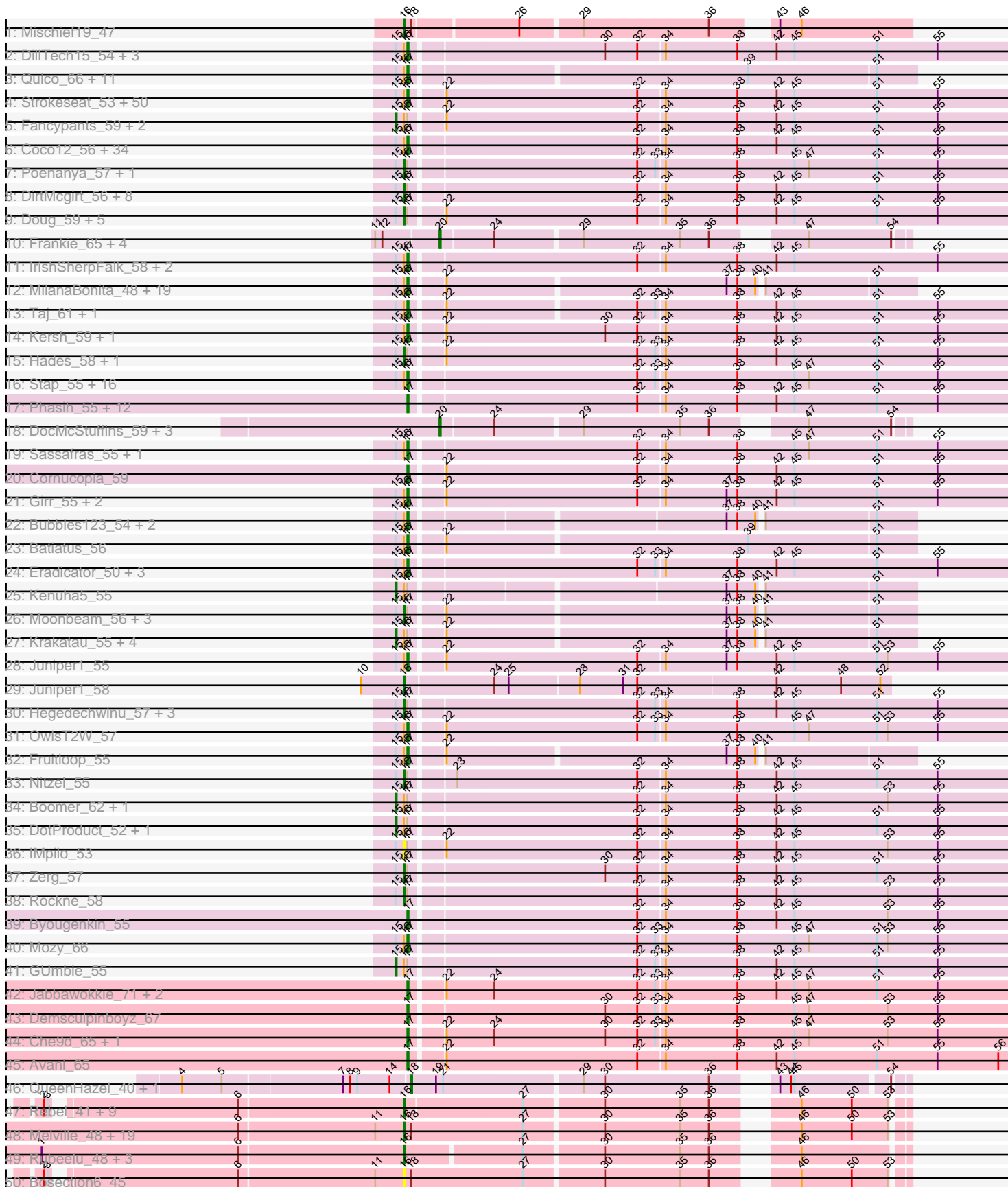
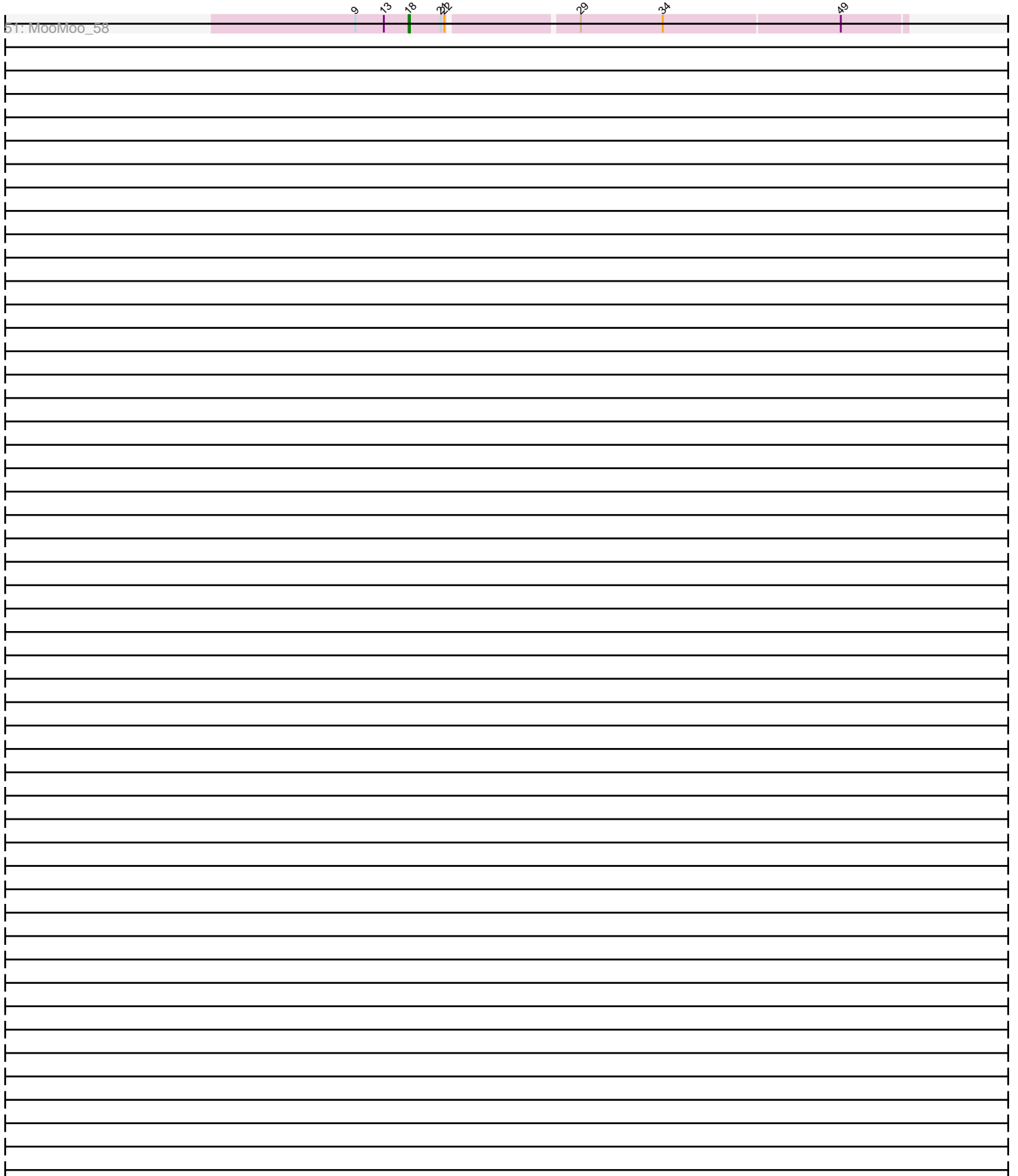


Pham 189403



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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 189403 Report

This analysis was run 11/02/24 on database version 579.

Pham number 189403 has 279 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Mischief19\_47
- Track 2 : DillTech15\_54, RockyHorror\_58, Marker\_59, Fastidio\_57
- Track 3 : Quico\_66, Sandalphon\_59, Whatsapiecost\_58, Minnie\_61, Florinda\_69, Veteran\_54, Squirty\_60, Chevrolet\_63, ArcusAngelus\_60, Girafales\_67, MilleniumForce\_61, Ramsey\_57
- Track 4 : Strokeseat\_53, Cabrinians\_58, OlympiaSaint\_59, Zizzle\_61, Burwell21\_55, ShowerHandel\_60, Seabastian\_62, Jinglebell\_62, Brocalys\_52, Llama\_62, OfUltron\_62, Kimberlium\_59, Oksu\_61, Dante\_58, Martik\_57, QuickMath\_58, DaWorst\_58, Lizziana\_63, Starcevich\_56, Latretium\_59, KristaRAM\_60, Rita\_58, AlpineSix\_62, LunaBlu\_59, MulchExplorer\_63, ShiLan\_56, Clifton\_52, Radiance\_56, Hlubikazi\_53, Saal\_59, Alexphander\_61, SiSi\_55, MadMen\_55, Galactic\_56, Madiba\_55, Gorge\_61, Mattes\_61, Mantra\_53, SwagPiggett\_62, Pippy\_55, FreddyB\_58, Ibhubesi\_57, Chuckly\_60, LastJedi\_51, Koella\_51, Priscilla\_57, GigiOuiOui\_53, Karhdo\_54, Yorick\_56, Rialto\_63, Crumble\_52
- Track 5 : Fancypants\_59, Ochi17\_60, BobaPhett\_61
- Track 6 : Coco12\_56, Estave1\_60, Lij\_53, LilMoolah\_55, Drago\_55, Scottish\_55, Sabbb\_61, DRBy19\_60, Spikelee\_64, OldBen\_54, Whouxphf\_54, Mova\_58, SimranZ1\_57, Nivrat\_53, Leozinho\_56, Velveteen\_52, Renaud18\_62, DosHalletts\_59, LittleShirley\_56, ByChance\_49, Phatniss\_55, Kingsley\_54, Eish\_61, James\_61, VRedHorse\_57, Maravista\_58, Sarma624\_55, UncleRicky\_56, Tootsieroll\_58, Philus\_60, Ovechkin\_56, Mutaforma13\_61, Mahavrat\_55, Lorde\_57, Royals2015\_60
- Track 7 : Poenanya\_57, Empress\_55
- Track 8 : DirtMcgirt\_56, Job42\_59, Blexus\_55, Firehouse51\_58, BigPhil\_53, BlueCrab\_57, Totinger\_56, Cerasum\_53, Plumbus\_59
- Track 9 : Doug\_59, Jarcob\_57, Pollywog\_58, Mandlovu\_53, NormanBulbieJr\_57, Modragons\_61
- Track 10 : Frankie\_65, Misha28\_57, LilSpotty\_59, Awesomesauce\_59, TootsiePop\_57
- Track 11 : IrishSherpFalk\_58, WillSterrel\_58, Spartacus\_59
- Track 12 : MilanaBonita\_48, Phanphagia\_55, XFactor\_56, Ardmore\_50, Shauna1\_56, Hamulus\_59, Donkeykong\_61, Akhila\_49, Bobi\_63, Filuzino\_56, Wachhund\_59, Emma\_59, DLane\_53, Aubs\_58, Phalconet\_56, Tweety\_57, TDanisky\_65, PhesterPhotato\_58, Sparkdehlily\_65, Flathead\_58
- Track 13 : Taj\_61, CaptainTrips\_54
- Track 14 : Kersh\_59, ShroomBoi\_59

- Track 15 : Hades\_58, DeadP\_63
- Track 16 : Stap\_55, PHappiness\_52, Leperchaun\_49, Daenerys\_51, JoeyJr\_52, Spoonbill\_54, RedBird\_55, Deb65\_52, RitaG\_52, Geralt\_52, BodEinwohner17\_57, KingMidas\_56, Pacc40\_51, Dorothy\_55, Nimbo\_51, Polka14\_55, Doomphist\_57
- Track 17 : Phasih\_55, Soul22\_63, JalFarm20\_70, TChen\_57, Harley\_60, Gandolph\_60, LunaStella\_55, Che8\_62, Yoshi\_69, Seagreen\_57, Juice456\_58, EleanorGeorge\_58, ThetaBob\_61
- Track 18 : DocMcStuffins\_59, MulchSalad\_59, Piper2020\_60, ChickenDinner\_61
- Track 19 : Sassafras\_55, Inventum\_52
- Track 20 : Cornucopia\_59
- Track 21 : Girr\_55, Ruby\_53, MisterCuddles\_55
- Track 22 : Bubbles123\_54, Ogopogo\_63, SuperGrey\_61
- Track 23 : Batiatus\_56
- Track 24 : Eradicator\_50, MinionDave\_56, Guppsters\_58, IbOuu\_58
- Track 25 : Kenuha5\_55
- Track 26 : Moonbeam\_56, PopTart\_52, SassyB\_52, StAnnes\_56
- Track 27 : Krakatau\_55, Melissauren88\_56, Beakin\_59, Bipolar\_56, Ms6\_53
- Track 28 : Juniper1\_55
- Track 29 : Juniper1\_58
- Track 30 : Hegedechwinu\_57, SG4\_54, BuzzLyseyear\_63, Enby\_58
- Track 31 : OwlsT2W\_57
- Track 32 : Fruitloop\_55
- Track 33 : Nitzel\_55
- Track 34 : Boomer\_62, PMC\_54
- Track 35 : DotProduct\_52, DaddyRickover\_56
- Track 36 : IMpilo\_53
- Track 37 : Zerg\_57
- Track 38 : Rockne\_58
- Track 39 : Byougenkin\_55
- Track 40 : Mozy\_66
- Track 41 : GUmbie\_55
- Track 42 : Jabbawokkie\_71, Blarby\_69, Zapner\_70
- Track 43 : Demsculpinboyz\_67
- Track 44 : Che9d\_65, Cornie\_52
- Track 45 : Avani\_65
- Track 46 : QueenHazel\_40, Xula\_39
- Track 47 : Rebel\_41, Aggie\_43, Purgamenstris\_49, Nенаe\_49, Redi\_49, Raymond7\_43, BabeRuth\_50, Silvy\_43, ShrimpFriedEgg\_49, PhancyPhin\_49
- Track 48 : Melville\_48, Fulbright\_44, Jamie19\_43, Parmesanjohn\_45, Panchino\_42, Phloss\_43, Duplicity\_45, Schnauzer\_46, SpongeBob\_43, Gex\_45, Magsby\_45, Scitech\_42, Chewbacca\_47, Xerxes\_45, Pipsqueaks\_45, Smurph\_45, Snekmaggedon\_43, Tapioca\_47, Carcharodon\_45, Silvafighter\_46
- Track 49 : Rubeelu\_48, Kevin1\_47, MichelleMyBell\_45, Butters\_48
- Track 50 : Bosection6\_45
- Track 51 : MooMoo\_58

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

The start number called the most often in the published annotations is 17, it was called in 180 of the 267 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_49, Alexphander\_61, AlpineSix\_62, ArcusAngelus\_60, Ardmore\_50, Aubs\_58, Avani\_65, Batiatus\_56, Blarby\_69, Bobi\_63, BodEinwohner17\_57, Brocalys\_52, Bubbles123\_54, Burwell21\_55, ByChance\_49, Byougenkin\_55, Cabrinians\_58, CaptainTrips\_54, Che8\_62, Che9d\_65, Chevrolet\_63, Chuckly\_60, Clifton\_52, Coco12\_56, Cornie\_52, Cornucopia\_59, Crumble\_52, DLane\_53, DRBy19\_60, DaWorst\_58, Daenerys\_51, Dante\_58, Deb65\_52, Demsculpinboyz\_67, DillTech15\_54, Donkeykong\_61, Doomphist\_57, Dorothy\_55, DosHalletts\_59, Drago\_55, Eish\_61, EleanorGeorge\_58, Emma\_59, Eradicator\_50, Estave1\_60, Fastidio\_57, Filuzino\_56, Flathead\_58, Florinda\_69, FreddyB\_58, Fruitloop\_55, Galactic\_56, Gandalph\_60, Geralt\_52, GigiOuiOui\_53, Girafales\_67, Girr\_55, Gorge\_61, Guppsters\_58, Hamulus\_59, Harley\_60, Hlubikazi\_53, IbOuu\_58, Ibhubesi\_57, Inventum\_52, IrishSherpFalk\_58, Jabbawokkie\_71, JalFarm20\_70, James\_61, Jinglebell\_62, JoeyJr\_52, Juice456\_58, Juniper1\_55, Karhdo\_54, Kersh\_59, Kimberlium\_59, KingMidas\_56, Kingsley\_54, Koella\_51, KristaRAM\_60, LastJedi\_51, Latretium\_59, Leozinho\_56, Leperchaun\_49, LilMoolah\_55, LittleShirley\_56, Lizziana\_63, Llama\_62, Llij\_53, Lorde\_57, LunaBlu\_59, LunaStella\_55, MadMen\_55, Madiba\_55, Mahavrat\_55, Mantra\_53, Maravista\_58, Marker\_59, Martik\_57, Mattes\_61, MilanaBonita\_48, MilleniumForce\_61, MinionDave\_56, Minnie\_61, MisterCuddles\_55, Mova\_58, Mozy\_66, MulchExplorer\_63, Mutaforma13\_61, Nimbo\_51, Nivrat\_53, OfUltron\_62, OgoPogo\_63, Oksu\_61, OldBen\_54, OlympiaSaint\_59, Ovechkin\_56, OwlsT2W\_57, PHappiness\_52, Pacc40\_51, Phalconet\_56, Phanphagia\_55, Phasih\_55, Phatniss\_55, PhesterPhotato\_58, Philus\_60, Pippy\_55, Polka14\_55, Priscilla\_57, QuickMath\_58, Quico\_66, Radiance\_56, Ramsey\_57, RedBird\_55, Renaud18\_62, Rialto\_63, RitaG\_52, Rita\_58, RockyHorror\_58, Royals2015\_60, Ruby\_53, Saal\_59, Sabbb\_61, Sandalphon\_59, Sarma624\_55, Sassafras\_55, Scottish\_55, Sebastian\_62, Seagreen\_57, Shauna1\_56, ShiLan\_56, ShowerHandel\_60, ShroomBoi\_59, SiSi\_55, SimranZ1\_57, Soul22\_63, Sparkdehlily\_65, Spartacus\_59, Spikelee\_64, Spoonbill\_54, Squirty\_60, Stap\_55, Starcevich\_56, Strokeseat\_53, SuperGrey\_61, SwagPiggett\_62, TChen\_57, TDanisky\_65, Taj\_61, ThetaBob\_61, Tootsieroll\_58, Tweety\_57, UncleRicky\_56, VRedHorse\_57, Velveteen\_52, Veteran\_54, Wachhund\_59, Whatsapiecost\_58, Whouxphf\_54, WillSterrel\_58, XFactor\_56, Yorick\_56, Yoshi\_69, Zapner\_70, Zizzle\_61,

