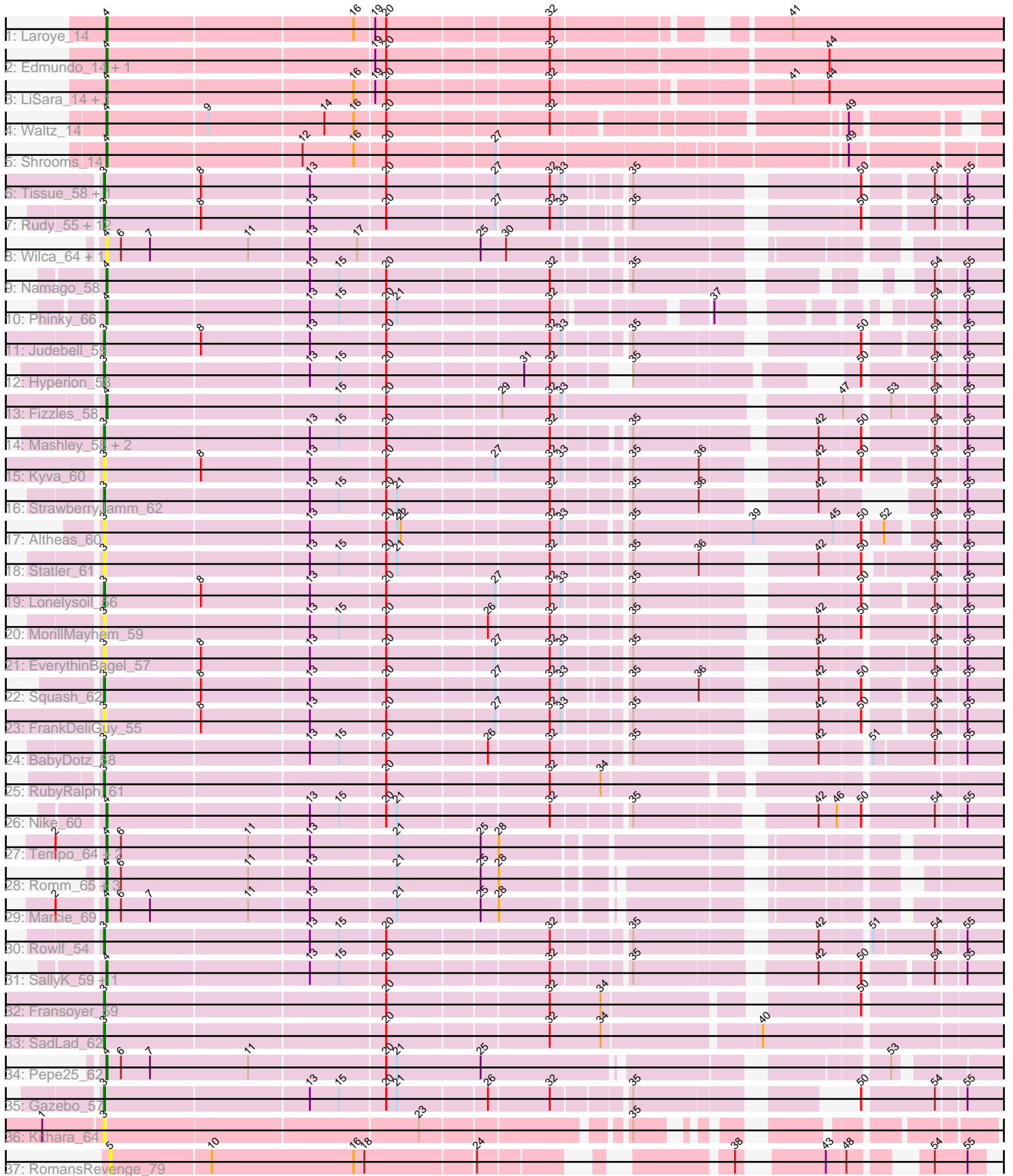


Pham 192575



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 192575 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192575 has 61 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Laroye_14
- Track 2 : Edmundo_14, Wheelbite_14
- Track 3 : LiSara_14, Salgado_14
- Track 4 : Waltz_14
- Track 5 : Shrooms_14
- Track 6 : Tissue_58, Grassboy_60
- Track 7 : Rudy_55, Quammi_55, DonaldDuck_57, Wheelie_57, Viceroy_56, Casend_58, Llemily_57, Wayne3_59, Phabia_57, Jehoshaphat_59, Zhafia_60, Teehee_58, Sillytadpoles_58
- Track 8 : Wilca_64, BirdInFrench_64
- Track 9 : Namago_58
- Track 10 : Phinky_66
- Track 11 : Judebell_59
- Track 12 : Hyperion_58
- Track 13 : Fizzles_58
- Track 14 : Mashley_58, AluminumJesus_55, Blab_56
- Track 15 : Kyva_60
- Track 16 : StrawberryJamm_62
- Track 17 : Altheas_60
- Track 18 : Statler_61
- Track 19 : Lonelysoil_56
- Track 20 : MorillMayhem_59
- Track 21 : EverythinBagel_57
- Track 22 : Squash_62
- Track 23 : FrankDeliGuy_55
- Track 24 : BabyDotz_58
- Track 25 : RubyRalph_61
- Track 26 : Nike_60
- Track 27 : Tempo_64, Kelcole_62, Fregley_64
- Track 28 : Romm_65, OneinaGillian_63, RobinRose_65, CandC_62
- Track 29 : Marcie_69
- Track 30 : Rowlf_54
- Track 31 : SallyK_59, Zagie_58
- Track 32 : Fransoyer_59
- Track 33 : SadLad_62
- Track 34 : Pepe25_62
- Track 35 : Gazebo_57

- Track 36 : Kithara_64
- Track 37 : RomansRevenge_79

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

