

Pham 292462



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 292462 Report

This analysis was run 04/18/26 on database version 643.

Pham number 292462 has 237 members, 6 are drafts.

Phages represented in each track:

- Track 1 : FugateOSU\_68, FriarPreacher\_66, Fang\_69, DirtJuice\_68, PhrankReynolds\_67, Podrick\_67, Mulan\_67, Phamished\_69, Pherdinand\_68, Vista\_66, LemonSlice\_68, Thora\_66, PhrodoBaggins\_69, Swish\_68, Derpp\_68, Craff\_71, Cobra\_68, Morgushi\_66, LeeLot\_67, Zonia\_68, Murdoc\_65, PinheadLarry\_67, Cher\_68, Placalicious\_68, CharlieGBrown\_66, Doddsville\_66, Phergie\_68, Vortex\_67, HighStump\_69, PhenghisKhan\_68, KingTut\_59, Oline\_67, Labeouficaum\_68, SDcharge11\_67, Slatt\_68, Vivaldi\_68, Phleuron\_66, Kwksand96\_68, Banjo\_66, Harvey\_65, TallGrassMM\_66, MichaelPhcott\_66, Daka\_70, Trypo\_69, Kailash\_66, Haimas\_66, Puhltonio\_66, Pipsqueak\_65, SassyCat97\_66, Mesh1\_68, Mana\_66, Soto\_65, Squid\_67, Daffy\_66, Prickles\_69, DuchessDung\_67, Iridoclysis\_67, MitKao\_67, Squiggle\_67, TyrionL\_68, UncleHowie\_65, Phipps\_67, Pinkman\_67, Held\_66, Matalotodo\_66, FluffyNinja\_68, Maru\_67, BatteryCK\_66, KingVeVeVe\_66, Yoshand\_68, Lego3393\_65
- Track 2 : Weher20\_65
- Track 3 : JDog\_67, Spartan300\_67, Kimbrough\_69, Lulumae\_65, Riggan\_69, EmpTee\_67, Mutante\_68, Serendipity\_67, LeiMonet\_71, Fringe\_72, Manad\_67, LuckyMarjie\_65, Riverton\_67, Orwigg\_67, Cornbread\_66, FleetyMac\_71, Dice\_67, Robyn\_68, AngelCake\_67, Keitherie\_70, Megatron\_68, CampRoach\_69, Xavier\_67, Andre\_70, Orfeu\_67, Tooj\_66, Quisquiliae\_69, ShiVal\_66, Chaelin\_69, KLucky39\_66, Mesmerelda\_67, KlimbOn\_67, Altwerkus\_66, Aelin\_67, CheetO\_67, Beaglebox\_66, Nyala\_67, Tomlarah\_69, HSavage\_66, JangoPhett\_102, Skippy\_69, PG1\_67, Jillium\_68, Kikipoo\_69, Hetaeria\_67, Apizium\_67, Chah\_69, PhatLouie\_70, Eremos\_67, Nacho\_0071, ProfessorX\_66, Gareth\_68, True\_66, Timmi\_67, Katniss\_69, Serpentine\_0068, Hartsy\_67, Virapocalypse\_69, Suffolk\_66, Carthage\_68, Scoot17C\_68, Coletti\_71, SirBeauregard\_69, Newman\_66, Cannibal\_68, JacAttac\_68, Gophee\_69, ShadowBud\_69, Swiphy\_70, Mcshane\_67, Jesabah\_70, Telesworld\_66, Badfish\_68, Anderson\_69, Sigman\_68, Pacifista\_67, Simielle\_68, Samaymay\_68, Hertubise\_67, ABU\_67, Waterdiva\_68, Giraffe\_68, Antonia\_67, Phunky\_66, Burr\_68, Oosterbaan\_67, Freya\_65, Lumine\_69, OneBrain\_71, Numberten\_67, Selr12\_69, Omniscient\_69, MrPhizzler\_71, PhatCats2014\_68, Kwadwo\_67, Roy17\_66, Charles1\_69, Haleema\_67, ThreeOh3D2\_69, Dione\_66, Longacauda\_69, Iridessa\_69, Bishoperium\_68, Windsor\_68, Mecca\_68, Valjean\_67, Vaticameos\_65, DoesntMatter\_65, Toni\_68, Piglet\_0068, Nicole21\_69, Morty\_69, Schadenfreude\_68, Colbert\_66, Chunky\_68, IsaacEli\_69, Olak\_67, OliverWalter\_67
- Track 4 : Zelda\_68, Plmatters\_66, Mag7\_66, Emiris\_69, YouGoGlencoco\_68, Wallhey\_68, Veritas\_67, Sophia\_66, Etaye\_67, Surely\_68, Solosis\_66, Roliet\_65,

MRabcd\_67, Legolas\_69, TomBombadil\_68, LostAndPhound\_67, SallyH\_70, Durga\_70

- Track 5 : Vaishali24\_68
- Track 6 : Kahve\_68, Childish\_67, DaddyDaniels\_70, HenryJackson\_68
- Track 7 : Gwennie1\_67, Jiraiya\_69, Crownjwl\_66, DelRivs\_66, Ricotta\_68, Soile\_69, Rimu\_68, Roscoe\_68
- Track 8 : Mosaic\_65
- Track 9 : OSmaximus\_68
- Track 10 : Cosmolli16\_69, QueenBeane\_68, CamL\_68
- Track 11 : Brilliant\_71
- Track 12 : Duggie\_68
- Track 13 : Kloppinator\_68
- Track 14 : JakeO\_69, Thunderbird\_68, Pops\_66
- Track 15 : LilMcDreamy\_64
- Track 16 : Donny\_68, Suigeneris\_68
- Track 17 : Bae\_67
- Track 18 : Acadian\_67

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

The start number called the most often in the published annotations is 4, it was called in 126 of the 231 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ABU\_67, Aelin\_67, Altwerkus\_66, Anderson\_69, Andre\_70, AngelCake\_67, Antonia\_67, Apizium\_67, Badfish\_68, Beaglebox\_66, Bishoperium\_68, Brilliant\_71, Burr\_68, CampRoach\_69, Cannibal\_68, Carthage\_68, Chaelin\_69, Chah\_69, Charles1\_69, CheetO\_67, Childish\_67, Chunky\_68, Colbert\_66, Coletti\_71, Cornbread\_66, Crownjwl\_66, DaddyDaniels\_70, DelRivs\_66, Dice\_67, Dione\_66, DoesntMatter\_65, EmpTee\_67, Eremos\_67, FleetyMac\_71, Freya\_65, Fringe\_72, Gareth\_68, Giraffe\_68, Gophee\_69, Gwennie1\_67, HSavage\_66, Haleema\_67, Hartsy\_67, HenryJackson\_68, Hertubise\_67, Hetaeria\_67, Iridessa\_69, IsaacEli\_69, JDog\_67, JacAttac\_68, JangoPhett\_102, Jesabah\_70, Jillium\_68, Jiraiya\_69, KLucky39\_66, Kahve\_68, Katniss\_69, Keitherie\_70, Kikipoo\_69, Kimbrough\_69, KlimbOn\_67, Kwadwo\_67, LeiMonet\_71, Longacauda\_69, LuckyMarjie\_65, Lulumae\_65, Lumine\_69, Manad\_67, Mcshane\_67, Mecca\_68, Megatron\_68, Mesmerelda\_67, Morty\_69, MrPhizzler\_71, Mutante\_68, Nacho\_0071, Newman\_66, Nicole21\_69, Numberten\_67, Nyala\_67, Olak\_67, OliverWalter\_67, Omniscient\_69, OneBrain\_71, Oosterbaan\_67, Orfeu\_67, Orwigg\_67, PG1\_67, Pacifista\_67, PhatCats2014\_68, PhatLouie\_70, Phunky\_66, Piglet\_0068, ProfessorX\_66, Quisquilliae\_69, Ricotta\_68, Riggan\_69, Rimu\_68, Riverton\_67, Robyn\_68, Roscoe\_68, Roy17\_66, Samaymay\_68, Schadenfreude\_68, Scoot17C\_68, Selr12\_69, Serendipity\_67, Serpentine\_0068, ShadowBud\_69, ShiVal\_66, Sigman\_68, Simielle\_68, SirBeauregard\_69, Skippy\_69, Soile\_69, Spartan300\_67, Suffolk\_66, Swiphy\_70, Telesworld\_66, ThreeOh3D2\_69, Timmi\_67, Tomlarah\_69, Toni\_68, Tooj\_66, True\_66, Valjean\_67, Vaticameos\_65, Virapocalypse\_69, Waterdiva\_68, Windsor\_68, Xavier\_67,

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

- CamL\_68, Cosmolli16\_69, QueenBeane\_68, Vaishali24\_68,

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

- Acadian\_67, Baeae\_67, Banjo\_66, BatteryCK\_66, CharlieGBrown\_66, Cher\_68, Cobra\_68, Craff\_71, Daffy\_66, Daka\_70, Derpp\_68, DirtJuice\_68, Doddsville\_66, Donny\_68, DuchessDung\_67, Duggie\_68, Durga\_70, Emiris\_69, Etaye\_67, Fang\_69, FluffyNinja\_68, FriarPreacher\_66, FugateOSU\_68, Haimas\_66, Harvey\_65, Held\_66, HighStump\_69, Iridoclysis\_67, JakeO\_69, Kailash\_66, KingTut\_59, KingVeVeVe\_66, Kloppinator\_68, Kwksand96\_68, Labeouficaum\_68, LeeLot\_67, Lego3393\_65, Legolas\_69, LemonSlice\_68, LilMcDreamy\_64, LostAndPhound\_67, MRabcd\_67, Mag7\_66, Mana\_66, Maru\_67, Matalotodo\_66, Mesh1\_68, MichaelPhcott\_66, MitKao\_67, Morgushi\_66, Mosaic\_65, Mulan\_67, Murdoc\_65, OSmaximus\_68, Oline\_67, Phamished\_69, PhenghisKhan\_68, Pherdinand\_68, Phergie\_68, Phipps\_67, Phleuron\_66, PhrankReynolds\_67, PhrodoBaggins\_69, PinheadLarry\_67, Pinkman\_67, Pipsqueak\_65, Placalicious\_68, Plmatters\_66, Podrick\_67, Pops\_66, Prickles\_69, Puhltonio\_66, Roliet\_65, SDcharge11\_67, SallyH\_70, SassyCat97\_66, Slatt\_68, Solosis\_66, Sophia\_66, Soto\_65, Squid\_67, Squiggle\_67, Suigeneris\_68, Surely\_68, Swish\_68, TallGrassMM\_66, Thora\_66, Thunderbird\_68, TomBombadil\_68, Trypo\_69, TyrionL\_68, UncleHowie\_65, Veritas\_67, Vista\_66, Vivaldi\_68, Vortex\_67, Wallhey\_68, Weher20\_65, Yoshand\_68, YouGoGlencoco\_68, Zelda\_68, Zonia\_68,

### Summary by start number:

Start 3:

- Found in 92 of 237 ( 38.8% ) of genes in pham
- Manual Annotations of this start: 74 of 231
- Called 80.4% of time when present
- Phage (with cluster) where this start called: Banjo\_66 (B1), BatteryCK\_66 (B1), CharlieGBrown\_66 (B1), Cher\_68 (B1), Cobra\_68 (B1), Craff\_71 (B1), Daffy\_66 (B1), Daka\_70 (B1), Derpp\_68 (B1), DirtJuice\_68 (B1), Doddsville\_66 (B1), DuchessDung\_67 (B1), Fang\_69 (B1), FluffyNinja\_68 (B1), FriarPreacher\_66 (B1), FugateOSU\_68 (B1), Haimas\_66 (B1), Harvey\_65 (B1), Held\_66 (B1), HighStump\_69 (B1), Iridoclysis\_67 (B1), Kailash\_66 (B1), KingTut\_59 (B1), KingVeVeVe\_66 (B1), Kloppinator\_68 (B1), Kwksand96\_68 (B1), Labeouficaum\_68 (B1), LeeLot\_67 (B1), Lego3393\_65 (B1), LemonSlice\_68 (B1), Mana\_66 (B1), Maru\_67 (B1), Matalotodo\_66 (B1), Mesh1\_68 (B1), MichaelPhcott\_66 (B1), MitKao\_67 (B1), Morgushi\_66 (B1), Mosaic\_65 (B1), Mulan\_67 (B1), Murdoc\_65 (B1), OSmaximus\_68 (B1), Oline\_67 (B1), Phamished\_69 (B1), PhenghisKhan\_68 (B1), Pherdinand\_68 (B1), Phergie\_68 (B1), Phipps\_67 (B1), Phleuron\_66 (B1), PhrankReynolds\_67 (B1), PhrodoBaggins\_69 (B1), PinheadLarry\_67 (B1), Pinkman\_67 (B1), Pipsqueak\_65 (B1), Placalicious\_68 (B1), Podrick\_67 (B1), Prickles\_69 (B1), Puhltonio\_66 (B1), SDcharge11\_67 (B1), SassyCat97\_66 (B1), Slatt\_68 (B1), Soto\_65 (B1), Squid\_67 (B1), Squiggle\_67 (B1), Swish\_68 (B1), TallGrassMM\_66 (B1), Thora\_66 (B1), Trypo\_69 (B1), TyrionL\_68 (B1), UncleHowie\_65 (B1), Vista\_66 (B1), Vivaldi\_68 (B1), Vortex\_67 (B1), Yoshand\_68 (B1), Zonia\_68 (B1),

Start 4:

- Found in 135 of 237 ( 57.0% ) of genes in pham
- Manual Annotations of this start: 126 of 231
- Called 97.0% of time when present
- Phage (with cluster) where this start called: ABU\_67 (B1), Aelin\_67 (B1), Altwerkus\_66 (B1), Anderson\_69 (B1), Andre\_70 (B1), AngelCake\_67 (B1), Antonia\_67 (B1), Apizium\_67 (B1), Badfish\_68 (B1), Beaglebox\_66 (B1),

Bishoperium\_68 (B1), Brilliant\_71 (B1), Burr\_68 (B1), CampRoach\_69 (B1), Cannibal\_68 (B1), Carthage\_68 (B1), Chaelin\_69 (B1), Chah\_69 (B1), Charles1\_69 (B1), CheetO\_67 (B1), Childish\_67 (B1), Chunky\_68 (B1), Colbert\_66 (B1), Coletti\_71 (B1), Cornbread\_66 (B1), Crownjwl\_66 (B1), DaddyDaniels\_70 (B1), DelRivs\_66 (B1), Dice\_67 (B1), Dione\_66 (B1), DoesntMatter\_65 (B1), EmpTee\_67 (B1), Eremos\_67 (B1), FleetyMac\_71 (B1), Freya\_65 (B1), Fringe\_72 (B1), Gareth\_68 (B1), Giraffe\_68 (B1), Gophee\_69 (B1), Gwennie1\_67 (B1), HSavage\_66 (B1), Haleema\_67 (B1), Hartsy\_67 (B1), HenryJackson\_68 (B1), Hertubise\_67 (B1), Hetaeria\_67 (B1), Iridessa\_69 (B1), IsaacEli\_69 (B1), JDog\_67 (B1), JacAttac\_68 (B1), JangoPhett\_102 (B1), Jesabah\_70 (B1), Jillium\_68 (B1), Jiraiya\_69 (B1), KLucky39\_66 (B1), Kahve\_68 (B1), Katniss\_69 (B1), Keitherie\_70 (B1), Kikipoo\_69 (B1), Kimbrough\_69 (B1), KlimbOn\_67 (B1), Kwadwo\_67 (B1), LeiMonet\_71 (B1), Longacauda\_69 (B1), LuckyMarjie\_65 (B1), Lulumae\_65 (B1), Lumine\_69 (B1), Manad\_67 (B1), Mcshane\_67 (B1), Mecca\_68 (B1), Megatron\_68 (B1), Mesmerelda\_67 (B1), Morty\_69 (B1), MrPhizzler\_71 (B1), Mutante\_68 (B1), Nacho\_0071 (B1), Newman\_66 (B1), Nicole21\_69 (B1), Numberten\_67 (B1), Nyala\_67 (B1), Olak\_67 (B1), OliverWalter\_67 (B1), Omniscient\_69 (B1), OneBrain\_71 (B1), Oosterbaan\_67 (B1), Orfeu\_67 (B1), Orwigg\_67 (B1), PG1\_67 (B1), Pacifista\_67 (B1), PhatCats2014\_68 (B1), PhatLouie\_70 (B1), Phunky\_66 (B1), Piglet\_0068 (B1), ProfessorX\_66 (B1), Quisquilliae\_69 (B1), Ricotta\_68 (B1), Riggan\_69 (B1), Rimu\_68 (B1), Riverton\_67 (B1), Robyn\_68 (B1), Roscoe\_68 (B1), Roy17\_66 (B1), Samaymay\_68 (B1), Schadenfreude\_68 (B1), Scoot17C\_68 (B1), Selr12\_69 (B1), Serendipity\_67 (B1), Serpentine\_0068 (B1), ShadowBud\_69 (B1), ShiVal\_66 (B1), Sigman\_68 (B1), Simielle\_68 (B1), SirBeauregard\_69 (B1), Skippy\_69 (B1), Soile\_69 (B1), Spartan300\_67 (B1), Suffolk\_66 (B1), Swiphy\_70 (B1), Telesworld\_66 (B1), ThreeOh3D2\_69 (B1), Timmi\_67 (B1), Tomlarah\_69 (B1), Toni\_68 (B1), Tooj\_66 (B1), True\_66 (B1), Valjean\_67 (B1), Vaticameos\_65 (B1), Virapocalypse\_69 (B1), Waterdiva\_68 (B1), Windsor\_68 (B1), Xavier\_67 (B1),

#### Start 5:

- Found in 4 of 237 ( 1.7% ) of genes in pham
- Manual Annotations of this start: 4 of 231
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acadian\_67 (B5), Bae\_67 (B5), Donny\_68 (B5), Suigeneris\_68 (B5),

#### Start 6:

- Found in 145 of 237 ( 61.2% ) of genes in pham
- Manual Annotations of this start: 9 of 231
- Called 6.2% of time when present
- Phage (with cluster) where this start called: CamL\_68 (B1), Cosmolli16\_69 (B1), Duggie\_68 (B1), JakeO\_69 (B1), LilMcDreamy\_64 (B12), Pops\_66 (B1), QueenBeane\_68 (B1), Thunderbird\_68 (B1), Vaishali24\_68 (B1),

#### Start 7:

- Found in 237 of 237 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 18 of 231
- Called 8.0% of time when present
- Phage (with cluster) where this start called: Durga\_70 (B1), Emiris\_69 (B1), Etaye\_67 (B1), Legolas\_69 (B1), LostAndPhound\_67 (B1), MRabcd\_67 (B1), Mag7\_66 (B1), Plmatters\_66 (B1), Roliet\_65 (B1), SallyH\_70 (B1), Solosis\_66 (B1), Sophia\_66 (B1), Surely\_68 (B1), TomBombadil\_68 (B1), Veritas\_67 (B1), Wallhey\_68 (B1), Weher20\_65 (B1), YouGoGlencoco\_68 (B1), Zelda\_68 (B1),

## Summary by clusters:

There are 3 clusters represented in this pham: B5, B12, B1,

Info for manual annotations of cluster B1:

- Start number 3 was manually annotated 74 times for cluster B1.
- Start number 4 was manually annotated 126 times for cluster B1.
- Start number 6 was manually annotated 8 times for cluster B1.
- Start number 7 was manually annotated 18 times for cluster B1.

Info for manual annotations of cluster B12:

- Start number 6 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B5:

- Start number 5 was manually annotated 4 times for cluster B5.

## Gene Information:

Gene: ABU\_67 Start: 57301, Stop: 57573, Start Num: 4

Candidate Starts for ABU\_67:

(Start: 4 @57301 has 126 MA's), (Start: 6 @57322 has 9 MA's), (Start: 7 @57331 has 18 MA's), (11, 57394), (13, 57421), (19, 57544),

Gene: Acadian\_67 Start: 58258, Stop: 58542, Start Num: 5

Candidate Starts for Acadian\_67:

(Start: 5 @58258 has 4 MA's), (Start: 6 @58285 has 9 MA's), (Start: 7 @58294 has 18 MA's), (12, 58360), (17, 58438), (18, 58492), (20, 58528),

Gene: Aelin\_67 Start: 56821, Stop: 57093, Start Num: 4

Candidate Starts for Aelin\_67:

(Start: 4 @56821 has 126 MA's), (Start: 6 @56842 has 9 MA's), (Start: 7 @56851 has 18 MA's), (11, 56914), (13, 56941), (19, 57064),

Gene: Altwerkus\_66 Start: 56464, Stop: 56736, Start Num: 4

Candidate Starts for Altwerkus\_66:

(Start: 4 @56464 has 126 MA's), (Start: 6 @56485 has 9 MA's), (Start: 7 @56494 has 18 MA's), (11, 56557), (13, 56584), (19, 56707),

Gene: Anderson\_69 Start: 57036, Stop: 57308, Start Num: 4

Candidate Starts for Anderson\_69:

(Start: 4 @57036 has 126 MA's), (Start: 6 @57057 has 9 MA's), (Start: 7 @57066 has 18 MA's), (11, 57129), (13, 57156), (19, 57279),

Gene: Andre\_70 Start: 57216, Stop: 57488, Start Num: 4

Candidate Starts for Andre\_70:

(Start: 4 @57216 has 126 MA's), (Start: 6 @57237 has 9 MA's), (Start: 7 @57246 has 18 MA's), (11, 57309), (13, 57336), (19, 57459),

Gene: AngelCake\_67 Start: 56953, Stop: 57225, Start Num: 4

Candidate Starts for AngelCake\_67:

(Start: 4 @56953 has 126 MA's), (Start: 6 @56974 has 9 MA's), (Start: 7 @56983 has 18 MA's), (11, 57046), (13, 57073), (19, 57196),

Gene: Antonia\_67 Start: 56820, Stop: 57092, Start Num: 4

Candidate Starts for Antonia\_67:

(Start: 4 @56820 has 126 MA's), (Start: 6 @56841 has 9 MA's), (Start: 7 @56850 has 18 MA's), (11, 56913), (13, 56940), (19, 57063),

Gene: Apizium\_67 Start: 56482, Stop: 56754, Start Num: 4

Candidate Starts for Apizium\_67:

(Start: 4 @56482 has 126 MA's), (Start: 6 @56503 has 9 MA's), (Start: 7 @56512 has 18 MA's), (11, 56575), (13, 56602), (19, 56725),

Gene: Badfish\_68 Start: 57322, Stop: 57594, Start Num: 4

Candidate Starts for Badfish\_68:

(Start: 4 @57322 has 126 MA's), (Start: 6 @57343 has 9 MA's), (Start: 7 @57352 has 18 MA's), (11, 57415), (13, 57442), (19, 57565),

Gene: Bae\_67 Start: 59301, Stop: 59585, Start Num: 5

Candidate Starts for Bae\_67:

(Start: 5 @59301 has 4 MA's), (Start: 6 @59328 has 9 MA's), (Start: 7 @59337 has 18 MA's), (12, 59403), (16, 59466), (17, 59481), (18, 59535), (20, 59571), (21, 59580),

Gene: Banjo\_66 Start: 56800, Stop: 57102, Start Num: 3

Candidate Starts for Banjo\_66:

(Start: 3 @56800 has 74 MA's), (Start: 7 @56854 has 18 MA's), (10, 56923), (14, 56965),

Gene: BatteryCK\_66 Start: 56770, Stop: 57072, Start Num: 3

Candidate Starts for BatteryCK\_66:

(Start: 3 @56770 has 74 MA's), (Start: 7 @56824 has 18 MA's), (10, 56893), (14, 56935),

Gene: Beaglebox\_66 Start: 56876, Stop: 57148, Start Num: 4

Candidate Starts for Beaglebox\_66:

(Start: 4 @56876 has 126 MA's), (Start: 6 @56897 has 9 MA's), (Start: 7 @56906 has 18 MA's), (11, 56969), (13, 56996), (19, 57119),

Gene: Bishoperium\_68 Start: 57350, Stop: 57622, Start Num: 4

Candidate Starts for Bishoperium\_68:

(Start: 4 @57350 has 126 MA's), (Start: 6 @57371 has 9 MA's), (Start: 7 @57380 has 18 MA's), (11, 57443), (13, 57470), (19, 57593),

Gene: Brilliant\_71 Start: 57319, Stop: 57591, Start Num: 4

Candidate Starts for Brilliant\_71:

(Start: 4 @57319 has 126 MA's), (Start: 6 @57340 has 9 MA's), (Start: 7 @57349 has 18 MA's), (11, 57412), (13, 57439), (16, 57478), (19, 57562),

Gene: Burr\_68 Start: 56786, Stop: 57058, Start Num: 4

Candidate Starts for Burr\_68:

(Start: 4 @56786 has 126 MA's), (Start: 6 @56807 has 9 MA's), (Start: 7 @56816 has 18 MA's), (11, 56879), (13, 56906), (19, 57029),

Gene: CamL\_68 Start: 57139, Stop: 57390, Start Num: 6

Candidate Starts for CamL\_68:

(Start: 4 @57118 has 126 MA's), (Start: 6 @57139 has 9 MA's), (Start: 7 @57148 has 18 MA's), (11, 57211), (13, 57238), (19, 57361),

Gene: CampRoach\_69 Start: 57225, Stop: 57497, Start Num: 4  
Candidate Starts for CampRoach\_69:

(Start: 4 @57225 has 126 MA's), (Start: 6 @57246 has 9 MA's), (Start: 7 @57255 has 18 MA's), (11, 57318), (13, 57345), (19, 57468),

Gene: Cannibal\_68 Start: 57060, Stop: 57332, Start Num: 4  
Candidate Starts for Cannibal\_68:

(Start: 4 @57060 has 126 MA's), (Start: 6 @57081 has 9 MA's), (Start: 7 @57090 has 18 MA's), (11, 57153), (13, 57180), (19, 57303),

Gene: Carthage\_68 Start: 56724, Stop: 56996, Start Num: 4  
Candidate Starts for Carthage\_68:

(Start: 4 @56724 has 126 MA's), (Start: 6 @56745 has 9 MA's), (Start: 7 @56754 has 18 MA's), (11, 56817), (13, 56844), (19, 56967),

Gene: Chaelin\_69 Start: 57349, Stop: 57621, Start Num: 4  
Candidate Starts for Chaelin\_69:

(Start: 4 @57349 has 126 MA's), (Start: 6 @57370 has 9 MA's), (Start: 7 @57379 has 18 MA's), (11, 57442), (13, 57469), (19, 57592),

Gene: Chah\_69 Start: 56763, Stop: 57035, Start Num: 4  
Candidate Starts for Chah\_69:

(Start: 4 @56763 has 126 MA's), (Start: 6 @56784 has 9 MA's), (Start: 7 @56793 has 18 MA's), (11, 56856), (13, 56883), (19, 57006),

Gene: Charles1\_69 Start: 57073, Stop: 57345, Start Num: 4  
Candidate Starts for Charles1\_69:

(Start: 4 @57073 has 126 MA's), (Start: 6 @57094 has 9 MA's), (Start: 7 @57103 has 18 MA's), (11, 57166), (13, 57193), (19, 57316),

Gene: CharlieGBrown\_66 Start: 56715, Stop: 57017, Start Num: 3  
Candidate Starts for CharlieGBrown\_66:

(Start: 3 @56715 has 74 MA's), (Start: 7 @56769 has 18 MA's), (10, 56838), (14, 56880),

Gene: CheetO\_67 Start: 57036, Stop: 57308, Start Num: 4  
Candidate Starts for CheetO\_67:

(Start: 4 @57036 has 126 MA's), (Start: 6 @57057 has 9 MA's), (Start: 7 @57066 has 18 MA's), (11, 57129), (13, 57156), (19, 57279),

Gene: Cher\_68 Start: 57320, Stop: 57622, Start Num: 3  
Candidate Starts for Cher\_68:

(Start: 3 @57320 has 74 MA's), (Start: 7 @57374 has 18 MA's), (10, 57443), (14, 57485),

Gene: Childish\_67 Start: 57339, Stop: 57611, Start Num: 4  
Candidate Starts for Childish\_67:

(Start: 4 @57339 has 126 MA's), (Start: 6 @57360 has 9 MA's), (Start: 7 @57369 has 18 MA's), (11, 57432), (12, 57435), (13, 57459), (19, 57582),

Gene: Chunky\_68 Start: 56653, Stop: 56925, Start Num: 4  
Candidate Starts for Chunky\_68:

(Start: 4 @56653 has 126 MA's), (Start: 6 @56674 has 9 MA's), (Start: 7 @56683 has 18 MA's), (11, 56746), (13, 56773), (19, 56896),

Gene: Cobra\_68 Start: 57351, Stop: 57653, Start Num: 3

Candidate Starts for Cobra\_68:

(Start: 3 @57351 has 74 MA's), (Start: 7 @57405 has 18 MA's), (10, 57474), (14, 57516),

Gene: Colbert\_66 Start: 56375, Stop: 56647, Start Num: 4

Candidate Starts for Colbert\_66:

(Start: 4 @56375 has 126 MA's), (Start: 6 @56396 has 9 MA's), (Start: 7 @56405 has 18 MA's), (11, 56468), (13, 56495), (19, 56618),

Gene: Coletti\_71 Start: 57877, Stop: 58149, Start Num: 4

Candidate Starts for Coletti\_71:

(Start: 4 @57877 has 126 MA's), (Start: 6 @57898 has 9 MA's), (Start: 7 @57907 has 18 MA's), (11, 57970), (13, 57997), (19, 58120),

Gene: Cornbread\_66 Start: 56841, Stop: 57113, Start Num: 4

Candidate Starts for Cornbread\_66:

(Start: 4 @56841 has 126 MA's), (Start: 6 @56862 has 9 MA's), (Start: 7 @56871 has 18 MA's), (11, 56934), (13, 56961), (19, 57084),

Gene: Cosmolli16\_69 Start: 57541, Stop: 57792, Start Num: 6

Candidate Starts for Cosmolli16\_69:

(Start: 4 @57520 has 126 MA's), (Start: 6 @57541 has 9 MA's), (Start: 7 @57550 has 18 MA's), (11, 57613), (13, 57640), (19, 57763),

Gene: Craff\_71 Start: 57754, Stop: 58056, Start Num: 3

Candidate Starts for Craff\_71:

(Start: 3 @57754 has 74 MA's), (Start: 7 @57808 has 18 MA's), (10, 57877), (14, 57919),

Gene: Crownjwl\_66 Start: 56838, Stop: 57110, Start Num: 4

Candidate Starts for Crownjwl\_66:

(Start: 4 @56838 has 126 MA's), (Start: 6 @56859 has 9 MA's), (Start: 7 @56868 has 18 MA's), (13, 56958), (19, 57081),

Gene: DaddyDaniels\_70 Start: 57296, Stop: 57568, Start Num: 4

Candidate Starts for DaddyDaniels\_70:

(Start: 4 @57296 has 126 MA's), (Start: 6 @57317 has 9 MA's), (Start: 7 @57326 has 18 MA's), (11, 57389), (12, 57392), (13, 57416), (19, 57539),

Gene: Daffy\_66 Start: 56792, Stop: 57094, Start Num: 3

Candidate Starts for Daffy\_66:

(Start: 3 @56792 has 74 MA's), (Start: 7 @56846 has 18 MA's), (10, 56915), (14, 56957),

Gene: Daka\_70 Start: 57306, Stop: 57608, Start Num: 3

Candidate Starts for Daka\_70:

(Start: 3 @57306 has 74 MA's), (Start: 7 @57360 has 18 MA's), (10, 57429), (14, 57471),

Gene: DelRivs\_66 Start: 56786, Stop: 57058, Start Num: 4

Candidate Starts for DelRivs\_66:

(Start: 4 @56786 has 126 MA's), (Start: 6 @56807 has 9 MA's), (Start: 7 @56816 has 18 MA's), (13, 56906), (19, 57029),

Gene: Derpp\_68 Start: 56891, Stop: 57193, Start Num: 3

Candidate Starts for Derpp\_68:

(Start: 3 @56891 has 74 MA's), (Start: 7 @56945 has 18 MA's), (10, 57014), (14, 57056),

Gene: Dice\_67 Start: 56784, Stop: 57056, Start Num: 4

Candidate Starts for Dice\_67:

(Start: 4 @56784 has 126 MA's), (Start: 6 @56805 has 9 MA's), (Start: 7 @56814 has 18 MA's), (11, 56877), (13, 56904), (19, 57027),

Gene: Dione\_66 Start: 56518, Stop: 56790, Start Num: 4

Candidate Starts for Dione\_66:

(Start: 4 @56518 has 126 MA's), (Start: 6 @56539 has 9 MA's), (Start: 7 @56548 has 18 MA's), (11, 56611), (13, 56638), (19, 56761),

Gene: DirtJuice\_68 Start: 57097, Stop: 57399, Start Num: 3

Candidate Starts for DirtJuice\_68:

(Start: 3 @57097 has 74 MA's), (Start: 7 @57151 has 18 MA's), (10, 57220), (14, 57262),

Gene: Doddsville\_66 Start: 56854, Stop: 57156, Start Num: 3

Candidate Starts for Doddsville\_66:

(Start: 3 @56854 has 74 MA's), (Start: 7 @56908 has 18 MA's), (10, 56977), (14, 57019),

Gene: DoesntMatter\_65 Start: 56808, Stop: 57080, Start Num: 4

Candidate Starts for DoesntMatter\_65:

(Start: 4 @56808 has 126 MA's), (Start: 6 @56829 has 9 MA's), (Start: 7 @56838 has 18 MA's), (11, 56901), (13, 56928), (19, 57051),

Gene: Donny\_68 Start: 58302, Stop: 58586, Start Num: 5

Candidate Starts for Donny\_68:

(Start: 5 @58302 has 4 MA's), (Start: 6 @58329 has 9 MA's), (Start: 7 @58338 has 18 MA's), (12, 58404), (17, 58482), (18, 58536), (19, 58551), (20, 58572),

Gene: DuchessDung\_67 Start: 56370, Stop: 56672, Start Num: 3

Candidate Starts for DuchessDung\_67:

(Start: 3 @56370 has 74 MA's), (Start: 7 @56424 has 18 MA's), (10, 56493), (14, 56535),

Gene: Duggie\_68 Start: 57082, Stop: 57333, Start Num: 6

Candidate Starts for Duggie\_68:

(Start: 6 @57082 has 9 MA's), (Start: 7 @57091 has 18 MA's), (13, 57181), (19, 57304),

Gene: Durga\_70 Start: 57651, Stop: 57899, Start Num: 7

Candidate Starts for Durga\_70:

(Start: 3 @57597 has 74 MA's), (Start: 7 @57651 has 18 MA's), (10, 57720), (14, 57762),

Gene: Emiris\_69 Start: 57560, Stop: 57808, Start Num: 7

Candidate Starts for Emiris\_69:

(Start: 3 @57506 has 74 MA's), (Start: 7 @57560 has 18 MA's), (10, 57629), (14, 57671),

Gene: EmpTee\_67 Start: 57028, Stop: 57300, Start Num: 4

Candidate Starts for EmpTee\_67:

(Start: 4 @57028 has 126 MA's), (Start: 6 @57049 has 9 MA's), (Start: 7 @57058 has 18 MA's), (11, 57121), (13, 57148), (19, 57271),

Gene: Eremos\_67 Start: 57023, Stop: 57295, Start Num: 4  
Candidate Starts for Eremos\_67:  
(Start: 4 @57023 has 126 MA's), (Start: 6 @57044 has 9 MA's), (Start: 7 @57053 has 18 MA's), (11, 57116), (13, 57143), (19, 57266),

Gene: Etaye\_67 Start: 57703, Stop: 57951, Start Num: 7  
Candidate Starts for Etaye\_67:  
(Start: 3 @57649 has 74 MA's), (Start: 7 @57703 has 18 MA's), (10, 57772), (14, 57814),

Gene: Fang\_69 Start: 57339, Stop: 57641, Start Num: 3  
Candidate Starts for Fang\_69:  
(Start: 3 @57339 has 74 MA's), (Start: 7 @57393 has 18 MA's), (10, 57462), (14, 57504),

Gene: FleetyMac\_71 Start: 56999, Stop: 57271, Start Num: 4  
Candidate Starts for FleetyMac\_71:  
(Start: 4 @56999 has 126 MA's), (Start: 6 @57020 has 9 MA's), (Start: 7 @57029 has 18 MA's), (11, 57092), (13, 57119), (19, 57242),

Gene: FluffyNinja\_68 Start: 57071, Stop: 57373, Start Num: 3  
Candidate Starts for FluffyNinja\_68:  
(Start: 3 @57071 has 74 MA's), (Start: 7 @57125 has 18 MA's), (10, 57194), (14, 57236),

Gene: Freya\_65 Start: 56508, Stop: 56780, Start Num: 4  
Candidate Starts for Freya\_65:  
(Start: 4 @56508 has 126 MA's), (Start: 6 @56529 has 9 MA's), (Start: 7 @56538 has 18 MA's), (11, 56601), (13, 56628), (19, 56751),

Gene: FriarPreacher\_66 Start: 56890, Stop: 57192, Start Num: 3  
Candidate Starts for FriarPreacher\_66:  
(Start: 3 @56890 has 74 MA's), (Start: 7 @56944 has 18 MA's), (10, 57013), (14, 57055),

Gene: Fringe\_72 Start: 57683, Stop: 57955, Start Num: 4  
Candidate Starts for Fringe\_72:  
(Start: 4 @57683 has 126 MA's), (Start: 6 @57704 has 9 MA's), (Start: 7 @57713 has 18 MA's), (11, 57776), (13, 57803), (19, 57926),

Gene: FugateOSU\_68 Start: 57843, Stop: 58145, Start Num: 3  
Candidate Starts for FugateOSU\_68:  
(Start: 3 @57843 has 74 MA's), (Start: 7 @57897 has 18 MA's), (10, 57966), (14, 58008),

Gene: Gareth\_68 Start: 57304, Stop: 57576, Start Num: 4  
Candidate Starts for Gareth\_68:  
(Start: 4 @57304 has 126 MA's), (Start: 6 @57325 has 9 MA's), (Start: 7 @57334 has 18 MA's), (11, 57397), (13, 57424), (19, 57547),

Gene: Giraffe\_68 Start: 57299, Stop: 57571, Start Num: 4  
Candidate Starts for Giraffe\_68:  
(Start: 4 @57299 has 126 MA's), (Start: 6 @57320 has 9 MA's), (Start: 7 @57329 has 18 MA's), (11, 57392), (13, 57419), (19, 57542),

Gene: Gophee\_69 Start: 57290, Stop: 57562, Start Num: 4  
Candidate Starts for Gophee\_69:

(Start: 4 @57290 has 126 MA's), (Start: 6 @57311 has 9 MA's), (Start: 7 @57320 has 18 MA's), (11, 57383), (13, 57410), (19, 57533),

Gene: Gwennie1\_67 Start: 57190, Stop: 57462, Start Num: 4

Candidate Starts for Gwennie1\_67:

(Start: 4 @57190 has 126 MA's), (Start: 6 @57211 has 9 MA's), (Start: 7 @57220 has 18 MA's), (13, 57310), (19, 57433),

Gene: HSavage\_66 Start: 56826, Stop: 57098, Start Num: 4

Candidate Starts for HSavage\_66:

(Start: 4 @56826 has 126 MA's), (Start: 6 @56847 has 9 MA's), (Start: 7 @56856 has 18 MA's), (11, 56919), (13, 56946), (19, 57069),

Gene: Haimas\_66 Start: 56790, Stop: 57092, Start Num: 3

Candidate Starts for Haimas\_66:

(Start: 3 @56790 has 74 MA's), (Start: 7 @56844 has 18 MA's), (10, 56913), (14, 56955),

Gene: Haleema\_67 Start: 56845, Stop: 57117, Start Num: 4

Candidate Starts for Haleema\_67:

(Start: 4 @56845 has 126 MA's), (Start: 6 @56866 has 9 MA's), (Start: 7 @56875 has 18 MA's), (11, 56938), (13, 56965), (19, 57088),

Gene: Hartsy\_67 Start: 56987, Stop: 57259, Start Num: 4

Candidate Starts for Hartsy\_67:

(Start: 4 @56987 has 126 MA's), (Start: 6 @57008 has 9 MA's), (Start: 7 @57017 has 18 MA's), (11, 57080), (13, 57107), (19, 57230),

Gene: Harvey\_65 Start: 56819, Stop: 57121, Start Num: 3

Candidate Starts for Harvey\_65:

(Start: 3 @56819 has 74 MA's), (Start: 7 @56873 has 18 MA's), (10, 56942), (14, 56984),

Gene: Held\_66 Start: 56793, Stop: 57095, Start Num: 3

Candidate Starts for Held\_66:

(Start: 3 @56793 has 74 MA's), (Start: 7 @56847 has 18 MA's), (10, 56916), (14, 56958),

Gene: HenryJackson\_68 Start: 57328, Stop: 57600, Start Num: 4

Candidate Starts for HenryJackson\_68:

(Start: 4 @57328 has 126 MA's), (Start: 6 @57349 has 9 MA's), (Start: 7 @57358 has 18 MA's), (11, 57421), (12, 57424), (13, 57448), (19, 57571),

Gene: Hertubise\_67 Start: 57094, Stop: 57366, Start Num: 4

Candidate Starts for Hertubise\_67:

(Start: 4 @57094 has 126 MA's), (Start: 6 @57115 has 9 MA's), (Start: 7 @57124 has 18 MA's), (11, 57187), (13, 57214), (19, 57337),

Gene: Hetaeria\_67 Start: 57034, Stop: 57306, Start Num: 4

Candidate Starts for Hetaeria\_67:

(Start: 4 @57034 has 126 MA's), (Start: 6 @57055 has 9 MA's), (Start: 7 @57064 has 18 MA's), (11, 57127), (13, 57154), (19, 57277),

Gene: HighStump\_69 Start: 57296, Stop: 57598, Start Num: 3

Candidate Starts for HighStump\_69:

(Start: 3 @57296 has 74 MA's), (Start: 7 @57350 has 18 MA's), (10, 57419), (14, 57461),

Gene: Iridessa\_69 Start: 56753, Stop: 57025, Start Num: 4  
Candidate Starts for Iridessa\_69:  
(Start: 4 @56753 has 126 MA's), (Start: 6 @56774 has 9 MA's), (Start: 7 @56783 has 18 MA's), (11, 56846), (13, 56873), (19, 56996),

Gene: Iridoclysis\_67 Start: 57107, Stop: 57409, Start Num: 3  
Candidate Starts for Iridoclysis\_67:  
(Start: 3 @57107 has 74 MA's), (Start: 7 @57161 has 18 MA's), (10, 57230), (14, 57272),

Gene: IsaacEli\_69 Start: 57317, Stop: 57589, Start Num: 4  
Candidate Starts for IsaacEli\_69:  
(Start: 4 @57317 has 126 MA's), (Start: 6 @57338 has 9 MA's), (Start: 7 @57347 has 18 MA's), (11, 57410), (13, 57437), (19, 57560),

Gene: JDog\_67 Start: 57338, Stop: 57610, Start Num: 4  
Candidate Starts for JDog\_67:  
(Start: 4 @57338 has 126 MA's), (Start: 6 @57359 has 9 MA's), (Start: 7 @57368 has 18 MA's), (11, 57431), (13, 57458), (19, 57581),

Gene: JacAttac\_68 Start: 56782, Stop: 57054, Start Num: 4  
Candidate Starts for JacAttac\_68:  
(Start: 4 @56782 has 126 MA's), (Start: 6 @56803 has 9 MA's), (Start: 7 @56812 has 18 MA's), (11, 56875), (13, 56902), (19, 57025),

Gene: JakeO\_69 Start: 57084, Stop: 57335, Start Num: 6  
Candidate Starts for JakeO\_69:  
(Start: 6 @57084 has 9 MA's), (Start: 7 @57093 has 18 MA's), (11, 57156), (13, 57183), (19, 57306),

Gene: JangoPhett\_102 Start: 57123, Stop: 57395, Start Num: 4  
Candidate Starts for JangoPhett\_102:  
(Start: 4 @57123 has 126 MA's), (Start: 6 @57144 has 9 MA's), (Start: 7 @57153 has 18 MA's), (11, 57216), (13, 57243), (19, 57366),

Gene: Jesabah\_70 Start: 57918, Stop: 58190, Start Num: 4  
Candidate Starts for Jesabah\_70:  
(Start: 4 @57918 has 126 MA's), (Start: 6 @57939 has 9 MA's), (Start: 7 @57948 has 18 MA's), (11, 58011), (13, 58038), (19, 58161),

Gene: Jillium\_68 Start: 57323, Stop: 57595, Start Num: 4  
Candidate Starts for Jillium\_68:  
(Start: 4 @57323 has 126 MA's), (Start: 6 @57344 has 9 MA's), (Start: 7 @57353 has 18 MA's), (11, 57416), (13, 57443), (19, 57566),

