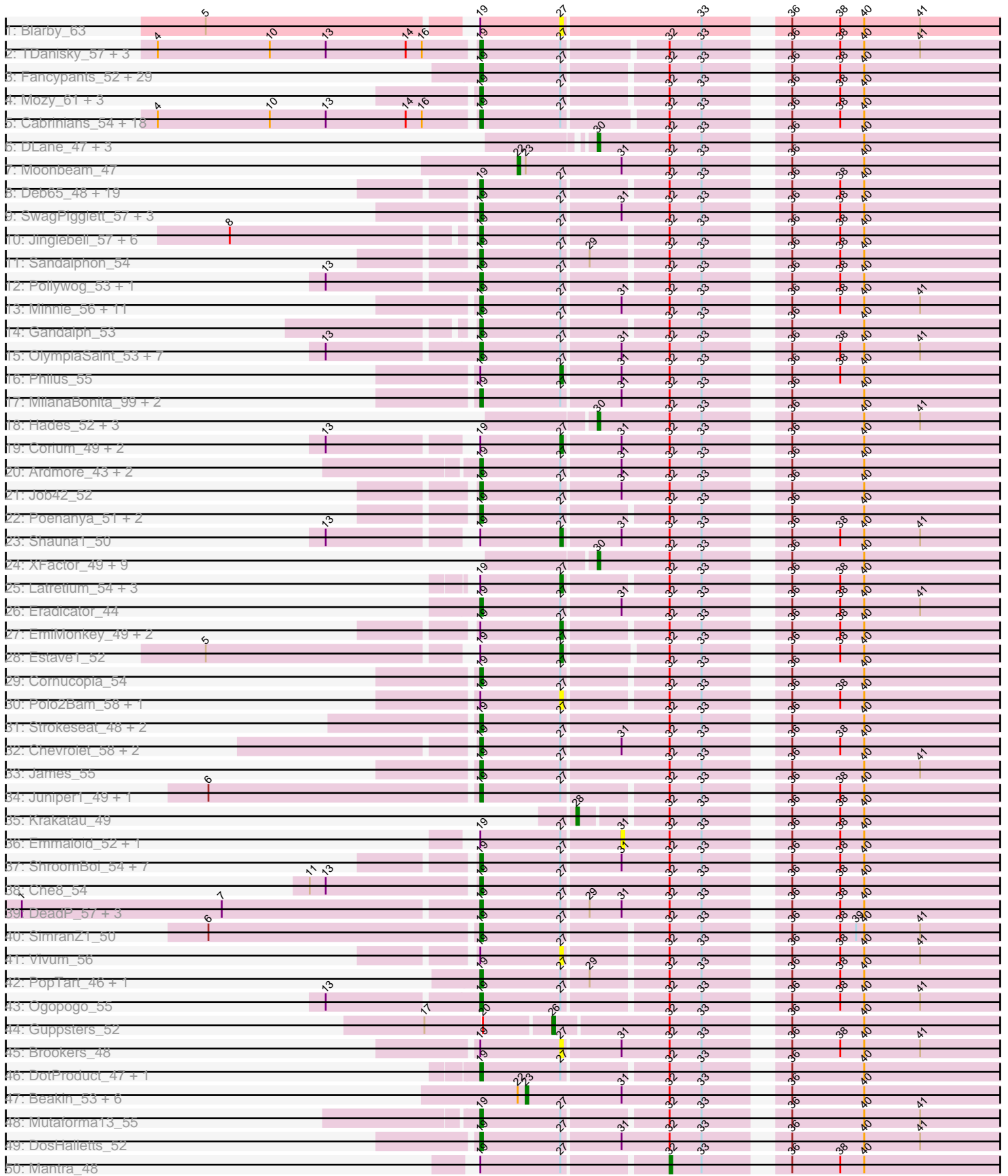
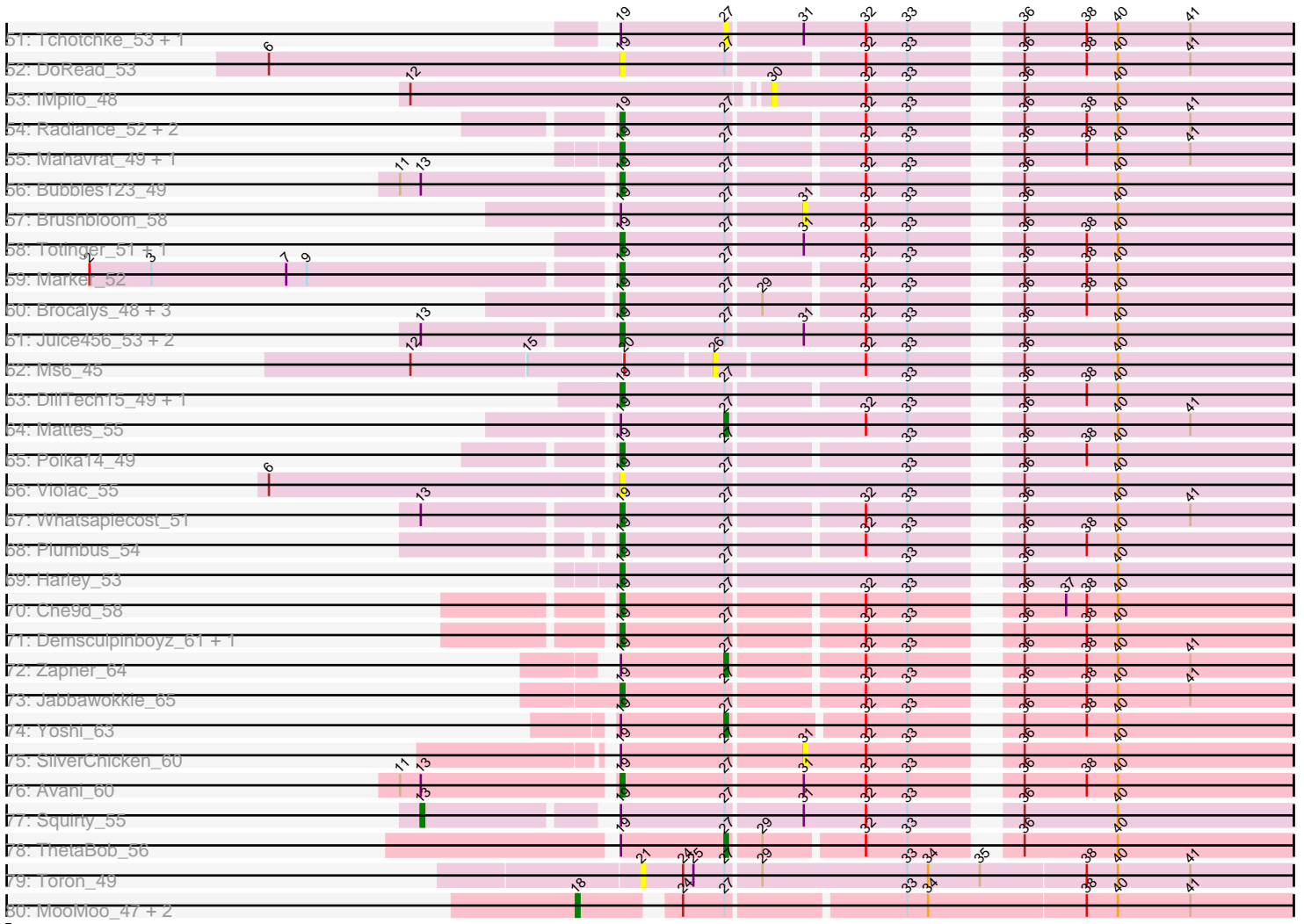


Pham 219374



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Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

## Pham 219374 Report

This analysis was run 03/28/25 on database version 593.

Pham number 219374 has 247 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Blarby\_63
- Track 2 : TDanisky\_57, MadMen\_47, Chuckly\_52, Sparkdehlily\_57
- Track 3 : Fancypants\_52, Dorothy\_48, Phatniss\_50, LilMoolah\_50, Drago\_50, Karhdo\_50, Firehouse51\_52, Lij\_48, SiSi\_50, Girr\_51, RedBird\_48, Kersh\_54, Leozinho\_52, Kimberlium\_54, Girafales\_61, QuickMath\_53, Sassafras\_49, Starcevich\_51, Veteran\_48, Maravista\_53, Sabbb\_57, MisterCuddles\_51, Whouxphf\_50, Nivrat\_48, UncleRicky\_51, Tootsieroll\_54, Seagreen\_52, MulchExplorer\_58, Hamulus\_52, Ruby\_49
- Track 4 : Mozy\_61, Zizzle\_57, LunaBlu\_55, Galactic\_52
- Track 5 : Cabrinians\_54, Burwell21\_51, Jarcob\_53, Koella\_47, BuzzLyseyear\_58, Lizziana\_59, Ibhubesi\_51, Martik\_53, Dante\_52, GUmbie\_50, Nitzel\_48, ShowerHandel\_56, NormanBulbieJr\_53, Priscilla\_53, ShiLan\_52, Madiba\_49, Crumble\_48, FreddyB\_54, Yorick\_52
- Track 6 : DLane\_47, Fruitloop\_49, Phalconet\_50, Ovechkin\_48
- Track 7 : Moonbeam\_47
- Track 8 : Deb65\_48, Quico\_61, Blexus\_50, Scottish\_51, Nimbo\_47, Leperchaun\_45, BlueCrab\_49, Stap\_51, OldBen\_50, Daenerys\_47, RitaG\_48, Geralt\_48, JoeyJr\_48, Empress\_51, IbOuu\_54, Ramsey\_53, Pacc40\_47, PHappiness\_48, Spoonbill\_50, KingMidas\_52
- Track 9 : SwagPiggett\_57, DRBy19\_55, Wachhund\_53, BobaPhett\_55
- Track 10 : Jinglebell\_57, Ochi17\_55, AlpineSix\_57, Llama\_57, Modragons\_56, Seabastian\_57, OfUltron\_57
- Track 11 : Sandalphon\_54
- Track 12 : Pollywog\_53, OwlsT2W\_52
- Track 13 : Minnie\_56, Alexphander\_56, IrishSherpFalk\_52, Kingsley\_48, Spartacus\_53, BigPhil\_47, WillSterrel\_52, Cerasum\_47, Cheese puff\_59, Sarma624\_49, Coco12\_50, Velveteen\_46
- Track 14 : Gandalph\_53
- Track 15 : OlympiaSaint\_53, Cornie\_46, Donkeykong\_56, Phanphagia\_49, SuperGrey\_55, JalFarm20\_63, Flathead\_51, Bipolar\_51
- Track 16 : Philus\_55
- Track 17 : MilanaBonita\_99, Akhila\_43, Rialto\_56
- Track 18 : Hades\_52, Gorge\_56, ByChance\_43, Saal\_54
- Track 19 : Corium\_49, KingJulian\_49, Soul22\_55
- Track 20 : Ardmore\_43, Mova\_52, Bobi\_54
- Track 21 : Job42\_52
- Track 22 : Poenanya\_51, Doomphist\_51, Eish\_53

- Track 23 : Shauna1\_50
- Track 24 : XFactor\_49, Melissauren88\_49, Batiatus\_49, StAnnes\_50, CaptainTrips\_48, MinionDave\_50, SG4\_48, VRedHorse\_51, Enby\_52, Lorde\_52
- Track 25 : Latretium\_54, Inventum\_46, DaddyRickover\_51, DirtMcgirt\_51
- Track 26 : Eradicator\_44
- Track 27 : EmiMonkey\_49, Florinda\_64, PhilipPhlop\_49
- Track 28 : Estave1\_52
- Track 29 : Cornucopia\_54
- Track 30 : Polo2Bam\_58, NewHope4\_57
- Track 31 : Strokeseat\_48, Hlubikazi\_48, Mandlovu\_48
- Track 32 : Chevrolet\_58, ArcusAngelus\_55, Royals2015\_54
- Track 33 : James\_55
- Track 34 : Juniper1\_49, Byougenkin\_49
- Track 35 : Krakatau\_49
- Track 36 : Emmaloid\_52, Slim\_52
- Track 37 : ShroomBoi\_54, DaWorst\_53, RockyHorror\_52, PMC\_46, Rockne\_50, Boomer\_54, Zerg\_51, Doug\_54
- Track 38 : Che8\_54
- Track 39 : DeadP\_57, Renaud18\_57, Taj\_55, Wee\_54
- Track 40 : SimranZ1\_50
- Track 41 : Vivum\_56
- Track 42 : PopTart\_46, SassyB\_46
- Track 43 : Ogopogo\_55
- Track 44 : Guppsters\_52
- Track 45 : Brookers\_48
- Track 46 : DotProduct\_47, GigiOuiOui\_48
- Track 47 : Beakin\_53, Emma\_51, Jant\_55, Hegedechwinu\_51, PhesterPhotato\_53, Filuzino\_49, MilleniumForce\_51
- Track 48 : Mutaforma13\_55
- Track 49 : DosHalletts\_52
- Track 50 : Mantra\_48
- Track 51 : Tchotchke\_53, Grimmer\_62
- Track 52 : DoRead\_53
- Track 53 : IMpilo\_48
- Track 54 : Radiance\_52, BodEinwohner17\_53, Spikelee\_58
- Track 55 : Mahavrat\_49, Aubs\_50
- Track 56 : Bubbles123\_49
- Track 57 : Brushbloom\_58
- Track 58 : Totinger\_51, LittleShirley\_51
- Track 59 : Marker\_52
- Track 60 : Brocalys\_48, Clifton\_48, Pippy\_51, LastJedi\_47
- Track 61 : Juice456\_53, KristaRAM\_54, EleanorGeorge\_50
- Track 62 : Ms6\_45
- Track 63 : DillTech15\_49, Fastidio\_52
- Track 64 : Mattes\_55
- Track 65 : Polka14\_49
- Track 66 : Violac\_55
- Track 67 : Whatsapiecost\_51
- Track 68 : Plumbus\_54
- Track 69 : Harley\_53
- Track 70 : Che9d\_58
- Track 71 : Demsculpinboyz\_61, Tweety\_51
- Track 72 : Zapner\_64

- Track 73 : Jabbawokkie\_65
- Track 74 : Yoshi\_63
- Track 75 : SilverChicken\_60
- Track 76 : Avani\_60
- Track 77 : Squirty\_55
- Track 78 : ThetaBob\_56
- Track 79 : Toron\_49
- Track 80 : MooMoo\_47, TChen\_51, LunaStella\_49