The start number called the most often in the published annotations is 3, it was called in 24 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_60, AluminumJesus_55, BabyDotz_58, Blab_56, Casend_58, DonaldDuck_57, EverythinBagel_57, FrankDeliGuy_55, Fransoyer_59, Gazebo_57, Grassboy_60, Hyperion_58, Jehoshaphat_59, Judebell_59, Kithara_64, Kyva_60, Llemily_57, Lonelysoil_56, Mashley_58, MorillMayhem_59, Phabia_57, Quammi_55, Rowlf_54, RubyRalph_61, Rudy_55, SadLad_62, Sillytadpoles_58, Squash_62, Statler_61, StrawberryJamm_62, Teehee_58, Tissue_58, Viceroy_56, Wayne3_59, Wheelie_57, Zhafia_60,

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

-

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

- BirdInFrench_64, CandC_62, Edmundo_14, Fizzles_58, Fregley_64, Kelcole_62, Laroye_14, LiSara_14, Marcie_69, Namago_58, Nike_60, OneinaGillian_63, Pepe25_62, Phinky_66, RobinRose_65, RomansRevenge_79, Romm_65, Salgado_14, SallyK_59, Shrooms_14, Tempo_64, Waltz_14, Wheelbite_14, Wilca_64, Zagie_58,

Summary by start number:

Start 3:

- Found in 36 of 61 (59.0%) of genes in pham
- Manual Annotations of this start: 24 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altheas_60 (EG), AluminumJesus_55 (EG), BabyDotz_58 (EG), Blab_56 (EG), Casend_58 (EG), DonaldDuck_57 (EG), EverythinBagel_57 (EG), FrankDeliGuy_55 (EG), Fransoyer_59 (EG), Gazebo_57 (EG), Grassboy_60 (EG), Hyperion_58 (EG), Jehoshaphat_59 (EG), Judebell_59 (EG), Kithara_64 (singleton), Kyva_60 (EG), Llemily_57 (EG), Lonelysoil_56 (EG), Mashley_58 (EG), MorillMayhem_59 (EG), Phabia_57 (EG), Quammi_55 (EG), Rowlf_54 (EG), RubyRalph_61 (EG), Rudy_55 (EG), SadLad_62 (EG), Sillytadpoles_58 (EG), Squash_62 (EG), Statler_61 (EG), StrawberryJamm_62 (EG), Teehee_58 (EG), Tissue_58 (EG), Viceroy_56 (EG), Wayne3_59 (EG), Wheelie_57 (EG), Zhafia_60 (EG),

Start 4:

- Found in 24 of 61 (39.3%) of genes in pham
- Manual Annotations of this start: 21 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BirdInFrench_64 (EG), CandC_62 (EG), Edmundo_14 (AL), Fizzles_58 (EG), Fregley_64 (EG), Kelcole_62 (EG), Laroye_14

(AL), LiSara_14 (AL), Marcie_69 (EG), Namago_58 (EG), Nike_60 (EG), OneinaGillian_63 (EG), Pepe25_62 (EG), Phinky_66 (EG), RobinRose_65 (EG), Romm_65 (EG), Salgado_14 (AL), SallyK_59 (EG), Shrooms_14 (AL), Tempo_64 (EG), Waltz_14 (AL), Wheelbite_14 (AL), Wilca_64 (EG), Zagie_58 (EG),

Start 5:

- Found in 1 of 61 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RomansRevenge_79 (singleton),

Summary by clusters:

There are 3 clusters represented in this pham: EG, AL, singleton,

Info for manual annotations of cluster AL:

- Start number 4 was manually annotated 7 times for cluster AL.

Info for manual annotations of cluster EG:

- Start number 3 was manually annotated 24 times for cluster EG.
- Start number 4 was manually annotated 14 times for cluster EG.

Gene Information:

Gene: Altheas_60 Start: 43871, Stop: 43149, Start Num: 3

Candidate Starts for Altheas_60:

(Start: 3 @43871 has 24 MA's), (13, 43709), (20, 43649), (21, 43640), (22, 43637), (32, 43523), (33, 43514), (35, 43472), (39, 43379), (45, 43313), (50, 43292), (52, 43280), (54, 43247), (55, 43226),

Gene: AluminumJesus_55 Start: 42828, Stop: 42118, Start Num: 3

Candidate Starts for AluminumJesus_55:

(Start: 3 @42828 has 24 MA's), (13, 42666), (15, 42642), (20, 42606), (32, 42480), (35, 42423), (42, 42297), (50, 42264), (54, 42210), (55, 42189),

Gene: BabyDotz_58 Start: 44301, Stop: 43588, Start Num: 3

Candidate Starts for BabyDotz_58:

(Start: 3 @44301 has 24 MA's), (13, 44139), (15, 44115), (20, 44079), (26, 44001), (32, 43953), (35, 43899), (42, 43773), (51, 43737), (54, 43689), (55, 43668),

Gene: BirdInFrench_64 Start: 43759, Stop: 43046, Start Num: 4

Candidate Starts for BirdInFrench_64:

(Start: 4 @43759 has 21 MA's), (6, 43747), (7, 43723), (11, 43642), (13, 43594), (17, 43555), (25, 43456), (30, 43435),

Gene: Blab_56 Start: 43444, Stop: 42740, Start Num: 3

Candidate Starts for Blab_56:

(Start: 3 @43444 has 24 MA's), (13, 43282), (15, 43258), (20, 43222), (32, 43096), (35, 43042), (42, 42916), (50, 42883), (54, 42829), (55, 42808),

Gene: CandC_62 Start: 42994, Stop: 42269, Start Num: 4

Candidate Starts for CandC_62:

(Start: 4 @42994 has 21 MA's), (6, 42982), (11, 42877), (13, 42829), (21, 42760), (25, 42691), (28, 42676),

Gene: Casend_58 Start: 43670, Stop: 42972, Start Num: 3

Candidate Starts for Casend_58:

(Start: 3 @43670 has 24 MA's), (8, 43595), (13, 43508), (20, 43448), (27, 43364), (32, 43322), (33, 43313), (35, 43271), (50, 43112), (54, 43064), (55, 43043),

Gene: DonaldDuck_57 Start: 43019, Stop: 42321, Start Num: 3

Candidate Starts for DonaldDuck_57:

(Start: 3 @43019 has 24 MA's), (8, 42944), (13, 42857), (20, 42797), (27, 42713), (32, 42671), (33, 42662), (35, 42620), (50, 42461), (54, 42413), (55, 42392),

Gene: Edmundo_14 Start: 9885, Stop: 10643, Start Num: 4

Candidate Starts for Edmundo_14:

(Start: 4 @9885 has 21 MA's), (19, 10098), (20, 10107), (32, 10233), (44, 10446),

