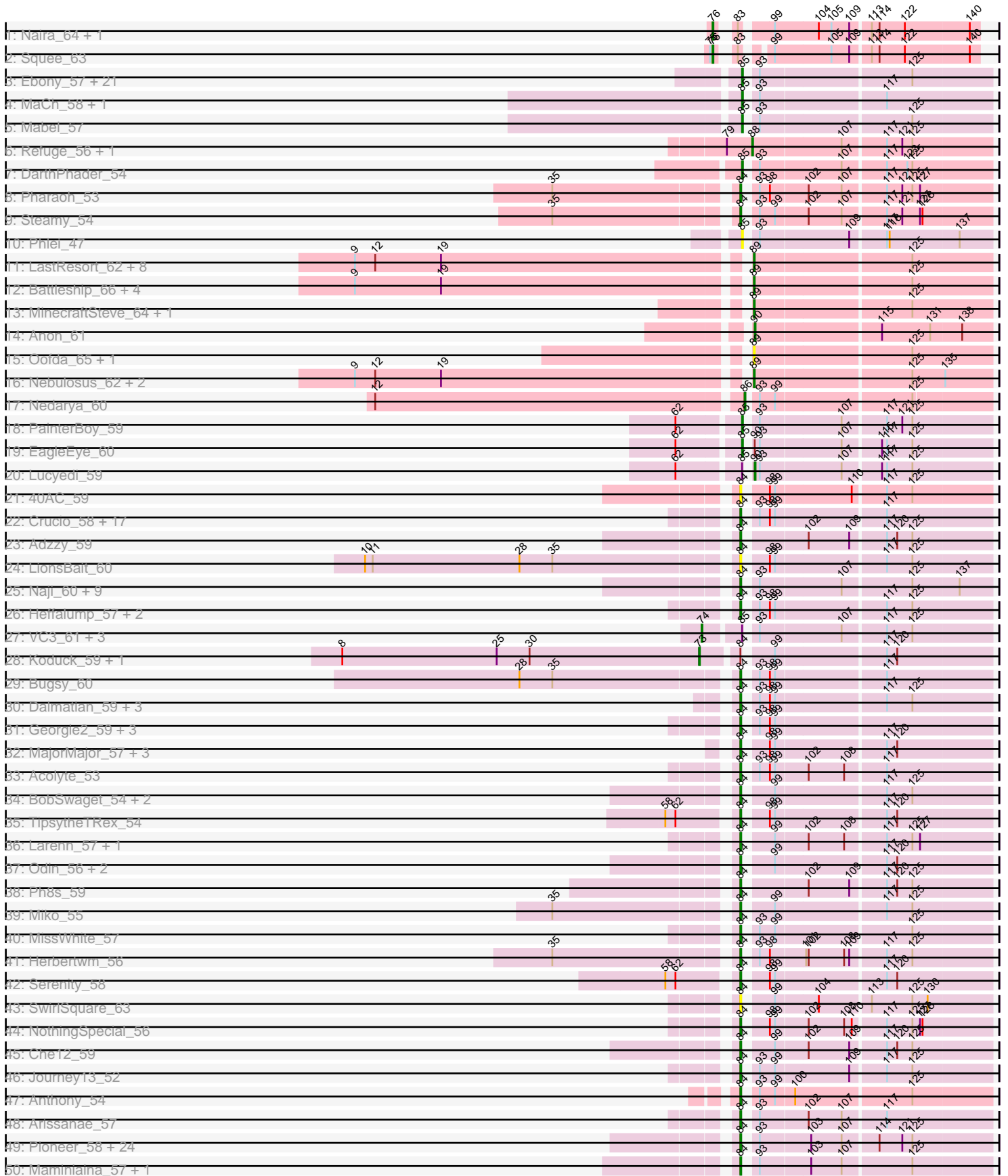
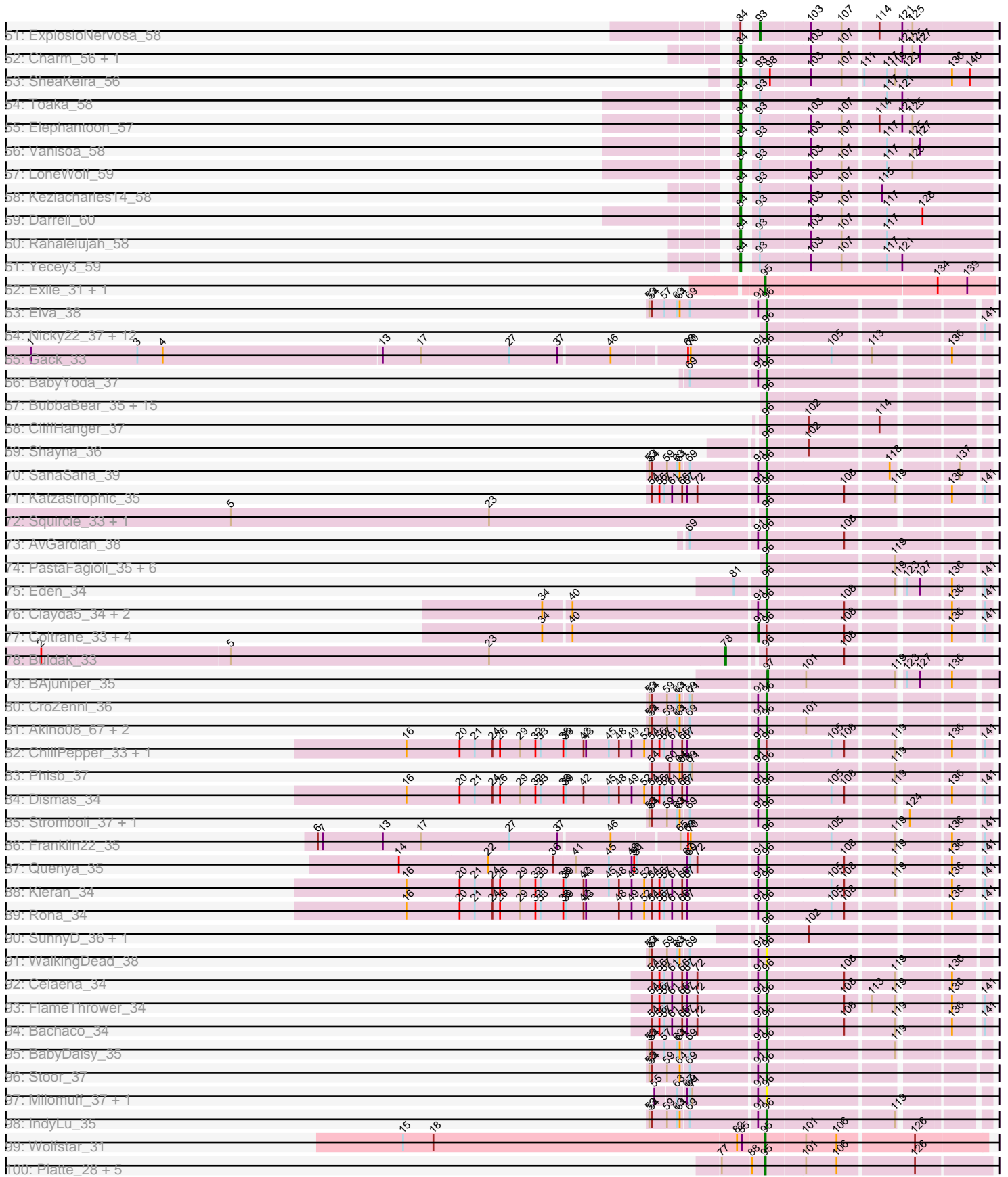


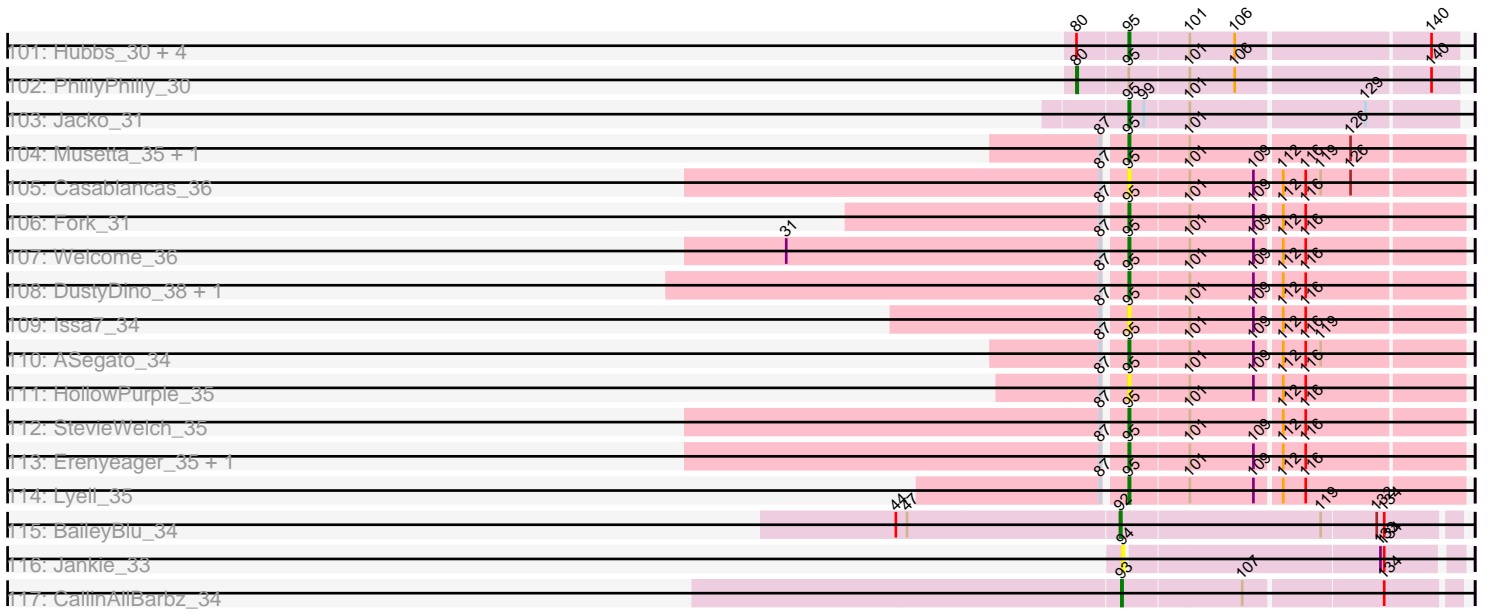
Pham 215768



Pham 215768



Pham 215768



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 215768 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 215768 has 288 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Naira\_64, Fenn\_64
- Track 2 : Squee\_63
- Track 3 : Ebony\_57, Bud\_57, Lucivia\_58, Mulciber\_57, Snape\_57, Fibonacci\_57, Munch\_58, Gilberta\_58, Orange\_57, Bowtie\_58, Hutc2\_57, Insomnia\_58, Et2Brutus\_56, Salz\_56, Jabith\_58, Timothy\_57, TinyTimmy\_57, Aneem\_58, Flaverint\_58, Joselito\_58, Petersenfast\_56, Sham4\_57
- Track 4 : MaCh\_58, Bachome\_59
- Track 5 : Mabel\_57
- Track 6 : Refuge\_56, Zimmer\_55
- Track 7 : DarthPhader\_54
- Track 8 : Pharaoh\_53
- Track 9 : Steamy\_54
- Track 10 : Phlei\_47
- Track 11 : LastResort\_62, Strosahl\_64, Remus\_64, JSwag\_63, Looper\_63, Waits\_64, Epsocamisio\_61, ReMo\_62, Rosalind\_62
- Track 12 : Battleship\_66, DekHockey33\_65, ShayRa\_64, Soups\_64, Switzerland\_63
- Track 13 : MinecraftSteve\_64, KatherineG\_64
- Track 14 : Anon\_61
- Track 15 : Oofda\_65, Warrior24\_67
- Track 16 : Nebulosus\_62, Anaysia\_64, Boohoo\_64
- Track 17 : Nedarya\_60
- Track 18 : PainterBoy\_59
- Track 19 : EagleEye\_60
- Track 20 : Lucyedi\_59
- Track 21 : 40AC\_59
- Track 22 : Crucio\_58, Benvolio\_55, ChipMunk\_60, EvilGenius\_60, FiringLine\_58, Echild\_58, Dignity\_60, Whabigail7\_59, Power\_57, SnapTap\_58, Leviathan\_60, KingCyrus\_60, Jerm\_60, SemperFi\_59, LilTurb\_59, QueenBeesly\_58, Smeagan\_61, Agape74\_60
- Track 23 : Adzzy\_59
- Track 24 : LionsBait\_60
- Track 25 : Naji\_60, Pomar16\_60, D29\_56, D32\_59, Kerberos\_60, DBQu4n\_60, Tomathan\_60, Travvers\_60, Duplo\_60, StarStuff\_60

- Track 26 : Heffalump\_57, QueenB2\_57, Fameo\_58
- Track 27 : VC3\_61, C3\_56, AN9\_61, ANI8\_61
- Track 28 : Koduck\_59, L5\_56
- Track 29 : Bugsy\_60
- Track 30 : Dalmatian\_59, Retro23\_59, DudeLittle\_57, Anselm\_59
- Track 31 : Georgie2\_59, AbbyPaige\_60, Turbido\_59, SweetiePie\_58
- Track 32 : MajorMajor\_57, Jsquared\_56, Bradman\_57, Quokka\_56
- Track 33 : Acolyte\_53
- Track 34 : BobSwaget\_54, Rachaly\_57, Lokk\_55
- Track 35 : TopsytheTRex\_54
- Track 36 : Larenn\_57, Malec\_58
- Track 37 : Odin\_56, Superchunk\_56, Caraxes\_58
- Track 38 : Ph8s\_59
- Track 39 : Miko\_55
- Track 40 : MissWhite\_57
- Track 41 : Herbertwm\_56
- Track 42 : Serenity\_58
- Track 43 : SwirlSquare\_63
- Track 44 : NothingSpecial\_56
- Track 45 : Che12\_59
- Track 46 : Journey13\_52
- Track 47 : Anthony\_54
- Track 48 : Arissanae\_57
- Track 49 : Pioneer\_58, Priya\_58, RyeScarlet\_59, Eidsmoe\_58, EmyBug\_57, Lilleskat\_56, Sachima\_55, Jiawan\_56, Myxus\_58, Onglai\_56, Spouty\_58, Aliter\_58, Ugenie5\_55, Conquerage\_58, PackMan\_57, Phaeder\_58, Beemo\_58, Qobbit\_58, Scherzo\_58, HortumSL17\_58, Alma\_58, Fayely\_58, Phonnegut\_58, Catalina\_59, Tubs\_58
- Track 50 : Maminiaina\_57, BogosyJay\_57
- Track 51 : ExplosioNervosa\_58
- Track 52 : Charm\_56, DreamTeam1\_56
- Track 53 : SheaKeira\_56
- Track 54 : Toaka\_58
- Track 55 : Elephantoon\_57
- Track 56 : Vanisoa\_58
- Track 57 : LoneWolf\_59
- Track 58 : Keziacharles14\_58
- Track 59 : Darrell\_60
- Track 60 : Rahalelujah\_58
- Track 61 : Yecey3\_59
- Track 62 : Exile\_31, Soondubu\_31
- Track 63 : Elva\_38
- Track 64 : Nicky22\_37, Kenzers\_36, SarBear\_36, Slay\_37, Eula\_37, Lynlen\_36, Albedo\_36, Jabb\_37, CupcakePrincess\_37, Jovita\_37, MsUbiquitous\_37, QMacho\_38, Swervy\_37
- Track 65 : Gack\_33
- Track 66 : BabyYoda\_37
- Track 67 : BubbaBear\_35, Bengal\_37, AnnaLie\_37, Albright\_34, Abigail\_35, SansAfet\_37, Finalfrontier\_36, BelmontSKP\_37, Arroyo\_37, Softsoap\_36, Doobus\_35, Johnathan\_35, Burritobowl\_36, DickRichards\_35, LimaBean\_35, Avocadoman\_35
- Track 68 : CliffHanger\_37
- Track 69 : Shayna\_36