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

- Beakin\_59, BigPhil\_53, Bipolar\_56, Blexus\_55, BlueCrab\_57, BobaPhett\_61, Boomer\_62, BuzzLyseyear\_63, Cerasum\_53, DaddyRickover\_56, DeadP\_63, DirtMcGirt\_56, DotProduct\_52, Doug\_59, Empress\_55, Enby\_58, Fancypants\_59, Firehouse51\_58, GUmbie\_55, Hades\_58, Hegedechwinu\_57, IMpilo\_53, Jarcob\_57, Job42\_59, Kenuha5\_55, Krakatau\_55, Mandlovu\_53, Melissauren88\_56, Modragons\_61, Moonbeam\_56, Ms6\_53, Nitzel\_55, NormanBulbieJr\_57, Ochi17\_60, PMC\_54, Plumbus\_59, Poenanya\_57, Pollywog\_58, PopTart\_52, Rockne\_58, SG4\_54, SassyB\_52, StAnnes\_56, Totinger\_56, Zerg\_57,

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

- Aggie\_43, Awesomesauce\_59, BabeRuth\_50, Bosection6\_45, Butters\_48, Carcharodon\_45, Chewbacca\_47, ChickenDinner\_61, DocMcStuffins\_59, Duplicity\_45, Frankie\_65, Fulbright\_44, Gex\_45, Jamie19\_43, Juniper1\_58, Kevin1\_47, LilSpotty\_59, Magsby\_45, Melville\_48, MichelleMyBell\_45, Mischief19\_47, Misha28\_57, MooMoo\_58, MulchSalad\_59, Nenae\_49, Panchino\_42, ParmesanJohn\_45, PhancyPhin\_49, Phloss\_43, Piper2020\_60, Pipsqueaks\_45,

Purgamenstris\_49, QueenHazel\_40, Raymond7\_43, Rebel\_41, Redi\_49, Rubeelu\_48, Schnauzer\_46, Scitech\_42, ShrimpFriedEgg\_49, Silvafighter\_46, Silvy\_43, Smurph\_45, Snekmaggedon\_43, SpongeBob\_43, Tapioca\_47, TootsiePop\_57, Xerxes\_45, Xula\_39,

### Summary by start number:

#### Start 15:

- Found in 208 of 279 ( 74.6% ) of genes in pham
- Manual Annotations of this start: 12 of 267
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Beakin\_59 (F1), Bipolar\_56 (F1), BobaPhett\_61 (F1), Boomer\_62 (F1), DaddyRickover\_56 (F1), DotProduct\_52 (F1), Fancypants\_59 (F1), GUmble\_55 (F1), Kenuha5\_55 (F1), Krakatau\_55 (F1), Melissauren88\_56 (F1), Ms6\_53 (F1), Ochi17\_60 (F1), PMC\_54 (F1),

#### Start 16:

- Found in 245 of 279 ( 87.8% ) of genes in pham
- Manual Annotations of this start: 65 of 267
- Called 27.8% of time when present
- Phage (with cluster) where this start called: Aggie\_43 (N), BabeRuth\_50 (N), BigPhil\_53 (F1), Blexus\_55 (F1), BlueCrab\_57 (F1), Bosection6\_45 (N), Butters\_48 (N), BuzzLyseyear\_63 (F1), Carcharodon\_45 (N), Cerasum\_53 (F1), Chewbacca\_47 (N), DeadP\_63 (F1), DirtMcgirt\_56 (F1), Doug\_59 (F1), Duplicity\_45 (N), Empress\_55 (F1), Enby\_58 (F1), Firehouse51\_58 (F1), Fulbright\_44 (N), Gex\_45 (N), Hades\_58 (F1), Hegedechwinu\_57 (F1), IMPilo\_53 (F1), Jamie19\_43 (N), Jarcob\_57 (F1), Job42\_59 (F1), Juniper1\_58 (F1), Kevin1\_47 (N), Magsby\_45 (N), Mandlovu\_53 (F1), Melville\_48 (N), MichelleMyBell\_45 (N), Mischief19\_47 (BG), Modragons\_61 (F1), Moonbeam\_56 (F1), Nенаe\_49 (N), Nitzel\_55 (F1), NormanBulbieJr\_57 (F1), Panchino\_42 (N), Parmesanjohn\_45 (N), PhancyPhin\_49 (N), Phloss\_43 (N), Pipsqueaks\_45 (N), Plumbus\_59 (F1), Poenanya\_57 (F1), Pollywog\_58 (F1), PopTart\_52 (F1), Purgamenstris\_49 (N), Raymond7\_43 (N), Rebel\_41 (N), Redi\_49 (N), Rockne\_58 (F1), Rubeelu\_48 (N), SG4\_54 (F1), SassyB\_52 (F1), Schnauzer\_46 (N), Scitech\_42 (N), ShrimpFriedEgg\_49 (N), Silvafighter\_46 (N), Silvy\_43 (N), Smurph\_45 (N), Snekmaggedon\_43 (N), SpongeBob\_43 (N), StAnnes\_56 (F1), Tapioca\_47 (N), Totinger\_56 (F1), Xerxes\_45 (N), Zerg\_57 (F1),

#### Start 17:

- Found in 230 of 279 ( 82.4% ) of genes in pham
- Manual Annotations of this start: 180 of 267
- Called 80.4% of time when present
- Phage (with cluster) where this start called: Akhila\_49 (F1), Alexphander\_61 (F1), AlpineSix\_62 (F1), ArcusAngelus\_60 (F1), Ardmore\_50 (F1), Aubs\_58 (F1), Avani\_65 (F2), Batiatus\_56 (F1), Blarby\_69 (F), Bobi\_63 (F1), BodEinwohner17\_57 (F1), Brocalys\_52 (F1), Bubbles123\_54 (F1), Burwell21\_55 (F1), ByChance\_49 (F1), Byougenkin\_55 (F1), Cabrinians\_58 (F1), CaptainTrips\_54 (F1), Che8\_62 (F1), Che9d\_65 (F2), Chevrolet\_63 (F1), Chuckly\_60 (F1), Clifton\_52 (F1), Coco12\_56 (F1), Cornie\_52 (F5), Cornucopia\_59 (F1), Crumble\_52 (F1), DLane\_53 (F1), DRBy19\_60 (F1), DaWorst\_58 (F1), Daenerys\_51 (F1), Dante\_58 (F1), Deb65\_52 (F1), Demsculpinboyz\_67 (F2), DillTech15\_54 (F1), Donkeykong\_61 (F1), Doomphist\_57 (F1), Dorothy\_55 (F1), DosHalletts\_59 (F1), Drago\_55 (F1), Eish\_61 (F1), EleanorGeorge\_58 (F1), Emma\_59 (F1), Eradicator\_50 (F1), Estave1\_60 (F1), Fastidio\_57 (F1), Filuzino\_56 (F1), Flathead\_58 (F1), Florinda\_69 (F1), FreddyB\_58

(F1), Fruitloop\_55 (F1), Galactic\_56 (F1), Gandalph\_60 (F1), Geralt\_52 (F1), GigiOuiOui\_53 (F1), Girafales\_67 (F1), Girr\_55 (F1), Gorge\_61 (F1), Guppsters\_58 (F1), Hamulus\_59 (F1), Harley\_60 (F1), Hlubikazi\_53 (F1), IbOuu\_58 (F1), Ibhubesi\_57 (F1), Inventum\_52 (F1), IrishSherpFalk\_58 (F1), Jabbawokkie\_71 (F2), JalFarm20\_70 (F1), James\_61 (F1), Jinglebell\_62 (F1), JoeyJr\_52 (F1), Juice456\_58 (F1), Juniper1\_55 (F1), Karhdo\_54 (F1), Kersh\_59 (F1), Kimberlium\_59 (F1), KingMidas\_56 (F1), Kingsley\_54 (F1), Koella\_51 (F1), KristaRAM\_60 (F1), LastJedi\_51 (F1), Latretium\_59 (F1), Leozinho\_56 (F1), Leperchaun\_49 (F1), LilMoolah\_55 (F1), LittleShirley\_56 (F1), Lizziana\_63 (F1), Llama\_62 (F1), Llij\_53 (F1), Lorde\_57 (F1), LunaBlu\_59 (F1), LunaStella\_55 (F4), MadMen\_55 (F1), Madiba\_55 (F1), Mahavrat\_55 (F1), Mantra\_53 (F1), Maravista\_58 (F1), Marker\_59 (F1), Martik\_57 (F1), Mattes\_61 (F1), MilanaBonita\_48 (F1), MilleniumForce\_61 (F1), MinionDave\_56 (F1), Minnie\_61 (F1), MisterCuddles\_55 (F1), Mova\_58 (F1), Mozy\_66 (F1), MulchExplorer\_63 (F1), Mutaforma13\_61 (F1), Nimbo\_51 (F1), Nivrat\_53 (F1), OfUltron\_62 (F1), Ogotopogo\_63 (F1), Oksu\_61 (F1), OldBen\_54 (F1), OlympiaSaint\_59 (F1), Ovechkin\_56 (F1), OwlsT2W\_57 (F1), PHappiness\_52 (F1), Pacc40\_51 (F1), Phalconet\_56 (F1), Phanphagia\_55 (F1), Phasih\_55 (F1), Phatniss\_55 (F1), PhesterPhotato\_58 (F1), Philus\_60 (F1), Pippy\_55 (F1), Polka14\_55 (F1), Priscilla\_57 (F1), QuickMath\_58 (F1), Quico\_66 (F1), Radiance\_56 (F1), Ramsey\_57 (F1), RedBird\_55 (F1), Renaud18\_62 (F4), Rialto\_63 (F1), RitaG\_52 (F1), Rita\_58 (F1), RockyHorror\_58 (F1), Royals2015\_60 (F1), Ruby\_53 (F1), Saal\_59 (F1), Sabbb\_61 (F1), Sandalphon\_59 (F1), Sarma624\_55 (F1), Sassafras\_55 (F1), Scottish\_55 (F1), Seabastian\_62 (F1), Seagreen\_57 (F1), Shauna1\_56 (F1), ShiLan\_56 (F1), ShowerHandel\_60 (F1), ShroomBoi\_59 (F1), SiSi\_55 (F1), SimranZ1\_57 (F1), Soul22\_63 (F2), Sparkdehlily\_65 (F1), Spartacus\_59 (F1), Spikelee\_64 (F1), Spoonbill\_54 (F1), Squirty\_60 (F3), Stap\_55 (F1), Starcevich\_56 (F1), Strokeseat\_53 (F1), SuperGrey\_61 (F1), SwagPigglett\_62 (F1), TChen\_57 (F4), TDanisky\_65 (F1), Taj\_61 (F1), ThetaBob\_61 (F4), Tootsieroll\_58 (F1), Tweety\_57 (F1), UncleRicky\_56 (F1), VRedHorse\_57 (F1), Velveteen\_52 (F1), Veteran\_54 (F1), Wachhund\_59 (F1), Whatsapiecost\_58 (F1), Whouxphf\_54 (F1), WillSterrel\_58 (F1), XFactor\_56 (F1), Yorick\_56 (F1), Yoshi\_69 (F2), Zapner\_70 (F2), Zizzle\_61 (F1),

#### Start 18:

- Found in 25 of 279 ( 9.0% ) of genes in pham
- Manual Annotations of this start: 3 of 267
- Called 12.0% of time when present
- Phage (with cluster) where this start called: MooMoo\_58 (singleton), QueenHazel\_40 (I1), Xula\_39 (I1),

#### Start 20:

- Found in 9 of 279 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 7 of 267
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Awesomesauce\_59 (F1), ChickenDinner\_61 (F1), DocMcStuffins\_59 (F1), Frankie\_65 (F1), LilSpotty\_59 (singleton), Misha28\_57 (F1), MulchSalad\_59 (F), Piper2020\_60 (F1), TootsiePop\_57 (F1),

#### Summary by clusters:

There are 10 clusters represented in this pham: F1, singleton, F3, F4, F5, F, I1, F2, N, BG,

Info for manual annotations of cluster BG:

- Start number 16 was manually annotated 1 time for cluster BG.

Info for manual annotations of cluster F1:

- Start number 15 was manually annotated 12 times for cluster F1.
- Start number 16 was manually annotated 31 times for cluster F1.
- Start number 17 was manually annotated 167 times for cluster F1.
- Start number 20 was manually annotated 6 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 17 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 17 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 17 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 17 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster I1:

- Start number 18 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster N:

- Start number 16 was manually annotated 33 times for cluster N.

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

Gene: Aggie\_43 Start: 30482, Stop: 30862, Start Num: 16

Candidate Starts for Aggie\_43:

(2, 30200), (3, 30203), (6, 30347), (Start: 16 @30482 has 65 MA's), (27, 30578), (30, 30641), (35, 30704), (36, 30728), (46, 30779), (50, 30821), (53, 30851),

Gene: Akhila\_49 Start: 35492, Stop: 35893, Start Num: 17

Candidate Starts for Akhila\_49:

(Start: 15 @35483 has 12 MA's), (Start: 16 @35489 has 65 MA's), (Start: 17 @35492 has 180 MA's), (22, 35516), (37, 35744), (38, 35753), (40, 35768), (41, 35771), (51, 35861),

Gene: Alexphander\_61 Start: 39449, Stop: 39943, Start Num: 17

Candidate Starts for Alexphander\_61:

(Start: 15 @39440 has 12 MA's), (Start: 16 @39446 has 65 MA's), (Start: 17 @39449 has 180 MA's), (22, 39473), (32, 39632), (34, 39653), (38, 39713), (42, 39746), (45, 39761), (51, 39830), (55, 39881),

Gene: AlpineSix\_62 Start: 41568, Stop: 42062, Start Num: 17

Candidate Starts for AlpineSix\_62:

(Start: 15 @41559 has 12 MA's), (Start: 16 @41565 has 65 MA's), (Start: 17 @41568 has 180 MA's), (22, 41592), (32, 41751), (34, 41772), (38, 41832), (42, 41865), (45, 41880), (51, 41949), (55, 42000),



Gene: ArcusAngelus\_60 Start: 40045, Stop: 40452, Start Num: 17  
Candidate Starts for ArcusAngelus\_60:  
(Start: 15 @40036 has 12 MA's), (Start: 16 @40042 has 65 MA's), (Start: 17 @40045 has 180 MA's),  
(39, 40315), (51, 40420),

Gene: Ardmore\_50 Start: 37578, Stop: 37979, Start Num: 17  
Candidate Starts for Ardmore\_50:  
(Start: 15 @37569 has 12 MA's), (Start: 16 @37575 has 65 MA's), (Start: 17 @37578 has 180 MA's),  
(22, 37602), (37, 37830), (38, 37839), (40, 37854), (41, 37857), (51, 37947),

Gene: Aubs\_58 Start: 39742, Stop: 40143, Start Num: 17  
Candidate Starts for Aubs\_58:  
(Start: 15 @39733 has 12 MA's), (Start: 16 @39739 has 65 MA's), (Start: 17 @39742 has 180 MA's),  
(22, 39766), (37, 39994), (38, 40003), (40, 40018), (41, 40021), (51, 40111),

Gene: Avani\_65 Start: 39767, Stop: 40261, Start Num: 17  
Candidate Starts for Avani\_65:  
(Start: 17 @39767 has 180 MA's), (22, 39791), (32, 39950), (34, 39971), (38, 40031), (42, 40064), (45,  
40079), (51, 40148), (55, 40199), (56, 40250),

Gene: Awesomesauce\_59 Start: 38429, Stop: 38782, Start Num: 20  
Candidate Starts for Awesomesauce\_59:  
(11, 38378), (12, 38384), (Start: 20 @38429 has 7 MA's), (24, 38471), (29, 38540), (35, 38621), (36,  
38645), (47, 38702), (54, 38771),

