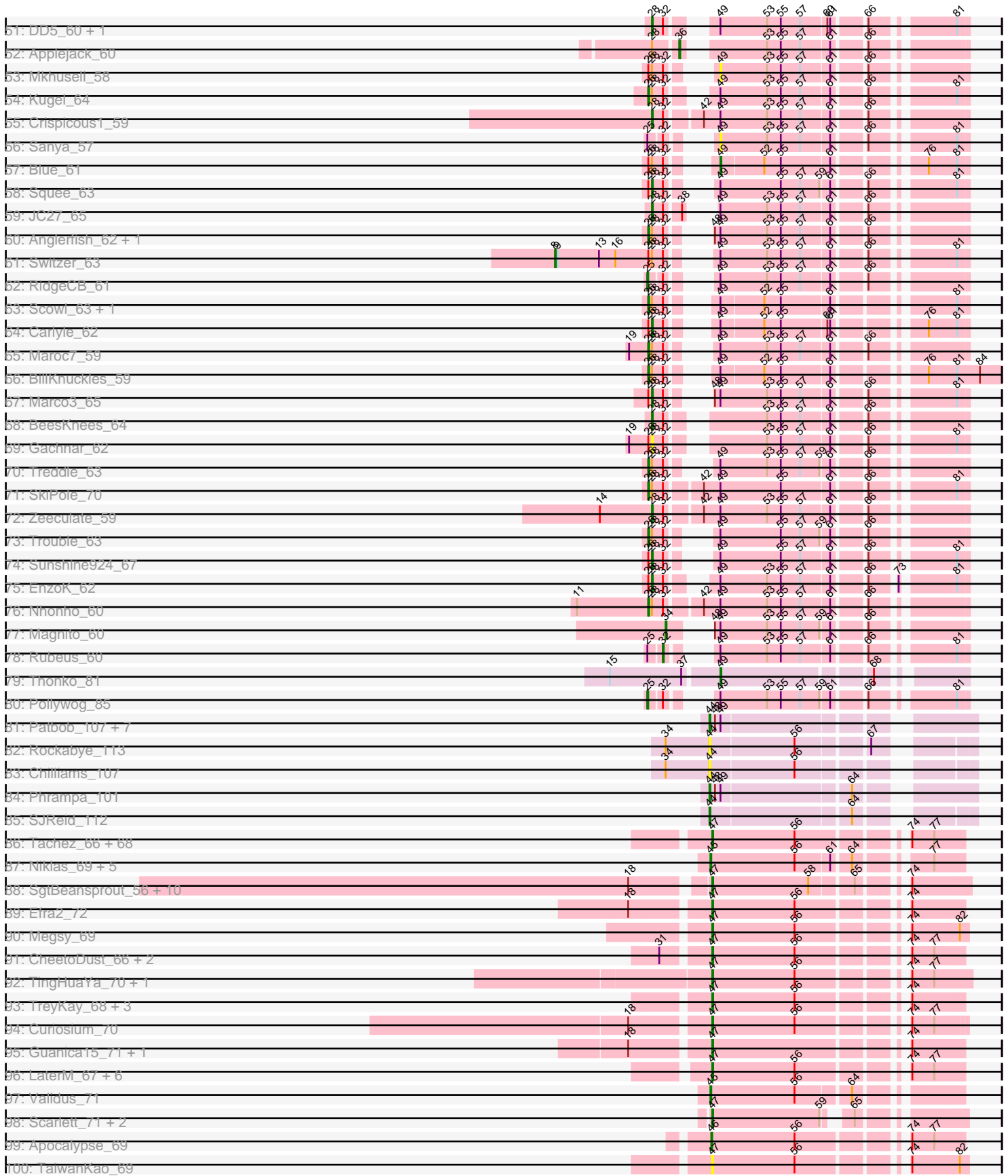




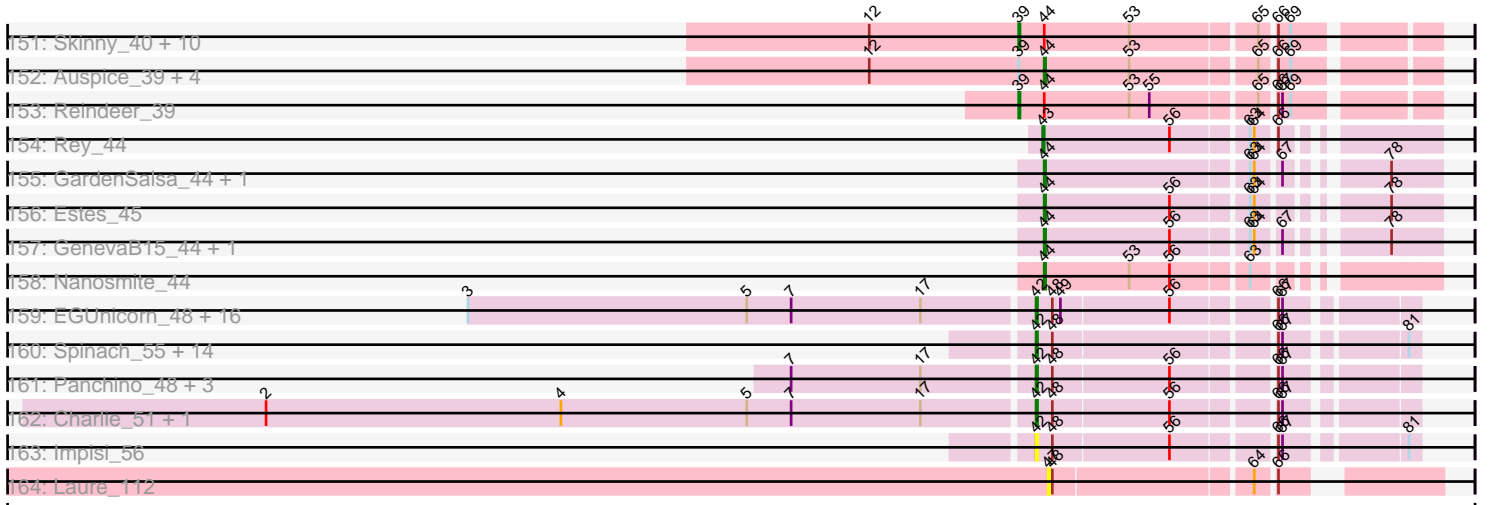
Pham 296103



Pham 296103



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

## Pham 296103 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296103 has 541 members, 57 are drafts.

Phages represented in each track:

- Track 1 : Gompeii16\_61, Bircsak\_61, Agaliana\_56, Francis47\_60
- Track 2 : GrecoEtereo\_61, Sagefire\_64, Swole\_63, BK1\_54, Marge\_59, Hami1\_57, Phlippers\_58, JuliaChild\_63, BarrowTuph\_63, PSullivan\_60, QTRLifeCrisis\_62, Tote\_58, A6\_54, CartmannCramer\_60, ConceptII\_64, Gandalf20\_64, Violet\_60, Licorice\_63, Smairt\_64, Abbyshoes\_63, BigPaolini\_59, PascalRango\_60, Dussy\_62, Chanagan\_56, CactusRose\_62, Perseus\_61, GroundGoblin\_59, Aldrich\_58, Mule\_59, Nerujay\_64, DirtDevil\_60, Doom\_60, LilBib\_62, Edtherson\_61, KikiBouba\_60, CatBus\_58, BaconJack\_66, ChristmasHams\_56, Ashballer\_65, Hermia\_60, Rajelicia\_62, Blesser\_58, Noxious\_59, Bigfoot\_54, Norz\_62, LunarLander\_62, Ciao\_60
- Track 3 : Ohno789\_62, Dreamboat\_63, PherrisBueller\_61, Jasper\_62
- Track 4 : Homines\_54, Froghopper\_60, MaryBeth\_60, Jerm2\_64, Corvo\_63, MetalQZJ\_59, MrGordo\_64, PinkPlastic\_62, GageAP\_63, Alsfro\_68, Barriga\_65, Solon\_61, Petruccio\_62, Niza\_64, NEHalo\_59, Burton\_63, Hope4ever\_63, Graduation\_66, Ajay\_62, Bxb1\_56, Big3\_63, Whitspit\_58, Ichabod\_66, Target\_64, Dexes\_62, SpikeBT\_60, Blackflame\_58, Pelly\_63, Jorgensen\_65, AFIS\_58
- Track 5 : Monet\_65, Marchy\_56, Payneful\_60, Puppet\_60
- Track 6 : Pinto\_62, Rufus\_63, Makemake\_64, Atkinbua\_64
- Track 7 : Gwendoluna\_65
- Track 8 : Buttons\_59, Kenmech\_65, HarryOW\_60, KSSJEB\_62, Pita2\_63, Papez\_64, Aeneas\_65, PattyP\_64, Fushigi\_58, Fascinus\_56, PhrostyMug\_62, Pippin\_62, Espresso\_59
- Track 9 : Oogway\_61
- Track 10 : Wilkins\_61, Topgun\_60
- Track 11 : PacerPaul\_61
- Track 12 : KyMonks1A\_65, Tripl3t\_65, Sorpresa\_59, Sandaddy\_58, Magnar\_60
- Track 13 : Levia\_60, PhineBark\_62
- Track 14 : Marcell\_58
- Track 15 : Petp2012\_65, Tasp14\_66, MPlant7149\_62, DreamCatcher\_65, BluSpix\_60, Rohr\_64, Museum\_64, Paphu\_62
- Track 16 : Fajezeel\_63, Acme\_64, Greg\_63, Lamina13\_66
- Track 17 : Beatrix\_61
- Track 18 : Peterson\_66, Lesedi\_58
- Track 19 : Sumter\_58, Turj99\_60, Thor\_61, Pari\_65
- Track 20 : Eyeball\_64
- Track 21 : StrongArm\_60, Bexan\_59

- Track 22 : GMonster\_59, Briton15\_66, Zephyr\_63, McGuire\_63, Molly\_63, Killigrew\_61
- Track 23 : HermioneGrange\_64, SwissCheese\_65, Moose\_63, IgnatiusPatJac\_62, Bruns\_63, Bones\_61, Forsytheast\_63, Kykar\_63, Parliament\_64, Adahisdi\_62, Arlo\_60, Cueyllyss\_62, U2\_60, Bob3\_63, BigMau\_64
- Track 24 : STLscum\_70, Ringer\_62
- Track 25 : Seabiscuit\_65, HanShotFirst\_63, Sibs6\_64, Watermelon\_62
- Track 26 : Zeuska\_67
- Track 27 : Paraselene\_60, Iqorha\_57, Inyanga\_57
- Track 28 : SarFire\_61, Bethlehem\_61
- Track 29 : Pepe\_60
- Track 30 : Naira\_64, Fenn\_64
- Track 31 : Mryolo\_58
- Track 32 : TheloniousMonk\_65
- Track 33 : Arcanine\_64, TwoPeat\_63, Slagathor\_64
- Track 34 : Dulcie\_62, DrFeelGood\_58, Ruotula\_64, Traft412\_64
- Track 35 : StewieG\_57
- Track 36 : Rutherford\_64, Rhynn\_60
- Track 37 : Gyzlar\_57
- Track 38 : Abrogate\_610
- Track 39 : BPBiebs31\_64
- Track 40 : Wheeler\_64, Michley\_65
- Track 41 : Lopton\_60
- Track 42 : MilleFeuille\_57
- Track 43 : Marsha\_61
- Track 44 : ProMouse\_61
- Track 45 : PowerRanger\_60, Euphoria\_60
- Track 46 : ILeeKay\_64, Bigchunggi\_61, McSinger\_60, Kanely\_63, ShortQueendom\_54, Altman\_64, Snazzy\_60
- Track 47 : Dynamix\_64
- Track 48 : Alvin\_62
- Track 49 : Seanderson\_64
- Track 50 : Teodoridan\_60, Smeagol\_64
- Track 51 : DD5\_60, Lockley\_59
- Track 52 : Applejack\_60
- Track 53 : Mkhuseleli\_58
- Track 54 : Kugel\_64
- Track 55 : Crispicous1\_59
- Track 56 : Sanya\_57
- Track 57 : Blue\_61
- Track 58 : Squee\_63
- Track 59 : JC27\_65
- Track 60 : Anglerfish\_62, Manatee\_62
- Track 61 : Switzer\_63
- Track 62 : RidgeCB\_61
- Track 63 : Scowl\_63, KBG\_63
- Track 64 : Carlyle\_62
- Track 65 : Maroc7\_59
- Track 66 : BillKnuckles\_59
- Track 67 : Marco3\_65
- Track 68 : BeesKnees\_64
- Track 69 : Gachnar\_62
- Track 70 : Treddle\_63

- Track 71 : SkiPole\_70
- Track 72 : Zeeculate\_59
- Track 73 : Trouble\_63
- Track 74 : Sunshine924\_67
- Track 75 : EnzoK\_62
- Track 76 : Nhonho\_60
- Track 77 : Magnito\_60
- Track 78 : Rubeus\_60
- Track 79 : Thonko\_81
- Track 80 : Pollywog\_85
- Track 81 : Patbob\_107, FrostedClock\_111, Talia1610\_108, FloraSnap32\_108, Racecar\_109, Bloom\_112, Mimi\_108, GoldenEssence\_94
- Track 82 : Rockabye\_113
- Track 83 : Chilliams\_107
- Track 84 : Phrampa\_101
- Track 85 : SJReid\_112
- Track 86 : Tachez\_66, Padpat\_69, Peel\_66, Blizzard\_66, Zabiza\_61, DrHayes\_67, Ramen\_67, Homura\_66, Pokerus\_66, Clipper\_70, Rosmarinus\_66, Lunahalos\_66, Joy99\_66, Zavala\_69, Belladonna\_66, Padfoot\_66, Angelica\_66, Jayhawk\_68, Deby\_67, Jeckyll\_66, HedwigODU\_66, Geraldini\_69, Veliki\_68, BGIluviae\_66, Inky\_66, TiniBug\_67, Llorens\_66, CallaLilly\_66, Rapunzel97\_68, CaseJules\_68, YoureAdopted\_66, Boiiii\_66, Piatt\_66, Beezoo\_68, Mynx\_68, Asayake\_66, Ganymede\_66, MacKat\_62, AlishaPH\_66, BEEST\_66, Pisa4\_60, Anma\_68, Twitch\_66, Jarvi\_66, Emerson\_68, Adephegia\_66, Urkel\_67, BarrelRoll\_67, TruffulaTree\_67, Pisa1\_66, Bella96\_67, ActinUp\_66, ShiaSurprise\_67, CREW\_66, Dalmuri\_66, DartGoblin\_69, JAWS\_67, Atiba\_67, Hyperbowlee\_66, Spock\_66, QuincyRose\_64, Durfee\_66, Sulley\_66, SamuelLPlaqson\_67, Slimphazie\_67, Adonis\_66, Topper\_66, Capricorn\_66, MeaningOfLife\_67
- Track 87 : Niklas\_69, Dartin\_69, Shaobing\_69, McMater\_69, Peanam\_69, Richo\_69
- Track 88 : SgtBeansprout\_56, LilPharaoh\_56, Nikao\_58, Trice\_55, Enkosi\_57, Amelie\_55, Nutello\_55, Teejan\_57, Mdavu\_56, Binglebops\_55, Torres\_58
- Track 89 : Efra2\_72
- Track 90 : Megsy\_69
- Track 91 : CheetoDust\_66, BaghaKamala\_66, Bern\_68
- Track 92 : TingHuaYa\_70, LastHope\_71
- Track 93 : TreyKay\_68, Prithvi\_68, CrimD\_68, LindNT\_66
- Track 94 : Curiosium\_70
- Track 95 : Guanica15\_71, Yunkel11\_71
- Track 96 : LaterM\_67, Stinson\_68, Devera\_74, Murucutumbu\_68, Illumine\_72, Ageofdapage\_70, Dole\_72
- Track 97 : Validus\_71
- Track 98 : Scarlett\_71, Oscar\_70, KiSi\_71
- Track 99 : Apocalypse\_69
- Track 100 : TaiwanKao\_69
- Track 101 : LeMond\_70
- Track 102 : Nibb\_69
- Track 103 : MarkPhew\_69
- Track 104 : Chavito\_69
- Track 105 : Tiri\_67
- Track 106 : Chris\_69
- Track 107 : Anaya\_69
- Track 108 : Marcoliusprime\_69, DismalStressor\_69, DismalFunk\_69
- Track 109 : Strobilo\_70, Milly\_69, Doughnut\_69, Findley\_69

- Track 110 : ZoeJ\_68
- Track 111 : Mufasa\_69
- Track 112 : BoostSeason\_69
- Track 113 : TM4\_67
- Track 114 : Keshu\_70
- Track 115 : Pixie\_67, TBond007\_64
- Track 116 : ShedlockHolmes\_69, Hurricane\_68, Lea83\_68
- Track 117 : MacnCheese\_70
- Track 118 : Pharb\_67, TribbleTrouble\_68
- Track 119 : DanSyl44\_73, Qhanda\_72, Kraw\_70, Chancellor\_70, Cheetobro\_70, Wintermute\_70, Lebo14\_69, Malthus\_71, Fionnbharth\_70, SamScheppers\_68, Juliette\_72, Slarp\_70
- Track 120 : Eponine\_72
- Track 121 : Reptar3000\_67
- Track 122 : Taquito\_69
- Track 123 : MissDaisy\_67
- Track 124 : Bobquesha\_71, Patt\_66
- Track 125 : Mitti\_70
- Track 126 : Ruthiejr\_71, JF1\_70, Y10\_67, OmniCritical\_69, Y2\_67
- Track 127 : YasnayaPolyana\_69
- Track 128 : Gengar\_60, Miryou\_64, OkiRoe\_61
- Track 129 : Edugator\_59, Paola\_60, Guillsminger\_61, Dadosky\_62, Leston\_60, Psycho\_60, Neighly\_62, AlleyCat\_62, Larva\_61
- Track 130 : Rando14\_62
- Track 131 : Kratio\_58, Agent47\_60, InvictusManeo\_58, ViviJ\_59, DoubleChamp\_57, LilDirt\_57, Collard\_58, BananenDer11\_57
- Track 132 : Omnicron\_64
- Track 133 : SoSeph\_61, Heftyboy\_61, Feyre\_63, Thyatira\_63, Waterfoul\_62
- Track 134 : Shadow1\_71, Tigress9\_73, Syra333\_70, Sunflower1121\_72
- Track 135 : Unicorn\_68, PhelpsODU\_68
- Track 136 : SirPhilip\_66
- Track 137 : Applecrisp\_63, Lavahound\_65, Ellie\_62
- Track 138 : Bryler\_70, Tierra\_70, Cain\_70, Phrank\_70
- Track 139 : Amohntion\_66, DARTH\_P\_66, Hammy\_66
- Track 140 : Ekdilam\_63
- Track 141 : Ximenita\_72
- Track 142 : TClif\_68
- Track 143 : Marshawn\_66
- Track 144 : November\_64
- Track 145 : Fefferhead\_64
- Track 146 : Amgine\_65
- Track 147 : Krueger\_71
- Track 148 : Yuna\_71
- Track 149 : Aminay\_66
- Track 150 : Boilgate\_63
- Track 151 : Skinny\_40, Glaske16\_40, Diminimus\_40, Bongo\_39, LilhomieP\_38, Dulcita\_40, TyDawg\_39, Bricole\_39, IPHone7\_39, Izel\_40, PegLeg\_39
- Track 152 : Auspice\_39, SlimJimmy\_38, TpuDiCK\_41, FreakyGoo\_40, KleverKiS\_40
- Track 153 : Reindeer\_39
- Track 154 : Rey\_44
- Track 155 : GardenSalsa\_44, MrMagoo\_44
- Track 156 : Estes\_45
- Track 157 : GenevaB15\_44, Aziz\_44

- Track 158 : Nanosmite\_44
- Track 159 : EGUnicorn\_48, Phloss\_48, Pipsqueaks\_50, Tortoise12\_49, Gex\_50, Magsby\_50, Schnauzer\_51, Xerxes\_50, Carcharodon\_50, Melville\_53, Fulbright\_49, Chewbacca\_52, Tessdabest\_51, Parmesanjohn\_50, Silvafighter\_51, Duplicity\_50, Smurph\_50
- Track 160 : Spinach\_55, BabeRuth\_56, ShrimpFriedEgg\_55, Jamie19\_49, Redi\_55, PhancyPhin\_55, SpongeBob\_49, Phrann\_52, Nenae\_55, Raymond7\_49, Hanako\_55, Purgamenstris\_55, Andies\_48, Tapioca\_52, Snekmaggedon\_49
- Track 161 : Panchino\_48, Butters\_53, Rubeelu\_53, Kevin1\_52
- Track 162 : Charlie\_51, Bosection6\_49
- Track 163 : Impisi\_56
- Track 164 : Laure\_112

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

The start number called the most often in the published annotations is 47, it was called in 167 of the 484 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_66, Adephegia\_66, Adonis\_66, Agent47\_60, Ageofdapage\_70, AlishaPH\_66, AlleyCat\_62, Amelie\_55, Amohnition\_66, Anaya\_69, Angelica\_66, Anma\_68, Applecrisp\_63, Asayake\_66, Atiba\_67, BEEST\_66, BGlluviae\_66, BaghaKamala\_66, BananenDer11\_57, BarrelRoll\_67, Beezoo\_68, Bella96\_67, Belladonna\_66, Bern\_68, Biglebops\_55, Blizzard\_66, Boiiii\_66, BoostSeason\_69, Bryler\_70, CREW\_66, Cain\_70, CallaLilly\_66, Capricorn\_66, CaseJules\_68, CheetoDust\_66, Chris\_69, Clipper\_70, Collard\_58, CrimD\_68, Curiosium\_70, Dadosky\_62, Dalmuri\_66, DartGoblin\_69, DarthP\_66, Deby\_67, Devera\_74, DismalFunk\_69, DismalStressor\_69, Dole\_72, DoubleChamp\_57, Doughnut\_69, DrHayes\_67, Durfee\_66, Edugator\_59, Efra2\_72, Ekdilam\_63, Ellie\_62, Emerson\_68, Enkosi\_57, Fefferhead\_64, Feyre\_63, Findley\_69, Ganymede\_66, Gengar\_60, Geraldini\_69, Guanica15\_71, Guillsminger\_61, Hammy\_66, HedwigODU\_66, Heftyboy\_61, Homura\_66, Hurricane\_68, Hyperbowlee\_66, Illumine\_72, Inky\_66, InvictusManeo\_58, JAWS\_67, Jarvi\_66, Jayhawk\_68, Jeckyll\_66, Joy99\_66, KiSi\_71, Kratio\_58, Larva\_61, LastHope\_71, LaterM\_67, Laure\_112, Lavahound\_65, LeMond\_70, Lea83\_68, Leston\_60, LilDirt\_57, LilPharaoh\_56, LindNT\_66, Llorens\_66, Lunahalos\_66, MacKat\_62, MacnCheese\_70, Marcoliusprime\_69, MarkPhew\_69, Marshawn\_66, Mdavu\_56, MeaningOfLife\_67, Megsy\_69, Milly\_69, Miryou\_64, Mufasa\_69, Murucutumbu\_68, Mynx\_68, Neighly\_62, Nibb\_69, Nikao\_58, November\_64, Nutello\_55, OkiRoe\_61, Omnicron\_64, Oscar\_70, Padfoot\_66, Padpat\_69, Paola\_60, Peel\_66, Pharb\_67, PhelpsODU\_68, Phrank\_70, Piatt\_66, Pisa1\_66, Pisa4\_60, Pixie\_67, Pokerus\_66, Prithvi\_68, Psycho\_60, QuincyRose\_64, Ramen\_67, Rando14\_62, Rapunzel97\_68, Rosmarinus\_66, SamuelLPlaqson\_67, Scarlett\_71, SgtBeansprout\_56, Shadow1\_71, ShedlockHolmes\_69, ShiaSurprise\_67, SirPhilip\_66, Slimphazie\_67, SoSeph\_61, Spock\_66, Stinson\_68, Strobilo\_70, Sulley\_66, Sunflower1121\_72, Syra333\_70, TBond007\_64, TClif\_68, TM4\_67, Tachez\_66, TaiwanKao\_69, Teejan\_57, Thyatira\_63, Tierra\_70, Tigress9\_73, TingHuaYa\_70, TiniBug\_67, Tiri\_67, Topper\_66, Torres\_58, TreyKay\_68, TribbleTrouble\_68, Trice\_55, TruffulaTree\_67, Twitch\_66, Unicorn\_68, Urkel\_67, Veliki\_68, ViviJ\_59, Waterfoul\_62, Ximenita\_72, YoureAdopted\_66, Yuna\_71, Yunkel11\_71, Zabiza\_61, Zavala\_69, ZoeJ\_68,

