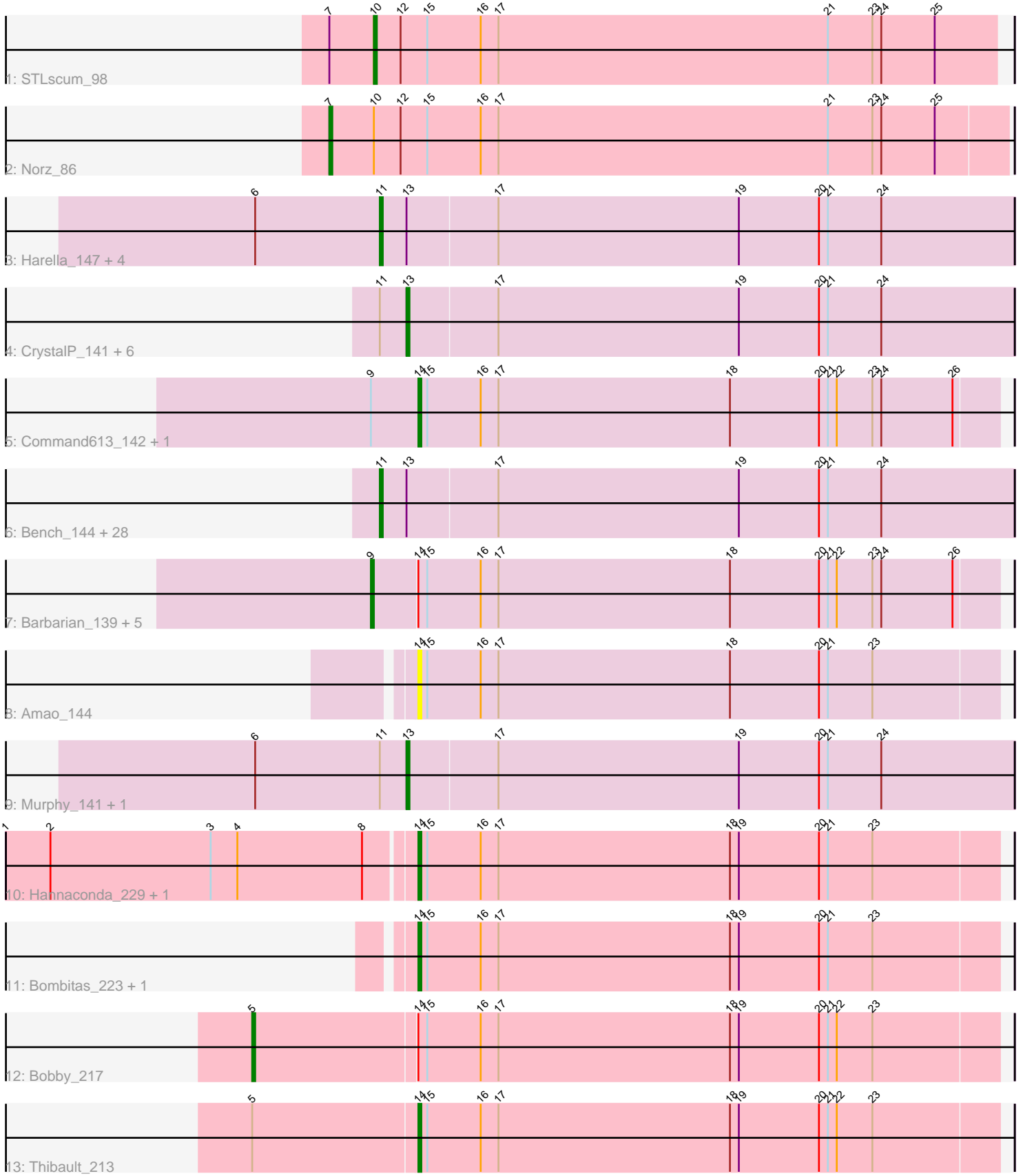


Pham 1732



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 1732 Report

This analysis was run 07/09/24 on database version 566.

Pham number 1732 has 60 members, 5 are drafts.

