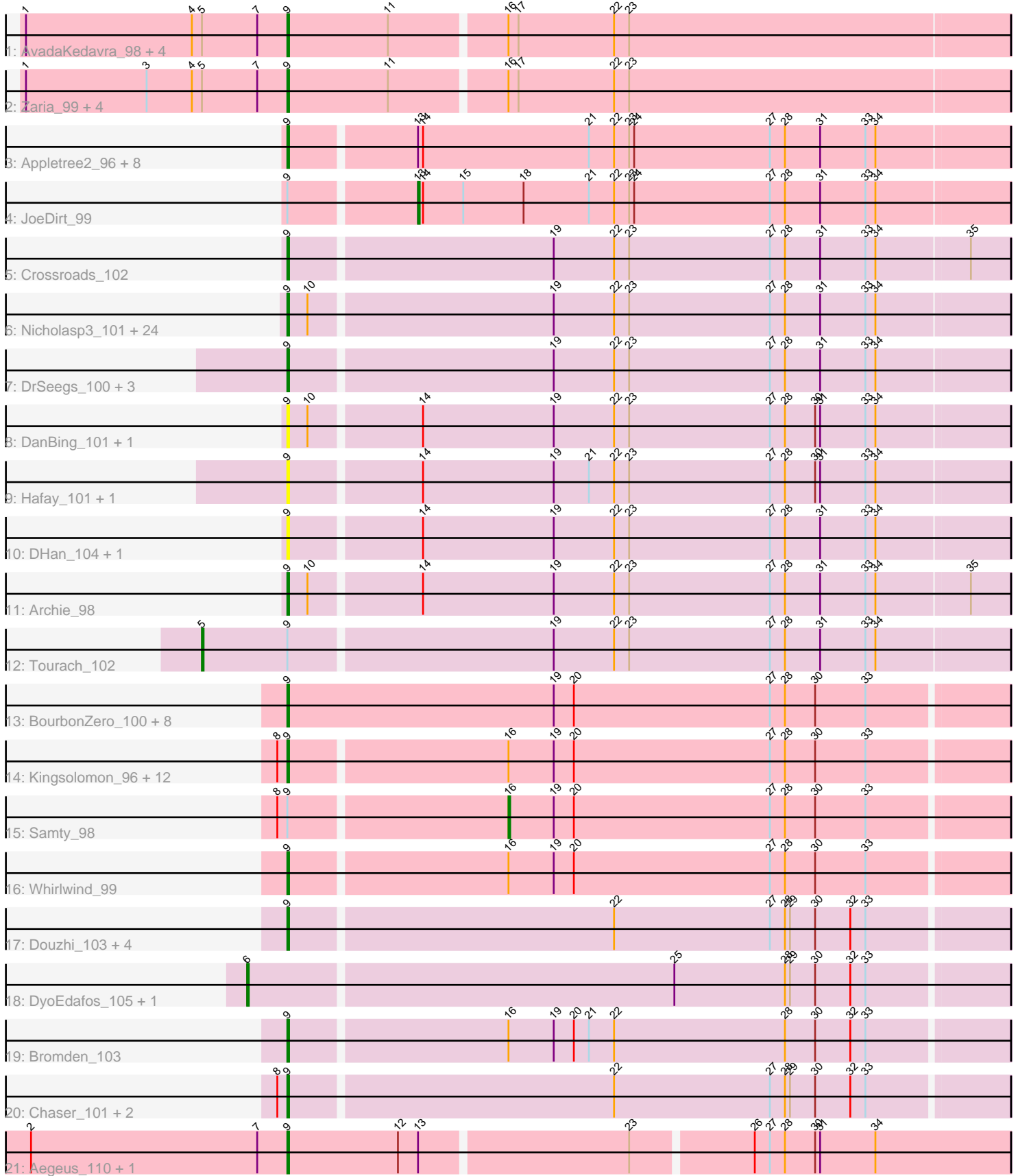


Pham 212499



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 212499 Report

This analysis was run 02/22/25 on database version 588.

Pham number 212499 has 95 members, 25 are drafts.

Phages represented in each track:

- Track 1 : AvadaKedavra_98, Wyatt2_99, UPIE_97, Acquire49_98, Tyson_100
- Track 2 : Zaria_99, LeBron_97, Halena_96, MAckerman_97, Calm_100
- Track 3 : Appletree2_96, Silverleaf_96, Rose5_99, CicholasNage_94, Poochiewood_95, DirkDirk_94, Enceladus_94, OhShagHennessy_93, Wamburgrxpress_96
- Track 4 : JoeDirt_99
- Track 5 : Crossroads_102
- Track 6 : Nicholasp3_101, LilDestine_99, Underpass_91, Bazzle_98, Wilder_101, Wigglewiggles_100, GuuelaD_97, Itos_101, Sarshaun_101, Finemlucis_102, BobsGarage_100, Zakai_102, Gabriela_101, MkaliMitinis3_102, Lewan_101, Vetrax_99, Faith1_100, Loadrie_99, Netyap_99, SoJulia_103, Rumpelstiltskin_97, BigCheese_100, Gardann_100, Kahlid_100, Soap141_100
- Track 7 : DrSeegs_100, Miley16_101, Breezona_101, Winky_101
- Track 8 : DanBing_101, Baoshan_98
- Track 9 : Hafay_101, Claus_100
- Track 10 : DHan_104, ZhongYanYuan_98
- Track 11 : Archie_98
- Track 12 : Tourach_102
- Track 13 : BourbonZero_100, KirDoubleO7_97, MiniLon_102, Ellson_98, DuncansLeg_100, Lolly9_97, MiniMac_102, LiyuLake_98, Krypton555_101
- Track 14 : Kingsolomon_96, Jubie_98, Moostard_95, TriFive_98, Snenia_97, Finnry_99, Nicholas_96, Jobypre_98, Red305_99, MsGreen_99, Clautastrophe_97, Bellis_97, Lumos_98
- Track 15 : Samty_98
- Track 16 : Whirlwind_99
- Track 17 : Douzhi_103, BrainDrainer_104, Sheng711_104, PYPDinur_103, Douge_103
- Track 18 : DyoEdafos_105, Kropertea_97
- Track 19 : Bromden_103
- Track 20 : Chaser_101, FarmResident_104, Quby_103
- Track 21 : Aegeus_110, Baudelaire_110

