 (A4), Baby16_63 (A4), Backyardigan_59 (A4), Badger_60 (A4), BangNhom_62 (A4), Bartimeaus_63 (A4), BellusTerra_64 (A4), Blackmoor_62 (A4), Bombshell_63 (A4), Broseidon_63 (A4), Bruiser_62 (A4), BubbleTrouble_62 (A4), Buckaroo_60 (A4), Bumblebee11_60 (A4), Burger_61 (A4), Caelakin_62 (A4), Camperdownii_61 (A4), CentreCat_63 (A4), Cerulean_64 (A4), ChampagnePapi_65 (A4), Chaph_63 (A4), Cici_61 (A4), Cindaradix_58 (A4), Cintron_63 (A4), Citius_63 (A4), Clarenza_62 (A4), Cocoaberry_63 (A4), Commander_62 (A4), Connomayer_63 (A4), Datway_61 (A4), Deano_61 (A4), Dhanush_63 (A4), DirtyDunning_62 (A4), Druantia_62 (A4), Eagle_62 (A4), Eapen_63 (A4), Eris_62 (A4), Eros_63 (A4), Eurydice_64 (A4), Florean_63 (A4), Flux_63 (A4), Funston_62 (A4), Gadost_63 (A4), HamSlice_60 (A4), Happiness_62 (A4), Holli_62 (A4), Houdini22_62 (A4), Huxley_62 (A4), ICleared_62 (A4), Iceman_63 (A4), Iracema64_64 (A4), Jaykayelowell_60 (A4), JetBlade_63 (A4), JoongJeon_62 (A4), Junimo_60 (A4), KFPoly_62 (A4), Kampy_62 (A4), Katalie136_61 (A4), KekoraPapaka_61 (A4), Kingmustik0402_63 (A4), Koan_60 (A4), Koreni_62 (A4), Kratark_62 (A4), Kremtemulon_63 (A4), Kyee_63 (A4), LHTSCC_65 (A4), LappelDuVide_63 (A4), Lemur_63 (A4), LeoAvram_62 (A4), LittleB_63 (A4),

LittleGuy_63 (A4), LochMonster_64 (A4), Lorenzo_63 (A4), Lunsford_64 (A4), Maverick_62 (A4), Maxo_64 (A4), Mayonnaise_61 (A4), Mazhar510_63 (A4), Medusa_63 (A4), MeeZee_62 (A4), Melvin_65 (A4), Millski_62 (A4), Miramae_60 (A4), Morpher26_61 (A4), Morrow_64 (A4), Nebs_64 (A4), Nemo27_62 (A4), NorthStar_61 (A4), Northrop_61 (A4), NotAPhaseMom_62 (A4), Nyxis_62 (A4), OKaNui_63 (A4), Obama12_64 (A4), Ohfah_64 (A4), Palestino_62 (A4), Peaches_61 (A4), Perplexer_61 (A4), PeterPeter_63 (A4), PetiteSangsue_61 (A4), Phacado_63 (A4), Phelipe_64 (A4), Phighter1804_63 (A4), Phontbonne_63 (A4), Pipcraft_60 (A4), Polymorphads_64 (A4), Pumbaa_63 (A4), Relief_62 (A4), RockieBear_63 (A4), Rocksand_61 (A4), Romney_62 (A4), Roosevelt_61 (A4), Rosa24_61 (A4), Ruin_63 (A4), Sabertooth_63 (A4), Scamp_63 (A4), SenorClean_64 (A4), Shaka_61 (A4), SheldonCooper_63 (A4), Shygu2_61 (A4), Skadoosh_62 (A4), Skipitt_62 (A4), Sparxx_64 (A4), Spino_62 (A4), SteMason_63 (A4), Stink_60 (A4), Sultana_63 (A4), Taquarus_62 (A4), Thanksgivukkah_62 (A4), TinaFeyge_61 (A4), Tinybot_62 (A4), TiroTheta9_62 (A4), TroyPia_64 (A4), TygerBlood_63 (A4), Ulysses_62 (A4), Wander_63 (A4), Wilbur_63 (A4), Wile_61 (A4), Wizard007_62 (A4), Xena_60 (A4), YoSam321_63 (A4),

Start 21:
• Found in 5 of 164 (3.0%) of genes in pham
• Manual Annotations of this start: 4 of 155
• Called 80.0% of time when present
• Phage (with cluster) where this start called: LilJank_47 (DU2), Neville_48 (DU2), Rabbitrun_49 (DU2), Trax_47 (DU2),

Start 23:
• Found in 2 of 164 (1.2%) of genes in pham
• Manual Annotations of this start: 2 of 155
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anthony_68 (A20), FatCactus_67 (A20),

Summary by clusters:

There are 5 clusters represented in this pham: A20, DU2, A19, A4, A7,

Info for manual annotations of cluster A19:
•Start number 3 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A20:
•Start number 23 was manually annotated 2 times for cluster A20.

Info for manual annotations of cluster A4:
•Start number 19 was manually annotated 3 times for cluster A4.
•Start number 20 was manually annotated 141 times for cluster A4.

Info for manual annotations of cluster A7:
•Start number 3 was manually annotated 3 times for cluster A7.
•Start number 13 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster DU2:
•Start number 21 was manually annotated 4 times for cluster DU2.

