



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 208448 Report

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

Pham number 208448 has 135 members, 10 are drafts.

Phages represented in each track:

- Track 1 : FairyPath\_142
- Track 2 : FireRed\_149, DoctorDiddles\_144, BadStone\_144, DrDrey\_146, Policronamos\_144, BigBubba\_148, Dusk\_144, Simpliphy\_146, Rakim\_147, Murica\_148, PhatBacter\_149, Bask21\_149, Command613\_148, Kostya\_145, Mindy\_149, xkcd\_150, 244\_144
- Track 3 : Thimble\_136, Pharsalus\_143, GooberAzure\_148, Miniwave\_139, TBrady12\_150, Paperbeatsrock\_143
- Track 4 : Moldemort\_147, Cactus\_153, Goldilocks\_151, Sotrice96\_150, SophKB\_143, Argent26\_149, Holt\_151, Kimchi\_150, Bench\_148, Lilizi\_145, Xandras\_145, Gemini\_150, Kanye\_141, StolenFromERC\_147, Adnama\_149, Gage\_136, Stank\_149, GoldenSpark\_149, NelitzaMV\_140, Wiggin\_148, Easy2Say\_147
- Track 5 : Thresher\_147, Czyszczonek\_145, JeTaime\_143
- Track 6 : Mosby\_142, Terminus\_148, Contagion\_141, Tomaszewski\_139, Sassay\_140
- Track 7 : MPhalcon\_147, HufflyPuff\_147, BugsBunny\_143, Elph10\_144, Lilac\_141, Porky\_148, NoSleep\_144, Phrux\_142, Emmina\_147, Pumpkin\_144, ChotaBhai\_150
- Track 8 : Asriel\_143, Barbarian\_145, Traaww1\_143, Flypotenuse\_141
- Track 9 : Icee\_145, StormChicken\_146, ABCat\_144
- Track 10 : Youngblood\_149, Willez\_143, Misfit\_145
- Track 11 : YassJohnny\_140
- Track 12 : ShereKhan\_144, Tarkin\_143, Qualification\_145
- Track 13 : Rimmer\_144, Petra64142\_145
- Track 14 : AmericanBeauty\_148
- Track 15 : Tuco\_149
- Track 16 : StellaBean\_142, BaboJay\_145
- Track 17 : Palpatine\_142
- Track 18 : IHOP\_150
- Track 19 : Filch\_149
- Track 20 : Balomoji\_145
- Track 21 : MISSy\_146
- Track 22 : Marshmallow\_148, OrionPax\_143, Ukulele\_142
- Track 23 : Goku\_144, FoghornLeghorn\_142
- Track 24 : Highbury\_140, MadamMonkfish\_147, Dumbo\_148, Cookies\_147, Bruin\_142, Saints25\_140
- Track 25 : Daikon\_148

- Track 26 : Eureka\_146, Nimrod\_144, Lilpickle\_145, Nala\_148, Manda\_148, Elite2014\_145, ChosenOne\_146, Phaux\_146
- Track 27 : Teaspoon\_129
- Track 28 : Toto\_142, ShamWow\_144, CrystalP\_145
- Track 29 : Murphy\_147
- Track 30 : Hopey\_143
- Track 31 : RiverMonster\_145, Cjw1\_142
- Track 32 : Amao\_149
- Track 33 : Pat3\_146, HanKaySha\_144, Glexan\_149, Harella\_152, Gator\_147
- Track 34 : Inca\_146
- Track 35 : Stark\_142
- Track 36 : Henry\_145, Myrale\_145, TeardropMSU\_144
- Track 37 : SirDuracell\_147
- Track 38 : Phaja\_150
- Track 39 : BilboSwaggins\_142
- Track 40 : Becksu\_141
- Track 41 : Maxxinista\_147
- Track 42 : Hoonter\_147
- Track 43 : Buck\_147

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

The start number called the most often in the published annotations is 41, it was called in 111 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_144, ABCat\_144, Adnama\_149, Argent26\_149, Asriel\_143, BaboJay\_145, BadStone\_144, Barbarian\_145, Bask21\_149, Bench\_148, BigBubba\_148, Bruin\_142, Buck\_147, BugsBunny\_143, Cactus\_153, ChosenOne\_146, ChotaBhai\_150, Cjw1\_142, Command613\_148, Contagion\_141, Cookies\_147, CrystalP\_145, Czyszczon1\_145, DoctorDiddles\_144, DrDrey\_146, Dumbo\_148, Dusk\_144, Easy2Say\_147, Elite2014\_145, Elph10\_144, Emmina\_147, Eureka\_146, Filch\_149, FireRed\_149, Flypotenuse\_141, Gage\_136, Gemini\_150, GoldenSpark\_149, Goldilocks\_151, GooberAzure\_148, Henry\_145, Highbury\_140, Holt\_151, Hoonter\_147, Hopey\_143, HufflyPuff\_147, IHOP\_150, Icee\_145, Inca\_146, JeTaime\_143, Kanye\_141, Kimchi\_150, Kostya\_145, Lilac\_141, Lilizi\_145, Lilpickle\_145, MISSy\_146, MPhalcon\_147, MadamMonkfish\_147, Manda\_148, Marshmallow\_148, Maxxinista\_147, Mindy\_149, Miniwave\_139, Moldemort\_147, Mosby\_142, Murica\_148, Murphy\_147, Myrale\_145, Nala\_148, NelitzaMV\_140, Nimrod\_144, NoSleep\_144, OrionPax\_143, Paperbeatsrock\_143, Petra64142\_145, Phaja\_150, Pharsalus\_143, PhatBacter\_149, Phaux\_146, Phrux\_142, Policronamos\_144, Porky\_148, Pumpkin\_144, Quallification\_145, Rakim\_147, Rimmer\_144, RiverMonster\_145, Saints25\_140, Sassay\_140, ShamWow\_144, ShereKhan\_144, Simpliphy\_146, SophKB\_143, Sotrice96\_150, Stank\_149, Stark\_142, StellaBean\_142, StolenFromERC\_147, StormChicken\_146, TBrady12\_150, Tarkin\_143, TeardropMSU\_144, Terminus\_148, Thimble\_136, Thresher\_147, Tomaszewski\_139, Toto\_142, Traaww1\_143, Tuco\_149, Ukulele\_142, WiggIn\_148, Xandras\_145, YassJohnny\_140, xkcd\_150,

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

- AmericanBeauty\_148, Balomoji\_145, Becksu\_141, BilboSwaggins\_142, Daikon\_148, FairyPath\_142, FoghornLeghorn\_142, Goku\_144, Misfit\_145, Palpatine\_142, SirDuracell\_147, Teaspoon\_129, Willez\_143, Youngblood\_149,

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

- Amao\_149, Gator\_147, Glexan\_149, HanKaySha\_144, Harella\_152, Pat3\_146,

### Summary by start number:

Start 39:

- Found in 5 of 135 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 5 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gator\_147 (E), Glexan\_149 (E), HanKaySha\_144 (E), Harella\_152 (E), Pat3\_146 (E),

Start 41:

- Found in 129 of 135 ( 95.6% ) of genes in pham
- Manual Annotations of this start: 111 of 125
- Called 89.1% of time when present
- Phage (with cluster) where this start called: 244\_144 (E), ABCat\_144 (E), Adnama\_149 (E), Argent26\_149 (E), Asriel\_143 (E), BaboJay\_145 (E), BadStone\_144 (E), Barbarian\_145 (E), Bask21\_149 (E), Bench\_148 (E), BigBubba\_148 (E), Bruin\_142 (E), Buck\_147 (E), BugsBunny\_143 (E), Cactus\_153 (E), ChosenOne\_146 (E), ChotaBhai\_150 (E), Cjw1\_142 (E), Command613\_148 (E), Contagion\_141 (E), Cookies\_147 (E), CrystalP\_145 (E), Czystoczon1\_145 (E), DoctorDiddles\_144 (E), DrDrey\_146 (E), Dumbo\_148 (E), Dusk\_144 (E), Easy2Say\_147 (E), Elite2014\_145 (E), Elph10\_144 (E), Emmina\_147 (E), Eureka\_146 (E), Filch\_149 (E), FireRed\_149 (E), Flypotenuse\_141 (E), Gage\_136 (E), Gemini\_150 (E), GoldenSpark\_149 (E), Goldilocks\_151 (E), GooberAzure\_148 (E), Henry\_145 (E), Highbury\_140 (E), Holt\_151 (E), Hoonter\_147 (E), Hopey\_143 (E), HufflyPuff\_147 (E), IHOP\_150 (E), Icee\_145 (E), Inca\_146 (E), JeTaime\_143 (E), Kanye\_141 (E), Kimchi\_150 (E), Kostya\_145 (E), Lilac\_141 (E), Lilizi\_145 (E), Lilpickle\_145 (E), MISSy\_146 (E), MPhalcon\_147 (E), MadamMonkfish\_147 (E), Manda\_148 (E), Marshmallow\_148 (E), Maxxinista\_147 (E), Mindy\_149 (E), Miniwave\_139 (E), Moldemort\_147 (E), Mosby\_142 (E), Murica\_148 (E), Murphy\_147 (E), Myrale\_145 (E), Nala\_148 (E), NelitzaMV\_140 (E), Nimrod\_144 (E), NoSleep\_144 (E), OrionPax\_143 (E), Paperbeatsrock\_143 (E), Petra64142\_145 (E), Phaja\_150 (E), Pharsalus\_143 (E), PhatBacter\_149 (E), Phaux\_146 (E), Phrux\_142 (E), Policronamos\_144 (E), Porky\_148 (E), Pumpkin\_144 (E), Qualification\_145 (E), Rakim\_147 (E), Rimmer\_144 (E), RiverMonster\_145 (E), Saints25\_140 (E), Sassay\_140 (E), ShamWow\_144 (E), ShereKhan\_144 (E), Simpliphy\_146 (E), SophKB\_143 (E), Sotrice96\_150 (E), Stank\_149 (E), Stark\_142 (E), StellaBean\_142 (E), StolenFromERC\_147 (E), StormChicken\_146 (E), TBrady12\_150 (E), Tarkin\_143 (E), TeardropMSU\_144 (E), Terminus\_148 (E), Thimble\_136 (E), Thresher\_147 (E), Tomaszewski\_139 (E), Toto\_142 (E), Traaww1\_143 (E), Tuco\_149 (E), Ukulele\_142 (E), Wiggins\_148 (E), Xandras\_145 (E), YassJohnny\_140 (E), xkcd\_150 (E),

Start 42:

- Found in 122 of 135 ( 90.4% ) of genes in pham
- Manual Annotations of this start: 7 of 125
- Called 9.0% of time when present

- Phage (with cluster) where this start called: Becksu\_141 (E), BilboSwaggins\_142 (E), FairyPath\_142 (E), FoghornLeghorn\_142 (E), Goku\_144 (E), Misfit\_145 (E), Palpatine\_142 (E), SirDuracell\_147 (E), Teaspoon\_129 (E), Willez\_143 (E), Youngblood\_149 (E),

Start 43:

- Found in 135 of 135 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Amao\_149 (E), AmericanBeauty\_148 (E), Balomoji\_145 (E),

Start 45:

- Found in 13 of 135 ( 9.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Daikon\_148 (E),

### Summary by clusters:

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

- Start number 39 was manually annotated 5 times for cluster E.
- Start number 41 was manually annotated 111 times for cluster E.
- Start number 42 was manually annotated 7 times for cluster E.
- Start number 43 was manually annotated 2 times for cluster E.

### Gene Information:

Gene: 244\_144 Start: 73691, Stop: 73912, Start Num: 41

Candidate Starts for 244\_144:

(Start: 41 @73691 has 111 MA's), (Start: 42 @73718 has 7 MA's), (Start: 43 @73751 has 2 MA's), (44, 73754),

Gene: ABCat\_144 Start: 75339, Stop: 75560, Start Num: 41

Candidate Starts for ABCat\_144:

(Start: 41 @75339 has 111 MA's), (Start: 42 @75366 has 7 MA's), (Start: 43 @75399 has 2 MA's), (44, 75402), (46, 75453),

Gene: Adnama\_149 Start: 74416, Stop: 74637, Start Num: 41

Candidate Starts for Adnama\_149:

(6, 73579), (11, 73627), (14, 73654), (17, 73681), (26, 73831), (30, 73897), (Start: 41 @74416 has 111 MA's), (Start: 42 @74443 has 7 MA's), (Start: 43 @74476 has 2 MA's), (44, 74479),

Gene: Amao\_149 Start: 75981, Stop: 76142, Start Num: 43

Candidate Starts for Amao\_149:

(34, 75744), (37, 75807), (38, 75825), (40, 75924), (Start: 43 @75981 has 2 MA's), (45, 75999), (47, 76068),

Gene: AmericanBeauty\_148 Start: 74518, Stop: 74679, Start Num: 43

Candidate Starts for AmericanBeauty\_148:

(6, 73621), (11, 73669), (14, 73696), (17, 73723), (26, 73873), (30, 73939), (Start: 41 @74458 has 111 MA's), (Start: 42 @74485 has 7 MA's), (Start: 43 @74518 has 2 MA's), (44, 74521),

Gene: Argent26\_149 Start: 74340, Stop: 74561, Start Num: 41

Candidate Starts for Argent26\_149:

(6, 73503), (11, 73551), (14, 73578), (17, 73605), (26, 73755), (30, 73821), (Start: 41 @74340 has 111 MA's), (Start: 42 @74367 has 7 MA's), (Start: 43 @74400 has 2 MA's), (44, 74403),

Gene: Asriel\_143 Start: 73805, Stop: 74023, Start Num: 41

Candidate Starts for Asriel\_143:

(Start: 41 @73805 has 111 MA's), (Start: 43 @73862 has 2 MA's), (44, 73865), (45, 73880), (47, 73949),

Gene: BaboJay\_145 Start: 75585, Stop: 75806, Start Num: 41

Candidate Starts for BaboJay\_145:

(Start: 41 @75585 has 111 MA's), (Start: 42 @75612 has 7 MA's), (Start: 43 @75645 has 2 MA's), (44, 75648),