Phages represented in each track:

- Track 1 : STLscum_98
- Track 2 : Norz_86
- Track 3 : Harella_147, Filch_144, DoctorDiddles_140, Simpliphy_141, MadamMonkfish_142
- Track 4 : CrystalP_141, BilboSwaggins_139, OrionPax_138, GooberAzure_144, GoldenSpark_145, Wiggin_144, StellaBean_138
- Track 5 : Command613_142, Daikon_142
- Track 6 : Bench_144, Xandras_141, Gage_132, Stank_145, Toto_138, Goldilocks_147, Sotrice96_146, Holt_147, Kanye_137, Lilizi_141, Pharsalus_139, Marshmallow_143, NelitzaMV_136, Moldemort_143, Miniwave_135, IHOP_145, Argent26_145, TBrady12_146, Kimchi_146, Paperbeatsrock_139, Cactus_149, Phaja_145, Easy2Say_143, Gemini_146, Adnama_145, StolenFromERC_143, AmericanBeauty_148, ShamWow_140, SophKB_139
- Track 7 : Barbarian_139, Balomoji_140, Asriel_136, Mindy_143, Flypotenuse_134, Traaww1_136
- Track 8 : Amao_144
- Track 9 : Murphy_141, RiverMonster_141
- Track 10 : Hannaconda_229, KashFlow_231
- Track 11 : Bombitas_223, Dove_230
- Track 12 : Bobby_217
- Track 13 : Thibault_213

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

The start number called the most often in the published annotations is 11, it was called in 33 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adnama_145, AmericanBeauty_148, Argent26_145, Bench_144, Cactus_149, DoctorDiddles_140, Easy2Say_143, Filch_144, Gage_132, Gemini_146, Goldilocks_147, Harella_147, Holt_147, IHOP_145, Kanye_137, Kimchi_146, Lilizi_141, MadamMonkfish_142, Marshmallow_143, Miniwave_135, Moldemort_143, NelitzaMV_136, Paperbeatsrock_139, Phaja_145, Pharsalus_139, ShamWow_140, Simpliphy_141, SophKB_139, Sotrice96_146, Stank_145, StolenFromERC_143,

TBrady12_146, Toto_138, Xandras_141,

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

- BilboSwaggins_139, CrystalP_141, GoldenSpark_145, GooberAzure_144, Murphy_141, OrionPax_138, RiverMonster_141, StellaBean_138, Wiggin_144,

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

- Amao_144, Asriel_136, Balomoji_140, Barbarian_139, Bobby_217, Bombitas_223, Command613_142, Daikon_142, Dove_230, Flypotenuse_134, Hannaconda_229, KashFlow_231, Mindy_143, Norz_86, STLscum_98, Thibault_213, Traaww1_136,

Summary by start number:

Start 5:

- Found in 2 of 60 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bobby_217 (J),

Start 7:

- Found in 2 of 60 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Norz_86 (A1),

Start 9:

- Found in 8 of 60 (13.3%) of genes in pham
- Manual Annotations of this start: 6 of 55
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Asriel_136 (E), Balomoji_140 (E), Barbarian_139 (E), Flypotenuse_134 (E), Mindy_143 (E), Traaww1_136 (E),

Start 10:

- Found in 2 of 60 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 50.0% of time when present
- Phage (with cluster) where this start called: STLscum_98 (A1),

Start 11:

- Found in 43 of 60 (71.7%) of genes in pham
- Manual Annotations of this start: 33 of 55
- Called 79.1% of time when present
- Phage (with cluster) where this start called: Adnama_145 (E), AmericanBeauty_148 (E), Argent26_145 (E), Bench_144 (E), Cactus_149 (E), DoctorDiddles_140 (E), Easy2Say_143 (E), Fiich_144 (E), Gage_132 (E), Gemini_146 (E), Goldilocks_147 (E), Harella_147 (E), Holt_147 (E), IHOP_145 (E), Kanye_137 (E), Kimchi_146 (E), Lilizi_141 (E), MadamMonkfish_142 (E), Marshmallow_143 (E), Miniwave_135 (E), Moldemort_143 (E), NelitzaMV_136 (E), Paperbeatsrock_139 (E), Phaja_145 (E), Pharsalus_139 (E), ShamWow_140 (E), Simpliphy_141 (E), SophKB_139 (E), Sotrice96_146 (E), Stank_145 (E), StolenFromERC_143 (E), TBrady12_146 (E), Toto_138 (E), Xandras_141 (E),

Start 13:

- Found in 43 of 60 (71.7%) of genes in pham
- Manual Annotations of this start: 8 of 55
- Called 20.9% of time when present
- Phage (with cluster) where this start called: BilboSwaggins_139 (E), CrystalP_141 (E), GoldenSpark_145 (E), GooberAzure_144 (E), Murphy_141 (E), OrionPax_138 (E), RiverMonster_141 (E), StellaBean_138 (E), Wiggin_144 (E),

Start 14:

- Found in 15 of 60 (25.0%) of genes in pham
- Manual Annotations of this start: 5 of 55
- Called 53.3% of time when present
- Phage (with cluster) where this start called: Amao_144 (E), Bombitas_223 (J), Command613_142 (E), Daikon_142 (E), Dove_230 (J), Hannaconda_229 (J), KashFlow_231 (J), Thibault_213 (J),

Summary by clusters:

There are 3 clusters represented in this pham: A1, J, E,

Info for manual annotations of cluster A1:

- Start number 7 was manually annotated 1 time for cluster A1.
- Start number 10 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster E:

- Start number 9 was manually annotated 6 times for cluster E.
- Start number 11 was manually annotated 33 times for cluster E.
- Start number 13 was manually annotated 8 times for cluster E.
- Start number 14 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster J:

- Start number 5 was manually annotated 1 time for cluster J.
- Start number 14 was manually annotated 4 times for cluster J.

Gene Information:

Gene: Adnama_145 Start: 73549, Stop: 73337, Start Num: 11

Candidate Starts for Adnama_145:

(Start: 11 @73549 has 33 MA's), (Start: 13 @73540 has 8 MA's), (17, 73510), (19, 73429), (20, 73402), (21, 73399), (24, 73381),

Gene: Amao_144 Start: 74634, Stop: 74440, Start Num: 14

Candidate Starts for Amao_144:

(Start: 14 @74634 has 5 MA's), (15, 74631), (16, 74613), (17, 74607), (18, 74529), (20, 74499), (21, 74496), (23, 74481),

Gene: AmericanBeauty_148 Start: 73591, Stop: 73379, Start Num: 11

Candidate Starts for AmericanBeauty_148:

(Start: 11 @73591 has 33 MA's), (Start: 13 @73582 has 8 MA's), (17, 73552), (19, 73471), (20, 73444), (21, 73441), (24, 73423),

Gene: Argent26_145 Start: 73473, Stop: 73261, Start Num: 11

Candidate Starts for Argent26_145:

(Start: 11 @73473 has 33 MA's), (Start: 13 @73464 has 8 MA's), (17, 73434), (19, 73353), (20, 73326), (21, 73323), (24, 73305),

Gene: Asriel_136 Start: 72191, Stop: 71982, Start Num: 9

Candidate Starts for Asriel_136:

(Start: 9 @72191 has 6 MA's), (Start: 14 @72176 has 5 MA's), (15, 72173), (16, 72155), (17, 72149), (18, 72071), (20, 72041), (21, 72038), (22, 72035), (23, 72023), (24, 72020), (26, 71996),

Gene: Balomoji_140 Start: 74016, Stop: 73807, Start Num: 9

Candidate Starts for Balomoji_140:

(Start: 9 @74016 has 6 MA's), (Start: 14 @74001 has 5 MA's), (15, 73998), (16, 73980), (17, 73974), (18, 73896), (20, 73866), (21, 73863), (22, 73860), (23, 73848), (24, 73845), (26, 73821),

Gene: Barbarian_139 Start: 72191, Stop: 71982, Start Num: 9

Candidate Starts for Barbarian_139:

(Start: 9 @72191 has 6 MA's), (Start: 14 @72176 has 5 MA's), (15, 72173), (16, 72155), (17, 72149), (18, 72071), (20, 72041), (21, 72038), (22, 72035), (23, 72023), (24, 72020), (26, 71996),

Gene: Bench_144 Start: 74433, Stop: 74221, Start Num: 11

Candidate Starts for Bench_144:

(Start: 11 @74433 has 33 MA's), (Start: 13 @74424 has 8 MA's), (17, 74394), (19, 74313), (20, 74286), (21, 74283), (24, 74265),

Gene: BilboSwaggins_139 Start: 74833, Stop: 74630, Start Num: 13

Candidate Starts for BilboSwaggins_139:

(Start: 11 @74842 has 33 MA's), (Start: 13 @74833 has 8 MA's), (17, 74803), (19, 74722), (20, 74695), (21, 74692), (24, 74674),

Gene: Bobby_217 Start: 109511, Stop: 109263, Start Num: 5

Candidate Starts for Bobby_217:

(Start: 5 @109511 has 1 MA's), (Start: 14 @109457 has 5 MA's), (15, 109454), (16, 109436), (17, 109430), (18, 109352), (19, 109349), (20, 109322), (21, 109319), (22, 109316), (23, 109304),

Gene: Bombitas_223 Start: 108333, Stop: 108139, Start Num: 14

Candidate Starts for Bombitas_223:

(Start: 14 @108333 has 5 MA's), (15, 108330), (16, 108312), (17, 108306), (18, 108228), (19, 108225), (20, 108198), (21, 108195), (23, 108180),

Gene: Cactus_149 Start: 73944, Stop: 73732, Start Num: 11

Candidate Starts for Cactus_149:

(Start: 11 @73944 has 33 MA's), (Start: 13 @73935 has 8 MA's), (17, 73905), (19, 73824), (20, 73797), (21, 73794), (24, 73776),

Gene: Command613_142 Start: 73944, Stop: 73750, Start Num: 14

Candidate Starts for Command613_142:

(Start: 9 @73959 has 6 MA's), (Start: 14 @73944 has 5 MA's), (15, 73941), (16, 73923), (17, 73917), (18, 73839), (20, 73809), (21, 73806), (22, 73803), (23, 73791), (24, 73788), (26, 73764),

Gene: CrystalP_141 Start: 74833, Stop: 74630, Start Num: 13

Candidate Starts for CrystalP_141:

(Start: 11 @74842 has 33 MA's), (Start: 13 @74833 has 8 MA's), (17, 74803), (19, 74722), (20, 74695), (21, 74692), (24, 74674),

Gene: Daikon_142 Start: 73249, Stop: 73055, Start Num: 14

Candidate Starts for Daikon_142:

(Start: 9 @73264 has 6 MA's), (Start: 14 @73249 has 5 MA's), (15, 73246), (16, 73228), (17, 73222), (18, 73144), (20, 73114), (21, 73111), (22, 73108), (23, 73096), (24, 73093), (26, 73069),

Gene: DoctorDiddles_140 Start: 73132, Stop: 72920, Start Num: 11

Candidate Starts for DoctorDiddles_140:

(6, 73174), (Start: 11 @73132 has 33 MA's), (Start: 13 @73123 has 8 MA's), (17, 73093), (19, 73012), (20, 72985), (21, 72982), (24, 72964),

Gene: Dove_230 Start: 106807, Stop: 106613, Start Num: 14

Candidate Starts for Dove_230:

(Start: 14 @106807 has 5 MA's), (15, 106804), (16, 106786), (17, 106780), (18, 106702), (19, 106699), (20, 106672), (21, 106669), (23, 106654),

Gene: Easy2Say_143 Start: 73939, Stop: 73727, Start Num: 11

Candidate Starts for Easy2Say_143:

(Start: 11 @73939 has 33 MA's), (Start: 13 @73930 has 8 MA's), (17, 73900), (19, 73819), (20, 73792), (21, 73789), (24, 73771),

Gene: Filch_144 Start: 73749, Stop: 73537, Start Num: 11

Candidate Starts for Filch_144:

(6, 73791), (Start: 11 @73749 has 33 MA's), (Start: 13 @73740 has 8 MA's), (17, 73710), (19, 73629), (20, 73602), (21, 73599), (24, 73581),

Gene: Flypotenuse_134 Start: 72845, Stop: 72636, Start Num: 9

Candidate Starts for Flypotenuse_134:

(Start: 9 @72845 has 6 MA's), (Start: 14 @72830 has 5 MA's), (15, 72827), (16, 72809), (17, 72803), (18, 72725), (20, 72695), (21, 72692), (22, 72689), (23, 72677), (24, 72674), (26, 72650),

Gene: Gage_132 Start: 69991, Stop: 69779, Start Num: 11

Candidate Starts for Gage_132:

(Start: 11 @69991 has 33 MA's), (Start: 13 @69982 has 8 MA's), (17, 69952), (19, 69871), (20, 69844), (21, 69841), (24, 69823),

