



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 189574 Report

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

Pham number 189574 has 128 members, 6 are drafts.

Phages represented in each track:

- Track 1 : DoctorDiddles_17, Palpatine_16, IHOP_16, Bruin_16, Willez_16, Quallification_18, Bask21_16, Balomoji_16, Rakim_18, Myrale_17, StellaBean_17, Nala_16, Command613_18, CrystalP_17, Cookies_17, Tomaszewski_16, Mindy_17, Mosby_16, Manda_17, Icee_16, Harella_15, Marshmallow_17, Miniwave_17, ShamWow_17, Rimmer_16, Sotrice96_17, SophKB_17, Buck_16, NelitzaMV_17, Kostya_17, Cactus_18, Henry_17, Phaja_16, TeardropMSU_16, ABCat_16, SirDuracell_16, BilboSwaggins_17, Goldilocks_18, Tuco_17, Toto_17, Sassay_16, Holt_18, Inca_16, Asriel_16, Barbarian_16, Traaww1_15, Flypotenuse_15, Daikon_15, Phaux_15, Glexan_15, Amao_17, xkcd_17, Dusk_16, BadStone_16
- Track 2 : Adnama_18, Lilpickle_15, Petra64142_17, BigBubba_16, FireRed_16, Thresher_17, GoldenSpark_18, Kanye_18, ShereKhan_18, OrionPax_17, HanKaySha_17, Lilizi_18, Hopey_17, MISSy_16, Filch_17, Terminus_16, AmericanBeauty_18, Easy2Say_17, Bench_18, Pharsalus_17, TBrady12_18, 244_17, Stark_17, Maxxinista_17, Hoonter_18, Cjw1_16, Pat3_16, Ukulele_16, Misfit_16, MPhalcon_16, Moldemort_17, ChosenOne_15, Goku_17, Simpliphy_17, Teaspoon_16, Pumpkin_17, Czyszczon1_17, Highbury_17, Eureka_17, Stank_18, Wiggin_18, Argent26_18, GooberAzure_18, Xandras_18, Nimrod_16, Youngblood_16, Emmina_16, DrDrey_17, Elite2014_15, ChotaBhai_16, Paperbeatsrock_18, StolenFromERC_18, Murica_15, MadamMonkfish_16, Murphy_16, NoSleep_17, Lilac_18, PhatBacter_16, Phrux_16, Gemini_18, Elph10_17, Dumbo_16, BaboJay_16, JeTaima_18, Tarkin_18, Porky_15, Gage_18, HufflyPuff_15, Kimchi_18, Saints25_17
- Track 3 : Gator_15, Contagion_16
- Track 4 : RiverMonster_16, Policronamos_16

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 119 of the 122 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_17, ABCat_16, Adnama_18, Amao_17, AmericanBeauty_18, Argent26_18, Asriel_16, BaboJay_16, BadStone_16, Balomoji_16, Barbarian_16, Bask21_16, Bench_18, BigBubba_16, BilboSwaggins_17, Bruin_16, Buck_16, Cactus_18,

ChosenOne_15, ChotaBhai_16, Cjw1_16, Command613_18, Cookies_17, CrystalP_17, Czyszczone1_17, Daikon_15, DoctorDiddles_17, DrDrey_17, Dumbo_16, Dusk_16, Easy2Say_17, Elite2014_15, Elph10_17, Emmina_16, Eureka_17, Filch_17, FireRed_16, Flypotenuse_15, Gage_18, Gemini_18, Glexan_15, Goku_17, GoldenSpark_18, Goldilocks_18, GooberAzure_18, HanKaySha_17, Harella_15, Henry_17, Highbury_17, Holt_18, Hoonter_18, Hopey_17, HufflyPuff_15, IHOP_16, Icee_16, Inca_16, JeTaime_18, Kanye_18, Kimchi_18, Kostya_17, Lilac_18, Lilizi_18, Lilipickle_15, MISSy_16, MPhalcon_16, MadamMonkfish_16, Manda_17, Marshmallow_17, Maxxinista_17, Mindy_17, Miniwave_17, Misfit_16, Moldemort_17, Mosby_16, Murica_15, Murphy_16, Myrale_17, Nala_16, NelitzaMV_17, Nimrod_16, NoSleep_17, OrionPax_17, Palpatine_16, Paperbeatsrock_18, Pat3_16, Petra64142_17, Phaja_16, Pharsalus_17, PhatBacter_16, Phaux_15, Phrux_16, Porky_15, Pumpkin_17, Quallification_18, Rakim_18, Rimmer_16, Saints25_17, Sassay_16, ShamWow_17, ShereKhan_18, Simpliphy_17, SirDuracell_16, SophKB_17, Sotrice96_17, Stank_18, Stark_17, StellaBean_17, StolenFromERC_18, TBrady12_18, Tarkin_18, TeardropMSU_16, Teaspoon_16, Terminus_16, Thresher_17, Tomaszewski_16, Toto_17, Traaww1_15, Tuco_17, Ukulele_16, Wiggin_18, Willez_16, Xandras_18, Youngblood_16, xkcd_17,

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

- Contagion_16, Gator_15, Policronamos_16, RiverMonster_16,

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

-

Summary by start number:

Start 2:

- Found in 128 of 128 (100.0%) of genes in pham
- Manual Annotations of this start: 3 of 122
- Called 3.1% of time when present
- Phage (with cluster) where this start called: Contagion_16 (E), Gator_15 (E), Policronamos_16 (E), RiverMonster_16 (E),

Start 3:

- Found in 128 of 128 (100.0%) of genes in pham
- Manual Annotations of this start: 119 of 122
- Called 96.9% of time when present
- Phage (with cluster) where this start called: 244_17 (E), ABCat_16 (E), Adnama_18 (E), Amao_17 (E), AmericanBeauty_18 (E), Argent26_18 (E), Asriel_16 (E), BaboJay_16 (E), BadStone_16 (E), Balomoji_16 (E), Barbarian_16 (E), Bask21_16 (E), Bench_18 (E), BigBubba_16 (E), BilboSwaggins_17 (E), Bruin_16 (E), Buck_16 (E), Cactus_18 (E), ChosenOne_15 (E), ChotaBhai_16 (E), Cjw1_16 (E), Command613_18 (E), Cookies_17 (E), CrystalP_17 (E), Czyszczone1_17 (E), Daikon_15 (E), DoctorDiddles_17 (E), DrDrey_17 (E), Dumbo_16 (E), Dusk_16 (E), Easy2Say_17 (E), Elite2014_15 (E), Elph10_17 (E), Emmina_16 (E), Eureka_17 (E), Filch_17 (E), FireRed_16 (E), Flypotenuse_15 (E), Gage_18 (E), Gemini_18 (E), Glexan_15 (E), Goku_17 (E), GoldenSpark_18 (E), Goldilocks_18 (E), GooberAzure_18 (E), HanKaySha_17 (E), Harella_15 (E), Henry_17 (E), Highbury_17 (E), Holt_18 (E), Hoonter_18 (E), Hopey_17 (E), HufflyPuff_15 (E), IHOP_16 (E), Icee_16 (E), Inca_16 (E), JeTaime_18 (E), Kanye_18 (E), Kimchi_18 (E), Kostya_17 (E), Lilac_18 (E), Lilizi_18 (E), Lilipickle_15 (E), MISSy_16 (E),

MPhalcon_16 (E), MadamMonkfish_16 (E), Manda_17 (E), Marshmallow_17 (E), Maxxinista_17 (E), Mindy_17 (E), Miniwave_17 (E), Misfit_16 (E), Moldemort_17 (E), Mosby_16 (E), Murica_15 (E), Murphy_16 (E), Myrale_17 (E), Nala_16 (E), NelitzaMV_17 (E), Nimrod_16 (E), NoSleep_17 (E), OrionPax_17 (E), Palpatine_16 (E), Paperbeatsrock_18 (E), Pat3_16 (E), Petra64142_17 (E), Phaja_16 (E), Pharsalus_17 (E), PhatBacter_16 (E), Phaux_15 (E), Phrux_16 (E), Porky_15 (E), Pumpkin_17 (E), Quallification_18 (E), Rakim_18 (E), Rimmer_16 (E), Saints25_17 (E), Sassay_16 (E), ShamWow_17 (E), ShereKhan_18 (E), Simpliphy_17 (E), SirDuracell_16 (E), SophKB_17 (E), Sotrice96_17 (E), Stank_18 (E), Stark_17 (E), StellaBean_17 (E), StolenFromERC_18 (E), TBrady12_18 (E), Tarkin_18 (E), TeardropMSU_16 (E), Teaspoon_16 (E), Terminus_16 (E), Thresher_17 (E), Tomaszewski_16 (E), Toto_17 (E), Traaww1_15 (E), Tuco_17 (E), Ukulele_16 (E), Wiggins_18 (E), Willez_16 (E), Xandras_18 (E), Youngblood_16 (E), xkcd_17 (E),

Summary by clusters:

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

- Start number 2 was manually annotated 3 times for cluster E.
- Start number 3 was manually annotated 119 times for cluster E.

Gene Information:

Gene: 244_17 Start: 9814, Stop: 10194, Start Num: 3

Candidate Starts for 244_17:

(1, 9694), (Start: 2 @9805 has 3 MA's), (Start: 3 @9814 has 119 MA's), (5, 9913), (6, 9928), (7, 9991), (8, 10069), (9, 10072), (10, 10120),

Gene: ABCat_16 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for ABCat_16:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Adnama_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Adnama_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Amao_17 Start: 9794, Stop: 10174, Start Num: 3

Candidate Starts for Amao_17:

(1, 9674), (Start: 2 @9785 has 3 MA's), (Start: 3 @9794 has 119 MA's), (4, 9845), (5, 9893), (6, 9908), (7, 9971), (8, 10049), (9, 10052), (10, 10100),

Gene: AmericanBeauty_18 Start: 10043, Stop: 10423, Start Num: 3

Candidate Starts for AmericanBeauty_18:

(1, 9923), (Start: 2 @10034 has 3 MA's), (Start: 3 @10043 has 119 MA's), (5, 10142), (6, 10157), (7, 10220), (8, 10298), (9, 10301), (10, 10349),

Gene: Argent26_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Argent26_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Asriel_16 Start: 9461, Stop: 9841, Start Num: 3

Candidate Starts for Asriel_16:

(1, 9341), (Start: 2 @9452 has 3 MA's), (Start: 3 @9461 has 119 MA's), (4, 9512), (5, 9560), (6, 9575), (7, 9638), (8, 9716), (9, 9719), (10, 9767),

Gene: BaboJay_16 Start: 10125, Stop: 10505, Start Num: 3

Candidate Starts for BaboJay_16:

(1, 10005), (Start: 2 @10116 has 3 MA's), (Start: 3 @10125 has 119 MA's), (5, 10224), (6, 10239), (7, 10302), (8, 10380), (9, 10383), (10, 10431),

Gene: BadStone_16 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for BadStone_16:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Balomoji_16 Start: 10323, Stop: 10703, Start Num: 3

Candidate Starts for Balomoji_16:

(1, 10203), (Start: 2 @10314 has 3 MA's), (Start: 3 @10323 has 119 MA's), (4, 10374), (5, 10422), (6, 10437), (7, 10500), (8, 10578), (9, 10581), (10, 10629),

Gene: Barbarian_16 Start: 9461, Stop: 9841, Start Num: 3

Candidate Starts for Barbarian_16:

(1, 9341), (Start: 2 @9452 has 3 MA's), (Start: 3 @9461 has 119 MA's), (4, 9512), (5, 9560), (6, 9575), (7, 9638), (8, 9716), (9, 9719), (10, 9767),

