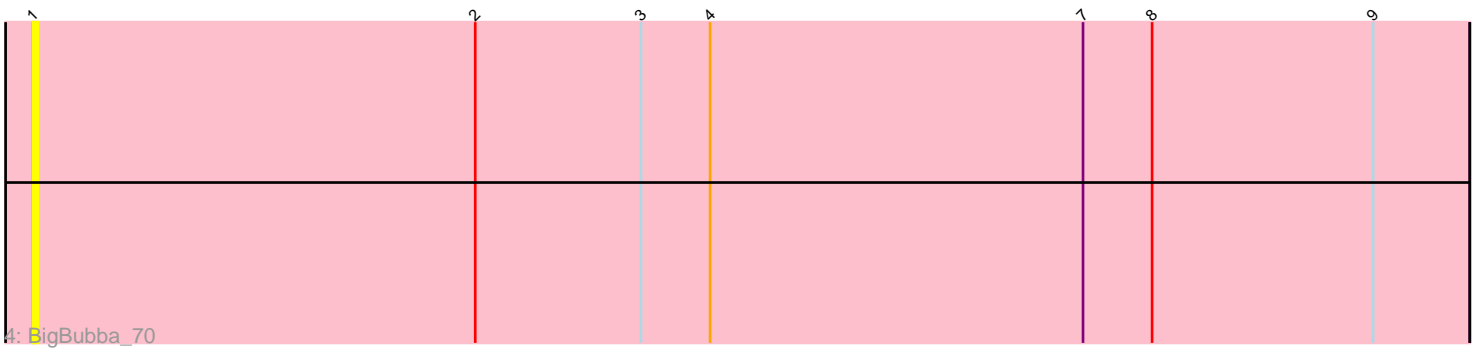
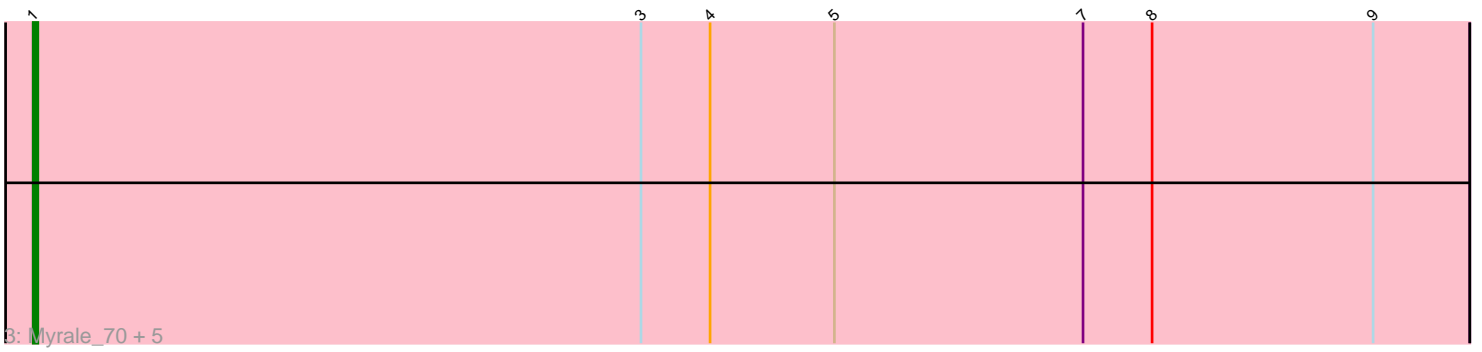
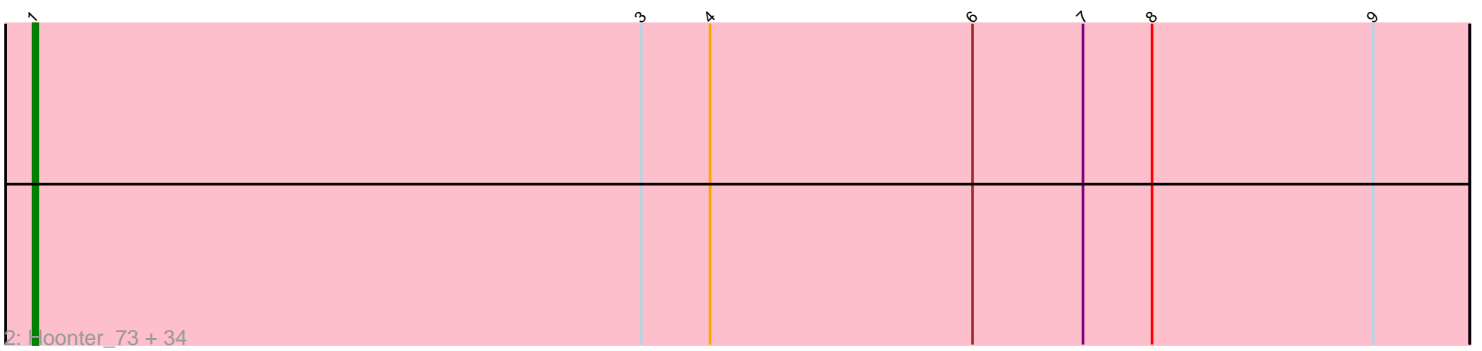
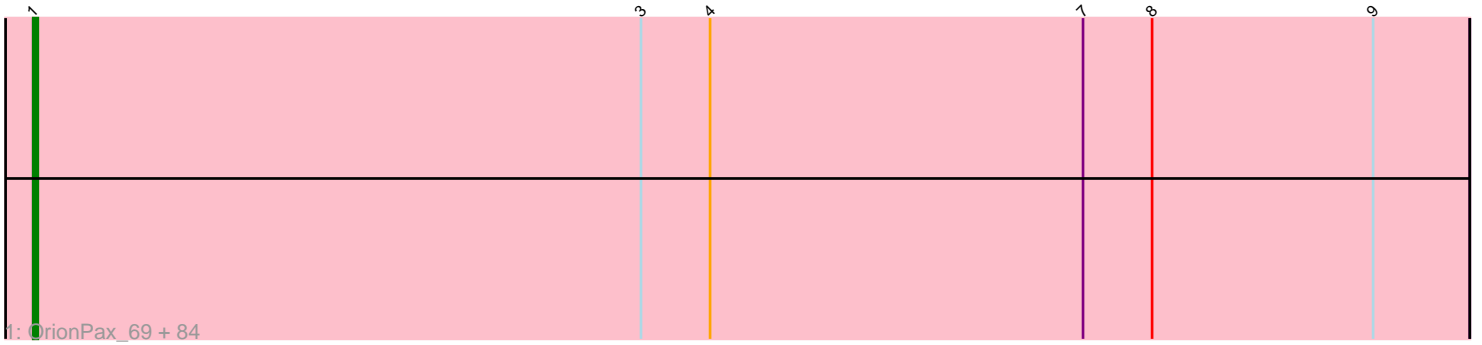


Pham 826



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 826 Report

This analysis was run 04/12/24 on database version 558.