- Track 70 : SanaSana\_39
- Track 71 : Katzastrophic\_35
- Track 72 : Squircle\_33, Olliecat\_33
- Track 73 : AvGardian\_38
- Track 74 : PastaFagioli\_35, Didgeridoo\_38, TukTuk\_37, Cashington\_34, Lahqtemish\_35, Kate33\_35, PhigPhack\_37
- Track 75 : Eden\_34
- Track 76 : Clayda5\_34, Skylord\_33, Vitas\_33
- Track 77 : Coltrane\_33, Rollins\_33, Brahms\_33, Bernstein\_33, Armstrong\_33
- Track 78 : Buldak\_33
- Track 79 : BAjuniper\_35
- Track 80 : CroZenni\_36
- Track 81 : Akino08\_67, Icarian\_39, Loviatar\_65
- Track 82 : ChiliPepper\_33, Sharkboy\_35
- Track 83 : Phisb\_37
- Track 84 : Dismas\_34
- Track 85 : Stromboli\_37, DirtyBubble\_36
- Track 86 : Franklin22\_35
- Track 87 : Quenya\_35
- Track 88 : Kieran\_34
- Track 89 : Rona\_34
- Track 90 : SunnyD\_36, Teagster\_37
- Track 91 : WalkingDead\_38
- Track 92 : Celaena\_34
- Track 93 : FlameThrower\_34
- Track 94 : Bachaco\_34
- Track 95 : BabyDaisy\_35
- Track 96 : Stoor\_37
- Track 97 : Milomuff\_37, Solea\_37
- Track 98 : IndyLu\_35
- Track 99 : Wolfstar\_31
- Track 100 : Platte\_28, Hortus1\_28, Alleb\_29, Tandem\_28, Pioneer3\_28, OlinDD\_28
- Track 101 : Hubbs\_30, Roman\_30, DejaVu\_31, Lupine\_29, Pavlo\_29
- Track 102 : PhillyPhilly\_30
- Track 103 : Jacko\_31
- Track 104 : Musetta\_35, Yuma\_34
- Track 105 : Casablanacas\_36
- Track 106 : Fork\_31
- Track 107 : Welcome\_36
- Track 108 : DustyDino\_38, RunningBrook\_36
- Track 109 : Issa7\_34
- Track 110 : ASegato\_34
- Track 111 : HollowPurple\_35
- Track 112 : StevieWelch\_35
- Track 113 : Erenyeager\_35, Necrophoxinus\_37
- Track 114 : Lyell\_35
- Track 115 : BaileyBlu\_34
- Track 116 : Jankie\_33
- Track 117 : CallinAllBarbz\_34

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

The start number called the most often in the published annotations is 84, it was called in 95 of the 251 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC\_59, AbbyPaige\_60, Acolyte\_53, Adzzy\_59, Agape74\_60, Aliter\_58, Alma\_58, Anselm\_59, Anthony\_54, Arissanae\_57, Beemo\_58, Benvolio\_55, BobSwaget\_54, BogosyJay\_57, Bradman\_57, Buggy\_60, Caraxes\_58, Catalina\_59, Charm\_56, Che12\_59, ChipMunk\_60, Conquerage\_58, Crucio\_58, D29\_56, D32\_59, DBQu4n\_60, Dalmatian\_59, Darrell\_60, Dignity\_60, DreamTeam1\_56, DudeLittle\_57, Duplo\_60, Echid\_58, Eidsmoe\_58, Elephantoon\_57, EmyBug\_57, EvilGenius\_60, Fameo\_58, Fayely\_58, FiringLine\_58, Georgie2\_59, Heffalump\_57, Herbertwm\_56, HortumSL17\_58, Jerm\_60, Jiawan\_56, Journey13\_52, Jsquared\_56, Kerberos\_60, Keziacharles14\_58, KingCyrus\_60, Larenn\_57, Leviathan\_60, LilTurb\_59, Lilleskat\_56, LionsBait\_60, Lokk\_55, LoneWolf\_59, MajorMajor\_57, Malec\_58, Maminiaina\_57, Miko\_55, MissWhite\_57, Myxus\_58, Naji\_60, NothingSpecial\_56, Odin\_56, Onglai\_56, PackMan\_57, Ph8s\_59, Phaeder\_58, Pharaoh\_53, Phonnegut\_58, Pioneer\_58, Pomar16\_60, Power\_57, Priya\_58, Qobbit\_58, QueenB2\_57, QueenBeesly\_58, Quokka\_56, Rachaly\_57, Rahalelujah\_58, Retro23\_59, RyeScarlet\_59, Sachima\_55, Scherzo\_58, SemperFi\_59, Serenity\_58, SheaKeira\_56, Smeagan\_61, SnapTap\_58, Spouty\_58, StarStuff\_60, Steamy\_54, Superchunk\_56, SweetiePie\_58, SwirlSquare\_63, TipsytheTRex\_54, Toaka\_58, Tomathan\_60, Travvers\_60, Tubs\_58, Turbido\_59, Ugenie5\_55, Vanisoa\_58, Whabigail7\_59, Yecey3\_59,

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

- ExplosioNervosa\_58, Koduck\_59, L5\_56,

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

- AN9\_61, ANI8\_61, ASegato\_34, Abigail\_35, Akino08\_67, Albedo\_36, Albright\_34, Alleb\_29, Anaysia\_64, Aneem\_58, AnnaLie\_37, Anon\_61, Armstrong\_33, Arroyo\_37, AvGuardian\_38, Avocadoman\_35, BAjuniper\_35, BabyDaisy\_35, BabyYoda\_37, Bachaco\_34, Bachome\_59, BaileyBlu\_34, Battleship\_66, BelmontSKP\_37, Bengal\_37, Bernstein\_33, Boohoo\_64, Bowtie\_58, Brahms\_33, BubbaBear\_35, Bud\_57, Buldak\_33, Burritobowl\_36, C3\_56, CallinAllBarbz\_34, Casablanacas\_36, Cashington\_34, Celaena\_34, ChiliPepper\_33, Clayda5\_34, CliffHanger\_37, Coltrane\_33, CroZenni\_36, CupcakePrincess\_37, DarthPhader\_54, DejaVu\_31, DekHockey33\_65, DickRichards\_35, Didgeridoo\_38, DirtyBubble\_36, Dismas\_34, Doobus\_35, DustyDino\_38, EagleEye\_60, Ebony\_57, Eden\_34, Elva\_38, Epsocamisio\_61, Erenyeager\_35, Et2Brutus\_56, Eula\_37, Exile\_31, Fenn\_64, Fibonacci\_57, Finalfrontier\_36, FlameThrower\_34, Flaverint\_58, Fork\_31, Franklin22\_35, Gack\_33, Gilberta\_58, HollowPurple\_35, Hortus1\_28, Hubbs\_30, Hutc2\_57, Icarian\_39, IndyLu\_35, Insomnia\_58, Issa7\_34, JSwag\_63, Jabb\_37, Jabith\_58, Jacko\_31, Jankie\_33, Johnathan\_35, Joselito\_58, Jovita\_37, Kate33\_35, KatherineG\_64, Katzastrophic\_35, Kenzers\_36, Kieran\_34, Lahqtemish\_35, LastResort\_62, LimaBean\_35, Looper\_63, Loviatar\_65, Lucivia\_58, Lucyedi\_59, Lupine\_29, Lyell\_35, Lynlen\_36, MaCh\_58, Mabel\_57, Milomuff\_37, MinecraftSteve\_64, MsUbiquitous\_37, Mulciber\_57, Munch\_58, Musetta\_35, Naira\_64, Nebulosus\_62, Necrophoxinus\_37, Nedarya\_60, Nicky22\_37, OlinDD\_28, Olliecat\_33, Oofda\_65, Orange\_57, PainterBoy\_59, PastaFagioli\_35, Pavlo\_29, Petersenfast\_56, PhigPhack\_37, PhillyPhilly\_30, Phisb\_37, Phlei\_47, Pioneer3\_28, Platte\_28, QMacho\_38, Quenya\_35, ReMo\_62, Refuge\_56, Remus\_64, Rollins\_33, Roman\_30, Rona\_34, Rosalind\_62, RunningBrook\_36, Salz\_56, SanaSana\_39,

SansAfet\_37, SarBear\_36, Sham4\_57, Sharkboy\_35, ShayRa\_64, Shayna\_36, Skylord\_33, Slay\_37, Snape\_57, Softsoap\_36, Solea\_37, Soondubu\_31, Soups\_64, Squee\_63, Squircle\_33, StevieWelch\_35, Stoor\_37, Stromboli\_37, Strosahl\_64, SunnyD\_36, Swervy\_37, Switzerland\_63, Tandem\_28, Teagster\_37, Timothy\_57, TinyTimmy\_57, TukTuk\_37, VC3\_61, Vitas\_33, Waits\_64, WalkingDead\_38, Warrior24\_67, Welcome\_36, Wolfstar\_31, Yuma\_34, Zimmer\_55,

### Summary by start number:

#### Start 73:

- Found in 2 of 288 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Koduck\_59 (A2), L5\_56 (A2),

#### Start 74:

- Found in 4 of 288 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 4 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9\_61 (A2), ANI8\_61 (A2), C3\_56 (A2), VC3\_61 (A2),

#### Start 76:

- Found in 3 of 288 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 3 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fenn\_64 (A1), Naira\_64 (A1), Squee\_63 (A1),

#### Start 78:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Buldak\_33 (EB),

#### Start 80:

- Found in 6 of 288 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 16.7% of time when present
- Phage (with cluster) where this start called: PhillyPhilly\_30 (ED1),

#### Start 84:

- Found in 111 of 288 ( 38.5% ) of genes in pham
- Manual Annotations of this start: 95 of 251
- Called 97.3% of time when present
- Phage (with cluster) where this start called: 40AC\_59 (A17), AbbyPaige\_60 (A2), Acolyte\_53 (A2), Adzzy\_59 (A2), Agape74\_60 (A2), Aliter\_58 (A9), Alma\_58 (A9), Anselm\_59 (A2), Anthony\_54 (A20), Arissanae\_57 (A9), Beemo\_58 (A9), Benvolio\_55 (A2), BobSwaget\_54 (A2), BogosyJay\_57 (A9), Bradman\_57 (A2), Buggy\_60 (A2), Caraxes\_58 (A2), Catalina\_59 (A9), Charm\_56 (A9), Che12\_59 (A2), ChipMunk\_60 (A2), Conquerage\_58 (A9), Crucio\_58 (A2), D29\_56 (A2), D32\_59 (A2), DBQu4n\_60 (A2), Dalmatian\_59 (A2), Darrell\_60 (A9), Dignity\_60 (A2), DreamTeam1\_56 (A9), DudeLittle\_57 (A2), Duplo\_60 (A2), Echild\_58 (A2),



Eidsmoe\_58 (A9), Elephantoon\_57 (A9), EmyBug\_57 (A9), EvilGenius\_60 (A2), Fameo\_58 (A2), Fayely\_58 (A9), FiringLine\_58 (A2), Georgie2\_59 (A2), Heffalump\_57 (A2), Herbertwm\_56 (A2), HortumSL17\_58 (A9), Jerm\_60 (A2), Jiawan\_56 (A9), Journey13\_52 (A2), Jsquared\_56 (A2), Kerberos\_60 (A2), Keziacharles14\_58 (A9), KingCyrus\_60 (A2), Larenn\_57 (A2), Leviathan\_60 (A2), LilTurb\_59 (A2), Lilleskat\_56 (A9), LionsBait\_60 (A2), Lokk\_55 (A2), LoneWolf\_59 (A9), MajorMajor\_57 (A2), Malec\_58 (A2), Maminiaina\_57 (A9), Miko\_55 (A2), MissWhite\_57 (A2), Myxus\_58 (A9), Naji\_60 (A2), NothingSpecial\_56 (A2), Odin\_56 (A2), Onglai\_56 (A9), PackMan\_57 (A9), Ph8s\_59 (A2), Phaeder\_58 (A9), Pharaoh\_53 (A12), Phonnegut\_58 (A9), Pioneer\_58 (A9), Pomar16\_60 (A2), Power\_57 (A2), Priya\_58 (A9), Qobbit\_58 (A9), QueenB2\_57 (A2), QueenBeesly\_58 (A2), Quokka\_56 (A2), Rachaly\_57 (A2), Rahalelujah\_58 (A9), Retro23\_59 (A2), RyeScarlet\_59 (A9), Sachima\_55 (A9), Scherzo\_58 (A9), SemperFi\_59 (A2), Serenity\_58 (A2), SheaKeira\_56 (A9), Smeagan\_61 (A2), SnapTap\_58 (A2), Spouty\_58 (A9), StarStuff\_60 (A2), Steamy\_54 (A12), Superchunk\_56 (A2), SweetiePie\_58 (A2), SwirlSquare\_63 (A2), TipsytheTRex\_54 (A2), Toaka\_58 (A9), Tomathan\_60 (A2), Travvers\_60 (A2), Tubs\_58 (A9), Turbido\_59 (A2), Ugenie5\_55 (A9), Vanisoa\_58 (A9), Whabigail7\_59 (A2), Yecey3\_59 (A9),

