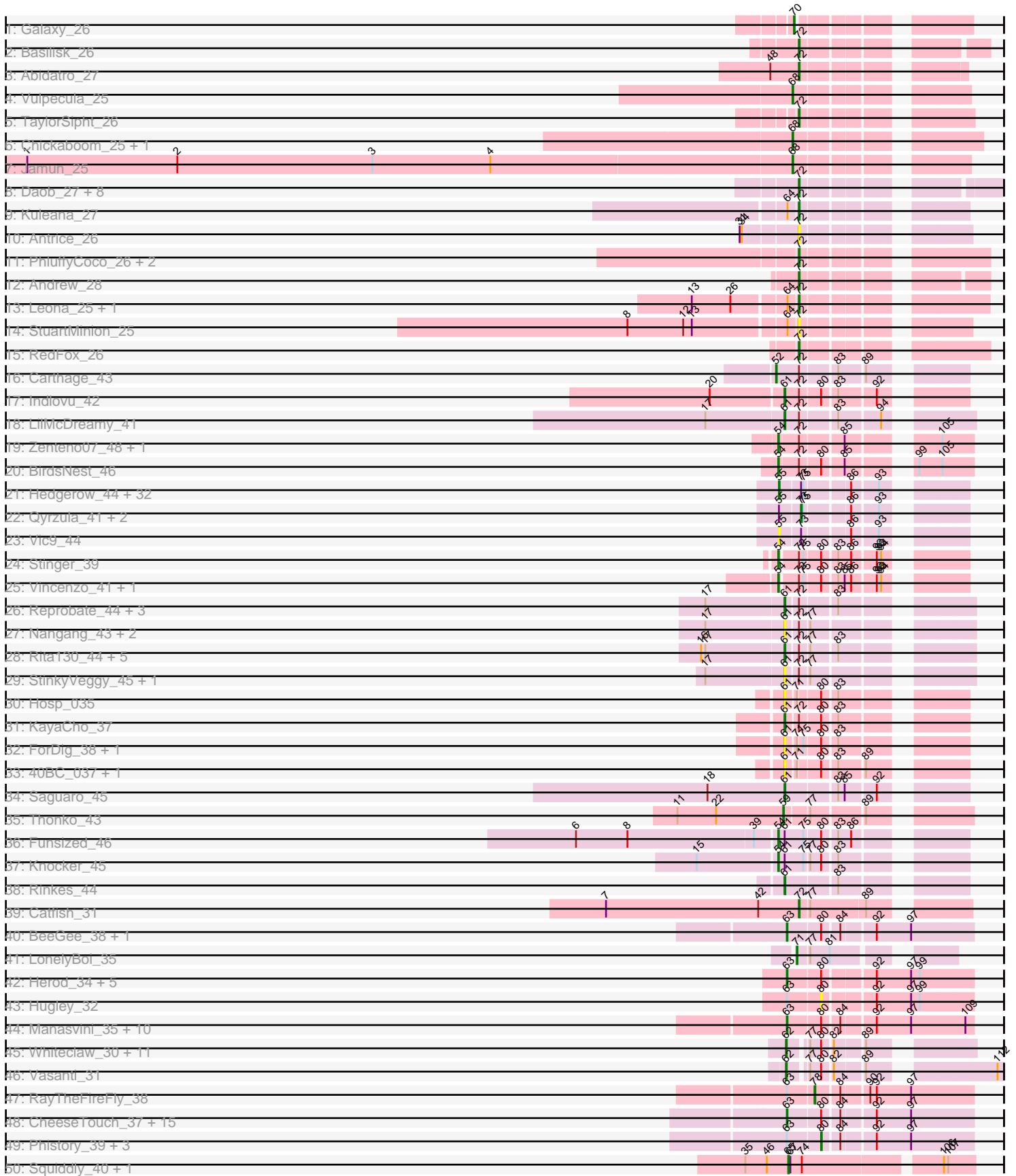
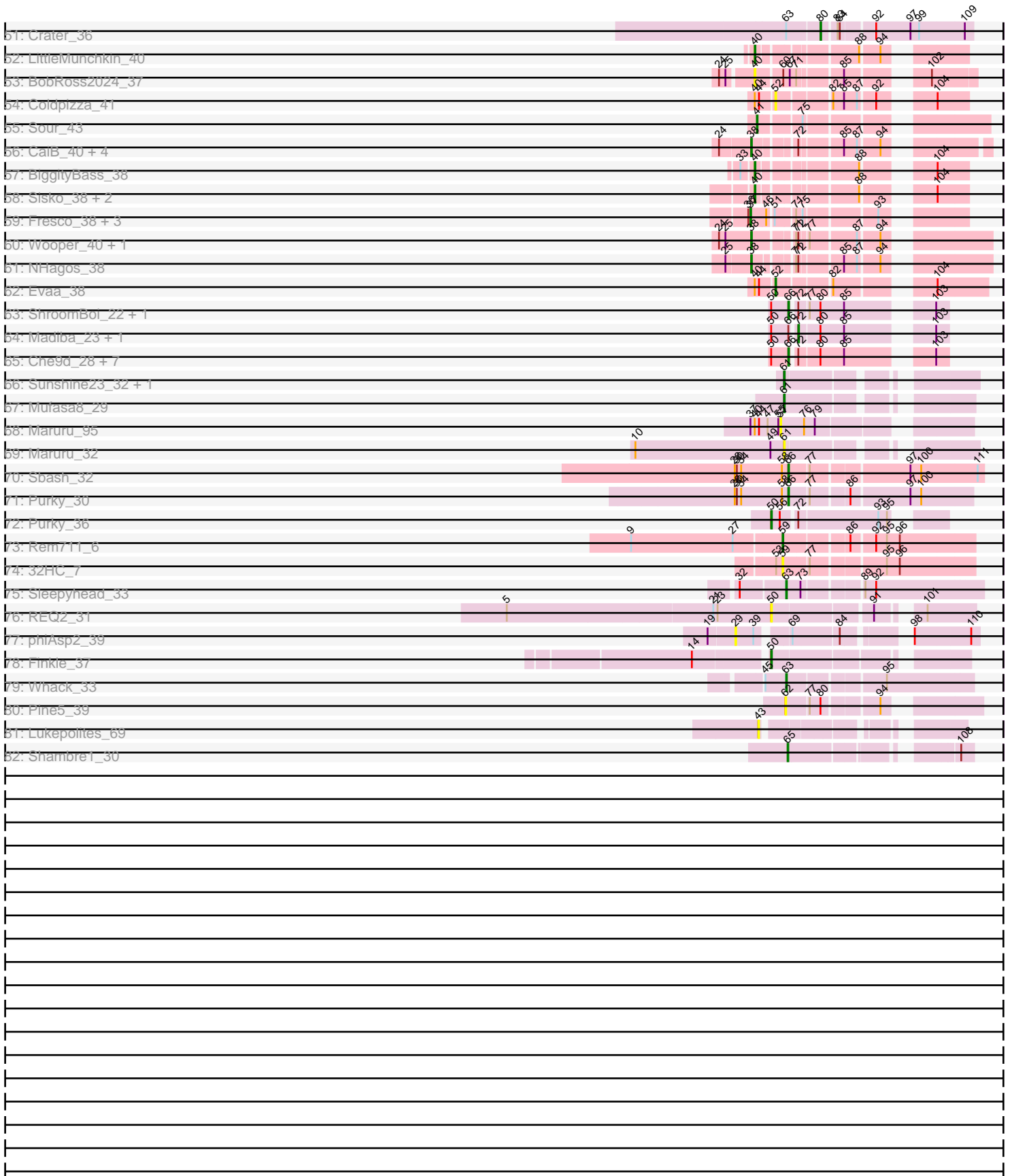


Pham 202682



Pham 202682



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 202682 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202682 has 209 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Galaxy\_26
- Track 2 : Basilisk\_26
- Track 3 : Abidatro\_27
- Track 4 : Vulpecula\_25
- Track 5 : TaylorSipht\_26
- Track 6 : Chickaboom\_25, Brynnie\_25
- Track 7 : Jamun\_25
- Track 8 : Daob\_27, Amelia\_27, Melons\_27, HannahPhantana\_27, Cote\_27, Orcanus\_26, Coral\_26, Lunar\_27, Polka\_26
- Track 9 : Kuleana\_27
- Track 10 : Antrice\_26
- Track 11 : PhluffyCoco\_26, Camara\_26, KHumphrey\_26
- Track 12 : Andrew\_28
- Track 13 : Leona\_25, Glotell\_27
- Track 14 : StuartMinion\_25
- Track 15 : RedFox\_26
- Track 16 : Carthage\_43
- Track 17 : Indlovu\_42
- Track 18 : LilMcDreamy\_41
- Track 19 : Zenteno07\_48, Hashim76\_46
- Track 20 : BirdsNest\_46
- Track 21 : Hedgerow\_44, Calamitous\_44, Coffee\_44, Lars\_44, Faze9\_43, MasterPo\_44, Lephleur\_44, ItsyBitsy1\_44, FrenchFry\_44, Tinciduntolum\_45, Bananafish\_44, TA17A\_44, Blocker23\_44, Kheth\_44, Tres\_44, Holeinone\_44, Kaleb\_44, Phantasmagoria\_44, LizLemon\_44, Kolhan\_44, Rhinoforte\_44, Godines\_44, Ares\_44, LilSmirk\_44, Brownie5\_44, Boyle\_44, Eaglehorse\_44, Sabella\_43, Allegro\_44, West99\_44, Laurie\_43, Opia\_44, Glass\_44
- Track 22 : Qyrzula\_41, Arbiter\_43, Rosebush\_43
- Track 23 : Vic9\_44
- Track 24 : Stinger\_39
- Track 25 : Vincenzo\_41, AlanGrant\_42
- Track 26 : Reprobate\_44, Mysterious\_45, Nehemiah\_43, Phelemich\_43
- Track 27 : Nangang\_43, Shenyu\_43, DigitDog\_43
- Track 28 : Rita130\_44, Acadian\_44, EastView9101\_42, Suigeneris\_44, Donny\_44, SirJeffery\_44
- Track 29 : StinkyVeggy\_45, KarasumaRum\_45
- Track 30 : Hosp\_035