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

The start number called the most often in the published annotations is 19, it was called in 177 of the 221 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_43, Alexphander\_56, AlpineSix\_57, ArcusAngelus\_55, Ardmore\_43, Aubs\_50, Avani\_60, BigPhil\_47, Bipolar\_51, Blexus\_50, BlueCrab\_49, BobaPhett\_55, Bobi\_54, BodEinwohner17\_53, Boomer\_54, Brocalys\_48, Bubbles123\_49, Burwell21\_51, BuzzLyseyear\_58, Byougenkin\_49, Cabrinians\_54, Cerasum\_47, Che8\_54, Che9d\_58, CheesePuff\_59, Chevrolet\_58, Chuckly\_52, Clifton\_48, Coco12\_50, Cornie\_46, Cornucopia\_54, Crumble\_48, DRBy19\_55, DaWorst\_53, Daenerys\_47, Dante\_52, DeadP\_57, Deb65\_48, Demsculpinboyz\_61, DillTech15\_49, DoRead\_53, Donkeykong\_56, Doomphist\_51, Dorothy\_48, DosHalletts\_52, DotProduct\_47, Doug\_54, Drago\_50, Eish\_53, EleanorGeorge\_50, Empress\_51, Eradicator\_44, Fancypants\_52, Fastidio\_52, Firehouse51\_52, Flathead\_51, FreddyB\_54, GUmBie\_50, Galactic\_52, Gandolph\_53, Geralt\_48, GigiOuiOui\_48, Girafales\_61, Girr\_51, Hamulus\_52, Harley\_53, Hlubikazi\_48, IbOuu\_54, Ibhubesi\_51, IrishSherpFalk\_52, Jabbawokkie\_65, JalFarm20\_63, James\_55, Jarcob\_53, Jinglebell\_57, Job42\_52, JoeyJr\_48, Juice456\_53, Juniper1\_49, Karhdo\_50, Kersh\_54, Kimberlium\_54, KingMidas\_52, Kingsley\_48, Koella\_47, KristaRAM\_54, LastJedi\_47, Leozinho\_52, Leperchaun\_45, LilMoolah\_50, LittleShirley\_51, Lizziana\_59, Llama\_57, Llij\_48, LunaBlu\_55, MadMen\_47, Madiba\_49, Mahavrat\_49, Mandlovu\_48, Maravista\_53, Marker\_52, Martik\_53, MilanaBonita\_99, Minnie\_56, MisterCuddles\_51, Modragons\_56, Mova\_52, Mozy\_61, MulchExplorer\_58, Mutaforma13\_55, Nimbo\_47, Nitzel\_48, Nivrat\_48, NormanBulbieJr\_53, Ochi17\_55, OfUltron\_57, Ogotopogo\_55, OldBen\_50, OlympiaSaint\_53, OwlsT2W\_52, PHappiness\_48, PMC\_46, Pacc40\_47, Phanphagia\_49, Phatniss\_50, Pippy\_51, Plumbus\_54, Poenanya\_51, Polka14\_49, Pollywog\_53, PopTart\_46, Priscilla\_53, QuickMath\_53, Quico\_61, Radiance\_52, Ramsey\_53, RedBird\_48, Renaud18\_57, Rialto\_56, RitaG\_48, Rockne\_50, RockyHorror\_52, Royals2015\_54, Ruby\_49, Sabbb\_57, Sandalphon\_54, Sarma624\_49, Sassafras\_49, SassyB\_46, Scottish\_51, Seabastian\_57, Seagreen\_52, ShiLan\_52, ShowerHandel\_56, ShroomBoi\_54, SiSi\_50, SimranZ1\_50, Sparkdehlily\_57, Spartacus\_53, Spikelee\_58, Spoonbill\_50, Stap\_51, Starcevich\_51, Strokeseat\_48, SuperGrey\_55, SwagPigglett\_57, TDanisky\_57, Taj\_55, Tootsieroll\_54, Totinger\_51, Tweety\_51, UncleRicky\_51, Velveteen\_46, Veteran\_48, Violac\_55, Wachhund\_53, Wee\_54, Whatsapiecost\_51, Whouxphf\_50, WillSterrel\_52, Yorick\_52, Zerg\_51, Zizzle\_57,

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

- Blarby\_63, Brookers\_48, Brushbloom\_58, Corium\_49, DaddyRickover\_51, DirtMcgirt\_51, EmiMonkey\_49, Emmaloid\_52, Estave1\_52, Florinda\_64, Grimmer\_62, Inventum\_46, KingJulian\_49, Latretium\_54, Mantra\_48, Mattes\_55, NewHope4\_57, Philus\_55, PhilipPhlop\_49, Polo2Bam\_58, Shauna1\_50, SilverChicken\_60, Slim\_52, Soul22\_55, Squirty\_55, Tchotchke\_53, ThetaBob\_56, Vivum\_56, Yoshi\_63, Zapner\_64,

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

- Batiatus\_49, Beakin\_53, ByChance\_43, CaptainTrips\_48, DLane\_47, Emma\_51, Enby\_52, Filuzino\_49, Fruitloop\_49, Gorge\_56, Guppsters\_52, Hades\_52, Hegedechwinu\_51, IMpilo\_48, Jant\_55, Krakatau\_49, Lorde\_52, LunaStella\_49, Melissauren88\_49, MilleniumForce\_51, MinionDave\_50, MooMoo\_47, Moonbeam\_47, Ms6\_45, Ovechkin\_48, Phalconet\_50, PhesterPhotato\_53, SG4\_48, Saal\_54, StAnnes\_50, TChen\_51, Toron\_49, VRedHorse\_51, XFactor\_49,

### Summary by start number:

Start 13:

- Found in 46 of 247 ( 18.6% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 2.2% of time when present
- Phage (with cluster) where this start called: Squirty\_55 (F3),

Start 18:

- Found in 3 of 247 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 3 of 221
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LunaStella\_49 (F4), MooMoo\_47 (singleton), TChen\_51 (F4),

Start 19:

- Found in 213 of 247 ( 86.2% ) of genes in pham
- Manual Annotations of this start: 177 of 221
- Called 85.9% of time when present
- Phage (with cluster) where this start called: Akhila\_43 (F1), Alexphander\_56 (F1), AlpineSix\_57 (F1), ArcusAngelus\_55 (F1), Ardmore\_43 (F1), Aubs\_50 (F1), Avani\_60 (F2), BigPhil\_47 (F1), Bipolar\_51 (F1), Blexus\_50 (F1), BlueCrab\_49 (F1), BobaPhett\_55 (F1), Bobi\_54 (F1), BodEinwohner17\_53 (F1), Boomer\_54 (F1), Brocalys\_48 (F1), Bubbles123\_49 (F1), Burwell21\_51 (F1), BuzzLyseyear\_58 (F1), Byougenkin\_49 (F1), Cabrinians\_54 (F1), Cerasum\_47 (F1), Che8\_54 (F1), Che9d\_58 (F2), Cheesepuff\_59 (F1), Chevrolet\_58 (F1), Chuckly\_52 (F1), Clifton\_48 (F1), Coco12\_50 (F1), Cornie\_46 (F5), Cornucopia\_54 (F1), Crumble\_48 (F1), DRBy19\_55 (F1), DaWorst\_53 (F1), Daenerys\_47 (F1), Dante\_52 (F1), DeadP\_57 (F1), Deb65\_48 (F1), Demsculpinboyz\_61 (F2), DillTech15\_49 (F1), DoRead\_53 (F1), Donkeykong\_56 (F1), Doomphist\_51 (F1), Dorothy\_48 (F1), DosHalletts\_52 (F1), DotProduct\_47 (F1), Doug\_54 (F1), Drago\_50 (F1), Eish\_53 (F1), EleanorGeorge\_50 (F1), Empress\_51 (F1), Eradicator\_44 (F1), Fancypants\_52 (F1), Fastidio\_52 (F1), Firehouse51\_52 (F1), Flathead\_51 (F1), FreddyB\_54 (F1), GUMbie\_50 (F1), Galactic\_52 (F1), Gandolph\_53 (F1), Geralt\_48 (F1), GigiOuiOui\_48 (F1), Girafales\_61 (F1), Girr\_51 (F1), Hamulus\_52 (F1), Harley\_53 (F1), Hlubikazi\_48 (F1), IbOuu\_54 (F1), Ibhubesi\_51 (F1), IrishSherpFalk\_52 (F1), Jabbawokkie\_65 (F2), JalFarm20\_63 (F1), James\_55 (F1), Jarcob\_53 (F1), Jinglebell\_57 (F1), Job42\_52 (F1), JoeyJr\_48 (F1), Juice456\_53 (F1), Juniper1\_49

(F1), Karhdo\_50 (F1), Kersh\_54 (F1), Kimberlium\_54 (F1), KingMidas\_52 (F1), Kingsley\_48 (F1), Koella\_47 (F1), KristaRAM\_54 (F1), LastJedi\_47 (F1), Leozinho\_52 (F1), Leperchaun\_45 (F1), LilMoolah\_50 (F1), LittleShirley\_51 (F1), Lizziana\_59 (F1), Llama\_57 (F1), Llij\_48 (F1), LunaBlu\_55 (F1), MadMen\_47 (F1), Madiba\_49 (F1), Mahavrat\_49 (F1), Mandlovu\_48 (F1), Maravista\_53 (F1), Marker\_52 (F1), Martik\_53 (F1), MilanaBonita\_99 (F1), Minnie\_56 (F1), MisterCuddles\_51 (F1), Modragons\_56 (F1), Mova\_52 (F1), Mozy\_61 (F1), MulchExplorer\_58 (F1), Mutaforma13\_55 (F1), Nimbo\_47 (F1), Nitzel\_48 (F1), Nivrat\_48 (F1), NormanBulbieJr\_53 (F1), Ochi17\_55 (F1), OfUltron\_57 (F1), Ogopogo\_55 (F1), OldBen\_50 (F1), OlympiaSaint\_53 (F1), OwlsT2W\_52 (F1), PHappiness\_48 (F1), PMC\_46 (F1), Pacc40\_47 (F1), Phanphagia\_49 (F1), Phatniss\_50 (F1), Pippy\_51 (F1), Plumbus\_54 (F1), Poenanya\_51 (F1), Polka14\_49 (F1), Pollywog\_53 (F1), PopTart\_46 (F1), Priscilla\_53 (F1), QuickMath\_53 (F1), Quico\_61 (F1), Radiance\_52 (F1), Ramsey\_53 (F1), RedBird\_48 (F1), Renaud18\_57 (F4), Rialto\_56 (F1), RitaG\_48 (F1), Rockne\_50 (F1), RockyHorror\_52 (F1), Royals2015\_54 (F1), Ruby\_49 (F1), Sabbb\_57 (F1), Sandalphon\_54 (F1), Sarma624\_49 (F1), Sassafras\_49 (F1), SassyB\_46 (F1), Scottish\_51 (F1), Sebastian\_57 (F1), Seagreen\_52 (F1), ShiLan\_52 (F1), ShowerHandel\_56 (F1), ShroomBoi\_54 (F1), SiSi\_50 (F1), SimranZ1\_50 (F1), Sparkdehlily\_57 (F1), Spartacus\_53 (F1), Spikelee\_58 (F1), Spoonbill\_50 (F1), Stap\_51 (F1), Starceвич\_51 (F1), Strokeseat\_48 (F1), SuperGrey\_55 (F1), SwagPigglett\_57 (F1), TDanisky\_57 (F1), Taj\_55 (F1), Tootsieroll\_54 (F1), Totinger\_51 (F1), Tweety\_51 (F1), UncleRicky\_51 (F1), Velveteen\_46 (F1), Veteran\_48 (F1), Violac\_55 (F1), Wachhund\_53 (F1), Wee\_54 (F1), Whatsapiecost\_51 (F1), Whouxphf\_50 (F1), WillSterrel\_52 (F1), Yorick\_52 (F1), Zerg\_51 (F1), Zizzle\_57 (F1),

#### Start 21:

- Found in 1 of 247 ( 0.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Toron\_49 (F6),

#### Start 22:

- Found in 8 of 247 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Moonbeam\_47 (F1),

#### Start 23:

- Found in 8 of 247 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 6 of 221
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Beakin\_53 (F1), Emma\_51 (F1), Filuzino\_49 (F1), Hegedechwinu\_51 (F1), Jant\_55 (F1), MilleniumForce\_51 (F1), PhesterPhotato\_53 (F1),

#### Start 26:

- Found in 2 of 247 ( 0.8% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Guppsters\_52 (F1), Ms6\_45 (F1),

#### Start 27:

- Found in 217 of 247 ( 87.9% ) of genes in pham
- Manual Annotations of this start: 12 of 221
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Blarby\_63 (F), Brookers\_48 (F1), Corium\_49 (F1), DaddyRickover\_51 (F1), DirtMcgirt\_51 (F1), EmiMonkey\_49 (F1), Estave1\_52 (F1), Florinda\_64 (F1), Grimmer\_62 (F1), Inventum\_46 (F1), KingJulian\_49 (F1), Latretium\_54 (F1), Mattes\_55 (F1), NewHope4\_57 (F1), Philus\_55 (F1), PhilipPhlop\_49 (F1), Polo2Bam\_58 (F1), Shauna1\_50 (F1), Soul22\_55 (F2), Tchotchke\_53 (F1), ThetaBob\_56 (F4), Vivum\_56 (F1), Yoshi\_63 (F2), Zapner\_64 (F2),

#### Start 28:

- Found in 1 of 247 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Krakatau\_49 (F1),

#### Start 30:

- Found in 19 of 247 ( 7.7% ) of genes in pham
- Manual Annotations of this start: 18 of 221
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Batiatus\_49 (F1), ByChance\_43 (F1), CaptainTrips\_48 (F1), DLane\_47 (F1), Enby\_52 (F1), Fruitloop\_49 (F1), Gorge\_56 (F1), Hades\_52 (F1), IMpilo\_48 (F1), Lorde\_52 (F1), Melissauren88\_49 (F1), MinionDave\_50 (F1), Ovechkin\_48 (F1), Phalconet\_50 (F1), SG4\_48 (F1), Saal\_54 (F1), StAnnes\_50 (F1), VRedHorse\_51 (F1), XFactor\_49 (F1),

#### Start 31:

- Found in 75 of 247 ( 30.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.3% of time when present
- Phage (with cluster) where this start called: Brushbloom\_58 (F1), Emmaloid\_52 (F1), SilverChicken\_60 (F2), Slim\_52 (F1),

#### Start 32:

- Found in 237 of 247 ( 96.0% ) of genes in pham
- Manual Annotations of this start: 1 of 221
- Called 0.4% of time when present
- Phage (with cluster) where this start called: Mantra\_48 (F1),

### Summary by clusters:

There are 8 clusters represented in this pham: F1, F2, F3, F4, F5, F6, F, singleton,

#### Info for manual annotations of cluster F1:

- Start number 19 was manually annotated 171 times for cluster F1.
- Start number 22 was manually annotated 1 time for cluster F1.
- Start number 23 was manually annotated 6 times for cluster F1.
- Start number 26 was manually annotated 1 time for cluster F1.
- Start number 27 was manually annotated 8 times for cluster F1.
- Start number 28 was manually annotated 1 time for cluster F1.
- Start number 30 was manually annotated 18 times for cluster F1.