Gene Information:

Gene: AbbysRanger_61 Start: 40924, Stop: 40376, Start Num: 20
Candidate Starts for AbbysRanger_61:
(Start: 20 @40924 has 141 MA's), (29, 40861), (32, 40831), (41, 40729), (43, 40714), (45, 40696), (53, 40654), (55, 40621), (59, 40582), (63, 40543), (65, 40531), (68, 40441),

Gene: Abdiel_63 Start: 41071, Stop: 40526, Start Num: 20
Candidate Starts for Abdiel_63:
(10, 41146), (11, 41140), (Start: 20 @41071 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (72, 40558),

Gene: Achebe_60 Start: 40907, Stop: 40359, Start Num: 20
Candidate Starts for Achebe_60:
(Start: 20 @40907 has 141 MA's), (29, 40844), (32, 40814), (41, 40712), (43, 40697), (45, 40679), (53, 40637), (55, 40604), (59, 40565), (63, 40526), (65, 40514), (68, 40424),

Gene: Albee_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Albee_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Alberto7_64 Start: 41395, Stop: 40859, Start Num: 20
Candidate Starts for Alberto7_64:
(10, 41470), (11, 41464), (Start: 20 @41395 has 141 MA's), (32, 41317), (41, 41215), (43, 41200), (53, 41140), (55, 41107), (59, 41068), (72, 40891),

Gene: Annyong_62 Start: 41103, Stop: 40567, Start Num: 20
Candidate Starts for Annyong_62:
(10, 41178), (11, 41172), (Start: 20 @41103 has 141 MA's), (32, 41025), (41, 40923), (43, 40908), (53, 40848), (55, 40815), (59, 40776), (72, 40599),

Gene: Anthony_68 Start: 41767, Stop: 41231, Start Num: 23
Candidate Starts for Anthony_68:
(Start: 23 @41767 has 2 MA's), (31, 41725), (35, 41671), (45, 41566), (56, 41485), (57, 41473), (58, 41458), (59, 41452), (61, 41440), (62, 41422), (64, 41404),

Gene: Arturo_61 Start: 41185, Stop: 40637, Start Num: 20
Candidate Starts for Arturo_61:
(5, 41296), (10, 41260), (Start: 20 @41185 has 141 MA's), (32, 41092), (35, 41059), (41, 40990), (43, 40975), (53, 40915), (55, 40882), (59, 40843), (63, 40804),

Gene: AvatarAhPeg_60 Start: 40691, Stop: 40149, Start Num: 20
Candidate Starts for AvatarAhPeg_60:
(Start: 20 @40691 has 141 MA's), (26, 40643), (30, 40628), (32, 40604), (43, 40487), (53, 40427), (55, 40394), (59, 40355), (68, 40214),

Gene: Avle17_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Avle17_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (60, 40719), (65, 40677), (72, 40551),

Gene: Baby16_63 Start: 41069, Stop: 40533, Start Num: 20

Candidate Starts for Baby16_63:
(10, 41144), (11, 41138), (Start: 20 @41069 has 141 MA's), (32, 40991), (41, 40889), (43, 40874), (53, 40814), (55, 40781), (59, 40742), (72, 40565),

Gene: Backyardigan_59 Start: 40940, Stop: 40392, Start Num: 20
Candidate Starts for Backyardigan_59:
(Start: 20 @40940 has 141 MA's), (29, 40877), (32, 40847), (41, 40745), (43, 40730), (45, 40712), (53, 40670), (55, 40637), (59, 40598), (63, 40559), (65, 40547), (68, 40457),

Gene: Badger_60 Start: 40908, Stop: 40360, Start Num: 20
Candidate Starts for Badger_60:
(Start: 20 @40908 has 141 MA's), (29, 40845), (32, 40815), (41, 40713), (43, 40698), (45, 40680), (53, 40638), (55, 40605), (59, 40566), (63, 40527), (65, 40515), (68, 40425),

Gene: BangNhom_62 Start: 41470, Stop: 40925, Start Num: 20
Candidate Starts for BangNhom_62:
(10, 41545), (Start: 20 @41470 has 141 MA's), (32, 41383), (35, 41350), (37, 41326), (41, 41281), (43, 41266), (53, 41206), (55, 41173), (59, 41134), (60, 41125), (72, 40957),

Gene: Bartimeaus_63 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Bartimeaus_63:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: BellusTerra_64 Start: 41071, Stop: 40526, Start Num: 20
Candidate Starts for BellusTerra_64:
(10, 41146), (11, 41140), (Start: 20 @41071 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (72, 40558),

Gene: Blackmoor_62 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Blackmoor_62:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Bombshell_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Bombshell_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Broseidon_63 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Broseidon_63:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Bruiser_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Bruiser_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: BubbleTrouble_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for BubbleTrouble_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Buckaroo_60 Start: 41062, Stop: 40526, Start Num: 20
Candidate Starts for Buckaroo_60:
(10, 41137), (11, 41131), (Start: 20 @41062 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (72, 40558),

Gene: Bumblebee11_60 Start: 40910, Stop: 40362, Start Num: 20
Candidate Starts for Bumblebee11_60:
(Start: 20 @40910 has 141 MA's), (29, 40847), (32, 40817), (41, 40715), (43, 40700), (45, 40682), (53, 40640), (55, 40607), (59, 40568), (63, 40529), (65, 40517), (68, 40427),

Gene: Burger_61 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Burger_61:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Caelakin_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Caelakin_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Camperdownii_61 Start: 40732, Stop: 40196, Start Num: 20
Candidate Starts for Camperdownii_61:
(10, 40807), (11, 40801), (Start: 20 @40732 has 141 MA's), (32, 40654), (41, 40552), (43, 40537), (53, 40477), (55, 40444), (59, 40405), (72, 40228),

Gene: CentreCat_63 Start: 41070, Stop: 40525, Start Num: 20
Candidate Starts for CentreCat_63:
(10, 41145), (11, 41139), (Start: 20 @41070 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Cerulean_64 Start: 41471, Stop: 40926, Start Num: 20
Candidate Starts for Cerulean_64:
(10, 41546), (Start: 20 @41471 has 141 MA's), (32, 41384), (35, 41351), (37, 41327), (41, 41282), (43, 41267), (53, 41207), (55, 41174), (59, 41135), (60, 41126), (72, 40958),