Gene: Jiraiya\_69 Start: 57095, Stop: 57367, Start Num: 4  
Candidate Starts for Jiraiya\_69:  
(Start: 4 @57095 has 126 MA's), (Start: 6 @57116 has 9 MA's), (Start: 7 @57125 has 18 MA's), (13, 57215), (19, 57338),

Gene: KLucky39\_66 Start: 56669, Stop: 56941, Start Num: 4  
Candidate Starts for KLucky39\_66:  
(Start: 4 @56669 has 126 MA's), (Start: 6 @56690 has 9 MA's), (Start: 7 @56699 has 18 MA's), (11, 56762), (13, 56789), (19, 56912),

Gene: Kahve\_68 Start: 57325, Stop: 57597, Start Num: 4

Candidate Starts for Kahve\_68:

(Start: 4 @57325 has 126 MA's), (Start: 6 @57346 has 9 MA's), (Start: 7 @57355 has 18 MA's), (11, 57418), (12, 57421), (13, 57445), (19, 57568),

Gene: Kailash\_66 Start: 57214, Stop: 57516, Start Num: 3

Candidate Starts for Kailash\_66:

(Start: 3 @57214 has 74 MA's), (Start: 7 @57268 has 18 MA's), (10, 57337), (14, 57379),

Gene: Katniss\_69 Start: 56765, Stop: 57037, Start Num: 4

Candidate Starts for Katniss\_69:

(Start: 4 @56765 has 126 MA's), (Start: 6 @56786 has 9 MA's), (Start: 7 @56795 has 18 MA's), (11, 56858), (13, 56885), (19, 57008),

Gene: Keitherie\_70 Start: 57387, Stop: 57659, Start Num: 4

Candidate Starts for Keitherie\_70:

(Start: 4 @57387 has 126 MA's), (Start: 6 @57408 has 9 MA's), (Start: 7 @57417 has 18 MA's), (11, 57480), (13, 57507), (19, 57630),

Gene: Kikipoo\_69 Start: 57317, Stop: 57589, Start Num: 4

Candidate Starts for Kikipoo\_69:

(Start: 4 @57317 has 126 MA's), (Start: 6 @57338 has 9 MA's), (Start: 7 @57347 has 18 MA's), (11, 57410), (13, 57437), (19, 57560),

Gene: Kimbrough\_69 Start: 57367, Stop: 57639, Start Num: 4

Candidate Starts for Kimbrough\_69:

(Start: 4 @57367 has 126 MA's), (Start: 6 @57388 has 9 MA's), (Start: 7 @57397 has 18 MA's), (11, 57460), (13, 57487), (19, 57610),

Gene: KingTut\_59 Start: 53521, Stop: 53823, Start Num: 3

Candidate Starts for KingTut\_59:

(Start: 3 @53521 has 74 MA's), (Start: 7 @53575 has 18 MA's), (10, 53644), (14, 53686),

Gene: KingVeVeVe\_66 Start: 56324, Stop: 56626, Start Num: 3

Candidate Starts for KingVeVeVe\_66:

(Start: 3 @56324 has 74 MA's), (Start: 7 @56378 has 18 MA's), (10, 56447), (14, 56489),

Gene: KlimbOn\_67 Start: 56826, Stop: 57098, Start Num: 4

Candidate Starts for KlimbOn\_67:

(Start: 4 @56826 has 126 MA's), (Start: 6 @56847 has 9 MA's), (Start: 7 @56856 has 18 MA's), (11, 56919), (13, 56946), (19, 57069),

Gene: Kloppinator\_68 Start: 56982, Stop: 57284, Start Num: 3

Candidate Starts for Kloppinator\_68:

(Start: 3 @56982 has 74 MA's), (Start: 7 @57036 has 18 MA's), (10, 57105), (14, 57147),

Gene: Kwadwo\_67 Start: 56776, Stop: 57048, Start Num: 4

Candidate Starts for Kwadwo\_67:

(Start: 4 @56776 has 126 MA's), (Start: 6 @56797 has 9 MA's), (Start: 7 @56806 has 18 MA's), (11, 56869), (13, 56896), (19, 57019),

Gene: Kwksand96\_68 Start: 56903, Stop: 57205, Start Num: 3

Candidate Starts for Kwksand96\_68:

(Start: 3 @56903 has 74 MA's), (Start: 7 @56957 has 18 MA's), (10, 57026), (14, 57068),

Gene: Labeouficaum\_68 Start: 56891, Stop: 57193, Start Num: 3

Candidate Starts for Labeouficaum\_68:

(Start: 3 @56891 has 74 MA's), (Start: 7 @56945 has 18 MA's), (10, 57014), (14, 57056),

Gene: LeeLot\_67 Start: 57397, Stop: 57699, Start Num: 3

Candidate Starts for LeeLot\_67:

(Start: 3 @57397 has 74 MA's), (Start: 7 @57451 has 18 MA's), (10, 57520), (14, 57562),

Gene: Lego3393\_65 Start: 57349, Stop: 57651, Start Num: 3

Candidate Starts for Lego3393\_65:

(Start: 3 @57349 has 74 MA's), (Start: 7 @57403 has 18 MA's), (10, 57472), (14, 57514),

Gene: Legolas\_69 Start: 57190, Stop: 57438, Start Num: 7

Candidate Starts for Legolas\_69:

(Start: 3 @57136 has 74 MA's), (Start: 7 @57190 has 18 MA's), (10, 57259), (14, 57301),

Gene: LeiMonet\_71 Start: 57269, Stop: 57541, Start Num: 4

Candidate Starts for LeiMonet\_71:

(Start: 4 @57269 has 126 MA's), (Start: 6 @57290 has 9 MA's), (Start: 7 @57299 has 18 MA's), (11, 57362), (13, 57389), (19, 57512),

Gene: LemonSlice\_68 Start: 56788, Stop: 57090, Start Num: 3

Candidate Starts for LemonSlice\_68:

(Start: 3 @56788 has 74 MA's), (Start: 7 @56842 has 18 MA's), (10, 56911), (14, 56953),

Gene: LilMcDreamy\_64 Start: 57921, Stop: 58187, Start Num: 6

Candidate Starts for LilMcDreamy\_64:

(Start: 6 @57921 has 9 MA's), (Start: 7 @57930 has 18 MA's), (8, 57972), (9, 57993), (10, 57999), (15, 58047),

Gene: Longacauda\_69 Start: 57172, Stop: 57444, Start Num: 4

Candidate Starts for Longacauda\_69:

(Start: 4 @57172 has 126 MA's), (Start: 6 @57193 has 9 MA's), (Start: 7 @57202 has 18 MA's), (11, 57265), (13, 57292), (19, 57415),

Gene: LostAndPhound\_67 Start: 57395, Stop: 57643, Start Num: 7

Candidate Starts for LostAndPhound\_67:

(Start: 3 @57341 has 74 MA's), (Start: 7 @57395 has 18 MA's), (10, 57464), (14, 57506),

Gene: LuckyMarjie\_65 Start: 56527, Stop: 56799, Start Num: 4

Candidate Starts for LuckyMarjie\_65:

(Start: 4 @56527 has 126 MA's), (Start: 6 @56548 has 9 MA's), (Start: 7 @56557 has 18 MA's), (11, 56620), (13, 56647), (19, 56770),

Gene: Lulumae\_65 Start: 56511, Stop: 56783, Start Num: 4

Candidate Starts for Lulumae\_65:

(Start: 4 @56511 has 126 MA's), (Start: 6 @56532 has 9 MA's), (Start: 7 @56541 has 18 MA's), (11, 56604), (13, 56631), (19, 56754),

Gene: Lumine\_69 Start: 56995, Stop: 57267, Start Num: 4

Candidate Starts for Lumine\_69:

(Start: 4 @56995 has 126 MA's), (Start: 6 @57016 has 9 MA's), (Start: 7 @57025 has 18 MA's), (11, 57088), (13, 57115), (19, 57238),

Gene: MRabcd\_67 Start: 57164, Stop: 57412, Start Num: 7

Candidate Starts for MRabcd\_67:

(Start: 3 @57110 has 74 MA's), (Start: 7 @57164 has 18 MA's), (10, 57233), (14, 57275),

Gene: Mag7\_66 Start: 56812, Stop: 57060, Start Num: 7

Candidate Starts for Mag7\_66:

(Start: 3 @56758 has 74 MA's), (Start: 7 @56812 has 18 MA's), (10, 56881), (14, 56923),

Gene: Mana\_66 Start: 56783, Stop: 57085, Start Num: 3

Candidate Starts for Mana\_66:

(Start: 3 @56783 has 74 MA's), (Start: 7 @56837 has 18 MA's), (10, 56906), (14, 56948),

Gene: Manad\_67 Start: 57078, Stop: 57350, Start Num: 4

Candidate Starts for Manad\_67:

(Start: 4 @57078 has 126 MA's), (Start: 6 @57099 has 9 MA's), (Start: 7 @57108 has 18 MA's), (11, 57171), (13, 57198), (19, 57321),

Gene: Maru\_67 Start: 57222, Stop: 57524, Start Num: 3

Candidate Starts for Maru\_67:

(Start: 3 @57222 has 74 MA's), (Start: 7 @57276 has 18 MA's), (10, 57345), (14, 57387),

Gene: Matalotodo\_66 Start: 57622, Stop: 57924, Start Num: 3

Candidate Starts for Matalotodo\_66:

(Start: 3 @57622 has 74 MA's), (Start: 7 @57676 has 18 MA's), (10, 57745), (14, 57787),

Gene: Mcshane\_67 Start: 56789, Stop: 57061, Start Num: 4

Candidate Starts for Mcshane\_67:

(Start: 4 @56789 has 126 MA's), (Start: 6 @56810 has 9 MA's), (Start: 7 @56819 has 18 MA's), (11, 56882), (13, 56909), (19, 57032),

Gene: Mecca\_68 Start: 57354, Stop: 57626, Start Num: 4

Candidate Starts for Mecca\_68:

(Start: 4 @57354 has 126 MA's), (Start: 6 @57375 has 9 MA's), (Start: 7 @57384 has 18 MA's), (11, 57447), (13, 57474), (19, 57597),

Gene: Megatron\_68 Start: 57304, Stop: 57576, Start Num: 4

Candidate Starts for Megatron\_68:

(Start: 4 @57304 has 126 MA's), (Start: 6 @57325 has 9 MA's), (Start: 7 @57334 has 18 MA's), (11, 57397), (13, 57424), (19, 57547),

Gene: Mesh1\_68 Start: 57358, Stop: 57660, Start Num: 3

Candidate Starts for Mesh1\_68:

(Start: 3 @57358 has 74 MA's), (Start: 7 @57412 has 18 MA's), (10, 57481), (14, 57523),

Gene: Mesmerelda\_67 Start: 57347, Stop: 57619, Start Num: 4

Candidate Starts for Mesmerelda\_67:

(Start: 4 @57347 has 126 MA's), (Start: 6 @57368 has 9 MA's), (Start: 7 @57377 has 18 MA's), (11, 57440), (13, 57467), (19, 57590),

Gene: MichaelPhcott\_66 Start: 56755, Stop: 57057, Start Num: 3  
Candidate Starts for MichaelPhcott\_66:  
(Start: 3 @56755 has 74 MA's), (Start: 7 @56809 has 18 MA's), (10, 56878), (14, 56920),

Gene: MitKao\_67 Start: 56792, Stop: 57094, Start Num: 3  
Candidate Starts for MitKao\_67:  
(Start: 3 @56792 has 74 MA's), (Start: 7 @56846 has 18 MA's), (10, 56915), (14, 56957),

