



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 85423 Report

This analysis was run 04/28/24 on database version 559.

Pham number 85423 has 82 members, 7 are drafts.

Phages represented in each track:

- Track 1 : CharlieGBrown_52, Gophee_53, Emiris_54, Inchworm_54, Charles1_53, Jillium_52, Bluephacebaby_52, Maskar_53, Placalicious_52, Bishoperium_52, LemonSlice_53, Riggan_53, Shida_101, JakeO_52, Mecca_52, Cobra_53, Cher_52, Skippy_53, Familton_100, ImtiyazSitla_53, Kimbrough_53, BatteryCK_52, Krili_101, PhrankReynolds_51, Ashraf_53, LostAndPhound_52, TyrionL_52, Burr_52, Jiminy_52, Magic8_53, FugateOSU_52, Phleuron_52, KingTut_44, Gareth_52, Mori_99, Omniscient_53, Zonia_53, TelAviv_96, DirtJuice_53, Lumine_52, PhenghisKhan_52, Vaticameos_49, SchoolBus_98, Keitherie_53, Duggie_52, YouGoGlencoco_53, Idergollasper_101, Phergie_53, Chaelin_53, MichaelPhcott_52, Anderson_53, Vorrps_99, PinheadLarry_53, Mag7_52, Catdawg_100, Hocus_52, Wallhey_52, BlueHusk_53, Tomlarah_53, Squiggle_53, Trypo_54, Durga_54, Slatt_53, Windsor_52
- Track 2 : Schueller_53, Megamind20_53, Coletti_52, Struggle_52, Chute_52, Labeouficaum_52, Jiraiya_55, Quisquillae_53, Virapocalypse_53, Scrick_53, PhrodoBaggins_53, Oline_52, Prickles_53, Iridoclysis_53, Bora_98
- Track 3 : Daka_54, Mutante_52
- Track 4 : Kwksand96_52

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

The start number called the most often in the published annotations is 1, it was called in 64 of the 75 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Anderson_53, Ashraf_53, BatteryCK_52, Bishoperium_52, BlueHusk_53, Bluephacebaby_52, Burr_52, Catdawg_100, Chaelin_53, Charles1_53, CharlieGBrown_52, Cher_52, Cobra_53, DirtJuice_53, Duggie_52, Durga_54, Emiris_54, Familton_100, FugateOSU_52, Gareth_52, Gophee_53, Hocus_52, Idergollasper_101, ImtiyazSitla_53, Inchworm_54, JakeO_52, Jillium_52, Jiminy_52, Keitherie_53, Kimbrough_53, KingTut_44, Krili_101, LemonSlice_53, LostAndPhound_52, Lumine_52, Mag7_52, Magic8_53, Maskar_53, Mecca_52, MichaelPhcott_52, Mori_99, Omniscient_53, PhenghisKhan_52, Phergie_53, Phleuron_52, PhrankReynolds_51, PinheadLarry_53, Placalicious_52, Riggan_53, SchoolBus_98, Shida_101, Skippy_53, Slatt_53, Squiggle_53, TelAviv_96,

Tomlarah_53, Trypo_54, TyrionL_52, Vaticameos_49, Vorrps_99, Wallhey_52, Windsor_52, YouGoGlencoco_53, Zonia_53,

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

- Bora_98, Chute_52, Coletti_52, Iridoclysis_53, Jiraiya_55, Labeouficaum_52, Megamind20_53, Oline_52, PhrodoBaggins_53, Prickles_53, Quisquilliae_53, Schueller_53, Scrick_53, Struggle_52, Virapocalypse_53,

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

- Daka_54, Kwksand96_52, Mutante_52,

Summary by start number:

Start 1:

- Found in 79 of 82 (96.3%) of genes in pham
- Manual Annotations of this start: 64 of 75
- Called 81.0% of time when present
- Phage (with cluster) where this start called: Anderson_53 (B1), Ashraf_53 (B1), BatteryCK_52 (B1), Bishoperium_52 (B1), BlueHusk_53 (B1), Bluephacebaby_52 (B1), Burr_52 (B1), Catdawg_100 (O), Chaelin_53 (B1), Charles1_53 (B1), CharlieGBrown_52 (B1), Cher_52 (B1), Cobra_53 (B1), DirtJuice_53 (B1), Duggie_52 (B1), Durga_54 (B1), Emiris_54 (B1), Familton_100 (O), FugateOSU_52 (B1), Gareth_52 (B1), Gophee_53 (B1), Hocus_52 (B1), Idergollasper_101 (O), ImtiyazSitla_53 (B1), Inchworm_54 (B1), JakeO_52 (B1), Jillium_52 (B1), Jiminy_52 (B1), Keitherie_53 (B1), Kimbrough_53 (B1), KingTut_44 (B1), Krili_101 (O), LemonSlice_53 (B1), LostAndPhound_52 (B1), Lumine_52 (B1), Mag7_52 (B1), Magic8_53 (B1), Maskar_53 (B1), Mecca_52 (B1), MichaelPhcott_52 (B1), Mori_99 (O), Omniscient_53 (B1), PhenghisKhan_52 (B1), Phergie_53 (B1), Phleuron_52 (B1), PhrankReynolds_51 (B1), PinheadLarry_53 (B1), Placalicious_52 (B1), Riggan_53 (B1), SchoolBus_98 (O), Shida_101 (O), Skippy_53 (B1), Slatt_53 (B1), Squiggle_53 (B1), TelAviv_96 (O), Tomlarah_53 (B1), Trypo_54 (B1), TyrionL_52 (B1), Vaticameos_49 (B1), Vorrps_99 (O), Wallhey_52 (B1), Windsor_52 (B1), YouGoGlencoco_53 (B1), Zonia_53 (B1),

Start 4:

- Found in 82 of 82 (100.0%) of genes in pham
- Manual Annotations of this start: 11 of 75
- Called 22.0% of time when present
- Phage (with cluster) where this start called: Bora_98 (O), Chute_52 (B1), Coletti_52 (B1), Daka_54 (B1), Iridoclysis_53 (B1), Jiraiya_55 (B1), Kwksand96_52 (B1), Labeouficaum_52 (B1), Megamind20_53 (B1), Mutante_52 (B1), Oline_52 (B1), PhrodoBaggins_53 (B1), Prickles_53 (B1), Quisquilliae_53 (B1), Schueller_53 (B1), Scrick_53 (B1), Struggle_52 (B1), Virapocalypse_53 (B1),

Summary by clusters:

There are 2 clusters represented in this pham: B1, O,

Info for manual annotations of cluster B1:

- Start number 1 was manually annotated 55 times for cluster B1.
- Start number 4 was manually annotated 11 times for cluster B1.

Info for manual annotations of cluster O:

- Start number 1 was manually annotated 9 times for cluster O.

Gene Information:

Gene: Anderson_53 Start: 47456, Stop: 47052, Start Num: 1

Candidate Starts for Anderson_53:

(Start: 1 @47456 has 64 MA's), (Start: 4 @47411 has 11 MA's), (5, 47333), (6, 47324), (7, 47249), (8, 47228), (9, 47210), (10, 47099),

Gene: Ashraf_53 Start: 47158, Stop: 46754, Start Num: 1

Candidate Starts for Ashraf_53:

(Start: 1 @47158 has 64 MA's), (Start: 4 @47113 has 11 MA's), (5, 47035), (6, 47026), (7, 46951), (8, 46930), (9, 46912), (10, 46801),

Gene: BatteryCK_52 Start: 47098, Stop: 46694, Start Num: 1

Candidate Starts for BatteryCK_52:

(Start: 1 @47098 has 64 MA's), (Start: 4 @47053 has 11 MA's), (5, 46975), (6, 46966), (7, 46891), (8, 46870), (9, 46852), (10, 46741),

Gene: Bishoperium_52 Start: 47170, Stop: 46766, Start Num: 1

Candidate Starts for Bishoperium_52:

(Start: 1 @47170 has 64 MA's), (Start: 4 @47125 has 11 MA's), (5, 47047), (6, 47038), (7, 46963), (8, 46942), (9, 46924), (10, 46813),

Gene: BlueHusk_53 Start: 46976, Stop: 46572, Start Num: 1

Candidate Starts for BlueHusk_53:

(Start: 1 @46976 has 64 MA's), (Start: 4 @46931 has 11 MA's), (5, 46853), (6, 46844), (7, 46769), (8, 46748), (9, 46730), (10, 46619),

