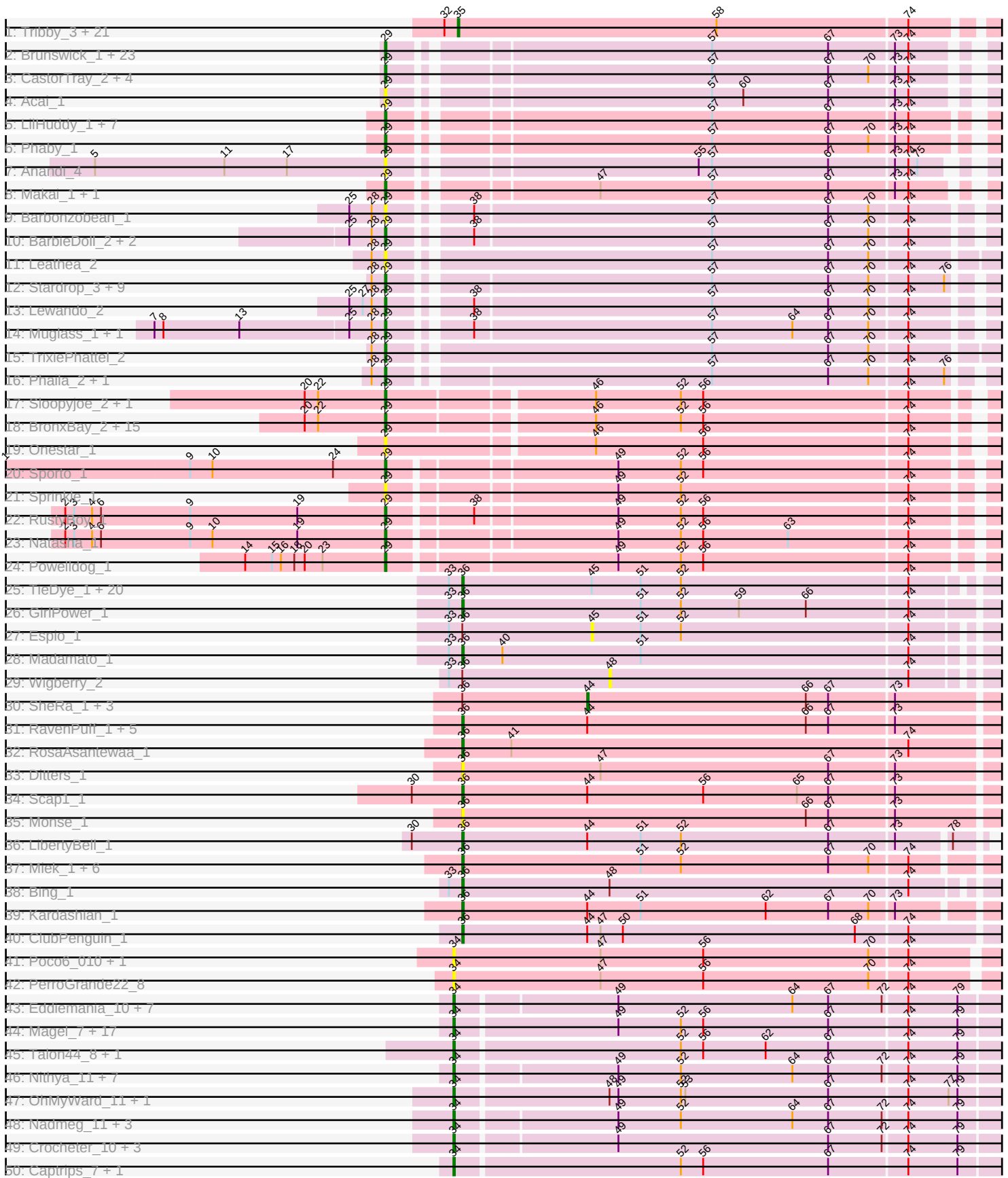
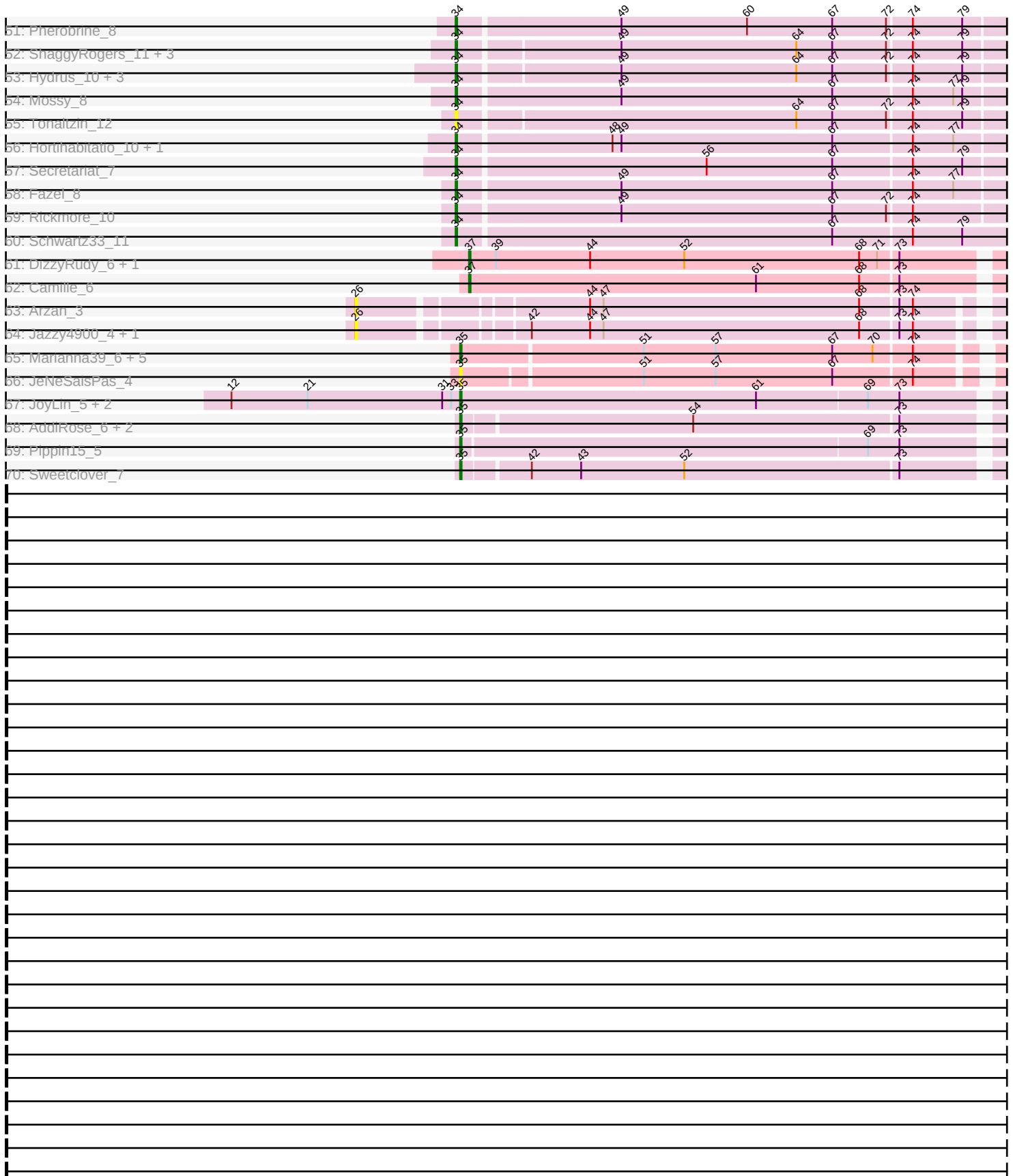




Pham 280063



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 280063 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280063 has 248 members, 53 are drafts.

Phages represented in each track:

- Track 1 : Tribby\_3, KeaneyLin\_2, Mooshroom\_3, Kardesai\_2, Heisenberger\_3, Dynamite\_3, Bowling\_3, Xenomorph\_2, Arcadia\_3, JEGGS\_3, Nason\_3, Benllo\_2, Circum\_3, NapoleonB\_3, Cheesy\_3, Elsa\_3, Hankly\_2, BenitoAntonio\_3, Correa\_3, GoCrazy\_2, YoshiYama\_2, Mudcat\_3
- Track 2 : Brunswick\_1, Inked\_2, Gordon\_1, Dinallo\_2, Loretta\_1, MediumFry\_2, ElephantMan\_1, Issa\_1, CapnMurica\_2, Caterpillar\_2, Tatanka\_1, Teacup\_2, Tenno\_2, DevitoJr\_1, Ingrid\_1, Westerlin\_2, Breylor17\_1, Darby\_1, Trustiboi\_1, Zippen\_2, LucySwiss\_1, Niktson\_1, Nightmare\_1, MiniBagel\_2
- Track 3 : CastorTray\_2, AreFloNak\_1, ScienceWizSam\_2, Synepsis\_1, Nivinsha\_1
- Track 4 : Acai\_1
- Track 5 : LilHuddy\_1, Chlochlo\_1, Tipton\_1, Tokki\_1, Bouchard\_1, Giantsbane\_1, Shepard\_1, Hemma\_2
- Track 6 : Phaby\_1
- Track 7 : Anandi\_4
- Track 8 : Makai\_1, Truckee\_1
- Track 9 : Barbonzobean\_1
- Track 10 : BarbieDoll\_2, Renaldo\_2, Kinny\_2
- Track 11 : Leathea\_2
- Track 12 : Stardrop\_3, Mardi\_2, Altjira\_1, Zeina\_2, Tenney120\_2, KevinMinion\_1, Uzumaki\_2, Argan\_1, GantcherGoblin\_1, PoeMe\_2
- Track 13 : Lewando\_2
- Track 14 : Muglass\_1, Biscute\_1
- Track 15 : TrixiePhattel\_2
- Track 16 : Phaila\_2, Navi1117\_2
- Track 17 : Sloopyjoe\_2, StarLord\_2
- Track 18 : BronxBay\_2, Djungelskog\_2, Salk\_2, HerbBucket\_2, Stayer\_2, Egad\_2, Shiba\_2, Raunak\_2, Jeremy4pt0\_2, Spain\_2, Boog\_2, MrAaronian\_2, Michelle\_2, Linda\_2, ProfFrink\_2, DoctorPepper\_2
- Track 19 : Onestar\_1
- Track 20 : Sporto\_1
- Track 21 : Sprinkle\_1
- Track 22 : RustyBoy\_1
- Track 23 : Natasha\_1
- Track 24 : Powellldog\_1
- Track 25 : TieDye\_1, Esketit\_1, Hoshi\_1, Popy\_1, FidgetOrca\_1, Jaylociraptor\_1, Rima\_1, Indigenous\_1, CherryBlossom\_1, TonyStarch\_1, Meibysrarus\_1, Spectropatronm\_1, IceWarrior\_1, HazuAndZazu\_1, TaídaOne\_1, Maya\_1,