- Start number 32 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 19 was manually annotated 4 times for cluster F2.
- Start number 27 was manually annotated 3 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 13 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 18 was manually annotated 2 times for cluster F4.
- Start number 19 was manually annotated 1 time for cluster F4.
- Start number 27 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 19 was manually annotated 1 time for cluster F5.

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

Gene: Akhila\_43 Start: 32688, Stop: 32879, Start Num: 19

Candidate Starts for Akhila\_43:

(Start: 19 @32688 has 177 MA's), (Start: 27 @32718 has 12 MA's), (31, 32739), (Start: 32 @32757 has 1 MA's), (33, 32769), (36, 32793), (40, 32820),

Gene: Alexphander\_56 Start: 37735, Stop: 37926, Start Num: 19

Candidate Starts for Alexphander\_56:

(Start: 19 @37735 has 177 MA's), (Start: 27 @37765 has 12 MA's), (31, 37786), (Start: 32 @37804 has 1 MA's), (33, 37816), (36, 37840), (38, 37858), (40, 37867), (41, 37888),

Gene: AlpineSix\_57 Start: 39232, Stop: 39420, Start Num: 19

Candidate Starts for AlpineSix\_57:

(8, 39148), (Start: 19 @39232 has 177 MA's), (Start: 27 @39262 has 12 MA's), (Start: 32 @39298 has 1 MA's), (33, 39310), (36, 39334), (38, 39352), (40, 39361),

Gene: ArcusAngelus\_55 Start: 38253, Stop: 38444, Start Num: 19

Candidate Starts for ArcusAngelus\_55:

(Start: 19 @38253 has 177 MA's), (Start: 27 @38283 has 12 MA's), (31, 38304), (Start: 32 @38322 has 1 MA's), (33, 38334), (36, 38358), (38, 38376), (40, 38385),

Gene: Ardmore\_43 Start: 35029, Stop: 35220, Start Num: 19

Candidate Starts for Ardmore\_43:

(Start: 19 @35029 has 177 MA's), (Start: 27 @35059 has 12 MA's), (31, 35080), (Start: 32 @35098 has 1 MA's), (33, 35110), (36, 35134), (40, 35161),

Gene: Aubs\_50 Start: 36540, Stop: 36731, Start Num: 19

Candidate Starts for Aubs\_50:

(Start: 19 @36540 has 177 MA's), (Start: 27 @36570 has 12 MA's), (Start: 32 @36609 has 1 MA's), (33, 36621), (36, 36645), (38, 36663), (40, 36672), (41, 36693),

Gene: Avani\_60 Start: 37393, Stop: 37584, Start Num: 19

Candidate Starts for Avani\_60:

(11, 37333), (Start: 13 @37339 has 1 MA's), (Start: 19 @37393 has 177 MA's), (Start: 27 @37423 has 12 MA's), (31, 37444), (Start: 32 @37462 has 1 MA's), (33, 37474), (36, 37498), (38, 37516), (40, 37525),

Gene: Batiatus\_49 Start: 36900, Stop: 37049, Start Num: 30

Candidate Starts for Batiatus\_49:

(Start: 30 @36900 has 18 MA's), (Start: 32 @36927 has 1 MA's), (33, 36939), (36, 36963), (40, 36990),

Gene: Beakin\_53 Start: 36720, Stop: 36896, Start Num: 23

Candidate Starts for Beakin\_53:

(Start: 22 @36717 has 1 MA's), (Start: 23 @36720 has 6 MA's), (31, 36756), (Start: 32 @36774 has 1 MA's), (33, 36786), (36, 36810), (40, 36837),

Gene: BigPhil\_47 Start: 33177, Stop: 33368, Start Num: 19

Candidate Starts for BigPhil\_47:

(Start: 19 @33177 has 177 MA's), (Start: 27 @33207 has 12 MA's), (31, 33228), (Start: 32 @33246 has 1 MA's), (33, 33258), (36, 33282), (38, 33300), (40, 33309), (41, 33330),

Gene: Bipolar\_51 Start: 37677, Stop: 37868, Start Num: 19

Candidate Starts for Bipolar\_51:

(Start: 13 @37629 has 1 MA's), (Start: 19 @37677 has 177 MA's), (Start: 27 @37707 has 12 MA's), (31, 37728), (Start: 32 @37746 has 1 MA's), (33, 37758), (36, 37782), (38, 37800), (40, 37809), (41, 37830),

Gene: Blarby\_63 Start: 38118, Stop: 38279, Start Num: 27

Candidate Starts for Blarby\_63:

(5, 37995), (Start: 19 @38088 has 177 MA's), (Start: 27 @38118 has 12 MA's), (33, 38169), (36, 38193), (38, 38211), (40, 38220), (41, 38241),

Gene: Blexus\_50 Start: 37054, Stop: 37242, Start Num: 19

Candidate Starts for Blexus\_50:

(Start: 19 @37054 has 177 MA's), (Start: 27 @37084 has 12 MA's), (Start: 32 @37120 has 1 MA's), (33, 37132), (36, 37156), (38, 37174), (40, 37183),

Gene: BlueCrab\_49 Start: 36780, Stop: 36968, Start Num: 19

Candidate Starts for BlueCrab\_49:

(Start: 19 @36780 has 177 MA's), (Start: 27 @36810 has 12 MA's), (Start: 32 @36846 has 1 MA's), (33, 36858), (36, 36882), (38, 36900), (40, 36909),

Gene: BobaPhett\_55 Start: 39668, Stop: 39859, Start Num: 19

Candidate Starts for BobaPhett\_55:

(Start: 19 @39668 has 177 MA's), (Start: 27 @39698 has 12 MA's), (31, 39719), (Start: 32 @39737 has 1 MA's), (33, 39749), (36, 39773), (38, 39791), (40, 39800),

Gene: Bobi\_54 Start: 38032, Stop: 38223, Start Num: 19

Candidate Starts for Bobi\_54:

(Start: 19 @38032 has 177 MA's), (Start: 27 @38062 has 12 MA's), (31, 38083), (Start: 32 @38101 has 1 MA's), (33, 38113), (36, 38137), (40, 38164),

Gene: BodEinwohner17\_53 Start: 36996, Stop: 37184, Start Num: 19

Candidate Starts for BodEinwohner17\_53:

(Start: 19 @36996 has 177 MA's), (Start: 27 @37026 has 12 MA's), (Start: 32 @37062 has 1 MA's), (33, 37074), (36, 37098), (38, 37116), (40, 37125), (41, 37146),

Gene: Boomer\_54 Start: 38229, Stop: 38420, Start Num: 19

Candidate Starts for Boomer\_54:

(Start: 19 @38229 has 177 MA's), (Start: 27 @38259 has 12 MA's), (31, 38280), (Start: 32 @38298 has 1 MA's), (33, 38310), (36, 38334), (38, 38352), (40, 38361),

Gene: Brocalys\_48 Start: 34329, Stop: 34517, Start Num: 19

Candidate Starts for Brocalys\_48:

(Start: 19 @34329 has 177 MA's), (Start: 27 @34359 has 12 MA's), (29, 34368), (Start: 32 @34395 has 1 MA's), (33, 34407), (36, 34431), (38, 34449), (40, 34458),

Gene: Brookers\_48 Start: 36158, Stop: 36319, Start Num: 27

Candidate Starts for Brookers\_48:

(Start: 19 @36128 has 177 MA's), (Start: 27 @36158 has 12 MA's), (31, 36179), (Start: 32 @36197 has 1 MA's), (33, 36209), (36, 36233), (38, 36251), (40, 36260), (41, 36281),

Gene: Brushbloom\_58 Start: 37387, Stop: 37527, Start Num: 31

Candidate Starts for Brushbloom\_58:

(Start: 19 @37336 has 177 MA's), (Start: 27 @37366 has 12 MA's), (31, 37387), (Start: 32 @37405 has 1 MA's), (33, 37417), (36, 37441), (40, 37468),

Gene: Bubbles123\_49 Start: 37521, Stop: 37709, Start Num: 19

Candidate Starts for Bubbles123\_49:

(11, 37461), (Start: 13 @37467 has 1 MA's), (Start: 19 @37521 has 177 MA's), (Start: 27 @37551 has 12 MA's), (Start: 32 @37587 has 1 MA's), (33, 37599), (36, 37623), (40, 37650),

Gene: Burwell21\_51 Start: 37427, Stop: 37615, Start Num: 19

Candidate Starts for Burwell21\_51:

(4, 37310), (10, 37352), (Start: 13 @37373 has 1 MA's), (14, 37403), (16, 37409), (Start: 19 @37427 has 177 MA's), (Start: 27 @37457 has 12 MA's), (Start: 32 @37493 has 1 MA's), (33, 37505), (36, 37529), (38, 37547), (40, 37556),

Gene: BuzzLyseyear\_58 Start: 38698, Stop: 38886, Start Num: 19

Candidate Starts for BuzzLyseyear\_58:

(4, 38581), (10, 38623), (Start: 13 @38644 has 1 MA's), (14, 38674), (16, 38680), (Start: 19 @38698 has 177 MA's), (Start: 27 @38728 has 12 MA's), (Start: 32 @38764 has 1 MA's), (33, 38776), (36, 38800), (38, 38818), (40, 38827),

Gene: ByChance\_43 Start: 32694, Stop: 32843, Start Num: 30

Candidate Starts for ByChance\_43:

(Start: 30 @32694 has 18 MA's), (Start: 32 @32721 has 1 MA's), (33, 32733), (36, 32757), (40, 32784), (41, 32805),

Gene: Byougenkin\_49 Start: 36715, Stop: 36903, Start Num: 19

Candidate Starts for Byougenkin\_49:

(6, 36616), (Start: 19 @36715 has 177 MA's), (Start: 27 @36745 has 12 MA's), (Start: 32 @36781 has 1 MA's), (33, 36793), (36, 36817), (38, 36835), (40, 36844),

Gene: Cabrinians\_54 Start: 37505, Stop: 37693, Start Num: 19

Candidate Starts for Cabrinians\_54:

(4, 37388), (10, 37430), (Start: 13 @37451 has 1 MA's), (14, 37481), (16, 37487), (Start: 19 @37505 has 177 MA's), (Start: 27 @37535 has 12 MA's), (Start: 32 @37571 has 1 MA's), (33, 37583), (36, 37607), (38, 37625), (40, 37634),

Gene: CaptainTrips\_48 Start: 35920, Stop: 36069, Start Num: 30

Candidate Starts for CaptainTrips\_48:

(Start: 30 @35920 has 18 MA's), (Start: 32 @35947 has 1 MA's), (33, 35959), (36, 35983), (40, 36010),

Gene: Cerasum\_47 Start: 33195, Stop: 33386, Start Num: 19

Candidate Starts for Cerasum\_47:

(Start: 19 @33195 has 177 MA's), (Start: 27 @33225 has 12 MA's), (31, 33246), (Start: 32 @33264 has 1 MA's), (33, 33276), (36, 33300), (38, 33318), (40, 33327), (41, 33348),

Gene: Che8\_54 Start: 38120, Stop: 38311, Start Num: 19

Candidate Starts for Che8\_54:

(11, 38060), (Start: 13 @38066 has 1 MA's), (Start: 19 @38120 has 177 MA's), (Start: 27 @38150 has 12 MA's), (Start: 32 @38189 has 1 MA's), (33, 38201), (36, 38225), (38, 38243), (40, 38252),

Gene: Che9d\_58 Start: 36580, Stop: 36768, Start Num: 19

Candidate Starts for Che9d\_58:

(Start: 19 @36580 has 177 MA's), (Start: 27 @36610 has 12 MA's), (Start: 32 @36646 has 1 MA's), (33, 36658), (36, 36682), (37, 36694), (38, 36700), (40, 36709),

Gene: Cheese puff\_59 Start: 38853, Stop: 39044, Start Num: 19

Candidate Starts for Cheese puff\_59:

(Start: 19 @38853 has 177 MA's), (Start: 27 @38883 has 12 MA's), (31, 38904), (Start: 32 @38922 has 1 MA's), (33, 38934), (36, 38958), (38, 38976), (40, 38985), (41, 39006),

Gene: Chevrolet\_58 Start: 38254, Stop: 38445, Start Num: 19

Candidate Starts for Chevrolet\_58:

(Start: 19 @38254 has 177 MA's), (Start: 27 @38284 has 12 MA's), (31, 38305), (Start: 32 @38323 has 1 MA's), (33, 38335), (36, 38359), (38, 38377), (40, 38386),

Gene: Chuckly\_52 Start: 37120, Stop: 37308, Start Num: 19

Candidate Starts for Chuckly\_52:

(4, 37003), (10, 37045), (Start: 13 @37066 has 1 MA's), (14, 37096), (16, 37102), (Start: 19 @37120 has 177 MA's), (Start: 27 @37150 has 12 MA's), (Start: 32 @37186 has 1 MA's), (33, 37198), (36, 37222), (38, 37240), (40, 37249), (41, 37270),

Gene: Clifton\_48 Start: 34680, Stop: 34868, Start Num: 19

Candidate Starts for Clifton\_48:

(Start: 19 @34680 has 177 MA's), (Start: 27 @34710 has 12 MA's), (29, 34719), (Start: 32 @34746 has 1 MA's), (33, 34758), (36, 34782), (38, 34800), (40, 34809),

Gene: Coco12\_50 Start: 37252, Stop: 37443, Start Num: 19

Candidate Starts for Coco12\_50:

(Start: 19 @37252 has 177 MA's), (Start: 27 @37282 has 12 MA's), (31, 37303), (Start: 32 @37321 has 1 MA's), (33, 37333), (36, 37357), (38, 37375), (40, 37384), (41, 37405),

Gene: Corium\_49 Start: 36238, Stop: 36399, Start Num: 27

Candidate Starts for Corium\_49:

(Start: 13 @36160 has 1 MA's), (Start: 19 @36208 has 177 MA's), (Start: 27 @36238 has 12 MA's), (31, 36259), (Start: 32 @36277 has 1 MA's), (33, 36289), (36, 36313), (40, 36340),

Gene: Cornie\_46 Start: 35312, Stop: 35503, Start Num: 19

Candidate Starts for Cornie\_46:

(Start: 13 @35264 has 1 MA's), (Start: 19 @35312 has 177 MA's), (Start: 27 @35342 has 12 MA's), (31, 35363), (Start: 32 @35381 has 1 MA's), (33, 35393), (36, 35417), (38, 35435), (40, 35444), (41, 35465),

Gene: Cornucopia\_54 Start: 37959, Stop: 38147, Start Num: 19

Candidate Starts for Cornucopia\_54:

(Start: 19 @37959 has 177 MA's), (Start: 27 @37989 has 12 MA's), (Start: 32 @38025 has 1 MA's), (33, 38037), (36, 38061), (40, 38088),

Gene: Crumble\_48 Start: 33441, Stop: 33629, Start Num: 19

Candidate Starts for Crumble\_48:

(4, 33324), (10, 33366), (Start: 13 @33387 has 1 MA's), (14, 33417), (16, 33423), (Start: 19 @33441 has 177 MA's), (Start: 27 @33471 has 12 MA's), (Start: 32 @33507 has 1 MA's), (33, 33519), (36, 33543), (38, 33561), (40, 33570),

Gene: DLane\_47 Start: 36002, Stop: 36151, Start Num: 30

Candidate Starts for DLane\_47:

(Start: 30 @36002 has 18 MA's), (Start: 32 @36029 has 1 MA's), (33, 36041), (36, 36065), (40, 36092),

Gene: DRBy19\_55 Start: 38456, Stop: 38647, Start Num: 19

Candidate Starts for DRBy19\_55:

(Start: 19 @38456 has 177 MA's), (Start: 27 @38486 has 12 MA's), (31, 38507), (Start: 32 @38525 has 1 MA's), (33, 38537), (36, 38561), (38, 38579), (40, 38588),

Gene: DaWorst\_53 Start: 37855, Stop: 38046, Start Num: 19

Candidate Starts for DaWorst\_53:

(Start: 19 @37855 has 177 MA's), (Start: 27 @37885 has 12 MA's), (31, 37906), (Start: 32 @37924 has 1 MA's), (33, 37936), (36, 37960), (38, 37978), (40, 37987),

Gene: DaddyRickover\_51 Start: 37515, Stop: 37673, Start Num: 27

Candidate Starts for DaddyRickover\_51:

(Start: 19 @37485 has 177 MA's), (Start: 27 @37515 has 12 MA's), (Start: 32 @37551 has 1 MA's), (33, 37563), (36, 37587), (38, 37605), (40, 37614),

Gene: Daenerys\_47 Start: 35723, Stop: 35911, Start Num: 19

Candidate Starts for Daenerys\_47:

(Start: 19 @35723 has 177 MA's), (Start: 27 @35753 has 12 MA's), (Start: 32 @35789 has 1 MA's), (33, 35801), (36, 35825), (38, 35843), (40, 35852),

Gene: Dante\_52 Start: 36848, Stop: 37039, Start Num: 19

Candidate Starts for Dante\_52:

(4, 36731), (10, 36773), (Start: 13 @36794 has 1 MA's), (14, 36824), (16, 36830), (Start: 19 @36848 has 177 MA's), (Start: 27 @36878 has 12 MA's), (Start: 32 @36917 has 1 MA's), (33, 36929), (36, 36953), (38, 36971), (40, 36980),

Gene: DeadP\_57 Start: 38744, Stop: 38935, Start Num: 19

Candidate Starts for DeadP\_57:

(1, 38582), (7, 38657), (Start: 19 @38744 has 177 MA's), (Start: 27 @38774 has 12 MA's), (29, 38783), (31, 38795), (Start: 32 @38813 has 1 MA's), (33, 38825), (36, 38849), (38, 38867), (40, 38876),

Gene: Deb65\_48 Start: 35692, Stop: 35880, Start Num: 19

Candidate Starts for Deb65\_48:

(Start: 19 @35692 has 177 MA's), (Start: 27 @35722 has 12 MA's), (Start: 32 @35758 has 1 MA's), (33, 35770), (36, 35794), (38, 35812), (40, 35821),

Gene: Demsculpinboyz\_61 Start: 36689, Stop: 36877, Start Num: 19

Candidate Starts for Demsculpinboyz\_61:

(Start: 19 @36689 has 177 MA's), (Start: 27 @36719 has 12 MA's), (Start: 32 @36755 has 1 MA's), (33, 36767), (36, 36791), (38, 36809), (40, 36818),

Gene: DillTech15\_49 Start: 35843, Stop: 36031, Start Num: 19

Candidate Starts for DillTech15\_49:

(Start: 19 @35843 has 177 MA's), (Start: 27 @35873 has 12 MA's), (33, 35921), (36, 35945), (38, 35963), (40, 35972),

Gene: DirtMcgirt\_51 Start: 36060, Stop: 36221, Start Num: 27

Candidate Starts for DirtMcgirt\_51:

(Start: 19 @36030 has 177 MA's), (Start: 27 @36060 has 12 MA's), (Start: 32 @36099 has 1 MA's), (33, 36111), (36, 36135), (38, 36153), (40, 36162),

Gene: DoRead\_53 Start: 35734, Stop: 35922, Start Num: 19

Candidate Starts for DoRead\_53:

(6, 35632), (Start: 19 @35734 has 177 MA's), (Start: 27 @35764 has 12 MA's), (Start: 32 @35800 has 1 MA's), (33, 35812), (36, 35836), (38, 35854), (40, 35863), (41, 35884),

Gene: Donkeykong\_56 Start: 39923, Stop: 40114, Start Num: 19

Candidate Starts for Donkeykong\_56:

(Start: 13 @39875 has 1 MA's), (Start: 19 @39923 has 177 MA's), (Start: 27 @39953 has 12 MA's), (31, 39974), (Start: 32 @39992 has 1 MA's), (33, 40004), (36, 40028), (38, 40046), (40, 40055), (41, 40076),

Gene: Doomphist\_51 Start: 37994, Stop: 38182, Start Num: 19

Candidate Starts for Doomphist\_51:

(Start: 19 @37994 has 177 MA's), (Start: 27 @38024 has 12 MA's), (Start: 32 @38060 has 1 MA's), (33, 38072), (36, 38096), (40, 38123),

Gene: Dorothy\_48 Start: 36366, Stop: 36557, Start Num: 19

Candidate Starts for Dorothy\_48:

(Start: 19 @36366 has 177 MA's), (Start: 27 @36396 has 12 MA's), (Start: 32 @36435 has 1 MA's), (33, 36447), (36, 36471), (38, 36489), (40, 36498),

Gene: DosHalletts\_52 Start: 38153, Stop: 38344, Start Num: 19

Candidate Starts for DosHalletts\_52:

(Start: 19 @38153 has 177 MA's), (Start: 27 @38183 has 12 MA's), (31, 38204), (Start: 32 @38222 has 1 MA's), (33, 38234), (36, 38258), (40, 38285), (41, 38306),

Gene: DotProduct\_47 Start: 36024, Stop: 36212, Start Num: 19

Candidate Starts for DotProduct\_47:

(Start: 19 @36024 has 177 MA's), (Start: 27 @36054 has 12 MA's), (Start: 32 @36090 has 1 MA's), (33, 36102), (36, 36126), (40, 36153),

Gene: Doug\_54 Start: 38112, Stop: 38303, Start Num: 19

Candidate Starts for Doug\_54:

(Start: 19 @38112 has 177 MA's), (Start: 27 @38142 has 12 MA's), (31, 38163), (Start: 32 @38181 has 1 MA's), (33, 38193), (36, 38217), (38, 38235), (40, 38244),

Gene: Drago\_50 Start: 36033, Stop: 36224, Start Num: 19

Candidate Starts for Drago\_50:

(Start: 19 @36033 has 177 MA's), (Start: 27 @36063 has 12 MA's), (Start: 32 @36102 has 1 MA's), (33, 36114), (36, 36138), (38, 36156), (40, 36165),

Gene: Eish\_53 Start: 37562, Stop: 37753, Start Num: 19

Candidate Starts for Eish\_53:

(Start: 19 @37562 has 177 MA's), (Start: 27 @37592 has 12 MA's), (Start: 32 @37631 has 1 MA's), (33, 37643), (36, 37667), (40, 37694),

Gene: EleanorGeorge\_50 Start: 36491, Stop: 36682, Start Num: 19

Candidate Starts for EleanorGeorge\_50:

(Start: 13 @36443 has 1 MA's), (Start: 19 @36491 has 177 MA's), (Start: 27 @36521 has 12 MA's), (31, 36542), (Start: 32 @36560 has 1 MA's), (33, 36572), (36, 36596), (40, 36623),

Gene: EmiMonkey\_49 Start: 38301, Stop: 38459, Start Num: 27

Candidate Starts for EmiMonkey\_49:

(Start: 19 @38271 has 177 MA's), (Start: 27 @38301 has 12 MA's), (Start: 32 @38337 has 1 MA's), (33, 38349), (36, 38373), (38, 38391), (40, 38400),

Gene: Emma\_51 Start: 36232, Stop: 36408, Start Num: 23

Candidate Starts for Emma\_51:

(Start: 22 @36229 has 1 MA's), (Start: 23 @36232 has 6 MA's), (31, 36268), (Start: 32 @36286 has 1 MA's), (33, 36298), (36, 36322), (40, 36349),

Gene: Emmaloid\_52 Start: 37808, Stop: 37948, Start Num: 31

Candidate Starts for Emmaloid\_52:

(Start: 19 @37757 has 177 MA's), (Start: 27 @37787 has 12 MA's), (31, 37808), (Start: 32 @37826 has 1 MA's), (33, 37838), (36, 37862), (38, 37880), (40, 37889),

Gene: Empress\_51 Start: 37137, Stop: 37325, Start Num: 19

Candidate Starts for Empress\_51:

(Start: 19 @37137 has 177 MA's), (Start: 27 @37167 has 12 MA's), (Start: 32 @37203 has 1 MA's), (33, 37215), (36, 37239), (38, 37257), (40, 37266),

Gene: Enby\_52 Start: 35406, Stop: 35555, Start Num: 30

Candidate Starts for Enby\_52:

(Start: 30 @35406 has 18 MA's), (Start: 32 @35433 has 1 MA's), (33, 35445), (36, 35469), (40, 35496),

Gene: Eradicator\_44 Start: 35249, Stop: 35440, Start Num: 19

Candidate Starts for Eradicator\_44:

(Start: 19 @35249 has 177 MA's), (Start: 27 @35279 has 12 MA's), (31, 35300), (Start: 32 @35318 has 1 MA's), (33, 35330), (36, 35354), (38, 35372), (40, 35381), (41, 35402),

Gene: Estave1\_52 Start: 36959, Stop: 37117, Start Num: 27

Candidate Starts for Estave1\_52:

(5, 36836), (Start: 19 @36929 has 177 MA's), (Start: 27 @36959 has 12 MA's), (Start: 32 @36995 has 1 MA's), (33, 37007), (36, 37031), (38, 37049), (40, 37058),

Gene: Fancypants\_52 Start: 37522, Stop: 37710, Start Num: 19

Candidate Starts for Fancypants\_52:

(Start: 19 @37522 has 177 MA's), (Start: 27 @37552 has 12 MA's), (Start: 32 @37588 has 1 MA's), (33, 37600), (36, 37624), (38, 37642), (40, 37651),

Gene: Fastidio\_52 Start: 35990, Stop: 36178, Start Num: 19

Candidate Starts for Fastidio\_52:

(Start: 19 @35990 has 177 MA's), (Start: 27 @36020 has 12 MA's), (33, 36068), (36, 36092), (38, 36110), (40, 36119),

Gene: Filuzino\_49 Start: 35812, Stop: 35988, Start Num: 23

Candidate Starts for Filuzino\_49:

(Start: 22 @35809 has 1 MA's), (Start: 23 @35812 has 6 MA's), (31, 35848), (Start: 32 @35866 has 1 MA's), (33, 35878), (36, 35902), (40, 35929),

Gene: Firehouse51\_52 Start: 39773, Stop: 39961, Start Num: 19

Candidate Starts for Firehouse51\_52:

(Start: 19 @39773 has 177 MA's), (Start: 27 @39803 has 12 MA's), (Start: 32 @39839 has 1 MA's), (33, 39851), (36, 39875), (38, 39893), (40, 39902),

Gene: Flathead\_51 Start: 37388, Stop: 37579, Start Num: 19

Candidate Starts for Flathead\_51:

(Start: 13 @37340 has 1 MA's), (Start: 19 @37388 has 177 MA's), (Start: 27 @37418 has 12 MA's), (31, 37439), (Start: 32 @37457 has 1 MA's), (33, 37469), (36, 37493), (38, 37511), (40, 37520), (41, 37541),

Gene: Florinda\_64 Start: 39732, Stop: 39890, Start Num: 27

Candidate Starts for Florinda\_64:

(Start: 19 @39702 has 177 MA's), (Start: 27 @39732 has 12 MA's), (Start: 32 @39768 has 1 MA's), (33, 39780), (36, 39804), (38, 39822), (40, 39831),

Gene: FreddyB\_54 Start: 36353, Stop: 36541, Start Num: 19

Candidate Starts for FreddyB\_54:

(4, 36236), (10, 36278), (Start: 13 @36299 has 1 MA's), (14, 36329), (16, 36335), (Start: 19 @36353 has 177 MA's), (Start: 27 @36383 has 12 MA's), (Start: 32 @36419 has 1 MA's), (33, 36431), (36, 36455), (38, 36473), (40, 36482),

Gene: Fruitloop\_49 Start: 37675, Stop: 37824, Start Num: 30

Candidate Starts for Fruitloop\_49:

(Start: 30 @37675 has 18 MA's), (Start: 32 @37702 has 1 MA's), (33, 37714), (36, 37738), (40, 37765),

Gene: GUmbie\_50 Start: 36775, Stop: 36963, Start Num: 19

Candidate Starts for GUmbie\_50:

(4, 36658), (10, 36700), (Start: 13 @36721 has 1 MA's), (14, 36751), (16, 36757), (Start: 19 @36775 has 177 MA's), (Start: 27 @36805 has 12 MA's), (Start: 32 @36841 has 1 MA's), (33, 36853), (36, 36877), (38, 36895), (40, 36904),

Gene: Galactic\_52 Start: 37428, Stop: 37616, Start Num: 19

Candidate Starts for Galactic\_52:

(Start: 19 @37428 has 177 MA's), (Start: 27 @37458 has 12 MA's), (Start: 32 @37494 has 1 MA's), (33, 37506), (36, 37530), (38, 37548), (40, 37557),

Gene: Gandolph\_53 Start: 36977, Stop: 37165, Start Num: 19

Candidate Starts for Gandolph\_53:



(Start: 19 @36977 has 177 MA's), (Start: 27 @37007 has 12 MA's), (Start: 32 @37043 has 1 MA's), (33, 37055), (36, 37079), (40, 37106),

Gene: Geralt\_48 Start: 35691, Stop: 35879, Start Num: 19

Candidate Starts for Geralt\_48:

(Start: 19 @35691 has 177 MA's), (Start: 27 @35721 has 12 MA's), (Start: 32 @35757 has 1 MA's), (33, 35769), (36, 35793), (38, 35811), (40, 35820),

Gene: GigiOuiOui\_48 Start: 36169, Stop: 36357, Start Num: 19

Candidate Starts for GigiOuiOui\_48:

(Start: 19 @36169 has 177 MA's), (Start: 27 @36199 has 12 MA's), (Start: 32 @36235 has 1 MA's), (33, 36247), (36, 36271), (40, 36298),

Gene: Girafales\_61 Start: 39245, Stop: 39433, Start Num: 19

Candidate Starts for Girafales\_61:

(Start: 19 @39245 has 177 MA's), (Start: 27 @39275 has 12 MA's), (Start: 32 @39311 has 1 MA's), (33, 39323), (36, 39347), (38, 39365), (40, 39374),

Gene: Girr\_51 Start: 37228, Stop: 37419, Start Num: 19

Candidate Starts for Girr\_51:

(Start: 19 @37228 has 177 MA's), (Start: 27 @37258 has 12 MA's), (Start: 32 @37297 has 1 MA's), (33, 37309), (36, 37333), (38, 37351), (40, 37360),

Gene: Gorge\_56 Start: 38586, Stop: 38735, Start Num: 30

Candidate Starts for Gorge\_56:

(Start: 30 @38586 has 18 MA's), (Start: 32 @38613 has 1 MA's), (33, 38625), (36, 38649), (40, 38676), (41, 38697),

Gene: Grimmer\_62 Start: 38773, Stop: 38934, Start Num: 27

Candidate Starts for Grimmer\_62:

(Start: 19 @38743 has 177 MA's), (Start: 27 @38773 has 12 MA's), (31, 38794), (Start: 32 @38812 has 1 MA's), (33, 38824), (36, 38848), (38, 38866), (40, 38875), (41, 38896),

Gene: Guppsters\_52 Start: 36514, Stop: 36678, Start Num: 26

Candidate Starts for Guppsters\_52:

(17, 36469), (20, 36490), (Start: 26 @36514 has 1 MA's), (Start: 32 @36556 has 1 MA's), (33, 36568), (36, 36592), (40, 36619),

Gene: Hades\_52 Start: 37185, Stop: 37334, Start Num: 30

Candidate Starts for Hades\_52:

(Start: 30 @37185 has 18 MA's), (Start: 32 @37212 has 1 MA's), (33, 37224), (36, 37248), (40, 37275), (41, 37296),

Gene: Hamulus\_52 Start: 37611, Stop: 37799, Start Num: 19

Candidate Starts for Hamulus\_52:

(Start: 19 @37611 has 177 MA's), (Start: 27 @37641 has 12 MA's), (Start: 32 @37677 has 1 MA's), (33, 37689), (36, 37713), (38, 37731), (40, 37740),

Gene: Harley\_53 Start: 36964, Stop: 37155, Start Num: 19

Candidate Starts for Harley\_53:

(Start: 19 @36964 has 177 MA's), (Start: 27 @36994 has 12 MA's), (33, 37045), (36, 37069), (40, 37096),

Gene: Hegedechwinu\_51 Start: 35612, Stop: 35788, Start Num: 23  
Candidate Starts for Hegedechwinu\_51:  
(Start: 22 @35609 has 1 MA's), (Start: 23 @35612 has 6 MA's), (31, 35648), (Start: 32 @35666 has 1 MA's), (33, 35678), (36, 35702), (40, 35729),

Gene: Hlubikazi\_48 Start: 35369, Stop: 35560, Start Num: 19  
Candidate Starts for Hlubikazi\_48:  
(Start: 19 @35369 has 177 MA's), (Start: 27 @35399 has 12 MA's), (Start: 32 @35438 has 1 MA's), (33, 35450), (36, 35474), (40, 35501),

Gene: IMpilo\_48 Start: 35282, Stop: 35431, Start Num: 30  
Candidate Starts for IMpilo\_48:  
(12, 35183), (Start: 30 @35282 has 18 MA's), (Start: 32 @35309 has 1 MA's), (33, 35321), (36, 35345), (40, 35372),

Gene: IbOuu\_54 Start: 37973, Stop: 38161, Start Num: 19  
Candidate Starts for IbOuu\_54:  
(Start: 19 @37973 has 177 MA's), (Start: 27 @38003 has 12 MA's), (Start: 32 @38039 has 1 MA's), (33, 38051), (36, 38075), (38, 38093), (40, 38102),

Gene: Ibhubesi\_51 Start: 36568, Stop: 36756, Start Num: 19  
Candidate Starts for Ibhubesi\_51:  
(4, 36451), (10, 36493), (Start: 13 @36514 has 1 MA's), (14, 36544), (16, 36550), (Start: 19 @36568 has 177 MA's), (Start: 27 @36598 has 12 MA's), (Start: 32 @36634 has 1 MA's), (33, 36646), (36, 36670), (38, 36688), (40, 36697),

Gene: Inventum\_46 Start: 36007, Stop: 36165, Start Num: 27  
Candidate Starts for Inventum\_46:  
(Start: 19 @35977 has 177 MA's), (Start: 27 @36007 has 12 MA's), (Start: 32 @36043 has 1 MA's), (33, 36055), (36, 36079), (38, 36097), (40, 36106),

Gene: IrishSherpFalk\_52 Start: 38345, Stop: 38536, Start Num: 19  
Candidate Starts for IrishSherpFalk\_52:  
(Start: 19 @38345 has 177 MA's), (Start: 27 @38375 has 12 MA's), (31, 38396), (Start: 32 @38414 has 1 MA's), (33, 38426), (36, 38450), (38, 38468), (40, 38477), (41, 38498),

Gene: Jabbawokkie\_65 Start: 38101, Stop: 38289, Start Num: 19  
Candidate Starts for Jabbawokkie\_65:  
(Start: 19 @38101 has 177 MA's), (Start: 27 @38131 has 12 MA's), (Start: 32 @38167 has 1 MA's), (33, 38179), (36, 38203), (38, 38221), (40, 38230), (41, 38251),

Gene: JalFarm20\_63 Start: 40418, Stop: 40609, Start Num: 19  
Candidate Starts for JalFarm20\_63:  
(Start: 13 @40370 has 1 MA's), (Start: 19 @40418 has 177 MA's), (Start: 27 @40448 has 12 MA's), (31, 40469), (Start: 32 @40487 has 1 MA's), (33, 40499), (36, 40523), (38, 40541), (40, 40550), (41, 40571),

Gene: James\_55 Start: 38546, Stop: 38737, Start Num: 19  
Candidate Starts for James\_55:  
(Start: 19 @38546 has 177 MA's), (Start: 27 @38576 has 12 MA's), (Start: 32 @38615 has 1 MA's), (33, 38627), (36, 38651), (40, 38678), (41, 38699),

Gene: Jant\_55 Start: 38683, Stop: 38859, Start Num: 23

Candidate Starts for Jant\_55:

(Start: 22 @38680 has 1 MA's), (Start: 23 @38683 has 6 MA's), (31, 38719), (Start: 32 @38737 has 1 MA's), (33, 38749), (36, 38773), (40, 38800),

Gene: Jarcob\_53 Start: 37473, Stop: 37661, Start Num: 19

Candidate Starts for Jarcob\_53:

(4, 37356), (10, 37398), (Start: 13 @37419 has 1 MA's), (14, 37449), (16, 37455), (Start: 19 @37473 has 177 MA's), (Start: 27 @37503 has 12 MA's), (Start: 32 @37539 has 1 MA's), (33, 37551), (36, 37575), (38, 37593), (40, 37602),

Gene: Jinglebell\_57 Start: 39231, Stop: 39419, Start Num: 19

Candidate Starts for Jinglebell\_57:

(8, 39147), (Start: 19 @39231 has 177 MA's), (Start: 27 @39261 has 12 MA's), (Start: 32 @39297 has 1 MA's), (33, 39309), (36, 39333), (38, 39351), (40, 39360),

Gene: Job42\_52 Start: 38645, Stop: 38836, Start Num: 19

Candidate Starts for Job42\_52:

(Start: 19 @38645 has 177 MA's), (Start: 27 @38675 has 12 MA's), (31, 38696), (Start: 32 @38714 has 1 MA's), (33, 38726), (36, 38750), (40, 38777),

Gene: JoeyJr\_48 Start: 35891, Stop: 36079, Start Num: 19

Candidate Starts for JoeyJr\_48:

(Start: 19 @35891 has 177 MA's), (Start: 27 @35921 has 12 MA's), (Start: 32 @35957 has 1 MA's), (33, 35969), (36, 35993), (38, 36011), (40, 36020),

Gene: Juice456\_53 Start: 38393, Stop: 38584, Start Num: 19

Candidate Starts for Juice456\_53:

(Start: 13 @38345 has 1 MA's), (Start: 19 @38393 has 177 MA's), (Start: 27 @38423 has 12 MA's), (31, 38444), (Start: 32 @38462 has 1 MA's), (33, 38474), (36, 38498), (40, 38525),

Gene: Juniper1\_49 Start: 36403, Stop: 36591, Start Num: 19

Candidate Starts for Juniper1\_49:

(6, 36304), (Start: 19 @36403 has 177 MA's), (Start: 27 @36433 has 12 MA's), (Start: 32 @36469 has 1 MA's), (33, 36481), (36, 36505), (38, 36523), (40, 36532),

Gene: Karhdo\_50 Start: 37051, Stop: 37239, Start Num: 19

Candidate Starts for Karhdo\_50:

(Start: 19 @37051 has 177 MA's), (Start: 27 @37081 has 12 MA's), (Start: 32 @37117 has 1 MA's), (33, 37129), (36, 37153), (38, 37171), (40, 37180),

Gene: Kersh\_54 Start: 39001, Stop: 39192, Start Num: 19

Candidate Starts for Kersh\_54:

(Start: 19 @39001 has 177 MA's), (Start: 27 @39031 has 12 MA's), (Start: 32 @39070 has 1 MA's), (33, 39082), (36, 39106), (38, 39124), (40, 39133),

Gene: Kimberlium\_54 Start: 38863, Stop: 39051, Start Num: 19

Candidate Starts for Kimberlium\_54:

(Start: 19 @38863 has 177 MA's), (Start: 27 @38893 has 12 MA's), (Start: 32 @38929 has 1 MA's), (33, 38941), (36, 38965), (38, 38983), (40, 38992),

Gene: KingJulian\_49 Start: 36238, Stop: 36399, Start Num: 27

Candidate Starts for KingJulian\_49:

(Start: 13 @36160 has 1 MA's), (Start: 19 @36208 has 177 MA's), (Start: 27 @36238 has 12 MA's), (31, 36259), (Start: 32 @36277 has 1 MA's), (33, 36289), (36, 36313), (40, 36340),

Gene: KingMidas\_52 Start: 37553, Stop: 37741, Start Num: 19

Candidate Starts for KingMidas\_52:

(Start: 19 @37553 has 177 MA's), (Start: 27 @37583 has 12 MA's), (Start: 32 @37619 has 1 MA's), (33, 37631), (36, 37655), (38, 37673), (40, 37682),

Gene: Kingsley\_48 Start: 35985, Stop: 36176, Start Num: 19

Candidate Starts for Kingsley\_48:

(Start: 19 @35985 has 177 MA's), (Start: 27 @36015 has 12 MA's), (31, 36036), (Start: 32 @36054 has 1 MA's), (33, 36066), (36, 36090), (38, 36108), (40, 36117), (41, 36138),

Gene: Koella\_47 Start: 33403, Stop: 33591, Start Num: 19

Candidate Starts for Koella\_47:

(4, 33286), (10, 33328), (Start: 13 @33349 has 1 MA's), (14, 33379), (16, 33385), (Start: 19 @33403 has 177 MA's), (Start: 27 @33433 has 12 MA's), (Start: 32 @33469 has 1 MA's), (33, 33481), (36, 33505), (38, 33523), (40, 33532),

Gene: Krakatau\_49 Start: 36698, Stop: 36850, Start Num: 28

Candidate Starts for Krakatau\_49:

(Start: 28 @36698 has 1 MA's), (Start: 32 @36728 has 1 MA's), (33, 36740), (36, 36764), (38, 36782), (40, 36791),

Gene: KristaRAM\_54 Start: 39046, Stop: 39237, Start Num: 19

Candidate Starts for KristaRAM\_54:

(Start: 13 @38998 has 1 MA's), (Start: 19 @39046 has 177 MA's), (Start: 27 @39076 has 12 MA's), (31, 39097), (Start: 32 @39115 has 1 MA's), (33, 39127), (36, 39151), (40, 39178),

Gene: LastJedi\_47 Start: 34723, Stop: 34911, Start Num: 19

Candidate Starts for LastJedi\_47:

(Start: 19 @34723 has 177 MA's), (Start: 27 @34753 has 12 MA's), (29, 34762), (Start: 32 @34789 has 1 MA's), (33, 34801), (36, 34825), (38, 34843), (40, 34852),

Gene: Latretium\_54 Start: 37870, Stop: 38028, Start Num: 27

Candidate Starts for Latretium\_54:

(Start: 19 @37840 has 177 MA's), (Start: 27 @37870 has 12 MA's), (Start: 32 @37906 has 1 MA's), (33, 37918), (36, 37942), (38, 37960), (40, 37969),

Gene: Leozinho\_52 Start: 36801, Stop: 36992, Start Num: 19

Candidate Starts for Leozinho\_52:

(Start: 19 @36801 has 177 MA's), (Start: 27 @36831 has 12 MA's), (Start: 32 @36870 has 1 MA's), (33, 36882), (36, 36906), (38, 36924), (40, 36933),

Gene: Leperchaun\_45 Start: 35121, Stop: 35309, Start Num: 19

Candidate Starts for Leperchaun\_45:

(Start: 19 @35121 has 177 MA's), (Start: 27 @35151 has 12 MA's), (Start: 32 @35187 has 1 MA's), (33, 35199), (36, 35223), (38, 35241), (40, 35250),

Gene: LilMoolah\_50 Start: 36618, Stop: 36809, Start Num: 19

Candidate Starts for LilMoolah\_50:

(Start: 19 @36618 has 177 MA's), (Start: 27 @36648 has 12 MA's), (Start: 32 @36687 has 1 MA's), (33, 36699), (36, 36723), (38, 36741), (40, 36750),

Gene: LittleShirley\_51 Start: 37649, Stop: 37840, Start Num: 19

Candidate Starts for LittleShirley\_51:

(Start: 19 @37649 has 177 MA's), (Start: 27 @37679 has 12 MA's), (31, 37700), (Start: 32 @37718 has 1 MA's), (33, 37730), (36, 37754), (38, 37772), (40, 37781),

Gene: Lizziana\_59 Start: 38476, Stop: 38664, Start Num: 19

Candidate Starts for Lizziana\_59:

(4, 38359), (10, 38401), (Start: 13 @38422 has 1 MA's), (14, 38452), (16, 38458), (Start: 19 @38476 has 177 MA's), (Start: 27 @38506 has 12 MA's), (Start: 32 @38542 has 1 MA's), (33, 38554), (36, 38578), (38, 38596), (40, 38605),

Gene: Llama\_57 Start: 39229, Stop: 39417, Start Num: 19

Candidate Starts for Llama\_57:

(8, 39145), (Start: 19 @39229 has 177 MA's), (Start: 27 @39259 has 12 MA's), (Start: 32 @39295 has 1 MA's), (33, 39307), (36, 39331), (38, 39349), (40, 39358),

