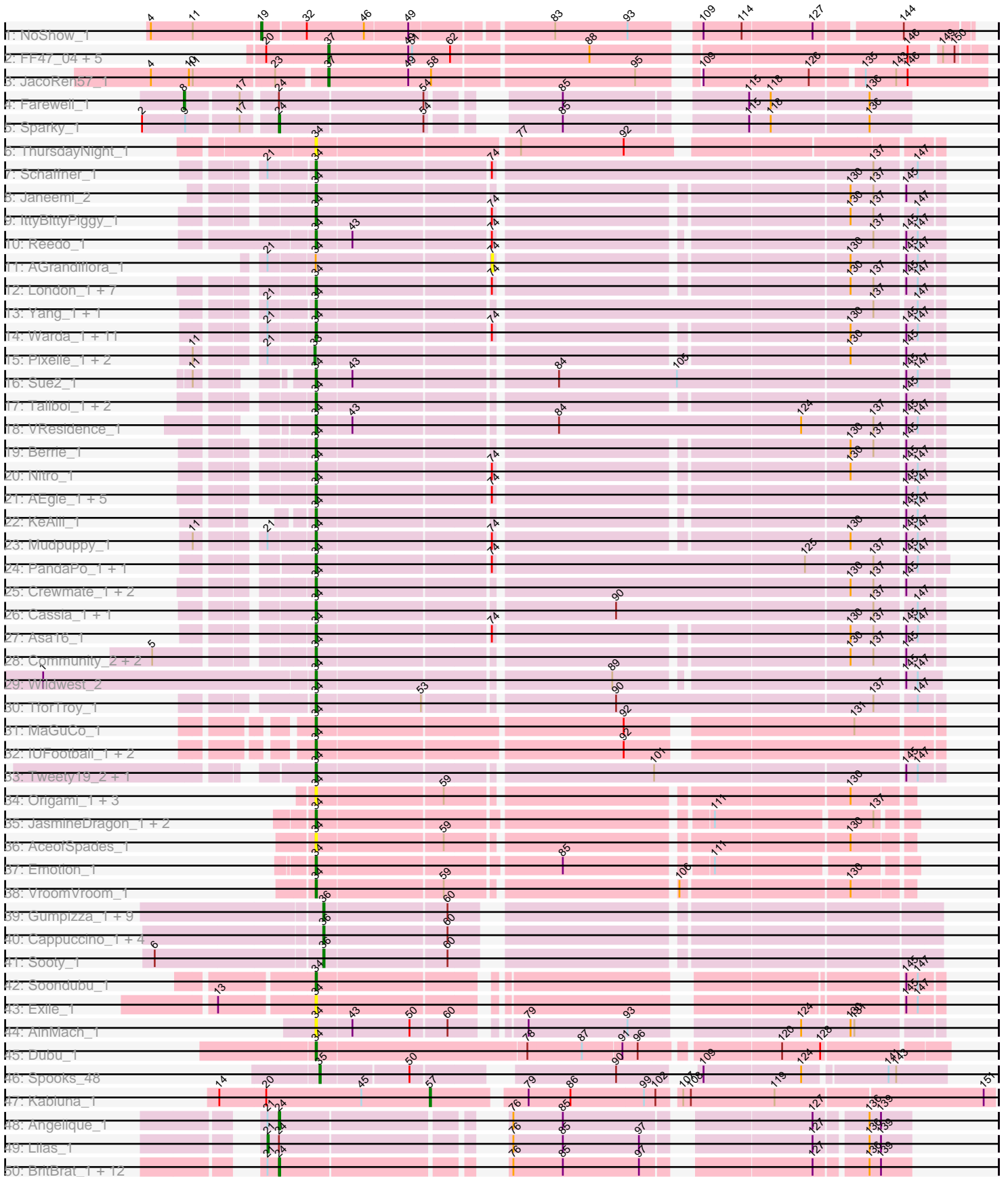
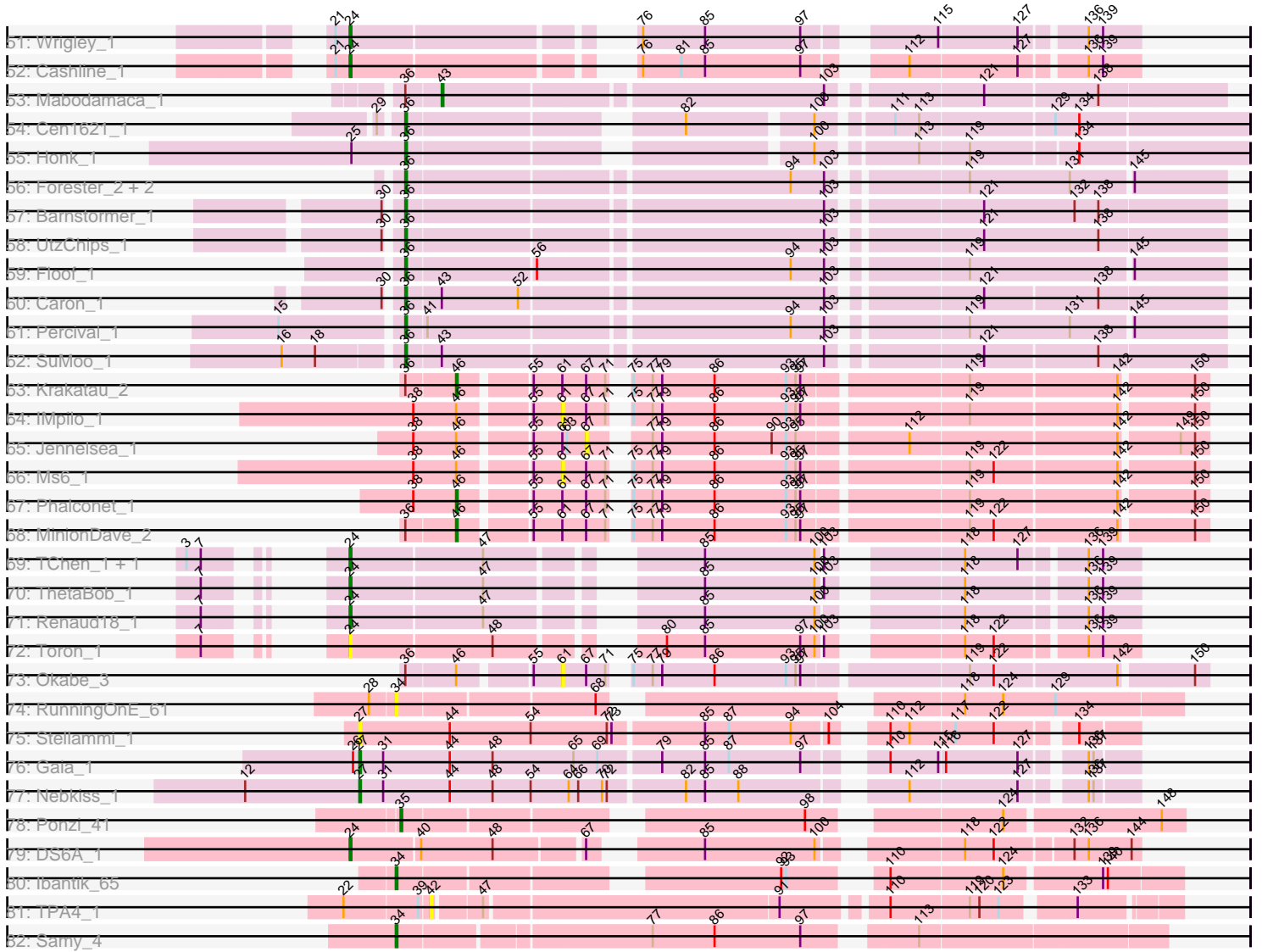


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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. 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 296305 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296305 has 157 members, 35 are drafts.