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

The start number called the most often in the published annotations is 9, it was called in 66 of the 70 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_98, Aegeus_110, Appletree2_96, Archie_98, AvadaKedavra_98, Baoshan_98, Baudelaire_110, Bazzle_98, Bellis_97, BigCheese_100, BobsGarage_100, BourbonZero_100, BrainDrainer_104, Breezona_101, Bromden_103, Calm_100, Chaser_101, CicholasNage_94, Claus_100, Clautastrophe_97, Crossroads_102, DHan_104, DanBing_101, DirkDirk_94, Douge_103, Douzhi_103, DrSeegs_100, DuncansLeg_100, Ellson_98, Enceladus_94, Faith1_100, FarmResident_104, Finemlucis_102, Finnry_99, Gabriela_101, Gardann_100, GuuelaD_97, Hafay_101, Halena_96, Itos_101, Jobypre_98, Jubie_98, Kahlid_100, Kingsolomon_96, KirDoubleO7_97, Krypton555_101, LeBron_97, Lewan_101, LilDestine_99, LiyuLake_98, Loadrie_99, Lolly9_97, Lumos_98, MAckerman_97, Miley16_101, MiniLon_102, MiniMac_102, MkaliMitinis3_102, Moostard_95, MsGreen_99, Netyap_99, Nicholas_96, Nicholasp3_101, OhShagHennessy_93, PYPDinur_103, Poochiewood_95, Quby_103, Red305_99, Rose5_99, Rumpelstiltskin_97, Sarshaun_101, Sheng711_104, Silverleaf_96, Snenia_97, SoJulia_103, Soap141_100, TriFive_98, Tyson_100, UPIE_97, Underpass_91, Vetrix_99, Wamburgrxpress_96, Whirlwind_99, Wigglewiggles_100, Wilder_101, Winky_101, Wyatt2_99, Zakai_102, Zaria_99, ZhongYanYuan_98,

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

- JoeDirt_99, Samty_98, Tourach_102,

Genes that do not have the "Most Annotated" start:

- DyoEdafos_105, Kropertea_97,

Summary by start number:

Start 5:

- Found in 11 of 95 (11.6%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Tourach_102 (L2),

Start 6:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DyoEdafos_105 (L4), Kropertea_97 (L4),

Start 9:

- Found in 93 of 95 (97.9%) of genes in pham
- Manual Annotations of this start: 66 of 70
- Called 96.8% of time when present
- Phage (with cluster) where this start called: Acquire49_98 (L1), Aegeus_110 (L5), Appletree2_96 (L1), Archie_98 (L2), AvadaKedavra_98 (L1), Baoshan_98 (L2), Baudelaire_110 (L5), Bazzle_98 (L2), Bellis_97 (L3), BigCheese_100 (L2), BobsGarage_100 (L2), BourbonZero_100 (L3), BrainDrainer_104 (L4), Breezona_101 (L2), Bromden_103 (L4), Calm_100 (L1), Chaser_101 (L4), CicholasNage_94 (L1), Claus_100 (L2), Clautastrophe_97 (L3), Crossroads_102 (L2),

DHan_104 (L2), DanBing_101 (L2), DirkDirk_94 (L1), Douge_103 (L4), Douzhi_103 (L4), DrSeegs_100 (L2), DuncansLeg_100 (L3), Ellson_98 (L3), Enceladus_94 (L1), Faith1_100 (L2), FarmResident_104 (L4), Finemlucis_102 (L2), Finnry_99 (L3), Gabriela_101 (L2), Gardann_100 (L2), GuuelaD_97 (L2), Hafay_101 (L2), Halena_96 (L1), Itos_101 (L2), Jobypre_98 (L3), Jubie_98 (L3), Kahlid_100 (L2), Kingsolomon_96 (L3), KirDoubleO7_97 (L3), Krypton555_101 (L3), LeBron_97 (L1), Lewan_101 (L2), LilDestine_99 (L2), LiyuLake_98 (L3), Loadrie_99 (L2), Lolly9_97 (L3), Lumos_98 (L3), MAckerman_97 (L1), Miley16_101 (L2), MiniLon_102 (L3), MiniMac_102 (L3), MkaliMitinis3_102 (L2), Moostard_95 (L3), MsGreen_99 (L3), Netyap_99 (L2), Nicholas_96 (L3), Nicholasp3_101 (L2), OhShagHennessy_93 (L1), PYPDinur_103 (L4), Poochiewood_95 (L1), Quby_103 (L4), Red305_99 (L3), Rose5_99 (L1), Rumpelstiltskin_97 (L2), Sarshaun_101 (L2), Sheng711_104 (L4), Silverleaf_96 (L1), Snenia_97 (L3), SoJulia_103 (L2), Soap141_100 (L2), TriFive_98 (L3), Tyson_100 (L1), UPIE_97 (L1), Underpass_91 (L2), Vetrix_99 (L2), Wamburgrxpress_96 (L1), Whirlwind_99 (L3), Wigglewiggles_100 (L2), Wilder_101 (L2), Winky_101 (L2), Wyatt2_99 (L1), Zakai_102 (L2), Zaria_99 (L1), ZhongYanYuan_98 (L2),

Start 13:

- Found in 12 of 95 (12.6%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 8.3% of time when present
- Phage (with cluster) where this start called: JoeDirt_99 (L1),

Start 16:

- Found in 26 of 95 (27.4%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 3.8% of time when present
- Phage (with cluster) where this start called: Samty_98 (L3),

Summary by clusters:

There are 5 clusters represented in this pham: L4, L5, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 9 was manually annotated 18 times for cluster L1.
- Start number 13 was manually annotated 1 time for cluster L1.