Gene: Llij\_48 Start: 36187, Stop: 36378, Start Num: 19

Candidate Starts for Llij\_48:

(Start: 19 @36187 has 177 MA's), (Start: 27 @36217 has 12 MA's), (Start: 32 @36256 has 1 MA's), (33, 36268), (36, 36292), (38, 36310), (40, 36319),

Gene: Lorde\_52 Start: 35381, Stop: 35530, Start Num: 30

Candidate Starts for Lorde\_52:

(Start: 30 @35381 has 18 MA's), (Start: 32 @35408 has 1 MA's), (33, 35420), (36, 35444), (40, 35471),

Gene: LunaBlu\_55 Start: 38087, Stop: 38275, Start Num: 19

Candidate Starts for LunaBlu\_55:

(Start: 19 @38087 has 177 MA's), (Start: 27 @38117 has 12 MA's), (Start: 32 @38153 has 1 MA's), (33, 38165), (36, 38189), (38, 38207), (40, 38216),

Gene: LunaStella\_49 Start: 35554, Stop: 35757, Start Num: 18

Candidate Starts for LunaStella\_49:

(Start: 18 @35554 has 3 MA's), (24, 35578), (Start: 27 @35590 has 12 MA's), (33, 35638), (34, 35644), (38, 35689), (40, 35698), (41, 35719),

Gene: MadMen\_47 Start: 36190, Stop: 36378, Start Num: 19

Candidate Starts for MadMen\_47:

(4, 36073), (10, 36115), (Start: 13 @36136 has 1 MA's), (14, 36166), (16, 36172), (Start: 19 @36190 has 177 MA's), (Start: 27 @36220 has 12 MA's), (Start: 32 @36256 has 1 MA's), (33, 36268), (36, 36292), (38, 36310), (40, 36319), (41, 36340),

Gene: Madiba\_49 Start: 35479, Stop: 35667, Start Num: 19

Candidate Starts for Madiba\_49:

(4, 35362), (10, 35404), (Start: 13 @35425 has 1 MA's), (14, 35455), (16, 35461), (Start: 19 @35479 has 177 MA's), (Start: 27 @35509 has 12 MA's), (Start: 32 @35545 has 1 MA's), (33, 35557), (36, 35581), (38, 35599), (40, 35608),

Gene: Mahavrat\_49 Start: 36148, Stop: 36336, Start Num: 19

Candidate Starts for Mahavrat\_49:

(Start: 19 @36148 has 177 MA's), (Start: 27 @36178 has 12 MA's), (Start: 32 @36214 has 1 MA's), (33, 36226), (36, 36250), (38, 36268), (40, 36277), (41, 36298),

Gene: Mandlovu\_48 Start: 35311, Stop: 35502, Start Num: 19

Candidate Starts for Mandlovu\_48:

(Start: 19 @35311 has 177 MA's), (Start: 27 @35341 has 12 MA's), (Start: 32 @35380 has 1 MA's), (33, 35392), (36, 35416), (40, 35443),

Gene: Mantra\_48 Start: 36205, Stop: 36327, Start Num: 32

Candidate Starts for Mantra\_48:

(Start: 19 @36139 has 177 MA's), (Start: 27 @36169 has 12 MA's), (Start: 32 @36205 has 1 MA's), (33, 36217), (36, 36241), (38, 36259), (40, 36268),

Gene: Maravista\_53 Start: 38622, Stop: 38810, Start Num: 19

Candidate Starts for Maravista\_53:

(Start: 19 @38622 has 177 MA's), (Start: 27 @38652 has 12 MA's), (Start: 32 @38688 has 1 MA's), (33, 38700), (36, 38724), (38, 38742), (40, 38751),

Gene: Marker\_52 Start: 36968, Stop: 37156, Start Num: 19

Candidate Starts for Marker\_52:

(2, 36821), (3, 36839), (7, 36878), (9, 36884), (Start: 19 @36968 has 177 MA's), (Start: 27 @36998 has 12 MA's), (Start: 32 @37034 has 1 MA's), (33, 37046), (36, 37070), (38, 37088), (40, 37097),

Gene: Martik\_53 Start: 37429, Stop: 37617, Start Num: 19

Candidate Starts for Martik\_53:

(4, 37312), (10, 37354), (Start: 13 @37375 has 1 MA's), (14, 37405), (16, 37411), (Start: 19 @37429 has 177 MA's), (Start: 27 @37459 has 12 MA's), (Start: 32 @37495 has 1 MA's), (33, 37507), (36, 37531), (38, 37549), (40, 37558),

Gene: Mattes\_55 Start: 38576, Stop: 38737, Start Num: 27

Candidate Starts for Mattes\_55:

(Start: 19 @38546 has 177 MA's), (Start: 27 @38576 has 12 MA's), (Start: 32 @38615 has 1 MA's), (33, 38627), (36, 38651), (40, 38678), (41, 38699),

Gene: Melissauren88\_49 Start: 36158, Stop: 36307, Start Num: 30

Candidate Starts for Melissauren88\_49:

(Start: 30 @36158 has 18 MA's), (Start: 32 @36185 has 1 MA's), (33, 36197), (36, 36221), (40, 36248),

Gene: MilanaBonita\_99 Start: 32688, Stop: 32879, Start Num: 19

Candidate Starts for MilanaBonita\_99:

(Start: 19 @32688 has 177 MA's), (Start: 27 @32718 has 12 MA's), (31, 32739), (Start: 32 @32757 has 1 MA's), (33, 32769), (36, 32793), (40, 32820),

Gene: MilleniumForce\_51 Start: 38152, Stop: 38328, Start Num: 23

Candidate Starts for MilleniumForce\_51:

(Start: 22 @38149 has 1 MA's), (Start: 23 @38152 has 6 MA's), (31, 38188), (Start: 32 @38206 has 1 MA's), (33, 38218), (36, 38242), (40, 38269),

Gene: MinionDave\_50 Start: 36695, Stop: 36844, Start Num: 30

Candidate Starts for MinionDave\_50:

(Start: 30 @36695 has 18 MA's), (Start: 32 @36722 has 1 MA's), (33, 36734), (36, 36758), (40, 36785),

Gene: Minnie\_56 Start: 39031, Stop: 39222, Start Num: 19

Candidate Starts for Minnie\_56:

(Start: 19 @39031 has 177 MA's), (Start: 27 @39061 has 12 MA's), (31, 39082), (Start: 32 @39100 has 1 MA's), (33, 39112), (36, 39136), (38, 39154), (40, 39163), (41, 39184),

Gene: MisterCuddles\_51 Start: 37228, Stop: 37419, Start Num: 19

Candidate Starts for MisterCuddles\_51:

(Start: 19 @37228 has 177 MA's), (Start: 27 @37258 has 12 MA's), (Start: 32 @37297 has 1 MA's), (33, 37309), (36, 37333), (38, 37351), (40, 37360),

Gene: Modragons\_56 Start: 39075, Stop: 39263, Start Num: 19

Candidate Starts for Modragons\_56:

(8, 38991), (Start: 19 @39075 has 177 MA's), (Start: 27 @39105 has 12 MA's), (Start: 32 @39141 has 1 MA's), (33, 39153), (36, 39177), (38, 39195), (40, 39204),

Gene: MooMoo\_47 Start: 35830, Stop: 36033, Start Num: 18

Candidate Starts for MooMoo\_47:

(Start: 18 @35830 has 3 MA's), (24, 35854), (Start: 27 @35866 has 12 MA's), (33, 35914), (34, 35920), (38, 35965), (40, 35974), (41, 35995),

Gene: Moonbeam\_47 Start: 36185, Stop: 36364, Start Num: 22

Candidate Starts for Moonbeam\_47:

(Start: 22 @36185 has 1 MA's), (Start: 23 @36188 has 6 MA's), (31, 36224), (Start: 32 @36242 has 1 MA's), (33, 36254), (36, 36278), (40, 36305),

Gene: Mova\_52 Start: 36496, Stop: 36687, Start Num: 19

Candidate Starts for Mova\_52:

(Start: 19 @36496 has 177 MA's), (Start: 27 @36526 has 12 MA's), (31, 36547), (Start: 32 @36565 has 1 MA's), (33, 36577), (36, 36601), (40, 36628),

Gene: Mozy\_61 Start: 39761, Stop: 39949, Start Num: 19

Candidate Starts for Mozy\_61:

(Start: 19 @39761 has 177 MA's), (Start: 27 @39791 has 12 MA's), (Start: 32 @39827 has 1 MA's), (33, 39839), (36, 39863), (38, 39881), (40, 39890),

Gene: Ms6\_45 Start: 31504, Stop: 31668, Start Num: 26

Candidate Starts for Ms6\_45:

(12, 31420), (15, 31453), (20, 31480), (Start: 26 @31504 has 1 MA's), (Start: 32 @31546 has 1 MA's), (33, 31558), (36, 31582), (40, 31609),

Gene: MulchExplorer\_58 Start: 38862, Stop: 39050, Start Num: 19

Candidate Starts for MulchExplorer\_58:

(Start: 19 @38862 has 177 MA's), (Start: 27 @38892 has 12 MA's), (Start: 32 @38928 has 1 MA's), (33, 38940), (36, 38964), (38, 38982), (40, 38991),

Gene: Mutaforma13\_55 Start: 39287, Stop: 39475, Start Num: 19

Candidate Starts for Mutaforma13\_55:

(Start: 19 @39287 has 177 MA's), (Start: 27 @39317 has 12 MA's), (Start: 32 @39353 has 1 MA's), (33, 39365), (36, 39389), (40, 39416), (41, 39437),

Gene: NewHope4\_57 Start: 37488, Stop: 37646, Start Num: 27

Candidate Starts for NewHope4\_57:

(Start: 19 @37458 has 177 MA's), (Start: 27 @37488 has 12 MA's), (Start: 32 @37524 has 1 MA's), (33, 37536), (36, 37560), (38, 37578), (40, 37587),

Gene: Nimbo\_47 Start: 35694, Stop: 35882, Start Num: 19

Candidate Starts for Nimbo\_47:

(Start: 19 @35694 has 177 MA's), (Start: 27 @35724 has 12 MA's), (Start: 32 @35760 has 1 MA's), (33, 35772), (36, 35796), (38, 35814), (40, 35823),

Gene: Nitzel\_48 Start: 35903, Stop: 36091, Start Num: 19

Candidate Starts for Nitzel\_48:

(4, 35786), (10, 35828), (Start: 13 @35849 has 1 MA's), (14, 35879), (16, 35885), (Start: 19 @35903 has 177 MA's), (Start: 27 @35933 has 12 MA's), (Start: 32 @35969 has 1 MA's), (33, 35981), (36, 36005), (38, 36023), (40, 36032),

Gene: Nivrat\_48 Start: 36491, Stop: 36682, Start Num: 19

Candidate Starts for Nivrat\_48:

(Start: 19 @36491 has 177 MA's), (Start: 27 @36521 has 12 MA's), (Start: 32 @36560 has 1 MA's), (33, 36572), (36, 36596), (38, 36614), (40, 36623),

Gene: NormanBulbieJr\_53 Start: 37416, Stop: 37604, Start Num: 19

Candidate Starts for NormanBulbieJr\_53:

(4, 37299), (10, 37341), (Start: 13 @37362 has 1 MA's), (14, 37392), (16, 37398), (Start: 19 @37416 has 177 MA's), (Start: 27 @37446 has 12 MA's), (Start: 32 @37482 has 1 MA's), (33, 37494), (36, 37518), (38, 37536), (40, 37545),

Gene: Ochi17\_55 Start: 38682, Stop: 38870, Start Num: 19

Candidate Starts for Ochi17\_55:

(8, 38598), (Start: 19 @38682 has 177 MA's), (Start: 27 @38712 has 12 MA's), (Start: 32 @38748 has 1 MA's), (33, 38760), (36, 38784), (38, 38802), (40, 38811),

Gene: OfUltron\_57 Start: 39231, Stop: 39419, Start Num: 19

Candidate Starts for OfUltron\_57:

(8, 39147), (Start: 19 @39231 has 177 MA's), (Start: 27 @39261 has 12 MA's), (Start: 32 @39297 has 1 MA's), (33, 39309), (36, 39333), (38, 39351), (40, 39360),

Gene: Ogopogo\_55 Start: 37249, Stop: 37437, Start Num: 19

Candidate Starts for Ogopogo\_55:

(Start: 13 @37201 has 1 MA's), (Start: 19 @37249 has 177 MA's), (Start: 27 @37279 has 12 MA's), (Start: 32 @37315 has 1 MA's), (33, 37327), (36, 37351), (38, 37369), (40, 37378), (41, 37399),

Gene: OldBen\_50 Start: 37409, Stop: 37597, Start Num: 19

Candidate Starts for OldBen\_50:

(Start: 19 @37409 has 177 MA's), (Start: 27 @37439 has 12 MA's), (Start: 32 @37475 has 1 MA's), (33, 37487), (36, 37511), (38, 37529), (40, 37538),

Gene: OlympiaSaint\_53 Start: 37453, Stop: 37644, Start Num: 19

Candidate Starts for OlympiaSaint\_53:

(Start: 13 @37405 has 1 MA's), (Start: 19 @37453 has 177 MA's), (Start: 27 @37483 has 12 MA's), (31, 37504), (Start: 32 @37522 has 1 MA's), (33, 37534), (36, 37558), (38, 37576), (40, 37585), (41, 37606),

Gene: Ovechkin\_48 Start: 36542, Stop: 36691, Start Num: 30

Candidate Starts for Ovechkin\_48:

(Start: 30 @36542 has 18 MA's), (Start: 32 @36569 has 1 MA's), (33, 36581), (36, 36605), (40, 36632),

Gene: OwlsT2W\_52 Start: 37458, Stop: 37649, Start Num: 19

Candidate Starts for OwlsT2W\_52:



(Start: 13 @37410 has 1 MA's), (Start: 19 @37458 has 177 MA's), (Start: 27 @37488 has 12 MA's),  
(Start: 32 @37527 has 1 MA's), (33, 37539), (36, 37563), (38, 37581), (40, 37590),

Gene: PHappiness\_48 Start: 35667, Stop: 35855, Start Num: 19

Candidate Starts for PHappiness\_48:

(Start: 19 @35667 has 177 MA's), (Start: 27 @35697 has 12 MA's), (Start: 32 @35733 has 1 MA's),  
(33, 35745), (36, 35769), (38, 35787), (40, 35796),

Gene: PMC\_46 Start: 36465, Stop: 36656, Start Num: 19

Candidate Starts for PMC\_46:

(Start: 19 @36465 has 177 MA's), (Start: 27 @36495 has 12 MA's), (31, 36516), (Start: 32 @36534  
has 1 MA's), (33, 36546), (36, 36570), (38, 36588), (40, 36597),

Gene: Pacc40\_47 Start: 35741, Stop: 35929, Start Num: 19

Candidate Starts for Pacc40\_47:

(Start: 19 @35741 has 177 MA's), (Start: 27 @35771 has 12 MA's), (Start: 32 @35807 has 1 MA's),  
(33, 35819), (36, 35843), (38, 35861), (40, 35870),

Gene: Phalconet\_50 Start: 36462, Stop: 36611, Start Num: 30

Candidate Starts for Phalconet\_50:

(Start: 30 @36462 has 18 MA's), (Start: 32 @36489 has 1 MA's), (33, 36501), (36, 36525), (40, 36552),

Gene: Phanphagia\_49 Start: 37378, Stop: 37569, Start Num: 19

Candidate Starts for Phanphagia\_49:

(Start: 13 @37330 has 1 MA's), (Start: 19 @37378 has 177 MA's), (Start: 27 @37408 has 12 MA's),  
(31, 37429), (Start: 32 @37447 has 1 MA's), (33, 37459), (36, 37483), (38, 37501), (40, 37510), (41,  
37531),

Gene: Phatniss\_50 Start: 37282, Stop: 37473, Start Num: 19

Candidate Starts for Phatniss\_50:

(Start: 19 @37282 has 177 MA's), (Start: 27 @37312 has 12 MA's), (Start: 32 @37351 has 1 MA's),  
(33, 37363), (36, 37387), (38, 37405), (40, 37414),

Gene: PhesterPhotato\_53 Start: 37420, Stop: 37596, Start Num: 23

Candidate Starts for PhesterPhotato\_53:

(Start: 22 @37417 has 1 MA's), (Start: 23 @37420 has 6 MA's), (31, 37456), (Start: 32 @37474 has 1  
MA's), (33, 37486), (36, 37510), (40, 37537),

Gene: Philus\_55 Start: 38462, Stop: 38623, Start Num: 27

Candidate Starts for Philus\_55:

(Start: 19 @38432 has 177 MA's), (Start: 27 @38462 has 12 MA's), (31, 38483), (Start: 32 @38501  
has 1 MA's), (33, 38513), (36, 38537), (38, 38555), (40, 38564),

Gene: PhlipPhlop\_49 Start: 38301, Stop: 38459, Start Num: 27

Candidate Starts for PhlipPhlop\_49:

(Start: 19 @38271 has 177 MA's), (Start: 27 @38301 has 12 MA's), (Start: 32 @38337 has 1 MA's),  
(33, 38349), (36, 38373), (38, 38391), (40, 38400),

Gene: Pippy\_51 Start: 36287, Stop: 36475, Start Num: 19

Candidate Starts for Pippy\_51:

(Start: 19 @36287 has 177 MA's), (Start: 27 @36317 has 12 MA's), (29, 36326), (Start: 32 @36353  
has 1 MA's), (33, 36365), (36, 36389), (38, 36407), (40, 36416),

Gene: Plumbus\_54 Start: 37516, Stop: 37704, Start Num: 19

Candidate Starts for Plumbus\_54:

(Start: 19 @37516 has 177 MA's), (Start: 27 @37546 has 12 MA's), (Start: 32 @37582 has 1 MA's), (33, 37594), (36, 37618), (38, 37636), (40, 37645),

Gene: Poenanya\_51 Start: 37994, Stop: 38182, Start Num: 19

Candidate Starts for Poenanya\_51:

(Start: 19 @37994 has 177 MA's), (Start: 27 @38024 has 12 MA's), (Start: 32 @38060 has 1 MA's), (33, 38072), (36, 38096), (40, 38123),

Gene: Polka14\_49 Start: 36344, Stop: 36532, Start Num: 19

Candidate Starts for Polka14\_49:

(Start: 19 @36344 has 177 MA's), (Start: 27 @36374 has 12 MA's), (33, 36422), (36, 36446), (38, 36464), (40, 36473),

Gene: Pollywog\_53 Start: 37900, Stop: 38088, Start Num: 19

Candidate Starts for Pollywog\_53:

(Start: 13 @37852 has 1 MA's), (Start: 19 @37900 has 177 MA's), (Start: 27 @37930 has 12 MA's), (Start: 32 @37966 has 1 MA's), (33, 37978), (36, 38002), (38, 38020), (40, 38029),

Gene: Polo2Bam\_58 Start: 37342, Stop: 37500, Start Num: 27

Candidate Starts for Polo2Bam\_58:

(Start: 19 @37312 has 177 MA's), (Start: 27 @37342 has 12 MA's), (Start: 32 @37378 has 1 MA's), (33, 37390), (36, 37414), (38, 37432), (40, 37441),

Gene: PopTart\_46 Start: 36053, Stop: 36241, Start Num: 19

Candidate Starts for PopTart\_46:

(Start: 19 @36053 has 177 MA's), (Start: 27 @36083 has 12 MA's), (29, 36092), (Start: 32 @36119 has 1 MA's), (33, 36131), (36, 36155), (38, 36173), (40, 36182),

Gene: Priscilla\_53 Start: 37515, Stop: 37703, Start Num: 19

Candidate Starts for Priscilla\_53:

(4, 37398), (10, 37440), (Start: 13 @37461 has 1 MA's), (14, 37491), (16, 37497), (Start: 19 @37515 has 177 MA's), (Start: 27 @37545 has 12 MA's), (Start: 32 @37581 has 1 MA's), (33, 37593), (36, 37617), (38, 37635), (40, 37644),

Gene: QuickMath\_53 Start: 39086, Stop: 39274, Start Num: 19

Candidate Starts for QuickMath\_53:

(Start: 19 @39086 has 177 MA's), (Start: 27 @39116 has 12 MA's), (Start: 32 @39152 has 1 MA's), (33, 39164), (36, 39188), (38, 39206), (40, 39215),

Gene: Quico\_61 Start: 39522, Stop: 39710, Start Num: 19

Candidate Starts for Quico\_61:

(Start: 19 @39522 has 177 MA's), (Start: 27 @39552 has 12 MA's), (Start: 32 @39588 has 1 MA's), (33, 39600), (36, 39624), (38, 39642), (40, 39651),

Gene: Radiance\_52 Start: 37581, Stop: 37769, Start Num: 19

Candidate Starts for Radiance\_52:

(Start: 19 @37581 has 177 MA's), (Start: 27 @37611 has 12 MA's), (Start: 32 @37647 has 1 MA's), (33, 37659), (36, 37683), (38, 37701), (40, 37710), (41, 37731),

Gene: Ramsey\_53 Start: 38235, Stop: 38426, Start Num: 19

Candidate Starts for Ramsey\_53:

(Start: 19 @38235 has 177 MA's), (Start: 27 @38265 has 12 MA's), (Start: 32 @38304 has 1 MA's), (33, 38316), (36, 38340), (38, 38358), (40, 38367),

Gene: RedBird\_48 Start: 36378, Stop: 36569, Start Num: 19

Candidate Starts for RedBird\_48:

(Start: 19 @36378 has 177 MA's), (Start: 27 @36408 has 12 MA's), (Start: 32 @36447 has 1 MA's), (33, 36459), (36, 36483), (38, 36501), (40, 36510),

Gene: Renaud18\_57 Start: 38033, Stop: 38224, Start Num: 19

Candidate Starts for Renaud18\_57:

(1, 37871), (7, 37946), (Start: 19 @38033 has 177 MA's), (Start: 27 @38063 has 12 MA's), (29, 38072), (31, 38084), (Start: 32 @38102 has 1 MA's), (33, 38114), (36, 38138), (38, 38156), (40, 38165),

Gene: Rialto\_56 Start: 39673, Stop: 39864, Start Num: 19

Candidate Starts for Rialto\_56:

(Start: 19 @39673 has 177 MA's), (Start: 27 @39703 has 12 MA's), (31, 39724), (Start: 32 @39742 has 1 MA's), (33, 39754), (36, 39778), (40, 39805),

Gene: RitaG\_48 Start: 36012, Stop: 36200, Start Num: 19

Candidate Starts for RitaG\_48:

(Start: 19 @36012 has 177 MA's), (Start: 27 @36042 has 12 MA's), (Start: 32 @36078 has 1 MA's), (33, 36090), (36, 36114), (38, 36132), (40, 36141),

Gene: Rockne\_50 Start: 36465, Stop: 36656, Start Num: 19

Candidate Starts for Rockne\_50:

(Start: 19 @36465 has 177 MA's), (Start: 27 @36495 has 12 MA's), (31, 36516), (Start: 32 @36534 has 1 MA's), (33, 36546), (36, 36570), (38, 36588), (40, 36597),

Gene: RockyHorror\_52 Start: 36869, Stop: 37060, Start Num: 19

Candidate Starts for RockyHorror\_52:

(Start: 19 @36869 has 177 MA's), (Start: 27 @36899 has 12 MA's), (31, 36920), (Start: 32 @36938 has 1 MA's), (33, 36950), (36, 36974), (38, 36992), (40, 37001),

Gene: Royals2015\_54 Start: 37127, Stop: 37318, Start Num: 19

Candidate Starts for Royals2015\_54:

(Start: 19 @37127 has 177 MA's), (Start: 27 @37157 has 12 MA's), (31, 37178), (Start: 32 @37196 has 1 MA's), (33, 37208), (36, 37232), (38, 37250), (40, 37259),

Gene: Ruby\_49 Start: 37229, Stop: 37420, Start Num: 19

Candidate Starts for Ruby\_49:

(Start: 19 @37229 has 177 MA's), (Start: 27 @37259 has 12 MA's), (Start: 32 @37298 has 1 MA's), (33, 37310), (36, 37334), (38, 37352), (40, 37361),

Gene: SG4\_48 Start: 35891, Stop: 36040, Start Num: 30

Candidate Starts for SG4\_48:

(Start: 30 @35891 has 18 MA's), (Start: 32 @35918 has 1 MA's), (33, 35930), (36, 35954), (40, 35981),

Gene: Saal\_54 Start: 38405, Stop: 38554, Start Num: 30

Candidate Starts for Saal\_54:

(Start: 30 @38405 has 18 MA's), (Start: 32 @38432 has 1 MA's), (33, 38444), (36, 38468), (40, 38495), (41, 38516),

Gene: Sabbb\_57 Start: 38277, Stop: 38468, Start Num: 19

Candidate Starts for Sabbb\_57:

(Start: 19 @38277 has 177 MA's), (Start: 27 @38307 has 12 MA's), (Start: 32 @38346 has 1 MA's), (33, 38358), (36, 38382), (38, 38400), (40, 38409),

Gene: Sandalphon\_54 Start: 38188, Stop: 38376, Start Num: 19

Candidate Starts for Sandalphon\_54:

(Start: 19 @38188 has 177 MA's), (Start: 27 @38218 has 12 MA's), (29, 38227), (Start: 32 @38254 has 1 MA's), (33, 38266), (36, 38290), (38, 38308), (40, 38317),

Gene: Sarma624\_49 Start: 33177, Stop: 33368, Start Num: 19

Candidate Starts for Sarma624\_49:

(Start: 19 @33177 has 177 MA's), (Start: 27 @33207 has 12 MA's), (31, 33228), (Start: 32 @33246 has 1 MA's), (33, 33258), (36, 33282), (38, 33300), (40, 33309), (41, 33330),

Gene: Sassafras\_49 Start: 35976, Stop: 36164, Start Num: 19

Candidate Starts for Sassafras\_49:

(Start: 19 @35976 has 177 MA's), (Start: 27 @36006 has 12 MA's), (Start: 32 @36042 has 1 MA's), (33, 36054), (36, 36078), (38, 36096), (40, 36105),

Gene: SassyB\_46 Start: 36053, Stop: 36241, Start Num: 19

Candidate Starts for SassyB\_46:

(Start: 19 @36053 has 177 MA's), (Start: 27 @36083 has 12 MA's), (29, 36092), (Start: 32 @36119 has 1 MA's), (33, 36131), (36, 36155), (38, 36173), (40, 36182),

Gene: Scottish\_51 Start: 37024, Stop: 37212, Start Num: 19

Candidate Starts for Scottish\_51:

(Start: 19 @37024 has 177 MA's), (Start: 27 @37054 has 12 MA's), (Start: 32 @37090 has 1 MA's), (33, 37102), (36, 37126), (38, 37144), (40, 37153),

Gene: Seabastian\_57 Start: 39232, Stop: 39420, Start Num: 19

Candidate Starts for Seabastian\_57:

(8, 39148), (Start: 19 @39232 has 177 MA's), (Start: 27 @39262 has 12 MA's), (Start: 32 @39298 has 1 MA's), (33, 39310), (36, 39334), (38, 39352), (40, 39361),

Gene: Seagreen\_52 Start: 36781, Stop: 36969, Start Num: 19

Candidate Starts for Seagreen\_52:

(Start: 19 @36781 has 177 MA's), (Start: 27 @36811 has 12 MA's), (Start: 32 @36847 has 1 MA's), (33, 36859), (36, 36883), (38, 36901), (40, 36910),

Gene: Shauna1\_50 Start: 37389, Stop: 37550, Start Num: 27

Candidate Starts for Shauna1\_50:

(Start: 13 @37311 has 1 MA's), (Start: 19 @37359 has 177 MA's), (Start: 27 @37389 has 12 MA's), (31, 37410), (Start: 32 @37428 has 1 MA's), (33, 37440), (36, 37464), (38, 37482), (40, 37491), (41, 37512),

Gene: ShiLan\_52 Start: 37462, Stop: 37650, Start Num: 19

Candidate Starts for ShiLan\_52:

(4, 37345), (10, 37387), (Start: 13 @37408 has 1 MA's), (14, 37438), (16, 37444), (Start: 19 @37462 has 177 MA's), (Start: 27 @37492 has 12 MA's), (Start: 32 @37528 has 1 MA's), (33, 37540), (36, 37564), (38, 37582), (40, 37591),

Gene: ShowerHandel\_56 Start: 37429, Stop: 37617, Start Num: 19

Candidate Starts for ShowerHandel\_56:

(4, 37312), (10, 37354), (Start: 13 @37375 has 1 MA's), (14, 37405), (16, 37411), (Start: 19 @37429 has 177 MA's), (Start: 27 @37459 has 12 MA's), (Start: 32 @37495 has 1 MA's), (33, 37507), (36, 37531), (38, 37549), (40, 37558),

Gene: ShroomBoi\_54 Start: 37646, Stop: 37837, Start Num: 19

Candidate Starts for ShroomBoi\_54:

(Start: 19 @37646 has 177 MA's), (Start: 27 @37676 has 12 MA's), (31, 37697), (Start: 32 @37715 has 1 MA's), (33, 37727), (36, 37751), (38, 37769), (40, 37778),

Gene: SiSi\_50 Start: 36603, Stop: 36791, Start Num: 19

Candidate Starts for SiSi\_50:

(Start: 19 @36603 has 177 MA's), (Start: 27 @36633 has 12 MA's), (Start: 32 @36669 has 1 MA's), (33, 36681), (36, 36705), (38, 36723), (40, 36732),