Phages represented in each track:

- Track 1 : NoShow\_1
- Track 2 : FF47\_04, Muddy\_4, LongHai\_5, 8UZL\_4, Maco6\_2, Salvus\_5
- Track 3 : JacoRen57\_1
- Track 4 : Farewell\_1
- Track 5 : Sparky\_1
- Track 6 : ThursdayNight\_1
- Track 7 : Schaffner\_1
- Track 8 : Janeemi\_2
- Track 9 : IttyBittyPiggy\_1
- Track 10 : Reedo\_1
- Track 11 : AGrandiflora\_1
- Track 12 : London\_1, Eraser\_1, Subaru\_1, Elezi\_1, Lizalica\_1, Skelbel\_1, Niobe\_1, Jstan\_1
- Track 13 : Yang\_1, JuneStar\_1
- Track 14 : Warda\_1, Cyan\_1, YesChef\_1, Flutur\_1, Tbone\_1, JohnDoe\_1, Kaylissa\_1, Tutumahutu\_1, Simpson\_1, Lego\_1, Powerpuff\_1, Joemato\_1
- Track 15 : Pixelle\_1, Amyev\_1, Tian\_1
- Track 16 : Sue2\_1
- Track 17 : Tallboi\_1, ObiToo\_1, DrSierra\_1
- Track 18 : VResidence\_1
- Track 19 : Berrie\_1
- Track 20 : Nitro\_1
- Track 21 : AEgle\_1, DrManhattan\_1, Amploria\_1, Adolin\_1, Turab\_1, Adumb2043\_1
- Track 22 : KeAlii\_1
- Track 23 : Mudpuppy\_1
- Track 24 : PandaPo\_1, MissSwiss\_1
- Track 25 : Crewmate\_1, Iter\_1, Ascela\_1
- Track 26 : Cassia\_1, Pumpkins\_1
- Track 27 : Asa16\_1
- Track 28 : Community\_2, Phives\_2, Tuck\_2
- Track 29 : Wildwest\_2
- Track 30 : TforTroy\_1
- Track 31 : MaGuCo\_1
- Track 32 : IUFootball\_1, Liebe\_1, Maureen\_1
- Track 33 : Tweety19\_2, Snek\_2
- Track 34 : Origami\_1, FiveHead\_1, JohnThicc\_1, LadyAstra\_1
- Track 35 : JasmineDragon\_1, ShakeltOph\_1, MiniMommy\_1

- Track 36 : AceofSpades\_1
- Track 37 : Emotion\_1
- Track 38 : VroomVroom\_1
- Track 39 : Gumpizza\_1, Giorgio\_1, Moss\_1, Mysterium\_1, Halsey\_1, Beaupre\_1, Stuu\_1, Ashes\_1, RockScotty\_1, SpecialK\_1
- Track 40 : Cappuccino\_1, Sabourin\_1, Gambol\_1, Donkey\_1, Kalimba\_1
- Track 41 : Sooty\_1
- Track 42 : Soondubu\_1
- Track 43 : Exile\_1
- Track 44 : AinMach\_1
- Track 45 : Dubu\_1
- Track 46 : Spooks\_48
- Track 47 : Kabluna\_1
- Track 48 : Angelique\_1
- Track 49 : Lilas\_1
- Track 50 : BritBrat\_1, Marteena\_1, EnalisNailo\_1, Jablanski\_1, Posh\_1, BeeGee\_1, Confidence\_1, EMsquaredA\_1, LonelyBoi\_1, Floral\_1, Pytheas\_1, Pollux\_1, Bradissa\_1
- Track 51 : Wrigley\_1
- Track 52 : Cashline\_1
- Track 53 : Mabodamaca\_1
- Track 54 : Cen1621\_1
- Track 55 : Honk\_1
- Track 56 : Forester\_2, Gretchen\_1, SuperHands\_1
- Track 57 : Barnstormer\_1
- Track 58 : UtzChips\_1
- Track 59 : Floof\_1
- Track 60 : Caron\_1
- Track 61 : Percival\_1
- Track 62 : SuMoo\_1
- Track 63 : Krakatau\_2
- Track 64 : IMpilo\_1
- Track 65 : Jennelsea\_1
- Track 66 : Ms6\_1
- Track 67 : Phalconet\_1
- Track 68 : MinionDave\_2
- Track 69 : TChen\_1, LunaStella\_1
- Track 70 : ThetaBob\_1
- Track 71 : Renaud18\_1
- Track 72 : Toron\_1
- Track 73 : Okabe\_3
- Track 74 : RunningOnE\_61
- Track 75 : Stellammi\_1
- Track 76 : Gaia\_1
- Track 77 : Nebkiss\_1
- Track 78 : Ponzi\_41
- Track 79 : DS6A\_1
- Track 80 : Ibantik\_65
- Track 81 : TPA4\_1
- Track 82 : Samy\_4

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

The start number called the most often in the published annotations is 34, it was called in 58 of the 122 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle\_1, AceofSpades\_1, Adolin\_1, Adumb2043\_1, AinMach\_1, Amploria\_1, Asa16\_1, Ascela\_1, Berrie\_1, Cassia\_1, Community\_2, Crewmate\_1, Cyan\_1, DrManhattan\_1, DrSierra\_1, Dubu\_1, Elezi\_1, Emotion\_1, Eraser\_1, Exile\_1, FiveHead\_1, Flutur\_1, IUFootball\_1, Ibantik\_65, Iter\_1, IttyBittyPiggy\_1, Janeemi\_2, JasmineDragon\_1, Joemato\_1, JohnDoe\_1, JohnThicc\_1, Jstan\_1, JuneStar\_1, Kaylissa\_1, KeAlii\_1, LadyAstra\_1, Lego\_1, Liebe\_1, Lizalica\_1, London\_1, MaGuCo\_1, Maureen\_1, MiniMommy\_1, MissSwiss\_1, Mudpuppy\_1, Niobe\_1, Nitro\_1, ObiToo\_1, Origami\_1, PandaPo\_1, Phives\_2, Powerpuff\_1, Pumpkins\_1, Reedo\_1, RunningOnE\_61, Samy\_4, Schaffner\_1, ShakeltOph\_1, Simpson\_1, Skelbel\_1, Snek\_2, Soondubu\_1, Subaru\_1, Sue2\_1, Tallboi\_1, Tbone\_1, TforTroy\_1, ThursdayNight\_1, Tuck\_2, Turab\_1, Tutumahutu\_1, Tweety19\_2, VResidence\_1, VroomVroom\_1, Warda\_1, Wildwest\_2, Yang\_1, YesChef\_1,