Pham number 826 has 127 members, 11 are drafts.

Phages represented in each track:

- Track 1 : OrionPax\_69, YassJohnny\_67, Dumbo\_70, Manda\_70, TBrady12\_73, Henry\_68, NelitzaMV\_68, Filch\_71, StellaBean\_66, Easy2Say\_71, BilboSwaggins\_69, Rimmer\_71, Miniwave\_65, Mindy\_69, Traaww1\_66, TeardropMSU\_66, Buck\_71, Phaux\_72, Pat3\_68, Pumpkin\_73, Tomaszewski\_65, Kostya\_70, Amao\_70, Ukulele\_65, Cactus\_73, Czyszczo1\_71, Teaspoon\_67, Adnama\_74, Toto\_68, Elph10\_70, SophKB\_67, Porky\_69, Lilizi\_71, Hopey\_70, Thresher\_72, Eureka\_68, Glexan\_69, Icee\_71, Goldilocks\_73, Harella\_70, ChotaBhai\_70, CrystalP\_69, Murphy\_70, Cjw1\_70, Bench\_73, Balomoji\_70, Cookies\_67, Command613\_72, BaboJay\_67, Daikon\_72, Goku\_68, PhatBacter\_74, Stark\_71, Inca\_67, Pharsalus\_67, Dusk\_67, Maxxinsta\_72, BadStone\_67, JeTaima\_70, Gator\_68, Asriel\_69, Lilac\_72, Emmina\_70, Moldemort\_73, Phrux\_67, Phaja\_68, DoctorDiddles\_69, Tarkin\_69, SirDuracell\_69, Simpliphy\_69, Petra64142\_74, Paperbeatsrock\_69, Bask21\_70, Wiggin\_72, IHOP\_68, RiverMonster\_70, HanKaySha\_70, Rakim\_71, Tuco\_71, Barbarian\_69, ABCat\_67, Flypotenuse\_66, Sotrice96\_71, ShamWow\_70, Stank\_74
- Track 2 : Hoonter\_73, Highbury\_69, NoSleep\_71, xkcd\_73, Nala\_72, Sassay\_65, GoldenSpark\_74, GooberAzure\_73, Youngblood\_73, MPhalcon\_71, AmericanBeauty\_77, Terminus\_73, Elite2014\_69, Murica\_73, Gemini\_75, 244\_71, Misfit\_71, HuffyPuff\_73, MISSy\_71, Nimrod\_71, ChosenOne\_70, Gage\_72, Kimchi\_74, Bruin\_67, Contagion\_66, Argent26\_74, FireRed\_74, Saints25\_69, StolenFromERC\_73, Holt\_75, Lilpickle\_69, Mosby\_66, MadamMonkfish\_70, Willez\_65, Xandras\_69
- Track 3 : Myrale\_70, Marshmallow\_68, Kanye\_67, DrDrey\_70, Quallification\_71, ShereKhan\_69
- Track 4 : BigBubba\_70

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

The start number called the most often in the published annotations is 1, it was called in 116 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_71, ABCat\_67, Adnama\_74, Amao\_70, AmericanBeauty\_77, Argent26\_74, Asriel\_69, BaboJay\_67, BadStone\_67, Balomoji\_70, Barbarian\_69, Bask21\_70,

Bench\_73, BigBubba\_70, BilboSwaggins\_69, Bruin\_67, Buck\_71, Cactus\_73, ChosenOne\_70, ChotaBhai\_70, Cjw1\_70, Command613\_72, Contagion\_66, Cookies\_67, CrystalP\_69, Czyszczone1\_71, Daikon\_72, DoctorDiddles\_69, DrDrey\_70, Dumbo\_70, Dusk\_67, Easy2Say\_71, Elite2014\_69, Elph10\_70, Emmina\_70, Eureka\_68, Filch\_71, FireRed\_74, Flypotenuse\_66, Gage\_72, Gator\_68, Gemini\_75, Glexan\_69, Goku\_68, GoldenSpark\_74, Goldilocks\_73, GooberAzure\_73, HanKaySha\_70, Harella\_70, Henry\_68, Highbury\_69, Holt\_75, Hoonter\_73, Hopey\_70, HufflyPuff\_73, IHOP\_68, Icee\_71, Inca\_67, JeTaime\_70, Kanye\_67, Kimchi\_74, Kostya\_70, Lilac\_72, Lilizi\_71, Lilipickle\_69, MISSy\_71, MPhalcon\_71, MadamMonkfish\_70, Manda\_70, Marshmallow\_68, Maxxinista\_72, Mindy\_69, Miniwave\_65, Misfit\_71, Moldemort\_73, Mosby\_66, Murica\_73, Murphy\_70, Myrale\_70, Nala\_72, NelitzaMV\_68, Nimrod\_71, NoSleep\_71, OrionPax\_69, Paperbeatsrock\_69, Pat3\_68, Petra64142\_74, Phaja\_68, Pharsalus\_67, PhatBacter\_74, Phaux\_72, Phrux\_67, Porky\_69, Pumpkin\_73, Quallification\_71, Rakim\_71, Rimmer\_71, RiverMonster\_70, Saints25\_69, Sassay\_65, ShamWow\_70, ShereKhan\_69, Simpliphy\_69, SirDuracell\_69, SophKB\_67, Sotrice96\_71, Stank\_74, Stark\_71, StellaBean\_66, StolenFromERC\_73, TBrady12\_73, Tarkin\_69, TeardropMSU\_66, Teaspoon\_67, Terminus\_73, Thresher\_72, Tomaszewski\_65, Toto\_68, Traaww1\_66, Tuco\_71, Ukulele\_65, Wiggin\_72, Willez\_65, Xandras\_69, YassJohnny\_67, Youngblood\_73, xkcd\_73,

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

- 

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

- 

### Summary by start number:

Start 1:

- Found in 127 of 127 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 116 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244\_71 (E), ABCat\_67 (E), Adnama\_74 (E), Amao\_70 (E), AmericanBeauty\_77 (E), Argent26\_74 (E), Asriel\_69 (E), BaboJay\_67 (E), BadStone\_67 (E), Balomoji\_70 (E), Barbarian\_69 (E), Bask21\_70 (E), Bench\_73 (E), BigBubba\_70 (E), BilboSwaggins\_69 (E), Bruin\_67 (E), Buck\_71 (E), Cactus\_73 (E), ChosenOne\_70 (E), ChotaBhai\_70 (E), Cjw1\_70 (E), Command613\_72 (E), Contagion\_66 (E), Cookies\_67 (E), CrystalP\_69 (E), Czyszczone1\_71 (E), Daikon\_72 (E), DoctorDiddles\_69 (E), DrDrey\_70 (E), Dumbo\_70 (E), Dusk\_67 (E), Easy2Say\_71 (E), Elite2014\_69 (E), Elph10\_70 (E), Emmina\_70 (E), Eureka\_68 (E), Filch\_71 (E), FireRed\_74 (E), Flypotenuse\_66 (E), Gage\_72 (E), Gator\_68 (E), Gemini\_75 (E), Glexan\_69 (E), Goku\_68 (E), GoldenSpark\_74 (E), Goldilocks\_73 (E), GooberAzure\_73 (E), HanKaySha\_70 (E), Harella\_70 (E), Henry\_68 (E), Highbury\_69 (E), Holt\_75 (E), Hoonter\_73 (E), Hopey\_70 (E), HufflyPuff\_73 (E), IHOP\_68 (E), Icee\_71 (E), Inca\_67 (E), JeTaime\_70 (E), Kanye\_67 (E), Kimchi\_74 (E), Kostya\_70 (E), Lilac\_72 (E), Lilizi\_71 (E), Lilipickle\_69 (E), MISSy\_71 (E), MPhalcon\_71 (E), MadamMonkfish\_70 (E), Manda\_70 (E), Marshmallow\_68 (E), Maxxinista\_72 (E), Mindy\_69 (E), Miniwave\_65 (E), Misfit\_71 (E), Moldemort\_73 (E), Mosby\_66 (E), Murica\_73 (E), Murphy\_70 (E), Myrale\_70 (E), Nala\_72 (E), NelitzaMV\_68 (E), Nimrod\_71 (E), NoSleep\_71 (E), OrionPax\_69 (E), Paperbeatsrock\_69 (E), Pat3\_68 (E), Petra64142\_74 (E), Phaja\_68 (E), Pharsalus\_67 (E), PhatBacter\_74 (E), Phaux\_72 (E), Phrux\_67 (E), Porky\_69

(E), Pumpkin\_73 (E), Quallification\_71 (E), Rakim\_71 (E), Rimmer\_71 (E), RiverMonster\_70 (E), Saints25\_69 (E), Sassay\_65 (E), ShamWow\_70 (E), ShereKhan\_69 (E), Simpliphy\_69 (E), SirDuracell\_69 (E), SophKB\_67 (E), Sotrice96\_71 (E), Stank\_74 (E), Stark\_71 (E), StellaBean\_66 (E), StolenFromERC\_73 (E), TBrady12\_73 (E), Tarkin\_69 (E), TeardropMSU\_66 (E), Teaspoon\_67 (E), Terminus\_73 (E), Thresher\_72 (E), Tomaszewski\_65 (E), Toto\_68 (E), Traaww1\_66 (E), Tuco\_71 (E), Ukulele\_65 (E), Wiggin\_72 (E), Willez\_65 (E), Xandras\_69 (E), YassJohnny\_67 (E), Youngblood\_73 (E), xkcd\_73 (E),

### **Summary by clusters:**

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

•Start number 1 was manually annotated 116 times for cluster E.

### **Gene Information:**

Gene: 244\_71 Start: 46276, Stop: 46587, Start Num: 1

Candidate Starts for 244\_71:

(Start: 1 @46276 has 116 MA's), (3, 46408), (4, 46423), (6, 46480), (7, 46504), (8, 46519), (9, 46567),

Gene: ABCat\_67 Start: 46623, Stop: 46934, Start Num: 1

Candidate Starts for ABCat\_67:

(Start: 1 @46623 has 116 MA's), (3, 46755), (4, 46770), (7, 46851), (8, 46866), (9, 46914),

Gene: Adnama\_74 Start: 46646, Stop: 46957, Start Num: 1

Candidate Starts for Adnama\_74:

(Start: 1 @46646 has 116 MA's), (3, 46778), (4, 46793), (7, 46874), (8, 46889), (9, 46937),

Gene: Amao\_70 Start: 46034, Stop: 46345, Start Num: 1

Candidate Starts for Amao\_70:

(Start: 1 @46034 has 116 MA's), (3, 46166), (4, 46181), (7, 46262), (8, 46277), (9, 46325),

Gene: AmericanBeauty\_77 Start: 46789, Stop: 47100, Start Num: 1

Candidate Starts for AmericanBeauty\_77:

(Start: 1 @46789 has 116 MA's), (3, 46921), (4, 46936), (6, 46993), (7, 47017), (8, 47032), (9, 47080),

Gene: Argent26\_74 Start: 46427, Stop: 46738, Start Num: 1

Candidate Starts for Argent26\_74:

(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: Asriel\_69 Start: 44983, Stop: 45294, Start Num: 1

Candidate Starts for Asriel\_69:

(Start: 1 @44983 has 116 MA's), (3, 45115), (4, 45130), (7, 45211), (8, 45226), (9, 45274),

Gene: BaboJay\_67 Start: 45820, Stop: 46131, Start Num: 1

Candidate Starts for BaboJay\_67:

(Start: 1 @45820 has 116 MA's), (3, 45952), (4, 45967), (7, 46048), (8, 46063), (9, 46111),

Gene: BadStone\_67 Start: 46192, Stop: 46503, Start Num: 1

Candidate Starts for BadStone\_67:

(Start: 1 @46192 has 116 MA's), (3, 46324), (4, 46339), (7, 46420), (8, 46435), (9, 46483),

Gene: Balomoji\_70 Start: 46753, Stop: 47064, Start Num: 1

Candidate Starts for Balomoji\_70:

(Start: 1 @46753 has 116 MA's), (3, 46885), (4, 46900), (7, 46981), (8, 46996), (9, 47044),

Gene: Barbarian\_69 Start: 44983, Stop: 45294, Start Num: 1

Candidate Starts for Barbarian\_69:

(Start: 1 @44983 has 116 MA's), (3, 45115), (4, 45130), (7, 45211), (8, 45226), (9, 45274),

Gene: Bask21\_70 Start: 45597, Stop: 45908, Start Num: 1

Candidate Starts for Bask21\_70:

(Start: 1 @45597 has 116 MA's), (3, 45729), (4, 45744), (7, 45825), (8, 45840), (9, 45888),

Gene: Bench\_73 Start: 46293, Stop: 46604, Start Num: 1

Candidate Starts for Bench\_73:

(Start: 1 @46293 has 116 MA's), (3, 46425), (4, 46440), (7, 46521), (8, 46536), (9, 46584),

Gene: BigBubba\_70 Start: 46002, Stop: 46313, Start Num: 1

Candidate Starts for BigBubba\_70:

(Start: 1 @46002 has 116 MA's), (2, 46098), (3, 46134), (4, 46149), (7, 46230), (8, 46245), (9, 46293),

Gene: BilboSwaggins\_69 Start: 46631, Stop: 46942, Start Num: 1

Candidate Starts for BilboSwaggins\_69:

(Start: 1 @46631 has 116 MA's), (3, 46763), (4, 46778), (7, 46859), (8, 46874), (9, 46922),

Gene: Bruin\_67 Start: 45169, Stop: 45480, Start Num: 1

Candidate Starts for Bruin\_67:

(Start: 1 @45169 has 116 MA's), (3, 45301), (4, 45316), (6, 45373), (7, 45397), (8, 45412), (9, 45460),

Gene: Buck\_71 Start: 46877, Stop: 47188, Start Num: 1

Candidate Starts for Buck\_71:

(Start: 1 @46877 has 116 MA's), (3, 47009), (4, 47024), (7, 47105), (8, 47120), (9, 47168),

Gene: Cactus\_73 Start: 45647, Stop: 45958, Start Num: 1

Candidate Starts for Cactus\_73:

(Start: 1 @45647 has 116 MA's), (3, 45779), (4, 45794), (7, 45875), (8, 45890), (9, 45938),

Gene: ChosenOne\_70 Start: 45650, Stop: 45961, Start Num: 1

Candidate Starts for ChosenOne\_70:

(Start: 1 @45650 has 116 MA's), (3, 45782), (4, 45797), (6, 45854), (7, 45878), (8, 45893), (9, 45941),

Gene: ChotaBhai\_70 Start: 45965, Stop: 46276, Start Num: 1

Candidate Starts for ChotaBhai\_70:

(Start: 1 @45965 has 116 MA's), (3, 46097), (4, 46112), (7, 46193), (8, 46208), (9, 46256),

Gene: Cjw1\_70 Start: 47347, Stop: 47658, Start Num: 1

Candidate Starts for Cjw1\_70:

(Start: 1 @47347 has 116 MA's), (3, 47479), (4, 47494), (7, 47575), (8, 47590), (9, 47638),

Gene: Command613\_72 Start: 46686, Stop: 46997, Start Num: 1

Candidate Starts for Command613\_72:

(Start: 1 @46686 has 116 MA's), (3, 46818), (4, 46833), (7, 46914), (8, 46929), (9, 46977),

Gene: Contagion\_66 Start: 45450, Stop: 45761, Start Num: 1

Candidate Starts for Contagion\_66:

(Start: 1 @45450 has 116 MA's), (3, 45582), (4, 45597), (6, 45654), (7, 45678), (8, 45693), (9, 45741),

Gene: Cookies\_67 Start: 45819, Stop: 46130, Start Num: 1

Candidate Starts for Cookies\_67:

(Start: 1 @45819 has 116 MA's), (3, 45951), (4, 45966), (7, 46047), (8, 46062), (9, 46110),

Gene: CrystalP\_69 Start: 46631, Stop: 46942, Start Num: 1

Candidate Starts for CrystalP\_69:

(Start: 1 @46631 has 116 MA's), (3, 46763), (4, 46778), (7, 46859), (8, 46874), (9, 46922),

Gene: Czyszczone1\_71 Start: 46156, Stop: 46467, Start Num: 1

Candidate Starts for Czyszczone1\_71:

(Start: 1 @46156 has 116 MA's), (3, 46288), (4, 46303), (7, 46384), (8, 46399), (9, 46447),

Gene: Daikon\_72 Start: 46774, Stop: 47085, Start Num: 1

Candidate Starts for Daikon\_72:

(Start: 1 @46774 has 116 MA's), (3, 46906), (4, 46921), (7, 47002), (8, 47017), (9, 47065),

Gene: DoctorDiddles\_69 Start: 46009, Stop: 46320, Start Num: 1

Candidate Starts for DoctorDiddles\_69:

(Start: 1 @46009 has 116 MA's), (3, 46141), (4, 46156), (7, 46237), (8, 46252), (9, 46300),

Gene: DrDrey\_70 Start: 47072, Stop: 47383, Start Num: 1

Candidate Starts for DrDrey\_70:

(Start: 1 @47072 has 116 MA's), (3, 47204), (4, 47219), (5, 47246), (7, 47300), (8, 47315), (9, 47363),

Gene: Dumbo\_70 Start: 45555, Stop: 45866, Start Num: 1

Candidate Starts for Dumbo\_70:

(Start: 1 @45555 has 116 MA's), (3, 45687), (4, 45702), (7, 45783), (8, 45798), (9, 45846),

Gene: Dusk\_67 Start: 45852, Stop: 46163, Start Num: 1

Candidate Starts for Dusk\_67:

(Start: 1 @45852 has 116 MA's), (3, 45984), (4, 45999), (7, 46080), (8, 46095), (9, 46143),

Gene: Easy2Say\_71 Start: 47093, Stop: 47404, Start Num: 1

Candidate Starts for Easy2Say\_71:

(Start: 1 @47093 has 116 MA's), (3, 47225), (4, 47240), (7, 47321), (8, 47336), (9, 47384),

Gene: Elite2014\_69 Start: 45649, Stop: 45960, Start Num: 1

Candidate Starts for Elite2014\_69:

(Start: 1 @45649 has 116 MA's), (3, 45781), (4, 45796), (6, 45853), (7, 45877), (8, 45892), (9, 45940),