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

- Amgine\_65, Keshu\_70, Krueger\_71,

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

- A6\_54, AFIS\_58, Abbyshoes\_63, Abrogate\_610, Acme\_64, Adahisdi\_62, Aeneas\_65, Agaliana\_56, Ajay\_62, Aldrich\_58, Alsfro\_68, Altman\_64, Alvin\_62, Aminay\_66, Andies\_48, Anglerfish\_62, Apocalypse\_69, Applejack\_60, Arcanine\_64, Arlo\_60, Ashballer\_65, Atkinbua\_64, Auspice\_39, Aziz\_44, BK1\_54, BPBiebs31\_64, BabeRuth\_56, BaconJack\_66, Barriga\_65, BarrowTuph\_63, Beatrix\_61, BeesKnees\_64, Bethlehem\_61, Bexan\_59, Big3\_63, BigMau\_64, BigPaolini\_59, Bigchungji\_61, Bigfoot\_54, BillKnuckles\_59, Bircsak\_61, Blackflame\_58, Blesser\_58, Bloom\_112, BluSpix\_60, Blue\_61, Bob3\_63, Bobquesha\_71, Boilgate\_63, Bones\_61, Bongo\_39, Bosection6\_49, Bricole\_39, Briton15\_66, Bruns\_63, Burton\_63, Butters\_53, Buttons\_59, Bxb1\_56, CactusRose\_62, Carcharodon\_50, Carlyle\_62, CartmannCramer\_60, CatBus\_58, Chanagan\_56, Chancellor\_70, Charlie\_51, Chavito\_69, Cheetobro\_70, Chewbacca\_52, Chilliams\_107, ChristmasHams\_56, Ciao\_60, ConceptII\_64, Corvo\_63, Crispicous1\_59, Cueylyss\_62, DD5\_60, DanSyl44\_73, Dartin\_69, Dexes\_62, Diminimus\_40, DirtDevil\_60, Doom\_60, DrFeelGood\_58, DreamCatcher\_65, Dreamboat\_63, Dulcie\_62, Dulcita\_40, Duplicity\_50, Dussy\_62, Dynamix\_64, EGUnicorn\_48, Edtherson\_61, EnzoK\_62, Eponine\_72, Espresso\_59, Estes\_45, Euphoria\_60, Eyeball\_64, Fajezeel\_63, Fascinus\_56, Fenn\_64, Fionnbharth\_70, FloraSnap32\_108, Forsytheast\_63, Francis47\_60, FreakyGoo\_40, Froghopper\_60, FrostedClock\_111, Fulbright\_49, Fushigi\_58, GMonster\_59, Gachnar\_62, GageAP\_63, Gandalf20\_64, GardenSalsa\_44, GenevaB15\_44, Gex\_50, Glaske16\_40, GoldenEssence\_94, Gompeii16\_61, Graduation\_66, GrecoEtereo\_61, Greg\_63, GroundGoblin\_59, Gwendoluna\_65, Gyzlar\_57, Hami1\_57, HanShotFirst\_63, Hanako\_55, HarryOW\_60, Hermia\_60, HermioneGrange\_64, Homines\_54, Hope4ever\_63, ILeeKay\_64, IPhane7\_39, Ichabod\_66, IgnatiusPatJac\_62, Impisi\_56, Inyanga\_57, Iqorha\_57, Izel\_40, JC27\_65, JF1\_70, Jamie19\_49, Jasper\_62, Jerm2\_64, Jorgensen\_65, JuliaChild\_63, Juliette\_72, KBG\_63, KSSJEB\_62, Kanely\_63, Kenmech\_65, Kevin1\_52, KikiBouba\_60, Killigrew\_61, KleverKiS\_40, Kraw\_70, Kugel\_64, KyMonks1A\_65, Kykar\_63, Lamina13\_66, Lebo14\_69, Lesedi\_58, Levia\_60, Licorice\_63, LilBib\_62, LilhomieP\_38, Lockley\_59, Lopton\_60, LunarLander\_62, MPlant7149\_62, Magnar\_60, Magnito\_60, Magsby\_50, Makemake\_64, Malthus\_71, Manatee\_62, Marcell\_58, Marchy\_56, Marco3\_65, Marge\_59, Maroc7\_59, Marsha\_61, MaryBeth\_60, McGuire\_63, McMater\_69, McSinger\_60, Melville\_53, MetalQZJ\_59, Michley\_65, MilleFeuille\_57, Mimi\_108, MissDaisy\_67, Mitti\_70, Mkhusei\_58, Molly\_63, Monet\_65, Moose\_63, MrGordo\_64, MrMagoo\_44, Mryolo\_58, Mule\_59, Museum\_64, NEHalo\_59, Naira\_64, Nanosmite\_44, Nenae\_55, Nerujay\_64, Nhonho\_60, Niklas\_69, Niza\_64, Norz\_62, Noxious\_59, Ohno789\_62, OmniCritical\_69, Oogway\_61, PSullivan\_60, PacerPaul\_61, Panchino\_48, Papez\_64, Paphu\_62, Paraselene\_60, Pari\_65, Parliament\_64, Parmesanjohn\_50, PascalRango\_60, Patbob\_107, Patt\_66, PattyP\_64, Payneful\_60, Peanam\_69, PegLeg\_39, Pelly\_63, Pepe\_60, Perseus\_61, Peterson\_66, Petp2012\_65, Petruccio\_62, PhancyPhin\_55, PherrisBueller\_61, PhineBark\_62, Phlippers\_58, Phloss\_48, Phrampa\_101, Phrann\_52, PhrostyMug\_62, PinkPlastic\_62, Pinto\_62, Pippin\_62, Pipsqueaks\_50, Pita2\_63, Pollywog\_85, PowerRanger\_60, ProMouse\_61, Puppet\_60, Purgamenstris\_55, QTRLifeCrisis\_62, Qhanda\_72, Racecar\_109, Rajelicia\_62, Raymond7\_49, Redi\_55, Reindeer\_39, Reptar3000\_67, Rey\_44, Rhynn\_60, Richo\_69, RidgeCB\_61, Ringer\_62, Rockabye\_113, Rohr\_64, Rubeelu\_53, Rubeus\_60, Rufus\_63, Ruotula\_64, Rutherford\_64, Ruthiejr\_71,

SJReid\_112, STLscum\_70, Sagefire\_64, SamScheppers\_68, Sandaddy\_58, Sanya\_57, SarFire\_61, Schnauzer\_51, Scowl\_63, Seabiscuit\_65, Seanderson\_64, Shaobing\_69, ShortQueendom\_54, ShrimpFriedEgg\_55, Sibs6\_64, Silvafighter\_51, SkiPole\_70, Skinny\_40, Slagathor\_64, Slarp\_70, SlimJimmy\_38, Smairt\_64, Smeagol\_64, Smurph\_50, Snazzy\_60, Snekmaggedon\_49, Solon\_61, Sorpresa\_59, SpikeBT\_60, Spinach\_55, SpongeBob\_49, Squee\_63, StewieG\_57, StrongArm\_60, Sumter\_58, Sunshine924\_67, SwissCheese\_65, Switzer\_63, Swole\_63, Talia1610\_108, Tapioca\_52, Taquito\_69, Target\_64, Tasp14\_66, Teodoridan\_60, Tessdabest\_51, TheloniousMonk\_65, Thonko\_81, Thor\_61, Topgun\_60, Tortoise12\_49, Tote\_58, TpudiCK\_41, Traft412\_64, Treddle\_63, Tripl3t\_65, Trouble\_63, Turj99\_60, TwoPeat\_63, TyDawg\_39, U2\_60, Validus\_71, Violet\_60, Watermelon\_62, Wheeler\_64, Whitspit\_58, Wilkins\_61, Wintermute\_70, Xerxes\_50, Y10\_67, Y2\_67, YasnayaPolyana\_69, Zeeculate\_59, Zephyr\_63, Zeuska\_67,

### Summary by start number:

#### Start 8:

- Found in 4 of 541 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Switzer\_63 (A1),

#### Start 18:

- Found in 27 of 541 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 3.7% of time when present
- Phage (with cluster) where this start called: Krueger\_71 (K6),

#### Start 21:

- Found in 5 of 541 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Amgine\_65 (K6),

#### Start 22:

- Found in 1 of 541 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Seanderson\_64 (A1),

#### Start 25:

- Found in 10 of 541 ( 1.8% ) of genes in pham
- Manual Annotations of this start: 6 of 484
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Atkinbua\_64 (A1), Makemake\_64 (A1), Pinto\_62 (A1), Pollywog\_85 (F1), RidgeCB\_61 (A1), Rufus\_63 (A1),

#### Start 26:

- Found in 197 of 541 ( 36.4% ) of genes in pham
- Manual Annotations of this start: 47 of 484
- Called 23.9% of time when present
- Phage (with cluster) where this start called: Acme\_64 (A1), Aeneas\_65 (A1), Anglerfish\_62 (A1), BPBiebs31\_64 (A1), Bethlehem\_61 (A1), BillKnuckles\_59 (A1),

BluSpix\_60 (A1), Buttons\_59 (A1), DreamCatcher\_65 (A1), Dynamix\_64 (A1), Espresso\_59 (A1), Fajezeel\_63 (A1), Fascinus\_56 (A1), Fushigi\_58 (A1), Greg\_63 (A1), HanShotFirst\_63 (A1), HarryOW\_60 (A1), KBG\_63 (A1), KSSJEB\_62 (A1), Kenmech\_65 (A1), Kugel\_64 (A1), Lamina13\_66 (A1), MPlant7149\_62 (A1), Manatee\_62 (A1), Maroc7\_59 (A1), Museum\_64 (A1), Nhonho\_60 (A1), PacerPaul\_61 (A1), Papez\_64 (A1), Paphu\_62 (A1), PattyP\_64 (A1), Petp2012\_65 (A1), PhrostyMug\_62 (A1), Pippin\_62 (A1), Pita2\_63 (A1), Rhynn\_60 (A1), Rohr\_64 (A1), Rutherford\_64 (A1), SarFire\_61 (A1), Scowl\_63 (A1), Seabiscuit\_65 (A1), Sibs6\_64 (A1), SkiPole\_70 (A1), Tasp14\_66 (A1), Treddle\_63 (A1), Trouble\_63 (A1), Watermelon\_62 (A1),

#### Start 27:

- Found in 1 of 541 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Keshu\_70 (K3),

#### Start 28:

- Found in 221 of 541 ( 40.9% ) of genes in pham
- Manual Annotations of this start: 143 of 484
- Called 74.7% of time when present
- Phage (with cluster) where this start called: A6\_54 (A1), AFIS\_58 (A1), Abbyshoes\_63 (A1), Adahisdi\_62 (A1), Agaliana\_56 (A1), Ajay\_62 (A1), Aldrich\_58 (A1), Alsfro\_68 (A1), Altman\_64 (A1), Alvin\_62 (A1), Arcanine\_64 (A1), Arlo\_60 (A1), Ashballer\_65 (A1), BK1\_54 (A1), BaconJack\_66 (A1), Barriga\_65 (A1), BarrowTuph\_63 (A1), Beatrix\_61 (A1), BeesKnees\_64 (A1), Bexan\_59 (A1), Big3\_63 (A1), BigMau\_64 (A1), BigPaolini\_59 (A1), Bigchungji\_61 (A1), Bigfoot\_54 (A1), Bircsak\_61 (A1), Blackflame\_58 (A1), Blesser\_58 (A1), Bob3\_63 (A1), Bones\_61 (A1), Briton15\_66 (A1), Bruns\_63 (A1), Burton\_63 (A1), Bxb1\_56 (A1), CactusRose\_62 (A1), Carlyle\_62 (A1), CartmannCramer\_60 (A1), CatBus\_58 (A1), Chanagan\_56 (A1), ChristmasHams\_56 (A1), Ciao\_60 (A1), ConceptII\_64 (A1), Corvo\_63 (A1), Crispicous1\_59 (A1), Cueylyss\_62 (A1), DD5\_60 (A1), Dexes\_62 (A1), DirtDevil\_60 (A1), Doom\_60 (A1), Dreamboat\_63 (A1), Dussy\_62 (A1), Edtherson\_61 (A1), EnzoK\_62 (A1), Euphoria\_60 (A1), Eyeball\_64 (A1), Fenn\_64 (A1), Forsytheast\_63 (A1), Francis47\_60 (A1), FrogHopper\_60 (A1), GMonster\_59 (A1), Gachnar\_62 (A1), GageAP\_63 (A1), Gandalf20\_64 (A1), Gompeii16\_61 (A1), Graduation\_66 (A1), GrecoEtereo\_61 (A1), GroundGoblin\_59 (A1), Hami1\_57 (A1), Hermia\_60 (A1), HermioneGrange\_64 (A1), Homines\_54 (A1), Hope4ever\_63 (A1), ILeeKay\_64 (A1), Ichabod\_66 (A1), IgnatiusPatJac\_62 (A1), Inyanga\_57 (A1), Iqorha\_57 (A1), JC27\_65 (A1), Jasper\_62 (A1), Jerm2\_64 (A1), Jorgensen\_65 (A1), JuliaChild\_63 (A1), Kanely\_63 (A1), KikiBouba\_60 (A1), Killigrew\_61 (A1), Kykar\_63 (A1), Lesedi\_58 (A1), Levia\_60 (A1), Licorice\_63 (A1), LilBib\_62 (A1), Lockley\_59 (A1), LunarLander\_62 (A1), Marcell\_58 (A1), Marchy\_56 (A1), Marco3\_65 (A1), Marge\_59 (A1), Marsha\_61 (A1), MaryBeth\_60 (A1), McGuire\_63 (A1), McSinger\_60 (A1), MetalQZJ\_59 (A1), Michley\_65 (A1), Molly\_63 (A1), Monet\_65 (A1), Moose\_63 (A1), MrGordo\_64 (A1), Mule\_59 (A1), NEHalo\_59 (A1), Naira\_64 (A1), Nerujay\_64 (A1), Niza\_64 (A1), Norz\_62 (A1), Noxious\_59 (A1), Ohno789\_62 (A1), PSullivan\_60 (A1), Paraselene\_60 (A1), Pari\_65 (A1), Parliament\_64 (A1), PascalRango\_60 (A1), Payneful\_60 (A1), Pelly\_63 (A1), Pepe\_60 (A1), Perseus\_61 (A1), Peterson\_66 (A1), Petruccio\_62 (A1), PherrisBueller\_61 (A1), PhineBark\_62 (A1), Phlippers\_58 (A1), PinkPlastic\_62 (A1), PowerRanger\_60 (A1), ProMouse\_61 (A1), Puppet\_60 (A1), QTRLifeCrisis\_62 (A1), Rajelicia\_62 (A1), Sagefire\_64 (A1), ShortQueendom\_54 (A1), Slagathor\_64 (A1), Smairt\_64 (A1), Smeagol\_64 (A1), Snazzy\_60 (A1), Solon\_61

(A1), SpikeBT\_60 (A1), Squee\_63 (A1), StewieG\_57 (A1), StrongArm\_60 (A1), Sumter\_58 (A1), Sunshine924\_67 (A1), SwissCheese\_65 (A1), Swole\_63 (A1), Target\_64 (A1), Teodoridan\_60 (A1), TheloniousMonk\_65 (A1), Thor\_61 (A1), Topgun\_60 (A1), Tote\_58 (A1), Turj99\_60 (A1), TwoPeat\_63 (A1), U2\_60 (A1), Violet\_60 (A1), Wheeler\_64 (A1), Whitspit\_58 (A1), Wilkins\_61 (A1), Zeeculate\_59 (A1), Zephyr\_63 (A1), Zeuska\_67 (A1),

Start 32:

- Found in 227 of 541 ( 42.0% ) of genes in pham
- Manual Annotations of this start: 4 of 484
- Called 1.8% of time when present
- Phage (with cluster) where this start called: Gwendoluna\_65 (A1), Gyzlar\_57 (A1), Lopton\_60 (A1), Rubeus\_60 (A1),

Start 34:

- Found in 13 of 541 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 10 of 484
- Called 84.6% of time when present
- Phage (with cluster) where this start called: DrFeelGood\_58 (A1), Dulcie\_62 (A1), KyMonks1A\_65 (A1), Magnar\_60 (A1), Magnito\_60 (A1), Mryolo\_58 (A1), Ruotula\_64 (A1), Sandaddy\_58 (A1), Sorpresa\_59 (A1), Traft412\_64 (A1), Tripl3t\_65 (A1),

Start 36:

- Found in 5 of 541 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abrogate\_610 (A1), Applejack\_60 (A1), MilleFeuille\_57 (A1), Ringer\_62 (A1), STLscum\_70 (A1),

Start 39:

- Found in 17 of 541 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 12 of 484
- Called 70.6% of time when present
- Phage (with cluster) where this start called: Bongo\_39 (M1), Bricole\_39 (M1), Diminimus\_40 (M1), Dulcita\_40 (M1), Glaske16\_40 (M1), IPhone7\_39 (M1), Izel\_40 (M1), LilhomieP\_38 (M1), PegLeg\_39 (M1), Reindeer\_39 (M1), Skinny\_40 (M1), TyDawg\_39 (M1),

Start 40:

- Found in 26 of 541 ( 4.8% ) of genes in pham
- Manual Annotations of this start: 22 of 484
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Aminay\_66 (K7), Bobquesha\_71 (K4), Chancellor\_70 (K4), Cheetobro\_70 (K4), DanSyl44\_73 (K4), Eponine\_72 (K4), Fionnbharth\_70 (K4), JF1\_70 (K4), Juliette\_72 (K4), Kraw\_70 (K4), Lebo14\_69 (K4), Malthus\_71 (K4), Mitti\_70 (K4), OmniCritical\_69 (K4), Patt\_66 (K4), Qhanda\_72 (K4), Reptar3000\_67 (K4), Ruthiejr\_71 (K4), SamScheppers\_68 (K4), Slarp\_70 (K4), Taquito\_69 (K4), Wintermute\_70 (K4), Y10\_67 (K4), Y2\_67 (K4), YasnayaPolyana\_69 (K4),

Start 41:

- Found in 1 of 541 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 484

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate\_63 (K8),

#### Start 42:

- Found in 80 of 541 ( 14.8% ) of genes in pham
- Manual Annotations of this start: 38 of 484
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Andies\_48 (N), BabeRuth\_56 (N), Bosection6\_49 (N), Butters\_53 (N), Carcharodon\_50 (N), Charlie\_51 (N), Chewbacca\_52 (N), Duplicity\_50 (N), EGUnicorn\_48 (N), Fulbright\_49 (N), Gex\_50 (N), Hanako\_55 (N), Impisi\_56 (N), Jamie19\_49 (N), Kevin1\_52 (N), Magsby\_50 (N), Melville\_53 (N), Nenae\_55 (N), Oogway\_61 (A1), Panchino\_48 (N), Parmesanjohn\_50 (N), PhancyPhin\_55 (N), Phloss\_48 (N), Phrann\_52 (N), Pipsqueaks\_50 (N), Purgamenstris\_55 (N), Raymond7\_49 (N), Redi\_55 (N), Rubeelu\_53 (N), Schnauzer\_51 (N), ShrimpFriedEgg\_55 (N), Silvafighter\_51 (N), Smurph\_50 (N), Snekmaggedon\_49 (N), Spinach\_55 (N), SpongeBob\_49 (N), Tapioca\_52 (N), Tessdabest\_51 (N), Tortoise12\_49 (N), Xerxes\_50 (N),

#### Start 43:

- Found in 1 of 541 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rey\_44 (M2),

#### Start 44:

- Found in 35 of 541 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 16 of 484
- Called 65.7% of time when present
- Phage (with cluster) where this start called: Auspice\_39 (M1), Aziz\_44 (M2), Bloom\_112 (FC), Chilliams\_107 (FC), Estes\_45 (M2), FloraSnap32\_108 (FC), FreakyGoo\_40 (M1), FrostedClock\_111 (FC), GardenSalsa\_44 (M2), GenevaB15\_44 (M2), GoldenEssence\_94 (FC), KleverKiS\_40 (M1), Mimi\_108 (FC), MrMagoo\_44 (M2), Nanosmite\_44 (M3), Patbob\_107 (FC), Phrampa\_101 (FC), Racecar\_109 (FC), Rockabye\_113 (FC), SJReid\_112 (FC), SlimJimmy\_38 (M1), Talia1610\_108 (FC), TpuDiCK\_41 (M1),

#### Start 45:

- Found in 7 of 541 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 4 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dartin\_69 (K1), McMater\_69 (K1), Niklas\_69 (K1), Peanam\_69 (K1), Richo\_69 (K1), Shaobing\_69 (K1), Validus\_71 (K1),

#### Start 46:

- Found in 2 of 541 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apocalypse\_69 (K1), Chavito\_69 (K1),

#### Start 47:

- Found in 185 of 541 ( 34.2% ) of genes in pham
- Manual Annotations of this start: 167 of 484

- Called 98.4% of time when present
- Phage (with cluster) where this start called: ActinUp\_66 (K1), Adephagia\_66 (K1), Adonis\_66 (K1), Agent47\_60 (K5), Ageofdapage\_70 (K1), AlishaPH\_66 (K1), AlleyCat\_62 (K5), Amelie\_55 (K1), Amohnton\_66 (K6), Anaya\_69 (K1), Angelica\_66 (K1), Anma\_68 (K1), Applecrisp\_63 (K6), Asayake\_66 (K1), Atiba\_67 (K1), BEEST\_66 (K1), BGlluviae\_66 (K1), BaghaKamala\_66 (K1), BananenDer11\_57 (K5), BarrelRoll\_67 (K1), Beezoo\_68 (K1), Bella96\_67 (K1), Belladonna\_66 (K1), Bern\_68 (K1), Binglebops\_55 (K1), Blizzard\_66 (K1), Boiiii\_66 (K1), BoostSeason\_69 (K2), Bryler\_70 (K6), CREW\_66 (K1), Cain\_70 (K6), CallaLilly\_66 (K1), Capricorn\_66 (K1), CaseJules\_68 (K1), CheetoDust\_66 (K1), Chris\_69 (K1), Clipper\_70 (K1), Collard\_58 (K5), CrimD\_68 (K1), Curiosium\_70 (K1), Dadosky\_62 (K5), Dalmuri\_66 (K1), DartGoblin\_69 (K1), DarthP\_66 (K6), Deby\_67 (K1), Devera\_74 (K1), DismalFunk\_69 (K2), DismalStressor\_69 (K2), Dole\_72 (K1), DoubleChamp\_57 (K5), Doughnut\_69 (K2), DrHayes\_67 (K1), Durfee\_66 (K1), Edugator\_59 (K5), Efra2\_72 (K1), Ekdilam\_63 (K6), Ellie\_62 (K6), Emerson\_68 (K1), Enkosi\_57 (K1), Fefferhead\_64 (K6), Feyre\_63 (K5), Findley\_69 (K2), Ganymede\_66 (K1), Gengar\_60 (K5), Geraldini\_69 (K1), Guanica15\_71 (K1), Guillsminger\_61 (K5), Hammy\_66 (K6), HedwigODU\_66 (K1), Heftyboy\_61 (K5), Homura\_66 (K1), Hurricane\_68 (K3), Hyperbowlee\_66 (K1), Illumine\_72 (K1), Inky\_66 (K1), InvictusManeo\_58 (K5), JAWS\_67 (K1), Jarvi\_66 (K1), Jayhawk\_68 (K1), Jeckyll\_66 (K1), Joy99\_66 (K1), KiSi\_71 (K1), Kratio\_58 (K5), Larva\_61 (K5), LastHope\_71 (K1), LaterM\_67 (K1), Laure\_112 (UNK), Lavahound\_65 (K6), LeMond\_70 (K1), Lea83\_68 (K3), Leston\_60 (K5), LilDirt\_57 (K5), LilPharaoh\_56 (K1), LindNT\_66 (K1), Llorens\_66 (K1), Lunahalos\_66 (K1), MacKat\_62 (K1), MacnCheese\_70 (K3), Marcoliusprime\_69 (K2), MarkPhew\_69 (K1), Marshawn\_66 (K6), Mdavu\_56 (K1), MeaningOfLife\_67 (K1), Megsy\_69 (K1), Milly\_69 (K2), Miryou\_64 (K5), Mufasa\_69 (K2), Murucutumbu\_68 (K1), Mynx\_68 (K1), Neighly\_62 (K3), Nibb\_69 (K1), Nikao\_58 (K1), November\_64 (K6), Nutello\_55 (K1), OkiRoe\_61 (K5), Omnicron\_64 (K5), Oscar\_70 (K1), Padfoot\_66 (K1), Padpat\_69 (K1), Paola\_60 (K5), Peel\_66 (K1), Pharb\_67 (K3), PhelpsODU\_68 (K6), Phrank\_70 (K6), Piatt\_66 (K1), Pisa1\_66 (K1), Pisa4\_60 (K1), Pixie\_67 (K3), Pokerus\_66 (K1), Prithvi\_68 (K1), Psycho\_60 (K5), QuincyRose\_64 (K1), Ramen\_67 (K1), Rando14\_62 (K5), Rapunzel97\_68 (K1), Rosmarinus\_66 (K1), SamuelLPlaqson\_67 (K1), Scarlett\_71 (K1), SgtBeansprout\_56 (K1), Shadow1\_71 (K6), ShedlockHolmes\_69 (K3), ShiaSurprise\_67 (K1), SirPhilip\_66 (K6), Slimphazie\_67 (K1), SoSeph\_61 (K5), Spock\_66 (K1), Stinson\_68 (K1), Strobilo\_70 (K2), Sulley\_66 (K1), Sunflower1121\_72 (K6), Syra333\_70 (K6), TBond007\_64 (K3), TClif\_68 (K6), TM4\_67 (K2), Tachez\_66 (K1), TaiwanKao\_69 (K1), Teejan\_57 (K1), Thyatira\_63 (K5), Tierra\_70 (K6), Tigress9\_73 (K6), TingHuaYa\_70 (K1), TiniBug\_67 (K1), Tiri\_67 (K1), Topper\_66 (K1), Torres\_58 (K1), TreyKay\_68 (K1), TribbleTrouble\_68 (K3), Trice\_55 (K1), TruffulaTree\_67 (K1), Twitch\_66 (K1), Unicorn\_68 (K6), Urkel\_67 (K1), Veliki\_68 (K1), ViviJ\_59 (K5), Waterfoul\_62 (K5), Ximenita\_72 (K6), YoureAdopted\_66 (K1), Yuna\_71 (K6), Yunkel11\_71 (K1), Zabiza\_61 (K1), Zavala\_69 (K1), ZoeJ\_68 (K2),

#### Start 48:

- Found in 101 of 541 ( 18.7% ) of genes in pham
- Manual Annotations of this start: 1 of 484
- Called 1.0% of time when present
- Phage (with cluster) where this start called: MissDaisy\_67 (K4),

#### Start 49:

- Found in 274 of 541 ( 50.6% ) of genes in pham
- Manual Annotations of this start: 2 of 484

- Called 1.5% of time when present
- Phage (with cluster) where this start called: Blue\_61 (A1), Mkhuseleli\_58 (A1), Sanya\_57 (A1), Thonko\_81 (B8),

### **Summary by clusters:**

There are 17 clusters represented in this pham: F1, K8, M3, M2, N, A1, K2, K1, FC, M1, K6, K5, K4, K7, UNK, B8, K3,

Info for manual annotations of cluster A1:

- Start number 8 was manually annotated 1 time for cluster A1.
- Start number 22 was manually annotated 1 time for cluster A1.
- Start number 25 was manually annotated 5 times for cluster A1.
- Start number 26 was manually annotated 47 times for cluster A1.
- Start number 28 was manually annotated 143 times for cluster A1.
- Start number 32 was manually annotated 4 times for cluster A1.
- Start number 34 was manually annotated 10 times for cluster A1.
- Start number 36 was manually annotated 4 times for cluster A1.
- Start number 42 was manually annotated 1 time for cluster A1.
- Start number 49 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster B8:

- Start number 49 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster F1:

- Start number 25 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster FC:

- Start number 44 was manually annotated 7 times for cluster FC.

Info for manual annotations of cluster K1:

- Start number 45 was manually annotated 4 times for cluster K1.
- Start number 46 was manually annotated 1 time for cluster K1.
- Start number 47 was manually annotated 103 times for cluster K1.

Info for manual annotations of cluster K2:

- Start number 47 was manually annotated 11 times for cluster K2.

Info for manual annotations of cluster K3:

- Start number 27 was manually annotated 1 time for cluster K3.
- Start number 47 was manually annotated 8 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 40 was manually annotated 21 times for cluster K4.
- Start number 48 was manually annotated 1 time for cluster K4.

Info for manual annotations of cluster K5:

- Start number 47 was manually annotated 23 times for cluster K5.

Info for manual annotations of cluster K6:

- Start number 18 was manually annotated 1 time for cluster K6.
- Start number 21 was manually annotated 1 time for cluster K6.
- Start number 47 was manually annotated 22 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 40 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 41 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster M1:

- Start number 39 was manually annotated 12 times for cluster M1.
- Start number 44 was manually annotated 3 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 43 was manually annotated 1 time for cluster M2.
- Start number 44 was manually annotated 5 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 44 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster N:

- Start number 42 was manually annotated 37 times for cluster N.

