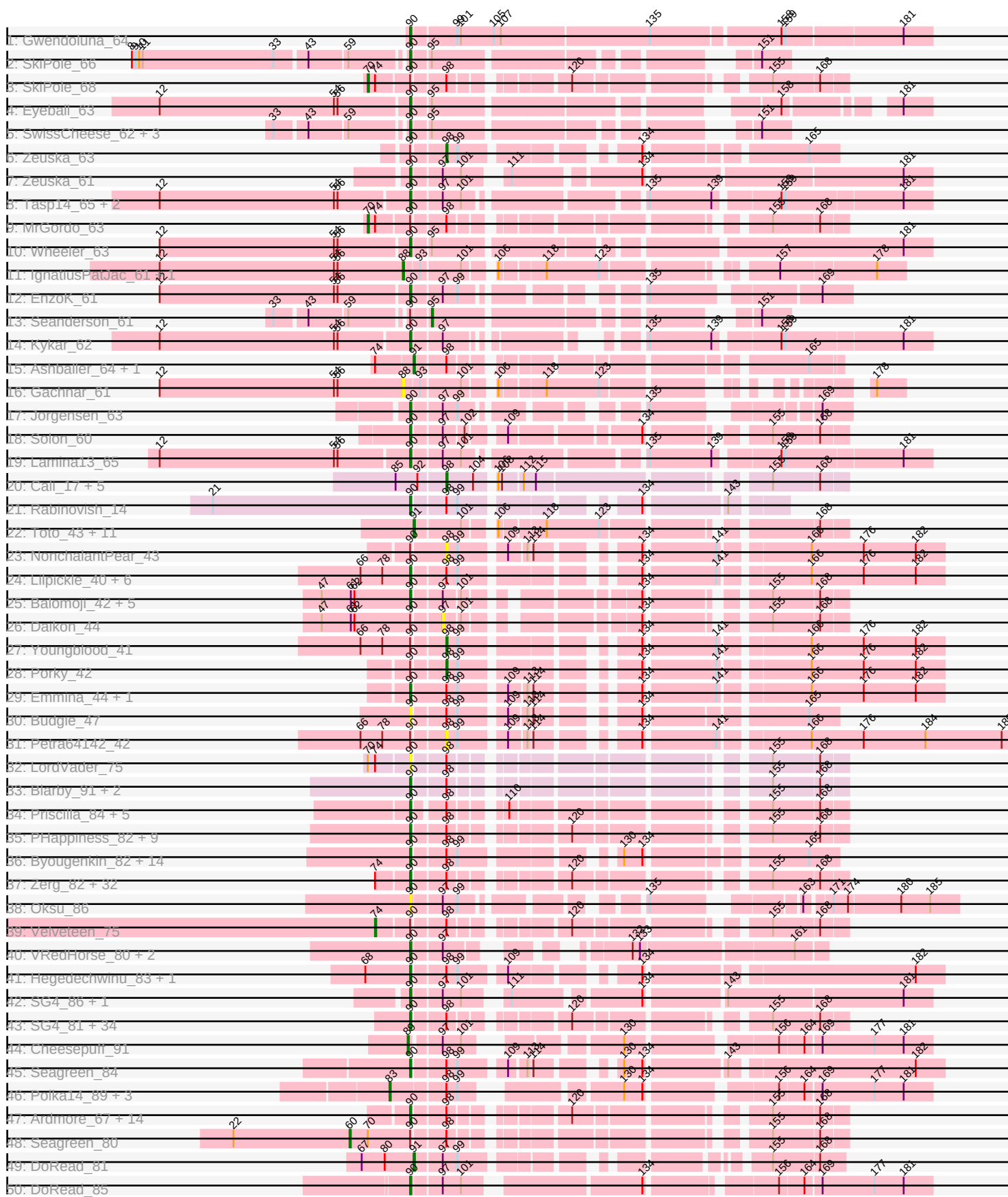
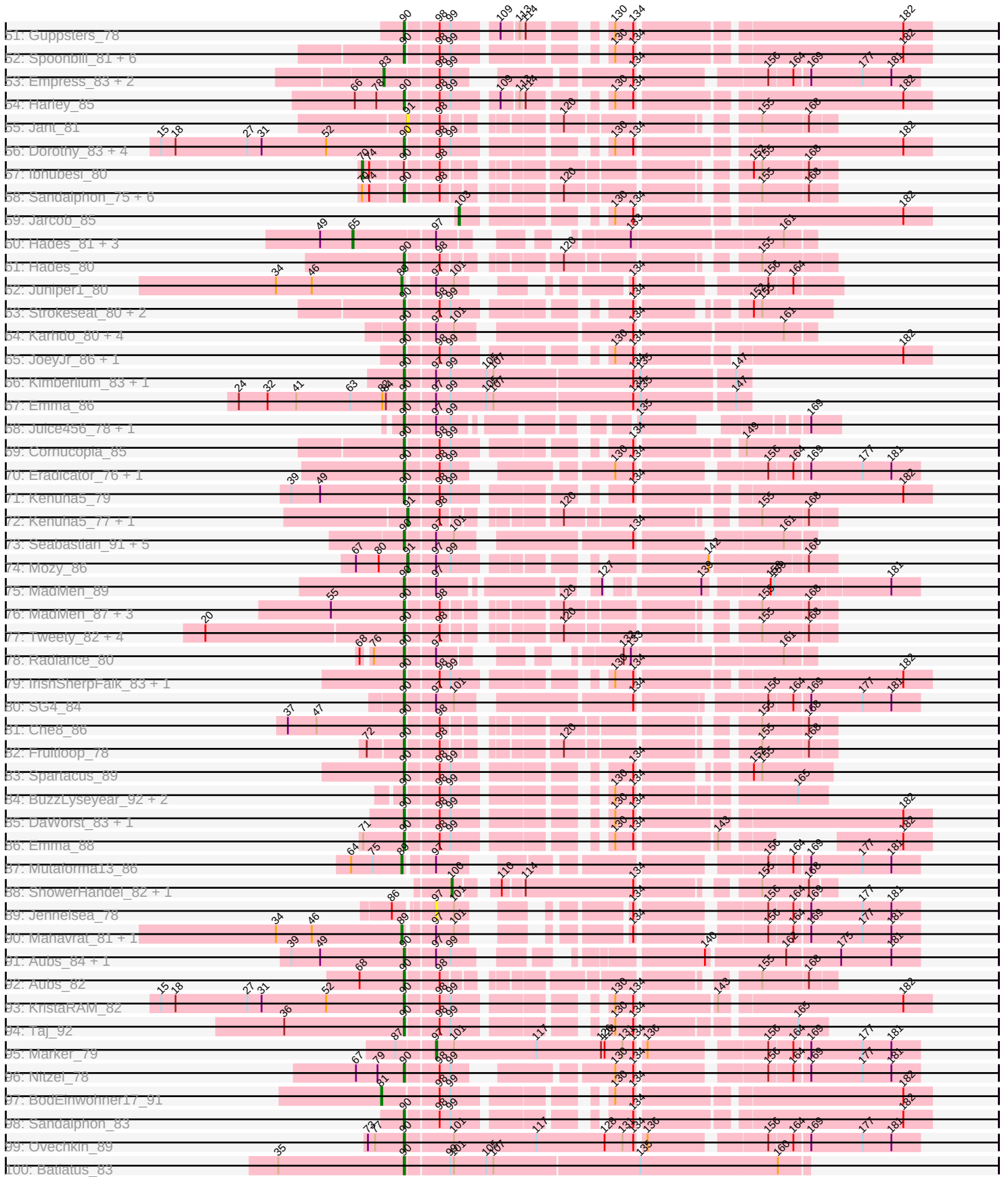


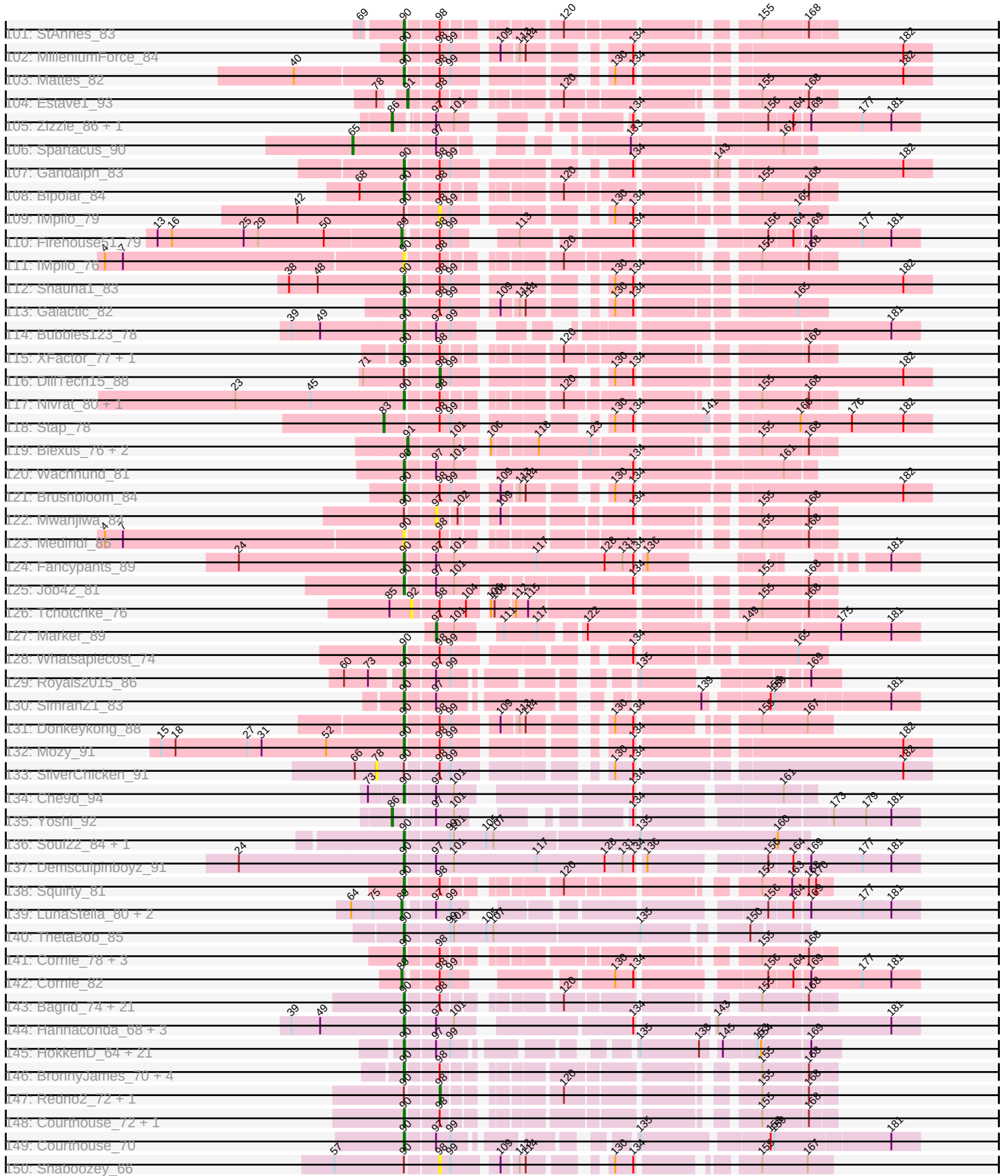
## Pham 279984



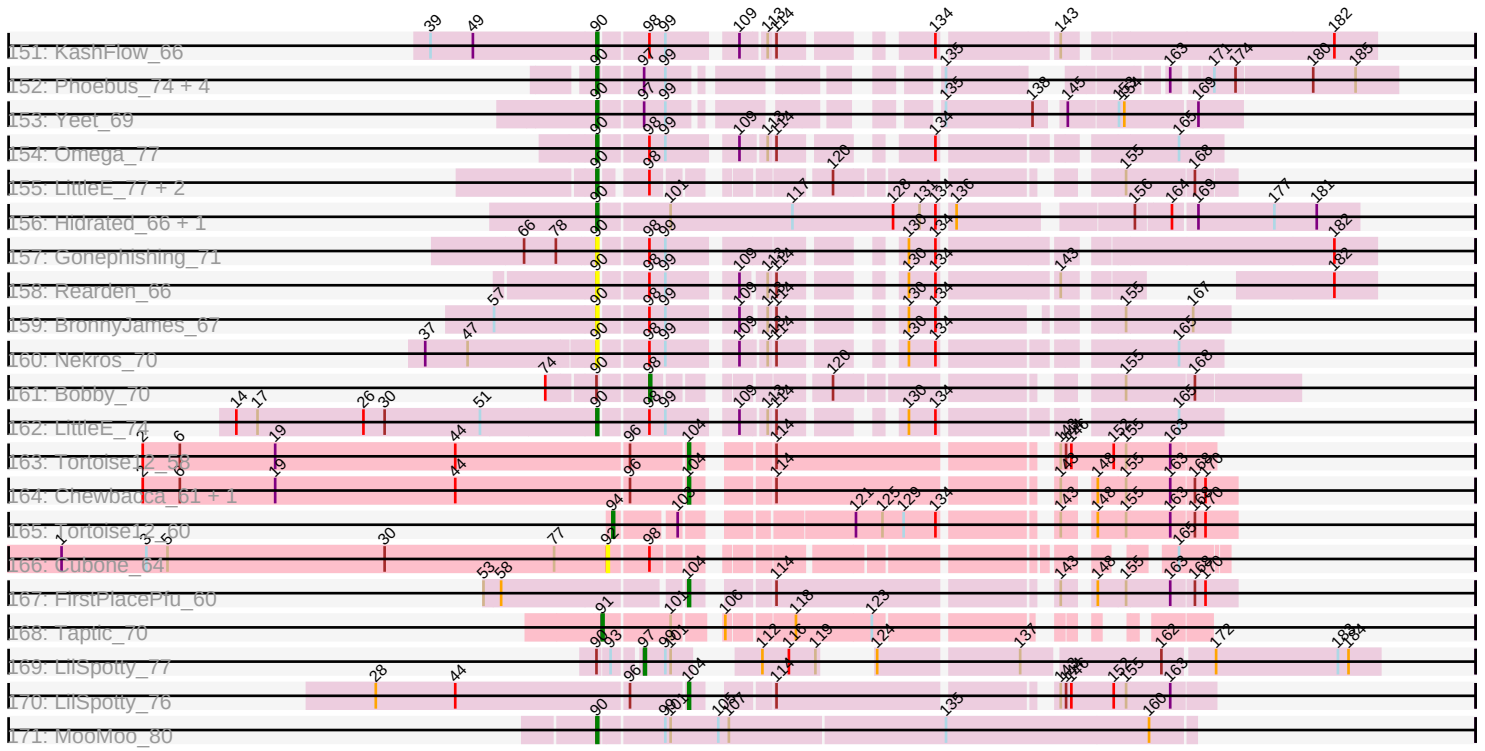
# Pham 279984



# Pham 279984



# Pham 279984



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 279984 Report

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

Pham number 279984 has 444 members, 43 are drafts.

Phages represented in each track:

- Track 1 : Gwendoluna\_64
- Track 2 : SkiPole\_66
- Track 3 : SkiPole\_68
- Track 4 : Eyeball\_63
- Track 5 : SwissCheese\_62, Moose\_60, Bruns\_60, Forsytheast\_60
- Track 6 : Zeuska\_63
- Track 7 : Zeuska\_61
- Track 8 : Tasp14\_65, Parliament\_63, Paphu\_61
- Track 9 : MrGordo\_63
- Track 10 : Wheeler\_63
- Track 11 : IgnatiusPatJac\_61, BluSpix\_59
- Track 12 : EnzoK\_61
- Track 13 : Seanderson\_61
- Track 14 : Kykar\_62
- Track 15 : Ashballer\_64, JC27\_64
- Track 16 : Gachnar\_61
- Track 17 : Jorgensen\_63
- Track 18 : Solon\_60
- Track 19 : Lamina13\_65
- Track 20 : Cali\_17, SuperGrey\_82, Eradicator\_72, KashFlow\_68, Sprinklers\_16, BadAgartude\_17
- Track 21 : Rabinovish\_14
- Track 22 : Toto\_43, BilboSwaggins\_43, Myrale\_44, Phaja\_42, IHOP\_42, Tuco\_45, Marshmallow\_43, ABCat\_42, Inca\_41, CrystalP\_44, ShamWow\_44, StellaBean\_42
- Track 23 : NonchalantPear\_43
- Track 24 : Lilpickle\_40, ChosenOne\_41, StormChicken\_41, Elite2014\_40, Rimmer\_40, Buck\_40, TeamEdward\_41
- Track 25 : Balomoji\_42, Flypotenuse\_38, Traaww1\_40, Gator\_41, Harella\_43, Glexan\_41
- Track 26 : Daikon\_44
- Track 27 : Youngblood\_41
- Track 28 : Porky\_42
- Track 29 : Emmina\_44, Teaspoon\_45
- Track 30 : Budgie\_47
- Track 31 : Petra64142\_42
- Track 32 : LordVader\_75
- Track 33 : Blarby\_91, Jabbawokkie\_91, Zapner\_90

- Track 34 : Priscilla\_84, Spartacus\_87, Wanda\_77, Koella\_76, Klein\_73, NormanBulbieJr\_82
- Track 35 : PHappiness\_82, Nimbo\_74, Geralt\_75, JoeyJr\_82, Daenerys\_81, OldBen\_79, RitaG\_82, Leperchaun\_80, MilleniumForce\_82, Deb65\_75
- Track 36 : Byougenkin\_82, PopTart\_77, Wee\_91, SassyB\_77, Florinda\_94, Royals2015\_90, Tweety\_86, Girafales\_91, Phalconet\_82, Eish\_88, DeadP\_86, PhesterPhotato\_89, Medindi\_89, Blexus\_80, Quico\_91
- Track 37 : Zerg\_82, VRedHorse\_86, FeliMaine\_10, PopTart\_73, OfUltron\_89, BAKA\_82, Guppsters\_76, Beelzebub\_12, SassyB\_73, Seabastian\_89, Ochi17\_87, Mandlovu\_76, Clarkson\_10, Huphlepuuff\_10, Lilbit\_10, Marvin\_8, Pringar\_9, Duke13\_80, Jinglebell\_88, BigPhil\_74, Minerva\_79, JoieB\_10, Strokeseat\_76, Modragons\_86, Llama\_88, Brookers\_76, Cerasum\_75, LittleLaf\_9, Corazon\_9, Sarma624\_80, Pound\_77, Hlubikazi\_76, Coco12\_78
- Track 38 : Oksu\_86
- Track 39 : Velveteen\_75
- Track 40 : VRedHorse\_80, Cornucopia\_81, Pacc40\_73
- Track 41 : Hegedechwinu\_83, JalFarm20\_90
- Track 42 : SG4\_86, Whatsapiecost\_76
- Track 43 : SG4\_81, Burwell21\_76, KristaRAM\_79, Harley\_80, JarcoB\_81, Mova\_80, Mozy\_88, Clifton\_74, OlympiaSaint\_81, Lucia\_81, Polo2Bam\_89, Philus\_84, Rockne\_82, Phatniss\_78, Latretium\_82, LunaBlu\_84, Ms6\_82, Flathead\_81, Llij\_77, Lorde\_81, Eish\_84, UncleRicky\_80, NewHope4\_84, Violac\_83, James\_82, Boomer\_85, Enby\_82, DirtMcGirt\_80, Drago\_78, DRBy19\_85, Ogopogo\_87, Rita\_88, Marker\_87, PMC\_78, Avani\_90
- Track 44 : Cheesepuff\_91
- Track 45 : Seagreen\_84
- Track 46 : Polka14\_89, Tootsieroll\_80, KingMidas\_84, Scottish\_83
- Track 47 : Ardmore\_67, Hamulus\_80, Phanphagia\_80, Batiatus\_81, Poise\_9, Filuzino\_82, Shauna1\_81, Blackbeetle\_9, DotProduct\_76, Tesla\_9, Akhila\_78, MilanaBonita\_77, Raela\_9, Nekros\_72, Manda\_43
- Track 48 : Seagreen\_80
- Track 49 : DoRead\_81
- Track 50 : DoRead\_85
- Track 51 : Guppsters\_78
- Track 52 : Spoonbill\_81, Phanphagia\_84, ShiLan\_85, OlympiaSaint\_85, Flathead\_85, Moonbeam\_83, James\_86
- Track 53 : Empress\_83, Doomphist\_88, Poenanya\_88
- Track 54 : Harley\_85
- Track 55 : Jant\_81
- Track 56 : Dorothy\_83, Ramsey\_86, Sassafras\_83, Inventum\_80, RedBird\_83
- Track 57 : lbhubesi\_80
- Track 58 : Sandalphon\_75, WillSterrel\_80, Bubbles123\_76, Minnie\_77, Soul22\_82, IrishSherpFalk\_81, Pepe\_59
- Track 59 : JarcoB\_85
- Track 60 : Hades\_81, Strokeseat\_81, Mandlovu\_81, Hlubikazi\_81
- Track 61 : Hades\_80
- Track 62 : Juniper1\_80
- Track 63 : Strokeseat\_80, Mandlovu\_80, Hlubikazi\_80
- Track 64 : Karhdo\_80, Renaud18\_93, MadMen\_79, Sabbb\_83, Kersh\_83
- Track 65 : JoeyJr\_86, Leperchaun\_84
- Track 66 : Kimberlium\_83, MulchExplorer\_85
- Track 67 : Emma\_86
- Track 68 : Juice456\_78, QuickMath\_80

- Track 69 : Cornucopia\_85
- Track 70 : Eradicator\_76, Violac\_87
- Track 71 : Kenuha5\_79
- Track 72 : Kenuha5\_77, Gandalph\_79
- Track 73 : Seabastian\_91, Llama\_90, Ochi17\_89, Modragons\_88, OfUltron\_91, Jinglebell\_90
- Track 74 : Mozy\_86
- Track 75 : MadMen\_89
- Track 76 : MadMen\_87, Nibley\_65, Galactic\_80, Kumao\_59
- Track 77 : Tweety\_82, Wee\_87, DeadP\_82, Taj\_88, Donkeykong\_86
- Track 78 : Radiance\_80
- Track 79 : IrishSherpFalk\_83, WillSterrel\_82
- Track 80 : SG4\_84
- Track 81 : Che8\_86
- Track 82 : Fruitloop\_78
- Track 83 : Spartacus\_89
- Track 84 : BuzzLyseyear\_92, Krakatau\_77, Job42\_84
- Track 85 : DaWorst\_83, Bobi\_88
- Track 86 : Emma\_88
- Track 87 : Mutaforma13\_86
- Track 88 : ShowerHandel\_82, ByChance\_73
- Track 89 : Jennelsea\_78
- Track 90 : Mahavrat\_81, Grimmer\_95
- Track 91 : Aubs\_84, Donkeykong\_90
- Track 92 : Aubs\_82
- Track 93 : KristaRAM\_82
- Track 94 : Taj\_92
- Track 95 : Marker\_79
- Track 96 : Nitzel\_78
- Track 97 : BodEinwohner17\_91
- Track 98 : Sandalphon\_83
- Track 99 : Ovechkin\_89
- Track 100 : Batiatus\_83
- Track 101 : StAnnes\_83
- Track 102 : MilleniumForce\_84
- Track 103 : Mattes\_82
- Track 104 : Estave1\_93
- Track 105 : Zizzle\_86, EleanorGeorge\_80
- Track 106 : Spartacus\_90
- Track 107 : Gandalph\_83
- Track 108 : Bipolar\_84
- Track 109 : IMpilo\_79
- Track 110 : Firehouse51\_79
- Track 111 : IMpilo\_76
- Track 112 : Shauna1\_83
- Track 113 : Galactic\_82
- Track 114 : Bubbles123\_78
- Track 115 : XFactor\_77, DLane\_83
- Track 116 : DillTech15\_88
- Track 117 : Nivrat\_80, LilMoolah\_82
- Track 118 : Stap\_78
- Track 119 : Blexus\_76, Leozinho\_79, Pippy\_76
- Track 120 : Wachhund\_81