Gene: Elph10\_70 Start: 45654, Stop: 45965, Start Num: 1

Candidate Starts for Elph10\_70:

(Start: 1 @45654 has 116 MA's), (3, 45786), (4, 45801), (7, 45882), (8, 45897), (9, 45945),

Gene: Emmina\_70 Start: 45556, Stop: 45867, Start Num: 1

Candidate Starts for Emmina\_70:

(Start: 1 @45556 has 116 MA's), (3, 45688), (4, 45703), (7, 45784), (8, 45799), (9, 45847),

Gene: Eureka\_68 Start: 46120, Stop: 46431, Start Num: 1

Candidate Starts for Eureka\_68:

(Start: 1 @46120 has 116 MA's), (3, 46252), (4, 46267), (7, 46348), (8, 46363), (9, 46411),

Gene: Filch\_71 Start: 45581, Stop: 45892, Start Num: 1

Candidate Starts for Filch\_71:

(Start: 1 @45581 has 116 MA's), (3, 45713), (4, 45728), (7, 45809), (8, 45824), (9, 45872),

Gene: FireRed\_74 Start: 47146, Stop: 47457, Start Num: 1

Candidate Starts for FireRed\_74:

(Start: 1 @47146 has 116 MA's), (3, 47278), (4, 47293), (6, 47350), (7, 47374), (8, 47389), (9, 47437),

Gene: Flypotenuse\_66 Start: 45637, Stop: 45948, Start Num: 1

Candidate Starts for Flypotenuse\_66:

(Start: 1 @45637 has 116 MA's), (3, 45769), (4, 45784), (7, 45865), (8, 45880), (9, 45928),

Gene: Gage\_72 Start: 46427, Stop: 46738, Start Num: 1

Candidate Starts for Gage\_72:

(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: Gator\_68 Start: 46483, Stop: 46794, Start Num: 1

Candidate Starts for Gator\_68:

(Start: 1 @46483 has 116 MA's), (3, 46615), (4, 46630), (7, 46711), (8, 46726), (9, 46774),

Gene: Gemini\_75 Start: 46944, Stop: 47255, Start Num: 1

Candidate Starts for Gemini\_75:

(Start: 1 @46944 has 116 MA's), (3, 47076), (4, 47091), (6, 47148), (7, 47172), (8, 47187), (9, 47235),

Gene: Glexan\_69 Start: 46767, Stop: 47078, Start Num: 1

Candidate Starts for Glexan\_69:

(Start: 1 @46767 has 116 MA's), (3, 46899), (4, 46914), (7, 46995), (8, 47010), (9, 47058),

Gene: Goku\_68 Start: 45849, Stop: 46160, Start Num: 1

Candidate Starts for Goku\_68:

(Start: 1 @45849 has 116 MA's), (3, 45981), (4, 45996), (7, 46077), (8, 46092), (9, 46140),

Gene: GoldenSpark\_74 Start: 46427, Stop: 46738, Start Num: 1

Candidate Starts for GoldenSpark\_74:

(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: Goldilocks\_73 Start: 45928, Stop: 46239, Start Num: 1

Candidate Starts for Goldilocks\_73:

(Start: 1 @45928 has 116 MA's), (3, 46060), (4, 46075), (7, 46156), (8, 46171), (9, 46219),

Gene: GooberAzure\_73 Start: 46427, Stop: 46738, Start Num: 1

Candidate Starts for GooberAzure\_73:

(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: HanKaySha\_70 Start: 45734, Stop: 46045, Start Num: 1

Candidate Starts for HanKaySha\_70:

(Start: 1 @45734 has 116 MA's), (3, 45866), (4, 45881), (7, 45962), (8, 45977), (9, 46025),

Gene: Harella\_70 Start: 47283, Stop: 47594, Start Num: 1  
Candidate Starts for Harella\_70:  
(Start: 1 @47283 has 116 MA's), (3, 47415), (4, 47430), (7, 47511), (8, 47526), (9, 47574),

Gene: Henry\_68 Start: 46071, Stop: 46382, Start Num: 1  
Candidate Starts for Henry\_68:  
(Start: 1 @46071 has 116 MA's), (3, 46203), (4, 46218), (7, 46299), (8, 46314), (9, 46362),

Gene: Highbury\_69 Start: 45722, Stop: 46033, Start Num: 1  
Candidate Starts for Highbury\_69:  
(Start: 1 @45722 has 116 MA's), (3, 45854), (4, 45869), (6, 45926), (7, 45950), (8, 45965), (9, 46013),

Gene: Holt\_75 Start: 46841, Stop: 47152, Start Num: 1  
Candidate Starts for Holt\_75:  
(Start: 1 @46841 has 116 MA's), (3, 46973), (4, 46988), (6, 47045), (7, 47069), (8, 47084), (9, 47132),

Gene: Hoonter\_73 Start: 46427, Stop: 46738, Start Num: 1  
Candidate Starts for Hoonter\_73:  
(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: Hopecy\_70 Start: 46266, Stop: 46577, Start Num: 1  
Candidate Starts for Hopecy\_70:  
(Start: 1 @46266 has 116 MA's), (3, 46398), (4, 46413), (7, 46494), (8, 46509), (9, 46557),

Gene: HufflyPuff\_73 Start: 47099, Stop: 47410, Start Num: 1  
Candidate Starts for HufflyPuff\_73:  
(Start: 1 @47099 has 116 MA's), (3, 47231), (4, 47246), (6, 47303), (7, 47327), (8, 47342), (9, 47390),

Gene: IHOP\_68 Start: 46195, Stop: 46506, Start Num: 1  
Candidate Starts for IHOP\_68:  
(Start: 1 @46195 has 116 MA's), (3, 46327), (4, 46342), (7, 46423), (8, 46438), (9, 46486),

Gene: Icee\_71 Start: 46094, Stop: 46405, Start Num: 1  
Candidate Starts for Icee\_71:  
(Start: 1 @46094 has 116 MA's), (3, 46226), (4, 46241), (7, 46322), (8, 46337), (9, 46385),

Gene: Inca\_67 Start: 44720, Stop: 45031, Start Num: 1  
Candidate Starts for Inca\_67:  
(Start: 1 @44720 has 116 MA's), (3, 44852), (4, 44867), (7, 44948), (8, 44963), (9, 45011),