Gene: Gemini_146 Start: 73990, Stop: 73778, Start Num: 11

Candidate Starts for Gemini_146:

(Start: 11 @73990 has 33 MA's), (Start: 13 @73981 has 8 MA's), (17, 73951), (19, 73870), (20, 73843), (21, 73840), (24, 73822),

Gene: GoldenSpark_145 Start: 73464, Stop: 73261, Start Num: 13

Candidate Starts for GoldenSpark_145:

(Start: 11 @73473 has 33 MA's), (Start: 13 @73464 has 8 MA's), (17, 73434), (19, 73353), (20, 73326), (21, 73323), (24, 73305),

Gene: Goldilocks_147 Start: 74069, Stop: 73857, Start Num: 11

Candidate Starts for Goldilocks_147:

(Start: 11 @74069 has 33 MA's), (Start: 13 @74060 has 8 MA's), (17, 74030), (19, 73949), (20, 73922), (21, 73919), (24, 73901),

Gene: GooberAzure_144 Start: 73464, Stop: 73261, Start Num: 13

Candidate Starts for GooberAzure_144:

(Start: 11 @73473 has 33 MA's), (Start: 13 @73464 has 8 MA's), (17, 73434), (19, 73353), (20, 73326), (21, 73323), (24, 73305),

Gene: Hannaconda_229 Start: 110280, Stop: 110086, Start Num: 14

Candidate Starts for Hannaconda_229:

(1, 110415), (2, 110400), (3, 110346), (4, 110337), (8, 110295), (Start: 14 @110280 has 5 MA's), (15, 110277), (16, 110259), (17, 110253), (18, 110175), (19, 110172), (20, 110145), (21, 110142), (23, 110127),

Gene: Harella_147 Start: 74959, Stop: 74747, Start Num: 11

Candidate Starts for Harella_147:

(6, 75001), (Start: 11 @74959 has 33 MA's), (Start: 13 @74950 has 8 MA's), (17, 74920), (19, 74839), (20, 74812), (21, 74809), (24, 74791),

Gene: Holt_147 Start: 74256, Stop: 74044, Start Num: 11

Candidate Starts for Holt_147:

(Start: 11 @74256 has 33 MA's), (Start: 13 @74247 has 8 MA's), (17, 74217), (19, 74136), (20, 74109), (21, 74106), (24, 74088),

Gene: IHOP_145 Start: 73730, Stop: 73518, Start Num: 11

Candidate Starts for IHOP_145:

(Start: 11 @73730 has 33 MA's), (Start: 13 @73721 has 8 MA's), (17, 73691), (19, 73610), (20, 73583), (21, 73580), (24, 73562),

Gene: Kanye_137 Start: 73794, Stop: 73582, Start Num: 11

Candidate Starts for Kanye_137:

(Start: 11 @73794 has 33 MA's), (Start: 13 @73785 has 8 MA's), (17, 73755), (19, 73674), (20, 73647), (21, 73644), (24, 73626),

Gene: KashFlow_231 Start: 110173, Stop: 109979, Start Num: 14

Candidate Starts for KashFlow_231:

(1, 110308), (2, 110293), (3, 110239), (4, 110230), (8, 110188), (Start: 14 @110173 has 5 MA's), (15, 110170), (16, 110152), (17, 110146), (18, 110068), (19, 110065), (20, 110038), (21, 110035), (23, 110020),

Gene: Kimchi_146 Start: 74170, Stop: 73958, Start Num: 11

Candidate Starts for Kimchi_146:

(Start: 11 @74170 has 33 MA's), (Start: 13 @74161 has 8 MA's), (17, 74131), (19, 74050), (20, 74023), (21, 74020), (24, 74002),

Gene: Lilizi_141 Start: 73701, Stop: 73489, Start Num: 11

Candidate Starts for Lilizi_141:

(Start: 11 @73701 has 33 MA's), (Start: 13 @73692 has 8 MA's), (17, 73662), (19, 73581), (20, 73554), (21, 73551), (24, 73533),

Gene: MadamMonkfish_142 Start: 73617, Stop: 73405, Start Num: 11

Candidate Starts for MadamMonkfish_142:

(6, 73659), (Start: 11 @73617 has 33 MA's), (Start: 13 @73608 has 8 MA's), (17, 73578), (19, 73497), (20, 73470), (21, 73467), (24, 73449),