Gene: BadStone\_144 Start: 74887, Stop: 75108, Start Num: 41

Candidate Starts for BadStone\_144:

(Start: 41 @74887 has 111 MA's), (Start: 42 @74914 has 7 MA's), (Start: 43 @74947 has 2 MA's), (44, 74950),

Gene: Balomoji\_145 Start: 75687, Stop: 75848, Start Num: 43

Candidate Starts for Balomoji\_145:

(Start: 41 @75630 has 111 MA's), (Start: 43 @75687 has 2 MA's), (44, 75690), (45, 75705), (47, 75774),

Gene: Barbarian\_145 Start: 73805, Stop: 74023, Start Num: 41

Candidate Starts for Barbarian\_145:

(Start: 41 @73805 has 111 MA's), (Start: 43 @73862 has 2 MA's), (44, 73865), (45, 73880), (47, 73949),

Gene: Bask21\_149 Start: 74205, Stop: 74426, Start Num: 41

Candidate Starts for Bask21\_149:

(Start: 41 @74205 has 111 MA's), (Start: 42 @74232 has 7 MA's), (Start: 43 @74265 has 2 MA's), (44, 74268),

Gene: Becksu\_141 Start: 75484, Stop: 75678, Start Num: 42

Candidate Starts for Becksu\_141:

(Start: 41 @75457 has 111 MA's), (Start: 42 @75484 has 7 MA's), (Start: 43 @75517 has 2 MA's), (44, 75520),

Gene: Bench\_148 Start: 75300, Stop: 75521, Start Num: 41

Candidate Starts for Bench\_148:

(6, 74463), (11, 74511), (14, 74538), (17, 74565), (26, 74715), (30, 74781), (Start: 41 @75300 has 111 MA's), (Start: 42 @75327 has 7 MA's), (Start: 43 @75360 has 2 MA's), (44, 75363),

Gene: BigBubba\_148 Start: 74214, Stop: 74435, Start Num: 41

Candidate Starts for BigBubba\_148:

(Start: 41 @74214 has 111 MA's), (Start: 42 @74241 has 7 MA's), (Start: 43 @74274 has 2 MA's), (44, 74277),

Gene: BilboSwaggins\_142 Start: 75718, Stop: 75912, Start Num: 42

Candidate Starts for BilboSwaggins\_142:

(6, 74872), (11, 74920), (14, 74947), (17, 74974), (26, 75121), (28, 75178), (Start: 41 @75691 has 111 MA's), (Start: 42 @75718 has 7 MA's), (Start: 43 @75751 has 2 MA's), (44, 75754),

Gene: Bruin\_142 Start: 73418, Stop: 73639, Start Num: 41

Candidate Starts for Bruin\_142:

(24, 72887), (Start: 41 @73418 has 111 MA's), (Start: 42 @73445 has 7 MA's), (Start: 43 @73478 has 2 MA's), (44, 73481),

Gene: Buck\_147 Start: 75896, Stop: 76117, Start Num: 41

Candidate Starts for Buck\_147:

(6, 75071), (11, 75119), (14, 75146), (17, 75173), (26, 75323), (30, 75389), (Start: 41 @75896 has 111 MA's), (Start: 42 @75923 has 7 MA's), (Start: 43 @75956 has 2 MA's), (44, 75959),

Gene: BugsBunny\_143 Start: 74592, Stop: 74813, Start Num: 41

Candidate Starts for BugsBunny\_143:

(Start: 41 @74592 has 111 MA's), (Start: 42 @74619 has 7 MA's), (Start: 43 @74652 has 2 MA's), (44, 74655),

Gene: Cactus\_153 Start: 74811, Stop: 75032, Start Num: 41

Candidate Starts for Cactus\_153:

(6, 73974), (11, 74022), (14, 74049), (17, 74076), (26, 74226), (30, 74292), (Start: 41 @74811 has 111 MA's), (Start: 42 @74838 has 7 MA's), (Start: 43 @74871 has 2 MA's), (44, 74874),

Gene: ChosenOne\_146 Start: 74178, Stop: 74399, Start Num: 41

Candidate Starts for ChosenOne\_146:

(Start: 41 @74178 has 111 MA's), (Start: 42 @74205 has 7 MA's), (Start: 43 @74238 has 2 MA's), (44, 74241),

Gene: ChotaBhai\_150 Start: 75353, Stop: 75574, Start Num: 41

Candidate Starts for ChotaBhai\_150:

(Start: 41 @75353 has 111 MA's), (Start: 42 @75380 has 7 MA's), (Start: 43 @75413 has 2 MA's), (44, 75416),

Gene: Cjw1\_142 Start: 75139, Stop: 75360, Start Num: 41

Candidate Starts for Cjw1\_142:

(7, 74395), (8, 74407), (21, 74572), (26, 74620), (Start: 41 @75139 has 111 MA's), (Start: 42 @75166 has 7 MA's), (Start: 43 @75199 has 2 MA's), (44, 75202),

Gene: Command613\_148 Start: 75233, Stop: 75454, Start Num: 41

Candidate Starts for Command613\_148:

(Start: 41 @75233 has 111 MA's), (Start: 42 @75260 has 7 MA's), (Start: 43 @75293 has 2 MA's), (44, 75296),

Gene: Contagion\_141 Start: 73741, Stop: 73962, Start Num: 41

Candidate Starts for Contagion\_141:

(22, 73192), (24, 73210), (Start: 41 @73741 has 111 MA's), (Start: 42 @73768 has 7 MA's), (Start: 43 @73801 has 2 MA's), (44, 73804),

Gene: Cookies\_147 Start: 75548, Stop: 75769, Start Num: 41

Candidate Starts for Cookies\_147:

(24, 75017), (Start: 41 @75548 has 111 MA's), (Start: 42 @75575 has 7 MA's), (Start: 43 @75608 has 2 MA's), (44, 75611),

Gene: CrystalP\_145 Start: 75691, Stop: 75912, Start Num: 41

Candidate Starts for CrystalP\_145:

(6, 74872), (11, 74920), (14, 74947), (17, 74974), (26, 75121), (28, 75178), (Start: 41 @75691 has 111 MA's), (Start: 42 @75718 has 7 MA's), (Start: 43 @75751 has 2 MA's), (44, 75754),

Gene: Czyszczone1\_145 Start: 74283, Stop: 74504, Start Num: 41

Candidate Starts for Czyszczone1\_145:

(4, 73449), (9, 73497), (12, 73524), (15, 73551), (23, 73701), (27, 73767), (Start: 41 @74283 has 111 MA's), (Start: 42 @74310 has 7 MA's), (Start: 43 @74343 has 2 MA's), (44, 74346),

Gene: Daikon\_148 Start: 74953, Stop: 75096, Start Num: 45

Candidate Starts for Daikon\_148:

(Start: 41 @74878 has 111 MA's), (Start: 43 @74935 has 2 MA's), (44, 74938), (45, 74953), (47, 75022),

Gene: DoctorDiddles\_144 Start: 74278, Stop: 74499, Start Num: 41

Candidate Starts for DoctorDiddles\_144:

(Start: 41 @74278 has 111 MA's), (Start: 42 @74305 has 7 MA's), (Start: 43 @74338 has 2 MA's), (44, 74341),