Info for manual annotations of cluster L2:

- Start number 5 was manually annotated 1 time for cluster L2.
- Start number 9 was manually annotated 27 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 9 was manually annotated 16 times for cluster L3.
- Start number 16 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 6 was manually annotated 1 time for cluster L4.
- Start number 9 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 9 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: Acquire49_98 Start: 60121, Stop: 60543, Start Num: 9

Candidate Starts for Acquire49_98:

(1, 59965), (4, 60064), (Start: 5 @60070 has 1 MA's), (7, 60103), (Start: 9 @60121 has 66 MA's), (11, 60181), (Start: 16 @60247 has 1 MA's), (17, 60253), (22, 60310), (23, 60319),

Gene: Aegeus_110 Start: 63361, Stop: 63780, Start Num: 9

Candidate Starts for Aegeus_110:

(2, 63208), (7, 63343), (Start: 9 @63361 has 66 MA's), (12, 63427), (Start: 13 @63439 has 1 MA's), (23, 63559), (26, 63628), (27, 63637), (28, 63646), (30, 63664), (31, 63667), (34, 63700),

Gene: Appletree2_96 Start: 59711, Stop: 60133, Start Num: 9

Candidate Starts for Appletree2_96:

(Start: 9 @59711 has 66 MA's), (Start: 13 @59783 has 1 MA's), (14, 59786), (21, 59885), (22, 59900), (23, 59909), (24, 59912), (27, 59993), (28, 60002), (31, 60023), (33, 60050), (34, 60056),

Gene: Archie_98 Start: 61295, Stop: 61717, Start Num: 9

Candidate Starts for Archie_98:

(Start: 9 @61295 has 66 MA's), (10, 61307), (14, 61370), (19, 61448), (22, 61484), (23, 61493), (27, 61577), (28, 61586), (31, 61607), (33, 61634), (34, 61640), (35, 61694),

Gene: AvadaKedavra_98 Start: 60233, Stop: 60655, Start Num: 9

Candidate Starts for AvadaKedavra_98:

(1, 60077), (4, 60176), (Start: 5 @60182 has 1 MA's), (7, 60215), (Start: 9 @60233 has 66 MA's), (11, 60293), (Start: 16 @60359 has 1 MA's), (17, 60365), (22, 60422), (23, 60431),

Gene: Baoshan_98 Start: 62080, Stop: 62502, Start Num: 9

Candidate Starts for Baoshan_98:

(Start: 9 @62080 has 66 MA's), (10, 62092), (14, 62155), (19, 62233), (22, 62269), (23, 62278), (27, 62362), (28, 62371), (30, 62389), (31, 62392), (33, 62419), (34, 62425),

Gene: Baudelaire_110 Start: 63361, Stop: 63780, Start Num: 9

Candidate Starts for Baudelaire_110:

(2, 63208), (7, 63343), (Start: 9 @63361 has 66 MA's), (12, 63427), (Start: 13 @63439 has 1 MA's), (23, 63559), (26, 63628), (27, 63637), (28, 63646), (30, 63664), (31, 63667), (34, 63700),

Gene: Bazzle_98 Start: 61851, Stop: 62273, Start Num: 9

Candidate Starts for Bazzle_98:

(Start: 9 @61851 has 66 MA's), (10, 61863), (19, 62004), (22, 62040), (23, 62049), (27, 62133), (28, 62142), (31, 62163), (33, 62190), (34, 62196),

Gene: Bellis_97 Start: 61628, Stop: 62047, Start Num: 9

Candidate Starts for Bellis_97:

(8, 61622), (Start: 9 @61628 has 66 MA's), (Start: 16 @61754 has 1 MA's), (19, 61781), (20, 61793), (27, 61910), (28, 61919), (30, 61937), (33, 61967),

Gene: BigCheese_100 Start: 62069, Stop: 62491, Start Num: 9

Candidate Starts for BigCheese_100:

(Start: 9 @62069 has 66 MA's), (10, 62081), (19, 62222), (22, 62258), (23, 62267), (27, 62351), (28, 62360), (31, 62381), (33, 62408), (34, 62414),

Gene: BobsGarage_100 Start: 62069, Stop: 62491, Start Num: 9
Candidate Starts for BobsGarage_100:
(Start: 9 @62069 has 66 MA's), (10, 62081), (19, 62222), (22, 62258), (23, 62267), (27, 62351), (28, 62360), (31, 62381), (33, 62408), (34, 62414),

Gene: BourbonZero_100 Start: 61801, Stop: 62226, Start Num: 9
Candidate Starts for BourbonZero_100:
(Start: 9 @61801 has 66 MA's), (19, 61960), (20, 61972), (27, 62089), (28, 62098), (30, 62116), (33, 62146),

Gene: BrainDrainer_104 Start: 62118, Stop: 62537, Start Num: 9
Candidate Starts for BrainDrainer_104:
(Start: 9 @62118 has 66 MA's), (22, 62307), (27, 62400), (28, 62409), (29, 62412), (30, 62427), (32, 62448), (33, 62457),

