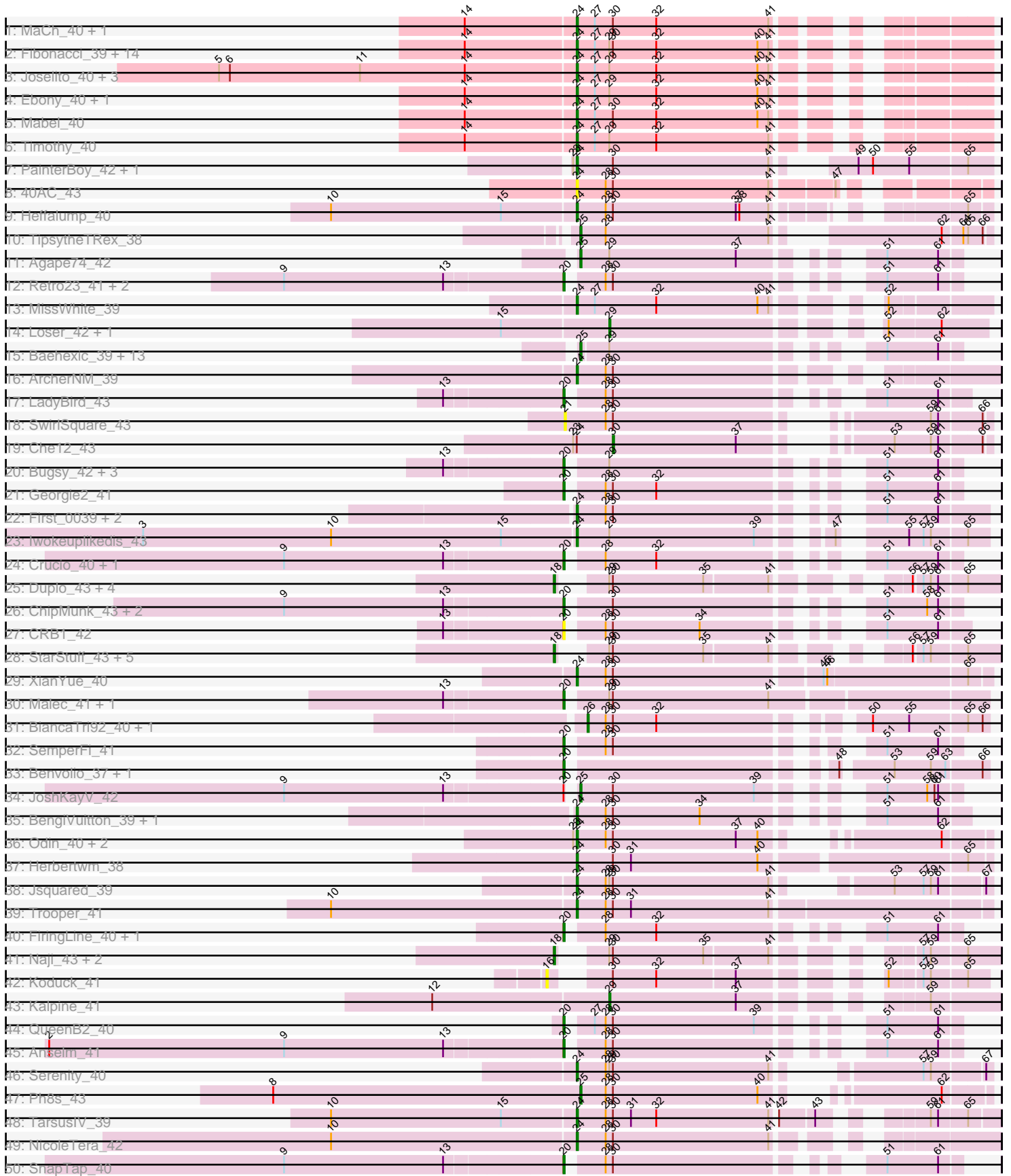
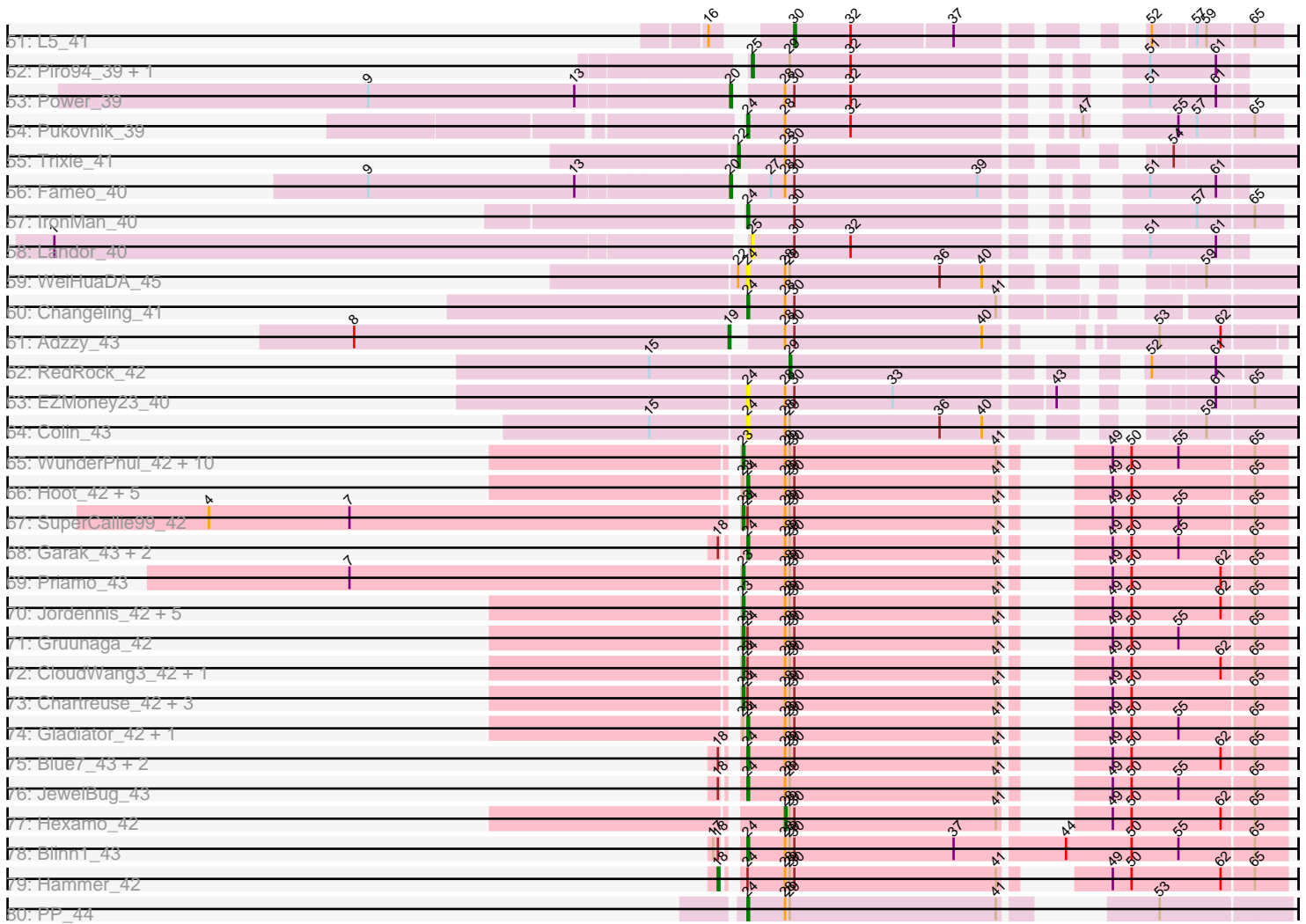


# Pham 129079



## Pham 129079



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 129079 Report

This analysis was run 04/28/24 on database version 559.

Pham number 129079 has 172 members, 21 are drafts.

Phages represented in each track:

- Track 1 : MaCh\_40, Bachome\_41
- Track 2 : Fibonacci\_39, TinyTimmy\_39, Bud\_39, Salz\_39, Insomnia\_39, Hutc2\_39, Snape\_39, Lucivia\_40, Petersenfast\_38, Jabith\_40, Sham4\_39, Orange\_39, Bowtie\_40, Mulciber\_39, Gilberta\_40
- Track 3 : Joselito\_40, Munch\_40, Aneem\_40, Flaverint\_40
- Track 4 : Ebony\_40, Et2Brutus\_39
- Track 5 : Mabel\_40
- Track 6 : Timothy\_40
- Track 7 : PainterBoy\_42, Lucyedi\_42
- Track 8 : 40AC\_43
- Track 9 : Heffalump\_40
- Track 10 : TipsytheTRex\_38
- Track 11 : Agape74\_42
- Track 12 : Retro23\_41, DudeLittle\_39, Dalmatian\_41
- Track 13 : MissWhite\_39
- Track 14 : Loser\_42, AnnaL29\_42
- Track 15 : Baehexic\_39, Equemioh13\_41, Updawg\_41, Smeagan\_43, MiculUcigas\_40, WideWale\_41, Dignity\_42, AbbyPaige\_42, Leviathan\_42, HarryHoudini\_41, Turbido\_41, Whabigail7\_41, LilTurb\_41, Jerm\_42
- Track 16 : ArcherNM\_39
- Track 17 : LadyBird\_43
- Track 18 : SwirlSquare\_43
- Track 19 : Che12\_43
- Track 20 : Bugsy\_42, Centaur\_41, NaSiaTalie\_40, Flare16\_40
- Track 21 : Georgie2\_41
- Track 22 : First\_0039, AN3\_40, 20ES\_40
- Track 23 : Iwokeuplikedis\_43
- Track 24 : Crucio\_40, SweetiePie\_40
- Track 25 : Duplo\_43, Tomathan\_43, DBQu4n\_43, Kerberos\_43, Pomar16\_43
- Track 26 : ChipMunk\_43, KingCyrus\_43, EvilGenius\_43
- Track 27 : CRB1\_42
- Track 28 : StarStuff\_43, ANI8\_43, C3\_38, VC3\_43, VA6\_40, AN9\_43
- Track 29 : XianYue\_40
- Track 30 : Malec\_41, Larenn\_40
- Track 31 : BiancaTri92\_40, Leogania\_40
- Track 32 : SemperFi\_41
- Track 33 : Benvolio\_37, Echid\_40