FrodoSwaggins\_1, DrGrey\_1, OlympicHelado\_1, Nam0\_1, Soshi\_1

- Track 26 : GirlPower\_1
- Track 27 : Espio\_1
- Track 28 : Madamoto\_1
- Track 29 : Wigberry\_2
- Track 30 : SheRa\_1, GoblinVoyage\_1, Sangak\_1, HotFries\_1
- Track 31 : RavenPuff\_1, Doxi13\_1, PherryCruz\_1, Annihilus\_1, Bilo\_1, Moozy\_1
- Track 32 : RosaAsantewaa\_1
- Track 33 : Ditters\_1
- Track 34 : Scap1\_1
- Track 35 : Monse\_1
- Track 36 : LibertyBell\_1
- Track 37 : Miek\_1, Thiqqums\_1, CricKo\_1, Regigigas\_1, FromIndy\_1, SendItCS\_1, Rainydai\_1
- Track 38 : Bing\_1
- Track 39 : Kardashian\_1
- Track 40 : ClubPenguin\_1
- Track 41 : Poco6\_010, Pepy6\_008
- Track 42 : PerroGrande22\_8
- Track 43 : Eddiemania\_10, MajinBuu\_11, Aflac\_11, Jodelie19\_11, OlgasClover\_11, Figliar\_11, TenaciousP\_11, BluerMoon\_11
- Track 44 : Magel\_7, Conley\_7, Trufflozitus\_7, NoPickles\_7, Kerry\_7, Dancer\_7, Bugg\_8, FortCran\_7, Gravy\_7, Odesza\_7, Gill\_7, Tanis\_7, Roney\_7, Artorias\_7, Petite\_8, JulesRay\_7, Tairn4Wing\_7, Football\_7
- Track 45 : Talon44\_8, Perkunas\_9
- Track 46 : Nithya\_11, Glintora\_10, Chikenjars\_11, Duffington\_11, Citrus\_10, Luthien\_12, AlainaMarie\_11, EndAve\_11
- Track 47 : OhMyWard\_11, Blanky\_7
- Track 48 : Nadmeg\_11, Vardy\_11, Burley\_11, Runhaar\_11
- Track 49 : Crocheter\_10, CWormy\_10, Madvan\_11, Kenosha\_8
- Track 50 : Captrips\_7, Avazak\_7
- Track 51 : Pherobrine\_8
- Track 52 : ShaggyRogers\_11, BetterYeti\_11, Gusicorn\_11, Phepper\_11
- Track 53 : Hydrus\_10, Arataki\_8, Zeph\_10, Untouchable\_10
- Track 54 : Mossy\_8
- Track 55 : Tonaltzin\_12
- Track 56 : Hortihabitatio\_10, Mysticmoon\_8
- Track 57 : Secretariat\_7
- Track 58 : Fazel\_8
- Track 59 : Rickmore\_10
- Track 60 : Schwartz33\_11
- Track 61 : DizzyRudy\_6, Damascus\_6
- Track 62 : Camille\_6
- Track 63 : Arzan\_3
- Track 64 : Jazzy4900\_4, Sunny4976\_3
- Track 65 : Marianna39\_6, Kureo\_7, Paella\_6, Elver\_6, Qui\_6, Gandionco\_5
- Track 66 : JeNeSaisPas\_4
- Track 67 : JoyLin\_5, Yotsuba\_5, Eevee\_5
- Track 68 : AddiRose\_6, Serenabean\_6, Daddyjeff\_6
- Track 69 : Pippin15\_5
- Track 70 : Sweetclover\_7

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

The start number called the most often in the published annotations is 29, it was called in 63 of the 195 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acai\_1, Altjira\_1, Anandi\_4, AreFloNak\_1, Argan\_1, BarbieDoll\_2, Barbonzobean\_1, Biscute\_1, Boog\_2, Bouchard\_1, Breylor17\_1, BronxBay\_2, Brunswick\_1, CapnMurica\_2, CastorTray\_2, Caterpillar\_2, Chlochlo\_1, Darby\_1, DevitoJr\_1, Dinallo\_2, Djungelskog\_2, DoctorPepper\_2, Egad\_2, ElephantMan\_1, GantcherGoblin\_1, Giantsbane\_1, Gordon\_1, Hemma\_2, HerbBucket\_2, Ingrid\_1, Inked\_2, Issa\_1, Jeremy4pt0\_2, KevinMinion\_1, Kinny\_2, Leathea\_2, Lewando\_2, LilHuddy\_1, Linda\_2, Loretta\_1, LucySwiss\_1, Makai\_1, Mardi\_2, MediumFry\_2, Michelle\_2, MiniBagel\_2, MrAaronian\_2, Muglass\_1, Natasha\_1, Navi1117\_2, Nightmare\_1, Niktson\_1, Nivinsha\_1, Onestar\_1, Phaby\_1, Phaila\_2, PoeMe\_2, Powelldog\_1, ProfFrink\_2, Raunak\_2, Renaldo\_2, RustyBoy\_1, Salk\_2, ScienceWizSam\_2, Shepard\_1, Shiba\_2, Sloopyjoe\_2, Spain\_2, Sporto\_1, Sprinkle\_1, StarLord\_2, Stardrop\_3, Stayer\_2, Synepsis\_1, Tatanka\_1, Teacup\_2, Tenney120\_2, Tenno\_2, Tipton\_1, Tokki\_1, TrixiePhatTe\_2, Truckee\_1, Trustiboi\_1, Uzumaki\_2, Westerlin\_2, Zeina\_2, Zippen\_2,

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

- 

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

- AddiRose\_6, Aflac\_11, AlainaMarie\_11, Annihilus\_1, Arataki\_8, Arcadia\_3, Artorias\_7, Arzan\_3, Avazak\_7, BenitoAntonio\_3, Benllo\_2, BetterYeti\_11, Bilo\_1, Bing\_1, Blanky\_7, BluerMoon\_11, Bowling\_3, Bugg\_8, Burley\_11, CWormy\_10, Camille\_6, Captrips\_7, Cheesy\_3, CherryBlossom\_1, Chickenjars\_11, Circum\_3, Citrus\_10, ClubPenguin\_1, Conley\_7, Correa\_3, CricKo\_1, Crocheter\_10, Daddyjeff\_6, Damascus\_6, Dancer\_7, Ditters\_1, DizzyRudy\_6, Doxi13\_1, DrGrey\_1, Duffington\_11, Dynamite\_3, Eddiemania\_10, Eevee\_5, Elsa\_3, Elver\_6, EndAve\_11, Esketit\_1, Espio\_1, Faze1\_8, FidgetOrca\_1, Figliar\_11, Football\_7, FortCran\_7, FrodoSwaggins\_1, FromIndy\_1, Gandionco\_5, Gil7\_7, GirlPower\_1, Glintora\_10, GoCrazy\_2, GoblinVoyage\_1, Gravy\_7, Gusicorn\_11, Hankly\_2, HazuAndZazu\_1, Heisenberger\_3, Hortihabitatio\_10, Hoshi\_1, HotFries\_1, Hydrus\_10, IceWarrior\_1, Indigenous\_1, JEGGS\_3, Jaylociraptor\_1, Jazzy4900\_4, JeNeSaisPas\_4, Jodelie19\_11, JoyLin\_5, JulesRay\_7, Kardashian\_1, Kardesai\_2, KeaneyLin\_2, Kenosha\_8, Kerry\_7, Kureo\_7, LibertyBell\_1, Luthien\_12, Madamoto\_1, Madvan\_11, Magel\_7, MajinBuu\_11, Marianna39\_6, Maya\_1, Meibysrarus\_1, Miek\_1, Monse\_1, Mooshroom\_3, Moozy\_1, Mossy\_8, Mudcat\_3, Mysticmoon\_8, Nadmeg\_11, Namo\_1, NapoleonB\_3, Nason\_3, Nithya\_11, NoPickles\_7, Odesza\_7, OhMyWard\_11, OlgasClover\_11, OlympicHelado\_1, Paella\_6, Pepy6\_008, Perkunas\_9, PerroGrande22\_8, Petite\_8, Phepper\_11, Pherobrine\_8, PherryCruz\_1, Pippin15\_5, Poco6\_010, Popy\_1, Qui\_6, Rainydai\_1, RavenPuff\_1, Regigigas\_1, Rickmore\_10, Rima\_1, Roney\_7, RosaAsantewaa\_1, Runhaar\_11, Sangak\_1, Scap1\_1, Schwartz33\_11, Secretariat\_7, SendItCS\_1, Serenabean\_6, ShaggyRogers\_11, SheRa\_1, Soshi\_1, Spectropatronm\_1, Sunny4976\_3, Sweetclover\_7, TaidaOne\_1, Tairn4Wing\_7, Talon44\_8, Tanis\_7, TenaciousP\_11, Thiqqums\_1, TieDye\_1, Tonaltzin\_12, TonyStarch\_1, Tribby\_3, Trufflozitus\_7, Untouchable\_10, Vardy\_11, Wigberry\_2, Xenomorph\_2, YoshiYama\_2, Yotsuba\_5, Zeph\_10,