Gene: DrDrey\_146 Start: 76575, Stop: 76796, Start Num: 41

Candidate Starts for DrDrey\_146:

(Start: 41 @76575 has 111 MA's), (Start: 42 @76602 has 7 MA's), (Start: 43 @76635 has 2 MA's), (44, 76638),

Gene: Dumbo\_148 Start: 74944, Stop: 75165, Start Num: 41

Candidate Starts for Dumbo\_148:

(24, 74413), (Start: 41 @74944 has 111 MA's), (Start: 42 @74971 has 7 MA's), (Start: 43 @75004 has 2 MA's), (44, 75007),

Gene: Dusk\_144 Start: 74547, Stop: 74768, Start Num: 41

Candidate Starts for Dusk\_144:

(Start: 41 @74547 has 111 MA's), (Start: 42 @74574 has 7 MA's), (Start: 43 @74607 has 2 MA's), (44, 74610),

Gene: Easy2Say\_147 Start: 74806, Stop: 75027, Start Num: 41

Candidate Starts for Easy2Say\_147:

(6, 73969), (11, 74017), (14, 74044), (17, 74071), (26, 74221), (30, 74287), (Start: 41 @74806 has 111 MA's), (Start: 42 @74833 has 7 MA's), (Start: 43 @74866 has 2 MA's), (44, 74869),

Gene: Elite2014\_145 Start: 74177, Stop: 74398, Start Num: 41

Candidate Starts for Elite2014\_145:

(Start: 41 @74177 has 111 MA's), (Start: 42 @74204 has 7 MA's), (Start: 43 @74237 has 2 MA's), (44, 74240),

Gene: Elph10\_144 Start: 73883, Stop: 74104, Start Num: 41

Candidate Starts for Elph10\_144:

(Start: 41 @73883 has 111 MA's), (Start: 42 @73910 has 7 MA's), (Start: 43 @73943 has 2 MA's), (44, 73946),



Gene: Emmina\_147 Start: 74503, Stop: 74724, Start Num: 41  
Candidate Starts for Emmina\_147:  
(Start: 41 @74503 has 111 MA's), (Start: 42 @74530 has 7 MA's), (Start: 43 @74563 has 2 MA's), (44, 74566),

Gene: Eureka\_146 Start: 75382, Stop: 75603, Start Num: 41  
Candidate Starts for Eureka\_146:  
(Start: 41 @75382 has 111 MA's), (Start: 42 @75409 has 7 MA's), (Start: 43 @75442 has 2 MA's), (44, 75445),

Gene: FairyPath\_142 Start: 74993, Stop: 75187, Start Num: 42  
Candidate Starts for FairyPath\_142:  
(Start: 41 @74966 has 111 MA's), (Start: 42 @74993 has 7 MA's), (Start: 43 @75026 has 2 MA's), (44, 75029),

Gene: Filch\_149 Start: 74900, Stop: 75121, Start Num: 41  
Candidate Starts for Filch\_149:  
(Start: 41 @74900 has 111 MA's), (Start: 42 @74927 has 7 MA's), (Start: 43 @74960 has 2 MA's), (44, 74963),

Gene: FireRed\_149 Start: 75425, Stop: 75646, Start Num: 41  
Candidate Starts for FireRed\_149:  
(Start: 41 @75425 has 111 MA's), (Start: 42 @75452 has 7 MA's), (Start: 43 @75485 has 2 MA's), (44, 75488),

Gene: Flypotenuse\_141 Start: 74459, Stop: 74677, Start Num: 41  
Candidate Starts for Flypotenuse\_141:  
(Start: 41 @74459 has 111 MA's), (Start: 43 @74516 has 2 MA's), (44, 74519), (45, 74534), (47, 74603),

Gene: FoghornLeghorn\_142 Start: 73596, Stop: 73790, Start Num: 42  
Candidate Starts for FoghornLeghorn\_142:  
(Start: 41 @73569 has 111 MA's), (Start: 42 @73596 has 7 MA's), (Start: 43 @73629 has 2 MA's), (44, 73632),

Gene: Gage\_136 Start: 70858, Stop: 71079, Start Num: 41  
Candidate Starts for Gage\_136:  
(6, 70021), (11, 70069), (14, 70096), (17, 70123), (26, 70273), (30, 70339), (Start: 41 @70858 has 111 MA's), (Start: 42 @70885 has 7 MA's), (Start: 43 @70918 has 2 MA's), (44, 70921),

Gene: Gator\_147 Start: 75562, Stop: 75780, Start Num: 39  
Candidate Starts for Gator\_147:  
(Start: 39 @75562 has 5 MA's), (Start: 43 @75619 has 2 MA's), (45, 75637), (47, 75706),

Gene: Gemini\_150 Start: 74857, Stop: 75078, Start Num: 41  
Candidate Starts for Gemini\_150:  
(6, 74020), (11, 74068), (14, 74095), (17, 74122), (26, 74272), (30, 74338), (Start: 41 @74857 has 111 MA's), (Start: 42 @74884 has 7 MA's), (Start: 43 @74917 has 2 MA's), (44, 74920),

Gene: Glexan\_149 Start: 75709, Stop: 75927, Start Num: 39  
Candidate Starts for Glexan\_149:  
(Start: 39 @75709 has 5 MA's), (Start: 43 @75766 has 2 MA's), (45, 75784), (47, 75853),

Gene: Goku\_144 Start: 75718, Stop: 75912, Start Num: 42  
Candidate Starts for Goku\_144:  
(Start: 41 @75691 has 111 MA's), (Start: 42 @75718 has 7 MA's), (Start: 43 @75751 has 2 MA's), (44, 75754),

Gene: GoldenSpark\_149 Start: 74340, Stop: 74561, Start Num: 41  
Candidate Starts for GoldenSpark\_149:  
(6, 73503), (11, 73551), (14, 73578), (17, 73605), (26, 73755), (30, 73821), (Start: 41 @74340 has 111 MA's), (Start: 42 @74367 has 7 MA's), (Start: 43 @74400 has 2 MA's), (44, 74403),

Gene: Goldilocks\_151 Start: 74936, Stop: 75157, Start Num: 41  
Candidate Starts for Goldilocks\_151:  
(6, 74099), (11, 74147), (14, 74174), (17, 74201), (26, 74351), (30, 74417), (Start: 41 @74936 has 111 MA's), (Start: 42 @74963 has 7 MA's), (Start: 43 @74996 has 2 MA's), (44, 74999),

Gene: GooberAzure\_148 Start: 74337, Stop: 74558, Start Num: 41  
Candidate Starts for GooberAzure\_148:  
(6, 73503), (11, 73551), (14, 73578), (17, 73605), (26, 73755), (30, 73821), (Start: 41 @74337 has 111 MA's), (Start: 42 @74364 has 7 MA's), (Start: 43 @74397 has 2 MA's), (44, 74400),

Gene: HanKaySha\_144 Start: 74739, Stop: 74957, Start Num: 39  
Candidate Starts for HanKaySha\_144:  
(Start: 39 @74739 has 5 MA's), (Start: 43 @74796 has 2 MA's), (45, 74814), (47, 74883),