Gene: Breezona_101 Start: 62404, Stop: 62826, Start Num: 9
Candidate Starts for Breezona_101:
(Start: 9 @62404 has 66 MA's), (19, 62557), (22, 62593), (23, 62602), (27, 62686), (28, 62695), (31, 62716), (33, 62743), (34, 62749),

Gene: Bromden_103 Start: 62854, Stop: 63273, Start Num: 9
Candidate Starts for Bromden_103:
(Start: 9 @62854 has 66 MA's), (Start: 16 @62980 has 1 MA's), (19, 63007), (20, 63019), (21, 63028), (22, 63043), (28, 63145), (30, 63163), (32, 63184), (33, 63193),

Gene: Calm_100 Start: 60500, Stop: 60922, Start Num: 9
Candidate Starts for Calm_100:
(1, 60344), (3, 60416), (4, 60443), (Start: 5 @60449 has 1 MA's), (7, 60482), (Start: 9 @60500 has 66 MA's), (11, 60560), (Start: 16 @60626 has 1 MA's), (17, 60632), (22, 60689), (23, 60698),

Gene: Chaser_101 Start: 61467, Stop: 61886, Start Num: 9
Candidate Starts for Chaser_101:
(8, 61461), (Start: 9 @61467 has 66 MA's), (22, 61656), (27, 61749), (28, 61758), (29, 61761), (30, 61776), (32, 61797), (33, 61806),

Gene: CicholasNage_94 Start: 59615, Stop: 60037, Start Num: 9
Candidate Starts for CicholasNage_94:
(Start: 9 @59615 has 66 MA's), (Start: 13 @59687 has 1 MA's), (14, 59690), (21, 59789), (22, 59804), (23, 59813), (24, 59816), (27, 59897), (28, 59906), (31, 59927), (33, 59954), (34, 59960),

Gene: Claus_100 Start: 61890, Stop: 62312, Start Num: 9
Candidate Starts for Claus_100:
(Start: 9 @61890 has 66 MA's), (14, 61965), (19, 62043), (21, 62064), (22, 62079), (23, 62088), (27, 62172), (28, 62181), (30, 62199), (31, 62202), (33, 62229), (34, 62235),

Gene: Clautastrophe_97 Start: 61623, Stop: 62042, Start Num: 9
Candidate Starts for Clautastrophe_97:
(8, 61617), (Start: 9 @61623 has 66 MA's), (Start: 16 @61749 has 1 MA's), (19, 61776), (20, 61788), (27, 61905), (28, 61914), (30, 61932), (33, 61962),

Gene: Crossroads_102 Start: 61956, Stop: 62378, Start Num: 9
Candidate Starts for Crossroads_102:

(Start: 9 @61956 has 66 MA's), (19, 62109), (22, 62145), (23, 62154), (27, 62238), (28, 62247), (31, 62268), (33, 62295), (34, 62301), (35, 62355),

Gene: DHan_104 Start: 62308, Stop: 62730, Start Num: 9

Candidate Starts for DHan_104:

(Start: 9 @62308 has 66 MA's), (14, 62383), (19, 62461), (22, 62497), (23, 62506), (27, 62590), (28, 62599), (31, 62620), (33, 62647), (34, 62653),

Gene: DanBing_101 Start: 61772, Stop: 62194, Start Num: 9

Candidate Starts for DanBing_101:

(Start: 9 @61772 has 66 MA's), (10, 61784), (14, 61847), (19, 61925), (22, 61961), (23, 61970), (27, 62054), (28, 62063), (30, 62081), (31, 62084), (33, 62111), (34, 62117),

Gene: DirkDirk_94 Start: 59326, Stop: 59748, Start Num: 9

Candidate Starts for DirkDirk_94:

(Start: 9 @59326 has 66 MA's), (Start: 13 @59398 has 1 MA's), (14, 59401), (21, 59500), (22, 59515), (23, 59524), (24, 59527), (27, 59608), (28, 59617), (31, 59638), (33, 59665), (34, 59671),

Gene: Douge_103 Start: 61538, Stop: 61957, Start Num: 9

Candidate Starts for Douge_103:

(Start: 9 @61538 has 66 MA's), (22, 61727), (27, 61820), (28, 61829), (29, 61832), (30, 61847), (32, 61868), (33, 61877),

Gene: Douzhi_103 Start: 61807, Stop: 62226, Start Num: 9

Candidate Starts for Douzhi_103:

(Start: 9 @61807 has 66 MA's), (22, 61996), (27, 62089), (28, 62098), (29, 62101), (30, 62116), (32, 62137), (33, 62146),

Gene: DrSeegs_100 Start: 62404, Stop: 62826, Start Num: 9

Candidate Starts for DrSeegs_100:

(Start: 9 @62404 has 66 MA's), (19, 62557), (22, 62593), (23, 62602), (27, 62686), (28, 62695), (31, 62716), (33, 62743), (34, 62749),

Gene: DuncansLeg_100 Start: 61789, Stop: 62214, Start Num: 9

Candidate Starts for DuncansLeg_100:

(Start: 9 @61789 has 66 MA's), (19, 61948), (20, 61960), (27, 62077), (28, 62086), (30, 62104), (33, 62134),

Gene: DyoEdafos_105 Start: 62092, Stop: 62535, Start Num: 6

Candidate Starts for DyoEdafos_105:

(Start: 6 @62092 has 1 MA's), (25, 62341), (28, 62407), (29, 62410), (30, 62425), (32, 62446), (33, 62455),

Gene: Ellson_98 Start: 62104, Stop: 62529, Start Num: 9

Candidate Starts for Ellson_98:

(Start: 9 @62104 has 66 MA's), (19, 62263), (20, 62275), (27, 62392), (28, 62401), (30, 62419), (33, 62449),