Gene: Bask21_16 Start: 9256, Stop: 9636, Start Num: 3

Candidate Starts for Bask21_16:

(1, 9136), (Start: 2 @9247 has 3 MA's), (Start: 3 @9256 has 119 MA's), (4, 9307), (5, 9355), (6, 9370), (7, 9433), (8, 9511), (9, 9514), (10, 9562),

Gene: Bench_18 Start: 9919, Stop: 10299, Start Num: 3

Candidate Starts for Bench_18:

(1, 9799), (Start: 2 @9910 has 3 MA's), (Start: 3 @9919 has 119 MA's), (5, 10018), (6, 10033), (7, 10096), (8, 10174), (9, 10177), (10, 10225),

Gene: BigBubba_16 Start: 9302, Stop: 9682, Start Num: 3

Candidate Starts for BigBubba_16:

(1, 9182), (Start: 2 @9293 has 3 MA's), (Start: 3 @9302 has 119 MA's), (5, 9401), (6, 9416), (7, 9479), (8, 9557), (9, 9560), (10, 9608),

Gene: BilboSwaggins_17 Start: 10590, Stop: 10970, Start Num: 3

Candidate Starts for BilboSwaggins_17:

(1, 10470), (Start: 2 @10581 has 3 MA's), (Start: 3 @10590 has 119 MA's), (4, 10641), (5, 10689), (6, 10704), (7, 10767), (8, 10845), (9, 10848), (10, 10896),

Gene: Bruin_16 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Bruin_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: Buck_16 Start: 10546, Stop: 10926, Start Num: 3

Candidate Starts for Buck_16:

(1, 10426), (Start: 2 @10537 has 3 MA's), (Start: 3 @10546 has 119 MA's), (4, 10597), (5, 10645), (6, 10660), (7, 10723), (8, 10801), (9, 10804), (10, 10852),

Gene: Cactus_18 Start: 9802, Stop: 10182, Start Num: 3

Candidate Starts for Cactus_18:

(1, 9682), (Start: 2 @9793 has 3 MA's), (Start: 3 @9802 has 119 MA's), (4, 9853), (5, 9901), (6, 9916), (7, 9979), (8, 10057), (9, 10060), (10, 10108),

Gene: ChosenOne_15 Start: 9266, Stop: 9646, Start Num: 3

Candidate Starts for ChosenOne_15:

(1, 9146), (Start: 2 @9257 has 3 MA's), (Start: 3 @9266 has 119 MA's), (5, 9365), (6, 9380), (7, 9443), (8, 9521), (9, 9524), (10, 9572),

Gene: ChotaBhai_16 Start: 9302, Stop: 9682, Start Num: 3

Candidate Starts for ChotaBhai_16:

(1, 9182), (Start: 2 @9293 has 3 MA's), (Start: 3 @9302 has 119 MA's), (5, 9401), (6, 9416), (7, 9479), (8, 9557), (9, 9560), (10, 9608),

Gene: Cjw1_16 Start: 10816, Stop: 11196, Start Num: 3

Candidate Starts for Cjw1_16:

(1, 10696), (Start: 2 @10807 has 3 MA's), (Start: 3 @10816 has 119 MA's), (5, 10915), (6, 10930), (7, 10993), (8, 11071), (9, 11074), (10, 11122),

Gene: Command613_18 Start: 10858, Stop: 11238, Start Num: 3

Candidate Starts for Command613_18:

(1, 10738), (Start: 2 @10849 has 3 MA's), (Start: 3 @10858 has 119 MA's), (4, 10909), (5, 10957), (6, 10972), (7, 11035), (8, 11113), (9, 11116), (10, 11164),

Gene: Contagion_16 Start: 10088, Stop: 10477, Start Num: 2

Candidate Starts for Contagion_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: Cookies_17 Start: 10462, Stop: 10842, Start Num: 3

Candidate Starts for Cookies_17:

(1, 10342), (Start: 2 @10453 has 3 MA's), (Start: 3 @10462 has 119 MA's), (4, 10513), (5, 10561), (6, 10576), (7, 10639), (8, 10717), (9, 10720), (10, 10768),

Gene: CrystalP_17 Start: 10590, Stop: 10970, Start Num: 3

Candidate Starts for CrystalP_17:

(1, 10470), (Start: 2 @10581 has 3 MA's), (Start: 3 @10590 has 119 MA's), (4, 10641), (5, 10689), (6, 10704), (7, 10767), (8, 10845), (9, 10848), (10, 10896),

Gene: Czyszczone1_17 Start: 9801, Stop: 10181, Start Num: 3

Candidate Starts for Czyszczone1_17:

(1, 9681), (Start: 2 @9792 has 3 MA's), (Start: 3 @9801 has 119 MA's), (5, 9900), (6, 9915), (7, 9978), (8, 10056), (9, 10059), (10, 10107),

Gene: Daikon_15 Start: 10324, Stop: 10704, Start Num: 3

Candidate Starts for Daikon_15:

(1, 10204), (Start: 2 @10315 has 3 MA's), (Start: 3 @10324 has 119 MA's), (4, 10375), (5, 10423), (6, 10438), (7, 10501), (8, 10579), (9, 10582), (10, 10630),

Gene: DoctorDiddles_17 Start: 9755, Stop: 10135, Start Num: 3

Candidate Starts for DoctorDiddles_17:

(1, 9635), (Start: 2 @9746 has 3 MA's), (Start: 3 @9755 has 119 MA's), (4, 9806), (5, 9854), (6, 9869), (7, 9932), (8, 10010), (9, 10013), (10, 10061),

Gene: DrDrey_17 Start: 10542, Stop: 10922, Start Num: 3

Candidate Starts for DrDrey_17:

(1, 10422), (Start: 2 @10533 has 3 MA's), (Start: 3 @10542 has 119 MA's), (5, 10641), (6, 10656), (7, 10719), (8, 10797), (9, 10800), (10, 10848),