Gene: ChampagnePapi_65 Start: 41470, Stop: 40925, Start Num: 20
Candidate Starts for ChampagnePapi_65:
(10, 41545), (Start: 20 @41470 has 141 MA's), (32, 41383), (35, 41350), (41, 41281), (43, 41266), (53, 41206), (55, 41173), (59, 41134), (60, 41125), (72, 40957),

Gene: Chaph_63 Start: 41069, Stop: 40533, Start Num: 20
Candidate Starts for Chaph_63:
(10, 41144), (11, 41138), (Start: 20 @41069 has 141 MA's), (32, 40991), (41, 40889), (43, 40874), (53, 40814), (55, 40781), (59, 40742), (60, 40733), (72, 40565),

Gene: Cici_61 Start: 40925, Stop: 40377, Start Num: 20
Candidate Starts for Cici_61:
(Start: 20 @40925 has 141 MA's), (29, 40862), (32, 40832), (41, 40730), (43, 40715), (45, 40697), (53, 40655), (55, 40622), (59, 40583), (63, 40544), (65, 40532), (68, 40442),

Gene: Cindaradix_58 Start: 40534, Stop: 39995, Start Num: 20
Candidate Starts for Cindaradix_58:

(Start: 20 @40534 has 141 MA's), (26, 40489), (30, 40474), (32, 40450), (35, 40417), (41, 40348), (43, 40333), (53, 40273), (55, 40240), (59, 40201), (68, 40060),

Gene: Cintron_63 Start: 41181, Stop: 40645, Start Num: 20
Candidate Starts for Cintron_63:
(10, 41256), (11, 41250), (Start: 20 @41181 has 141 MA's), (32, 41103), (41, 41001), (43, 40986), (53, 40926), (55, 40893), (59, 40854), (63, 40815), (72, 40677),

Gene: Citius_63 Start: 41079, Stop: 40543, Start Num: 20
Candidate Starts for Citius_63:
(10, 41154), (11, 41148), (Start: 20 @41079 has 141 MA's), (32, 41001), (41, 40899), (43, 40884), (53, 40824), (55, 40791), (59, 40752), (72, 40575),

Gene: Clarenza_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Clarenza_62:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Cocoaberry_63 Start: 41062, Stop: 40526, Start Num: 20
Candidate Starts for Cocoaberry_63:
(10, 41137), (11, 41131), (Start: 20 @41062 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (60, 40726), (65, 40684), (72, 40558),

Gene: Commander_62 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Commander_62:
(5, 41168), (10, 41132), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (72, 40553),

Gene: Connomayer_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Connomayer_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Datway_61 Start: 40896, Stop: 40348, Start Num: 20
Candidate Starts for Datway_61:
(Start: 20 @40896 has 141 MA's), (29, 40833), (32, 40803), (41, 40701), (43, 40686), (45, 40668), (53, 40626), (55, 40593), (59, 40554), (63, 40515), (65, 40503), (68, 40413),

Gene: Deano_61 Start: 41066, Stop: 40530, Start Num: 20
Candidate Starts for Deano_61:
(10, 41141), (11, 41135), (Start: 20 @41066 has 141 MA's), (32, 40988), (41, 40886), (43, 40871), (53, 40811), (55, 40778), (59, 40739), (72, 40562),

Gene: Dhanush_63 Start: 41061, Stop: 40525, Start Num: 20
Candidate Starts for Dhanush_63:
(10, 41136), (11, 41130), (Start: 20 @41061 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: DirtyDunning_62 Start: 41073, Stop: 40537, Start Num: 20
Candidate Starts for DirtyDunning_62:
(10, 41148), (11, 41142), (Start: 20 @41073 has 141 MA's), (32, 40995), (41, 40893), (43, 40878), (53, 40818), (55, 40785), (59, 40746), (72, 40569),

Gene: DroogsArmy_62 Start: 44054, Stop: 43362, Start Num: 3
Candidate Starts for DroogsArmy_62:
(Start: 3 @44054 has 4 MA's), (9, 44003), (26, 43868), (37, 43769), (43, 43709), (46, 43682), (49, 43670), (58, 43580), (59, 43574),

Gene: Druantia_62 Start: 41061, Stop: 40525, Start Num: 20
Candidate Starts for Druantia_62:
(10, 41136), (11, 41130), (Start: 20 @41061 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Eagle_62 Start: 41092, Stop: 40547, Start Num: 20
Candidate Starts for Eagle_62:
(10, 41167), (11, 41161), (Start: 20 @41092 has 141 MA's), (32, 41005), (41, 40903), (43, 40888), (53, 40828), (55, 40795), (59, 40756), (72, 40579),

Gene: Eapen_63 Start: 41053, Stop: 40517, Start Num: 20
Candidate Starts for Eapen_63:
(10, 41128), (11, 41122), (Start: 20 @41053 has 141 MA's), (32, 40975), (41, 40873), (43, 40858), (53, 40798), (55, 40765), (59, 40726), (72, 40549),

Gene: Eris_62 Start: 41073, Stop: 40537, Start Num: 20
Candidate Starts for Eris_62:
(10, 41148), (11, 41142), (Start: 20 @41073 has 141 MA's), (32, 40995), (41, 40893), (43, 40878), (53, 40818), (55, 40785), (59, 40746), (65, 40695), (72, 40569),

Gene: Eros_63 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Eros_63:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Eurydice_64 Start: 41067, Stop: 40522, Start Num: 20
Candidate Starts for Eurydice_64:
(10, 41142), (11, 41136), (Start: 20 @41067 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: FatCactus_67 Start: 41400, Stop: 40867, Start Num: 23
Candidate Starts for FatCactus_67:
(18, 41433), (Start: 23 @41400 has 2 MA's), (31, 41361), (35, 41307), (45, 41202), (56, 41121), (57, 41109), (58, 41094), (59, 41088), (61, 41076), (62, 41058), (64, 41040),