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

Gene: A6\_54 Start: 38910, Stop: 38635, Start Num: 28

Candidate Starts for A6\_54:

(Start: 26 @38913 has 47 MA's), (Start: 28 @38910 has 143 MA's), (Start: 32 @38898 has 4 MA's), (Start: 49 @38868 has 2 MA's), (53, 38817), (55, 38802), (57, 38781), (61, 38751), (66, 38721),

Gene: AFIS\_58 Start: 39979, Stop: 39713, Start Num: 28

Candidate Starts for AFIS\_58:

(Start: 26 @39982 has 47 MA's), (Start: 28 @39979 has 143 MA's), (Start: 32 @39967 has 4 MA's), (Start: 49 @39946 has 2 MA's), (53, 39895), (55, 39880), (57, 39859), (61, 39829), (66, 39799), (81, 39724),

Gene: Abbysshoes\_63 Start: 41669, Stop: 41403, Start Num: 28

Candidate Starts for Abbysshoes\_63:

(Start: 26 @41672 has 47 MA's), (Start: 28 @41669 has 143 MA's), (Start: 32 @41657 has 4 MA's), (Start: 49 @41636 has 2 MA's), (53, 41585), (55, 41570), (57, 41549), (61, 41519), (66, 41489),

Gene: Abrogate\_610 Start: 42660, Stop: 42409, Start Num: 36

Candidate Starts for Abrogate\_610:

(Start: 28 @42684 has 143 MA's), (Start: 36 @42660 has 4 MA's), (53, 42591), (55, 42576), (57, 42555), (59, 42534), (61, 42525), (66, 42495),

Gene: Acme\_64 Start: 41595, Stop: 41326, Start Num: 26

Candidate Starts for Acme\_64:

(Start: 26 @41595 has 47 MA's), (Start: 28 @41592 has 143 MA's), (Start: 32 @41580 has 4 MA's), (Start: 49 @41559 has 2 MA's), (53, 41508), (55, 41493), (57, 41472), (61, 41442), (66, 41412), (81, 41337),

Gene: ActinUp\_66 Start: 43467, Stop: 43709, Start Num: 47  
Candidate Starts for ActinUp\_66:  
(Start: 47 @43467 has 167 MA's), (56, 43557), (74, 43653), (77, 43677),

Gene: Adahisdi\_62 Start: 42536, Stop: 42240, Start Num: 28  
Candidate Starts for Adahisdi\_62:  
(Start: 26 @42539 has 47 MA's), (Start: 28 @42536 has 143 MA's), (Start: 32 @42524 has 4 MA's),  
(Start: 42 @42491 has 38 MA's), (Start: 49 @42473 has 2 MA's), (53, 42422), (55, 42407), (57,  
42386), (61, 42356), (66, 42326), (81, 42251),

Gene: Adephagia\_66 Start: 43504, Stop: 43746, Start Num: 47  
Candidate Starts for Adephagia\_66:  
(Start: 47 @43504 has 167 MA's), (56, 43594), (74, 43690), (77, 43714),

Gene: Adonis\_66 Start: 43739, Stop: 43981, Start Num: 47  
Candidate Starts for Adonis\_66:  
(Start: 47 @43739 has 167 MA's), (56, 43829), (74, 43925), (77, 43949),

Gene: Aeneas\_65 Start: 43097, Stop: 42828, Start Num: 26  
Candidate Starts for Aeneas\_65:  
(Start: 26 @43097 has 47 MA's), (Start: 28 @43094 has 143 MA's), (Start: 32 @43082 has 4 MA's),  
(Start: 49 @43061 has 2 MA's), (53, 43010), (55, 42995), (57, 42974), (61, 42944), (66, 42914),

Gene: Agaliana\_56 Start: 37891, Stop: 37616, Start Num: 28  
Candidate Starts for Agaliana\_56:  
(Start: 26 @37894 has 47 MA's), (Start: 28 @37891 has 143 MA's), (Start: 32 @37879 has 4 MA's),  
(Start: 49 @37849 has 2 MA's), (53, 37798), (55, 37783), (57, 37762), (61, 37732), (66, 37702),

Gene: Agent47\_60 Start: 40769, Stop: 41017, Start Num: 47  
Candidate Starts for Agent47\_60:  
(Start: 47 @40769 has 167 MA's), (62, 40901), (67, 40931), (75, 40964),

Gene: Ageofdapage\_70 Start: 44895, Stop: 45137, Start Num: 47  
Candidate Starts for Ageofdapage\_70:  
(Start: 47 @44895 has 167 MA's), (56, 44985), (74, 45081), (77, 45105),

Gene: Ajay\_62 Start: 41482, Stop: 41216, Start Num: 28  
Candidate Starts for Ajay\_62:  
(Start: 26 @41485 has 47 MA's), (Start: 28 @41482 has 143 MA's), (Start: 32 @41470 has 4 MA's),  
(Start: 49 @41449 has 2 MA's), (53, 41398), (55, 41383), (57, 41362), (61, 41332), (66, 41302), (81,  
41227),

Gene: Aldrich\_58 Start: 40769, Stop: 40503, Start Num: 28  
Candidate Starts for Aldrich\_58:  
(Start: 26 @40772 has 47 MA's), (Start: 28 @40769 has 143 MA's), (Start: 32 @40757 has 4 MA's),  
(Start: 49 @40736 has 2 MA's), (53, 40685), (55, 40670), (57, 40649), (61, 40619), (66, 40589),

Gene: AlishaPH\_66 Start: 43765, Stop: 44007, Start Num: 47  
Candidate Starts for AlishaPH\_66:  
(Start: 47 @43765 has 167 MA's), (56, 43855), (74, 43951), (77, 43975),

Gene: AlleyCat\_62 Start: 41081, Stop: 41329, Start Num: 47  
Candidate Starts for AlleyCat\_62:

(Start: 47 @41081 has 167 MA's), (55, 41156), (65, 41228),

Gene: Alsfro\_68 Start: 41762, Stop: 41487, Start Num: 28

Candidate Starts for Alsfro\_68:

(Start: 26 @41765 has 47 MA's), (Start: 28 @41762 has 143 MA's), (Start: 32 @41750 has 4 MA's), (Start: 49 @41720 has 2 MA's), (53, 41669), (55, 41654), (57, 41633), (61, 41603), (66, 41573), (81, 41498),

Gene: Altman\_64 Start: 41400, Stop: 41125, Start Num: 28

Candidate Starts for Altman\_64:

(Start: 26 @41403 has 47 MA's), (Start: 28 @41400 has 143 MA's), (Start: 32 @41388 has 4 MA's), (53, 41307), (55, 41292), (57, 41271), (61, 41241), (66, 41211),

Gene: Alvin\_62 Start: 41227, Stop: 40952, Start Num: 28

Candidate Starts for Alvin\_62:

(Start: 8 @41332 has 1 MA's), (9, 41329), (13, 41284), (16, 41266), (Start: 26 @41230 has 47 MA's), (Start: 28 @41227 has 143 MA's), (Start: 32 @41215 has 4 MA's), (Start: 49 @41185 has 2 MA's), (53, 41134), (55, 41119), (57, 41098), (61, 41068), (66, 41038), (76, 40993), (81, 40963),

Gene: Amelie\_55 Start: 40941, Stop: 41186, Start Num: 47

Candidate Starts for Amelie\_55:

(Start: 18 @40869 has 1 MA's), (Start: 47 @40941 has 167 MA's), (58, 41046), (65, 41088), (74, 41124),

Gene: Amgine\_65 Start: 44496, Stop: 44807, Start Num: 21

Candidate Starts for Amgine\_65:

(Start: 21 @44496 has 1 MA's), (Start: 47 @44565 has 167 MA's), (Start: 49 @44574 has 2 MA's), (53, 44625), (56, 44655), (74, 44751), (77, 44775),

Gene: Aminay\_66 Start: 43144, Stop: 43401, Start Num: 40

Candidate Starts for Aminay\_66:

(Start: 40 @43144 has 22 MA's), (50, 43189), (69, 43321), (71, 43339), (81, 43393),

Gene: Amohnition\_66 Start: 44113, Stop: 44352, Start Num: 47

Candidate Starts for Amohnition\_66:

(Start: 47 @44113 has 167 MA's), (56, 44203), (65, 44263),

Gene: Anaya\_69 Start: 44458, Stop: 44700, Start Num: 47

Candidate Starts for Anaya\_69:

(Start: 18 @44380 has 1 MA's), (Start: 47 @44458 has 167 MA's), (56, 44548), (74, 44644), (77, 44668),

Gene: Andies\_48 Start: 34452, Stop: 34700, Start Num: 42

Candidate Starts for Andies\_48:

(Start: 42 @34452 has 38 MA's), (Start: 48 @34464 has 1 MA's), (66, 34614), (67, 34617), (81, 34692),

Gene: Angelica\_66 Start: 43657, Stop: 43899, Start Num: 47

Candidate Starts for Angelica\_66:

(Start: 47 @43657 has 167 MA's), (56, 43747), (74, 43843), (77, 43867),

Gene: Anglerfish\_62 Start: 41575, Stop: 41306, Start Num: 26

Candidate Starts for Anglerfish\_62:

(Start: 26 @41575 has 47 MA's), (Start: 28 @41572 has 143 MA's), (Start: 32 @41560 has 4 MA's), (Start: 48 @41545 has 1 MA's), (Start: 49 @41539 has 2 MA's), (53, 41488), (55, 41473), (57, 41452), (61, 41422), (66, 41392),

Gene: Anma\_68 Start: 44362, Stop: 44604, Start Num: 47

Candidate Starts for Anma\_68:

(Start: 47 @44362 has 167 MA's), (56, 44452), (74, 44548), (77, 44572),

Gene: Apocalypse\_69 Start: 44420, Stop: 44662, Start Num: 46

Candidate Starts for Apocalypse\_69:

(Start: 46 @44420 has 1 MA's), (56, 44510), (74, 44606), (77, 44630),

Gene: Applecrisp\_63 Start: 43695, Stop: 43937, Start Num: 47

Candidate Starts for Applecrisp\_63:

(Start: 21 @43626 has 1 MA's), (Start: 47 @43695 has 167 MA's), (Start: 49 @43704 has 2 MA's), (53, 43755), (56, 43785), (74, 43881), (77, 43905),

Gene: Applejack\_60 Start: 39669, Stop: 39418, Start Num: 36

Candidate Starts for Applejack\_60:

(Start: 28 @39693 has 143 MA's), (Start: 36 @39669 has 4 MA's), (53, 39600), (55, 39585), (57, 39564), (61, 39534), (66, 39504),

Gene: Arcanine\_64 Start: 42296, Stop: 42030, Start Num: 28

Candidate Starts for Arcanine\_64:

(Start: 26 @42299 has 47 MA's), (Start: 28 @42296 has 143 MA's), (Start: 32 @42284 has 4 MA's), (Start: 48 @42269 has 1 MA's), (Start: 49 @42263 has 2 MA's), (53, 42212), (55, 42197), (57, 42176), (61, 42146), (66, 42116),

Gene: Arlo\_60 Start: 40881, Stop: 40585, Start Num: 28

Candidate Starts for Arlo\_60:

(Start: 26 @40884 has 47 MA's), (Start: 28 @40881 has 143 MA's), (Start: 32 @40869 has 4 MA's), (Start: 42 @40836 has 38 MA's), (Start: 49 @40818 has 2 MA's), (53, 40767), (55, 40752), (57, 40731), (61, 40701), (66, 40671), (81, 40596),

Gene: Asayake\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Asayake\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: Ashballer\_65 Start: 42043, Stop: 41777, Start Num: 28

Candidate Starts for Ashballer\_65:

(Start: 26 @42046 has 47 MA's), (Start: 28 @42043 has 143 MA's), (Start: 32 @42031 has 4 MA's), (Start: 49 @42010 has 2 MA's), (53, 41959), (55, 41944), (57, 41923), (61, 41893), (66, 41863),

Gene: Atiba\_67 Start: 43467, Stop: 43709, Start Num: 47

Candidate Starts for Atiba\_67:

(Start: 47 @43467 has 167 MA's), (56, 43557), (74, 43653), (77, 43677),

Gene: Atkinbua\_64 Start: 41089, Stop: 40823, Start Num: 25

Candidate Starts for Atkinbua\_64:

(Start: 25 @41089 has 6 MA's), (Start: 32 @41077 has 4 MA's), (Start: 49 @41056 has 2 MA's), (53, 41005), (55, 40990), (57, 40969), (61, 40939), (66, 40909), (81, 40834),

Gene: Auspice\_39 Start: 32780, Stop: 33040, Start Num: 44

Candidate Starts for Auspice\_39:

(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65, 32930), (66, 32939), (69, 32948),

Gene: Aziz\_44 Start: 33930, Stop: 34181, Start Num: 44

Candidate Starts for Aziz\_44:

(Start: 44 @33930 has 16 MA's), (56, 34023), (63, 34074), (64, 34077), (67, 34092), (78, 34146),

Gene: BEEST\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for BEEST\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: BGlluviae\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for BGlluviae\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: BK1\_54 Start: 38910, Stop: 38635, Start Num: 28

Candidate Starts for BK1\_54:

(Start: 26 @38913 has 47 MA's), (Start: 28 @38910 has 143 MA's), (Start: 32 @38898 has 4 MA's), (Start: 49 @38868 has 2 MA's), (53, 38817), (55, 38802), (57, 38781), (61, 38751), (66, 38721),

Gene: BPBiubs31\_64 Start: 41826, Stop: 41557, Start Num: 26

Candidate Starts for BPBiubs31\_64:

(Start: 26 @41826 has 47 MA's), (Start: 28 @41823 has 143 MA's), (Start: 32 @41811 has 4 MA's), (38, 41796), (Start: 49 @41790 has 2 MA's), (55, 41724), (57, 41703), (61, 41673), (66, 41643),

Gene: BabeRuth\_56 Start: 36173, Stop: 36421, Start Num: 42

Candidate Starts for BabeRuth\_56:

(Start: 42 @36173 has 38 MA's), (Start: 48 @36185 has 1 MA's), (66, 36335), (67, 36338), (81, 36413),

Gene: BaconJack\_66 Start: 44013, Stop: 43747, Start Num: 28

Candidate Starts for BaconJack\_66:

(Start: 26 @44016 has 47 MA's), (Start: 28 @44013 has 143 MA's), (Start: 32 @44001 has 4 MA's), (Start: 49 @43980 has 2 MA's), (53, 43929), (55, 43914), (57, 43893), (61, 43863), (66, 43833),

Gene: BaghaKamala\_66 Start: 43286, Stop: 43528, Start Num: 47

Candidate Starts for BaghaKamala\_66:

(31, 43241), (Start: 47 @43286 has 167 MA's), (56, 43376), (74, 43472), (77, 43496),

Gene: BananenDer11\_57 Start: 40730, Stop: 40978, Start Num: 47

Candidate Starts for BananenDer11\_57:

(Start: 47 @40730 has 167 MA's), (62, 40862), (67, 40892), (75, 40925),

Gene: BarrelRoll\_67 Start: 43905, Stop: 44147, Start Num: 47

Candidate Starts for BarrelRoll\_67:

(Start: 47 @43905 has 167 MA's), (56, 43995), (74, 44091), (77, 44115),

Gene: Barriga\_65 Start: 40220, Stop: 39954, Start Num: 28

Candidate Starts for Barriga\_65:

(Start: 26 @40223 has 47 MA's), (Start: 28 @40220 has 143 MA's), (Start: 32 @40208 has 4 MA's), (Start: 49 @40187 has 2 MA's), (53, 40136), (55, 40121), (57, 40100), (61, 40070), (66, 40040), (81, 39965),

Gene: BarrowTuph\_63 Start: 41075, Stop: 40809, Start Num: 28

Candidate Starts for BarrowTuph\_63:

(Start: 26 @41078 has 47 MA's), (Start: 28 @41075 has 143 MA's), (Start: 32 @41063 has 4 MA's), (Start: 49 @41042 has 2 MA's), (53, 40991), (55, 40976), (57, 40955), (61, 40925), (66, 40895),

Gene: Beatrix\_61 Start: 42133, Stop: 41867, Start Num: 28

Candidate Starts for Beatrix\_61:

(Start: 26 @42136 has 47 MA's), (Start: 28 @42133 has 143 MA's), (Start: 32 @42121 has 4 MA's), (Start: 49 @42097 has 2 MA's), (52, 42052), (55, 42034), (57, 42013), (61, 41983), (66, 41953), (81, 41878),

Gene: BeesKnees\_64 Start: 40665, Stop: 40390, Start Num: 28

Candidate Starts for BeesKnees\_64:

(Start: 28 @40665 has 143 MA's), (Start: 32 @40653 has 4 MA's), (53, 40572), (55, 40557), (57, 40536), (61, 40506), (66, 40476),

Gene: Beezoo\_68 Start: 44417, Stop: 44659, Start Num: 47

Candidate Starts for Beezoo\_68:

(Start: 47 @44417 has 167 MA's), (56, 44507), (74, 44603), (77, 44627),

Gene: Bella96\_67 Start: 44208, Stop: 44450, Start Num: 47

Candidate Starts for Bella96\_67:

(Start: 47 @44208 has 167 MA's), (56, 44298), (74, 44394), (77, 44418),

Gene: Belladonna\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Belladonna\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Bern\_68 Start: 42879, Stop: 43121, Start Num: 47

Candidate Starts for Bern\_68:

(31, 42834), (Start: 47 @42879 has 167 MA's), (56, 42969), (74, 43065), (77, 43089),

Gene: Bethlehem\_61 Start: 42502, Stop: 42233, Start Num: 26

Candidate Starts for Bethlehem\_61:

(Start: 26 @42502 has 47 MA's), (Start: 28 @42499 has 143 MA's), (Start: 32 @42487 has 4 MA's), (Start: 48 @42472 has 1 MA's), (Start: 49 @42466 has 2 MA's), (53, 42415), (55, 42400), (57, 42379), (61, 42349), (66, 42319), (81, 42244),

Gene: Bexan\_59 Start: 41912, Stop: 41646, Start Num: 28

Candidate Starts for Bexan\_59:

(Start: 26 @41915 has 47 MA's), (Start: 28 @41912 has 143 MA's), (Start: 32 @41900 has 4 MA's), (Start: 49 @41876 has 2 MA's), (52, 41831), (55, 41813), (61, 41762), (81, 41657),

Gene: Big3\_63 Start: 42551, Stop: 42288, Start Num: 28

Candidate Starts for Big3\_63:

(Start: 26 @42554 has 47 MA's), (Start: 28 @42551 has 143 MA's), (Start: 32 @42539 has 4 MA's), (Start: 49 @42518 has 2 MA's), (53, 42467), (55, 42452), (57, 42431), (61, 42401), (66, 42371), (81, 42299),

Gene: BigMau\_64 Start: 41801, Stop: 41505, Start Num: 28

Candidate Starts for BigMau\_64:

(Start: 26 @41804 has 47 MA's), (Start: 28 @41801 has 143 MA's), (Start: 32 @41789 has 4 MA's), (Start: 42 @41756 has 38 MA's), (Start: 49 @41738 has 2 MA's), (53, 41687), (55, 41672), (57,

41651), (61, 41621), (66, 41591), (81, 41516),

Gene: BigPaolini\_59 Start: 39208, Stop: 38933, Start Num: 28

Candidate Starts for BigPaolini\_59:

(Start: 26 @39211 has 47 MA's), (Start: 28 @39208 has 143 MA's), (Start: 32 @39196 has 4 MA's), (Start: 49 @39166 has 2 MA's), (53, 39115), (55, 39100), (57, 39079), (61, 39049), (66, 39019),

Gene: Bigchungji\_61 Start: 41000, Stop: 40725, Start Num: 28

Candidate Starts for Bigchungji\_61:

(Start: 26 @41003 has 47 MA's), (Start: 28 @41000 has 143 MA's), (Start: 32 @40988 has 4 MA's), (53, 40907), (55, 40892), (57, 40871), (61, 40841), (66, 40811),

Gene: Bigfoot\_54 Start: 40154, Stop: 39888, Start Num: 28

Candidate Starts for Bigfoot\_54:

(Start: 26 @40157 has 47 MA's), (Start: 28 @40154 has 143 MA's), (Start: 32 @40142 has 4 MA's), (Start: 49 @40121 has 2 MA's), (53, 40070), (55, 40055), (57, 40034), (61, 40004), (66, 39974),

Gene: Biglebops\_55 Start: 40941, Stop: 41186, Start Num: 47

Candidate Starts for Biglebops\_55:

(Start: 18 @40869 has 1 MA's), (Start: 47 @40941 has 167 MA's), (58, 41046), (65, 41088), (74, 41124),

Gene: BillKnuckles\_59 Start: 42435, Stop: 42130, Start Num: 26

Candidate Starts for BillKnuckles\_59:

(Start: 26 @42435 has 47 MA's), (Start: 28 @42432 has 143 MA's), (Start: 32 @42420 has 4 MA's), (Start: 49 @42396 has 2 MA's), (52, 42351), (55, 42333), (61, 42282), (76, 42207), (81, 42177), (84, 42153),

Gene: Bircsak\_61 Start: 42809, Stop: 42543, Start Num: 28

Candidate Starts for Bircsak\_61:

(Start: 26 @42812 has 47 MA's), (Start: 28 @42809 has 143 MA's), (Start: 32 @42797 has 4 MA's), (Start: 49 @42776 has 2 MA's), (53, 42725), (55, 42710), (57, 42689), (61, 42659), (66, 42629),

Gene: Blackflame\_58 Start: 40747, Stop: 40481, Start Num: 28

Candidate Starts for Blackflame\_58:

(Start: 26 @40750 has 47 MA's), (Start: 28 @40747 has 143 MA's), (Start: 32 @40735 has 4 MA's), (Start: 49 @40714 has 2 MA's), (53, 40663), (55, 40648), (57, 40627), (61, 40597), (66, 40567), (81, 40492),

Gene: Blesser\_58 Start: 40182, Stop: 39916, Start Num: 28

Candidate Starts for Blesser\_58:

(Start: 26 @40185 has 47 MA's), (Start: 28 @40182 has 143 MA's), (Start: 32 @40170 has 4 MA's), (Start: 49 @40149 has 2 MA's), (53, 40098), (55, 40083), (57, 40062), (61, 40032), (66, 40002),

Gene: Blizzard\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Blizzard\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: Bloom\_112 Start: 87140, Stop: 87388, Start Num: 44

Candidate Starts for Bloom\_112:

(Start: 44 @87140 has 16 MA's), (Start: 48 @87146 has 1 MA's), (Start: 49 @87152 has 2 MA's),

Gene: BluSpix\_60 Start: 37016, Stop: 36717, Start Num: 26

Candidate Starts for BluSpix\_60:

(Start: 26 @37016 has 47 MA's), (Start: 28 @37013 has 143 MA's), (Start: 32 @37001 has 4 MA's), (Start: 42 @36968 has 38 MA's), (Start: 49 @36950 has 2 MA's), (53, 36899), (55, 36884), (57, 36863), (61, 36833), (66, 36803), (81, 36728),

Gene: Blue\_61 Start: 41818, Stop: 41588, Start Num: 49

Candidate Starts for Blue\_61:

(Start: 26 @41857 has 47 MA's), (Start: 28 @41854 has 143 MA's), (Start: 32 @41842 has 4 MA's), (Start: 49 @41818 has 2 MA's), (52, 41773), (55, 41755), (61, 41704), (76, 41629), (81, 41599),

Gene: Bob3\_63 Start: 41074, Stop: 40778, Start Num: 28

Candidate Starts for Bob3\_63:

(Start: 26 @41077 has 47 MA's), (Start: 28 @41074 has 143 MA's), (Start: 32 @41062 has 4 MA's), (Start: 42 @41029 has 38 MA's), (Start: 49 @41011 has 2 MA's), (53, 40960), (55, 40945), (57, 40924), (61, 40894), (66, 40864), (81, 40789),

Gene: Bobquesha\_71 Start: 42269, Stop: 42532, Start Num: 40

Candidate Starts for Bobquesha\_71:

(6, 42086), (Start: 40 @42269 has 22 MA's), (56, 42371), (72, 42467), (81, 42521),

Gene: Boiiii\_66 Start: 43821, Stop: 44063, Start Num: 47

Candidate Starts for Boiiii\_66:

(Start: 47 @43821 has 167 MA's), (56, 43911), (74, 44007), (77, 44031),

Gene: Boilgate\_63 Start: 45255, Stop: 45500, Start Num: 41

Candidate Starts for Boilgate\_63:

(Start: 41 @45255 has 1 MA's), (Start: 48 @45270 has 1 MA's), (80, 45486), (81, 45489),

Gene: Bones\_61 Start: 42258, Stop: 41962, Start Num: 28

Candidate Starts for Bones\_61:

(Start: 26 @42261 has 47 MA's), (Start: 28 @42258 has 143 MA's), (Start: 32 @42246 has 4 MA's), (Start: 42 @42213 has 38 MA's), (Start: 49 @42195 has 2 MA's), (53, 42144), (55, 42129), (57, 42108), (61, 42078), (66, 42048), (81, 41973),

Gene: Bongo\_39 Start: 32762, Stop: 33040, Start Num: 39

Candidate Starts for Bongo\_39:

(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65, 32930), (66, 32939), (69, 32948),

Gene: BoostSeason\_69 Start: 45667, Stop: 45912, Start Num: 47

Candidate Starts for BoostSeason\_69:

(30, 45610), (33, 45616), (Start: 47 @45667 has 167 MA's), (56, 45757), (67, 45826), (74, 45850), (83, 45904),

Gene: Bosection6\_49 Start: 33918, Stop: 34166, Start Num: 42

Candidate Starts for Bosection6\_49:

(2, 33354), (4, 33573), (5, 33711), (7, 33744), (17, 33840), (Start: 42 @33918 has 38 MA's), (Start: 48 @33930 has 1 MA's), (56, 34014), (66, 34080), (67, 34083),

Gene: Bricole\_39 Start: 32748, Stop: 33026, Start Num: 39

Candidate Starts for Bricole\_39:

(12, 32637), (Start: 39 @32748 has 12 MA's), (Start: 44 @32766 has 16 MA's), (53, 32829), (65, 32916), (66, 32925), (69, 32934),

Gene: Briton15\_66 Start: 42878, Stop: 42582, Start Num: 28

Candidate Starts for Briton15\_66:

(Start: 26 @42881 has 47 MA's), (Start: 28 @42878 has 143 MA's), (Start: 32 @42866 has 4 MA's), (Start: 42 @42833 has 38 MA's), (Start: 49 @42815 has 2 MA's), (53, 42764), (55, 42749), (57, 42728), (61, 42698), (66, 42668),

Gene: Bruns\_63 Start: 40455, Stop: 40159, Start Num: 28

Candidate Starts for Bruns\_63:

(Start: 26 @40458 has 47 MA's), (Start: 28 @40455 has 143 MA's), (Start: 32 @40443 has 4 MA's), (Start: 42 @40410 has 38 MA's), (Start: 49 @40392 has 2 MA's), (53, 40341), (55, 40326), (57, 40305), (61, 40275), (66, 40245), (81, 40170),

Gene: Bryler\_70 Start: 43476, Stop: 43715, Start Num: 47

Candidate Starts for Bryler\_70:

(Start: 18 @43392 has 1 MA's), (Start: 47 @43476 has 167 MA's), (Start: 49 @43485 has 2 MA's), (56, 43566), (64, 43620),

Gene: Burton\_63 Start: 42834, Stop: 42568, Start Num: 28

Candidate Starts for Burton\_63:

(Start: 26 @42837 has 47 MA's), (Start: 28 @42834 has 143 MA's), (Start: 32 @42822 has 4 MA's), (Start: 49 @42801 has 2 MA's), (53, 42750), (55, 42735), (57, 42714), (61, 42684), (66, 42654), (81, 42579),

Gene: Butters\_53 Start: 35513, Stop: 35761, Start Num: 42

Candidate Starts for Butters\_53:

(7, 35339), (17, 35435), (Start: 42 @35513 has 38 MA's), (Start: 48 @35525 has 1 MA's), (56, 35609), (66, 35675), (67, 35678),

Gene: Buttons\_59 Start: 38725, Stop: 38456, Start Num: 26

Candidate Starts for Buttons\_59:

(Start: 26 @38725 has 47 MA's), (Start: 28 @38722 has 143 MA's), (Start: 32 @38710 has 4 MA's), (Start: 49 @38689 has 2 MA's), (53, 38638), (55, 38623), (57, 38602), (61, 38572), (66, 38542),

Gene: Bxb1\_56 Start: 39835, Stop: 39569, Start Num: 28

Candidate Starts for Bxb1\_56:

(Start: 26 @39838 has 47 MA's), (Start: 28 @39835 has 143 MA's), (Start: 32 @39823 has 4 MA's), (Start: 49 @39802 has 2 MA's), (53, 39751), (55, 39736), (57, 39715), (61, 39685), (66, 39655), (81, 39580),

Gene: CREW\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for CREW\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: CactusRose\_62 Start: 41174, Stop: 40908, Start Num: 28

Candidate Starts for CactusRose\_62:

(Start: 26 @41177 has 47 MA's), (Start: 28 @41174 has 143 MA's), (Start: 32 @41162 has 4 MA's), (Start: 49 @41141 has 2 MA's), (53, 41090), (55, 41075), (57, 41054), (61, 41024), (66, 40994),

Gene: Cain\_70 Start: 43464, Stop: 43703, Start Num: 47

Candidate Starts for Cain\_70:

(Start: 18 @43380 has 1 MA's), (Start: 47 @43464 has 167 MA's), (Start: 49 @43473 has 2 MA's), (56, 43554), (64, 43608),

Gene: CallaLilly\_66 Start: 43545, Stop: 43787, Start Num: 47  
Candidate Starts for CallaLilly\_66:  
(Start: 47 @43545 has 167 MA's), (56, 43635), (74, 43731), (77, 43755),

Gene: Capricorn\_66 Start: 43622, Stop: 43864, Start Num: 47  
Candidate Starts for Capricorn\_66:  
(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Carcharodon\_50 Start: 34905, Stop: 35153, Start Num: 42  
Candidate Starts for Carcharodon\_50:  
(3, 34491), (5, 34698), (7, 34731), (17, 34827), (Start: 42 @34905 has 38 MA's), (Start: 48 @34917 has 1 MA's), (Start: 49 @34923 has 2 MA's), (56, 35001), (66, 35067), (67, 35070),

Gene: Carlyle\_62 Start: 39960, Stop: 39694, Start Num: 28  
Candidate Starts for Carlyle\_62:  
(Start: 26 @39963 has 47 MA's), (Start: 28 @39960 has 143 MA's), (Start: 32 @39948 has 4 MA's), (Start: 49 @39924 has 2 MA's), (52, 39879), (55, 39861), (60, 39813), (61, 39810), (76, 39735), (81, 39705),

Gene: CartmannCramer\_60 Start: 42923, Stop: 42648, Start Num: 28  
Candidate Starts for CartmannCramer\_60:  
(Start: 26 @42926 has 47 MA's), (Start: 28 @42923 has 143 MA's), (Start: 32 @42911 has 4 MA's), (Start: 49 @42881 has 2 MA's), (53, 42830), (55, 42815), (57, 42794), (61, 42764), (66, 42734),

Gene: CaseJules\_68 Start: 43819, Stop: 44061, Start Num: 47  
Candidate Starts for CaseJules\_68:  
(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: CatBus\_58 Start: 40961, Stop: 40695, Start Num: 28  
Candidate Starts for CatBus\_58:  
(Start: 26 @40964 has 47 MA's), (Start: 28 @40961 has 143 MA's), (Start: 32 @40949 has 4 MA's), (Start: 49 @40928 has 2 MA's), (53, 40877), (55, 40862), (57, 40841), (61, 40811), (66, 40781),

Gene: Chanagan\_56 Start: 38816, Stop: 38541, Start Num: 28  
Candidate Starts for Chanagan\_56:  
(Start: 26 @38819 has 47 MA's), (Start: 28 @38816 has 143 MA's), (Start: 32 @38804 has 4 MA's), (Start: 49 @38774 has 2 MA's), (53, 38723), (55, 38708), (57, 38687), (61, 38657), (66, 38627),

Gene: Chancellor\_70 Start: 43377, Stop: 43640, Start Num: 40  
Candidate Starts for Chancellor\_70:  
(Start: 40 @43377 has 22 MA's), (Start: 48 @43392 has 1 MA's), (56, 43479), (72, 43575), (81, 43629),

Gene: Charlie\_51 Start: 33657, Stop: 33905, Start Num: 42  
Candidate Starts for Charlie\_51:  
(2, 33093), (4, 33312), (5, 33450), (7, 33483), (17, 33579), (Start: 42 @33657 has 38 MA's), (Start: 48 @33669 has 1 MA's), (56, 33753), (66, 33819), (67, 33822),

Gene: Chavito\_69 Start: 44664, Stop: 44903, Start Num: 46  
Candidate Starts for Chavito\_69:  
(Start: 18 @44589 has 1 MA's), (Start: 46 @44664 has 1 MA's), (56, 44754), (64, 44808),

Gene: CheetoDust\_66 Start: 43333, Stop: 43575, Start Num: 47

Candidate Starts for CheetoDust\_66:

(31, 43288), (Start: 47 @43333 has 167 MA's), (56, 43423), (74, 43519), (77, 43543),

Gene: Cheetobro\_70 Start: 43374, Stop: 43637, Start Num: 40

Candidate Starts for Cheetobro\_70:

(Start: 40 @43374 has 22 MA's), (Start: 48 @43389 has 1 MA's), (56, 43476), (72, 43572), (81, 43626),

Gene: Chewbacca\_52 Start: 34905, Stop: 35153, Start Num: 42

Candidate Starts for Chewbacca\_52:

(3, 34491), (5, 34698), (7, 34731), (17, 34827), (Start: 42 @34905 has 38 MA's), (Start: 48 @34917 has 1 MA's), (Start: 49 @34923 has 2 MA's), (56, 35001), (66, 35067), (67, 35070),

Gene: Chilliams\_107 Start: 79905, Stop: 80147, Start Num: 44

Candidate Starts for Chilliams\_107:

(Start: 34 @79857 has 10 MA's), (Start: 44 @79905 has 16 MA's), (56, 79995),

Gene: Chris\_69 Start: 44665, Stop: 44892, Start Num: 47

Candidate Starts for Chris\_69:

(Start: 47 @44665 has 167 MA's), (64, 44797), (74, 44836),

Gene: ChristmasHams\_56 Start: 38811, Stop: 38536, Start Num: 28

Candidate Starts for ChristmasHams\_56:

(Start: 26 @38814 has 47 MA's), (Start: 28 @38811 has 143 MA's), (Start: 32 @38799 has 4 MA's), (Start: 49 @38769 has 2 MA's), (53, 38718), (55, 38703), (57, 38682), (61, 38652), (66, 38622),

Gene: Ciao\_60 Start: 40180, Stop: 39914, Start Num: 28

Candidate Starts for Ciao\_60:

(Start: 26 @40183 has 47 MA's), (Start: 28 @40180 has 143 MA's), (Start: 32 @40168 has 4 MA's), (Start: 49 @40147 has 2 MA's), (53, 40096), (55, 40081), (57, 40060), (61, 40030), (66, 40000),

Gene: Clipper\_70 Start: 44521, Stop: 44763, Start Num: 47

Candidate Starts for Clipper\_70:

(Start: 47 @44521 has 167 MA's), (56, 44611), (74, 44707), (77, 44731),

Gene: Collard\_58 Start: 40730, Stop: 40978, Start Num: 47

Candidate Starts for Collard\_58:

(Start: 47 @40730 has 167 MA's), (62, 40862), (67, 40892), (75, 40925),

Gene: ConceptII\_64 Start: 42246, Stop: 41980, Start Num: 28

Candidate Starts for ConceptII\_64:

(Start: 26 @42249 has 47 MA's), (Start: 28 @42246 has 143 MA's), (Start: 32 @42234 has 4 MA's), (Start: 49 @42213 has 2 MA's), (53, 42162), (55, 42147), (57, 42126), (61, 42096), (66, 42066),

Gene: Corvo\_63 Start: 42111, Stop: 41845, Start Num: 28

Candidate Starts for Corvo\_63:

(Start: 26 @42114 has 47 MA's), (Start: 28 @42111 has 143 MA's), (Start: 32 @42099 has 4 MA's), (Start: 49 @42078 has 2 MA's), (53, 42027), (55, 42012), (57, 41991), (61, 41961), (66, 41931), (81, 41856),

Gene: CrimD\_68 Start: 44444, Stop: 44686, Start Num: 47

Candidate Starts for CrimD\_68:

(Start: 47 @44444 has 167 MA's), (56, 44534), (74, 44630),

Gene: Crispicous1\_59 Start: 39995, Stop: 39699, Start Num: 28

Candidate Starts for Crispicous1\_59:

(Start: 28 @39995 has 143 MA's), (Start: 32 @39983 has 4 MA's), (Start: 42 @39950 has 38 MA's), (Start: 49 @39932 has 2 MA's), (53, 39881), (55, 39866), (57, 39845), (61, 39815), (66, 39785),

Gene: Cueyllyss\_62 Start: 42458, Stop: 42162, Start Num: 28

Candidate Starts for Cueyllyss\_62:

(Start: 26 @42461 has 47 MA's), (Start: 28 @42458 has 143 MA's), (Start: 32 @42446 has 4 MA's), (Start: 42 @42413 has 38 MA's), (Start: 49 @42395 has 2 MA's), (53, 42344), (55, 42329), (57, 42308), (61, 42278), (66, 42248), (81, 42173),

Gene: Curiosium\_70 Start: 43138, Stop: 43380, Start Num: 47

Candidate Starts for Curiosium\_70:

(Start: 18 @43060 has 1 MA's), (Start: 47 @43138 has 167 MA's), (56, 43228), (74, 43324), (77, 43348),

Gene: DD5\_60 Start: 41693, Stop: 41418, Start Num: 28

Candidate Starts for DD5\_60:

(Start: 28 @41693 has 143 MA's), (Start: 32 @41681 has 4 MA's), (Start: 49 @41651 has 2 MA's), (53, 41600), (55, 41585), (57, 41564), (60, 41537), (61, 41534), (66, 41504), (81, 41429),

Gene: Dadosky\_62 Start: 41083, Stop: 41331, Start Num: 47

Candidate Starts for Dadosky\_62:

(Start: 47 @41083 has 167 MA's), (55, 41158), (65, 41230),

Gene: Dalmuri\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Dalmuri\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: DanSyl44\_73 Start: 44568, Stop: 44831, Start Num: 40

Candidate Starts for DanSyl44\_73:

(Start: 40 @44568 has 22 MA's), (Start: 48 @44583 has 1 MA's), (56, 44670), (72, 44766), (81, 44820),

Gene: DartGoblin\_69 Start: 44180, Stop: 44422, Start Num: 47

Candidate Starts for DartGoblin\_69:

(Start: 47 @44180 has 167 MA's), (56, 44270), (74, 44366), (77, 44390),

Gene: DarthP\_66 Start: 43967, Stop: 44206, Start Num: 47

Candidate Starts for DarthP\_66:

(Start: 47 @43967 has 167 MA's), (56, 44057), (65, 44117),

Gene: Dartin\_69 Start: 44123, Stop: 44362, Start Num: 45

Candidate Starts for Dartin\_69:

(Start: 45 @44123 has 4 MA's), (56, 44213), (61, 44249), (64, 44267), (77, 44330),

Gene: Deby\_67 Start: 44105, Stop: 44347, Start Num: 47

Candidate Starts for Deby\_67:

(Start: 47 @44105 has 167 MA's), (56, 44195), (74, 44291), (77, 44315),

Gene: Devera\_74 Start: 45458, Stop: 45700, Start Num: 47

Candidate Starts for Devera\_74:

(Start: 47 @45458 has 167 MA's), (56, 45548), (74, 45644), (77, 45668),

Gene: Dexes\_62 Start: 41896, Stop: 41630, Start Num: 28

Candidate Starts for Dexes\_62:

(Start: 26 @41899 has 47 MA's), (Start: 28 @41896 has 143 MA's), (Start: 32 @41884 has 4 MA's), (Start: 49 @41863 has 2 MA's), (53, 41812), (55, 41797), (57, 41776), (61, 41746), (66, 41716), (81, 41641),

Gene: Diminimus\_40 Start: 32761, Stop: 33039, Start Num: 39

Candidate Starts for Diminimus\_40:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65, 32929), (66, 32938), (69, 32947),

Gene: DirtDevil\_60 Start: 40769, Stop: 40503, Start Num: 28

Candidate Starts for DirtDevil\_60:

(Start: 26 @40772 has 47 MA's), (Start: 28 @40769 has 143 MA's), (Start: 32 @40757 has 4 MA's), (Start: 49 @40736 has 2 MA's), (53, 40685), (55, 40670), (57, 40649), (61, 40619), (66, 40589),

Gene: DismalFunk\_69 Start: 46092, Stop: 46337, Start Num: 47

Candidate Starts for DismalFunk\_69:

(30, 46035), (33, 46041), (Start: 47 @46092 has 167 MA's), (56, 46182), (61, 46218), (67, 46251),

Gene: DismalStressor\_69 Start: 46092, Stop: 46337, Start Num: 47

Candidate Starts for DismalStressor\_69:

(30, 46035), (33, 46041), (Start: 47 @46092 has 167 MA's), (56, 46182), (61, 46218), (67, 46251),

Gene: Dole\_72 Start: 45461, Stop: 45703, Start Num: 47

Candidate Starts for Dole\_72:

(Start: 47 @45461 has 167 MA's), (56, 45551), (74, 45647), (77, 45671),

Gene: Doom\_60 Start: 41667, Stop: 41392, Start Num: 28

Candidate Starts for Doom\_60:

(Start: 26 @41670 has 47 MA's), (Start: 28 @41667 has 143 MA's), (Start: 32 @41655 has 4 MA's), (Start: 49 @41625 has 2 MA's), (53, 41574), (55, 41559), (57, 41538), (61, 41508), (66, 41478),

Gene: DoubleChamp\_57 Start: 40730, Stop: 40978, Start Num: 47

Candidate Starts for DoubleChamp\_57:

(Start: 47 @40730 has 167 MA's), (62, 40862), (67, 40892), (75, 40925),

Gene: Doughnut\_69 Start: 45708, Stop: 45953, Start Num: 47

Candidate Starts for Doughnut\_69:

(29, 45645), (Start: 47 @45708 has 167 MA's), (56, 45798), (67, 45867),

Gene: DrFeelGood\_58 Start: 40034, Stop: 39777, Start Num: 34

Candidate Starts for DrFeelGood\_58:

(Start: 34 @40034 has 10 MA's), (Start: 48 @40016 has 1 MA's), (Start: 49 @40010 has 2 MA's), (53, 39959), (55, 39944), (57, 39923), (61, 39893), (66, 39863),

Gene: DrHayes\_67 Start: 44362, Stop: 44604, Start Num: 47

Candidate Starts for DrHayes\_67:

(Start: 47 @44362 has 167 MA's), (56, 44452), (74, 44548), (77, 44572),

Gene: DreamCatcher\_65 Start: 41754, Stop: 41455, Start Num: 26

Candidate Starts for DreamCatcher\_65:

(Start: 26 @41754 has 47 MA's), (Start: 28 @41751 has 143 MA's), (Start: 32 @41739 has 4 MA's), (Start: 42 @41706 has 38 MA's), (Start: 49 @41688 has 2 MA's), (53, 41637), (55, 41622), (57, 41601), (61, 41571), (66, 41541), (81, 41466),

Gene: Dreamboat\_63 Start: 40328, Stop: 40062, Start Num: 28

Candidate Starts for Dreamboat\_63:

(Start: 28 @40328 has 143 MA's), (Start: 32 @40316 has 4 MA's), (Start: 48 @40301 has 1 MA's), (Start: 49 @40295 has 2 MA's), (53, 40244), (55, 40229), (57, 40208), (61, 40178), (66, 40148), (81, 40073),

Gene: Dulcie\_62 Start: 42668, Stop: 42411, Start Num: 34

Candidate Starts for Dulcie\_62:

(Start: 34 @42668 has 10 MA's), (Start: 48 @42650 has 1 MA's), (Start: 49 @42644 has 2 MA's), (53, 42593), (55, 42578), (57, 42557), (61, 42527), (66, 42497),

Gene: Dulcita\_40 Start: 32761, Stop: 33039, Start Num: 39

Candidate Starts for Dulcita\_40:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65, 32929), (66, 32938), (69, 32947),

Gene: Duplicity\_50 Start: 34914, Stop: 35162, Start Num: 42

Candidate Starts for Duplicity\_50:

(3, 34500), (5, 34707), (7, 34740), (17, 34836), (Start: 42 @34914 has 38 MA's), (Start: 48 @34926 has 1 MA's), (Start: 49 @34932 has 2 MA's), (56, 35010), (66, 35076), (67, 35079),

Gene: Durfee\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Durfee\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: Dussy\_62 Start: 41689, Stop: 41423, Start Num: 28

Candidate Starts for Dussy\_62:

(Start: 26 @41692 has 47 MA's), (Start: 28 @41689 has 143 MA's), (Start: 32 @41677 has 4 MA's), (Start: 49 @41656 has 2 MA's), (53, 41605), (55, 41590), (57, 41569), (61, 41539), (66, 41509),

Gene: Dynamix\_64 Start: 40678, Stop: 40409, Start Num: 26

Candidate Starts for Dynamix\_64:

(Start: 26 @40678 has 47 MA's), (Start: 28 @40675 has 143 MA's), (Start: 32 @40663 has 4 MA's), (Start: 49 @40642 has 2 MA's), (55, 40576), (57, 40555), (61, 40525), (66, 40495), (81, 40420),

Gene: EGUunicorn\_48 Start: 33605, Stop: 33853, Start Num: 42

Candidate Starts for EGUunicorn\_48:

(3, 33191), (5, 33398), (7, 33431), (17, 33527), (Start: 42 @33605 has 38 MA's), (Start: 48 @33617 has 1 MA's), (Start: 49 @33623 has 2 MA's), (56, 33701), (66, 33767), (67, 33770),

Gene: Edtherson\_61 Start: 41661, Stop: 41386, Start Num: 28

Candidate Starts for Edtherson\_61:

(Start: 26 @41664 has 47 MA's), (Start: 28 @41661 has 143 MA's), (Start: 32 @41649 has 4 MA's), (Start: 49 @41619 has 2 MA's), (53, 41568), (55, 41553), (57, 41532), (61, 41502), (66, 41472),

Gene: Edugator\_59 Start: 42504, Stop: 42752, Start Num: 47

Candidate Starts for Edugator\_59:

(Start: 47 @42504 has 167 MA's), (55, 42579), (65, 42651),

Gene: Efra2\_72 Start: 44206, Stop: 44448, Start Num: 47  
Candidate Starts for Efra2\_72:  
(Start: 18 @44128 has 1 MA's), (Start: 47 @44206 has 167 MA's), (56, 44296), (74, 44392),

Gene: Ekdilam\_63 Start: 44192, Stop: 44431, Start Num: 47  
Candidate Starts for Ekdilam\_63:  
(Start: 47 @44192 has 167 MA's), (Start: 49 @44201 has 2 MA's), (56, 44282),

Gene: Ellie\_62 Start: 43425, Stop: 43667, Start Num: 47  
Candidate Starts for Ellie\_62:  
(Start: 21 @43356 has 1 MA's), (Start: 47 @43425 has 167 MA's), (Start: 49 @43434 has 2 MA's), (53, 43485), (56, 43515), (74, 43611), (77, 43635),

Gene: Emerson\_68 Start: 43939, Stop: 44181, Start Num: 47  
Candidate Starts for Emerson\_68:  
(Start: 47 @43939 has 167 MA's), (56, 44029), (74, 44125), (77, 44149),

Gene: Enkosi\_57 Start: 43554, Stop: 43799, Start Num: 47  
Candidate Starts for Enkosi\_57:  
(Start: 18 @43482 has 1 MA's), (Start: 47 @43554 has 167 MA's), (58, 43659), (65, 43701), (74, 43737),

Gene: EnzoK\_62 Start: 38636, Stop: 38361, Start Num: 28  
Candidate Starts for EnzoK\_62:  
(Start: 26 @38639 has 47 MA's), (Start: 28 @38636 has 143 MA's), (Start: 32 @38624 has 4 MA's),  
(Start: 49 @38594 has 2 MA's), (53, 38543), (55, 38528), (57, 38507), (61, 38477), (66, 38447), (73, 38423), (81, 38372),

Gene: Eponine\_72 Start: 44220, Stop: 44483, Start Num: 40  
Candidate Starts for Eponine\_72:  
(Start: 40 @44220 has 22 MA's), (Start: 48 @44235 has 1 MA's), (56, 44322), (72, 44418), (79, 44463),  
(81, 44472),

Gene: Espresso\_59 Start: 41111, Stop: 40833, Start Num: 26  
Candidate Starts for Espresso\_59:  
(Start: 26 @41111 has 47 MA's), (Start: 28 @41108 has 143 MA's), (Start: 32 @41096 has 4 MA's),  
(Start: 49 @41066 has 2 MA's), (53, 41015), (55, 41000), (57, 40979), (61, 40949), (66, 40919),

Gene: Estes\_45 Start: 34058, Stop: 34309, Start Num: 44  
Candidate Starts for Estes\_45:  
(Start: 44 @34058 has 16 MA's), (56, 34151), (63, 34202), (64, 34205), (78, 34274),

Gene: Euphoria\_60 Start: 40818, Stop: 40552, Start Num: 28  
Candidate Starts for Euphoria\_60:  
(Start: 26 @40821 has 47 MA's), (Start: 28 @40818 has 143 MA's), (Start: 32 @40806 has 4 MA's),  
(Start: 49 @40785 has 2 MA's), (53, 40734), (55, 40719), (61, 40668), (76, 40593), (81, 40563),

Gene: Eyeball\_64 Start: 42166, Stop: 41900, Start Num: 28  
Candidate Starts for Eyeball\_64:  
(Start: 26 @42169 has 47 MA's), (Start: 28 @42166 has 143 MA's), (Start: 32 @42154 has 4 MA's),  
(Start: 49 @42133 has 2 MA's), (53, 42082), (55, 42067), (57, 42046), (59, 42025), (61, 42016), (66, 41986), (81, 41911),

Gene: Fajezeel\_63 Start: 40885, Stop: 40616, Start Num: 26

Candidate Starts for Fajezeel\_63:

(Start: 26 @40885 has 47 MA's), (Start: 28 @40882 has 143 MA's), (Start: 32 @40870 has 4 MA's), (Start: 49 @40849 has 2 MA's), (53, 40798), (55, 40783), (57, 40762), (61, 40732), (66, 40702), (81, 40627),

Gene: Fascinus\_56 Start: 40671, Stop: 40402, Start Num: 26

Candidate Starts for Fascinus\_56:

(Start: 26 @40671 has 47 MA's), (Start: 28 @40668 has 143 MA's), (Start: 32 @40656 has 4 MA's), (Start: 49 @40635 has 2 MA's), (53, 40584), (55, 40569), (57, 40548), (61, 40518), (66, 40488),

Gene: Fefferhead\_64 Start: 43334, Stop: 43576, Start Num: 47

Candidate Starts for Fefferhead\_64:

(Start: 21 @43265 has 1 MA's), (Start: 47 @43334 has 167 MA's), (Start: 49 @43343 has 2 MA's), (53, 43394), (56, 43424), (74, 43520),

Gene: Fenn\_64 Start: 42653, Stop: 42378, Start Num: 28

Candidate Starts for Fenn\_64:

(Start: 28 @42653 has 143 MA's), (Start: 32 @42641 has 4 MA's), (Start: 49 @42611 has 2 MA's), (53, 42560), (55, 42545), (57, 42524), (59, 42503), (61, 42494), (66, 42464), (81, 42389),

Gene: Feyre\_63 Start: 44492, Stop: 44740, Start Num: 47

Candidate Starts for Feyre\_63:

(Start: 47 @44492 has 167 MA's), (55, 44567), (65, 44639), (70, 44663),

Gene: Findley\_69 Start: 46086, Stop: 46331, Start Num: 47

Candidate Starts for Findley\_69:

(29, 46023), (Start: 47 @46086 has 167 MA's), (56, 46176), (67, 46245),

Gene: Fionnbharth\_70 Start: 43618, Stop: 43881, Start Num: 40

Candidate Starts for Fionnbharth\_70:

(Start: 40 @43618 has 22 MA's), (Start: 48 @43633 has 1 MA's), (56, 43720), (72, 43816), (81, 43870),

Gene: FloraSnap32\_108 Start: 86040, Stop: 86288, Start Num: 44

Candidate Starts for FloraSnap32\_108:

(Start: 44 @86040 has 16 MA's), (Start: 48 @86046 has 1 MA's), (Start: 49 @86052 has 2 MA's),

Gene: Forsytheast\_63 Start: 40623, Stop: 40327, Start Num: 28

Candidate Starts for Forsytheast\_63:

(Start: 26 @40626 has 47 MA's), (Start: 28 @40623 has 143 MA's), (Start: 32 @40611 has 4 MA's), (Start: 42 @40578 has 38 MA's), (Start: 49 @40560 has 2 MA's), (53, 40509), (55, 40494), (57, 40473), (61, 40443), (66, 40413), (81, 40338),

Gene: Francis47\_60 Start: 41735, Stop: 41460, Start Num: 28

Candidate Starts for Francis47\_60:

(Start: 26 @41738 has 47 MA's), (Start: 28 @41735 has 143 MA's), (Start: 32 @41723 has 4 MA's), (Start: 49 @41693 has 2 MA's), (53, 41642), (55, 41627), (57, 41606), (61, 41576), (66, 41546),

Gene: FreakyGoo\_40 Start: 32780, Stop: 33040, Start Num: 44

Candidate Starts for FreakyGoo\_40:

(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65, 32930), (66, 32939), (69, 32948),

Gene: Froghopper\_60 Start: 40239, Stop: 39964, Start Num: 28

Candidate Starts for Froghopper\_60:

(Start: 26 @40242 has 47 MA's), (Start: 28 @40239 has 143 MA's), (Start: 32 @40227 has 4 MA's), (Start: 49 @40197 has 2 MA's), (53, 40146), (55, 40131), (57, 40110), (61, 40080), (66, 40050), (81, 39975),

Gene: FrostedClock\_111 Start: 87337, Stop: 87585, Start Num: 44

Candidate Starts for FrostedClock\_111:

(Start: 44 @87337 has 16 MA's), (Start: 48 @87343 has 1 MA's), (Start: 49 @87349 has 2 MA's),

Gene: Fulbright\_49 Start: 33994, Stop: 34242, Start Num: 42

Candidate Starts for Fulbright\_49:

(3, 33580), (5, 33787), (7, 33820), (17, 33916), (Start: 42 @33994 has 38 MA's), (Start: 48 @34006 has 1 MA's), (Start: 49 @34012 has 2 MA's), (56, 34090), (66, 34156), (67, 34159),

Gene: Fushigi\_58 Start: 39205, Stop: 38936, Start Num: 26

Candidate Starts for Fushigi\_58:

(Start: 26 @39205 has 47 MA's), (Start: 28 @39202 has 143 MA's), (Start: 32 @39190 has 4 MA's), (Start: 49 @39169 has 2 MA's), (53, 39118), (55, 39103), (57, 39082), (61, 39052), (66, 39022),

Gene: GMonster\_59 Start: 40681, Stop: 40385, Start Num: 28

Candidate Starts for GMonster\_59:

(Start: 26 @40684 has 47 MA's), (Start: 28 @40681 has 143 MA's), (Start: 32 @40669 has 4 MA's), (Start: 42 @40636 has 38 MA's), (Start: 49 @40618 has 2 MA's), (53, 40567), (55, 40552), (57, 40531), (61, 40501), (66, 40471),

Gene: Gachnar\_62 Start: 41366, Stop: 41091, Start Num: 28

Candidate Starts for Gachnar\_62:

(19, 41390), (Start: 26 @41369 has 47 MA's), (Start: 28 @41366 has 143 MA's), (Start: 32 @41354 has 4 MA's), (53, 41273), (55, 41258), (57, 41237), (61, 41207), (66, 41177), (81, 41102),

Gene: GageAP\_63 Start: 41646, Stop: 41380, Start Num: 28

Candidate Starts for GageAP\_63:

(Start: 26 @41649 has 47 MA's), (Start: 28 @41646 has 143 MA's), (Start: 32 @41634 has 4 MA's), (Start: 49 @41613 has 2 MA's), (53, 41562), (55, 41547), (57, 41526), (61, 41496), (66, 41466), (81, 41391),