Gene: Dumbo_16 Start: 9523, Stop: 9903, Start Num: 3

Candidate Starts for Dumbo_16:

(1, 9403), (Start: 2 @9514 has 3 MA's), (Start: 3 @9523 has 119 MA's), (5, 9622), (6, 9637), (7, 9700), (8, 9778), (9, 9781), (10, 9829),

Gene: Dusk_16 Start: 10249, Stop: 10629, Start Num: 3

Candidate Starts for Dusk_16:

(1, 10129), (Start: 2 @10240 has 3 MA's), (Start: 3 @10249 has 119 MA's), (4, 10300), (5, 10348), (6, 10363), (7, 10426), (8, 10504), (9, 10507), (10, 10555),

Gene: Easy2Say_17 Start: 10789, Stop: 11169, Start Num: 3

Candidate Starts for Easy2Say_17:

(1, 10669), (Start: 2 @10780 has 3 MA's), (Start: 3 @10789 has 119 MA's), (5, 10888), (6, 10903), (7, 10966), (8, 11044), (9, 11047), (10, 11095),

Gene: Elite2014_15 Start: 9266, Stop: 9646, Start Num: 3

Candidate Starts for Elite2014_15:

(1, 9146), (Start: 2 @9257 has 3 MA's), (Start: 3 @9266 has 119 MA's), (5, 9365), (6, 9380), (7, 9443), (8, 9521), (9, 9524), (10, 9572),

Gene: Elph10_17 Start: 9526, Stop: 9906, Start Num: 3

Candidate Starts for Elph10_17:

(1, 9406), (Start: 2 @9517 has 3 MA's), (Start: 3 @9526 has 119 MA's), (5, 9625), (6, 9640), (7, 9703), (8, 9781), (9, 9784), (10, 9832),

Gene: Emmina_16 Start: 9371, Stop: 9751, Start Num: 3

Candidate Starts for Emmina_16:

(1, 9251), (Start: 2 @9362 has 3 MA's), (Start: 3 @9371 has 119 MA's), (5, 9470), (6, 9485), (7, 9548), (8, 9626), (9, 9629), (10, 9677),

Gene: Eureka_17 Start: 10569, Stop: 10949, Start Num: 3

Candidate Starts for Eureka_17:

(1, 10449), (Start: 2 @10560 has 3 MA's), (Start: 3 @10569 has 119 MA's), (5, 10668), (6, 10683), (7, 10746), (8, 10824), (9, 10827), (10, 10875),

Gene: Filch_17 Start: 9811, Stop: 10191, Start Num: 3

Candidate Starts for Filch_17:

(1, 9691), (Start: 2 @9802 has 3 MA's), (Start: 3 @9811 has 119 MA's), (5, 9910), (6, 9925), (7, 9988), (8, 10066), (9, 10069), (10, 10117),

Gene: FireRed_16 Start: 10099, Stop: 10479, Start Num: 3

Candidate Starts for FireRed_16:

(1, 9979), (Start: 2 @10090 has 3 MA's), (Start: 3 @10099 has 119 MA's), (5, 10198), (6, 10213), (7, 10276), (8, 10354), (9, 10357), (10, 10405),

Gene: Flypotenuse_15 Start: 10206, Stop: 10586, Start Num: 3

Candidate Starts for Flypotenuse_15:

(1, 10086), (Start: 2 @10197 has 3 MA's), (Start: 3 @10206 has 119 MA's), (4, 10257), (5, 10305), (6, 10320), (7, 10383), (8, 10461), (9, 10464), (10, 10512),

Gene: Gage_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Gage_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Gator_15 Start: 10196, Stop: 10585, Start Num: 2

Candidate Starts for Gator_15:

(1, 10085), (Start: 2 @10196 has 3 MA's), (Start: 3 @10205 has 119 MA's), (4, 10256), (5, 10304), (6, 10319), (7, 10382), (8, 10460), (9, 10463), (10, 10511),

Gene: Gemini_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Gemini_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Glexan_15 Start: 10206, Stop: 10586, Start Num: 3

Candidate Starts for Glexan_15:

(1, 10086), (Start: 2 @10197 has 3 MA's), (Start: 3 @10206 has 119 MA's), (4, 10257), (5, 10305), (6, 10320), (7, 10383), (8, 10461), (9, 10464), (10, 10512),

Gene: Goku_17 Start: 10298, Stop: 10678, Start Num: 3

Candidate Starts for Goku_17:

(1, 10178), (Start: 2 @10289 has 3 MA's), (Start: 3 @10298 has 119 MA's), (5, 10397), (6, 10412), (7, 10475), (8, 10553), (9, 10556), (10, 10604),

Gene: GoldenSpark_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for GoldenSpark_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Goldilocks_18 Start: 10000, Stop: 10380, Start Num: 3

Candidate Starts for Goldilocks_18:

(1, 9880), (Start: 2 @9991 has 3 MA's), (Start: 3 @10000 has 119 MA's), (4, 10051), (5, 10099), (6, 10114), (7, 10177), (8, 10255), (9, 10258), (10, 10306),

Gene: GooberAzure_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for GooberAzure_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: HanKaySha_17 Start: 9801, Stop: 10181, Start Num: 3

Candidate Starts for HanKaySha_17:

(1, 9681), (Start: 2 @9792 has 3 MA's), (Start: 3 @9801 has 119 MA's), (5, 9900), (6, 9915), (7, 9978), (8, 10056), (9, 10059), (10, 10107),

Gene: Harella_15 Start: 10206, Stop: 10586, Start Num: 3

Candidate Starts for Harella_15:

(1, 10086), (Start: 2 @10197 has 3 MA's), (Start: 3 @10206 has 119 MA's), (4, 10257), (5, 10305), (6, 10320), (7, 10383), (8, 10461), (9, 10464), (10, 10512),