- Track 34 : JoshKayV\_42
- Track 35 : BengiVuitton\_39, Deloris\_38
- Track 36 : Odin\_40, Caraxes\_41, Superchunk\_40
- Track 37 : Herbertwm\_38
- Track 38 : Jsquared\_39
- Track 39 : Trooper\_41
- Track 40 : FiringLine\_40, QueenBeesly\_40
- Track 41 : Naji\_43, D29\_41, D32\_43
- Track 42 : Koduck\_41
- Track 43 : Kalpine\_41
- Track 44 : QueenB2\_40
- Track 45 : Anselm\_41
- Track 46 : Serenity\_40
- Track 47 : Ph8s\_43
- Track 48 : TarsusIV\_39
- Track 49 : NicoleTera\_42
- Track 50 : SnapTap\_40
- Track 51 : L5\_41
- Track 52 : Piro94\_39, Drake55\_42
- Track 53 : Power\_39
- Track 54 : Pukovnik\_39
- Track 55 : Trixie\_41
- Track 56 : Fameo\_40
- Track 57 : IronMan\_40
- Track 58 : Landor\_40
- Track 59 : WeiHuaDA\_45
- Track 60 : Changeling\_41
- Track 61 : Adzzy\_43
- Track 62 : RedRock\_42
- Track 63 : EZMoney23\_40
- Track 64 : Colin\_43
- Track 65 : WunderPhul\_42, Yokurt\_42, Newrala\_42, Kipper29\_42, Pmask\_42, Cookiedough\_42, SuperAwesome\_42, Zaka\_42, Zulu\_43, Neeharika16\_42, ToneTone\_39
- Track 66 : Hoot\_42, GreedyLawyer\_42, McFly\_42, EricB\_42, DaVinci\_42, VohminGhazi\_42
- Track 67 : SuperCallie99\_42
- Track 68 : Garak\_43, Helmet\_43, Indra\_44
- Track 69 : Priamo\_43
- Track 70 : Jordennis\_42, Tucker\_43, Dorothea\_41, Wiks\_41, Jeffabunny\_42, Lilbunny\_40
- Track 71 : Gruunaga\_42
- Track 72 : CloudWang3\_42, Artemis2UCLA\_42
- Track 73 : Chartreuse\_42, Candra\_42, Kazan\_43, SmellyB\_42
- Track 74 : Gladiator\_42, Roksolana\_43
- Track 75 : Blue7\_43, Rifter\_42, Koko\_42
- Track 76 : JewelBug\_43
- Track 77 : Hexamo\_42
- Track 78 : Blinn1\_43
- Track 79 : Hammer\_42
- Track 80 : PP\_44

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

The start number called the most often in the published annotations is 24, it was called in 58 of the 151 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_40, 40AC\_43, AN3\_40, Aneem\_40, ArcherNM\_39, Bachome\_41, BengiVuitton\_39, Blinn1\_43, Blue7\_43, Bowtie\_40, Bud\_39, Caraxes\_41, Changeling\_41, Colin\_43, DaVinci\_42, Deloris\_38, EZMoney23\_40, Ebony\_40, EricB\_42, Et2Brutus\_39, Fibonacci\_39, First\_0039, Flaverint\_40, Garak\_43, Gilberta\_40, Gladiator\_42, GreedyLawyer\_42, Heffalump\_40, Helmet\_43, Herbertwm\_38, Hoot\_42, Hutc2\_39, Indra\_44, Insomnia\_39, IronMan\_40, Iwokeuplikedis\_43, Jabith\_40, JewelBug\_43, Joselito\_40, Jsquared\_39, Koko\_42, Lucivia\_40, Lucyedi\_42, MaCh\_40, Mabel\_40, McFly\_42, MissWhite\_39, Mulciber\_39, Munch\_40, NicoleTera\_42, Odin\_40, Orange\_39, PP\_44, PainterBoy\_42, Petersenfast\_38, Pukovnik\_39, Rifter\_42, Roksolana\_43, Salz\_39, Serenity\_40, Sham4\_39, Snape\_39, Superchunk\_40, TarsusIV\_39, Timothy\_40, TinyTimmy\_39, Trooper\_41, VohminGhazi\_42, WeiHuaDA\_45, XianYue\_40,

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

- Artemis2UCLA\_42, Candra\_42, Chartreuse\_42, Che12\_43, CloudWang3\_42, Gruunaga\_42, Hammer\_42, Kazan\_43, SmellyB\_42, SuperCallie99\_42,

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

- AN9\_43, ANI8\_43, AbbyPaige\_42, Adzzy\_43, Agape74\_42, AnnaL29\_42, Anselm\_41, Baehexic\_39, Benvolio\_37, BiancaTri92\_40, Buggy\_42, C3\_38, CRB1\_42, Centaur\_41, ChipMunk\_43, Cookiedough\_42, Crucio\_40, D29\_41, D32\_43, DBQu4n\_43, Dalmatian\_41, Dignity\_42, Dorothea\_41, Drake55\_42, DudeLittle\_39, Duplo\_43, Echid\_40, Equemioh13\_41, EvilGenius\_43, Fameo\_40, FiringLine\_40, Flare16\_40, Georgie2\_41, HarryHoudini\_41, Hexamo\_42, Jeffabunny\_42, Jerm\_42, Jordennis\_42, JoshKayV\_42, Kalpine\_41, Kerberos\_43, KingCyrus\_43, Kipper29\_42, Koduck\_41, L5\_41, LadyBird\_43, Landor\_40, Larenn\_40, Leogania\_40, Leviathan\_42, LilTurb\_41, Lilbunny\_40, Loser\_42, Malec\_41, MiculUcigas\_40, NaSiaTalie\_40, Naji\_43, Neeharika16\_42, Newrala\_42, Ph8s\_43, Piro94\_39, Pmask\_42, Pomar16\_43, Power\_39, Priamo\_43, QueenB2\_40, QueenBeesly\_40, RedRock\_42, Retro23\_41, SemperFi\_41, Smeagan\_43, SnapTap\_40, StarStuff\_43, SuperAwesome\_42, SweetiePie\_40, SwirlSquare\_43, TopsytheTRex\_38, Tomathan\_43, ToneTone\_39, Trixie\_41, Tucker\_43, Turbido\_41, Updawg\_41, VA6\_40, VC3\_43, Whabigail7\_41, WideWale\_41, Wiks\_41, WunderPhul\_42, Yokurt\_42, Zaka\_42, Zulu\_43,

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

Start 16:

- Found in 2 of 172 ( 1.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Koduck\_41 (A2),

Start 18:

- Found in 23 of 172 ( 13.4% ) of genes in pham
- Manual Annotations of this start: 15 of 151

- Called 65.2% of time when present
- Phage (with cluster) where this start called: AN9\_43 (A2), ANI8\_43 (A2), C3\_38 (A2), D29\_41 (A2), D32\_43 (A2), DBQu4n\_43 (A2), Duplo\_43 (A2), Hammer\_42 (A6), Kerberos\_43 (A2), Naji\_43 (A2), Pomar16\_43 (A2), StarStuff\_43 (A2), Tomathan\_43 (A2), VA6\_40 (A2), VC3\_43 (A2),

#### Start 19:

- Found in 1 of 172 ( 0.6% ) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adzzy\_43 (A2),

#### Start 20:

- Found in 28 of 172 ( 16.3% ) of genes in pham
- Manual Annotations of this start: 26 of 151
- Called 96.4% of time when present
- Phage (with cluster) where this start called: Anselm\_41 (A2), Benvolio\_37 (A2), Buggy\_42 (A2), CRB1\_42 (A2), Centaur\_41 (A2), ChipMunk\_43 (A2), Crucio\_40 (A2), Dalmatian\_41 (A2), DudeLittle\_39 (A2), Echid\_40 (A2), EvilGenius\_43 (A2), Fameo\_40 (A2), FiringLine\_40 (A2), Flare16\_40 (A2), Georgie2\_41 (A2), KingCyrus\_43 (A2), LadyBird\_43 (A2), Larenn\_40 (A2), Malec\_41 (A2), NaSiaTalie\_40 (A2), Power\_39 (A2), QueenB2\_40 (A2), QueenBeesly\_40 (A2), Retro23\_41 (A2), SemperFi\_41 (A2), SnapTap\_40 (A2), SweetiePie\_40 (A2),

#### Start 21:

- Found in 1 of 172 ( 0.6% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SwirlSquare\_43 (A2),

#### Start 22:

- Found in 2 of 172 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Trixie\_41 (A2),

#### Start 23:

- Found in 40 of 172 ( 23.3% ) of genes in pham
- Manual Annotations of this start: 21 of 151
- Called 65.0% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_42 (A6), Candra\_42 (A6), Chartreuse\_42 (A6), CloudWang3\_42 (A6), Cookiedough\_42 (A6), Dorothea\_41 (A6), Gruunaga\_42 (A6), Jeffabunny\_42 (A6), Jordennis\_42 (A6), Kazan\_43 (A6), Kipper29\_42 (A6), Lilbunny\_40 (A6), Neeharika16\_42 (A6), Newrala\_42 (A6), Pmask\_42 (A6), Priamo\_43 (A6), SmellyB\_42 (A6), SuperAwesome\_42 (A6), SuperCallie99\_42 (A6), ToneTone\_39 (A6), Tucker\_43 (A6), Wiks\_41 (A6), WunderPhul\_42 (A6), Yokurt\_42 (A6), Zaka\_42 (A6), Zulu\_43 (A6),

#### Start 24:

- Found in 80 of 172 ( 46.5% ) of genes in pham
- Manual Annotations of this start: 58 of 151
- Called 87.5% of time when present

- Phage (with cluster) where this start called: 20ES\_40 (A2), 40AC\_43 (A17), AN3\_40 (A2), Aneem\_40 (A11), ArcherNM\_39 (A2), Bachome\_41 (A11), BengiVuitton\_39 (A2), Blinn1\_43 (A6), Blue7\_43 (A6), Bowtie\_40 (A11), Bud\_39 (A11), Caraxes\_41 (A2), Changeling\_41 (A2), Colin\_43 (A2), DaVinci\_42 (A6), Deloris\_38 (A2), EZMoney23\_40 (A2), Ebony\_40 (A11), EricB\_42 (A6), Et2Brutus\_39 (A11), Fibonacci\_39 (A11), First\_0039 (A2), Flaverint\_40 (A11), Garak\_43 (A6), Gilberta\_40 (A11), Gladiator\_42 (A6), GreedyLawyer\_42 (A6), Heffalump\_40 (A2), Helmet\_43 (A6), Herbertwm\_38 (A2), Hoot\_42 (A6), Hutc2\_39 (A11), Indra\_44 (A6), Insomnia\_39 (A11), IronMan\_40 (A2), Iwokeuplikedis\_43 (A2), Jabith\_40 (A11), JewelBug\_43 (A6), Joselito\_40 (A11), Jsquared\_39 (A2), Koko\_42 (A6), Lucivia\_40 (A11), Lucyedi\_42 (A16), MaCh\_40 (A11), Mabel\_40 (A11), McFly\_42 (A6), MissWhite\_39 (A2), Mulciber\_39 (A11), Munch\_40 (A11), NicoleTera\_42 (A2), Odin\_40 (A2), Orange\_39 (A11), PP\_44 (A7), PainterBoy\_42 (A16), Petersenfast\_38 (A11), Pukovnik\_39 (A2), Rifter\_42 (A6), Roksolana\_43 (A6), Salz\_39 (A11), Serenity\_40 (A2), Sham4\_39 (A11), Snape\_39 (A11), Superchunk\_40 (A2), TarsusIV\_39 (A2), Timothy\_40 (A11), TinyTimmy\_39 (A11), Trooper\_41 (A2), VohminGhazi\_42 (A6), WeiHuaDA\_45 (A2), XianYue\_40 (A2),