- Track 121 : Brushbloom\_84
- Track 122 : Mwanjiwa\_84
- Track 123 : Medindi\_85
- Track 124 : Fancypants\_89
- Track 125 : Job42\_81
- Track 126 : Tchotchke\_76
- Track 127 : Marker\_89
- Track 128 : Whatsapiecost\_74
- Track 129 : Royals2015\_86
- Track 130 : SimranZ1\_83
- Track 131 : Donkeykong\_88
- Track 132 : Mozy\_91
- Track 133 : SilverChicken\_91
- Track 134 : Che9d\_94
- Track 135 : Yoshi\_92
- Track 136 : Soul22\_84, Llij\_80
- Track 137 : Demsculpinboyz\_91
- Track 138 : Squirty\_81
- Track 139 : LunaStella\_80, TChen\_82, ShroomBoi\_82
- Track 140 : ThetaBob\_85
- Track 141 : Cornie\_78, CaptainTrips\_81, MinionDave\_77, Rearden\_68
- Track 142 : Cornie\_82
- Track 143 : Bagrid\_74, DmpstrDiver\_75, Porcelain\_75, ThreeRngTarjay\_73, Kalah2\_70, Phoebus\_78, Dallas\_74, Odette\_74, Halley\_77, Zelink\_73, Ejimix\_75, Squint\_76, JuicyJay\_74, EricMillard\_74, HokkenD\_68, Hughesyang\_74, Superphikiman\_73, Beem\_75, NihilNomen\_76, MiaZeal\_76, Ariel\_75, Schatzie\_70
- Track 144 : Hannaconda\_68, Shaboozey\_64, SuperGrey\_84, BronnyJames\_65
- Track 145 : HokkenD\_64, DmpstrDiver\_71, NihilNomen\_72, Schatzie\_66, Dallas\_70, Odette\_70, Lucky2013\_69, Superphikiman\_69, Halley\_73, Zelink\_69, Kalah2\_66, Ejimix\_71, JuicyJay\_70, Marleymoo\_65, Minerva\_77, Klein\_71, Hughesyang\_70, Redno2\_68, Wanda\_75, Beem\_71, ThreeRngTarjay\_69, Pound\_75
- Track 146 : BronnyJames\_70, Phalconet\_78, Shaboozey\_69, Hannaconda\_70, Kingsley\_85
- Track 147 : Redno2\_72, Lucky2013\_73
- Track 148 : Courthouse\_72, Yeet\_71
- Track 149 : Courthouse\_70
- Track 150 : Shaboozey\_66
- Track 151 : KashFlow\_66
- Track 152 : Phoebus\_74, Squint\_72, Porcelain\_71, MiaZeal\_72, Ariel\_71
- Track 153 : Yeet\_69
- Track 154 : Omega\_77
- Track 155 : LittleE\_77, Omega\_79, PhesterPhotato\_85
- Track 156 : Hidrated\_66, Bobby\_68
- Track 157 : Gonephishing\_71
- Track 158 : Rearden\_66
- Track 159 : BronnyJames\_67
- Track 160 : Nekros\_70
- Track 161 : Bobby\_70
- Track 162 : LittleE\_74
- Track 163 : Tortoise12\_58
- Track 164 : Chewbacca\_61, ZenTime222\_56
- Track 165 : Tortoise12\_60
- Track 166 : Cubone\_64



- Track 167 : FirstPlacePfu\_60
- Track 168 : Taptic\_70
- Track 169 : LilSpotty\_77
- Track 170 : LilSpotty\_76
- Track 171 : MooMoo\_80

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

The start number called the most often in the published annotations is 90, it was called in 319 of the 401 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila\_78, Ardmore\_67, Ariel\_71, Ariel\_75, Aubs\_82, Aubs\_84, Avani\_90, BAKA\_82, Bagrid\_74, Balomoji\_42, Batiatus\_81, Batiatus\_83, Beelzebub\_12, Beem\_71, Beem\_75, BigPhil\_74, Bipolar\_84, Blackbeetle\_9, Blarby\_91, Blexus\_80, Bobby\_68, Bobi\_88, Boomer\_85, BronnyJames\_65, BronnyJames\_67, BronnyJames\_70, Brookers\_76, Bruns\_60, Brushbloom\_84, Bubbles123\_76, Bubbles123\_78, Buck\_40, Budgie\_47, Burwell21\_76, BuzzLyseyear\_92, Byougenkin\_82, CaptainTrips\_81, Cerasum\_75, Che8\_86, Che9d\_94, ChosenOne\_41, Clarkson\_10, Clifton\_74, Coco12\_78, Corazon\_9, Cornie\_78, Cornucopia\_81, Cornucopia\_85, Courthouse\_70, Courthouse\_72, DLane\_83, DRBy19\_85, DaWorst\_83, Daenerys\_81, Dallas\_70, Dallas\_74, DeadP\_82, DeadP\_86, Deb65\_75, Demsculpinboyz\_91, DirtMcgirt\_80, DmpstrDiver\_71, DmpstrDiver\_75, DoRead\_85, Donkeykong\_86, Donkeykong\_88, Donkeykong\_90, Dorothy\_83, DotProduct\_76, Drago\_78, Duke13\_80, Eish\_84, Eish\_88, Ejimix\_71, Ejimix\_75, Elite2014\_40, Emma\_86, Emma\_88, Emmina\_44, Enby\_82, EnzoK\_61, Eradicator\_76, EricMillard\_74, Eyeball\_63, Fancypants\_89, FeliMaine\_10, Filuzino\_82, Flathead\_81, Flathead\_85, Florinda\_94, Flypotenuse\_38, Forsytheast\_60, Fruitloop\_78, Galactic\_80, Galactic\_82, Gandolph\_83, Gator\_41, Geralt\_75, Girafales\_91, Glexan\_41, Gonephishing\_71, Guppsters\_76, Guppsters\_78, Gwendoluna\_64, Hades\_80, Halley\_73, Halley\_77, Hamulus\_80, Hannaconda\_68, Hannaconda\_70, Harella\_43, Harley\_80, Harley\_85, Hegedechwinu\_83, Hidrated\_66, Hlubikazi\_76, Hlubikazi\_80, HokkenD\_64, HokkenD\_68, Hughesyang\_70, Hughesyang\_74, Huphlepuuff\_10, IMpilo\_76, Inventum\_80, IrishSherpFalk\_81, IrishSherpFalk\_83, Jabbawokkie\_91, JalFarm20\_90, James\_82, James\_86, Jacob\_81, Jinglebell\_88, Jinglebell\_90, Job42\_81, Job42\_84, JoeyJr\_82, JoeyJr\_86, JoieB\_10, Jorgensen\_63, Juice456\_78, JuicyJay\_70, JuicyJay\_74, Kalah2\_66, Kalah2\_70, Karhdo\_80, KashFlow\_66, Kenuha5\_79, Kersh\_83, Kimberlium\_83, Kingsley\_85, Klein\_71, Klein\_73, Koella\_76, Krakatau\_77, KristaRAM\_79, KristaRAM\_82, Kumao\_59, Kykar\_62, Lamina13\_65, Latretium\_82, Leperchaun\_80, Leperchaun\_84, LilMoolah\_82, Lilbit\_10, Lilpickle\_40, LittleE\_74, LittleE\_77, LittleLaf\_9, Llama\_88, Llama\_90, Llij\_77, Llij\_80, LordVader\_75, Lorde\_81, Lucia\_81, Lucky2013\_69, LunaBlu\_84, MadMen\_79, MadMen\_87, MadMen\_89, Manda\_43, Mandlovu\_76, Mandlovu\_80, Marker\_87, Marleymoo\_65, Marvin\_8, Mattes\_82, Medindi\_85, Medindi\_89, MiaZeal\_72, MiaZeal\_76, MilanaBonita\_77, MilleniumForce\_82, MilleniumForce\_84, Minerva\_77, Minerva\_79, MinionDave\_77, Minnie\_77, Modragons\_86, Modragons\_88, MooMoo\_80, Moonbeam\_83, Moose\_60, Mova\_80, Mozy\_88, Mozy\_91, Ms6\_82, MulchExplorer\_85, Nekros\_70, Nekros\_72, NewHope4\_84, Nibley\_65, NihilNomen\_72, NihilNomen\_76, Nimbo\_74, Nitzel\_78, Nivrat\_80,

NormanBulbieJr\_82, Ochi17\_87, Ochi17\_89, Odette\_70, Odette\_74, OfUltron\_89, OfUltron\_91, Ogopogo\_87, Oksu\_86, OldBen\_79, OlympiaSaint\_81, OlympiaSaint\_85, Omega\_77, Omega\_79, Ovechkin\_89, PHappiness\_82, PMC\_78, Pacc40\_73, Paphu\_61, Parliament\_63, Pepe\_59, Phalconet\_78, Phalconet\_82, Phanphagia\_80, Phanphagia\_84, Phatniss\_78, PhesterPhotato\_85, PhesterPhotato\_89, Philus\_84, Phoebus\_74, Phoebus\_78, Poise\_9, Polo2Bam\_89, PopTart\_73, PopTart\_77, Porcelain\_71, Porcelain\_75, Pound\_75, Pound\_77, Pringar\_9, Priscilla\_84, QuickMath\_80, Quico\_91, Rabinovish\_14, Radiance\_80, Raela\_9, Ramsey\_86, Rearden\_66, Rearden\_68, RedBird\_83, Redno2\_68, Renaud18\_93, Rimmer\_40, RitaG\_82, Rita\_88, Rockne\_82, Royals2015\_86, Royals2015\_90, SG4\_81, SG4\_84, SG4\_86, Sabbb\_83, Sandalphon\_75, Sandalphon\_83, Sarma624\_80, Sassafras\_83, SassyB\_73, SassyB\_77, Schatzie\_66, Schatzie\_70, Seabastian\_89, Seabastian\_91, Seagreen\_84, Shaboozey\_64, Shaboozey\_69, Shauna1\_81, Shauna1\_83, ShiLan\_85, SimranZ1\_83, SkiPole\_66, Solon\_60, Soul22\_82, Soul22\_84, Spartacus\_87, Spartacus\_89, Spoonbill\_81, Squint\_72, Squint\_76, Squirty\_81, StAnnes\_83, StormChicken\_41, Strokeseat\_76, Strokeseat\_80, SuperGrey\_84, Superphikiman\_69, Superphikiman\_73, SwissCheese\_62, Taj\_88, Taj\_92, Tasp14\_65, TeamEdward\_41, Teaspoon\_45, Tesla\_9, ThetaBob\_85, ThreeRngTarjay\_69, ThreeRngTarjay\_73, Traaww1\_40, Tweety\_82, Tweety\_86, UncleRicky\_80, VRedHorse\_80, VRedHorse\_86, Violac\_83, Violac\_87, Wachhund\_81, Wanda\_75, Wanda\_77, Wee\_87, Wee\_91, Whatsapiecost\_74, Whatsapiecost\_76, Wheeler\_63, WillSterrel\_80, WillSterrel\_82, XFactor\_77, Yeet\_69, Yeet\_71, Zapner\_90, Zelink\_69, Zelink\_73, Zerg\_82, Zeuska\_61,

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

- Bobby\_70, Daikon\_44, DillTech15\_88, IMpilo\_79, Ibhubesi\_80, LilSpotty\_77, Lucky2013\_73, MrGordo\_63, Mwanjiwa\_84, NonchalantPear\_43, Petra64142\_42, Porky\_42, Redno2\_72, Seagreen\_80, Seanderson\_61, Shaboozey\_66, SilverChicken\_91, SkiPole\_68, Velveteen\_75, Youngblood\_41, Zeuska\_63,

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

- ABCat\_42, Ashballer\_64, BadAgartude\_17, BilboSwaggins\_43, Blexus\_76, BluSpix\_59, BodEinwohner17\_91, ByChance\_73, Cali\_17, CheesePuff\_91, Chewbacca\_61, Cornie\_82, CrystalP\_44, Cubone\_64, DoRead\_81, Doomphist\_88, EleanorGeorge\_80, Empress\_83, Eradicator\_72, Estave1\_93, Firehouse51\_79, FirstPlacePfu\_60, Gachnar\_61, Gandolph\_79, Grimmer\_95, Hades\_81, Hlubikazi\_81, IHOP\_42, IgnatiusPatJac\_61, Inca\_41, JC27\_64, Jant\_81, Jacob\_85, Jennelsea\_78, Juniper1\_80, KashFlow\_68, Kenuha5\_77, KingMidas\_84, Leozinho\_79, LilSpotty\_76, LunaStella\_80, Mahavrat\_81, Mandlovu\_81, Marker\_79, Marker\_89, Marshmallow\_43, Mozy\_86, Mutaforma13\_86, Myrale\_44, Phaja\_42, Pippy\_76, Poenanya\_88, Polka14\_89, Scottish\_83, ShamWow\_44, ShowerHandel\_82, ShroomBoi\_82, Spartacus\_90, Sprinklers\_16, Stap\_78, StellaBean\_42, Strokeseat\_81, SuperGrey\_82, TChen\_82, Taptic\_70, Tchotchke\_76, Tootsieroll\_80, Tortoise12\_58, Tortoise12\_60, Toto\_43, Tuco\_45, Yoshi\_92, ZenTime222\_56, Zizzle\_86,

## Summary by start number:

Start 60:

- Found in 2 of 444 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 50.0% of time when present

- Phage (with cluster) where this start called: Seagreen\_80 (F1),

Start 65:

- Found in 5 of 444 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 5 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hades\_81 (F1), Hlubikazi\_81 (F1), Mandlovu\_81 (F1), Spartacus\_90 (F1), Strokeseat\_81 (F1),

Start 70:

- Found in 12 of 444 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 3 of 401
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Ibhubesi\_80 (F1), MrGordo\_63 (A1), SkiPole\_68 (A1),

Start 74:

- Found in 48 of 444 ( 10.8% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 2.1% of time when present
- Phage (with cluster) where this start called: Velveteen\_75 (F1),

Start 78:

- Found in 13 of 444 ( 2.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: SilverChicken\_91 (F2),

Start 81:

- Found in 1 of 444 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17\_91 (F1),

Start 83:

- Found in 8 of 444 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 8 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Doomphist\_88 (F1), Empress\_83 (F1), KingMidas\_84 (F1), Poenanya\_88 (F1), Polka14\_89 (F1), Scottish\_83 (F1), Stap\_78 (F1), Tootsieroll\_80 (F1),

Start 86:

- Found in 4 of 444 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 3 of 401
- Called 75.0% of time when present
- Phage (with cluster) where this start called: EleanorGeorge\_80 (F1), Yoshi\_92 (F2), Zizzle\_86 (F1),

Start 88:

- Found in 3 of 444 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 401
- Called 100.0% of time when present

- Phage (with cluster) where this start called: BluSpix\_59 (A1), Gachnar\_61 (A1), IgnatiusPatJac\_61 (A1),

Start 89:

- Found in 10 of 444 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 9 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CheesePuff\_91 (F1), Cornie\_82 (F5), Firehouse51\_79 (F1), Grimmer\_95 (F1), Juniper1\_80 (F1), LunaStella\_80 (F4), Mahavrat\_81 (F1), Mutaforma13\_86 (F1), ShroomBoi\_82 (F1), TChen\_82 (F4),

Start 90:

- Found in 370 of 444 ( 83.3% ) of genes in pham
- Manual Annotations of this start: 319 of 401
- Called 94.3% of time when present
- Phage (with cluster) where this start called: Akhila\_78 (F1), Ardmore\_67 (F1), Ariel\_71 (J), Ariel\_75 (J), Aubs\_82 (F1), Aubs\_84 (F1), Avani\_90 (F2), BAKA\_82 (J), Bagrid\_74 (J), Balomaji\_42 (E), Batiatius\_81 (F1), Batiatius\_83 (F1), Beelzebub\_12 (S), Beem\_71 (J), Beem\_75 (J), BigPhil\_74 (F1), Bipolar\_84 (F1), Blackbeetle\_9 (S), Blarby\_91 (F), Blexus\_80 (F1), Bobby\_68 (J), Bobi\_88 (F1), Boomer\_85 (F1), BronnyJames\_65 (J), BronnyJames\_67 (J), BronnyJames\_70 (J), Brookers\_76 (F1), Bruns\_60 (A1), Brushbloom\_84 (F1), Bubbles123\_76 (F1), Bubbles123\_78 (F1), Buck\_40 (E), Budgie\_47 (E), Burwell21\_76 (F1), BuzzLyseyear\_92 (F1), Byougenkin\_82 (F1), CaptainTrips\_81 (F1), Cerasum\_75 (F1), Che8\_86 (F1), Che9d\_94 (F2), ChosenOne\_41 (E), Clarkson\_10 (S), Clifton\_74 (F1), Coco12\_78 (F1), Corazon\_9 (S), Cornie\_78 (F5), Cornucopia\_81 (F1), Cornucopia\_85 (F1), Courthouse\_70 (J), Courthouse\_72 (J), DLane\_83 (F1), DRBy19\_85 (F1), DaWorst\_83 (F1), Daenerys\_81 (F1), Dallas\_70 (J), Dallas\_74 (J), DeadP\_82 (F1), DeadP\_86 (F1), Deb65\_75 (F1), Demsculpinboyz\_91 (F2), DirtMcGirt\_80 (F1), DmpstrDiver\_71 (J), DmpstrDiver\_75 (J), DoRead\_85 (F1), Donkeykong\_86 (F1), Donkeykong\_88 (F1), Donkeykong\_90 (F1), Dorothy\_83 (F1), DotProduct\_76 (F1), Drago\_78 (F1), Duke13\_80 (J), Eish\_84 (F1), Eish\_88 (F1), Ejimix\_71 (J), Ejimix\_75 (J), Elite2014\_40 (E), Emma\_86 (F1), Emma\_88 (F1), Emmina\_44 (E), Enby\_82 (F1), EnzoK\_61 (A1), Eradicator\_76 (F1), EricMillard\_74 (J), Eyeball\_63 (A1), Fancypants\_89 (F1), FeliMaine\_10 (S), Filuzino\_82 (F1), Flathead\_81 (F1), Flathead\_85 (F1), Florinda\_94 (F1), Flypotenuse\_38 (E), Forsytheast\_60 (A1), Fruitloop\_78 (F1), Galactic\_80 (F1), Galactic\_82 (F1), Gandolph\_83 (F1), Gator\_41 (E), Geralt\_75 (F1), Girafales\_91 (F1), Glexan\_41 (E), Gonephishing\_71 (J), Guppsters\_76 (F1), Guppsters\_78 (F1), Gwendoluna\_64 (A1), Hades\_80 (F1), Halley\_73 (J), Halley\_77 (J), Hamulus\_80 (F1), Hannaconda\_68 (J), Hannaconda\_70 (J), Harella\_43 (E), Harley\_80 (F1), Harley\_85 (F1), Hegedechwinu\_83 (F1), Hidrated\_66 (J), Hlubikazi\_76 (F1), Hlubikazi\_80 (F1), HokkenD\_64 (J), HokkenD\_68 (J), Hughesyang\_70 (J), Hughesyang\_74 (J), HuphlePuff\_10 (S), IMpilo\_76 (F1), Inventum\_80 (F1), IrishSherpFalk\_81 (F1), IrishSherpFalk\_83 (F1), Jabbawokkie\_91 (F2), JalFarm20\_90 (F1), James\_82 (F1), James\_86 (F1), Jacob\_81 (F1), Jinglebell\_88 (F1), Jinglebell\_90 (F1), Job42\_81 (F1), Job42\_84 (F1), JoeyJr\_82 (F1), JoeyJr\_86 (F1), JoieB\_10 (S), Jorgensen\_63 (A1), Juice456\_78 (F1), JuicyJay\_70 (J), JuicyJay\_74 (J), Kalah2\_66 (J), Kalah2\_70 (J), Karhdo\_80 (F1), KashFlow\_66 (J), Kenuha5\_79 (F1), Kersh\_83 (F1), Kimberlium\_83 (F1), Kingsley\_85 (F1), Klein\_71 (J), Klein\_73 (J), Koella\_76 (F1), Krakatau\_77 (F1), KristaRAM\_79 (F1), KristaRAM\_82 (F1), Kumao\_59 (singleton), Kykar\_62 (A1), Lamina13\_65 (A1), Latretium\_82 (F1), Leperchaun\_80 (F1), Leperchaun\_84 (F1), LilMoolah\_82 (F1), Lilbit\_10 (S), Lilpickle\_40 (E), LittleE\_74 (J), LittleE\_77 (J),

LittleLaf\_9 (S), Llama\_88 (F1), Llama\_90 (F1), Llij\_77 (F1), Llij\_80 (F1),  
 LordVader\_75 (F), Lorde\_81 (F1), Lucia\_81 (F1), Lucky2013\_69 (J), LunaBlu\_84  
 (F1), MadMen\_79 (F1), MadMen\_87 (F1), MadMen\_89 (F1), Manda\_43 (E),  
 Mandlovu\_76 (F1), Mandlovu\_80 (F1), Marker\_87 (F1), Marleymoo\_65 (J), Marvin\_8  
 (S), Mattes\_82 (F1), Medindi\_85 (F1), Medindi\_89 (F1), MiaZeal\_72 (J), MiaZeal\_76  
 (J), MilanaBonita\_77 (F1), MilleniumForce\_82 (F1), MilleniumForce\_84 (F1),  
 Minerva\_77 (J), Minerva\_79 (J), MinionDave\_77 (F1), Minnie\_77 (F1), Modragons\_86  
 (F1), Modragons\_88 (F1), MooMoo\_80 (singleton), Moonbeam\_83 (F1), Moose\_60  
 (A1), Mova\_80 (F1), Mozy\_88 (F1), Mozy\_91 (F1), Ms6\_82 (F1), MulchExplorer\_85  
 (F1), Nekros\_70 (J), Nekros\_72 (J), NewHope4\_84 (F1), Nibley\_65 (J),  
 NihilNomen\_72 (J), NihilNomen\_76 (J), Nimbo\_74 (F1), Nitzel\_78 (F1), Nivrat\_80  
 (F1), NormanBulbieJr\_82 (F1), Ochi17\_87 (F1), Ochi17\_89 (F1), Odette\_70 (J),  
 Odette\_74 (J), OfUltron\_89 (F1), OfUltron\_91 (F1), Ogopogo\_87 (F1), Oksu\_86 (F1),  
 OldBen\_79 (F1), OlympiaSaint\_81 (F1), OlympiaSaint\_85 (F1), Omega\_77 (J),  
 Omega\_79 (J), Ovechkin\_89 (F1), PHappiness\_82 (F1), PMC\_78 (F1), Pacc40\_73  
 (F1), Paphu\_61 (A1), Parliament\_63 (A1), Pepe\_59 (A1), Phalconet\_78 (F1),  
 Phalconet\_82 (F1), Phanphagia\_80 (F1), Phanphagia\_84 (F1), Phatniss\_78 (F1),  
 PhesterPhotato\_85 (F1), PhesterPhotato\_89 (F1), Philus\_84 (F1), Phoebus\_74 (J),  
 Phoebus\_78 (J), Poise\_9 (S), Polo2Bam\_89 (F1), PopTart\_73 (F1), PopTart\_77 (F1),  
 Porcelain\_71 (J), Porcelain\_75 (J), Pound\_75 (J), Pound\_77 (J), Pringar\_9 (S),  
 Priscilla\_84 (F1), QuickMath\_80 (F1), Quico\_91 (F1), Rabinovich\_14 (C1),  
 Radiance\_80 (F1), Raela\_9 (S), Ramsey\_86 (F1), Rearden\_66 (J), Rearden\_68 (J),  
 RedBird\_83 (F1), Redno2\_68 (J), Renaud18\_93 (F4), Rimmer\_40 (E), RitaG\_82 (F1),  
 Rita\_88 (F1), Rockne\_82 (F1), Royals2015\_86 (F1), Royals2015\_90 (F1), SG4\_81  
 (F1), SG4\_84 (F1), SG4\_86 (F1), Sabbb\_83 (F1), Sandalphon\_75 (F1),  
 Sandalphon\_83 (F1), Sarma624\_80 (F1), Sassafras\_83 (F1), SassyB\_73 (F1),  
 SassyB\_77 (F1), Schatzie\_66 (J), Schatzie\_70 (J), Seabastian\_89 (F1),  
 Seabastian\_91 (F1), Seagreen\_84 (F1), Shaboozey\_64 (J), Shaboozey\_69 (J),  
 Shauna1\_81 (F1), Shauna1\_83 (F1), ShiLan\_85 (F1), SimranZ1\_83 (F1), SkiPole\_66  
 (A1), Solon\_60 (A1), Soul22\_82 (F2), Soul22\_84 (F2), Spartacus\_87 (F1),  
 Spartacus\_89 (F1), Spoonbill\_81 (F1), Squint\_72 (J), Squint\_76 (J), Squirty\_81 (F3),  
 StAnnes\_83 (F1), StormChicken\_41 (E), Strokeseat\_76 (F1), Strokeseat\_80 (F1),  
 SuperGrey\_84 (F1), Superphikiman\_69 (J), Superphikiman\_73 (J), SwissCheese\_62  
 (A1), Taj\_88 (F1), Taj\_92 (F1), Tasp14\_65 (A1), TeamEdward\_41 (E), Teaspoon\_45  
 (E), Tesla\_9 (S), ThetaBob\_85 (F4), ThreeRngTarjay\_69 (J), ThreeRngTarjay\_73 (J),  
 Traaww1\_40 (E), Tweety\_82 (F1), Tweety\_86 (F1), UncleRicky\_80 (F1),  
 VRedHorse\_80 (F1), VRedHorse\_86 (F1), Violac\_83 (F1), Violac\_87 (F1),  
 Wachhund\_81 (F1), Wanda\_75 (J), Wanda\_77 (J), Wee\_87 (F1), Wee\_91 (F1),  
 Whatsapiecost\_74 (F1), Whatsapiecost\_76 (F1), Wheeler\_63 (A1), WillSterrel\_80  
 (F1), WillSterrel\_82 (F1), XFactor\_77 (F1), Yeet\_69 (J), Yeet\_71 (J), Zapner\_90 (F2),  
 Zelink\_69 (J), Zelink\_73 (J), Zerg\_82 (F1), Zeuska\_61 (A1),