#### Start 85:

- Found in 35 of 288 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 27 of 251
- Called 82.9% of time when present
- Phage (with cluster) where this start called: Aneem\_58 (A11), Bachome\_59 (A11), Bowtie\_58 (A11), Bud\_57 (A11), DarthPhader\_54 (A12), EagleEye\_60 (A16), Ebony\_57 (A11), Et2Brutus\_56 (A11), Fibonacci\_57 (A11), Flaverint\_58 (A11), Gilberta\_58 (A11), Hutc2\_57 (A11), Insomnia\_58 (A11), Jabith\_58 (A11), Joselito\_58 (A11), Lucivia\_58 (A11), MaCh\_58 (A11), Mabel\_57 (A11), Mulciber\_57 (A11), Munch\_58 (A11), Orange\_57 (A11), PainterBoy\_59 (A16), Petersenfast\_56 (A11), Phlei\_47 (A13), Salz\_56 (A11), Sham4\_57 (A11), Snape\_57 (A11), Timothy\_57 (A11), TinyTimmy\_57 (A11),

#### Start 86:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Nedarya\_60 (A15),

#### Start 88:

- Found in 8 of 288 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 2 of 251
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Refuge\_56 (A12), Zimmer\_55 (A12),

#### Start 89:

- Found in 21 of 288 ( 7.3% ) of genes in pham
- Manual Annotations of this start: 19 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anaysia\_64 (A15), Battleship\_66 (A15), Boohoo\_64 (A15), DekHockey33\_65 (A15), Epsocamisio\_61 (A15), JSwag\_63 (A15), KatherineG\_64 (A15), LastResort\_62 (A15), Looper\_63 (A15), MinecraftSteve\_64 (A15), Nebulosus\_62 (A15), Oofda\_65 (A15), ReMo\_62 (A15), Remus\_64 (A15), Rosalind\_62 (A15), ShayRa\_64 (A15), Soups\_64 (A15), Strosahl\_64 (A15),

Switzerland\_63 (A15), Waits\_64 (A15), Warrior24\_67 (A15),

Start 90:

- Found in 3 of 288 ( 1.0% ) of genes in pham
- Manual Annotations of this start: 2 of 251
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Anon\_61 (A15), Lucyedi\_59 (A16),

Start 91:

- Found in 36 of 288 ( 12.5% ) of genes in pham
- Manual Annotations of this start: 7 of 251
- Called 19.4% of time when present
- Phage (with cluster) where this start called: Armstrong\_33 (EB), Bernstein\_33 (EB), Brahms\_33 (EB), ChiliPepper\_33 (EB), Coltrane\_33 (EB), Rollins\_33 (EB), Sharkboy\_35 (EB),

Start 92:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu\_34 (FP),

Start 93:

- Found in 121 of 288 ( 42.0% ) of genes in pham
- Manual Annotations of this start: 2 of 251
- Called 1.7% of time when present
- Phage (with cluster) where this start called: CallinAllBarbz\_34 (FP), ExplosioNervosa\_58 (A9),

Start 94:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jankie\_33 (FP),

Start 95:

- Found in 30 of 288 ( 10.4% ) of genes in pham
- Manual Annotations of this start: 25 of 251
- Called 96.7% of time when present
- Phage (with cluster) where this start called: ASegato\_34 (ED2), Alleb\_29 (ED1), Casablanco\_36 (ED2), DejaVu\_31 (ED1), DustyDino\_38 (ED2), Erenyeager\_35 (ED2), Exile\_31 (AZ), Fork\_31 (ED2), HollowPurple\_35 (ED2), Hortus1\_28 (ED1), Hubbs\_30 (ED1), Issa7\_34 (ED2), Jacko\_31 (ED1), Lupine\_29 (ED1), Lyell\_35 (ED2), Musetta\_35 (ED2), Necrophoxinus\_37 (ED2), OlinDD\_28 (ED1), Pavlo\_29 (ED1), Pioneer3\_28 (ED1), Platte\_28 (ED1), Roman\_30 (ED1), RunningBrook\_36 (ED2), Soondubu\_31 (AZ), StevieWelch\_35 (ED2), Tandem\_28 (ED1), Welcome\_36 (ED2), Wolfstar\_31 (ED), Yuma\_34 (ED2),

Start 96:

- Found in 81 of 288 ( 28.1% ) of genes in pham
- Manual Annotations of this start: 59 of 251
- Called 90.1% of time when present

- Phage (with cluster) where this start called: Abigail\_35 (EB), Akino08\_67 (EB), Albedo\_36 (EB), Albright\_34 (EB), AnnaLie\_37 (EB), Arroyo\_37 (EB), AvGardian\_38 (EB), Avocadoman\_35 (EB), BabyDaisy\_35 (EB), BabyYoda\_37 (EB), Bachaco\_34 (EB), BelmontSKP\_37 (EB), Bengal\_37 (EB), BubbaBear\_35 (EB), Burritobowl\_36 (EB), Cashington\_34 (EB), Celaena\_34 (EB), Clayda5\_34 (EB), CliffHanger\_37 (EB), CroZenni\_36 (EB), CupcakePrincess\_37 (EB), DickRichards\_35 (EB), Didgeridoo\_38 (EB), DirtyBubble\_36 (EB), Dismas\_34 (EB), Doobus\_35 (EB), Eden\_34 (EB), Elva\_38 (EB), Eula\_37 (EB), Finalfrontier\_36 (EB), FlameThrower\_34 (EB), Franklin22\_35 (EB), Gack\_33 (EB), Icarian\_39 (EB), IndyLu\_35 (EB), Jabb\_37 (EB), Johnathan\_35 (EB), Jovita\_37 (EB), Kate33\_35 (EB), Katzastrophic\_35 (EB), Kenzers\_36 (EB), Kieran\_34 (EB), Lahqtemish\_35 (EB), LimaBean\_35 (EB), Loviatar\_65 (EB), Lynlen\_36 (EB), Milomuff\_37 (EB), MsUbiquitous\_37 (EB), Nicky22\_37 (EB), Olliecat\_33 (EB), PastaFagioli\_35 (EB), PhigPhack\_37 (EB), Phisb\_37 (EB), QMacho\_38 (EB), Quenya\_35 (EB), Rona\_34 (EB), SanaSana\_39 (EB), SansAfet\_37 (EB), SarBear\_36 (EB), Shayna\_36 (EB), Skylord\_33 (EB), Slay\_37 (EB), Softsoap\_36 (EB), Solea\_37 (EB), Squirrel\_33 (EB), Stoor\_37 (EB), Stromboli\_37 (EB), SunnyD\_36 (EB), Swervy\_37 (EB), Teagster\_37 (EB), TukTuk\_37 (EB), Vitas\_33 (EB), WalkingDead\_38 (EB),

Start 97:

- Found in 1 of 288 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 251
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAjuniper\_35 (EB),

### Summary by clusters:

There are 16 clusters represented in this pham: A15, FP, A17, A16, A11, A13, A12, ED, EB, ED2, A1, ED1, A9, AZ, A2, A20,

Info for manual annotations of cluster A1:

- Start number 76 was manually annotated 3 times for cluster A1.

Info for manual annotations of cluster A11:

- Start number 85 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 84 was manually annotated 2 times for cluster A12.
- Start number 85 was manually annotated 1 time for cluster A12.
- Start number 88 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A15:

- Start number 86 was manually annotated 1 time for cluster A15.
- Start number 89 was manually annotated 19 times for cluster A15.
- Start number 90 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 85 was manually annotated 2 times for cluster A16.
- Start number 90 was manually annotated 1 time for cluster A16.

Info for manual annotations of cluster A2:

- Start number 73 was manually annotated 1 time for cluster A2.
- Start number 74 was manually annotated 4 times for cluster A2.
- Start number 84 was manually annotated 58 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 84 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A9:

- Start number 84 was manually annotated 34 times for cluster A9.
- Start number 93 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AZ:

- Start number 95 was manually annotated 1 time for cluster AZ.

Info for manual annotations of cluster EB:

- Start number 78 was manually annotated 1 time for cluster EB.
- Start number 91 was manually annotated 7 times for cluster EB.
- Start number 96 was manually annotated 59 times for cluster EB.
- Start number 97 was manually annotated 1 time for cluster EB.

Info for manual annotations of cluster ED:

- Start number 95 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster ED1:

- Start number 80 was manually annotated 1 time for cluster ED1.
- Start number 95 was manually annotated 12 times for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 95 was manually annotated 11 times for cluster ED2.

Info for manual annotations of cluster FP:

- Start number 92 was manually annotated 1 time for cluster FP.
- Start number 93 was manually annotated 1 time for cluster FP.

### ***Gene Information:***

Gene: 40AC\_59 Start: 39531, Stop: 39259, Start Num: 84

Candidate Starts for 40AC\_59:

(Start: 84 @39531 has 95 MA's), (98, 39510), (99, 39504), (110, 39417), (117, 39381), (125, 39351),

Gene: AN9\_61 Start: 38705, Stop: 38394, Start Num: 74

Candidate Starts for AN9\_61:

(Start: 74 @38705 has 4 MA's), (Start: 85 @38666 has 27 MA's), (Start: 93 @38657 has 2 MA's), (107, 38564), (117, 38516), (125, 38486),

Gene: ANI8\_61 Start: 38705, Stop: 38394, Start Num: 74

Candidate Starts for ANI8\_61:

(Start: 74 @38705 has 4 MA's), (Start: 85 @38666 has 27 MA's), (Start: 93 @38657 has 2 MA's), (107, 38564), (117, 38516), (125, 38486),

Gene: ASegato\_34 Start: 9990, Stop: 10244, Start Num: 95

Candidate Starts for ASegato\_34:

(87, 9975), (Start: 95 @9990 has 25 MA's), (101, 10035), (109, 10086), (112, 10104), (116, 10122), (119, 10134),

Gene: AbbyPaige\_60 Start: 38775, Stop: 38503, Start Num: 84

Candidate Starts for AbbyPaige\_60:

(Start: 84 @38775 has 95 MA's), (Start: 93 @38766 has 2 MA's), (98, 38754), (99, 38748),

Gene: Abigail\_35 Start: 24992, Stop: 25222, Start Num: 96

Candidate Starts for Abigail\_35:

(Start: 96 @24992 has 59 MA's),

Gene: Acolyte\_53 Start: 37597, Stop: 37325, Start Num: 84

Candidate Starts for Acolyte\_53:

(Start: 84 @37597 has 95 MA's), (Start: 93 @37588 has 2 MA's), (98, 37576), (99, 37570), (102, 37534), (108, 37492), (117, 37447),

Gene: Adzzy\_59 Start: 37247, Stop: 36975, Start Num: 84

Candidate Starts for Adzzy\_59:

(Start: 84 @37247 has 95 MA's), (102, 37184), (109, 37136), (117, 37097), (120, 37085), (125, 37067),

Gene: Agape74\_60 Start: 38769, Stop: 38497, Start Num: 84

Candidate Starts for Agape74\_60:

(Start: 84 @38769 has 95 MA's), (Start: 93 @38760 has 2 MA's), (98, 38748), (99, 38742), (117, 38619),

Gene: Akino08\_67 Start: 27416, Stop: 27649, Start Num: 96

Candidate Starts for Akino08\_67:

(53, 27287), (54, 27290), (59, 27308), (63, 27320), (64, 27323), (69, 27332), (Start: 91 @27407 has 7 MA's), (Start: 96 @27416 has 59 MA's), (101, 27458),

Gene: Albedo\_36 Start: 25530, Stop: 25772, Start Num: 96

Candidate Starts for Albedo\_36:

(Start: 96 @25530 has 59 MA's), (141, 25764),

Gene: Albright\_34 Start: 24694, Stop: 24924, Start Num: 96

Candidate Starts for Albright\_34:

(Start: 96 @24694 has 59 MA's),

Gene: Aliter\_58 Start: 38153, Stop: 37881, Start Num: 84

Candidate Starts for Aliter\_58:

(Start: 84 @38153 has 95 MA's), (Start: 93 @38144 has 2 MA's), (103, 38087), (107, 38051), (114, 38012), (121, 37985), (125, 37973),

Gene: Alleb\_29 Start: 9182, Stop: 9436, Start Num: 95

Candidate Starts for Alleb\_29:

(77, 9134), (Start: 88 @9167 has 2 MA's), (Start: 95 @9182 has 25 MA's), (101, 9227), (106, 9263), (126, 9350),

Gene: Alma\_58 Start: 38528, Stop: 38256, Start Num: 84

Candidate Starts for Alma\_58:

(Start: 84 @38528 has 95 MA's), (Start: 93 @38519 has 2 MA's), (103, 38462), (107, 38426), (114, 38387), (121, 38360), (125, 38348),

Gene: Anaysia\_64 Start: 37667, Stop: 37398, Start Num: 89  
Candidate Starts for Anaysia\_64:  
(9, 38111), (12, 38087), (19, 38009), (Start: 89 @37667 has 19 MA's), (125, 37490), (135, 37451),

Gene: Aneem\_58 Start: 37786, Stop: 37514, Start Num: 85  
Candidate Starts for Aneem\_58:  
(Start: 85 @37786 has 27 MA's), (Start: 93 @37777 has 2 MA's), (125, 37606),

Gene: AnnaLie\_37 Start: 25815, Stop: 26045, Start Num: 96  
Candidate Starts for AnnaLie\_37:  
(Start: 96 @25815 has 59 MA's),

Gene: Anon\_61 Start: 37216, Stop: 36947, Start Num: 90  
Candidate Starts for Anon\_61:  
(Start: 90 @37216 has 2 MA's), (115, 37075), (131, 37018), (138, 36982),

Gene: Anselm\_59 Start: 38676, Stop: 38404, Start Num: 84  
Candidate Starts for Anselm\_59:  
(Start: 84 @38676 has 95 MA's), (Start: 93 @38667 has 2 MA's), (98, 38655), (99, 38649), (117, 38526), (125, 38496),

Gene: Anthony\_54 Start: 36233, Stop: 35961, Start Num: 84  
Candidate Starts for Anthony\_54:  
(Start: 84 @36233 has 95 MA's), (Start: 93 @36224 has 2 MA's), (99, 36206), (100, 36185), (125, 36053),

Gene: Arissanae\_57 Start: 38844, Stop: 38572, Start Num: 84  
Candidate Starts for Arissanae\_57:  
(Start: 84 @38844 has 95 MA's), (Start: 93 @38835 has 2 MA's), (102, 38781), (107, 38742), (117, 38694),

Gene: Armstrong\_33 Start: 23408, Stop: 23647, Start Num: 91  
Candidate Starts for Armstrong\_33:  
(34, 23165), (40, 23195), (Start: 91 @23408 has 7 MA's), (Start: 96 @23417 has 59 MA's), (108, 23504), (136, 23609), (141, 23639),

Gene: Arroyo\_37 Start: 25853, Stop: 26083, Start Num: 96  
Candidate Starts for Arroyo\_37:  
(Start: 96 @25853 has 59 MA's),

Gene: AvGardian\_38 Start: 25976, Stop: 26215, Start Num: 96  
Candidate Starts for AvGardian\_38:  
(69, 25892), (Start: 91 @25967 has 7 MA's), (Start: 96 @25976 has 59 MA's), (108, 26063),