- Track 31 : KayaCho\_37
- Track 32 : ForDig\_38, Jolie1\_037
- Track 33 : 40BC\_037, 39HC\_037
- Track 34 : Saguaro\_45
- Track 35 : Thonko\_43
- Track 36 : Funsized\_46
- Track 37 : Knocker\_45
- Track 38 : Rinkes\_44
- Track 39 : Catfish\_31
- Track 40 : BeeGee\_38, RavenCo17\_36
- Track 41 : LonelyBoi\_35
- Track 42 : Herod\_34, Eviarto\_34, BatStarr\_34, Nymphadora\_34, TimTam\_34, Bosnia\_34
- Track 43 : Hugley\_32
- Track 44 : Manasvini\_35, Suscepit\_35, Antonio\_35, Zameen\_35, Kita\_36, Neobush\_35, Eudoria\_35, Trumpet\_35, Tayonia\_35, Maridalia\_34, Polly\_32
- Track 45 : Whiteclaw\_30, Clap\_30, Savage\_30, Sahara\_29, Ebert\_31, Haley23\_30, GemG\_30, Sproutie\_30, Cynthia\_30, Mocha12\_30, TuertoX\_30, Gizermo\_30
- Track 46 : Vasanti\_31
- Track 47 : RayTheFireFly\_38
- Track 48 : CheeseTouch\_37, Getalong\_40, Horus\_39, Phabuloso\_36, Lutum\_39, Budski\_39, Kenna\_38, BearBQ\_38, ShawBrad\_38, ODay\_42, Asapag\_39, Holliday\_38, Leroy\_39, Ecliptus\_40, Whitney\_42, Periwinkle\_42
- Track 49 : Phistory\_39, BENtherdunthat\_38, Frickyeah\_39, Apricot\_38
- Track 50 : Squiddly\_40, Spooky\_39
- Track 51 : Crater\_36
- Track 52 : LittleMunchkin\_40
- Track 53 : BobRoss2024\_37
- Track 54 : Coldpizza\_41
- Track 55 : Sour\_43
- Track 56 : CaiB\_40, CloverMinnie\_40, MossRose\_40, AnarQue\_40, MakoManhole\_40
- Track 57 : BiggityBass\_38
- Track 58 : Sisko\_38, AnClar\_39, Yago84\_38
- Track 59 : Fresco\_38, Axumite\_38, Shatter\_38, Ligma\_38
- Track 60 : Wooper\_40, Yeshua\_40
- Track 61 : NHagos\_38
- Track 62 : Evaa\_38
- Track 63 : ShroomBoi\_22, Avani\_28
- Track 64 : Madiba\_23, ThetaBob\_24
- Track 65 : Che9d\_28, Ogopogo\_25, Bipolar\_22, Demsculpinboyz\_28, Kersh\_23, Kenuha5\_22, Pollywog\_25, Yoshi\_28
- Track 66 : Sunshine23\_32, Sonali\_32
- Track 67 : Mufasa8\_29
- Track 68 : Maruru\_95
- Track 69 : Maruru\_32
- Track 70 : Sbash\_32
- Track 71 : Purky\_30
- Track 72 : Purky\_36
- Track 73 : Rem711\_6
- Track 74 : 32HC\_7
- Track 75 : Sleepyhead\_33
- Track 76 : REQ2\_31

- Track 77 : phiAsp2\_39
- Track 78 : Finkle\_37
- Track 79 : Whack\_33
- Track 80 : Pine5\_39
- Track 81 : Lukepolites\_69
- Track 82 : Shambre1\_30

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

The start number called the most often in the published annotations is 63, it was called in 36 of the 172 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antonio\_35, Asapag\_39, BatStarr\_34, BearBQ\_38, BeeGee\_38, Bosnia\_34, Budski\_39, CheeseTouch\_37, Ecliptus\_40, Eudoria\_35, Eviarto\_34, Getalong\_40, Herod\_34, Holliday\_38, Horus\_39, Kenna\_38, Kita\_36, Leroy\_39, Lutum\_39, Manasvini\_35, Maridalia\_34, Neobush\_35, Nymphadora\_34, ODay\_42, Periwinkle\_42, Phabuloso\_36, Polly\_32, RavenCo17\_36, ShawBrad\_38, Sleepyhead\_33, Suscepit\_35, Tayonia\_35, TimTam\_34, Trumpet\_35, Whack\_33, Whitney\_42, Zameen\_35,

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

- Apricot\_38, BENtherdunthat\_38, Crater\_36, Frickyeah\_39, Hugley\_32, Phistory\_39, RayTheFireFly\_38,

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

- 32HC\_7, 39HC\_037, 40BC\_037, Abidatro\_27, Acadian\_44, AlanGrant\_42, Allegro\_44, Amelia\_27, AnClar\_39, AnarQue\_40, Andrew\_28, Antrice\_26, Arbiter\_43, Ares\_44, Avani\_28, Axumite\_38, Bananafish\_44, Basilisk\_26, BiggityBass\_38, Bipolar\_22, BirdsNest\_46, Blocker23\_44, BobRoss2024\_37, Boyle\_44, Brownie5\_44, Brynnie\_25, CaiB\_40, Calamitous\_44, Camara\_26, Carthage\_43, Catfish\_31, Che9d\_28, Chickaboom\_25, Clap\_30, CloverMinnie\_40, Coffee\_44, Coldpizza\_41, Coral\_26, Cote\_27, Cynthia\_30, Daob\_27, Demsculpinboyz\_28, DigitDog\_43, Donny\_44, Eaglehorse\_44, EastView9101\_42, Ebert\_31, Evaa\_38, Faze9\_43, Finkle\_37, ForDig\_38, FrenchFry\_44, Fresco\_38, Funsized\_46, Galaxy\_26, GemG\_30, Gizermo\_30, Glass\_44, Glotell\_27, Godines\_44, Haley23\_30, HannahPhantana\_27, Hashim76\_46, Hedgerow\_44, Holeinone\_44, Hosp\_035, Indlovu\_42, ItsyBitsy1\_44, Jamun\_25, Jolie1\_037, KHumphrey\_26, Kaleb\_44, KarasumaRum\_45, KayaCho\_37, Kenuha5\_22, Kersh\_23, Kheth\_44, Knocker\_45, Kolhan\_44, Kuleana\_27, Lars\_44, Laurie\_43, Leona\_25, Lephleur\_44, Ligma\_38, LilMcDreamy\_41, LilSmirk\_44, LittleMunchkin\_40, LizLemon\_44, LonelyBoi\_35, Lukepolites\_69, Lunar\_27, Madiba\_23, MakoManhole\_40, Maruru\_32, Maruru\_95, MasterPo\_44, Melons\_27, Mocha12\_30, MossRose\_40, Mufasa8\_29, Mysterious\_45, NHagos\_38, Nangang\_43, Nehemiah\_43, Ogopogo\_25, Opia\_44, Orcanus\_26, Phantasmagoria\_44, Phelemich\_43, PhluffyCoco\_26, Pine5\_39, Polka\_26, Pollywog\_25, Purky\_30, Purky\_36, Qyrzula\_41, REQ2\_31, RedFox\_26, Rem711\_6, Reprobate\_44, Rhinoforte\_44, Rinkes\_44, Rita130\_44, Rosebush\_43, Sabella\_43, Saguaro\_45, Sahara\_29, Savage\_30, Sbash\_32, Shambre1\_30, Shatter\_38, Shenyu\_43, ShroomBoi\_22, SirJeffery\_44, Sisko\_38, Sonali\_32, Sour\_43, Spooky\_39, Sproutie\_30, Squiddly\_40, Stinger\_39, StinkyVeggy\_45,

StuartMinion\_25, Suigeneris\_44, Sunshine23\_32, TA17A\_44, TaylorSipt\_26, ThetaBob\_24, Thonko\_43, Tinciduntolum\_45, Tres\_44, TuertoX\_30, Vasanti\_31, Vic9\_44, Vincenzo\_41, Vulpecula\_25, West99\_44, Whiteclaw\_30, Wooper\_40, Yago84\_38, Yeshua\_40, Yoshi\_28, Zenteno07\_48, phiAsp2\_39,

### Summary by start number:

#### Start 29:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: phiAsp2\_39 (singleton),

#### Start 37:

- Found in 5 of 209 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 4 of 172
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Axumite\_38 (DR), Fresco\_38 (DR), Ligma\_38 (DR), Shatter\_38 (DR),

#### Start 38:

- Found in 8 of 209 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 7 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnarQue\_40 (DR), CaiB\_40 (DR), CloverMinnie\_40 (DR), MakoManhole\_40 (DR), MossRose\_40 (DR), NHagos\_38 (DR), Wooper\_40 (DR), Yeshua\_40 (DR),

#### Start 40:

- Found in 9 of 209 ( 4.3% ) of genes in pham
- Manual Annotations of this start: 5 of 172
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AnClar\_39 (DR), BiggityBass\_38 (DR), BobRoss2024\_37 (DR), LittleMunchkin\_40 (DR), Sisko\_38 (DR), Yago84\_38 (DR),

#### Start 41:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sour\_43 (DR),

#### Start 43:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lukepolites\_69 (singleton),

#### Start 50:

- Found in 15 of 209 ( 7.2% ) of genes in pham
- Manual Annotations of this start: 2 of 172
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Finkle\_37 (singleton), Purky\_36 (P6), REQ2\_31 (singleton),

Start 52:

- Found in 3 of 209 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Carthage\_43 (B1), Coldpizza\_41 (DR), Evaa\_38 (DR),

Start 54:

- Found in 8 of 209 ( 3.8% ) of genes in pham
- Manual Annotations of this start: 8 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AlanGrant\_42 (B4), BirdsNest\_46 (B13), Funsized\_46 (B9), Hashim76\_46 (B13), Knocker\_45 (B9), Stinger\_39 (B4), Vincenzo\_41 (B4), Zenteno07\_48 (B13),

Start 55:

- Found in 38 of 209 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 29 of 172
- Called 89.5% of time when present
- Phage (with cluster) where this start called: Allegro\_44 (B2), Ares\_44 (B2), Bananafish\_44 (B2), Blocker23\_44 (B2), Boyle\_44 (B2), Brownie5\_44 (B2), Calamitous\_44 (B2), Coffee\_44 (B2), Eaglehorse\_44 (B2), Faze9\_43 (B2), FrenchFry\_44 (B2), Glass\_44 (B2), Godines\_44 (B2), Hedgerow\_44 (B2), Holeinone\_44 (B2), ItsyBitsy1\_44 (B2), Kaleb\_44 (B2), Kheth\_44 (B2), Kolhan\_44 (B2), Lars\_44 (B2), Laurie\_43 (B2), Lephleur\_44 (B2), LilSmirk\_44 (B2), LizLemon\_44 (B2), MasterPo\_44 (B2), Opia\_44 (B2), Phantasmagoria\_44 (B2), Rhinoforte\_44 (B2), Sabella\_43 (B2), TA17A\_44 (B2), Tinciduntolum\_45 (B2), Tres\_44 (B2), Vic9\_44 (B2), West99\_44 (B2),