Start 91:

- Found in 24 of 444 ( 5.4% ) of genes in pham
- Manual Annotations of this start: 23 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ABCat\_42 (E), Ashballer\_64 (A1), BilboSwaggins\_43 (E), Blexus\_76 (F1), CrystalP\_44 (E), DoRead\_81 (F1), Estave1\_93 (F1), Gandolph\_79 (F1), IHOP\_42 (E), Inca\_41 (E), JC27\_64 (A1), Jant\_81 (F1), Kenuha5\_77 (F1), Leozinho\_79 (F1), Marshmallow\_43 (E), Mozy\_86 (F1), Myrale\_44 (E), Phaja\_42 (E), Pippy\_76 (F1), ShamWow\_44 (E), StellaBean\_42 (E), Taptic\_70 (W), Toto\_43 (E), Tuco\_45 (E),

Start 92:

- Found in 8 of 444 ( 1.8% ) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Cubone\_64 (N), Tchotchke\_76 (F1),

Start 94:

- Found in 1 of 444 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tortoise12\_60 (N),

Start 95:

- Found in 8 of 444 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Seanderson\_61 (A1),

Start 97:

- Found in 108 of 444 ( 24.3% ) of genes in pham
- Manual Annotations of this start: 3 of 401
- Called 5.6% of time when present
- Phage (with cluster) where this start called: Daikon\_44 (E), Jennelsea\_78 (F1), LilSpotty\_77 (singleton), Marker\_79 (F1), Marker\_89 (F1), Mwanjiwa\_84 (F1),

Start 98:

- Found in 291 of 444 ( 65.5% ) of genes in pham
- Manual Annotations of this start: 13 of 401
- Called 5.8% of time when present
- Phage (with cluster) where this start called: BadAgartude\_17 (C1), Bobby\_70 (J), Cali\_17 (C1), DillTech15\_88 (F1), Eradicator\_72 (F1), IMpilo\_79 (F1), KashFlow\_68 (J), Lucky2013\_73 (J), NonchalantPear\_43 (E), Petra64142\_42 (E), Porky\_42 (E), Redno2\_72 (J), Shaboozey\_66 (J), Sprinklers\_16 (C1), SuperGrey\_82 (F1), Youngblood\_41 (E), Zeuska\_63 (A1),

Start 100:

- Found in 2 of 444 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 401
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ByChance\_73 (F1), ShowerHandel\_82 (F1),

Start 103:

- Found in 2 of 444 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 401
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jacob\_85 (F1),

Start 104:

- Found in 12 of 444 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 5 of 401
- Called 41.7% of time when present

- Phage (with cluster) where this start called: Chewbacca\_61 (N), FirstPlacePfu\_60 (P1), LilSpotty\_76 (singleton), Tortoise12\_58 (N), ZenTime222\_56 (T),

### **Summary by clusters:**

There are 16 clusters represented in this pham: F1, F2, F3, F4, F5, F, J, singleton, N, A1, S, P1, T, W, E, C1,

Info for manual annotations of cluster A1:

- Start number 70 was manually annotated 2 times for cluster A1.
- Start number 88 was manually annotated 2 times for cluster A1.
- Start number 90 was manually annotated 18 times for cluster A1.
- Start number 91 was manually annotated 2 times for cluster A1.
- Start number 95 was manually annotated 1 time for cluster A1.
- Start number 98 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:

- Start number 90 was manually annotated 1 time for cluster C1.
- Start number 98 was manually annotated 3 times for cluster C1.

Info for manual annotations of cluster E:

- Start number 90 was manually annotated 14 times for cluster E.
- Start number 91 was manually annotated 12 times for cluster E.
- Start number 98 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 60 was manually annotated 1 time for cluster F1.
- Start number 65 was manually annotated 5 times for cluster F1.
- Start number 70 was manually annotated 1 time for cluster F1.
- Start number 74 was manually annotated 1 time for cluster F1.
- Start number 81 was manually annotated 1 time for cluster F1.
- Start number 83 was manually annotated 8 times for cluster F1.
- Start number 86 was manually annotated 2 times for cluster F1.
- Start number 89 was manually annotated 6 times for cluster F1.
- Start number 90 was manually annotated 196 times for cluster F1.
- Start number 91 was manually annotated 8 times for cluster F1.
- Start number 97 was manually annotated 2 times for cluster F1.
- Start number 98 was manually annotated 3 times for cluster F1.
- Start number 100 was manually annotated 2 times for cluster F1.
- Start number 103 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 86 was manually annotated 1 time for cluster F2.
- Start number 90 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster F3:

- Start number 90 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 89 was manually annotated 2 times for cluster F4.
- Start number 90 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 89 was manually annotated 1 time for cluster F5.
- Start number 90 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 90 was manually annotated 63 times for cluster J.
- Start number 98 was manually annotated 4 times for cluster J.

Info for manual annotations of cluster N:

- Start number 94 was manually annotated 1 time for cluster N.
- Start number 104 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 104 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster S:

- Start number 90 was manually annotated 14 times for cluster S.

Info for manual annotations of cluster T:

- Start number 104 was manually annotated 1 time for cluster T.

Info for manual annotations of cluster W:

- Start number 91 was manually annotated 1 time for cluster W.

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

Gene: ABCat\_42 Start: 36113, Stop: 35817, Start Num: 91

Candidate Starts for ABCat\_42:

(Start: 91 @36113 has 23 MA's), (101, 36077), (106, 36059), (118, 36026), (123, 35984), (168, 35837),

Gene: Akhila\_78 Start: 48008, Stop: 48292, Start Num: 90

Candidate Starts for Akhila\_78:

(Start: 90 @48008 has 319 MA's), (Start: 98 @48032 has 13 MA's), (120, 48107), (155, 48236), (168, 48272),

Gene: Ardmore\_67 Start: 43684, Stop: 43968, Start Num: 90

Candidate Starts for Ardmore\_67:

(Start: 90 @43684 has 319 MA's), (Start: 98 @43708 has 13 MA's), (120, 43783), (155, 43912), (168, 43948),

Gene: Ariel\_75 Start: 47349, Stop: 47065, Start Num: 90

Candidate Starts for Ariel\_75:

(Start: 90 @47349 has 319 MA's), (Start: 98 @47325 has 13 MA's), (120, 47250), (155, 47121), (168, 47085),

Gene: Ariel\_71 Start: 45936, Stop: 45583, Start Num: 90

Candidate Starts for Ariel\_71:

(Start: 90 @45936 has 319 MA's), (Start: 97 @45915 has 3 MA's), (99, 45903), (135, 45795), (163, 45702), (171, 45684), (174, 45672), (180, 45630), (185, 45606),

Gene: Ashballer\_64 Start: 41640, Stop: 41353, Start Num: 91



Candidate Starts for Ashballer\_64:

(Start: 74 @41670 has 1 MA's), (Start: 91 @41640 has 23 MA's), (Start: 98 @41616 has 13 MA's), (165, 41376),

Gene: Aubs\_84 Start: 50517, Stop: 50876, Start Num: 90

Candidate Starts for Aubs\_84:

(39, 50424), (49, 50448), (Start: 90 @50517 has 319 MA's), (Start: 97 @50538 has 3 MA's), (99, 50550), (140, 50706), (162, 50769), (175, 50811), (181, 50853),

Gene: Aubs\_82 Start: 49731, Stop: 50015, Start Num: 90

Candidate Starts for Aubs\_82:

(68, 49695), (Start: 90 @49731 has 319 MA's), (Start: 98 @49755 has 13 MA's), (155, 49959), (168, 49995),

Gene: Avani\_90 Start: 47333, Stop: 47617, Start Num: 90

Candidate Starts for Avani\_90:

(Start: 90 @47333 has 319 MA's), (Start: 98 @47357 has 13 MA's), (120, 47432), (155, 47561), (168, 47597),

Gene: BAKA\_82 Start: 52624, Stop: 52340, Start Num: 90

Candidate Starts for BAKA\_82:

(Start: 74 @52648 has 1 MA's), (Start: 90 @52624 has 319 MA's), (Start: 98 @52600 has 13 MA's), (120, 52525), (155, 52396), (168, 52360),

Gene: BadAgartude\_17 Start: 5514, Stop: 5792, Start Num: 98

Candidate Starts for BadAgartude\_17:

(85, 5475), (92, 5493), (Start: 98 @5514 has 13 MA's), (Start: 104 @5535 has 5 MA's), (106, 5547), (108, 5550), (112, 5565), (115, 5574), (155, 5736), (168, 5772),

Gene: Bagrid\_74 Start: 50766, Stop: 50482, Start Num: 90

Candidate Starts for Bagrid\_74:

(Start: 90 @50766 has 319 MA's), (Start: 98 @50742 has 13 MA's), (120, 50667), (155, 50538), (168, 50502),

Gene: Balomoji\_42 Start: 35703, Stop: 35428, Start Num: 90

Candidate Starts for Balomoji\_42:

(47, 35775), (61, 35751), (62, 35748), (Start: 90 @35703 has 319 MA's), (Start: 97 @35682 has 3 MA's), (101, 35670), (134, 35562), (155, 35484), (168, 35448),

Gene: Batiatus\_81 Start: 49093, Stop: 49377, Start Num: 90

Candidate Starts for Batiatus\_81:

(Start: 90 @49093 has 319 MA's), (Start: 98 @49117 has 13 MA's), (120, 49192), (155, 49321), (168, 49357),

Gene: Batiatus\_83 Start: 49708, Stop: 50034, Start Num: 90

Candidate Starts for Batiatus\_83:

(35, 49603), (Start: 90 @49708 has 319 MA's), (99, 49741), (101, 49744), (105, 49771), (107, 49777), (135, 49897), (160, 50011),

Gene: Beelzebub\_12 Start: 3476, Stop: 3760, Start Num: 90

Candidate Starts for Beelzebub\_12:

(Start: 74 @3452 has 1 MA's), (Start: 90 @3476 has 319 MA's), (Start: 98 @3500 has 13 MA's), (120, 3575), (155, 3704), (168, 3740),

Gene: Beem\_75 Start: 51626, Stop: 51342, Start Num: 90

Candidate Starts for Beem\_75:

(Start: 90 @51626 has 319 MA's), (Start: 98 @51602 has 13 MA's), (120, 51527), (155, 51398), (168, 51362),

Gene: Beem\_71 Start: 50213, Stop: 49920, Start Num: 90

Candidate Starts for Beem\_71:

(Start: 90 @50213 has 319 MA's), (Start: 97 @50192 has 3 MA's), (99, 50180), (135, 50072), (138, 50024), (145, 50012), (153, 49985), (154, 49982), (169, 49943),

Gene: BigPhil\_74 Start: 44927, Stop: 45211, Start Num: 90

Candidate Starts for BigPhil\_74:

(Start: 74 @44903 has 1 MA's), (Start: 90 @44927 has 319 MA's), (Start: 98 @44951 has 13 MA's), (120, 45026), (155, 45155), (168, 45191),

Gene: BilboSwaggins\_43 Start: 36121, Stop: 35825, Start Num: 91

Candidate Starts for BilboSwaggins\_43:

(Start: 91 @36121 has 23 MA's), (101, 36085), (106, 36067), (118, 36034), (123, 35992), (168, 35845),

Gene: Bipolar\_84 Start: 50621, Stop: 50905, Start Num: 90

Candidate Starts for Bipolar\_84:

(68, 50585), (Start: 90 @50621 has 319 MA's), (Start: 98 @50645 has 13 MA's), (120, 50720), (155, 50849), (168, 50885),

Gene: Blackbeetle\_9 Start: 2787, Stop: 3071, Start Num: 90

Candidate Starts for Blackbeetle\_9:

(Start: 90 @2787 has 319 MA's), (Start: 98 @2811 has 13 MA's), (120, 2886), (155, 3015), (168, 3051),

Gene: Blarby\_91 Start: 47885, Stop: 48169, Start Num: 90

Candidate Starts for Blarby\_91:

(Start: 90 @47885 has 319 MA's), (Start: 98 @47909 has 13 MA's), (155, 48113), (168, 48149),

Gene: Blexus\_76 Start: 48851, Stop: 49147, Start Num: 91

Candidate Starts for Blexus\_76:

(Start: 91 @48851 has 23 MA's), (101, 48887), (106, 48905), (118, 48938), (123, 48980), (155, 49091), (168, 49127),

Gene: Blexus\_80 Start: 49926, Stop: 50210, Start Num: 90

Candidate Starts for Blexus\_80:

(Start: 90 @49926 has 319 MA's), (Start: 98 @49950 has 13 MA's), (99, 49959), (130, 50058), (134, 50073), (165, 50187),

Gene: BluSpix\_59 Start: 36720, Stop: 36373, Start Num: 88

Candidate Starts for BluSpix\_59:

(12, 36921), (54, 36777), (56, 36774), (Start: 88 @36720 has 2 MA's), (93, 36708), (101, 36678), (106, 36660), (118, 36627), (123, 36585), (157, 36471), (178, 36396),

Gene: Bobby\_68 Start: 49135, Stop: 48737, Start Num: 90

Candidate Starts for Bobby\_68:

(Start: 90 @49135 has 319 MA's), (101, 49099), (117, 49030), (128, 48973), (131, 48958), (134, 48949), (136, 48943), (156, 48856), (164, 48838), (169, 48826), (177, 48784), (181, 48760),

Gene: Bobby\_70 Start: 49641, Stop: 49345, Start Num: 98

Candidate Starts for Bobby\_70:

(Start: 74 @49689 has 1 MA's), (Start: 90 @49665 has 319 MA's), (Start: 98 @49641 has 13 MA's), (120, 49566), (155, 49437), (168, 49401),

Gene: Bobi\_88 Start: 51408, Stop: 51779, Start Num: 90

Candidate Starts for Bobi\_88:

(Start: 90 @51408 has 319 MA's), (Start: 98 @51432 has 13 MA's), (99, 51441), (130, 51540), (134, 51555), (182, 51756),

Gene: BodEinwohner17\_91 Start: 52011, Stop: 52400, Start Num: 81

Candidate Starts for BodEinwohner17\_91:

(Start: 81 @52011 has 1 MA's), (Start: 98 @52053 has 13 MA's), (99, 52062), (130, 52161), (134, 52176), (182, 52377),

Gene: Boomer\_85 Start: 49678, Stop: 49962, Start Num: 90

Candidate Starts for Boomer\_85:

(Start: 90 @49678 has 319 MA's), (Start: 98 @49702 has 13 MA's), (120, 49777), (155, 49906), (168, 49942),

Gene: BronnyJames\_70 Start: 45965, Stop: 45681, Start Num: 90

Candidate Starts for BronnyJames\_70:

(Start: 90 @45965 has 319 MA's), (Start: 98 @45941 has 13 MA's), (155, 45737), (168, 45701),

Gene: BronnyJames\_65 Start: 44145, Stop: 43759, Start Num: 90

Candidate Starts for BronnyJames\_65:

(39, 44238), (49, 44214), (Start: 90 @44145 has 319 MA's), (Start: 97 @44124 has 3 MA's), (101, 44109), (134, 43983), (143, 43923), (181, 43782),

Gene: BronnyJames\_67 Start: 44925, Stop: 44647, Start Num: 90

Candidate Starts for BronnyJames\_67:

(57, 44982), (Start: 90 @44925 has 319 MA's), (Start: 98 @44901 has 13 MA's), (99, 44892), (109, 44859), (113, 44847), (114, 44844), (130, 44796), (134, 44781), (155, 44703), (167, 44667),

Gene: Brookers\_76 Start: 47878, Stop: 48162, Start Num: 90

Candidate Starts for Brookers\_76:

(Start: 74 @47854 has 1 MA's), (Start: 90 @47878 has 319 MA's), (Start: 98 @47902 has 13 MA's), (120, 47977), (155, 48106), (168, 48142),

Gene: Bruns\_60 Start: 39755, Stop: 39507, Start Num: 90

Candidate Starts for Bruns\_60:

(33, 39851), (43, 39827), (59, 39797), (Start: 90 @39755 has 319 MA's), (Start: 95 @39743 has 1 MA's), (151, 39530),

Gene: Brushbloom\_84 Start: 50508, Stop: 50876, Start Num: 90

Candidate Starts for Brushbloom\_84:

(Start: 90 @50508 has 319 MA's), (Start: 98 @50532 has 13 MA's), (99, 50541), (109, 50574), (113, 50586), (114, 50589), (130, 50637), (134, 50652), (182, 50853),

Gene: Bubbles123\_76 Start: 48608, Stop: 48892, Start Num: 90

Candidate Starts for Bubbles123\_76:

(Start: 70 @48578 has 3 MA's), (Start: 74 @48584 has 1 MA's), (Start: 90 @48608 has 319 MA's), (Start: 98 @48632 has 13 MA's), (120, 48707), (155, 48836), (168, 48872),

Gene: Bubbles123\_78 Start: 49394, Stop: 49753, Start Num: 90

Candidate Starts for Bubbles123\_78:

(39, 49301), (49, 49325), (Start: 90 @49394 has 319 MA's), (Start: 97 @49415 has 3 MA's), (99, 49427), (181, 49730),

Gene: Buck\_40 Start: 34705, Stop: 34334, Start Num: 90

Candidate Starts for Buck\_40:

(66, 34744), (78, 34726), (Start: 90 @34705 has 319 MA's), (Start: 98 @34681 has 13 MA's), (99, 34672), (134, 34558), (141, 34504), (166, 34441), (176, 34399), (182, 34357),

Gene: Budgie\_47 Start: 35211, Stop: 34930, Start Num: 90

Candidate Starts for Budgie\_47:

(Start: 90 @35211 has 319 MA's), (Start: 98 @35187 has 13 MA's), (99, 35178), (109, 35145), (113, 35133), (114, 35130), (134, 35067), (165, 34953),

Gene: Burwell21\_76 Start: 48586, Stop: 48870, Start Num: 90

Candidate Starts for Burwell21\_76:

(Start: 90 @48586 has 319 MA's), (Start: 98 @48610 has 13 MA's), (120, 48685), (155, 48814), (168, 48850),

Gene: BuzzLyseyear\_92 Start: 52666, Stop: 52950, Start Num: 90

Candidate Starts for BuzzLyseyear\_92:

(Start: 90 @52666 has 319 MA's), (Start: 98 @52690 has 13 MA's), (99, 52699), (130, 52798), (134, 52813), (165, 52927),

Gene: ByChance\_73 Start: 44779, Stop: 45045, Start Num: 100

Candidate Starts for ByChance\_73:

(Start: 100 @44779 has 2 MA's), (110, 44806), (114, 44821), (134, 44911), (155, 44989), (168, 45025),

Gene: Byougenkin\_82 Start: 47350, Stop: 47634, Start Num: 90

Candidate Starts for Byougenkin\_82:

(Start: 90 @47350 has 319 MA's), (Start: 98 @47374 has 13 MA's), (99, 47383), (130, 47482), (134, 47497), (165, 47611),

Gene: Cali\_17 Start: 6490, Stop: 6768, Start Num: 98

Candidate Starts for Cali\_17:

(85, 6451), (92, 6469), (Start: 98 @6490 has 13 MA's), (Start: 104 @6511 has 5 MA's), (106, 6523), (108, 6526), (112, 6541), (115, 6550), (155, 6712), (168, 6748),

Gene: CaptainTrips\_81 Start: 48491, Stop: 48775, Start Num: 90

Candidate Starts for CaptainTrips\_81:

(Start: 90 @48491 has 319 MA's), (Start: 98 @48515 has 13 MA's), (155, 48719), (168, 48755),

Gene: Cerasum\_75 Start: 44945, Stop: 45229, Start Num: 90

Candidate Starts for Cerasum\_75:

(Start: 74 @44921 has 1 MA's), (Start: 90 @44945 has 319 MA's), (Start: 98 @44969 has 13 MA's), (120, 45044), (155, 45173), (168, 45209),

Gene: Che8\_86 Start: 49874, Stop: 50158, Start Num: 90

Candidate Starts for Che8\_86:

(37, 49778), (47, 49802), (Start: 90 @49874 has 319 MA's), (Start: 98 @49898 has 13 MA's), (155, 50102), (168, 50138),

Gene: Che9d\_94 Start: 49583, Stop: 49876, Start Num: 90

Candidate Starts for Che9d\_94:

(73, 49556), (Start: 90 @49583 has 319 MA's), (Start: 97 @49604 has 3 MA's), (101, 49619), (134, 49745), (161, 49853),

Gene: Cheesepuff\_91 Start: 49733, Stop: 50089, Start Num: 89

Candidate Starts for Cheesepuff\_91:

(Start: 89 @49733 has 9 MA's), (Start: 97 @49754 has 3 MA's), (101, 49769), (130, 49862), (156, 49970), (164, 49988), (169, 50000), (177, 50042), (181, 50066),

Gene: Chewbacca\_61 Start: 37859, Stop: 38119, Start Num: 104

Candidate Starts for Chewbacca\_61:

(2, 37556), (6, 37577), (19, 37631), (44, 37733), (96, 37829), (Start: 104 @37859 has 5 MA's), (114, 37892), (143, 38033), (148, 38045), (155, 38060), (163, 38084), (168, 38096), (170, 38102),

Gene: ChosenOne\_41 Start: 33974, Stop: 33603, Start Num: 90

Candidate Starts for ChosenOne\_41:

(66, 34013), (78, 33995), (Start: 90 @33974 has 319 MA's), (Start: 98 @33950 has 13 MA's), (99, 33941), (134, 33827), (141, 33773), (166, 33710), (176, 33668), (182, 33626),

Gene: Clarkson\_10 Start: 3252, Stop: 3536, Start Num: 90

Candidate Starts for Clarkson\_10:

(Start: 74 @3228 has 1 MA's), (Start: 90 @3252 has 319 MA's), (Start: 98 @3276 has 13 MA's), (120, 3351), (155, 3480), (168, 3516),

Gene: Clifton\_74 Start: 47402, Stop: 47686, Start Num: 90

Candidate Starts for Clifton\_74:

(Start: 90 @47402 has 319 MA's), (Start: 98 @47426 has 13 MA's), (120, 47501), (155, 47630), (168, 47666),

Gene: Coco12\_78 Start: 49002, Stop: 49286, Start Num: 90

Candidate Starts for Coco12\_78:

(Start: 74 @48978 has 1 MA's), (Start: 90 @49002 has 319 MA's), (Start: 98 @49026 has 13 MA's), (120, 49101), (155, 49230), (168, 49266),