Gene: Avocadoman\_35 Start: 24931, Stop: 25161, Start Num: 96  
Candidate Starts for Avocadoman\_35:  
(Start: 96 @24931 has 59 MA's),

Gene: BAjuniper\_35 Start: 26652, Stop: 26891, Start Num: 97  
Candidate Starts for BAjuniper\_35:  
(Start: 97 @26652 has 1 MA's), (101, 26694), (119, 26793), (123, 26799), (127, 26814), (136, 26844),

Gene: BabyDaisy\_35 Start: 25454, Stop: 25684, Start Num: 96  
Candidate Starts for BabyDaisy\_35:  
(53, 25325), (54, 25328), (57, 25343), (63, 25358), (64, 25361), (69, 25370), (Start: 91 @25445 has 7 MA's), (Start: 96 @25454 has 59 MA's), (119, 25595),

Gene: BabyYoda\_37 Start: 26596, Stop: 26829, Start Num: 96  
Candidate Starts for BabyYoda\_37:  
(69, 26512), (Start: 91 @26587 has 7 MA's), (Start: 96 @26596 has 59 MA's),

Gene: Bachaco\_34 Start: 26614, Stop: 26844, Start Num: 96  
Candidate Starts for Bachaco\_34:  
(54, 26485), (56, 26494), (57, 26500), (61, 26509), (66, 26521), (67, 26527), (72, 26539), (Start: 91 @26605 has 7 MA's), (Start: 96 @26614 has 59 MA's), (108, 26701), (119, 26755), (136, 26806), (141, 26836),

Gene: Bachome\_59 Start: 37766, Stop: 37494, Start Num: 85  
Candidate Starts for Bachome\_59:  
(Start: 85 @37766 has 27 MA's), (Start: 93 @37757 has 2 MA's), (117, 37616),

Gene: BaileyBlu\_34 Start: 24331, Stop: 24588, Start Num: 92  
Candidate Starts for BaileyBlu\_34:  
(44, 24157), (47, 24166), (Start: 92 @24331 has 1 MA's), (119, 24487), (132, 24529), (134, 24535),

Gene: Battleship\_66 Start: 37873, Stop: 37604, Start Num: 89  
Candidate Starts for Battleship\_66:  
(9, 38317), (19, 38215), (Start: 89 @37873 has 19 MA's), (125, 37696),

Gene: Beemo\_58 Start: 38323, Stop: 38051, Start Num: 84  
Candidate Starts for Beemo\_58:  
(Start: 84 @38323 has 95 MA's), (Start: 93 @38314 has 2 MA's), (103, 38257), (107, 38221), (114, 38182), (121, 38155), (125, 38143),

Gene: BelmontSKP\_37 Start: 25815, Stop: 26045, Start Num: 96  
Candidate Starts for BelmontSKP\_37:  
(Start: 96 @25815 has 59 MA's),

Gene: Bengal\_37 Start: 25443, Stop: 25673, Start Num: 96  
Candidate Starts for Bengal\_37:  
(Start: 96 @25443 has 59 MA's),

Gene: Benvolio\_55 Start: 37700, Stop: 37428, Start Num: 84  
Candidate Starts for Benvolio\_55:  
(Start: 84 @37700 has 95 MA's), (Start: 93 @37691 has 2 MA's), (98, 37679), (99, 37673), (117, 37550),

Gene: Bernstein\_33 Start: 23463, Stop: 23702, Start Num: 91  
Candidate Starts for Bernstein\_33:  
(34, 23220), (40, 23250), (Start: 91 @23463 has 7 MA's), (Start: 96 @23472 has 59 MA's), (108, 23559), (136, 23664), (141, 23694),

Gene: BobSwaget\_54 Start: 37176, Stop: 36904, Start Num: 84  
Candidate Starts for BobSwaget\_54:  
(Start: 84 @37176 has 95 MA's), (99, 37149), (117, 37026), (125, 36996),

Gene: BogosyJay\_57 Start: 38245, Stop: 37973, Start Num: 84  
Candidate Starts for BogosyJay\_57:  
(Start: 84 @38245 has 95 MA's), (Start: 93 @38236 has 2 MA's), (103, 38179), (107, 38143), (125, 38065),

Gene: Boohoo\_64 Start: 37667, Stop: 37398, Start Num: 89  
Candidate Starts for Boohoo\_64:  
(9, 38111), (12, 38087), (19, 38009), (Start: 89 @37667 has 19 MA's), (125, 37490), (135, 37451),

Gene: Bowtie\_58 Start: 37793, Stop: 37521, Start Num: 85  
Candidate Starts for Bowtie\_58:  
(Start: 85 @37793 has 27 MA's), (Start: 93 @37784 has 2 MA's), (125, 37613),

Gene: Bradman\_57 Start: 37421, Stop: 37149, Start Num: 84  
Candidate Starts for Bradman\_57:  
(Start: 84 @37421 has 95 MA's), (98, 37400), (99, 37394), (117, 37271), (120, 37259),

Gene: Brahms\_33 Start: 23410, Stop: 23649, Start Num: 91  
Candidate Starts for Brahms\_33:  
(34, 23167), (40, 23197), (Start: 91 @23410 has 7 MA's), (Start: 96 @23419 has 59 MA's), (108, 23506), (136, 23611), (141, 23641),

Gene: BubbaBear\_35 Start: 25387, Stop: 25617, Start Num: 96  
Candidate Starts for BubbaBear\_35:  
(Start: 96 @25387 has 59 MA's),

Gene: Bud\_57 Start: 37340, Stop: 37068, Start Num: 85  
Candidate Starts for Bud\_57:  
(Start: 85 @37340 has 27 MA's), (Start: 93 @37331 has 2 MA's), (125, 37160),

Gene: Buggy\_60 Start: 38826, Stop: 38554, Start Num: 84  
Candidate Starts for Buggy\_60:  
(28, 39066), (35, 39027), (Start: 84 @38826 has 95 MA's), (Start: 93 @38817 has 2 MA's), (98, 38805), (99, 38799), (117, 38676),

Gene: Buldak\_33 Start: 24218, Stop: 24493, Start Num: 78  
Candidate Starts for Buldak\_33:  
(2, 23414), (5, 23633), (23, 23939), (Start: 78 @24218 has 1 MA's), (Start: 96 @24254 has 59 MA's), (108, 24341),

Gene: Burritobowl\_36 Start: 25388, Stop: 25618, Start Num: 96  
Candidate Starts for Burritobowl\_36:  
(Start: 96 @25388 has 59 MA's),

Gene: C3\_56 Start: 38705, Stop: 38394, Start Num: 74  
Candidate Starts for C3\_56:  
(Start: 74 @38705 has 4 MA's), (Start: 85 @38666 has 27 MA's), (Start: 93 @38657 has 2 MA's), (107, 38564), (117, 38516), (125, 38486),

Gene: CallinAllBarbz\_34 Start: 24734, Stop: 24985, Start Num: 93  
Candidate Starts for CallinAllBarbz\_34:  
(Start: 93 @24734 has 2 MA's), (107, 24827), (134, 24932),



Gene: Caraxes\_58 Start: 36944, Stop: 36672, Start Num: 84  
Candidate Starts for Caraxes\_58:  
(Start: 84 @36944 has 95 MA's), (99, 36917), (117, 36794), (120, 36782),

Gene: Casablanacas\_36 Start: 10074, Stop: 10328, Start Num: 95  
Candidate Starts for Casablanacas\_36:  
(87, 10059), (Start: 95 @10074 has 25 MA's), (101, 10119), (109, 10170), (112, 10188), (116, 10206),  
(119, 10218), (126, 10242),

Gene: Cashington\_34 Start: 24734, Stop: 24964, Start Num: 96  
Candidate Starts for Cashington\_34:  
(Start: 96 @24734 has 59 MA's), (119, 24875),

Gene: Catalina\_59 Start: 38226, Stop: 37954, Start Num: 84  
Candidate Starts for Catalina\_59:  
(Start: 84 @38226 has 95 MA's), (Start: 93 @38217 has 2 MA's), (103, 38160), (107, 38124), (114,  
38085), (121, 38058), (125, 38046),

Gene: Celaena\_34 Start: 26364, Stop: 26594, Start Num: 96  
Candidate Starts for Celaena\_34:  
(54, 26235), (56, 26244), (57, 26250), (61, 26259), (66, 26271), (67, 26277), (72, 26289), (Start: 91  
@26355 has 7 MA's), (Start: 96 @26364 has 59 MA's), (108, 26451), (119, 26505), (136, 26556),

Gene: Charm\_56 Start: 38090, Stop: 37818, Start Num: 84  
Candidate Starts for Charm\_56:  
(Start: 84 @38090 has 95 MA's), (103, 38024), (107, 37988), (121, 37922), (125, 37910), (127, 37901),

Gene: Che12\_59 Start: 37385, Stop: 37113, Start Num: 84  
Candidate Starts for Che12\_59:  
(Start: 84 @37385 has 95 MA's), (99, 37358), (102, 37322), (109, 37274), (117, 37235), (120, 37223),  
(125, 37205),

Gene: ChiliPepper\_33 Start: 25809, Stop: 26048, Start Num: 91  
Candidate Starts for ChiliPepper\_33:  
(16, 25398), (20, 25461), (21, 25479), (24, 25500), (26, 25509), (29, 25533), (32, 25551), (33, 25557),  
(38, 25584), (39, 25587), (42, 25608), (43, 25611), (45, 25638), (48, 25650), (49, 25665), (52, 25680),  
(54, 25689), (56, 25698), (57, 25704), (61, 25713), (66, 25725), (67, 25731), (Start: 91 @25809 has 7  
MA's), (Start: 96 @25818 has 59 MA's), (105, 25890), (108, 25905), (119, 25959), (136, 26010), (141,  
26040),

Gene: ChipMunk\_60 Start: 40026, Stop: 39754, Start Num: 84  
Candidate Starts for ChipMunk\_60:  
(Start: 84 @40026 has 95 MA's), (Start: 93 @40017 has 2 MA's), (98, 40005), (99, 39999), (117,  
39876),

Gene: Clayda5\_34 Start: 23406, Stop: 23636, Start Num: 96  
Candidate Starts for Clayda5\_34:  
(34, 23154), (40, 23184), (Start: 91 @23397 has 7 MA's), (Start: 96 @23406 has 59 MA's), (108,  
23493), (136, 23598), (141, 23628),

Gene: CliffHanger\_37 Start: 24318, Stop: 24548, Start Num: 96  
Candidate Starts for CliffHanger\_37:

(Start: 96 @24318 has 59 MA's), (102, 24363), (114, 24441),

Gene: Coltrane\_33 Start: 23410, Stop: 23649, Start Num: 91

Candidate Starts for Coltrane\_33:

(34, 23167), (40, 23197), (Start: 91 @23410 has 7 MA's), (Start: 96 @23419 has 59 MA's), (108, 23506), (136, 23611), (141, 23641),

Gene: Conquerage\_58 Start: 38297, Stop: 38025, Start Num: 84

Candidate Starts for Conquerage\_58:

(Start: 84 @38297 has 95 MA's), (Start: 93 @38288 has 2 MA's), (103, 38231), (107, 38195), (114, 38156), (121, 38129), (125, 38117),

Gene: CroZenni\_36 Start: 25278, Stop: 25508, Start Num: 96

Candidate Starts for CroZenni\_36:

(53, 25149), (54, 25152), (59, 25170), (63, 25182), (64, 25185), (69, 25194), (71, 25197), (Start: 91 @25269 has 7 MA's), (Start: 96 @25278 has 59 MA's),

Gene: Crucio\_58 Start: 38443, Stop: 38171, Start Num: 84

Candidate Starts for Crucio\_58:

(Start: 84 @38443 has 95 MA's), (Start: 93 @38434 has 2 MA's), (98, 38422), (99, 38416), (117, 38293),

Gene: CupcakePrincess\_37 Start: 25564, Stop: 25806, Start Num: 96

Candidate Starts for CupcakePrincess\_37:

(Start: 96 @25564 has 59 MA's), (141, 25798),

Gene: D29\_56 Start: 38269, Stop: 37997, Start Num: 84

Candidate Starts for D29\_56:

(Start: 84 @38269 has 95 MA's), (Start: 93 @38260 has 2 MA's), (107, 38167), (125, 38089), (137, 38035),

Gene: D32\_59 Start: 38269, Stop: 37997, Start Num: 84

Candidate Starts for D32\_59:

(Start: 84 @38269 has 95 MA's), (Start: 93 @38260 has 2 MA's), (107, 38167), (125, 38089), (137, 38035),

Gene: DBQu4n\_60 Start: 38250, Stop: 37978, Start Num: 84

Candidate Starts for DBQu4n\_60:

(Start: 84 @38250 has 95 MA's), (Start: 93 @38241 has 2 MA's), (107, 38148), (125, 38070), (137, 38016),

Gene: Dalmatian\_59 Start: 38649, Stop: 38377, Start Num: 84

Candidate Starts for Dalmatian\_59:

(Start: 84 @38649 has 95 MA's), (Start: 93 @38640 has 2 MA's), (98, 38628), (99, 38622), (117, 38499), (125, 38469),

Gene: Darrell\_60 Start: 38922, Stop: 38650, Start Num: 84

Candidate Starts for Darrell\_60:

(Start: 84 @38922 has 95 MA's), (Start: 93 @38913 has 2 MA's), (103, 38856), (107, 38820), (117, 38772), (128, 38730),

Gene: DarthPhader\_54 Start: 39183, Stop: 38911, Start Num: 85

Candidate Starts for DarthPhader\_54:

(Start: 85 @39183 has 27 MA's), (Start: 93 @39174 has 2 MA's), (107, 39081), (117, 39033), (123, 39009), (125, 39003),

Gene: DejaVu\_31 Start: 9377, Stop: 9625, Start Num: 95

Candidate Starts for DejaVu\_31:

(Start: 80 @9338 has 1 MA's), (Start: 95 @9377 has 25 MA's), (101, 9422), (106, 9458), (140, 9605),

Gene: DekHockey33\_65 Start: 37959, Stop: 37690, Start Num: 89

Candidate Starts for DekHockey33\_65:

(9, 38403), (19, 38301), (Start: 89 @37959 has 19 MA's), (125, 37782),

Gene: DickRichards\_35 Start: 25717, Stop: 25947, Start Num: 96

Candidate Starts for DickRichards\_35:

(Start: 96 @25717 has 59 MA's),

Gene: Didgeridoo\_38 Start: 25851, Stop: 26093, Start Num: 96

Candidate Starts for Didgeridoo\_38:

(Start: 96 @25851 has 59 MA's), (119, 25992),

Gene: Dignity\_60 Start: 38849, Stop: 38577, Start Num: 84

Candidate Starts for Dignity\_60:

(Start: 84 @38849 has 95 MA's), (Start: 93 @38840 has 2 MA's), (98, 38828), (99, 38822), (117, 38699),