Start 57:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru\_95 (FG),

Start 59:

- Found in 3 of 209 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 2 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 32HC\_7 (Z), Rem711\_6 (Z), Thonko\_43 (B8),

Start 61:

- Found in 31 of 209 ( 14.8% ) of genes in pham
- Manual Annotations of this start: 13 of 172
- Called 93.5% of time when present
- Phage (with cluster) where this start called: 39HC\_037 (B6), 40BC\_037 (B6), Acadian\_44 (B5), DigitDog\_43 (B5), Donny\_44 (B5), EastView9101\_42 (B5), ForDig\_38 (B6), Hosp\_035 (B6), Indlovu\_42 (B11), Jolie1\_037 (B6), KarasumaRum\_45 (B5), KayaCho\_37 (B6), LilMcDreamy\_41 (B12), Maruru\_32 (FG), Mufasa8\_29 (FG), Mysterious\_45 (B5), Nangang\_43 (B5), Nehemiah\_43 (B5), Phelemich\_43 (B5), Reprobate\_44 (B5), Rinke\_44 (B9), Rita130\_44 (B5),

Saguaro\_45 (B7), Shenyu\_43 (B5), SirJeffery\_44 (B5), Sonali\_32 (FG), StinkyVeggy\_45 (B5), Suigeneris\_44 (B5), Sunshine23\_32 (FG),

Start 62:

- Found in 14 of 209 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 13 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clap\_30 (CZ2), Cynthia\_30 (CZ2), Ebert\_31 (CZ2), GemG\_30 (CZ2), Gizermo\_30 (CZ2), Haley23\_30 (CZ2), Mocha12\_30 (CZ2), Pine5\_39 (singleton), Sahara\_29 (CZ2), Savage\_30 (CZ2), Sproutie\_30 (CZ2), TuertoX\_30 (CZ2), Vasanti\_31 (CZ2), Whiteclaw\_30 (CZ2),

Start 63:

- Found in 44 of 209 ( 21.1% ) of genes in pham
- Manual Annotations of this start: 36 of 172
- Called 84.1% of time when present
- Phage (with cluster) where this start called: Antonio\_35 (CZ1), Asapag\_39 (DN1), BatStarr\_34 (CZ1), BearBQ\_38 (DN), BeeGee\_38 (CY), Bosnia\_34 (CZ1), Budski\_39 (DN), CheeseTouch\_37 (DN1), Ecliptus\_40 (DN), Eudoria\_35 (CZ1), Eviarto\_34 (CZ1), Getalong\_40 (DN1), Herod\_34 (CZ1), Holliday\_38 (DN1), Horus\_39 (DN1), Kenna\_38 (DN1), Kita\_36 (CZ1), Leroy\_39 (DN1), Lutum\_39 (DN1), Manasvini\_35 (CZ1), Maridalia\_34 (CZ1), Neobush\_35 (CZ1), Nymphadora\_34 (CZ1), ODay\_42 (DN), Periwinkle\_42 (DN1), Phabuloso\_36 (DN1), Polly\_32 (CZ1), RavenCo17\_36 (CZ8), ShawBrad\_38 (DN1), Sleepyhead\_33 (singleton), Suscepit\_35 (CZ1), Tayonia\_35 (CZ1), TimTam\_34 (CZ1), Trumpet\_35 (CZ1), Whack\_33 (singleton), Whitney\_42 (DN1), Zameen\_35 (CZ1),

Start 65:

- Found in 3 of 209 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 3 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shambre1\_30 (singleton), Spooky\_39 (DN2), Squiddly\_40 (DN2),

Start 66:

- Found in 14 of 209 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 12 of 172
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Avani\_28 (F2), Bipolar\_22 (F1), Che9d\_28 (F2), Demsculpinboyz\_28 (F2), Kenuha5\_22 (F1), Kersh\_23 (F1), Ogopogo\_25 (F1), Pollywog\_25 (F1), Purky\_30 (P6), Sbash\_32 (I2), ShroomBoi\_22 (F1), Yoshi\_28 (F2),

Start 68:

- Found in 4 of 209 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 4 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Brynnie\_25 (AS1), Chickaboom\_25 (AS1), Jamun\_25 (AS1), Vulpecula\_25 (AS1),

Start 70:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 172



- Called 100.0% of time when present
- Phage (with cluster) where this start called: Galaxy\_26 (AS1),

Start 71:

- Found in 14 of 209 ( 6.7% ) of genes in pham
- Manual Annotations of this start: 1 of 172
- Called 7.1% of time when present
- Phage (with cluster) where this start called: LonelyBoi\_35 (CY),

Start 72:

- Found in 69 of 209 ( 33.0% ) of genes in pham
- Manual Annotations of this start: 21 of 172
- Called 36.2% of time when present
- Phage (with cluster) where this start called: Abidatro\_27 (AS1), Amelia\_27 (AS2), Andrew\_28 (AS3), Antrice\_26 (AS2), Basilisk\_26 (AS1), Camara\_26 (AS3), Catfish\_31 (CU5), Coral\_26 (AS2), Cote\_27 (AS2), Daob\_27 (AS2), Glotell\_27 (AS3), HannahPhantana\_27 (AS2), KHumphrey\_26 (AS3), Kuleana\_27 (AS2), Leona\_25 (AS3), Lunar\_27 (AS2), Madiba\_23 (F1), Melons\_27 (AS2), Orcanus\_26 (AS1), PhluffyCoco\_26 (AS3), Polka\_26 (AS2), RedFox\_26 (AS3), StuartMinion\_25 (AS3), TaylorSipt\_26 (AS1), ThetaBob\_24 (F4),

Start 73:

- Found in 38 of 209 ( 18.2% ) of genes in pham
- Manual Annotations of this start: 3 of 172
- Called 7.9% of time when present
- Phage (with cluster) where this start called: Arbiter\_43 (B2), Qyrzula\_41 (B2), Rosebush\_43 (B2),

Start 78:

- Found in 1 of 209 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 172
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RayTheFireFly\_38 (DB),

Start 80:

- Found in 80 of 209 ( 38.3% ) of genes in pham
- Manual Annotations of this start: 4 of 172
- Called 7.5% of time when present
- Phage (with cluster) where this start called: Apricot\_38 (DN3), BENtherdunthat\_38 (DN1), Crater\_36 (DN3), Frickyeah\_39 (DN1), Hugley\_32 (CZ1), Phistory\_39 (DN1),

### Summary by clusters:

There are 33 clusters represented in this pham: DN, singleton, CZ2, CZ1, DB, CZ8, B12, B13, B11, DR, CU5, I2, DN1, DN3, DN2, AS3, AS2, AS1, P6, CY, Z, F1, F2, F4, B4, B5, B6, B7, B1, B2, FG, B8, B9,

Info for manual annotations of cluster AS1:

- Start number 68 was manually annotated 4 times for cluster AS1.
- Start number 70 was manually annotated 1 time for cluster AS1.
- Start number 72 was manually annotated 4 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 72 was manually annotated 9 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 72 was manually annotated 5 times for cluster AS3.

Info for manual annotations of cluster B1:

- Start number 52 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster B11:

- Start number 61 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 61 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 54 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B2:

- Start number 55 was manually annotated 29 times for cluster B2.
- Start number 73 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B4:

- Start number 54 was manually annotated 3 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 61 was manually annotated 6 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 61 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

- Start number 61 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

- Start number 59 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

- Start number 54 was manually annotated 2 times for cluster B9.
- Start number 61 was manually annotated 1 time for cluster B9.

Info for manual annotations of cluster CU5:

- Start number 72 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY:

- Start number 63 was manually annotated 1 time for cluster CY.
- Start number 71 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CZ1:

- Start number 63 was manually annotated 17 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 62 was manually annotated 13 times for cluster CZ2.

Info for manual annotations of cluster CZ8:

- Start number 63 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DB:

- Start number 78 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DN:

- Start number 63 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 63 was manually annotated 11 times for cluster DN1.
- Start number 80 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 65 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 80 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DR:

- Start number 37 was manually annotated 4 times for cluster DR.
- Start number 38 was manually annotated 7 times for cluster DR.
- Start number 40 was manually annotated 5 times for cluster DR.
- Start number 41 was manually annotated 1 time for cluster DR.
- Start number 52 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster F1:

- Start number 66 was manually annotated 6 times for cluster F1.
- Start number 72 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 66 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 72 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FG:

- Start number 61 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster I2:

- Start number 66 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster P6:

- Start number 50 was manually annotated 1 time for cluster P6.
- Start number 66 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Z:

- Start number 59 was manually annotated 1 time for cluster Z.

***Gene Information:***

Gene: 32HC\_7 Start: 3414, Stop: 3172, Start Num: 59  
Candidate Starts for 32HC\_7:  
(53, 3423), (Start: 59 @3414 has 2 MA's), (77, 3384), (95, 3291), (96, 3273),

Gene: 39HC\_037 Start: 36987, Stop: 36790, Start Num: 61  
Candidate Starts for 39HC\_037:  
(Start: 61 @36987 has 13 MA's), (Start: 71 @36975 has 1 MA's), (Start: 80 @36948 has 4 MA's), (83, 36930), (89, 36897),

Gene: 40BC\_037 Start: 36987, Stop: 36790, Start Num: 61  
Candidate Starts for 40BC\_037:  
(Start: 61 @36987 has 13 MA's), (Start: 71 @36975 has 1 MA's), (Start: 80 @36948 has 4 MA's), (83, 36930), (89, 36897),

Gene: Abidatro\_27 Start: 19710, Stop: 19528, Start Num: 72  
Candidate Starts for Abidatro\_27:  
(48, 19749), (Start: 72 @19710 has 21 MA's),

Gene: Acadian\_44 Start: 39648, Stop: 39439, Start Num: 61  
Candidate Starts for Acadian\_44:  
(16, 39762), (17, 39756), (Start: 61 @39648 has 13 MA's), (Start: 72 @39633 has 21 MA's), (77, 39621), (83, 39588),

Gene: AlanGrant\_42 Start: 39951, Stop: 39745, Start Num: 54  
Candidate Starts for AlanGrant\_42:  
(Start: 54 @39951 has 8 MA's), (Start: 72 @39930 has 21 MA's), (75, 39924), (Start: 80 @39903 has 4 MA's), (83, 39885), (85, 39876), (86, 39867), (92, 39837), (93, 39834), (94, 39831),