Gene: Gandalf20\_64 Start: 42393, Stop: 42118, Start Num: 28

Candidate Starts for Gandalf20\_64:

(Start: 26 @42396 has 47 MA's), (Start: 28 @42393 has 143 MA's), (Start: 32 @42381 has 4 MA's), (Start: 49 @42351 has 2 MA's), (53, 42300), (55, 42285), (57, 42264), (61, 42234), (66, 42204),

Gene: Ganymede\_66 Start: 43845, Stop: 44087, Start Num: 47

Candidate Starts for Ganymede\_66:

(Start: 47 @43845 has 167 MA's), (56, 43935), (74, 44031), (77, 44055),

Gene: GardenSalsa\_44 Start: 33882, Stop: 34133, Start Num: 44

Candidate Starts for GardenSalsa\_44:

(Start: 44 @33882 has 16 MA's), (63, 34026), (64, 34029), (67, 34044), (78, 34098),

Gene: GenevaB15\_44 Start: 33930, Stop: 34181, Start Num: 44

Candidate Starts for GenevaB15\_44:

(Start: 44 @33930 has 16 MA's), (56, 34023), (63, 34074), (64, 34077), (67, 34092), (78, 34146),

Gene: Gengar\_60 Start: 42478, Stop: 42726, Start Num: 47

Candidate Starts for Gengar\_60:

(Start: 47 @42478 has 167 MA's), (54, 42541),

Gene: Geraldini\_69 Start: 44501, Stop: 44743, Start Num: 47

Candidate Starts for Geraldini\_69:

(Start: 47 @44501 has 167 MA's), (56, 44591), (74, 44687), (77, 44711),

Gene: Gex\_50 Start: 34921, Stop: 35169, Start Num: 42

Candidate Starts for Gex\_50:

(3, 34507), (5, 34714), (7, 34747), (17, 34843), (Start: 42 @34921 has 38 MA's), (Start: 48 @34933 has 1 MA's), (Start: 49 @34939 has 2 MA's), (56, 35017), (66, 35083), (67, 35086),

Gene: Glaske16\_40 Start: 32761, Stop: 33039, Start Num: 39

Candidate Starts for Glaske16\_40:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65, 32929), (66, 32938), (69, 32947),

Gene: GoldenEssence\_94 Start: 80932, Stop: 81180, Start Num: 44

Candidate Starts for GoldenEssence\_94:

(Start: 44 @80932 has 16 MA's), (Start: 48 @80938 has 1 MA's), (Start: 49 @80944 has 2 MA's),

Gene: Gompeii16\_61 Start: 42810, Stop: 42544, Start Num: 28

Candidate Starts for Gompeii16\_61:

(Start: 26 @42813 has 47 MA's), (Start: 28 @42810 has 143 MA's), (Start: 32 @42798 has 4 MA's), (Start: 49 @42777 has 2 MA's), (53, 42726), (55, 42711), (57, 42690), (61, 42660), (66, 42630),

Gene: Graduation\_66 Start: 42500, Stop: 42234, Start Num: 28

Candidate Starts for Graduation\_66:

(Start: 26 @42503 has 47 MA's), (Start: 28 @42500 has 143 MA's), (Start: 32 @42488 has 4 MA's), (Start: 49 @42467 has 2 MA's), (53, 42416), (55, 42401), (57, 42380), (61, 42350), (66, 42320), (81, 42245),

Gene: GrecoEtereo\_61 Start: 40288, Stop: 40022, Start Num: 28

Candidate Starts for GrecoEtereo\_61:

(Start: 26 @40291 has 47 MA's), (Start: 28 @40288 has 143 MA's), (Start: 32 @40276 has 4 MA's), (Start: 49 @40255 has 2 MA's), (53, 40204), (55, 40189), (57, 40168), (61, 40138), (66, 40108),

Gene: Greg\_63 Start: 40885, Stop: 40616, Start Num: 26

Candidate Starts for Greg\_63:

(Start: 26 @40885 has 47 MA's), (Start: 28 @40882 has 143 MA's), (Start: 32 @40870 has 4 MA's), (Start: 49 @40849 has 2 MA's), (53, 40798), (55, 40783), (57, 40762), (61, 40732), (66, 40702), (81, 40627),

Gene: GroundGoblin\_59 Start: 40911, Stop: 40645, Start Num: 28

Candidate Starts for GroundGoblin\_59:

(Start: 26 @40914 has 47 MA's), (Start: 28 @40911 has 143 MA's), (Start: 32 @40899 has 4 MA's), (Start: 49 @40878 has 2 MA's), (53, 40827), (55, 40812), (57, 40791), (61, 40761), (66, 40731),

Gene: Guanica15\_71 Start: 43944, Stop: 44186, Start Num: 47

Candidate Starts for Guanica15\_71:

(Start: 18 @43866 has 1 MA's), (Start: 47 @43944 has 167 MA's), (74, 44130),

Gene: Guillsminger\_61 Start: 42432, Stop: 42680, Start Num: 47

Candidate Starts for Guillsminger\_61:

(Start: 47 @42432 has 167 MA's), (55, 42507), (65, 42579),

Gene: Gwendoluna\_65 Start: 43032, Stop: 42778, Start Num: 32

Candidate Starts for Gwendoluna\_65:

(Start: 25 @43044 has 6 MA's), (Start: 32 @43032 has 4 MA's), (Start: 49 @43011 has 2 MA's), (53, 42960), (55, 42945), (57, 42924), (59, 42903), (61, 42894), (66, 42864),

Gene: Gyzlar\_57 Start: 38964, Stop: 38710, Start Num: 32

Candidate Starts for Gyzlar\_57:

(Start: 28 @38976 has 143 MA's), (Start: 32 @38964 has 4 MA's), (Start: 49 @38943 has 2 MA's), (53, 38892), (55, 38877), (57, 38856), (61, 38826), (66, 38796), (81, 38721),

Gene: Hami1\_57 Start: 36945, Stop: 36679, Start Num: 28

Candidate Starts for Hami1\_57:

(Start: 26 @36948 has 47 MA's), (Start: 28 @36945 has 143 MA's), (Start: 32 @36933 has 4 MA's), (Start: 49 @36912 has 2 MA's), (53, 36861), (55, 36846), (57, 36825), (61, 36795), (66, 36765),

Gene: Hammy\_66 Start: 43955, Stop: 44194, Start Num: 47

Candidate Starts for Hammy\_66:

(Start: 47 @43955 has 167 MA's), (56, 44045), (65, 44105),

Gene: HanShotFirst\_63 Start: 42830, Stop: 42531, Start Num: 26

Candidate Starts for HanShotFirst\_63:

(Start: 26 @42830 has 47 MA's), (Start: 28 @42827 has 143 MA's), (Start: 32 @42815 has 4 MA's), (Start: 42 @42782 has 38 MA's), (Start: 49 @42764 has 2 MA's), (53, 42713), (55, 42698), (57, 42677), (61, 42647), (66, 42617),

Gene: Hanako\_55 Start: 36173, Stop: 36421, Start Num: 42

Candidate Starts for Hanako\_55:

(Start: 42 @36173 has 38 MA's), (Start: 48 @36185 has 1 MA's), (66, 36335), (67, 36338), (81, 36413),

Gene: HarryOW\_60 Start: 40966, Stop: 40688, Start Num: 26

Candidate Starts for HarryOW\_60:

(Start: 26 @40966 has 47 MA's), (Start: 28 @40963 has 143 MA's), (Start: 32 @40951 has 4 MA's), (Start: 49 @40921 has 2 MA's), (53, 40870), (55, 40855), (57, 40834), (61, 40804), (66, 40774),

Gene: HedwigODU\_66 Start: 43467, Stop: 43709, Start Num: 47

Candidate Starts for HedwigODU\_66:

(Start: 47 @43467 has 167 MA's), (56, 43557), (74, 43653), (77, 43677),

Gene: Heftyboy\_61 Start: 42799, Stop: 43047, Start Num: 47

Candidate Starts for Heftyboy\_61:

(Start: 47 @42799 has 167 MA's), (55, 42874), (65, 42946), (70, 42970),

Gene: Hermia\_60 Start: 40961, Stop: 40695, Start Num: 28

Candidate Starts for Hermia\_60:

(Start: 26 @40964 has 47 MA's), (Start: 28 @40961 has 143 MA's), (Start: 32 @40949 has 4 MA's), (Start: 49 @40928 has 2 MA's), (53, 40877), (55, 40862), (57, 40841), (61, 40811), (66, 40781),

Gene: HermioneGrange\_64 Start: 42295, Stop: 41999, Start Num: 28

Candidate Starts for HermioneGrange\_64:

(Start: 26 @42298 has 47 MA's), (Start: 28 @42295 has 143 MA's), (Start: 32 @42283 has 4 MA's), (Start: 42 @42250 has 38 MA's), (Start: 49 @42232 has 2 MA's), (53, 42181), (55, 42166), (57, 42145), (61, 42115), (66, 42085), (81, 42010),

Gene: Homines\_54 Start: 37291, Stop: 37025, Start Num: 28

Candidate Starts for Homines\_54:

(Start: 26 @37294 has 47 MA's), (Start: 28 @37291 has 143 MA's), (Start: 32 @37279 has 4 MA's), (Start: 49 @37258 has 2 MA's), (53, 37207), (55, 37192), (57, 37171), (61, 37141), (66, 37111), (81, 37036),

Gene: Homura\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Homura\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Hope4ever\_63 Start: 41279, Stop: 41004, Start Num: 28

Candidate Starts for Hope4ever\_63:

(Start: 26 @41282 has 47 MA's), (Start: 28 @41279 has 143 MA's), (Start: 32 @41267 has 4 MA's), (Start: 49 @41237 has 2 MA's), (53, 41186), (55, 41171), (57, 41150), (61, 41120), (66, 41090), (81, 41015),

Gene: Hurricane\_68 Start: 44101, Stop: 44340, Start Num: 47

Candidate Starts for Hurricane\_68:

(Start: 47 @44101 has 167 MA's), (50, 44134), (56, 44188), (65, 44248), (67, 44260),

Gene: Hyperbowlee\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Hyperbowlee\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: ILeeKay\_64 Start: 41170, Stop: 40895, Start Num: 28

Candidate Starts for ILeeKay\_64:

(Start: 26 @41173 has 47 MA's), (Start: 28 @41170 has 143 MA's), (Start: 32 @41158 has 4 MA's), (53, 41077), (55, 41062), (57, 41041), (61, 41011), (66, 40981),

Gene: IPHane7\_39 Start: 32762, Stop: 33040, Start Num: 39

Candidate Starts for IPHane7\_39:

(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65, 32930), (66, 32939), (69, 32948),

Gene: Ichabod\_66 Start: 42392, Stop: 42126, Start Num: 28

Candidate Starts for Ichabod\_66:

(Start: 26 @42395 has 47 MA's), (Start: 28 @42392 has 143 MA's), (Start: 32 @42380 has 4 MA's), (Start: 49 @42359 has 2 MA's), (53, 42308), (55, 42293), (57, 42272), (61, 42242), (66, 42212), (81, 42137),

Gene: IgnatiusPatJac\_62 Start: 40958, Stop: 40662, Start Num: 28

Candidate Starts for IgnatiusPatJac\_62:

(Start: 26 @40961 has 47 MA's), (Start: 28 @40958 has 143 MA's), (Start: 32 @40946 has 4 MA's), (Start: 42 @40913 has 38 MA's), (Start: 49 @40895 has 2 MA's), (53, 40844), (55, 40829), (57, 40808), (61, 40778), (66, 40748), (81, 40673),

Gene: Illumine\_72 Start: 45460, Stop: 45702, Start Num: 47

Candidate Starts for Illumine\_72:

(Start: 47 @45460 has 167 MA's), (56, 45550), (74, 45646), (77, 45670),

Gene: Impisi\_56 Start: 35970, Stop: 36218, Start Num: 42

Candidate Starts for Impisi\_56:

(Start: 42 @35970 has 38 MA's), (Start: 48 @35982 has 1 MA's), (56, 36066), (66, 36132), (67, 36135), (81, 36210),

Gene: Inky\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Inky\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: InvictusManeo\_58 Start: 40773, Stop: 41021, Start Num: 47

Candidate Starts for InvictusManeo\_58:

(Start: 47 @40773 has 167 MA's), (62, 40905), (67, 40935), (75, 40968),

Gene: Inyanga\_57 Start: 41026, Stop: 40760, Start Num: 28

Candidate Starts for Inyanga\_57:

(Start: 26 @41029 has 47 MA's), (Start: 28 @41026 has 143 MA's), (Start: 32 @41014 has 4 MA's), (Start: 49 @40993 has 2 MA's), (53, 40942), (55, 40927), (57, 40906), (61, 40876), (66, 40846), (81, 40771),

Gene: Iqorha\_57 Start: 41025, Stop: 40759, Start Num: 28

Candidate Starts for Iqorha\_57:

(Start: 26 @41028 has 47 MA's), (Start: 28 @41025 has 143 MA's), (Start: 32 @41013 has 4 MA's), (Start: 49 @40992 has 2 MA's), (53, 40941), (55, 40926), (57, 40905), (61, 40875), (66, 40845), (81, 40770),

Gene: Izel\_40 Start: 32761, Stop: 33039, Start Num: 39

Candidate Starts for Izel\_40:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65, 32929), (66, 32938), (69, 32947),

Gene: JAWS\_67 Start: 43898, Stop: 44140, Start Num: 47

Candidate Starts for JAWS\_67:

(Start: 47 @43898 has 167 MA's), (56, 43988), (74, 44084), (77, 44108),

Gene: JC27\_65 Start: 41732, Stop: 41466, Start Num: 28

Candidate Starts for JC27\_65:

(Start: 28 @41732 has 143 MA's), (Start: 32 @41720 has 4 MA's), (38, 41705), (Start: 49 @41699 has 2 MA's), (53, 41648), (55, 41633), (57, 41612), (61, 41582), (66, 41552),

Gene: JF1\_70 Start: 43533, Stop: 43847, Start Num: 40

Candidate Starts for JF1\_70:

(Start: 40 @43533 has 22 MA's), (Start: 48 @43548 has 1 MA's), (50, 43578), (56, 43635),

Gene: Jamie19\_49 Start: 34464, Stop: 34712, Start Num: 42

Candidate Starts for Jamie19\_49:

(Start: 42 @34464 has 38 MA's), (Start: 48 @34476 has 1 MA's), (66, 34626), (67, 34629), (81, 34704),

Gene: Jarvi\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Jarvi\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Jasper\_62 Start: 40214, Stop: 39948, Start Num: 28

Candidate Starts for Jasper\_62:

(Start: 28 @40214 has 143 MA's), (Start: 32 @40202 has 4 MA's), (Start: 48 @40187 has 1 MA's), (Start: 49 @40181 has 2 MA's), (53, 40130), (55, 40115), (57, 40094), (61, 40064), (66, 40034), (81, 39959),

Gene: Jayhawk\_68 Start: 43965, Stop: 44207, Start Num: 47

Candidate Starts for Jayhawk\_68:

(Start: 47 @43965 has 167 MA's), (56, 44055), (74, 44151), (77, 44175),

Gene: Jeckyll\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Jeckyll\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Jerm2\_64 Start: 42536, Stop: 42270, Start Num: 28

Candidate Starts for Jerm2\_64:

(Start: 26 @42539 has 47 MA's), (Start: 28 @42536 has 143 MA's), (Start: 32 @42524 has 4 MA's), (Start: 49 @42503 has 2 MA's), (53, 42452), (55, 42437), (57, 42416), (61, 42386), (66, 42356), (81, 42281),

Gene: Jorgensen\_65 Start: 41384, Stop: 41109, Start Num: 28

Candidate Starts for Jorgensen\_65:

(Start: 26 @41387 has 47 MA's), (Start: 28 @41384 has 143 MA's), (Start: 32 @41372 has 4 MA's), (Start: 49 @41342 has 2 MA's), (53, 41291), (55, 41276), (57, 41255), (61, 41225), (66, 41195), (81, 41120),

Gene: Joy99\_66 Start: 43551, Stop: 43793, Start Num: 47

Candidate Starts for Joy99\_66:

(Start: 47 @43551 has 167 MA's), (56, 43641), (74, 43737), (77, 43761),

Gene: JuliaChild\_63 Start: 41613, Stop: 41338, Start Num: 28

Candidate Starts for JuliaChild\_63:

(Start: 26 @41616 has 47 MA's), (Start: 28 @41613 has 143 MA's), (Start: 32 @41601 has 4 MA's), (Start: 49 @41571 has 2 MA's), (53, 41520), (55, 41505), (57, 41484), (61, 41454), (66, 41424),

Gene: Juliette\_72 Start: 43682, Stop: 43945, Start Num: 40

Candidate Starts for Juliette\_72:

(Start: 40 @43682 has 22 MA's), (Start: 48 @43697 has 1 MA's), (56, 43784), (72, 43880), (81, 43934),

Gene: KBG\_63 Start: 43145, Stop: 42876, Start Num: 26

Candidate Starts for KBG\_63:

(Start: 26 @43145 has 47 MA's), (Start: 28 @43142 has 143 MA's), (Start: 32 @43130 has 4 MA's), (Start: 49 @43106 has 2 MA's), (52, 43061), (55, 43043), (61, 42992), (81, 42887),

Gene: KSSJEB\_62 Start: 40592, Stop: 40323, Start Num: 26

Candidate Starts for KSSJEB\_62:

(Start: 26 @40592 has 47 MA's), (Start: 28 @40589 has 143 MA's), (Start: 32 @40577 has 4 MA's), (Start: 49 @40556 has 2 MA's), (53, 40505), (55, 40490), (57, 40469), (61, 40439), (66, 40409),

Gene: Kanely\_63 Start: 41177, Stop: 40902, Start Num: 28

Candidate Starts for Kanely\_63:

(Start: 26 @41180 has 47 MA's), (Start: 28 @41177 has 143 MA's), (Start: 32 @41165 has 4 MA's), (53, 41084), (55, 41069), (57, 41048), (61, 41018), (66, 40988),

Gene: Kenmech\_65 Start: 42818, Stop: 42549, Start Num: 26

Candidate Starts for Kenmech\_65:

(Start: 26 @42818 has 47 MA's), (Start: 28 @42815 has 143 MA's), (Start: 32 @42803 has 4 MA's),  
(Start: 49 @42782 has 2 MA's), (53, 42731), (55, 42716), (57, 42695), (61, 42665), (66, 42635),

Gene: Keshu\_70 Start: 44135, Stop: 44440, Start Num: 27

Candidate Starts for Keshu\_70:

(24, 44129), (Start: 27 @44135 has 1 MA's), (35, 44156), (Start: 47 @44198 has 167 MA's), (50,  
44231), (56, 44288), (65, 44348), (67, 44360),

Gene: Kevin1\_52 Start: 34949, Stop: 35200, Start Num: 42

Candidate Starts for Kevin1\_52:

(7, 34775), (17, 34871), (Start: 42 @34949 has 38 MA's), (Start: 48 @34961 has 1 MA's), (56, 35045),  
(66, 35111), (67, 35114),

Gene: KiSi\_71 Start: 44647, Stop: 44877, Start Num: 47

Candidate Starts for KiSi\_71:

(Start: 47 @44647 has 167 MA's), (59, 44764), (65, 44782),

Gene: KikiBouba\_60 Start: 40770, Stop: 40504, Start Num: 28

Candidate Starts for KikiBouba\_60:

(Start: 26 @40773 has 47 MA's), (Start: 28 @40770 has 143 MA's), (Start: 32 @40758 has 4 MA's),  
(Start: 49 @40737 has 2 MA's), (53, 40686), (55, 40671), (57, 40650), (61, 40620), (66, 40590),

Gene: Killigrew\_61 Start: 41393, Stop: 41097, Start Num: 28

Candidate Starts for Killigrew\_61:

(Start: 26 @41396 has 47 MA's), (Start: 28 @41393 has 143 MA's), (Start: 32 @41381 has 4 MA's),  
(Start: 42 @41348 has 38 MA's), (Start: 49 @41330 has 2 MA's), (53, 41279), (55, 41264), (57,  
41243), (61, 41213), (66, 41183),

Gene: KleverKiS\_40 Start: 32760, Stop: 33020, Start Num: 44

Candidate Starts for KleverKiS\_40:

(12, 32631), (Start: 39 @32742 has 12 MA's), (Start: 44 @32760 has 16 MA's), (53, 32823), (65,  
32910), (66, 32919), (69, 32928),

Gene: Kratio\_58 Start: 40509, Stop: 40757, Start Num: 47

Candidate Starts for Kratio\_58:

(Start: 47 @40509 has 167 MA's), (62, 40641), (67, 40671), (75, 40704),

Gene: Kraw\_70 Start: 43370, Stop: 43633, Start Num: 40

Candidate Starts for Kraw\_70:

(Start: 40 @43370 has 22 MA's), (Start: 48 @43385 has 1 MA's), (56, 43472), (72, 43568), (81, 43622),

Gene: Krueger\_71 Start: 43668, Stop: 43991, Start Num: 18

Candidate Starts for Krueger\_71:

(Start: 18 @43668 has 1 MA's), (Start: 47 @43752 has 167 MA's), (Start: 49 @43761 has 2 MA's), (56,  
43842), (64, 43896), (67, 43911),

Gene: Kugel\_64 Start: 42232, Stop: 41954, Start Num: 26

Candidate Starts for Kugel\_64:

(Start: 26 @42232 has 47 MA's), (Start: 28 @42229 has 143 MA's), (Start: 32 @42217 has 4 MA's),  
(Start: 49 @42187 has 2 MA's), (53, 42136), (55, 42121), (57, 42100), (61, 42070), (66, 42040), (81,

41965),

Gene: KyMonks1A\_65 Start: 41158, Stop: 40901, Start Num: 34

Candidate Starts for KyMonks1A\_65:

(Start: 34 @41158 has 10 MA's), (Start: 48 @41140 has 1 MA's), (Start: 49 @41134 has 2 MA's), (53, 41083), (55, 41068), (57, 41047), (61, 41017), (66, 40987), (81, 40912),

Gene: Kykar\_63 Start: 41758, Stop: 41462, Start Num: 28

Candidate Starts for Kykar\_63:

(Start: 26 @41761 has 47 MA's), (Start: 28 @41758 has 143 MA's), (Start: 32 @41746 has 4 MA's), (Start: 42 @41713 has 38 MA's), (Start: 49 @41695 has 2 MA's), (53, 41644), (55, 41629), (57, 41608), (61, 41578), (66, 41548), (81, 41473),

Gene: Lamina13\_66 Start: 42549, Stop: 42280, Start Num: 26

Candidate Starts for Lamina13\_66:

(Start: 26 @42549 has 47 MA's), (Start: 28 @42546 has 143 MA's), (Start: 32 @42534 has 4 MA's), (Start: 49 @42513 has 2 MA's), (53, 42462), (55, 42447), (57, 42426), (61, 42396), (66, 42366), (81, 42291),

Gene: Larva\_61 Start: 41955, Stop: 42203, Start Num: 47

Candidate Starts for Larva\_61:

(Start: 47 @41955 has 167 MA's), (55, 42030), (65, 42102),

Gene: LastHope\_71 Start: 43062, Stop: 43310, Start Num: 47

Candidate Starts for LastHope\_71:

(Start: 47 @43062 has 167 MA's), (56, 43152), (74, 43248), (77, 43272),

Gene: LaterM\_67 Start: 44313, Stop: 44555, Start Num: 47

Candidate Starts for LaterM\_67:

(Start: 47 @44313 has 167 MA's), (56, 44403), (74, 44499), (77, 44523),

Gene: Laure\_112 Start: 79855, Stop: 80103, Start Num: 47

Candidate Starts for Laure\_112:

(Start: 47 @79855 has 167 MA's), (Start: 48 @79858 has 1 MA's), (64, 79996), (66, 80008),

Gene: Lavahound\_65 Start: 44702, Stop: 44944, Start Num: 47

Candidate Starts for Lavahound\_65:

(Start: 21 @44633 has 1 MA's), (Start: 47 @44702 has 167 MA's), (Start: 49 @44711 has 2 MA's), (53, 44762), (56, 44792), (74, 44888), (77, 44912),

Gene: LeMond\_70 Start: 44281, Stop: 44508, Start Num: 47

Candidate Starts for LeMond\_70:

(Start: 47 @44281 has 167 MA's), (59, 44398), (65, 44416), (74, 44452),

Gene: Lea83\_68 Start: 44132, Stop: 44374, Start Num: 47

Candidate Starts for Lea83\_68:

(Start: 47 @44132 has 167 MA's), (50, 44165), (56, 44222), (65, 44282), (67, 44294),

Gene: Lebo14\_69 Start: 43703, Stop: 43966, Start Num: 40

Candidate Starts for Lebo14\_69:

(Start: 40 @43703 has 22 MA's), (Start: 48 @43718 has 1 MA's), (56, 43805), (72, 43901), (81, 43955),

Gene: Lesedi\_58 Start: 39515, Stop: 39249, Start Num: 28

Candidate Starts for Lesedi\_58:

(Start: 28 @39515 has 143 MA's), (Start: 32 @39503 has 4 MA's), (Start: 49 @39482 has 2 MA's), (53, 39431), (55, 39416), (57, 39395), (61, 39365), (66, 39335), (81, 39260),

Gene: Leston\_60 Start: 42561, Stop: 42809, Start Num: 47

Candidate Starts for Leston\_60:

(Start: 47 @42561 has 167 MA's), (55, 42636), (65, 42708),

Gene: Levia\_60 Start: 40538, Stop: 40263, Start Num: 28

Candidate Starts for Levia\_60:

(Start: 26 @40541 has 47 MA's), (Start: 28 @40538 has 143 MA's), (Start: 32 @40526 has 4 MA's), (Start: 49 @40496 has 2 MA's), (55, 40430), (57, 40409), (61, 40379), (66, 40349),

Gene: Licorice\_63 Start: 42655, Stop: 42389, Start Num: 28

Candidate Starts for Licorice\_63:

(Start: 26 @42658 has 47 MA's), (Start: 28 @42655 has 143 MA's), (Start: 32 @42643 has 4 MA's), (Start: 49 @42622 has 2 MA's), (53, 42571), (55, 42556), (57, 42535), (61, 42505), (66, 42475),

Gene: LilBib\_62 Start: 42639, Stop: 42373, Start Num: 28

Candidate Starts for LilBib\_62:

(Start: 26 @42642 has 47 MA's), (Start: 28 @42639 has 143 MA's), (Start: 32 @42627 has 4 MA's), (Start: 49 @42606 has 2 MA's), (53, 42555), (55, 42540), (57, 42519), (61, 42489), (66, 42459),

Gene: LilDirt\_57 Start: 40531, Stop: 40779, Start Num: 47

Candidate Starts for LilDirt\_57:

(Start: 47 @40531 has 167 MA's), (62, 40663), (67, 40693), (75, 40726),

Gene: LilPharaoh\_56 Start: 40669, Stop: 40914, Start Num: 47

Candidate Starts for LilPharaoh\_56:

(Start: 18 @40597 has 1 MA's), (Start: 47 @40669 has 167 MA's), (58, 40774), (65, 40816), (74, 40852),

Gene: LilhomieP\_38 Start: 32762, Stop: 33040, Start Num: 39

Candidate Starts for LilhomieP\_38:

(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65, 32930), (66, 32939), (69, 32948),

Gene: LindNT\_66 Start: 44110, Stop: 44352, Start Num: 47

Candidate Starts for LindNT\_66:

(Start: 47 @44110 has 167 MA's), (56, 44200), (74, 44296),

Gene: Llorens\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Llorens\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Lockley\_59 Start: 40855, Stop: 40580, Start Num: 28