Gene: Morgushi\_66 Start: 56781, Stop: 57083, Start Num: 3  
Candidate Starts for Morgushi\_66:  
(Start: 3 @56781 has 74 MA's), (Start: 7 @56835 has 18 MA's), (10, 56904), (14, 56946),

Gene: Morty\_69 Start: 57318, Stop: 57590, Start Num: 4  
Candidate Starts for Morty\_69:  
(Start: 4 @57318 has 126 MA's), (Start: 6 @57339 has 9 MA's), (Start: 7 @57348 has 18 MA's), (11, 57411), (13, 57438), (19, 57561),

Gene: Mosaic\_65 Start: 56787, Stop: 57089, Start Num: 3  
Candidate Starts for Mosaic\_65:  
(2, 56778), (Start: 3 @56787 has 74 MA's), (Start: 7 @56841 has 18 MA's), (10, 56910), (14, 56952),

Gene: MrPhizzler\_71 Start: 57258, Stop: 57530, Start Num: 4  
Candidate Starts for MrPhizzler\_71:  
(Start: 4 @57258 has 126 MA's), (Start: 6 @57279 has 9 MA's), (Start: 7 @57288 has 18 MA's), (11, 57351), (13, 57378), (19, 57501),

Gene: Mulan\_67 Start: 57021, Stop: 57323, Start Num: 3  
Candidate Starts for Mulan\_67:  
(Start: 3 @57021 has 74 MA's), (Start: 7 @57075 has 18 MA's), (10, 57144), (14, 57186),

Gene: Murdoc\_65 Start: 57070, Stop: 57372, Start Num: 3  
Candidate Starts for Murdoc\_65:  
(Start: 3 @57070 has 74 MA's), (Start: 7 @57124 has 18 MA's), (10, 57193), (14, 57235),

Gene: Mutante\_68 Start: 56801, Stop: 57073, Start Num: 4  
Candidate Starts for Mutante\_68:  
(Start: 4 @56801 has 126 MA's), (Start: 6 @56822 has 9 MA's), (Start: 7 @56831 has 18 MA's), (11, 56894), (13, 56921), (19, 57044),

Gene: Nacho\_0071 Start: 57839, Stop: 58111, Start Num: 4  
Candidate Starts for Nacho\_0071:  
(Start: 4 @57839 has 126 MA's), (Start: 6 @57860 has 9 MA's), (Start: 7 @57869 has 18 MA's), (11, 57932), (13, 57959), (19, 58082),

Gene: Newman\_66 Start: 57116, Stop: 57388, Start Num: 4  
Candidate Starts for Newman\_66:  
(Start: 4 @57116 has 126 MA's), (Start: 6 @57137 has 9 MA's), (Start: 7 @57146 has 18 MA's), (11, 57209), (13, 57236), (19, 57359),

Gene: Nicole21\_69 Start: 57080, Stop: 57352, Start Num: 4  
Candidate Starts for Nicole21\_69:  
(Start: 4 @57080 has 126 MA's), (Start: 6 @57101 has 9 MA's), (Start: 7 @57110 has 18 MA's), (11, 57173), (13, 57200), (19, 57323),

Gene: Numberten\_67 Start: 57024, Stop: 57296, Start Num: 4  
Candidate Starts for Numberten\_67:  
(Start: 4 @57024 has 126 MA's), (Start: 6 @57045 has 9 MA's), (Start: 7 @57054 has 18 MA's), (11, 57117), (13, 57144), (19, 57267),

Gene: Nyala\_67 Start: 56799, Stop: 57071, Start Num: 4  
Candidate Starts for Nyala\_67:  
(Start: 4 @56799 has 126 MA's), (Start: 6 @56820 has 9 MA's), (Start: 7 @56829 has 18 MA's), (11, 56892), (13, 56919), (19, 57042),

Gene: OSmaximus\_68 Start: 57554, Stop: 57850, Start Num: 3  
Candidate Starts for OSmaximus\_68:  
(1, 57536), (Start: 3 @57554 has 74 MA's), (Start: 6 @57599 has 9 MA's), (Start: 7 @57608 has 18 MA's), (12, 57674), (19, 57821),

Gene: Olak\_67 Start: 56805, Stop: 57077, Start Num: 4  
Candidate Starts for Olak\_67:  
(Start: 4 @56805 has 126 MA's), (Start: 6 @56826 has 9 MA's), (Start: 7 @56835 has 18 MA's), (11, 56898), (13, 56925), (19, 57048),

Gene: Oline\_67 Start: 56953, Stop: 57255, Start Num: 3  
Candidate Starts for Oline\_67:  
(Start: 3 @56953 has 74 MA's), (Start: 7 @57007 has 18 MA's), (10, 57076), (14, 57118),

Gene: OliverWalter\_67 Start: 57124, Stop: 57396, Start Num: 4  
Candidate Starts for OliverWalter\_67:  
(Start: 4 @57124 has 126 MA's), (Start: 6 @57145 has 9 MA's), (Start: 7 @57154 has 18 MA's), (11, 57217), (13, 57244), (19, 57367),

Gene: Omniscient\_69 Start: 57662, Stop: 57934, Start Num: 4  
Candidate Starts for Omniscient\_69:  
(Start: 4 @57662 has 126 MA's), (Start: 6 @57683 has 9 MA's), (Start: 7 @57692 has 18 MA's), (11, 57755), (13, 57782), (19, 57905),

Gene: OneBrain\_71 Start: 57068, Stop: 57340, Start Num: 4  
Candidate Starts for OneBrain\_71:  
(Start: 4 @57068 has 126 MA's), (Start: 6 @57089 has 9 MA's), (Start: 7 @57098 has 18 MA's), (11, 57161), (13, 57188), (19, 57311),

Gene: Oosterbaan\_67 Start: 57081, Stop: 57353, Start Num: 4  
Candidate Starts for Oosterbaan\_67:  
(Start: 4 @57081 has 126 MA's), (Start: 6 @57102 has 9 MA's), (Start: 7 @57111 has 18 MA's), (11, 57174), (13, 57201), (19, 57324),

Gene: Orfeu\_67 Start: 57338, Stop: 57610, Start Num: 4  
Candidate Starts for Orfeu\_67:  
(Start: 4 @57338 has 126 MA's), (Start: 6 @57359 has 9 MA's), (Start: 7 @57368 has 18 MA's), (11, 57431), (13, 57458), (19, 57581),

Gene: Orwigg\_67 Start: 56723, Stop: 56995, Start Num: 4  
Candidate Starts for Orwigg\_67:

(Start: 4 @56723 has 126 MA's), (Start: 6 @56744 has 9 MA's), (Start: 7 @56753 has 18 MA's), (11, 56816), (13, 56843), (19, 56966),

Gene: PG1\_67 Start: 57314, Stop: 57586, Start Num: 4

Candidate Starts for PG1\_67:

(Start: 4 @57314 has 126 MA's), (Start: 6 @57335 has 9 MA's), (Start: 7 @57344 has 18 MA's), (11, 57407), (13, 57434), (19, 57557),

Gene: Pacifista\_67 Start: 56800, Stop: 57072, Start Num: 4

Candidate Starts for Pacifista\_67:

(Start: 4 @56800 has 126 MA's), (Start: 6 @56821 has 9 MA's), (Start: 7 @56830 has 18 MA's), (11, 56893), (13, 56920), (19, 57043),

Gene: Phamished\_69 Start: 57004, Stop: 57306, Start Num: 3

Candidate Starts for Phamished\_69:

(Start: 3 @57004 has 74 MA's), (Start: 7 @57058 has 18 MA's), (10, 57127), (14, 57169),

Gene: PhatCats2014\_68 Start: 57319, Stop: 57591, Start Num: 4

Candidate Starts for PhatCats2014\_68:

(Start: 4 @57319 has 126 MA's), (Start: 6 @57340 has 9 MA's), (Start: 7 @57349 has 18 MA's), (11, 57412), (13, 57439), (19, 57562),

Gene: PhatLouie\_70 Start: 57338, Stop: 57610, Start Num: 4

Candidate Starts for PhatLouie\_70:

(Start: 4 @57338 has 126 MA's), (Start: 6 @57359 has 9 MA's), (Start: 7 @57368 has 18 MA's), (11, 57431), (13, 57458), (19, 57581),

Gene: PhenghisKhan\_68 Start: 56960, Stop: 57262, Start Num: 3

Candidate Starts for PhenghisKhan\_68:

(Start: 3 @56960 has 74 MA's), (Start: 7 @57014 has 18 MA's), (10, 57083), (14, 57125),

Gene: Pherdinand\_68 Start: 57073, Stop: 57375, Start Num: 3

Candidate Starts for Pherdinand\_68:

(Start: 3 @57073 has 74 MA's), (Start: 7 @57127 has 18 MA's), (10, 57196), (14, 57238),

Gene: Phergie\_68 Start: 56952, Stop: 57254, Start Num: 3

Candidate Starts for Phergie\_68:

(Start: 3 @56952 has 74 MA's), (Start: 7 @57006 has 18 MA's), (10, 57075), (14, 57117),

Gene: Phipps\_67 Start: 56871, Stop: 57173, Start Num: 3

Candidate Starts for Phipps\_67:

(Start: 3 @56871 has 74 MA's), (Start: 7 @56925 has 18 MA's), (10, 56994), (14, 57036),

Gene: Phleuron\_66 Start: 56758, Stop: 57060, Start Num: 3

Candidate Starts for Phleuron\_66:

(Start: 3 @56758 has 74 MA's), (Start: 7 @56812 has 18 MA's), (10, 56881), (14, 56923),

Gene: PhrankReynolds\_67 Start: 56957, Stop: 57259, Start Num: 3

Candidate Starts for PhrankReynolds\_67:

(Start: 3 @56957 has 74 MA's), (Start: 7 @57011 has 18 MA's), (10, 57080), (14, 57122),

Gene: PhrodoBaggins\_69 Start: 57177, Stop: 57479, Start Num: 3

Candidate Starts for PhrodoBaggins\_69:

(Start: 3 @57177 has 74 MA's), (Start: 7 @57231 has 18 MA's), (10, 57300), (14, 57342),

Gene: Phunky\_66 Start: 56822, Stop: 57094, Start Num: 4

Candidate Starts for Phunky\_66:

(Start: 4 @56822 has 126 MA's), (Start: 6 @56843 has 9 MA's), (Start: 7 @56852 has 18 MA's), (11, 56915), (13, 56942), (19, 57065),

Gene: Piglet\_0068 Start: 57291, Stop: 57563, Start Num: 4

Candidate Starts for Piglet\_0068:

(Start: 4 @57291 has 126 MA's), (Start: 6 @57312 has 9 MA's), (Start: 7 @57321 has 18 MA's), (11, 57384), (13, 57411), (19, 57534),

Gene: PinheadLarry\_67 Start: 57119, Stop: 57421, Start Num: 3

Candidate Starts for PinheadLarry\_67:

(Start: 3 @57119 has 74 MA's), (Start: 7 @57173 has 18 MA's), (10, 57242), (14, 57284),

Gene: Pinkman\_67 Start: 56895, Stop: 57197, Start Num: 3

Candidate Starts for Pinkman\_67:

(Start: 3 @56895 has 74 MA's), (Start: 7 @56949 has 18 MA's), (10, 57018), (14, 57060),

Gene: Pipsqueak\_65 Start: 56798, Stop: 57100, Start Num: 3

Candidate Starts for Pipsqueak\_65:

(Start: 3 @56798 has 74 MA's), (Start: 7 @56852 has 18 MA's), (10, 56921), (14, 56963),

Gene: Placalicious\_68 Start: 57839, Stop: 58141, Start Num: 3

Candidate Starts for Placalicious\_68:

(Start: 3 @57839 has 74 MA's), (Start: 7 @57893 has 18 MA's), (10, 57962), (14, 58004),

Gene: Plmatters\_66 Start: 56864, Stop: 57112, Start Num: 7

Candidate Starts for Plmatters\_66:

(Start: 3 @56810 has 74 MA's), (Start: 7 @56864 has 18 MA's), (10, 56933), (14, 56975),

Gene: Podrick\_67 Start: 56879, Stop: 57181, Start Num: 3

Candidate Starts for Podrick\_67:

(Start: 3 @56879 has 74 MA's), (Start: 7 @56933 has 18 MA's), (10, 57002), (14, 57044),

Gene: Pops\_66 Start: 56842, Stop: 57093, Start Num: 6

Candidate Starts for Pops\_66:

(Start: 6 @56842 has 9 MA's), (Start: 7 @56851 has 18 MA's), (11, 56914), (13, 56941), (19, 57064),

Gene: Prickles\_69 Start: 57305, Stop: 57607, Start Num: 3

Candidate Starts for Prickles\_69:

(Start: 3 @57305 has 74 MA's), (Start: 7 @57359 has 18 MA's), (10, 57428), (14, 57470),

Gene: ProfessorX\_66 Start: 56815, Stop: 57087, Start Num: 4

Candidate Starts for ProfessorX\_66:

(Start: 4 @56815 has 126 MA's), (Start: 6 @56836 has 9 MA's), (Start: 7 @56845 has 18 MA's), (11, 56908), (13, 56935), (19, 57058),

Gene: Puhltonio\_66 Start: 57079, Stop: 57381, Start Num: 3

Candidate Starts for Puhltonio\_66:

(Start: 3 @57079 has 74 MA's), (Start: 7 @57133 has 18 MA's), (10, 57202), (14, 57244),

Gene: QueenBeane\_68 Start: 57139, Stop: 57390, Start Num: 6  
Candidate Starts for QueenBeane\_68:  
(Start: 4 @57118 has 126 MA's), (Start: 6 @57139 has 9 MA's), (Start: 7 @57148 has 18 MA's), (11, 57211), (13, 57238), (19, 57361),

Gene: Quisquilliae\_69 Start: 57079, Stop: 57351, Start Num: 4  
Candidate Starts for Quisquilliae\_69:  
(Start: 4 @57079 has 126 MA's), (Start: 6 @57100 has 9 MA's), (Start: 7 @57109 has 18 MA's), (11, 57172), (13, 57199), (19, 57322),

Gene: Ricotta\_68 Start: 56812, Stop: 57084, Start Num: 4  
Candidate Starts for Ricotta\_68:  
(Start: 4 @56812 has 126 MA's), (Start: 6 @56833 has 9 MA's), (Start: 7 @56842 has 18 MA's), (13, 56932), (19, 57055),

Gene: Riggan\_69 Start: 57111, Stop: 57383, Start Num: 4  
Candidate Starts for Riggan\_69:  
(Start: 4 @57111 has 126 MA's), (Start: 6 @57132 has 9 MA's), (Start: 7 @57141 has 18 MA's), (11, 57204), (13, 57231), (19, 57354),

Gene: Rimu\_68 Start: 57279, Stop: 57551, Start Num: 4  
Candidate Starts for Rimu\_68:  
(Start: 4 @57279 has 126 MA's), (Start: 6 @57300 has 9 MA's), (Start: 7 @57309 has 18 MA's), (13, 57399), (19, 57522),

Gene: Riverton\_67 Start: 57041, Stop: 57313, Start Num: 4  
Candidate Starts for Riverton\_67:  
(Start: 4 @57041 has 126 MA's), (Start: 6 @57062 has 9 MA's), (Start: 7 @57071 has 18 MA's), (11, 57134), (13, 57161), (19, 57284),

Gene: Robyn\_68 Start: 57384, Stop: 57656, Start Num: 4  
Candidate Starts for Robyn\_68:  
(Start: 4 @57384 has 126 MA's), (Start: 6 @57405 has 9 MA's), (Start: 7 @57414 has 18 MA's), (11, 57477), (13, 57504), (19, 57627),

Gene: Roliet\_65 Start: 56199, Stop: 56447, Start Num: 7  
Candidate Starts for Roliet\_65:  
(Start: 3 @56145 has 74 MA's), (Start: 7 @56199 has 18 MA's), (10, 56268), (14, 56310),

Gene: Roscoe\_68 Start: 57258, Stop: 57530, Start Num: 4  
Candidate Starts for Roscoe\_68:  
(Start: 4 @57258 has 126 MA's), (Start: 6 @57279 has 9 MA's), (Start: 7 @57288 has 18 MA's), (13, 57378), (19, 57501),

Gene: Roy17\_66 Start: 56511, Stop: 56783, Start Num: 4  
Candidate Starts for Roy17\_66:  
(Start: 4 @56511 has 126 MA's), (Start: 6 @56532 has 9 MA's), (Start: 7 @56541 has 18 MA's), (11, 56604), (13, 56631), (19, 56754),

Gene: SDcharge11\_67 Start: 56317, Stop: 56619, Start Num: 3  
Candidate Starts for SDcharge11\_67:  
(Start: 3 @56317 has 74 MA's), (Start: 7 @56371 has 18 MA's), (10, 56440), (14, 56482),

Gene: SallyH\_70 Start: 57110, Stop: 57358, Start Num: 7  
Candidate Starts for SallyH\_70:  
(Start: 3 @57056 has 74 MA's), (Start: 7 @57110 has 18 MA's), (10, 57179), (14, 57221),

Gene: Samaymay\_68 Start: 57118, Stop: 57390, Start Num: 4  
Candidate Starts for Samaymay\_68:  
(Start: 4 @57118 has 126 MA's), (Start: 6 @57139 has 9 MA's), (Start: 7 @57148 has 18 MA's), (11, 57211), (13, 57238), (19, 57361),

Gene: SassyCat97\_66 Start: 56794, Stop: 57096, Start Num: 3  
Candidate Starts for SassyCat97\_66:  
(Start: 3 @56794 has 74 MA's), (Start: 7 @56848 has 18 MA's), (10, 56917), (14, 56959),

Gene: Schadenfreude\_68 Start: 56686, Stop: 56958, Start Num: 4  
Candidate Starts for Schadenfreude\_68:  
(Start: 4 @56686 has 126 MA's), (Start: 6 @56707 has 9 MA's), (Start: 7 @56716 has 18 MA's), (11, 56779), (13, 56806), (19, 56929),

Gene: Scoot17C\_68 Start: 56745, Stop: 57017, Start Num: 4  
Candidate Starts for Scoot17C\_68:  
(Start: 4 @56745 has 126 MA's), (Start: 6 @56766 has 9 MA's), (Start: 7 @56775 has 18 MA's), (11, 56838), (13, 56865), (19, 56988),

Gene: Selr12\_69 Start: 56827, Stop: 57099, Start Num: 4  
Candidate Starts for Selr12\_69:  
(Start: 4 @56827 has 126 MA's), (Start: 6 @56848 has 9 MA's), (Start: 7 @56857 has 18 MA's), (11, 56920), (13, 56947), (19, 57070),

Gene: Serendipity\_67 Start: 57100, Stop: 57372, Start Num: 4  
Candidate Starts for Serendipity\_67:  
(Start: 4 @57100 has 126 MA's), (Start: 6 @57121 has 9 MA's), (Start: 7 @57130 has 18 MA's), (11, 57193), (13, 57220), (19, 57343),

Gene: Serpentine\_0068 Start: 57183, Stop: 57455, Start Num: 4  
Candidate Starts for Serpentine\_0068:  
(Start: 4 @57183 has 126 MA's), (Start: 6 @57204 has 9 MA's), (Start: 7 @57213 has 18 MA's), (11, 57276), (13, 57303), (19, 57426),

Gene: ShadowBud\_69 Start: 57076, Stop: 57348, Start Num: 4  
Candidate Starts for ShadowBud\_69:  
(Start: 4 @57076 has 126 MA's), (Start: 6 @57097 has 9 MA's), (Start: 7 @57106 has 18 MA's), (11, 57169), (13, 57196), (19, 57319),

Gene: ShiVal\_66 Start: 56826, Stop: 57098, Start Num: 4  
Candidate Starts for ShiVal\_66:  
(Start: 4 @56826 has 126 MA's), (Start: 6 @56847 has 9 MA's), (Start: 7 @56856 has 18 MA's), (11, 56919), (13, 56946), (19, 57069),

Gene: Sigman\_68 Start: 56782, Stop: 57054, Start Num: 4  
Candidate Starts for Sigman\_68:  
(Start: 4 @56782 has 126 MA's), (Start: 6 @56803 has 9 MA's), (Start: 7 @56812 has 18 MA's), (11, 56875), (13, 56902), (19, 57025),

Gene: Simielle\_68 Start: 56783, Stop: 57055, Start Num: 4  
Candidate Starts for Simielle\_68:  
(Start: 4 @56783 has 126 MA's), (Start: 6 @56804 has 9 MA's), (Start: 7 @56813 has 18 MA's), (11, 56876), (13, 56903), (19, 57026),

Gene: SirBeauregard\_69 Start: 57349, Stop: 57621, Start Num: 4  
Candidate Starts for SirBeauregard\_69:  
(Start: 4 @57349 has 126 MA's), (Start: 6 @57370 has 9 MA's), (Start: 7 @57379 has 18 MA's), (11, 57442), (13, 57469), (19, 57592),

Gene: Skippy\_69 Start: 57036, Stop: 57308, Start Num: 4  
Candidate Starts for Skippy\_69:  
(Start: 4 @57036 has 126 MA's), (Start: 6 @57057 has 9 MA's), (Start: 7 @57066 has 18 MA's), (11, 57129), (13, 57156), (19, 57279),

Gene: Slatt\_68 Start: 57090, Stop: 57392, Start Num: 3  
Candidate Starts for Slatt\_68:  
(Start: 3 @57090 has 74 MA's), (Start: 7 @57144 has 18 MA's), (10, 57213), (14, 57255),

Gene: Soile\_69 Start: 57332, Stop: 57604, Start Num: 4  
Candidate Starts for Soile\_69:  
(Start: 4 @57332 has 126 MA's), (Start: 6 @57353 has 9 MA's), (Start: 7 @57362 has 18 MA's), (13, 57452), (19, 57575),

Gene: Solosis\_66 Start: 56843, Stop: 57091, Start Num: 7  
Candidate Starts for Solosis\_66:  
(Start: 3 @56789 has 74 MA's), (Start: 7 @56843 has 18 MA's), (10, 56912), (14, 56954),

Gene: Sophia\_66 Start: 56836, Stop: 57084, Start Num: 7  
Candidate Starts for Sophia\_66:  
(Start: 3 @56782 has 74 MA's), (Start: 7 @56836 has 18 MA's), (10, 56905), (14, 56947),

Gene: Soto\_65 Start: 56349, Stop: 56651, Start Num: 3  
Candidate Starts for Soto\_65:  
(Start: 3 @56349 has 74 MA's), (Start: 7 @56403 has 18 MA's), (10, 56472), (14, 56514),