## Summary by start number:

### Start 26:

- Found in 3 of 248 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arzan\_3 (FI), Jazzy4900\_4 (FI), Sunny4976\_3 (FI),

### Start 29:

- Found in 87 of 248 ( 35.1% ) of genes in pham
- Manual Annotations of this start: 63 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acai\_1 (AU1), Altjira\_1 (AU6), Anandi\_4 (AU4), AreFloNak\_1 (AU1), Argan\_1 (AU6), BarbieDoll\_2 (AU6), Barbonzobean\_1 (AU6), Biscute\_1 (AU6), Boog\_2 (AW), Bouchard\_1 (AU2), Breylor17\_1 (AU1), BronxBay\_2 (AW), Brunswick\_1 (AU1), CapnMurica\_2 (AU1), CastorTray\_2 (AU1), Caterpillar\_2 (AU4), Chlochlo\_1 (AU2), Darby\_1 (AU1), DevitoJr\_1 (AU1), Dinallo\_2 (AU1), Djungelskog\_2 (AW), DoctorPepper\_2 (AW), Egad\_2 (AW), ElephantMan\_1 (AU1), GantcherGoblin\_1 (AU6), Giantsbane\_1 (AU2), Gordon\_1 (AU1), Hemma\_2 (AU1), HerbBucket\_2 (AW), Ingrid\_1 (AU3), Inked\_2 (AU7), Issa\_1 (AU1), Jeremy4pt0\_2 (AW), KevinMinion\_1 (AU6), Kinny\_2 (AU6), Leatheia\_2 (AU6), Lewando\_2 (AU6), LilHuddy\_1 (AU2), Linda\_2 (AW), Loretta\_1 (AU3), LucySwiss\_1 (AU1), Makai\_1 (AU5), Mardi\_2 (AU6), MediumFry\_2 (AU4), Michelle\_2 (AW), MiniBagel\_2 (AU1), MrAaronian\_2 (AW), Muglass\_1 (AU6), Natasha\_1 (AW), Navi1117\_2 (AU6), Nightmare\_1 (AU1), Niktson\_1 (AU1), Nivinsha\_1 (AU1), Onestar\_1 (AW), Phaby\_1 (AU2), Phaila\_2 (AU6), PoeMe\_2 (AU6), Powellldog\_1 (AW), ProfFrink\_2 (AW), Raunak\_2 (AW), Renaldo\_2 (AU6), RustyBoy\_1 (AW), Salk\_2 (AW), ScienceWizSam\_2 (AU1), Shepard\_1 (AU2), Shiba\_2 (AW), Sloopyjoe\_2 (AW), Spain\_2 (AW), Sporto\_1 (AW), Sprinkle\_1 (AW), StarLord\_2 (AW), Stardrop\_3 (AU6), Stayer\_2 (AW), Synopsis\_1 (AU1), Tatanka\_1 (AU1), Teacup\_2 (AU1), Tenney120\_2 (AU6), Tenno\_2 (AU1), Tipton\_1 (AU2), Tokki\_1 (AU2), TrixiePhattel\_2 (AU6), Truckee\_1 (AU5), Trustiboi\_1 (AU1), Uzumaki\_2 (AU6), Westerlin\_2 (AU1), Zeina\_2 (AU6), Zippen\_2 (AU7),

### Start 34:

- Found in 68 of 248 ( 27.4% ) of genes in pham
- Manual Annotations of this start: 55 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aflac\_11 (DJ), AlainaMarie\_11 (DJ), Arataki\_8 (DJ), Artorias\_7 (DJ), Avazak\_7 (DJ), BetterYeti\_11 (DJ), Blanky\_7 (DJ), BluerMoon\_11 (DJ), Bugg\_8 (DJ), Burley\_11 (DJ), CWormy\_10 (DJ), Captrips\_7 (DJ), Chickenjars\_11 (DJ), Citrus\_10 (DJ), Conley\_7 (DJ), Crocheter\_10 (DJ), Dancer\_7 (DJ), Duffington\_11 (DJ), Eddiemania\_10 (DJ), EndAve\_11 (DJ), Fazel\_8 (DJ), Figliar\_11 (DJ), Football\_7 (DJ), FortCran\_7 (DJ), Gill\_7 (DJ), Gintora\_10 (DJ), Gravy\_7 (DJ), Gusicorn\_11 (DJ), Hortihabitatio\_10 (DJ), Hydrus\_10 (DJ), Jodelie19\_11 (DJ), JulesRay\_7 (DJ), Kenosha\_8 (DJ), Kerry\_7 (DJ), Luthien\_12 (DJ), Madvan\_11 (DJ), Magel\_7 (DJ), MajinBuu\_11 (DJ), Mossy\_8 (DJ), Mysticmoon\_8 (DJ), Nadmeg\_11 (DJ), Nithya\_11 (DJ), NoPickles\_7 (DJ), Odesza\_7 (DJ), OhMyWard\_11 (DJ), OlgasClover\_11 (DJ), Pepy6\_008 (CC), Perkunas\_9 (DJ), PerroGrande22\_8 (CC), Petito\_8 (DJ), Phepper\_11 (DJ), Pherobrine\_8 (DJ), Poco6\_010 (CC), Rickmore\_10 (DJ), Roney\_7 (DJ), Runhaar\_11 (DJ),

Schwartz33\_11 (DJ), Secretariat\_7 (DJ), ShaggyRogers\_11 (DJ), Tairn4Wing\_7 (DJ), Talon44\_8 (DJ), Tanis\_7 (DJ), TenaciousP\_11 (DJ), Tonaltzin\_12 (DJ), Trufflozitus\_7 (DJ), Untouchable\_10 (DJ), Vardy\_11 (DJ), Zeph\_10 (DJ),

Start 35:

- Found in 37 of 248 ( 14.9% ) of genes in pham
- Manual Annotations of this start: 31 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AddiRose\_6 (JA), Arcadia\_3 (AM), BenitoAntonio\_3 (AM), Benllo\_2 (AM), Bowling\_3 (AM), Cheesy\_3 (AM), Circum\_3 (AM), Correa\_3 (AM), Daddyjeff\_6 (JA), Dynamite\_3 (AM), Eevee\_5 (JA), Elsa\_3 (AM), Elver\_6 (FK), Gandionco\_5 (FK), GoCrazy\_2 (AM), Hankly\_2 (AM), Heisenberger\_3 (AM), JEGGS\_3 (AM), JeNeSaisPas\_4 (FK), JoyLin\_5 (JA), Kardesai\_2 (AM), KeaneyLin\_2 (AM), Kureo\_7 (FK), Marianna39\_6 (FK), Mooshroom\_3 (AM), Mudcat\_3 (AM), NapoleonB\_3 (AM), Nason\_3 (AM), Paella\_6 (FK), Pippin15\_5 (JA), Qui\_6 (FK), Serenabean\_6 (JA), Sweetclover\_7 (JA), Tribby\_3 (AM), Xenomorph\_2 (AM), YoshiYama\_2 (AM), Yotsuba\_5 (JA),

Start 36:

- Found in 50 of 248 ( 20.2% ) of genes in pham
- Manual Annotations of this start: 40 of 195
- Called 88.0% of time when present
- Phage (with cluster) where this start called: Annihilus\_1 (BI2), Bilo\_1 (BI2), Bing\_1 (BI5), CherryBlossom\_1 (BI1), ClubPenguin\_1 (BI7), CricKo\_1 (BI4), Ditters\_1 (BI2), Doxi13\_1 (BI2), DrGrey\_1 (BI1), Esketit\_1 (BI1), FidgetOrca\_1 (BI1), FrodoSwaggins\_1 (BI1), FromIndy\_1 (BI4), GirlPower\_1 (BI1), HazuAndZazu\_1 (BI1), Hoshi\_1 (BI1), IceWarrior\_1 (BI1), Indigenous\_1 (BI1), Jaylociraptor\_1 (BI1), Kardashian\_1 (BI6), LibertyBell\_1 (BI3), Madamato\_1 (BI1), Maya\_1 (BI1), Meibysrarus\_1 (BI1), Miek\_1 (BI4), Monse\_1 (BI2), Moozy\_1 (BI2), Namo\_1 (BI1), OlympicHelado\_1 (BI1), PherryCruz\_1 (BI2), Popy\_1 (BI1), Rainydai\_1 (BI4), RavenPuff\_1 (BI2), Regigigas\_1 (BI4), Rima\_1 (BI1), RosaAsantewaa\_1 (BI2), Scap1\_1 (BI2), SendItCS\_1 (BI4), Soshi\_1 (BI1), Spectropatronm\_1 (BI1), TaidaOne\_1 (BI1), Thiqqums\_1 (BI4), TieDye\_1 (BI1), TonyStarch\_1 (BI1),

Start 37:

- Found in 3 of 248 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 195
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camille\_6 (EL), Damascus\_6 (EL), DizzyRudy\_6 (EL),

Start 44:

- Found in 19 of 248 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 3 of 195
- Called 21.1% of time when present
- Phage (with cluster) where this start called: GoblinVoyage\_1 (BI2), HotFries\_1 (BI2), Sangak\_1 (BI2), SheRa\_1 (BI2),

Start 45:

- Found in 22 of 248 ( 8.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 4.5% of time when present
- Phage (with cluster) where this start called: Espio\_1 (BI1),

Start 48:

- Found in 6 of 248 ( 2.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Wigberry\_2 (BI1),

### **Summary by clusters:**

There are 22 clusters represented in this pham: DJ, FI, FK, JA, AU1, AU3, AU2, AU5, AU4, AU7, AU6, EL, CC, AM, AW, BI6, BI7, BI4, BI5, BI2, BI3, BI1,

Info for manual annotations of cluster AM:

- Start number 35 was manually annotated 20 times for cluster AM.

Info for manual annotations of cluster AU1:

- Start number 29 was manually annotated 19 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 29 was manually annotated 7 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 29 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:

- Start number 29 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 29 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 29 was manually annotated 11 times for cluster AU6.

Info for manual annotations of cluster AU7:

- Start number 29 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AW:

- Start number 29 was manually annotated 18 times for cluster AW.