Gene: Henry_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for Henry_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Highbury_17 Start: 9720, Stop: 10100, Start Num: 3

Candidate Starts for Highbury_17:

(1, 9600), (Start: 2 @9711 has 3 MA's), (Start: 3 @9720 has 119 MA's), (5, 9819), (6, 9834), (7, 9897), (8, 9975), (9, 9978), (10, 10026),

Gene: Holt_18 Start: 9873, Stop: 10253, Start Num: 3

Candidate Starts for Holt_18:

(1, 9753), (Start: 2 @9864 has 3 MA's), (Start: 3 @9873 has 119 MA's), (4, 9924), (5, 9972), (6, 9987), (7, 10050), (8, 10128), (9, 10131), (10, 10179),

Gene: Hoonter_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Hoonter_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Hokey_17 Start: 9811, Stop: 10191, Start Num: 3

Candidate Starts for Hokey_17:

(1, 9691), (Start: 2 @9802 has 3 MA's), (Start: 3 @9811 has 119 MA's), (5, 9910), (6, 9925), (7, 9988), (8, 10066), (9, 10069), (10, 10117),

Gene: HufflyPuff_15 Start: 10055, Stop: 10435, Start Num: 3

Candidate Starts for HufflyPuff_15:

(1, 9935), (Start: 2 @10046 has 3 MA's), (Start: 3 @10055 has 119 MA's), (5, 10154), (6, 10169), (7, 10232), (8, 10310), (9, 10313), (10, 10361),

Gene: IHOP_16 Start: 10249, Stop: 10629, Start Num: 3

Candidate Starts for IHOP_16:

(1, 10129), (Start: 2 @10240 has 3 MA's), (Start: 3 @10249 has 119 MA's), (4, 10300), (5, 10348), (6, 10363), (7, 10426), (8, 10504), (9, 10507), (10, 10555),

Gene: Icee_16 Start: 10249, Stop: 10629, Start Num: 3

Candidate Starts for Icee_16:

(1, 10129), (Start: 2 @10240 has 3 MA's), (Start: 3 @10249 has 119 MA's), (4, 10300), (5, 10348), (6, 10363), (7, 10426), (8, 10504), (9, 10507), (10, 10555),

Gene: Inca_16 Start: 9269, Stop: 9649, Start Num: 3

Candidate Starts for Inca_16:

(1, 9149), (Start: 2 @9260 has 3 MA's), (Start: 3 @9269 has 119 MA's), (4, 9320), (5, 9368), (6, 9383), (7, 9446), (8, 9524), (9, 9527), (10, 9575),

Gene: JeTaime_18 Start: 10851, Stop: 11231, Start Num: 3

Candidate Starts for JeTaime_18:

(1, 10731), (Start: 2 @10842 has 3 MA's), (Start: 3 @10851 has 119 MA's), (5, 10950), (6, 10965), (7, 11028), (8, 11106), (9, 11109), (10, 11157),

Gene: Kanye_18 Start: 11039, Stop: 11419, Start Num: 3

Candidate Starts for Kanye_18:

(1, 10919), (Start: 2 @11030 has 3 MA's), (Start: 3 @11039 has 119 MA's), (5, 11138), (6, 11153), (7, 11216), (8, 11294), (9, 11297), (10, 11345),

Gene: Kimchi_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Kimchi_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Kostya_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for Kostya_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Lilac_18 Start: 9547, Stop: 9927, Start Num: 3

Candidate Starts for Lilac_18:

(1, 9427), (Start: 2 @9538 has 3 MA's), (Start: 3 @9547 has 119 MA's), (5, 9646), (6, 9661), (7, 9724), (8, 9802), (9, 9805), (10, 9853),

Gene: Lilizi_18 Start: 9758, Stop: 10138, Start Num: 3

Candidate Starts for Lilizi_18:

(1, 9638), (Start: 2 @9749 has 3 MA's), (Start: 3 @9758 has 119 MA's), (5, 9857), (6, 9872), (7, 9935), (8, 10013), (9, 10016), (10, 10064),

Gene: Lilpickle_15 Start: 9266, Stop: 9646, Start Num: 3

Candidate Starts for Lilpickle_15:

(1, 9146), (Start: 2 @9257 has 3 MA's), (Start: 3 @9266 has 119 MA's), (5, 9365), (6, 9380), (7, 9443), (8, 9521), (9, 9524), (10, 9572),

Gene: MISSy_16 Start: 10099, Stop: 10479, Start Num: 3

Candidate Starts for MISSy_16:

(1, 9979), (Start: 2 @10090 has 3 MA's), (Start: 3 @10099 has 119 MA's), (5, 10198), (6, 10213), (7, 10276), (8, 10354), (9, 10357), (10, 10405),

Gene: MPhalcon_16 Start: 10099, Stop: 10479, Start Num: 3

Candidate Starts for MPhalcon_16:

(1, 9979), (Start: 2 @10090 has 3 MA's), (Start: 3 @10099 has 119 MA's), (5, 10198), (6, 10213), (7, 10276), (8, 10354), (9, 10357), (10, 10405),

Gene: MadamMonkfish_16 Start: 9477, Stop: 9857, Start Num: 3

Candidate Starts for MadamMonkfish_16:

(1, 9357), (Start: 2 @9468 has 3 MA's), (Start: 3 @9477 has 119 MA's), (5, 9576), (6, 9591), (7, 9654), (8, 9732), (9, 9735), (10, 9783),

Gene: Manda_17 Start: 10559, Stop: 10939, Start Num: 3

Candidate Starts for Manda_17:

(1, 10439), (Start: 2 @10550 has 3 MA's), (Start: 3 @10559 has 119 MA's), (4, 10610), (5, 10658), (6, 10673), (7, 10736), (8, 10814), (9, 10817), (10, 10865),

Gene: Marshmallow_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for Marshmallow_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Maxxinista_17 Start: 9526, Stop: 9906, Start Num: 3