Gene: Florean_63 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Florean_63:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (72, 40553),

Gene: Flux_63 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Flux_63:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (72, 40553),

Gene: FlyCatcher_68 Start: 44704, Stop: 44048, Start Num: 3
Candidate Starts for FlyCatcher_68:

(Start: 3 @44704 has 4 MA's), (7, 44674), (8, 44662), (16, 44608), (26, 44533), (46, 44356), (48, 44347), (58, 44257), (65, 44200),

Gene: Funston_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Funston_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Gadost_63 Start: 41062, Stop: 40526, Start Num: 20
Candidate Starts for Gadost_63:
(10, 41137), (11, 41131), (Start: 20 @41062 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (60, 40726), (65, 40684), (72, 40558),

Gene: HINdeR_63 Start: 43646, Stop: 43056, Start Num: 13
Candidate Starts for HINdeR_63:
(Start: 13 @43646 has 1 MA's), (Start: 21 @43589 has 4 MA's), (26, 43562), (27, 43559), (37, 43463), (43, 43403), (46, 43376), (49, 43364), (65, 43217),

Gene: HamSlice_60 Start: 41056, Stop: 40520, Start Num: 20
Candidate Starts for HamSlice_60:
(10, 41131), (11, 41125), (Start: 20 @41056 has 141 MA's), (32, 40978), (41, 40876), (43, 40861), (53, 40801), (55, 40768), (59, 40729), (72, 40552),

Gene: Happiness_62 Start: 41053, Stop: 40508, Start Num: 20
Candidate Starts for Happiness_62:
(10, 41128), (Start: 20 @41053 has 141 MA's), (32, 40966), (35, 40933), (41, 40864), (43, 40849), (53, 40789), (55, 40756), (59, 40717), (60, 40708), (72, 40540),

Gene: Holli_62 Start: 40848, Stop: 40312, Start Num: 20
Candidate Starts for Holli_62:
(10, 40923), (11, 40917), (Start: 20 @40848 has 141 MA's), (32, 40770), (41, 40668), (43, 40653), (53, 40593), (55, 40560), (59, 40521), (72, 40344),

Gene: Houdini22_62 Start: 41062, Stop: 40526, Start Num: 20
Candidate Starts for Houdini22_62:
(10, 41137), (11, 41131), (Start: 20 @41062 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (60, 40726), (65, 40684), (72, 40558),

Gene: Huxley_62 Start: 41122, Stop: 40586, Start Num: 20
Candidate Starts for Huxley_62:
(10, 41197), (11, 41191), (Start: 20 @41122 has 141 MA's), (32, 41044), (41, 40942), (43, 40927), (53, 40867), (55, 40834), (59, 40795), (72, 40618),

Gene: ICleared_62 Start: 41099, Stop: 40554, Start Num: 20
Candidate Starts for ICleared_62:
(10, 41174), (11, 41168), (Start: 20 @41099 has 141 MA's), (32, 41012), (35, 40979), (41, 40910), (43, 40895), (53, 40835), (55, 40802), (59, 40763), (72, 40586),

Gene: Iceman_63 Start: 41347, Stop: 40811, Start Num: 20
Candidate Starts for Iceman_63:
(10, 41422), (11, 41416), (Start: 20 @41347 has 141 MA's), (32, 41269), (41, 41167), (43, 41152), (53, 41092), (55, 41059), (59, 41020), (72, 40843),

Gene: Iracema64_64 Start: 41325, Stop: 40789, Start Num: 20
Candidate Starts for Iracema64_64:
(10, 41400), (11, 41394), (Start: 20 @41325 has 141 MA's), (32, 41247), (41, 41145), (43, 41130), (53, 41070), (55, 41037), (59, 40998), (65, 40947), (72, 40821),

Gene: Jaykayelowell_60 Start: 41051, Stop: 40515, Start Num: 20
Candidate Starts for Jaykayelowell_60:
(10, 41126), (11, 41120), (Start: 20 @41051 has 141 MA's), (32, 40973), (41, 40871), (43, 40856), (53, 40796), (55, 40763), (59, 40724), (72, 40547),

Gene: JetBlade_63 Start: 41061, Stop: 40516, Start Num: 20
Candidate Starts for JetBlade_63:
(10, 41136), (Start: 20 @41061 has 141 MA's), (32, 40974), (35, 40941), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (60, 40716), (72, 40548),

Gene: JoongJeon_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for JoongJeon_62:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (60, 40719), (65, 40677), (72, 40551),

Gene: Junimo_60 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Junimo_60:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: KFPoly_62 Start: 41052, Stop: 40516, Start Num: 20
Candidate Starts for KFPoly_62:
(10, 41127), (11, 41121), (Start: 20 @41052 has 141 MA's), (32, 40974), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (72, 40548),

Gene: Kampy_62 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Kampy_62:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Katalie136_61 Start: 40910, Stop: 40362, Start Num: 20
Candidate Starts for Katalie136_61:
(Start: 20 @40910 has 141 MA's), (29, 40847), (32, 40817), (41, 40715), (43, 40700), (45, 40682), (53, 40640), (55, 40607), (59, 40568), (63, 40529), (65, 40517), (68, 40427),

Gene: KekoraPapaka_61 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for KekoraPapaka_61:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Kimona_61 Start: 39816, Stop: 39106, Start Num: 3
Candidate Starts for Kimona_61:
(1, 39930), (Start: 3 @39816 has 4 MA's), (7, 39780), (12, 39747), (14, 39723), (17, 39684), (22, 39651), (25, 39639), (32, 39582), (39, 39519), (42, 39477), (45, 39447), (53, 39405), (59, 39333), (65, 39282), (69, 39165),

Gene: Kingmustik0402_63 Start: 41047, Stop: 40511, Start Num: 20
Candidate Starts for Kingmustik0402_63:

(10, 41122), (11, 41116), (Start: 20 @41047 has 141 MA's), (32, 40969), (41, 40867), (43, 40852), (53, 40792), (55, 40759), (59, 40720), (72, 40543),

Gene: Koan_60 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Koan_60:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Koreni_62 Start: 40739, Stop: 40203, Start Num: 20
Candidate Starts for Koreni_62:
(10, 40814), (11, 40808), (Start: 20 @40739 has 141 MA's), (32, 40661), (41, 40559), (43, 40544), (53, 40484), (55, 40451), (59, 40412), (72, 40235),

Gene: Kratark_62 Start: 41068, Stop: 40520, Start Num: 20
Candidate Starts for Kratark_62:
(5, 41179), (10, 41143), (Start: 20 @41068 has 141 MA's), (32, 40975), (35, 40942), (41, 40873), (43, 40858), (53, 40798), (55, 40765), (59, 40726), (63, 40687), (72, 40549),

Gene: Kremtemulon_63 Start: 41164, Stop: 40628, Start Num: 20
Candidate Starts for Kremtemulon_63:
(10, 41239), (11, 41233), (Start: 20 @41164 has 141 MA's), (32, 41086), (41, 40984), (53, 40909), (55, 40876), (59, 40837), (72, 40660),

Gene: Kyee_63 Start: 41056, Stop: 40520, Start Num: 20
Candidate Starts for Kyee_63:
(10, 41131), (11, 41125), (Start: 20 @41056 has 141 MA's), (32, 40978), (41, 40876), (43, 40861), (53, 40801), (55, 40768), (59, 40729), (60, 40720), (65, 40678), (72, 40552),

Gene: LHTSCC_65 Start: 41470, Stop: 40925, Start Num: 20
Candidate Starts for LHTSCC_65:
(10, 41545), (Start: 20 @41470 has 141 MA's), (32, 41383), (35, 41350), (41, 41281), (43, 41266), (53, 41206), (55, 41173), (59, 41134), (60, 41125), (72, 40957),

Gene: LappelDuVide_63 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for LappelDuVide_63:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (72, 40553),

Gene: Lemur_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Lemur_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: LeoAvram_62 Start: 41061, Stop: 40525, Start Num: 20
Candidate Starts for LeoAvram_62:
(10, 41136), (11, 41130), (Start: 20 @41061 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: LilJank_47 Start: 35680, Stop: 36261, Start Num: 21
Candidate Starts for LilJank_47:
(Start: 21 @35680 has 4 MA's), (24, 35695), (38, 35818), (42, 35863), (47, 35908), (50, 35926), (51, 35929), (54, 35950), (57, 35983), (58, 35998), (59, 36004), (63, 36043), (70, 36178),

Gene: LittleB_63 Start: 41059, Stop: 40523, Start Num: 20
Candidate Starts for LittleB_63:
(10, 41134), (11, 41128), (Start: 20 @41059 has 141 MA's), (32, 40981), (41, 40879), (43, 40864), (53, 40804), (55, 40771), (59, 40732), (60, 40723), (72, 40555),

Gene: LittleGuy_63 Start: 40954, Stop: 40418, Start Num: 20
Candidate Starts for LittleGuy_63:
(10, 41029), (11, 41023), (Start: 20 @40954 has 141 MA's), (32, 40876), (41, 40774), (43, 40759), (53, 40699), (55, 40666), (59, 40627), (72, 40450),

Gene: LochMonster_64 Start: 41297, Stop: 40761, Start Num: 20
Candidate Starts for LochMonster_64:
(10, 41372), (11, 41366), (Start: 20 @41297 has 141 MA's), (32, 41219), (41, 41117), (43, 41102), (53, 41042), (55, 41009), (59, 40970), (72, 40793),

Gene: Lorenzo_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Lorenzo_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Lunsford_64 Start: 41052, Stop: 40516, Start Num: 20
Candidate Starts for Lunsford_64:
(10, 41127), (11, 41121), (Start: 20 @41052 has 141 MA's), (32, 40974), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (72, 40548),

Gene: Maverick_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Maverick_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Maxo_64 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Maxo_64:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Mayonnaise_61 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Mayonnaise_61:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Mazhar510_63 Start: 41059, Stop: 40523, Start Num: 20
Candidate Starts for Mazhar510_63:
(10, 41134), (11, 41128), (Start: 20 @41059 has 141 MA's), (32, 40981), (41, 40879), (43, 40864), (53, 40804), (55, 40771), (59, 40732), (60, 40723), (65, 40681), (72, 40555),

Gene: Medusa_63 Start: 41072, Stop: 40536, Start Num: 20
Candidate Starts for Medusa_63:
(10, 41147), (11, 41141), (Start: 20 @41072 has 141 MA's), (32, 40994), (41, 40892), (43, 40877), (53, 40817), (55, 40784), (59, 40745), (72, 40568),

Gene: MeeZee_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for MeeZee_62:

(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Melvin_65 Start: 41053, Stop: 40517, Start Num: 20
Candidate Starts for Melvin_65:
(10, 41128), (11, 41122), (Start: 20 @41053 has 141 MA's), (32, 40975), (41, 40873), (43, 40858), (53, 40798), (55, 40765), (59, 40726), (72, 40549),

Gene: Millski_62 Start: 41059, Stop: 40523, Start Num: 20
Candidate Starts for Millski_62:
(10, 41134), (11, 41128), (Start: 20 @41059 has 141 MA's), (32, 40981), (41, 40879), (43, 40864), (53, 40804), (55, 40771), (59, 40732), (72, 40555),

Gene: Miramae_60 Start: 40353, Stop: 39811, Start Num: 20
Candidate Starts for Miramae_60:
(Start: 20 @40353 has 141 MA's), (26, 40305), (30, 40290), (32, 40266), (43, 40149), (53, 40089), (55, 40056), (59, 40017), (68, 39876),