Gene: Allegro\_44 Start: 39432, Stop: 39226, Start Num: 55  
Candidate Starts for Allegro\_44:  
(Start: 55 @39432 has 29 MA's), (Start: 73 @39405 has 3 MA's), (75, 39402), (86, 39348), (93, 39315),

Gene: Amelia\_27 Start: 19057, Stop: 18836, Start Num: 72  
Candidate Starts for Amelia\_27:  
(Start: 72 @19057 has 21 MA's),

Gene: AnClar\_39 Start: 35606, Stop: 35379, Start Num: 40  
Candidate Starts for AnClar\_39:  
(Start: 40 @35606 has 5 MA's), (88, 35489), (104, 35420),

Gene: AnarQue\_40 Start: 34838, Stop: 34584, Start Num: 38  
Candidate Starts for AnarQue\_40:  
(24, 34880), (Start: 38 @34838 has 7 MA's), (Start: 72 @34790 has 21 MA's), (85, 34739), (87, 34721), (94, 34694),

Gene: Andrew\_28 Start: 19161, Stop: 18955, Start Num: 72  
Candidate Starts for Andrew\_28:  
(Start: 72 @19161 has 21 MA's),

Gene: Antonio\_35 Start: 29354, Stop: 29118, Start Num: 63  
Candidate Starts for Antonio\_35:  
(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201), (109, 29129),

Gene: Antrice\_26 Start: 19359, Stop: 19168, Start Num: 72

Candidate Starts for Antrice\_26:

(31, 19434), (34, 19431), (Start: 72 @19359 has 21 MA's),

Gene: Apricot\_38 Start: 28904, Stop: 28710, Start Num: 80

Candidate Starts for Apricot\_38:

(Start: 63 @28946 has 36 MA's), (Start: 80 @28904 has 4 MA's), (84, 28883), (92, 28841), (97, 28793),

Gene: Arbiter\_43 Start: 39491, Stop: 39312, Start Num: 73

Candidate Starts for Arbiter\_43:

(Start: 55 @39518 has 29 MA's), (Start: 73 @39491 has 3 MA's), (75, 39488), (86, 39434), (93, 39401),

Gene: Ares\_44 Start: 39502, Stop: 39296, Start Num: 55

Candidate Starts for Ares\_44:

(Start: 55 @39502 has 29 MA's), (Start: 73 @39475 has 3 MA's), (75, 39472), (86, 39418), (93, 39385),

Gene: Asapag\_39 Start: 30538, Stop: 30302, Start Num: 63

Candidate Starts for Asapag\_39:

(Start: 63 @30538 has 36 MA's), (Start: 80 @30496 has 4 MA's), (84, 30475), (92, 30433), (97, 30385),

Gene: Avani\_28 Start: 24082, Stop: 23903, Start Num: 66

Candidate Starts for Avani\_28:

(Start: 50 @24106 has 2 MA's), (Start: 66 @24082 has 12 MA's), (Start: 72 @24076 has 21 MA's), (77, 24064), (Start: 80 @24049 has 4 MA's), (85, 24016), (103, 23920),

Gene: Axumite\_38 Start: 32837, Stop: 32601, Start Num: 37

Candidate Starts for Axumite\_38:

(36, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (Start: 71 @32786 has 1 MA's), (75, 32780), (93, 32690),

Gene: BENtherdunthat\_38 Start: 28707, Stop: 28513, Start Num: 80

Candidate Starts for BENtherdunthat\_38:

(Start: 63 @28749 has 36 MA's), (Start: 80 @28707 has 4 MA's), (84, 28686), (92, 28644), (97, 28596),

Gene: Bananafish\_44 Start: 39438, Stop: 39232, Start Num: 55

Candidate Starts for Bananafish\_44:

(Start: 55 @39438 has 29 MA's), (Start: 73 @39411 has 3 MA's), (75, 39408), (86, 39354), (93, 39321),

Gene: Basilisk\_26 Start: 20189, Stop: 19986, Start Num: 72

Candidate Starts for Basilisk\_26:

(Start: 72 @20189 has 21 MA's),

Gene: BatStarr\_34 Start: 29521, Stop: 29285, Start Num: 63

Candidate Starts for BatStarr\_34:

(Start: 63 @29521 has 36 MA's), (Start: 80 @29479 has 4 MA's), (92, 29416), (97, 29368), (99, 29356),

Gene: BearBQ\_38 Start: 30173, Stop: 29937, Start Num: 63

Candidate Starts for BearBQ\_38:

(Start: 63 @30173 has 36 MA's), (Start: 80 @30131 has 4 MA's), (84, 30110), (92, 30068), (97, 30020),

Gene: BeeGee\_38 Start: 30304, Stop: 30068, Start Num: 63

Candidate Starts for BeeGee\_38:

(Start: 63 @30304 has 36 MA's), (Start: 80 @30262 has 4 MA's), (84, 30241), (92, 30199), (97, 30151),

Gene: BiggityBass\_38 Start: 35067, Stop: 34840, Start Num: 40

Candidate Starts for BiggityBass\_38:

(33, 35082), (Start: 40 @35067 has 5 MA's), (88, 34950), (104, 34881),

Gene: Bipolar\_22 Start: 24352, Stop: 24173, Start Num: 66

Candidate Starts for Bipolar\_22:

(Start: 50 @24376 has 2 MA's), (Start: 66 @24352 has 12 MA's), (Start: 72 @24346 has 21 MA's),

(Start: 80 @24319 has 4 MA's), (85, 24286), (103, 24190),

Gene: BirdsNest\_46 Start: 37877, Stop: 37662, Start Num: 54

Candidate Starts for BirdsNest\_46:

(Start: 54 @37877 has 8 MA's), (Start: 72 @37853 has 21 MA's), (Start: 80 @37826 has 4 MA's), (85,

37799), (99, 37733), (105, 37703),

Gene: Blocker23\_44 Start: 39556, Stop: 39350, Start Num: 55

Candidate Starts for Blocker23\_44:

(Start: 55 @39556 has 29 MA's), (Start: 73 @39529 has 3 MA's), (75, 39526), (86, 39472), (93, 39439),

Gene: BobRoss2024\_37 Start: 32952, Stop: 32707, Start Num: 40

Candidate Starts for BobRoss2024\_37:

(24, 32994), (25, 32985), (Start: 40 @32952 has 5 MA's), (60, 32919), (67, 32910), (Start: 71 @32901

has 1 MA's), (85, 32847), (102, 32763),

Gene: Bosnia\_34 Start: 29521, Stop: 29285, Start Num: 63

Candidate Starts for Bosnia\_34:

(Start: 63 @29521 has 36 MA's), (Start: 80 @29479 has 4 MA's), (92, 29416), (97, 29368), (99, 29356),

Gene: Boyle\_44 Start: 39557, Stop: 39351, Start Num: 55

Candidate Starts for Boyle\_44:

(Start: 55 @39557 has 29 MA's), (Start: 73 @39530 has 3 MA's), (75, 39527), (86, 39473), (93, 39440),

Gene: Brownie5\_44 Start: 39563, Stop: 39357, Start Num: 55

Candidate Starts for Brownie5\_44:

(Start: 55 @39563 has 29 MA's), (Start: 73 @39536 has 3 MA's), (75, 39533), (86, 39479), (93, 39446),

Gene: Brynnie\_25 Start: 19788, Stop: 19591, Start Num: 68

Candidate Starts for Brynnie\_25:

(Start: 68 @19788 has 4 MA's),

Gene: Budski\_39 Start: 30500, Stop: 30264, Start Num: 63

Candidate Starts for Budski\_39:

(Start: 63 @30500 has 36 MA's), (Start: 80 @30458 has 4 MA's), (84, 30437), (92, 30395), (97, 30347),

Gene: CaiB\_40 Start: 34824, Stop: 34570, Start Num: 38

Candidate Starts for CaiB\_40:

(24, 34866), (Start: 38 @34824 has 7 MA's), (Start: 72 @34776 has 21 MA's), (85, 34725), (87, 34707),

(94, 34680),

Gene: Calamitous\_44 Start: 39443, Stop: 39237, Start Num: 55

Candidate Starts for Calamitous\_44:

(Start: 55 @39443 has 29 MA's), (Start: 73 @39416 has 3 MA's), (75, 39413), (86, 39359), (93, 39326),

Gene: Camara\_26 Start: 18733, Stop: 18518, Start Num: 72

Candidate Starts for Camara\_26:

(Start: 72 @18733 has 21 MA's),

Gene: Carthage\_43 Start: 38107, Stop: 37892, Start Num: 52

Candidate Starts for Carthage\_43:

(Start: 52 @38107 has 2 MA's), (Start: 72 @38077 has 21 MA's), (83, 38032), (89, 37999),

Gene: Catfish\_31 Start: 25984, Stop: 25784, Start Num: 72

Candidate Starts for Catfish\_31:

(7, 26254), (42, 26041), (Start: 72 @25984 has 21 MA's), (77, 25972), (89, 25897),

Gene: Che9d\_28 Start: 24090, Stop: 23911, Start Num: 66

Candidate Starts for Che9d\_28:

(Start: 50 @24114 has 2 MA's), (Start: 66 @24090 has 12 MA's), (Start: 72 @24084 has 21 MA's),

(Start: 80 @24057 has 4 MA's), (85, 24024), (103, 23928),

Gene: CheeseTouch\_37 Start: 27100, Stop: 26864, Start Num: 63

Candidate Starts for CheeseTouch\_37:

(Start: 63 @27100 has 36 MA's), (Start: 80 @27058 has 4 MA's), (84, 27037), (92, 26995), (97, 26947),

Gene: Chickaboom\_25 Start: 18878, Stop: 18663, Start Num: 68

Candidate Starts for Chickaboom\_25:

(Start: 68 @18878 has 4 MA's),

Gene: Clap\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for Clap\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: CloverMinnie\_40 Start: 34764, Stop: 34510, Start Num: 38

Candidate Starts for CloverMinnie\_40:

(24, 34806), (Start: 38 @34764 has 7 MA's), (Start: 72 @34716 has 21 MA's), (85, 34665), (87, 34647), (94, 34620),

Gene: Coffee\_44 Start: 39546, Stop: 39340, Start Num: 55

Candidate Starts for Coffee\_44:

(Start: 55 @39546 has 29 MA's), (Start: 73 @39519 has 3 MA's), (75, 39516), (86, 39462), (93, 39429),

Gene: Coldpizza\_41 Start: 37616, Stop: 37404, Start Num: 52

Candidate Starts for Coldpizza\_41:

(Start: 40 @37640 has 5 MA's), (44, 37634), (Start: 52 @37616 has 2 MA's), (82, 37550), (85, 37535),