Gene: EverythinBagel_57 Start: 43393, Stop: 42680, Start Num: 3

Candidate Starts for EverythinBagel_57:

(Start: 3 @43393 has 24 MA's), (8, 43318), (13, 43231), (20, 43171), (27, 43087), (32, 43045), (33, 43036), (35, 42991), (42, 42865), (54, 42781), (55, 42760),

Gene: Fizzles_58 Start: 43354, Stop: 42620, Start Num: 4

Candidate Starts for Fizzles_58:

(Start: 4 @43354 has 21 MA's), (15, 43168), (20, 43132), (29, 43045), (32, 43006), (33, 42997), (47, 42787), (53, 42754), (54, 42721), (55, 42700),

Gene: FrankDeliGuy_55 Start: 43007, Stop: 42297, Start Num: 3

Candidate Starts for FrankDeliGuy_55:

(Start: 3 @43007 has 24 MA's), (8, 42932), (13, 42845), (20, 42785), (27, 42701), (32, 42659), (33, 42650), (35, 42605), (42, 42479), (50, 42446), (54, 42398), (55, 42377),

Gene: Fransoyer_59 Start: 45054, Stop: 44338, Start Num: 3

Candidate Starts for Fransoyer_59:

(Start: 3 @45054 has 24 MA's), (20, 44832), (32, 44706), (34, 44664), (50, 44484),

Gene: Fregley_64 Start: 43164, Stop: 42451, Start Num: 4

Candidate Starts for Fregley_64:

(2, 43200), (Start: 4 @43164 has 21 MA's), (6, 43152), (11, 43047), (13, 42999), (21, 42930), (25, 42861), (28, 42846),

Gene: Gazebo_57 Start: 43512, Stop: 42829, Start Num: 3

Candidate Starts for Gazebo_57:

(Start: 3 @43512 has 24 MA's), (13, 43350), (15, 43326), (20, 43290), (21, 43281), (26, 43212), (32, 43164), (35, 43110), (50, 42984), (54, 42930), (55, 42909),

Gene: Grassboy_60 Start: 43901, Stop: 43191, Start Num: 3

Candidate Starts for Grassboy_60:

(Start: 3 @43901 has 24 MA's), (8, 43826), (13, 43739), (20, 43679), (27, 43595), (32, 43553), (33, 43544), (35, 43499), (50, 43340), (54, 43292), (55, 43271),

Gene: Hyperion_58 Start: 43687, Stop: 43004, Start Num: 3

Candidate Starts for Hyperion_58:

(Start: 3 @43687 has 24 MA's), (13, 43525), (15, 43501), (20, 43465), (31, 43360), (32, 43339), (35, 43297), (50, 43156), (54, 43105), (55, 43084),

Gene: Jehoshaphat_59 Start: 43938, Stop: 43240, Start Num: 3

Candidate Starts for Jehoshaphat_59:

(Start: 3 @43938 has 24 MA's), (8, 43863), (13, 43776), (20, 43716), (27, 43632), (32, 43590), (33, 43581), (35, 43539), (50, 43380), (54, 43332), (55, 43311),

Gene: Judebell_59 Start: 43387, Stop: 42686, Start Num: 3

Candidate Starts for Judebell_59:

(Start: 3 @43387 has 24 MA's), (8, 43312), (13, 43225), (20, 43165), (32, 43039), (33, 43030), (35, 42985), (50, 42826), (54, 42778), (55, 42757),

Gene: Kelcole_62 Start: 43226, Stop: 42510, Start Num: 4

Candidate Starts for Kelcole_62:

(2, 43262), (Start: 4 @43226 has 21 MA's), (6, 43214), (11, 43109), (13, 43061), (21, 42992), (25, 42923), (28, 42908),

Gene: Kithara_64 Start: 46071, Stop: 45460, Start Num: 3

Candidate Starts for Kithara_64:

(1, 46119), (Start: 3 @46071 has 24 MA's), (23, 45822), (35, 45675),

Gene: Kyva_60 Start: 43924, Stop: 43214, Start Num: 3

Candidate Starts for Kyva_60:

(Start: 3 @43924 has 24 MA's), (8, 43849), (13, 43762), (20, 43702), (27, 43618), (32, 43576), (33, 43567), (35, 43522), (36, 43471), (42, 43396), (50, 43363), (54, 43315), (55, 43294),