Gene: Enceladus_94 Start: 59624, Stop: 60046, Start Num: 9

Candidate Starts for Enceladus_94:

(Start: 9 @59624 has 66 MA's), (Start: 13 @59696 has 1 MA's), (14, 59699), (21, 59798), (22, 59813), (23, 59822), (24, 59825), (27, 59906), (28, 59915), (31, 59936), (33, 59963), (34, 59969),

Gene: Faith1_100 Start: 61712, Stop: 62134, Start Num: 9

Candidate Starts for Faith1_100:

(Start: 9 @61712 has 66 MA's), (10, 61724), (19, 61865), (22, 61901), (23, 61910), (27, 61994), (28, 62003), (31, 62024), (33, 62051), (34, 62057),

Gene: FarmResident_104 Start: 61721, Stop: 62140, Start Num: 9

Candidate Starts for FarmResident_104:

(8, 61715), (Start: 9 @61721 has 66 MA's), (22, 61910), (27, 62003), (28, 62012), (29, 62015), (30, 62030), (32, 62051), (33, 62060),

Gene: Finemlucis_102 Start: 62772, Stop: 63194, Start Num: 9

Candidate Starts for Finemlucis_102:

(Start: 9 @62772 has 66 MA's), (10, 62784), (19, 62925), (22, 62961), (23, 62970), (27, 63054), (28, 63063), (31, 63084), (33, 63111), (34, 63117),

Gene: Finnry_99 Start: 61976, Stop: 62395, Start Num: 9

Candidate Starts for Finnry_99:

(8, 61970), (Start: 9 @61976 has 66 MA's), (Start: 16 @62102 has 1 MA's), (19, 62129), (20, 62141), (27, 62258), (28, 62267), (30, 62285), (33, 62315),

Gene: Gabriela_101 Start: 61058, Stop: 61480, Start Num: 9

Candidate Starts for Gabriela_101:

(Start: 9 @61058 has 66 MA's), (10, 61070), (19, 61211), (22, 61247), (23, 61256), (27, 61340), (28, 61349), (31, 61370), (33, 61397), (34, 61403),

Gene: Gardann_100 Start: 61505, Stop: 61927, Start Num: 9

Candidate Starts for Gardann_100:

(Start: 9 @61505 has 66 MA's), (10, 61517), (19, 61658), (22, 61694), (23, 61703), (27, 61787), (28, 61796), (31, 61817), (33, 61844), (34, 61850),

Gene: GuuelaD_97 Start: 61671, Stop: 62093, Start Num: 9

Candidate Starts for GuuelaD_97:

(Start: 9 @61671 has 66 MA's), (10, 61683), (19, 61824), (22, 61860), (23, 61869), (27, 61953), (28, 61962), (31, 61983), (33, 62010), (34, 62016),

Gene: Hafay_101 Start: 61885, Stop: 62307, Start Num: 9

Candidate Starts for Hafay_101:

(Start: 9 @61885 has 66 MA's), (14, 61960), (19, 62038), (21, 62059), (22, 62074), (23, 62083), (27, 62167), (28, 62176), (30, 62194), (31, 62197), (33, 62224), (34, 62230),

Gene: Halena_96 Start: 59416, Stop: 59838, Start Num: 9

Candidate Starts for Halena_96:

(1, 59260), (3, 59332), (4, 59359), (Start: 5 @59365 has 1 MA's), (7, 59398), (Start: 9 @59416 has 66 MA's), (11, 59476), (Start: 16 @59542 has 1 MA's), (17, 59548), (22, 59605), (23, 59614),

Gene: Itos_101 Start: 60618, Stop: 61040, Start Num: 9

Candidate Starts for Itos_101:

(Start: 9 @60618 has 66 MA's), (10, 60630), (19, 60771), (22, 60807), (23, 60816), (27, 60900), (28, 60909), (31, 60930), (33, 60957), (34, 60963),

Gene: Jobypre_98 Start: 61623, Stop: 62042, Start Num: 9

Candidate Starts for Jobypre_98:

(8, 61617), (Start: 9 @61623 has 66 MA's), (Start: 16 @61749 has 1 MA's), (19, 61776), (20, 61788), (27, 61905), (28, 61914), (30, 61932), (33, 61962),

Gene: JoeDirt_99 Start: 60625, Stop: 60975, Start Num: 13

Candidate Starts for JoeDirt_99:

(Start: 9 @60553 has 66 MA's), (Start: 13 @60625 has 1 MA's), (14, 60628), (15, 60652), (18, 60688), (21, 60727), (22, 60742), (23, 60751), (24, 60754), (27, 60835), (28, 60844), (31, 60865), (33, 60892), (34, 60898),

Gene: Jubie_98 Start: 61758, Stop: 62177, Start Num: 9

Candidate Starts for Jubie_98:

(8, 61752), (Start: 9 @61758 has 66 MA's), (Start: 16 @61884 has 1 MA's), (19, 61911), (20, 61923), (27, 62040), (28, 62049), (30, 62067), (33, 62097),

Gene: Kahlid_100 Start: 61423, Stop: 61845, Start Num: 9

Candidate Starts for Kahlid_100:

(Start: 9 @61423 has 66 MA's), (10, 61435), (19, 61576), (22, 61612), (23, 61621), (27, 61705), (28, 61714), (31, 61735), (33, 61762), (34, 61768),

Gene: Kingsolomon_96 Start: 61732, Stop: 62151, Start Num: 9

Candidate Starts for Kingsolomon_96:

(8, 61726), (Start: 9 @61732 has 66 MA's), (Start: 16 @61858 has 1 MA's), (19, 61885), (20, 61897), (27, 62014), (28, 62023), (30, 62041), (33, 62071),