Info for manual annotations of cluster BI1:

- Start number 36 was manually annotated 23 times for cluster BI1.

Info for manual annotations of cluster BI2:

- Start number 36 was manually annotated 8 times for cluster BI2.
- Start number 44 was manually annotated 3 times for cluster BI2.

Info for manual annotations of cluster BI3:

- Start number 36 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

- Start number 36 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 36 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 36 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:

- Start number 36 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster DJ:

- Start number 34 was manually annotated 55 times for cluster DJ.

Info for manual annotations of cluster EL:

- Start number 37 was manually annotated 3 times for cluster EL.

Info for manual annotations of cluster FK:

- Start number 35 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster JA:

- Start number 35 was manually annotated 8 times for cluster JA.

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

Gene: Acai\_1 Start: 760, Stop: 1128, Start Num: 29

Candidate Starts for Acai\_1:

(Start: 29 @760 has 63 MA's), (57, 958), (60, 979), (67, 1036), (73, 1078), (74, 1087),

Gene: AddiRose\_6 Start: 2618, Stop: 2962, Start Num: 35

Candidate Starts for AddiRose\_6:

(Start: 35 @2618 has 31 MA's), (54, 2768), (73, 2903),

Gene: Aflac\_11 Start: 5884, Stop: 6237, Start Num: 34

Candidate Starts for Aflac\_11:

(Start: 34 @5884 has 55 MA's), (49, 5986), (64, 6103), (67, 6127), (72, 6163), (74, 6178), (79, 6211),

Gene: AlainaMarie\_11 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for AlainaMarie\_11:

(Start: 34 @5875 has 55 MA's), (49, 5977), (52, 6019), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: Altjira\_1 Start: 624, Stop: 1001, Start Num: 29

Candidate Starts for Altjira\_1:

(28, 615), (Start: 29 @624 has 63 MA's), (57, 825), (67, 903), (70, 930), (74, 954), (76, 978),

Gene: Anandi\_4 Start: 859, Stop: 1224, Start Num: 29

Candidate Starts for Anandi\_4:

(5, 664), (11, 751), (17, 793), (Start: 29 @859 has 63 MA's), (55, 1048), (57, 1057), (67, 1135), (73, 1177), (74, 1186), (75, 1192),

Gene: Annihilus\_1 Start: 137, Stop: 490, Start Num: 36

Candidate Starts for Annihilus\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Arataki\_8 Start: 3466, Stop: 3819, Start Num: 34

Candidate Starts for Arataki\_8:

(Start: 34 @3466 has 55 MA's), (49, 3568), (64, 3685), (67, 3709), (72, 3745), (74, 3760), (79, 3793),

Gene: Arcadia\_3 Start: 1126, Stop: 1473, Start Num: 35

Candidate Starts for Arcadia\_3:

(32, 1117), (Start: 35 @1126 has 31 MA's), (58, 1300), (74, 1426),

Gene: AreFloNak\_1 Start: 623, Stop: 991, Start Num: 29

Candidate Starts for AreFloNak\_1:

(Start: 29 @623 has 63 MA's), (57, 821), (67, 899), (70, 926), (73, 941), (74, 950),

Gene: Argan\_1 Start: 438, Stop: 815, Start Num: 29

Candidate Starts for Argan\_1:

(28, 429), (Start: 29 @438 has 63 MA's), (57, 639), (67, 717), (70, 744), (74, 768), (76, 792),

Gene: Artorias\_7 Start: 3034, Stop: 3399, Start Num: 34

Candidate Starts for Artorias\_7:

(Start: 34 @3034 has 55 MA's), (49, 3139), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: Arzan\_3 Start: 1155, Stop: 1553, Start Num: 26

Candidate Starts for Arzan\_3:

(26, 1155), (Start: 44 @1293 has 3 MA's), (47, 1302), (68, 1473), (73, 1497), (74, 1506),

Gene: Avazak\_7 Start: 3034, Stop: 3390, Start Num: 34

Candidate Starts for Avazak\_7:

(Start: 34 @3034 has 55 MA's), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: BarbieDoll\_2 Start: 734, Stop: 1111, Start Num: 29

Candidate Starts for BarbieDoll\_2:

(25, 710), (28, 725), (Start: 29 @734 has 63 MA's), (38, 779), (57, 935), (67, 1013), (70, 1040), (74, 1064),

Gene: Barbonzobean\_1 Start: 430, Stop: 807, Start Num: 29

Candidate Starts for Barbonzobean\_1:

(25, 406), (28, 421), (Start: 29 @430 has 63 MA's), (38, 475), (57, 631), (67, 709), (70, 736), (74, 760),

Gene: BenitoAntonio\_3 Start: 734, Stop: 1081, Start Num: 35

Candidate Starts for BenitoAntonio\_3:

(32, 725), (Start: 35 @734 has 31 MA's), (58, 908), (74, 1034),

Gene: Benllo\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Benllo\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: BetterYeti\_11 Start: 5674, Stop: 6027, Start Num: 34

Candidate Starts for BetterYeti\_11:

(Start: 34 @5674 has 55 MA's), (49, 5776), (64, 5893), (67, 5917), (72, 5953), (74, 5968), (79, 6001),

Gene: Bilo\_1 Start: 137, Stop: 490, Start Num: 36

Candidate Starts for Bilo\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Bing\_1 Start: 158, Stop: 502, Start Num: 36

Candidate Starts for Bing\_1:

(33, 149), (Start: 36 @158 has 40 MA's), (48, 257), (74, 455),

Gene: Biscute\_1 Start: 430, Stop: 807, Start Num: 29

Candidate Starts for Biscute\_1:

(7, 277), (8, 283), (13, 334), (25, 406), (28, 421), (Start: 29 @430 has 63 MA's), (38, 475), (57, 631), (64, 685), (67, 709), (70, 736), (74, 760),

Gene: Blanky\_7 Start: 3520, Stop: 3876, Start Num: 34

Candidate Starts for Blanky\_7:

(Start: 34 @3520 has 55 MA's), (48, 3619), (49, 3625), (52, 3667), (53, 3670), (67, 3766), (74, 3817), (77, 3844), (79, 3850),

Gene: BluerMoon\_11 Start: 5878, Stop: 6231, Start Num: 34

Candidate Starts for BluerMoon\_11:

(Start: 34 @5878 has 55 MA's), (49, 5980), (64, 6097), (67, 6121), (72, 6157), (74, 6172), (79, 6205),

Gene: Boog\_2 Start: 630, Stop: 1022, Start Num: 29

Candidate Starts for Boog\_2:

(20, 576), (22, 585), (Start: 29 @630 has 63 MA's), (46, 759), (52, 816), (56, 831), (74, 966),

Gene: Bouchard\_1 Start: 604, Stop: 975, Start Num: 29

Candidate Starts for Bouchard\_1:

(Start: 29 @604 has 63 MA's), (57, 802), (67, 880), (73, 922), (74, 931),

Gene: Bowling\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Bowling\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Breylor17\_1 Start: 748, Stop: 1116, Start Num: 29

Candidate Starts for Breylor17\_1:

(Start: 29 @748 has 63 MA's), (57, 946), (67, 1024), (73, 1066), (74, 1075),

Gene: BronxBay\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for BronxBay\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Brunswick\_1 Start: 757, Stop: 1125, Start Num: 29

Candidate Starts for Brunswick\_1:

(Start: 29 @757 has 63 MA's), (57, 955), (67, 1033), (73, 1075), (74, 1084),

Gene: Bugg\_8 Start: 3044, Stop: 3400, Start Num: 34

Candidate Starts for Bugg\_8:

(Start: 34 @3044 has 55 MA's), (49, 3149), (52, 3191), (56, 3206), (67, 3290), (74, 3341), (79, 3374),

Gene: Burley\_11 Start: 5675, Stop: 6028, Start Num: 34

Candidate Starts for Burley\_11:

(Start: 34 @5675 has 55 MA's), (49, 5777), (52, 5819), (64, 5894), (67, 5918), (72, 5954), (74, 5969), (79, 6002),

Gene: CWormy\_10 Start: 4602, Stop: 4955, Start Num: 34

Candidate Starts for CWormy\_10:

(Start: 34 @4602 has 55 MA's), (49, 4704), (67, 4845), (72, 4881), (74, 4896), (79, 4929),

Gene: Camille\_6 Start: 2268, Stop: 2615, Start Num: 37

Candidate Starts for Camille\_6:

(Start: 37 @2268 has 3 MA's), (61, 2460), (68, 2529), (73, 2553),

Gene: CapnMurica\_2 Start: 2000, Stop: 2368, Start Num: 29

Candidate Starts for CapnMurica\_2:

(Start: 29 @2000 has 63 MA's), (57, 2198), (67, 2276), (73, 2318), (74, 2327),

Gene: Captrips\_7 Start: 3034, Stop: 3390, Start Num: 34

Candidate Starts for Captrips\_7:

(Start: 34 @3034 has 55 MA's), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: CastorTray\_2 Start: 602, Stop: 970, Start Num: 29

Candidate Starts for CastorTray\_2:

(Start: 29 @602 has 63 MA's), (57, 800), (67, 878), (70, 905), (73, 920), (74, 929),

Gene: Caterpillar\_2 Start: 831, Stop: 1199, Start Num: 29

Candidate Starts for Caterpillar\_2:

(Start: 29 @831 has 63 MA's), (57, 1029), (67, 1107), (73, 1149), (74, 1158),

Gene: Cheesy\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Cheesy\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: CherryBlossom\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for CherryBlossom\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Chikenjars\_11 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for Chikenjars\_11:

(Start: 34 @5875 has 55 MA's), (49, 5977), (52, 6019), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: Chlochlo\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for Chlochlo\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Circum\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Circum\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Citrus\_10 Start: 5882, Stop: 6235, Start Num: 34

Candidate Starts for Citrus\_10:

(Start: 34 @5882 has 55 MA's), (49, 5984), (52, 6026), (64, 6101), (67, 6125), (72, 6161), (74, 6176), (79, 6209),