Gene: Corazon\_9 Start: 3205, Stop: 3489, Start Num: 90

Candidate Starts for Corazon\_9:

(Start: 74 @3181 has 1 MA's), (Start: 90 @3205 has 319 MA's), (Start: 98 @3229 has 13 MA's), (120, 3304), (155, 3433), (168, 3469),

Gene: Cornie\_78 Start: 47540, Stop: 47824, Start Num: 90

Candidate Starts for Cornie\_78:

(Start: 90 @47540 has 319 MA's), (Start: 98 @47564 has 13 MA's), (155, 47768), (168, 47804),

Gene: Cornie\_82 Start: 48423, Stop: 48782, Start Num: 89

Candidate Starts for Cornie\_82:

(Start: 89 @48423 has 9 MA's), (Start: 98 @48447 has 13 MA's), (99, 48456), (130, 48555), (134, 48570), (156, 48663), (164, 48681), (169, 48693), (177, 48735), (181, 48759),

Gene: Cornucopia\_81 Start: 47550, Stop: 47819, Start Num: 90

Candidate Starts for Cornucopia\_81:

(Start: 90 @47550 has 319 MA's), (Start: 97 @47571 has 3 MA's), (132, 47670), (133, 47676), (161, 47796),

Gene: Cornucopia\_85 Start: 48642, Stop: 48905, Start Num: 90

Candidate Starts for Cornucopia\_85:

(Start: 90 @48642 has 319 MA's), (Start: 98 @48666 has 13 MA's), (99, 48675), (134, 48789), (149, 48864),

Gene: Courthouse\_72 Start: 46987, Stop: 46703, Start Num: 90

Candidate Starts for Courthouse\_72:

(Start: 90 @46987 has 319 MA's), (Start: 98 @46963 has 13 MA's), (155, 46759), (168, 46723),

Gene: Courthouse\_70 Start: 46345, Stop: 45986, Start Num: 90

Candidate Starts for Courthouse\_70:

(Start: 90 @46345 has 319 MA's), (Start: 97 @46324 has 3 MA's), (99, 46312), (135, 46204), (158, 46105), (159, 46102), (181, 46009),

Gene: CrystalP\_44 Start: 36121, Stop: 35825, Start Num: 91

Candidate Starts for CrystalP\_44:

(Start: 91 @36121 has 23 MA's), (101, 36085), (106, 36067), (118, 36034), (123, 35992), (168, 35845),

Gene: Cubone\_64 Start: 39109, Stop: 39372, Start Num: 92

Candidate Starts for Cubone\_64:

(1, 38800), (3, 38848), (5, 38860), (30, 38983), (77, 39079), (92, 39109), (Start: 98 @39130 has 13 MA's), (165, 39349),

Gene: DLane\_83 Start: 50315, Stop: 50599, Start Num: 90

Candidate Starts for DLane\_83:

(Start: 90 @50315 has 319 MA's), (Start: 98 @50339 has 13 MA's), (120, 50414), (168, 50579),

Gene: DRBy19\_85 Start: 51131, Stop: 51415, Start Num: 90

Candidate Starts for DRBy19\_85:

(Start: 90 @51131 has 319 MA's), (Start: 98 @51155 has 13 MA's), (120, 51230), (155, 51359), (168, 51395),

Gene: DaWorst\_83 Start: 48921, Stop: 49292, Start Num: 90

Candidate Starts for DaWorst\_83:

(Start: 90 @48921 has 319 MA's), (Start: 98 @48945 has 13 MA's), (99, 48954), (130, 49053), (134, 49068), (182, 49269),

Gene: Daenerys\_81 Start: 50626, Stop: 50910, Start Num: 90

Candidate Starts for Daenerys\_81:

(Start: 90 @50626 has 319 MA's), (Start: 98 @50650 has 13 MA's), (120, 50725), (155, 50854), (168, 50890),

Gene: Daikon\_44 Start: 35703, Stop: 35449, Start Num: 97

Candidate Starts for Daikon\_44:

(47, 35796), (61, 35772), (62, 35769), (Start: 90 @35724 has 319 MA's), (Start: 97 @35703 has 3 MA's), (101, 35691), (134, 35583), (155, 35505), (168, 35469),

Gene: Dallas\_70 Start: 49134, Stop: 48841, Start Num: 90

Candidate Starts for Dallas\_70:

(Start: 90 @49134 has 319 MA's), (Start: 97 @49113 has 3 MA's), (99, 49101), (135, 48993), (138, 48945), (145, 48933), (153, 48906), (154, 48903), (169, 48864),

Gene: Dallas\_74 Start: 50547, Stop: 50263, Start Num: 90

Candidate Starts for Dallas\_74:

(Start: 90 @50547 has 319 MA's), (Start: 98 @50523 has 13 MA's), (120, 50448), (155, 50319), (168, 50283),

Gene: DeadP\_82 Start: 48110, Stop: 48394, Start Num: 90

Candidate Starts for DeadP\_82:

(20, 47948), (Start: 90 @48110 has 319 MA's), (Start: 98 @48134 has 13 MA's), (120, 48209), (155, 48338), (168, 48374),

Gene: DeadP\_86 Start: 49174, Stop: 49458, Start Num: 90

Candidate Starts for DeadP\_86:

(Start: 90 @49174 has 319 MA's), (Start: 98 @49198 has 13 MA's), (99, 49207), (130, 49306), (134, 49321), (165, 49435),

Gene: Deb65\_75 Start: 48348, Stop: 48632, Start Num: 90

Candidate Starts for Deb65\_75:

(Start: 90 @48348 has 319 MA's), (Start: 98 @48372 has 13 MA's), (120, 48447), (155, 48576), (168, 48612),

Gene: Demsculpinboyz\_91 Start: 47365, Stop: 47763, Start Num: 90

Candidate Starts for Demsculpinboyz\_91:

(24, 47227), (Start: 90 @47365 has 319 MA's), (Start: 97 @47386 has 3 MA's), (101, 47401), (117, 47470), (128, 47527), (131, 47542), (134, 47551), (136, 47557), (156, 47644), (164, 47662), (169, 47674), (177, 47716), (181, 47740),

Gene: DillTech15\_88 Start: 49164, Stop: 49511, Start Num: 98

Candidate Starts for DillTech15\_88:

(71, 49107), (Start: 90 @49140 has 319 MA's), (Start: 98 @49164 has 13 MA's), (99, 49173), (130, 49272), (134, 49287), (182, 49488),

Gene: DirtMcgirt\_80 Start: 46288, Stop: 46572, Start Num: 90

Candidate Starts for DirtMcgirt\_80:

(Start: 90 @46288 has 319 MA's), (Start: 98 @46312 has 13 MA's), (120, 46387), (155, 46516), (168, 46552),

Gene: DmpstrDiver\_75 Start: 50974, Stop: 50690, Start Num: 90

Candidate Starts for DmpstrDiver\_75:

(Start: 90 @50974 has 319 MA's), (Start: 98 @50950 has 13 MA's), (120, 50875), (155, 50746), (168, 50710),

Gene: DmpstrDiver\_71 Start: 49561, Stop: 49268, Start Num: 90

Candidate Starts for DmpstrDiver\_71:

(Start: 90 @49561 has 319 MA's), (Start: 97 @49540 has 3 MA's), (99, 49528), (135, 49420), (138, 49372), (145, 49360), (153, 49333), (154, 49330), (169, 49291),

Gene: DoRead\_81 Start: 46952, Stop: 47230, Start Num: 91

Candidate Starts for DoRead\_81:

(67, 46910), (80, 46928), (Start: 91 @46952 has 23 MA's), (Start: 97 @46973 has 3 MA's), (99, 46985), (155, 47174), (168, 47210),

Gene: DoRead\_85 Start: 48009, Stop: 48383, Start Num: 90

Candidate Starts for DoRead\_85:

(Start: 90 @48009 has 319 MA's), (Start: 97 @48030 has 3 MA's), (101, 48045), (134, 48171), (156, 48264), (164, 48282), (169, 48294), (177, 48336), (181, 48360),

Gene: Donkeykong\_90 Start: 52122, Stop: 52481, Start Num: 90

Candidate Starts for Donkeykong\_90:

(39, 52029), (49, 52053), (Start: 90 @52122 has 319 MA's), (Start: 97 @52143 has 3 MA's), (99, 52155), (140, 52311), (162, 52374), (175, 52416), (181, 52458),

Gene: Donkeykong\_86 Start: 50724, Stop: 51008, Start Num: 90

Candidate Starts for Donkeykong\_86:

(20, 50562), (Start: 90 @50724 has 319 MA's), (Start: 98 @50748 has 13 MA's), (120, 50823), (155, 50952), (168, 50988),

Gene: Donkeykong\_88 Start: 51342, Stop: 51620, Start Num: 90

Candidate Starts for Donkeykong\_88:

(Start: 90 @51342 has 319 MA's), (Start: 98 @51366 has 13 MA's), (99, 51375), (109, 51408), (113, 51420), (114, 51423), (130, 51471), (134, 51486), (155, 51564), (167, 51600),

Gene: Doomphist\_88 Start: 50710, Stop: 51087, Start Num: 83

Candidate Starts for Doomphist\_88:

(Start: 83 @50710 has 8 MA's), (Start: 98 @50752 has 13 MA's), (99, 50761), (134, 50875), (156, 50968), (164, 50986), (169, 50998), (177, 51040), (181, 51064),

Gene: Dorothy\_83 Start: 51040, Stop: 51411, Start Num: 90

Candidate Starts for Dorothy\_83:

(15, 50839), (18, 50851), (27, 50911), (31, 50923), (52, 50977), (Start: 90 @51040 has 319 MA's), (Start: 98 @51064 has 13 MA's), (99, 51073), (130, 51172), (134, 51187), (182, 51388),

Gene: DotProduct\_76 Start: 47105, Stop: 47389, Start Num: 90

Candidate Starts for DotProduct\_76:

(Start: 90 @47105 has 319 MA's), (Start: 98 @47129 has 13 MA's), (120, 47204), (155, 47333), (168, 47369),

Gene: Drago\_78 Start: 46291, Stop: 46575, Start Num: 90

Candidate Starts for Drago\_78:

(Start: 90 @46291 has 319 MA's), (Start: 98 @46315 has 13 MA's), (120, 46390), (155, 46519), (168, 46555),

Gene: Duke13\_80 Start: 51836, Stop: 51552, Start Num: 90

Candidate Starts for Duke13\_80:

(Start: 74 @51860 has 1 MA's), (Start: 90 @51836 has 319 MA's), (Start: 98 @51812 has 13 MA's), (120, 51737), (155, 51608), (168, 51572),

Gene: Eish\_88 Start: 51057, Stop: 51341, Start Num: 90

Candidate Starts for Eish\_88:

(Start: 90 @51057 has 319 MA's), (Start: 98 @51081 has 13 MA's), (99, 51090), (130, 51189), (134, 51204), (165, 51318),

Gene: Eish\_84 Start: 49994, Stop: 50278, Start Num: 90

Candidate Starts for Eish\_84:



(Start: 90 @49994 has 319 MA's), (Start: 98 @50018 has 13 MA's), (120, 50093), (155, 50222), (168, 50258),

Gene: Ejimix\_71 Start: 50999, Stop: 50706, Start Num: 90

Candidate Starts for Ejimix\_71:

(Start: 90 @50999 has 319 MA's), (Start: 97 @50978 has 3 MA's), (99, 50966), (135, 50858), (138, 50810), (145, 50798), (153, 50771), (154, 50768), (169, 50729),

Gene: Ejimix\_75 Start: 52415, Stop: 52131, Start Num: 90

Candidate Starts for Ejimix\_75:

(Start: 90 @52415 has 319 MA's), (Start: 98 @52391 has 13 MA's), (120, 52316), (155, 52187), (168, 52151),

Gene: EleanorGeorge\_80 Start: 48792, Stop: 49136, Start Num: 86

Candidate Starts for EleanorGeorge\_80:

(Start: 86 @48792 has 3 MA's), (Start: 97 @48819 has 3 MA's), (101, 48834), (134, 48924), (156, 49017), (164, 49035), (169, 49047), (177, 49089), (181, 49113),

Gene: Elite2014\_40 Start: 33973, Stop: 33602, Start Num: 90

Candidate Starts for Elite2014\_40:

(66, 34012), (78, 33994), (Start: 90 @33973 has 319 MA's), (Start: 98 @33949 has 13 MA's), (99, 33940), (134, 33826), (141, 33772), (166, 33709), (176, 33667), (182, 33625),

Gene: Emma\_86 Start: 48537, Stop: 48812, Start Num: 90

Candidate Starts for Emma\_86:

(24, 48399), (32, 48423), (41, 48447), (63, 48492), (82, 48519), (84, 48522), (Start: 90 @48537 has 319 MA's), (Start: 97 @48558 has 3 MA's), (99, 48570), (105, 48600), (107, 48606), (134, 48720), (135, 48726), (147, 48801),

Gene: Emma\_88 Start: 49160, Stop: 49480, Start Num: 90

Candidate Starts for Emma\_88:

(71, 49127), (Start: 90 @49160 has 319 MA's), (Start: 98 @49184 has 13 MA's), (99, 49193), (130, 49292), (134, 49307), (143, 49367), (182, 49457),

Gene: Emmina\_44 Start: 34912, Stop: 34541, Start Num: 90

Candidate Starts for Emmina\_44:

(Start: 90 @34912 has 319 MA's), (Start: 98 @34885 has 13 MA's), (99, 34876), (109, 34843), (113, 34831), (114, 34828), (134, 34765), (141, 34711), (166, 34648), (176, 34606), (182, 34564),

Gene: Empress\_83 Start: 49521, Stop: 49898, Start Num: 83

Candidate Starts for Empress\_83:

(Start: 83 @49521 has 8 MA's), (Start: 98 @49563 has 13 MA's), (99, 49572), (134, 49686), (156, 49779), (164, 49797), (169, 49809), (177, 49851), (181, 49875),

Gene: Enby\_82 Start: 46567, Stop: 46851, Start Num: 90

Candidate Starts for Enby\_82:

(Start: 90 @46567 has 319 MA's), (Start: 98 @46591 has 13 MA's), (120, 46666), (155, 46795), (168, 46831),

Gene: EnzoK\_61 Start: 38364, Stop: 38077, Start Num: 90

Candidate Starts for EnzoK\_61:

(12, 38565), (54, 38421), (56, 38418), (Start: 90 @38364 has 319 MA's), (Start: 97 @38343 has 3 MA's), (99, 38331), (135, 38223), (169, 38100),

Gene: Eradicator\_76 Start: 47953, Stop: 48312, Start Num: 90

Candidate Starts for Eradicator\_76:

(Start: 90 @47953 has 319 MA's), (Start: 98 @47977 has 13 MA's), (99, 47986), (130, 48085), (134, 48100), (156, 48193), (164, 48211), (169, 48223), (177, 48265), (181, 48289),

Gene: Eradicator\_72 Start: 46896, Stop: 47174, Start Num: 98

Candidate Starts for Eradicator\_72:

(85, 46857), (92, 46875), (Start: 98 @46896 has 13 MA's), (Start: 104 @46917 has 5 MA's), (106, 46929), (108, 46932), (112, 46947), (115, 46956), (155, 47118), (168, 47154),

Gene: EricMillard\_74 Start: 51619, Stop: 51335, Start Num: 90

Candidate Starts for EricMillard\_74:

(Start: 90 @51619 has 319 MA's), (Start: 98 @51595 has 13 MA's), (120, 51520), (155, 51391), (168, 51355),

Gene: Estave1\_93 Start: 53691, Stop: 53975, Start Num: 91

Candidate Starts for Estave1\_93:

(78, 53676), (Start: 91 @53691 has 23 MA's), (Start: 98 @53715 has 13 MA's), (120, 53790), (155, 53919), (168, 53955),

Gene: Eyeball\_63 Start: 41903, Stop: 41556, Start Num: 90

Candidate Starts for Eyeball\_63:

(12, 42104), (54, 41960), (56, 41957), (Start: 90 @41903 has 319 MA's), (Start: 95 @41891 has 1 MA's), (158, 41654), (181, 41579),

Gene: Fancypants\_89 Start: 51307, Stop: 51630, Start Num: 90

Candidate Starts for Fancypants\_89:

(24, 51169), (Start: 90 @51307 has 319 MA's), (Start: 97 @51328 has 3 MA's), (101, 51343), (117, 51412), (128, 51469), (131, 51484), (134, 51493), (136, 51499), (181, 51607),

Gene: FeliMaine\_10 Start: 3253, Stop: 3537, Start Num: 90

Candidate Starts for FeliMaine\_10:

(Start: 74 @3229 has 1 MA's), (Start: 90 @3253 has 319 MA's), (Start: 98 @3277 has 13 MA's), (120, 3352), (155, 3481), (168, 3517),

Gene: Filuzino\_82 Start: 50908, Stop: 51192, Start Num: 90

Candidate Starts for Filuzino\_82:

(Start: 90 @50908 has 319 MA's), (Start: 98 @50932 has 13 MA's), (120, 51007), (155, 51136), (168, 51172),

Gene: Firehouse51\_79 Start: 50692, Stop: 51051, Start Num: 89

Candidate Starts for Firehouse51\_79:

(13, 50491), (16, 50503), (25, 50563), (29, 50575), (50, 50629), (Start: 89 @50692 has 9 MA's), (Start: 98 @50716 has 13 MA's), (99, 50725), (113, 50758), (134, 50839), (156, 50932), (164, 50950), (169, 50962), (177, 51004), (181, 51028),

Gene: FirstPlacePfu\_60 Start: 37764, Stop: 38024, Start Num: 104

Candidate Starts for FirstPlacePfu\_60:

(53, 37662), (58, 37671), (Start: 104 @37764 has 5 MA's), (114, 37797), (143, 37938), (148, 37950), (155, 37965), (163, 37989), (168, 38001), (170, 38007),

Gene: Flathead\_85 Start: 49803, Stop: 50174, Start Num: 90

Candidate Starts for Flathead\_85:

(Start: 90 @49803 has 319 MA's), (Start: 98 @49827 has 13 MA's), (99, 49836), (130, 49935), (134, 49950), (182, 50151),

Gene: Flathead\_81 Start: 48740, Stop: 49024, Start Num: 90

Candidate Starts for Flathead\_81:

(Start: 90 @48740 has 319 MA's), (Start: 98 @48764 has 13 MA's), (120, 48839), (155, 48968), (168, 49004),

Gene: Florinda\_94 Start: 51591, Stop: 51875, Start Num: 90

Candidate Starts for Florinda\_94:

(Start: 90 @51591 has 319 MA's), (Start: 98 @51615 has 13 MA's), (99, 51624), (130, 51723), (134, 51738), (165, 51852),

Gene: Flypotenuse\_38 Start: 34455, Stop: 34180, Start Num: 90

Candidate Starts for Flypotenuse\_38:

(47, 34527), (61, 34503), (62, 34500), (Start: 90 @34455 has 319 MA's), (Start: 97 @34434 has 3 MA's), (101, 34422), (134, 34314), (155, 34236), (168, 34200),

Gene: Forsytheast\_60 Start: 39923, Stop: 39675, Start Num: 90

Candidate Starts for Forsytheast\_60:

(33, 40019), (43, 39995), (59, 39965), (Start: 90 @39923 has 319 MA's), (Start: 95 @39911 has 1 MA's), (151, 39698),

Gene: Fruitloop\_78 Start: 48745, Stop: 49029, Start Num: 90

Candidate Starts for Fruitloop\_78:

(72, 48718), (Start: 90 @48745 has 319 MA's), (Start: 98 @48769 has 13 MA's), (120, 48844), (155, 48973), (168, 49009),

Gene: Gachnar\_61 Start: 41094, Stop: 40789, Start Num: 88

Candidate Starts for Gachnar\_61:

(12, 41295), (54, 41151), (56, 41148), (Start: 88 @41094 has 2 MA's), (93, 41082), (101, 41052), (106, 41034), (118, 41001), (123, 40959), (178, 40812),

Gene: Galactic\_82 Start: 48872, Stop: 49156, Start Num: 90

Candidate Starts for Galactic\_82:

(Start: 90 @48872 has 319 MA's), (Start: 98 @48899 has 13 MA's), (99, 48908), (109, 48941), (113, 48953), (114, 48956), (130, 49004), (134, 49019), (165, 49133),

Gene: Galactic\_80 Start: 48440, Stop: 48724, Start Num: 90

Candidate Starts for Galactic\_80:

(55, 48380), (Start: 90 @48440 has 319 MA's), (Start: 98 @48464 has 13 MA's), (120, 48539), (155, 48668), (168, 48704),

Gene: Gandolph\_79 Start: 46011, Stop: 46295, Start Num: 91

Candidate Starts for Gandolph\_79:

(Start: 91 @46011 has 23 MA's), (Start: 98 @46035 has 13 MA's), (120, 46110), (155, 46239), (168, 46275),

Gene: Gandolph\_83 Start: 47074, Stop: 47445, Start Num: 90

Candidate Starts for Gandolph\_83:

(Start: 90 @47074 has 319 MA's), (Start: 98 @47098 has 13 MA's), (99, 47107), (134, 47221), (143, 47281), (182, 47422),

Gene: Gator\_41 Start: 35594, Stop: 35319, Start Num: 90

Candidate Starts for Gator\_41:

(47, 35666), (61, 35642), (62, 35639), (Start: 90 @35594 has 319 MA's), (Start: 97 @35573 has 3 MA's), (101, 35561), (134, 35453), (155, 35375), (168, 35339),

Gene: Geralt\_75 Start: 48346, Stop: 48630, Start Num: 90

Candidate Starts for Geralt\_75:

(Start: 90 @48346 has 319 MA's), (Start: 98 @48370 has 13 MA's), (120, 48445), (155, 48574), (168, 48610),

Gene: Girafales\_91 Start: 51196, Stop: 51480, Start Num: 90

Candidate Starts for Girafales\_91:

(Start: 90 @51196 has 319 MA's), (Start: 98 @51220 has 13 MA's), (99, 51229), (130, 51328), (134, 51343), (165, 51457),

Gene: Glexan\_41 Start: 35582, Stop: 35307, Start Num: 90

Candidate Starts for Glexan\_41:

(47, 35654), (61, 35630), (62, 35627), (Start: 90 @35582 has 319 MA's), (Start: 97 @35561 has 3 MA's), (101, 35549), (134, 35441), (155, 35363), (168, 35327),

Gene: Gonephishing\_71 Start: 47256, Stop: 46885, Start Num: 90

Candidate Starts for Gonephishing\_71:

(66, 47295), (78, 47277), (Start: 90 @47256 has 319 MA's), (Start: 98 @47232 has 13 MA's), (99, 47223), (130, 47124), (134, 47109), (182, 46908),

Gene: Grimmer\_95 Start: 50263, Stop: 50601, Start Num: 89

Candidate Starts for Grimmer\_95:

(34, 50158), (46, 50188), (Start: 89 @50263 has 9 MA's), (Start: 97 @50284 has 3 MA's), (101, 50299), (134, 50389), (156, 50482), (164, 50500), (169, 50512), (177, 50554), (181, 50578),

Gene: Guppsters\_76 Start: 46731, Stop: 47015, Start Num: 90

Candidate Starts for Guppsters\_76:

(Start: 74 @46707 has 1 MA's), (Start: 90 @46731 has 319 MA's), (Start: 98 @46755 has 13 MA's), (120, 46830), (155, 46959), (168, 46995),

Gene: Guppsters\_78 Start: 47339, Stop: 47707, Start Num: 90

Candidate Starts for Guppsters\_78:

(Start: 90 @47339 has 319 MA's), (Start: 98 @47363 has 13 MA's), (99, 47372), (109, 47405), (113, 47417), (114, 47420), (130, 47468), (134, 47483), (182, 47684),

Gene: Gwendoluna\_64 Start: 42781, Stop: 42374, Start Num: 90

Candidate Starts for Gwendoluna\_64:

(Start: 90 @42781 has 319 MA's), (99, 42748), (101, 42745), (105, 42718), (107, 42712), (135, 42592), (158, 42493), (159, 42490), (181, 42397),

Gene: Hades\_81 Start: 47173, Stop: 47484, Start Num: 65

Candidate Starts for Hades\_81:

(49, 47146), (Start: 65 @47173 has 5 MA's), (Start: 97 @47236 has 3 MA's), (133, 47341), (161, 47461),

Gene: Hades\_80 Start: 46896, Stop: 47180, Start Num: 90

Candidate Starts for Hades\_80:

(Start: 90 @46896 has 319 MA's), (Start: 98 @46920 has 13 MA's), (120, 46995), (155, 47124),

Gene: Halley\_77 Start: 51626, Stop: 51342, Start Num: 90

Candidate Starts for Halley\_77:

(Start: 90 @51626 has 319 MA's), (Start: 98 @51602 has 13 MA's), (120, 51527), (155, 51398), (168, 51362),

Gene: Halley\_73 Start: 50213, Stop: 49920, Start Num: 90

Candidate Starts for Halley\_73:

(Start: 90 @50213 has 319 MA's), (Start: 97 @50192 has 3 MA's), (99, 50180), (135, 50072), (138, 50024), (145, 50012), (153, 49985), (154, 49982), (169, 49943),

Gene: Hamulus\_80 Start: 48587, Stop: 48871, Start Num: 90

Candidate Starts for Hamulus\_80:

(Start: 90 @48587 has 319 MA's), (Start: 98 @48611 has 13 MA's), (120, 48686), (155, 48815), (168, 48851),

Gene: Hannaconda\_68 Start: 45250, Stop: 44864, Start Num: 90

Candidate Starts for Hannaconda\_68:

(39, 45343), (49, 45319), (Start: 90 @45250 has 319 MA's), (Start: 97 @45229 has 3 MA's), (101, 45214), (134, 45088), (143, 45028), (181, 44887),

Gene: Hannaconda\_70 Start: 46036, Stop: 45752, Start Num: 90

Candidate Starts for Hannaconda\_70:

(Start: 90 @46036 has 319 MA's), (Start: 98 @46012 has 13 MA's), (155, 45808), (168, 45772),

Gene: Harella\_43 Start: 36098, Stop: 35823, Start Num: 90

Candidate Starts for Harella\_43:

(47, 36170), (61, 36146), (62, 36143), (Start: 90 @36098 has 319 MA's), (Start: 97 @36077 has 3 MA's), (101, 36065), (134, 35957), (155, 35879), (168, 35843),

Gene: Harley\_80 Start: 48340, Stop: 48624, Start Num: 90

Candidate Starts for Harley\_80:

(Start: 90 @48340 has 319 MA's), (Start: 98 @48364 has 13 MA's), (120, 48439), (155, 48568), (168, 48604),

Gene: Harley\_85 Start: 49675, Stop: 50043, Start Num: 90

Candidate Starts for Harley\_85:

(66, 49636), (78, 49654), (Start: 90 @49675 has 319 MA's), (Start: 98 @49699 has 13 MA's), (99, 49708), (109, 49741), (113, 49753), (114, 49756), (130, 49804), (134, 49819), (182, 50020),

Gene: Hegedechwinu\_83 Start: 48330, Stop: 48701, Start Num: 90

Candidate Starts for Hegedechwinu\_83:

(68, 48294), (Start: 90 @48330 has 319 MA's), (Start: 98 @48354 has 13 MA's), (99, 48363), (109, 48396), (134, 48477), (182, 48678),

Gene: Hidrated\_66 Start: 49459, Stop: 49061, Start Num: 90

Candidate Starts for Hidrated\_66:

(Start: 90 @49459 has 319 MA's), (101, 49423), (117, 49354), (128, 49297), (131, 49282), (134, 49273), (136, 49267), (156, 49180), (164, 49162), (169, 49150), (177, 49108), (181, 49084),

Gene: Hlubikazi\_81 Start: 47588, Stop: 47899, Start Num: 65

Candidate Starts for Hlubikazi\_81:

(49, 47561), (Start: 65 @47588 has 5 MA's), (Start: 97 @47651 has 3 MA's), (133, 47756), (161, 47876),

Gene: Hlubikazi\_80 Start: 47314, Stop: 47595, Start Num: 90

Candidate Starts for Hlubikazi\_80:

(Start: 90 @47314 has 319 MA's), (Start: 98 @47338 has 13 MA's), (99, 47347), (134, 47461), (152, 47533), (155, 47539),

Gene: Hlubikazi\_76 Start: 46227, Stop: 46511, Start Num: 90

Candidate Starts for Hlubikazi\_76:

(Start: 74 @46203 has 1 MA's), (Start: 90 @46227 has 319 MA's), (Start: 98 @46251 has 13 MA's), (120, 46326), (155, 46455), (168, 46491),

Gene: HokkenD\_64 Start: 48482, Stop: 48189, Start Num: 90

Candidate Starts for HokkenD\_64:

(Start: 90 @48482 has 319 MA's), (Start: 97 @48461 has 3 MA's), (99, 48449), (135, 48341), (138, 48293), (145, 48281), (153, 48254), (154, 48251), (169, 48212),

Gene: HokkenD\_68 Start: 49895, Stop: 49611, Start Num: 90

Candidate Starts for HokkenD\_68:

(Start: 90 @49895 has 319 MA's), (Start: 98 @49871 has 13 MA's), (120, 49796), (155, 49667), (168, 49631),

Gene: Hughesyang\_70 Start: 50142, Stop: 49849, Start Num: 90

Candidate Starts for Hughesyang\_70:

(Start: 90 @50142 has 319 MA's), (Start: 97 @50121 has 3 MA's), (99, 50109), (135, 50001), (138, 49953), (145, 49941), (153, 49914), (154, 49911), (169, 49872),

Gene: Hughesyang\_74 Start: 51585, Stop: 51301, Start Num: 90

Candidate Starts for Hughesyang\_74:

(Start: 90 @51585 has 319 MA's), (Start: 98 @51561 has 13 MA's), (120, 51486), (155, 51357), (168, 51321),

Gene: Huphlebuff\_10 Start: 2982, Stop: 3266, Start Num: 90

Candidate Starts for Huphlebuff\_10:

(Start: 74 @2958 has 1 MA's), (Start: 90 @2982 has 319 MA's), (Start: 98 @3006 has 13 MA's), (120, 3081), (155, 3210), (168, 3246),

Gene: IHOP\_42 Start: 35685, Stop: 35389, Start Num: 91

Candidate Starts for IHOP\_42:

(Start: 91 @35685 has 23 MA's), (101, 35649), (106, 35631), (118, 35598), (123, 35556), (168, 35409),

Gene: IMpilo\_79 Start: 47727, Stop: 47987, Start Num: 98

Candidate Starts for IMpilo\_79:

(42, 47616), (Start: 90 @47703 has 319 MA's), (Start: 98 @47727 has 13 MA's), (99, 47736), (130, 47835), (134, 47850), (165, 47964),

Gene: IMpilo\_76 Start: 46638, Stop: 46922, Start Num: 90

Candidate Starts for IMpilo\_76:

(4, 46392), (7, 46407), (Start: 90 @46638 has 319 MA's), (Start: 98 @46662 has 13 MA's), (120, 46737), (155, 46866), (168, 46902),

Gene: Ibhubesi\_80 Start: 47022, Stop: 47336, Start Num: 70

Candidate Starts for Ibhubesi\_80:

(Start: 70 @47022 has 3 MA's), (Start: 74 @47028 has 1 MA's), (Start: 90 @47052 has 319 MA's),  
(Start: 98 @47076 has 13 MA's), (152, 47274), (155, 47280), (168, 47316),

Gene: IgnatiusPatJac\_61 Start: 40665, Stop: 40318, Start Num: 88

Candidate Starts for IgnatiusPatJac\_61:

(12, 40866), (54, 40722), (56, 40719), (Start: 88 @40665 has 2 MA's), (93, 40653), (101, 40623), (106, 40605), (118, 40572), (123, 40530), (157, 40416), (178, 40341),

Gene: Inca\_41 Start: 34210, Stop: 33914, Start Num: 91

Candidate Starts for Inca\_41:

(Start: 91 @34210 has 23 MA's), (101, 34174), (106, 34156), (118, 34123), (123, 34081), (168, 33934),

Gene: Inventum\_80 Start: 49225, Stop: 49596, Start Num: 90

Candidate Starts for Inventum\_80:

(15, 49024), (18, 49036), (27, 49096), (31, 49108), (52, 49162), (Start: 90 @49225 has 319 MA's),  
(Start: 98 @49249 has 13 MA's), (99, 49258), (130, 49357), (134, 49372), (182, 49573),

Gene: IrishSherpFalk\_83 Start: 50030, Stop: 50401, Start Num: 90

Candidate Starts for IrishSherpFalk\_83:

(Start: 90 @50030 has 319 MA's), (Start: 98 @50054 has 13 MA's), (99, 50063), (130, 50162), (134, 50177), (182, 50378),

Gene: IrishSherpFalk\_81 Start: 49331, Stop: 49615, Start Num: 90

Candidate Starts for IrishSherpFalk\_81:

(Start: 70 @49301 has 3 MA's), (Start: 74 @49307 has 1 MA's), (Start: 90 @49331 has 319 MA's),  
(Start: 98 @49355 has 13 MA's), (120, 49430), (155, 49559), (168, 49595),

Gene: JC27\_64 Start: 41329, Stop: 41042, Start Num: 91

Candidate Starts for JC27\_64:

(Start: 74 @41359 has 1 MA's), (Start: 91 @41329 has 23 MA's), (Start: 98 @41305 has 13 MA's),  
(165, 41065),

Gene: Jabbawokkie\_91 Start: 47805, Stop: 48089, Start Num: 90

Candidate Starts for Jabbawokkie\_91:

(Start: 90 @47805 has 319 MA's), (Start: 98 @47829 has 13 MA's), (155, 48033), (168, 48069),

Gene: JalFarm20\_90 Start: 50347, Stop: 50718, Start Num: 90

Candidate Starts for JalFarm20\_90:

(68, 50311), (Start: 90 @50347 has 319 MA's), (Start: 98 @50371 has 13 MA's), (99, 50380), (109, 50413), (134, 50494), (182, 50695),

Gene: James\_86 Start: 51529, Stop: 51900, Start Num: 90

Candidate Starts for James\_86:

(Start: 90 @51529 has 319 MA's), (Start: 98 @51553 has 13 MA's), (99, 51562), (130, 51661), (134, 51676), (182, 51877),

Gene: James\_82 Start: 50466, Stop: 50750, Start Num: 90

Candidate Starts for James\_82:

(Start: 90 @50466 has 319 MA's), (Start: 98 @50490 has 13 MA's), (120, 50565), (155, 50694), (168, 50730),

Gene: Jant\_81 Start: 47386, Stop: 47670, Start Num: 91

Candidate Starts for Jant\_81:

(Start: 91 @47386 has 23 MA's), (Start: 98 @47410 has 13 MA's), (120, 47485), (155, 47614), (168, 47650),

Gene: Jacob\_85 Start: 51167, Stop: 51499, Start Num: 103

Candidate Starts for Jacob\_85:

(Start: 103 @51167 has 1 MA's), (130, 51260), (134, 51275), (182, 51476),

Gene: Jacob\_81 Start: 50063, Stop: 50347, Start Num: 90

Candidate Starts for Jacob\_81:

(Start: 90 @50063 has 319 MA's), (Start: 98 @50087 has 13 MA's), (120, 50162), (155, 50291), (168, 50327),

Gene: Jennelsea\_78 Start: 48296, Stop: 48613, Start Num: 97

Candidate Starts for Jennelsea\_78:

(Start: 86 @48269 has 3 MA's), (Start: 97 @48296 has 3 MA's), (101, 48311), (134, 48401), (156, 48494), (164, 48512), (169, 48524), (177, 48566), (181, 48590),

Gene: Jinglebell\_88 Start: 49768, Stop: 50088, Start Num: 90

Candidate Starts for Jinglebell\_88:

(Start: 74 @49744 has 1 MA's), (Start: 90 @49768 has 319 MA's), (Start: 98 @49792 has 13 MA's), (120, 49867), (155, 49996), (168, 50032),

Gene: Jinglebell\_90 Start: 50298, Stop: 50591, Start Num: 90

Candidate Starts for Jinglebell\_90:

(Start: 90 @50298 has 319 MA's), (Start: 97 @50319 has 3 MA's), (101, 50334), (134, 50460), (161, 50568),

Gene: Job42\_84 Start: 52418, Stop: 52702, Start Num: 90

Candidate Starts for Job42\_84:

(Start: 90 @52418 has 319 MA's), (Start: 98 @52442 has 13 MA's), (99, 52451), (130, 52550), (134, 52565), (165, 52679),

Gene: Job42\_81 Start: 51522, Stop: 51818, Start Num: 90

Candidate Starts for Job42\_81:

(Start: 90 @51522 has 319 MA's), (Start: 97 @51543 has 3 MA's), (101, 51558), (134, 51684), (155, 51762), (168, 51798),

Gene: JoeyJr\_82 Start: 50251, Stop: 50535, Start Num: 90

Candidate Starts for JoeyJr\_82:

(Start: 90 @50251 has 319 MA's), (Start: 98 @50275 has 13 MA's), (120, 50350), (155, 50479), (168, 50515),

Gene: JoeyJr\_86 Start: 51134, Stop: 51505, Start Num: 90

Candidate Starts for JoeyJr\_86:

(Start: 90 @51134 has 319 MA's), (Start: 98 @51158 has 13 MA's), (99, 51167), (130, 51266), (134, 51281), (182, 51482),

Gene: JoieB\_10 Start: 3201, Stop: 3485, Start Num: 90

Candidate Starts for JoieB\_10:

(Start: 74 @3177 has 1 MA's), (Start: 90 @3201 has 319 MA's), (Start: 98 @3225 has 13 MA's), (120, 3300), (155, 3429), (168, 3465),



Gene: Jorgensen\_63 Start: 40720, Stop: 40448, Start Num: 90

Candidate Starts for Jorgensen\_63:

(Start: 90 @40720 has 319 MA's), (Start: 97 @40699 has 3 MA's), (99, 40687), (135, 40579), (169, 40471),

Gene: Juice456\_78 Start: 48213, Stop: 48485, Start Num: 90

Candidate Starts for Juice456\_78:

(Start: 90 @48213 has 319 MA's), (Start: 97 @48234 has 3 MA's), (99, 48246), (135, 48354), (169, 48462),

Gene: JuicyJay\_70 Start: 51347, Stop: 51054, Start Num: 90

Candidate Starts for JuicyJay\_70:

(Start: 90 @51347 has 319 MA's), (Start: 97 @51326 has 3 MA's), (99, 51314), (135, 51206), (138, 51158), (145, 51146), (153, 51119), (154, 51116), (169, 51077),

Gene: JuicyJay\_74 Start: 52760, Stop: 52476, Start Num: 90

Candidate Starts for JuicyJay\_74:

(Start: 90 @52760 has 319 MA's), (Start: 98 @52736 has 13 MA's), (120, 52661), (155, 52532), (168, 52496),

Gene: Juniper1\_80 Start: 48708, Stop: 48983, Start Num: 89

Candidate Starts for Juniper1\_80:

(34, 48603), (46, 48633), (Start: 89 @48708 has 9 MA's), (Start: 97 @48729 has 3 MA's), (101, 48744), (134, 48834), (156, 48927), (164, 48945),

Gene: Kalah2\_70 Start: 50919, Stop: 50635, Start Num: 90

Candidate Starts for Kalah2\_70:

(Start: 90 @50919 has 319 MA's), (Start: 98 @50895 has 13 MA's), (120, 50820), (155, 50691), (168, 50655),

Gene: Kalah2\_66 Start: 49506, Stop: 49213, Start Num: 90

Candidate Starts for Kalah2\_66:

(Start: 90 @49506 has 319 MA's), (Start: 97 @49485 has 3 MA's), (99, 49473), (135, 49365), (138, 49317), (145, 49305), (153, 49278), (154, 49275), (169, 49236),

Gene: Karhdo\_80 Start: 47607, Stop: 47906, Start Num: 90

Candidate Starts for Karhdo\_80:

(Start: 90 @47607 has 319 MA's), (Start: 97 @47628 has 3 MA's), (101, 47643), (134, 47769), (161, 47883),

Gene: KashFlow\_66 Start: 45121, Stop: 44753, Start Num: 90

Candidate Starts for KashFlow\_66:

(39, 45214), (49, 45190), (Start: 90 @45121 has 319 MA's), (Start: 98 @45097 has 13 MA's), (99, 45088), (109, 45055), (113, 45043), (114, 45040), (134, 44977), (143, 44917), (182, 44776),

Gene: KashFlow\_68 Start: 45901, Stop: 45623, Start Num: 98

Candidate Starts for KashFlow\_68:

(85, 45940), (92, 45922), (Start: 98 @45901 has 13 MA's), (Start: 104 @45880 has 5 MA's), (106, 45868), (108, 45865), (112, 45850), (115, 45841), (155, 45679), (168, 45643),

Gene: Kenuha5\_79 Start: 50155, Stop: 50526, Start Num: 90

Candidate Starts for Kenuha5\_79:

(39, 50062), (49, 50086), (Start: 90 @50155 has 319 MA's), (Start: 98 @50179 has 13 MA's), (99, 50188), (134, 50302), (182, 50503),

Gene: Kenuha5\_77 Start: 49369, Stop: 49653, Start Num: 91

Candidate Starts for Kenuha5\_77:

(Start: 91 @49369 has 23 MA's), (Start: 98 @49393 has 13 MA's), (120, 49468), (155, 49597), (168, 49633),

Gene: Kersh\_83 Start: 50793, Stop: 51092, Start Num: 90

Candidate Starts for Kersh\_83:

(Start: 90 @50793 has 319 MA's), (Start: 97 @50814 has 3 MA's), (101, 50829), (134, 50955), (161, 51069),

Gene: Kimberlium\_83 Start: 48559, Stop: 48834, Start Num: 90

Candidate Starts for Kimberlium\_83:

(Start: 90 @48559 has 319 MA's), (Start: 97 @48580 has 3 MA's), (99, 48592), (105, 48622), (107, 48628), (134, 48742), (135, 48748), (147, 48823),

Gene: KingMidas\_84 Start: 49936, Stop: 50313, Start Num: 83

Candidate Starts for KingMidas\_84:

(Start: 83 @49936 has 8 MA's), (Start: 98 @49978 has 13 MA's), (99, 49987), (130, 50086), (134, 50101), (156, 50194), (164, 50212), (169, 50224), (177, 50266), (181, 50290),

Gene: Kingsley\_85 Start: 51609, Stop: 51893, Start Num: 90

Candidate Starts for Kingsley\_85:

(Start: 90 @51609 has 319 MA's), (Start: 98 @51633 has 13 MA's), (155, 51837), (168, 51873),

Gene: Klein\_71 Start: 49529, Stop: 49236, Start Num: 90

Candidate Starts for Klein\_71:

(Start: 90 @49529 has 319 MA's), (Start: 97 @49508 has 3 MA's), (99, 49496), (135, 49388), (138, 49340), (145, 49328), (153, 49301), (154, 49298), (169, 49259),

Gene: Klein\_73 Start: 50165, Stop: 49884, Start Num: 90

Candidate Starts for Klein\_73:

(Start: 90 @50165 has 319 MA's), (Start: 98 @50144 has 13 MA's), (110, 50111), (155, 49940), (168, 49904),

Gene: Koella\_76 Start: 46177, Stop: 46458, Start Num: 90

Candidate Starts for Koella\_76:

(Start: 90 @46177 has 319 MA's), (Start: 98 @46198 has 13 MA's), (110, 46231), (155, 46402), (168, 46438),

Gene: Krakatau\_77 Start: 45727, Stop: 46011, Start Num: 90

Candidate Starts for Krakatau\_77:

(Start: 90 @45727 has 319 MA's), (Start: 98 @45751 has 13 MA's), (99, 45760), (130, 45859), (134, 45874), (165, 45988),

Gene: KristaRAM\_79 Start: 47927, Stop: 48211, Start Num: 90

Candidate Starts for KristaRAM\_79:

(Start: 90 @47927 has 319 MA's), (Start: 98 @47951 has 13 MA's), (120, 48026), (155, 48155), (168, 48191),

Gene: KristaRAM\_82 Start: 48874, Stop: 49245, Start Num: 90

Candidate Starts for KristaRAM\_82:

(15, 48673), (18, 48685), (27, 48745), (31, 48757), (52, 48811), (Start: 90 @48874 has 319 MA's), (Start: 98 @48898 has 13 MA's), (99, 48907), (130, 49006), (134, 49021), (143, 49081), (182, 49222),

Gene: Kumao\_59 Start: 43007, Stop: 43291, Start Num: 90

Candidate Starts for Kumao\_59:

(55, 42947), (Start: 90 @43007 has 319 MA's), (Start: 98 @43031 has 13 MA's), (120, 43106), (155, 43235), (168, 43271),

Gene: Kykar\_62 Start: 41465, Stop: 41115, Start Num: 90

Candidate Starts for Kykar\_62:

(12, 41666), (54, 41522), (56, 41519), (Start: 90 @41465 has 319 MA's), (Start: 97 @41444 has 3 MA's), (135, 41333), (139, 41282), (158, 41234), (159, 41231), (181, 41138),

Gene: Lamina13\_65 Start: 42283, Stop: 41903, Start Num: 90

Candidate Starts for Lamina13\_65:

(12, 42484), (54, 42340), (56, 42337), (Start: 90 @42283 has 319 MA's), (Start: 97 @42262 has 3 MA's), (101, 42247), (135, 42121), (139, 42070), (158, 42022), (159, 42019), (181, 41926),

Gene: Latretium\_82 Start: 48306, Stop: 48590, Start Num: 90

Candidate Starts for Latretium\_82:

(Start: 90 @48306 has 319 MA's), (Start: 98 @48330 has 13 MA's), (120, 48405), (155, 48534), (168, 48570),

Gene: Leozinho\_79 Start: 46485, Stop: 46781, Start Num: 91

Candidate Starts for Leozinho\_79:

(Start: 91 @46485 has 23 MA's), (101, 46521), (106, 46539), (118, 46572), (123, 46614), (155, 46725), (168, 46761),

Gene: Leperchaun\_80 Start: 49485, Stop: 49769, Start Num: 90

Candidate Starts for Leperchaun\_80:

(Start: 90 @49485 has 319 MA's), (Start: 98 @49509 has 13 MA's), (120, 49584), (155, 49713), (168, 49749),

Gene: Leperchaun\_84 Start: 50368, Stop: 50739, Start Num: 90

Candidate Starts for Leperchaun\_84:

(Start: 90 @50368 has 319 MA's), (Start: 98 @50392 has 13 MA's), (99, 50401), (130, 50500), (134, 50515), (182, 50716),

Gene: LilMoolah\_82 Start: 49634, Stop: 49918, Start Num: 90

Candidate Starts for LilMoolah\_82:

(23, 49496), (45, 49559), (Start: 90 @49634 has 319 MA's), (Start: 98 @49658 has 13 MA's), (120, 49733), (155, 49862), (168, 49898),

Gene: LilSpotty\_77 Start: 45059, Stop: 45403, Start Num: 97

Candidate Starts for LilSpotty\_77:

(Start: 90 @45041 has 319 MA's), (93, 45047), (Start: 97 @45059 has 3 MA's), (99, 45071), (101, 45074), (112, 45101), (116, 45116), (119, 45131), (124, 45134), (137, 45209), (162, 45284), (172, 45311), (183, 45380), (184, 45386),

Gene: LilSpotty\_76 Start: 44396, Stop: 44653, Start Num: 104

Candidate Starts for LilSpotty\_76:

(28, 44225), (44, 44270), (96, 44366), (Start: 104 @44396 has 5 MA's), (114, 44429), (143, 44570), (144, 44573), (146, 44576), (152, 44600), (155, 44606), (163, 44630),

Gene: Lilbit\_10 Start: 3253, Stop: 3537, Start Num: 90

Candidate Starts for Lilbit\_10:

(Start: 74 @3229 has 1 MA's), (Start: 90 @3253 has 319 MA's), (Start: 98 @3277 has 13 MA's), (120, 3352), (155, 3481), (168, 3517),

Gene: Lilpickle\_40 Start: 33973, Stop: 33602, Start Num: 90

Candidate Starts for Lilpickle\_40:

(66, 34012), (78, 33994), (Start: 90 @33973 has 319 MA's), (Start: 98 @33949 has 13 MA's), (99, 33940), (134, 33826), (141, 33772), (166, 33709), (176, 33667), (182, 33625),

Gene: LittleE\_77 Start: 50428, Stop: 50147, Start Num: 90

Candidate Starts for LittleE\_77:

(Start: 90 @50428 has 319 MA's), (Start: 98 @50407 has 13 MA's), (120, 50332), (155, 50203), (168, 50167),

Gene: LittleE\_74 Start: 49484, Stop: 49203, Start Num: 90

Candidate Starts for LittleE\_74:

(14, 49685), (17, 49673), (26, 49613), (30, 49601), (51, 49547), (Start: 90 @49484 has 319 MA's), (Start: 98 @49460 has 13 MA's), (99, 49451), (109, 49418), (113, 49406), (114, 49403), (130, 49355), (134, 49340), (165, 49226),

Gene: LittleLaf\_9 Start: 2982, Stop: 3266, Start Num: 90

Candidate Starts for LittleLaf\_9:

(Start: 74 @2958 has 1 MA's), (Start: 90 @2982 has 319 MA's), (Start: 98 @3006 has 13 MA's), (120, 3081), (155, 3210), (168, 3246),

Gene: Llama\_90 Start: 50154, Stop: 50447, Start Num: 90

Candidate Starts for Llama\_90:

(Start: 90 @50154 has 319 MA's), (Start: 97 @50175 has 3 MA's), (101, 50190), (134, 50316), (161, 50424),

Gene: Llama\_88 Start: 49624, Stop: 49944, Start Num: 90

Candidate Starts for Llama\_88:

(Start: 74 @49600 has 1 MA's), (Start: 90 @49624 has 319 MA's), (Start: 98 @49648 has 13 MA's), (120, 49723), (155, 49852), (168, 49888),

Gene: Llij\_77 Start: 46445, Stop: 46729, Start Num: 90

Candidate Starts for Llij\_77:

(Start: 90 @46445 has 319 MA's), (Start: 98 @46469 has 13 MA's), (120, 46544), (155, 46673), (168, 46709),

Gene: Llij\_80 Start: 47508, Stop: 47834, Start Num: 90

Candidate Starts for Llij\_80:

(Start: 90 @47508 has 319 MA's), (99, 47541), (101, 47544), (105, 47571), (107, 47577), (135, 47697), (160, 47811),

Gene: LordVader\_75 Start: 44278, Stop: 44562, Start Num: 90

Candidate Starts for LordVader\_75:

(Start: 70 @44248 has 3 MA's), (Start: 74 @44254 has 1 MA's), (Start: 90 @44278 has 319 MA's), (Start: 98 @44302 has 13 MA's), (155, 44506), (168, 44542),

Gene: Lorde\_81 Start: 45732, Stop: 46016, Start Num: 90

Candidate Starts for Lorde\_81:

(Start: 90 @45732 has 319 MA's), (Start: 98 @45756 has 13 MA's), (120, 45831), (155, 45960), (168, 45996),

Gene: Lucia\_81 Start: 46580, Stop: 46864, Start Num: 90

Candidate Starts for Lucia\_81:

(Start: 90 @46580 has 319 MA's), (Start: 98 @46604 has 13 MA's), (120, 46679), (155, 46808), (168, 46844),

Gene: Lucky2013\_69 Start: 45952, Stop: 45659, Start Num: 90

Candidate Starts for Lucky2013\_69:

(Start: 90 @45952 has 319 MA's), (Start: 97 @45931 has 3 MA's), (99, 45919), (135, 45811), (138, 45763), (145, 45751), (153, 45724), (154, 45721), (169, 45682),

Gene: Lucky2013\_73 Start: 47341, Stop: 47081, Start Num: 98

Candidate Starts for Lucky2013\_73:

(Start: 90 @47365 has 319 MA's), (Start: 98 @47341 has 13 MA's), (120, 47266), (155, 47137), (168, 47101),

Gene: LunaBlu\_84 Start: 49474, Stop: 49758, Start Num: 90

Candidate Starts for LunaBlu\_84:

(Start: 90 @49474 has 319 MA's), (Start: 98 @49498 has 13 MA's), (120, 49573), (155, 49702), (168, 49738),

Gene: LunaStella\_80 Start: 48469, Stop: 48825, Start Num: 89

Candidate Starts for LunaStella\_80:

(64, 48427), (75, 48445), (Start: 89 @48469 has 9 MA's), (Start: 97 @48490 has 3 MA's), (99, 48502), (156, 48706), (164, 48724), (169, 48736), (177, 48778), (181, 48802),

Gene: MadMen\_89 Start: 50218, Stop: 50580, Start Num: 90

Candidate Starts for MadMen\_89:

(Start: 90 @50218 has 319 MA's), (Start: 97 @50239 has 3 MA's), (127, 50347), (139, 50413), (158, 50461), (159, 50464), (181, 50557),

Gene: MadMen\_87 Start: 49600, Stop: 49884, Start Num: 90

Candidate Starts for MadMen\_87:

(55, 49540), (Start: 90 @49600 has 319 MA's), (Start: 98 @49624 has 13 MA's), (120, 49699), (155, 49828), (168, 49864),

Gene: MadMen\_79 Start: 47451, Stop: 47750, Start Num: 90

Candidate Starts for MadMen\_79:

(Start: 90 @47451 has 319 MA's), (Start: 97 @47472 has 3 MA's), (101, 47487), (134, 47613), (161, 47727),

Gene: Mahavrat\_81 Start: 47831, Stop: 48169, Start Num: 89

Candidate Starts for Mahavrat\_81:

(34, 47726), (46, 47756), (Start: 89 @47831 has 9 MA's), (Start: 97 @47852 has 3 MA's), (101, 47867), (134, 47957), (156, 48050), (164, 48068), (169, 48080), (177, 48122), (181, 48146),

Gene: Manda\_43 Start: 35798, Stop: 35514, Start Num: 90

Candidate Starts for Manda\_43:

(Start: 90 @35798 has 319 MA's), (Start: 98 @35774 has 13 MA's), (120, 35699), (155, 35570), (168, 35534),

Gene: Mandlovu\_81 Start: 47530, Stop: 47841, Start Num: 65

Candidate Starts for Mandlovu\_81:

(49, 47503), (Start: 65 @47530 has 5 MA's), (Start: 97 @47593 has 3 MA's), (133, 47698), (161, 47818),

Gene: Mandlovu\_80 Start: 47256, Stop: 47537, Start Num: 90

Candidate Starts for Mandlovu\_80:

(Start: 90 @47256 has 319 MA's), (Start: 98 @47280 has 13 MA's), (99, 47289), (134, 47403), (152, 47475), (155, 47481),

Gene: Mandlovu\_76 Start: 46169, Stop: 46453, Start Num: 90

Candidate Starts for Mandlovu\_76:

(Start: 74 @46145 has 1 MA's), (Start: 90 @46169 has 319 MA's), (Start: 98 @46193 has 13 MA's), (120, 46268), (155, 46397), (168, 46433),

Gene: Marker\_79 Start: 47302, Stop: 47679, Start Num: 97

Candidate Starts for Marker\_79:

(87, 47275), (Start: 97 @47302 has 3 MA's), (101, 47317), (117, 47386), (126, 47440), (128, 47443), (131, 47458), (134, 47467), (136, 47473), (156, 47560), (164, 47578), (169, 47590), (177, 47632), (181, 47656),

Gene: Marker\_87 Start: 49400, Stop: 49684, Start Num: 90

Candidate Starts for Marker\_87:

(Start: 90 @49400 has 319 MA's), (Start: 98 @49424 has 13 MA's), (120, 49499), (155, 49628), (168, 49664),

Gene: Marker\_89 Start: 50064, Stop: 50420, Start Num: 97

Candidate Starts for Marker\_89:

(Start: 97 @50064 has 3 MA's), (101, 50079), (111, 50103), (117, 50130), (122, 50160), (149, 50280), (175, 50355), (181, 50397),

Gene: Marleymoo\_65 Start: 48325, Stop: 48032, Start Num: 90

Candidate Starts for Marleymoo\_65:

(Start: 90 @48325 has 319 MA's), (Start: 97 @48304 has 3 MA's), (99, 48292), (135, 48184), (138, 48136), (145, 48124), (153, 48097), (154, 48094), (169, 48055),

Gene: Marshmallow\_43 Start: 36119, Stop: 35823, Start Num: 91

Candidate Starts for Marshmallow\_43:

(Start: 91 @36119 has 23 MA's), (101, 36083), (106, 36065), (118, 36032), (123, 35990), (168, 35843),

Gene: Marvin\_8 Start: 2964, Stop: 3248, Start Num: 90

Candidate Starts for Marvin\_8:

(Start: 74 @2940 has 1 MA's), (Start: 90 @2964 has 319 MA's), (Start: 98 @2988 has 13 MA's), (120, 3063), (155, 3192), (168, 3228),

Gene: Mattes\_82 Start: 50261, Stop: 50632, Start Num: 90

Candidate Starts for Mattes\_82:

(40, 50174), (Start: 90 @50261 has 319 MA's), (Start: 98 @50285 has 13 MA's), (99, 50294), (130, 50393), (134, 50408), (182, 50609),

Gene: Medindi\_85 Start: 50197, Stop: 50481, Start Num: 90

Candidate Starts for Medindi\_85:

(4, 49951), (7, 49966), (Start: 90 @50197 has 319 MA's), (Start: 98 @50221 has 13 MA's), (155, 50425), (168, 50461),

Gene: Medindi\_89 Start: 51260, Stop: 51544, Start Num: 90

Candidate Starts for Medindi\_89:

(Start: 90 @51260 has 319 MA's), (Start: 98 @51284 has 13 MA's), (99, 51293), (130, 51392), (134, 51407), (165, 51521),

Gene: MiaZeal\_76 Start: 48021, Stop: 47737, Start Num: 90

Candidate Starts for MiaZeal\_76:

(Start: 90 @48021 has 319 MA's), (Start: 98 @47997 has 13 MA's), (120, 47922), (155, 47793), (168, 47757),

Gene: MiaZeal\_72 Start: 46608, Stop: 46255, Start Num: 90

Candidate Starts for MiaZeal\_72:

(Start: 90 @46608 has 319 MA's), (Start: 97 @46587 has 3 MA's), (99, 46575), (135, 46467), (163, 46374), (171, 46356), (174, 46344), (180, 46302), (185, 46278),

Gene: MilanaBonita\_77 Start: 48008, Stop: 48292, Start Num: 90

Candidate Starts for MilanaBonita\_77:

(Start: 90 @48008 has 319 MA's), (Start: 98 @48032 has 13 MA's), (120, 48107), (155, 48236), (168, 48272),

Gene: MilleniumForce\_84 Start: 50365, Stop: 50733, Start Num: 90

Candidate Starts for MilleniumForce\_84:

(Start: 90 @50365 has 319 MA's), (Start: 98 @50389 has 13 MA's), (99, 50398), (109, 50431), (113, 50443), (114, 50446), (134, 50509), (182, 50710),

Gene: MilleniumForce\_82 Start: 49757, Stop: 50041, Start Num: 90

Candidate Starts for MilleniumForce\_82:

(Start: 90 @49757 has 319 MA's), (Start: 98 @49781 has 13 MA's), (120, 49856), (155, 49985), (168, 50021),

Gene: Minerva\_79 Start: 52268, Stop: 51984, Start Num: 90

Candidate Starts for Minerva\_79:

(Start: 74 @52292 has 1 MA's), (Start: 90 @52268 has 319 MA's), (Start: 98 @52244 has 13 MA's), (120, 52169), (155, 52040), (168, 52004),

Gene: Minerva\_77 Start: 51629, Stop: 51336, Start Num: 90

Candidate Starts for Minerva\_77:

(Start: 90 @51629 has 319 MA's), (Start: 97 @51608 has 3 MA's), (99, 51596), (135, 51488), (138, 51440), (145, 51428), (153, 51401), (154, 51398), (169, 51359),

Gene: MinionDave\_77 Start: 48491, Stop: 48775, Start Num: 90

Candidate Starts for MinionDave\_77:

(Start: 90 @48491 has 319 MA's), (Start: 98 @48515 has 13 MA's), (155, 48719), (168, 48755),

Gene: Minnie\_77 Start: 50537, Stop: 50821, Start Num: 90

Candidate Starts for Minnie\_77:

(Start: 70 @50507 has 3 MA's), (Start: 74 @50513 has 1 MA's), (Start: 90 @50537 has 319 MA's), (Start: 98 @50561 has 13 MA's), (120, 50636), (155, 50765), (168, 50801),

Gene: Modragons\_88 Start: 50142, Stop: 50435, Start Num: 90

Candidate Starts for Modragons\_88:

(Start: 90 @50142 has 319 MA's), (Start: 97 @50163 has 3 MA's), (101, 50178), (134, 50304), (161, 50412),

Gene: Modragons\_86 Start: 49612, Stop: 49932, Start Num: 90

Candidate Starts for Modragons\_86:

(Start: 74 @49588 has 1 MA's), (Start: 90 @49612 has 319 MA's), (Start: 98 @49636 has 13 MA's), (120, 49711), (155, 49840), (168, 49876),

Gene: MooMoo\_80 Start: 48107, Stop: 48433, Start Num: 90

Candidate Starts for MooMoo\_80:

(Start: 90 @48107 has 319 MA's), (99, 48140), (101, 48143), (105, 48170), (107, 48176), (135, 48296), (160, 48410),

Gene: Moonbeam\_83 Start: 49609, Stop: 49980, Start Num: 90

Candidate Starts for Moonbeam\_83:

(Start: 90 @49609 has 319 MA's), (Start: 98 @49633 has 13 MA's), (99, 49642), (130, 49741), (134, 49756), (182, 49957),

Gene: Moose\_60 Start: 39923, Stop: 39675, Start Num: 90

Candidate Starts for Moose\_60:

(33, 40019), (43, 39995), (59, 39965), (Start: 90 @39923 has 319 MA's), (Start: 95 @39911 has 1 MA's), (151, 39698),

Gene: Mova\_80 Start: 47852, Stop: 48136, Start Num: 90

Candidate Starts for Mova\_80:

(Start: 90 @47852 has 319 MA's), (Start: 98 @47876 has 13 MA's), (120, 47951), (155, 48080), (168, 48116),

Gene: Mozy\_86 Start: 47832, Stop: 48131, Start Num: 91

Candidate Starts for Mozy\_86:

(67, 47790), (80, 47808), (Start: 91 @47832 has 23 MA's), (Start: 97 @47853 has 3 MA's), (99, 47865), (142, 48033), (168, 48108),

Gene: Mozy\_88 Start: 48337, Stop: 48621, Start Num: 90

Candidate Starts for Mozy\_88:

(Start: 90 @48337 has 319 MA's), (Start: 98 @48361 has 13 MA's), (120, 48436), (155, 48565), (168, 48601),

Gene: Mozy\_91 Start: 49284, Stop: 49655, Start Num: 90

Candidate Starts for Mozy\_91:

(15, 49083), (18, 49095), (27, 49155), (31, 49167), (52, 49221), (Start: 90 @49284 has 319 MA's), (Start: 98 @49308 has 13 MA's), (99, 49317), (134, 49431), (182, 49632),

Gene: MrGordo\_63 Start: 41253, Stop: 40939, Start Num: 70

Candidate Starts for MrGordo\_63:

(Start: 70 @41253 has 3 MA's), (Start: 74 @41247 has 1 MA's), (Start: 90 @41223 has 319 MA's), (Start: 98 @41199 has 13 MA's), (155, 40995), (168, 40959),

Gene: Ms6\_82 Start: 45701, Stop: 45985, Start Num: 90

Candidate Starts for Ms6\_82:



(Start: 90 @45701 has 319 MA's), (Start: 98 @45725 has 13 MA's), (120, 45800), (155, 45929), (168, 45965),

Gene: MulchExplorer\_85 Start: 48230, Stop: 48505, Start Num: 90

Candidate Starts for MulchExplorer\_85:

(Start: 90 @48230 has 319 MA's), (Start: 97 @48251 has 3 MA's), (99, 48263), (105, 48293), (107, 48299), (134, 48413), (135, 48419), (147, 48494),

Gene: Mutaforma13\_86 Start: 49538, Stop: 49894, Start Num: 89

Candidate Starts for Mutaforma13\_86:

(64, 49496), (75, 49514), (Start: 89 @49538 has 9 MA's), (Start: 97 @49559 has 3 MA's), (156, 49775), (164, 49793), (169, 49805), (177, 49847), (181, 49871),

Gene: Mwanjiwa\_84 Start: 49794, Stop: 50060, Start Num: 97

Candidate Starts for Mwanjiwa\_84:

(Start: 90 @49773 has 319 MA's), (Start: 97 @49794 has 3 MA's), (102, 49809), (109, 49833), (134, 49926), (155, 50004), (168, 50040),

Gene: Myrale\_44 Start: 35984, Stop: 35688, Start Num: 91

Candidate Starts for Myrale\_44:

(Start: 91 @35984 has 23 MA's), (101, 35948), (106, 35930), (118, 35897), (123, 35855), (168, 35708),

Gene: Nekros\_72 Start: 49247, Stop: 48963, Start Num: 90

Candidate Starts for Nekros\_72:

(Start: 90 @49247 has 319 MA's), (Start: 98 @49223 has 13 MA's), (120, 49148), (155, 49019), (168, 48983),

Gene: Nekros\_70 Start: 48461, Stop: 48180, Start Num: 90

Candidate Starts for Nekros\_70:

(37, 48554), (47, 48530), (Start: 90 @48461 has 319 MA's), (Start: 98 @48437 has 13 MA's), (99, 48428), (109, 48395), (113, 48383), (114, 48380), (130, 48332), (134, 48317), (165, 48203),

Gene: NewHope4\_84 Start: 47569, Stop: 47853, Start Num: 90

Candidate Starts for NewHope4\_84:

(Start: 90 @47569 has 319 MA's), (Start: 98 @47593 has 13 MA's), (120, 47668), (155, 47797), (168, 47833),

Gene: Nibley\_65 Start: 44964, Stop: 44680, Start Num: 90

Candidate Starts for Nibley\_65:

(55, 45024), (Start: 90 @44964 has 319 MA's), (Start: 98 @44940 has 13 MA's), (120, 44865), (155, 44736), (168, 44700),

Gene: NihilNomen\_72 Start: 50300, Stop: 50007, Start Num: 90

Candidate Starts for NihilNomen\_72:

(Start: 90 @50300 has 319 MA's), (Start: 97 @50279 has 3 MA's), (99, 50267), (135, 50159), (138, 50111), (145, 50099), (153, 50072), (154, 50069), (169, 50030),

Gene: NihilNomen\_76 Start: 51713, Stop: 51429, Start Num: 90

Candidate Starts for NihilNomen\_76:

(Start: 90 @51713 has 319 MA's), (Start: 98 @51689 has 13 MA's), (120, 51614), (155, 51485), (168, 51449),

Gene: Nimbo\_74 Start: 48349, Stop: 48633, Start Num: 90

Candidate Starts for Nimbo\_74:

(Start: 90 @48349 has 319 MA's), (Start: 98 @48373 has 13 MA's), (120, 48448), (155, 48577), (168, 48613),

Gene: Nitzel\_78 Start: 46831, Stop: 47190, Start Num: 90

Candidate Starts for Nitzel\_78:

(67, 46792), (79, 46810), (Start: 90 @46831 has 319 MA's), (Start: 98 @46855 has 13 MA's), (99, 46864), (130, 46963), (134, 46978), (156, 47071), (164, 47089), (169, 47101), (177, 47143), (181, 47167),

Gene: Nivrat\_80 Start: 49507, Stop: 49791, Start Num: 90

Candidate Starts for Nivrat\_80:

(23, 49369), (45, 49432), (Start: 90 @49507 has 319 MA's), (Start: 98 @49531 has 13 MA's), (120, 49606), (155, 49735), (168, 49771),

Gene: NonchalantPear\_43 Start: 34888, Stop: 34544, Start Num: 98

Candidate Starts for NonchalantPear\_43:

(Start: 90 @34915 has 319 MA's), (Start: 98 @34888 has 13 MA's), (99, 34879), (109, 34846), (113, 34834), (114, 34831), (134, 34768), (141, 34714), (166, 34651), (176, 34609), (182, 34567),

Gene: NormanBulbieJr\_82 Start: 50191, Stop: 50472, Start Num: 90

Candidate Starts for NormanBulbieJr\_82:

(Start: 90 @50191 has 319 MA's), (Start: 98 @50212 has 13 MA's), (110, 50245), (155, 50416), (168, 50452),

Gene: Ochi17\_87 Start: 49219, Stop: 49539, Start Num: 90

Candidate Starts for Ochi17\_87:

(Start: 74 @49195 has 1 MA's), (Start: 90 @49219 has 319 MA's), (Start: 98 @49243 has 13 MA's), (120, 49318), (155, 49447), (168, 49483),

Gene: Ochi17\_89 Start: 49749, Stop: 50042, Start Num: 90

Candidate Starts for Ochi17\_89:

(Start: 90 @49749 has 319 MA's), (Start: 97 @49770 has 3 MA's), (101, 49785), (134, 49911), (161, 50019),

Gene: Odette\_70 Start: 49343, Stop: 49050, Start Num: 90

Candidate Starts for Odette\_70:

(Start: 90 @49343 has 319 MA's), (Start: 97 @49322 has 3 MA's), (99, 49310), (135, 49202), (138, 49154), (145, 49142), (153, 49115), (154, 49112), (169, 49073),

Gene: Odette\_74 Start: 50756, Stop: 50472, Start Num: 90

Candidate Starts for Odette\_74:

(Start: 90 @50756 has 319 MA's), (Start: 98 @50732 has 13 MA's), (120, 50657), (155, 50528), (168, 50492),

Gene: OfUltron\_89 Start: 49768, Stop: 50088, Start Num: 90

Candidate Starts for OfUltron\_89:

(Start: 74 @49744 has 1 MA's), (Start: 90 @49768 has 319 MA's), (Start: 98 @49792 has 13 MA's), (120, 49867), (155, 49996), (168, 50032),

Gene: OfUltron\_91 Start: 50298, Stop: 50591, Start Num: 90

Candidate Starts for OfUltron\_91:

(Start: 90 @50298 has 319 MA's), (Start: 97 @50319 has 3 MA's), (101, 50334), (134, 50460), (161, 50568),

Gene: Ogopogo\_87 Start: 48817, Stop: 49101, Start Num: 90

Candidate Starts for Ogopogo\_87:

(Start: 90 @48817 has 319 MA's), (Start: 98 @48841 has 13 MA's), (120, 48916), (155, 49045), (168, 49081),

Gene: Oksu\_86 Start: 50903, Stop: 51256, Start Num: 90

Candidate Starts for Oksu\_86:

(Start: 90 @50903 has 319 MA's), (Start: 97 @50924 has 3 MA's), (99, 50936), (135, 51044), (163, 51137), (171, 51155), (174, 51167), (180, 51209), (185, 51233),

Gene: OldBen\_79 Start: 49741, Stop: 50025, Start Num: 90

Candidate Starts for OldBen\_79:

(Start: 90 @49741 has 319 MA's), (Start: 98 @49765 has 13 MA's), (120, 49840), (155, 49969), (168, 50005),

Gene: OlympiaSaint\_85 Start: 50471, Stop: 50842, Start Num: 90

Candidate Starts for OlympiaSaint\_85:

(Start: 90 @50471 has 319 MA's), (Start: 98 @50495 has 13 MA's), (99, 50504), (130, 50603), (134, 50618), (182, 50819),

Gene: OlympiaSaint\_81 Start: 49408, Stop: 49692, Start Num: 90

Candidate Starts for OlympiaSaint\_81:

(Start: 90 @49408 has 319 MA's), (Start: 98 @49432 has 13 MA's), (120, 49507), (155, 49636), (168, 49672),

Gene: Omega\_77 Start: 51219, Stop: 50938, Start Num: 90

Candidate Starts for Omega\_77:

(Start: 90 @51219 has 319 MA's), (Start: 98 @51195 has 13 MA's), (99, 51186), (109, 51153), (113, 51141), (114, 51138), (134, 51075), (165, 50961),