Gene: Bluephacebaby_52 Start: 47173, Stop: 46769, Start Num: 1

Candidate Starts for Bluephacebaby_52:

(Start: 1 @47173 has 64 MA's), (Start: 4 @47128 has 11 MA's), (5, 47050), (6, 47041), (7, 46966), (8, 46945), (9, 46927), (10, 46816),

Gene: Bora_98 Start: 62179, Stop: 61835, Start Num: 4

Candidate Starts for Bora_98:

(Start: 1 @62224 has 64 MA's), (Start: 4 @62179 has 11 MA's), (5, 62101), (6, 62092), (7, 62017), (8, 61996), (9, 61978), (10, 61867),

Gene: Burr_52 Start: 47167, Stop: 46763, Start Num: 1

Candidate Starts for Burr_52:

(Start: 1 @47167 has 64 MA's), (Start: 4 @47122 has 11 MA's), (5, 47044), (6, 47035), (7, 46960), (8, 46939), (9, 46921), (10, 46810),

Gene: Catdawg_100 Start: 62494, Stop: 62105, Start Num: 1

Candidate Starts for Catdawg_100:

(Start: 1 @62494 has 64 MA's), (Start: 4 @62449 has 11 MA's), (5, 62371), (6, 62362), (7, 62287), (8, 62266), (9, 62248), (10, 62137),

Gene: Chaelin_53 Start: 47168, Stop: 46764, Start Num: 1

Candidate Starts for Chaelin_53:

(Start: 1 @47168 has 64 MA's), (Start: 4 @47123 has 11 MA's), (5, 47045), (6, 47036), (7, 46961), (8, 46940), (9, 46922), (10, 46811),

Gene: Charles1_53 Start: 47453, Stop: 47049, Start Num: 1

Candidate Starts for Charles1_53:

(Start: 1 @47453 has 64 MA's), (Start: 4 @47408 has 11 MA's), (5, 47330), (6, 47321), (7, 47246), (8, 47225), (9, 47207), (10, 47096),

Gene: CharlieGBrown_52 Start: 47043, Stop: 46639, Start Num: 1

Candidate Starts for CharlieGBrown_52:

(Start: 1 @47043 has 64 MA's), (Start: 4 @46998 has 11 MA's), (5, 46920), (6, 46911), (7, 46836), (8, 46815), (9, 46797), (10, 46686),

Gene: Cher_52 Start: 47190, Stop: 46786, Start Num: 1

Candidate Starts for Cher_52:

(Start: 1 @47190 has 64 MA's), (Start: 4 @47145 has 11 MA's), (5, 47067), (6, 47058), (7, 46983), (8, 46962), (9, 46944), (10, 46833),

Gene: Chute_52 Start: 47469, Stop: 47110, Start Num: 4

Candidate Starts for Chute_52:

(Start: 1 @47514 has 64 MA's), (Start: 4 @47469 has 11 MA's), (5, 47391), (6, 47382), (7, 47307), (8, 47286), (9, 47268), (10, 47157),

Gene: Cobra_53 Start: 47488, Stop: 47084, Start Num: 1

Candidate Starts for Cobra_53:

(Start: 1 @47488 has 64 MA's), (Start: 4 @47443 has 11 MA's), (5, 47365), (6, 47356), (7, 47281), (8, 47260), (9, 47242), (10, 47131),

Gene: Coletti_52 Start: 47469, Stop: 47110, Start Num: 4

Candidate Starts for Coletti_52:

(Start: 1 @47514 has 64 MA's), (Start: 4 @47469 has 11 MA's), (5, 47391), (6, 47382), (7, 47307), (8, 47286), (9, 47268), (10, 47157),

Gene: Daka_54 Start: 47410, Stop: 47051, Start Num: 4

Candidate Starts for Daka_54:

(Start: 4 @47410 has 11 MA's), (5, 47332), (6, 47323), (7, 47248), (8, 47227), (9, 47209), (10, 47098),

Gene: DirtJuice_53 Start: 47445, Stop: 47041, Start Num: 1

Candidate Starts for DirtJuice_53:

(Start: 1 @47445 has 64 MA's), (Start: 4 @47400 has 11 MA's), (5, 47322), (6, 47313), (7, 47238), (8, 47217), (9, 47199), (10, 47088),