Gene: SilverChicken\_60 Start: 37014, Stop: 37154, Start Num: 31

Candidate Starts for SilverChicken\_60:

(Start: 19 @36963 has 177 MA's), (Start: 27 @36993 has 12 MA's), (31, 37014), (Start: 32 @37032 has 1 MA's), (33, 37044), (36, 37068), (40, 37095),

Gene: SimranZ1\_50 Start: 36116, Stop: 36304, Start Num: 19

Candidate Starts for SimranZ1\_50:

(6, 36017), (Start: 19 @36116 has 177 MA's), (Start: 27 @36146 has 12 MA's), (Start: 32 @36182 has 1 MA's), (33, 36194), (36, 36218), (38, 36236), (39, 36242), (40, 36245), (41, 36266),

Gene: Slim\_52 Start: 37799, Stop: 37939, Start Num: 31

Candidate Starts for Slim\_52:

(Start: 19 @37748 has 177 MA's), (Start: 27 @37778 has 12 MA's), (31, 37799), (Start: 32 @37817 has 1 MA's), (33, 37829), (36, 37853), (38, 37871), (40, 37880),

Gene: Soul22\_55 Start: 37253, Stop: 37414, Start Num: 27

Candidate Starts for Soul22\_55:

(Start: 13 @37175 has 1 MA's), (Start: 19 @37223 has 177 MA's), (Start: 27 @37253 has 12 MA's), (31, 37274), (Start: 32 @37292 has 1 MA's), (33, 37304), (36, 37328), (40, 37355),

Gene: Sparkdehlily\_57 Start: 38118, Stop: 38306, Start Num: 19

Candidate Starts for Sparkdehlily\_57:

(4, 38001), (10, 38043), (Start: 13 @38064 has 1 MA's), (14, 38094), (16, 38100), (Start: 19 @38118 has 177 MA's), (Start: 27 @38148 has 12 MA's), (Start: 32 @38184 has 1 MA's), (33, 38196), (36, 38220), (38, 38238), (40, 38247), (41, 38268),

Gene: Spartacus\_53 Start: 37262, Stop: 37453, Start Num: 19

Candidate Starts for Spartacus\_53:

(Start: 19 @37262 has 177 MA's), (Start: 27 @37292 has 12 MA's), (31, 37313), (Start: 32 @37331 has 1 MA's), (33, 37343), (36, 37367), (38, 37385), (40, 37394), (41, 37415),

Gene: Spikelee\_58 Start: 38764, Stop: 38955, Start Num: 19

Candidate Starts for Spikelee\_58:

(Start: 19 @38764 has 177 MA's), (Start: 27 @38794 has 12 MA's), (Start: 32 @38833 has 1 MA's), (33, 38845), (36, 38869), (38, 38887), (40, 38896), (41, 38917),

Gene: Spoonbill\_50 Start: 35966, Stop: 36154, Start Num: 19

Candidate Starts for Spoonbill\_50:

(Start: 19 @35966 has 177 MA's), (Start: 27 @35996 has 12 MA's), (Start: 32 @36032 has 1 MA's), (33, 36044), (36, 36068), (38, 36086), (40, 36095),

Gene: Squirty\_55 Start: 38391, Stop: 38630, Start Num: 13

Candidate Starts for Squirty\_55:

(Start: 13 @38391 has 1 MA's), (Start: 19 @38439 has 177 MA's), (Start: 27 @38469 has 12 MA's), (31, 38490), (Start: 32 @38508 has 1 MA's), (33, 38520), (36, 38544), (40, 38571),

Gene: StAnnes\_50 Start: 37137, Stop: 37286, Start Num: 30

Candidate Starts for StAnnes\_50:

(Start: 30 @37137 has 18 MA's), (Start: 32 @37164 has 1 MA's), (33, 37176), (36, 37200), (40, 37227),

Gene: Stap\_51 Start: 36767, Stop: 36955, Start Num: 19

Candidate Starts for Stap\_51:

(Start: 19 @36767 has 177 MA's), (Start: 27 @36797 has 12 MA's), (Start: 32 @36833 has 1 MA's), (33, 36845), (36, 36869), (38, 36887), (40, 36896),

Gene: Starcevich\_51 Start: 37233, Stop: 37421, Start Num: 19

Candidate Starts for Starcevich\_51:

(Start: 19 @37233 has 177 MA's), (Start: 27 @37263 has 12 MA's), (Start: 32 @37299 has 1 MA's), (33, 37311), (36, 37335), (38, 37353), (40, 37362),

Gene: Strokeseat\_48 Start: 35368, Stop: 35559, Start Num: 19

Candidate Starts for Strokeseat\_48:

(Start: 19 @35368 has 177 MA's), (Start: 27 @35398 has 12 MA's), (Start: 32 @35437 has 1 MA's), (33, 35449), (36, 35473), (40, 35500),

Gene: SuperGrey\_55 Start: 38785, Stop: 38976, Start Num: 19

Candidate Starts for SuperGrey\_55:

(Start: 13 @38737 has 1 MA's), (Start: 19 @38785 has 177 MA's), (Start: 27 @38815 has 12 MA's), (31, 38836), (Start: 32 @38854 has 1 MA's), (33, 38866), (36, 38890), (38, 38908), (40, 38917), (41, 38938),

Gene: SwagPigglett\_57 Start: 39437, Stop: 39628, Start Num: 19

Candidate Starts for SwagPigglett\_57:

(Start: 19 @39437 has 177 MA's), (Start: 27 @39467 has 12 MA's), (31, 39488), (Start: 32 @39506 has 1 MA's), (33, 39518), (36, 39542), (38, 39560), (40, 39569),

Gene: TChen\_51 Start: 37505, Stop: 37708, Start Num: 18

Candidate Starts for TChen\_51:

(Start: 18 @37505 has 3 MA's), (24, 37529), (Start: 27 @37541 has 12 MA's), (33, 37589), (34, 37595), (38, 37640), (40, 37649), (41, 37670),

Gene: TDanisky\_57 Start: 38118, Stop: 38306, Start Num: 19

Candidate Starts for TDanisky\_57:

(4, 38001), (10, 38043), (Start: 13 @38064 has 1 MA's), (14, 38094), (16, 38100), (Start: 19 @38118 has 177 MA's), (Start: 27 @38148 has 12 MA's), (Start: 32 @38184 has 1 MA's), (33, 38196), (36, 38220), (38, 38238), (40, 38247), (41, 38268),

Gene: Taj\_55 Start: 37954, Stop: 38145, Start Num: 19

Candidate Starts for Taj\_55:

(1, 37792), (7, 37867), (Start: 19 @37954 has 177 MA's), (Start: 27 @37984 has 12 MA's), (29, 37993), (31, 38005), (Start: 32 @38023 has 1 MA's), (33, 38035), (36, 38059), (38, 38077), (40, 38086),

Gene: Tchotchke\_53 Start: 36528, Stop: 36689, Start Num: 27

Candidate Starts for Tchotchke\_53:

(Start: 19 @36498 has 177 MA's), (Start: 27 @36528 has 12 MA's), (31, 36549), (Start: 32 @36567 has 1 MA's), (33, 36579), (36, 36603), (38, 36621), (40, 36630), (41, 36651),

Gene: ThetaBob\_56 Start: 37454, Stop: 37612, Start Num: 27

Candidate Starts for ThetaBob\_56:

(Start: 19 @37424 has 177 MA's), (Start: 27 @37454 has 12 MA's), (29, 37463), (Start: 32 @37490 has 1 MA's), (33, 37502), (36, 37526), (40, 37553),

Gene: Tootsieroll\_54 Start: 36790, Stop: 36981, Start Num: 19

Candidate Starts for Tootsieroll\_54:

(Start: 19 @36790 has 177 MA's), (Start: 27 @36820 has 12 MA's), (Start: 32 @36859 has 1 MA's), (33, 36871), (36, 36895), (38, 36913), (40, 36922),

Gene: Toron\_49 Start: 36813, Stop: 37007, Start Num: 21

Candidate Starts for Toron\_49:

(21, 36813), (24, 36825), (25, 36828), (Start: 27 @36837 has 12 MA's), (29, 36846), (33, 36888), (34, 36894), (35, 36909), (38, 36939), (40, 36948), (41, 36969),

Gene: Totinger\_51 Start: 36375, Stop: 36566, Start Num: 19

Candidate Starts for Totinger\_51:

(Start: 19 @36375 has 177 MA's), (Start: 27 @36405 has 12 MA's), (31, 36426), (Start: 32 @36444 has 1 MA's), (33, 36456), (36, 36480), (38, 36498), (40, 36507),

Gene: Tweety\_51 Start: 37589, Stop: 37777, Start Num: 19

Candidate Starts for Tweety\_51:

(Start: 19 @37589 has 177 MA's), (Start: 27 @37619 has 12 MA's), (Start: 32 @37655 has 1 MA's), (33, 37667), (36, 37691), (38, 37709), (40, 37718),

Gene: UncleRicky\_51 Start: 37530, Stop: 37721, Start Num: 19

Candidate Starts for UncleRicky\_51:

(Start: 19 @37530 has 177 MA's), (Start: 27 @37560 has 12 MA's), (Start: 32 @37599 has 1 MA's), (33, 37611), (36, 37635), (38, 37653), (40, 37662),

Gene: VRedHorse\_51 Start: 36379, Stop: 36528, Start Num: 30

Candidate Starts for VRedHorse\_51:

(Start: 30 @36379 has 18 MA's), (Start: 32 @36406 has 1 MA's), (33, 36418), (36, 36442), (40, 36469),

Gene: Velveteen\_46 Start: 33177, Stop: 33368, Start Num: 19

Candidate Starts for Velveteen\_46:

(Start: 19 @33177 has 177 MA's), (Start: 27 @33207 has 12 MA's), (31, 33228), (Start: 32 @33246 has 1 MA's), (33, 33258), (36, 33282), (38, 33300), (40, 33309), (41, 33330),

Gene: Veteran\_48 Start: 36247, Stop: 36435, Start Num: 19

Candidate Starts for Veteran\_48:

(Start: 19 @36247 has 177 MA's), (Start: 27 @36277 has 12 MA's), (Start: 32 @36313 has 1 MA's), (33, 36325), (36, 36349), (38, 36367), (40, 36376),

Gene: Violac\_55 Start: 38477, Stop: 38668, Start Num: 19

Candidate Starts for Violac\_55:

(6, 38378), (Start: 19 @38477 has 177 MA's), (Start: 27 @38507 has 12 MA's), (33, 38558), (36, 38582), (40, 38609),

Gene: Vivum\_56 Start: 37818, Stop: 37976, Start Num: 27

Candidate Starts for Vivum\_56:

(Start: 19 @37788 has 177 MA's), (Start: 27 @37818 has 12 MA's), (Start: 32 @37854 has 1 MA's), (33, 37866), (36, 37890), (38, 37908), (40, 37917), (41, 37938),

Gene: Wachhund\_53 Start: 36783, Stop: 36974, Start Num: 19

Candidate Starts for Wachhund\_53:

(Start: 19 @36783 has 177 MA's), (Start: 27 @36813 has 12 MA's), (31, 36834), (Start: 32 @36852 has 1 MA's), (33, 36864), (36, 36888), (38, 36906), (40, 36915),

Gene: Wee\_54 Start: 38226, Stop: 38417, Start Num: 19

Candidate Starts for Wee\_54:

(1, 38064), (7, 38139), (Start: 19 @38226 has 177 MA's), (Start: 27 @38256 has 12 MA's), (29, 38265), (31, 38277), (Start: 32 @38295 has 1 MA's), (33, 38307), (36, 38331), (38, 38349), (40, 38358),

Gene: Whatsapiecost\_51 Start: 36251, Stop: 36439, Start Num: 19

Candidate Starts for Whatsapiecost\_51:

(Start: 13 @36203 has 1 MA's), (Start: 19 @36251 has 177 MA's), (Start: 27 @36281 has 12 MA's), (Start: 32 @36317 has 1 MA's), (33, 36329), (36, 36353), (40, 36380), (41, 36401),

Gene: Whouxphf\_50 Start: 37267, Stop: 37455, Start Num: 19

Candidate Starts for Whouxphf\_50:

(Start: 19 @37267 has 177 MA's), (Start: 27 @37297 has 12 MA's), (Start: 32 @37333 has 1 MA's), (33, 37345), (36, 37369), (38, 37387), (40, 37396),

Gene: WillSterrel\_52 Start: 38378, Stop: 38569, Start Num: 19

Candidate Starts for WillSterrel\_52:

(Start: 19 @38378 has 177 MA's), (Start: 27 @38408 has 12 MA's), (31, 38429), (Start: 32 @38447 has 1 MA's), (33, 38459), (36, 38483), (38, 38501), (40, 38510), (41, 38531),

Gene: XFactor\_49 Start: 35866, Stop: 36015, Start Num: 30

Candidate Starts for XFactor\_49:

(Start: 30 @35866 has 18 MA's), (Start: 32 @35893 has 1 MA's), (33, 35905), (36, 35929), (40, 35956),

Gene: Yorick\_52 Start: 37803, Stop: 37991, Start Num: 19

Candidate Starts for Yorick\_52:

(4, 37686), (10, 37728), (Start: 13 @37749 has 1 MA's), (14, 37779), (16, 37785), (Start: 19 @37803 has 177 MA's), (Start: 27 @37833 has 12 MA's), (Start: 32 @37869 has 1 MA's), (33, 37881), (36, 37905), (38, 37923), (40, 37932),

Gene: Yoshi\_63 Start: 38592, Stop: 38750, Start Num: 27

Candidate Starts for Yoshi\_63:

(Start: 19 @38562 has 177 MA's), (Start: 27 @38592 has 12 MA's), (Start: 32 @38628 has 1 MA's), (33, 38640), (36, 38664), (38, 38682), (40, 38691),

Gene: Zapner\_64 Start: 38132, Stop: 38290, Start Num: 27

Candidate Starts for Zapner\_64:

(Start: 19 @38102 has 177 MA's), (Start: 27 @38132 has 12 MA's), (Start: 32 @38168 has 1 MA's), (33, 38180), (36, 38204), (38, 38222), (40, 38231), (41, 38252),



Gene: Zerg\_51 Start: 36978, Stop: 37169, Start Num: 19

Candidate Starts for Zerg\_51:

(Start: 19 @36978 has 177 MA's), (Start: 27 @37008 has 12 MA's), (31, 37029), (Start: 32 @37047 has 1 MA's), (33, 37059), (36, 37083), (38, 37101), (40, 37110),

Gene: Zizzle\_57 Start: 39121, Stop: 39309, Start Num: 19

Candidate Starts for Zizzle\_57:

(Start: 19 @39121 has 177 MA's), (Start: 27 @39151 has 12 MA's), (Start: 32 @39187 has 1 MA's), (33, 39199), (36, 39223), (38, 39241), (40, 39250),