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

- AGrandiflora\_1,

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

- 8UZL\_4, Amyev\_1, Angelique\_1, Ashes\_1, Barnstormer\_1, Beaupre\_1, BeeGee\_1, Bradissa\_1, BritBrat\_1, Cappuccino\_1, Caron\_1, Cashline\_1, Cen1621\_1, Confidence\_1, DS6A\_1, Donkey\_1, EMSquaredA\_1, EnalisNailo\_1, FF47\_04, Farewell\_1, Floof\_1, Floral\_1, Forester\_2, Gaia\_1, Gambol\_1, Giorgio\_1, Gretchen\_1, Gumpizza\_1, Halsey\_1, Honk\_1, IMpilo\_1, Jablanski\_1, JacoRen57\_1, Jennelsea\_1, Kabluna\_1, Kalimba\_1, Krakatau\_2, Lilas\_1, LonelyBoi\_1, LongHai\_5, LunaStella\_1, Mabodamaca\_1, Maco6\_2, Marteenaa\_1, MinionDave\_2, Moss\_1, Ms6\_1, Muddy\_4, Mysterium\_1, Nebkiss\_1, NoShow\_1, Okabe\_3, Percival\_1, Phalconet\_1, Pixelle\_1, Pollux\_1, Ponzi\_41, Posh\_1, Pytheas\_1, Renaud18\_1, RockScotty\_1, Sabourin\_1, Salvus\_5, Sooty\_1, Sparky\_1, SpecialK\_1, Spooks\_48, Stellammi\_1, Stuu\_1, SuMoo\_1, SuperHands\_1, TChen\_1, TPA4\_1, ThetaBob\_1, Tian\_1, Toron\_1, UtzChips\_1, Wrigley\_1,

### **Summary by start number:**

Start 8:

- Found in 1 of 157 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell\_1 (AF),

Start 19:

- Found in 1 of 157 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoShow\_1 (AB),

Start 21:

- Found in 37 of 157 ( 23.6% ) of genes in pham

- Manual Annotations of this start: 1 of 122
- Called 2.7% of time when present
- Phage (with cluster) where this start called: Lilas\_1 (CY1),

#### Start 24:

- Found in 25 of 157 ( 15.9% ) of genes in pham
- Manual Annotations of this start: 22 of 122
- Called 92.0% of time when present
- Phage (with cluster) where this start called: Angelique\_1 (CY1), BeeGee\_1 (CY5), Bradissa\_1 (CY1), BritBrat\_1 (CY2), Cashline\_1 (CY6), Confidence\_1 (CY1), DS6A\_1 (singleton), EMSquaredA\_1 (CY1), EnalisNailo\_1 (CY1), Floral\_1 (CY1), Jablanski\_1 (CY3), LonelyBoi\_1 (CY7), LunaStella\_1 (F4), Marteena\_1 (CY1), Pollux\_1 (CY1), Posh\_1 (CY4), Pytheas\_1 (CY3), Renaud18\_1 (F4), Sparky\_1 (AF), TChen\_1 (F4), ThetaBob\_1 (F4), Toron\_1 (F6), Wrigley\_1 (CY4),

#### Start 27:

- Found in 3 of 157 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia\_1 (X), Nebkiss\_1 (X), Stellammi\_1 (UNK),

#### Start 33:

- Found in 3 of 157 ( 1.9% ) of genes in pham
- Manual Annotations of this start: 2 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev\_1 (AZ1), Pixelle\_1 (AZ1), Tian\_1 (AZ1),

#### Start 34:

- Found in 79 of 157 ( 50.3% ) of genes in pham
- Manual Annotations of this start: 58 of 122
- Called 98.7% of time when present
- Phage (with cluster) where this start called: AEgle\_1 (AZ1), AceofSpades\_1 (AZ4), Adolin\_1 (AZ1), Adumb2043\_1 (AZ1), AinMach\_1 (AZ7), Amploria\_1 (AZ1), Asa16\_1 (AZ1), Ascela\_1 (AZ1), Berrie\_1 (AZ1), Cassia\_1 (AZ1), Community\_2 (AZ1), Crewmate\_1 (AZ1), Cyan\_1 (AZ1), DrManhattan\_1 (AZ1), DrSierra\_1 (AZ1), Dubu\_1 (BJ), Elezi\_1 (AZ1), Emotion\_1 (AZ4), Eraser\_1 (AZ1), Exile\_1 (AZ6), FiveHead\_1 (AZ4), Flutur\_1 (AZ), IUFootball\_1 (AZ2), Ibantik\_65 (singleton), Iter\_1 (AZ1), IttyBittyPiggy\_1 (AZ1), Janeemi\_2 (AZ1), JasmineDragon\_1 (AZ4), Joemato\_1 (AZ1), JohnDoe\_1 (AZ1), JohnThicc\_1 (AZ4), Jstan\_1 (AZ1), JuneStar\_1 (AZ1), Kaylissa\_1 (AZ1), KeAlii\_1 (AZ1), LadyAstra\_1 (AZ4), Lego\_1 (AZ1), Liebe\_1 (AZ2), Lizalica\_1 (AZ1), London\_1 (AZ1), MaGuCo\_1 (AZ2), Maureen\_1 (AZ2), MiniMommy\_1 (AZ4), MissSwiss\_1 (AZ1), Mudpuppy\_1 (AZ1), Niobe\_1 (AZ1), Nitro\_1 (AZ1), ObiToo\_1 (AZ1), Origami\_1 (AZ4), PandaPo\_1 (AZ1), Phives\_2 (AZ1), Powerpuff\_1 (AZ1), Pumpkins\_1 (AZ1), Reedo\_1 (AZ1), RunningOnE\_61 (UNK), Samy\_4 (singleton), Schaffner\_1 (AZ1), ShakeltOph\_1 (AZ4), Simpson\_1 (AZ1), Skelbel\_1 (AZ1), Snek\_2 (AZ3), Soondubu\_1 (AZ6), Subaru\_1 (AZ1), Sue2\_1 (AZ1), Tallboi\_1 (AZ1), Tbone\_1 (AZ1), TforTroy\_1 (AZ1), ThursdayNight\_1 (AZ), Tuck\_2 (AZ1), Turab\_1 (AZ1), Tutumahutu\_1 (AZ1), Tweety19\_2 (AZ3), VResidence\_1 (AZ1), VroomVroom\_1 (AZ4), Warda\_1 (AZ1), Wildwest\_2 (AZ1), Yang\_1 (AZ1), YesChef\_1 (AZ1),

#### Start 35:

- Found in 2 of 157 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ponzi\_41 (singleton), Spooks\_48 (BT),