Gene: Harella\_152 Start: 76070, Stop: 76288, Start Num: 39  
Candidate Starts for Harella\_152:  
(Start: 39 @76070 has 5 MA's), (Start: 43 @76127 has 2 MA's), (45, 76145), (47, 76214),

Gene: Henry\_145 Start: 75257, Stop: 75478, Start Num: 41  
Candidate Starts for Henry\_145:  
(15, 74537), (18, 74585), (19, 74612), (20, 74639), (Start: 41 @75257 has 111 MA's), (Start: 42 @75284 has 7 MA's), (Start: 43 @75317 has 2 MA's), (44, 75320),

Gene: Highbury\_140 Start: 72623, Stop: 72844, Start Num: 41  
Candidate Starts for Highbury\_140:  
(24, 72092), (Start: 41 @72623 has 111 MA's), (Start: 42 @72650 has 7 MA's), (Start: 43 @72683 has 2 MA's), (44, 72686),

Gene: Holt\_151 Start: 75123, Stop: 75344, Start Num: 41  
Candidate Starts for Holt\_151:  
(6, 74286), (11, 74334), (14, 74361), (17, 74388), (26, 74538), (30, 74604), (Start: 41 @75123 has 111 MA's), (Start: 42 @75150 has 7 MA's), (Start: 43 @75183 has 2 MA's), (44, 75186),

Gene: Hoonter\_147 Start: 74478, Stop: 74696, Start Num: 41  
Candidate Starts for Hoonter\_147:  
(5, 73635), (10, 73683), (13, 73710), (16, 73737), (25, 73887), (29, 73953), (31, 74025), (Start: 41 @74478 has 111 MA's), (Start: 43 @74535 has 2 MA's), (45, 74553), (47, 74622),

Gene: Hokey\_143 Start: 74794, Stop: 75015, Start Num: 41  
Candidate Starts for Hokey\_143:  
(32, 74575), (33, 74638), (35, 74656), (36, 74674), (Start: 41 @74794 has 111 MA's), (Start: 42 @74821 has 7 MA's), (Start: 43 @74854 has 2 MA's), (44, 74857),

Gene: HufflyPuff\_147 Start: 75531, Stop: 75752, Start Num: 41  
Candidate Starts for HufflyPuff\_147:  
(Start: 41 @75531 has 111 MA's), (Start: 42 @75558 has 7 MA's), (Start: 43 @75591 has 2 MA's), (44, 75594),

Gene: IHOP\_150 Start: 74876, Stop: 75097, Start Num: 41  
Candidate Starts for IHOP\_150:  
(1, 74081), (2, 74096), (3, 74102), (24, 74345), (Start: 41 @74876 has 111 MA's), (Start: 42 @74903 has 7 MA's), (Start: 43 @74936 has 2 MA's), (44, 74939), (46, 74990),

Gene: Icee\_145 Start: 73377, Stop: 73598, Start Num: 41  
Candidate Starts for Icee\_145:  
(Start: 41 @73377 has 111 MA's), (Start: 42 @73404 has 7 MA's), (Start: 43 @73437 has 2 MA's), (44, 73440), (46, 73491),

Gene: Inca\_146 Start: 73278, Stop: 73499, Start Num: 41  
Candidate Starts for Inca\_146:  
(24, 72747), (Start: 41 @73278 has 111 MA's), (Start: 42 @73305 has 7 MA's), (Start: 43 @73338 has 2 MA's), (44, 73341),

Gene: JeTaime\_143 Start: 74307, Stop: 74528, Start Num: 41  
Candidate Starts for JeTaime\_143:  
(4, 73473), (9, 73521), (12, 73548), (15, 73575), (23, 73725), (27, 73791), (Start: 41 @74307 has 111 MA's), (Start: 42 @74334 has 7 MA's), (Start: 43 @74367 has 2 MA's), (44, 74370),

Gene: Kanye\_141 Start: 74661, Stop: 74882, Start Num: 41  
Candidate Starts for Kanye\_141:  
(6, 73824), (11, 73872), (14, 73899), (17, 73926), (26, 74076), (30, 74142), (Start: 41 @74661 has 111 MA's), (Start: 42 @74688 has 7 MA's), (Start: 43 @74721 has 2 MA's), (44, 74724),

Gene: Kimchi\_150 Start: 75037, Stop: 75258, Start Num: 41  
Candidate Starts for Kimchi\_150:  
(6, 74200), (11, 74248), (14, 74275), (17, 74302), (26, 74452), (30, 74518), (Start: 41 @75037 has 111 MA's), (Start: 42 @75064 has 7 MA's), (Start: 43 @75097 has 2 MA's), (44, 75100),

Gene: Kostya\_145 Start: 75019, Stop: 75240, Start Num: 41  
Candidate Starts for Kostya\_145:  
(Start: 41 @75019 has 111 MA's), (Start: 42 @75046 has 7 MA's), (Start: 43 @75079 has 2 MA's), (44, 75082),

Gene: Lilac\_141 Start: 75468, Stop: 75689, Start Num: 41  
Candidate Starts for Lilac\_141:  
(Start: 41 @75468 has 111 MA's), (Start: 42 @75495 has 7 MA's), (Start: 43 @75528 has 2 MA's), (44, 75531),

Gene: Lilizi\_145 Start: 74568, Stop: 74789, Start Num: 41  
Candidate Starts for Lilizi\_145:  
(6, 73731), (11, 73779), (14, 73806), (17, 73833), (26, 73983), (30, 74049), (Start: 41 @74568 has 111 MA's), (Start: 42 @74595 has 7 MA's), (Start: 43 @74628 has 2 MA's), (44, 74631),

Gene: Lilpickle\_145 Start: 74177, Stop: 74398, Start Num: 41  
Candidate Starts for Lilpickle\_145:

(Start: 41 @74177 has 111 MA's), (Start: 42 @74204 has 7 MA's), (Start: 43 @74237 has 2 MA's), (44, 74240),

Gene: MISSy\_146 Start: 75016, Stop: 75237, Start Num: 41

Candidate Starts for MISSy\_146:

(15, 74347), (18, 74395), (19, 74422), (20, 74449), (Start: 41 @75016 has 111 MA's), (Start: 42 @75043 has 7 MA's), (Start: 43 @75076 has 2 MA's), (44, 75079),

Gene: MPhalcon\_147 Start: 74813, Stop: 75034, Start Num: 41

Candidate Starts for MPhalcon\_147:

(Start: 41 @74813 has 111 MA's), (Start: 42 @74840 has 7 MA's), (Start: 43 @74873 has 2 MA's), (44, 74876),

Gene: MadamMonkfish\_147 Start: 74762, Stop: 74983, Start Num: 41

Candidate Starts for MadamMonkfish\_147:

(24, 74231), (Start: 41 @74762 has 111 MA's), (Start: 42 @74789 has 7 MA's), (Start: 43 @74822 has 2 MA's), (44, 74825),

Gene: Manda\_148 Start: 75231, Stop: 75452, Start Num: 41

Candidate Starts for Manda\_148:

(Start: 41 @75231 has 111 MA's), (Start: 42 @75258 has 7 MA's), (Start: 43 @75291 has 2 MA's), (44, 75294),