Gene: Laroye_14 Start: 9623, Stop: 10354, Start Num: 4

Candidate Starts for Laroye_14:

(Start: 4 @9623 has 21 MA's), (16, 9821), (19, 9836), (20, 9845), (32, 9971), (41, 10127),

Gene: LiSara_14 Start: 9657, Stop: 10409, Start Num: 4

Candidate Starts for LiSara_14:

(Start: 4 @9657 has 21 MA's), (16, 9855), (19, 9870), (20, 9879), (32, 10005), (41, 10182), (44, 10212),

Gene: Llemily_57 Start: 42714, Stop: 42016, Start Num: 3

Candidate Starts for Llemily_57:

(Start: 3 @42714 has 24 MA's), (8, 42639), (13, 42552), (20, 42492), (27, 42408), (32, 42366), (33, 42357), (35, 42315), (50, 42156), (54, 42108), (55, 42087),

Gene: Lonelysoil_56 Start: 42870, Stop: 42169, Start Num: 3

Candidate Starts for Lonelysoil_56:

(Start: 3 @42870 has 24 MA's), (8, 42795), (13, 42708), (20, 42648), (27, 42564), (32, 42522), (33, 42513), (35, 42468), (50, 42309), (54, 42261), (55, 42240),

Gene: Marcie_69 Start: 44119, Stop: 43409, Start Num: 4

Candidate Starts for Marcie_69:

(2, 44155), (Start: 4 @44119 has 21 MA's), (6, 44107), (7, 44083), (11, 44002), (13, 43954), (21, 43885), (25, 43816), (28, 43801),

Gene: Mashley_58 Start: 43499, Stop: 42783, Start Num: 3

Candidate Starts for Mashley_58:

(Start: 3 @43499 has 24 MA's), (13, 43337), (15, 43313), (20, 43277), (32, 43151), (35, 43100), (42, 42968), (50, 42935), (54, 42884), (55, 42863),

Gene: MorillMayhem_59 Start: 43826, Stop: 43119, Start Num: 3

Candidate Starts for MorillMayhem_59:

(Start: 3 @43826 has 24 MA's), (13, 43664), (15, 43640), (20, 43604), (26, 43526), (32, 43478), (35, 43424), (42, 43295), (50, 43262), (54, 43211), (55, 43190),

Gene: Namago_58 Start: 42834, Stop: 42160, Start Num: 4

Candidate Starts for Namago_58:

(Start: 4 @42834 has 21 MA's), (13, 42672), (15, 42648), (20, 42612), (32, 42486), (35, 42432), (54, 42261), (55, 42240),

Gene: Nike_60 Start: 44258, Stop: 43542, Start Num: 4

Candidate Starts for Nike_60:

(Start: 4 @44258 has 21 MA's), (13, 44096), (15, 44072), (20, 44036), (21, 44027), (32, 43910), (35, 43856), (42, 43730), (46, 43715), (50, 43697), (54, 43643), (55, 43622),

Gene: OneinaGillian_63 Start: 43119, Stop: 42412, Start Num: 4

Candidate Starts for OneinaGillian_63:

(Start: 4 @43119 has 21 MA's), (6, 43107), (11, 43002), (13, 42954), (21, 42885), (25, 42816), (28, 42801),

Gene: Pepe25_62 Start: 42678, Stop: 41956, Start Num: 4

Candidate Starts for Pepe25_62:

(Start: 4 @42678 has 21 MA's), (6, 42666), (7, 42642), (11, 42561), (20, 42453), (21, 42444), (25, 42375), (53, 42087),

Gene: Phabia_57 Start: 43129, Stop: 42431, Start Num: 3

Candidate Starts for Phabia_57:

(Start: 3 @43129 has 24 MA's), (8, 43054), (13, 42967), (20, 42907), (27, 42823), (32, 42781), (33, 42772), (35, 42730), (50, 42571), (54, 42523), (55, 42502),

Gene: Phinky_66 Start: 45167, Stop: 44487, Start Num: 4

Candidate Starts for Phinky_66:

(Start: 4 @45167 has 21 MA's), (13, 45005), (15, 44981), (20, 44945), (21, 44936), (32, 44819), (37, 44714), (54, 44588), (55, 44567),