Gene: DirtyBubble\_36 Start: 26244, Stop: 26477, Start Num: 96

Candidate Starts for DirtyBubble\_36:

(53, 26115), (54, 26118), (59, 26136), (63, 26148), (64, 26151), (69, 26160), (Start: 91 @26235 has 7 MA's), (Start: 96 @26244 has 59 MA's), (124, 26394),

Gene: Dismas\_34 Start: 25989, Stop: 26219, Start Num: 96

Candidate Starts for Dismas\_34:

(16, 25569), (20, 25632), (21, 25650), (24, 25671), (26, 25680), (29, 25704), (32, 25722), (33, 25728), (38, 25755), (39, 25758), (42, 25779), (45, 25809), (48, 25821), (49, 25836), (52, 25851), (54, 25860), (56, 25869), (57, 25875), (61, 25884), (66, 25896), (67, 25902), (Start: 91 @25980 has 7 MA's), (Start: 96 @25989 has 59 MA's), (105, 26061), (108, 26076), (119, 26130), (136, 26181), (141, 26211),

Gene: Doobus\_35 Start: 25098, Stop: 25328, Start Num: 96

Candidate Starts for Doobus\_35:

(Start: 96 @25098 has 59 MA's),

Gene: DreamTeam1\_56 Start: 37922, Stop: 37650, Start Num: 84

Candidate Starts for DreamTeam1\_56:

(Start: 84 @37922 has 95 MA's), (103, 37856), (107, 37820), (121, 37754), (125, 37742), (127, 37733),

Gene: DudeLittle\_57 Start: 38415, Stop: 38143, Start Num: 84

Candidate Starts for DudeLittle\_57:

(Start: 84 @38415 has 95 MA's), (Start: 93 @38406 has 2 MA's), (98, 38394), (99, 38388), (117, 38265), (125, 38235),

Gene: Duplo\_60 Start: 38306, Stop: 38034, Start Num: 84

Candidate Starts for Duplo\_60:

(Start: 84 @38306 has 95 MA's), (Start: 93 @38297 has 2 MA's), (107, 38204), (125, 38126), (137, 38072),

Gene: DustyDino\_38 Start: 10938, Stop: 11192, Start Num: 95

Candidate Starts for DustyDino\_38:

(87, 10923), (Start: 95 @10938 has 25 MA's), (101, 10983), (109, 11034), (112, 11052), (116, 11070),

Gene: EagleEye\_60 Start: 38143, Stop: 37871, Start Num: 85

Candidate Starts for EagleEye\_60:

(62, 38212), (Start: 85 @38143 has 27 MA's), (Start: 90 @38140 has 2 MA's), (Start: 93 @38134 has 2 MA's), (107, 38041), (115, 37999), (117, 37993), (125, 37963),

Gene: Ebony\_57 Start: 37357, Stop: 37085, Start Num: 85

Candidate Starts for Ebony\_57:

(Start: 85 @37357 has 27 MA's), (Start: 93 @37348 has 2 MA's), (125, 37177),

Gene: Echild\_58 Start: 37724, Stop: 37452, Start Num: 84

Candidate Starts for Echild\_58:

(Start: 84 @37724 has 95 MA's), (Start: 93 @37715 has 2 MA's), (98, 37703), (99, 37697), (117, 37574),

Gene: Eden\_34 Start: 24202, Stop: 24432, Start Num: 96

Candidate Starts for Eden\_34:

(81, 24169), (Start: 96 @24202 has 59 MA's), (119, 24343), (123, 24349), (127, 24364), (136, 24394), (141, 24424),

Gene: Eidsmoe\_58 Start: 38289, Stop: 38017, Start Num: 84

Candidate Starts for Eidsmoe\_58:

(Start: 84 @38289 has 95 MA's), (Start: 93 @38280 has 2 MA's), (103, 38223), (107, 38187), (114, 38148), (121, 38121), (125, 38109),

Gene: Elephantoon\_57 Start: 37664, Stop: 37392, Start Num: 84

Candidate Starts for Elephantoon\_57:

(Start: 84 @37664 has 95 MA's), (Start: 93 @37655 has 2 MA's), (103, 37598), (107, 37562), (114, 37523), (121, 37496), (125, 37484),

Gene: Elva\_38 Start: 26309, Stop: 26539, Start Num: 96

Candidate Starts for Elva\_38:

(53, 26177), (54, 26180), (57, 26195), (63, 26210), (64, 26213), (69, 26225), (Start: 91 @26300 has 7 MA's), (Start: 96 @26309 has 59 MA's),

Gene: EmyBug\_57 Start: 38291, Stop: 38019, Start Num: 84

Candidate Starts for EmyBug\_57:

(Start: 84 @38291 has 95 MA's), (Start: 93 @38282 has 2 MA's), (103, 38225), (107, 38189), (114, 38150), (121, 38123), (125, 38111),

Gene: Epsocamisio\_61 Start: 37202, Stop: 36933, Start Num: 89

Candidate Starts for Epsocamisio\_61:

(9, 37646), (12, 37622), (19, 37544), (Start: 89 @37202 has 19 MA's), (125, 37025),

Gene: Erenyeager\_35 Start: 10332, Stop: 10586, Start Num: 95

Candidate Starts for Erenyeager\_35:

(87, 10317), (Start: 95 @10332 has 25 MA's), (101, 10377), (109, 10428), (112, 10446), (116, 10464),

Gene: Et2Brutus\_56 Start: 37320, Stop: 37048, Start Num: 85

Candidate Starts for Et2Brutus\_56:  
(Start: 85 @37320 has 27 MA's), (Start: 93 @37311 has 2 MA's), (125, 37140),

Gene: Eula\_37 Start: 25477, Stop: 25719, Start Num: 96  
Candidate Starts for Eula\_37:  
(Start: 96 @25477 has 59 MA's), (141, 25711),

Gene: EvilGenius\_60 Start: 40027, Stop: 39755, Start Num: 84  
Candidate Starts for EvilGenius\_60:  
(Start: 84 @40027 has 95 MA's), (Start: 93 @40018 has 2 MA's), (98, 40006), (99, 40000), (117, 39877),

Gene: Exile\_31 Start: 26521, Stop: 26784, Start Num: 95  
Candidate Starts for Exile\_31:  
(Start: 95 @26521 has 25 MA's), (134, 26719), (139, 26752),

Gene: ExplosioNervosa\_58 Start: 38348, Stop: 38085, Start Num: 93  
Candidate Starts for ExplosioNervosa\_58:  
(Start: 84 @38357 has 95 MA's), (Start: 93 @38348 has 2 MA's), (103, 38291), (107, 38255), (114, 38216), (121, 38189), (125, 38177),

Gene: Fameo\_58 Start: 38774, Stop: 38502, Start Num: 84  
Candidate Starts for Fameo\_58:  
(Start: 84 @38774 has 95 MA's), (Start: 93 @38765 has 2 MA's), (98, 38753), (99, 38747), (117, 38624), (125, 38594),

Gene: Fayely\_58 Start: 38258, Stop: 37986, Start Num: 84  
Candidate Starts for Fayely\_58:  
(Start: 84 @38258 has 95 MA's), (Start: 93 @38249 has 2 MA's), (103, 38192), (107, 38156), (114, 38117), (121, 38090), (125, 38078),

Gene: Fenn\_64 Start: 42653, Stop: 42378, Start Num: 76  
Candidate Starts for Fenn\_64:  
(Start: 76 @42653 has 3 MA's), (83, 42641), (99, 42611), (104, 42560), (105, 42545), (109, 42524), (113, 42503), (114, 42494), (122, 42464), (140, 42389),

Gene: Fibonacci\_57 Start: 37326, Stop: 37054, Start Num: 85  
Candidate Starts for Fibonacci\_57:  
(Start: 85 @37326 has 27 MA's), (Start: 93 @37317 has 2 MA's), (125, 37146),

Gene: Finalfrontier\_36 Start: 26101, Stop: 26331, Start Num: 96  
Candidate Starts for Finalfrontier\_36:  
(Start: 96 @26101 has 59 MA's),

Gene: FiringLine\_58 Start: 38424, Stop: 38152, Start Num: 84  
Candidate Starts for FiringLine\_58:  
(Start: 84 @38424 has 95 MA's), (Start: 93 @38415 has 2 MA's), (98, 38403), (99, 38397), (117, 38274),

Gene: FlameThrower\_34 Start: 25814, Stop: 26044, Start Num: 96  
Candidate Starts for FlameThrower\_34:  
(54, 25685), (56, 25694), (57, 25700), (61, 25709), (66, 25721), (67, 25727), (72, 25739), (Start: 91 @25805 has 7 MA's), (Start: 96 @25814 has 59 MA's), (108, 25901), (113, 25928), (119, 25955), (136,

26006), (141, 26036),

Gene: Flaverint\_58 Start: 37784, Stop: 37512, Start Num: 85

Candidate Starts for Flaverint\_58:

(Start: 85 @37784 has 27 MA's), (Start: 93 @37775 has 2 MA's), (125, 37604),

Gene: Fork\_31 Start: 9648, Stop: 9902, Start Num: 95

Candidate Starts for Fork\_31:

(87, 9633), (Start: 95 @9648 has 25 MA's), (101, 9693), (109, 9744), (112, 9762), (116, 9780),

Gene: Franklin22\_35 Start: 24188, Stop: 24418, Start Num: 96

Candidate Starts for Franklin22\_35:

(6, 23681), (7, 23687), (13, 23756), (17, 23801), (27, 23906), (37, 23963), (46, 24020), (65, 24095), (68, 24104), (70, 24107), (Start: 96 @24188 has 59 MA's), (105, 24260), (119, 24329), (136, 24380), (141, 24410),

Gene: Gack\_33 Start: 23939, Stop: 24169, Start Num: 96

Candidate Starts for Gack\_33:

(1, 23093), (3, 23219), (4, 23249), (13, 23507), (17, 23552), (27, 23657), (37, 23714), (46, 23771), (68, 23855), (70, 23858), (Start: 91 @23930 has 7 MA's), (Start: 96 @23939 has 59 MA's), (105, 24011), (113, 24053), (136, 24131),

Gene: Georgie2\_59 Start: 38469, Stop: 38197, Start Num: 84

Candidate Starts for Georgie2\_59:

(Start: 84 @38469 has 95 MA's), (Start: 93 @38460 has 2 MA's), (98, 38448), (99, 38442),

Gene: Gilberta\_58 Start: 37777, Stop: 37505, Start Num: 85

Candidate Starts for Gilberta\_58:

(Start: 85 @37777 has 27 MA's), (Start: 93 @37768 has 2 MA's), (125, 37597),

Gene: Heffalump\_57 Start: 39242, Stop: 38970, Start Num: 84

Candidate Starts for Heffalump\_57:

(Start: 84 @39242 has 95 MA's), (Start: 93 @39233 has 2 MA's), (98, 39221), (99, 39215), (117, 39092), (125, 39062),

Gene: Herbertwm\_56 Start: 38206, Stop: 37934, Start Num: 84

Candidate Starts for Herbertwm\_56:

(35, 38407), (Start: 84 @38206 has 95 MA's), (Start: 93 @38197 has 2 MA's), (98, 38185), (101, 38146), (102, 38143), (108, 38101), (109, 38095), (117, 38056), (125, 38026),

Gene: HollowPurple\_35 Start: 10186, Stop: 10440, Start Num: 95

Candidate Starts for HollowPurple\_35:

(87, 10171), (Start: 95 @10186 has 25 MA's), (101, 10231), (109, 10282), (112, 10300), (116, 10318),

Gene: HortumSL17\_58 Start: 38225, Stop: 37953, Start Num: 84

Candidate Starts for HortumSL17\_58:

(Start: 84 @38225 has 95 MA's), (Start: 93 @38216 has 2 MA's), (103, 38159), (107, 38123), (114, 38084), (121, 38057), (125, 38045),

Gene: Hortus1\_28 Start: 9181, Stop: 9435, Start Num: 95

Candidate Starts for Hortus1\_28:

(77, 9133), (Start: 88 @9166 has 2 MA's), (Start: 95 @9181 has 25 MA's), (101, 9226), (106, 9262), (126, 9349),

Gene: Hubbs\_30 Start: 9589, Stop: 9837, Start Num: 95  
Candidate Starts for Hubbs\_30:  
(Start: 80 @9550 has 1 MA's), (Start: 95 @9589 has 25 MA's), (101, 9634), (106, 9670), (140, 9817),

Gene: Hutc2\_57 Start: 37326, Stop: 37054, Start Num: 85  
Candidate Starts for Hutc2\_57:  
(Start: 85 @37326 has 27 MA's), (Start: 93 @37317 has 2 MA's), (125, 37146),

Gene: Icarian\_39 Start: 26879, Stop: 27112, Start Num: 96  
Candidate Starts for Icarian\_39:  
(53, 26750), (54, 26753), (59, 26771), (63, 26783), (64, 26786), (69, 26795), (Start: 91 @26870 has 7 MA's), (Start: 96 @26879 has 59 MA's), (101, 26921),

Gene: IndyLu\_35 Start: 25415, Stop: 25645, Start Num: 96  
Candidate Starts for IndyLu\_35:  
(53, 25286), (54, 25289), (59, 25307), (63, 25319), (64, 25322), (69, 25331), (Start: 91 @25406 has 7 MA's), (Start: 96 @25415 has 59 MA's), (119, 25556),

Gene: Insomnia\_58 Start: 37837, Stop: 37565, Start Num: 85  
Candidate Starts for Insomnia\_58:  
(Start: 85 @37837 has 27 MA's), (Start: 93 @37828 has 2 MA's), (125, 37657),

Gene: Issa7\_34 Start: 9642, Stop: 9896, Start Num: 95  
Candidate Starts for Issa7\_34:  
(87, 9627), (Start: 95 @9642 has 25 MA's), (101, 9687), (109, 9738), (112, 9756), (116, 9774),

Gene: JSwag\_63 Start: 37391, Stop: 37122, Start Num: 89  
Candidate Starts for JSwag\_63:  
(9, 37835), (12, 37811), (19, 37733), (Start: 89 @37391 has 19 MA's), (125, 37214),

Gene: Jabb\_37 Start: 25564, Stop: 25806, Start Num: 96  
Candidate Starts for Jabb\_37:  
(Start: 96 @25564 has 59 MA's), (141, 25798),

Gene: Jabith\_58 Start: 37838, Stop: 37566, Start Num: 85  
Candidate Starts for Jabith\_58:  
(Start: 85 @37838 has 27 MA's), (Start: 93 @37829 has 2 MA's), (125, 37658),

Gene: Jacko\_31 Start: 9673, Stop: 9921, Start Num: 95  
Candidate Starts for Jacko\_31:  
(Start: 95 @9673 has 25 MA's), (99, 9685), (101, 9718), (129, 9853),

Gene: Jankie\_33 Start: 23923, Stop: 24174, Start Num: 94  
Candidate Starts for Jankie\_33:  
(94, 23923), (133, 24118), (134, 24121),