#### Start 36:

- Found in 31 of 157 ( 19.7% ) of genes in pham
- Manual Annotations of this start: 25 of 122
- Called 87.1% of time when present
- Phage (with cluster) where this start called: Ashes\_1 (AZ5), Barnstormer\_1 (EH), Beaupre\_1 (AZ5), Cappuccino\_1 (AZ5), Caron\_1 (EH), Cen1621\_1 (EH), Donkey\_1 (AZ5), Floof\_1 (EH), Forester\_2 (EH), Gambol\_1 (AZ5), Giorgio\_1 (AZ5), Gretchen\_1 (EH), Gumpizza\_1 (AZ5), Halsey\_1 (AZ5), Honk\_1 (EH), Kalimba\_1 (AZ5), Moss\_1 (AZ5), Mysterium\_1 (AZ5), Percival\_1 (EH), RockScotty\_1 (AZ5), Sabourin\_1 (AZ5), Sooty\_1 (AZ5), SpecialK\_1 (AZ5), Stuu\_1 (AZ5), SuMoo\_1 (EH), SuperHands\_1 (EH), UtzChips\_1 (EH),

#### Start 37:

- Found in 7 of 157 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 3 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 8UZL\_4 (AB), FF47\_04 (AB), JacoRen57\_1 (AB), LongHai\_5 (AB), Maco6\_2 (AB), Muddy\_4 (AB), Salvus\_5 (AB),

#### Start 42:

- Found in 1 of 157 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4\_1 (singleton),

#### Start 43:

- Found in 7 of 157 ( 4.5% ) of genes in pham
- Manual Annotations of this start: 1 of 122
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Mabodamaca\_1 (EH),

#### Start 46:

- Found in 8 of 157 ( 5.1% ) of genes in pham
- Manual Annotations of this start: 3 of 122
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Krakatau\_2 (F1), MinionDave\_2 (F1), Phalconet\_1 (F1),

#### Start 57:

- Found in 1 of 157 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 122
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kabluna\_1 (CR2),

#### Start 61:

- Found in 7 of 157 ( 4.5% ) of genes in pham
- No Manual Annotations of this start.
- Called 42.9% of time when present

- Phage (with cluster) where this start called: IMpilo\_1 (F1), Ms6\_1 (F1), Okabe\_3 (F8),

Start 67:

- Found in 8 of 157 ( 5.1% ) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Jennelsea\_1 (F1),

Start 74:

- Found in 35 of 157 ( 22.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 2.9% of time when present
- Phage (with cluster) where this start called: AGrandiflora\_1 (AZ1),

### **Summary by clusters:**

There are 28 clusters represented in this pham: singleton, BJ, BT, CY6, UNK, CY4, CY3, CY2, CY1, AB, CY7, EH, CY5, AF, X, AZ, CR2, F1, F4, F6, F8, AZ1, AZ2, AZ3, AZ4, AZ5, AZ6, AZ7,

Info for manual annotations of cluster AB:

- Start number 19 was manually annotated 1 time for cluster AB.
- Start number 37 was manually annotated 3 times for cluster AB.

Info for manual annotations of cluster AF:

- Start number 8 was manually annotated 1 time for cluster AF.
- Start number 24 was manually annotated 1 time for cluster AF.

Info for manual annotations of cluster AZ1:

- Start number 33 was manually annotated 2 times for cluster AZ1.
- Start number 34 was manually annotated 44 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 34 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 34 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 34 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 36 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 34 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster BJ:

- Start number 34 was manually annotated 1 time for cluster BJ.



Info for manual annotations of cluster BT:

- Start number 35 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster CR2:

- Start number 57 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CY1:

- Start number 21 was manually annotated 1 time for cluster CY1.
- Start number 24 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 24 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:

- Start number 24 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:

- Start number 24 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:

- Start number 24 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:

- Start number 24 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:

- Start number 24 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster EH:

- Start number 36 was manually annotated 9 times for cluster EH.
- Start number 43 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster F1:

- Start number 46 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster F4:

- Start number 24 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster X:

- Start number 27 was manually annotated 2 times for cluster X.

### **Gene Information:**

Gene: 8UZL\_4 Start: 1322, Stop: 1795, Start Num: 37

Candidate Starts for 8UZL\_4:

(20, 1274), (Start: 37 @1322 has 3 MA's), (49, 1385), (51, 1388), (62, 1418), (88, 1520), (146, 1745), (149, 1766), (150, 1775),

Gene: AEgle\_1 Start: 85, Stop: 540, Start Num: 34  
Candidate Starts for AEgle\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (145, 511), (147, 520),

Gene: AGrandiflora\_1 Start: 213, Stop: 536, Start Num: 74  
Candidate Starts for AGrandiflora\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: AceofSpades\_1 Start: 132, Stop: 563, Start Num: 34  
Candidate Starts for AceofSpades\_1:  
(Start: 34 @132 has 58 MA's), (59, 228), (130, 519),

Gene: Adolin\_1 Start: 85, Stop: 537, Start Num: 34  
Candidate Starts for Adolin\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (145, 508), (147, 517),

Gene: Adumb2043\_1 Start: 85, Stop: 540, Start Num: 34  
Candidate Starts for Adumb2043\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (145, 511), (147, 520),

Gene: AinMach\_1 Start: 140, Stop: 574, Start Num: 34  
Candidate Starts for AinMach\_1:  
(Start: 34 @140 has 58 MA's), (Start: 43 @167 has 1 MA's), (50, 212), (60, 239), (79, 281), (93, 359),  
(124, 473), (130, 509), (131, 512),

Gene: Amploria\_1 Start: 85, Stop: 540, Start Num: 34  
Candidate Starts for Amploria\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (145, 511), (147, 520),

Gene: Amyev\_1 Start: 84, Stop: 536, Start Num: 33  
Candidate Starts for Amyev\_1:  
(11, 12), (Start: 21 @54 has 1 MA's), (Start: 33 @84 has 2 MA's), (130, 471), (145, 510),

Gene: Angelique\_1 Start: 82, Stop: 504, Start Num: 24  
Candidate Starts for Angelique\_1:  
(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (127, 436), (136, 472),  
(139, 481),

Gene: Asa16\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for Asa16\_1:  
(Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (137, 489), (145, 510), (147, 519),

Gene: Ascela\_1 Start: 85, Stop: 537, Start Num: 34  
Candidate Starts for Ascela\_1:  
(Start: 34 @85 has 58 MA's), (130, 472), (137, 490), (145, 511),

Gene: Ashes\_1 Start: 139, Stop: 579, Start Num: 36  
Candidate Starts for Ashes\_1:  
(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Barnstormer\_1 Start: 114, Stop: 596, Start Num: 36  
Candidate Starts for Barnstormer\_1:  
(30, 108), (Start: 36 @114 has 25 MA's), (103, 363), (121, 447), (132, 504), (138, 519),

Gene: Beaupre\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for Beaupre\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: BeeGee\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for BeeGee\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Berrie\_1 Start: 83, Stop: 535, Start Num: 34

Candidate Starts for Berrie\_1:

(Start: 34 @83 has 58 MA's), (130, 470), (137, 488), (145, 509),

Gene: Bradissa\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Bradissa\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: BritBrat\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for BritBrat\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Cappuccino\_1 Start: 138, Stop: 578, Start Num: 36

Candidate Starts for Cappuccino\_1:

(Start: 36 @138 has 25 MA's), (60, 231),

Gene: Caron\_1 Start: 114, Stop: 593, Start Num: 36

Candidate Starts for Caron\_1:

(30, 108), (Start: 36 @114 has 25 MA's), (Start: 43 @135 has 1 MA's), (52, 183), (103, 363), (121, 447), (138, 516),

Gene: Cashline\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Cashline\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (81, 250), (85, 265), (97, 325), (112, 370), (127, 436), (136, 472), (139, 481),

Gene: Cassia\_1 Start: 86, Stop: 550, Start Num: 34

Candidate Starts for Cassia\_1:

(Start: 34 @86 has 58 MA's), (90, 305), (137, 503), (147, 533),

Gene: Cen1621\_1 Start: 100, Stop: 576, Start Num: 36

Candidate Starts for Cen1621\_1:

(29, 88), (Start: 36 @100 has 25 MA's), (82, 250), (100, 322), (111, 361), (113, 376), (129, 457), (134, 472),

Gene: Community\_2 Start: 1157, Stop: 1609, Start Num: 34

Candidate Starts for Community\_2:

(5, 1052), (Start: 34 @1157 has 58 MA's), (130, 1544), (137, 1562), (145, 1583),

Gene: Confidence\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Confidence\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Crewmate\_1 Start: 85, Stop: 549, Start Num: 34

Candidate Starts for Crewmate\_1:

(Start: 34 @85 has 58 MA's), (130, 484), (137, 502), (145, 523),

Gene: Cyan\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Cyan\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: DS6A\_1 Start: 246, Stop: 680, Start Num: 24

Candidate Starts for DS6A\_1:

(Start: 24 @246 has 22 MA's), (40, 288), (48, 333), (67, 384), (85, 435), (100, 504), (118, 576), (122, 594), (132, 639), (136, 648), (144, 675),

Gene: Donkey\_1 Start: 138, Stop: 578, Start Num: 36

Candidate Starts for Donkey\_1:

(Start: 36 @138 has 25 MA's), (60, 231),

Gene: DrManhattan\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for DrManhattan\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (145, 508), (147, 517),

Gene: DrSierra\_1 Start: 87, Stop: 551, Start Num: 34

Candidate Starts for DrSierra\_1:

(Start: 34 @87 has 58 MA's), (145, 525),

Gene: Dubu\_1 Start: 90, Stop: 557, Start Num: 34

Candidate Starts for Dubu\_1:

(Start: 34 @90 has 58 MA's), (78, 252), (87, 294), (91, 324), (96, 336), (120, 435), (128, 465),

Gene: EMSquaredA\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for EMSquaredA\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Elezi\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Elezi\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: Emotion\_1 Start: 130, Stop: 558, Start Num: 34

Candidate Starts for Emotion\_1:

(Start: 34 @130 has 58 MA's), (85, 310), (111, 415),

Gene: EnalisNailo\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for EnalisNailo\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Eraser\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Eraser\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: Exile\_1 Start: 140, Stop: 571, Start Num: 34  
Candidate Starts for Exile\_1:  
(13, 71), (Start: 34 @140 has 58 MA's), (145, 545), (147, 554),

Gene: FF47\_04 Start: 1302, Stop: 1775, Start Num: 37  
Candidate Starts for FF47\_04:  
(20, 1254), (Start: 37 @1302 has 3 MA's), (49, 1365), (51, 1368), (62, 1398), (88, 1500), (146, 1725),  
(149, 1746), (150, 1755),

Gene: Farewell\_1 Start: 34, Stop: 528, Start Num: 8  
Candidate Starts for Farewell\_1:  
(Start: 8 @34 has 1 MA's), (17, 73), (Start: 24 @97 has 22 MA's), (54, 208), (85, 280), (115, 406), (118,  
421), (136, 496),

Gene: FiveHead\_1 Start: 132, Stop: 563, Start Num: 34  
Candidate Starts for FiveHead\_1:  
(Start: 34 @132 has 58 MA's), (59, 228), (130, 519),

Gene: Floof\_1 Start: 122, Stop: 601, Start Num: 36  
Candidate Starts for Floof\_1:  
(Start: 36 @122 has 25 MA's), (56, 200), (94, 350), (103, 371), (119, 446), (145, 545),

Gene: Floral\_1 Start: 82, Stop: 504, Start Num: 24  
Candidate Starts for Floral\_1:  
(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436),  
(136, 472), (139, 481),

Gene: Flutur\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for Flutur\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Forester\_2 Start: 128, Stop: 607, Start Num: 36  
Candidate Starts for Forester\_2:  
(Start: 36 @128 has 25 MA's), (94, 356), (103, 377), (119, 452), (131, 515), (145, 551),

Gene: Gaia\_1 Start: 129, Stop: 578, Start Num: 27  
Candidate Starts for Gaia\_1:  
(26, 126), (Start: 27 @129 has 2 MA's), (31, 144), (44, 186), (48, 213), (65, 264), (69, 279), (79, 315),  
(85, 342), (87, 357), (97, 402), (110, 438), (115, 468), (116, 471), (127, 516), (136, 549), (137, 552),

Gene: Gambol\_1 Start: 138, Stop: 578, Start Num: 36  
Candidate Starts for Gambol\_1:  
(Start: 36 @138 has 25 MA's), (60, 231),

Gene: Giorgio\_1 Start: 139, Stop: 579, Start Num: 36  
Candidate Starts for Giorgio\_1:  
(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Gretchen\_1 Start: 128, Stop: 607, Start Num: 36  
Candidate Starts for Gretchen\_1:  
(Start: 36 @128 has 25 MA's), (94, 356), (103, 377), (119, 452), (131, 515), (145, 551),

Gene: Gumpizza\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for Gumpizza\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Halsey\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for Halsey\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Honk\_1 Start: 161, Stop: 634, Start Num: 36

Candidate Starts for Honk\_1:

(25, 128), (Start: 36 @161 has 25 MA's), (100, 383), (113, 437), (119, 467), (134, 530),

Gene: IMPilo\_1 Start: 194, Stop: 565, Start Num: 61

Candidate Starts for IMPilo\_1:

(38, 110), (Start: 46 @137 has 3 MA's), (55, 176), (61, 194), (67, 209), (71, 221), (75, 224), (77, 236), (79, 242), (86, 275), (93, 320), (95, 326), (97, 329), (119, 425), (142, 515), (150, 557),

Gene: IUFootball\_1 Start: 80, Stop: 535, Start Num: 34

Candidate Starts for IUFootball\_1:

(Start: 34 @80 has 58 MA's), (92, 311),

Gene: lbantik\_65 Start: 27614, Stop: 28042, Start Num: 34

Candidate Starts for lbantik\_65:

(Start: 34 @27614 has 58 MA's), (92, 27824), (93, 27827), (110, 27869), (124, 27938), (139, 27995), (140, 27998),

Gene: lter\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for lter\_1:

(Start: 34 @85 has 58 MA's), (130, 472), (137, 490), (145, 511),

Gene: IttyBittyPiggy\_1 Start: 86, Stop: 538, Start Num: 34

Candidate Starts for IttyBittyPiggy\_1:

(Start: 34 @86 has 58 MA's), (74, 215), (130, 473), (137, 491), (147, 521),

Gene: Jablanski\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Jablanski\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: JacoRen57\_1 Start: 190, Stop: 669, Start Num: 37

Candidate Starts for JacoRen57\_1:

(4, 61), (10, 91), (11, 94), (23, 154), (Start: 37 @190 has 3 MA's), (49, 253), (58, 271), (95, 424), (109, 457), (126, 538), (135, 574), (143, 598), (146, 607),

Gene: Janeemi\_2 Start: 1168, Stop: 1620, Start Num: 34

Candidate Starts for Janeemi\_2:

(Start: 34 @1168 has 58 MA's), (130, 1555), (137, 1573), (145, 1594),

Gene: JasmineDragon\_1 Start: 132, Stop: 560, Start Num: 34

Candidate Starts for JasmineDragon\_1:

(Start: 34 @132 has 58 MA's), (111, 417), (137, 534),

Gene: Jennelsea\_1 Start: 208, Stop: 564, Start Num: 67

Candidate Starts for Jennelsea\_1:

(38, 109), (Start: 46 @136 has 3 MA's), (55, 175), (61, 193), (63, 196), (67, 208), (77, 235), (79, 241), (86, 274), (90, 310), (93, 319), (95, 325), (112, 388), (142, 514), (149, 547), (150, 556),

Gene: Joemato\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Joemato\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: JohnDoe\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for JohnDoe\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: JohnThicc\_1 Start: 132, Stop: 563, Start Num: 34

Candidate Starts for JohnThicc\_1:

(Start: 34 @132 has 58 MA's), (59, 228), (130, 519),

Gene: Jstan\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Jstan\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: JuneStar\_1 Start: 84, Stop: 548, Start Num: 34

Candidate Starts for JuneStar\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (137, 501), (147, 531),

Gene: Kabluna\_1 Start: 289, Stop: 708, Start Num: 57

Candidate Starts for Kabluna\_1:

(14, 124), (20, 160), (45, 235), (Start: 57 @289 has 1 MA's), (79, 355), (86, 388), (99, 445), (102, 454), (107, 469), (108, 475), (119, 541), (151, 700),

Gene: Kalimba\_1 Start: 138, Stop: 578, Start Num: 36

Candidate Starts for Kalimba\_1:

(Start: 36 @138 has 25 MA's), (60, 231),

Gene: Kaylissa\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Kaylissa\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: KeAlii\_1 Start: 69, Stop: 521, Start Num: 34

Candidate Starts for KeAlii\_1:

(Start: 34 @69 has 58 MA's), (145, 492), (147, 501),

Gene: Krakatau\_2 Start: 784, Stop: 1212, Start Num: 46

Candidate Starts for Krakatau\_2:

(Start: 36 @754 has 25 MA's), (Start: 46 @784 has 3 MA's), (55, 823), (61, 841), (67, 856), (71, 868), (75, 871), (77, 883), (79, 889), (86, 922), (93, 967), (95, 973), (97, 976), (119, 1072), (142, 1162), (150, 1204),

Gene: LadyAstra\_1 Start: 132, Stop: 563, Start Num: 34

Candidate Starts for LadyAstra\_1:

(Start: 34 @132 has 58 MA's), (59, 228), (130, 519),

Gene: Lego\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Lego\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Liebe\_1 Start: 80, Stop: 535, Start Num: 34

Candidate Starts for Liebe\_1:

(Start: 34 @80 has 58 MA's), (92, 311),

Gene: Lilas\_1 Start: 73, Stop: 504, Start Num: 21

Candidate Starts for Lilas\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Lizalica\_1 Start: 85, Stop: 534, Start Num: 34

Candidate Starts for Lizalica\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 469), (137, 487), (145, 508), (147, 517),

Gene: London\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for London\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: LonelyBoi\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for LonelyBoi\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: LongHai\_5 Start: 1624, Stop: 2100, Start Num: 37

Candidate Starts for LongHai\_5:

(20, 1576), (Start: 37 @1624 has 3 MA's), (49, 1687), (51, 1690), (62, 1720), (88, 1822), (146, 2047), (149, 2068), (150, 2077),

Gene: LunaStella\_1 Start: 55, Stop: 477, Start Num: 24

Candidate Starts for LunaStella\_1:

(3, 7), (7, 16), (Start: 24 @55 has 22 MA's), (47, 136), (85, 238), (100, 307), (103, 310), (118, 376), (127, 409), (136, 445), (139, 454),

Gene: MaGuCo\_1 Start: 80, Stop: 535, Start Num: 34

Candidate Starts for MaGuCo\_1:

(Start: 34 @80 has 58 MA's), (92, 311), (131, 473),

Gene: Mabodamaca\_1 Start: 146, Stop: 604, Start Num: 43

Candidate Starts for Mabodamaca\_1:

(Start: 36 @125 has 25 MA's), (Start: 43 @146 has 1 MA's), (103, 374), (121, 458), (138, 527),

Gene: Maco6\_2 Start: 581, Stop: 1054, Start Num: 37

Candidate Starts for Maco6\_2:

(20, 533), (Start: 37 @581 has 3 MA's), (49, 644), (51, 647), (62, 677), (88, 779), (146, 1004), (149, 1025), (150, 1034),

Gene: Marteena\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Marteena\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Maureen\_1 Start: 80, Stop: 535, Start Num: 34



Candidate Starts for Maureen\_1:  
(Start: 34 @80 has 58 MA's), (92, 311),

Gene: MiniMommy\_1 Start: 132, Stop: 560, Start Num: 34  
Candidate Starts for MiniMommy\_1:  
(Start: 34 @132 has 58 MA's), (111, 417), (137, 534),

Gene: MinionDave\_2 Start: 784, Stop: 1212, Start Num: 46  
Candidate Starts for MinionDave\_2:  
(Start: 36 @754 has 25 MA's), (Start: 46 @784 has 3 MA's), (55, 823), (61, 841), (67, 856), (71, 868),  
(75, 871), (77, 883), (79, 889), (86, 922), (93, 967), (95, 973), (97, 976), (119, 1072), (122, 1087), (142,  
1162), (150, 1204),

Gene: MissSwiss\_1 Start: 87, Stop: 554, Start Num: 34  
Candidate Starts for MissSwiss\_1:  
(Start: 34 @87 has 58 MA's), (74, 216), (125, 453), (137, 504), (145, 525), (147, 534),

Gene: Moss\_1 Start: 139, Stop: 579, Start Num: 36  
Candidate Starts for Moss\_1:  
(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Ms6\_1 Start: 193, Stop: 564, Start Num: 61  
Candidate Starts for Ms6\_1:  
(38, 109), (Start: 46 @136 has 3 MA's), (55, 175), (61, 193), (67, 208), (71, 220), (75, 223), (77, 235),  
(79, 241), (86, 274), (93, 319), (95, 325), (97, 328), (119, 424), (122, 439), (142, 514), (150, 556),

Gene: Muddy\_4 Start: 1535, Stop: 2008, Start Num: 37  
Candidate Starts for Muddy\_4:  
(20, 1487), (Start: 37 @1535 has 3 MA's), (49, 1598), (51, 1601), (62, 1631), (88, 1733), (146, 1958),  
(149, 1979), (150, 1988),