Gene: Marshmallow\_148 Start: 75948, Stop: 76169, Start Num: 41

Candidate Starts for Marshmallow\_148:

(1, 75153), (2, 75168), (3, 75174), (24, 75417), (Start: 41 @75948 has 111 MA's), (Start: 42 @75975 has 7 MA's), (Start: 43 @76008 has 2 MA's), (44, 76011),

Gene: Maxxinista\_147 Start: 74423, Stop: 74644, Start Num: 41

Candidate Starts for Maxxinista\_147:

(Start: 41 @74423 has 111 MA's), (Start: 42 @74450 has 7 MA's), (Start: 43 @74483 has 2 MA's), (44, 74486),

Gene: Mindy\_149 Start: 75004, Stop: 75225, Start Num: 41

Candidate Starts for Mindy\_149:

(Start: 41 @75004 has 111 MA's), (Start: 42 @75031 has 7 MA's), (Start: 43 @75064 has 2 MA's), (44, 75067),

Gene: Miniwave\_139 Start: 74169, Stop: 74390, Start Num: 41

Candidate Starts for Miniwave\_139:

(6, 73335), (11, 73383), (14, 73410), (17, 73437), (26, 73587), (30, 73653), (Start: 41 @74169 has 111 MA's), (Start: 42 @74196 has 7 MA's), (Start: 43 @74229 has 2 MA's), (44, 74232),

Gene: Misfit\_145 Start: 75404, Stop: 75598, Start Num: 42

Candidate Starts for Misfit\_145:

(22, 74828), (24, 74846), (Start: 41 @75377 has 111 MA's), (Start: 42 @75404 has 7 MA's), (Start: 43 @75437 has 2 MA's), (44, 75440),

Gene: Moldemort\_147 Start: 74448, Stop: 74669, Start Num: 41

Candidate Starts for Moldemort\_147:

(6, 73611), (11, 73659), (14, 73686), (17, 73713), (26, 73863), (30, 73929), (Start: 41 @74448 has 111 MA's), (Start: 42 @74475 has 7 MA's), (Start: 43 @74508 has 2 MA's), (44, 74511),

Gene: Mosby\_142 Start: 73741, Stop: 73962, Start Num: 41  
Candidate Starts for Mosby\_142:  
(22, 73192), (24, 73210), (Start: 41 @73741 has 111 MA's), (Start: 42 @73768 has 7 MA's), (Start: 43 @73801 has 2 MA's), (44, 73804),

Gene: Murica\_148 Start: 76261, Stop: 76482, Start Num: 41  
Candidate Starts for Murica\_148:  
(Start: 41 @76261 has 111 MA's), (Start: 42 @76288 has 7 MA's), (Start: 43 @76321 has 2 MA's), (44, 76324),

Gene: Murphy\_147 Start: 75387, Stop: 75608, Start Num: 41  
Candidate Starts for Murphy\_147:  
(Start: 41 @75387 has 111 MA's), (Start: 42 @75414 has 7 MA's), (Start: 43 @75447 has 2 MA's), (44, 75450), (46, 75501),

Gene: Myrale\_145 Start: 75627, Stop: 75848, Start Num: 41  
Candidate Starts for Myrale\_145:  
(15, 74907), (18, 74955), (19, 74982), (20, 75009), (Start: 41 @75627 has 111 MA's), (Start: 42 @75654 has 7 MA's), (Start: 43 @75687 has 2 MA's), (44, 75690),

Gene: Nala\_148 Start: 75102, Stop: 75323, Start Num: 41  
Candidate Starts for Nala\_148:  
(Start: 41 @75102 has 111 MA's), (Start: 42 @75129 has 7 MA's), (Start: 43 @75162 has 2 MA's), (44, 75165),

Gene: NelitzaMV\_140 Start: 71998, Stop: 72219, Start Num: 41  
Candidate Starts for NelitzaMV\_140:  
(6, 71161), (11, 71209), (14, 71236), (17, 71263), (26, 71413), (30, 71479), (Start: 41 @71998 has 111 MA's), (Start: 42 @72025 has 7 MA's), (Start: 43 @72058 has 2 MA's), (44, 72061),

Gene: Nimrod\_144 Start: 75643, Stop: 75864, Start Num: 41  
Candidate Starts for Nimrod\_144:  
(Start: 41 @75643 has 111 MA's), (Start: 42 @75670 has 7 MA's), (Start: 43 @75703 has 2 MA's), (44, 75706),

Gene: NoSleep\_144 Start: 73863, Stop: 74084, Start Num: 41  
Candidate Starts for NoSleep\_144:  
(Start: 41 @73863 has 111 MA's), (Start: 42 @73890 has 7 MA's), (Start: 43 @73923 has 2 MA's), (44, 73926),

Gene: OrionPax\_143 Start: 74321, Stop: 74542, Start Num: 41  
Candidate Starts for OrionPax\_143:  
(1, 73526), (2, 73541), (3, 73547), (24, 73790), (Start: 41 @74321 has 111 MA's), (Start: 42 @74348 has 7 MA's), (Start: 43 @74381 has 2 MA's), (44, 74384),

Gene: Palpatine\_142 Start: 75044, Stop: 75238, Start Num: 42  
Candidate Starts for Palpatine\_142:  
(Start: 41 @75017 has 111 MA's), (Start: 42 @75044 has 7 MA's), (Start: 43 @75077 has 2 MA's), (44, 75080),

Gene: Paperbeatsrock\_143 Start: 74847, Stop: 75068, Start Num: 41  
Candidate Starts for Paperbeatsrock\_143:

(6, 74013), (11, 74061), (14, 74088), (17, 74115), (26, 74265), (30, 74331), (Start: 41 @74847 has 111 MA's), (Start: 42 @74874 has 7 MA's), (Start: 43 @74907 has 2 MA's), (44, 74910),

Gene: Pat3\_146 Start: 74886, Stop: 75104, Start Num: 39

Candidate Starts for Pat3\_146:

(Start: 39 @74886 has 5 MA's), (Start: 43 @74943 has 2 MA's), (45, 74961), (47, 75030),

Gene: Petra64142\_145 Start: 75050, Stop: 75271, Start Num: 41

Candidate Starts for Petra64142\_145:

(6, 74231), (11, 74279), (14, 74306), (17, 74333), (26, 74480), (28, 74537), (Start: 41 @75050 has 111 MA's), (Start: 42 @75077 has 7 MA's), (Start: 43 @75110 has 2 MA's), (44, 75113),

Gene: Phaja\_150 Start: 74893, Stop: 75114, Start Num: 41

Candidate Starts for Phaja\_150:

(1, 74086), (2, 74101), (3, 74107), (24, 74350), (Start: 41 @74893 has 111 MA's), (Start: 42 @74920 has 7 MA's), (Start: 43 @74953 has 2 MA's), (44, 74956),

Gene: Pharsalus\_143 Start: 74987, Stop: 75208, Start Num: 41

Candidate Starts for Pharsalus\_143:

(6, 74153), (11, 74201), (14, 74228), (17, 74255), (26, 74405), (30, 74471), (Start: 41 @74987 has 111 MA's), (Start: 42 @75014 has 7 MA's), (Start: 43 @75047 has 2 MA's), (44, 75050),