(87, 37517), (92, 37496), (104, 37445),

Gene: Coral\_26 Start: 18896, Stop: 18675, Start Num: 72

Candidate Starts for Coral\_26:

(Start: 72 @18896 has 21 MA's),

Gene: Cote\_27 Start: 19041, Stop: 18820, Start Num: 72

Candidate Starts for Cote\_27:

(Start: 72 @19041 has 21 MA's),

Gene: Crater\_36 Start: 28423, Stop: 28229, Start Num: 80

Candidate Starts for Crater\_36:

(Start: 63 @28465 has 36 MA's), (Start: 80 @28423 has 4 MA's), (83, 28405), (84, 28402), (92, 28360), (97, 28312), (99, 28300), (109, 28240),

Gene: Cynthia\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for Cynthia\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Daob\_27 Start: 19046, Stop: 18825, Start Num: 72

Candidate Starts for Daob\_27:

(Start: 72 @19046 has 21 MA's),

Gene: Demsculpinboyz\_28 Start: 24075, Stop: 23896, Start Num: 66

Candidate Starts for Demsculpinboyz\_28:

(Start: 50 @24099 has 2 MA's), (Start: 66 @24075 has 12 MA's), (Start: 72 @24069 has 21 MA's), (Start: 80 @24042 has 4 MA's), (85, 24009), (103, 23913),

Gene: DigitDog\_43 Start: 39348, Stop: 39139, Start Num: 61

Candidate Starts for DigitDog\_43:

(17, 39456), (Start: 61 @39348 has 13 MA's), (Start: 72 @39333 has 21 MA's), (77, 39321),

Gene: Donny\_44 Start: 39653, Stop: 39444, Start Num: 61

Candidate Starts for Donny\_44:

(16, 39767), (17, 39761), (Start: 61 @39653 has 13 MA's), (Start: 72 @39638 has 21 MA's), (77, 39626), (83, 39593),

Gene: Eaglehorse\_44 Start: 39470, Stop: 39264, Start Num: 55

Candidate Starts for Eaglehorse\_44:

(Start: 55 @39470 has 29 MA's), (Start: 73 @39443 has 3 MA's), (75, 39440), (86, 39386), (93, 39353),

Gene: EastView9101\_42 Start: 39303, Stop: 39094, Start Num: 61

Candidate Starts for EastView9101\_42:

(16, 39417), (17, 39411), (Start: 61 @39303 has 13 MA's), (Start: 72 @39288 has 21 MA's), (77, 39276), (83, 39243),

Gene: Ebert\_31 Start: 25587, Stop: 25387, Start Num: 62

Candidate Starts for Ebert\_31:

(Start: 62 @25587 has 13 MA's), (77, 25566), (Start: 80 @25551 has 4 MA's), (82, 25539), (89, 25503),

Gene: Ecliptus\_40 Start: 31004, Stop: 30768, Start Num: 63

Candidate Starts for Ecliptus\_40:

(Start: 63 @31004 has 36 MA's), (Start: 80 @30962 has 4 MA's), (84, 30941), (92, 30899), (97, 30851),

Gene: Eudoria\_35 Start: 29354, Stop: 29118, Start Num: 63

Candidate Starts for Eudoria\_35:

(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201), (109, 29129),

Gene: Evaa\_38 Start: 33917, Stop: 33678, Start Num: 52

Candidate Starts for Evaa\_38:

(Start: 40 @33941 has 5 MA's), (44, 33935), (Start: 52 @33917 has 2 MA's), (82, 33851), (104, 33746),

Gene: Eviarto\_34 Start: 29497, Stop: 29261, Start Num: 63



Candidate Starts for Eviarto\_34:

(Start: 63 @29497 has 36 MA's), (Start: 80 @29455 has 4 MA's), (92, 29392), (97, 29344), (99, 29332),

Gene: Faze9\_43 Start: 39566, Stop: 39360, Start Num: 55

Candidate Starts for Faze9\_43:

(Start: 55 @39566 has 29 MA's), (Start: 73 @39539 has 3 MA's), (75, 39536), (86, 39482), (93, 39449),

Gene: Finkle\_37 Start: 29834, Stop: 29601, Start Num: 50

Candidate Starts for Finkle\_37:

(14, 29927), (Start: 50 @29834 has 2 MA's),

Gene: ForDig\_38 Start: 36976, Stop: 36779, Start Num: 61

Candidate Starts for ForDig\_38:

(Start: 61 @36976 has 13 MA's), (Start: 71 @36964 has 1 MA's), (75, 36958), (Start: 80 @36937 has 4 MA's), (83, 36919),

Gene: FrenchFry\_44 Start: 39560, Stop: 39354, Start Num: 55

Candidate Starts for FrenchFry\_44:

(Start: 55 @39560 has 29 MA's), (Start: 73 @39533 has 3 MA's), (75, 39530), (86, 39476), (93, 39443),

Gene: Fresco\_38 Start: 32837, Stop: 32601, Start Num: 37

Candidate Starts for Fresco\_38:

(36, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (Start: 71 @32786 has 1 MA's), (75, 32780), (93, 32690),

Gene: Frickyeah\_39 Start: 28597, Stop: 28403, Start Num: 80

Candidate Starts for Frickyeah\_39:

(Start: 63 @28639 has 36 MA's), (Start: 80 @28597 has 4 MA's), (84, 28576), (92, 28534), (97, 28486),

Gene: Funsized\_46 Start: 41756, Stop: 41544, Start Num: 54

Candidate Starts for Funsized\_46:

(6, 42029), (8, 41957), (39, 41783), (Start: 54 @41756 has 8 MA's), (Start: 61 @41747 has 13 MA's), (75, 41723), (Start: 80 @41702 has 4 MA's), (83, 41684), (86, 41666),

Gene: Galaxy\_26 Start: 19656, Stop: 19465, Start Num: 70

Candidate Starts for Galaxy\_26:

(Start: 70 @19656 has 1 MA's),

Gene: GemG\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for GemG\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Getalong\_40 Start: 31359, Stop: 31123, Start Num: 63

Candidate Starts for Getalong\_40:

(Start: 63 @31359 has 36 MA's), (Start: 80 @31317 has 4 MA's), (84, 31296), (92, 31254), (97, 31206),

Gene: Gizermo\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for Gizermo\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Glass\_44 Start: 39560, Stop: 39354, Start Num: 55

Candidate Starts for Glass\_44:

(Start: 55 @39560 has 29 MA's), (Start: 73 @39533 has 3 MA's), (75, 39530), (86, 39476), (93, 39443),

Gene: Glotell\_27 Start: 18731, Stop: 18516, Start Num: 72  
Candidate Starts for Glotell\_27:  
(13, 18866), (26, 18812), (64, 18743), (Start: 72 @18731 has 21 MA's),

Gene: Godines\_44 Start: 39502, Stop: 39296, Start Num: 55  
Candidate Starts for Godines\_44:  
(Start: 55 @39502 has 29 MA's), (Start: 73 @39475 has 3 MA's), (75, 39472), (86, 39418), (93, 39385),

Gene: Haley23\_30 Start: 25663, Stop: 25463, Start Num: 62  
Candidate Starts for Haley23\_30:  
(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: HannahPhantana\_27 Start: 19053, Stop: 18832, Start Num: 72  
Candidate Starts for HannahPhantana\_27:  
(Start: 72 @19053 has 21 MA's),

Gene: Hashim76\_46 Start: 38349, Stop: 38134, Start Num: 54  
Candidate Starts for Hashim76\_46:  
(Start: 54 @38349 has 8 MA's), (Start: 72 @38325 has 21 MA's), (85, 38271), (105, 38175),

Gene: Hedgerow\_44 Start: 39542, Stop: 39336, Start Num: 55  
Candidate Starts for Hedgerow\_44:  
(Start: 55 @39542 has 29 MA's), (Start: 73 @39515 has 3 MA's), (75, 39512), (86, 39458), (93, 39425),

Gene: Herod\_34 Start: 29521, Stop: 29285, Start Num: 63  
Candidate Starts for Herod\_34:  
(Start: 63 @29521 has 36 MA's), (Start: 80 @29479 has 4 MA's), (92, 29416), (97, 29368), (99, 29356),

Gene: Holeinone\_44 Start: 39422, Stop: 39216, Start Num: 55  
Candidate Starts for Holeinone\_44:  
(Start: 55 @39422 has 29 MA's), (Start: 73 @39395 has 3 MA's), (75, 39392), (86, 39338), (93, 39305),

Gene: Holliday\_38 Start: 29214, Stop: 28978, Start Num: 63  
Candidate Starts for Holliday\_38:  
(Start: 63 @29214 has 36 MA's), (Start: 80 @29172 has 4 MA's), (84, 29151), (92, 29109), (97, 29061),

Gene: Horus\_39 Start: 30560, Stop: 30324, Start Num: 63  
Candidate Starts for Horus\_39:  
(Start: 63 @30560 has 36 MA's), (Start: 80 @30518 has 4 MA's), (84, 30497), (92, 30455), (97, 30407),

Gene: Hosp\_035 Start: 35180, Stop: 34983, Start Num: 61  
Candidate Starts for Hosp\_035:  
(Start: 61 @35180 has 13 MA's), (Start: 71 @35168 has 1 MA's), (Start: 80 @35141 has 4 MA's), (83, 35123),

Gene: Hugley\_32 Start: 29478, Stop: 29284, Start Num: 80  
Candidate Starts for Hugley\_32:  
(Start: 63 @29520 has 36 MA's), (Start: 80 @29478 has 4 MA's), (92, 29415), (97, 29367), (99, 29355),

Gene: Indlovu\_42 Start: 38503, Stop: 38300, Start Num: 61  
Candidate Starts for Indlovu\_42:

(20, 38602), (Start: 61 @38503 has 13 MA's), (Start: 72 @38485 has 21 MA's), (Start: 80 @38458 has 4 MA's), (83, 38440), (92, 38392),

Gene: ItsyBitsy1\_44 Start: 39424, Stop: 39218, Start Num: 55

Candidate Starts for ItsyBitsy1\_44:

(Start: 55 @39424 has 29 MA's), (Start: 73 @39397 has 3 MA's), (75, 39394), (86, 39340), (93, 39307),

Gene: Jamun\_25 Start: 19385, Stop: 19188, Start Num: 68

Candidate Starts for Jamun\_25:

(1, 20447), (2, 20237), (3, 19964), (4, 19799), (Start: 68 @19385 has 4 MA's),

Gene: Jolie1\_037 Start: 36967, Stop: 36770, Start Num: 61

Candidate Starts for Jolie1\_037:

(Start: 61 @36967 has 13 MA's), (Start: 71 @36955 has 1 MA's), (75, 36949), (Start: 80 @36928 has 4 MA's), (83, 36910),

Gene: KHumphrey\_26 Start: 18730, Stop: 18515, Start Num: 72

Candidate Starts for KHumphrey\_26:

(Start: 72 @18730 has 21 MA's),

Gene: Kaleb\_44 Start: 39557, Stop: 39351, Start Num: 55

Candidate Starts for Kaleb\_44:

(Start: 55 @39557 has 29 MA's), (Start: 73 @39530 has 3 MA's), (75, 39527), (86, 39473), (93, 39440),

Gene: KarasumaRum\_45 Start: 39790, Stop: 39581, Start Num: 61

Candidate Starts for KarasumaRum\_45:

(17, 39898), (Start: 61 @39790 has 13 MA's), (Start: 72 @39775 has 21 MA's), (77, 39763),

Gene: KayaCho\_37 Start: 36966, Stop: 36766, Start Num: 61

Candidate Starts for KayaCho\_37:

(Start: 61 @36966 has 13 MA's), (Start: 72 @36951 has 21 MA's), (Start: 80 @36924 has 4 MA's), (83, 36906),

Gene: Kenna\_38 Start: 29550, Stop: 29314, Start Num: 63

Candidate Starts for Kenna\_38:

(Start: 63 @29550 has 36 MA's), (Start: 80 @29508 has 4 MA's), (84, 29487), (92, 29445), (97, 29397),

Gene: Kenuha5\_22 Start: 24468, Stop: 24289, Start Num: 66

Candidate Starts for Kenuha5\_22:

(Start: 50 @24492 has 2 MA's), (Start: 66 @24468 has 12 MA's), (Start: 72 @24462 has 21 MA's),

(Start: 80 @24435 has 4 MA's), (85, 24402), (103, 24306),

Gene: Kersh\_23 Start: 24511, Stop: 24332, Start Num: 66

Candidate Starts for Kersh\_23:

(Start: 50 @24535 has 2 MA's), (Start: 66 @24511 has 12 MA's), (Start: 72 @24505 has 21 MA's),

(Start: 80 @24478 has 4 MA's), (85, 24445), (103, 24349),

Gene: Kheth\_44 Start: 39445, Stop: 39239, Start Num: 55

Candidate Starts for Kheth\_44:

(Start: 55 @39445 has 29 MA's), (Start: 73 @39418 has 3 MA's), (75, 39415), (86, 39361), (93, 39328),

Gene: Kita\_36 Start: 29363, Stop: 29127, Start Num: 63

Candidate Starts for Kita\_36:

(Start: 63 @29363 has 36 MA's), (Start: 80 @29321 has 4 MA's), (84, 29300), (92, 29258), (97, 29210), (109, 29138),

Gene: Knocker\_45 Start: 40870, Stop: 40658, Start Num: 54

Candidate Starts for Knocker\_45:

(15, 40978), (Start: 54 @40870 has 8 MA's), (Start: 61 @40861 has 13 MA's), (75, 40837), (77, 40831), (Start: 80 @40816 has 4 MA's), (83, 40798),

Gene: Kolhan\_44 Start: 39436, Stop: 39230, Start Num: 55

Candidate Starts for Kolhan\_44:

(Start: 55 @39436 has 29 MA's), (Start: 73 @39409 has 3 MA's), (75, 39406), (86, 39352), (93, 39319),

Gene: Kuleana\_27 Start: 19065, Stop: 18880, Start Num: 72

Candidate Starts for Kuleana\_27:

(64, 19077), (Start: 72 @19065 has 21 MA's),

Gene: Lars\_44 Start: 39547, Stop: 39341, Start Num: 55

Candidate Starts for Lars\_44:

(Start: 55 @39547 has 29 MA's), (Start: 73 @39520 has 3 MA's), (75, 39517), (86, 39463), (93, 39430),

Gene: Laurie\_43 Start: 38946, Stop: 38740, Start Num: 55

Candidate Starts for Laurie\_43:

(Start: 55 @38946 has 29 MA's), (Start: 73 @38919 has 3 MA's), (75, 38916), (86, 38862), (93, 38829),

Gene: Leona\_25 Start: 18655, Stop: 18440, Start Num: 72

Candidate Starts for Leona\_25:

(13, 18790), (26, 18736), (64, 18667), (Start: 72 @18655 has 21 MA's),

Gene: Lephleur\_44 Start: 39440, Stop: 39234, Start Num: 55

Candidate Starts for Lephleur\_44:

(Start: 55 @39440 has 29 MA's), (Start: 73 @39413 has 3 MA's), (75, 39410), (86, 39356), (93, 39323),

Gene: Leroy\_39 Start: 30561, Stop: 30325, Start Num: 63

Candidate Starts for Leroy\_39:

(Start: 63 @30561 has 36 MA's), (Start: 80 @30519 has 4 MA's), (84, 30498), (92, 30456), (97, 30408),

Gene: Ligma\_38 Start: 32837, Stop: 32601, Start Num: 37

Candidate Starts for Ligma\_38:

(36, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (Start: 71 @32786 has 1 MA's), (75, 32780), (93, 32690),

Gene: LilMcDreamy\_41 Start: 38754, Stop: 38542, Start Num: 61

Candidate Starts for LilMcDreamy\_41:

(17, 38862), (Start: 61 @38754 has 13 MA's), (Start: 72 @38736 has 21 MA's), (83, 38691), (94, 38637),

Gene: LilSmirk\_44 Start: 39434, Stop: 39228, Start Num: 55

Candidate Starts for LilSmirk\_44:

(Start: 55 @39434 has 29 MA's), (Start: 73 @39407 has 3 MA's), (75, 39404), (86, 39350), (93, 39317),

Gene: LittleMunchkin\_40 Start: 36172, Stop: 35945, Start Num: 40

Candidate Starts for LittleMunchkin\_40:

(Start: 40 @36172 has 5 MA's), (88, 36055), (94, 36031),

Gene: LizLemon\_44 Start: 39556, Stop: 39350, Start Num: 55

Candidate Starts for LizLemon\_44:

(Start: 55 @39556 has 29 MA's), (Start: 73 @39529 has 3 MA's), (75, 39526), (86, 39472), (93, 39439),

Gene: LonelyBoi\_35 Start: 30866, Stop: 30690, Start Num: 71

Candidate Starts for LonelyBoi\_35:

(Start: 71 @30866 has 1 MA's), (77, 30851), (81, 30824),

Gene: Lukepolites\_69 Start: 44405, Stop: 44190, Start Num: 43

Candidate Starts for Lukepolites\_69:

(43, 44405),

Gene: Lunar\_27 Start: 19041, Stop: 18820, Start Num: 72

Candidate Starts for Lunar\_27:

(Start: 72 @19041 has 21 MA's),

Gene: Lutum\_39 Start: 29550, Stop: 29314, Start Num: 63

Candidate Starts for Lutum\_39:

(Start: 63 @29550 has 36 MA's), (Start: 80 @29508 has 4 MA's), (84, 29487), (92, 29445), (97, 29397),

Gene: Madiba\_23 Start: 24209, Stop: 24036, Start Num: 72

Candidate Starts for Madiba\_23:

(Start: 50 @24239 has 2 MA's), (Start: 66 @24215 has 12 MA's), (Start: 72 @24209 has 21 MA's),

(Start: 80 @24182 has 4 MA's), (85, 24149), (103, 24053),

Gene: MakoManhole\_40 Start: 34842, Stop: 34588, Start Num: 38

Candidate Starts for MakoManhole\_40:

(24, 34884), (Start: 38 @34842 has 7 MA's), (Start: 72 @34794 has 21 MA's), (85, 34743), (87, 34725),

(94, 34698),

Gene: Manasvini\_35 Start: 29355, Stop: 29119, Start Num: 63

Candidate Starts for Manasvini\_35:

(Start: 63 @29355 has 36 MA's), (Start: 80 @29313 has 4 MA's), (84, 29292), (92, 29250), (97, 29202),

(109, 29130),

Gene: Maridalia\_34 Start: 29354, Stop: 29118, Start Num: 63

Candidate Starts for Maridalia\_34:

(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201),

(109, 29129),

Gene: Maruru\_95 Start: 57307, Stop: 57080, Start Num: 57

Candidate Starts for Maruru\_95:

(Start: 37 @57349 has 4 MA's), (Start: 40 @57343 has 5 MA's), (44, 57337), (47, 57325), (Start: 55

@57310 has 29 MA's), (57, 57307), (76, 57274), (79, 57259),

Gene: Maruru\_32 Start: 29698, Stop: 29486, Start Num: 61

Candidate Starts for Maruru\_32:

(10, 29905), (49, 29716), (Start: 61 @29698 has 13 MA's),

Gene: MasterPo\_44 Start: 39443, Stop: 39237, Start Num: 55

Candidate Starts for MasterPo\_44:

(Start: 55 @39443 has 29 MA's), (Start: 73 @39416 has 3 MA's), (75, 39413), (86, 39359), (93, 39326),

Gene: Melons\_27 Start: 19041, Stop: 18820, Start Num: 72

Candidate Starts for Melons\_27:

(Start: 72 @19041 has 21 MA's),

Gene: Mocha12\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for Mocha12\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: MossRose\_40 Start: 34821, Stop: 34567, Start Num: 38

Candidate Starts for MossRose\_40:

(24, 34863), (Start: 38 @34821 has 7 MA's), (Start: 72 @34773 has 21 MA's), (85, 34722), (87, 34704), (94, 34677),

Gene: Mufasa8\_29 Start: 27032, Stop: 26823, Start Num: 61

Candidate Starts for Mufasa8\_29:

(Start: 61 @27032 has 13 MA's),

Gene: Mysterious\_45 Start: 39920, Stop: 39711, Start Num: 61

Candidate Starts for Mysterious\_45:

(17, 40028), (Start: 61 @39920 has 13 MA's), (Start: 72 @39905 has 21 MA's), (83, 39860),

Gene: NHagos\_38 Start: 33445, Stop: 33185, Start Num: 38

Candidate Starts for NHagos\_38:

(25, 33478), (Start: 38 @33445 has 7 MA's), (Start: 71 @33403 has 1 MA's), (Start: 72 @33400 has 21 MA's), (85, 33349), (87, 33331), (94, 33304),

Gene: Nangang\_43 Start: 39713, Stop: 39504, Start Num: 61

Candidate Starts for Nangang\_43:

(17, 39821), (Start: 61 @39713 has 13 MA's), (Start: 72 @39698 has 21 MA's), (77, 39686),