Gene: BabeRuth\_50 Start: 32627, Stop: 33007, Start Num: 16  
Candidate Starts for BabeRuth\_50:  
(2, 32345), (3, 32348), (6, 32492), (Start: 16 @32627 has 65 MA's), (27, 32723), (30, 32786), (35,  
32849), (36, 32873), (46, 32924), (50, 32966), (53, 32996),

Gene: Batiatus\_56 Start: 39446, Stop: 39853, Start Num: 17  
Candidate Starts for Batiatus\_56:  
(Start: 15 @39437 has 12 MA's), (Start: 16 @39443 has 65 MA's), (Start: 17 @39446 has 180 MA's),  
(22, 39470), (39, 39716), (51, 39821),

Gene: Beakin\_59 Start: 38572, Stop: 38982, Start Num: 15  
Candidate Starts for Beakin\_59:  
(Start: 15 @38572 has 12 MA's), (Start: 16 @38578 has 65 MA's), (Start: 17 @38581 has 180 MA's),  
(22, 38605), (37, 38833), (38, 38842), (40, 38857), (41, 38860), (51, 38950),

Gene: BigPhil\_53 Start: 35158, Stop: 35655, Start Num: 16  
Candidate Starts for BigPhil\_53:  
(Start: 15 @35152 has 12 MA's), (Start: 16 @35158 has 65 MA's), (Start: 17 @35161 has 180 MA's),  
(32, 35344), (34, 35365), (38, 35425), (42, 35458), (45, 35473), (51, 35542), (55, 35593),

Gene: Bipolar\_56 Start: 39193, Stop: 39603, Start Num: 15  
Candidate Starts for Bipolar\_56:  
(Start: 15 @39193 has 12 MA's), (Start: 16 @39199 has 65 MA's), (Start: 17 @39202 has 180 MA's),  
(22, 39226), (37, 39454), (38, 39463), (40, 39478), (41, 39481), (51, 39571),

Gene: Blarby\_69 Start: 40862, Stop: 41356, Start Num: 17  
Candidate Starts for Blarby\_69:

(Start: 17 @40862 has 180 MA's), (22, 40886), (24, 40925), (32, 41045), (33, 41060), (34, 41066), (38, 41126), (42, 41159), (45, 41174), (47, 41186), (51, 41243), (55, 41294),

Gene: Blexus\_55 Start: 39416, Stop: 39913, Start Num: 16

Candidate Starts for Blexus\_55:

(Start: 15 @39410 has 12 MA's), (Start: 16 @39416 has 65 MA's), (Start: 17 @39419 has 180 MA's), (32, 39602), (34, 39623), (38, 39683), (42, 39716), (45, 39731), (51, 39800), (55, 39851),

Gene: BlueCrab\_57 Start: 39724, Stop: 40221, Start Num: 16

Candidate Starts for BlueCrab\_57:

(Start: 15 @39718 has 12 MA's), (Start: 16 @39724 has 65 MA's), (Start: 17 @39727 has 180 MA's), (32, 39910), (34, 39931), (38, 39991), (42, 40024), (45, 40039), (51, 40108), (55, 40159),

Gene: BobaPhett\_61 Start: 41669, Stop: 42172, Start Num: 15

Candidate Starts for BobaPhett\_61:

(Start: 15 @41669 has 12 MA's), (Start: 16 @41675 has 65 MA's), (Start: 17 @41678 has 180 MA's), (22, 41702), (32, 41861), (34, 41882), (38, 41942), (42, 41975), (45, 41990), (51, 42059), (55, 42110),

Gene: Bobi\_63 Start: 41055, Stop: 41456, Start Num: 17

Candidate Starts for Bobi\_63:

(Start: 15 @41046 has 12 MA's), (Start: 16 @41052 has 65 MA's), (Start: 17 @41055 has 180 MA's), (22, 41079), (37, 41307), (38, 41316), (40, 41331), (41, 41334), (51, 41424),

Gene: BodEinwohner17\_57 Start: 38489, Stop: 38983, Start Num: 17

Candidate Starts for BodEinwohner17\_57:

(Start: 15 @38480 has 12 MA's), (Start: 16 @38486 has 65 MA's), (Start: 17 @38489 has 180 MA's), (32, 38672), (33, 38687), (34, 38693), (38, 38753), (45, 38801), (47, 38813), (51, 38870), (55, 38921),

Gene: Boomer\_62 Start: 41344, Stop: 41847, Start Num: 15

Candidate Starts for Boomer\_62:

(Start: 15 @41344 has 12 MA's), (Start: 16 @41350 has 65 MA's), (Start: 17 @41353 has 180 MA's), (32, 41536), (34, 41557), (38, 41617), (42, 41650), (45, 41665), (53, 41743), (55, 41785),

Gene: Bosection6\_45 Start: 30372, Stop: 30755, Start Num: 16

Candidate Starts for Bosection6\_45:

(2, 30090), (3, 30093), (6, 30237), (11, 30348), (Start: 16 @30372 has 65 MA's), (Start: 18 @30378 has 3 MA's), (27, 30471), (30, 30534), (35, 30597), (36, 30621), (46, 30672), (50, 30714), (53, 30744),

Gene: Brocalys\_52 Start: 35863, Stop: 36357, Start Num: 17

Candidate Starts for Brocalys\_52:

(Start: 15 @35854 has 12 MA's), (Start: 16 @35860 has 65 MA's), (Start: 17 @35863 has 180 MA's), (22, 35887), (32, 36046), (34, 36067), (38, 36127), (42, 36160), (45, 36175), (51, 36244), (55, 36295),

Gene: Bubbles123\_54 Start: 39367, Stop: 39762, Start Num: 17

Candidate Starts for Bubbles123\_54:

(Start: 15 @39358 has 12 MA's), (Start: 16 @39364 has 65 MA's), (Start: 17 @39367 has 180 MA's), (37, 39613), (38, 39622), (40, 39637), (41, 39640), (51, 39730),

Gene: Burwell21\_55 Start: 38961, Stop: 39455, Start Num: 17

Candidate Starts for Burwell21\_55:

(Start: 15 @38952 has 12 MA's), (Start: 16 @38958 has 65 MA's), (Start: 17 @38961 has 180 MA's), (22, 38985), (32, 39144), (34, 39165), (38, 39225), (42, 39258), (45, 39273), (51, 39342), (55, 39393),

Gene: Butters\_48 Start: 32426, Stop: 32803, Start Num: 16

Candidate Starts for Butters\_48:

(1, 32126), (6, 32291), (Start: 16 @32426 has 65 MA's), (27, 32519), (30, 32582), (35, 32645), (36, 32669), (46, 32720),

Gene: BuzzLyseyear\_63 Start: 40382, Stop: 40879, Start Num: 16

Candidate Starts for BuzzLyseyear\_63:

(Start: 15 @40376 has 12 MA's), (Start: 16 @40382 has 65 MA's), (Start: 17 @40385 has 180 MA's), (32, 40568), (33, 40583), (34, 40589), (38, 40649), (42, 40682), (45, 40697), (51, 40766), (55, 40817),

Gene: ByChance\_49 Start: 34652, Stop: 35146, Start Num: 17

Candidate Starts for ByChance\_49:

(Start: 15 @34643 has 12 MA's), (Start: 16 @34649 has 65 MA's), (Start: 17 @34652 has 180 MA's), (32, 34835), (34, 34856), (38, 34916), (42, 34949), (45, 34964), (51, 35033), (55, 35084),

Gene: Byougenkin\_55 Start: 38728, Stop: 39222, Start Num: 17

Candidate Starts for Byougenkin\_55:

(Start: 17 @38728 has 180 MA's), (32, 38911), (34, 38932), (38, 38992), (42, 39025), (45, 39040), (53, 39118), (55, 39160),

Gene: Cabrinians\_58 Start: 39039, Stop: 39533, Start Num: 17

Candidate Starts for Cabrinians\_58:

(Start: 15 @39030 has 12 MA's), (Start: 16 @39036 has 65 MA's), (Start: 17 @39039 has 180 MA's), (22, 39063), (32, 39222), (34, 39243), (38, 39303), (42, 39336), (45, 39351), (51, 39420), (55, 39471),

Gene: CaptainTrips\_54 Start: 38535, Stop: 39029, Start Num: 17

Candidate Starts for CaptainTrips\_54:

(Start: 15 @38526 has 12 MA's), (Start: 16 @38532 has 65 MA's), (Start: 17 @38535 has 180 MA's), (22, 38559), (32, 38718), (33, 38733), (34, 38739), (38, 38799), (42, 38832), (45, 38847), (51, 38916), (55, 38967),

Gene: Carcharodon\_45 Start: 31721, Stop: 32104, Start Num: 16

Candidate Starts for Carcharodon\_45:

(6, 31586), (11, 31697), (Start: 16 @31721 has 65 MA's), (Start: 18 @31727 has 3 MA's), (27, 31820), (30, 31883), (35, 31946), (36, 31970), (46, 32021), (50, 32063), (53, 32093),

Gene: Cerasum\_53 Start: 35176, Stop: 35673, Start Num: 16

Candidate Starts for Cerasum\_53:

(Start: 15 @35170 has 12 MA's), (Start: 16 @35176 has 65 MA's), (Start: 17 @35179 has 180 MA's), (32, 35362), (34, 35383), (38, 35443), (42, 35476), (45, 35491), (51, 35560), (55, 35611),

Gene: Che8\_62 Start: 41668, Stop: 42162, Start Num: 17

Candidate Starts for Che8\_62:

(Start: 17 @41668 has 180 MA's), (32, 41851), (34, 41872), (38, 41932), (42, 41965), (45, 41980), (51, 42049), (55, 42100),

Gene: Che9d\_65 Start: 38750, Stop: 39244, Start Num: 17

Candidate Starts for Che9d\_65:

(Start: 17 @38750 has 180 MA's), (22, 38774), (24, 38813), (30, 38906), (32, 38933), (33, 38948), (34, 38954), (38, 39014), (45, 39062), (47, 39074), (53, 39140), (55, 39182),

Gene: Chevrolet\_63 Start: 40046, Stop: 40453, Start Num: 17

Candidate Starts for Chevrolet\_63:

(Start: 15 @40037 has 12 MA's), (Start: 16 @40043 has 65 MA's), (Start: 17 @40046 has 180 MA's), (39, 40316), (51, 40421),

Gene: Chewbacca\_47 Start: 31721, Stop: 32104, Start Num: 16

Candidate Starts for Chewbacca\_47:

(6, 31586), (11, 31697), (Start: 16 @31721 has 65 MA's), (Start: 18 @31727 has 3 MA's), (27, 31820), (30, 31883), (35, 31946), (36, 31970), (46, 32021), (50, 32063), (53, 32093),

Gene: ChickenDinner\_61 Start: 39346, Stop: 39699, Start Num: 20

Candidate Starts for ChickenDinner\_61:

(Start: 20 @39346 has 7 MA's), (24, 39388), (29, 39457), (35, 39538), (36, 39562), (47, 39619), (54, 39688),

Gene: Chuckly\_60 Start: 39681, Stop: 40175, Start Num: 17

Candidate Starts for Chuckly\_60:

(Start: 15 @39672 has 12 MA's), (Start: 16 @39678 has 65 MA's), (Start: 17 @39681 has 180 MA's), (22, 39705), (32, 39864), (34, 39885), (38, 39945), (42, 39978), (45, 39993), (51, 40062), (55, 40113),

Gene: Clifton\_52 Start: 36214, Stop: 36708, Start Num: 17

Candidate Starts for Clifton\_52:

(Start: 15 @36205 has 12 MA's), (Start: 16 @36211 has 65 MA's), (Start: 17 @36214 has 180 MA's), (22, 36238), (32, 36397), (34, 36418), (38, 36478), (42, 36511), (45, 36526), (51, 36595), (55, 36646),

Gene: Coco12\_56 Start: 39236, Stop: 39730, Start Num: 17

Candidate Starts for Coco12\_56:

(Start: 15 @39227 has 12 MA's), (Start: 16 @39233 has 65 MA's), (Start: 17 @39236 has 180 MA's), (32, 39419), (34, 39440), (38, 39500), (42, 39533), (45, 39548), (51, 39617), (55, 39668),

Gene: Cornie\_52 Start: 37254, Stop: 37748, Start Num: 17

Candidate Starts for Cornie\_52:

(Start: 17 @37254 has 180 MA's), (22, 37278), (24, 37317), (30, 37410), (32, 37437), (33, 37452), (34, 37458), (38, 37518), (45, 37566), (47, 37578), (53, 37644), (55, 37686),

Gene: Cornucopia\_59 Start: 39695, Stop: 40189, Start Num: 17

Candidate Starts for Cornucopia\_59:

(Start: 17 @39695 has 180 MA's), (22, 39719), (32, 39878), (34, 39899), (38, 39959), (42, 39992), (45, 40007), (51, 40076), (55, 40127),

Gene: Crumble\_52 Start: 34975, Stop: 35469, Start Num: 17

Candidate Starts for Crumble\_52:

(Start: 15 @34966 has 12 MA's), (Start: 16 @34972 has 65 MA's), (Start: 17 @34975 has 180 MA's), (22, 34999), (32, 35158), (34, 35179), (38, 35239), (42, 35272), (45, 35287), (51, 35356), (55, 35407),

Gene: DLane\_53 Start: 38102, Stop: 38503, Start Num: 17

Candidate Starts for DLane\_53:

(Start: 15 @38093 has 12 MA's), (Start: 16 @38099 has 65 MA's), (Start: 17 @38102 has 180 MA's), (22, 38126), (37, 38354), (38, 38363), (40, 38378), (41, 38381), (51, 38471),

Gene: DRBy19\_60 Start: 40139, Stop: 40633, Start Num: 17

Candidate Starts for DRBy19\_60:

(Start: 15 @40130 has 12 MA's), (Start: 16 @40136 has 65 MA's), (Start: 17 @40139 has 180 MA's), (32, 40322), (34, 40343), (38, 40403), (42, 40436), (45, 40451), (51, 40520), (55, 40571),

Gene: DaWorst\_58 Start: 39440, Stop: 39934, Start Num: 17

Candidate Starts for DaWorst\_58:

(Start: 15 @39431 has 12 MA's), (Start: 16 @39437 has 65 MA's), (Start: 17 @39440 has 180 MA's), (22, 39464), (32, 39623), (34, 39644), (38, 39704), (42, 39737), (45, 39752), (51, 39821), (55, 39872),

Gene: DaddyRickover\_56 Start: 39169, Stop: 39672, Start Num: 15

Candidate Starts for DaddyRickover\_56:

(Start: 15 @39169 has 12 MA's), (Start: 16 @39175 has 65 MA's), (Start: 17 @39178 has 180 MA's), (32, 39361), (34, 39382), (38, 39442), (42, 39475), (45, 39490), (51, 39559), (55, 39610),

Gene: Daenerys\_51 Start: 37294, Stop: 37788, Start Num: 17

Candidate Starts for Daenerys\_51:

(Start: 15 @37285 has 12 MA's), (Start: 16 @37291 has 65 MA's), (Start: 17 @37294 has 180 MA's), (32, 37477), (33, 37492), (34, 37498), (38, 37558), (45, 37606), (47, 37618), (51, 37675), (55, 37726),

Gene: Dante\_58 Start: 38963, Stop: 39457, Start Num: 17

Candidate Starts for Dante\_58:

(Start: 15 @38954 has 12 MA's), (Start: 16 @38960 has 65 MA's), (Start: 17 @38963 has 180 MA's), (22, 38987), (32, 39146), (34, 39167), (38, 39227), (42, 39260), (45, 39275), (51, 39344), (55, 39395),

Gene: DeadP\_63 Start: 41612, Stop: 42103, Start Num: 16

Candidate Starts for DeadP\_63:

(Start: 15 @41606 has 12 MA's), (Start: 16 @41612 has 65 MA's), (Start: 17 @41615 has 180 MA's), (22, 41639), (32, 41792), (33, 41807), (34, 41813), (38, 41873), (42, 41906), (45, 41921), (51, 41990), (55, 42041),

Gene: Deb65\_52 Start: 37263, Stop: 37757, Start Num: 17

Candidate Starts for Deb65\_52:

(Start: 15 @37254 has 12 MA's), (Start: 16 @37260 has 65 MA's), (Start: 17 @37263 has 180 MA's), (32, 37446), (33, 37461), (34, 37467), (38, 37527), (45, 37575), (47, 37587), (51, 37644), (55, 37695),

Gene: Demsculpinboyz\_67 Start: 38751, Stop: 39245, Start Num: 17

Candidate Starts for Demsculpinboyz\_67:

(Start: 17 @38751 has 180 MA's), (30, 38907), (32, 38934), (33, 38949), (34, 38955), (38, 39015), (45, 39063), (47, 39075), (53, 39141), (55, 39183),

Gene: DillTech15\_54 Start: 37628, Stop: 38122, Start Num: 17

Candidate Starts for DillTech15\_54:

(Start: 15 @37619 has 12 MA's), (Start: 16 @37625 has 65 MA's), (Start: 17 @37628 has 180 MA's), (30, 37784), (32, 37811), (34, 37832), (38, 37892), (42, 37925), (45, 37940), (51, 38009), (55, 38060),