Candidate Starts for Maxxinista_17:

(1, 9406), (Start: 2 @9517 has 3 MA's), (Start: 3 @9526 has 119 MA's), (5, 9625), (6, 9640), (7, 9703), (8, 9781), (9, 9784), (10, 9832),

Gene: Mindy_17 Start: 10368, Stop: 10748, Start Num: 3

Candidate Starts for Mindy_17:

(1, 10248), (Start: 2 @10359 has 3 MA's), (Start: 3 @10368 has 119 MA's), (4, 10419), (5, 10467), (6, 10482), (7, 10545), (8, 10623), (9, 10626), (10, 10674),

Gene: Miniwave_17 Start: 10787, Stop: 11167, Start Num: 3

Candidate Starts for Miniwave_17:

(1, 10667), (Start: 2 @10778 has 3 MA's), (Start: 3 @10787 has 119 MA's), (4, 10838), (5, 10886), (6, 10901), (7, 10964), (8, 11042), (9, 11045), (10, 11093),

Gene: Misfit_16 Start: 10143, Stop: 10523, Start Num: 3

Candidate Starts for Misfit_16:

(1, 10023), (Start: 2 @10134 has 3 MA's), (Start: 3 @10143 has 119 MA's), (5, 10242), (6, 10257), (7, 10320), (8, 10398), (9, 10401), (10, 10449),

Gene: Moldemort_17 Start: 9801, Stop: 10181, Start Num: 3

Candidate Starts for Moldemort_17:

(1, 9681), (Start: 2 @9792 has 3 MA's), (Start: 3 @9801 has 119 MA's), (5, 9900), (6, 9915), (7, 9978), (8, 10056), (9, 10059), (10, 10107),

Gene: Mosby_16 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Mosby_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: Murica_15 Start: 10055, Stop: 10435, Start Num: 3

Candidate Starts for Murica_15:

(1, 9935), (Start: 2 @10046 has 3 MA's), (Start: 3 @10055 has 119 MA's), (5, 10154), (6, 10169), (7, 10232), (8, 10310), (9, 10313), (10, 10361),

Gene: Murphy_16 Start: 9518, Stop: 9898, Start Num: 3

Candidate Starts for Murphy_16:

(1, 9398), (Start: 2 @9509 has 3 MA's), (Start: 3 @9518 has 119 MA's), (5, 9617), (6, 9632), (7, 9695), (8, 9773), (9, 9776), (10, 9824),

Gene: Myrale_17 Start: 10460, Stop: 10840, Start Num: 3

Candidate Starts for Myrale_17:

(1, 10340), (Start: 2 @10451 has 3 MA's), (Start: 3 @10460 has 119 MA's), (4, 10511), (5, 10559), (6, 10574), (7, 10637), (8, 10715), (9, 10718), (10, 10766),

Gene: Nala_16 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Nala_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: NelitzaMV_17 Start: 10659, Stop: 11039, Start Num: 3

Candidate Starts for NelitzaMV_17:

(1, 10539), (Start: 2 @10650 has 3 MA's), (Start: 3 @10659 has 119 MA's), (4, 10710), (5, 10758), (6, 10773), (7, 10836), (8, 10914), (9, 10917), (10, 10965),

Gene: Nimrod_16 Start: 10298, Stop: 10678, Start Num: 3

Candidate Starts for Nimrod_16:

(1, 10178), (Start: 2 @10289 has 3 MA's), (Start: 3 @10298 has 119 MA's), (5, 10397), (6, 10412), (7, 10475), (8, 10553), (9, 10556), (10, 10604),

Gene: NoSleep_17 Start: 9798, Stop: 10178, Start Num: 3

Candidate Starts for NoSleep_17:

(1, 9678), (Start: 2 @9789 has 3 MA's), (Start: 3 @9798 has 119 MA's), (5, 9897), (6, 9912), (7, 9975), (8, 10053), (9, 10056), (10, 10104),

Gene: OrionPax_17 Start: 9801, Stop: 10181, Start Num: 3

Candidate Starts for OrionPax_17:

(1, 9681), (Start: 2 @9792 has 3 MA's), (Start: 3 @9801 has 119 MA's), (5, 9900), (6, 9915), (7, 9978), (8, 10056), (9, 10059), (10, 10107),

Gene: Palpatine_16 Start: 10094, Stop: 10474, Start Num: 3

Candidate Starts for Palpatine_16:

(1, 9974), (Start: 2 @10085 has 3 MA's), (Start: 3 @10094 has 119 MA's), (4, 10145), (5, 10193), (6, 10208), (7, 10271), (8, 10349), (9, 10352), (10, 10400),

Gene: Paperbeatsrock_18 Start: 11033, Stop: 11413, Start Num: 3

Candidate Starts for Paperbeatsrock_18:

(1, 10913), (Start: 2 @11024 has 3 MA's), (Start: 3 @11033 has 119 MA's), (5, 11132), (6, 11147), (7, 11210), (8, 11288), (9, 11291), (10, 11339),

Gene: Pat3_16 Start: 9301, Stop: 9681, Start Num: 3

Candidate Starts for Pat3_16:

(1, 9181), (Start: 2 @9292 has 3 MA's), (Start: 3 @9301 has 119 MA's), (5, 9400), (6, 9415), (7, 9478), (8, 9556), (9, 9559), (10, 9607),

Gene: Petra64142_17 Start: 10514, Stop: 10894, Start Num: 3

Candidate Starts for Petra64142_17:

(1, 10394), (Start: 2 @10505 has 3 MA's), (Start: 3 @10514 has 119 MA's), (5, 10613), (6, 10628), (7, 10691), (8, 10769), (9, 10772), (10, 10820),

Gene: Phaja_16 Start: 10249, Stop: 10629, Start Num: 3

Candidate Starts for Phaja_16:

(1, 10129), (Start: 2 @10240 has 3 MA's), (Start: 3 @10249 has 119 MA's), (4, 10300), (5, 10348), (6, 10363), (7, 10426), (8, 10504), (9, 10507), (10, 10555),

Gene: Pharsalus_17 Start: 10833, Stop: 11213, Start Num: 3

Candidate Starts for Pharsalus_17:

(1, 10713), (Start: 2 @10824 has 3 MA's), (Start: 3 @10833 has 119 MA's), (5, 10932), (6, 10947), (7, 11010), (8, 11088), (9, 11091), (10, 11139),

Gene: PhatBacter_16 Start: 10099, Stop: 10479, Start Num: 3

Candidate Starts for PhatBacter_16:

(1, 9979), (Start: 2 @10090 has 3 MA's), (Start: 3 @10099 has 119 MA's), (5, 10198), (6, 10213), (7, 10276), (8, 10354), (9, 10357), (10, 10405),

Gene: Phaux_15 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Phaux_15:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: Phrux_16 Start: 9797, Stop: 10177, Start Num: 3

Candidate Starts for Phrux_16:

(1, 9677), (Start: 2 @9788 has 3 MA's), (Start: 3 @9797 has 119 MA's), (5, 9896), (6, 9911), (7, 9974), (8, 10052), (9, 10055), (10, 10103),

Gene: Policronamos_16 Start: 10090, Stop: 10479, Start Num: 2

Candidate Starts for Policronamos_16:

(1, 9979), (Start: 2 @10090 has 3 MA's), (Start: 3 @10099 has 119 MA's), (5, 10198), (6, 10213), (7, 10276), (8, 10354), (9, 10357), (10, 10405),

Gene: Porky_15 Start: 9371, Stop: 9751, Start Num: 3

Candidate Starts for Porky_15:

(1, 9251), (Start: 2 @9362 has 3 MA's), (Start: 3 @9371 has 119 MA's), (5, 9470), (6, 9485), (7, 9548), (8, 9626), (9, 9629), (10, 9677),

Gene: Pumpkin_17 Start: 9614, Stop: 9994, Start Num: 3

Candidate Starts for Pumpkin_17:

(1, 9494), (Start: 2 @9605 has 3 MA's), (Start: 3 @9614 has 119 MA's), (5, 9713), (6, 9728), (7, 9791), (8, 9869), (9, 9872), (10, 9920),

Gene: Quallification_18 Start: 10796, Stop: 11176, Start Num: 3

Candidate Starts for Quallification_18:

(1, 10676), (Start: 2 @10787 has 3 MA's), (Start: 3 @10796 has 119 MA's), (4, 10847), (5, 10895), (6, 10910), (7, 10973), (8, 11051), (9, 11054), (10, 11102),

Gene: Rakim_18 Start: 10703, Stop: 11083, Start Num: 3

Candidate Starts for Rakim_18:

(1, 10583), (Start: 2 @10694 has 3 MA's), (Start: 3 @10703 has 119 MA's), (4, 10754), (5, 10802), (6, 10817), (7, 10880), (8, 10958), (9, 10961), (10, 11009),

Gene: Rimmer_16 Start: 10156, Stop: 10536, Start Num: 3

Candidate Starts for Rimmer_16:

(1, 10036), (Start: 2 @10147 has 3 MA's), (Start: 3 @10156 has 119 MA's), (4, 10207), (5, 10255), (6, 10270), (7, 10333), (8, 10411), (9, 10414), (10, 10462),

Gene: RiverMonster_16 Start: 9802, Stop: 10191, Start Num: 2

Candidate Starts for RiverMonster_16:

(1, 9691), (Start: 2 @9802 has 3 MA's), (Start: 3 @9811 has 119 MA's), (5, 9910), (6, 9925), (7, 9988), (8, 10066), (9, 10069), (10, 10117),

Gene: Saints25_17 Start: 9720, Stop: 10100, Start Num: 3

Candidate Starts for Saints25_17:

(1, 9600), (Start: 2 @9711 has 3 MA's), (Start: 3 @9720 has 119 MA's), (5, 9819), (6, 9834), (7, 9897), (8, 9975), (9, 9978), (10, 10026),

Gene: Sassay_16 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Sassay_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: ShamWow_17 Start: 10590, Stop: 10970, Start Num: 3

Candidate Starts for ShamWow_17:

(1, 10470), (Start: 2 @10581 has 3 MA's), (Start: 3 @10590 has 119 MA's), (4, 10641), (5, 10689), (6, 10704), (7, 10767), (8, 10845), (9, 10848), (10, 10896),

Gene: ShereKhan_18 Start: 11039, Stop: 11419, Start Num: 3

Candidate Starts for ShereKhan_18:

(1, 10919), (Start: 2 @11030 has 3 MA's), (Start: 3 @11039 has 119 MA's), (5, 11138), (6, 11153), (7, 11216), (8, 11294), (9, 11297), (10, 11345),

Gene: Simpliphy_17 Start: 9801, Stop: 10181, Start Num: 3

Candidate Starts for Simpliphy_17:

(1, 9681), (Start: 2 @9792 has 3 MA's), (Start: 3 @9801 has 119 MA's), (5, 9900), (6, 9915), (7, 9978), (8, 10056), (9, 10059), (10, 10107),

Gene: SirDuracell_16 Start: 9256, Stop: 9636, Start Num: 3

Candidate Starts for SirDuracell_16:

(1, 9136), (Start: 2 @9247 has 3 MA's), (Start: 3 @9256 has 119 MA's), (4, 9307), (5, 9355), (6, 9370), (7, 9433), (8, 9511), (9, 9514), (10, 9562),

Gene: SophKB_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for SophKB_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Sotrice96_17 Start: 10545, Stop: 10925, Start Num: 3

Candidate Starts for Sotrice96_17:

(1, 10425), (Start: 2 @10536 has 3 MA's), (Start: 3 @10545 has 119 MA's), (4, 10596), (5, 10644), (6, 10659), (7, 10722), (8, 10800), (9, 10803), (10, 10851),