Gene: Morpher26_61 Start: 40931, Stop: 40383, Start Num: 20
Candidate Starts for Morpher26_61:
(Start: 20 @40931 has 141 MA's), (29, 40868), (32, 40838), (41, 40736), (43, 40721), (45, 40703), (53, 40661), (55, 40628), (59, 40589), (63, 40550), (65, 40538), (68, 40448),

Gene: Morrow_64 Start: 41073, Stop: 40528, Start Num: 20
Candidate Starts for Morrow_64:
(10, 41148), (11, 41142), (Start: 20 @41073 has 141 MA's), (32, 40986), (41, 40884), (43, 40869), (53, 40809), (55, 40776), (59, 40737), (72, 40560),

Gene: Mundrea_61 Start: 40923, Stop: 40375, Start Num: 19
Candidate Starts for Mundrea_61:
(2, 41097), (5, 41028), (Start: 19 @40923 has 3 MA's), (32, 40830), (35, 40797), (41, 40728), (43, 40713), (53, 40653), (55, 40620), (59, 40581), (68, 40440),

Gene: Nebs_64 Start: 41070, Stop: 40525, Start Num: 20
Candidate Starts for Nebs_64:
(10, 41145), (11, 41139), (Start: 20 @41070 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Nemo27_62 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Nemo27_62:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (60, 40721), (65, 40679), (72, 40553),

Gene: Neville_48 Start: 35357, Stop: 35923, Start Num: 21
Candidate Starts for Neville_48:
(Start: 21 @35357 has 4 MA's), (34, 35447), (36, 35474), (42, 35525), (44, 35549), (47, 35570), (50, 35588), (51, 35591), (52, 35594), (53, 35597), (57, 35645), (58, 35660), (59, 35666), (66, 35723), (73, 35873), (74, 35885),

Gene: Noelle_62 Start: 41238, Stop: 40684, Start Num: 19
Candidate Starts for Noelle_62:
(Start: 19 @41238 has 3 MA's), (32, 41145), (45, 41010), (53, 40968), (55, 40935), (59, 40896), (63, 40857), (65, 40845), (68, 40755),

Gene: NorthStar_61 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for NorthStar_61:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Northrop_61 Start: 41054, Stop: 40518, Start Num: 20
Candidate Starts for Northrop_61:
(10, 41129), (11, 41123), (Start: 20 @41054 has 141 MA's), (32, 40976), (41, 40874), (43, 40859), (53, 40799), (55, 40766), (59, 40727), (72, 40550),

Gene: NotAPhaseMom_62 Start: 41062, Stop: 40526, Start Num: 20
Candidate Starts for NotAPhaseMom_62:
(10, 41137), (11, 41131), (Start: 20 @41062 has 141 MA's), (32, 40984), (41, 40882), (43, 40867), (53, 40807), (55, 40774), (59, 40735), (60, 40726), (65, 40684), (72, 40558),

Gene: Nyxis_62 Start: 40948, Stop: 40412, Start Num: 20
Candidate Starts for Nyxis_62:
(10, 41023), (11, 41017), (Start: 20 @40948 has 141 MA's), (32, 40870), (41, 40768), (43, 40753), (53, 40693), (55, 40660), (59, 40621), (72, 40444),

Gene: OKaNui_63 Start: 41108, Stop: 40572, Start Num: 20
Candidate Starts for OKaNui_63:
(10, 41183), (11, 41177), (Start: 20 @41108 has 141 MA's), (32, 41030), (41, 40928), (43, 40913), (53, 40853), (55, 40820), (59, 40781), (72, 40604),

Gene: Obama12_64 Start: 41454, Stop: 40909, Start Num: 20
Candidate Starts for Obama12_64:
(10, 41529), (Start: 20 @41454 has 141 MA's), (32, 41367), (35, 41334), (41, 41265), (43, 41250), (53, 41190), (55, 41157), (59, 41118), (60, 41109), (72, 40941),

Gene: Ohfah_64 Start: 41070, Stop: 40525, Start Num: 20
Candidate Starts for Ohfah_64:
(10, 41145), (11, 41139), (Start: 20 @41070 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Palestino_62 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Palestino_62:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Peaches_61 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Peaches_61:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (72, 40553),

Gene: Perplexer_61 Start: 40907, Stop: 40359, Start Num: 20
Candidate Starts for Perplexer_61:
(Start: 20 @40907 has 141 MA's), (29, 40844), (32, 40814), (41, 40712), (43, 40697), (45, 40679), (53, 40637), (55, 40604), (59, 40565), (63, 40526), (65, 40514), (68, 40424),

Gene: PeterPeter_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for PeterPeter_63:

(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (60, 40719), (65, 40677), (72, 40551),

Gene: PetiteSangsue_61 Start: 40910, Stop: 40362, Start Num: 20
Candidate Starts for PetiteSangsue_61:
(Start: 20 @40910 has 141 MA's), (29, 40847), (32, 40817), (41, 40715), (43, 40700), (45, 40682), (53, 40640), (55, 40607), (59, 40568), (63, 40529), (65, 40517), (68, 40427),

Gene: Phacado_63 Start: 41057, Stop: 40521, Start Num: 20
Candidate Starts for Phacado_63:
(10, 41132), (11, 41126), (Start: 20 @41057 has 141 MA's), (32, 40979), (41, 40877), (43, 40862), (53, 40802), (55, 40769), (59, 40730), (60, 40721), (65, 40679), (72, 40553),

Gene: Phelipe_64 Start: 41070, Stop: 40525, Start Num: 20
Candidate Starts for Phelipe_64:
(10, 41145), (11, 41139), (Start: 20 @41070 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Phighter1804_63 Start: 41122, Stop: 40586, Start Num: 20
Candidate Starts for Phighter1804_63:
(10, 41197), (11, 41191), (Start: 20 @41122 has 141 MA's), (32, 41044), (41, 40942), (43, 40927), (53, 40867), (55, 40834), (59, 40795), (72, 40618),