Gene: Nehemiah\_43 Start: 39920, Stop: 39711, Start Num: 61

Candidate Starts for Nehemiah\_43:

(17, 40028), (Start: 61 @39920 has 13 MA's), (Start: 72 @39905 has 21 MA's), (83, 39860),

Gene: Neobush\_35 Start: 29354, Stop: 29118, Start Num: 63

Candidate Starts for Neobush\_35:

(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201), (109, 29129),

Gene: Nymphadora\_34 Start: 29521, Stop: 29285, Start Num: 63

Candidate Starts for Nymphadora\_34:

(Start: 63 @29521 has 36 MA's), (Start: 80 @29479 has 4 MA's), (92, 29416), (97, 29368), (99, 29356),

Gene: ODay\_42 Start: 31024, Stop: 30788, Start Num: 63

Candidate Starts for ODay\_42:

(Start: 63 @31024 has 36 MA's), (Start: 80 @30982 has 4 MA's), (84, 30961), (92, 30919), (97, 30871),

Gene: Ogopogo\_25 Start: 24675, Stop: 24496, Start Num: 66

Candidate Starts for Ogopogo\_25:

(Start: 50 @24699 has 2 MA's), (Start: 66 @24675 has 12 MA's), (Start: 72 @24669 has 21 MA's), (Start: 80 @24642 has 4 MA's), (85, 24609), (103, 24513),

Gene: Opia\_44 Start: 39429, Stop: 39223, Start Num: 55  
Candidate Starts for Opia\_44:  
(Start: 55 @39429 has 29 MA's), (Start: 73 @39402 has 3 MA's), (75, 39399), (86, 39345), (93, 39312),

Gene: Orcanus\_26 Start: 19951, Stop: 19748, Start Num: 72  
Candidate Starts for Orcanus\_26:  
(Start: 72 @19951 has 21 MA's),

Gene: Periwinkle\_42 Start: 31005, Stop: 30769, Start Num: 63  
Candidate Starts for Periwinkle\_42:  
(Start: 63 @31005 has 36 MA's), (Start: 80 @30963 has 4 MA's), (84, 30942), (92, 30900), (97, 30852),

Gene: Phabuloso\_36 Start: 29262, Stop: 29026, Start Num: 63  
Candidate Starts for Phabuloso\_36:  
(Start: 63 @29262 has 36 MA's), (Start: 80 @29220 has 4 MA's), (84, 29199), (92, 29157), (97, 29109),

Gene: Phantasmagoria\_44 Start: 39441, Stop: 39235, Start Num: 55  
Candidate Starts for Phantasmagoria\_44:  
(Start: 55 @39441 has 29 MA's), (Start: 73 @39414 has 3 MA's), (75, 39411), (86, 39357), (93, 39324),

Gene: Phelemich\_43 Start: 39919, Stop: 39710, Start Num: 61  
Candidate Starts for Phelemich\_43:  
(17, 40027), (Start: 61 @39919 has 13 MA's), (Start: 72 @39904 has 21 MA's), (83, 39859),

Gene: Phistory\_39 Start: 29860, Stop: 29666, Start Num: 80  
Candidate Starts for Phistory\_39:  
(Start: 63 @29902 has 36 MA's), (Start: 80 @29860 has 4 MA's), (84, 29839), (92, 29797), (97, 29749),

Gene: PhluffyCoco\_26 Start: 18717, Stop: 18502, Start Num: 72  
Candidate Starts for PhluffyCoco\_26:  
(Start: 72 @18717 has 21 MA's),

Gene: Pine5\_39 Start: 32324, Stop: 32103, Start Num: 62  
Candidate Starts for Pine5\_39:  
(Start: 62 @32324 has 13 MA's), (77, 32294), (Start: 80 @32279 has 4 MA's), (94, 32210),

Gene: Polka\_26 Start: 18904, Stop: 18683, Start Num: 72  
Candidate Starts for Polka\_26:  
(Start: 72 @18904 has 21 MA's),

Gene: Polly\_32 Start: 28797, Stop: 28561, Start Num: 63  
Candidate Starts for Polly\_32:  
(Start: 63 @28797 has 36 MA's), (Start: 80 @28755 has 4 MA's), (84, 28734), (92, 28692), (97, 28644),  
(109, 28572),

Gene: Pollywog\_25 Start: 25545, Stop: 25366, Start Num: 66  
Candidate Starts for Pollywog\_25:  
(Start: 50 @25569 has 2 MA's), (Start: 66 @25545 has 12 MA's), (Start: 72 @25539 has 21 MA's),  
(Start: 80 @25512 has 4 MA's), (85, 25479), (103, 25383),

Gene: Purky\_30 Start: 26584, Stop: 26351, Start Num: 66  
Candidate Starts for Purky\_30:

(28, 26659), (30, 26656), (34, 26650), (58, 26593), (Start: 66 @26584 has 12 MA's), (77, 26560), (86, 26512), (97, 26434), (100, 26419),

Gene: Purky\_36 Start: 28450, Stop: 28653, Start Num: 50

Candidate Starts for Purky\_36:

(Start: 50 @28450 has 2 MA's), (56, 28462), (Start: 72 @28480 has 21 MA's), (93, 28588), (95, 28600),

Gene: Qyrzula\_41 Start: 39560, Stop: 39381, Start Num: 73

Candidate Starts for Qyrzula\_41:

(Start: 55 @39587 has 29 MA's), (Start: 73 @39560 has 3 MA's), (75, 39557), (86, 39503), (93, 39470),

Gene: REQ2\_31 Start: 26798, Stop: 26559, Start Num: 50

Candidate Starts for REQ2\_31:

(5, 27161), (21, 26879), (23, 26873), (Start: 50 @26798 has 2 MA's), (91, 26669), (101, 26624),

Gene: RavenCo17\_36 Start: 30180, Stop: 29944, Start Num: 63

Candidate Starts for RavenCo17\_36:

(Start: 63 @30180 has 36 MA's), (Start: 80 @30138 has 4 MA's), (84, 30117), (92, 30075), (97, 30027),

Gene: RayTheFireFly\_38 Start: 29870, Stop: 29667, Start Num: 78

Candidate Starts for RayTheFireFly\_38:

(Start: 63 @29903 has 36 MA's), (Start: 78 @29870 has 1 MA's), (84, 29840), (90, 29807), (92, 29798), (97, 29750),

Gene: RedFox\_26 Start: 18732, Stop: 18517, Start Num: 72

Candidate Starts for RedFox\_26:

(Start: 72 @18732 has 21 MA's),

Gene: Rem711\_6 Start: 3521, Stop: 3279, Start Num: 59

Candidate Starts for Rem711\_6:

(9, 3722), (27, 3584), (Start: 59 @3521 has 2 MA's), (86, 3443), (92, 3413), (95, 3398), (96, 3380),

Gene: Reprobate\_44 Start: 39924, Stop: 39715, Start Num: 61

Candidate Starts for Reprobate\_44:

(17, 40032), (Start: 61 @39924 has 13 MA's), (Start: 72 @39909 has 21 MA's), (83, 39864),

Gene: Rhinoforte\_44 Start: 39550, Stop: 39344, Start Num: 55

Candidate Starts for Rhinoforte\_44:

(Start: 55 @39550 has 29 MA's), (Start: 73 @39523 has 3 MA's), (75, 39520), (86, 39466), (93, 39433),

Gene: Rinkes\_44 Start: 40426, Stop: 40223, Start Num: 61

Candidate Starts for Rinkes\_44:

(Start: 61 @40426 has 13 MA's), (83, 40363),

Gene: Rita130\_44 Start: 39651, Stop: 39442, Start Num: 61

Candidate Starts for Rita130\_44:

(16, 39765), (17, 39759), (Start: 61 @39651 has 13 MA's), (Start: 72 @39636 has 21 MA's), (77, 39624), (83, 39591),

Gene: Rosebush\_43 Start: 39530, Stop: 39351, Start Num: 73

Candidate Starts for Rosebush\_43:

(Start: 55 @39557 has 29 MA's), (Start: 73 @39530 has 3 MA's), (75, 39527), (86, 39473), (93, 39440),



Gene: Sabella\_43 Start: 39434, Stop: 39228, Start Num: 55  
Candidate Starts for Sabella\_43:  
(Start: 55 @39434 has 29 MA's), (Start: 73 @39407 has 3 MA's), (75, 39404), (86, 39350), (93, 39317),

Gene: Saguaro\_45 Start: 40648, Stop: 40445, Start Num: 61  
Candidate Starts for Saguaro\_45:  
(18, 40756), (Start: 61 @40648 has 13 MA's), (83, 40585), (85, 40576), (92, 40537),

Gene: Sahara\_29 Start: 25333, Stop: 25133, Start Num: 62  
Candidate Starts for Sahara\_29:  
(Start: 62 @25333 has 13 MA's), (77, 25312), (Start: 80 @25297 has 4 MA's), (82, 25285), (89, 25249),

Gene: Savage\_30 Start: 25663, Stop: 25463, Start Num: 62  
Candidate Starts for Savage\_30:  
(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Sbash\_32 Start: 28849, Stop: 28601, Start Num: 66  
Candidate Starts for Sbash\_32:  
(28, 28924), (30, 28921), (34, 28915), (58, 28858), (Start: 66 @28849 has 12 MA's), (77, 28825), (97, 28699), (100, 28684), (111, 28609),

Gene: Shambre1\_30 Start: 22778, Stop: 22578, Start Num: 65  
Candidate Starts for Shambre1\_30:  
(Start: 65 @22778 has 3 MA's), (108, 22595),

Gene: Shatter\_38 Start: 32837, Stop: 32601, Start Num: 37  
Candidate Starts for Shatter\_38:  
(36, 32840), (Start: 37 @32837 has 4 MA's), (46, 32816), (51, 32810), (Start: 71 @32786 has 1 MA's), (75, 32780), (93, 32690),

Gene: ShawBrad\_38 Start: 29124, Stop: 28888, Start Num: 63  
Candidate Starts for ShawBrad\_38:  
(Start: 63 @29124 has 36 MA's), (Start: 80 @29082 has 4 MA's), (84, 29061), (92, 29019), (97, 28971),

Gene: Shenyu\_43 Start: 39713, Stop: 39504, Start Num: 61  
Candidate Starts for Shenyu\_43:  
(17, 39821), (Start: 61 @39713 has 13 MA's), (Start: 72 @39698 has 21 MA's), (77, 39686),