#### Start 25:

- Found in 21 of 172 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 20 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AbbyPaige\_42 (A2), Agape74\_42 (A2), Baehexic\_39 (A2), Dignity\_42 (A2), Drake55\_42 (A2), Equemioh13\_41 (A2), HarryHoudini\_41 (A2), Jerm\_42 (A2), JoshKayV\_42 (A2), Landor\_40 (A2), Leviathan\_42 (A2), LiITurb\_41 (A2), MiculUcigas\_40 (A2), Ph8s\_43 (A2), Piro94\_39 (A2), Smeagan\_43 (A2), TipsytheTRex\_38 (A2), Turbido\_41 (A2), Updawg\_41 (A2), Whabigail7\_41 (A2), WideWale\_41 (A2),

#### Start 26:

- Found in 2 of 172 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BiancaTri92\_40 (A2), Leogania\_40 (A2),

#### Start 28:

- Found in 90 of 172 ( 52.3% ) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 1.1% of time when present
- Phage (with cluster) where this start called: Hexamo\_42 (A6),

#### Start 29:

- Found in 113 of 172 ( 65.7% ) of genes in pham
- Manual Annotations of this start: 4 of 151
- Called 3.5% of time when present
- Phage (with cluster) where this start called: AnnaL29\_42 (A2), Kalpine\_41 (A2), Loser\_42 (A2), RedRock\_42 (A2),

#### Start 30:

- Found in 126 of 172 ( 73.3% ) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 1.6% of time when present
- Phage (with cluster) where this start called: Che12\_43 (A2), L5\_41 (A2),

## Summary by clusters:

There are 6 clusters represented in this pham: A17, A16, A11, A2, A7, A6,

Info for manual annotations of cluster A11:

- Start number 24 was manually annotated 22 times for cluster A11.

Info for manual annotations of cluster A16:

- Start number 24 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 18 was manually annotated 14 times for cluster A2.
- Start number 19 was manually annotated 1 time for cluster A2.
- Start number 20 was manually annotated 26 times for cluster A2.
- Start number 22 was manually annotated 1 time for cluster A2.
- Start number 24 was manually annotated 19 times for cluster A2.
- Start number 25 was manually annotated 20 times for cluster A2.
- Start number 26 was manually annotated 2 times for cluster A2.
- Start number 29 was manually annotated 4 times for cluster A2.
- Start number 30 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 18 was manually annotated 1 time for cluster A6.
- Start number 23 was manually annotated 21 times for cluster A6.
- Start number 24 was manually annotated 14 times for cluster A6.
- Start number 28 was manually annotated 1 time for cluster A6.

Info for manual annotations of cluster A7:

- Start number 24 was manually annotated 1 time for cluster A7.

## Gene Information:

Gene: 20ES\_40 Start: 28514, Stop: 28227, Start Num: 24

Candidate Starts for 20ES\_40:

(Start: 24 @28514 has 58 MA's), (Start: 28 @28490 has 1 MA's), (Start: 30 @28484 has 2 MA's), (51, 28307), (61, 28265),

Gene: 40AC\_43 Start: 30498, Stop: 30202, Start Num: 24

Candidate Starts for 40AC\_43:

(Start: 24 @30498 has 58 MA's), (Start: 28 @30474 has 1 MA's), (Start: 30 @30468 has 2 MA's), (41, 30339), (47, 30294),

Gene: AN3\_40 Start: 28897, Stop: 28625, Start Num: 24

Candidate Starts for AN3\_40:

(Start: 24 @28897 has 58 MA's), (Start: 28 @28873 has 1 MA's), (Start: 30 @28867 has 2 MA's), (51, 28690), (61, 28648),

Gene: AN9\_43 Start: 28888, Stop: 28604, Start Num: 18

Candidate Starts for AN9\_43:



(Start: 18 @28888 has 15 MA's), (Start: 29 @28867 has 4 MA's), (Start: 30 @28864 has 2 MA's), (35, 28789), (41, 28738), (56, 28669), (57, 28663), (59, 28657), (65, 28630),

Gene: ANI8\_43 Start: 28888, Stop: 28604, Start Num: 18

Candidate Starts for ANI8\_43:

(Start: 18 @28888 has 15 MA's), (Start: 29 @28867 has 4 MA's), (Start: 30 @28864 has 2 MA's), (35, 28789), (41, 28738), (56, 28669), (57, 28663), (59, 28657), (65, 28630),

Gene: AbbyPaige\_42 Start: 29224, Stop: 28961, Start Num: 25

Candidate Starts for AbbyPaige\_42:

(Start: 25 @29224 has 20 MA's), (Start: 29 @29200 has 4 MA's), (51, 29020), (61, 28978),

Gene: Adzzy\_43 Start: 27804, Stop: 27520, Start Num: 19

Candidate Starts for Adzzy\_43:

(8, 28044), (Start: 19 @27804 has 1 MA's), (Start: 28 @27780 has 1 MA's), (Start: 30 @27774 has 2 MA's), (40, 27654), (53, 27594), (62, 27555),

Gene: Agape74\_42 Start: 29209, Stop: 28946, Start Num: 25

Candidate Starts for Agape74\_42:

(Start: 25 @29209 has 20 MA's), (Start: 29 @29185 has 4 MA's), (37, 29080), (51, 29005), (61, 28963),

Gene: Aneem\_40 Start: 28242, Stop: 27955, Start Num: 24

Candidate Starts for Aneem\_40:

(5, 28536), (6, 28527), (11, 28419), (14, 28332), (Start: 24 @28242 has 58 MA's), (27, 28227), (Start: 29 @28215 has 4 MA's), (32, 28176), (40, 28092), (41, 28083),

Gene: AnnaL29\_42 Start: 29750, Stop: 29484, Start Num: 29

Candidate Starts for AnnaL29\_42:

(15, 29837), (Start: 29 @29750 has 4 MA's), (52, 29564), (62, 29522),

Gene: Anselm\_41 Start: 29157, Stop: 28891, Start Num: 20

Candidate Starts for Anselm\_41:

(2, 29577), (9, 29382), (13, 29250), (Start: 20 @29157 has 26 MA's), (Start: 28 @29133 has 1 MA's), (Start: 30 @29127 has 2 MA's), (51, 28950), (61, 28908),

Gene: ArcherNM\_39 Start: 29506, Stop: 29213, Start Num: 24

Candidate Starts for ArcherNM\_39:

(Start: 24 @29506 has 58 MA's), (Start: 28 @29482 has 1 MA's), (Start: 30 @29476 has 2 MA's),

Gene: Artemis2UCLA\_42 Start: 26991, Stop: 26689, Start Num: 23

Candidate Starts for Artemis2UCLA\_42:

(Start: 23 @26991 has 21 MA's), (Start: 24 @26988 has 58 MA's), (Start: 28 @26964 has 1 MA's), (Start: 29 @26961 has 4 MA's), (Start: 30 @26958 has 2 MA's), (41, 26829), (49, 26796), (50, 26784), (62, 26727), (65, 26709),

Gene: Bachome\_41 Start: 28230, Stop: 27943, Start Num: 24

Candidate Starts for Bachome\_41:

(14, 28320), (Start: 24 @28230 has 58 MA's), (27, 28215), (Start: 30 @28200 has 2 MA's), (32, 28164), (41, 28071),

Gene: Baehexic\_39 Start: 29028, Stop: 28768, Start Num: 25

Candidate Starts for Baehexic\_39:

(Start: 25 @29028 has 20 MA's), (Start: 29 @29007 has 4 MA's), (51, 28827), (61, 28785),

Gene: BengiVuitton\_39 Start: 28479, Stop: 28207, Start Num: 24

Candidate Starts for BengiVuitton\_39:

(Start: 24 @28479 has 58 MA's), (Start: 28 @28455 has 1 MA's), (Start: 30 @28449 has 2 MA's), (34, 28377), (51, 28272), (61, 28230),

Gene: Benvolio\_37 Start: 28210, Stop: 27911, Start Num: 20

Candidate Starts for Benvolio\_37:

(Start: 20 @28210 has 26 MA's), (48, 28021), (53, 27985), (59, 27955), (63, 27943), (66, 27916),

Gene: BiancaTri92\_40 Start: 29608, Stop: 29318, Start Num: 26

Candidate Starts for BiancaTri92\_40:

(Start: 26 @29608 has 2 MA's), (Start: 28 @29593 has 1 MA's), (Start: 30 @29587 has 2 MA's), (32, 29551), (50, 29410), (55, 29380), (65, 29335), (66, 29323),

Gene: Blinn1\_43 Start: 27412, Stop: 27077, Start Num: 24

Candidate Starts for Blinn1\_43:

(17, 27421), (Start: 18 @27418 has 15 MA's), (Start: 24 @27412 has 58 MA's), (Start: 28 @27388 has 1 MA's), (Start: 29 @27385 has 4 MA's), (Start: 30 @27382 has 2 MA's), (37, 27280), (44, 27214), (50, 27172), (55, 27142), (65, 27097),

Gene: Blue7\_43 Start: 27306, Stop: 27007, Start Num: 24

Candidate Starts for Blue7\_43:

(Start: 18 @27312 has 15 MA's), (Start: 24 @27306 has 58 MA's), (Start: 28 @27282 has 1 MA's), (Start: 29 @27279 has 4 MA's), (Start: 30 @27276 has 2 MA's), (41, 27147), (49, 27114), (50, 27102), (62, 27045), (65, 27027),

Gene: Bowtie\_40 Start: 28249, Stop: 27962, Start Num: 24

Candidate Starts for Bowtie\_40:

(14, 28339), (Start: 24 @28249 has 58 MA's), (27, 28234), (Start: 29 @28222 has 4 MA's), (Start: 30 @28219 has 2 MA's), (32, 28183), (40, 28099), (41, 28090),

Gene: Bud\_39 Start: 27804, Stop: 27517, Start Num: 24

Candidate Starts for Bud\_39:

(14, 27894), (Start: 24 @27804 has 58 MA's), (27, 27789), (Start: 29 @27777 has 4 MA's), (Start: 30 @27774 has 2 MA's), (32, 27738), (40, 27654), (41, 27645),

Gene: Bugsy\_42 Start: 29305, Stop: 29039, Start Num: 20

Candidate Starts for Bugsy\_42:

(13, 29398), (Start: 20 @29305 has 26 MA's), (Start: 29 @29278 has 4 MA's), (51, 29098), (61, 29056),

Gene: C3\_38 Start: 28888, Stop: 28604, Start Num: 18

Candidate Starts for C3\_38:

(Start: 18 @28888 has 15 MA's), (Start: 29 @28867 has 4 MA's), (Start: 30 @28864 has 2 MA's), (35, 28789), (41, 28738), (56, 28669), (57, 28663), (59, 28657), (65, 28630),

Gene: CRB1\_42 Start: 29225, Stop: 28953, Start Num: 20

Candidate Starts for CRB1\_42:

(13, 29318), (Start: 20 @29225 has 26 MA's), (Start: 28 @29201 has 1 MA's), (Start: 30 @29195 has 2 MA's), (34, 29123), (51, 29018), (61, 28976),

Gene: Candra\_42 Start: 27330, Stop: 27028, Start Num: 23

Candidate Starts for Candra\_42:

(Start: 23 @27330 has 21 MA's), (Start: 24 @27327 has 58 MA's), (Start: 28 @27303 has 1 MA's),  
(Start: 29 @27300 has 4 MA's), (Start: 30 @27297 has 2 MA's), (41, 27168), (49, 27135), (50, 27123),  
(65, 27048),

Gene: Caraxes\_41 Start: 27515, Stop: 27231, Start Num: 24

Candidate Starts for Caraxes\_41:

(Start: 23 @27518 has 21 MA's), (Start: 24 @27515 has 58 MA's), (Start: 28 @27491 has 1 MA's),  
(Start: 30 @27485 has 2 MA's), (37, 27383), (40, 27365), (62, 27266),

Gene: Centaur\_41 Start: 29150, Stop: 28884, Start Num: 20

Candidate Starts for Centaur\_41:

(13, 29243), (Start: 20 @29150 has 26 MA's), (Start: 29 @29123 has 4 MA's), (51, 28943), (61,  
28901),

Gene: Changeling\_41 Start: 29768, Stop: 29463, Start Num: 24

Candidate Starts for Changeling\_41:

(Start: 24 @29768 has 58 MA's), (Start: 28 @29744 has 1 MA's), (Start: 30 @29738 has 2 MA's), (41,  
29609),

Gene: Chartreuse\_42 Start: 27241, Stop: 26939, Start Num: 23

Candidate Starts for Chartreuse\_42:

(Start: 23 @27241 has 21 MA's), (Start: 24 @27238 has 58 MA's), (Start: 28 @27214 has 1 MA's),  
(Start: 29 @27211 has 4 MA's), (Start: 30 @27208 has 2 MA's), (41, 27079), (49, 27046), (50, 27034),  
(65, 26959),

Gene: Che12\_43 Start: 27953, Stop: 27699, Start Num: 30

Candidate Starts for Che12\_43:

(Start: 23 @27986 has 21 MA's), (Start: 24 @27983 has 58 MA's), (Start: 30 @27953 has 2 MA's),  
(37, 27851), (53, 27773), (59, 27743), (61, 27737), (66, 27704),

Gene: ChipMunk\_43 Start: 30657, Stop: 30391, Start Num: 20

Candidate Starts for ChipMunk\_43:

(9, 30882), (13, 30750), (Start: 20 @30657 has 26 MA's), (Start: 30 @30627 has 2 MA's), (51, 30450),  
(58, 30417), (61, 30408),

Gene: CloudWang3\_42 Start: 27091, Stop: 26789, Start Num: 23

Candidate Starts for CloudWang3\_42:

(Start: 23 @27091 has 21 MA's), (Start: 24 @27088 has 58 MA's), (Start: 28 @27064 has 1 MA's),  
(Start: 29 @27061 has 4 MA's), (Start: 30 @27058 has 2 MA's), (41, 26929), (49, 26896), (50, 26884),  
(62, 26827), (65, 26809),

Gene: Colin\_43 Start: 29812, Stop: 29519, Start Num: 24

Candidate Starts for Colin\_43:

(15, 29872), (Start: 24 @29812 has 58 MA's), (Start: 28 @29788 has 1 MA's), (Start: 29 @29785 has  
4 MA's), (36, 29689), (40, 29662), (59, 29572),

Gene: Cookiedough\_42 Start: 27306, Stop: 27004, Start Num: 23

Candidate Starts for Cookiedough\_42:

(Start: 23 @27306 has 21 MA's), (Start: 28 @27279 has 1 MA's), (Start: 29 @27276 has 4 MA's),  
(Start: 30 @27273 has 2 MA's), (41, 27144), (49, 27111), (50, 27099), (55, 27069), (65, 27024),

Gene: Crucio\_40 Start: 28740, Stop: 28474, Start Num: 20

Candidate Starts for Crucio\_40:

(9, 28965), (13, 28833), (Start: 20 @28740 has 26 MA's), (Start: 28 @28716 has 1 MA's), (32, 28674), (51, 28533), (61, 28491),

Gene: D29\_41 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for D29\_41:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35, 28690), (41, 28639), (57, 28564), (59, 28558), (65, 28531),

Gene: D32\_43 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for D32\_43:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35, 28690), (41, 28639), (57, 28564), (59, 28558), (65, 28531),

Gene: DBQu4n\_43 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for DBQu4n\_43:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35, 28690), (41, 28639), (56, 28570), (57, 28564), (59, 28558), (61, 28552), (65, 28531),

Gene: DaVinci\_42 Start: 27292, Stop: 26993, Start Num: 24

Candidate Starts for DaVinci\_42:

(Start: 23 @27295 has 21 MA's), (Start: 24 @27292 has 58 MA's), (Start: 28 @27268 has 1 MA's), (Start: 29 @27265 has 4 MA's), (Start: 30 @27262 has 2 MA's), (41, 27133), (49, 27100), (50, 27088), (65, 27013),

Gene: Dalmatian\_41 Start: 29133, Stop: 28867, Start Num: 20

Candidate Starts for Dalmatian\_41:

(9, 29358), (13, 29226), (Start: 20 @29133 has 26 MA's), (Start: 28 @29109 has 1 MA's), (Start: 30 @29103 has 2 MA's), (51, 28926), (61, 28884),

Gene: Deloris\_38 Start: 28148, Stop: 27876, Start Num: 24

Candidate Starts for Deloris\_38:

(Start: 24 @28148 has 58 MA's), (Start: 28 @28124 has 1 MA's), (Start: 30 @28118 has 2 MA's), (34, 28046), (51, 27941), (61, 27899),

Gene: Dignity\_42 Start: 29289, Stop: 29026, Start Num: 25

Candidate Starts for Dignity\_42:

(Start: 25 @29289 has 20 MA's), (Start: 29 @29265 has 4 MA's), (51, 29085), (61, 29043),

Gene: Dorothea\_41 Start: 27313, Stop: 27011, Start Num: 23

Candidate Starts for Dorothea\_41:

(Start: 23 @27313 has 21 MA's), (Start: 28 @27286 has 1 MA's), (Start: 29 @27283 has 4 MA's), (Start: 30 @27280 has 2 MA's), (41, 27151), (49, 27118), (50, 27106), (62, 27049), (65, 27031),

Gene: Drake55\_42 Start: 29207, Stop: 28947, Start Num: 25

Candidate Starts for Drake55\_42:

(Start: 25 @29207 has 20 MA's), (Start: 29 @29186 has 4 MA's), (32, 29147), (51, 29006), (61, 28964),

Gene: DudeLittle\_39 Start: 28799, Stop: 28533, Start Num: 20

Candidate Starts for DudeLittle\_39:

(9, 29024), (13, 28892), (Start: 20 @28799 has 26 MA's), (Start: 28 @28775 has 1 MA's), (Start: 30 @28769 has 2 MA's), (51, 28592), (61, 28550),

Gene: Duplo\_43 Start: 28827, Stop: 28543, Start Num: 18

Candidate Starts for Duplo\_43:

(Start: 18 @28827 has 15 MA's), (Start: 29 @28806 has 4 MA's), (Start: 30 @28803 has 2 MA's), (35, 28728), (41, 28677), (56, 28608), (57, 28602), (59, 28596), (61, 28590), (65, 28569),

Gene: EZMoney23\_40 Start: 29042, Stop: 28743, Start Num: 24

Candidate Starts for EZMoney23\_40:

(Start: 24 @29042 has 58 MA's), (Start: 28 @29018 has 1 MA's), (Start: 30 @29012 has 2 MA's), (33, 28949), (43, 28853), (61, 28790), (65, 28769),

Gene: Ebony\_40 Start: 28204, Stop: 27917, Start Num: 24

Candidate Starts for Ebony\_40:

(14, 28294), (Start: 24 @28204 has 58 MA's), (27, 28189), (Start: 29 @28177 has 4 MA's), (32, 28138), (40, 28054), (41, 28045),

Gene: Echild\_40 Start: 28234, Stop: 27935, Start Num: 20

Candidate Starts for Echild\_40:

(Start: 20 @28234 has 26 MA's), (48, 28045), (53, 28009), (59, 27979), (63, 27967), (66, 27940),

Gene: Equemioh13\_41 Start: 29147, Stop: 28887, Start Num: 25

Candidate Starts for Equemioh13\_41:

(Start: 25 @29147 has 20 MA's), (Start: 29 @29126 has 4 MA's), (51, 28946), (61, 28904),

Gene: EricB\_42 Start: 27284, Stop: 26985, Start Num: 24

Candidate Starts for EricB\_42:

(Start: 23 @27287 has 21 MA's), (Start: 24 @27284 has 58 MA's), (Start: 28 @27260 has 1 MA's), (Start: 29 @27257 has 4 MA's), (Start: 30 @27254 has 2 MA's), (41, 27125), (49, 27092), (50, 27080), (65, 27005),

Gene: Et2Brutus\_39 Start: 28164, Stop: 27877, Start Num: 24

Candidate Starts for Et2Brutus\_39:

(14, 28254), (Start: 24 @28164 has 58 MA's), (27, 28149), (Start: 29 @28137 has 4 MA's), (32, 28098), (40, 28014), (41, 28005),

Gene: EvilGenius\_43 Start: 30661, Stop: 30395, Start Num: 20

Candidate Starts for EvilGenius\_43:

(9, 30886), (13, 30754), (Start: 20 @30661 has 26 MA's), (Start: 30 @30631 has 2 MA's), (51, 30454), (58, 30421), (61, 30412),

Gene: Fameo\_40 Start: 28927, Stop: 28661, Start Num: 20

Candidate Starts for Fameo\_40:

(9, 29152), (13, 29020), (Start: 20 @28927 has 26 MA's), (27, 28912), (Start: 28 @28903 has 1 MA's), (Start: 30 @28897 has 2 MA's), (39, 28780), (51, 28720), (61, 28678),

Gene: Fibonacci\_39 Start: 27796, Stop: 27509, Start Num: 24

Candidate Starts for Fibonacci\_39:

(14, 27886), (Start: 24 @27796 has 58 MA's), (27, 27781), (Start: 29 @27769 has 4 MA's), (Start: 30 @27766 has 2 MA's), (32, 27730), (40, 27646), (41, 27637),

Gene: FiringLine\_40 Start: 28721, Stop: 28455, Start Num: 20

Candidate Starts for FiringLine\_40:

(Start: 20 @28721 has 26 MA's), (Start: 28 @28697 has 1 MA's), (32, 28655), (51, 28514), (61, 28472),

Gene: First\_0039 Start: 28390, Stop: 28103, Start Num: 24

Candidate Starts for First\_0039:

(Start: 24 @28390 has 58 MA's), (Start: 28 @28366 has 1 MA's), (Start: 30 @28360 has 2 MA's), (51, 28183), (61, 28141),

Gene: Flare16\_40 Start: 28813, Stop: 28547, Start Num: 20

Candidate Starts for Flare16\_40:

(13, 28906), (Start: 20 @28813 has 26 MA's), (Start: 29 @28786 has 4 MA's), (51, 28606), (61, 28564),

Gene: Flaverint\_40 Start: 28243, Stop: 27956, Start Num: 24

Candidate Starts for Flaverint\_40:

(5, 28537), (6, 28528), (11, 28420), (14, 28333), (Start: 24 @28243 has 58 MA's), (27, 28228), (Start: 29 @28216 has 4 MA's), (32, 28177), (40, 28093), (41, 28084),

Gene: Garak\_43 Start: 27310, Stop: 27011, Start Num: 24

Candidate Starts for Garak\_43:

(Start: 18 @27316 has 15 MA's), (Start: 24 @27310 has 58 MA's), (Start: 28 @27286 has 1 MA's), (Start: 29 @27283 has 4 MA's), (Start: 30 @27280 has 2 MA's), (41, 27151), (49, 27118), (50, 27106), (55, 27076), (65, 27031),

Gene: Georgie2\_41 Start: 28766, Stop: 28500, Start Num: 20

Candidate Starts for Georgie2\_41:

(Start: 20 @28766 has 26 MA's), (Start: 28 @28742 has 1 MA's), (Start: 30 @28736 has 2 MA's), (32, 28700), (51, 28559), (61, 28517),

Gene: Gilberta\_40 Start: 28233, Stop: 27946, Start Num: 24

Candidate Starts for Gilberta\_40:

(14, 28323), (Start: 24 @28233 has 58 MA's), (27, 28218), (Start: 29 @28206 has 4 MA's), (Start: 30 @28203 has 2 MA's), (32, 28167), (40, 28083), (41, 28074),

Gene: Gladiator\_42 Start: 27292, Stop: 26993, Start Num: 24

Candidate Starts for Gladiator\_42:

(Start: 23 @27295 has 21 MA's), (Start: 24 @27292 has 58 MA's), (Start: 28 @27268 has 1 MA's), (Start: 29 @27265 has 4 MA's), (Start: 30 @27262 has 2 MA's), (41, 27133), (49, 27100), (50, 27088), (55, 27058), (65, 27013),

Gene: GreedyLawyer\_42 Start: 27291, Stop: 26992, Start Num: 24

Candidate Starts for GreedyLawyer\_42:

(Start: 23 @27294 has 21 MA's), (Start: 24 @27291 has 58 MA's), (Start: 28 @27267 has 1 MA's), (Start: 29 @27264 has 4 MA's), (Start: 30 @27261 has 2 MA's), (41, 27132), (49, 27099), (50, 27087), (65, 27012),

Gene: Gruunaga\_42 Start: 27294, Stop: 26992, Start Num: 23

Candidate Starts for Gruunaga\_42:

(Start: 23 @27294 has 21 MA's), (Start: 24 @27291 has 58 MA's), (Start: 28 @27267 has 1 MA's), (Start: 29 @27264 has 4 MA's), (Start: 30 @27261 has 2 MA's), (41, 27132), (49, 27099), (50, 27087), (55, 27057), (65, 27012),

Gene: Hammer\_42 Start: 27122, Stop: 26817, Start Num: 18

Candidate Starts for Hammer\_42:

(Start: 18 @27122 has 15 MA's), (Start: 24 @27116 has 58 MA's), (Start: 28 @27092 has 1 MA's),  
(Start: 29 @27089 has 4 MA's), (Start: 30 @27086 has 2 MA's), (41, 26957), (49, 26924), (50, 26912),  
(62, 26855), (65, 26837),

Gene: HarryHoudini\_41 Start: 29081, Stop: 28821, Start Num: 25

Candidate Starts for HarryHoudini\_41:

(Start: 25 @29081 has 20 MA's), (Start: 29 @29060 has 4 MA's), (51, 28880), (61, 28838),

Gene: Heffalump\_40 Start: 29677, Stop: 29393, Start Num: 24

Candidate Starts for Heffalump\_40:

(10, 29878), (15, 29737), (Start: 24 @29677 has 58 MA's), (Start: 28 @29653 has 1 MA's), (Start: 30  
@29647 has 2 MA's), (37, 29545), (38, 29542), (41, 29518), (65, 29410),

Gene: Helmet\_43 Start: 27310, Stop: 27011, Start Num: 24

Candidate Starts for Helmet\_43:

(Start: 18 @27316 has 15 MA's), (Start: 24 @27310 has 58 MA's), (Start: 28 @27286 has 1 MA's),  
(Start: 29 @27283 has 4 MA's), (Start: 30 @27280 has 2 MA's), (41, 27151), (49, 27118), (50, 27106),  
(55, 27076), (65, 27031),

Gene: Herbertwm\_38 Start: 27747, Stop: 27424, Start Num: 24

Candidate Starts for Herbertwm\_38:

(Start: 24 @27747 has 58 MA's), (Start: 30 @27717 has 2 MA's), (31, 27702), (40, 27597), (65,  
27441),

Gene: Hexamo\_42 Start: 27052, Stop: 26777, Start Num: 28

Candidate Starts for Hexamo\_42:

(Start: 28 @27052 has 1 MA's), (Start: 29 @27049 has 4 MA's), (Start: 30 @27046 has 2 MA's), (41,  
26917), (49, 26884), (50, 26872), (62, 26815), (65, 26797),

Gene: Hoot\_42 Start: 27269, Stop: 26970, Start Num: 24

Candidate Starts for Hoot\_42:

(Start: 23 @27272 has 21 MA's), (Start: 24 @27269 has 58 MA's), (Start: 28 @27245 has 1 MA's),  
(Start: 29 @27242 has 4 MA's), (Start: 30 @27239 has 2 MA's), (41, 27110), (49, 27077), (50, 27065),  
(65, 26990),

Gene: Hutc2\_39 Start: 27796, Stop: 27509, Start Num: 24

Candidate Starts for Hutc2\_39:

(14, 27886), (Start: 24 @27796 has 58 MA's), (27, 27781), (Start: 29 @27769 has 4 MA's), (Start: 30  
@27766 has 2 MA's), (32, 27730), (40, 27646), (41, 27637),

Gene: Indra\_44 Start: 27311, Stop: 27012, Start Num: 24

Candidate Starts for Indra\_44:

(Start: 18 @27317 has 15 MA's), (Start: 24 @27311 has 58 MA's), (Start: 28 @27287 has 1 MA's),  
(Start: 29 @27284 has 4 MA's), (Start: 30 @27281 has 2 MA's), (41, 27152), (49, 27119), (50, 27107),  
(55, 27077), (65, 27032),

Gene: Insomnia\_39 Start: 28301, Stop: 28014, Start Num: 24

Candidate Starts for Insomnia\_39:

(14, 28391), (Start: 24 @28301 has 58 MA's), (27, 28286), (Start: 29 @28274 has 4 MA's), (Start: 30  
@28271 has 2 MA's), (32, 28235), (40, 28151), (41, 28142),

Gene: IronMan\_40 Start: 29940, Stop: 29650, Start Num: 24

Candidate Starts for IronMan\_40:

(Start: 24 @29940 has 58 MA's), (Start: 30 @29910 has 2 MA's), (57, 29700), (65, 29667),

Gene: Iwokeuplikedis\_43 Start: 28853, Stop: 28563, Start Num: 24

Candidate Starts for Iwokeuplikedis\_43:

(3, 29210), (10, 29054), (15, 28913), (Start: 24 @28853 has 58 MA's), (Start: 29 @28826 has 4 MA's), (39, 28706), (47, 28664), (55, 28625), (57, 28613), (59, 28607), (65, 28580),

Gene: Jabith\_40 Start: 28302, Stop: 28015, Start Num: 24

Candidate Starts for Jabith\_40:

(14, 28392), (Start: 24 @28302 has 58 MA's), (27, 28287), (Start: 29 @28275 has 4 MA's), (Start: 30 @28272 has 2 MA's), (32, 28236), (40, 28152), (41, 28143),

Gene: Jeffabunny\_42 Start: 27115, Stop: 26813, Start Num: 23

Candidate Starts for Jeffabunny\_42:

(Start: 23 @27115 has 21 MA's), (Start: 28 @27088 has 1 MA's), (Start: 29 @27085 has 4 MA's), (Start: 30 @27082 has 2 MA's), (41, 26953), (49, 26920), (50, 26908), (62, 26851), (65, 26833),

Gene: Jerm\_42 Start: 29282, Stop: 29019, Start Num: 25

Candidate Starts for Jerm\_42:

(Start: 25 @29282 has 20 MA's), (Start: 29 @29258 has 4 MA's), (51, 29078), (61, 29036),