Gene: Jerm\_60 Start: 38841, Stop: 38569, Start Num: 84  
Candidate Starts for Jerm\_60:  
(Start: 84 @38841 has 95 MA's), (Start: 93 @38832 has 2 MA's), (98, 38820), (99, 38814), (117, 38691),

Gene: Jiawan\_56 Start: 38310, Stop: 38038, Start Num: 84

Candidate Starts for Jiawan\_56:

(Start: 84 @38310 has 95 MA's), (Start: 93 @38301 has 2 MA's), (103, 38244), (107, 38208), (114, 38169), (121, 38142), (125, 38130),

Gene: Johnathan\_35 Start: 24821, Stop: 25051, Start Num: 96

Candidate Starts for Johnathan\_35:

(Start: 96 @24821 has 59 MA's),

Gene: Joselito\_58 Start: 37786, Stop: 37514, Start Num: 85

Candidate Starts for Joselito\_58:

(Start: 85 @37786 has 27 MA's), (Start: 93 @37777 has 2 MA's), (125, 37606),

Gene: Journey13\_52 Start: 36811, Stop: 36539, Start Num: 84

Candidate Starts for Journey13\_52:

(Start: 84 @36811 has 95 MA's), (Start: 93 @36802 has 2 MA's), (99, 36784), (109, 36700), (117, 36661), (125, 36631),

Gene: Jovita\_37 Start: 25579, Stop: 25821, Start Num: 96

Candidate Starts for Jovita\_37:

(Start: 96 @25579 has 59 MA's), (141, 25813),

Gene: Jsquared\_56 Start: 37405, Stop: 37133, Start Num: 84

Candidate Starts for Jsquared\_56:

(Start: 84 @37405 has 95 MA's), (98, 37384), (99, 37378), (117, 37255), (120, 37243),

Gene: Kate33\_35 Start: 25175, Stop: 25417, Start Num: 96

Candidate Starts for Kate33\_35:

(Start: 96 @25175 has 59 MA's), (119, 25316),

Gene: KatherineG\_64 Start: 37864, Stop: 37595, Start Num: 89

Candidate Starts for KatherineG\_64:

(Start: 89 @37864 has 19 MA's), (125, 37687),

Gene: Katzastrophic\_35 Start: 25943, Stop: 26173, Start Num: 96

Candidate Starts for Katzastrophic\_35:

(54, 25814), (56, 25823), (57, 25829), (61, 25838), (66, 25850), (67, 25856), (72, 25868), (Start: 91 @25934 has 7 MA's), (Start: 96 @25943 has 59 MA's), (108, 26030), (119, 26084), (136, 26135), (141, 26165),

Gene: Kenzers\_36 Start: 25402, Stop: 25644, Start Num: 96

Candidate Starts for Kenzers\_36:

(Start: 96 @25402 has 59 MA's), (141, 25636),

Gene: Kerberos\_60 Start: 38268, Stop: 37996, Start Num: 84

Candidate Starts for Kerberos\_60:

(Start: 84 @38268 has 95 MA's), (Start: 93 @38259 has 2 MA's), (107, 38166), (125, 38088), (137, 38034),

Gene: Keziacharles14\_58 Start: 39366, Stop: 39094, Start Num: 84

Candidate Starts for Keziacharles14\_58:

(Start: 84 @39366 has 95 MA's), (Start: 93 @39357 has 2 MA's), (103, 39300), (107, 39264), (115, 39222),



Gene: Kieran\_34 Start: 25998, Stop: 26228, Start Num: 96

Candidate Starts for Kieran\_34:

(16, 25578), (20, 25641), (21, 25659), (24, 25680), (26, 25689), (29, 25713), (32, 25731), (33, 25737), (38, 25764), (39, 25767), (42, 25788), (43, 25791), (45, 25818), (48, 25830), (49, 25845), (52, 25860), (54, 25869), (56, 25878), (57, 25884), (61, 25893), (66, 25905), (67, 25911), (Start: 91 @25989 has 7 MA's), (Start: 96 @25998 has 59 MA's), (105, 26070), (108, 26085), (119, 26139), (136, 26190), (141, 26220),

Gene: KingCyrus\_60 Start: 40022, Stop: 39750, Start Num: 84

Candidate Starts for KingCyrus\_60:

(Start: 84 @40022 has 95 MA's), (Start: 93 @40013 has 2 MA's), (98, 40001), (99, 39995), (117, 39872),

Gene: Koduck\_59 Start: 37723, Stop: 37412, Start Num: 73

Candidate Starts for Koduck\_59:

(8, 38146), (25, 37963), (30, 37924), (Start: 73 @37723 has 1 MA's), (Start: 84 @37684 has 95 MA's), (99, 37657), (117, 37534), (120, 37522),

Gene: L5\_56 Start: 37810, Stop: 37499, Start Num: 73

Candidate Starts for L5\_56:

(8, 38233), (25, 38050), (30, 38011), (Start: 73 @37810 has 1 MA's), (Start: 84 @37771 has 95 MA's), (99, 37744), (117, 37621), (120, 37609),

Gene: Lahqtemish\_35 Start: 25448, Stop: 25690, Start Num: 96

Candidate Starts for Lahqtemish\_35:

(Start: 96 @25448 has 59 MA's), (119, 25589),

Gene: Larenn\_57 Start: 38431, Stop: 38159, Start Num: 84

Candidate Starts for Larenn\_57:

(Start: 84 @38431 has 95 MA's), (99, 38404), (102, 38368), (108, 38326), (117, 38281), (125, 38251), (127, 38242),

Gene: LastResort\_62 Start: 37443, Stop: 37174, Start Num: 89

Candidate Starts for LastResort\_62:

(9, 37887), (12, 37863), (19, 37785), (Start: 89 @37443 has 19 MA's), (125, 37266),

Gene: Leviathan\_60 Start: 38898, Stop: 38626, Start Num: 84

Candidate Starts for Leviathan\_60:

(Start: 84 @38898 has 95 MA's), (Start: 93 @38889 has 2 MA's), (98, 38877), (99, 38871), (117, 38748),

Gene: LilTurb\_59 Start: 38722, Stop: 38450, Start Num: 84

Candidate Starts for LilTurb\_59:

(Start: 84 @38722 has 95 MA's), (Start: 93 @38713 has 2 MA's), (98, 38701), (99, 38695), (117, 38572),

Gene: Lilleskat\_56 Start: 38227, Stop: 37955, Start Num: 84

Candidate Starts for Lilleskat\_56:

(Start: 84 @38227 has 95 MA's), (Start: 93 @38218 has 2 MA's), (103, 38161), (107, 38125), (114, 38086), (121, 38059), (125, 38047),

Gene: LimaBean\_35 Start: 24870, Stop: 25100, Start Num: 96

Candidate Starts for LimaBean\_35:

(Start: 96 @24870 has 59 MA's),

Gene: LionsBait\_60 Start: 39877, Stop: 39605, Start Num: 84

Candidate Starts for LionsBait\_60:

(10, 40300), (11, 40291), (28, 40117), (35, 40078), (Start: 84 @39877 has 95 MA's), (98, 39856), (99, 39850), (117, 39727), (125, 39697),

Gene: Lokk\_55 Start: 37800, Stop: 37528, Start Num: 84

Candidate Starts for Lokk\_55:

(Start: 84 @37800 has 95 MA's), (99, 37773), (117, 37650), (125, 37620),

Gene: LoneWolf\_59 Start: 38258, Stop: 37986, Start Num: 84

Candidate Starts for LoneWolf\_59:

(Start: 84 @38258 has 95 MA's), (Start: 93 @38249 has 2 MA's), (103, 38192), (107, 38156), (117, 38108), (125, 38078),

Gene: Looper\_63 Start: 37355, Stop: 37086, Start Num: 89

Candidate Starts for Looper\_63:

(9, 37799), (12, 37775), (19, 37697), (Start: 89 @37355 has 19 MA's), (125, 37178),

Gene: Loviatar\_65 Start: 27431, Stop: 27664, Start Num: 96

Candidate Starts for Loviatar\_65:

(53, 27302), (54, 27305), (59, 27323), (63, 27335), (64, 27338), (69, 27347), (Start: 91 @27422 has 7 MA's), (Start: 96 @27431 has 59 MA's), (101, 27473),

Gene: Lucivia\_58 Start: 37835, Stop: 37563, Start Num: 85

Candidate Starts for Lucivia\_58:

(Start: 85 @37835 has 27 MA's), (Start: 93 @37826 has 2 MA's), (125, 37655),

Gene: Lucyedi\_59 Start: 38336, Stop: 38067, Start Num: 90

Candidate Starts for Lucyedi\_59:

(62, 38408), (Start: 85 @38339 has 27 MA's), (Start: 90 @38336 has 2 MA's), (Start: 93 @38330 has 2 MA's), (107, 38237), (115, 38195), (117, 38189), (125, 38159),

Gene: Lupine\_29 Start: 9261, Stop: 9509, Start Num: 95

Candidate Starts for Lupine\_29:

(Start: 80 @9222 has 1 MA's), (Start: 95 @9261 has 25 MA's), (101, 9306), (106, 9342), (140, 9489),

Gene: Lyell\_35 Start: 10250, Stop: 10504, Start Num: 95

Candidate Starts for Lyell\_35:

(87, 10235), (Start: 95 @10250 has 25 MA's), (101, 10295), (109, 10346), (112, 10364), (116, 10382),

Gene: Lynlen\_36 Start: 25402, Stop: 25644, Start Num: 96

Candidate Starts for Lynlen\_36:

(Start: 96 @25402 has 59 MA's), (141, 25636),

Gene: MaCh\_58 Start: 37765, Stop: 37493, Start Num: 85

Candidate Starts for MaCh\_58:

(Start: 85 @37765 has 27 MA's), (Start: 93 @37756 has 2 MA's), (117, 37615),

Gene: Mabel\_57 Start: 37367, Stop: 37095, Start Num: 85

Candidate Starts for Mabel\_57:

(Start: 85 @37367 has 27 MA's), (Start: 93 @37358 has 2 MA's), (125, 37187),

Gene: MajorMajor\_57 Start: 37421, Stop: 37149, Start Num: 84  
Candidate Starts for MajorMajor\_57:  
(Start: 84 @37421 has 95 MA's), (98, 37400), (99, 37394), (117, 37271), (120, 37259),

Gene: Malec\_58 Start: 38998, Stop: 38726, Start Num: 84  
Candidate Starts for Malec\_58:  
(Start: 84 @38998 has 95 MA's), (99, 38971), (102, 38935), (108, 38893), (117, 38848), (125, 38818),  
(127, 38809),

Gene: Maminiaina\_57 Start: 38227, Stop: 37955, Start Num: 84  
Candidate Starts for Maminiaina\_57:  
(Start: 84 @38227 has 95 MA's), (Start: 93 @38218 has 2 MA's), (103, 38161), (107, 38125), (125,  
38047),

Gene: Miko\_55 Start: 38578, Stop: 38306, Start Num: 84  
Candidate Starts for Miko\_55:  
(35, 38779), (Start: 84 @38578 has 95 MA's), (99, 38551), (117, 38428), (125, 38398),

Gene: Milomuff\_37 Start: 25291, Stop: 25521, Start Num: 96  
Candidate Starts for Milomuff\_37:  
(55, 25171), (63, 25195), (67, 25204), (69, 25207), (71, 25210), (Start: 91 @25282 has 7 MA's), (Start:  
96 @25291 has 59 MA's),

Gene: MinecraftSteve\_64 Start: 37679, Stop: 37410, Start Num: 89  
Candidate Starts for MinecraftSteve\_64:  
(Start: 89 @37679 has 19 MA's), (125, 37502),

Gene: MissWhite\_57 Start: 36925, Stop: 36653, Start Num: 84  
Candidate Starts for MissWhite\_57:  
(Start: 84 @36925 has 95 MA's), (Start: 93 @36916 has 2 MA's), (99, 36898), (125, 36745),

Gene: MsUbiquitous\_37 Start: 25564, Stop: 25806, Start Num: 96  
Candidate Starts for MsUbiquitous\_37:  
(Start: 96 @25564 has 59 MA's), (141, 25798),

Gene: Mulciber\_57 Start: 37323, Stop: 37051, Start Num: 85  
Candidate Starts for Mulciber\_57:  
(Start: 85 @37323 has 27 MA's), (Start: 93 @37314 has 2 MA's), (125, 37143),

Gene: Munch\_58 Start: 37786, Stop: 37514, Start Num: 85  
Candidate Starts for Munch\_58:  
(Start: 85 @37786 has 27 MA's), (Start: 93 @37777 has 2 MA's), (125, 37606),

Gene: Musetta\_35 Start: 10358, Stop: 10612, Start Num: 95  
Candidate Starts for Musetta\_35:  
(87, 10343), (Start: 95 @10358 has 25 MA's), (101, 10403), (126, 10526),

Gene: Myxus\_58 Start: 38225, Stop: 37953, Start Num: 84  
Candidate Starts for Myxus\_58:  
(Start: 84 @38225 has 95 MA's), (Start: 93 @38216 has 2 MA's), (103, 38159), (107, 38123), (114,  
38084), (121, 38057), (125, 38045),

Gene: Naira\_64 Start: 42709, Stop: 42434, Start Num: 76  
Candidate Starts for Naira\_64:  
(Start: 76 @42709 has 3 MA's), (83, 42697), (99, 42667), (104, 42616), (105, 42601), (109, 42580),  
(113, 42559), (114, 42550), (122, 42520), (140, 42445),

Gene: Naji\_60 Start: 38269, Stop: 37997, Start Num: 84  
Candidate Starts for Naji\_60:  
(Start: 84 @38269 has 95 MA's), (Start: 93 @38260 has 2 MA's), (107, 38167), (125, 38089), (137,  
38035),

Gene: Nebulosus\_62 Start: 37439, Stop: 37170, Start Num: 89  
Candidate Starts for Nebulosus\_62:  
(9, 37883), (12, 37859), (19, 37781), (Start: 89 @37439 has 19 MA's), (125, 37262), (135, 37223),

Gene: Necrophoxinus\_37 Start: 10946, Stop: 11200, Start Num: 95  
Candidate Starts for Necrophoxinus\_37:  
(87, 10931), (Start: 95 @10946 has 25 MA's), (101, 10991), (109, 11042), (112, 11060), (116, 11078),

Gene: Nedarya\_60 Start: 37419, Stop: 37150, Start Num: 86  
Candidate Starts for Nedarya\_60:  
(12, 37842), (Start: 86 @37419 has 1 MA's), (Start: 93 @37410 has 2 MA's), (99, 37392), (125, 37239),

Gene: Nicky22\_37 Start: 25941, Stop: 26183, Start Num: 96  
Candidate Starts for Nicky22\_37:  
(Start: 96 @25941 has 59 MA's), (141, 26175),