Gene: Spartan300\_67 Start: 57023, Stop: 57295, Start Num: 4  
Candidate Starts for Spartan300\_67:  
(Start: 4 @57023 has 126 MA's), (Start: 6 @57044 has 9 MA's), (Start: 7 @57053 has 18 MA's), (11, 57116), (13, 57143), (19, 57266),

Gene: Squid\_67 Start: 57082, Stop: 57384, Start Num: 3  
Candidate Starts for Squid\_67:  
(Start: 3 @57082 has 74 MA's), (Start: 7 @57136 has 18 MA's), (10, 57205), (14, 57247),

Gene: Squiggle\_67 Start: 56801, Stop: 57103, Start Num: 3  
Candidate Starts for Squiggle\_67:  
(Start: 3 @56801 has 74 MA's), (Start: 7 @56855 has 18 MA's), (10, 56924), (14, 56966),

Gene: Suffolk\_66 Start: 56596, Stop: 56868, Start Num: 4  
Candidate Starts for Suffolk\_66:  
(Start: 4 @56596 has 126 MA's), (Start: 6 @56617 has 9 MA's), (Start: 7 @56626 has 18 MA's), (11, 56689), (13, 56716), (19, 56839),

Gene: Suigeneris\_68 Start: 58477, Stop: 58761, Start Num: 5

Candidate Starts for Suigeneris\_68:

(Start: 5 @58477 has 4 MA's), (Start: 6 @58504 has 9 MA's), (Start: 7 @58513 has 18 MA's), (12, 58579), (17, 58657), (18, 58711), (19, 58726), (20, 58747),

Gene: Surely\_68 Start: 57426, Stop: 57674, Start Num: 7

Candidate Starts for Surely\_68:

(Start: 3 @57372 has 74 MA's), (Start: 7 @57426 has 18 MA's), (10, 57495), (14, 57537),

Gene: Swiphy\_70 Start: 57338, Stop: 57610, Start Num: 4

Candidate Starts for Swiphy\_70:

(Start: 4 @57338 has 126 MA's), (Start: 6 @57359 has 9 MA's), (Start: 7 @57368 has 18 MA's), (11, 57431), (13, 57458), (19, 57581),

Gene: Swish\_68 Start: 57058, Stop: 57360, Start Num: 3

Candidate Starts for Swish\_68:

(Start: 3 @57058 has 74 MA's), (Start: 7 @57112 has 18 MA's), (10, 57181), (14, 57223),

Gene: TallGrassMM\_66 Start: 56698, Stop: 57000, Start Num: 3

Candidate Starts for TallGrassMM\_66:

(Start: 3 @56698 has 74 MA's), (Start: 7 @56752 has 18 MA's), (10, 56821), (14, 56863),

Gene: Telesworld\_66 Start: 56912, Stop: 57184, Start Num: 4

Candidate Starts for Telesworld\_66:

(Start: 4 @56912 has 126 MA's), (Start: 6 @56933 has 9 MA's), (Start: 7 @56942 has 18 MA's), (11, 57005), (13, 57032), (19, 57155),

Gene: Thora\_66 Start: 57138, Stop: 57440, Start Num: 3

Candidate Starts for Thora\_66:

(Start: 3 @57138 has 74 MA's), (Start: 7 @57192 has 18 MA's), (10, 57261), (14, 57303),

Gene: ThreeOh3D2\_69 Start: 57310, Stop: 57582, Start Num: 4

Candidate Starts for ThreeOh3D2\_69:

(Start: 4 @57310 has 126 MA's), (Start: 6 @57331 has 9 MA's), (Start: 7 @57340 has 18 MA's), (11, 57403), (13, 57430), (19, 57553),

Gene: Thunderbird\_68 Start: 57071, Stop: 57322, Start Num: 6

Candidate Starts for Thunderbird\_68:

(Start: 6 @57071 has 9 MA's), (Start: 7 @57080 has 18 MA's), (11, 57143), (13, 57170), (19, 57293),

Gene: Timmi\_67 Start: 56794, Stop: 57066, Start Num: 4

Candidate Starts for Timmi\_67:

(Start: 4 @56794 has 126 MA's), (Start: 6 @56815 has 9 MA's), (Start: 7 @56824 has 18 MA's), (11, 56887), (13, 56914), (19, 57037),

Gene: TomBombadil\_68 Start: 57410, Stop: 57658, Start Num: 7

Candidate Starts for TomBombadil\_68:

(Start: 3 @57356 has 74 MA's), (Start: 7 @57410 has 18 MA's), (10, 57479), (14, 57521),

Gene: Tomlarah\_69 Start: 57647, Stop: 57919, Start Num: 4

Candidate Starts for Tomlarah\_69:

(Start: 4 @57647 has 126 MA's), (Start: 6 @57668 has 9 MA's), (Start: 7 @57677 has 18 MA's), (11, 57740), (13, 57767), (19, 57890),

Gene: Toni\_68 Start: 57239, Stop: 57511, Start Num: 4

Candidate Starts for Toni\_68:

(Start: 4 @57239 has 126 MA's), (Start: 6 @57260 has 9 MA's), (Start: 7 @57269 has 18 MA's), (11, 57332), (13, 57359), (19, 57482),

Gene: Tooj\_66 Start: 56464, Stop: 56736, Start Num: 4

Candidate Starts for Tooj\_66:

(Start: 4 @56464 has 126 MA's), (Start: 6 @56485 has 9 MA's), (Start: 7 @56494 has 18 MA's), (11, 56557), (13, 56584), (19, 56707),

Gene: True\_66 Start: 56803, Stop: 57075, Start Num: 4

Candidate Starts for True\_66:

(Start: 4 @56803 has 126 MA's), (Start: 6 @56824 has 9 MA's), (Start: 7 @56833 has 18 MA's), (11, 56896), (13, 56923), (19, 57046),

Gene: Trypo\_69 Start: 57523, Stop: 57825, Start Num: 3

Candidate Starts for Trypo\_69:

(Start: 3 @57523 has 74 MA's), (Start: 7 @57577 has 18 MA's), (10, 57646), (14, 57688),

Gene: TyrionL\_68 Start: 56891, Stop: 57193, Start Num: 3

Candidate Starts for TyrionL\_68:

(Start: 3 @56891 has 74 MA's), (Start: 7 @56945 has 18 MA's), (10, 57014), (14, 57056),

Gene: UncleHowie\_65 Start: 56493, Stop: 56795, Start Num: 3

Candidate Starts for UncleHowie\_65:

(Start: 3 @56493 has 74 MA's), (Start: 7 @56547 has 18 MA's), (10, 56616), (14, 56658),

Gene: Vaishali24\_68 Start: 57154, Stop: 57405, Start Num: 6

Candidate Starts for Vaishali24\_68:

(Start: 4 @57133 has 126 MA's), (Start: 6 @57154 has 9 MA's), (Start: 7 @57163 has 18 MA's), (11, 57226), (13, 57253), (16, 57292), (19, 57376),

Gene: Valjean\_67 Start: 57033, Stop: 57305, Start Num: 4

Candidate Starts for Valjean\_67:

(Start: 4 @57033 has 126 MA's), (Start: 6 @57054 has 9 MA's), (Start: 7 @57063 has 18 MA's), (11, 57126), (13, 57153), (19, 57276),

Gene: Vaticameos\_65 Start: 55337, Stop: 55609, Start Num: 4

Candidate Starts for Vaticameos\_65:

(Start: 4 @55337 has 126 MA's), (Start: 6 @55358 has 9 MA's), (Start: 7 @55367 has 18 MA's), (11, 55430), (13, 55457), (19, 55580),

Gene: Veritas\_67 Start: 57024, Stop: 57272, Start Num: 7

Candidate Starts for Veritas\_67:

(Start: 3 @56970 has 74 MA's), (Start: 7 @57024 has 18 MA's), (10, 57093), (14, 57135),

Gene: Virapocalypse\_69 Start: 57132, Stop: 57404, Start Num: 4

Candidate Starts for Virapocalypse\_69:

(Start: 4 @57132 has 126 MA's), (Start: 6 @57153 has 9 MA's), (Start: 7 @57162 has 18 MA's), (11, 57225), (13, 57252), (19, 57375),

Gene: Vista\_66 Start: 56794, Stop: 57096, Start Num: 3  
Candidate Starts for Vista\_66:  
(Start: 3 @56794 has 74 MA's), (Start: 7 @56848 has 18 MA's), (10, 56917), (14, 56959),

Gene: Vivaldi\_68 Start: 57255, Stop: 57557, Start Num: 3  
Candidate Starts for Vivaldi\_68:  
(Start: 3 @57255 has 74 MA's), (Start: 7 @57309 has 18 MA's), (10, 57378), (14, 57420),

Gene: Vortex\_67 Start: 57078, Stop: 57380, Start Num: 3  
Candidate Starts for Vortex\_67:  
(Start: 3 @57078 has 74 MA's), (Start: 7 @57132 has 18 MA's), (10, 57201), (14, 57243),

Gene: Wallhey\_68 Start: 56955, Stop: 57203, Start Num: 7  
Candidate Starts for Wallhey\_68:  
(Start: 3 @56901 has 74 MA's), (Start: 7 @56955 has 18 MA's), (10, 57024), (14, 57066),

Gene: Waterdiva\_68 Start: 57166, Stop: 57438, Start Num: 4  
Candidate Starts for Waterdiva\_68:  
(Start: 4 @57166 has 126 MA's), (Start: 6 @57187 has 9 MA's), (Start: 7 @57196 has 18 MA's), (11, 57259), (13, 57286), (19, 57409),

Gene: Weher20\_65 Start: 57467, Stop: 57715, Start Num: 7  
Candidate Starts for Weher20\_65:  
(2, 57404), (Start: 7 @57467 has 18 MA's), (10, 57536), (14, 57578),

Gene: Windsor\_68 Start: 57353, Stop: 57625, Start Num: 4  
Candidate Starts for Windsor\_68:  
(Start: 4 @57353 has 126 MA's), (Start: 6 @57374 has 9 MA's), (Start: 7 @57383 has 18 MA's), (11, 57446), (13, 57473), (19, 57596),

Gene: Xavier\_67 Start: 56794, Stop: 57066, Start Num: 4  
Candidate Starts for Xavier\_67:  
(Start: 4 @56794 has 126 MA's), (Start: 6 @56815 has 9 MA's), (Start: 7 @56824 has 18 MA's), (11, 56887), (13, 56914), (19, 57037),

Gene: Yoshand\_68 Start: 57071, Stop: 57373, Start Num: 3  
Candidate Starts for Yoshand\_68:  
(Start: 3 @57071 has 74 MA's), (Start: 7 @57125 has 18 MA's), (10, 57194), (14, 57236),

Gene: YouGoGlencoco\_68 Start: 57137, Stop: 57385, Start Num: 7  
Candidate Starts for YouGoGlencoco\_68:  
(Start: 3 @57083 has 74 MA's), (Start: 7 @57137 has 18 MA's), (10, 57206), (14, 57248),

Gene: Zelda\_68 Start: 57477, Stop: 57725, Start Num: 7  
Candidate Starts for Zelda\_68:  
(Start: 3 @57423 has 74 MA's), (Start: 7 @57477 has 18 MA's), (10, 57546), (14, 57588),

Gene: Zonia\_68 Start: 57352, Stop: 57654, Start Num: 3  
Candidate Starts for Zonia\_68:  
(Start: 3 @57352 has 74 MA's), (Start: 7 @57406 has 18 MA's), (10, 57475), (14, 57517),