Gene: Quammi_55 Start: 42829, Stop: 42131, Start Num: 3

Candidate Starts for Quammi_55:

(Start: 3 @42829 has 24 MA's), (8, 42754), (13, 42667), (20, 42607), (27, 42523), (32, 42481), (33, 42472), (35, 42430), (50, 42271), (54, 42223), (55, 42202),

Gene: RobinRose_65 Start: 43625, Stop: 42924, Start Num: 4

Candidate Starts for RobinRose_65:

(Start: 4 @43625 has 21 MA's), (6, 43613), (11, 43508), (13, 43460), (21, 43391), (25, 43322), (28, 43307),

Gene: RomansRevenge_79 Start: 53660, Stop: 53067, Start Num: 5

Candidate Starts for RomansRevenge_79:

(5, 53660), (10, 53579), (16, 53462), (18, 53453), (24, 53366), (38, 53216), (43, 53165), (48, 53150), (54, 53108), (55, 53081),

Gene: Romm_65 Start: 43622, Stop: 42921, Start Num: 4

Candidate Starts for Romm_65:

(Start: 4 @43622 has 21 MA's), (6, 43610), (11, 43505), (13, 43457), (21, 43388), (25, 43319), (28, 43304),

Gene: Rowlf_54 Start: 42772, Stop: 42059, Start Num: 3

Candidate Starts for Rowlf_54:

(Start: 3 @42772 has 24 MA's), (13, 42610), (15, 42586), (20, 42550), (32, 42424), (35, 42370), (42, 42244), (51, 42208), (54, 42160), (55, 42139),

Gene: RubyRalph_61 Start: 45401, Stop: 44676, Start Num: 3

Candidate Starts for RubyRalph_61:

(Start: 3 @45401 has 24 MA's), (20, 45179), (32, 45053), (34, 45011),

Gene: Rudy_55 Start: 42865, Stop: 42167, Start Num: 3

Candidate Starts for Rudy_55:

(Start: 3 @42865 has 24 MA's), (8, 42790), (13, 42703), (20, 42643), (27, 42559), (32, 42517), (33, 42508), (35, 42466), (50, 42307), (54, 42259), (55, 42238),

Gene: SadLad_62 Start: 46174, Stop: 45440, Start Num: 3

Candidate Starts for SadLad_62:

(Start: 3 @46174 has 24 MA's), (20, 45952), (32, 45826), (34, 45784), (40, 45664),

Gene: Salgado_14 Start: 9631, Stop: 10362, Start Num: 4

Candidate Starts for Salgado_14:

(Start: 4 @9631 has 21 MA's), (16, 9829), (19, 9844), (20, 9853), (32, 9979), (41, 10135), (44, 10165),

Gene: SallyK_59 Start: 44086, Stop: 43373, Start Num: 4

Candidate Starts for SallyK_59:

(Start: 4 @44086 has 21 MA's), (13, 43924), (15, 43900), (20, 43864), (32, 43738), (35, 43684), (42, 43555), (50, 43522), (54, 43474), (55, 43453),

Gene: Shrooms_14 Start: 9704, Stop: 10450, Start Num: 4

Candidate Starts for Shrooms_14:

(Start: 4 @9704 has 21 MA's), (12, 9860), (16, 9902), (20, 9926), (27, 10010), (49, 10271),

Gene: Sillytadpoles_58 Start: 42702, Stop: 42004, Start Num: 3

Candidate Starts for Sillytadpoles_58:

(Start: 3 @42702 has 24 MA's), (8, 42627), (13, 42540), (20, 42480), (27, 42396), (32, 42354), (33, 42345), (35, 42303), (50, 42144), (54, 42096), (55, 42075),

Gene: Squash_62 Start: 44406, Stop: 43699, Start Num: 3

Candidate Starts for Squash_62:

(Start: 3 @44406 has 24 MA's), (8, 44331), (13, 44244), (20, 44184), (27, 44100), (32, 44058), (33, 44049), (35, 44007), (36, 43956), (42, 43881), (50, 43848), (54, 43800), (55, 43779),

Gene: Statler_61 Start: 43488, Stop: 42778, Start Num: 3

Candidate Starts for Statler_61:

(Start: 3 @43488 has 24 MA's), (13, 43326), (15, 43302), (20, 43266), (21, 43257), (32, 43140), (35, 43086), (36, 43035), (42, 42960), (50, 42927), (54, 42879), (55, 42858),

Gene: StrawberryJamm_62 Start: 43175, Stop: 42492, Start Num: 3

Candidate Starts for StrawberryJamm_62:

(Start: 3 @43175 has 24 MA's), (13, 43013), (15, 42989), (20, 42953), (21, 42944), (32, 42827), (35, 42773), (36, 42722), (42, 42647), (54, 42593), (55, 42572),

Gene: Teehee_58 Start: 43935, Stop: 43237, Start Num: 3

Candidate Starts for Teehee_58:

(Start: 3 @43935 has 24 MA's), (8, 43860), (13, 43773), (20, 43713), (27, 43629), (32, 43587), (33, 43578), (35, 43536), (50, 43377), (54, 43329), (55, 43308),

Gene: Tempo_64 Start: 43508, Stop: 42789, Start Num: 4

Candidate Starts for Tempo_64:

(2, 43544), (Start: 4 @43508 has 21 MA's), (6, 43496), (11, 43391), (13, 43343), (21, 43274), (25, 43205), (28, 43190),

Gene: Tissue_58 Start: 43778, Stop: 43071, Start Num: 3

Candidate Starts for Tissue_58:

(Start: 3 @43778 has 24 MA's), (8, 43703), (13, 43616), (20, 43556), (27, 43472), (32, 43430), (33, 43421), (35, 43379), (50, 43220), (54, 43172), (55, 43151),

Gene: Viceroy_56 Start: 42835, Stop: 42137, Start Num: 3

Candidate Starts for Viceroy_56:

(Start: 3 @42835 has 24 MA's), (8, 42760), (13, 42673), (20, 42613), (27, 42529), (32, 42487), (33, 42478), (35, 42436), (50, 42277), (54, 42229), (55, 42208),

Gene: Waltz_14 Start: 9797, Stop: 10513, Start Num: 4

Candidate Starts for Waltz_14:

(Start: 4 @9797 has 21 MA's), (9, 9878), (14, 9971), (16, 9995), (20, 10019), (32, 10145), (49, 10352),

Gene: Wayne3_59 Start: 43698, Stop: 43000, Start Num: 3

Candidate Starts for Wayne3_59:

(Start: 3 @43698 has 24 MA's), (8, 43623), (13, 43536), (20, 43476), (27, 43392), (32, 43350), (33, 43341), (35, 43299), (50, 43140), (54, 43092), (55, 43071),

Gene: Wheelbite_14 Start: 9719, Stop: 10477, Start Num: 4

Candidate Starts for Wheelbite_14:

(Start: 4 @9719 has 21 MA's), (19, 9932), (20, 9941), (32, 10067), (44, 10280),

Gene: Wheelie_57 Start: 43019, Stop: 42321, Start Num: 3

Candidate Starts for Wheelie_57:

(Start: 3 @43019 has 24 MA's), (8, 42944), (13, 42857), (20, 42797), (27, 42713), (32, 42671), (33, 42662), (35, 42620), (50, 42461), (54, 42413), (55, 42392),

Gene: Wilca_64 Start: 43759, Stop: 43046, Start Num: 4

Candidate Starts for Wilca_64:

(Start: 4 @43759 has 21 MA's), (6, 43747), (7, 43723), (11, 43642), (13, 43594), (17, 43555), (25, 43456), (30, 43435),

Gene: Zagie_58 Start: 43363, Stop: 42659, Start Num: 4

Candidate Starts for Zagie_58:

(Start: 4 @43363 has 21 MA's), (13, 43201), (15, 43177), (20, 43141), (32, 43015), (35, 42961), (42, 42832), (50, 42799), (54, 42751), (55, 42730),

Gene: Zhafia_60 Start: 43499, Stop: 42801, Start Num: 3

Candidate Starts for Zhafia_60:

(Start: 3 @43499 has 24 MA's), (8, 43424), (13, 43337), (20, 43277), (27, 43193), (32, 43151), (33, 43142), (35, 43100), (50, 42941), (54, 42893), (55, 42872),