Gene: Mudpuppy\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for Mudpuppy\_1:  
(11, 12), (Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510),  
(147, 519),

Gene: Mysterium\_1 Start: 139, Stop: 579, Start Num: 36  
Candidate Starts for Mysterium\_1:  
(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Nebkiss\_1 Start: 130, Stop: 579, Start Num: 27  
Candidate Starts for Nebkiss\_1:  
(12, 58), (Start: 27 @130 has 2 MA's), (31, 145), (44, 187), (48, 214), (54, 238), (64, 262), (66, 268),  
(70, 283), (72, 286), (82, 331), (85, 343), (88, 364), (112, 451), (127, 517), (136, 550), (137, 553),

Gene: Niobe\_1 Start: 85, Stop: 537, Start Num: 34  
Candidate Starts for Niobe\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: Nitro\_1 Start: 86, Stop: 538, Start Num: 34  
Candidate Starts for Nitro\_1:  
(Start: 34 @86 has 58 MA's), (74, 215), (130, 473), (145, 512), (147, 521),

Gene: NoShow\_1 Start: 166, Stop: 675, Start Num: 19

Candidate Starts for NoShow\_1:

(4, 82), (11, 115), (Start: 19 @166 has 1 MA's), (32, 199), (Start: 46 @244 has 3 MA's), (49, 277), (83, 379), (93, 436), (109, 478), (114, 508), (127, 562), (144, 625),

Gene: ObiToo\_1 Start: 85, Stop: 549, Start Num: 34

Candidate Starts for ObiToo\_1:

(Start: 34 @85 has 58 MA's), (145, 523),

Gene: Okabe\_3 Start: 841, Stop: 1212, Start Num: 61

Candidate Starts for Okabe\_3:

(Start: 36 @754 has 25 MA's), (Start: 46 @784 has 3 MA's), (55, 823), (61, 841), (67, 856), (71, 868), (75, 871), (77, 883), (79, 889), (86, 922), (93, 967), (95, 973), (97, 976), (119, 1072), (122, 1087), (142, 1162), (150, 1204),

Gene: Origami\_1 Start: 132, Stop: 563, Start Num: 34

Candidate Starts for Origami\_1:

(Start: 34 @132 has 58 MA's), (59, 228), (130, 519),

Gene: PandaPo\_1 Start: 87, Stop: 554, Start Num: 34

Candidate Starts for PandaPo\_1:

(Start: 34 @87 has 58 MA's), (74, 216), (125, 453), (137, 504), (145, 525), (147, 534),

Gene: Percival\_1 Start: 128, Stop: 607, Start Num: 36

Candidate Starts for Percival\_1:

(15, 56), (Start: 36 @128 has 25 MA's), (41, 140), (94, 356), (103, 377), (119, 452), (131, 515), (145, 551),

Gene: Phalconet\_1 Start: 136, Stop: 564, Start Num: 46

Candidate Starts for Phalconet\_1:

(38, 109), (Start: 46 @136 has 3 MA's), (55, 175), (61, 193), (67, 208), (71, 220), (75, 223), (77, 235), (79, 241), (86, 274), (93, 319), (95, 325), (97, 328), (119, 424), (142, 514), (150, 556),

Gene: Phives\_2 Start: 1157, Stop: 1609, Start Num: 34

Candidate Starts for Phives\_2:

(5, 1052), (Start: 34 @1157 has 58 MA's), (130, 1544), (137, 1562), (145, 1583),

Gene: Pixelle\_1 Start: 84, Stop: 536, Start Num: 33

Candidate Starts for Pixelle\_1:

(11, 12), (Start: 21 @54 has 1 MA's), (Start: 33 @84 has 2 MA's), (130, 471), (145, 510),

Gene: Pollux\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Pollux\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Ponzi\_41 Start: 22312, Stop: 22740, Start Num: 35

Candidate Starts for Ponzi\_41:

(Start: 35 @22312 has 2 MA's), (98, 22534), (124, 22633), (148, 22726),

Gene: Posh\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Posh\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Powerpuff\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Powerpuff\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Pumpkins\_1 Start: 86, Stop: 550, Start Num: 34

Candidate Starts for Pumpkins\_1:

(Start: 34 @86 has 58 MA's), (90, 305), (137, 503), (147, 533),

Gene: Pytheas\_1 Start: 82, Stop: 504, Start Num: 24

Candidate Starts for Pytheas\_1:

(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (127, 436), (136, 472), (139, 481),

Gene: Reedo\_1 Start: 95, Stop: 547, Start Num: 34

Candidate Starts for Reedo\_1:

(Start: 34 @95 has 58 MA's), (Start: 43 @122 has 1 MA's), (74, 224), (137, 497), (145, 518), (147, 527),

Gene: Renaud18\_1 Start: 55, Stop: 477, Start Num: 24

Candidate Starts for Renaud18\_1:

(7, 16), (Start: 24 @55 has 22 MA's), (47, 136), (85, 238), (100, 307), (118, 376), (136, 445), (139, 454),

Gene: RockScotty\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for RockScotty\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: RunningOnE\_61 Start: 26921, Stop: 27355, Start Num: 34

Candidate Starts for RunningOnE\_61:

(28, 26906), (Start: 34 @26921 has 58 MA's), (68, 27038), (118, 27221), (124, 27245), (129, 27278),

Gene: Sabourin\_1 Start: 138, Stop: 578, Start Num: 36

Candidate Starts for Sabourin\_1:

(Start: 36 @138 has 25 MA's), (60, 231),

Gene: Salvus\_5 Start: 1624, Stop: 2100, Start Num: 37

Candidate Starts for Salvus\_5:

(20, 1576), (Start: 37 @1624 has 3 MA's), (49, 1687), (51, 1690), (62, 1720), (88, 1822), (146, 2047), (149, 2068), (150, 2077),

Gene: Samy\_4 Start: 1334, Stop: 1780, Start Num: 34

Candidate Starts for Samy\_4:

(Start: 34 @1334 has 58 MA's), (77, 1484), (86, 1523), (97, 1577), (113, 1631),

Gene: Schaffner\_1 Start: 84, Stop: 548, Start Num: 34

Candidate Starts for Schaffner\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (137, 501), (147, 531),

Gene: ShakeltOph\_1 Start: 132, Stop: 560, Start Num: 34

Candidate Starts for ShakeltOph\_1:

(Start: 34 @132 has 58 MA's), (111, 417), (137, 534),

Gene: Simpson\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Simpson\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Skelbel\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Skelbel\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: Snek\_2 Start: 958, Stop: 1422, Start Num: 34

Candidate Starts for Snek\_2:

(Start: 34 @958 has 58 MA's), (101, 1207), (145, 1396), (147, 1405),

Gene: Soondubu\_1 Start: 140, Stop: 571, Start Num: 34

Candidate Starts for Soondubu\_1:

(Start: 34 @140 has 58 MA's), (145, 545), (147, 554),

Gene: Sooty\_1 Start: 138, Stop: 578, Start Num: 36

Candidate Starts for Sooty\_1:

(6, 12), (Start: 36 @138 has 25 MA's), (60, 231),

Gene: Sparky\_1 Start: 98, Stop: 529, Start Num: 24

Candidate Starts for Sparky\_1:

(2, 2), (9, 35), (17, 74), (Start: 24 @98 has 22 MA's), (54, 209), (85, 281), (115, 407), (118, 422), (136, 497),

Gene: SpecialK\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for SpecialK\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: Spooks\_48 Start: 26248, Stop: 26673, Start Num: 35

Candidate Starts for Spooks\_48:

(Start: 35 @26248 has 2 MA's), (50, 26314), (90, 26449), (109, 26494), (124, 26569), (141, 26629), (143, 26635),

Gene: Stellammi\_1 Start: 109, Stop: 558, Start Num: 27

Candidate Starts for Stellammi\_1:

(Start: 27 @109 has 2 MA's), (44, 166), (54, 217), (72, 265), (73, 268), (85, 322), (87, 337), (94, 376), (104, 397), (110, 418), (112, 430), (117, 457), (122, 481), (134, 523),

Gene: Stuu\_1 Start: 139, Stop: 579, Start Num: 36

Candidate Starts for Stuu\_1:

(Start: 36 @139 has 25 MA's), (60, 232),

Gene: SuMoo\_1 Start: 124, Stop: 603, Start Num: 36

Candidate Starts for SuMoo\_1:

(16, 58), (18, 79), (Start: 36 @124 has 25 MA's), (Start: 43 @145 has 1 MA's), (103, 373), (121, 457), (138, 526),

Gene: Subaru\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Subaru\_1:

(Start: 34 @85 has 58 MA's), (74, 214), (130, 472), (137, 490), (145, 511), (147, 520),

Gene: Sue2\_1 Start: 75, Stop: 542, Start Num: 34

Candidate Starts for Sue2\_1:

(11, 12), (Start: 34 @75 has 58 MA's), (Start: 43 @102 has 1 MA's), (84, 249), (105, 342), (145, 513), (147, 522),

Gene: SuperHands\_1 Start: 128, Stop: 607, Start Num: 36

Candidate Starts for SuperHands\_1:

(Start: 36 @128 has 25 MA's), (94, 356), (103, 377), (119, 452), (131, 515), (145, 551),

Gene: TChen\_1 Start: 55, Stop: 477, Start Num: 24

Candidate Starts for TChen\_1:

(3, 7), (7, 16), (Start: 24 @55 has 22 MA's), (47, 136), (85, 238), (100, 307), (103, 310), (118, 376), (127, 409), (136, 445), (139, 454),

Gene: TPA4\_1 Start: 75, Stop: 497, Start Num: 42

Candidate Starts for TPA4\_1:

(22, 24), (39, 69), (42, 75), (47, 102), (91, 279), (110, 336), (119, 384), (120, 390), (123, 402), (133, 441),

Gene: Tallboi\_1 Start: 85, Stop: 537, Start Num: 34

Candidate Starts for Tallboi\_1:

(Start: 34 @85 has 58 MA's), (145, 511),

Gene: Tbone\_1 Start: 84, Stop: 536, Start Num: 34

Candidate Starts for Tbone\_1:

(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: TforTroy\_1 Start: 86, Stop: 550, Start Num: 34

Candidate Starts for TforTroy\_1:

(Start: 34 @86 has 58 MA's), (53, 167), (90, 305), (137, 503), (147, 533),

Gene: ThetaBob\_1 Start: 55, Stop: 477, Start Num: 24

Candidate Starts for ThetaBob\_1:

(7, 16), (Start: 24 @55 has 22 MA's), (47, 136), (85, 238), (100, 307), (103, 310), (118, 376), (136, 445), (139, 454),

Gene: ThursdayNight\_1 Start: 97, Stop: 549, Start Num: 34

Candidate Starts for ThursdayNight\_1:

(Start: 34 @97 has 58 MA's), (77, 247), (92, 328),

Gene: Tian\_1 Start: 84, Stop: 536, Start Num: 33

Candidate Starts for Tian\_1:

(11, 12), (Start: 21 @54 has 1 MA's), (Start: 33 @84 has 2 MA's), (130, 471), (145, 510),

Gene: Toron\_1 Start: 55, Stop: 477, Start Num: 24

Candidate Starts for Toron\_1:

(7, 16), (Start: 24 @55 has 22 MA's), (48, 142), (80, 214), (85, 238), (97, 298), (100, 307), (103, 310), (118, 376), (122, 394), (136, 445), (139, 454),

Gene: Tuck\_2 Start: 1145, Stop: 1597, Start Num: 34

Candidate Starts for Tuck\_2:

(5, 1040), (Start: 34 @1145 has 58 MA's), (130, 1532), (137, 1550), (145, 1571),

Gene: Turab\_1 Start: 85, Stop: 540, Start Num: 34  
Candidate Starts for Turab\_1:  
(Start: 34 @85 has 58 MA's), (74, 214), (145, 511), (147, 520),

Gene: Tutumahutu\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for Tutumahutu\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Tweety19\_2 Start: 958, Stop: 1422, Start Num: 34  
Candidate Starts for Tweety19\_2:  
(Start: 34 @958 has 58 MA's), (101, 1207), (145, 1396), (147, 1405),

Gene: UtzChips\_1 Start: 114, Stop: 596, Start Num: 36  
Candidate Starts for UtzChips\_1:  
(30, 108), (Start: 36 @114 has 25 MA's), (103, 363), (121, 447), (138, 519),

Gene: VResidence\_1 Start: 140, Stop: 604, Start Num: 34  
Candidate Starts for VResidence\_1:  
(Start: 34 @140 has 58 MA's), (Start: 43 @167 has 1 MA's), (84, 314), (124, 503), (137, 557), (145, 578), (147, 587),

Gene: VroomVroom\_1 Start: 132, Stop: 563, Start Num: 34  
Candidate Starts for VroomVroom\_1:  
(Start: 34 @132 has 58 MA's), (59, 228), (106, 393), (130, 519),

Gene: Warda\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for Warda\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),

Gene: Wildwest\_2 Start: 1032, Stop: 1481, Start Num: 34  
Candidate Starts for Wildwest\_2:  
(1, 825), (Start: 34 @1032 has 58 MA's), (89, 1248), (145, 1455), (147, 1464),

Gene: Wrigley\_1 Start: 82, Stop: 504, Start Num: 24  
Candidate Starts for Wrigley\_1:  
(Start: 21 @73 has 1 MA's), (Start: 24 @82 has 22 MA's), (76, 226), (85, 265), (97, 325), (115, 388), (127, 436), (136, 472), (139, 481),

Gene: Yang\_1 Start: 84, Stop: 548, Start Num: 34  
Candidate Starts for Yang\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (137, 501), (147, 531),

Gene: YesChef\_1 Start: 84, Stop: 536, Start Num: 34  
Candidate Starts for YesChef\_1:  
(Start: 21 @54 has 1 MA's), (Start: 34 @84 has 58 MA's), (74, 213), (130, 471), (145, 510), (147, 519),