Candidate Starts for Lockley\_59:

(Start: 28 @40855 has 143 MA's), (Start: 32 @40843 has 4 MA's), (Start: 49 @40813 has 2 MA's), (53, 40762), (55, 40747), (57, 40726), (60, 40699), (61, 40696), (66, 40666), (81, 40591),

Gene: Lopton\_60 Start: 42624, Stop: 42370, Start Num: 32

Candidate Starts for Lopton\_60:

(Start: 25 @42636 has 6 MA's), (Start: 32 @42624 has 4 MA's), (Start: 49 @42603 has 2 MA's), (53, 42552), (55, 42537), (57, 42516), (61, 42486), (66, 42456),

Gene: Lunahalos\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Lunahalos\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: LunarLander\_62 Start: 41834, Stop: 41568, Start Num: 28

Candidate Starts for LunarLander\_62:

(Start: 26 @41837 has 47 MA's), (Start: 28 @41834 has 143 MA's), (Start: 32 @41822 has 4 MA's), (Start: 49 @41801 has 2 MA's), (53, 41750), (55, 41735), (57, 41714), (61, 41684), (66, 41654),

Gene: MPlant7149\_62 Start: 40186, Stop: 39887, Start Num: 26

Candidate Starts for MPlant7149\_62:

(Start: 26 @40186 has 47 MA's), (Start: 28 @40183 has 143 MA's), (Start: 32 @40171 has 4 MA's), (Start: 42 @40138 has 38 MA's), (Start: 49 @40120 has 2 MA's), (53, 40069), (55, 40054), (57, 40033), (61, 40003), (66, 39973), (81, 39898),

Gene: MacKat\_62 Start: 39405, Stop: 39647, Start Num: 47

Candidate Starts for MacKat\_62:

(Start: 47 @39405 has 167 MA's), (56, 39495), (74, 39591), (77, 39615),

Gene: MacnCheese\_70 Start: 44725, Stop: 44967, Start Num: 47

Candidate Starts for MacnCheese\_70:

(Start: 47 @44725 has 167 MA's), (50, 44758), (56, 44815), (67, 44887), (74, 44911),

Gene: Magnar\_60 Start: 41031, Stop: 40774, Start Num: 34

Candidate Starts for Magnar\_60:

(Start: 34 @41031 has 10 MA's), (Start: 48 @41013 has 1 MA's), (Start: 49 @41007 has 2 MA's), (53, 40956), (55, 40941), (57, 40920), (61, 40890), (66, 40860), (81, 40785),

Gene: Magnito\_60 Start: 40895, Stop: 40638, Start Num: 34

Candidate Starts for Magnito\_60:

(Start: 34 @40895 has 10 MA's), (Start: 48 @40877 has 1 MA's), (Start: 49 @40871 has 2 MA's), (53, 40820), (55, 40805), (57, 40784), (59, 40763), (61, 40754), (66, 40724),

Gene: Magsby\_50 Start: 34922, Stop: 35170, Start Num: 42

Candidate Starts for Magsby\_50:

(3, 34508), (5, 34715), (7, 34748), (17, 34844), (Start: 42 @34922 has 38 MA's), (Start: 48 @34934 has 1 MA's), (Start: 49 @34940 has 2 MA's), (56, 35018), (66, 35084), (67, 35087),

Gene: Makemake\_64 Start: 42602, Stop: 42336, Start Num: 25

Candidate Starts for Makemake\_64:

(Start: 25 @42602 has 6 MA's), (Start: 32 @42590 has 4 MA's), (Start: 49 @42569 has 2 MA's), (53, 42518), (55, 42503), (57, 42482), (61, 42452), (66, 42422), (81, 42347),

Gene: Malthus\_71 Start: 43370, Stop: 43633, Start Num: 40

Candidate Starts for Malthus\_71:

(Start: 40 @43370 has 22 MA's), (Start: 48 @43385 has 1 MA's), (56, 43472), (72, 43568), (81, 43622),

Gene: Manatee\_62 Start: 40921, Stop: 40652, Start Num: 26

Candidate Starts for Manatee\_62:

(Start: 26 @40921 has 47 MA's), (Start: 28 @40918 has 143 MA's), (Start: 32 @40906 has 4 MA's), (Start: 48 @40891 has 1 MA's), (Start: 49 @40885 has 2 MA's), (53, 40834), (55, 40819), (57, 40798), (61, 40768), (66, 40738),

Gene: Marcell\_58 Start: 39784, Stop: 39509, Start Num: 28

Candidate Starts for Marcell\_58:

(19, 39808), (Start: 26 @39787 has 47 MA's), (Start: 28 @39784 has 143 MA's), (Start: 32 @39772 has 4 MA's), (Start: 49 @39742 has 2 MA's), (53, 39691), (55, 39676), (57, 39655), (61, 39625), (66, 39595),

Gene: Marchy\_56 Start: 37872, Stop: 37597, Start Num: 28

Candidate Starts for Marchy\_56:

(Start: 26 @37875 has 47 MA's), (Start: 28 @37872 has 143 MA's), (Start: 32 @37860 has 4 MA's), (Start: 49 @37830 has 2 MA's), (53, 37779), (55, 37764), (57, 37743), (59, 37722), (61, 37713), (66, 37683),

Gene: Marco3\_65 Start: 42801, Stop: 42535, Start Num: 28

Candidate Starts for Marco3\_65:

(Start: 26 @42804 has 47 MA's), (Start: 28 @42801 has 143 MA's), (Start: 32 @42789 has 4 MA's), (Start: 48 @42774 has 1 MA's), (Start: 49 @42768 has 2 MA's), (53, 42717), (55, 42702), (57, 42681), (61, 42651), (66, 42621), (81, 42546),

Gene: Marcoliusprime\_69 Start: 46092, Stop: 46337, Start Num: 47

Candidate Starts for Marcoliusprime\_69:

(30, 46035), (33, 46041), (Start: 47 @46092 has 167 MA's), (56, 46182), (61, 46218), (67, 46251),

Gene: Marge\_59 Start: 40664, Stop: 40398, Start Num: 28

Candidate Starts for Marge\_59:

(Start: 26 @40667 has 47 MA's), (Start: 28 @40664 has 143 MA's), (Start: 32 @40652 has 4 MA's), (Start: 49 @40631 has 2 MA's), (53, 40580), (55, 40565), (57, 40544), (61, 40514), (66, 40484),

Gene: MarkPhew\_69 Start: 43780, Stop: 44007, Start Num: 47

Candidate Starts for MarkPhew\_69:

(Start: 47 @43780 has 167 MA's), (59, 43897), (64, 43912), (65, 43915), (74, 43951),

Gene: Maroc7\_59 Start: 41311, Stop: 41042, Start Num: 26

Candidate Starts for Maroc7\_59:

(19, 41332), (Start: 26 @41311 has 47 MA's), (Start: 28 @41308 has 143 MA's), (Start: 32 @41296 has 4 MA's), (Start: 49 @41275 has 2 MA's), (53, 41224), (55, 41209), (57, 41188), (61, 41158), (66, 41128),

Gene: Marsha\_61 Start: 42250, Stop: 41984, Start Num: 28

Candidate Starts for Marsha\_61:

(Start: 26 @42253 has 47 MA's), (Start: 28 @42250 has 143 MA's), (Start: 49 @42217 has 2 MA's), (53, 42166), (55, 42151), (57, 42130), (59, 42109), (61, 42100), (66, 42070),

Gene: Marshawn\_66 Start: 44145, Stop: 44384, Start Num: 47

Candidate Starts for Marshawn\_66:

(Start: 47 @44145 has 167 MA's), (56, 44235),

Gene: MaryBeth\_60 Start: 41488, Stop: 41222, Start Num: 28

Candidate Starts for MaryBeth\_60:

(Start: 26 @41491 has 47 MA's), (Start: 28 @41488 has 143 MA's), (Start: 32 @41476 has 4 MA's), (Start: 49 @41455 has 2 MA's), (53, 41404), (55, 41389), (57, 41368), (61, 41338), (66, 41308), (81, 41233),

Gene: McGuire\_63 Start: 40458, Stop: 40162, Start Num: 28

Candidate Starts for McGuire\_63:

(Start: 26 @40461 has 47 MA's), (Start: 28 @40458 has 143 MA's), (Start: 32 @40446 has 4 MA's), (Start: 42 @40413 has 38 MA's), (Start: 49 @40395 has 2 MA's), (53, 40344), (55, 40329), (57, 40308), (61, 40278), (66, 40248),

Gene: McMater\_69 Start: 44123, Stop: 44362, Start Num: 45

Candidate Starts for McMater\_69:

(Start: 45 @44123 has 4 MA's), (56, 44213), (61, 44249), (64, 44267), (77, 44330),

Gene: McSinger\_60 Start: 40407, Stop: 40132, Start Num: 28

Candidate Starts for McSinger\_60:

(Start: 26 @40410 has 47 MA's), (Start: 28 @40407 has 143 MA's), (Start: 32 @40395 has 4 MA's), (53, 40314), (55, 40299), (57, 40278), (61, 40248), (66, 40218),

Gene: Mdavu\_56 Start: 40930, Stop: 41175, Start Num: 47

Candidate Starts for Mdavu\_56:

(Start: 18 @40858 has 1 MA's), (Start: 47 @40930 has 167 MA's), (58, 41035), (65, 41077), (74, 41113),

Gene: MeaningOfLife\_67 Start: 44374, Stop: 44616, Start Num: 47

Candidate Starts for MeaningOfLife\_67:

(Start: 47 @44374 has 167 MA's), (56, 44464), (74, 44560), (77, 44584),

Gene: Megsy\_69 Start: 44032, Stop: 44277, Start Num: 47

Candidate Starts for Megsy\_69:

(Start: 47 @44032 has 167 MA's), (56, 44122), (74, 44218), (82, 44269),

Gene: Melville\_53 Start: 34906, Stop: 35154, Start Num: 42

Candidate Starts for Melville\_53:

(3, 34492), (5, 34699), (7, 34732), (17, 34828), (Start: 42 @34906 has 38 MA's), (Start: 48 @34918 has 1 MA's), (Start: 49 @34924 has 2 MA's), (56, 35002), (66, 35068), (67, 35071),

Gene: MetalQZJ\_59 Start: 41488, Stop: 41222, Start Num: 28

Candidate Starts for MetalQZJ\_59:

(Start: 26 @41491 has 47 MA's), (Start: 28 @41488 has 143 MA's), (Start: 32 @41476 has 4 MA's), (Start: 49 @41455 has 2 MA's), (53, 41404), (55, 41389), (57, 41368), (61, 41338), (66, 41308), (81, 41233),

Gene: Michley\_65 Start: 41769, Stop: 41494, Start Num: 28

Candidate Starts for Michley\_65:

(Start: 28 @41769 has 143 MA's), (Start: 32 @41757 has 4 MA's), (53, 41676), (55, 41661), (57, 41640), (61, 41610), (66, 41580), (81, 41505),

Gene: MilleFeuille\_57 Start: 40825, Stop: 40574, Start Num: 36

Candidate Starts for MilleFeuille\_57:

(10, 40930), (Start: 28 @40849 has 143 MA's), (Start: 36 @40825 has 4 MA's), (53, 40756), (55, 40741), (57, 40720), (59, 40699), (61, 40690), (66, 40660), (81, 40585),

Gene: Milly\_69 Start: 46066, Stop: 46311, Start Num: 47  
Candidate Starts for Milly\_69:  
(29, 46003), (Start: 47 @46066 has 167 MA's), (56, 46156), (67, 46225),

Gene: Mimi\_108 Start: 86487, Stop: 86735, Start Num: 44  
Candidate Starts for Mimi\_108:  
(Start: 44 @86487 has 16 MA's), (Start: 48 @86493 has 1 MA's), (Start: 49 @86499 has 2 MA's),

Gene: Miryou\_64 Start: 45175, Stop: 45423, Start Num: 47  
Candidate Starts for Miryou\_64:  
(Start: 47 @45175 has 167 MA's), (54, 45238),

Gene: MissDaisy\_67 Start: 42299, Stop: 42547, Start Num: 48  
Candidate Starts for MissDaisy\_67:  
(6, 42101), (Start: 40 @42284 has 22 MA's), (Start: 48 @42299 has 1 MA's), (56, 42386), (72, 42482),  
(81, 42536),

Gene: Mitti\_70 Start: 43525, Stop: 43788, Start Num: 40  
Candidate Starts for Mitti\_70:  
(Start: 40 @43525 has 22 MA's), (Start: 48 @43540 has 1 MA's), (56, 43627), (72, 43723), (81, 43777),

Gene: Mkhuseleli\_58 Start: 39493, Stop: 39260, Start Num: 49  
Candidate Starts for Mkhuseleli\_58:  
(Start: 26 @39529 has 47 MA's), (Start: 28 @39526 has 143 MA's), (Start: 32 @39514 has 4 MA's),  
(Start: 49 @39493 has 2 MA's), (53, 39442), (55, 39427), (57, 39406), (61, 39376), (66, 39346),

Gene: Molly\_63 Start: 41563, Stop: 41267, Start Num: 28  
Candidate Starts for Molly\_63:  
(Start: 26 @41566 has 47 MA's), (Start: 28 @41563 has 143 MA's), (Start: 32 @41551 has 4 MA's),  
(Start: 42 @41518 has 38 MA's), (Start: 49 @41500 has 2 MA's), (53, 41449), (55, 41434), (57,  
41413), (61, 41383), (66, 41353),

Gene: Monet\_65 Start: 43052, Stop: 42786, Start Num: 28  
Candidate Starts for Monet\_65:  
(Start: 26 @43055 has 47 MA's), (Start: 28 @43052 has 143 MA's), (Start: 32 @43040 has 4 MA's),  
(Start: 49 @43019 has 2 MA's), (53, 42968), (55, 42953), (57, 42932), (59, 42911), (61, 42902), (66,  
42872),

Gene: Moose\_63 Start: 40623, Stop: 40327, Start Num: 28  
Candidate Starts for Moose\_63:  
(Start: 26 @40626 has 47 MA's), (Start: 28 @40623 has 143 MA's), (Start: 32 @40611 has 4 MA's),  
(Start: 42 @40578 has 38 MA's), (Start: 49 @40560 has 2 MA's), (53, 40509), (55, 40494), (57,  
40473), (61, 40443), (66, 40413), (81, 40338),

Gene: MrGordo\_64 Start: 41635, Stop: 41360, Start Num: 28  
Candidate Starts for MrGordo\_64:  
(Start: 26 @41638 has 47 MA's), (Start: 28 @41635 has 143 MA's), (Start: 32 @41623 has 4 MA's),  
(Start: 49 @41593 has 2 MA's), (53, 41542), (55, 41527), (57, 41506), (61, 41476), (66, 41446), (81,  
41371),

Gene: MrMagoo\_44 Start: 33882, Stop: 34133, Start Num: 44  
Candidate Starts for MrMagoo\_44:  
(Start: 44 @33882 has 16 MA's), (63, 34026), (64, 34029), (67, 34044), (78, 34098),

Gene: Mryolo\_58 Start: 40629, Stop: 40372, Start Num: 34

Candidate Starts for Mryolo\_58:

(Start: 34 @40629 has 10 MA's), (Start: 48 @40611 has 1 MA's), (Start: 49 @40605 has 2 MA's), (53, 40554), (55, 40539), (57, 40518), (61, 40488), (66, 40458),

Gene: Mufasa\_69 Start: 45652, Stop: 45897, Start Num: 47

Candidate Starts for Mufasa\_69:

(30, 45595), (33, 45601), (Start: 47 @45652 has 167 MA's), (56, 45742), (67, 45811), (74, 45835), (83, 45889),

Gene: Mule\_59 Start: 40467, Stop: 40201, Start Num: 28

Candidate Starts for Mule\_59:

(Start: 26 @40470 has 47 MA's), (Start: 28 @40467 has 143 MA's), (Start: 32 @40455 has 4 MA's), (Start: 49 @40434 has 2 MA's), (53, 40383), (55, 40368), (57, 40347), (61, 40317), (66, 40287),

Gene: Murucutumbu\_68 Start: 44888, Stop: 45130, Start Num: 47

Candidate Starts for Murucutumbu\_68:

(Start: 47 @44888 has 167 MA's), (56, 44978), (74, 45074), (77, 45098),

Gene: Museum\_64 Start: 42785, Stop: 42486, Start Num: 26

Candidate Starts for Museum\_64:

(Start: 26 @42785 has 47 MA's), (Start: 28 @42782 has 143 MA's), (Start: 32 @42770 has 4 MA's), (Start: 42 @42737 has 38 MA's), (Start: 49 @42719 has 2 MA's), (53, 42668), (55, 42653), (57, 42632), (61, 42602), (66, 42572), (81, 42497),

Gene: Mynx\_68 Start: 44234, Stop: 44476, Start Num: 47

Candidate Starts for Mynx\_68:

(Start: 47 @44234 has 167 MA's), (56, 44324), (74, 44420), (77, 44444),

Gene: NEHalo\_59 Start: 41047, Stop: 40781, Start Num: 28

Candidate Starts for NEHalo\_59:

(Start: 26 @41050 has 47 MA's), (Start: 28 @41047 has 143 MA's), (Start: 32 @41035 has 4 MA's), (Start: 49 @41014 has 2 MA's), (53, 40963), (55, 40948), (57, 40927), (61, 40897), (66, 40867), (81, 40792),

Gene: Naira\_64 Start: 42709, Stop: 42434, Start Num: 28

Candidate Starts for Naira\_64:

(Start: 28 @42709 has 143 MA's), (Start: 32 @42697 has 4 MA's), (Start: 49 @42667 has 2 MA's), (53, 42616), (55, 42601), (57, 42580), (59, 42559), (61, 42550), (66, 42520), (81, 42445),

Gene: Nanosmite\_44 Start: 33715, Stop: 33966, Start Num: 44

Candidate Starts for Nanosmite\_44:

(Start: 44 @33715 has 16 MA's), (53, 33778), (56, 33808), (63, 33859),

Gene: Neighly\_62 Start: 41954, Stop: 42202, Start Num: 47

Candidate Starts for Neighly\_62:

(Start: 47 @41954 has 167 MA's), (55, 42029), (65, 42101),

Gene: Nenae\_55 Start: 36175, Stop: 36423, Start Num: 42

Candidate Starts for Nenae\_55:

(Start: 42 @36175 has 38 MA's), (Start: 48 @36187 has 1 MA's), (66, 36337), (67, 36340), (81, 36415),

Gene: Nerujay\_64 Start: 42393, Stop: 42118, Start Num: 28

Candidate Starts for Nerujay\_64:

(Start: 26 @42396 has 47 MA's), (Start: 28 @42393 has 143 MA's), (Start: 32 @42381 has 4 MA's), (Start: 49 @42351 has 2 MA's), (53, 42300), (55, 42285), (57, 42264), (61, 42234), (66, 42204),

Gene: Nhonho\_60 Start: 41685, Stop: 41386, Start Num: 26

Candidate Starts for Nhonho\_60:

(11, 41763), (Start: 26 @41685 has 47 MA's), (Start: 28 @41682 has 143 MA's), (Start: 32 @41670 has 4 MA's), (Start: 42 @41637 has 38 MA's), (Start: 49 @41619 has 2 MA's), (53, 41568), (55, 41553), (57, 41532), (61, 41502), (66, 41472),

Gene: Nibb\_69 Start: 43994, Stop: 44221, Start Num: 47

Candidate Starts for Nibb\_69:

(Start: 47 @43994 has 167 MA's), (65, 44129), (74, 44165),

Gene: Nikao\_58 Start: 43554, Stop: 43799, Start Num: 47

Candidate Starts for Nikao\_58:

(Start: 18 @43482 has 1 MA's), (Start: 47 @43554 has 167 MA's), (58, 43659), (65, 43701), (74, 43737),

Gene: Niklas\_69 Start: 44184, Stop: 44423, Start Num: 45

Candidate Starts for Niklas\_69:

(Start: 45 @44184 has 4 MA's), (56, 44274), (61, 44310), (64, 44328), (77, 44391),

Gene: Niza\_64 Start: 43063, Stop: 42797, Start Num: 28

Candidate Starts for Niza\_64:

(Start: 26 @43066 has 47 MA's), (Start: 28 @43063 has 143 MA's), (Start: 32 @43051 has 4 MA's), (Start: 49 @43030 has 2 MA's), (53, 42979), (55, 42964), (57, 42943), (61, 42913), (66, 42883), (81, 42808),

Gene: Norz\_62 Start: 43480, Stop: 43214, Start Num: 28

Candidate Starts for Norz\_62:

(Start: 26 @43483 has 47 MA's), (Start: 28 @43480 has 143 MA's), (Start: 32 @43468 has 4 MA's), (Start: 49 @43447 has 2 MA's), (53, 43396), (55, 43381), (57, 43360), (61, 43330), (66, 43300),

Gene: November\_64 Start: 43864, Stop: 44103, Start Num: 47

Candidate Starts for November\_64:

(23, 43798), (Start: 47 @43864 has 167 MA's), (Start: 49 @43873 has 2 MA's), (74, 44050),

Gene: Noxious\_59 Start: 40961, Stop: 40695, Start Num: 28

Candidate Starts for Noxious\_59:

(Start: 26 @40964 has 47 MA's), (Start: 28 @40961 has 143 MA's), (Start: 32 @40949 has 4 MA's), (Start: 49 @40928 has 2 MA's), (53, 40877), (55, 40862), (57, 40841), (61, 40811), (66, 40781),

Gene: Nutello\_55 Start: 40941, Stop: 41186, Start Num: 47

Candidate Starts for Nutello\_55:

(Start: 18 @40869 has 1 MA's), (Start: 47 @40941 has 167 MA's), (58, 41046), (65, 41088), (74, 41124),

Gene: Ohno789\_62 Start: 41791, Stop: 41525, Start Num: 28

Candidate Starts for Ohno789\_62:

(Start: 28 @41791 has 143 MA's), (Start: 32 @41779 has 4 MA's), (Start: 48 @41764 has 1 MA's), (Start: 49 @41758 has 2 MA's), (53, 41707), (55, 41692), (57, 41671), (61, 41641), (66, 41611), (81,

41536),

Gene: OkiRoe\_61 Start: 42847, Stop: 43095, Start Num: 47

Candidate Starts for OkiRoe\_61:

(Start: 47 @42847 has 167 MA's), (54, 42910),

Gene: OmniCritical\_69 Start: 43407, Stop: 43721, Start Num: 40

Candidate Starts for OmniCritical\_69:

(Start: 40 @43407 has 22 MA's), (Start: 48 @43422 has 1 MA's), (50, 43452), (56, 43509),

Gene: Omnicron\_64 Start: 42953, Stop: 43201, Start Num: 47

Candidate Starts for Omnicron\_64:

(Start: 47 @42953 has 167 MA's), (51, 42998),

Gene: Oogway\_61 Start: 42078, Stop: 41827, Start Num: 42

Candidate Starts for Oogway\_61:

(Start: 26 @42126 has 47 MA's), (Start: 28 @42123 has 143 MA's), (Start: 32 @42111 has 4 MA's),  
(Start: 42 @42078 has 38 MA's), (Start: 49 @42060 has 2 MA's), (53, 42009), (55, 41994), (57,  
41973), (61, 41943), (66, 41913), (81, 41838),

Gene: Oscar\_70 Start: 44198, Stop: 44425, Start Num: 47

Candidate Starts for Oscar\_70:

(Start: 47 @44198 has 167 MA's), (59, 44315), (65, 44333),

Gene: PSullivan\_60 Start: 39680, Stop: 39405, Start Num: 28

Candidate Starts for PSullivan\_60:

(Start: 26 @39683 has 47 MA's), (Start: 28 @39680 has 143 MA's), (Start: 32 @39668 has 4 MA's),  
(Start: 49 @39638 has 2 MA's), (53, 39587), (55, 39572), (57, 39551), (61, 39521), (66, 39491),

Gene: PacerPaul\_61 Start: 41105, Stop: 40827, Start Num: 26

Candidate Starts for PacerPaul\_61:

(Start: 26 @41105 has 47 MA's), (Start: 28 @41102 has 143 MA's), (Start: 32 @41090 has 4 MA's),  
(Start: 49 @41060 has 2 MA's), (53, 41009), (55, 40994), (57, 40973), (61, 40943), (66, 40913),

Gene: Padfoot\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Padfoot\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: Padpat\_69 Start: 43939, Stop: 44181, Start Num: 47

Candidate Starts for Padpat\_69:

(Start: 47 @43939 has 167 MA's), (56, 44029), (74, 44125), (77, 44149),

Gene: Panchino\_48 Start: 35810, Stop: 36058, Start Num: 42

Candidate Starts for Panchino\_48:

(7, 35636), (17, 35732), (Start: 42 @35810 has 38 MA's), (Start: 48 @35822 has 1 MA's), (56, 35906),  
(66, 35972), (67, 35975),

Gene: Paola\_60 Start: 42432, Stop: 42680, Start Num: 47

Candidate Starts for Paola\_60:

(Start: 47 @42432 has 167 MA's), (55, 42507), (65, 42579),

Gene: Papez\_64 Start: 42624, Stop: 42355, Start Num: 26

Candidate Starts for Papez\_64:

(Start: 26 @42624 has 47 MA's), (Start: 28 @42621 has 143 MA's), (Start: 32 @42609 has 4 MA's),  
(Start: 49 @42588 has 2 MA's), (53, 42537), (55, 42522), (57, 42501), (61, 42471), (66, 42441),

Gene: Paphu\_62 Start: 41937, Stop: 41638, Start Num: 26

Candidate Starts for Paphu\_62:

(Start: 26 @41937 has 47 MA's), (Start: 28 @41934 has 143 MA's), (Start: 32 @41922 has 4 MA's),  
(Start: 42 @41889 has 38 MA's), (Start: 49 @41871 has 2 MA's), (53, 41820), (55, 41805), (57,  
41784), (61, 41754), (66, 41724), (81, 41649),

Gene: Paraselene\_60 Start: 41399, Stop: 41133, Start Num: 28

Candidate Starts for Paraselene\_60:

(Start: 26 @41402 has 47 MA's), (Start: 28 @41399 has 143 MA's), (Start: 32 @41387 has 4 MA's),  
(Start: 49 @41366 has 2 MA's), (53, 41315), (55, 41300), (57, 41279), (61, 41249), (66, 41219), (81,  
41144),

Gene: Pari\_65 Start: 40809, Stop: 40543, Start Num: 28

Candidate Starts for Pari\_65:

(Start: 26 @40812 has 47 MA's), (Start: 28 @40809 has 143 MA's), (Start: 32 @40797 has 4 MA's),  
(Start: 48 @40782 has 1 MA's), (Start: 49 @40776 has 2 MA's), (53, 40725), (55, 40710), (57, 40689),  
(61, 40659), (66, 40629), (81, 40554),

Gene: Parliament\_64 Start: 43726, Stop: 43430, Start Num: 28

Candidate Starts for Parliament\_64:

(Start: 26 @43729 has 47 MA's), (Start: 28 @43726 has 143 MA's), (Start: 32 @43714 has 4 MA's),  
(Start: 42 @43681 has 38 MA's), (Start: 49 @43663 has 2 MA's), (53, 43612), (55, 43597), (57,  
43576), (61, 43546), (66, 43516), (81, 43441),

Gene: Parmesanjohn\_50 Start: 34925, Stop: 35173, Start Num: 42

Candidate Starts for Parmesanjohn\_50:

(3, 34511), (5, 34718), (7, 34751), (17, 34847), (Start: 42 @34925 has 38 MA's), (Start: 48 @34937  
has 1 MA's), (Start: 49 @34943 has 2 MA's), (56, 35021), (66, 35087), (67, 35090),