Gene: PhatBacter\_149 Start: 75425, Stop: 75646, Start Num: 41

Candidate Starts for PhatBacter\_149:

(Start: 41 @75425 has 111 MA's), (Start: 42 @75452 has 7 MA's), (Start: 43 @75485 has 2 MA's), (44, 75488),

Gene: Phaux\_146 Start: 75687, Stop: 75908, Start Num: 41

Candidate Starts for Phaux\_146:

(Start: 41 @75687 has 111 MA's), (Start: 42 @75714 has 7 MA's), (Start: 43 @75747 has 2 MA's), (44, 75750),

Gene: Phrux\_142 Start: 73919, Stop: 74140, Start Num: 41

Candidate Starts for Phrux\_142:

(Start: 41 @73919 has 111 MA's), (Start: 42 @73946 has 7 MA's), (Start: 43 @73979 has 2 MA's), (44, 73982),

Gene: Policronamos\_144 Start: 75102, Stop: 75323, Start Num: 41

Candidate Starts for Policronamos\_144:

(Start: 41 @75102 has 111 MA's), (Start: 42 @75129 has 7 MA's), (Start: 43 @75162 has 2 MA's), (44, 75165),

Gene: Porky\_148 Start: 75520, Stop: 75741, Start Num: 41

Candidate Starts for Porky\_148:

(Start: 41 @75520 has 111 MA's), (Start: 42 @75547 has 7 MA's), (Start: 43 @75580 has 2 MA's), (44, 75583),

Gene: Pumpkin\_144 Start: 73699, Stop: 73920, Start Num: 41

Candidate Starts for Pumpkin\_144:

(Start: 41 @73699 has 111 MA's), (Start: 42 @73726 has 7 MA's), (Start: 43 @73759 has 2 MA's), (44, 73762),

Gene: Quallification\_145 Start: 75116, Stop: 75337, Start Num: 41

Candidate Starts for Quallification\_145:

(6, 74282), (11, 74330), (14, 74357), (17, 74384), (26, 74534), (30, 74600), (Start: 41 @75116 has 111 MA's), (Start: 42 @75143 has 7 MA's), (Start: 43 @75176 has 2 MA's), (44, 75179),

Gene: Rakim\_147 Start: 74914, Stop: 75135, Start Num: 41

Candidate Starts for Rakim\_147:

(Start: 41 @74914 has 111 MA's), (Start: 42 @74941 has 7 MA's), (Start: 43 @74974 has 2 MA's), (44, 74977),

Gene: Rimmer\_144 Start: 74868, Stop: 75089, Start Num: 41

Candidate Starts for Rimmer\_144:

(6, 74049), (11, 74097), (14, 74124), (17, 74151), (26, 74298), (28, 74355), (Start: 41 @74868 has 111 MA's), (Start: 42 @74895 has 7 MA's), (Start: 43 @74928 has 2 MA's), (44, 74931),

Gene: RiverMonster\_145 Start: 74773, Stop: 74994, Start Num: 41

Candidate Starts for RiverMonster\_145:

(7, 74029), (8, 74041), (21, 74206), (26, 74254), (Start: 41 @74773 has 111 MA's), (Start: 42 @74800 has 7 MA's), (Start: 43 @74833 has 2 MA's), (44, 74836),

Gene: Saints25\_140 Start: 72623, Stop: 72844, Start Num: 41

Candidate Starts for Saints25\_140:

(24, 72092), (Start: 41 @72623 has 111 MA's), (Start: 42 @72650 has 7 MA's), (Start: 43 @72683 has 2 MA's), (44, 72686),

Gene: Sassay\_140 Start: 72703, Stop: 72924, Start Num: 41

Candidate Starts for Sassay\_140:

(22, 72154), (24, 72172), (Start: 41 @72703 has 111 MA's), (Start: 42 @72730 has 7 MA's), (Start: 43 @72763 has 2 MA's), (44, 72766),

Gene: ShamWow\_144 Start: 75141, Stop: 75362, Start Num: 41

Candidate Starts for ShamWow\_144:

(6, 74322), (11, 74370), (14, 74397), (17, 74424), (26, 74571), (28, 74628), (Start: 41 @75141 has 111 MA's), (Start: 42 @75168 has 7 MA's), (Start: 43 @75201 has 2 MA's), (44, 75204),

Gene: ShereKhan\_144 Start: 75341, Stop: 75562, Start Num: 41

Candidate Starts for ShereKhan\_144:

(6, 74507), (11, 74555), (14, 74582), (17, 74609), (26, 74759), (30, 74825), (Start: 41 @75341 has 111 MA's), (Start: 42 @75368 has 7 MA's), (Start: 43 @75401 has 2 MA's), (44, 75404),

Gene: Simpliphy\_146 Start: 74574, Stop: 74795, Start Num: 41

Candidate Starts for Simpliphy\_146:

(Start: 41 @74574 has 111 MA's), (Start: 42 @74601 has 7 MA's), (Start: 43 @74634 has 2 MA's), (44, 74637),

Gene: SirDuracell\_147 Start: 75208, Stop: 75402, Start Num: 42

Candidate Starts for SirDuracell\_147:

(7, 74437), (8, 74449), (21, 74614), (26, 74662), (Start: 41 @75181 has 111 MA's), (Start: 42 @75208 has 7 MA's), (Start: 43 @75241 has 2 MA's), (44, 75244),

Gene: SophKB\_143 Start: 74793, Stop: 75014, Start Num: 41

Candidate Starts for SophKB\_143:

(6, 73956), (11, 74004), (14, 74031), (17, 74058), (26, 74208), (30, 74274), (Start: 41 @74793 has 111 MA's), (Start: 42 @74820 has 7 MA's), (Start: 43 @74853 has 2 MA's), (44, 74856),

Gene: Sotrice96\_150 Start: 75507, Stop: 75728, Start Num: 41  
Candidate Starts for Sotrice96\_150:  
(6, 74670), (11, 74718), (14, 74745), (17, 74772), (26, 74922), (30, 74988), (Start: 41 @75507 has 111 MA's), (Start: 42 @75534 has 7 MA's), (Start: 43 @75567 has 2 MA's), (44, 75570),

Gene: Stank\_149 Start: 75133, Stop: 75354, Start Num: 41  
Candidate Starts for Stank\_149:  
(6, 74296), (11, 74344), (14, 74371), (17, 74398), (26, 74548), (30, 74614), (Start: 41 @75133 has 111 MA's), (Start: 42 @75160 has 7 MA's), (Start: 43 @75193 has 2 MA's), (44, 75196),

Gene: Stark\_142 Start: 73939, Stop: 74160, Start Num: 41  
Candidate Starts for Stark\_142:  
(Start: 41 @73939 has 111 MA's), (Start: 42 @73966 has 7 MA's), (Start: 43 @73999 has 2 MA's), (44, 74002),

Gene: StellaBean\_142 Start: 74930, Stop: 75151, Start Num: 41  
Candidate Starts for StellaBean\_142:  
(Start: 41 @74930 has 111 MA's), (Start: 42 @74957 has 7 MA's), (Start: 43 @74990 has 2 MA's), (44, 74993),