Gene: Duggie_52 Start: 47185, Stop: 46781, Start Num: 1

Candidate Starts for Duggie_52:

(Start: 1 @47185 has 64 MA's), (Start: 4 @47140 has 11 MA's), (5, 47062), (6, 47053), (7, 46978), (8, 46957), (9, 46939), (10, 46828),

Gene: Durga_54 Start: 47624, Stop: 47220, Start Num: 1

Candidate Starts for Durga_54:

(Start: 1 @47624 has 64 MA's), (Start: 4 @47579 has 11 MA's), (5, 47501), (6, 47492), (7, 47417), (8, 47396), (9, 47378), (10, 47267),

Gene: Emiris_54 Start: 47592, Stop: 47188, Start Num: 1

Candidate Starts for Emiris_54:

(Start: 1 @47592 has 64 MA's), (Start: 4 @47547 has 11 MA's), (5, 47469), (6, 47460), (7, 47385), (8, 47364), (9, 47346), (10, 47235),

Gene: Familton_100 Start: 61906, Stop: 61517, Start Num: 1

Candidate Starts for Familton_100:

(Start: 1 @61906 has 64 MA's), (Start: 4 @61861 has 11 MA's), (5, 61783), (6, 61774), (7, 61699), (8, 61678), (9, 61660), (10, 61549),

Gene: FugateOSU_52 Start: 47171, Stop: 46767, Start Num: 1

Candidate Starts for FugateOSU_52:

(Start: 1 @47171 has 64 MA's), (Start: 4 @47126 has 11 MA's), (5, 47048), (6, 47039), (7, 46964), (8, 46943), (9, 46925), (10, 46814),

Gene: Gareth_52 Start: 47165, Stop: 46761, Start Num: 1

Candidate Starts for Gareth_52:

(Start: 1 @47165 has 64 MA's), (Start: 4 @47120 has 11 MA's), (5, 47042), (6, 47033), (7, 46958), (8, 46937), (9, 46919), (10, 46808),

Gene: Gophee_53 Start: 47463, Stop: 47059, Start Num: 1

Candidate Starts for Gophee_53:

(Start: 1 @47463 has 64 MA's), (Start: 4 @47418 has 11 MA's), (5, 47340), (6, 47331), (7, 47256), (8, 47235), (9, 47217), (10, 47106),

Gene: Hocus_52 Start: 47169, Stop: 46765, Start Num: 1

Candidate Starts for Hocus_52:

(Start: 1 @47169 has 64 MA's), (Start: 4 @47124 has 11 MA's), (5, 47046), (6, 47037), (7, 46962), (8, 46941), (9, 46923), (10, 46812),

Gene: Idergollasper_101 Start: 62454, Stop: 62065, Start Num: 1

Candidate Starts for Idergollasper_101:

(Start: 1 @62454 has 64 MA's), (Start: 4 @62409 has 11 MA's), (5, 62331), (6, 62322), (7, 62247), (8, 62226), (9, 62208), (10, 62097),

Gene: ImtiyazSitla_53 Start: 47158, Stop: 46754, Start Num: 1

Candidate Starts for ImtiyazSitla_53:

(Start: 1 @47158 has 64 MA's), (Start: 4 @47113 has 11 MA's), (5, 47035), (6, 47026), (7, 46951), (8, 46930), (9, 46912), (10, 46801),

Gene: Inchworm_54 Start: 47596, Stop: 47192, Start Num: 1

Candidate Starts for Inchworm_54:

(Start: 1 @47596 has 64 MA's), (Start: 4 @47551 has 11 MA's), (5, 47473), (6, 47464), (7, 47389), (8, 47368), (9, 47350), (10, 47239),

Gene: Iridoclysis_53 Start: 47410, Stop: 47051, Start Num: 4

Candidate Starts for Iridoclysis_53:

(Start: 1 @47455 has 64 MA's), (Start: 4 @47410 has 11 MA's), (5, 47332), (6, 47323), (7, 47248), (8, 47227), (9, 47209), (10, 47098),

Gene: JakeO_52 Start: 47188, Stop: 46784, Start Num: 1

Candidate Starts for JakeO_52:

(Start: 1 @47188 has 64 MA's), (Start: 4 @47143 has 11 MA's), (5, 47065), (6, 47056), (7, 46981), (8, 46960), (9, 46942), (10, 46831),