Gene: PascalRango\_60 Start: 40921, Stop: 40646, Start Num: 28

Candidate Starts for PascalRango\_60:

(Start: 26 @40924 has 47 MA's), (Start: 28 @40921 has 143 MA's), (Start: 32 @40909 has 4 MA's),  
(Start: 49 @40879 has 2 MA's), (53, 40828), (55, 40813), (57, 40792), (61, 40762), (66, 40732),

Gene: Patbob\_107 Start: 87222, Stop: 87470, Start Num: 44

Candidate Starts for Patbob\_107:

(Start: 44 @87222 has 16 MA's), (Start: 48 @87228 has 1 MA's), (Start: 49 @87234 has 2 MA's),

Gene: Patt\_66 Start: 42008, Stop: 42271, Start Num: 40

Candidate Starts for Patt\_66:

(6, 41825), (Start: 40 @42008 has 22 MA's), (56, 42110), (72, 42206), (81, 42260),

Gene: PattyP\_64 Start: 42323, Stop: 42045, Start Num: 26

Candidate Starts for PattyP\_64:

(Start: 26 @42323 has 47 MA's), (Start: 28 @42320 has 143 MA's), (Start: 32 @42308 has 4 MA's),  
(Start: 49 @42278 has 2 MA's), (53, 42227), (55, 42212), (57, 42191), (61, 42161), (66, 42131),

Gene: Payneful\_60 Start: 40589, Stop: 40314, Start Num: 28

Candidate Starts for Payneful\_60:

(Start: 26 @40592 has 47 MA's), (Start: 28 @40589 has 143 MA's), (Start: 32 @40577 has 4 MA's), (Start: 49 @40547 has 2 MA's), (53, 40496), (55, 40481), (57, 40460), (59, 40439), (61, 40430), (66, 40400),

Gene: Peanam\_69 Start: 44141, Stop: 44380, Start Num: 45

Candidate Starts for Peanam\_69:

(Start: 45 @44141 has 4 MA's), (56, 44231), (61, 44267), (64, 44285), (77, 44348),

Gene: Peel\_66 Start: 43624, Stop: 43866, Start Num: 47

Candidate Starts for Peel\_66:

(Start: 47 @43624 has 167 MA's), (56, 43714), (74, 43810), (77, 43834),

Gene: PegLeg\_39 Start: 32761, Stop: 33039, Start Num: 39

Candidate Starts for PegLeg\_39:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65, 32929), (66, 32938), (69, 32947),

Gene: Pelly\_63 Start: 43135, Stop: 42869, Start Num: 28

Candidate Starts for Pelly\_63:

(Start: 26 @43138 has 47 MA's), (Start: 28 @43135 has 143 MA's), (Start: 32 @43123 has 4 MA's), (Start: 49 @43102 has 2 MA's), (53, 43051), (55, 43036), (57, 43015), (61, 42985), (66, 42955), (81, 42880),

Gene: Pepe\_60 Start: 40251, Stop: 39985, Start Num: 28

Candidate Starts for Pepe\_60:

(Start: 26 @40254 has 47 MA's), (Start: 28 @40251 has 143 MA's), (Start: 32 @40239 has 4 MA's), (Start: 48 @40224 has 1 MA's), (Start: 49 @40218 has 2 MA's), (53, 40167), (55, 40152), (61, 40101), (66, 40071),

Gene: Perseus\_61 Start: 42872, Stop: 42606, Start Num: 28

Candidate Starts for Perseus\_61:

(Start: 26 @42875 has 47 MA's), (Start: 28 @42872 has 143 MA's), (Start: 32 @42860 has 4 MA's), (Start: 49 @42839 has 2 MA's), (53, 42788), (55, 42773), (57, 42752), (61, 42722), (66, 42692),

Gene: Peterson\_66 Start: 43632, Stop: 43366, Start Num: 28

Candidate Starts for Peterson\_66:

(Start: 28 @43632 has 143 MA's), (Start: 32 @43620 has 4 MA's), (Start: 49 @43599 has 2 MA's), (53, 43548), (55, 43533), (57, 43512), (61, 43482), (66, 43452), (81, 43377),

Gene: Petp2012\_65 Start: 43269, Stop: 42970, Start Num: 26

Candidate Starts for Petp2012\_65:

(Start: 26 @43269 has 47 MA's), (Start: 28 @43266 has 143 MA's), (Start: 32 @43254 has 4 MA's), (Start: 42 @43221 has 38 MA's), (Start: 49 @43203 has 2 MA's), (53, 43152), (55, 43137), (57, 43116), (61, 43086), (66, 43056), (81, 42981),

Gene: Petruccio\_62 Start: 40710, Stop: 40435, Start Num: 28

Candidate Starts for Petruccio\_62:

(Start: 26 @40713 has 47 MA's), (Start: 28 @40710 has 143 MA's), (Start: 32 @40698 has 4 MA's), (Start: 49 @40668 has 2 MA's), (53, 40617), (55, 40602), (57, 40581), (61, 40551), (66, 40521), (81, 40446),

Gene: PhancyPhin\_55 Start: 36169, Stop: 36417, Start Num: 42

Candidate Starts for PhancyPhin\_55:

(Start: 42 @36169 has 38 MA's), (Start: 48 @36181 has 1 MA's), (66, 36331), (67, 36334), (81, 36409),

Gene: Pharb\_67 Start: 43448, Stop: 43690, Start Num: 47

Candidate Starts for Pharb\_67:

(Start: 47 @43448 has 167 MA's), (50, 43481), (56, 43538), (67, 43610),

Gene: PhelpsODU\_68 Start: 43391, Stop: 43630, Start Num: 47

Candidate Starts for PhelpsODU\_68:

(Start: 47 @43391 has 167 MA's), (Start: 49 @43400 has 2 MA's), (56, 43481), (67, 43550),

Gene: PherrisBueller\_61 Start: 39865, Stop: 39599, Start Num: 28

Candidate Starts for PherrisBueller\_61:

(Start: 28 @39865 has 143 MA's), (Start: 32 @39853 has 4 MA's), (Start: 48 @39838 has 1 MA's), (Start: 49 @39832 has 2 MA's), (53, 39781), (55, 39766), (57, 39745), (61, 39715), (66, 39685), (81, 39610),

Gene: PhineBark\_62 Start: 41556, Stop: 41281, Start Num: 28

Candidate Starts for PhineBark\_62:

(Start: 26 @41559 has 47 MA's), (Start: 28 @41556 has 143 MA's), (Start: 32 @41544 has 4 MA's), (Start: 49 @41514 has 2 MA's), (55, 41448), (57, 41427), (61, 41397), (66, 41367),

Gene: Phlippers\_58 Start: 41400, Stop: 41134, Start Num: 28

Candidate Starts for Phlippers\_58:

(Start: 26 @41403 has 47 MA's), (Start: 28 @41400 has 143 MA's), (Start: 32 @41388 has 4 MA's), (Start: 49 @41367 has 2 MA's), (53, 41316), (55, 41301), (57, 41280), (61, 41250), (66, 41220),

Gene: Phloss\_48 Start: 34332, Stop: 34580, Start Num: 42

Candidate Starts for Phloss\_48:

(3, 33918), (5, 34125), (7, 34158), (17, 34254), (Start: 42 @34332 has 38 MA's), (Start: 48 @34344 has 1 MA's), (Start: 49 @34350 has 2 MA's), (56, 34428), (66, 34494), (67, 34497),

Gene: Phrampa\_101 Start: 88629, Stop: 88877, Start Num: 44

Candidate Starts for Phrampa\_101:

(Start: 44 @88629 has 16 MA's), (Start: 48 @88635 has 1 MA's), (Start: 49 @88641 has 2 MA's), (64, 88773),

Gene: Phrank\_70 Start: 43454, Stop: 43693, Start Num: 47

Candidate Starts for Phrank\_70:

(Start: 18 @43370 has 1 MA's), (Start: 47 @43454 has 167 MA's), (Start: 49 @43463 has 2 MA's), (56, 43544), (64, 43598),

Gene: Phrann\_52 Start: 36452, Stop: 36700, Start Num: 42

Candidate Starts for Phrann\_52:

(Start: 42 @36452 has 38 MA's), (Start: 48 @36464 has 1 MA's), (66, 36614), (67, 36617), (81, 36692),

Gene: PhrostyMug\_62 Start: 42644, Stop: 42375, Start Num: 26

Candidate Starts for PhrostyMug\_62:

(Start: 26 @42644 has 47 MA's), (Start: 28 @42641 has 143 MA's), (Start: 32 @42629 has 4 MA's), (Start: 49 @42608 has 2 MA's), (53, 42557), (55, 42542), (57, 42521), (61, 42491), (66, 42461),

Gene: Piatt\_66 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for Piatt\_66:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: PinkPlastic\_62 Start: 41194, Stop: 40919, Start Num: 28

Candidate Starts for PinkPlastic\_62:

(Start: 26 @41197 has 47 MA's), (Start: 28 @41194 has 143 MA's), (Start: 32 @41182 has 4 MA's), (Start: 49 @41152 has 2 MA's), (53, 41101), (55, 41086), (57, 41065), (61, 41035), (66, 41005), (81, 40930),

Gene: Pinto\_62 Start: 40971, Stop: 40705, Start Num: 25

Candidate Starts for Pinto\_62:

(Start: 25 @40971 has 6 MA's), (Start: 32 @40959 has 4 MA's), (Start: 49 @40938 has 2 MA's), (53, 40887), (55, 40872), (57, 40851), (61, 40821), (66, 40791), (81, 40716),

Gene: Pippin\_62 Start: 40576, Stop: 40307, Start Num: 26

Candidate Starts for Pippin\_62:

(Start: 26 @40576 has 47 MA's), (Start: 28 @40573 has 143 MA's), (Start: 32 @40561 has 4 MA's), (Start: 49 @40540 has 2 MA's), (53, 40489), (55, 40474), (57, 40453), (61, 40423), (66, 40393),

Gene: Pipsqueaks\_50 Start: 34902, Stop: 35150, Start Num: 42

Candidate Starts for Pipsqueaks\_50:

(3, 34488), (5, 34695), (7, 34728), (17, 34824), (Start: 42 @34902 has 38 MA's), (Start: 48 @34914 has 1 MA's), (Start: 49 @34920 has 2 MA's), (56, 34998), (66, 35064), (67, 35067),

Gene: Pisa1\_66 Start: 44437, Stop: 44682, Start Num: 47

Candidate Starts for Pisa1\_66:

(Start: 47 @44437 has 167 MA's), (56, 44527), (74, 44623), (77, 44647),

Gene: Pisa4\_60 Start: 39806, Stop: 40051, Start Num: 47

Candidate Starts for Pisa4\_60:

(Start: 47 @39806 has 167 MA's), (56, 39896), (74, 39992), (77, 40016),

Gene: Pita2\_63 Start: 41180, Stop: 40902, Start Num: 26

Candidate Starts for Pita2\_63:

(Start: 26 @41180 has 47 MA's), (Start: 28 @41177 has 143 MA's), (Start: 32 @41165 has 4 MA's), (Start: 49 @41135 has 2 MA's), (53, 41084), (55, 41069), (57, 41048), (61, 41018), (66, 40988),

Gene: Pixie\_67 Start: 43623, Stop: 43865, Start Num: 47

Candidate Starts for Pixie\_67:

(Start: 47 @43623 has 167 MA's), (50, 43656), (56, 43713), (59, 43740), (65, 43773), (67, 43785),

Gene: Pokerus\_66 Start: 43964, Stop: 44206, Start Num: 47

Candidate Starts for Pokerus\_66:

(Start: 47 @43964 has 167 MA's), (56, 44054), (74, 44150), (77, 44174),

Gene: Pollywog\_85 Start: 50811, Stop: 51077, Start Num: 25

Candidate Starts for Pollywog\_85:

(Start: 25 @50811 has 6 MA's), (Start: 32 @50823 has 4 MA's), (Start: 49 @50844 has 2 MA's), (53, 50895), (55, 50910), (57, 50931), (59, 50952), (61, 50961), (66, 50991), (81, 51066),

Gene: PowerRanger\_60 Start: 42237, Stop: 41971, Start Num: 28

Candidate Starts for PowerRanger\_60:

(Start: 26 @42240 has 47 MA's), (Start: 28 @42237 has 143 MA's), (Start: 32 @42225 has 4 MA's), (Start: 49 @42204 has 2 MA's), (53, 42153), (55, 42138), (61, 42087), (76, 42012), (81, 41982),

Gene: Prithvi\_68 Start: 44110, Stop: 44352, Start Num: 47  
Candidate Starts for Prithvi\_68:  
(Start: 47 @44110 has 167 MA's), (56, 44200), (74, 44296),

Gene: ProMouse\_61 Start: 41373, Stop: 41077, Start Num: 28  
Candidate Starts for ProMouse\_61:  
(14, 41430), (Start: 28 @41373 has 143 MA's), (Start: 32 @41361 has 4 MA's), (Start: 42 @41328 has 38 MA's), (Start: 49 @41310 has 2 MA's), (55, 41244), (57, 41223), (61, 41193), (66, 41163), (81, 41088),

Gene: Psycho\_60 Start: 41080, Stop: 41328, Start Num: 47  
Candidate Starts for Psycho\_60:  
(Start: 47 @41080 has 167 MA's), (55, 41155), (65, 41227),

Gene: Puppet\_60 Start: 42578, Stop: 42312, Start Num: 28  
Candidate Starts for Puppet\_60:  
(Start: 26 @42581 has 47 MA's), (Start: 28 @42578 has 143 MA's), (Start: 32 @42566 has 4 MA's), (Start: 49 @42545 has 2 MA's), (53, 42494), (55, 42479), (57, 42458), (59, 42437), (61, 42428), (66, 42398),

Gene: Purgamenstris\_55 Start: 36173, Stop: 36421, Start Num: 42  
Candidate Starts for Purgamenstris\_55:  
(Start: 42 @36173 has 38 MA's), (Start: 48 @36185 has 1 MA's), (66, 36335), (67, 36338), (81, 36413),

Gene: QTRlifeCrisis\_62 Start: 41518, Stop: 41243, Start Num: 28  
Candidate Starts for QTRlifeCrisis\_62:  
(Start: 26 @41521 has 47 MA's), (Start: 28 @41518 has 143 MA's), (Start: 32 @41506 has 4 MA's), (Start: 49 @41476 has 2 MA's), (53, 41425), (55, 41410), (57, 41389), (61, 41359), (66, 41329),

Gene: Qhanda\_72 Start: 43386, Stop: 43649, Start Num: 40  
Candidate Starts for Qhanda\_72:  
(Start: 40 @43386 has 22 MA's), (Start: 48 @43401 has 1 MA's), (56, 43488), (72, 43584), (81, 43638),

Gene: QuincyRose\_64 Start: 43845, Stop: 44087, Start Num: 47  
Candidate Starts for QuincyRose\_64:  
(Start: 47 @43845 has 167 MA's), (56, 43935), (74, 44031), (77, 44055),

Gene: Racecar\_109 Start: 87140, Stop: 87388, Start Num: 44  
Candidate Starts for Racecar\_109:  
(Start: 44 @87140 has 16 MA's), (Start: 48 @87146 has 1 MA's), (Start: 49 @87152 has 2 MA's),

Gene: Rajelicia\_62 Start: 42806, Stop: 42531, Start Num: 28  
Candidate Starts for Rajelicia\_62:  
(Start: 26 @42809 has 47 MA's), (Start: 28 @42806 has 143 MA's), (Start: 32 @42794 has 4 MA's), (Start: 49 @42764 has 2 MA's), (53, 42713), (55, 42698), (57, 42677), (61, 42647), (66, 42617),

Gene: Ramen\_67 Start: 43469, Stop: 43711, Start Num: 47  
Candidate Starts for Ramen\_67:  
(Start: 47 @43469 has 167 MA's), (56, 43559), (74, 43655), (77, 43679),

Gene: Rando14\_62 Start: 40667, Stop: 40915, Start Num: 47  
Candidate Starts for Rando14\_62:  
(Start: 47 @40667 has 167 MA's),

Gene: Rapunzel97\_68 Start: 43920, Stop: 44162, Start Num: 47  
Candidate Starts for Rapunzel97\_68:  
(Start: 47 @43920 has 167 MA's), (56, 44010), (74, 44106), (77, 44130),

Gene: Raymond7\_49 Start: 35961, Stop: 36209, Start Num: 42  
Candidate Starts for Raymond7\_49:  
(Start: 42 @35961 has 38 MA's), (Start: 48 @35973 has 1 MA's), (66, 36123), (67, 36126), (81, 36201),

Gene: Redi\_55 Start: 36172, Stop: 36420, Start Num: 42  
Candidate Starts for Redi\_55:  
(Start: 42 @36172 has 38 MA's), (Start: 48 @36184 has 1 MA's), (66, 36334), (67, 36337), (81, 36412),

Gene: Reindeer\_39 Start: 33229, Stop: 33507, Start Num: 39  
Candidate Starts for Reindeer\_39:  
(Start: 39 @33229 has 12 MA's), (Start: 44 @33247 has 16 MA's), (53, 33310), (55, 33325), (65, 33397), (66, 33406), (67, 33409), (69, 33415),

Gene: Reptar3000\_67 Start: 41997, Stop: 42260, Start Num: 40  
Candidate Starts for Reptar3000\_67:  
(Start: 40 @41997 has 22 MA's), (56, 42099), (72, 42195), (81, 42249),

Gene: Rey\_44 Start: 34155, Stop: 34406, Start Num: 43  
Candidate Starts for Rey\_44:  
(Start: 43 @34155 has 1 MA's), (56, 34248), (63, 34299), (64, 34302), (66, 34314),

Gene: Rhynn\_60 Start: 40743, Stop: 40474, Start Num: 26  
Candidate Starts for Rhynn\_60:  
(Start: 8 @40845 has 1 MA's), (9, 40842), (13, 40797), (16, 40779), (Start: 26 @40743 has 47 MA's),  
(Start: 28 @40740 has 143 MA's), (Start: 32 @40728 has 4 MA's), (Start: 49 @40707 has 2 MA's), (53, 40656), (55, 40641), (57, 40620), (61, 40590), (66, 40560),

Gene: Richo\_69 Start: 44123, Stop: 44362, Start Num: 45  
Candidate Starts for Richo\_69:  
(Start: 45 @44123 has 4 MA's), (56, 44213), (61, 44249), (64, 44267), (77, 44330),

Gene: RidgeCB\_61 Start: 40947, Stop: 40681, Start Num: 25  
Candidate Starts for RidgeCB\_61:  
(Start: 25 @40947 has 6 MA's), (Start: 32 @40935 has 4 MA's), (Start: 49 @40914 has 2 MA's), (53, 40863), (55, 40848), (57, 40827), (61, 40797), (66, 40767),

Gene: Ringer\_62 Start: 42252, Stop: 42001, Start Num: 36  
Candidate Starts for Ringer\_62:  
(10, 42357), (Start: 36 @42252 has 4 MA's), (53, 42183), (55, 42168), (57, 42147), (61, 42117), (66, 42087), (81, 42012),

Gene: Rockabye\_113 Start: 80343, Stop: 80585, Start Num: 44  
Candidate Starts for Rockabye\_113:  
(Start: 34 @80295 has 10 MA's), (Start: 44 @80343 has 16 MA's), (56, 80433), (67, 80502),

Gene: Rohr\_64 Start: 42615, Stop: 42316, Start Num: 26  
Candidate Starts for Rohr\_64:

(Start: 26 @42615 has 47 MA's), (Start: 28 @42612 has 143 MA's), (Start: 32 @42600 has 4 MA's),  
(Start: 42 @42567 has 38 MA's), (Start: 49 @42549 has 2 MA's), (53, 42498), (55, 42483), (57,  
42462), (61, 42432), (66, 42402), (81, 42327),

Gene: Rosmarinus\_66 Start: 43610, Stop: 43852, Start Num: 47  
Candidate Starts for Rosmarinus\_66:  
(Start: 47 @43610 has 167 MA's), (56, 43700), (74, 43796), (77, 43820),

Gene: Rubeelu\_53 Start: 35513, Stop: 35761, Start Num: 42  
Candidate Starts for Rubeelu\_53:  
(7, 35339), (17, 35435), (Start: 42 @35513 has 38 MA's), (Start: 48 @35525 has 1 MA's), (56, 35609),  
(66, 35675), (67, 35678),

Gene: Rubeus\_60 Start: 38752, Stop: 38498, Start Num: 32  
Candidate Starts for Rubeus\_60:  
(Start: 25 @38764 has 6 MA's), (Start: 32 @38752 has 4 MA's), (Start: 49 @38731 has 2 MA's), (53,  
38680), (55, 38665), (57, 38644), (61, 38614), (66, 38584), (81, 38509),

Gene: Rufus\_63 Start: 41448, Stop: 41182, Start Num: 25  
Candidate Starts for Rufus\_63:  
(Start: 25 @41448 has 6 MA's), (Start: 32 @41436 has 4 MA's), (Start: 49 @41415 has 2 MA's), (53,  
41364), (55, 41349), (57, 41328), (61, 41298), (66, 41268), (81, 41193),

Gene: Ruotula\_64 Start: 42952, Stop: 42695, Start Num: 34  
Candidate Starts for Ruotula\_64:  
(Start: 34 @42952 has 10 MA's), (Start: 48 @42934 has 1 MA's), (Start: 49 @42928 has 2 MA's), (53,  
42877), (55, 42862), (57, 42841), (61, 42811), (66, 42781),

Gene: Rutherferd\_64 Start: 42559, Stop: 42290, Start Num: 26  
Candidate Starts for Rutherferd\_64:  
(Start: 8 @42661 has 1 MA's), (9, 42658), (13, 42613), (16, 42595), (Start: 26 @42559 has 47 MA's),  
(Start: 28 @42556 has 143 MA's), (Start: 32 @42544 has 4 MA's), (Start: 49 @42523 has 2 MA's), (53,  
42472), (55, 42457), (57, 42436), (61, 42406), (66, 42376),

Gene: Ruthiejr\_71 Start: 43418, Stop: 43732, Start Num: 40  
Candidate Starts for Ruthiejr\_71:  
(Start: 40 @43418 has 22 MA's), (Start: 48 @43433 has 1 MA's), (50, 43463), (56, 43520),

Gene: SJReid\_112 Start: 79391, Stop: 79633, Start Num: 44  
Candidate Starts for SJReid\_112:  
(Start: 44 @79391 has 16 MA's), (64, 79535),

Gene: STLscum\_70 Start: 43220, Stop: 42969, Start Num: 36  
Candidate Starts for STLscum\_70:  
(10, 43325), (Start: 36 @43220 has 4 MA's), (53, 43151), (55, 43136), (57, 43115), (61, 43085), (66,  
43055), (81, 42980),

Gene: Sagefire\_64 Start: 42827, Stop: 42561, Start Num: 28  
Candidate Starts for Sagefire\_64:  
(Start: 26 @42830 has 47 MA's), (Start: 28 @42827 has 143 MA's), (Start: 32 @42815 has 4 MA's),  
(Start: 49 @42794 has 2 MA's), (53, 42743), (55, 42728), (57, 42707), (61, 42677), (66, 42647),

Gene: SamScheppers\_68 Start: 43849, Stop: 44112, Start Num: 40

Candidate Starts for SamScheppers\_68:

(Start: 40 @43849 has 22 MA's), (Start: 48 @43864 has 1 MA's), (56, 43951), (72, 44047), (81, 44101),

Gene: SamuelLPlaqson\_67 Start: 44362, Stop: 44604, Start Num: 47

Candidate Starts for SamuelLPlaqson\_67:

(Start: 47 @44362 has 167 MA's), (56, 44452), (74, 44548), (77, 44572),

Gene: Sandaddy\_58 Start: 40699, Stop: 40442, Start Num: 34

Candidate Starts for Sandaddy\_58:

(Start: 34 @40699 has 10 MA's), (Start: 48 @40681 has 1 MA's), (Start: 49 @40675 has 2 MA's), (53, 40624), (55, 40609), (57, 40588), (61, 40558), (66, 40528), (81, 40453),

Gene: Sanya\_57 Start: 41974, Stop: 41741, Start Num: 49

Candidate Starts for Sanya\_57:

(Start: 25 @42007 has 6 MA's), (Start: 32 @41995 has 4 MA's), (Start: 49 @41974 has 2 MA's), (53, 41923), (55, 41908), (57, 41887), (61, 41857), (66, 41827), (81, 41752),

Gene: SarFire\_61 Start: 41167, Stop: 40898, Start Num: 26

Candidate Starts for SarFire\_61:

(Start: 26 @41167 has 47 MA's), (Start: 28 @41164 has 143 MA's), (Start: 32 @41152 has 4 MA's), (Start: 48 @41137 has 1 MA's), (Start: 49 @41131 has 2 MA's), (53, 41080), (55, 41065), (57, 41044), (61, 41014), (66, 40984), (81, 40909),

Gene: Scarlett\_71 Start: 44528, Stop: 44758, Start Num: 47

Candidate Starts for Scarlett\_71:

(Start: 47 @44528 has 167 MA's), (59, 44645), (65, 44663),

Gene: Schnauzer\_51 Start: 34925, Stop: 35173, Start Num: 42

Candidate Starts for Schnauzer\_51:

(3, 34511), (5, 34718), (7, 34751), (17, 34847), (Start: 42 @34925 has 38 MA's), (Start: 48 @34937 has 1 MA's), (Start: 49 @34943 has 2 MA's), (56, 35021), (66, 35087), (67, 35090),

Gene: Scowl\_63 Start: 41099, Stop: 40830, Start Num: 26

Candidate Starts for Scowl\_63:

(Start: 26 @41099 has 47 MA's), (Start: 28 @41096 has 143 MA's), (Start: 32 @41084 has 4 MA's), (Start: 49 @41060 has 2 MA's), (52, 41015), (55, 40997), (61, 40946), (81, 40841),

Gene: Seabiscuit\_65 Start: 40723, Stop: 40424, Start Num: 26

Candidate Starts for Seabiscuit\_65:

(Start: 26 @40723 has 47 MA's), (Start: 28 @40720 has 143 MA's), (Start: 32 @40708 has 4 MA's), (Start: 42 @40675 has 38 MA's), (Start: 49 @40657 has 2 MA's), (53, 40606), (55, 40591), (57, 40570), (61, 40540), (66, 40510),

Gene: Seanderson\_64 Start: 43120, Stop: 42836, Start Num: 22

Candidate Starts for Seanderson\_64:

(Start: 22 @43120 has 1 MA's), (Start: 28 @43102 has 143 MA's), (Start: 32 @43090 has 4 MA's), (Start: 48 @43075 has 1 MA's), (Start: 49 @43069 has 2 MA's), (53, 43018), (55, 43003), (57, 42982), (61, 42952), (66, 42922), (76, 42877), (81, 42847),

Gene: SgtBeansprout\_56 Start: 40941, Stop: 41186, Start Num: 47

Candidate Starts for SgtBeansprout\_56:

(Start: 18 @40869 has 1 MA's), (Start: 47 @40941 has 167 MA's), (58, 41046), (65, 41088), (74, 41124),

Gene: Shadow1\_71 Start: 43904, Stop: 44143, Start Num: 47

Candidate Starts for Shadow1\_71:

(Start: 18 @43820 has 1 MA's), (Start: 47 @43904 has 167 MA's), (Start: 49 @43913 has 2 MA's), (56, 43994), (64, 44048), (67, 44063),

Gene: Shaobing\_69 Start: 44159, Stop: 44398, Start Num: 45

Candidate Starts for Shaobing\_69:

(Start: 45 @44159 has 4 MA's), (56, 44249), (61, 44285), (64, 44303), (77, 44366),