Gene: NothingSpecial\_56 Start: 38807, Stop: 38535, Start Num: 84  
Candidate Starts for NothingSpecial\_56:  
(Start: 84 @38807 has 95 MA's), (98, 38786), (99, 38780), (102, 38744), (108, 38702), (110, 38693),  
(117, 38657), (125, 38627), (127, 38618), (128, 38615),

Gene: Odin\_56 Start: 37328, Stop: 37056, Start Num: 84  
Candidate Starts for Odin\_56:  
(Start: 84 @37328 has 95 MA's), (99, 37301), (117, 37178), (120, 37166),

Gene: OlinDD\_28 Start: 9180, Stop: 9434, Start Num: 95  
Candidate Starts for OlinDD\_28:  
(77, 9132), (Start: 88 @9165 has 2 MA's), (Start: 95 @9180 has 25 MA's), (101, 9225), (106, 9261),  
(126, 9348),

Gene: Olliecat\_33 Start: 24245, Stop: 24484, Start Num: 96  
Candidate Starts for Olliecat\_33:  
(5, 23624), (23, 23930), (Start: 96 @24245 has 59 MA's),

Gene: Onglai\_56 Start: 36566, Stop: 36294, Start Num: 84  
Candidate Starts for Onglai\_56:  
(Start: 84 @36566 has 95 MA's), (Start: 93 @36557 has 2 MA's), (103, 36500), (107, 36464), (114,  
36425), (121, 36398), (125, 36386),

Gene: Oofda\_65 Start: 37642, Stop: 37373, Start Num: 89  
Candidate Starts for Oofda\_65:  
(Start: 89 @37642 has 19 MA's), (125, 37465),

Gene: Orange\_57 Start: 37335, Stop: 37063, Start Num: 85  
Candidate Starts for Orange\_57:  
(Start: 85 @37335 has 27 MA's), (Start: 93 @37326 has 2 MA's), (125, 37155),

Gene: PackMan\_57 Start: 38225, Stop: 37953, Start Num: 84  
Candidate Starts for PackMan\_57:  
(Start: 84 @38225 has 95 MA's), (Start: 93 @38216 has 2 MA's), (103, 38159), (107, 38123), (114, 38084), (121, 38057), (125, 38045),

Gene: PainterBoy\_59 Start: 38298, Stop: 38026, Start Num: 85  
Candidate Starts for PainterBoy\_59:  
(62, 38367), (Start: 85 @38298 has 27 MA's), (Start: 93 @38289 has 2 MA's), (107, 38196), (117, 38148), (121, 38130), (125, 38118),

Gene: PastaFagioli\_35 Start: 25432, Stop: 25674, Start Num: 96  
Candidate Starts for PastaFagioli\_35:  
(Start: 96 @25432 has 59 MA's), (119, 25573),

Gene: Pavlo\_29 Start: 9536, Stop: 9784, Start Num: 95  
Candidate Starts for Pavlo\_29:  
(Start: 80 @9497 has 1 MA's), (Start: 95 @9536 has 25 MA's), (101, 9581), (106, 9617), (140, 9764),

Gene: Petersenfast\_56 Start: 37334, Stop: 37062, Start Num: 85  
Candidate Starts for Petersenfast\_56:  
(Start: 85 @37334 has 27 MA's), (Start: 93 @37325 has 2 MA's), (125, 37154),

Gene: Ph8s\_59 Start: 37685, Stop: 37413, Start Num: 84  
Candidate Starts for Ph8s\_59:  
(Start: 84 @37685 has 95 MA's), (102, 37622), (109, 37574), (117, 37535), (120, 37523), (125, 37505),

Gene: Phaeder\_58 Start: 38225, Stop: 37953, Start Num: 84  
Candidate Starts for Phaeder\_58:  
(Start: 84 @38225 has 95 MA's), (Start: 93 @38216 has 2 MA's), (103, 38159), (107, 38123), (114, 38084), (121, 38057), (125, 38045),

Gene: Pharaoh\_53 Start: 38271, Stop: 37999, Start Num: 84  
Candidate Starts for Pharaoh\_53:  
(35, 38472), (Start: 84 @38271 has 95 MA's), (Start: 93 @38262 has 2 MA's), (98, 38250), (102, 38208), (107, 38169), (117, 38121), (121, 38103), (125, 38091), (127, 38082),

Gene: PhigPhack\_37 Start: 25302, Stop: 25544, Start Num: 96  
Candidate Starts for PhigPhack\_37:  
(Start: 96 @25302 has 59 MA's), (119, 25443),

Gene: PhillyPhilly\_30 Start: 9402, Stop: 9689, Start Num: 80  
Candidate Starts for PhillyPhilly\_30:  
(Start: 80 @9402 has 1 MA's), (Start: 95 @9441 has 25 MA's), (101, 9486), (106, 9522), (140, 9669),

Gene: Phisb\_37 Start: 25535, Stop: 25777, Start Num: 96  
Candidate Starts for Phisb\_37:  
(54, 25406), (60, 25427), (64, 25439), (66, 25442), (69, 25451), (71, 25454), (Start: 91 @25526 has 7 MA's), (Start: 96 @25535 has 59 MA's), (119, 25676),

Gene: Phlei\_47 Start: 37907, Stop: 37635, Start Num: 85

Candidate Starts for Phlei\_47:

(Start: 85 @37907 has 27 MA's), (Start: 93 @37898 has 2 MA's), (109, 37796), (117, 37757), (118, 37754), (137, 37673),

Gene: Phonnegut\_58 Start: 38322, Stop: 38050, Start Num: 84

Candidate Starts for Phonnegut\_58:

(Start: 84 @38322 has 95 MA's), (Start: 93 @38313 has 2 MA's), (103, 38256), (107, 38220), (114, 38181), (121, 38154), (125, 38142),

Gene: Pioneer\_58 Start: 38322, Stop: 38050, Start Num: 84

Candidate Starts for Pioneer\_58:

(Start: 84 @38322 has 95 MA's), (Start: 93 @38313 has 2 MA's), (103, 38256), (107, 38220), (114, 38181), (121, 38154), (125, 38142),

Gene: Pioneer3\_28 Start: 9179, Stop: 9433, Start Num: 95

Candidate Starts for Pioneer3\_28:

(77, 9131), (Start: 88 @9164 has 2 MA's), (Start: 95 @9179 has 25 MA's), (101, 9224), (106, 9260), (126, 9347),

Gene: Platte\_28 Start: 8949, Stop: 9203, Start Num: 95

Candidate Starts for Platte\_28:

(77, 8901), (Start: 88 @8934 has 2 MA's), (Start: 95 @8949 has 25 MA's), (101, 8994), (106, 9030), (126, 9117),

Gene: Pomar16\_60 Start: 38309, Stop: 38037, Start Num: 84

Candidate Starts for Pomar16\_60:

(Start: 84 @38309 has 95 MA's), (Start: 93 @38300 has 2 MA's), (107, 38207), (125, 38129), (137, 38075),

Gene: Power\_57 Start: 38477, Stop: 38205, Start Num: 84

Candidate Starts for Power\_57:

(Start: 84 @38477 has 95 MA's), (Start: 93 @38468 has 2 MA's), (98, 38456), (99, 38450), (117, 38327),

Gene: Priya\_58 Start: 38292, Stop: 38020, Start Num: 84

Candidate Starts for Priya\_58:

(Start: 84 @38292 has 95 MA's), (Start: 93 @38283 has 2 MA's), (103, 38226), (107, 38190), (114, 38151), (121, 38124), (125, 38112),

Gene: QMacho\_38 Start: 25959, Stop: 26201, Start Num: 96

Candidate Starts for QMacho\_38:

(Start: 96 @25959 has 59 MA's), (141, 26193),

Gene: Qobbit\_58 Start: 38254, Stop: 37982, Start Num: 84

Candidate Starts for Qobbit\_58:

(Start: 84 @38254 has 95 MA's), (Start: 93 @38245 has 2 MA's), (103, 38188), (107, 38152), (114, 38113), (121, 38086), (125, 38074),

Gene: QueenB2\_57 Start: 38455, Stop: 38183, Start Num: 84

Candidate Starts for QueenB2\_57:

(Start: 84 @38455 has 95 MA's), (Start: 93 @38446 has 2 MA's), (98, 38434), (99, 38428), (117, 38305), (125, 38275),

Gene: QueenBeesly\_58 Start: 38424, Stop: 38152, Start Num: 84

Candidate Starts for QueenBeesly\_58:

(Start: 84 @38424 has 95 MA's), (Start: 93 @38415 has 2 MA's), (98, 38403), (99, 38397), (117, 38274),

Gene: Quenya\_35 Start: 25660, Stop: 25890, Start Num: 96

Candidate Starts for Quenya\_35:

(14, 25243), (22, 25348), (36, 25423), (41, 25447), (45, 25486), (49, 25513), (50, 25516), (51, 25519), (67, 25576), (69, 25579), (72, 25585), (Start: 91 @25651 has 7 MA's), (Start: 96 @25660 has 59 MA's), (108, 25747), (119, 25801), (136, 25852), (141, 25882),

Gene: Quokka\_56 Start: 37421, Stop: 37149, Start Num: 84

Candidate Starts for Quokka\_56:

(Start: 84 @37421 has 95 MA's), (98, 37400), (99, 37394), (117, 37271), (120, 37259),

Gene: Rachaly\_57 Start: 38723, Stop: 38451, Start Num: 84

Candidate Starts for Rachaly\_57:

(Start: 84 @38723 has 95 MA's), (99, 38696), (117, 38573), (125, 38543),

Gene: Rahalelujah\_58 Start: 37998, Stop: 37726, Start Num: 84

Candidate Starts for Rahalelujah\_58:

(Start: 84 @37998 has 95 MA's), (Start: 93 @37989 has 2 MA's), (103, 37932), (107, 37896), (117, 37848),

Gene: ReMo\_62 Start: 37440, Stop: 37171, Start Num: 89

Candidate Starts for ReMo\_62:

(9, 37884), (12, 37860), (19, 37782), (Start: 89 @37440 has 19 MA's), (125, 37263),

Gene: Refuge\_56 Start: 39539, Stop: 39267, Start Num: 88

Candidate Starts for Refuge\_56:

(79, 39569), (Start: 88 @39539 has 2 MA's), (107, 39437), (117, 39389), (121, 39371), (125, 39359),

Gene: Remus\_64 Start: 37446, Stop: 37177, Start Num: 89

Candidate Starts for Remus\_64:

(9, 37890), (12, 37866), (19, 37788), (Start: 89 @37446 has 19 MA's), (125, 37269),

Gene: Retro23\_59 Start: 38669, Stop: 38397, Start Num: 84

Candidate Starts for Retro23\_59:

(Start: 84 @38669 has 95 MA's), (Start: 93 @38660 has 2 MA's), (98, 38648), (99, 38642), (117, 38519), (125, 38489),

Gene: Rollins\_33 Start: 23463, Stop: 23702, Start Num: 91

Candidate Starts for Rollins\_33:

(34, 23220), (40, 23250), (Start: 91 @23463 has 7 MA's), (Start: 96 @23472 has 59 MA's), (108, 23559), (136, 23664), (141, 23694),

Gene: Roman\_30 Start: 9436, Stop: 9684, Start Num: 95

Candidate Starts for Roman\_30:

(Start: 80 @9397 has 1 MA's), (Start: 95 @9436 has 25 MA's), (101, 9481), (106, 9517), (140, 9664),

Gene: Rona\_34 Start: 25980, Stop: 26210, Start Num: 96

Candidate Starts for Rona\_34:

(16, 25560), (20, 25623), (21, 25641), (24, 25662), (26, 25671), (29, 25695), (32, 25713), (33, 25719), (38, 25746), (39, 25749), (42, 25770), (43, 25773), (48, 25812), (49, 25827), (52, 25842), (54, 25851), (56, 25860), (57, 25866), (61, 25875), (66, 25887), (67, 25893), (Start: 91 @25971 has 7 MA's), (Start: 96 @25980 has 59 MA's), (105, 26052), (108, 26067), (136, 26172), (141, 26202),

Gene: Rosalind\_62 Start: 37598, Stop: 37329, Start Num: 89

Candidate Starts for Rosalind\_62:

(9, 38042), (12, 38018), (19, 37940), (Start: 89 @37598 has 19 MA's), (125, 37421),

Gene: RunningBrook\_36 Start: 10938, Stop: 11192, Start Num: 95

Candidate Starts for RunningBrook\_36:

(87, 10923), (Start: 95 @10938 has 25 MA's), (101, 10983), (109, 11034), (112, 11052), (116, 11070),

Gene: RyeScarlet\_59 Start: 38297, Stop: 38025, Start Num: 84

Candidate Starts for RyeScarlet\_59:

(Start: 84 @38297 has 95 MA's), (Start: 93 @38288 has 2 MA's), (103, 38231), (107, 38195), (114, 38156), (121, 38129), (125, 38117),

Gene: Sachima\_55 Start: 38207, Stop: 37935, Start Num: 84

Candidate Starts for Sachima\_55:

(Start: 84 @38207 has 95 MA's), (Start: 93 @38198 has 2 MA's), (103, 38141), (107, 38105), (114, 38066), (121, 38039), (125, 38027),

Gene: Salz\_56 Start: 37305, Stop: 37033, Start Num: 85

Candidate Starts for Salz\_56:

(Start: 85 @37305 has 27 MA's), (Start: 93 @37296 has 2 MA's), (125, 37125),

Gene: SanaSana\_39 Start: 27081, Stop: 27314, Start Num: 96

Candidate Starts for SanaSana\_39:

(53, 26952), (54, 26955), (59, 26973), (63, 26985), (64, 26988), (69, 26997), (Start: 91 @27072 has 7 MA's), (Start: 96 @27081 has 59 MA's), (118, 27216), (137, 27282),

Gene: SansAfet\_37 Start: 25401, Stop: 25631, Start Num: 96

Candidate Starts for SansAfet\_37:

(Start: 96 @25401 has 59 MA's),

Gene: SarBear\_36 Start: 25256, Stop: 25498, Start Num: 96

Candidate Starts for SarBear\_36:

(Start: 96 @25256 has 59 MA's), (141, 25490),

Gene: Scherzo\_58 Start: 38511, Stop: 38239, Start Num: 84

Candidate Starts for Scherzo\_58:

(Start: 84 @38511 has 95 MA's), (Start: 93 @38502 has 2 MA's), (103, 38445), (107, 38409), (114, 38370), (121, 38343), (125, 38331),

Gene: SemperFi\_59 Start: 38692, Stop: 38420, Start Num: 84

Candidate Starts for SemperFi\_59:

(Start: 84 @38692 has 95 MA's), (Start: 93 @38683 has 2 MA's), (98, 38671), (99, 38665), (117, 38542),

Gene: Serenity\_58 Start: 37628, Stop: 37356, Start Num: 84

Candidate Starts for Serenity\_58:



(58, 37700), (62, 37688), (Start: 84 @37628 has 95 MA's), (98, 37607), (99, 37601), (117, 37478), (120, 37466),

Gene: Sham4\_57 Start: 37333, Stop: 37061, Start Num: 85

Candidate Starts for Sham4\_57:

(Start: 85 @37333 has 27 MA's), (Start: 93 @37324 has 2 MA's), (125, 37153),

Gene: Sharkboy\_35 Start: 26070, Stop: 26309, Start Num: 91

Candidate Starts for Sharkboy\_35:

(16, 25659), (20, 25722), (21, 25740), (24, 25761), (26, 25770), (29, 25794), (32, 25812), (33, 25818), (38, 25845), (39, 25848), (42, 25869), (43, 25872), (45, 25899), (48, 25911), (49, 25926), (52, 25941), (54, 25950), (56, 25959), (57, 25965), (61, 25974), (66, 25986), (67, 25992), (Start: 91 @26070 has 7 MA's), (Start: 96 @26079 has 59 MA's), (105, 26151), (108, 26166), (119, 26220), (136, 26271), (141, 26301),

Gene: ShayRa\_64 Start: 37627, Stop: 37358, Start Num: 89

Candidate Starts for ShayRa\_64:

(9, 38071), (19, 37969), (Start: 89 @37627 has 19 MA's), (125, 37450),

Gene: Shayna\_36 Start: 24764, Stop: 24994, Start Num: 96

Candidate Starts for Shayna\_36:

(Start: 96 @24764 has 59 MA's), (102, 24809),

Gene: SheaKeira\_56 Start: 37935, Stop: 37663, Start Num: 84

Candidate Starts for SheaKeira\_56:

(Start: 84 @37935 has 95 MA's), (Start: 93 @37926 has 2 MA's), (98, 37914), (103, 37869), (107, 37833), (111, 37812), (117, 37785), (119, 37776), (123, 37761), (136, 37710), (140, 37689),

Gene: Skylord\_33 Start: 23403, Stop: 23633, Start Num: 96

Candidate Starts for Skylord\_33:

(34, 23151), (40, 23181), (Start: 91 @23394 has 7 MA's), (Start: 96 @23403 has 59 MA's), (108, 23490), (136, 23595), (141, 23625),

Gene: Slay\_37 Start: 25937, Stop: 26179, Start Num: 96

Candidate Starts for Slay\_37:

(Start: 96 @25937 has 59 MA's), (141, 26171),

Gene: Smeagan\_61 Start: 38985, Stop: 38713, Start Num: 84

Candidate Starts for Smeagan\_61:

(Start: 84 @38985 has 95 MA's), (Start: 93 @38976 has 2 MA's), (98, 38964), (99, 38958), (117, 38835),

Gene: SnapTap\_58 Start: 38503, Stop: 38231, Start Num: 84

Candidate Starts for SnapTap\_58:

(Start: 84 @38503 has 95 MA's), (Start: 93 @38494 has 2 MA's), (98, 38482), (99, 38476), (117, 38353),

Gene: Snape\_57 Start: 37325, Stop: 37053, Start Num: 85

Candidate Starts for Snape\_57:

(Start: 85 @37325 has 27 MA's), (Start: 93 @37316 has 2 MA's), (125, 37145),

Gene: Softsoap\_36 Start: 25312, Stop: 25542, Start Num: 96

Candidate Starts for Softsoap\_36:

(Start: 96 @25312 has 59 MA's),

Gene: Solea\_37 Start: 25291, Stop: 25521, Start Num: 96

Candidate Starts for Solea\_37:

(55, 25171), (63, 25195), (67, 25204), (69, 25207), (71, 25210), (Start: 91 @25282 has 7 MA's), (Start: 96 @25291 has 59 MA's),

Gene: Soondubu\_31 Start: 26525, Stop: 26788, Start Num: 95

Candidate Starts for Soondubu\_31:

(Start: 95 @26525 has 25 MA's), (134, 26723), (139, 26756),

Gene: Soups\_64 Start: 37890, Stop: 37621, Start Num: 89

Candidate Starts for Soups\_64:

(9, 38334), (19, 38232), (Start: 89 @37890 has 19 MA's), (125, 37713),

Gene: Spouty\_58 Start: 38291, Stop: 38019, Start Num: 84

Candidate Starts for Spouty\_58:

(Start: 84 @38291 has 95 MA's), (Start: 93 @38282 has 2 MA's), (103, 38225), (107, 38189), (114, 38150), (121, 38123), (125, 38111),

Gene: Squee\_63 Start: 41158, Stop: 40892, Start Num: 76

Candidate Starts for Squee\_63:

(75, 41161), (Start: 76 @41158 has 3 MA's), (83, 41146), (99, 41125), (105, 41059), (109, 41038), (113, 41017), (114, 41008), (122, 40978), (140, 40903),

Gene: Squirrel\_33 Start: 24244, Stop: 24483, Start Num: 96

Candidate Starts for Squirrel\_33:

(5, 23623), (23, 23929), (Start: 96 @24244 has 59 MA's),

Gene: StarStuff\_60 Start: 38271, Stop: 37999, Start Num: 84

Candidate Starts for StarStuff\_60:

(Start: 84 @38271 has 95 MA's), (Start: 93 @38262 has 2 MA's), (107, 38169), (125, 38091), (137, 38037),

Gene: Steamy\_54 Start: 38003, Stop: 37731, Start Num: 84

Candidate Starts for Steamy\_54:

(35, 38204), (Start: 84 @38003 has 95 MA's), (Start: 93 @37994 has 2 MA's), (99, 37976), (102, 37940), (107, 37901), (117, 37853), (121, 37835), (127, 37814), (128, 37811),

Gene: StevieWelch\_35 Start: 10338, Stop: 10592, Start Num: 95

Candidate Starts for StevieWelch\_35:

(87, 10323), (Start: 95 @10338 has 25 MA's), (101, 10383), (112, 10452), (116, 10470),

Gene: Stoor\_37 Start: 26750, Stop: 26983, Start Num: 96

Candidate Starts for Stoor\_37:

(53, 26621), (54, 26624), (59, 26642), (64, 26657), (69, 26666), (Start: 91 @26741 has 7 MA's), (Start: 96 @26750 has 59 MA's),

Gene: Stromboli\_37 Start: 26614, Stop: 26847, Start Num: 96

Candidate Starts for Stromboli\_37:

(53, 26485), (54, 26488), (59, 26506), (63, 26518), (64, 26521), (69, 26530), (Start: 91 @26605 has 7 MA's), (Start: 96 @26614 has 59 MA's), (124, 26764),

Gene: Strosahl\_64 Start: 37446, Stop: 37177, Start Num: 89  
Candidate Starts for Strosahl\_64:  
(9, 37890), (12, 37866), (19, 37788), (Start: 89 @37446 has 19 MA's), (125, 37269),

Gene: SunnyD\_36 Start: 24766, Stop: 24996, Start Num: 96  
Candidate Starts for SunnyD\_36:  
(Start: 96 @24766 has 59 MA's), (102, 24811),

Gene: Superchunk\_56 Start: 36944, Stop: 36672, Start Num: 84  
Candidate Starts for Superchunk\_56:  
(Start: 84 @36944 has 95 MA's), (99, 36917), (117, 36794), (120, 36782),

Gene: SweetiePie\_58 Start: 38635, Stop: 38363, Start Num: 84  
Candidate Starts for SweetiePie\_58:  
(Start: 84 @38635 has 95 MA's), (Start: 93 @38626 has 2 MA's), (98, 38614), (99, 38608),

Gene: Swervy\_37 Start: 25456, Stop: 25698, Start Num: 96  
Candidate Starts for Swervy\_37:  
(Start: 96 @25456 has 59 MA's), (141, 25690),

Gene: SwirlSquare\_63 Start: 37866, Stop: 37594, Start Num: 84  
Candidate Starts for SwirlSquare\_63:  
(Start: 84 @37866 has 95 MA's), (99, 37839), (104, 37791), (113, 37734), (125, 37686), (130, 37668),

Gene: Switzerland\_63 Start: 37766, Stop: 37497, Start Num: 89  
Candidate Starts for Switzerland\_63:  
(9, 38210), (19, 38108), (Start: 89 @37766 has 19 MA's), (125, 37589),

Gene: Tandem\_28 Start: 9118, Stop: 9372, Start Num: 95  
Candidate Starts for Tandem\_28:  
(77, 9070), (Start: 88 @9103 has 2 MA's), (Start: 95 @9118 has 25 MA's), (101, 9163), (106, 9199),  
(126, 9286),

Gene: Teagster\_37 Start: 25597, Stop: 25827, Start Num: 96  
Candidate Starts for Teagster\_37:  
(Start: 96 @25597 has 59 MA's), (102, 25642),

Gene: Timothy\_57 Start: 37302, Stop: 37030, Start Num: 85  
Candidate Starts for Timothy\_57:  
(Start: 85 @37302 has 27 MA's), (Start: 93 @37293 has 2 MA's), (125, 37122),

Gene: TinyTimmy\_57 Start: 37351, Stop: 37079, Start Num: 85  
Candidate Starts for TinyTimmy\_57:  
(Start: 85 @37351 has 27 MA's), (Start: 93 @37342 has 2 MA's), (125, 37171),

Gene: TipsytheTRex\_54 Start: 37698, Stop: 37426, Start Num: 84  
Candidate Starts for TipsytheTRex\_54:  
(58, 37770), (62, 37758), (Start: 84 @37698 has 95 MA's), (98, 37677), (99, 37671), (117, 37548),  
(120, 37536),

Gene: Toaka\_58 Start: 38206, Stop: 37934, Start Num: 84  
Candidate Starts for Toaka\_58:  
(Start: 84 @38206 has 95 MA's), (Start: 93 @38197 has 2 MA's), (117, 38056), (121, 38038),

Gene: Tomathan\_60 Start: 38318, Stop: 38046, Start Num: 84

Candidate Starts for Tomathan\_60:

(Start: 84 @38318 has 95 MA's), (Start: 93 @38309 has 2 MA's), (107, 38216), (125, 38138), (137, 38084),

Gene: Travvers\_60 Start: 38268, Stop: 37996, Start Num: 84

Candidate Starts for Travvers\_60:

(Start: 84 @38268 has 95 MA's), (Start: 93 @38259 has 2 MA's), (107, 38166), (125, 38088), (137, 38034),

Gene: Tubs\_58 Start: 38225, Stop: 37953, Start Num: 84

Candidate Starts for Tubs\_58:

(Start: 84 @38225 has 95 MA's), (Start: 93 @38216 has 2 MA's), (103, 38159), (107, 38123), (114, 38084), (121, 38057), (125, 38045),

Gene: TukTuk\_37 Start: 25527, Stop: 25769, Start Num: 96

Candidate Starts for TukTuk\_37:

(Start: 96 @25527 has 59 MA's), (119, 25668),

Gene: Turbido\_59 Start: 38719, Stop: 38447, Start Num: 84

Candidate Starts for Turbido\_59:

(Start: 84 @38719 has 95 MA's), (Start: 93 @38710 has 2 MA's), (98, 38698), (99, 38692),

Gene: Ugenie5\_55 Start: 38510, Stop: 38238, Start Num: 84

Candidate Starts for Ugenie5\_55:

(Start: 84 @38510 has 95 MA's), (Start: 93 @38501 has 2 MA's), (103, 38444), (107, 38408), (114, 38369), (121, 38342), (125, 38330),

Gene: VC3\_61 Start: 38705, Stop: 38394, Start Num: 74

Candidate Starts for VC3\_61:

(Start: 74 @38705 has 4 MA's), (Start: 85 @38666 has 27 MA's), (Start: 93 @38657 has 2 MA's), (107, 38564), (117, 38516), (125, 38486),

Gene: Vanisoa\_58 Start: 39326, Stop: 39054, Start Num: 84

Candidate Starts for Vanisoa\_58:

(Start: 84 @39326 has 95 MA's), (Start: 93 @39317 has 2 MA's), (103, 39260), (107, 39224), (117, 39176), (125, 39146), (127, 39137),

Gene: Vitas\_33 Start: 23412, Stop: 23642, Start Num: 96

Candidate Starts for Vitas\_33:

(34, 23160), (40, 23190), (Start: 91 @23403 has 7 MA's), (Start: 96 @23412 has 59 MA's), (108, 23499), (136, 23604), (141, 23634),

Gene: Waits\_64 Start: 37663, Stop: 37394, Start Num: 89

Candidate Starts for Waits\_64:

(9, 38107), (12, 38083), (19, 38005), (Start: 89 @37663 has 19 MA's), (125, 37486),

Gene: WalkingDead\_38 Start: 27005, Stop: 27238, Start Num: 96

Candidate Starts for WalkingDead\_38:

(53, 26876), (54, 26879), (59, 26897), (63, 26909), (64, 26912), (69, 26921), (Start: 91 @26996 has 7 MA's), (Start: 96 @27005 has 59 MA's),

Gene: Warrior24\_67 Start: 38097, Stop: 37828, Start Num: 89  
Candidate Starts for Warrior24\_67:  
(Start: 89 @38097 has 19 MA's), (125, 37920),

Gene: Welcome\_36 Start: 10355, Stop: 10609, Start Num: 95  
Candidate Starts for Welcome\_36:  
(31, 10088), (87, 10340), (Start: 95 @10355 has 25 MA's), (101, 10400), (109, 10451), (112, 10469),  
(116, 10487),

Gene: Whabigail7\_59 Start: 38704, Stop: 38432, Start Num: 84  
Candidate Starts for Whabigail7\_59:  
(Start: 84 @38704 has 95 MA's), (Start: 93 @38695 has 2 MA's), (98, 38683), (99, 38677), (117,  
38554),

Gene: Wolfstar\_31 Start: 9938, Stop: 10189, Start Num: 95  
Candidate Starts for Wolfstar\_31:  
(15, 9515), (18, 9551), (82, 9908), (Start: 85 @9914 has 27 MA's), (Start: 95 @9938 has 25 MA's),  
(101, 9983), (106, 10019), (126, 10106),

Gene: Yecey3\_59 Start: 38093, Stop: 37821, Start Num: 84  
Candidate Starts for Yecey3\_59:  
(Start: 84 @38093 has 95 MA's), (Start: 93 @38084 has 2 MA's), (103, 38027), (107, 37991), (117,  
37943), (121, 37925),

Gene: Yuma\_34 Start: 10257, Stop: 10511, Start Num: 95  
Candidate Starts for Yuma\_34:  
(87, 10242), (Start: 95 @10257 has 25 MA's), (101, 10302), (126, 10425),

Gene: Zimmer\_55 Start: 39223, Stop: 38951, Start Num: 88  
Candidate Starts for Zimmer\_55:  
(79, 39253), (Start: 88 @39223 has 2 MA's), (107, 39121), (117, 39073), (121, 39055), (125, 39043),