Gene: JewelBug\_43 Start: 27315, Stop: 27016, Start Num: 24

Candidate Starts for JewelBug\_43:

(Start: 18 @27321 has 15 MA's), (Start: 24 @27315 has 58 MA's), (Start: 28 @27291 has 1 MA's), (Start: 29 @27288 has 4 MA's), (41, 27156), (49, 27123), (50, 27111), (55, 27081), (65, 27036),

Gene: Jordennis\_42 Start: 27302, Stop: 27000, Start Num: 23

Candidate Starts for Jordennis\_42:

(Start: 23 @27302 has 21 MA's), (Start: 28 @27275 has 1 MA's), (Start: 29 @27272 has 4 MA's), (Start: 30 @27269 has 2 MA's), (41, 27140), (49, 27107), (50, 27095), (62, 27038), (65, 27020),

Gene: Joselito\_40 Start: 28242, Stop: 27955, Start Num: 24

Candidate Starts for Joselito\_40:

(5, 28536), (6, 28527), (11, 28419), (14, 28332), (Start: 24 @28242 has 58 MA's), (27, 28227), (Start: 29 @28215 has 4 MA's), (32, 28176), (40, 28092), (41, 28083),

Gene: JoshKayV\_42 Start: 29245, Stop: 28982, Start Num: 25

Candidate Starts for JoshKayV\_42:

(9, 29473), (13, 29341), (Start: 20 @29248 has 26 MA's), (Start: 25 @29245 has 20 MA's), (Start: 30 @29218 has 2 MA's), (39, 29101), (51, 29041), (58, 29008), (60, 29002), (61, 28999),

Gene: Jsquared\_39 Start: 27882, Stop: 27598, Start Num: 24

Candidate Starts for Jsquared\_39:

(Start: 24 @27882 has 58 MA's), (Start: 28 @27858 has 1 MA's), (Start: 29 @27855 has 4 MA's), (Start: 30 @27852 has 2 MA's), (41, 27723), (53, 27672), (57, 27648), (59, 27642), (61, 27636), (67, 27603),

Gene: Kalpine\_41 Start: 29680, Stop: 29414, Start Num: 29

Candidate Starts for Kalpine\_41:

(12, 29824), (Start: 29 @29680 has 4 MA's), (37, 29575), (59, 29467),



Gene: Kazan\_43 Start: 27300, Stop: 26998, Start Num: 23

Candidate Starts for Kazan\_43:

(Start: 23 @27300 has 21 MA's), (Start: 24 @27297 has 58 MA's), (Start: 28 @27273 has 1 MA's),  
(Start: 29 @27270 has 4 MA's), (Start: 30 @27267 has 2 MA's), (41, 27138), (49, 27105), (50, 27093),  
(65, 27018),

Gene: Kerberos\_43 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for Kerberos\_43:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35,  
28690), (41, 28639), (56, 28570), (57, 28564), (59, 28558), (61, 28552), (65, 28531),

Gene: KingCyrus\_43 Start: 30656, Stop: 30390, Start Num: 20

Candidate Starts for KingCyrus\_43:

(9, 30881), (13, 30749), (Start: 20 @30656 has 26 MA's), (Start: 30 @30626 has 2 MA's), (51, 30449),  
(58, 30416), (61, 30407),

Gene: Kipper29\_42 Start: 27313, Stop: 27011, Start Num: 23

Candidate Starts for Kipper29\_42:

(Start: 23 @27313 has 21 MA's), (Start: 28 @27286 has 1 MA's), (Start: 29 @27283 has 4 MA's),  
(Start: 30 @27280 has 2 MA's), (41, 27151), (49, 27118), (50, 27106), (55, 27076), (65, 27031),

Gene: Koduck\_41 Start: 28082, Stop: 27801, Start Num: 16

Candidate Starts for Koduck\_41:

(16, 28082), (Start: 30 @28052 has 2 MA's), (32, 28016), (37, 27953), (52, 27875), (57, 27851), (59,  
27845), (65, 27818),

Gene: Koko\_42 Start: 27655, Stop: 27356, Start Num: 24

Candidate Starts for Koko\_42:

(Start: 18 @27661 has 15 MA's), (Start: 24 @27655 has 58 MA's), (Start: 28 @27631 has 1 MA's),  
(Start: 29 @27628 has 4 MA's), (Start: 30 @27625 has 2 MA's), (41, 27496), (49, 27463), (50, 27451),  
(62, 27394), (65, 27376),

Gene: L5\_41 Start: 28021, Stop: 27770, Start Num: 30

Candidate Starts for L5\_41:

(16, 28051), (Start: 30 @28021 has 2 MA's), (32, 27985), (37, 27922), (52, 27844), (57, 27820), (59,  
27814), (65, 27787),

Gene: LadyBird\_43 Start: 29187, Stop: 28915, Start Num: 20

Candidate Starts for LadyBird\_43:

(13, 29280), (Start: 20 @29187 has 26 MA's), (Start: 28 @29163 has 1 MA's), (Start: 30 @29157 has  
2 MA's), (51, 28980), (61, 28938),

Gene: Landor\_40 Start: 30027, Stop: 29764, Start Num: 25

Candidate Starts for Landor\_40:

(1, 30456), (Start: 25 @30027 has 20 MA's), (Start: 30 @30000 has 2 MA's), (32, 29964), (51, 29823),  
(61, 29781),

Gene: Larenn\_40 Start: 29050, Stop: 28721, Start Num: 20

Candidate Starts for Larenn\_40:

(13, 29143), (Start: 20 @29050 has 26 MA's), (Start: 29 @29023 has 4 MA's), (Start: 30 @29020 has  
2 MA's), (41, 28891),

Gene: Leogania\_40 Start: 29975, Stop: 29685, Start Num: 26

Candidate Starts for Leogania\_40:

(Start: 26 @29975 has 2 MA's), (Start: 28 @29960 has 1 MA's), (Start: 30 @29954 has 2 MA's), (32, 29918), (50, 29777), (55, 29747), (65, 29702), (66, 29690),

Gene: Leviathan\_42 Start: 29338, Stop: 29075, Start Num: 25

Candidate Starts for Leviathan\_42:

(Start: 25 @29338 has 20 MA's), (Start: 29 @29314 has 4 MA's), (51, 29134), (61, 29092),

Gene: LilTurb\_41 Start: 29171, Stop: 28908, Start Num: 25

Candidate Starts for LilTurb\_41:

(Start: 25 @29171 has 20 MA's), (Start: 29 @29147 has 4 MA's), (51, 28967), (61, 28925),

Gene: Lilbunny\_40 Start: 27089, Stop: 26787, Start Num: 23

Candidate Starts for Lilbunny\_40:

(Start: 23 @27089 has 21 MA's), (Start: 28 @27062 has 1 MA's), (Start: 29 @27059 has 4 MA's), (Start: 30 @27056 has 2 MA's), (41, 26927), (49, 26894), (50, 26882), (62, 26825), (65, 26807),

Gene: Loser\_42 Start: 29693, Stop: 29427, Start Num: 29

Candidate Starts for Loser\_42:

(15, 29780), (Start: 29 @29693 has 4 MA's), (52, 29507), (62, 29465),

Gene: Lucivia\_40 Start: 28291, Stop: 28004, Start Num: 24

Candidate Starts for Lucivia\_40:

(14, 28381), (Start: 24 @28291 has 58 MA's), (27, 28276), (Start: 29 @28264 has 4 MA's), (Start: 30 @28261 has 2 MA's), (32, 28225), (40, 28141), (41, 28132),

Gene: Lucyedi\_42 Start: 28643, Stop: 28344, Start Num: 24

Candidate Starts for Lucyedi\_42:

(Start: 23 @28646 has 21 MA's), (Start: 24 @28643 has 58 MA's), (Start: 30 @28613 has 2 MA's), (41, 28484), (49, 28451), (50, 28439), (55, 28409), (65, 28364),

Gene: MaCh\_40 Start: 28229, Stop: 27942, Start Num: 24

Candidate Starts for MaCh\_40:

(14, 28319), (Start: 24 @28229 has 58 MA's), (27, 28214), (Start: 30 @28199 has 2 MA's), (32, 28163), (41, 28070),

Gene: Mabel\_40 Start: 28214, Stop: 27927, Start Num: 24

Candidate Starts for Mabel\_40:

(14, 28304), (Start: 24 @28214 has 58 MA's), (27, 28199), (Start: 30 @28184 has 2 MA's), (32, 28148), (40, 28064), (41, 28055),

Gene: Malec\_41 Start: 29614, Stop: 29285, Start Num: 20

Candidate Starts for Malec\_41:

(13, 29707), (Start: 20 @29614 has 26 MA's), (Start: 29 @29587 has 4 MA's), (Start: 30 @29584 has 2 MA's), (41, 29455),

Gene: McFly\_42 Start: 27291, Stop: 26992, Start Num: 24

Candidate Starts for McFly\_42:

(Start: 23 @27294 has 21 MA's), (Start: 24 @27291 has 58 MA's), (Start: 28 @27267 has 1 MA's), (Start: 29 @27264 has 4 MA's), (Start: 30 @27261 has 2 MA's), (41, 27132), (49, 27099), (50, 27087), (65, 27012),

Gene: MiculUcigas\_40 Start: 28806, Stop: 28546, Start Num: 25

Candidate Starts for MiculUcigas\_40:

(Start: 25 @28806 has 20 MA's), (Start: 29 @28785 has 4 MA's), (51, 28605), (61, 28563),

Gene: MissWhite\_39 Start: 27357, Stop: 27070, Start Num: 24

Candidate Starts for MissWhite\_39:

(Start: 24 @27357 has 58 MA's), (27, 27342), (32, 27291), (40, 27207), (41, 27198), (52, 27147),

Gene: Mulciber\_39 Start: 27793, Stop: 27506, Start Num: 24

Candidate Starts for Mulciber\_39:

(14, 27883), (Start: 24 @27793 has 58 MA's), (27, 27778), (Start: 29 @27766 has 4 MA's), (Start: 30 @27763 has 2 MA's), (32, 27727), (40, 27643), (41, 27634),

Gene: Munch\_40 Start: 28242, Stop: 27955, Start Num: 24

Candidate Starts for Munch\_40:

(5, 28536), (6, 28527), (11, 28419), (14, 28332), (Start: 24 @28242 has 58 MA's), (27, 28227), (Start: 29 @28215 has 4 MA's), (32, 28176), (40, 28092), (41, 28083),

Gene: NaSiaTalie\_40 Start: 28810, Stop: 28544, Start Num: 20

Candidate Starts for NaSiaTalie\_40:

(13, 28903), (Start: 20 @28810 has 26 MA's), (Start: 29 @28783 has 4 MA's), (51, 28603), (61, 28561),

Gene: Naji\_43 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for Naji\_43:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35, 28690), (41, 28639), (57, 28564), (59, 28558), (65, 28531),

Gene: Neeharika16\_42 Start: 27305, Stop: 27003, Start Num: 23

Candidate Starts for Neeharika16\_42:

(Start: 23 @27305 has 21 MA's), (Start: 28 @27278 has 1 MA's), (Start: 29 @27275 has 4 MA's), (Start: 30 @27272 has 2 MA's), (41, 27143), (49, 27110), (50, 27098), (55, 27068), (65, 27023),

Gene: Newrala\_42 Start: 27305, Stop: 27003, Start Num: 23

Candidate Starts for Newrala\_42:

(Start: 23 @27305 has 21 MA's), (Start: 28 @27278 has 1 MA's), (Start: 29 @27275 has 4 MA's), (Start: 30 @27272 has 2 MA's), (41, 27143), (49, 27110), (50, 27098), (55, 27068), (65, 27023),

Gene: NicoleTera\_42 Start: 29755, Stop: 29462, Start Num: 24

Candidate Starts for NicoleTera\_42:

(10, 29956), (Start: 24 @29755 has 58 MA's), (Start: 28 @29731 has 1 MA's), (Start: 30 @29725 has 2 MA's), (41, 29596),

Gene: Odin\_40 Start: 27688, Stop: 27404, Start Num: 24

Candidate Starts for Odin\_40:

(Start: 23 @27691 has 21 MA's), (Start: 24 @27688 has 58 MA's), (Start: 28 @27664 has 1 MA's), (Start: 30 @27658 has 2 MA's), (37, 27556), (40, 27538), (62, 27439),

Gene: Orange\_39 Start: 27791, Stop: 27504, Start Num: 24

Candidate Starts for Orange\_39:

(14, 27881), (Start: 24 @27791 has 58 MA's), (27, 27776), (Start: 29 @27764 has 4 MA's), (Start: 30 @27761 has 2 MA's), (32, 27725), (40, 27641), (41, 27632),

Gene: PP\_44 Start: 32996, Stop: 32706, Start Num: 24

Candidate Starts for PP\_44:

(Start: 24 @32996 has 58 MA's), (Start: 28 @32972 has 1 MA's), (Start: 29 @32969 has 4 MA's), (41, 32837), (53, 32786),

Gene: PainterBoy\_42 Start: 28579, Stop: 28280, Start Num: 24

Candidate Starts for PainterBoy\_42:

(Start: 23 @28582 has 21 MA's), (Start: 24 @28579 has 58 MA's), (Start: 30 @28549 has 2 MA's), (41, 28420), (49, 28387), (50, 28375), (55, 28345), (65, 28300),

Gene: Petersenfast\_38 Start: 27798, Stop: 27511, Start Num: 24

Candidate Starts for Petersenfast\_38:

(14, 27888), (Start: 24 @27798 has 58 MA's), (27, 27783), (Start: 29 @27771 has 4 MA's), (Start: 30 @27768 has 2 MA's), (32, 27732), (40, 27648), (41, 27639),

Gene: Ph8s\_43 Start: 28224, Stop: 27943, Start Num: 25

Candidate Starts for Ph8s\_43:

(8, 28479), (Start: 25 @28224 has 20 MA's), (Start: 28 @28203 has 1 MA's), (Start: 30 @28197 has 2 MA's), (40, 28077), (62, 27978),

Gene: Piro94\_39 Start: 28999, Stop: 28736, Start Num: 25

Candidate Starts for Piro94\_39:

(Start: 25 @28999 has 20 MA's), (Start: 29 @28975 has 4 MA's), (32, 28936), (51, 28795), (61, 28753),

Gene: Pmask\_42 Start: 27306, Stop: 27004, Start Num: 23

Candidate Starts for Pmask\_42:

(Start: 23 @27306 has 21 MA's), (Start: 28 @27279 has 1 MA's), (Start: 29 @27276 has 4 MA's), (Start: 30 @27273 has 2 MA's), (41, 27144), (49, 27111), (50, 27099), (55, 27069), (65, 27024),

Gene: Pomar16\_43 Start: 28830, Stop: 28546, Start Num: 18

Candidate Starts for Pomar16\_43:

(Start: 18 @28830 has 15 MA's), (Start: 29 @28809 has 4 MA's), (Start: 30 @28806 has 2 MA's), (35, 28731), (41, 28680), (56, 28611), (57, 28605), (59, 28599), (61, 28593), (65, 28572),

Gene: Power\_39 Start: 28774, Stop: 28508, Start Num: 20

Candidate Starts for Power\_39:

(9, 28999), (13, 28867), (Start: 20 @28774 has 26 MA's), (Start: 28 @28750 has 1 MA's), (Start: 30 @28744 has 2 MA's), (32, 28708), (51, 28567), (61, 28525),

Gene: Priamo\_43 Start: 27355, Stop: 27053, Start Num: 23

Candidate Starts for Priamo\_43:

(7, 27595), (Start: 23 @27355 has 21 MA's), (Start: 28 @27328 has 1 MA's), (Start: 29 @27325 has 4 MA's), (Start: 30 @27322 has 2 MA's), (41, 27193), (49, 27160), (50, 27148), (62, 27091), (65, 27073),

Gene: Pukovnik\_39 Start: 29602, Stop: 29312, Start Num: 24

Candidate Starts for Pukovnik\_39:

(Start: 24 @29602 has 58 MA's), (Start: 28 @29578 has 1 MA's), (32, 29536), (47, 29413), (55, 29374), (57, 29362), (65, 29329),

Gene: QueenB2\_40 Start: 28845, Stop: 28579, Start Num: 20

Candidate Starts for QueenB2\_40:

(Start: 20 @28845 has 26 MA's), (27, 28830), (Start: 28 @28821 has 1 MA's), (Start: 30 @28815 has 2 MA's), (39, 28698), (51, 28638), (61, 28596),

Gene: QueenBeesly\_40 Start: 28721, Stop: 28455, Start Num: 20

Candidate Starts for QueenBeesly\_40:

(Start: 20 @28721 has 26 MA's), (Start: 28 @28697 has 1 MA's), (32, 28655), (51, 28514), (61, 28472),

Gene: RedRock\_42 Start: 29906, Stop: 29643, Start Num: 29

Candidate Starts for RedRock\_42:

(15, 29993), (Start: 29 @29906 has 4 MA's), (52, 29720), (61, 29681),

Gene: Retro23\_41 Start: 29129, Stop: 28863, Start Num: 20

Candidate Starts for Retro23\_41:

(9, 29354), (13, 29222), (Start: 20 @29129 has 26 MA's), (Start: 28 @29105 has 1 MA's), (Start: 30 @29099 has 2 MA's), (51, 28922), (61, 28880),

Gene: Rifter\_42 Start: 27079, Stop: 26780, Start Num: 24

Candidate Starts for Rifter\_42:

(Start: 18 @27085 has 15 MA's), (Start: 24 @27079 has 58 MA's), (Start: 28 @27055 has 1 MA's), (Start: 29 @27052 has 4 MA's), (Start: 30 @27049 has 2 MA's), (41, 26920), (49, 26887), (50, 26875), (62, 26818), (65, 26800),

Gene: Roksolana\_43 Start: 27339, Stop: 27040, Start Num: 24

Candidate Starts for Roksolana\_43:

(Start: 23 @27342 has 21 MA's), (Start: 24 @27339 has 58 MA's), (Start: 28 @27315 has 1 MA's), (Start: 29 @27312 has 4 MA's), (Start: 30 @27309 has 2 MA's), (41, 27180), (49, 27147), (50, 27135), (55, 27105), (65, 27060),

Gene: Salz\_39 Start: 28152, Stop: 27865, Start Num: 24

Candidate Starts for Salz\_39:

(14, 28242), (Start: 24 @28152 has 58 MA's), (27, 28137), (Start: 29 @28125 has 4 MA's), (Start: 30 @28122 has 2 MA's), (32, 28086), (40, 28002), (41, 27993),

Gene: SemperFi\_41 Start: 28989, Stop: 28723, Start Num: 20

Candidate Starts for SemperFi\_41:

(Start: 20 @28989 has 26 MA's), (Start: 28 @28965 has 1 MA's), (Start: 30 @28959 has 2 MA's), (51, 28782), (61, 28740),

Gene: Serenity\_40 Start: 27868, Stop: 27584, Start Num: 24

Candidate Starts for Serenity\_40:

(Start: 24 @27868 has 58 MA's), (Start: 28 @27844 has 1 MA's), (Start: 29 @27841 has 4 MA's), (Start: 30 @27838 has 2 MA's), (41, 27709), (57, 27634), (59, 27628), (67, 27589),

Gene: Sham4\_39 Start: 27797, Stop: 27510, Start Num: 24

Candidate Starts for Sham4\_39:

(14, 27887), (Start: 24 @27797 has 58 MA's), (27, 27782), (Start: 29 @27770 has 4 MA's), (Start: 30 @27767 has 2 MA's), (32, 27731), (40, 27647), (41, 27638),

Gene: Smeagan\_43 Start: 29425, Stop: 29162, Start Num: 25

Candidate Starts for Smeagan\_43:

(Start: 25 @29425 has 20 MA's), (Start: 29 @29401 has 4 MA's), (51, 29221), (61, 29179),

Gene: SmellyB\_42 Start: 27294, Stop: 26992, Start Num: 23

Candidate Starts for SmellyB\_42:

(Start: 23 @27294 has 21 MA's), (Start: 24 @27291 has 58 MA's), (Start: 28 @27267 has 1 MA's),  
(Start: 29 @27264 has 4 MA's), (Start: 30 @27261 has 2 MA's), (41, 27132), (49, 27099), (50, 27087),  
(65, 27012),

Gene: SnapTap\_40 Start: 28800, Stop: 28534, Start Num: 20

Candidate Starts for SnapTap\_40:

(9, 29025), (13, 28893), (Start: 20 @28800 has 26 MA's), (Start: 28 @28776 has 1 MA's), (Start: 30  
@28770 has 2 MA's), (51, 28593), (61, 28551),

Gene: Snape\_39 Start: 27795, Stop: 27508, Start Num: 24

Candidate Starts for Snape\_39:

(14, 27885), (Start: 24 @27795 has 58 MA's), (27, 27780), (Start: 29 @27768 has 4 MA's), (Start: 30  
@27765 has 2 MA's), (32, 27729), (40, 27645), (41, 27636),