Gene: DirtMcgirt\_56 Start: 37700, Stop: 38197, Start Num: 16

Candidate Starts for DirtMcgirt\_56:

(Start: 15 @37694 has 12 MA's), (Start: 16 @37700 has 65 MA's), (Start: 17 @37703 has 180 MA's), (32, 37886), (34, 37907), (38, 37967), (42, 38000), (45, 38015), (51, 38084), (55, 38135),

Gene: DocMcStuffins\_59 Start: 39346, Stop: 39699, Start Num: 20

Candidate Starts for DocMcStuffins\_59:

(Start: 20 @39346 has 7 MA's), (24, 39388), (29, 39457), (35, 39538), (36, 39562), (47, 39619), (54, 39688),

Gene: Donkeykong\_61 Start: 41997, Stop: 42398, Start Num: 17

Candidate Starts for Donkeykong\_61:

(Start: 15 @41988 has 12 MA's), (Start: 16 @41994 has 65 MA's), (Start: 17 @41997 has 180 MA's), (22, 42021), (37, 42249), (38, 42258), (40, 42273), (41, 42276), (51, 42366),

Gene: Doomphist\_57 Start: 40139, Stop: 40633, Start Num: 17

Candidate Starts for Doomphist\_57:

(Start: 15 @40130 has 12 MA's), (Start: 16 @40136 has 65 MA's), (Start: 17 @40139 has 180 MA's), (32, 40322), (33, 40337), (34, 40343), (38, 40403), (45, 40451), (47, 40463), (51, 40520), (55, 40571),

Gene: Dorothy\_55 Start: 38358, Stop: 38852, Start Num: 17

Candidate Starts for Dorothy\_55:

(Start: 15 @38349 has 12 MA's), (Start: 16 @38355 has 65 MA's), (Start: 17 @38358 has 180 MA's), (32, 38541), (33, 38556), (34, 38562), (38, 38622), (45, 38670), (47, 38682), (51, 38739), (55, 38790),

Gene: DosHalletts\_59 Start: 40494, Stop: 40988, Start Num: 17

Candidate Starts for DosHalletts\_59:

(Start: 15 @40485 has 12 MA's), (Start: 16 @40491 has 65 MA's), (Start: 17 @40494 has 180 MA's), (32, 40677), (34, 40698), (38, 40758), (42, 40791), (45, 40806), (51, 40875), (55, 40926),

Gene: DotProduct\_52 Start: 37748, Stop: 38251, Start Num: 15

Candidate Starts for DotProduct\_52:

(Start: 15 @37748 has 12 MA's), (Start: 16 @37754 has 65 MA's), (Start: 17 @37757 has 180 MA's), (32, 37940), (34, 37961), (38, 38021), (42, 38054), (45, 38069), (51, 38138), (55, 38189),

Gene: Doug\_59 Start: 39703, Stop: 40200, Start Num: 16

Candidate Starts for Doug\_59:

(Start: 15 @39697 has 12 MA's), (Start: 16 @39703 has 65 MA's), (Start: 17 @39706 has 180 MA's), (22, 39730), (32, 39889), (34, 39910), (38, 39970), (42, 40003), (45, 40018), (51, 40087), (55, 40138),

Gene: Drago\_55 Start: 37706, Stop: 38200, Start Num: 17

Candidate Starts for Drago\_55:

(Start: 15 @37697 has 12 MA's), (Start: 16 @37703 has 65 MA's), (Start: 17 @37706 has 180 MA's), (32, 37889), (34, 37910), (38, 37970), (42, 38003), (45, 38018), (51, 38087), (55, 38138),

Gene: Duplicity\_45 Start: 31730, Stop: 32113, Start Num: 16

Candidate Starts for Duplicity\_45:

(6, 31595), (11, 31706), (Start: 16 @31730 has 65 MA's), (Start: 18 @31736 has 3 MA's), (27, 31829), (30, 31892), (35, 31955), (36, 31979), (46, 32030), (50, 32072), (53, 32102),

Gene: Eish\_61 Start: 39955, Stop: 40449, Start Num: 17

Candidate Starts for Eish\_61:

(Start: 15 @39946 has 12 MA's), (Start: 16 @39952 has 65 MA's), (Start: 17 @39955 has 180 MA's), (32, 40138), (34, 40159), (38, 40219), (42, 40252), (45, 40267), (51, 40336), (55, 40387),

Gene: EleanorGeorge\_58 Start: 39822, Stop: 40316, Start Num: 17

Candidate Starts for EleanorGeorge\_58:

(Start: 17 @39822 has 180 MA's), (32, 40005), (34, 40026), (38, 40086), (42, 40119), (45, 40134), (51, 40203), (55, 40254),

Gene: Emma\_59 Start: 39114, Stop: 39515, Start Num: 17

Candidate Starts for Emma\_59:

(Start: 15 @39105 has 12 MA's), (Start: 16 @39111 has 65 MA's), (Start: 17 @39114 has 180 MA's), (22, 39138), (37, 39366), (38, 39375), (40, 39390), (41, 39393), (51, 39483),

Gene: Empress\_55 Start: 38705, Stop: 39202, Start Num: 16

Candidate Starts for Empress\_55:

(Start: 15 @38699 has 12 MA's), (Start: 16 @38705 has 65 MA's), (Start: 17 @38708 has 180 MA's), (32, 38891), (33, 38906), (34, 38912), (38, 38972), (45, 39020), (47, 39032), (51, 39089), (55, 39140),

Gene: Enby\_58 Start: 37979, Stop: 38476, Start Num: 16

Candidate Starts for Enby\_58:

(Start: 15 @37973 has 12 MA's), (Start: 16 @37979 has 65 MA's), (Start: 17 @37982 has 180 MA's), (32, 38165), (33, 38180), (34, 38186), (38, 38246), (42, 38279), (45, 38294), (51, 38363), (55, 38414),

Gene: Eradicator\_50 Start: 37235, Stop: 37729, Start Num: 17

Candidate Starts for Eradicator\_50:

(Start: 15 @37226 has 12 MA's), (Start: 16 @37232 has 65 MA's), (Start: 17 @37235 has 180 MA's), (32, 37418), (33, 37433), (34, 37439), (38, 37499), (42, 37532), (45, 37547), (51, 37616), (55, 37667),

Gene: Estave1\_60 Start: 40159, Stop: 40653, Start Num: 17

Candidate Starts for Estave1\_60:

(Start: 15 @40150 has 12 MA's), (Start: 16 @40156 has 65 MA's), (Start: 17 @40159 has 180 MA's), (32, 40342), (34, 40363), (38, 40423), (42, 40456), (45, 40471), (51, 40540), (55, 40591),

Gene: Fancypants\_59 Start: 39664, Stop: 40167, Start Num: 15

Candidate Starts for Fancypants\_59:

(Start: 15 @39664 has 12 MA's), (Start: 16 @39670 has 65 MA's), (Start: 17 @39673 has 180 MA's), (22, 39697), (32, 39856), (34, 39877), (38, 39937), (42, 39970), (45, 39985), (51, 40054), (55, 40105),

Gene: Fastidio\_57 Start: 37775, Stop: 38269, Start Num: 17

Candidate Starts for Fastidio\_57:

(Start: 15 @37766 has 12 MA's), (Start: 16 @37772 has 65 MA's), (Start: 17 @37775 has 180 MA's), (30, 37931), (32, 37958), (34, 37979), (38, 38039), (42, 38072), (45, 38087), (51, 38156), (55, 38207),

Gene: Filuzino\_56 Start: 38404, Stop: 38805, Start Num: 17

Candidate Starts for Filuzino\_56:

(Start: 15 @38395 has 12 MA's), (Start: 16 @38401 has 65 MA's), (Start: 17 @38404 has 180 MA's), (22, 38428), (37, 38656), (38, 38665), (40, 38680), (41, 38683), (51, 38773),

Gene: Firehouse51\_58 Start: 42554, Stop: 43051, Start Num: 16

Candidate Starts for Firehouse51\_58:

(Start: 15 @42548 has 12 MA's), (Start: 16 @42554 has 65 MA's), (Start: 17 @42557 has 180 MA's), (32, 42740), (34, 42761), (38, 42821), (42, 42854), (45, 42869), (51, 42938), (55, 42989),

Gene: Flathead\_58 Start: 39871, Stop: 40272, Start Num: 17

Candidate Starts for Flathead\_58:

(Start: 15 @39862 has 12 MA's), (Start: 16 @39868 has 65 MA's), (Start: 17 @39871 has 180 MA's), (22, 39895), (37, 40123), (38, 40132), (40, 40147), (41, 40150), (51, 40240),

Gene: Florinda\_69 Start: 41495, Stop: 41902, Start Num: 17

Candidate Starts for Florinda\_69:

(Start: 15 @41486 has 12 MA's), (Start: 16 @41492 has 65 MA's), (Start: 17 @41495 has 180 MA's), (39, 41765), (51, 41870),

Gene: Frankie\_65 Start: 41824, Stop: 42177, Start Num: 20

Candidate Starts for Frankie\_65:

(11, 41773), (12, 41779), (Start: 20 @41824 has 7 MA's), (24, 41866), (29, 41935), (35, 42016), (36, 42040), (47, 42097), (54, 42166),

Gene: FreddyB\_58 Start: 37887, Stop: 38381, Start Num: 17

Candidate Starts for FreddyB\_58:

(Start: 15 @37878 has 12 MA's), (Start: 16 @37884 has 65 MA's), (Start: 17 @37887 has 180 MA's), (22, 37911), (32, 38070), (34, 38091), (38, 38151), (42, 38184), (45, 38199), (51, 38268), (55, 38319),

Gene: Fruitloop\_55 Start: 39718, Stop: 40119, Start Num: 17

Candidate Starts for Fruitloop\_55:

(Start: 15 @39709 has 12 MA's), (Start: 16 @39715 has 65 MA's), (Start: 17 @39718 has 180 MA's), (22, 39742), (37, 39970), (38, 39979), (40, 39994), (41, 39997),

Gene: Fulbright\_44 Start: 30810, Stop: 31193, Start Num: 16

Candidate Starts for Fulbright\_44:

(6, 30675), (11, 30786), (Start: 16 @30810 has 65 MA's), (Start: 18 @30816 has 3 MA's), (27, 30909), (30, 30972), (35, 31035), (36, 31059), (46, 31110), (50, 31152), (53, 31182),

Gene: GUmbie\_55 Start: 38453, Stop: 38956, Start Num: 15

Candidate Starts for GUmbie\_55:

(Start: 15 @38453 has 12 MA's), (Start: 16 @38459 has 65 MA's), (Start: 17 @38462 has 180 MA's), (32, 38645), (33, 38660), (34, 38666), (38, 38726), (42, 38759), (45, 38774), (51, 38843), (55, 38894),

Gene: Galactic\_56 Start: 38928, Stop: 39422, Start Num: 17

Candidate Starts for Galactic\_56:

(Start: 15 @38919 has 12 MA's), (Start: 16 @38925 has 65 MA's), (Start: 17 @38928 has 180 MA's), (22, 38952), (32, 39111), (34, 39132), (38, 39192), (42, 39225), (45, 39240), (51, 39309), (55, 39360),

Gene: Gandalph\_60 Start: 39284, Stop: 39778, Start Num: 17

Candidate Starts for Gandalph\_60:

(Start: 17 @39284 has 180 MA's), (32, 39467), (34, 39488), (38, 39548), (42, 39581), (45, 39596), (51, 39665), (55, 39716),

Gene: Geralt\_52 Start: 37262, Stop: 37756, Start Num: 17

Candidate Starts for Geralt\_52:

(Start: 15 @37253 has 12 MA's), (Start: 16 @37259 has 65 MA's), (Start: 17 @37262 has 180 MA's), (32, 37445), (33, 37460), (34, 37466), (38, 37526), (45, 37574), (47, 37586), (51, 37643), (55, 37694),

Gene: Gex\_45 Start: 31737, Stop: 32120, Start Num: 16

Candidate Starts for Gex\_45:

(6, 31602), (11, 31713), (Start: 16 @31737 has 65 MA's), (Start: 18 @31743 has 3 MA's), (27, 31836), (30, 31899), (35, 31962), (36, 31986), (46, 32037), (50, 32079), (53, 32109),

Gene: GigiOuiOui\_53 Start: 37902, Stop: 38396, Start Num: 17

Candidate Starts for GigiOuiOui\_53:

(Start: 15 @37893 has 12 MA's), (Start: 16 @37899 has 65 MA's), (Start: 17 @37902 has 180 MA's), (22, 37926), (32, 38085), (34, 38106), (38, 38166), (42, 38199), (45, 38214), (51, 38283), (55, 38334),

Gene: Girafales\_67 Start: 41286, Stop: 41693, Start Num: 17

Candidate Starts for Girafales\_67:

(Start: 15 @41277 has 12 MA's), (Start: 16 @41283 has 65 MA's), (Start: 17 @41286 has 180 MA's), (39, 41556), (51, 41661),



Gene: Girr\_55 Start: 38769, Stop: 39263, Start Num: 17

Candidate Starts for Girr\_55:

(Start: 15 @38760 has 12 MA's), (Start: 16 @38766 has 65 MA's), (Start: 17 @38769 has 180 MA's), (22, 38793), (32, 38952), (34, 38973), (37, 39024), (38, 39033), (42, 39066), (45, 39081), (51, 39150), (55, 39201),

Gene: Gorge\_61 Start: 40404, Stop: 40898, Start Num: 17

Candidate Starts for Gorge\_61:

(Start: 15 @40395 has 12 MA's), (Start: 16 @40401 has 65 MA's), (Start: 17 @40404 has 180 MA's), (22, 40428), (32, 40587), (34, 40608), (38, 40668), (42, 40701), (45, 40716), (51, 40785), (55, 40836),

Gene: Guppsters\_58 Start: 38592, Stop: 39086, Start Num: 17

Candidate Starts for Guppsters\_58:

(Start: 15 @38583 has 12 MA's), (Start: 16 @38589 has 65 MA's), (Start: 17 @38592 has 180 MA's), (32, 38775), (33, 38790), (34, 38796), (38, 38856), (42, 38889), (45, 38904), (51, 38973), (55, 39024),

Gene: Hades\_58 Start: 39857, Stop: 40354, Start Num: 16

Candidate Starts for Hades\_58:

(Start: 15 @39851 has 12 MA's), (Start: 16 @39857 has 65 MA's), (Start: 17 @39860 has 180 MA's), (22, 39884), (32, 40043), (33, 40058), (34, 40064), (38, 40124), (42, 40157), (45, 40172), (51, 40241), (55, 40292),

Gene: Hamulus\_59 Start: 39858, Stop: 40259, Start Num: 17

Candidate Starts for Hamulus\_59:

(Start: 15 @39849 has 12 MA's), (Start: 16 @39855 has 65 MA's), (Start: 17 @39858 has 180 MA's), (22, 39882), (37, 40110), (38, 40119), (40, 40134), (41, 40137), (51, 40227),

Gene: Harley\_60 Start: 39823, Stop: 40317, Start Num: 17

Candidate Starts for Harley\_60:

(Start: 17 @39823 has 180 MA's), (32, 40006), (34, 40027), (38, 40087), (42, 40120), (45, 40135), (51, 40204), (55, 40255),

Gene: Hegedechwinu\_57 Start: 38071, Stop: 38568, Start Num: 16

Candidate Starts for Hegedechwinu\_57:

(Start: 15 @38065 has 12 MA's), (Start: 16 @38071 has 65 MA's), (Start: 17 @38074 has 180 MA's), (32, 38257), (33, 38272), (34, 38278), (38, 38338), (42, 38371), (45, 38386), (51, 38455), (55, 38506),

Gene: Hlubikazi\_53 Start: 37080, Stop: 37574, Start Num: 17

Candidate Starts for Hlubikazi\_53:

(Start: 15 @37071 has 12 MA's), (Start: 16 @37077 has 65 MA's), (Start: 17 @37080 has 180 MA's), (22, 37104), (32, 37263), (34, 37284), (38, 37344), (42, 37377), (45, 37392), (51, 37461), (55, 37512),

Gene: IMpilo\_53 Start: 36915, Stop: 37412, Start Num: 16

Candidate Starts for IMpilo\_53:

(Start: 15 @36909 has 12 MA's), (Start: 16 @36915 has 65 MA's), (Start: 17 @36918 has 180 MA's), (22, 36942), (32, 37101), (34, 37122), (38, 37182), (42, 37215), (45, 37230), (53, 37308), (55, 37350),

Gene: IbOuu\_58 Start: 39439, Stop: 39933, Start Num: 17

Candidate Starts for IbOuu\_58:

(Start: 15 @39430 has 12 MA's), (Start: 16 @39436 has 65 MA's), (Start: 17 @39439 has 180 MA's), (32, 39622), (33, 39637), (34, 39643), (38, 39703), (42, 39736), (45, 39751), (51, 39820), (55, 39871),

Gene: Ibhubesi\_57 Start: 39052, Stop: 39546, Start Num: 17

Candidate Starts for Ibhubes\_i\_57:

(Start: 15 @39043 has 12 MA's), (Start: 16 @39049 has 65 MA's), (Start: 17 @39052 has 180 MA's), (22, 39076), (32, 39235), (34, 39256), (38, 39316), (42, 39349), (45, 39364), (51, 39433), (55, 39484),

Gene: Inventum\_52 Start: 38556, Stop: 39050, Start Num: 17

Candidate Starts for Inventum\_52:

(Start: 15 @38547 has 12 MA's), (Start: 16 @38553 has 65 MA's), (Start: 17 @38556 has 180 MA's), (32, 38739), (34, 38760), (38, 38820), (45, 38868), (47, 38880), (51, 38937), (55, 38988),

Gene: IrishSherpFalk\_58 Start: 40717, Stop: 41211, Start Num: 17

Candidate Starts for IrishSherpFalk\_58:

(Start: 15 @40708 has 12 MA's), (Start: 16 @40714 has 65 MA's), (Start: 17 @40717 has 180 MA's), (32, 40900), (34, 40921), (38, 40981), (42, 41014), (45, 41029), (55, 41149),

Gene: Jabbawokkie\_71 Start: 40782, Stop: 41276, Start Num: 17

Candidate Starts for Jabbawokkie\_71:

(Start: 17 @40782 has 180 MA's), (22, 40806), (24, 40845), (32, 40965), (33, 40980), (34, 40986), (38, 41046), (42, 41079), (45, 41094), (47, 41106), (51, 41163), (55, 41214),

Gene: JalFarm20\_70 Start: 42971, Stop: 43465, Start Num: 17

Candidate Starts for JalFarm20\_70:

(Start: 17 @42971 has 180 MA's), (32, 43154), (34, 43175), (38, 43235), (42, 43268), (45, 43283), (51, 43352), (55, 43403),

Gene: James\_61 Start: 40529, Stop: 41023, Start Num: 17

Candidate Starts for James\_61:

(Start: 15 @40520 has 12 MA's), (Start: 16 @40526 has 65 MA's), (Start: 17 @40529 has 180 MA's), (32, 40712), (34, 40733), (38, 40793), (42, 40826), (45, 40841), (51, 40910), (55, 40961),

Gene: Jamie19\_43 Start: 30918, Stop: 31301, Start Num: 16

Candidate Starts for Jamie19\_43:

(6, 30783), (11, 30894), (Start: 16 @30918 has 65 MA's), (Start: 18 @30924 has 3 MA's), (27, 31017), (30, 31080), (35, 31143), (36, 31167), (46, 31218), (50, 31260), (53, 31290),

Gene: Jacob\_57 Start: 39004, Stop: 39501, Start Num: 16

Candidate Starts for Jacob\_57:

(Start: 15 @38998 has 12 MA's), (Start: 16 @39004 has 65 MA's), (Start: 17 @39007 has 180 MA's), (22, 39031), (32, 39190), (34, 39211), (38, 39271), (42, 39304), (45, 39319), (51, 39388), (55, 39439),

Gene: Jinglebell\_62 Start: 41567, Stop: 42061, Start Num: 17

Candidate Starts for Jinglebell\_62:

(Start: 15 @41558 has 12 MA's), (Start: 16 @41564 has 65 MA's), (Start: 17 @41567 has 180 MA's), (22, 41591), (32, 41750), (34, 41771), (38, 41831), (42, 41864), (45, 41879), (51, 41948), (55, 41999),

Gene: Job42\_59 Start: 40944, Stop: 41441, Start Num: 16

Candidate Starts for Job42\_59:

(Start: 15 @40938 has 12 MA's), (Start: 16 @40944 has 65 MA's), (Start: 17 @40947 has 180 MA's), (32, 41130), (34, 41151), (38, 41211), (42, 41244), (45, 41259), (51, 41328), (55, 41379),

Gene: JoeyJr\_52 Start: 37462, Stop: 37956, Start Num: 17

Candidate Starts for JoeyJr\_52:

(Start: 15 @37453 has 12 MA's), (Start: 16 @37459 has 65 MA's), (Start: 17 @37462 has 180 MA's), (32, 37645), (33, 37660), (34, 37666), (38, 37726), (45, 37774), (47, 37786), (51, 37843), (55, 37894),

Gene: Juice456\_58 Start: 40927, Stop: 41421, Start Num: 17

Candidate Starts for Juice456\_58:

(Start: 17 @40927 has 180 MA's), (32, 41110), (34, 41131), (38, 41191), (42, 41224), (45, 41239), (51, 41308), (55, 41359),

Gene: Juniper1\_55 Start: 38863, Stop: 39357, Start Num: 17

Candidate Starts for Juniper1\_55:

(Start: 15 @38854 has 12 MA's), (Start: 16 @38860 has 65 MA's), (Start: 17 @38863 has 180 MA's), (22, 38887), (32, 39046), (34, 39067), (37, 39118), (38, 39127), (42, 39160), (45, 39175), (51, 39244), (53, 39253), (55, 39295),

Gene: Juniper1\_58 Start: 40048, Stop: 40446, Start Num: 16

Candidate Starts for Juniper1\_58:

(10, 40012), (Start: 16 @40048 has 65 MA's), (24, 40120), (25, 40132), (28, 40189), (31, 40225), (32, 40237), (42, 40351), (48, 40405), (52, 40438),

Gene: Karhdo\_54 Start: 38552, Stop: 39046, Start Num: 17

Candidate Starts for Karhdo\_54:

(Start: 15 @38543 has 12 MA's), (Start: 16 @38549 has 65 MA's), (Start: 17 @38552 has 180 MA's), (22, 38576), (32, 38735), (34, 38756), (38, 38816), (42, 38849), (45, 38864), (51, 38933), (55, 38984),

Gene: Kenuha5\_55 Start: 37976, Stop: 38380, Start Num: 15

Candidate Starts for Kenuha5\_55:

(Start: 15 @37976 has 12 MA's), (Start: 16 @37982 has 65 MA's), (Start: 17 @37985 has 180 MA's), (37, 38231), (38, 38240), (40, 38255), (41, 38258), (51, 38348),

Gene: Kersh\_59 Start: 41305, Stop: 41799, Start Num: 17

Candidate Starts for Kersh\_59:

(Start: 15 @41296 has 12 MA's), (Start: 16 @41302 has 65 MA's), (Start: 17 @41305 has 180 MA's), (22, 41329), (30, 41461), (32, 41488), (34, 41509), (38, 41569), (42, 41602), (45, 41617), (51, 41686), (55, 41737),

Gene: Kevin1\_47 Start: 31862, Stop: 32239, Start Num: 16

Candidate Starts for Kevin1\_47:

(1, 31562), (6, 31727), (Start: 16 @31862 has 65 MA's), (27, 31955), (30, 32018), (35, 32081), (36, 32105), (46, 32156),

Gene: Kimberlium\_59 Start: 40626, Stop: 41120, Start Num: 17

Candidate Starts for Kimberlium\_59:

(Start: 15 @40617 has 12 MA's), (Start: 16 @40623 has 65 MA's), (Start: 17 @40626 has 180 MA's), (22, 40650), (32, 40809), (34, 40830), (38, 40890), (42, 40923), (45, 40938), (51, 41007), (55, 41058),

Gene: KingMidas\_56 Start: 39124, Stop: 39618, Start Num: 17

Candidate Starts for KingMidas\_56:

(Start: 15 @39115 has 12 MA's), (Start: 16 @39121 has 65 MA's), (Start: 17 @39124 has 180 MA's), (32, 39307), (33, 39322), (34, 39328), (38, 39388), (45, 39436), (47, 39448), (51, 39505), (55, 39556),

Gene: Kingsley\_54 Start: 37969, Stop: 38463, Start Num: 17

Candidate Starts for Kingsley\_54:

(Start: 15 @37960 has 12 MA's), (Start: 16 @37966 has 65 MA's), (Start: 17 @37969 has 180 MA's), (32, 38152), (34, 38173), (38, 38233), (42, 38266), (45, 38281), (51, 38350), (55, 38401),

Gene: Koella\_51 Start: 34937, Stop: 35431, Start Num: 17

Candidate Starts for Koella\_51:

(Start: 15 @34928 has 12 MA's), (Start: 16 @34934 has 65 MA's), (Start: 17 @34937 has 180 MA's), (22, 34961), (32, 35120), (34, 35141), (38, 35201), (42, 35234), (45, 35249), (51, 35318), (55, 35369),

Gene: Krakatau\_55 Start: 38665, Stop: 39075, Start Num: 15

Candidate Starts for Krakatau\_55:

(Start: 15 @38665 has 12 MA's), (Start: 16 @38671 has 65 MA's), (Start: 17 @38674 has 180 MA's), (22, 38698), (37, 38926), (38, 38935), (40, 38950), (41, 38953), (51, 39043),

Gene: KristaRAM\_60 Start: 41509, Stop: 42003, Start Num: 17

Candidate Starts for KristaRAM\_60:

(Start: 15 @41500 has 12 MA's), (Start: 16 @41506 has 65 MA's), (Start: 17 @41509 has 180 MA's), (22, 41533), (32, 41692), (34, 41713), (38, 41773), (42, 41806), (45, 41821), (51, 41890), (55, 41941),

Gene: LastJedi\_51 Start: 36257, Stop: 36751, Start Num: 17

Candidate Starts for LastJedi\_51:

(Start: 15 @36248 has 12 MA's), (Start: 16 @36254 has 65 MA's), (Start: 17 @36257 has 180 MA's), (22, 36281), (32, 36440), (34, 36461), (38, 36521), (42, 36554), (45, 36569), (51, 36638), (55, 36689),

Gene: Latretium\_59 Start: 39583, Stop: 40077, Start Num: 17

Candidate Starts for Latretium\_59:

(Start: 15 @39574 has 12 MA's), (Start: 16 @39580 has 65 MA's), (Start: 17 @39583 has 180 MA's), (22, 39607), (32, 39766), (34, 39787), (38, 39847), (42, 39880), (45, 39895), (51, 39964), (55, 40015),

Gene: Leozinho\_56 Start: 38342, Stop: 38836, Start Num: 17

Candidate Starts for Leozinho\_56:

(Start: 15 @38333 has 12 MA's), (Start: 16 @38339 has 65 MA's), (Start: 17 @38342 has 180 MA's), (32, 38525), (34, 38546), (38, 38606), (42, 38639), (45, 38654), (51, 38723), (55, 38774),

Gene: Leperchaun\_49 Start: 36692, Stop: 37186, Start Num: 17

Candidate Starts for Leperchaun\_49:

(Start: 15 @36683 has 12 MA's), (Start: 16 @36689 has 65 MA's), (Start: 17 @36692 has 180 MA's), (32, 36875), (33, 36890), (34, 36896), (38, 36956), (45, 37004), (47, 37016), (51, 37073), (55, 37124),

Gene: LilMoolah\_55 Start: 38452, Stop: 38946, Start Num: 17

Candidate Starts for LilMoolah\_55:

(Start: 15 @38443 has 12 MA's), (Start: 16 @38449 has 65 MA's), (Start: 17 @38452 has 180 MA's), (32, 38635), (34, 38656), (38, 38716), (42, 38749), (45, 38764), (51, 38833), (55, 38884),

Gene: LilSpotty\_59 Start: 37743, Stop: 38096, Start Num: 20

Candidate Starts for LilSpotty\_59:

(11, 37692), (12, 37698), (Start: 20 @37743 has 7 MA's), (24, 37785), (29, 37854), (35, 37935), (36, 37959), (47, 38016), (54, 38085),

Gene: LittleShirley\_56 Start: 39496, Stop: 39990, Start Num: 17

Candidate Starts for LittleShirley\_56:

(Start: 15 @39487 has 12 MA's), (Start: 16 @39493 has 65 MA's), (Start: 17 @39496 has 180 MA's), (32, 39679), (34, 39700), (38, 39760), (42, 39793), (45, 39808), (51, 39877), (55, 39928),

Gene: Lizziana\_63 Start: 40010, Stop: 40504, Start Num: 17

Candidate Starts for Lizziana\_63:

(Start: 15 @40001 has 12 MA's), (Start: 16 @40007 has 65 MA's), (Start: 17 @40010 has 180 MA's), (22, 40034), (32, 40193), (34, 40214), (38, 40274), (42, 40307), (45, 40322), (51, 40391), (55, 40442),

Gene: Llama\_62 Start: 41421, Stop: 41915, Start Num: 17

Candidate Starts for Llama\_62:

(Start: 15 @41412 has 12 MA's), (Start: 16 @41418 has 65 MA's), (Start: 17 @41421 has 180 MA's), (22, 41445), (32, 41604), (34, 41625), (38, 41685), (42, 41718), (45, 41733), (51, 41802), (55, 41853),

Gene: Llij\_53 Start: 37860, Stop: 38354, Start Num: 17

Candidate Starts for Llij\_53:

(Start: 15 @37851 has 12 MA's), (Start: 16 @37857 has 65 MA's), (Start: 17 @37860 has 180 MA's), (32, 38043), (34, 38064), (38, 38124), (42, 38157), (45, 38172), (51, 38241), (55, 38292),

Gene: Lorde\_57 Start: 37147, Stop: 37641, Start Num: 17

Candidate Starts for Lorde\_57:

(Start: 15 @37138 has 12 MA's), (Start: 16 @37144 has 65 MA's), (Start: 17 @37147 has 180 MA's), (32, 37330), (34, 37351), (38, 37411), (42, 37444), (45, 37459), (51, 37528), (55, 37579),

Gene: LunaBlu\_59 Start: 39587, Stop: 40081, Start Num: 17

Candidate Starts for LunaBlu\_59:

(Start: 15 @39578 has 12 MA's), (Start: 16 @39584 has 65 MA's), (Start: 17 @39587 has 180 MA's), (22, 39611), (32, 39770), (34, 39791), (38, 39851), (42, 39884), (45, 39899), (51, 39968), (55, 40019),

Gene: LunaStella\_55 Start: 38222, Stop: 38716, Start Num: 17

Candidate Starts for LunaStella\_55:

(Start: 17 @38222 has 180 MA's), (32, 38405), (34, 38426), (38, 38486), (42, 38519), (45, 38534), (51, 38603), (55, 38654),

Gene: MadMen\_55 Start: 38784, Stop: 39278, Start Num: 17

Candidate Starts for MadMen\_55:

(Start: 15 @38775 has 12 MA's), (Start: 16 @38781 has 65 MA's), (Start: 17 @38784 has 180 MA's), (22, 38808), (32, 38967), (34, 38988), (38, 39048), (42, 39081), (45, 39096), (51, 39165), (55, 39216),

Gene: Madiba\_55 Start: 38033, Stop: 38527, Start Num: 17

Candidate Starts for Madiba\_55:

(Start: 15 @38024 has 12 MA's), (Start: 16 @38030 has 65 MA's), (Start: 17 @38033 has 180 MA's), (22, 38057), (32, 38216), (34, 38237), (38, 38297), (42, 38330), (45, 38345), (51, 38414), (55, 38465),

Gene: Magsby\_45 Start: 31738, Stop: 32121, Start Num: 16

Candidate Starts for Magsby\_45:

(6, 31603), (11, 31714), (Start: 16 @31738 has 65 MA's), (Start: 18 @31744 has 3 MA's), (27, 31837), (30, 31900), (35, 31963), (36, 31987), (46, 32038), (50, 32080), (53, 32110),

Gene: Mahavrat\_55 Start: 38412, Stop: 38906, Start Num: 17

Candidate Starts for Mahavrat\_55:

(Start: 15 @38403 has 12 MA's), (Start: 16 @38409 has 65 MA's), (Start: 17 @38412 has 180 MA's), (32, 38595), (34, 38616), (38, 38676), (42, 38709), (45, 38724), (51, 38793), (55, 38844),

Gene: Mandlovu\_53 Start: 37019, Stop: 37516, Start Num: 16

Candidate Starts for Mandlovu\_53:

(Start: 15 @37013 has 12 MA's), (Start: 16 @37019 has 65 MA's), (Start: 17 @37022 has 180 MA's), (22, 37046), (32, 37205), (34, 37226), (38, 37286), (42, 37319), (45, 37334), (51, 37403), (55, 37454),

Gene: Mantra\_53 Start: 37905, Stop: 38399, Start Num: 17

Candidate Starts for Mantra\_53:

(Start: 15 @37896 has 12 MA's), (Start: 16 @37902 has 65 MA's), (Start: 17 @37905 has 180 MA's), (22, 37929), (32, 38088), (34, 38109), (38, 38169), (42, 38202), (45, 38217), (51, 38286), (55, 38337),

Gene: Maravista\_58 Start: 40459, Stop: 40953, Start Num: 17

Candidate Starts for Maravista\_58:

(Start: 15 @40450 has 12 MA's), (Start: 16 @40456 has 65 MA's), (Start: 17 @40459 has 180 MA's), (32, 40642), (34, 40663), (38, 40723), (42, 40756), (45, 40771), (51, 40840), (55, 40891),

Gene: Marker\_59 Start: 39127, Stop: 39621, Start Num: 17

Candidate Starts for Marker\_59:

(Start: 15 @39118 has 12 MA's), (Start: 16 @39124 has 65 MA's), (Start: 17 @39127 has 180 MA's), (30, 39283), (32, 39310), (34, 39331), (38, 39391), (42, 39424), (45, 39439), (51, 39508), (55, 39559),