Gene: Marshmallow_143 Start: 74802, Stop: 74590, Start Num: 11

Candidate Starts for Marshmallow_143:

(Start: 11 @74802 has 33 MA's), (Start: 13 @74793 has 8 MA's), (17, 74763), (19, 74682), (20, 74655), (21, 74652), (24, 74634),

Gene: Mindy_143 Start: 73730, Stop: 73521, Start Num: 9

Candidate Starts for Mindy_143:

(Start: 9 @73730 has 6 MA's), (Start: 14 @73715 has 5 MA's), (15, 73712), (16, 73694), (17, 73688), (18, 73610), (20, 73580), (21, 73577), (22, 73574), (23, 73562), (24, 73559), (26, 73535),

Gene: Miniwave_135 Start: 73305, Stop: 73093, Start Num: 11

Candidate Starts for Miniwave_135:

(Start: 11 @73305 has 33 MA's), (Start: 13 @73296 has 8 MA's), (17, 73266), (19, 73185), (20, 73158), (21, 73155), (24, 73137),

Gene: Moldemort_143 Start: 73581, Stop: 73369, Start Num: 11

Candidate Starts for Moldemort_143:

(Start: 11 @73581 has 33 MA's), (Start: 13 @73572 has 8 MA's), (17, 73542), (19, 73461), (20, 73434), (21, 73431), (24, 73413),

Gene: Murphy_141 Start: 73935, Stop: 73732, Start Num: 13

Candidate Starts for Murphy_141:

(6, 73986), (Start: 11 @73944 has 33 MA's), (Start: 13 @73935 has 8 MA's), (17, 73905), (19, 73824), (20, 73797), (21, 73794), (24, 73776),

Gene: NelitzaMV_136 Start: 71131, Stop: 70919, Start Num: 11

Candidate Starts for NelitzaMV_136:

(Start: 11 @71131 has 33 MA's), (Start: 13 @71122 has 8 MA's), (17, 71092), (19, 71011), (20, 70984), (21, 70981), (24, 70963),

Gene: Norz_86 Start: 52331, Stop: 52104, Start Num: 7

Candidate Starts for Norz_86:

(Start: 7 @52331 has 1 MA's), (Start: 10 @52316 has 1 MA's), (12, 52307), (15, 52298), (16, 52280), (17, 52274), (21, 52163), (23, 52148), (24, 52145), (25, 52127),

Gene: OrionPax_138 Start: 73166, Stop: 72963, Start Num: 13

Candidate Starts for OrionPax_138:

(Start: 11 @73175 has 33 MA's), (Start: 13 @73166 has 8 MA's), (17, 73136), (19, 73055), (20, 73028), (21, 73025), (24, 73007),

Gene: Paperbeatsrock_139 Start: 73983, Stop: 73771, Start Num: 11

Candidate Starts for Paperbeatsrock_139:

(Start: 11 @73983 has 33 MA's), (Start: 13 @73974 has 8 MA's), (17, 73944), (19, 73863), (20, 73836), (21, 73833), (24, 73815),

Gene: Phaja_145 Start: 73735, Stop: 73523, Start Num: 11

Candidate Starts for Phaja_145:

(Start: 11 @73735 has 33 MA's), (Start: 13 @73726 has 8 MA's), (17, 73696), (19, 73615), (20, 73588), (21, 73585), (24, 73567),

Gene: Pharsalus_139 Start: 74123, Stop: 73911, Start Num: 11

Candidate Starts for Pharsalus_139:

(Start: 11 @74123 has 33 MA's), (Start: 13 @74114 has 8 MA's), (17, 74084), (19, 74003), (20, 73976), (21, 73973), (24, 73955),

Gene: RiverMonster_141 Start: 73848, Stop: 73645, Start Num: 13
Candidate Starts for RiverMonster_141:
(6, 73899), (Start: 11 @73857 has 33 MA's), (Start: 13 @73848 has 8 MA's), (17, 73818), (19, 73737),
(20, 73710), (21, 73707), (24, 73689),

Gene: STLscum_98 Start: 51304, Stop: 51095, Start Num: 10
Candidate Starts for STLscum_98:
(Start: 7 @51319 has 1 MA's), (Start: 10 @51304 has 1 MA's), (12, 51295), (15, 51286), (16, 51268),
(17, 51262), (21, 51151), (23, 51136), (24, 51133), (25, 51115),