Gene: Jillium_52 Start: 47185, Stop: 46781, Start Num: 1

Candidate Starts for Jillium_52:

(Start: 1 @47185 has 64 MA's), (Start: 4 @47140 has 11 MA's), (5, 47062), (6, 47053), (7, 46978), (8, 46957), (9, 46939), (10, 46828),

Gene: Jiminy_52 Start: 47023, Stop: 46619, Start Num: 1

Candidate Starts for Jiminy_52:

(Start: 1 @47023 has 64 MA's), (Start: 4 @46978 has 11 MA's), (5, 46900), (6, 46891), (7, 46816), (8, 46795), (9, 46777), (10, 46666),

Gene: Jiraiya_55 Start: 47131, Stop: 46772, Start Num: 4

Candidate Starts for Jiraiya_55:

(Start: 1 @47176 has 64 MA's), (Start: 4 @47131 has 11 MA's), (5, 47053), (6, 47044), (7, 46969), (8, 46948), (9, 46930), (10, 46819),

Gene: Keitherie_53 Start: 47523, Stop: 47119, Start Num: 1

Candidate Starts for Keitherie_53:

(Start: 1 @47523 has 64 MA's), (Start: 4 @47478 has 11 MA's), (5, 47400), (6, 47391), (7, 47316), (8, 47295), (9, 47277), (10, 47166),

Gene: Kimbrough_53 Start: 47186, Stop: 46782, Start Num: 1

Candidate Starts for Kimbrough_53:

(Start: 1 @47186 has 64 MA's), (Start: 4 @47141 has 11 MA's), (5, 47063), (6, 47054), (7, 46979), (8, 46958), (9, 46940), (10, 46829),

Gene: KingTut_44 Start: 42850, Stop: 42446, Start Num: 1

Candidate Starts for KingTut_44:

(Start: 1 @42850 has 64 MA's), (Start: 4 @42805 has 11 MA's), (5, 42727), (6, 42718), (7, 42643), (8, 42622), (9, 42604), (10, 42493),

Gene: Krili_101 Start: 62003, Stop: 61614, Start Num: 1

Candidate Starts for Krili_101:

(Start: 1 @62003 has 64 MA's), (Start: 4 @61958 has 11 MA's), (5, 61880), (6, 61871), (7, 61796), (8, 61775), (9, 61757), (10, 61646),

Gene: Kwksand96_52 Start: 46992, Stop: 46633, Start Num: 4

Candidate Starts for Kwksand96_52:

(2, 47034), (3, 47019), (Start: 4 @46992 has 11 MA's), (5, 46914), (6, 46905), (7, 46830), (8, 46809), (9, 46791), (10, 46680),

Gene: Labeouficaum_52 Start: 46987, Stop: 46628, Start Num: 4

Candidate Starts for Labeouficaum_52:

(Start: 1 @47032 has 64 MA's), (Start: 4 @46987 has 11 MA's), (5, 46909), (6, 46900), (7, 46825), (8, 46804), (9, 46786), (10, 46675),

Gene: LemonSlice_53 Start: 47174, Stop: 46770, Start Num: 1

Candidate Starts for LemonSlice_53:

(Start: 1 @47174 has 64 MA's), (Start: 4 @47129 has 11 MA's), (5, 47051), (6, 47042), (7, 46967), (8, 46946), (9, 46928), (10, 46817),

Gene: LostAndPhound_52 Start: 47189, Stop: 46785, Start Num: 1

Candidate Starts for LostAndPhound_52:

(Start: 1 @47189 has 64 MA's), (Start: 4 @47144 has 11 MA's), (5, 47066), (6, 47057), (7, 46982), (8, 46961), (9, 46943), (10, 46832),

Gene: Lumine_52 Start: 47158, Stop: 46754, Start Num: 1

Candidate Starts for Lumine_52:

(Start: 1 @47158 has 64 MA's), (Start: 4 @47113 has 11 MA's), (5, 47035), (6, 47026), (7, 46951), (8, 46930), (9, 46912), (10, 46801),

Gene: Mag7_52 Start: 47092, Stop: 46688, Start Num: 1

Candidate Starts for Mag7_52:

(Start: 1 @47092 has 64 MA's), (Start: 4 @47047 has 11 MA's), (5, 46969), (6, 46960), (7, 46885), (8, 46864), (9, 46846), (10, 46735),

Gene: Magic8_53 Start: 47527, Stop: 47123, Start Num: 1

Candidate Starts for Magic8_53:

(Start: 1 @47527 has 64 MA's), (Start: 4 @47482 has 11 MA's), (5, 47404), (6, 47395), (7, 47320), (8, 47299), (9, 47281), (10, 47170),

Gene: Maskar_53 Start: 47158, Stop: 46754, Start Num: 1

Candidate Starts for Maskar_53:

(Start: 1 @47158 has 64 MA's), (Start: 4 @47113 has 11 MA's), (5, 47035), (6, 47026), (7, 46951), (8, 46930), (9, 46912), (10, 46801),

Gene: Mecca_52 Start: 47174, Stop: 46770, Start Num: 1

Candidate Starts for Mecca_52:

(Start: 1 @47174 has 64 MA's), (Start: 4 @47129 has 11 MA's), (5, 47051), (6, 47042), (7, 46967), (8, 46946), (9, 46928), (10, 46817),

Gene: Megamind20_53 Start: 47152, Stop: 46793, Start Num: 4

Candidate Starts for Megamind20_53:

(Start: 1 @47197 has 64 MA's), (Start: 4 @47152 has 11 MA's), (5, 47074), (6, 47065), (7, 46990), (8, 46969), (9, 46951), (10, 46840),

Gene: MichaelPhcott_52 Start: 47089, Stop: 46685, Start Num: 1

Candidate Starts for MichaelPhcott_52:

(Start: 1 @47089 has 64 MA's), (Start: 4 @47044 has 11 MA's), (5, 46966), (6, 46957), (7, 46882), (8, 46861), (9, 46843), (10, 46732),

Gene: Mori_99 Start: 62032, Stop: 61643, Start Num: 1

Candidate Starts for Mori_99:

(Start: 1 @62032 has 64 MA's), (Start: 4 @61987 has 11 MA's), (5, 61909), (6, 61900), (7, 61825), (8, 61804), (9, 61786), (10, 61675),

Gene: Mutante_52 Start: 47136, Stop: 46777, Start Num: 4

Candidate Starts for Mutante_52:

(Start: 4 @47136 has 11 MA's), (5, 47058), (6, 47049), (7, 46974), (8, 46953), (9, 46935), (10, 46824),

Gene: Oline_52 Start: 46991, Stop: 46632, Start Num: 4

Candidate Starts for Oline_52:

(Start: 1 @47036 has 64 MA's), (Start: 4 @46991 has 11 MA's), (5, 46913), (6, 46904), (7, 46829), (8, 46808), (9, 46790), (10, 46679),

Gene: Omniscient_53 Start: 47481, Stop: 47077, Start Num: 1

Candidate Starts for Omniscient_53:

(Start: 1 @47481 has 64 MA's), (Start: 4 @47436 has 11 MA's), (5, 47358), (6, 47349), (7, 47274), (8, 47253), (9, 47235), (10, 47124),

Gene: PhenghisKhan_52 Start: 47095, Stop: 46691, Start Num: 1

Candidate Starts for PhenghisKhan_52:

(Start: 1 @47095 has 64 MA's), (Start: 4 @47050 has 11 MA's), (5, 46972), (6, 46963), (7, 46888), (8, 46867), (9, 46849), (10, 46738),

Gene: Phergie_53 Start: 47087, Stop: 46683, Start Num: 1

Candidate Starts for Phergie_53:

(Start: 1 @47087 has 64 MA's), (Start: 4 @47042 has 11 MA's), (5, 46964), (6, 46955), (7, 46880), (8, 46859), (9, 46841), (10, 46730),

Gene: Phleuron_52 Start: 47092, Stop: 46688, Start Num: 1

Candidate Starts for Phleuron_52:

(Start: 1 @47092 has 64 MA's), (Start: 4 @47047 has 11 MA's), (5, 46969), (6, 46960), (7, 46885), (8, 46864), (9, 46846), (10, 46735),

Gene: PhrankReynolds_51 Start: 47092, Stop: 46688, Start Num: 1

Candidate Starts for PhrankReynolds_51:

(Start: 1 @47092 has 64 MA's), (Start: 4 @47047 has 11 MA's), (5, 46969), (6, 46960), (7, 46885), (8, 46864), (9, 46846), (10, 46735),

Gene: PhrodoBaggins_53 Start: 47554, Stop: 47195, Start Num: 4

Candidate Starts for PhrodoBaggins_53:

(Start: 1 @47599 has 64 MA's), (Start: 4 @47554 has 11 MA's), (5, 47476), (6, 47467), (7, 47392), (8, 47371), (9, 47353), (10, 47242),

Gene: PinheadLarry_53 Start: 47178, Stop: 46774, Start Num: 1

Candidate Starts for PinheadLarry_53:

(Start: 1 @47178 has 64 MA's), (Start: 4 @47133 has 11 MA's), (5, 47055), (6, 47046), (7, 46971), (8, 46950), (9, 46932), (10, 46821),

Gene: Placalicious_52 Start: 47168, Stop: 46764, Start Num: 1

Candidate Starts for Placalicious_52:

(Start: 1 @47168 has 64 MA's), (Start: 4 @47123 has 11 MA's), (5, 47045), (6, 47036), (7, 46961), (8, 46940), (9, 46922), (10, 46811),

Gene: Prickles_53 Start: 47406, Stop: 47047, Start Num: 4

Candidate Starts for Prickles_53:

(Start: 1 @47451 has 64 MA's), (Start: 4 @47406 has 11 MA's), (5, 47328), (6, 47319), (7, 47244), (8, 47223), (9, 47205), (10, 47094),

Gene: Quisquilliae_53 Start: 47454, Stop: 47095, Start Num: 4

Candidate Starts for Quisquilliae_53:

(Start: 1 @47499 has 64 MA's), (Start: 4 @47454 has 11 MA's), (5, 47376), (6, 47367), (7, 47292), (8, 47271), (9, 47253), (10, 47142),

Gene: Riggan_53 Start: 47450, Stop: 47046, Start Num: 1

Candidate Starts for Riggan_53:

(Start: 1 @47450 has 64 MA's), (Start: 4 @47405 has 11 MA's), (5, 47327), (6, 47318), (7, 47243), (8, 47222), (9, 47204), (10, 47093),

Gene: SchoolBus_98 Start: 61623, Stop: 61234, Start Num: 1

Candidate Starts for SchoolBus_98:

(Start: 1 @61623 has 64 MA's), (Start: 4 @61578 has 11 MA's), (5, 61500), (6, 61491), (7, 61416), (8, 61395), (9, 61377), (10, 61266),

Gene: Schueller_53 Start: 47128, Stop: 46769, Start Num: 4

Candidate Starts for Schueller_53:

(Start: 1 @47173 has 64 MA's), (Start: 4 @47128 has 11 MA's), (5, 47050), (6, 47041), (7, 46966), (8, 46945), (9, 46927), (10, 46816),

Gene: Scrick_53 Start: 47153, Stop: 46794, Start Num: 4

Candidate Starts for Scrick_53:

(Start: 1 @47198 has 64 MA's), (Start: 4 @47153 has 11 MA's), (5, 47075), (6, 47066), (7, 46991), (8, 46970), (9, 46952), (10, 46841),

Gene: Shida_101 Start: 62124, Stop: 61735, Start Num: 1

Candidate Starts for Shida_101:

(Start: 1 @62124 has 64 MA's), (Start: 4 @62079 has 11 MA's), (5, 62001), (6, 61992), (7, 61917), (8, 61896), (9, 61878), (10, 61767),

Gene: Skippy_53 Start: 47456, Stop: 47052, Start Num: 1

Candidate Starts for Skippy_53:

(Start: 1 @47456 has 64 MA's), (Start: 4 @47411 has 11 MA's), (5, 47333), (6, 47324), (7, 47249), (8, 47228), (9, 47210), (10, 47099),

Gene: Slatt_53 Start: 47482, Stop: 47078, Start Num: 1

Candidate Starts for Slatt_53:

(Start: 1 @47482 has 64 MA's), (Start: 4 @47437 has 11 MA's), (5, 47359), (6, 47350), (7, 47275), (8, 47254), (9, 47236), (10, 47125),

Gene: Squiggle_53 Start: 47192, Stop: 46788, Start Num: 1

Candidate Starts for Squiggle_53:

(Start: 1 @47192 has 64 MA's), (Start: 4 @47147 has 11 MA's), (5, 47069), (6, 47060), (7, 46985), (8, 46964), (9, 46946), (10, 46835),

Gene: Struggle_52 Start: 46976, Stop: 46617, Start Num: 4

Candidate Starts for Struggle_52:

(Start: 1 @47021 has 64 MA's), (Start: 4 @46976 has 11 MA's), (5, 46898), (6, 46889), (7, 46814), (8, 46793), (9, 46775), (10, 46664),

Gene: TelAviv_96 Start: 61849, Stop: 61460, Start Num: 1

Candidate Starts for TelAviv_96:

(Start: 1 @61849 has 64 MA's), (Start: 4 @61804 has 11 MA's), (5, 61726), (6, 61717), (7, 61642), (8, 61621), (9, 61603), (10, 61492),

Gene: Tomlarah_53 Start: 47466, Stop: 47062, Start Num: 1

Candidate Starts for Tomlarah_53:

(Start: 1 @47466 has 64 MA's), (Start: 4 @47421 has 11 MA's), (5, 47343), (6, 47334), (7, 47259), (8, 47238), (9, 47220), (10, 47109),

Gene: Trypo_54 Start: 47607, Stop: 47203, Start Num: 1

Candidate Starts for Trypo_54:

(Start: 1 @47607 has 64 MA's), (Start: 4 @47562 has 11 MA's), (5, 47484), (6, 47475), (7, 47400), (8, 47379), (9, 47361), (10, 47250),

Gene: TyrionL_52 Start: 47032, Stop: 46628, Start Num: 1

Candidate Starts for TyrionL_52:

(Start: 1 @47032 has 64 MA's), (Start: 4 @46987 has 11 MA's), (5, 46909), (6, 46900), (7, 46825), (8, 46804), (9, 46786), (10, 46675),

Gene: Vaticameos_49 Start: 45157, Stop: 44753, Start Num: 1

Candidate Starts for Vaticameos_49:

(Start: 1 @45157 has 64 MA's), (Start: 4 @45112 has 11 MA's), (5, 45034), (6, 45025), (7, 44950), (8, 44929), (9, 44911), (10, 44800),

Gene: Virapocalypse_53 Start: 47421, Stop: 47062, Start Num: 4

Candidate Starts for Virapocalypse_53:

(Start: 1 @47466 has 64 MA's), (Start: 4 @47421 has 11 MA's), (5, 47343), (6, 47334), (7, 47259), (8, 47238), (9, 47220), (10, 47109),

Gene: Vorrrps_99 Start: 62033, Stop: 61644, Start Num: 1

Candidate Starts for Vorrrps_99:

(Start: 1 @62033 has 64 MA's), (Start: 4 @61988 has 11 MA's), (5, 61910), (6, 61901), (7, 61826), (8, 61805), (9, 61787), (10, 61676),

Gene: Wallhey_52 Start: 47036, Stop: 46632, Start Num: 1

Candidate Starts for Wallhey_52:

(Start: 1 @47036 has 64 MA's), (Start: 4 @46991 has 11 MA's), (5, 46913), (6, 46904), (7, 46829), (8, 46808), (9, 46790), (10, 46679),

Gene: Windsor_52 Start: 47172, Stop: 46768, Start Num: 1

Candidate Starts for Windsor_52:

(Start: 1 @47172 has 64 MA's), (Start: 4 @47127 has 11 MA's), (5, 47049), (6, 47040), (7, 46965), (8, 46944), (9, 46926), (10, 46815),

Gene: YouGoGlencoco_53 Start: 47470, Stop: 47066, Start Num: 1

Candidate Starts for YouGoGlencoco_53:

(Start: 1 @47470 has 64 MA's), (Start: 4 @47425 has 11 MA's), (5, 47347), (6, 47338), (7, 47263), (8, 47242), (9, 47224), (10, 47113),

Gene: Zonia_53 Start: 47487, Stop: 47083, Start Num: 1

Candidate Starts for Zonia_53:

(Start: 1 @47487 has 64 MA's), (Start: 4 @47442 has 11 MA's), (5, 47364), (6, 47355), (7, 47280), (8, 47259), (9, 47241), (10, 47130),