Gene: Omega\_79 Start: 51648, Stop: 51367, Start Num: 90

Candidate Starts for Omega\_79:

(Start: 90 @51648 has 319 MA's), (Start: 98 @51627 has 13 MA's), (120, 51552), (155, 51423), (168, 51387),

Gene: Ovechkin\_89 Start: 50892, Stop: 51290, Start Num: 90

Candidate Starts for Ovechkin\_89:

(73, 50862), (77, 50868), (Start: 90 @50892 has 319 MA's), (101, 50928), (117, 50997), (128, 51054), (131, 51069), (134, 51078), (136, 51084), (156, 51171), (164, 51189), (169, 51201), (177, 51243), (181, 51267),

Gene: PHappiness\_82 Start: 50570, Stop: 50854, Start Num: 90

Candidate Starts for PHappiness\_82:

(Start: 90 @50570 has 319 MA's), (Start: 98 @50594 has 13 MA's), (120, 50669), (155, 50798), (168, 50834),

Gene: PMC\_78 Start: 47902, Stop: 48186, Start Num: 90

Candidate Starts for PMC\_78:

(Start: 90 @47902 has 319 MA's), (Start: 98 @47926 has 13 MA's), (120, 48001), (155, 48130), (168, 48166),

Gene: Pacc40\_73 Start: 48569, Stop: 48838, Start Num: 90

Candidate Starts for Pacc40\_73:

(Start: 90 @48569 has 319 MA's), (Start: 97 @48590 has 3 MA's), (132, 48689), (133, 48695), (161, 48815),

Gene: Paphu\_61 Start: 41641, Stop: 41261, Start Num: 90

Candidate Starts for Paphu\_61:

(12, 41842), (54, 41698), (56, 41695), (Start: 90 @41641 has 319 MA's), (Start: 97 @41620 has 3 MA's), (101, 41605), (135, 41479), (139, 41428), (158, 41380), (159, 41377), (181, 41284),

Gene: Parliament\_63 Start: 43433, Stop: 43053, Start Num: 90

Candidate Starts for Parliament\_63:

(12, 43634), (54, 43490), (56, 43487), (Start: 90 @43433 has 319 MA's), (Start: 97 @43412 has 3 MA's), (101, 43397), (135, 43271), (139, 43220), (158, 43172), (159, 43169), (181, 43076),

Gene: Pepe\_59 Start: 39848, Stop: 39564, Start Num: 90

Candidate Starts for Pepe\_59:

(Start: 70 @39878 has 3 MA's), (Start: 74 @39872 has 1 MA's), (Start: 90 @39848 has 319 MA's), (Start: 98 @39824 has 13 MA's), (120, 39749), (155, 39620), (168, 39584),

Gene: Petra64142\_42 Start: 35106, Stop: 34705, Start Num: 98

Candidate Starts for Petra64142\_42:

(66, 35169), (78, 35151), (Start: 90 @35130 has 319 MA's), (Start: 98 @35106 has 13 MA's), (99, 35097), (109, 35064), (113, 35052), (114, 35049), (134, 34986), (141, 34932), (166, 34869), (176, 34827), (184, 34776), (186, 34713),

Gene: Phaja\_42 Start: 35684, Stop: 35388, Start Num: 91

Candidate Starts for Phaja\_42:

(Start: 91 @35684 has 23 MA's), (101, 35648), (106, 35630), (118, 35597), (123, 35555), (168, 35408),

Gene: Phalconet\_78 Start: 48031, Stop: 48315, Start Num: 90

Candidate Starts for Phalconet\_78:

(Start: 90 @48031 has 319 MA's), (Start: 98 @48055 has 13 MA's), (155, 48259), (168, 48295),

Gene: Phalconet\_82 Start: 49094, Stop: 49378, Start Num: 90

Candidate Starts for Phalconet\_82:

(Start: 90 @49094 has 319 MA's), (Start: 98 @49118 has 13 MA's), (99, 49127), (130, 49226), (134, 49241), (165, 49355),

Gene: Phanphagia\_84 Start: 50468, Stop: 50839, Start Num: 90

Candidate Starts for Phanphagia\_84:

(Start: 90 @50468 has 319 MA's), (Start: 98 @50492 has 13 MA's), (99, 50501), (130, 50600), (134, 50615), (182, 50816),

Gene: Phanphagia\_80 Start: 49405, Stop: 49689, Start Num: 90

Candidate Starts for Phanphagia\_80:

(Start: 90 @49405 has 319 MA's), (Start: 98 @49429 has 13 MA's), (120, 49504), (155, 49633), (168, 49669),

Gene: Phatniss\_78 Start: 47540, Stop: 47824, Start Num: 90

Candidate Starts for Phatniss\_78:

(Start: 90 @47540 has 319 MA's), (Start: 98 @47564 has 13 MA's), (120, 47639), (155, 47768), (168, 47804),

Gene: PhesterPhotato\_85 Start: 49202, Stop: 49483, Start Num: 90

Candidate Starts for PhesterPhotato\_85:

(Start: 90 @49202 has 319 MA's), (Start: 98 @49223 has 13 MA's), (120, 49298), (155, 49427), (168, 49463),

Gene: PhesterPhotato\_89 Start: 50262, Stop: 50546, Start Num: 90

Candidate Starts for PhesterPhotato\_89:

(Start: 90 @50262 has 319 MA's), (Start: 98 @50286 has 13 MA's), (99, 50295), (130, 50394), (134, 50409), (165, 50523),

Gene: Philus\_84 Start: 51107, Stop: 51391, Start Num: 90

Candidate Starts for Philus\_84:

(Start: 90 @51107 has 319 MA's), (Start: 98 @51131 has 13 MA's), (120, 51206), (155, 51335), (168, 51371),

Gene: Phoebus\_78 Start: 52895, Stop: 52611, Start Num: 90

Candidate Starts for Phoebus\_78:

(Start: 90 @52895 has 319 MA's), (Start: 98 @52871 has 13 MA's), (120, 52796), (155, 52667), (168, 52631),

Gene: Phoebus\_74 Start: 51482, Stop: 51129, Start Num: 90

Candidate Starts for Phoebus\_74:

(Start: 90 @51482 has 319 MA's), (Start: 97 @51461 has 3 MA's), (99, 51449), (135, 51341), (163, 51248), (171, 51230), (174, 51218), (180, 51176), (185, 51152),

Gene: Pippy\_76 Start: 47591, Stop: 47887, Start Num: 91

Candidate Starts for Pippy\_76:

(Start: 91 @47591 has 23 MA's), (101, 47627), (106, 47645), (118, 47678), (123, 47720), (155, 47831), (168, 47867),

Gene: Poenanya\_88 Start: 50710, Stop: 51087, Start Num: 83

Candidate Starts for Poenanya\_88:

(Start: 83 @50710 has 8 MA's), (Start: 98 @50752 has 13 MA's), (99, 50761), (134, 50875), (156, 50968), (164, 50986), (169, 50998), (177, 51040), (181, 51064),

Gene: Poise\_9 Start: 2787, Stop: 3071, Start Num: 90

Candidate Starts for Poise\_9:

(Start: 90 @2787 has 319 MA's), (Start: 98 @2811 has 13 MA's), (120, 2886), (155, 3015), (168, 3051),

Gene: Polka14\_89 Start: 51500, Stop: 51877, Start Num: 83

Candidate Starts for Polka14\_89:

(Start: 83 @51500 has 8 MA's), (Start: 98 @51542 has 13 MA's), (99, 51551), (130, 51650), (134, 51665), (156, 51758), (164, 51776), (169, 51788), (177, 51830), (181, 51854),

Gene: Polo2Bam\_89 Start: 47423, Stop: 47707, Start Num: 90

Candidate Starts for Polo2Bam\_89:

(Start: 90 @47423 has 319 MA's), (Start: 98 @47447 has 13 MA's), (120, 47522), (155, 47651), (168, 47687),

Gene: PopTart\_77 Start: 47157, Stop: 47441, Start Num: 90

Candidate Starts for PopTart\_77:

(Start: 90 @47157 has 319 MA's), (Start: 98 @47181 has 13 MA's), (99, 47190), (130, 47289), (134, 47304), (165, 47418),

Gene: PopTart\_73 Start: 46094, Stop: 46378, Start Num: 90

Candidate Starts for PopTart\_73:

(Start: 74 @46070 has 1 MA's), (Start: 90 @46094 has 319 MA's), (Start: 98 @46118 has 13 MA's), (120, 46193), (155, 46322), (168, 46358),

Gene: Porcelain\_75 Start: 48021, Stop: 47737, Start Num: 90

Candidate Starts for Porcelain\_75:

(Start: 90 @48021 has 319 MA's), (Start: 98 @47997 has 13 MA's), (120, 47922), (155, 47793), (168, 47757),

Gene: Porcelain\_71 Start: 46608, Stop: 46255, Start Num: 90

Candidate Starts for Porcelain\_71:

(Start: 90 @46608 has 319 MA's), (Start: 97 @46587 has 3 MA's), (99, 46575), (135, 46467), (163, 46374), (171, 46356), (174, 46344), (180, 46302), (185, 46278),

Gene: Porky\_42 Start: 34896, Stop: 34549, Start Num: 98

Candidate Starts for Porky\_42:

(Start: 90 @34920 has 319 MA's), (Start: 98 @34896 has 13 MA's), (99, 34887), (134, 34773), (141, 34719), (166, 34656), (176, 34614), (182, 34572),

Gene: Pound\_77 Start: 53540, Stop: 53256, Start Num: 90

Candidate Starts for Pound\_77:

(Start: 74 @53564 has 1 MA's), (Start: 90 @53540 has 319 MA's), (Start: 98 @53516 has 13 MA's), (120, 53441), (155, 53312), (168, 53276),

Gene: Pound\_75 Start: 52901, Stop: 52608, Start Num: 90

Candidate Starts for Pound\_75:

(Start: 90 @52901 has 319 MA's), (Start: 97 @52880 has 3 MA's), (99, 52868), (135, 52760), (138, 52712), (145, 52700), (153, 52673), (154, 52670), (169, 52631),

Gene: Pringar\_9 Start: 2807, Stop: 3091, Start Num: 90

Candidate Starts for Pringar\_9:

(Start: 74 @2783 has 1 MA's), (Start: 90 @2807 has 319 MA's), (Start: 98 @2831 has 13 MA's), (120, 2906), (155, 3035), (168, 3071),

Gene: Priscilla\_84 Start: 50289, Stop: 50570, Start Num: 90

Candidate Starts for Priscilla\_84:

(Start: 90 @50289 has 319 MA's), (Start: 98 @50310 has 13 MA's), (110, 50343), (155, 50514), (168, 50550),

Gene: QuickMath\_80 Start: 48565, Stop: 48837, Start Num: 90

Candidate Starts for QuickMath\_80:

(Start: 90 @48565 has 319 MA's), (Start: 97 @48586 has 3 MA's), (99, 48598), (135, 48706), (169, 48814),

Gene: Quico\_91 Start: 51411, Stop: 51695, Start Num: 90

Candidate Starts for Quico\_91:

(Start: 90 @51411 has 319 MA's), (Start: 98 @51435 has 13 MA's), (99, 51444), (130, 51543), (134, 51558), (165, 51672),

Gene: Rabinovich\_14 Start: 5789, Stop: 6034, Start Num: 90

Candidate Starts for Rabinovich\_14:

(21, 5627), (Start: 90 @5789 has 319 MA's), (Start: 98 @5813 has 13 MA's), (99, 5822), (134, 5936), (143, 5996),

Gene: Radiance\_80 Start: 49352, Stop: 49621, Start Num: 90

Candidate Starts for Radiance\_80:

(68, 49322), (76, 49328), (Start: 90 @49352 has 319 MA's), (Start: 97 @49373 has 3 MA's), (132, 49472), (133, 49478), (161, 49598),

Gene: Raela\_9 Start: 3191, Stop: 3475, Start Num: 90

Candidate Starts for Raela\_9:

(Start: 90 @3191 has 319 MA's), (Start: 98 @3215 has 13 MA's), (120, 3290), (155, 3419), (168, 3455),

Gene: Ramsey\_86 Start: 51149, Stop: 51520, Start Num: 90

Candidate Starts for Ramsey\_86:

(15, 50948), (18, 50960), (27, 51020), (31, 51032), (52, 51086), (Start: 90 @51149 has 319 MA's), (Start: 98 @51173 has 13 MA's), (99, 51182), (130, 51281), (134, 51296), (182, 51497),

Gene: Rearden\_68 Start: 46777, Stop: 46493, Start Num: 90

Candidate Starts for Rearden\_68:

(Start: 90 @46777 has 319 MA's), (Start: 98 @46753 has 13 MA's), (155, 46549), (168, 46513),

Gene: Rearden\_66 Start: 46135, Stop: 45818, Start Num: 90

Candidate Starts for Rearden\_66:

(Start: 90 @46135 has 319 MA's), (Start: 98 @46111 has 13 MA's), (99, 46102), (109, 46069), (113, 46057), (114, 46054), (130, 46006), (134, 45991), (143, 45931), (182, 45841),

Gene: RedBird\_83 Start: 50910, Stop: 51281, Start Num: 90

Candidate Starts for RedBird\_83:

(15, 50709), (18, 50721), (27, 50781), (31, 50793), (52, 50847), (Start: 90 @50910 has 319 MA's), (Start: 98 @50934 has 13 MA's), (99, 50943), (130, 51042), (134, 51057), (182, 51258),

Gene: Redno2\_72 Start: 48485, Stop: 48225, Start Num: 98

Candidate Starts for Redno2\_72:

(Start: 90 @48509 has 319 MA's), (Start: 98 @48485 has 13 MA's), (120, 48410), (155, 48281), (168, 48245),

Gene: Redno2\_68 Start: 47096, Stop: 46803, Start Num: 90

Candidate Starts for Redno2\_68:

(Start: 90 @47096 has 319 MA's), (Start: 97 @47075 has 3 MA's), (99, 47063), (135, 46955), (138, 46907), (145, 46895), (153, 46868), (154, 46865), (169, 46826),

Gene: Renaud18\_93 Start: 50655, Stop: 50924, Start Num: 90

Candidate Starts for Renaud18\_93:

(Start: 90 @50655 has 319 MA's), (Start: 97 @50676 has 3 MA's), (101, 50691), (134, 50787), (161, 50901),

Gene: Rimmer\_40 Start: 34315, Stop: 33944, Start Num: 90

Candidate Starts for Rimmer\_40:

(66, 34354), (78, 34336), (Start: 90 @34315 has 319 MA's), (Start: 98 @34291 has 13 MA's), (99, 34282), (134, 34168), (141, 34114), (166, 34051), (176, 34009), (182, 33967),

Gene: Rita\_88 Start: 51756, Stop: 52040, Start Num: 90

Candidate Starts for Rita\_88:

(Start: 90 @51756 has 319 MA's), (Start: 98 @51780 has 13 MA's), (120, 51855), (155, 51984), (168, 52020),

Gene: RitaG\_82 Start: 50372, Stop: 50656, Start Num: 90

Candidate Starts for RitaG\_82:

(Start: 90 @50372 has 319 MA's), (Start: 98 @50396 has 13 MA's), (120, 50471), (155, 50600), (168, 50636),

Gene: Rockne\_82 Start: 47914, Stop: 48198, Start Num: 90

Candidate Starts for Rockne\_82:

(Start: 90 @47914 has 319 MA's), (Start: 98 @47938 has 13 MA's), (120, 48013), (155, 48142), (168, 48178),

Gene: Royals2015\_90 Start: 49759, Stop: 50043, Start Num: 90

Candidate Starts for Royals2015\_90:

(Start: 90 @49759 has 319 MA's), (Start: 98 @49783 has 13 MA's), (99, 49792), (130, 49891), (134, 49906), (165, 50020),

Gene: Royals2015\_86 Start: 48664, Stop: 48936, Start Num: 90

Candidate Starts for Royals2015\_86:

(Start: 60 @48622 has 1 MA's), (73, 48640), (Start: 90 @48664 has 319 MA's), (Start: 97 @48685 has 3 MA's), (99, 48697), (135, 48805), (169, 48913),

Gene: SG4\_86 Start: 50874, Stop: 51251, Start Num: 90

Candidate Starts for SG4\_86:

(Start: 90 @50874 has 319 MA's), (Start: 97 @50895 has 3 MA's), (101, 50910), (111, 50934), (134, 51027), (143, 51087), (181, 51228),

Gene: SG4\_81 Start: 49453, Stop: 49737, Start Num: 90

Candidate Starts for SG4\_81:

(Start: 90 @49453 has 319 MA's), (Start: 98 @49477 has 13 MA's), (120, 49552), (155, 49681), (168, 49717),

Gene: SG4\_84 Start: 50324, Stop: 50698, Start Num: 90

Candidate Starts for SG4\_84:

(Start: 90 @50324 has 319 MA's), (Start: 97 @50345 has 3 MA's), (101, 50360), (134, 50486), (156, 50579), (164, 50597), (169, 50609), (177, 50651), (181, 50675),

Gene: Sabbb\_83 Start: 46768, Stop: 47067, Start Num: 90

Candidate Starts for Sabbb\_83:

(Start: 90 @46768 has 319 MA's), (Start: 97 @46789 has 3 MA's), (101, 46804), (134, 46930), (161, 47044),

Gene: Sandalphon\_75 Start: 48522, Stop: 48806, Start Num: 90

Candidate Starts for Sandalphon\_75:

(Start: 70 @48492 has 3 MA's), (Start: 74 @48498 has 1 MA's), (Start: 90 @48522 has 319 MA's), (Start: 98 @48546 has 13 MA's), (120, 48621), (155, 48750), (168, 48786),

Gene: Sandalphon\_83 Start: 50748, Stop: 51119, Start Num: 90

Candidate Starts for Sandalphon\_83:



(Start: 90 @50748 has 319 MA's), (Start: 98 @50772 has 13 MA's), (99, 50781), (134, 50895), (182, 51096),

Gene: Sarma624\_80 Start: 45621, Stop: 45905, Start Num: 90

Candidate Starts for Sarma624\_80:

(Start: 74 @45597 has 1 MA's), (Start: 90 @45621 has 319 MA's), (Start: 98 @45645 has 13 MA's), (120, 45720), (155, 45849), (168, 45885),

Gene: Sassafras\_83 Start: 49224, Stop: 49595, Start Num: 90

Candidate Starts for Sassafras\_83:

(15, 49023), (18, 49035), (27, 49095), (31, 49107), (52, 49161), (Start: 90 @49224 has 319 MA's), (Start: 98 @49248 has 13 MA's), (99, 49257), (130, 49356), (134, 49371), (182, 49572),

Gene: SassyB\_73 Start: 46094, Stop: 46378, Start Num: 90

Candidate Starts for SassyB\_73:

(Start: 74 @46070 has 1 MA's), (Start: 90 @46094 has 319 MA's), (Start: 98 @46118 has 13 MA's), (120, 46193), (155, 46322), (168, 46358),

Gene: SassyB\_77 Start: 47157, Stop: 47441, Start Num: 90

Candidate Starts for SassyB\_77:

(Start: 90 @47157 has 319 MA's), (Start: 98 @47181 has 13 MA's), (99, 47190), (130, 47289), (134, 47304), (165, 47418),

Gene: Schatzie\_66 Start: 49090, Stop: 48797, Start Num: 90

Candidate Starts for Schatzie\_66:

(Start: 90 @49090 has 319 MA's), (Start: 97 @49069 has 3 MA's), (99, 49057), (135, 48949), (138, 48901), (145, 48889), (153, 48862), (154, 48859), (169, 48820),

Gene: Schatzie\_70 Start: 50503, Stop: 50219, Start Num: 90

Candidate Starts for Schatzie\_70:

(Start: 90 @50503 has 319 MA's), (Start: 98 @50479 has 13 MA's), (120, 50404), (155, 50275), (168, 50239),

Gene: Scottish\_83 Start: 49191, Stop: 49568, Start Num: 83

Candidate Starts for Scottish\_83:

(Start: 83 @49191 has 8 MA's), (Start: 98 @49233 has 13 MA's), (99, 49242), (130, 49341), (134, 49356), (156, 49449), (164, 49467), (169, 49479), (177, 49521), (181, 49545),

Gene: Seabastian\_89 Start: 49769, Stop: 50089, Start Num: 90

Candidate Starts for Seabastian\_89:

(Start: 74 @49745 has 1 MA's), (Start: 90 @49769 has 319 MA's), (Start: 98 @49793 has 13 MA's), (120, 49868), (155, 49997), (168, 50033),

Gene: Seabastian\_91 Start: 50299, Stop: 50592, Start Num: 90

Candidate Starts for Seabastian\_91:

(Start: 90 @50299 has 319 MA's), (Start: 97 @50320 has 3 MA's), (101, 50335), (134, 50461), (161, 50569),

Gene: Seagreen\_84 Start: 50260, Stop: 50628, Start Num: 90

Candidate Starts for Seagreen\_84:

(Start: 90 @50260 has 319 MA's), (Start: 98 @50284 has 13 MA's), (99, 50293), (109, 50326), (113, 50338), (114, 50341), (130, 50389), (134, 50404), (143, 50464), (182, 50605),

Gene: Seagreen\_80 Start: 49149, Stop: 49481, Start Num: 60

Candidate Starts for Seagreen\_80:

(22, 49053), (Start: 60 @49149 has 1 MA's), (Start: 70 @49164 has 3 MA's), (Start: 90 @49197 has 319 MA's), (Start: 98 @49221 has 13 MA's), (155, 49425), (168, 49461),

Gene: Seanderson\_61 Start: 42123, Stop: 41887, Start Num: 95

Candidate Starts for Seanderson\_61:

(33, 42231), (43, 42207), (59, 42177), (Start: 90 @42135 has 319 MA's), (Start: 95 @42123 has 1 MA's), (151, 41910),

Gene: Shaboozey\_69 Start: 45986, Stop: 45702, Start Num: 90

Candidate Starts for Shaboozey\_69:

(Start: 90 @45986 has 319 MA's), (Start: 98 @45962 has 13 MA's), (155, 45758), (168, 45722),

Gene: Shaboozey\_64 Start: 44166, Stop: 43780, Start Num: 90

Candidate Starts for Shaboozey\_64:

(39, 44259), (49, 44235), (Start: 90 @44166 has 319 MA's), (Start: 97 @44145 has 3 MA's), (101, 44130), (134, 44004), (143, 43944), (181, 43803),

Gene: Shaboozey\_66 Start: 44922, Stop: 44668, Start Num: 98

Candidate Starts for Shaboozey\_66:

(57, 45003), (Start: 90 @44946 has 319 MA's), (Start: 98 @44922 has 13 MA's), (99, 44913), (109, 44880), (113, 44868), (114, 44865), (130, 44817), (134, 44802), (155, 44724), (167, 44688),

Gene: ShamWow\_44 Start: 36121, Stop: 35825, Start Num: 91

Candidate Starts for ShamWow\_44:

(Start: 91 @36121 has 23 MA's), (101, 36085), (106, 36067), (118, 36034), (123, 35992), (168, 35845),

Gene: Shauna1\_81 Start: 49655, Stop: 49939, Start Num: 90

Candidate Starts for Shauna1\_81:

(Start: 90 @49655 has 319 MA's), (Start: 98 @49679 has 13 MA's), (120, 49754), (155, 49883), (168, 49919),

Gene: Shauna1\_83 Start: 50441, Stop: 50812, Start Num: 90

Candidate Starts for Shauna1\_83:

(38, 50348), (48, 50372), (Start: 90 @50441 has 319 MA's), (Start: 98 @50465 has 13 MA's), (99, 50474), (130, 50573), (134, 50588), (182, 50789),

Gene: ShiLan\_85 Start: 51984, Stop: 52355, Start Num: 90

Candidate Starts for ShiLan\_85:

(Start: 90 @51984 has 319 MA's), (Start: 98 @52008 has 13 MA's), (99, 52017), (130, 52116), (134, 52131), (182, 52332),

Gene: ShowerHandel\_82 Start: 48717, Stop: 48983, Start Num: 100

Candidate Starts for ShowerHandel\_82:

(Start: 100 @48717 has 2 MA's), (110, 48744), (114, 48759), (134, 48849), (155, 48927), (168, 48963),