Gene: KirDoubleO7_97 Start: 61791, Stop: 62216, Start Num: 9

Candidate Starts for KirDoubleO7_97:

(Start: 9 @61791 has 66 MA's), (19, 61950), (20, 61962), (27, 62079), (28, 62088), (30, 62106), (33, 62136),

Gene: Kropertea_97 Start: 61330, Stop: 61773, Start Num: 6

Candidate Starts for Kropertea_97:

(Start: 6 @61330 has 1 MA's), (25, 61579), (28, 61645), (29, 61648), (30, 61663), (32, 61684), (33, 61693),

Gene: Krypton555_101 Start: 62044, Stop: 62463, Start Num: 9

Candidate Starts for Krypton555_101:

(Start: 9 @62044 has 66 MA's), (19, 62197), (20, 62209), (27, 62326), (28, 62335), (30, 62353), (33, 62383),

Gene: LeBron_97 Start: 59723, Stop: 60145, Start Num: 9

Candidate Starts for LeBron_97:

(1, 59567), (3, 59639), (4, 59666), (Start: 5 @59672 has 1 MA's), (7, 59705), (Start: 9 @59723 has 66 MA's), (11, 59783), (Start: 16 @59849 has 1 MA's), (17, 59855), (22, 59912), (23, 59921),

Gene: Lewan_101 Start: 61711, Stop: 62133, Start Num: 9

Candidate Starts for Lewan_101:

(Start: 9 @61711 has 66 MA's), (10, 61723), (19, 61864), (22, 61900), (23, 61909), (27, 61993), (28, 62002), (31, 62023), (33, 62050), (34, 62056),

Gene: LilDestine_99 Start: 61382, Stop: 61804, Start Num: 9

Candidate Starts for LilDestine_99:

(Start: 9 @61382 has 66 MA's), (10, 61394), (19, 61535), (22, 61571), (23, 61580), (27, 61664), (28, 61673), (31, 61694), (33, 61721), (34, 61727),

Gene: LiyuLake_98 Start: 61864, Stop: 62289, Start Num: 9

Candidate Starts for LiyuLake_98:

(Start: 9 @61864 has 66 MA's), (19, 62023), (20, 62035), (27, 62152), (28, 62161), (30, 62179), (33, 62209),

Gene: Loadrie_99 Start: 61873, Stop: 62295, Start Num: 9

Candidate Starts for Loadrie_99:

(Start: 9 @61873 has 66 MA's), (10, 61885), (19, 62026), (22, 62062), (23, 62071), (27, 62155), (28, 62164), (31, 62185), (33, 62212), (34, 62218),

Gene: Lolly9_97 Start: 61717, Stop: 62136, Start Num: 9

Candidate Starts for Lolly9_97:

(Start: 9 @61717 has 66 MA's), (19, 61870), (20, 61882), (27, 61999), (28, 62008), (30, 62026), (33, 62056),

Gene: Lumos_98 Start: 61620, Stop: 62039, Start Num: 9

Candidate Starts for Lumos_98:

(8, 61614), (Start: 9 @61620 has 66 MA's), (Start: 16 @61746 has 1 MA's), (19, 61773), (20, 61785), (27, 61902), (28, 61911), (30, 61929), (33, 61959),

Gene: MAckerman_97 Start: 59409, Stop: 59831, Start Num: 9

Candidate Starts for MAckerman_97:

(1, 59253), (3, 59325), (4, 59352), (Start: 5 @59358 has 1 MA's), (7, 59391), (Start: 9 @59409 has 66 MA's), (11, 59469), (Start: 16 @59535 has 1 MA's), (17, 59541), (22, 59598), (23, 59607),

Gene: Miley16_101 Start: 62404, Stop: 62826, Start Num: 9

Candidate Starts for Miley16_101:

(Start: 9 @62404 has 66 MA's), (19, 62557), (22, 62593), (23, 62602), (27, 62686), (28, 62695), (31, 62716), (33, 62743), (34, 62749),

Gene: MiniLon_102 Start: 61718, Stop: 62137, Start Num: 9

Candidate Starts for MiniLon_102:

(Start: 9 @61718 has 66 MA's), (19, 61871), (20, 61883), (27, 62000), (28, 62009), (30, 62027), (33, 62057),

Gene: MiniMac_102 Start: 61713, Stop: 62132, Start Num: 9

Candidate Starts for MiniMac_102:

(Start: 9 @61713 has 66 MA's), (19, 61866), (20, 61878), (27, 61995), (28, 62004), (30, 62022), (33, 62052),

Gene: MkaliMitinis3_102 Start: 61837, Stop: 62259, Start Num: 9

Candidate Starts for MkaliMitinis3_102:

(Start: 9 @61837 has 66 MA's), (10, 61849), (19, 61990), (22, 62026), (23, 62035), (27, 62119), (28, 62128), (31, 62149), (33, 62176), (34, 62182),

Gene: Moostard_95 Start: 61727, Stop: 62146, Start Num: 9

Candidate Starts for Moostard_95:

(8, 61721), (Start: 9 @61727 has 66 MA's), (Start: 16 @61853 has 1 MA's), (19, 61880), (20, 61892), (27, 62009), (28, 62018), (30, 62036), (33, 62066),

Gene: MsGreen_99 Start: 61622, Stop: 62041, Start Num: 9

Candidate Starts for MsGreen_99:

(8, 61616), (Start: 9 @61622 has 66 MA's), (Start: 16 @61748 has 1 MA's), (19, 61775), (20, 61787), (27, 61904), (28, 61913), (30, 61931), (33, 61961),