Gene: StarStuff\_43 Start: 28792, Stop: 28508, Start Num: 18

Candidate Starts for StarStuff\_43:

(Start: 18 @28792 has 15 MA's), (Start: 29 @28771 has 4 MA's), (Start: 30 @28768 has 2 MA's), (35,  
28693), (41, 28642), (56, 28573), (57, 28567), (59, 28561), (65, 28534),

Gene: SuperAwesome\_42 Start: 27305, Stop: 27003, Start Num: 23

Candidate Starts for SuperAwesome\_42:

(Start: 23 @27305 has 21 MA's), (Start: 28 @27278 has 1 MA's), (Start: 29 @27275 has 4 MA's),  
(Start: 30 @27272 has 2 MA's), (41, 27143), (49, 27110), (50, 27098), (55, 27068), (65, 27023),

Gene: SuperCallie99\_42 Start: 27304, Stop: 27002, Start Num: 23

Candidate Starts for SuperCallie99\_42:

(4, 27634), (7, 27544), (Start: 23 @27304 has 21 MA's), (Start: 24 @27301 has 58 MA's), (Start: 28  
@27277 has 1 MA's), (Start: 29 @27274 has 4 MA's), (Start: 30 @27271 has 2 MA's), (41, 27142),  
(49, 27109), (50, 27097), (55, 27067), (65, 27022),

Gene: Superchunk\_40 Start: 27515, Stop: 27231, Start Num: 24

Candidate Starts for Superchunk\_40:

(Start: 23 @27518 has 21 MA's), (Start: 24 @27515 has 58 MA's), (Start: 28 @27491 has 1 MA's),  
(Start: 30 @27485 has 2 MA's), (37, 27383), (40, 27365), (62, 27266),

Gene: SweetiePie\_40 Start: 28800, Stop: 28534, Start Num: 20

Candidate Starts for SweetiePie\_40:

(9, 29025), (13, 28893), (Start: 20 @28800 has 26 MA's), (Start: 28 @28776 has 1 MA's), (32, 28734),  
(51, 28593), (61, 28551),

Gene: SwirlSquare\_43 Start: 27628, Stop: 27335, Start Num: 21

Candidate Starts for SwirlSquare\_43:

(21, 27628), (Start: 28 @27595 has 1 MA's), (Start: 30 @27589 has 2 MA's), (59, 27379), (61, 27373),  
(66, 27340),

Gene: TarsusIV\_39 Start: 28764, Stop: 28468, Start Num: 24

Candidate Starts for TarsusIV\_39:

(10, 28965), (15, 28824), (Start: 24 @28764 has 58 MA's), (Start: 28 @28740 has 1 MA's), (Start: 30  
@28734 has 2 MA's), (31, 28719), (32, 28698), (41, 28605), (42, 28602), (43, 28575), (59, 28518),  
(61, 28512), (65, 28491),

Gene: Timothy\_40 Start: 28155, Stop: 27868, Start Num: 24

Candidate Starts for Timothy\_40:

(14, 28245), (Start: 24 @28155 has 58 MA's), (27, 28140), (Start: 29 @28128 has 4 MA's), (32, 28089), (41, 27996),

Gene: TinyTimmy\_39 Start: 28198, Stop: 27911, Start Num: 24

Candidate Starts for TinyTimmy\_39:

(14, 28288), (Start: 24 @28198 has 58 MA's), (27, 28183), (Start: 29 @28171 has 4 MA's), (Start: 30 @28168 has 2 MA's), (32, 28132), (40, 28048), (41, 28039),

Gene: TopsytheTRex\_38 Start: 28163, Stop: 27870, Start Num: 25

Candidate Starts for TopsytheTRex\_38:

(Start: 25 @28163 has 20 MA's), (Start: 28 @28142 has 1 MA's), (41, 28007), (62, 27905), (64, 27890), (65, 27887), (66, 27875),

Gene: Tomathan\_43 Start: 28789, Stop: 28505, Start Num: 18

Candidate Starts for Tomathan\_43:

(Start: 18 @28789 has 15 MA's), (Start: 29 @28768 has 4 MA's), (Start: 30 @28765 has 2 MA's), (35, 28690), (41, 28639), (56, 28570), (57, 28564), (59, 28558), (61, 28552), (65, 28531),

Gene: ToneTone\_39 Start: 27021, Stop: 26719, Start Num: 23

Candidate Starts for ToneTone\_39:

(Start: 23 @27021 has 21 MA's), (Start: 28 @26994 has 1 MA's), (Start: 29 @26991 has 4 MA's), (Start: 30 @26988 has 2 MA's), (41, 26859), (49, 26826), (50, 26814), (55, 26784), (65, 26739),

Gene: Trixie\_41 Start: 29551, Stop: 29252, Start Num: 22

Candidate Starts for Trixie\_41:

(Start: 22 @29551 has 1 MA's), (Start: 28 @29521 has 1 MA's), (Start: 30 @29515 has 2 MA's), (54, 29323),

Gene: Trooper\_41 Start: 29038, Stop: 28709, Start Num: 24

Candidate Starts for Trooper\_41:

(10, 29239), (Start: 24 @29038 has 58 MA's), (Start: 28 @29014 has 1 MA's), (Start: 30 @29008 has 2 MA's), (31, 28993), (41, 28879),

Gene: Tucker\_43 Start: 27459, Stop: 27157, Start Num: 23

Candidate Starts for Tucker\_43:

(Start: 23 @27459 has 21 MA's), (Start: 28 @27432 has 1 MA's), (Start: 29 @27429 has 4 MA's), (Start: 30 @27426 has 2 MA's), (41, 27297), (49, 27264), (50, 27252), (62, 27195), (65, 27177),

Gene: Turbido\_41 Start: 29165, Stop: 28902, Start Num: 25

Candidate Starts for Turbido\_41:

(Start: 25 @29165 has 20 MA's), (Start: 29 @29141 has 4 MA's), (51, 28961), (61, 28919),

Gene: Updawg\_41 Start: 29147, Stop: 28887, Start Num: 25

Candidate Starts for Updawg\_41:

(Start: 25 @29147 has 20 MA's), (Start: 29 @29126 has 4 MA's), (51, 28946), (61, 28904),

Gene: VA6\_40 Start: 28900, Stop: 28616, Start Num: 18

Candidate Starts for VA6\_40:

(Start: 18 @28900 has 15 MA's), (Start: 29 @28879 has 4 MA's), (Start: 30 @28876 has 2 MA's), (35, 28801), (41, 28750), (56, 28681), (57, 28675), (59, 28669), (65, 28642),

Gene: VC3\_43 Start: 28888, Stop: 28604, Start Num: 18

Candidate Starts for VC3\_43:

(Start: 18 @28888 has 15 MA's), (Start: 29 @28867 has 4 MA's), (Start: 30 @28864 has 2 MA's), (35, 28789), (41, 28738), (56, 28669), (57, 28663), (59, 28657), (65, 28630),

Gene: VohminGhazi\_42 Start: 27292, Stop: 26993, Start Num: 24

Candidate Starts for VohminGhazi\_42:

(Start: 23 @27295 has 21 MA's), (Start: 24 @27292 has 58 MA's), (Start: 28 @27268 has 1 MA's), (Start: 29 @27265 has 4 MA's), (Start: 30 @27262 has 2 MA's), (41, 27133), (49, 27100), (50, 27088), (65, 27013),

Gene: WeiHuaDA\_45 Start: 30434, Stop: 30141, Start Num: 24

Candidate Starts for WeiHuaDA\_45:

(Start: 22 @30440 has 1 MA's), (Start: 24 @30434 has 58 MA's), (Start: 28 @30410 has 1 MA's), (Start: 29 @30407 has 4 MA's), (36, 30311), (40, 30284), (59, 30194),

Gene: Whabigail7\_41 Start: 29153, Stop: 28890, Start Num: 25

Candidate Starts for Whabigail7\_41:

(Start: 25 @29153 has 20 MA's), (Start: 29 @29129 has 4 MA's), (51, 28949), (61, 28907),

Gene: WideWale\_41 Start: 29147, Stop: 28887, Start Num: 25

Candidate Starts for WideWale\_41:

(Start: 25 @29147 has 20 MA's), (Start: 29 @29126 has 4 MA's), (51, 28946), (61, 28904),

Gene: Wiks\_41 Start: 27089, Stop: 26787, Start Num: 23

Candidate Starts for Wiks\_41:

(Start: 23 @27089 has 21 MA's), (Start: 28 @27062 has 1 MA's), (Start: 29 @27059 has 4 MA's), (Start: 30 @27056 has 2 MA's), (41, 26927), (49, 26894), (50, 26882), (62, 26825), (65, 26807),

Gene: WunderPhul\_42 Start: 27087, Stop: 26785, Start Num: 23

Candidate Starts for WunderPhul\_42:

(Start: 23 @27087 has 21 MA's), (Start: 28 @27060 has 1 MA's), (Start: 29 @27057 has 4 MA's), (Start: 30 @27054 has 2 MA's), (41, 26925), (49, 26892), (50, 26880), (55, 26850), (65, 26805),

Gene: XianYue\_40 Start: 28803, Stop: 28477, Start Num: 24

Candidate Starts for XianYue\_40:

(Start: 24 @28803 has 58 MA's), (Start: 28 @28779 has 1 MA's), (Start: 30 @28773 has 2 MA's), (45, 28608), (46, 28605), (65, 28494),

Gene: Yokurt\_42 Start: 27089, Stop: 26787, Start Num: 23

Candidate Starts for Yokurt\_42:

(Start: 23 @27089 has 21 MA's), (Start: 28 @27062 has 1 MA's), (Start: 29 @27059 has 4 MA's), (Start: 30 @27056 has 2 MA's), (41, 26927), (49, 26894), (50, 26882), (55, 26852), (65, 26807),

Gene: Zaka\_42 Start: 27089, Stop: 26787, Start Num: 23

Candidate Starts for Zaka\_42:

(Start: 23 @27089 has 21 MA's), (Start: 28 @27062 has 1 MA's), (Start: 29 @27059 has 4 MA's), (Start: 30 @27056 has 2 MA's), (41, 26927), (49, 26894), (50, 26882), (55, 26852), (65, 26807),

Gene: Zulu\_43 Start: 27440, Stop: 27138, Start Num: 23

Candidate Starts for Zulu\_43:

(Start: 23 @27440 has 21 MA's), (Start: 28 @27413 has 1 MA's), (Start: 29 @27410 has 4 MA's), (Start: 30 @27407 has 2 MA's), (41, 27278), (49, 27245), (50, 27233), (55, 27203), (65, 27158),