Gene: ShroomBoi\_22 Start: 24354, Stop: 24175, Start Num: 66  
Candidate Starts for ShroomBoi\_22:  
(Start: 50 @24378 has 2 MA's), (Start: 66 @24354 has 12 MA's), (Start: 72 @24348 has 21 MA's), (77, 24336), (Start: 80 @24321 has 4 MA's), (85, 24288), (103, 24192),

Gene: SirJeffery\_44 Start: 39650, Stop: 39441, Start Num: 61  
Candidate Starts for SirJeffery\_44:  
(16, 39764), (17, 39758), (Start: 61 @39650 has 13 MA's), (Start: 72 @39635 has 21 MA's), (77, 39623), (83, 39590),

Gene: Sisko\_38 Start: 33610, Stop: 33383, Start Num: 40  
Candidate Starts for Sisko\_38:  
(Start: 40 @33610 has 5 MA's), (88, 33493), (104, 33424),

Gene: Sleepyhead\_33 Start: 26741, Stop: 26493, Start Num: 63

Candidate Starts for Sleepyhead\_33:  
(32, 26798), (Start: 63 @26741 has 36 MA's), (Start: 73 @26723 has 3 MA's), (89, 26651), (92, 26636),

Gene: Sonali\_32 Start: 30335, Stop: 30120, Start Num: 61  
Candidate Starts for Sonali\_32:  
(Start: 61 @30335 has 13 MA's),

Gene: Sour\_43 Start: 37566, Stop: 37306, Start Num: 41  
Candidate Starts for Sour\_43:  
(Start: 41 @37566 has 1 MA's), (75, 37515),

Gene: Spooky\_39 Start: 29741, Stop: 29508, Start Num: 65  
Candidate Starts for Spooky\_39:  
(35, 29801), (46, 29771), (Start: 65 @29741 has 3 MA's), (67, 29738), (74, 29723), (106, 29549), (107, 29543),

Gene: Sproutie\_30 Start: 25663, Stop: 25463, Start Num: 62  
Candidate Starts for Sproutie\_30:  
(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Squiddly\_40 Start: 31125, Stop: 30892, Start Num: 65  
Candidate Starts for Squiddly\_40:  
(35, 31185), (46, 31155), (Start: 65 @31125 has 3 MA's), (67, 31122), (74, 31107), (106, 30933), (107, 30927),

Gene: Stinger\_39 Start: 37776, Stop: 37570, Start Num: 54  
Candidate Starts for Stinger\_39:  
(Start: 54 @37776 has 8 MA's), (Start: 72 @37755 has 21 MA's), (75, 37749), (Start: 80 @37728 has 4 MA's), (83, 37710), (86, 37692), (92, 37662), (93, 37659), (94, 37656),

Gene: StinkyVeggy\_45 Start: 39790, Stop: 39581, Start Num: 61  
Candidate Starts for StinkyVeggy\_45:  
(17, 39898), (Start: 61 @39790 has 13 MA's), (Start: 72 @39775 has 21 MA's), (77, 39763),

Gene: StuartMinion\_25 Start: 18294, Stop: 18103, Start Num: 72  
Candidate Starts for StuartMinion\_25:  
(8, 18519), (12, 18441), (13, 18429), (64, 18306), (Start: 72 @18294 has 21 MA's),

Gene: Suigeneris\_44 Start: 39653, Stop: 39444, Start Num: 61  
Candidate Starts for Suigeneris\_44:  
(16, 39767), (17, 39761), (Start: 61 @39653 has 13 MA's), (Start: 72 @39638 has 21 MA's), (77, 39626), (83, 39593),

Gene: Sunshine23\_32 Start: 29942, Stop: 29730, Start Num: 61  
Candidate Starts for Sunshine23\_32:  
(Start: 61 @29942 has 13 MA's),

Gene: Suscepit\_35 Start: 29355, Stop: 29119, Start Num: 63  
Candidate Starts for Suscepit\_35:  
(Start: 63 @29355 has 36 MA's), (Start: 80 @29313 has 4 MA's), (84, 29292), (92, 29250), (97, 29202), (109, 29130),

Gene: TA17A\_44 Start: 39424, Stop: 39218, Start Num: 55

Candidate Starts for TA17A\_44:

(Start: 55 @39424 has 29 MA's), (Start: 73 @39397 has 3 MA's), (75, 39394), (86, 39340), (93, 39307),

Gene: TaylorSipt\_26 Start: 18969, Stop: 18775, Start Num: 72

Candidate Starts for TaylorSipt\_26:

(Start: 72 @18969 has 21 MA's),

Gene: Tayonia\_35 Start: 29354, Stop: 29118, Start Num: 63

Candidate Starts for Tayonia\_35:

(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201), (109, 29129),

Gene: ThetaBob\_24 Start: 24665, Stop: 24492, Start Num: 72

Candidate Starts for ThetaBob\_24:

(Start: 50 @24695 has 2 MA's), (Start: 66 @24671 has 12 MA's), (Start: 72 @24665 has 21 MA's), (Start: 80 @24638 has 4 MA's), (85, 24605), (103, 24509),

Gene: Thonko\_43 Start: 36961, Stop: 36752, Start Num: 59

Candidate Starts for Thonko\_43:

(11, 37108), (22, 37054), (Start: 59 @36961 has 2 MA's), (77, 36931), (89, 36865),

Gene: TimTam\_34 Start: 29521, Stop: 29285, Start Num: 63

Candidate Starts for TimTam\_34:

(Start: 63 @29521 has 36 MA's), (Start: 80 @29479 has 4 MA's), (92, 29416), (97, 29368), (99, 29356),

Gene: Tinciduntolum\_45 Start: 39562, Stop: 39356, Start Num: 55

Candidate Starts for Tinciduntolum\_45:

(Start: 55 @39562 has 29 MA's), (Start: 73 @39535 has 3 MA's), (75, 39532), (86, 39478), (93, 39445),

Gene: Tres\_44 Start: 39437, Stop: 39231, Start Num: 55

Candidate Starts for Tres\_44:

(Start: 55 @39437 has 29 MA's), (Start: 73 @39410 has 3 MA's), (75, 39407), (86, 39353), (93, 39320),

Gene: Trumpet\_35 Start: 29355, Stop: 29119, Start Num: 63

Candidate Starts for Trumpet\_35:

(Start: 63 @29355 has 36 MA's), (Start: 80 @29313 has 4 MA's), (84, 29292), (92, 29250), (97, 29202), (109, 29130),

Gene: TuertoX\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for TuertoX\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Vasanti\_31 Start: 26204, Stop: 25965, Start Num: 62

Candidate Starts for Vasanti\_31:

(Start: 62 @26204 has 13 MA's), (77, 26183), (Start: 80 @26168 has 4 MA's), (82, 26156), (89, 26120), (112, 25973),

Gene: Vic9\_44 Start: 39943, Stop: 39737, Start Num: 55

Candidate Starts for Vic9\_44:

(Start: 55 @39943 has 29 MA's), (Start: 73 @39916 has 3 MA's), (86, 39859), (93, 39826),

Gene: Vincenzo\_41 Start: 39951, Stop: 39745, Start Num: 54

Candidate Starts for Vincenzo\_41:

(Start: 54 @39951 has 8 MA's), (Start: 72 @39930 has 21 MA's), (75, 39924), (Start: 80 @39903 has 4 MA's), (83, 39885), (85, 39876), (86, 39867), (92, 39837), (93, 39834), (94, 39831),

Gene: Vulpecula\_25 Start: 19383, Stop: 19186, Start Num: 68

Candidate Starts for Vulpecula\_25:

(Start: 68 @19383 has 4 MA's),

Gene: West99\_44 Start: 39557, Stop: 39351, Start Num: 55

Candidate Starts for West99\_44:

(Start: 55 @39557 has 29 MA's), (Start: 73 @39530 has 3 MA's), (75, 39527), (86, 39473), (93, 39440),

Gene: Whack\_33 Start: 28160, Stop: 27924, Start Num: 63

Candidate Starts for Whack\_33:

(45, 28187), (Start: 63 @28160 has 36 MA's), (95, 28040),

Gene: Whiteclaw\_30 Start: 25663, Stop: 25463, Start Num: 62

Candidate Starts for Whiteclaw\_30:

(Start: 62 @25663 has 13 MA's), (77, 25642), (Start: 80 @25627 has 4 MA's), (82, 25615), (89, 25579),

Gene: Whitney\_42 Start: 32542, Stop: 32306, Start Num: 63

Candidate Starts for Whitney\_42:

(Start: 63 @32542 has 36 MA's), (Start: 80 @32500 has 4 MA's), (84, 32479), (92, 32437), (97, 32389),

Gene: Wooper\_40 Start: 34857, Stop: 34591, Start Num: 38

Candidate Starts for Wooper\_40:

(24, 34902), (25, 34893), (Start: 38 @34857 has 7 MA's), (Start: 71 @34809 has 1 MA's), (Start: 72 @34806 has 21 MA's), (77, 34797), (87, 34737), (94, 34710),

Gene: Yago84\_38 Start: 33684, Stop: 33457, Start Num: 40

Candidate Starts for Yago84\_38:

(Start: 40 @33684 has 5 MA's), (88, 33567), (104, 33498),

Gene: Yeshua\_40 Start: 34834, Stop: 34568, Start Num: 38

Candidate Starts for Yeshua\_40:

(24, 34879), (25, 34870), (Start: 38 @34834 has 7 MA's), (Start: 71 @34786 has 1 MA's), (Start: 72 @34783 has 21 MA's), (77, 34774), (87, 34714), (94, 34687),

Gene: Yoshi\_28 Start: 24080, Stop: 23901, Start Num: 66

Candidate Starts for Yoshi\_28:

(Start: 50 @24104 has 2 MA's), (Start: 66 @24080 has 12 MA's), (Start: 72 @24074 has 21 MA's), (Start: 80 @24047 has 4 MA's), (85, 24014), (103, 23918),

Gene: Zameen\_35 Start: 29354, Stop: 29118, Start Num: 63

Candidate Starts for Zameen\_35:

(Start: 63 @29354 has 36 MA's), (Start: 80 @29312 has 4 MA's), (84, 29291), (92, 29249), (97, 29201), (109, 29129),

Gene: Zenteno07\_48 Start: 38553, Stop: 38338, Start Num: 54

Candidate Starts for Zenteno07\_48:

(Start: 54 @38553 has 8 MA's), (Start: 72 @38529 has 21 MA's), (85, 38475), (105, 38379),

Gene: phiAsp2\_39 Start: 33131, Stop: 33403, Start Num: 29

Candidate Starts for phiAsp2\_39:

(19, 33095), (29, 33131), (39, 33155), (69, 33191), (84, 33251), (98, 33317), (110, 33392),