Gene: Netyap_99 Start: 61713, Stop: 62135, Start Num: 9

Candidate Starts for Netyap_99:

(Start: 9 @61713 has 66 MA's), (10, 61725), (19, 61866), (22, 61902), (23, 61911), (27, 61995), (28, 62004), (31, 62025), (33, 62052), (34, 62058),

Gene: Nicholas_96 Start: 61732, Stop: 62151, Start Num: 9

Candidate Starts for Nicholas_96:

(8, 61726), (Start: 9 @61732 has 66 MA's), (Start: 16 @61858 has 1 MA's), (19, 61885), (20, 61897), (27, 62014), (28, 62023), (30, 62041), (33, 62071),

Gene: Nicholasp3_101 Start: 61505, Stop: 61927, Start Num: 9

Candidate Starts for Nicholasp3_101:

(Start: 9 @61505 has 66 MA's), (10, 61517), (19, 61658), (22, 61694), (23, 61703), (27, 61787), (28, 61796), (31, 61817), (33, 61844), (34, 61850),

Gene: OhShagHennessy_93 Start: 59128, Stop: 59550, Start Num: 9

Candidate Starts for OhShagHennessy_93:

(Start: 9 @59128 has 66 MA's), (Start: 13 @59200 has 1 MA's), (14, 59203), (21, 59302), (22, 59317), (23, 59326), (24, 59329), (27, 59410), (28, 59419), (31, 59440), (33, 59467), (34, 59473),

Gene: PYPDinur_103 Start: 62370, Stop: 62789, Start Num: 9

Candidate Starts for PYPDinur_103:

(Start: 9 @62370 has 66 MA's), (22, 62559), (27, 62652), (28, 62661), (29, 62664), (30, 62679), (32, 62700), (33, 62709),

Gene: Pochiewood_95 Start: 60525, Stop: 60947, Start Num: 9

Candidate Starts for Pochiewood_95:

(Start: 9 @60525 has 66 MA's), (Start: 13 @60597 has 1 MA's), (14, 60600), (21, 60699), (22, 60714), (23, 60723), (24, 60726), (27, 60807), (28, 60816), (31, 60837), (33, 60864), (34, 60870),

Gene: Quby_103 Start: 61696, Stop: 62115, Start Num: 9

Candidate Starts for Quby_103:

(8, 61690), (Start: 9 @61696 has 66 MA's), (22, 61885), (27, 61978), (28, 61987), (29, 61990), (30, 62005), (32, 62026), (33, 62035),

Gene: Red305_99 Start: 61623, Stop: 62042, Start Num: 9

Candidate Starts for Red305_99:

(8, 61617), (Start: 9 @61623 has 66 MA's), (Start: 16 @61749 has 1 MA's), (19, 61776), (20, 61788), (27, 61905), (28, 61914), (30, 61932), (33, 61962),

Gene: Rose5_99 Start: 60395, Stop: 60817, Start Num: 9

Candidate Starts for Rose5_99:

(Start: 9 @60395 has 66 MA's), (Start: 13 @60467 has 1 MA's), (14, 60470), (21, 60569), (22, 60584), (23, 60593), (24, 60596), (27, 60677), (28, 60686), (31, 60707), (33, 60734), (34, 60740),

Gene: Rumpelstiltskin_97 Start: 61298, Stop: 61720, Start Num: 9

Candidate Starts for Rumpelstiltskin_97:

(Start: 9 @61298 has 66 MA's), (10, 61310), (19, 61451), (22, 61487), (23, 61496), (27, 61580), (28, 61589), (31, 61610), (33, 61637), (34, 61643),

Gene: Samty_98 Start: 61846, Stop: 62139, Start Num: 16

Candidate Starts for Samty_98:

(8, 61714), (Start: 9 @61720 has 66 MA's), (Start: 16 @61846 has 1 MA's), (19, 61873), (20, 61885), (27, 62002), (28, 62011), (30, 62029), (33, 62059),

Gene: Sarshaun_101 Start: 62465, Stop: 62887, Start Num: 9

Candidate Starts for Sarshaun_101:

(Start: 9 @62465 has 66 MA's), (10, 62477), (19, 62618), (22, 62654), (23, 62663), (27, 62747), (28, 62756), (31, 62777), (33, 62804), (34, 62810),

Gene: Sheng711_104 Start: 61894, Stop: 62313, Start Num: 9

Candidate Starts for Sheng711_104:

(Start: 9 @61894 has 66 MA's), (22, 62083), (27, 62176), (28, 62185), (29, 62188), (30, 62203), (32, 62224), (33, 62233),

Gene: Silverleaf_96 Start: 59535, Stop: 59957, Start Num: 9

Candidate Starts for Silverleaf_96:

(Start: 9 @59535 has 66 MA's), (Start: 13 @59607 has 1 MA's), (14, 59610), (21, 59709), (22, 59724), (23, 59733), (24, 59736), (27, 59817), (28, 59826), (31, 59847), (33, 59874), (34, 59880),

Gene: Snenia_97 Start: 61624, Stop: 62043, Start Num: 9

Candidate Starts for Snenia_97:

(8, 61618), (Start: 9 @61624 has 66 MA's), (Start: 16 @61750 has 1 MA's), (19, 61777), (20, 61789), (27, 61906), (28, 61915), (30, 61933), (33, 61963),

Gene: SoJulia_103 Start: 63229, Stop: 63651, Start Num: 9

Candidate Starts for SoJulia_103:

(Start: 9 @63229 has 66 MA's), (10, 63241), (19, 63382), (22, 63418), (23, 63427), (27, 63511), (28, 63520), (31, 63541), (33, 63568), (34, 63574),

Gene: Soap141_100 Start: 62465, Stop: 62887, Start Num: 9

Candidate Starts for Soap141_100:

(Start: 9 @62465 has 66 MA's), (10, 62477), (19, 62618), (22, 62654), (23, 62663), (27, 62747), (28, 62756), (31, 62777), (33, 62804), (34, 62810),

Gene: Tourach_102 Start: 62713, Stop: 63186, Start Num: 5

Candidate Starts for Tourach_102:

(Start: 5 @62713 has 1 MA's), (Start: 9 @62764 has 66 MA's), (19, 62917), (22, 62953), (23, 62962), (27, 63046), (28, 63055), (31, 63076), (33, 63103), (34, 63109),

Gene: TriFive_98 Start: 61736, Stop: 62155, Start Num: 9

Candidate Starts for TriFive_98:

(8, 61730), (Start: 9 @61736 has 66 MA's), (Start: 16 @61862 has 1 MA's), (19, 61889), (20, 61901), (27, 62018), (28, 62027), (30, 62045), (33, 62075),

Gene: Tyson_100 Start: 60826, Stop: 61248, Start Num: 9

Candidate Starts for Tyson_100:

(1, 60670), (4, 60769), (Start: 5 @60775 has 1 MA's), (7, 60808), (Start: 9 @60826 has 66 MA's), (11, 60886), (Start: 16 @60952 has 1 MA's), (17, 60958), (22, 61015), (23, 61024),

Gene: UPIE_97 Start: 60066, Stop: 60488, Start Num: 9

Candidate Starts for UPIE_97:

(1, 59910), (4, 60009), (Start: 5 @60015 has 1 MA's), (7, 60048), (Start: 9 @60066 has 66 MA's), (11, 60126), (Start: 16 @60192 has 1 MA's), (17, 60198), (22, 60255), (23, 60264),

Gene: Underpass_91 Start: 56541, Stop: 56963, Start Num: 9

Candidate Starts for Underpass_91:

(Start: 9 @56541 has 66 MA's), (10, 56553), (19, 56694), (22, 56730), (23, 56739), (27, 56823), (28, 56832), (31, 56853), (33, 56880), (34, 56886),

Gene: Vetrix_99 Start: 61538, Stop: 61960, Start Num: 9

Candidate Starts for Vetrix_99:

(Start: 9 @61538 has 66 MA's), (10, 61550), (19, 61691), (22, 61727), (23, 61736), (27, 61820), (28, 61829), (31, 61850), (33, 61877), (34, 61883),

Gene: Wamburgxpress_96 Start: 60012, Stop: 60434, Start Num: 9

Candidate Starts for Wamburgxpress_96:

(Start: 9 @60012 has 66 MA's), (Start: 13 @60084 has 1 MA's), (14, 60087), (21, 60186), (22, 60201), (23, 60210), (24, 60213), (27, 60294), (28, 60303), (31, 60324), (33, 60351), (34, 60357),

Gene: Whirlwind_99 Start: 61872, Stop: 62291, Start Num: 9

Candidate Starts for Whirlwind_99:

(Start: 9 @61872 has 66 MA's), (Start: 16 @61998 has 1 MA's), (19, 62025), (20, 62037), (27, 62154), (28, 62163), (30, 62181), (33, 62211),

Gene: Wigglewigggle_100 Start: 61635, Stop: 62057, Start Num: 9

Candidate Starts for Wigglewigggle_100:

(Start: 9 @61635 has 66 MA's), (10, 61647), (19, 61788), (22, 61824), (23, 61833), (27, 61917), (28, 61926), (31, 61947), (33, 61974), (34, 61980),

Gene: Wilder_101 Start: 61682, Stop: 62104, Start Num: 9

Candidate Starts for Wilder_101:

(Start: 9 @61682 has 66 MA's), (10, 61694), (19, 61835), (22, 61871), (23, 61880), (27, 61964), (28, 61973), (31, 61994), (33, 62021), (34, 62027),

Gene: Winky_101 Start: 62404, Stop: 62826, Start Num: 9

Candidate Starts for Winky_101:

(Start: 9 @62404 has 66 MA's), (19, 62557), (22, 62593), (23, 62602), (27, 62686), (28, 62695), (31, 62716), (33, 62743), (34, 62749),

Gene: Wyatt2_99 Start: 60489, Stop: 60911, Start Num: 9

Candidate Starts for Wyatt2_99:

(1, 60333), (4, 60432), (Start: 5 @60438 has 1 MA's), (7, 60471), (Start: 9 @60489 has 66 MA's), (11, 60549), (Start: 16 @60615 has 1 MA's), (17, 60621), (22, 60678), (23, 60687),

Gene: Zakai_102 Start: 62114, Stop: 62536, Start Num: 9

Candidate Starts for Zakai_102:

(Start: 9 @62114 has 66 MA's), (10, 62126), (19, 62267), (22, 62303), (23, 62312), (27, 62396), (28, 62405), (31, 62426), (33, 62453), (34, 62459),

Gene: Zaria_99 Start: 59965, Stop: 60387, Start Num: 9

Candidate Starts for Zaria_99:

(1, 59809), (3, 59881), (4, 59908), (Start: 5 @59914 has 1 MA's), (7, 59947), (Start: 9 @59965 has 66 MA's), (11, 60025), (Start: 16 @60091 has 1 MA's), (17, 60097), (22, 60154), (23, 60163),

Gene: ZhongYanYuan_98 Start: 61828, Stop: 62250, Start Num: 9

Candidate Starts for ZhongYanYuan_98:

(Start: 9 @61828 has 66 MA's), (14, 61903), (19, 61981), (22, 62017), (23, 62026), (27, 62110), (28, 62119), (31, 62140), (33, 62167), (34, 62173),