Gene: JeTaime\_70 Start: 46918, Stop: 47229, Start Num: 1  
Candidate Starts for JeTaime\_70:  
(Start: 1 @46918 has 116 MA's), (3, 47050), (4, 47065), (7, 47146), (8, 47161), (9, 47209),

Gene: Kanye\_67 Start: 45776, Stop: 46087, Start Num: 1  
Candidate Starts for Kanye\_67:  
(Start: 1 @45776 has 116 MA's), (3, 45908), (4, 45923), (5, 45950), (7, 46004), (8, 46019), (9, 46067),

Gene: Kimchi\_74 Start: 46430, Stop: 46741, Start Num: 1  
Candidate Starts for Kimchi\_74:  
(Start: 1 @46430 has 116 MA's), (3, 46562), (4, 46577), (6, 46634), (7, 46658), (8, 46673), (9, 46721),

Gene: Kostya\_70 Start: 46294, Stop: 46605, Start Num: 1



Candidate Starts for Kostya\_70:

(Start: 1 @46294 has 116 MA's), (3, 46426), (4, 46441), (7, 46522), (8, 46537), (9, 46585),

Gene: Lilac\_72 Start: 46051, Stop: 46362, Start Num: 1

Candidate Starts for Lilac\_72:

(Start: 1 @46051 has 116 MA's), (3, 46183), (4, 46198), (7, 46279), (8, 46294), (9, 46342),

Gene: Lilizi\_71 Start: 45764, Stop: 46075, Start Num: 1

Candidate Starts for Lilizi\_71:

(Start: 1 @45764 has 116 MA's), (3, 45896), (4, 45911), (7, 45992), (8, 46007), (9, 46055),

Gene: Lilpickle\_69 Start: 45649, Stop: 45960, Start Num: 1

Candidate Starts for Lilpickle\_69:

(Start: 1 @45649 has 116 MA's), (3, 45781), (4, 45796), (6, 45853), (7, 45877), (8, 45892), (9, 45940),

Gene: MISSy\_71 Start: 46155, Stop: 46466, Start Num: 1

Candidate Starts for MISSy\_71:

(Start: 1 @46155 has 116 MA's), (3, 46287), (4, 46302), (6, 46359), (7, 46383), (8, 46398), (9, 46446),

Gene: MPhalcon\_71 Start: 46148, Stop: 46459, Start Num: 1

Candidate Starts for MPhalcon\_71:

(Start: 1 @46148 has 116 MA's), (3, 46280), (4, 46295), (6, 46352), (7, 46376), (8, 46391), (9, 46439),

Gene: MadamMonkfish\_70 Start: 45373, Stop: 45684, Start Num: 1

Candidate Starts for MadamMonkfish\_70:

(Start: 1 @45373 has 116 MA's), (3, 45505), (4, 45520), (6, 45577), (7, 45601), (8, 45616), (9, 45664),

Gene: Manda\_70 Start: 46654, Stop: 46965, Start Num: 1

Candidate Starts for Manda\_70:

(Start: 1 @46654 has 116 MA's), (3, 46786), (4, 46801), (7, 46882), (8, 46897), (9, 46945),

Gene: Marshmallow\_68 Start: 46922, Stop: 47233, Start Num: 1

Candidate Starts for Marshmallow\_68:

(Start: 1 @46922 has 116 MA's), (3, 47054), (4, 47069), (5, 47096), (7, 47150), (8, 47165), (9, 47213),

Gene: Maxxinista\_72 Start: 46024, Stop: 46335, Start Num: 1

Candidate Starts for Maxxinista\_72:

(Start: 1 @46024 has 116 MA's), (3, 46156), (4, 46171), (7, 46252), (8, 46267), (9, 46315),

Gene: Mindy\_69 Start: 45237, Stop: 45548, Start Num: 1

Candidate Starts for Mindy\_69:

(Start: 1 @45237 has 116 MA's), (3, 45369), (4, 45384), (7, 45465), (8, 45480), (9, 45528),

Gene: Miniwave\_65 Start: 45690, Stop: 46001, Start Num: 1

Candidate Starts for Miniwave\_65:

(Start: 1 @45690 has 116 MA's), (3, 45822), (4, 45837), (7, 45918), (8, 45933), (9, 45981),

Gene: Misfit\_71 Start: 47167, Stop: 47478, Start Num: 1

Candidate Starts for Misfit\_71:

(Start: 1 @47167 has 116 MA's), (3, 47299), (4, 47314), (6, 47371), (7, 47395), (8, 47410), (9, 47458),

Gene: Moldemort\_73 Start: 46246, Stop: 46557, Start Num: 1

Candidate Starts for Moldemort\_73:

(Start: 1 @46246 has 116 MA's), (3, 46378), (4, 46393), (7, 46474), (8, 46489), (9, 46537),

Gene: Mosby\_66 Start: 45450, Stop: 45761, Start Num: 1

Candidate Starts for Mosby\_66:

(Start: 1 @45450 has 116 MA's), (3, 45582), (4, 45597), (6, 45654), (7, 45678), (8, 45693), (9, 45741),

Gene: Murica\_73 Start: 47099, Stop: 47410, Start Num: 1

Candidate Starts for Murica\_73:

(Start: 1 @47099 has 116 MA's), (3, 47231), (4, 47246), (6, 47303), (7, 47327), (8, 47342), (9, 47390),

Gene: Murphy\_70 Start: 46536, Stop: 46847, Start Num: 1

Candidate Starts for Murphy\_70:

(Start: 1 @46536 has 116 MA's), (3, 46668), (4, 46683), (7, 46764), (8, 46779), (9, 46827),

Gene: Myrale\_70 Start: 46787, Stop: 47098, Start Num: 1

Candidate Starts for Myrale\_70:

(Start: 1 @46787 has 116 MA's), (3, 46919), (4, 46934), (5, 46961), (7, 47015), (8, 47030), (9, 47078),

Gene: Nala\_72 Start: 46660, Stop: 46971, Start Num: 1

Candidate Starts for Nala\_72:

(Start: 1 @46660 has 116 MA's), (3, 46792), (4, 46807), (6, 46864), (7, 46888), (8, 46903), (9, 46951),

Gene: NelitzaMV\_68 Start: 45736, Stop: 46047, Start Num: 1

Candidate Starts for NelitzaMV\_68:

(Start: 1 @45736 has 116 MA's), (3, 45868), (4, 45883), (7, 45964), (8, 45979), (9, 46027),