Gene: Stank_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Stank_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Stark_17 Start: 9814, Stop: 10194, Start Num: 3

Candidate Starts for Stark_17:

(1, 9694), (Start: 2 @9805 has 3 MA's), (Start: 3 @9814 has 119 MA's), (5, 9913), (6, 9928), (7, 9991), (8, 10069), (9, 10072), (10, 10120),

Gene: StellaBean_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for StellaBean_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: StolenFromERC_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for StolenFromERC_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: TBrady12_18 Start: 10043, Stop: 10423, Start Num: 3

Candidate Starts for TBrady12_18:

(1, 9923), (Start: 2 @10034 has 3 MA's), (Start: 3 @10043 has 119 MA's), (5, 10142), (6, 10157), (7, 10220), (8, 10298), (9, 10301), (10, 10349),

Gene: Tarkin_18 Start: 11042, Stop: 11422, Start Num: 3

Candidate Starts for Tarkin_18:

(1, 10922), (Start: 2 @11033 has 3 MA's), (Start: 3 @11042 has 119 MA's), (5, 11141), (6, 11156), (7, 11219), (8, 11297), (9, 11300), (10, 11348),

Gene: TeardropMSU_16 Start: 10497, Stop: 10877, Start Num: 3

Candidate Starts for TeardropMSU_16:

(1, 10377), (Start: 2 @10488 has 3 MA's), (Start: 3 @10497 has 119 MA's), (4, 10548), (5, 10596), (6, 10611), (7, 10674), (8, 10752), (9, 10755), (10, 10803),

Gene: Teaspoon_16 Start: 9496, Stop: 9876, Start Num: 3

Candidate Starts for Teaspoon_16:

(1, 9376), (Start: 2 @9487 has 3 MA's), (Start: 3 @9496 has 119 MA's), (5, 9595), (6, 9610), (7, 9673), (8, 9751), (9, 9754), (10, 9802),

Gene: Terminus_16 Start: 10143, Stop: 10523, Start Num: 3

Candidate Starts for Terminus_16:

(1, 10023), (Start: 2 @10134 has 3 MA's), (Start: 3 @10143 has 119 MA's), (5, 10242), (6, 10257), (7, 10320), (8, 10398), (9, 10401), (10, 10449),

Gene: Thresher_17 Start: 10804, Stop: 11184, Start Num: 3

Candidate Starts for Thresher_17:

(1, 10684), (Start: 2 @10795 has 3 MA's), (Start: 3 @10804 has 119 MA's), (5, 10903), (6, 10918), (7, 10981), (8, 11059), (9, 11062), (10, 11110),

Gene: Tomaszewski_16 Start: 10190, Stop: 10570, Start Num: 3

Candidate Starts for Tomaszewski_16:

(1, 10070), (Start: 2 @10181 has 3 MA's), (Start: 3 @10190 has 119 MA's), (4, 10241), (5, 10289), (6, 10304), (7, 10367), (8, 10445), (9, 10448), (10, 10496),

Gene: Toto_17 Start: 10590, Stop: 10970, Start Num: 3

Candidate Starts for Toto_17:

(1, 10470), (Start: 2 @10581 has 3 MA's), (Start: 3 @10590 has 119 MA's), (4, 10641), (5, 10689), (6, 10704), (7, 10767), (8, 10845), (9, 10848), (10, 10896),

Gene: Traaww1_15 Start: 10235, Stop: 10615, Start Num: 3

Candidate Starts for Traaww1_15:

(1, 10115), (Start: 2 @10226 has 3 MA's), (Start: 3 @10235 has 119 MA's), (4, 10286), (5, 10334), (6, 10349), (7, 10412), (8, 10490), (9, 10493), (10, 10541),

Gene: Tuco_17 Start: 10589, Stop: 10969, Start Num: 3

Candidate Starts for Tuco_17:

(1, 10469), (Start: 2 @10580 has 3 MA's), (Start: 3 @10589 has 119 MA's), (4, 10640), (5, 10688), (6, 10703), (7, 10766), (8, 10844), (9, 10847), (10, 10895),

Gene: Ukulele_16 Start: 9814, Stop: 10194, Start Num: 3

Candidate Starts for Ukulele_16:

(1, 9694), (Start: 2 @9805 has 3 MA's), (Start: 3 @9814 has 119 MA's), (5, 9913), (6, 9928), (7, 9991), (8, 10069), (9, 10072), (10, 10120),

Gene: Wiggin_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Wiggin_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Willez_16 Start: 10097, Stop: 10477, Start Num: 3

Candidate Starts for Willez_16:

(1, 9977), (Start: 2 @10088 has 3 MA's), (Start: 3 @10097 has 119 MA's), (4, 10148), (5, 10196), (6, 10211), (7, 10274), (8, 10352), (9, 10355), (10, 10403),

Gene: Xandras_18 Start: 10046, Stop: 10426, Start Num: 3

Candidate Starts for Xandras_18:

(1, 9926), (Start: 2 @10037 has 3 MA's), (Start: 3 @10046 has 119 MA's), (5, 10145), (6, 10160), (7, 10223), (8, 10301), (9, 10304), (10, 10352),

Gene: Youngblood_16 Start: 10224, Stop: 10604, Start Num: 3

Candidate Starts for Youngblood_16:

(1, 10104), (Start: 2 @10215 has 3 MA's), (Start: 3 @10224 has 119 MA's), (5, 10323), (6, 10338), (7, 10401), (8, 10479), (9, 10482), (10, 10530),

Gene: xkcd_17 Start: 10249, Stop: 10629, Start Num: 3

Candidate Starts for xkcd_17:

(1, 10129), (Start: 2 @10240 has 3 MA's), (Start: 3 @10249 has 119 MA's), (4, 10300), (5, 10348), (6, 10363), (7, 10426), (8, 10504), (9, 10507), (10, 10555),