Gene: StolenFromERC\_147 Start: 74478, Stop: 74699, Start Num: 41  
Candidate Starts for StolenFromERC\_147:  
(6, 73641), (11, 73689), (14, 73716), (17, 73743), (26, 73893), (30, 73959), (Start: 41 @74478 has 111 MA's), (Start: 42 @74505 has 7 MA's), (Start: 43 @74538 has 2 MA's), (44, 74541),

Gene: StormChicken\_146 Start: 75152, Stop: 75373, Start Num: 41  
Candidate Starts for StormChicken\_146:  
(Start: 41 @75152 has 111 MA's), (Start: 42 @75179 has 7 MA's), (Start: 43 @75212 has 2 MA's), (44, 75215), (46, 75266),

Gene: TBrady12\_150 Start: 74567, Stop: 74788, Start Num: 41  
Candidate Starts for TBrady12\_150:  
(6, 73733), (11, 73781), (14, 73808), (17, 73835), (26, 73985), (30, 74051), (Start: 41 @74567 has 111 MA's), (Start: 42 @74594 has 7 MA's), (Start: 43 @74627 has 2 MA's), (44, 74630),

Gene: Tarkin\_143 Start: 75206, Stop: 75427, Start Num: 41  
Candidate Starts for Tarkin\_143:  
(6, 74372), (11, 74420), (14, 74447), (17, 74474), (26, 74624), (30, 74690), (Start: 41 @75206 has 111 MA's), (Start: 42 @75233 has 7 MA's), (Start: 43 @75266 has 2 MA's), (44, 75269),

Gene: TeardropMSU\_144 Start: 74104, Stop: 74325, Start Num: 41  
Candidate Starts for TeardropMSU\_144:  
(15, 73384), (18, 73432), (19, 73459), (20, 73486), (Start: 41 @74104 has 111 MA's), (Start: 42 @74131 has 7 MA's), (Start: 43 @74164 has 2 MA's), (44, 74167),

Gene: Teaspoon\_129 Start: 70177, Stop: 70371, Start Num: 42  
Candidate Starts for Teaspoon\_129:  
(6, 69313), (11, 69361), (14, 69388), (17, 69415), (26, 69565), (30, 69631), (Start: 41 @70150 has 111 MA's), (Start: 42 @70177 has 7 MA's), (Start: 43 @70210 has 2 MA's), (44, 70213),

Gene: Terminus\_148 Start: 75377, Stop: 75598, Start Num: 41  
Candidate Starts for Terminus\_148:



(22, 74828), (24, 74846), (Start: 41 @75377 has 111 MA's), (Start: 42 @75404 has 7 MA's), (Start: 43 @75437 has 2 MA's), (44, 75440),

Gene: Thimble\_136 Start: 70674, Stop: 70895, Start Num: 41

Candidate Starts for Thimble\_136:

(6, 69840), (11, 69888), (14, 69915), (17, 69942), (26, 70092), (30, 70158), (Start: 41 @70674 has 111 MA's), (Start: 42 @70701 has 7 MA's), (Start: 43 @70734 has 2 MA's), (44, 70737),

Gene: Thresher\_147 Start: 75400, Stop: 75621, Start Num: 41

Candidate Starts for Thresher\_147:

(4, 74566), (9, 74614), (12, 74641), (15, 74668), (23, 74818), (27, 74884), (Start: 41 @75400 has 111 MA's), (Start: 42 @75427 has 7 MA's), (Start: 43 @75460 has 2 MA's), (44, 75463),

Gene: Tomaszewski\_139 Start: 73915, Stop: 74136, Start Num: 41

Candidate Starts for Tomaszewski\_139:

(22, 73366), (24, 73384), (Start: 41 @73915 has 111 MA's), (Start: 42 @73942 has 7 MA's), (Start: 43 @73975 has 2 MA's), (44, 73978),

Gene: Toto\_142 Start: 75141, Stop: 75362, Start Num: 41

Candidate Starts for Toto\_142:

(6, 74322), (11, 74370), (14, 74397), (17, 74424), (26, 74571), (28, 74628), (Start: 41 @75141 has 111 MA's), (Start: 42 @75168 has 7 MA's), (Start: 43 @75201 has 2 MA's), (44, 75204),

Gene: Traaww1\_143 Start: 74634, Stop: 74852, Start Num: 41

Candidate Starts for Traaww1\_143:

(Start: 41 @74634 has 111 MA's), (Start: 43 @74691 has 2 MA's), (44, 74694), (45, 74709), (47, 74778),

Gene: Tuco\_149 Start: 76152, Stop: 76373, Start Num: 41

Candidate Starts for Tuco\_149:

(Start: 41 @76152 has 111 MA's), (Start: 42 @76179 has 7 MA's), (Start: 43 @76212 has 2 MA's), (44, 76215),

Gene: Ukulele\_142 Start: 74322, Stop: 74543, Start Num: 41

Candidate Starts for Ukulele\_142:

(1, 73527), (2, 73542), (3, 73548), (24, 73791), (Start: 41 @74322 has 111 MA's), (Start: 42 @74349 has 7 MA's), (Start: 43 @74382 has 2 MA's), (44, 74385),

Gene: Wiggin\_148 Start: 74111, Stop: 74332, Start Num: 41

Candidate Starts for Wiggin\_148:

(6, 73274), (11, 73322), (14, 73349), (17, 73376), (26, 73526), (30, 73592), (Start: 41 @74111 has 111 MA's), (Start: 42 @74138 has 7 MA's), (Start: 43 @74171 has 2 MA's), (44, 74174),

Gene: Willez\_143 Start: 73811, Stop: 74005, Start Num: 42

Candidate Starts for Willez\_143:

(22, 73235), (24, 73253), (Start: 41 @73784 has 111 MA's), (Start: 42 @73811 has 7 MA's), (Start: 43 @73844 has 2 MA's), (44, 73847),

Gene: Xandras\_145 Start: 74387, Stop: 74608, Start Num: 41

Candidate Starts for Xandras\_145:

(6, 73550), (11, 73598), (14, 73625), (17, 73652), (26, 73802), (30, 73868), (Start: 41 @74387 has 111 MA's), (Start: 42 @74414 has 7 MA's), (Start: 43 @74447 has 2 MA's), (44, 74450),

Gene: YassJohnny\_140 Start: 72905, Stop: 73126, Start Num: 41

Candidate Starts for YassJohnny\_140:

(6, 72215), (11, 72263), (14, 72290), (17, 72317), (Start: 41 @72905 has 111 MA's), (Start: 42 @72932 has 7 MA's), (Start: 43 @72965 has 2 MA's), (44, 72968),

Gene: Youngblood\_149 Start: 75131, Stop: 75325, Start Num: 42

Candidate Starts for Youngblood\_149:

(22, 74555), (24, 74573), (Start: 41 @75104 has 111 MA's), (Start: 42 @75131 has 7 MA's), (Start: 43 @75164 has 2 MA's), (44, 75167),

Gene: xkcd\_150 Start: 76123, Stop: 76344, Start Num: 41

Candidate Starts for xkcd\_150:

(Start: 41 @76123 has 111 MA's), (Start: 42 @76150 has 7 MA's), (Start: 43 @76183 has 2 MA's), (44, 76186),