Gene: Phontbonne_63 Start: 40964, Stop: 40428, Start Num: 20
Candidate Starts for Phontbonne_63:
(10, 41039), (Start: 20 @40964 has 141 MA's), (32, 40886), (41, 40784), (43, 40769), (53, 40709), (55, 40676), (59, 40637), (72, 40460),

Gene: Pipcraft_60 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Pipcraft_60:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Polymorphads_64 Start: 41051, Stop: 40515, Start Num: 20
Candidate Starts for Polymorphads_64:
(10, 41126), (11, 41120), (Start: 20 @41051 has 141 MA's), (32, 40973), (41, 40871), (43, 40856), (53, 40796), (55, 40763), (59, 40724), (72, 40547),

Gene: Pumbaa_63 Start: 41003, Stop: 40467, Start Num: 20
Candidate Starts for Pumbaa_63:
(10, 41078), (11, 41072), (Start: 20 @41003 has 141 MA's), (32, 40925), (41, 40823), (43, 40808), (53, 40748), (55, 40715), (59, 40676), (72, 40499),

Gene: Rabbitrun_49 Start: 35754, Stop: 36320, Start Num: 21
Candidate Starts for Rabbitrun_49:
(15, 35700), (Start: 21 @35754 has 4 MA's), (24, 35769), (28, 35796), (33, 35847), (34, 35859), (38, 35892), (40, 35910), (42, 35937), (45, 35967), (47, 35982), (50, 36000), (51, 36003), (52, 36006), (54, 36024), (57, 36057), (58, 36072), (59, 36078), (63, 36117), (65, 36129), (70, 36252),

Gene: Relief_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Relief_62:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: RockieBear_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for RockieBear_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Rocksand_61 Start: 41054, Stop: 40518, Start Num: 20
Candidate Starts for Rocksand_61:
(10, 41129), (11, 41123), (Start: 20 @41054 has 141 MA's), (32, 40976), (41, 40874), (43, 40859), (53, 40799), (55, 40766), (59, 40727), (72, 40550),

Gene: Romney_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Romney_62:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (71, 40554), (72, 40551),

Gene: Roosevelt_61 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Roosevelt_61:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Rosa24_61 Start: 41089, Stop: 40553, Start Num: 20
Candidate Starts for Rosa24_61:
(10, 41164), (11, 41158), (Start: 20 @41089 has 141 MA's), (32, 41011), (41, 40909), (43, 40894), (53, 40834), (55, 40801), (59, 40762), (72, 40585),

Gene: Ruin_63 Start: 41051, Stop: 40515, Start Num: 20
Candidate Starts for Ruin_63:
(10, 41126), (11, 41120), (Start: 20 @41051 has 141 MA's), (32, 40973), (41, 40871), (43, 40856), (53, 40796), (55, 40763), (59, 40724), (72, 40547),

Gene: Sabertooth_63 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Sabertooth_63:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: Scamp_63 Start: 41060, Stop: 40524, Start Num: 20
Candidate Starts for Scamp_63:
(10, 41135), (11, 41129), (Start: 20 @41060 has 141 MA's), (32, 40982), (41, 40880), (43, 40865), (53, 40805), (55, 40772), (59, 40733), (72, 40556),

Gene: SenorClean_64 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for SenorClean_64:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Shaka_61 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Shaka_61:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Sheen_66 Start: 44592, Stop: 43936, Start Num: 3
Candidate Starts for Sheen_66:

(Start: 3 @44592 has 4 MA's), (7, 44562), (8, 44550), (16, 44496), (26, 44421), (46, 44244), (48, 44235), (58, 44145), (65, 44088),

Gene: SheldonCooper_63 Start: 41471, Stop: 40926, Start Num: 20
Candidate Starts for SheldonCooper_63:
(10, 41546), (Start: 20 @41471 has 141 MA's), (32, 41384), (35, 41351), (37, 41327), (41, 41282), (43, 41267), (53, 41207), (55, 41174), (59, 41135), (60, 41126), (72, 40958),

Gene: Shygu2_61 Start: 40961, Stop: 40413, Start Num: 20
Candidate Starts for Shygu2_61:
(Start: 20 @40961 has 141 MA's), (32, 40868), (35, 40835), (41, 40766), (43, 40751), (53, 40691), (55, 40658), (59, 40619), (63, 40580), (68, 40478),

Gene: Skadoosh_62 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Skadoosh_62:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Skipitt_62 Start: 41052, Stop: 40516, Start Num: 20
Candidate Starts for Skipitt_62:
(10, 41127), (11, 41121), (Start: 20 @41052 has 141 MA's), (32, 40974), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (72, 40548),

Gene: Sparxx_64 Start: 41053, Stop: 40517, Start Num: 20
Candidate Starts for Sparxx_64:
(10, 41128), (11, 41122), (Start: 20 @41053 has 141 MA's), (32, 40975), (41, 40873), (43, 40858), (53, 40798), (55, 40765), (58, 40732), (59, 40726), (72, 40549),

Gene: Spino_62 Start: 41061, Stop: 40525, Start Num: 20
Candidate Starts for Spino_62:
(10, 41136), (11, 41130), (Start: 20 @41061 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Stasia_61 Start: 40841, Stop: 40287, Start Num: 19
Candidate Starts for Stasia_61:
(Start: 19 @40841 has 3 MA's), (32, 40748), (35, 40715), (41, 40646), (43, 40631), (53, 40571), (55, 40538), (59, 40499), (72, 40322),

Gene: SteMason_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for SteMason_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (72, 40551),