Gene: ShamWow_140 Start: 74292, Stop: 74080, Start Num: 11
Candidate Starts for ShamWow_140:
(Start: 11 @74292 has 33 MA's), (Start: 13 @74283 has 8 MA's), (17, 74253), (19, 74172), (20,
74145), (21, 74142), (24, 74124),

Gene: Simpliphy_141 Start: 73428, Stop: 73216, Start Num: 11
Candidate Starts for Simpliphy_141:
(6, 73470), (Start: 11 @73428 has 33 MA's), (Start: 13 @73419 has 8 MA's), (17, 73389), (19, 73308),
(20, 73281), (21, 73278), (24, 73260),

Gene: SophKB_139 Start: 73926, Stop: 73714, Start Num: 11
Candidate Starts for SophKB_139:
(Start: 11 @73926 has 33 MA's), (Start: 13 @73917 has 8 MA's), (17, 73887), (19, 73806), (20,
73779), (21, 73776), (24, 73758),

Gene: Sotrice96_146 Start: 74640, Stop: 74428, Start Num: 11
Candidate Starts for Sotrice96_146:
(Start: 11 @74640 has 33 MA's), (Start: 13 @74631 has 8 MA's), (17, 74601), (19, 74520), (20,
74493), (21, 74490), (24, 74472),

Gene: Stank_145 Start: 74266, Stop: 74054, Start Num: 11
Candidate Starts for Stank_145:
(Start: 11 @74266 has 33 MA's), (Start: 13 @74257 has 8 MA's), (17, 74227), (19, 74146), (20,
74119), (21, 74116), (24, 74098),

Gene: StellaBean_138 Start: 74056, Stop: 73853, Start Num: 13
Candidate Starts for StellaBean_138:
(Start: 11 @74065 has 33 MA's), (Start: 13 @74056 has 8 MA's), (17, 74026), (19, 73945), (20,
73918), (21, 73915), (24, 73897),

Gene: StolenFromERC_143 Start: 73611, Stop: 73399, Start Num: 11
Candidate Starts for StolenFromERC_143:
(Start: 11 @73611 has 33 MA's), (Start: 13 @73602 has 8 MA's), (17, 73572), (19, 73491), (20,
73464), (21, 73461), (24, 73443),

Gene: TBrady12_146 Start: 73703, Stop: 73491, Start Num: 11
Candidate Starts for TBrady12_146:
(Start: 11 @73703 has 33 MA's), (Start: 13 @73694 has 8 MA's), (17, 73664), (19, 73583), (20,
73556), (21, 73553), (24, 73535),

Gene: Thibault_213 Start: 105146, Stop: 104952, Start Num: 14
Candidate Starts for Thibault_213:

(Start: 5 @105200 has 1 MA's), (Start: 14 @105146 has 5 MA's), (15, 105143), (16, 105125), (17, 105119), (18, 105041), (19, 105038), (20, 105011), (21, 105008), (22, 105005), (23, 104993),

Gene: Toto_138 Start: 74292, Stop: 74080, Start Num: 11

Candidate Starts for Toto_138:

(Start: 11 @74292 has 33 MA's), (Start: 13 @74283 has 8 MA's), (17, 74253), (19, 74172), (20, 74145), (21, 74142), (24, 74124),

Gene: Traaww1_136 Start: 73020, Stop: 72811, Start Num: 9

Candidate Starts for Traaww1_136:

(Start: 9 @73020 has 6 MA's), (Start: 14 @73005 has 5 MA's), (15, 73002), (16, 72984), (17, 72978), (18, 72900), (20, 72870), (21, 72867), (22, 72864), (23, 72852), (24, 72849), (26, 72825),

Gene: Wiggin_144 Start: 73235, Stop: 73032, Start Num: 13

Candidate Starts for Wiggin_144:

(Start: 11 @73244 has 33 MA's), (Start: 13 @73235 has 8 MA's), (17, 73205), (19, 73124), (20, 73097), (21, 73094), (24, 73076),

Gene: Xandras_141 Start: 73520, Stop: 73308, Start Num: 11

Candidate Starts for Xandras_141:

(Start: 11 @73520 has 33 MA's), (Start: 13 @73511 has 8 MA's), (17, 73481), (19, 73400), (20, 73373), (21, 73370), (24, 73352),