Gene: ClubPenguin\_1 Start: 106, Stop: 462, Start Num: 36

Candidate Starts for ClubPenguin\_1:

(Start: 36 @106 has 40 MA's), (Start: 44 @190 has 3 MA's), (47, 199), (50, 214), (68, 370), (74, 403),

Gene: Conley\_7 Start: 3062, Stop: 3418, Start Num: 34

Candidate Starts for Conley\_7:

(Start: 34 @3062 has 55 MA's), (49, 3167), (52, 3209), (56, 3224), (67, 3308), (74, 3359), (79, 3392),

Gene: Correa\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Correa\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: CricKo\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for CricKo\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: Crocheter\_10 Start: 4602, Stop: 4955, Start Num: 34

Candidate Starts for Crocheter\_10:

(Start: 34 @4602 has 55 MA's), (49, 4704), (67, 4845), (72, 4881), (74, 4896), (79, 4929),

Gene: Daddyjeff\_6 Start: 2617, Stop: 2961, Start Num: 35

Candidate Starts for Daddyjeff\_6:

(Start: 35 @2617 has 31 MA's), (54, 2767), (73, 2902),

Gene: Damascus\_6 Start: 2267, Stop: 2611, Start Num: 37

Candidate Starts for Damascus\_6:

(Start: 37 @2267 has 3 MA's), (39, 2285), (Start: 44 @2348 has 3 MA's), (52, 2411), (68, 2528), (71, 2540), (73, 2552),

Gene: Dancer\_7 Start: 2740, Stop: 3105, Start Num: 34

Candidate Starts for Dancer\_7:

(Start: 34 @2740 has 55 MA's), (49, 2845), (52, 2887), (56, 2902), (67, 2986), (74, 3037), (79, 3070),

Gene: Darby\_1 Start: 605, Stop: 973, Start Num: 29

Candidate Starts for Darby\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: DevitoJr\_1 Start: 747, Stop: 1115, Start Num: 29

Candidate Starts for DevitoJr\_1:

(Start: 29 @747 has 63 MA's), (57, 945), (67, 1023), (73, 1065), (74, 1074),

Gene: Dinallo\_2 Start: 2000, Stop: 2368, Start Num: 29

Candidate Starts for Dinallo\_2:

(Start: 29 @2000 has 63 MA's), (57, 2198), (67, 2276), (73, 2318), (74, 2327),

Gene: Ditters\_1 Start: 148, Stop: 501, Start Num: 36

Candidate Starts for Ditters\_1:

(Start: 36 @148 has 40 MA's), (47, 241), (67, 394), (73, 436),

Gene: DizzyRudy\_6 Start: 2265, Stop: 2609, Start Num: 37

Candidate Starts for DizzyRudy\_6:

(Start: 37 @2265 has 3 MA's), (39, 2283), (Start: 44 @2346 has 3 MA's), (52, 2409), (68, 2526), (71, 2538), (73, 2550),

Gene: Djungelskog\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Djungelskog\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: DoctorPepper\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for DoctorPepper\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Doxi13\_1 Start: 137, Stop: 490, Start Num: 36

Candidate Starts for Doxi13\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: DrGrey\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for DrGrey\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Duffington\_11 Start: 5860, Stop: 6213, Start Num: 34

Candidate Starts for Duffington\_11:

(Start: 34 @5860 has 55 MA's), (49, 5962), (52, 6004), (64, 6079), (67, 6103), (72, 6139), (74, 6154), (79, 6187),

Gene: Dynamite\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Dynamite\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Eddiemania\_10 Start: 5067, Stop: 5420, Start Num: 34

Candidate Starts for Eddiemania\_10:

(Start: 34 @5067 has 55 MA's), (49, 5169), (64, 5286), (67, 5310), (72, 5346), (74, 5361), (79, 5394),

Gene: Eevee\_5 Start: 2151, Stop: 2507, Start Num: 35

Candidate Starts for Eevee\_5:

(12, 1998), (21, 2049), (31, 2139), (33, 2145), (Start: 35 @2151 has 31 MA's), (61, 2349), (69, 2421), (73, 2442),

Gene: Egad\_2 Start: 630, Stop: 1022, Start Num: 29

Candidate Starts for Egad\_2:

(20, 576), (22, 585), (Start: 29 @630 has 63 MA's), (46, 759), (52, 816), (56, 831), (74, 966),

Gene: ElephantMan\_1 Start: 760, Stop: 1128, Start Num: 29

Candidate Starts for ElephantMan\_1:

(Start: 29 @760 has 63 MA's), (57, 958), (67, 1036), (73, 1078), (74, 1087),

Gene: Elsa\_3 Start: 1126, Stop: 1473, Start Num: 35

Candidate Starts for Elsa\_3:

(32, 1117), (Start: 35 @1126 has 31 MA's), (58, 1300), (74, 1426),

Gene: Elver\_6 Start: 1902, Stop: 2240, Start Num: 35

Candidate Starts for Elver\_6:

(Start: 35 @1902 has 31 MA's), (51, 2019), (57, 2067), (67, 2145), (70, 2172), (74, 2196),

Gene: EndAve\_11 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for EndAve\_11:

(Start: 34 @5875 has 55 MA's), (49, 5977), (52, 6019), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: Esketit\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Esketit\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Espio\_1 Start: 235, Stop: 492, Start Num: 45

Candidate Starts for Espio\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Fazel\_8 Start: 4607, Stop: 4963, Start Num: 34

Candidate Starts for Fazel\_8:

(Start: 34 @4607 has 55 MA's), (49, 4712), (67, 4853), (74, 4904), (77, 4931),

Gene: FidgetOrca\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for FidgetOrca\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Figliar\_11 Start: 5884, Stop: 6237, Start Num: 34

Candidate Starts for Figliar\_11:

(Start: 34 @5884 has 55 MA's), (49, 5986), (64, 6103), (67, 6127), (72, 6163), (74, 6178), (79, 6211),

Gene: Football\_7 Start: 2749, Stop: 3105, Start Num: 34

Candidate Starts for Football\_7:

(Start: 34 @2749 has 55 MA's), (49, 2854), (52, 2896), (56, 2911), (67, 2995), (74, 3046), (79, 3079),

Gene: FortCran\_7 Start: 3034, Stop: 3399, Start Num: 34

Candidate Starts for FortCran\_7:

(Start: 34 @3034 has 55 MA's), (49, 3139), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: FrodoSwaggins\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for FrodoSwaggins\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: FromIndy\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for FromIndy\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: Gandionco\_5 Start: 1901, Stop: 2239, Start Num: 35

Candidate Starts for Gandionco\_5:

(Start: 35 @1901 has 31 MA's), (51, 2018), (57, 2066), (67, 2144), (70, 2171), (74, 2195),

Gene: GantcherGoblin\_1 Start: 438, Stop: 815, Start Num: 29

Candidate Starts for GantcherGoblin\_1:

(28, 429), (Start: 29 @438 has 63 MA's), (57, 639), (67, 717), (70, 744), (74, 768), (76, 792),

Gene: Giantsbane\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for Giantsbane\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Gill\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Gill\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: GirlPower\_1 Start: 1005, Stop: 1355, Start Num: 36

Candidate Starts for GirlPower\_1:

(33, 996), (Start: 36 @1005 has 40 MA's), (51, 1125), (52, 1152), (59, 1191), (66, 1236), (74, 1302),

Gene: Glintora\_10 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for Glintora\_10:

(Start: 34 @5875 has 55 MA's), (49, 5977), (52, 6019), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: GoCrazy\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for GoCrazy\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: GoblinVoyage\_1 Start: 221, Stop: 490, Start Num: 44

Candidate Starts for GoblinVoyage\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Gordon\_1 Start: 601, Stop: 969, Start Num: 29

Candidate Starts for Gordon\_1:

(Start: 29 @601 has 63 MA's), (57, 799), (67, 877), (73, 919), (74, 928),

Gene: Gravy\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Gravy\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: Gusicorn\_11 Start: 5674, Stop: 6027, Start Num: 34

Candidate Starts for Gusicorn\_11:

(Start: 34 @5674 has 55 MA's), (49, 5776), (64, 5893), (67, 5917), (72, 5953), (74, 5968), (79, 6001),

Gene: Hankly\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Hankly\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: HazuAndZazu\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for HazuAndZazu\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Heisenberger\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Heisenberger\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Hemma\_2 Start: 392, Stop: 760, Start Num: 29

Candidate Starts for Hemma\_2:

(Start: 29 @392 has 63 MA's), (57, 590), (67, 668), (73, 710), (74, 719),

Gene: HerbBucket\_2 Start: 630, Stop: 1022, Start Num: 29

Candidate Starts for HerbBucket\_2:

(20, 576), (22, 585), (Start: 29 @630 has 63 MA's), (46, 759), (52, 816), (56, 831), (74, 966),

Gene: Hortihabitatio\_10 Start: 4963, Stop: 5319, Start Num: 34

Candidate Starts for Hortihabitatio\_10:

(Start: 34 @4963 has 55 MA's), (48, 5062), (49, 5068), (67, 5209), (74, 5260), (77, 5287),

Gene: Hoshi\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Hoshi\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: HotFries\_1 Start: 221, Stop: 490, Start Num: 44

Candidate Starts for HotFries\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Hydrus\_10 Start: 4860, Stop: 5213, Start Num: 34

Candidate Starts for Hydrus\_10:

(Start: 34 @4860 has 55 MA's), (49, 4962), (64, 5079), (67, 5103), (72, 5139), (74, 5154), (79, 5187),

Gene: IceWarrior\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for IceWarrior\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Indigenous\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Indigenous\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Ingrid\_1 Start: 629, Stop: 997, Start Num: 29

Candidate Starts for Ingrid\_1:

(Start: 29 @629 has 63 MA's), (57, 827), (67, 905), (73, 947), (74, 956),

Gene: Inked\_2 Start: 866, Stop: 1234, Start Num: 29

Candidate Starts for Inked\_2:

(Start: 29 @866 has 63 MA's), (57, 1064), (67, 1142), (73, 1184), (74, 1193),

Gene: Issa\_1 Start: 748, Stop: 1116, Start Num: 29

Candidate Starts for Issa\_1:

(Start: 29 @748 has 63 MA's), (57, 946), (67, 1024), (73, 1066), (74, 1075),

Gene: JEGGS\_3 Start: 738, Stop: 1085, Start Num: 35

Candidate Starts for JEGGS\_3:

(32, 729), (Start: 35 @738 has 31 MA's), (58, 912), (74, 1038),

Gene: Jaylociraptor\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Jaylociraptor\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Jazzy4900\_4 Start: 1181, Stop: 1579, Start Num: 26

Candidate Starts for Jazzy4900\_4:

(26, 1181), (42, 1280), (Start: 44 @1319 has 3 MA's), (47, 1328), (68, 1499), (73, 1523), (74, 1532),

Gene: JeNeSaisPas\_4 Start: 1417, Stop: 1752, Start Num: 35

Candidate Starts for JeNeSaisPas\_4:

(Start: 35 @1417 has 31 MA's), (51, 1531), (57, 1579), (67, 1657), (74, 1708),

Gene: Jeremy4pt0\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Jeremy4pt0\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Jodelie19\_11 Start: 5878, Stop: 6231, Start Num: 34

Candidate Starts for Jodelie19\_11:

(Start: 34 @5878 has 55 MA's), (49, 5980), (64, 6097), (67, 6121), (72, 6157), (74, 6172), (79, 6205),

Gene: JoyLin\_5 Start: 2151, Stop: 2507, Start Num: 35

Candidate Starts for JoyLin\_5:

(12, 1998), (21, 2049), (31, 2139), (33, 2145), (Start: 35 @2151 has 31 MA's), (61, 2349), (69, 2421), (73, 2442),

Gene: JulesRay\_7 Start: 3034, Stop: 3399, Start Num: 34

Candidate Starts for JulesRay\_7:

(Start: 34 @3034 has 55 MA's), (49, 3139), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: Kardashian\_1 Start: 221, Stop: 568, Start Num: 36

Candidate Starts for Kardashian\_1:

(Start: 36 @221 has 40 MA's), (Start: 44 @305 has 3 MA's), (51, 341), (62, 425), (67, 467), (70, 494), (73, 509),

Gene: Kardesai\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Kardesai\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: KeaneyLin\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for KeaneyLin\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Kenosha\_8 Start: 3461, Stop: 3814, Start Num: 34

Candidate Starts for Kenosha\_8:

(Start: 34 @3461 has 55 MA's), (49, 3563), (67, 3704), (72, 3740), (74, 3755), (79, 3788),

Gene: Kerry\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Kerry\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: KevinMinion\_1 Start: 594, Stop: 971, Start Num: 29

Candidate Starts for KevinMinion\_1:

(28, 585), (Start: 29 @594 has 63 MA's), (57, 795), (67, 873), (70, 900), (74, 924), (76, 948),

Gene: Kinny\_2 Start: 734, Stop: 1111, Start Num: 29

Candidate Starts for Kinny\_2:

(25, 710), (28, 725), (Start: 29 @734 has 63 MA's), (38, 779), (57, 935), (67, 1013), (70, 1040), (74, 1064),

Gene: Kureo\_7 Start: 3131, Stop: 3469, Start Num: 35

Candidate Starts for Kureo\_7:

(Start: 35 @3131 has 31 MA's), (51, 3248), (57, 3296), (67, 3374), (70, 3401), (74, 3425),

Gene: Leathea\_2 Start: 618, Stop: 1004, Start Num: 29

Candidate Starts for Leathea\_2:

(28, 609), (Start: 29 @618 has 63 MA's), (57, 822), (67, 900), (70, 927), (74, 951),

Gene: Lewando\_2 Start: 733, Stop: 1110, Start Num: 29

Candidate Starts for Lewando\_2:

(25, 709), (27, 718), (28, 724), (Start: 29 @733 has 63 MA's), (38, 778), (57, 934), (67, 1012), (70, 1039), (74, 1063),

Gene: LibertyBell\_1 Start: 158, Stop: 496, Start Num: 36

Candidate Starts for LibertyBell\_1:

(30, 125), (Start: 36 @158 has 40 MA's), (Start: 44 @242 has 3 MA's), (51, 278), (52, 305), (67, 404), (73, 446), (78, 479),

Gene: LilHuddy\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for LilHuddy\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Linda\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Linda\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Loretta\_1 Start: 629, Stop: 997, Start Num: 29

Candidate Starts for Loretta\_1:

(Start: 29 @629 has 63 MA's), (57, 827), (67, 905), (73, 947), (74, 956),

Gene: LucySwiss\_1 Start: 767, Stop: 1135, Start Num: 29

Candidate Starts for LucySwiss\_1:

(Start: 29 @767 has 63 MA's), (57, 965), (67, 1043), (73, 1085), (74, 1094),

Gene: Luthien\_12 Start: 5876, Stop: 6229, Start Num: 34

Candidate Starts for Luthien\_12:

(Start: 34 @5876 has 55 MA's), (49, 5978), (52, 6020), (64, 6095), (67, 6119), (72, 6155), (74, 6170), (79, 6203),

Gene: Madamoto\_1 Start: 149, Stop: 493, Start Num: 36

Candidate Starts for Madamoto\_1:

(33, 140), (Start: 36 @149 has 40 MA's), (40, 176), (51, 269), (74, 446),

Gene: Madvan\_11 Start: 5675, Stop: 6028, Start Num: 34

Candidate Starts for Madvan\_11:

(Start: 34 @5675 has 55 MA's), (49, 5777), (67, 5918), (72, 5954), (74, 5969), (79, 6002),

Gene: Magel\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Magel\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: MajinBuu\_11 Start: 5879, Stop: 6232, Start Num: 34

Candidate Starts for MajinBuu\_11:

(Start: 34 @5879 has 55 MA's), (49, 5981), (64, 6098), (67, 6122), (72, 6158), (74, 6173), (79, 6206),

Gene: Makai\_1 Start: 688, Stop: 1056, Start Num: 29

Candidate Starts for Makai\_1:

(Start: 29 @688 has 63 MA's), (47, 811), (57, 886), (67, 964), (73, 1006), (74, 1015),

Gene: Mardi\_2 Start: 743, Stop: 1120, Start Num: 29

Candidate Starts for Mardi\_2:

(28, 734), (Start: 29 @743 has 63 MA's), (57, 944), (67, 1022), (70, 1049), (74, 1073), (76, 1097),

Gene: Marianna39\_6 Start: 1901, Stop: 2239, Start Num: 35  
Candidate Starts for Marianna39\_6:  
(Start: 35 @1901 has 31 MA's), (51, 2018), (57, 2066), (67, 2144), (70, 2171), (74, 2195),

Gene: Maya\_1 Start: 148, Stop: 492, Start Num: 36  
Candidate Starts for Maya\_1:  
(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: MediumFry\_2 Start: 860, Stop: 1228, Start Num: 29  
Candidate Starts for MediumFry\_2:  
(Start: 29 @860 has 63 MA's), (57, 1058), (67, 1136), (73, 1178), (74, 1187),

Gene: Meibysrarus\_1 Start: 148, Stop: 492, Start Num: 36  
Candidate Starts for Meibysrarus\_1:  
(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Michelle\_2 Start: 629, Stop: 1021, Start Num: 29  
Candidate Starts for Michelle\_2:  
(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Miek\_1 Start: 190, Stop: 537, Start Num: 36  
Candidate Starts for Miek\_1:  
(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: MiniBagel\_2 Start: 2000, Stop: 2368, Start Num: 29  
Candidate Starts for MiniBagel\_2:  
(Start: 29 @2000 has 63 MA's), (57, 2198), (67, 2276), (73, 2318), (74, 2327),

Gene: Monse\_1 Start: 148, Stop: 501, Start Num: 36  
Candidate Starts for Monse\_1:  
(Start: 36 @148 has 40 MA's), (66, 379), (67, 394), (73, 436),

Gene: Mooshroom\_3 Start: 736, Stop: 1083, Start Num: 35  
Candidate Starts for Mooshroom\_3:  
(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Moozy\_1 Start: 137, Stop: 490, Start Num: 36  
Candidate Starts for Moozy\_1:  
(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Mossy\_8 Start: 3734, Stop: 4090, Start Num: 34  
Candidate Starts for Mossy\_8:  
(Start: 34 @3734 has 55 MA's), (49, 3839), (67, 3980), (74, 4031), (77, 4058), (79, 4064),

Gene: MrAaronian\_2 Start: 629, Stop: 1021, Start Num: 29  
Candidate Starts for MrAaronian\_2:  
(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Mudcat\_3 Start: 735, Stop: 1082, Start Num: 35  
Candidate Starts for Mudcat\_3:  
(32, 726), (Start: 35 @735 has 31 MA's), (58, 909), (74, 1035),

Gene: Muglass\_1 Start: 430, Stop: 807, Start Num: 29

Candidate Starts for Muglass\_1:

(7, 277), (8, 283), (13, 334), (25, 406), (28, 421), (Start: 29 @430 has 63 MA's), (38, 475), (57, 631), (64, 685), (67, 709), (70, 736), (74, 760),

Gene: Mysticmoon\_8 Start: 3437, Stop: 3793, Start Num: 34

Candidate Starts for Mysticmoon\_8:

(Start: 34 @3437 has 55 MA's), (48, 3536), (49, 3542), (67, 3683), (74, 3734), (77, 3761),

Gene: Nadmeg\_11 Start: 5676, Stop: 6029, Start Num: 34

Candidate Starts for Nadmeg\_11:

(Start: 34 @5676 has 55 MA's), (49, 5778), (52, 5820), (64, 5895), (67, 5919), (72, 5955), (74, 5970), (79, 6003),

Gene: Namo\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Namo\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: NapoleonB\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for NapoleonB\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Nason\_3 Start: 1126, Stop: 1473, Start Num: 35

Candidate Starts for Nason\_3:

(32, 1117), (Start: 35 @1126 has 31 MA's), (58, 1300), (74, 1426),

Gene: Natasha\_1 Start: 606, Stop: 998, Start Num: 29

Candidate Starts for Natasha\_1:

(2, 393), (3, 399), (4, 411), (6, 417), (9, 477), (10, 492), (19, 549), (Start: 29 @606 has 63 MA's), (49, 747), (52, 789), (56, 804), (63, 861), (74, 939),

Gene: Navi1117\_2 Start: 833, Stop: 1210, Start Num: 29

Candidate Starts for Navi1117\_2:

(28, 824), (Start: 29 @833 has 63 MA's), (57, 1034), (67, 1112), (70, 1139), (74, 1163), (76, 1187),

Gene: Nightmare\_1 Start: 767, Stop: 1135, Start Num: 29

Candidate Starts for Nightmare\_1:

(Start: 29 @767 has 63 MA's), (57, 965), (67, 1043), (73, 1085), (74, 1094),

Gene: Niktson\_1 Start: 760, Stop: 1128, Start Num: 29

Candidate Starts for Niktson\_1:

(Start: 29 @760 has 63 MA's), (57, 958), (67, 1036), (73, 1078), (74, 1087),

Gene: Nithya\_11 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for Nithya\_11:

(Start: 34 @5875 has 55 MA's), (49, 5977), (52, 6019), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: Nivinsha\_1 Start: 623, Stop: 991, Start Num: 29

Candidate Starts for Nivinsha\_1:

(Start: 29 @623 has 63 MA's), (57, 821), (67, 899), (70, 926), (73, 941), (74, 950),

Gene: NoPickles\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for NoPickles\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: Odesza\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Odesza\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: OhMyWard\_11 Start: 5673, Stop: 6029, Start Num: 34

Candidate Starts for OhMyWard\_11:

(Start: 34 @5673 has 55 MA's), (48, 5772), (49, 5778), (52, 5820), (53, 5823), (67, 5919), (74, 5970), (77, 5997), (79, 6003),

Gene: OlgasClover\_11 Start: 5875, Stop: 6228, Start Num: 34

Candidate Starts for OlgasClover\_11:

(Start: 34 @5875 has 55 MA's), (49, 5977), (64, 6094), (67, 6118), (72, 6154), (74, 6169), (79, 6202),

Gene: OlympicHelado\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for OlympicHelado\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Onestar\_1 Start: 638, Stop: 1033, Start Num: 29

Candidate Starts for Onestar\_1:

(Start: 29 @638 has 63 MA's), (46, 770), (56, 842), (74, 977),

Gene: Paella\_6 Start: 1901, Stop: 2239, Start Num: 35

Candidate Starts for Paella\_6:

(Start: 35 @1901 has 31 MA's), (51, 2018), (57, 2066), (67, 2144), (70, 2171), (74, 2195),

Gene: Pepy6\_008 Start: 8195, Stop: 8551, Start Num: 34

Candidate Starts for Pepy6\_008:

(Start: 34 @8195 has 55 MA's), (47, 8294), (56, 8363), (70, 8474), (74, 8498),

Gene: Perkunas\_9 Start: 3558, Stop: 3914, Start Num: 34

Candidate Starts for Perkunas\_9:

(Start: 34 @3558 has 55 MA's), (52, 3705), (56, 3720), (62, 3762), (67, 3804), (74, 3855), (79, 3888),

Gene: PerroGrande22\_8 Start: 8395, Stop: 8751, Start Num: 34

Candidate Starts for PerroGrande22\_8:

(Start: 34 @8395 has 55 MA's), (47, 8494), (56, 8563), (70, 8674), (74, 8698),

Gene: Petito\_8 Start: 3256, Stop: 3612, Start Num: 34

Candidate Starts for Petito\_8:

(Start: 34 @3256 has 55 MA's), (49, 3361), (52, 3403), (56, 3418), (67, 3502), (74, 3553), (79, 3586),

Gene: Phaby\_1 Start: 604, Stop: 975, Start Num: 29

Candidate Starts for Phaby\_1:

(Start: 29 @604 has 63 MA's), (57, 802), (67, 880), (70, 907), (73, 922), (74, 931),

Gene: Phaila\_2 Start: 707, Stop: 1084, Start Num: 29

Candidate Starts for Phaila\_2:

(28, 698), (Start: 29 @707 has 63 MA's), (57, 908), (67, 986), (70, 1013), (74, 1037), (76, 1061),

Gene: Phepper\_11 Start: 5674, Stop: 6027, Start Num: 34

Candidate Starts for Phepper\_11:

(Start: 34 @5674 has 55 MA's), (49, 5776), (64, 5893), (67, 5917), (72, 5953), (74, 5968), (79, 6001),

Gene: Pherobrine\_8 Start: 3433, Stop: 3789, Start Num: 34

Candidate Starts for Pherobrine\_8:

(Start: 34 @3433 has 55 MA's), (49, 3538), (60, 3622), (67, 3679), (72, 3715), (74, 3730), (79, 3763),

Gene: PherryCruz\_1 Start: 137, Stop: 490, Start Num: 36

Candidate Starts for PherryCruz\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Pippin15\_5 Start: 2173, Stop: 2526, Start Num: 35

Candidate Starts for Pippin15\_5:

(Start: 35 @2173 has 31 MA's), (69, 2440), (73, 2461),

Gene: Poco6\_010 Start: 11626, Stop: 11982, Start Num: 34

Candidate Starts for Poco6\_010:

(Start: 34 @11626 has 55 MA's), (47, 11725), (56, 11794), (70, 11905), (74, 11929),

Gene: PoeMe\_2 Start: 741, Stop: 1118, Start Num: 29

Candidate Starts for PoeMe\_2:

(28, 732), (Start: 29 @741 has 63 MA's), (57, 942), (67, 1020), (70, 1047), (74, 1071), (76, 1095),

Gene: Popy\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Popy\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Powelldog\_1 Start: 662, Stop: 1057, Start Num: 29

Candidate Starts for Powelldog\_1:

(14, 569), (15, 587), (16, 593), (18, 602), (20, 608), (23, 620), (Start: 29 @662 has 63 MA's), (49, 806), (52, 848), (56, 863), (74, 998),

Gene: ProfFrink\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for ProfFrink\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Qui\_6 Start: 1901, Stop: 2239, Start Num: 35

Candidate Starts for Qui\_6:

(Start: 35 @1901 has 31 MA's), (51, 2018), (57, 2066), (67, 2144), (70, 2171), (74, 2195),

Gene: Rainydai\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for Rainydai\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: Raunak\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Raunak\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: RavenPuff\_1 Start: 137, Stop: 490, Start Num: 36

Candidate Starts for RavenPuff\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Regigigas\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for Regigigas\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: Renaldo\_2 Start: 734, Stop: 1111, Start Num: 29

Candidate Starts for Renaldo\_2:

(25, 710), (28, 725), (Start: 29 @734 has 63 MA's), (38, 779), (57, 935), (67, 1013), (70, 1040), (74, 1064),

Gene: Rickmore\_10 Start: 4442, Stop: 4798, Start Num: 34

Candidate Starts for Rickmore\_10:

(Start: 34 @4442 has 55 MA's), (49, 4547), (67, 4688), (72, 4724), (74, 4739),

Gene: Rima\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Rima\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Roney\_7 Start: 2747, Stop: 3103, Start Num: 34

Candidate Starts for Roney\_7:

(Start: 34 @2747 has 55 MA's), (49, 2852), (52, 2894), (56, 2909), (67, 2993), (74, 3044), (79, 3077),

Gene: RosaAsantewaa\_1 Start: 106, Stop: 459, Start Num: 36

Candidate Starts for RosaAsantewaa\_1:

(Start: 36 @106 has 40 MA's), (41, 139), (74, 403),

Gene: Runhaar\_11 Start: 5676, Stop: 6029, Start Num: 34

Candidate Starts for Runhaar\_11:

(Start: 34 @5676 has 55 MA's), (49, 5778), (52, 5820), (64, 5895), (67, 5919), (72, 5955), (74, 5970), (79, 6003),

Gene: RustyBoy\_1 Start: 606, Stop: 998, Start Num: 29

Candidate Starts for RustyBoy\_1:

(2, 393), (3, 399), (4, 411), (6, 417), (9, 477), (19, 549), (Start: 29 @606 has 63 MA's), (38, 657), (49, 747), (52, 789), (56, 804), (74, 939),

Gene: Salk\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Salk\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Sangak\_1 Start: 222, Stop: 491, Start Num: 44

Candidate Starts for Sangak\_1:

(Start: 36 @138 has 40 MA's), (Start: 44 @222 has 3 MA's), (66, 369), (67, 384), (73, 426),

Gene: Scap1\_1 Start: 148, Stop: 501, Start Num: 36

Candidate Starts for Scap1\_1:

(30, 115), (Start: 36 @148 has 40 MA's), (Start: 44 @232 has 3 MA's), (56, 310), (65, 373), (67, 394), (73, 436),

Gene: Schwartz33\_11 Start: 5916, Stop: 6275, Start Num: 34

Candidate Starts for Schwartz33\_11:

(Start: 34 @5916 has 55 MA's), (67, 6162), (74, 6213), (79, 6246),

Gene: ScienceWizSam\_2 Start: 578, Stop: 946, Start Num: 29

Candidate Starts for ScienceWizSam\_2:

(Start: 29 @578 has 63 MA's), (57, 776), (67, 854), (70, 881), (73, 896), (74, 905),

Gene: Secretariat\_7 Start: 3519, Stop: 3875, Start Num: 34

Candidate Starts for Secretariat\_7:

(Start: 34 @3519 has 55 MA's), (56, 3681), (67, 3765), (74, 3816), (79, 3849),

Gene: SendItCS\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for SendItCS\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: Serenabean\_6 Start: 2617, Stop: 2961, Start Num: 35

Candidate Starts for Serenabean\_6:

(Start: 35 @2617 has 31 MA's), (54, 2767), (73, 2902),

Gene: ShaggyRogers\_11 Start: 5673, Stop: 6026, Start Num: 34

Candidate Starts for ShaggyRogers\_11:

(Start: 34 @5673 has 55 MA's), (49, 5775), (64, 5892), (67, 5916), (72, 5952), (74, 5967), (79, 6000),

Gene: SheRa\_1 Start: 221, Stop: 490, Start Num: 44

Candidate Starts for SheRa\_1:

(Start: 36 @137 has 40 MA's), (Start: 44 @221 has 3 MA's), (66, 368), (67, 383), (73, 425),

Gene: Shepard\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for Shepard\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Shiba\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Shiba\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Sloopyjoe\_2 Start: 630, Stop: 1022, Start Num: 29

Candidate Starts for Sloopyjoe\_2:

(20, 576), (22, 585), (Start: 29 @630 has 63 MA's), (46, 759), (52, 816), (56, 831), (74, 966),

Gene: Soshi\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Soshi\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Spain\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Spain\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Spectropatronm\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for Spectropatronm\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Sporto\_1 Start: 584, Stop: 976, Start Num: 29

Candidate Starts for Sporto\_1:

(1, 332), (9, 455), (10, 470), (24, 551), (Start: 29 @584 has 63 MA's), (49, 725), (52, 767), (56, 782), (74, 917),

Gene: Sprinkle\_1 Start: 611, Stop: 1003, Start Num: 29

Candidate Starts for Sprinkle\_1:

(Start: 29 @611 has 63 MA's), (49, 752), (52, 794), (74, 944),

Gene: StarLord\_2 Start: 630, Stop: 1022, Start Num: 29

Candidate Starts for StarLord\_2:

(20, 576), (22, 585), (Start: 29 @630 has 63 MA's), (46, 759), (52, 816), (56, 831), (74, 966),

Gene: Stardrop\_3 Start: 741, Stop: 1118, Start Num: 29

Candidate Starts for Stardrop\_3:

(28, 732), (Start: 29 @741 has 63 MA's), (57, 942), (67, 1020), (70, 1047), (74, 1071), (76, 1095),

Gene: Stayer\_2 Start: 629, Stop: 1021, Start Num: 29

Candidate Starts for Stayer\_2:

(20, 575), (22, 584), (Start: 29 @629 has 63 MA's), (46, 758), (52, 815), (56, 830), (74, 965),

Gene: Sunny4976\_3 Start: 1181, Stop: 1579, Start Num: 26

Candidate Starts for Sunny4976\_3:

(26, 1181), (42, 1280), (Start: 44 @1319 has 3 MA's), (47, 1328), (68, 1499), (73, 1523), (74, 1532),

Gene: Sweetclover\_7 Start: 2582, Stop: 2926, Start Num: 35

Candidate Starts for Sweetclover\_7:

(Start: 35 @2582 has 31 MA's), (42, 2624), (43, 2657), (52, 2726), (73, 2867),

Gene: Synopsis\_1 Start: 746, Stop: 1114, Start Num: 29

Candidate Starts for Synopsis\_1:

(Start: 29 @746 has 63 MA's), (57, 944), (67, 1022), (70, 1049), (73, 1064), (74, 1073),

Gene: TaidaOne\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for TaidaOne\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Tairn4Wing\_7 Start: 3034, Stop: 3399, Start Num: 34

Candidate Starts for Tairn4Wing\_7:

(Start: 34 @3034 has 55 MA's), (49, 3139), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: Talon44\_8 Start: 3234, Stop: 3590, Start Num: 34

Candidate Starts for Talon44\_8:

(Start: 34 @3234 has 55 MA's), (52, 3381), (56, 3396), (62, 3438), (67, 3480), (74, 3531), (79, 3564),

Gene: Tanis\_7 Start: 2597, Stop: 2953, Start Num: 34

Candidate Starts for Tanis\_7:

(Start: 34 @2597 has 55 MA's), (49, 2702), (52, 2744), (56, 2759), (67, 2843), (74, 2894), (79, 2927),

Gene: Tatanka\_1 Start: 686, Stop: 1054, Start Num: 29

Candidate Starts for Tatanka\_1:

(Start: 29 @686 has 63 MA's), (57, 884), (67, 962), (73, 1004), (74, 1013),

Gene: Teacup\_2 Start: 748, Stop: 1116, Start Num: 29

Candidate Starts for Teacup\_2:

(Start: 29 @748 has 63 MA's), (57, 946), (67, 1024), (73, 1066), (74, 1075),

Gene: TenaciousP\_11 Start: 5878, Stop: 6231, Start Num: 34

Candidate Starts for TenaciousP\_11:

(Start: 34 @5878 has 55 MA's), (49, 5980), (64, 6097), (67, 6121), (72, 6157), (74, 6172), (79, 6205),

Gene: Tenney120\_2 Start: 721, Stop: 1098, Start Num: 29

Candidate Starts for Tenney120\_2:

(28, 712), (Start: 29 @721 has 63 MA's), (57, 922), (67, 1000), (70, 1027), (74, 1051), (76, 1075),

Gene: Tenno\_2 Start: 2000, Stop: 2368, Start Num: 29

Candidate Starts for Tenno\_2:

(Start: 29 @2000 has 63 MA's), (57, 2198), (67, 2276), (73, 2318), (74, 2327),

Gene: Thiqqums\_1 Start: 190, Stop: 537, Start Num: 36

Candidate Starts for Thiqqums\_1:

(Start: 36 @190 has 40 MA's), (51, 310), (52, 337), (67, 436), (70, 463), (74, 487),

Gene: TieDye\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for TieDye\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Tipton\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for Tipton\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Tokki\_1 Start: 605, Stop: 976, Start Num: 29

Candidate Starts for Tokki\_1:

(Start: 29 @605 has 63 MA's), (57, 803), (67, 881), (73, 923), (74, 932),

Gene: Tonaltzin\_12 Start: 5878, Stop: 6231, Start Num: 34

Candidate Starts for Tonaltzin\_12:

(Start: 34 @5878 has 55 MA's), (64, 6097), (67, 6121), (72, 6157), (74, 6172), (79, 6205),

Gene: TonyStarch\_1 Start: 148, Stop: 492, Start Num: 36

Candidate Starts for TonyStarch\_1:

(33, 139), (Start: 36 @148 has 40 MA's), (45, 235), (51, 268), (52, 295), (74, 445),

Gene: Tribby\_3 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Tribby\_3:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: TrixiePhattel\_2 Start: 665, Stop: 1051, Start Num: 29

Candidate Starts for TrixiePhattel\_2:

(28, 656), (Start: 29 @665 has 63 MA's), (57, 869), (67, 947), (70, 974), (74, 998),

Gene: Truckee\_1 Start: 635, Stop: 1003, Start Num: 29

Candidate Starts for Truckee\_1:

(Start: 29 @635 has 63 MA's), (47, 758), (57, 833), (67, 911), (73, 953), (74, 962),

Gene: Trufflozitus\_7 Start: 3034, Stop: 3399, Start Num: 34

Candidate Starts for Trufflozitus\_7:

(Start: 34 @3034 has 55 MA's), (49, 3139), (52, 3181), (56, 3196), (67, 3280), (74, 3331), (79, 3364),

Gene: Trustiboi\_1 Start: 767, Stop: 1135, Start Num: 29

Candidate Starts for Trustiboi\_1:

(Start: 29 @767 has 63 MA's), (57, 965), (67, 1043), (73, 1085), (74, 1094),

Gene: Untouchable\_10 Start: 4601, Stop: 4954, Start Num: 34

Candidate Starts for Untouchable\_10:

(Start: 34 @4601 has 55 MA's), (49, 4703), (64, 4820), (67, 4844), (72, 4880), (74, 4895), (79, 4928),

Gene: Uzumaki\_2 Start: 721, Stop: 1098, Start Num: 29

Candidate Starts for Uzumaki\_2:

(28, 712), (Start: 29 @721 has 63 MA's), (57, 922), (67, 1000), (70, 1027), (74, 1051), (76, 1075),

Gene: Vardy\_11 Start: 5674, Stop: 6027, Start Num: 34

Candidate Starts for Vardy\_11:

(Start: 34 @5674 has 55 MA's), (49, 5776), (52, 5818), (64, 5893), (67, 5917), (72, 5953), (74, 5968), (79, 6001),

Gene: Westerlin\_2 Start: 2000, Stop: 2368, Start Num: 29

Candidate Starts for Westerlin\_2:

(Start: 29 @2000 has 63 MA's), (57, 2198), (67, 2276), (73, 2318), (74, 2327),

Gene: Wigberry\_2 Start: 256, Stop: 501, Start Num: 48

Candidate Starts for Wigberry\_2:

(33, 148), (Start: 36 @157 has 40 MA's), (48, 256), (74, 454),

Gene: Xenomorph\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for Xenomorph\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: YoshiYama\_2 Start: 736, Stop: 1083, Start Num: 35

Candidate Starts for YoshiYama\_2:

(32, 727), (Start: 35 @736 has 31 MA's), (58, 910), (74, 1036),

Gene: Yotsuba\_5 Start: 2151, Stop: 2507, Start Num: 35

Candidate Starts for Yotsuba\_5:

(12, 1998), (21, 2049), (31, 2139), (33, 2145), (Start: 35 @2151 has 31 MA's), (61, 2349), (69, 2421), (73, 2442),

Gene: Zeina\_2 Start: 731, Stop: 1108, Start Num: 29

Candidate Starts for Zeina\_2:

(28, 722), (Start: 29 @731 has 63 MA's), (57, 932), (67, 1010), (70, 1037), (74, 1061), (76, 1085),

Gene: Zeph\_10 Start: 4860, Stop: 5213, Start Num: 34

Candidate Starts for Zeph\_10:

(Start: 34 @4860 has 55 MA's), (49, 4962), (64, 5079), (67, 5103), (72, 5139), (74, 5154), (79, 5187),

Gene: Zippen\_2 Start: 867, Stop: 1235, Start Num: 29

Candidate Starts for Zippen\_2:

(Start: 29 @867 has 63 MA's), (57, 1065), (67, 1143), (73, 1185), (74, 1194),