Gene: Stink_60 Start: 40633, Stop: 40091, Start Num: 20
Candidate Starts for Stink_60:
(Start: 20 @40633 has 141 MA's), (26, 40585), (30, 40570), (32, 40546), (43, 40429), (53, 40369), (55, 40336), (59, 40297), (68, 40156),

Gene: Sultana_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for Sultana_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (60, 40722), (65, 40680), (72, 40554),

Gene: Taquarus_62 Start: 41061, Stop: 40525, Start Num: 20
Candidate Starts for Taquarus_62:
(10, 41136), (11, 41130), (Start: 20 @41061 has 141 MA's), (32, 40983), (41, 40881), (43, 40866), (53, 40806), (55, 40773), (59, 40734), (72, 40557),

Gene: Thanksgivukkah_62 Start: 41056, Stop: 40520, Start Num: 20
Candidate Starts for Thanksgivukkah_62:
(10, 41131), (11, 41125), (Start: 20 @41056 has 141 MA's), (32, 40978), (41, 40876), (43, 40861), (53, 40801), (55, 40768), (59, 40729), (72, 40552),

Gene: Timshel_66 Start: 44325, Stop: 43648, Start Num: 3
Candidate Starts for Timshel_66:
(Start: 3 @44325 has 4 MA's), (4, 44316), (6, 44298), (16, 44223), (26, 44154), (37, 44055), (43, 43995), (46, 43968), (49, 43956), (67, 43758),

Gene: TinaFeyge_61 Start: 41053, Stop: 40517, Start Num: 20
Candidate Starts for TinaFeyge_61:
(10, 41128), (11, 41122), (Start: 20 @41053 has 141 MA's), (32, 40975), (41, 40873), (43, 40858), (53, 40798), (55, 40765), (59, 40726), (72, 40549),

Gene: Tinybot_62 Start: 41088, Stop: 40552, Start Num: 20
Candidate Starts for Tinybot_62:
(10, 41163), (11, 41157), (Start: 20 @41088 has 141 MA's), (32, 41010), (41, 40908), (43, 40893), (53, 40833), (55, 40800), (59, 40761), (72, 40584),

Gene: TiroTheta9_62 Start: 41052, Stop: 40516, Start Num: 20
Candidate Starts for TiroTheta9_62:
(10, 41127), (11, 41121), (Start: 20 @41052 has 141 MA's), (32, 40974), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (72, 40548),

Gene: Toro_66 Start: 44704, Stop: 44048, Start Num: 3
Candidate Starts for Toro_66:
(Start: 3 @44704 has 4 MA's), (7, 44674), (8, 44662), (16, 44608), (26, 44533), (46, 44356), (48, 44347), (58, 44257), (65, 44200),

Gene: Trax_47 Start: 35627, Stop: 36208, Start Num: 21
Candidate Starts for Trax_47:
(Start: 21 @35627 has 4 MA's), (24, 35642), (38, 35765), (42, 35810), (47, 35855), (50, 35873), (51, 35876), (54, 35897), (57, 35930), (58, 35945), (59, 35951), (63, 35990), (70, 36125),

Gene: TroyPia_64 Start: 41065, Stop: 40520, Start Num: 20
Candidate Starts for TroyPia_64:
(10, 41140), (11, 41134), (Start: 20 @41065 has 141 MA's), (32, 40978), (41, 40876), (43, 40861), (53, 40801), (55, 40768), (59, 40729), (72, 40552),

Gene: TygerBlood_63 Start: 41058, Stop: 40522, Start Num: 20
Candidate Starts for TygerBlood_63:
(10, 41133), (11, 41127), (Start: 20 @41058 has 141 MA's), (32, 40980), (41, 40878), (43, 40863), (53, 40803), (55, 40770), (59, 40731), (72, 40554),

Gene: Ulysses_62 Start: 40744, Stop: 40202, Start Num: 20
Candidate Starts for Ulysses_62:

(10, 40819), (11, 40813), (Start: 20 @40744 has 141 MA's), (32, 40657), (35, 40624), (41, 40555), (43, 40540), (53, 40480), (55, 40447), (59, 40408), (72, 40231),

Gene: Wander_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Wander_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (60, 40719), (65, 40677), (72, 40551),

Gene: Wilbur_63 Start: 41055, Stop: 40519, Start Num: 20
Candidate Starts for Wilbur_63:
(10, 41130), (11, 41124), (Start: 20 @41055 has 141 MA's), (32, 40977), (41, 40875), (43, 40860), (53, 40800), (55, 40767), (59, 40728), (71, 40554), (72, 40551),

Gene: Wile_61 Start: 40941, Stop: 40393, Start Num: 20
Candidate Starts for Wile_61:
(Start: 20 @40941 has 141 MA's), (29, 40878), (32, 40848), (41, 40746), (43, 40731), (45, 40713), (53, 40671), (55, 40638), (59, 40599), (63, 40560), (65, 40548), (68, 40458),

Gene: Wizard007_62 Start: 41063, Stop: 40527, Start Num: 20
Candidate Starts for Wizard007_62:
(10, 41138), (11, 41132), (Start: 20 @41063 has 141 MA's), (32, 40985), (41, 40883), (43, 40868), (53, 40808), (55, 40775), (59, 40736), (72, 40559),

Gene: Xena_60 Start: 40907, Stop: 40359, Start Num: 20
Candidate Starts for Xena_60:
(Start: 20 @40907 has 141 MA's), (29, 40844), (32, 40814), (41, 40712), (43, 40697), (45, 40679), (53, 40637), (55, 40604), (59, 40565), (63, 40526), (65, 40514), (68, 40424),

Gene: YoSam321_63 Start: 41052, Stop: 40516, Start Num: 20
Candidate Starts for YoSam321_63:
(10, 41127), (11, 41121), (Start: 20 @41052 has 141 MA's), (32, 40974), (41, 40872), (43, 40857), (53, 40797), (55, 40764), (59, 40725), (72, 40548),