Gene: Nimrod\_71 Start: 47357, Stop: 47668, Start Num: 1

Candidate Starts for Nimrod\_71:

(Start: 1 @47357 has 116 MA's), (3, 47489), (4, 47504), (6, 47561), (7, 47585), (8, 47600), (9, 47648),

Gene: NoSleep\_71 Start: 45994, Stop: 46305, Start Num: 1

Candidate Starts for NoSleep\_71:

(Start: 1 @45994 has 116 MA's), (3, 46126), (4, 46141), (6, 46198), (7, 46222), (8, 46237), (9, 46285),

Gene: OrionPax\_69 Start: 45742, Stop: 46053, Start Num: 1

Candidate Starts for OrionPax\_69:

(Start: 1 @45742 has 116 MA's), (3, 45874), (4, 45889), (7, 45970), (8, 45985), (9, 46033),

Gene: Paperbeatsrock\_69 Start: 46368, Stop: 46679, Start Num: 1

Candidate Starts for Paperbeatsrock\_69:

(Start: 1 @46368 has 116 MA's), (3, 46500), (4, 46515), (7, 46596), (8, 46611), (9, 46659),

Gene: Pat3\_68 Start: 44894, Stop: 45205, Start Num: 1

Candidate Starts for Pat3\_68:

(Start: 1 @44894 has 116 MA's), (3, 45026), (4, 45041), (7, 45122), (8, 45137), (9, 45185),

Gene: Petra64142\_74 Start: 47593, Stop: 47904, Start Num: 1

Candidate Starts for Petra64142\_74:

(Start: 1 @47593 has 116 MA's), (3, 47725), (4, 47740), (7, 47821), (8, 47836), (9, 47884),

Gene: Phaja\_68 Start: 46194, Stop: 46505, Start Num: 1

Candidate Starts for Phaja\_68:

(Start: 1 @46194 has 116 MA's), (3, 46326), (4, 46341), (7, 46422), (8, 46437), (9, 46485),

Gene: Pharsalus\_67 Start: 46168, Stop: 46479, Start Num: 1

Candidate Starts for Pharsalus\_67:

(Start: 1 @46168 has 116 MA's), (3, 46300), (4, 46315), (7, 46396), (8, 46411), (9, 46459),

Gene: PhatBacter\_74 Start: 47143, Stop: 47454, Start Num: 1

Candidate Starts for PhatBacter\_74:

(Start: 1 @47143 has 116 MA's), (3, 47275), (4, 47290), (7, 47371), (8, 47386), (9, 47434),

Gene: Phaux\_72 Start: 47138, Stop: 47449, Start Num: 1

Candidate Starts for Phaux\_72:

(Start: 1 @47138 has 116 MA's), (3, 47270), (4, 47285), (7, 47366), (8, 47381), (9, 47429),

Gene: Phrux\_67 Start: 45734, Stop: 46045, Start Num: 1

Candidate Starts for Phrux\_67:

(Start: 1 @45734 has 116 MA's), (3, 45866), (4, 45881), (7, 45962), (8, 45977), (9, 46025),

Gene: Porky\_69 Start: 45564, Stop: 45875, Start Num: 1

Candidate Starts for Porky\_69:

(Start: 1 @45564 has 116 MA's), (3, 45696), (4, 45711), (7, 45792), (8, 45807), (9, 45855),

Gene: Pumpkin\_73 Start: 46792, Stop: 47103, Start Num: 1

Candidate Starts for Pumpkin\_73:

(Start: 1 @46792 has 116 MA's), (3, 46924), (4, 46939), (7, 47020), (8, 47035), (9, 47083),

Gene: Quallification\_71 Start: 46776, Stop: 47087, Start Num: 1

Candidate Starts for Quallification\_71:

(Start: 1 @46776 has 116 MA's), (3, 46908), (4, 46923), (5, 46950), (7, 47004), (8, 47019), (9, 47067),

Gene: Rakim\_71 Start: 46245, Stop: 46556, Start Num: 1

Candidate Starts for Rakim\_71:

(Start: 1 @46245 has 116 MA's), (3, 46377), (4, 46392), (7, 46473), (8, 46488), (9, 46536),

Gene: Rimmer\_71 Start: 46487, Stop: 46798, Start Num: 1

Candidate Starts for Rimmer\_71:

(Start: 1 @46487 has 116 MA's), (3, 46619), (4, 46634), (7, 46715), (8, 46730), (9, 46778),

Gene: RiverMonster\_70 Start: 46312, Stop: 46623, Start Num: 1

Candidate Starts for RiverMonster\_70:

(Start: 1 @46312 has 116 MA's), (3, 46444), (4, 46459), (7, 46540), (8, 46555), (9, 46603),

Gene: Saints25\_69 Start: 45722, Stop: 46033, Start Num: 1

Candidate Starts for Saints25\_69:

(Start: 1 @45722 has 116 MA's), (3, 45854), (4, 45869), (6, 45926), (7, 45950), (8, 45965), (9, 46013),

Gene: Sassay\_65 Start: 44412, Stop: 44723, Start Num: 1

Candidate Starts for Sassay\_65:

(Start: 1 @44412 has 116 MA's), (3, 44544), (4, 44559), (6, 44616), (7, 44640), (8, 44655), (9, 44703),

Gene: ShamWow\_70 Start: 46631, Stop: 46942, Start Num: 1

Candidate Starts for ShamWow\_70:

(Start: 1 @46631 has 116 MA's), (3, 46763), (4, 46778), (7, 46859), (8, 46874), (9, 46922),

Gene: ShereKhan\_69 Start: 46700, Stop: 47011, Start Num: 1  
Candidate Starts for ShereKhan\_69:  
(Start: 1 @46700 has 116 MA's), (3, 46832), (4, 46847), (5, 46874), (7, 46928), (8, 46943), (9, 46991),

Gene: Simpliphy\_69 Start: 45712, Stop: 46023, Start Num: 1  
Candidate Starts for Simpliphy\_69:  
(Start: 1 @45712 has 116 MA's), (3, 45844), (4, 45859), (7, 45940), (8, 45955), (9, 46003),

Gene: SirDuracell\_69 Start: 44986, Stop: 45297, Start Num: 1  
Candidate Starts for SirDuracell\_69:  
(Start: 1 @44986 has 116 MA's), (3, 45118), (4, 45133), (7, 45214), (8, 45229), (9, 45277),