Gene: Martik\_57 Start: 38963, Stop: 39457, Start Num: 17

Candidate Starts for Martik\_57:

(Start: 15 @38954 has 12 MA's), (Start: 16 @38960 has 65 MA's), (Start: 17 @38963 has 180 MA's), (22, 38987), (32, 39146), (34, 39167), (38, 39227), (42, 39260), (45, 39275), (51, 39344), (55, 39395),

Gene: Mattes\_61 Start: 40529, Stop: 41023, Start Num: 17

Candidate Starts for Mattes\_61:

(Start: 15 @40520 has 12 MA's), (Start: 16 @40526 has 65 MA's), (Start: 17 @40529 has 180 MA's), (22, 40553), (32, 40712), (34, 40733), (38, 40793), (42, 40826), (45, 40841), (51, 40910), (55, 40961),

Gene: Melissauren88\_56 Start: 38890, Stop: 39300, Start Num: 15

Candidate Starts for Melissauren88\_56:

(Start: 15 @38890 has 12 MA's), (Start: 16 @38896 has 65 MA's), (Start: 17 @38899 has 180 MA's), (22, 38923), (37, 39151), (38, 39160), (40, 39175), (41, 39178), (51, 39268),

Gene: Melville\_48 Start: 31722, Stop: 32105, Start Num: 16

Candidate Starts for Melville\_48:

(6, 31587), (11, 31698), (Start: 16 @31722 has 65 MA's), (Start: 18 @31728 has 3 MA's), (27, 31821), (30, 31884), (35, 31947), (36, 31971), (46, 32022), (50, 32064), (53, 32094),

Gene: MichelleMyBell\_45 Start: 30673, Stop: 31050, Start Num: 16

Candidate Starts for MichelleMyBell\_45:

(1, 30373), (6, 30538), (Start: 16 @30673 has 65 MA's), (27, 30766), (30, 30829), (35, 30892), (36, 30916), (46, 30967),

Gene: MilanaBonita\_48 Start: 35492, Stop: 35893, Start Num: 17

Candidate Starts for MilanaBonita\_48:

(Start: 15 @35483 has 12 MA's), (Start: 16 @35489 has 65 MA's), (Start: 17 @35492 has 180 MA's), (22, 35516), (37, 35744), (38, 35753), (40, 35768), (41, 35771), (51, 35861),

Gene: MilleniumForce\_61 Start: 41581, Stop: 41988, Start Num: 17

Candidate Starts for MilleniumForce\_61:

(Start: 15 @41572 has 12 MA's), (Start: 16 @41578 has 65 MA's), (Start: 17 @41581 has 180 MA's), (39, 41851), (51, 41956),

Gene: MinionDave\_56 Start: 39310, Stop: 39804, Start Num: 17

Candidate Starts for MinionDave\_56:

(Start: 15 @39301 has 12 MA's), (Start: 16 @39307 has 65 MA's), (Start: 17 @39310 has 180 MA's), (32, 39493), (33, 39508), (34, 39514), (38, 39574), (42, 39607), (45, 39622), (51, 39691), (55, 39742),

Gene: Minnie\_61 Start: 40883, Stop: 41290, Start Num: 17

Candidate Starts for Minnie\_61:

(Start: 15 @40874 has 12 MA's), (Start: 16 @40880 has 65 MA's), (Start: 17 @40883 has 180 MA's), (39, 41153), (51, 41258),

Gene: Mischief19\_47 Start: 42321, Stop: 41932, Start Num: 16

Candidate Starts for Mischief19\_47:

(Start: 16 @42321 has 65 MA's), (Start: 18 @42315 has 3 MA's), (26, 42231), (29, 42183), (36, 42078), (43, 42042), (46, 42024),

Gene: Misha28\_57 Start: 38434, Stop: 38787, Start Num: 20

Candidate Starts for Misha28\_57:

(11, 38383), (12, 38389), (Start: 20 @38434 has 7 MA's), (24, 38476), (29, 38545), (35, 38626), (36, 38650), (47, 38707), (54, 38776),

Gene: MisterCuddles\_55 Start: 38769, Stop: 39263, Start Num: 17

Candidate Starts for MisterCuddles\_55:

(Start: 15 @38760 has 12 MA's), (Start: 16 @38766 has 65 MA's), (Start: 17 @38769 has 180 MA's), (22, 38793), (32, 38952), (34, 38973), (37, 39024), (38, 39033), (42, 39066), (45, 39081), (51, 39150), (55, 39201),

Gene: Modragons\_61 Start: 41408, Stop: 41905, Start Num: 16

Candidate Starts for Modragons\_61:

(Start: 15 @41402 has 12 MA's), (Start: 16 @41408 has 65 MA's), (Start: 17 @41411 has 180 MA's), (22, 41435), (32, 41594), (34, 41615), (38, 41675), (42, 41708), (45, 41723), (51, 41792), (55, 41843),

Gene: MooMoo\_58 Start: 39220, Stop: 39621, Start Num: 18

Candidate Starts for MooMoo\_58:

(9, 39175), (13, 39199), (Start: 18 @39220 has 3 MA's), (21, 39247), (22, 39250), (29, 39352), (34, 39421), (49, 39568),

Gene: Moonbeam\_56 Start: 39040, Stop: 39444, Start Num: 16

Candidate Starts for Moonbeam\_56:

(Start: 15 @39034 has 12 MA's), (Start: 16 @39040 has 65 MA's), (Start: 17 @39043 has 180 MA's), (22, 39067), (37, 39295), (38, 39304), (40, 39319), (41, 39322), (51, 39412),

Gene: Mova\_58 Start: 38537, Stop: 39031, Start Num: 17

Candidate Starts for Mova\_58:

(Start: 15 @38528 has 12 MA's), (Start: 16 @38534 has 65 MA's), (Start: 17 @38537 has 180 MA's), (32, 38720), (34, 38741), (38, 38801), (42, 38834), (45, 38849), (51, 38918), (55, 38969),

Gene: Mozy\_66 Start: 41544, Stop: 42038, Start Num: 17

Candidate Starts for Mozy\_66:

(Start: 15 @41535 has 12 MA's), (Start: 16 @41541 has 65 MA's), (Start: 17 @41544 has 180 MA's), (32, 41727), (33, 41742), (34, 41748), (38, 41808), (45, 41856), (47, 41868), (51, 41925), (53, 41934), (55, 41976),

Gene: Ms6\_53 Start: 34621, Stop: 35031, Start Num: 15

Candidate Starts for Ms6\_53:

(Start: 15 @34621 has 12 MA's), (Start: 16 @34627 has 65 MA's), (Start: 17 @34630 has 180 MA's), (22, 34654), (37, 34882), (38, 34891), (40, 34906), (41, 34909), (51, 34999),

Gene: MulchExplorer\_63 Start: 40625, Stop: 41119, Start Num: 17

Candidate Starts for MulchExplorer\_63:

(Start: 15 @40616 has 12 MA's), (Start: 16 @40622 has 65 MA's), (Start: 17 @40625 has 180 MA's), (22, 40649), (32, 40808), (34, 40829), (38, 40889), (42, 40922), (45, 40937), (51, 41006), (55, 41057),

Gene: MulchSalad\_59 Start: 37668, Stop: 38021, Start Num: 20

Candidate Starts for MulchSalad\_59:

(Start: 20 @37668 has 7 MA's), (24, 37710), (29, 37779), (35, 37860), (36, 37884), (47, 37941), (54, 38010),

Gene: Mutaforma13\_61 Start: 41867, Stop: 42361, Start Num: 17

Candidate Starts for Mutaforma13\_61:

(Start: 15 @41858 has 12 MA's), (Start: 16 @41864 has 65 MA's), (Start: 17 @41867 has 180 MA's), (32, 42050), (34, 42071), (38, 42131), (42, 42164), (45, 42179), (51, 42248), (55, 42299),

Gene: Nenae\_49 Start: 32629, Stop: 33009, Start Num: 16

Candidate Starts for Nenae\_49:

(2, 32347), (3, 32350), (6, 32494), (Start: 16 @32629 has 65 MA's), (27, 32725), (30, 32788), (35, 32851), (36, 32875), (46, 32926), (50, 32968), (53, 32998),

Gene: Nimbo\_51 Start: 37265, Stop: 37759, Start Num: 17

Candidate Starts for Nimbo\_51:

(Start: 15 @37256 has 12 MA's), (Start: 16 @37262 has 65 MA's), (Start: 17 @37265 has 180 MA's), (32, 37448), (33, 37463), (34, 37469), (38, 37529), (45, 37577), (47, 37589), (51, 37646), (55, 37697),

Gene: Nitzel\_55 Start: 38315, Stop: 38812, Start Num: 16

Candidate Starts for Nitzel\_55:

(Start: 15 @38309 has 12 MA's), (Start: 16 @38315 has 65 MA's), (Start: 17 @38318 has 180 MA's), (23, 38351), (32, 38501), (34, 38522), (38, 38582), (42, 38615), (45, 38630), (51, 38699), (55, 38750),

Gene: Nivrat\_53 Start: 38325, Stop: 38819, Start Num: 17

Candidate Starts for Nivrat\_53:

(Start: 15 @38316 has 12 MA's), (Start: 16 @38322 has 65 MA's), (Start: 17 @38325 has 180 MA's), (32, 38508), (34, 38529), (38, 38589), (42, 38622), (45, 38637), (51, 38706), (55, 38757),

Gene: NormanBulbieJr\_57 Start: 38947, Stop: 39444, Start Num: 16

Candidate Starts for NormanBulbieJr\_57:

(Start: 15 @38941 has 12 MA's), (Start: 16 @38947 has 65 MA's), (Start: 17 @38950 has 180 MA's), (22, 38974), (32, 39133), (34, 39154), (38, 39214), (42, 39247), (45, 39262), (51, 39331), (55, 39382),

Gene: Ochi17\_60 Start: 41009, Stop: 41512, Start Num: 15

Candidate Starts for Ochi17\_60:

(Start: 15 @41009 has 12 MA's), (Start: 16 @41015 has 65 MA's), (Start: 17 @41018 has 180 MA's), (22, 41042), (32, 41201), (34, 41222), (38, 41282), (42, 41315), (45, 41330), (51, 41399), (55, 41450),

Gene: OfUltron\_62 Start: 41567, Stop: 42061, Start Num: 17

Candidate Starts for OfUltron\_62:

(Start: 15 @41558 has 12 MA's), (Start: 16 @41564 has 65 MA's), (Start: 17 @41567 has 180 MA's), (22, 41591), (32, 41750), (34, 41771), (38, 41831), (42, 41864), (45, 41879), (51, 41948), (55, 41999),



Gene: Ogotogo\_63 Start: 39889, Stop: 40284, Start Num: 17

Candidate Starts for Ogotogo\_63:

(Start: 15 @39880 has 12 MA's), (Start: 16 @39886 has 65 MA's), (Start: 17 @39889 has 180 MA's), (37, 40135), (38, 40144), (40, 40159), (41, 40162), (51, 40252),

Gene: Oksu\_61 Start: 41830, Stop: 42324, Start Num: 17

Candidate Starts for Oksu\_61:

(Start: 15 @41821 has 12 MA's), (Start: 16 @41827 has 65 MA's), (Start: 17 @41830 has 180 MA's), (22, 41854), (32, 42013), (34, 42034), (38, 42094), (42, 42127), (45, 42142), (51, 42211), (55, 42262),

Gene: OldBen\_54 Start: 38875, Stop: 39369, Start Num: 17

Candidate Starts for OldBen\_54:

(Start: 15 @38866 has 12 MA's), (Start: 16 @38872 has 65 MA's), (Start: 17 @38875 has 180 MA's), (32, 39058), (34, 39079), (38, 39139), (42, 39172), (45, 39187), (51, 39256), (55, 39307),

Gene: OlympiaSaint\_59 Start: 39471, Stop: 39965, Start Num: 17

Candidate Starts for OlympiaSaint\_59:

(Start: 15 @39462 has 12 MA's), (Start: 16 @39468 has 65 MA's), (Start: 17 @39471 has 180 MA's), (22, 39495), (32, 39654), (34, 39675), (38, 39735), (42, 39768), (45, 39783), (51, 39852), (55, 39903),

Gene: Ovechkin\_56 Start: 39471, Stop: 39965, Start Num: 17

Candidate Starts for Ovechkin\_56:

(Start: 15 @39462 has 12 MA's), (Start: 16 @39468 has 65 MA's), (Start: 17 @39471 has 180 MA's), (32, 39654), (34, 39675), (38, 39735), (42, 39768), (45, 39783), (51, 39852), (55, 39903),

Gene: OwlsT2W\_57 Start: 39193, Stop: 39687, Start Num: 17

Candidate Starts for OwlsT2W\_57:

(Start: 15 @39184 has 12 MA's), (Start: 16 @39190 has 65 MA's), (Start: 17 @39193 has 180 MA's), (22, 39217), (32, 39376), (33, 39391), (34, 39397), (38, 39457), (45, 39505), (47, 39517), (51, 39574), (53, 39583), (55, 39625),

Gene: PHappiness\_52 Start: 37238, Stop: 37732, Start Num: 17

Candidate Starts for PHappiness\_52:

(Start: 15 @37229 has 12 MA's), (Start: 16 @37235 has 65 MA's), (Start: 17 @37238 has 180 MA's), (32, 37421), (33, 37436), (34, 37442), (38, 37502), (45, 37550), (47, 37562), (51, 37619), (55, 37670),

Gene: PMC\_54 Start: 39568, Stop: 40071, Start Num: 15

Candidate Starts for PMC\_54:

(Start: 15 @39568 has 12 MA's), (Start: 16 @39574 has 65 MA's), (Start: 17 @39577 has 180 MA's), (32, 39760), (34, 39781), (38, 39841), (42, 39874), (45, 39889), (53, 39967), (55, 40009),

Gene: Pacc40\_51 Start: 37312, Stop: 37806, Start Num: 17

Candidate Starts for Pacc40\_51:

(Start: 15 @37303 has 12 MA's), (Start: 16 @37309 has 65 MA's), (Start: 17 @37312 has 180 MA's), (32, 37495), (33, 37510), (34, 37516), (38, 37576), (45, 37624), (47, 37636), (51, 37693), (55, 37744),

Gene: Panchino\_42 Start: 32264, Stop: 32647, Start Num: 16

Candidate Starts for Panchino\_42:

(6, 32129), (11, 32240), (Start: 16 @32264 has 65 MA's), (Start: 18 @32270 has 3 MA's), (27, 32363), (30, 32426), (35, 32489), (36, 32513), (46, 32564), (50, 32606), (53, 32636),

Gene: Parmesanjohn\_45 Start: 31741, Stop: 32124, Start Num: 16

Candidate Starts for Parmesanjohn\_45:

(6, 31606), (11, 31717), (Start: 16 @31741 has 65 MA's), (Start: 18 @31747 has 3 MA's), (27, 31840), (30, 31903), (35, 31966), (36, 31990), (46, 32041), (50, 32083), (53, 32113),

Gene: Phalconet\_56 Start: 38170, Stop: 38571, Start Num: 17

Candidate Starts for Phalconet\_56:

(Start: 15 @38161 has 12 MA's), (Start: 16 @38167 has 65 MA's), (Start: 17 @38170 has 180 MA's), (22, 38194), (37, 38422), (38, 38431), (40, 38446), (41, 38449), (51, 38539),

Gene: PhancyPhin\_49 Start: 32623, Stop: 33003, Start Num: 16

Candidate Starts for PhancyPhin\_49:

(2, 32341), (3, 32344), (6, 32488), (Start: 16 @32623 has 65 MA's), (27, 32719), (30, 32782), (35, 32845), (36, 32869), (46, 32920), (50, 32962), (53, 32992),

Gene: Phanphagia\_55 Start: 39761, Stop: 40162, Start Num: 17

Candidate Starts for Phanphagia\_55:

(Start: 15 @39752 has 12 MA's), (Start: 16 @39758 has 65 MA's), (Start: 17 @39761 has 180 MA's), (22, 39785), (37, 40013), (38, 40022), (40, 40037), (41, 40040), (51, 40130),

Gene: Phasih\_55 Start: 39382, Stop: 39876, Start Num: 17

Candidate Starts for Phasih\_55:

(Start: 17 @39382 has 180 MA's), (32, 39565), (34, 39586), (38, 39646), (42, 39679), (45, 39694), (51, 39763), (55, 39814),

Gene: Phatniss\_55 Start: 38955, Stop: 39449, Start Num: 17

Candidate Starts for Phatniss\_55:

(Start: 15 @38946 has 12 MA's), (Start: 16 @38952 has 65 MA's), (Start: 17 @38955 has 180 MA's), (32, 39138), (34, 39159), (38, 39219), (42, 39252), (45, 39267), (51, 39336), (55, 39387),

Gene: PhesterPhotato\_58 Start: 38987, Stop: 39388, Start Num: 17

Candidate Starts for PhesterPhotato\_58:

(Start: 15 @38978 has 12 MA's), (Start: 16 @38984 has 65 MA's), (Start: 17 @38987 has 180 MA's), (22, 39011), (37, 39239), (38, 39248), (40, 39263), (41, 39266), (51, 39356),

Gene: Philus\_60 Start: 40115, Stop: 40609, Start Num: 17

Candidate Starts for Philus\_60:

(Start: 15 @40106 has 12 MA's), (Start: 16 @40112 has 65 MA's), (Start: 17 @40115 has 180 MA's), (32, 40298), (34, 40319), (38, 40379), (42, 40412), (45, 40427), (51, 40496), (55, 40547),

Gene: Phloss\_43 Start: 31148, Stop: 31531, Start Num: 16

Candidate Starts for Phloss\_43:

(6, 31013), (11, 31124), (Start: 16 @31148 has 65 MA's), (Start: 18 @31154 has 3 MA's), (27, 31247), (30, 31310), (35, 31373), (36, 31397), (46, 31448), (50, 31490), (53, 31520),

Gene: Piper2020\_60 Start: 39329, Stop: 39682, Start Num: 20

Candidate Starts for Piper2020\_60:

(Start: 20 @39329 has 7 MA's), (24, 39371), (29, 39440), (35, 39521), (36, 39545), (47, 39602), (54, 39671),

Gene: Pippy\_55 Start: 37821, Stop: 38315, Start Num: 17

Candidate Starts for Pippy\_55:

(Start: 15 @37812 has 12 MA's), (Start: 16 @37818 has 65 MA's), (Start: 17 @37821 has 180 MA's), (22, 37845), (32, 38004), (34, 38025), (38, 38085), (42, 38118), (45, 38133), (51, 38202), (55, 38253),

Gene: Pipsqueaks\_45 Start: 31718, Stop: 32101, Start Num: 16

Candidate Starts for Pipsqueaks\_45:

(6, 31583), (11, 31694), (Start: 16 @31718 has 65 MA's), (Start: 18 @31724 has 3 MA's), (27, 31817), (30, 31880), (35, 31943), (36, 31967), (46, 32018), (50, 32060), (53, 32090),

Gene: Plumbus\_59 Start: 39279, Stop: 39776, Start Num: 16

Candidate Starts for Plumbus\_59:

(Start: 15 @39273 has 12 MA's), (Start: 16 @39279 has 65 MA's), (Start: 17 @39282 has 180 MA's), (32, 39465), (34, 39486), (38, 39546), (42, 39579), (45, 39594), (51, 39663), (55, 39714),

Gene: Poenanya\_57 Start: 40136, Stop: 40633, Start Num: 16

Candidate Starts for Poenanya\_57:

(Start: 15 @40130 has 12 MA's), (Start: 16 @40136 has 65 MA's), (Start: 17 @40139 has 180 MA's), (32, 40322), (33, 40337), (34, 40343), (38, 40403), (45, 40451), (47, 40463), (51, 40520), (55, 40571),

Gene: Polka14\_55 Start: 38335, Stop: 38829, Start Num: 17

Candidate Starts for Polka14\_55:

(Start: 15 @38326 has 12 MA's), (Start: 16 @38332 has 65 MA's), (Start: 17 @38335 has 180 MA's), (32, 38518), (33, 38533), (34, 38539), (38, 38599), (45, 38647), (47, 38659), (51, 38716), (55, 38767),

Gene: Pollywog\_58 Start: 39783, Stop: 40280, Start Num: 16

Candidate Starts for Pollywog\_58:

(Start: 15 @39777 has 12 MA's), (Start: 16 @39783 has 65 MA's), (Start: 17 @39786 has 180 MA's), (22, 39810), (32, 39969), (34, 39990), (38, 40050), (42, 40083), (45, 40098), (51, 40167), (55, 40218),

Gene: PopTart\_52 Start: 37792, Stop: 38196, Start Num: 16

Candidate Starts for PopTart\_52:

(Start: 15 @37786 has 12 MA's), (Start: 16 @37792 has 65 MA's), (Start: 17 @37795 has 180 MA's), (22, 37819), (37, 38047), (38, 38056), (40, 38071), (41, 38074), (51, 38164),

Gene: Priscilla\_57 Start: 39049, Stop: 39543, Start Num: 17

Candidate Starts for Priscilla\_57:

(Start: 15 @39040 has 12 MA's), (Start: 16 @39046 has 65 MA's), (Start: 17 @39049 has 180 MA's), (22, 39073), (32, 39232), (34, 39253), (38, 39313), (42, 39346), (45, 39361), (51, 39430), (55, 39481),

Gene: Purgamenstris\_49 Start: 32627, Stop: 33007, Start Num: 16

Candidate Starts for Purgamenstris\_49:

(2, 32345), (3, 32348), (6, 32492), (Start: 16 @32627 has 65 MA's), (27, 32723), (30, 32786), (35, 32849), (36, 32873), (46, 32924), (50, 32966), (53, 32996),

Gene: QueenHazel\_40 Start: 31055, Stop: 31426, Start Num: 18

Candidate Starts for QueenHazel\_40:

(4, 30872), (5, 30905), (7, 31001), (8, 31007), (9, 31013), (14, 31040), (Start: 18 @31055 has 3 MA's), (19, 31076), (21, 31082), (29, 31193), (30, 31211), (36, 31298), (43, 31331), (44, 31340), (45, 31343), (54, 31415),

Gene: QuickMath\_58 Start: 40849, Stop: 41343, Start Num: 17

Candidate Starts for QuickMath\_58:

(Start: 15 @40840 has 12 MA's), (Start: 16 @40846 has 65 MA's), (Start: 17 @40849 has 180 MA's), (22, 40873), (32, 41032), (34, 41053), (38, 41113), (42, 41146), (45, 41161), (51, 41230), (55, 41281),

Gene: Quico\_66 Start: 41315, Stop: 41722, Start Num: 17

Candidate Starts for Quico\_66:

(Start: 15 @41306 has 12 MA's), (Start: 16 @41312 has 65 MA's), (Start: 17 @41315 has 180 MA's), (39, 41585), (51, 41690),

Gene: Radiance\_56 Start: 39074, Stop: 39568, Start Num: 17

Candidate Starts for Radiance\_56:

(Start: 15 @39065 has 12 MA's), (Start: 16 @39071 has 65 MA's), (Start: 17 @39074 has 180 MA's), (22, 39098), (32, 39257), (34, 39278), (38, 39338), (42, 39371), (45, 39386), (51, 39455), (55, 39506),

Gene: Ramsey\_57 Start: 39737, Stop: 40144, Start Num: 17

Candidate Starts for Ramsey\_57:

(Start: 15 @39728 has 12 MA's), (Start: 16 @39734 has 65 MA's), (Start: 17 @39737 has 180 MA's), (39, 40007), (51, 40112),

Gene: Raymond7\_43 Start: 32415, Stop: 32795, Start Num: 16

Candidate Starts for Raymond7\_43:

(2, 32133), (3, 32136), (6, 32280), (Start: 16 @32415 has 65 MA's), (27, 32511), (30, 32574), (35, 32637), (36, 32661), (46, 32712), (50, 32754), (53, 32784),

Gene: Rebel\_41 Start: 28757, Stop: 29137, Start Num: 16

Candidate Starts for Rebel\_41:

(2, 28475), (3, 28478), (6, 28622), (Start: 16 @28757 has 65 MA's), (27, 28853), (30, 28916), (35, 28979), (36, 29003), (46, 29054), (50, 29096), (53, 29126),

Gene: RedBird\_55 Start: 38370, Stop: 38864, Start Num: 17

Candidate Starts for RedBird\_55:

(Start: 15 @38361 has 12 MA's), (Start: 16 @38367 has 65 MA's), (Start: 17 @38370 has 180 MA's), (32, 38553), (33, 38568), (34, 38574), (38, 38634), (45, 38682), (47, 38694), (51, 38751), (55, 38802),

Gene: Redi\_49 Start: 32626, Stop: 33006, Start Num: 16

Candidate Starts for Redi\_49:

(2, 32344), (3, 32347), (6, 32491), (Start: 16 @32626 has 65 MA's), (27, 32722), (30, 32785), (35, 32848), (36, 32872), (46, 32923), (50, 32965), (53, 32995),

Gene: Renaud18\_62 Start: 39627, Stop: 40121, Start Num: 17

Candidate Starts for Renaud18\_62:

(Start: 15 @39618 has 12 MA's), (Start: 16 @39624 has 65 MA's), (Start: 17 @39627 has 180 MA's), (32, 39810), (34, 39831), (38, 39891), (42, 39924), (45, 39939), (51, 40008), (55, 40059),

Gene: Rialto\_63 Start: 41853, Stop: 42347, Start Num: 17

Candidate Starts for Rialto\_63:

(Start: 15 @41844 has 12 MA's), (Start: 16 @41850 has 65 MA's), (Start: 17 @41853 has 180 MA's), (22, 41877), (32, 42036), (34, 42057), (38, 42117), (42, 42150), (45, 42165), (51, 42234), (55, 42285),

Gene: Rita\_58 Start: 37680, Stop: 38174, Start Num: 17

Candidate Starts for Rita\_58:

(Start: 15 @37671 has 12 MA's), (Start: 16 @37677 has 65 MA's), (Start: 17 @37680 has 180 MA's), (22, 37704), (32, 37863), (34, 37884), (38, 37944), (42, 37977), (45, 37992), (51, 38061), (55, 38112),

Gene: RitaG\_52 Start: 37583, Stop: 38077, Start Num: 17

Candidate Starts for RitaG\_52:

(Start: 15 @37574 has 12 MA's), (Start: 16 @37580 has 65 MA's), (Start: 17 @37583 has 180 MA's), (32, 37766), (33, 37781), (34, 37787), (38, 37847), (45, 37895), (47, 37907), (51, 37964), (55, 38015),

Gene: Rockne\_58 Start: 39586, Stop: 40083, Start Num: 16

Candidate Starts for Rockne\_58:

(Start: 15 @39580 has 12 MA's), (Start: 16 @39586 has 65 MA's), (Start: 17 @39589 has 180 MA's), (32, 39772), (34, 39793), (38, 39853), (42, 39886), (45, 39901), (53, 39979), (55, 40021),

Gene: RockyHorror\_58 Start: 38638, Stop: 39132, Start Num: 17

Candidate Starts for RockyHorror\_58:

(Start: 15 @38629 has 12 MA's), (Start: 16 @38635 has 65 MA's), (Start: 17 @38638 has 180 MA's), (30, 38794), (32, 38821), (34, 38842), (38, 38902), (42, 38935), (45, 38950), (51, 39019), (55, 39070),

Gene: Royals2015\_60 Start: 38991, Stop: 39485, Start Num: 17

Candidate Starts for Royals2015\_60:

(Start: 15 @38982 has 12 MA's), (Start: 16 @38988 has 65 MA's), (Start: 17 @38991 has 180 MA's), (32, 39174), (34, 39195), (38, 39255), (42, 39288), (45, 39303), (51, 39372), (55, 39423),

Gene: Rubeelu\_48 Start: 32426, Stop: 32803, Start Num: 16

Candidate Starts for Rubeelu\_48:

(1, 32126), (6, 32291), (Start: 16 @32426 has 65 MA's), (27, 32519), (30, 32582), (35, 32645), (36, 32669), (46, 32720),

Gene: Ruby\_53 Start: 38770, Stop: 39264, Start Num: 17

Candidate Starts for Ruby\_53:

(Start: 15 @38761 has 12 MA's), (Start: 16 @38767 has 65 MA's), (Start: 17 @38770 has 180 MA's), (22, 38794), (32, 38953), (34, 38974), (37, 39025), (38, 39034), (42, 39067), (45, 39082), (51, 39151), (55, 39202),

Gene: SG4\_54 Start: 38464, Stop: 38961, Start Num: 16

Candidate Starts for SG4\_54:

(Start: 15 @38458 has 12 MA's), (Start: 16 @38464 has 65 MA's), (Start: 17 @38467 has 180 MA's), (32, 38650), (33, 38665), (34, 38671), (38, 38731), (42, 38764), (45, 38779), (51, 38848), (55, 38899),

Gene: Saal\_59 Start: 40223, Stop: 40717, Start Num: 17

Candidate Starts for Saal\_59:

(Start: 15 @40214 has 12 MA's), (Start: 16 @40220 has 65 MA's), (Start: 17 @40223 has 180 MA's), (22, 40247), (32, 40406), (34, 40427), (38, 40487), (42, 40520), (45, 40535), (51, 40604), (55, 40655),

Gene: Sabbb\_61 Start: 39911, Stop: 40405, Start Num: 17

Candidate Starts for Sabbb\_61:

(Start: 15 @39902 has 12 MA's), (Start: 16 @39908 has 65 MA's), (Start: 17 @39911 has 180 MA's), (32, 40094), (34, 40115), (38, 40175), (42, 40208), (45, 40223), (51, 40292), (55, 40343),

Gene: Sandalphon\_59 Start: 39861, Stop: 40268, Start Num: 17

Candidate Starts for Sandalphon\_59:

(Start: 15 @39852 has 12 MA's), (Start: 16 @39858 has 65 MA's), (Start: 17 @39861 has 180 MA's), (39, 40131), (51, 40236),

Gene: Sarma624\_55 Start: 35161, Stop: 35655, Start Num: 17

Candidate Starts for Sarma624\_55:

(Start: 15 @35152 has 12 MA's), (Start: 16 @35158 has 65 MA's), (Start: 17 @35161 has 180 MA's), (32, 35344), (34, 35365), (38, 35425), (42, 35458), (45, 35473), (51, 35542), (55, 35593),

Gene: Sassafra\_55 Start: 38555, Stop: 39049, Start Num: 17

Candidate Starts for Sassafra\_55:

(Start: 15 @38546 has 12 MA's), (Start: 16 @38552 has 65 MA's), (Start: 17 @38555 has 180 MA's), (32, 38738), (34, 38759), (38, 38819), (45, 38867), (47, 38879), (51, 38936), (55, 38987),

Gene: SassyB\_52 Start: 37792, Stop: 38196, Start Num: 16

Candidate Starts for SassyB\_52:

(Start: 15 @37786 has 12 MA's), (Start: 16 @37792 has 65 MA's), (Start: 17 @37795 has 180 MA's), (22, 37819), (37, 38047), (38, 38056), (40, 38071), (41, 38074), (51, 38164),

Gene: Schnauzer\_46 Start: 31741, Stop: 32124, Start Num: 16

Candidate Starts for Schnauzer\_46:

(6, 31606), (11, 31717), (Start: 16 @31741 has 65 MA's), (Start: 18 @31747 has 3 MA's), (27, 31840), (30, 31903), (35, 31966), (36, 31990), (46, 32041), (50, 32083), (53, 32113),

Gene: Scitech\_42 Start: 29757, Stop: 30140, Start Num: 16

Candidate Starts for Scitech\_42:

(6, 29622), (11, 29733), (Start: 16 @29757 has 65 MA's), (Start: 18 @29763 has 3 MA's), (27, 29856), (30, 29919), (35, 29982), (36, 30006), (46, 30057), (50, 30099), (53, 30129),

Gene: Scottish\_55 Start: 38595, Stop: 39089, Start Num: 17

Candidate Starts for Scottish\_55:

(Start: 15 @38586 has 12 MA's), (Start: 16 @38592 has 65 MA's), (Start: 17 @38595 has 180 MA's), (32, 38778), (34, 38799), (38, 38859), (42, 38892), (45, 38907), (51, 38976), (55, 39027),

Gene: Seabastian\_62 Start: 41568, Stop: 42062, Start Num: 17

Candidate Starts for Seabastian\_62:

(Start: 15 @41559 has 12 MA's), (Start: 16 @41565 has 65 MA's), (Start: 17 @41568 has 180 MA's), (22, 41592), (32, 41751), (34, 41772), (38, 41832), (42, 41865), (45, 41880), (51, 41949), (55, 42000),

Gene: Seagreen\_57 Start: 38560, Stop: 39054, Start Num: 17

Candidate Starts for Seagreen\_57:

(Start: 17 @38560 has 180 MA's), (32, 38743), (34, 38764), (38, 38824), (42, 38857), (45, 38872), (51, 38941), (55, 38992),

Gene: Shauna1\_56 Start: 39670, Stop: 40071, Start Num: 17

Candidate Starts for Shauna1\_56:

(Start: 15 @39661 has 12 MA's), (Start: 16 @39667 has 65 MA's), (Start: 17 @39670 has 180 MA's), (22, 39694), (37, 39922), (38, 39931), (40, 39946), (41, 39949), (51, 40039),

Gene: ShiLan\_56 Start: 38996, Stop: 39490, Start Num: 17

Candidate Starts for ShiLan\_56:

(Start: 15 @38987 has 12 MA's), (Start: 16 @38993 has 65 MA's), (Start: 17 @38996 has 180 MA's), (22, 39020), (32, 39179), (34, 39200), (38, 39260), (42, 39293), (45, 39308), (51, 39377), (55, 39428),

Gene: ShowerHandel\_60 Start: 38963, Stop: 39457, Start Num: 17

Candidate Starts for ShowerHandel\_60:

(Start: 15 @38954 has 12 MA's), (Start: 16 @38960 has 65 MA's), (Start: 17 @38963 has 180 MA's), (22, 38987), (32, 39146), (34, 39167), (38, 39227), (42, 39260), (45, 39275), (51, 39344), (55, 39395),

Gene: ShrimpFriedEgg\_49 Start: 32626, Stop: 33006, Start Num: 16

Candidate Starts for ShrimpFriedEgg\_49:

(2, 32344), (3, 32347), (6, 32491), (Start: 16 @32626 has 65 MA's), (27, 32722), (30, 32785), (35, 32848), (36, 32872), (46, 32923), (50, 32965), (53, 32995),

Gene: ShroomBoi\_59 Start: 39923, Stop: 40417, Start Num: 17

Candidate Starts for ShroomBoi\_59:

(Start: 15 @39914 has 12 MA's), (Start: 16 @39920 has 65 MA's), (Start: 17 @39923 has 180 MA's), (22, 39947), (30, 40079), (32, 40106), (34, 40127), (38, 40187), (42, 40220), (45, 40235), (51, 40304), (55, 40355),

Gene: SiSi\_55 Start: 38369, Stop: 38863, Start Num: 17

Candidate Starts for SiSi\_55:

(Start: 15 @38360 has 12 MA's), (Start: 16 @38366 has 65 MA's), (Start: 17 @38369 has 180 MA's), (22, 38393), (32, 38552), (34, 38573), (38, 38633), (42, 38666), (45, 38681), (51, 38750), (55, 38801),

Gene: Silvafighter\_46 Start: 31714, Stop: 32097, Start Num: 16

Candidate Starts for Silvafighter\_46:

(6, 31579), (11, 31690), (Start: 16 @31714 has 65 MA's), (Start: 18 @31720 has 3 MA's), (27, 31813), (30, 31876), (35, 31939), (36, 31963), (46, 32014), (50, 32056), (53, 32086),

Gene: Silvy\_43 Start: 30482, Stop: 30862, Start Num: 16

Candidate Starts for Silvy\_43:

(2, 30200), (3, 30203), (6, 30347), (Start: 16 @30482 has 65 MA's), (27, 30578), (30, 30641), (35, 30704), (36, 30728), (46, 30779), (50, 30821), (53, 30851),

Gene: SimranZ1\_57 Start: 39149, Stop: 39643, Start Num: 17

Candidate Starts for SimranZ1\_57:

(Start: 15 @39140 has 12 MA's), (Start: 16 @39146 has 65 MA's), (Start: 17 @39149 has 180 MA's), (32, 39332), (34, 39353), (38, 39413), (42, 39446), (45, 39461), (51, 39530), (55, 39581),

Gene: Smurph\_45 Start: 31741, Stop: 32124, Start Num: 16

Candidate Starts for Smurph\_45:

(6, 31606), (11, 31717), (Start: 16 @31741 has 65 MA's), (Start: 18 @31747 has 3 MA's), (27, 31840), (30, 31903), (35, 31966), (36, 31990), (46, 32041), (50, 32083), (53, 32113),

Gene: Snekmaggedon\_43 Start: 30918, Stop: 31301, Start Num: 16

Candidate Starts for Snekmaggedon\_43:

(6, 30783), (11, 30894), (Start: 16 @30918 has 65 MA's), (Start: 18 @30924 has 3 MA's), (27, 31017), (30, 31080), (35, 31143), (36, 31167), (46, 31218), (50, 31260), (53, 31290),

Gene: Soul22\_63 Start: 40554, Stop: 41048, Start Num: 17

Candidate Starts for Soul22\_63:

(Start: 17 @40554 has 180 MA's), (32, 40737), (34, 40758), (38, 40818), (42, 40851), (45, 40866), (51, 40935), (55, 40986),

Gene: Sparkdehlily\_65 Start: 40681, Stop: 41082, Start Num: 17

Candidate Starts for Sparkdehlily\_65:

(Start: 15 @40672 has 12 MA's), (Start: 16 @40678 has 65 MA's), (Start: 17 @40681 has 180 MA's), (22, 40705), (37, 40933), (38, 40942), (40, 40957), (41, 40960), (51, 41050),

Gene: Spartacus\_59 Start: 39633, Stop: 40127, Start Num: 17

Candidate Starts for Spartacus\_59:

(Start: 15 @39624 has 12 MA's), (Start: 16 @39630 has 65 MA's), (Start: 17 @39633 has 180 MA's), (32, 39816), (34, 39837), (38, 39897), (42, 39930), (45, 39945), (55, 40065),

Gene: Spikelee\_64 Start: 41253, Stop: 41747, Start Num: 17

Candidate Starts for Spikelee\_64:

(Start: 15 @41244 has 12 MA's), (Start: 16 @41250 has 65 MA's), (Start: 17 @41253 has 180 MA's), (32, 41436), (34, 41457), (38, 41517), (42, 41550), (45, 41565), (51, 41634), (55, 41685),

Gene: SpongeBob\_43 Start: 30918, Stop: 31301, Start Num: 16

Candidate Starts for SpongeBob\_43:

(6, 30783), (11, 30894), (Start: 16 @30918 has 65 MA's), (Start: 18 @30924 has 3 MA's), (27, 31017), (30, 31080), (35, 31143), (36, 31167), (46, 31218), (50, 31260), (53, 31290),

Gene: Spoonbill\_54 Start: 37543, Stop: 38037, Start Num: 17

Candidate Starts for Spoonbill\_54:

(Start: 15 @37534 has 12 MA's), (Start: 16 @37540 has 65 MA's), (Start: 17 @37543 has 180 MA's), (32, 37726), (33, 37741), (34, 37747), (38, 37807), (45, 37855), (47, 37867), (51, 37924), (55, 37975),

Gene: Squirty\_60 Start: 40442, Stop: 40849, Start Num: 17

Candidate Starts for Squirty\_60:

(Start: 15 @40433 has 12 MA's), (Start: 16 @40439 has 65 MA's), (Start: 17 @40442 has 180 MA's), (39, 40712), (51, 40817),

Gene: StAnnes\_56 Start: 39845, Stop: 40249, Start Num: 16

Candidate Starts for StAnnes\_56:

(Start: 15 @39839 has 12 MA's), (Start: 16 @39845 has 65 MA's), (Start: 17 @39848 has 180 MA's), (22, 39872), (37, 40100), (38, 40109), (40, 40124), (41, 40127), (51, 40217),

Gene: Stap\_55 Start: 38344, Stop: 38838, Start Num: 17

Candidate Starts for Stap\_55:

(Start: 15 @38335 has 12 MA's), (Start: 16 @38341 has 65 MA's), (Start: 17 @38344 has 180 MA's), (32, 38527), (33, 38542), (34, 38548), (38, 38608), (45, 38656), (47, 38668), (51, 38725), (55, 38776),

Gene: Starcevich\_56 Start: 38920, Stop: 39414, Start Num: 17

Candidate Starts for Starcevich\_56:

(Start: 15 @38911 has 12 MA's), (Start: 16 @38917 has 65 MA's), (Start: 17 @38920 has 180 MA's), (22, 38944), (32, 39103), (34, 39124), (38, 39184), (42, 39217), (45, 39232), (51, 39301), (55, 39352),

Gene: Strokeseat\_53 Start: 37079, Stop: 37573, Start Num: 17

Candidate Starts for Strokeseat\_53:

(Start: 15 @37070 has 12 MA's), (Start: 16 @37076 has 65 MA's), (Start: 17 @37079 has 180 MA's), (22, 37103), (32, 37262), (34, 37283), (38, 37343), (42, 37376), (45, 37391), (51, 37460), (55, 37511),

Gene: SuperGrey\_61 Start: 41156, Stop: 41557, Start Num: 17

Candidate Starts for SuperGrey\_61:

(Start: 15 @41147 has 12 MA's), (Start: 16 @41153 has 65 MA's), (Start: 17 @41156 has 180 MA's), (37, 41408), (38, 41417), (40, 41432), (41, 41435), (51, 41525),

Gene: SwagPigglett\_62 Start: 41271, Stop: 41765, Start Num: 17

Candidate Starts for SwagPigglett\_62:

(Start: 15 @41262 has 12 MA's), (Start: 16 @41268 has 65 MA's), (Start: 17 @41271 has 180 MA's), (22, 41295), (32, 41454), (34, 41475), (38, 41535), (42, 41568), (45, 41583), (51, 41652), (55, 41703),

Gene: TChen\_57 Start: 40173, Stop: 40667, Start Num: 17

Candidate Starts for TChen\_57:

(Start: 17 @40173 has 180 MA's), (32, 40356), (34, 40377), (38, 40437), (42, 40470), (45, 40485), (51, 40554), (55, 40605),



Gene: TDanisky\_65 Start: 40681, Stop: 41082, Start Num: 17

Candidate Starts for TDanisky\_65:

(Start: 15 @40672 has 12 MA's), (Start: 16 @40678 has 65 MA's), (Start: 17 @40681 has 180 MA's), (22, 40705), (37, 40933), (38, 40942), (40, 40957), (41, 40960), (51, 41050),

Gene: Taj\_61 Start: 40729, Stop: 41217, Start Num: 17

Candidate Starts for Taj\_61:

(Start: 15 @40720 has 12 MA's), (Start: 16 @40726 has 65 MA's), (Start: 17 @40729 has 180 MA's), (22, 40753), (32, 40906), (33, 40921), (34, 40927), (38, 40987), (42, 41020), (45, 41035), (51, 41104), (55, 41155),

Gene: Tapioca\_47 Start: 31707, Stop: 32090, Start Num: 16

Candidate Starts for Tapioca\_47:

(6, 31572), (11, 31683), (Start: 16 @31707 has 65 MA's), (Start: 18 @31713 has 3 MA's), (27, 31806), (30, 31869), (35, 31932), (36, 31956), (46, 32007), (50, 32049), (53, 32079),

Gene: ThetaBob\_61 Start: 40247, Stop: 40741, Start Num: 17

Candidate Starts for ThetaBob\_61:

(Start: 17 @40247 has 180 MA's), (32, 40430), (34, 40451), (38, 40511), (42, 40544), (45, 40559), (51, 40628), (55, 40679),

Gene: TootsiePop\_57 Start: 38434, Stop: 38787, Start Num: 20

Candidate Starts for TootsiePop\_57:

(11, 38383), (12, 38389), (Start: 20 @38434 has 7 MA's), (24, 38476), (29, 38545), (35, 38626), (36, 38650), (47, 38707), (54, 38776),

Gene: Tootsieroll\_58 Start: 38292, Stop: 38786, Start Num: 17

Candidate Starts for Tootsieroll\_58:

(Start: 15 @38283 has 12 MA's), (Start: 16 @38289 has 65 MA's), (Start: 17 @38292 has 180 MA's), (32, 38475), (34, 38496), (38, 38556), (42, 38589), (45, 38604), (51, 38673), (55, 38724),

Gene: Totinger\_56 Start: 38219, Stop: 38716, Start Num: 16

Candidate Starts for Totinger\_56:

(Start: 15 @38213 has 12 MA's), (Start: 16 @38219 has 65 MA's), (Start: 17 @38222 has 180 MA's), (32, 38405), (34, 38426), (38, 38486), (42, 38519), (45, 38534), (51, 38603), (55, 38654),

Gene: Tweety\_57 Start: 40472, Stop: 40873, Start Num: 17

Candidate Starts for Tweety\_57:

(Start: 15 @40463 has 12 MA's), (Start: 16 @40469 has 65 MA's), (Start: 17 @40472 has 180 MA's), (22, 40496), (37, 40724), (38, 40733), (40, 40748), (41, 40751), (51, 40841),

Gene: UncleRicky\_56 Start: 39203, Stop: 39697, Start Num: 17

Candidate Starts for UncleRicky\_56:

(Start: 15 @39194 has 12 MA's), (Start: 16 @39200 has 65 MA's), (Start: 17 @39203 has 180 MA's), (32, 39386), (34, 39407), (38, 39467), (42, 39500), (45, 39515), (51, 39584), (55, 39635),

Gene: VRedHorse\_57 Start: 38279, Stop: 38773, Start Num: 17

Candidate Starts for VRedHorse\_57:

(Start: 15 @38270 has 12 MA's), (Start: 16 @38276 has 65 MA's), (Start: 17 @38279 has 180 MA's), (32, 38462), (34, 38483), (38, 38543), (42, 38576), (45, 38591), (51, 38660), (55, 38711),

Gene: Velveteen\_52 Start: 35161, Stop: 35655, Start Num: 17

Candidate Starts for Velveteen\_52:

(Start: 15 @35152 has 12 MA's), (Start: 16 @35158 has 65 MA's), (Start: 17 @35161 has 180 MA's), (32, 35344), (34, 35365), (38, 35425), (42, 35458), (45, 35473), (51, 35542), (55, 35593),

Gene: Veteran\_54 Start: 38058, Stop: 38465, Start Num: 17

Candidate Starts for Veteran\_54:

(Start: 15 @38049 has 12 MA's), (Start: 16 @38055 has 65 MA's), (Start: 17 @38058 has 180 MA's), (39, 38328), (51, 38433),

Gene: Wachhund\_59 Start: 39272, Stop: 39673, Start Num: 17

Candidate Starts for Wachhund\_59:

(Start: 15 @39263 has 12 MA's), (Start: 16 @39269 has 65 MA's), (Start: 17 @39272 has 180 MA's), (22, 39296), (37, 39524), (38, 39533), (40, 39548), (41, 39551), (51, 39641),

Gene: Whatsapiecost\_58 Start: 38556, Stop: 38963, Start Num: 17

Candidate Starts for Whatsapiecost\_58:

(Start: 15 @38547 has 12 MA's), (Start: 16 @38553 has 65 MA's), (Start: 17 @38556 has 180 MA's), (39, 38826), (51, 38931),

Gene: Whouxphf\_54 Start: 38875, Stop: 39369, Start Num: 17

Candidate Starts for Whouxphf\_54:

(Start: 15 @38866 has 12 MA's), (Start: 16 @38872 has 65 MA's), (Start: 17 @38875 has 180 MA's), (32, 39058), (34, 39079), (38, 39139), (42, 39172), (45, 39187), (51, 39256), (55, 39307),

Gene: WillSterrel\_58 Start: 40750, Stop: 41244, Start Num: 17

Candidate Starts for WillSterrel\_58:

(Start: 15 @40741 has 12 MA's), (Start: 16 @40747 has 65 MA's), (Start: 17 @40750 has 180 MA's), (32, 40933), (34, 40954), (38, 41014), (42, 41047), (45, 41062), (55, 41182),

Gene: XFactor\_56 Start: 38361, Stop: 38762, Start Num: 17

Candidate Starts for XFactor\_56:

(Start: 15 @38352 has 12 MA's), (Start: 16 @38358 has 65 MA's), (Start: 17 @38361 has 180 MA's), (22, 38385), (37, 38613), (38, 38622), (40, 38637), (41, 38640), (51, 38730),

Gene: Xerxes\_45 Start: 31738, Stop: 32121, Start Num: 16

Candidate Starts for Xerxes\_45:

(6, 31603), (11, 31714), (Start: 16 @31738 has 65 MA's), (Start: 18 @31744 has 3 MA's), (27, 31837), (30, 31900), (35, 31963), (36, 31987), (46, 32038), (50, 32080), (53, 32110),

Gene: Xula\_39 Start: 30657, Stop: 31028, Start Num: 18

Candidate Starts for Xula\_39:

(4, 30474), (5, 30507), (7, 30603), (8, 30609), (9, 30615), (14, 30642), (Start: 18 @30657 has 3 MA's), (19, 30678), (21, 30684), (29, 30795), (30, 30813), (36, 30900), (43, 30933), (44, 30942), (45, 30945), (54, 31017),

Gene: Yorick\_56 Start: 39337, Stop: 39831, Start Num: 17

Candidate Starts for Yorick\_56:

(Start: 15 @39328 has 12 MA's), (Start: 16 @39334 has 65 MA's), (Start: 17 @39337 has 180 MA's), (22, 39361), (32, 39520), (34, 39541), (38, 39601), (42, 39634), (45, 39649), (51, 39718), (55, 39769),

Gene: Yoshi\_69 Start: 40511, Stop: 41005, Start Num: 17

Candidate Starts for Yoshi\_69:

(Start: 17 @40511 has 180 MA's), (32, 40694), (34, 40715), (38, 40775), (42, 40808), (45, 40823), (51, 40892), (55, 40943),

Gene: Zapner\_70 Start: 40876, Stop: 41370, Start Num: 17

Candidate Starts for Zapner\_70:

(Start: 17 @40876 has 180 MA's), (22, 40900), (24, 40939), (32, 41059), (33, 41074), (34, 41080), (38, 41140), (42, 41173), (45, 41188), (47, 41200), (51, 41257), (55, 41308),

Gene: Zerg\_57 Start: 38744, Stop: 39241, Start Num: 16

Candidate Starts for Zerg\_57:

(Start: 15 @38738 has 12 MA's), (Start: 16 @38744 has 65 MA's), (Start: 17 @38747 has 180 MA's), (30, 38903), (32, 38930), (34, 38951), (38, 39011), (42, 39044), (45, 39059), (51, 39128), (55, 39179),

Gene: Zizzle\_61 Start: 40590, Stop: 41084, Start Num: 17

Candidate Starts for Zizzle\_61:

(Start: 15 @40581 has 12 MA's), (Start: 16 @40587 has 65 MA's), (Start: 17 @40590 has 180 MA's), (22, 40614), (32, 40773), (34, 40794), (38, 40854), (42, 40887), (45, 40902), (51, 40971), (55, 41022),