Gene: ShroomBoi\_82 Start: 49425, Stop: 49781, Start Num: 89

Candidate Starts for ShroomBoi\_82:

(64, 49383), (75, 49401), (Start: 89 @49425 has 9 MA's), (Start: 97 @49446 has 3 MA's), (99, 49458), (156, 49662), (164, 49680), (169, 49692), (177, 49734), (181, 49758),

Gene: SilverChicken\_91 Start: 49686, Stop: 50078, Start Num: 78

Candidate Starts for SilverChicken\_91:

(66, 49668), (78, 49686), (Start: 90 @49707 has 319 MA's), (Start: 98 @49731 has 13 MA's), (99, 49740), (130, 49839), (134, 49854), (182, 50055),

Gene: SimranZ1\_83 Start: 48924, Stop: 49286, Start Num: 90

Candidate Starts for SimranZ1\_83:

(Start: 90 @48924 has 319 MA's), (Start: 97 @48945 has 3 MA's), (139, 49119), (158, 49167), (159, 49170), (181, 49263),

Gene: SkiPole\_66 Start: 41398, Stop: 41150, Start Num: 90

Candidate Starts for SkiPole\_66:

(8, 41611), (9, 41608), (10, 41605), (11, 41602), (33, 41494), (43, 41470), (59, 41440), (Start: 90 @41398 has 319 MA's), (Start: 95 @41386 has 1 MA's), (151, 41173),

Gene: SkiPole\_68 Start: 41922, Stop: 41608, Start Num: 70

Candidate Starts for SkiPole\_68:

(Start: 70 @41922 has 3 MA's), (Start: 74 @41916 has 1 MA's), (Start: 90 @41892 has 319 MA's), (Start: 98 @41868 has 13 MA's), (120, 41793), (155, 41664), (168, 41628),

Gene: Solon\_60 Start: 40387, Stop: 40100, Start Num: 90

Candidate Starts for Solon\_60:

(Start: 90 @40387 has 319 MA's), (Start: 97 @40366 has 3 MA's), (102, 40351), (109, 40327), (134, 40234), (155, 40156), (168, 40120),

Gene: Soul22\_82 Start: 47187, Stop: 47471, Start Num: 90

Candidate Starts for Soul22\_82:

(Start: 70 @47157 has 3 MA's), (Start: 74 @47163 has 1 MA's), (Start: 90 @47187 has 319 MA's), (Start: 98 @47211 has 13 MA's), (120, 47286), (155, 47415), (168, 47451),

Gene: Soul22\_84 Start: 47805, Stop: 48131, Start Num: 90

Candidate Starts for Soul22\_84:

(Start: 90 @47805 has 319 MA's), (99, 47838), (101, 47841), (105, 47868), (107, 47874), (135, 47994), (160, 48108),

Gene: Spartacus\_89 Start: 52261, Stop: 52542, Start Num: 90

Candidate Starts for Spartacus\_89:

(Start: 90 @52261 has 319 MA's), (Start: 98 @52285 has 13 MA's), (99, 52294), (134, 52408), (152, 52480), (155, 52486),

Gene: Spartacus\_87 Start: 51565, Stop: 51846, Start Num: 90

Candidate Starts for Spartacus\_87:

(Start: 90 @51565 has 319 MA's), (Start: 98 @51586 has 13 MA's), (110, 51619), (155, 51790), (168, 51826),

Gene: Spartacus\_90 Start: 52535, Stop: 52846, Start Num: 65

Candidate Starts for Spartacus\_90:

(Start: 65 @52535 has 5 MA's), (Start: 97 @52598 has 3 MA's), (133, 52703), (161, 52823),

Gene: Spoonbill\_81 Start: 47897, Stop: 48268, Start Num: 90

Candidate Starts for Spoonbill\_81:

(Start: 90 @47897 has 319 MA's), (Start: 98 @47921 has 13 MA's), (99, 47930), (130, 48029), (134, 48044), (182, 48245),

Gene: Sprinklers\_16 Start: 4916, Stop: 5194, Start Num: 98

Candidate Starts for Sprinklers\_16:

(85, 4877), (92, 4895), (Start: 98 @4916 has 13 MA's), (Start: 104 @4937 has 5 MA's), (106, 4949), (108, 4952), (112, 4967), (115, 4976), (155, 5138), (168, 5174),

Gene: Squint\_76 Start: 48140, Stop: 47856, Start Num: 90

Candidate Starts for Squint\_76:

(Start: 90 @48140 has 319 MA's), (Start: 98 @48116 has 13 MA's), (120, 48041), (155, 47912), (168, 47876),

Gene: Squint\_72 Start: 46727, Stop: 46374, Start Num: 90

Candidate Starts for Squint\_72:

(Start: 90 @46727 has 319 MA's), (Start: 97 @46706 has 3 MA's), (99, 46694), (135, 46586), (163, 46493), (171, 46475), (174, 46463), (180, 46421), (185, 46397),

Gene: Squirty\_81 Start: 52224, Stop: 52505, Start Num: 90

Candidate Starts for Squirty\_81:

(Start: 90 @52224 has 319 MA's), (Start: 98 @52248 has 13 MA's), (120, 52323), (155, 52452), (163, 52476), (168, 52488), (170, 52494),

Gene: StAnnes\_83 Start: 50113, Stop: 50397, Start Num: 90

Candidate Starts for StAnnes\_83:

(69, 50083), (Start: 90 @50113 has 319 MA's), (Start: 98 @50137 has 13 MA's), (120, 50212), (155, 50341), (168, 50377),

Gene: Stap\_78 Start: 46857, Stop: 47246, Start Num: 83

Candidate Starts for Stap\_78:

(Start: 83 @46857 has 8 MA's), (Start: 98 @46899 has 13 MA's), (99, 46908), (130, 47007), (134, 47022), (141, 47076), (166, 47139), (176, 47181), (182, 47223),

Gene: StellaBean\_42 Start: 35445, Stop: 35149, Start Num: 91

Candidate Starts for StellaBean\_42:

(Start: 91 @35445 has 23 MA's), (101, 35409), (106, 35391), (118, 35358), (123, 35316), (168, 35169),

Gene: StormChicken\_41 Start: 34923, Stop: 34552, Start Num: 90

Candidate Starts for StormChicken\_41:

(66, 34962), (78, 34944), (Start: 90 @34923 has 319 MA's), (Start: 98 @34899 has 13 MA's), (99, 34890), (134, 34776), (141, 34722), (166, 34659), (176, 34617), (182, 34575),

Gene: Strokeseat\_80 Start: 47313, Stop: 47594, Start Num: 90

Candidate Starts for Strokeseat\_80:

(Start: 90 @47313 has 319 MA's), (Start: 98 @47337 has 13 MA's), (99, 47346), (134, 47460), (152, 47532), (155, 47538),

Gene: Strokeseat\_81 Start: 47587, Stop: 47898, Start Num: 65

Candidate Starts for Strokeseat\_81:

(49, 47560), (Start: 65 @47587 has 5 MA's), (Start: 97 @47650 has 3 MA's), (133, 47755), (161, 47875),

Gene: Strokeseat\_76 Start: 46226, Stop: 46510, Start Num: 90

Candidate Starts for Strokeseat\_76:

(Start: 74 @46202 has 1 MA's), (Start: 90 @46226 has 319 MA's), (Start: 98 @46250 has 13 MA's), (120, 46325), (155, 46454), (168, 46490),

Gene: SuperGrey\_82 Start: 51027, Stop: 51305, Start Num: 98

Candidate Starts for SuperGrey\_82:

(85, 50988), (92, 51006), (Start: 98 @51027 has 13 MA's), (Start: 104 @51048 has 5 MA's), (106, 51060), (108, 51063), (112, 51078), (115, 51087), (155, 51249), (168, 51285),

Gene: SuperGrey\_84 Start: 51807, Stop: 52193, Start Num: 90

Candidate Starts for SuperGrey\_84:

(39, 51714), (49, 51738), (Start: 90 @51807 has 319 MA's), (Start: 97 @51828 has 3 MA's), (101, 51843), (134, 51969), (143, 52029), (181, 52170),

Gene: Superphikiman\_69 Start: 45818, Stop: 45525, Start Num: 90

Candidate Starts for Superphikiman\_69:

(Start: 90 @45818 has 319 MA's), (Start: 97 @45797 has 3 MA's), (99, 45785), (135, 45677), (138, 45629), (145, 45617), (153, 45590), (154, 45587), (169, 45548),

Gene: Superphikiman\_73 Start: 47231, Stop: 46947, Start Num: 90

Candidate Starts for Superphikiman\_73:

(Start: 90 @47231 has 319 MA's), (Start: 98 @47207 has 13 MA's), (120, 47132), (155, 47003), (168, 46967),

Gene: SwissCheese\_62 Start: 40423, Stop: 40175, Start Num: 90

Candidate Starts for SwissCheese\_62:

(33, 40519), (43, 40495), (59, 40465), (Start: 90 @40423 has 319 MA's), (Start: 95 @40411 has 1 MA's), (151, 40198),

Gene: TChen\_82 Start: 50420, Stop: 50776, Start Num: 89

Candidate Starts for TChen\_82:

(64, 50378), (75, 50396), (Start: 89 @50420 has 9 MA's), (Start: 97 @50441 has 3 MA's), (99, 50453), (156, 50657), (164, 50675), (169, 50687), (177, 50729), (181, 50753),

Gene: Taj\_92 Start: 52011, Stop: 52295, Start Num: 90

Candidate Starts for Taj\_92:

(36, 51912), (Start: 90 @52011 has 319 MA's), (Start: 98 @52035 has 13 MA's), (99, 52044), (130, 52143), (134, 52158), (165, 52272),

Gene: Taj\_88 Start: 50947, Stop: 51231, Start Num: 90

Candidate Starts for Taj\_88:

(20, 50785), (Start: 90 @50947 has 319 MA's), (Start: 98 @50971 has 13 MA's), (120, 51046), (155, 51175), (168, 51211),

Gene: Taptic\_70 Start: 50486, Stop: 50746, Start Num: 91

Candidate Starts for Taptic\_70:

(Start: 91 @50486 has 23 MA's), (101, 50522), (106, 50540), (118, 50573), (123, 50615),

Gene: Tasp14\_65 Start: 42922, Stop: 42542, Start Num: 90

Candidate Starts for Tasp14\_65:

(12, 43123), (54, 42979), (56, 42976), (Start: 90 @42922 has 319 MA's), (Start: 97 @42901 has 3 MA's), (101, 42886), (135, 42760), (139, 42709), (158, 42661), (159, 42658), (181, 42565),

Gene: Tchotchke\_76 Start: 47691, Stop: 47990, Start Num: 92

Candidate Starts for Tchotchke\_76:

(85, 47673), (92, 47691), (Start: 98 @47712 has 13 MA's), (Start: 104 @47733 has 5 MA's), (106, 47745), (108, 47748), (112, 47763), (115, 47772), (155, 47934), (168, 47970),

Gene: TeamEdward\_41 Start: 34920, Stop: 34549, Start Num: 90

Candidate Starts for TeamEdward\_41:

(66, 34959), (78, 34941), (Start: 90 @34920 has 319 MA's), (Start: 98 @34896 has 13 MA's), (99, 34887), (134, 34773), (141, 34719), (166, 34656), (176, 34614), (182, 34572),

Gene: Teaspoon\_45 Start: 35627, Stop: 35256, Start Num: 90

Candidate Starts for Teaspoon\_45:

(Start: 90 @35627 has 319 MA's), (Start: 98 @35600 has 13 MA's), (99, 35591), (109, 35558), (113, 35546), (114, 35543), (134, 35480), (141, 35426), (166, 35363), (176, 35321), (182, 35279),

Gene: Tesla\_9 Start: 2778, Stop: 3062, Start Num: 90

Candidate Starts for Tesla\_9:

(Start: 90 @2778 has 319 MA's), (Start: 98 @2802 has 13 MA's), (120, 2877), (155, 3006), (168, 3042),

Gene: ThetaBob\_85 Start: 48938, Stop: 49243, Start Num: 90

Candidate Starts for ThetaBob\_85:

(Start: 90 @48938 has 319 MA's), (99, 48971), (101, 48974), (105, 49001), (107, 49007), (135, 49127), (150, 49202),

Gene: ThreeRngTarjay\_73 Start: 51787, Stop: 51503, Start Num: 90

Candidate Starts for ThreeRngTarjay\_73:

(Start: 90 @51787 has 319 MA's), (Start: 98 @51763 has 13 MA's), (120, 51688), (155, 51559), (168, 51523),

Gene: ThreeRngTarjay\_69 Start: 50376, Stop: 50083, Start Num: 90

Candidate Starts for ThreeRngTarjay\_69:

(Start: 90 @50376 has 319 MA's), (Start: 97 @50355 has 3 MA's), (99, 50343), (135, 50235), (138, 50187), (145, 50175), (153, 50148), (154, 50145), (169, 50106),

Gene: Tootsieroll\_80 Start: 50185, Stop: 50562, Start Num: 83

Candidate Starts for Tootsieroll\_80:

(Start: 83 @50185 has 8 MA's), (Start: 98 @50227 has 13 MA's), (99, 50236), (130, 50335), (134, 50350), (156, 50443), (164, 50461), (169, 50473), (177, 50515), (181, 50539),

Gene: Tortoise12\_58 Start: 37074, Stop: 37331, Start Num: 104

Candidate Starts for Tortoise12\_58:

(2, 36771), (6, 36792), (19, 36846), (44, 36948), (96, 37044), (Start: 104 @37074 has 5 MA's), (114, 37107), (143, 37248), (144, 37251), (146, 37254), (152, 37278), (155, 37284), (163, 37308),

Gene: Tortoise12\_60 Start: 37645, Stop: 37935, Start Num: 94

Candidate Starts for Tortoise12\_60:

(Start: 94 @37645 has 1 MA's), (Start: 103 @37675 has 1 MA's), (121, 37753), (125, 37768), (129, 37780), (134, 37798), (143, 37849), (148, 37861), (155, 37876), (163, 37900), (168, 37912), (170, 37918),

Gene: Toto\_43 Start: 36121, Stop: 35825, Start Num: 91

Candidate Starts for Toto\_43:

(Start: 91 @36121 has 23 MA's), (101, 36085), (106, 36067), (118, 36034), (123, 35992), (168, 35845),

Gene: Traaww1\_40 Start: 34923, Stop: 34648, Start Num: 90

Candidate Starts for Traaww1\_40:

(47, 34995), (61, 34971), (62, 34968), (Start: 90 @34923 has 319 MA's), (Start: 97 @34902 has 3 MA's), (101, 34890), (134, 34782), (155, 34704), (168, 34668),

Gene: Tuco\_45 Start: 36629, Stop: 36333, Start Num: 91

Candidate Starts for Tuco\_45:

(Start: 91 @36629 has 23 MA's), (101, 36593), (106, 36575), (118, 36542), (123, 36500), (168, 36353),

Gene: Tweety\_86 Start: 51088, Stop: 51372, Start Num: 90

Candidate Starts for Tweety\_86:

(Start: 90 @51088 has 319 MA's), (Start: 98 @51112 has 13 MA's), (99, 51121), (130, 51220), (134, 51235), (165, 51349),

Gene: Tweety\_82 Start: 50025, Stop: 50309, Start Num: 90

Candidate Starts for Tweety\_82:

(20, 49863), (Start: 90 @50025 has 319 MA's), (Start: 98 @50049 has 13 MA's), (120, 50124), (155, 50253), (168, 50289),

Gene: UncleRicky\_80 Start: 47788, Stop: 48072, Start Num: 90

Candidate Starts for UncleRicky\_80:

(Start: 90 @47788 has 319 MA's), (Start: 98 @47812 has 13 MA's), (120, 47887), (155, 48016), (168, 48052),

Gene: VRedHorse\_86 Start: 47830, Stop: 48114, Start Num: 90

Candidate Starts for VRedHorse\_86:

(Start: 74 @47806 has 1 MA's), (Start: 90 @47830 has 319 MA's), (Start: 98 @47854 has 13 MA's), (120, 47929), (155, 48058), (168, 48094),

Gene: VRedHorse\_80 Start: 46368, Stop: 46637, Start Num: 90

Candidate Starts for VRedHorse\_80:

(Start: 90 @46368 has 319 MA's), (Start: 97 @46389 has 3 MA's), (132, 46488), (133, 46494), (161, 46614),

Gene: Velveteen\_75 Start: 45597, Stop: 45905, Start Num: 74

Candidate Starts for Velveteen\_75:

(Start: 74 @45597 has 1 MA's), (Start: 90 @45621 has 319 MA's), (Start: 98 @45645 has 13 MA's), (120, 45720), (155, 45849), (168, 45885),

Gene: Violac\_87 Start: 51567, Stop: 51926, Start Num: 90

Candidate Starts for Violac\_87:

(Start: 90 @51567 has 319 MA's), (Start: 98 @51591 has 13 MA's), (99, 51600), (130, 51699), (134, 51714), (156, 51807), (164, 51825), (169, 51837), (177, 51879), (181, 51903),

Gene: Violac\_83 Start: 50504, Stop: 50788, Start Num: 90

Candidate Starts for Violac\_83:

(Start: 90 @50504 has 319 MA's), (Start: 98 @50528 has 13 MA's), (120, 50603), (155, 50732), (168, 50768),

Gene: Wachhund\_81 Start: 46941, Stop: 47240, Start Num: 90

Candidate Starts for Wachhund\_81:

(Start: 90 @46941 has 319 MA's), (Start: 97 @46962 has 3 MA's), (101, 46977), (134, 47103), (161, 47217),

Gene: Wanda\_77 Start: 50474, Stop: 50193, Start Num: 90

Candidate Starts for Wanda\_77:

(Start: 90 @50474 has 319 MA's), (Start: 98 @50453 has 13 MA's), (110, 50420), (155, 50249), (168, 50213),

Gene: Wanda\_75 Start: 49838, Stop: 49545, Start Num: 90

Candidate Starts for Wanda\_75:

(Start: 90 @49838 has 319 MA's), (Start: 97 @49817 has 3 MA's), (99, 49805), (135, 49697), (138, 49649), (145, 49637), (153, 49610), (154, 49607), (169, 49568),

Gene: Wee\_91 Start: 52087, Stop: 52371, Start Num: 90

Candidate Starts for Wee\_91:

(Start: 90 @52087 has 319 MA's), (Start: 98 @52111 has 13 MA's), (99, 52120), (130, 52219), (134, 52234), (165, 52348),

Gene: Wee\_87 Start: 51023, Stop: 51307, Start Num: 90

Candidate Starts for Wee\_87:

(20, 50861), (Start: 90 @51023 has 319 MA's), (Start: 98 @51047 has 13 MA's), (120, 51122), (155, 51251), (168, 51287),

Gene: Whatsapiecost\_74 Start: 44329, Stop: 44613, Start Num: 90

Candidate Starts for Whatsapiecost\_74:

(Start: 90 @44329 has 319 MA's), (Start: 98 @44353 has 13 MA's), (99, 44362), (134, 44476), (165, 44590),

Gene: Whatsapiecost\_76 Start: 44789, Stop: 45166, Start Num: 90

Candidate Starts for Whatsapiecost\_76:

(Start: 90 @44789 has 319 MA's), (Start: 97 @44810 has 3 MA's), (101, 44825), (111, 44849), (134, 44942), (143, 45002), (181, 45143),

Gene: Wheeler\_63 Start: 41547, Stop: 41161, Start Num: 90

Candidate Starts for Wheeler\_63:

(12, 41748), (54, 41604), (56, 41601), (Start: 90 @41547 has 319 MA's), (Start: 95 @41535 has 1 MA's), (181, 41184),

Gene: WillSterrel\_80 Start: 49364, Stop: 49648, Start Num: 90

Candidate Starts for WillSterrel\_80:

(Start: 70 @49334 has 3 MA's), (Start: 74 @49340 has 1 MA's), (Start: 90 @49364 has 319 MA's), (Start: 98 @49388 has 13 MA's), (120, 49463), (155, 49592), (168, 49628),

Gene: WillSterrel\_82 Start: 50063, Stop: 50434, Start Num: 90

Candidate Starts for WillSterrel\_82:

(Start: 90 @50063 has 319 MA's), (Start: 98 @50087 has 13 MA's), (99, 50096), (130, 50195), (134, 50210), (182, 50411),

Gene: XFactor\_77 Start: 48229, Stop: 48513, Start Num: 90

Candidate Starts for XFactor\_77:

(Start: 90 @48229 has 319 MA's), (Start: 98 @48253 has 13 MA's), (120, 48328), (168, 48493),

Gene: Yeet\_71 Start: 50004, Stop: 49720, Start Num: 90

Candidate Starts for Yeet\_71:

(Start: 90 @50004 has 319 MA's), (Start: 98 @49980 has 13 MA's), (155, 49776), (168, 49740),



Gene: Yeet\_69 Start: 49362, Stop: 49069, Start Num: 90

Candidate Starts for Yeet\_69:

(Start: 90 @49362 has 319 MA's), (Start: 97 @49341 has 3 MA's), (99, 49329), (135, 49221), (138, 49173), (145, 49161), (153, 49134), (154, 49131), (169, 49092),

Gene: Yoshi\_92 Start: 49392, Stop: 49736, Start Num: 86

Candidate Starts for Yoshi\_92:

(Start: 86 @49392 has 3 MA's), (Start: 97 @49419 has 3 MA's), (101, 49434), (134, 49524), (173, 49665), (179, 49692), (181, 49713),

Gene: Youngblood\_41 Start: 34902, Stop: 34555, Start Num: 98

Candidate Starts for Youngblood\_41:

(66, 34965), (78, 34947), (Start: 90 @34926 has 319 MA's), (Start: 98 @34902 has 13 MA's), (99, 34893), (134, 34779), (141, 34725), (166, 34662), (176, 34620), (182, 34578),

Gene: Zapner\_90 Start: 47899, Stop: 48183, Start Num: 90

Candidate Starts for Zapner\_90:

(Start: 90 @47899 has 319 MA's), (Start: 98 @47923 has 13 MA's), (155, 48127), (168, 48163),

Gene: Zelink\_73 Start: 52099, Stop: 51815, Start Num: 90

Candidate Starts for Zelink\_73:

(Start: 90 @52099 has 319 MA's), (Start: 98 @52075 has 13 MA's), (120, 52000), (155, 51871), (168, 51835),

Gene: Zelink\_69 Start: 50689, Stop: 50396, Start Num: 90

Candidate Starts for Zelink\_69:

(Start: 90 @50689 has 319 MA's), (Start: 97 @50668 has 3 MA's), (99, 50656), (135, 50548), (138, 50500), (145, 50488), (153, 50461), (154, 50458), (169, 50419),

Gene: ZenTime222\_56 Start: 39238, Stop: 39498, Start Num: 104

Candidate Starts for ZenTime222\_56:

(2, 38935), (6, 38956), (19, 39010), (44, 39112), (96, 39208), (Start: 104 @39238 has 5 MA's), (114, 39271), (143, 39412), (148, 39424), (155, 39439), (163, 39463), (168, 39475), (170, 39481),

Gene: Zerg\_82 Start: 49172, Stop: 49456, Start Num: 90

Candidate Starts for Zerg\_82:

(Start: 74 @49148 has 1 MA's), (Start: 90 @49172 has 319 MA's), (Start: 98 @49196 has 13 MA's), (120, 49271), (155, 49400), (168, 49436),

Gene: Zeuska\_63 Start: 42656, Stop: 42396, Start Num: 98

Candidate Starts for Zeuska\_63:

(Start: 90 @42680 has 319 MA's), (Start: 98 @42656 has 13 MA's), (99, 42647), (134, 42533), (165, 42419),

Gene: Zeuska\_61 Start: 42220, Stop: 41843, Start Num: 90

Candidate Starts for Zeuska\_61:

(Start: 90 @42220 has 319 MA's), (Start: 97 @42199 has 3 MA's), (101, 42184), (111, 42160), (134, 42067), (181, 41866),

Gene: Zizzle\_86 Start: 51134, Stop: 51478, Start Num: 86

Candidate Starts for Zizzle\_86:

(Start: 86 @51134 has 3 MA's), (Start: 97 @51161 has 3 MA's), (101, 51176), (134, 51266), (156, 51359), (164, 51377), (169, 51389), (177, 51431), (181, 51455),