Gene: SophKB\_67 Start: 45387, Stop: 45698, Start Num: 1  
Candidate Starts for SophKB\_67:  
(Start: 1 @45387 has 116 MA's), (3, 45519), (4, 45534), (7, 45615), (8, 45630), (9, 45678),

Gene: Sotrice96\_71 Start: 46390, Stop: 46701, Start Num: 1  
Candidate Starts for Sotrice96\_71:  
(Start: 1 @46390 has 116 MA's), (3, 46522), (4, 46537), (7, 46618), (8, 46633), (9, 46681),

Gene: Stank\_74 Start: 46645, Stop: 46956, Start Num: 1  
Candidate Starts for Stank\_74:  
(Start: 1 @46645 has 116 MA's), (3, 46777), (4, 46792), (7, 46873), (8, 46888), (9, 46936),

Gene: Stark\_71 Start: 46195, Stop: 46506, Start Num: 1  
Candidate Starts for Stark\_71:  
(Start: 1 @46195 has 116 MA's), (3, 46327), (4, 46342), (7, 46423), (8, 46438), (9, 46486),

Gene: StellaBean\_66 Start: 45955, Stop: 46266, Start Num: 1  
Candidate Starts for StellaBean\_66:  
(Start: 1 @45955 has 116 MA's), (3, 46087), (4, 46102), (7, 46183), (8, 46198), (9, 46246),

Gene: StolenFromERC\_73 Start: 46427, Stop: 46738, Start Num: 1  
Candidate Starts for StolenFromERC\_73:  
(Start: 1 @46427 has 116 MA's), (3, 46559), (4, 46574), (6, 46631), (7, 46655), (8, 46670), (9, 46718),

Gene: TBrady12\_73 Start: 46129, Stop: 46440, Start Num: 1  
Candidate Starts for TBrady12\_73:  
(Start: 1 @46129 has 116 MA's), (3, 46261), (4, 46276), (7, 46357), (8, 46372), (9, 46420),

Gene: Tarkin\_69 Start: 46377, Stop: 46688, Start Num: 1  
Candidate Starts for Tarkin\_69:  
(Start: 1 @46377 has 116 MA's), (3, 46509), (4, 46524), (7, 46605), (8, 46620), (9, 46668),

Gene: TeardropMSU\_66 Start: 45377, Stop: 45688, Start Num: 1  
Candidate Starts for TeardropMSU\_66:  
(Start: 1 @45377 has 116 MA's), (3, 45509), (4, 45524), (7, 45605), (8, 45620), (9, 45668),

Gene: Teaspoon\_67 Start: 46271, Stop: 46582, Start Num: 1  
Candidate Starts for Teaspoon\_67:  
(Start: 1 @46271 has 116 MA's), (3, 46403), (4, 46418), (7, 46499), (8, 46514), (9, 46562),

Gene: Terminus\_73 Start: 47167, Stop: 47478, Start Num: 1

Candidate Starts for Terminus\_73:

(Start: 1 @47167 has 116 MA's), (3, 47299), (4, 47314), (6, 47371), (7, 47395), (8, 47410), (9, 47458),

Gene: Thresher\_72 Start: 47254, Stop: 47565, Start Num: 1

Candidate Starts for Thresher\_72:

(Start: 1 @47254 has 116 MA's), (3, 47386), (4, 47401), (7, 47482), (8, 47497), (9, 47545),

Gene: Tomaszewski\_65 Start: 45546, Stop: 45857, Start Num: 1

Candidate Starts for Tomaszewski\_65:

(Start: 1 @45546 has 116 MA's), (3, 45678), (4, 45693), (7, 45774), (8, 45789), (9, 45837),

Gene: Toto\_68 Start: 46631, Stop: 46942, Start Num: 1

Candidate Starts for Toto\_68:

(Start: 1 @46631 has 116 MA's), (3, 46763), (4, 46778), (7, 46859), (8, 46874), (9, 46922),

Gene: Traaww1\_66 Start: 45812, Stop: 46123, Start Num: 1

Candidate Starts for Traaww1\_66:

(Start: 1 @45812 has 116 MA's), (3, 45944), (4, 45959), (7, 46040), (8, 46055), (9, 46103),

Gene: Tuco\_71 Start: 47139, Stop: 47450, Start Num: 1

Candidate Starts for Tuco\_71:

(Start: 1 @47139 has 116 MA's), (3, 47271), (4, 47286), (7, 47367), (8, 47382), (9, 47430),

Gene: Ukulele\_65 Start: 45525, Stop: 45836, Start Num: 1

Candidate Starts for Ukulele\_65:

(Start: 1 @45525 has 116 MA's), (3, 45657), (4, 45672), (7, 45753), (8, 45768), (9, 45816),

Gene: Wiggin\_72 Start: 46213, Stop: 46524, Start Num: 1

Candidate Starts for Wiggin\_72:

(Start: 1 @46213 has 116 MA's), (3, 46345), (4, 46360), (7, 46441), (8, 46456), (9, 46504),

Gene: Willez\_65 Start: 44412, Stop: 44723, Start Num: 1

Candidate Starts for Willez\_65:

(Start: 1 @44412 has 116 MA's), (3, 44544), (4, 44559), (6, 44616), (7, 44640), (8, 44655), (9, 44703),

Gene: Xandras\_69 Start: 45624, Stop: 45935, Start Num: 1

Candidate Starts for Xandras\_69:

(Start: 1 @45624 has 116 MA's), (3, 45756), (4, 45771), (6, 45828), (7, 45852), (8, 45867), (9, 45915),

Gene: YassJohnny\_67 Start: 45585, Stop: 45896, Start Num: 1

Candidate Starts for YassJohnny\_67:

(Start: 1 @45585 has 116 MA's), (3, 45717), (4, 45732), (7, 45813), (8, 45828), (9, 45876),

Gene: Youngblood\_73 Start: 47094, Stop: 47405, Start Num: 1

Candidate Starts for Youngblood\_73:

(Start: 1 @47094 has 116 MA's), (3, 47226), (4, 47241), (6, 47298), (7, 47322), (8, 47337), (9, 47385),

Gene: xkcd\_73 Start: 47284, Stop: 47595, Start Num: 1

Candidate Starts for xkcd\_73:

(Start: 1 @47284 has 116 MA's), (3, 47416), (4, 47431), (6, 47488), (7, 47512), (8, 47527), (9, 47575),