Gene: ShedlockHolmes\_69 Start: 44136, Stop: 44378, Start Num: 47

Candidate Starts for ShedlockHolmes\_69:

(Start: 47 @44136 has 167 MA's), (50, 44169), (56, 44226), (65, 44286), (67, 44298),

Gene: ShiaSurprise\_67 Start: 43819, Stop: 44061, Start Num: 47

Candidate Starts for ShiaSurprise\_67:

(Start: 47 @43819 has 167 MA's), (56, 43909), (74, 44005), (77, 44029),

Gene: ShortQueendom\_54 Start: 38806, Stop: 38531, Start Num: 28

Candidate Starts for ShortQueendom\_54:

(Start: 26 @38809 has 47 MA's), (Start: 28 @38806 has 143 MA's), (Start: 32 @38794 has 4 MA's), (53, 38713), (55, 38698), (57, 38677), (61, 38647), (66, 38617),

Gene: ShrimpFriedEgg\_55 Start: 36172, Stop: 36420, Start Num: 42

Candidate Starts for ShrimpFriedEgg\_55:

(Start: 42 @36172 has 38 MA's), (Start: 48 @36184 has 1 MA's), (66, 36334), (67, 36337), (81, 36412),

Gene: Sibs6\_64 Start: 39832, Stop: 39533, Start Num: 26

Candidate Starts for Sibs6\_64:

(Start: 26 @39832 has 47 MA's), (Start: 28 @39829 has 143 MA's), (Start: 32 @39817 has 4 MA's), (Start: 42 @39784 has 38 MA's), (Start: 49 @39766 has 2 MA's), (53, 39715), (55, 39700), (57, 39679), (61, 39649), (66, 39619),

Gene: Silvafighter\_51 Start: 34898, Stop: 35146, Start Num: 42

Candidate Starts for Silvafighter\_51:

(3, 34484), (5, 34691), (7, 34724), (17, 34820), (Start: 42 @34898 has 38 MA's), (Start: 48 @34910 has 1 MA's), (Start: 49 @34916 has 2 MA's), (56, 34994), (66, 35060), (67, 35063),

Gene: SirPhilip\_66 Start: 44298, Stop: 44537, Start Num: 47

Candidate Starts for SirPhilip\_66:

(Start: 47 @44298 has 167 MA's), (56, 44388), (61, 44424), (64, 44442), (66, 44454),

Gene: SkiPole\_70 Start: 42720, Stop: 42421, Start Num: 26

Candidate Starts for SkiPole\_70:

(Start: 26 @42720 has 47 MA's), (Start: 28 @42717 has 143 MA's), (Start: 32 @42705 has 4 MA's), (Start: 42 @42672 has 38 MA's), (Start: 49 @42654 has 2 MA's), (55, 42588), (61, 42537), (66, 42507), (81, 42432),

Gene: Skinny\_40 Start: 33191, Stop: 33469, Start Num: 39

Candidate Starts for Skinny\_40:

(12, 33080), (Start: 39 @33191 has 12 MA's), (Start: 44 @33209 has 16 MA's), (53, 33272), (65, 33359), (66, 33368), (69, 33377),

Gene: Slagathor\_64 Start: 43192, Stop: 42926, Start Num: 28

Candidate Starts for Slagathor\_64:

(Start: 26 @43195 has 47 MA's), (Start: 28 @43192 has 143 MA's), (Start: 32 @43180 has 4 MA's), (Start: 48 @43165 has 1 MA's), (Start: 49 @43159 has 2 MA's), (53, 43108), (55, 43093), (57, 43072), (61, 43042), (66, 43012),

Gene: Slarp\_70 Start: 43377, Stop: 43640, Start Num: 40

Candidate Starts for Slarp\_70:

(Start: 40 @43377 has 22 MA's), (Start: 48 @43392 has 1 MA's), (56, 43479), (72, 43575), (81, 43629),

Gene: SlimJimmy\_38 Start: 32763, Stop: 33023, Start Num: 44

Candidate Starts for SlimJimmy\_38:

(12, 32634), (Start: 39 @32745 has 12 MA's), (Start: 44 @32763 has 16 MA's), (53, 32826), (65, 32913), (66, 32922), (69, 32931),

Gene: Slimphazie\_67 Start: 43920, Stop: 44162, Start Num: 47

Candidate Starts for Slimphazie\_67:

(Start: 47 @43920 has 167 MA's), (56, 44010), (74, 44106), (77, 44130),

Gene: Smairt\_64 Start: 43635, Stop: 43369, Start Num: 28

Candidate Starts for Smairt\_64:

(Start: 26 @43638 has 47 MA's), (Start: 28 @43635 has 143 MA's), (Start: 32 @43623 has 4 MA's), (Start: 49 @43602 has 2 MA's), (53, 43551), (55, 43536), (57, 43515), (61, 43485), (66, 43455),

Gene: Smeagol\_64 Start: 43015, Stop: 42749, Start Num: 28

Candidate Starts for Smeagol\_64:

(Start: 28 @43015 has 143 MA's), (Start: 32 @43003 has 4 MA's), (Start: 49 @42982 has 2 MA's), (53, 42931), (55, 42916), (57, 42895), (61, 42865), (66, 42835),

Gene: Smurph\_50 Start: 34925, Stop: 35173, Start Num: 42

Candidate Starts for Smurph\_50:

(3, 34511), (5, 34718), (7, 34751), (17, 34847), (Start: 42 @34925 has 38 MA's), (Start: 48 @34937 has 1 MA's), (Start: 49 @34943 has 2 MA's), (56, 35021), (66, 35087), (67, 35090),

Gene: Snazzy\_60 Start: 40262, Stop: 39987, Start Num: 28

Candidate Starts for Snazzy\_60:

(Start: 26 @40265 has 47 MA's), (Start: 28 @40262 has 143 MA's), (Start: 32 @40250 has 4 MA's), (53, 40169), (55, 40154), (57, 40133), (61, 40103), (66, 40073),

Gene: Snekmaggedon\_49 Start: 34464, Stop: 34712, Start Num: 42

Candidate Starts for Snekmaggedon\_49:

(Start: 42 @34464 has 38 MA's), (Start: 48 @34476 has 1 MA's), (66, 34626), (67, 34629), (81, 34704),

Gene: SoSeph\_61 Start: 42799, Stop: 43047, Start Num: 47

Candidate Starts for SoSeph\_61:

(Start: 47 @42799 has 167 MA's), (55, 42874), (65, 42946), (70, 42970),

Gene: Solon\_61 Start: 40838, Stop: 40563, Start Num: 28

Candidate Starts for Solon\_61:

(Start: 26 @40841 has 47 MA's), (Start: 28 @40838 has 143 MA's), (Start: 32 @40826 has 4 MA's), (Start: 49 @40796 has 2 MA's), (53, 40745), (55, 40730), (57, 40709), (61, 40679), (66, 40649), (81, 40574),

Gene: Sorpresa\_59 Start: 40701, Stop: 40444, Start Num: 34

Candidate Starts for Sorpresa\_59:

(Start: 34 @40701 has 10 MA's), (Start: 48 @40683 has 1 MA's), (Start: 49 @40677 has 2 MA's), (53, 40626), (55, 40611), (57, 40590), (61, 40560), (66, 40530), (81, 40455),

Gene: SpikeBT\_60 Start: 40904, Stop: 40638, Start Num: 28

Candidate Starts for SpikeBT\_60:

(Start: 26 @40907 has 47 MA's), (Start: 28 @40904 has 143 MA's), (Start: 32 @40892 has 4 MA's), (Start: 49 @40871 has 2 MA's), (53, 40820), (55, 40805), (57, 40784), (61, 40754), (66, 40724), (81, 40649),

Gene: Spinach\_55 Start: 36172, Stop: 36420, Start Num: 42

Candidate Starts for Spinach\_55:

(Start: 42 @36172 has 38 MA's), (Start: 48 @36184 has 1 MA's), (66, 36334), (67, 36337), (81, 36412),

Gene: Spock\_66 Start: 43623, Stop: 43865, Start Num: 47

Candidate Starts for Spock\_66:

(Start: 47 @43623 has 167 MA's), (56, 43713), (74, 43809), (77, 43833),

Gene: SpongeBob\_49 Start: 34464, Stop: 34712, Start Num: 42

Candidate Starts for SpongeBob\_49:

(Start: 42 @34464 has 38 MA's), (Start: 48 @34476 has 1 MA's), (66, 34626), (67, 34629), (81, 34704),

Gene: Squee\_63 Start: 41158, Stop: 40892, Start Num: 28

Candidate Starts for Squee\_63:

(Start: 26 @41161 has 47 MA's), (Start: 28 @41158 has 143 MA's), (Start: 32 @41146 has 4 MA's), (Start: 49 @41125 has 2 MA's), (55, 41059), (57, 41038), (59, 41017), (61, 41008), (66, 40978), (81, 40903),

Gene: StewieG\_57 Start: 37645, Stop: 37379, Start Num: 28

Candidate Starts for StewieG\_57:

(Start: 26 @37648 has 47 MA's), (Start: 28 @37645 has 143 MA's), (Start: 32 @37633 has 4 MA's), (Start: 49 @37612 has 2 MA's), (53, 37561), (55, 37546), (57, 37525), (61, 37495),

Gene: Stinson\_68 Start: 44248, Stop: 44490, Start Num: 47

Candidate Starts for Stinson\_68:

(Start: 47 @44248 has 167 MA's), (56, 44338), (74, 44434), (77, 44458),

Gene: Strobilo\_70 Start: 46068, Stop: 46313, Start Num: 47

Candidate Starts for Strobilo\_70:

(29, 46005), (Start: 47 @46068 has 167 MA's), (56, 46158), (67, 46227),

Gene: StrongArm\_60 Start: 42040, Stop: 41774, Start Num: 28

Candidate Starts for StrongArm\_60:

(Start: 26 @42043 has 47 MA's), (Start: 28 @42040 has 143 MA's), (Start: 32 @42028 has 4 MA's), (Start: 49 @42004 has 2 MA's), (52, 41959), (55, 41941), (61, 41890), (81, 41785),

Gene: Sulley\_66 Start: 43683, Stop: 43925, Start Num: 47

Candidate Starts for Sulley\_66:

(Start: 47 @43683 has 167 MA's), (56, 43773), (74, 43869), (77, 43893),

Gene: Sumter\_58 Start: 41278, Stop: 41012, Start Num: 28

Candidate Starts for Sumter\_58:

(Start: 26 @41281 has 47 MA's), (Start: 28 @41278 has 143 MA's), (Start: 32 @41266 has 4 MA's), (Start: 48 @41251 has 1 MA's), (Start: 49 @41245 has 2 MA's), (53, 41194), (55, 41179), (57, 41158), (61, 41128), (66, 41098), (81, 41023),

Gene: Sunflower1121\_72 Start: 44050, Stop: 44289, Start Num: 47

Candidate Starts for Sunflower1121\_72:

(Start: 18 @43966 has 1 MA's), (Start: 47 @44050 has 167 MA's), (Start: 49 @44059 has 2 MA's), (56, 44140), (64, 44194), (67, 44209),

Gene: Sunshine924\_67 Start: 41911, Stop: 41645, Start Num: 28

Candidate Starts for Sunshine924\_67:

(Start: 26 @41914 has 47 MA's), (Start: 28 @41911 has 143 MA's), (Start: 32 @41899 has 4 MA's), (Start: 49 @41878 has 2 MA's), (55, 41812), (57, 41791), (61, 41761), (66, 41731), (81, 41656),

Gene: SwissCheese\_65 Start: 41123, Stop: 40827, Start Num: 28

Candidate Starts for SwissCheese\_65:

(Start: 26 @41126 has 47 MA's), (Start: 28 @41123 has 143 MA's), (Start: 32 @41111 has 4 MA's), (Start: 42 @41078 has 38 MA's), (Start: 49 @41060 has 2 MA's), (53, 41009), (55, 40994), (57, 40973), (61, 40943), (66, 40913), (81, 40838),

Gene: Switzer\_63 Start: 42783, Stop: 42412, Start Num: 8

Candidate Starts for Switzer\_63:

(Start: 8 @42783 has 1 MA's), (9, 42780), (13, 42735), (16, 42717), (Start: 26 @42681 has 47 MA's), (Start: 28 @42678 has 143 MA's), (Start: 32 @42666 has 4 MA's), (Start: 49 @42645 has 2 MA's), (53, 42594), (55, 42579), (57, 42558), (61, 42528), (66, 42498), (81, 42423),

Gene: Swole\_63 Start: 41087, Stop: 40812, Start Num: 28

Candidate Starts for Swole\_63:

(Start: 26 @41090 has 47 MA's), (Start: 28 @41087 has 143 MA's), (Start: 32 @41075 has 4 MA's), (Start: 49 @41045 has 2 MA's), (53, 40994), (55, 40979), (57, 40958), (61, 40928), (66, 40898),

Gene: Syra333\_70 Start: 43764, Stop: 44003, Start Num: 47

Candidate Starts for Syra333\_70:

(Start: 18 @43680 has 1 MA's), (Start: 47 @43764 has 167 MA's), (Start: 49 @43773 has 2 MA's), (56, 43854), (64, 43908), (67, 43923),

Gene: TBond007\_64 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for TBond007\_64:

(Start: 47 @43622 has 167 MA's), (50, 43655), (56, 43712), (59, 43739), (65, 43772), (67, 43784),

Gene: TClif\_68 Start: 43725, Stop: 43964, Start Num: 47

Candidate Starts for TClif\_68:

(Start: 47 @43725 has 167 MA's), (Start: 49 @43734 has 2 MA's), (56, 43815), (67, 43884), (77, 43932),

Gene: TM4\_67 Start: 40730, Stop: 40975, Start Num: 47

Candidate Starts for TM4\_67:

(1, 39989), (30, 40673), (33, 40679), (Start: 47 @40730 has 167 MA's), (56, 40820), (67, 40889), (74, 40913), (83, 40967),

Gene: Tachez\_66 Start: 43467, Stop: 43709, Start Num: 47

Candidate Starts for Tachez\_66:

(Start: 47 @43467 has 167 MA's), (56, 43557), (74, 43653), (77, 43677),

Gene: TaiwanKao\_69 Start: 44172, Stop: 44417, Start Num: 47  
Candidate Starts for TaiwanKao\_69:  
(Start: 47 @44172 has 167 MA's), (56, 44262), (74, 44358), (82, 44409),

Gene: Talia1610\_108 Start: 86506, Stop: 86754, Start Num: 44  
Candidate Starts for Talia1610\_108:  
(Start: 44 @86506 has 16 MA's), (Start: 48 @86512 has 1 MA's), (Start: 49 @86518 has 2 MA's),

Gene: Tapioca\_52 Start: 34891, Stop: 35139, Start Num: 42  
Candidate Starts for Tapioca\_52:  
(Start: 42 @34891 has 38 MA's), (Start: 48 @34903 has 1 MA's), (66, 35053), (67, 35056), (81, 35131),

Gene: Taquito\_69 Start: 43582, Stop: 43845, Start Num: 40  
Candidate Starts for Taquito\_69:  
(Start: 40 @43582 has 22 MA's), (Start: 48 @43597 has 1 MA's), (56, 43684), (72, 43780), (81, 43834),

Gene: Target\_64 Start: 41123, Stop: 40848, Start Num: 28  
Candidate Starts for Target\_64:  
(Start: 26 @41126 has 47 MA's), (Start: 28 @41123 has 143 MA's), (Start: 32 @41111 has 4 MA's),  
(Start: 49 @41081 has 2 MA's), (53, 41030), (55, 41015), (57, 40994), (61, 40964), (66, 40934), (81,  
40859),

Gene: Tasp14\_66 Start: 43218, Stop: 42919, Start Num: 26  
Candidate Starts for Tasp14\_66:  
(Start: 26 @43218 has 47 MA's), (Start: 28 @43215 has 143 MA's), (Start: 32 @43203 has 4 MA's),  
(Start: 42 @43170 has 38 MA's), (Start: 49 @43152 has 2 MA's), (53, 43101), (55, 43086), (57,  
43065), (61, 43035), (66, 43005), (81, 42930),

Gene: Teejan\_57 Start: 43554, Stop: 43799, Start Num: 47  
Candidate Starts for Teejan\_57:  
(Start: 18 @43482 has 1 MA's), (Start: 47 @43554 has 167 MA's), (58, 43659), (65, 43701), (74,  
43737),

Gene: Teodoridan\_60 Start: 40295, Stop: 40029, Start Num: 28  
Candidate Starts for Teodoridan\_60:  
(Start: 28 @40295 has 143 MA's), (Start: 32 @40283 has 4 MA's), (Start: 49 @40262 has 2 MA's), (53,  
40211), (55, 40196), (57, 40175), (61, 40145), (66, 40115),

Gene: Tessdabest\_51 Start: 34922, Stop: 35170, Start Num: 42  
Candidate Starts for Tessdabest\_51:  
(3, 34508), (5, 34715), (7, 34748), (17, 34844), (Start: 42 @34922 has 38 MA's), (Start: 48 @34934  
has 1 MA's), (Start: 49 @34940 has 2 MA's), (56, 35018), (66, 35084), (67, 35087),

Gene: TheloniousMonk\_65 Start: 43428, Stop: 43162, Start Num: 28  
Candidate Starts for TheloniousMonk\_65:  
(Start: 26 @43431 has 47 MA's), (Start: 28 @43428 has 143 MA's), (Start: 32 @43416 has 4 MA's),  
(Start: 49 @43392 has 2 MA's), (52, 43347), (55, 43329), (61, 43278), (76, 43203), (81, 43173),

Gene: Thonko\_81 Start: 61339, Stop: 61569, Start Num: 49  
Candidate Starts for Thonko\_81:  
(15, 61228), (37, 61303), (Start: 49 @61339 has 2 MA's), (68, 61489),

Gene: Thor\_61 Start: 40522, Stop: 40256, Start Num: 28

Candidate Starts for Thor\_61:

(Start: 26 @40525 has 47 MA's), (Start: 28 @40522 has 143 MA's), (Start: 32 @40510 has 4 MA's),  
(Start: 48 @40495 has 1 MA's), (Start: 49 @40489 has 2 MA's), (53, 40438), (55, 40423), (57, 40402),  
(61, 40372), (66, 40342), (81, 40267),

Gene: Thyatira\_63 Start: 44764, Stop: 45012, Start Num: 47

Candidate Starts for Thyatira\_63:

(Start: 47 @44764 has 167 MA's), (55, 44839), (65, 44911), (70, 44935),

Gene: Tierra\_70 Start: 44265, Stop: 44504, Start Num: 47

Candidate Starts for Tierra\_70:

(Start: 18 @44181 has 1 MA's), (Start: 47 @44265 has 167 MA's), (Start: 49 @44274 has 2 MA's), (56,  
44355), (64, 44409),

Gene: Tigress9\_73 Start: 44081, Stop: 44320, Start Num: 47

Candidate Starts for Tigress9\_73:

(Start: 18 @43997 has 1 MA's), (Start: 47 @44081 has 167 MA's), (Start: 49 @44090 has 2 MA's), (56,  
44171), (64, 44225), (67, 44240),

Gene: TingHuaYa\_70 Start: 43428, Stop: 43676, Start Num: 47

Candidate Starts for TingHuaYa\_70:

(Start: 47 @43428 has 167 MA's), (56, 43518), (74, 43614), (77, 43638),

Gene: TiniBug\_67 Start: 44358, Stop: 44600, Start Num: 47

Candidate Starts for TiniBug\_67:

(Start: 47 @44358 has 167 MA's), (56, 44448), (74, 44544), (77, 44568),

Gene: Tiri\_67 Start: 43756, Stop: 43998, Start Num: 47

Candidate Starts for Tiri\_67:

(Start: 47 @43756 has 167 MA's), (51, 43801), (56, 43846), (74, 43942),

Gene: Topgun\_60 Start: 40325, Stop: 40029, Start Num: 28

Candidate Starts for Topgun\_60:

(Start: 26 @40328 has 47 MA's), (Start: 28 @40325 has 143 MA's), (Start: 32 @40313 has 4 MA's),  
(Start: 42 @40280 has 38 MA's), (Start: 49 @40262 has 2 MA's), (55, 40196), (57, 40175), (61,  
40145), (66, 40115),

Gene: Topper\_66 Start: 43622, Stop: 43864, Start Num: 47

Candidate Starts for Topper\_66:

(Start: 47 @43622 has 167 MA's), (56, 43712), (74, 43808), (77, 43832),

Gene: Torres\_58 Start: 43555, Stop: 43800, Start Num: 47

Candidate Starts for Torres\_58:

(Start: 18 @43483 has 1 MA's), (Start: 47 @43555 has 167 MA's), (58, 43660), (65, 43702), (74,  
43738),

Gene: Tortoise12\_49 Start: 33608, Stop: 33856, Start Num: 42

Candidate Starts for Tortoise12\_49:

(3, 33194), (5, 33401), (7, 33434), (17, 33530), (Start: 42 @33608 has 38 MA's), (Start: 48 @33620  
has 1 MA's), (Start: 49 @33626 has 2 MA's), (56, 33704), (66, 33770), (67, 33773),

Gene: Tote\_58 Start: 38354, Stop: 38079, Start Num: 28

Candidate Starts for Tote\_58:

(Start: 26 @38357 has 47 MA's), (Start: 28 @38354 has 143 MA's), (Start: 32 @38342 has 4 MA's),  
(Start: 49 @38312 has 2 MA's), (53, 38261), (55, 38246), (57, 38225), (61, 38195), (66, 38165),

Gene: TpudiCK\_41 Start: 32779, Stop: 33039, Start Num: 44

Candidate Starts for TpudiCK\_41:

(12, 32650), (Start: 39 @32761 has 12 MA's), (Start: 44 @32779 has 16 MA's), (53, 32842), (65,  
32929), (66, 32938), (69, 32947),

Gene: Traft412\_64 Start: 41743, Stop: 41486, Start Num: 34

Candidate Starts for Traft412\_64:

(Start: 34 @41743 has 10 MA's), (Start: 48 @41725 has 1 MA's), (Start: 49 @41719 has 2 MA's), (53,  
41668), (55, 41653), (57, 41632), (61, 41602), (66, 41572),

Gene: Treddle\_63 Start: 42567, Stop: 42298, Start Num: 26

Candidate Starts for Treddle\_63:

(Start: 26 @42567 has 47 MA's), (Start: 28 @42564 has 143 MA's), (Start: 32 @42552 has 4 MA's),  
(Start: 49 @42531 has 2 MA's), (53, 42480), (55, 42465), (57, 42444), (59, 42423), (61, 42414), (66,  
42384),

Gene: TreyKay\_68 Start: 44110, Stop: 44352, Start Num: 47

Candidate Starts for TreyKay\_68:

(Start: 47 @44110 has 167 MA's), (56, 44200), (74, 44296),

Gene: TribbleTrouble\_68 Start: 44625, Stop: 44867, Start Num: 47

Candidate Starts for TribbleTrouble\_68:

(Start: 47 @44625 has 167 MA's), (50, 44658), (56, 44715), (67, 44787),

Gene: Trice\_55 Start: 40942, Stop: 41187, Start Num: 47

Candidate Starts for Trice\_55:

(Start: 18 @40870 has 1 MA's), (Start: 47 @40942 has 167 MA's), (58, 41047), (65, 41089), (74,  
41125),

Gene: Tripl3t\_65 Start: 43651, Stop: 43394, Start Num: 34

Candidate Starts for Tripl3t\_65:

(Start: 34 @43651 has 10 MA's), (Start: 48 @43633 has 1 MA's), (Start: 49 @43627 has 2 MA's), (53,  
43576), (55, 43561), (57, 43540), (61, 43510), (66, 43480), (81, 43405),

Gene: Trouble\_63 Start: 41668, Stop: 41399, Start Num: 26

Candidate Starts for Trouble\_63:

(Start: 26 @41668 has 47 MA's), (Start: 28 @41665 has 143 MA's), (Start: 32 @41653 has 4 MA's),  
(Start: 49 @41632 has 2 MA's), (55, 41566), (57, 41545), (59, 41524), (61, 41515), (66, 41485),

Gene: TruffulaTree\_67 Start: 43916, Stop: 44158, Start Num: 47

Candidate Starts for TruffulaTree\_67:

(Start: 47 @43916 has 167 MA's), (56, 44006), (74, 44102), (77, 44126),

Gene: Turj99\_60 Start: 42063, Stop: 41797, Start Num: 28

Candidate Starts for Turj99\_60:

(Start: 26 @42066 has 47 MA's), (Start: 28 @42063 has 143 MA's), (Start: 32 @42051 has 4 MA's),  
(Start: 48 @42036 has 1 MA's), (Start: 49 @42030 has 2 MA's), (53, 41979), (55, 41964), (57, 41943),  
(61, 41913), (66, 41883), (81, 41808),

Gene: Twitch\_66 Start: 43624, Stop: 43866, Start Num: 47  
Candidate Starts for Twitch\_66:  
(Start: 47 @43624 has 167 MA's), (56, 43714), (74, 43810), (77, 43834),

Gene: TwoPeat\_63 Start: 41915, Stop: 41649, Start Num: 28  
Candidate Starts for TwoPeat\_63:  
(Start: 26 @41918 has 47 MA's), (Start: 28 @41915 has 143 MA's), (Start: 32 @41903 has 4 MA's),  
(Start: 48 @41888 has 1 MA's), (Start: 49 @41882 has 2 MA's), (53, 41831), (55, 41816), (57, 41795),  
(61, 41765), (66, 41735),

Gene: TyDawg\_39 Start: 32762, Stop: 33040, Start Num: 39  
Candidate Starts for TyDawg\_39:  
(12, 32651), (Start: 39 @32762 has 12 MA's), (Start: 44 @32780 has 16 MA's), (53, 32843), (65,  
32930), (66, 32939), (69, 32948),

Gene: U2\_60 Start: 41888, Stop: 41592, Start Num: 28  
Candidate Starts for U2\_60:  
(Start: 26 @41891 has 47 MA's), (Start: 28 @41888 has 143 MA's), (Start: 32 @41876 has 4 MA's),  
(Start: 42 @41843 has 38 MA's), (Start: 49 @41825 has 2 MA's), (53, 41774), (55, 41759), (57,  
41738), (61, 41708), (66, 41678), (81, 41603),

Gene: Unicorn\_68 Start: 43391, Stop: 43630, Start Num: 47  
Candidate Starts for Unicorn\_68:  
(Start: 47 @43391 has 167 MA's), (Start: 49 @43400 has 2 MA's), (56, 43481), (67, 43550),

Gene: Urkel\_67 Start: 44362, Stop: 44604, Start Num: 47  
Candidate Starts for Urkel\_67:  
(Start: 47 @44362 has 167 MA's), (56, 44452), (74, 44548), (77, 44572),

Gene: Validus\_71 Start: 44494, Stop: 44733, Start Num: 45  
Candidate Starts for Validus\_71:  
(Start: 45 @44494 has 4 MA's), (56, 44584), (64, 44638),

Gene: Veliki\_68 Start: 43889, Stop: 44131, Start Num: 47  
Candidate Starts for Veliki\_68:  
(Start: 47 @43889 has 167 MA's), (56, 43979), (74, 44075), (77, 44099),

Gene: Violet\_60 Start: 42922, Stop: 42656, Start Num: 28  
Candidate Starts for Violet\_60:  
(Start: 26 @42925 has 47 MA's), (Start: 28 @42922 has 143 MA's), (Start: 32 @42910 has 4 MA's),  
(Start: 49 @42889 has 2 MA's), (53, 42838), (55, 42823), (57, 42802), (61, 42772), (66, 42742),

Gene: ViviJ\_59 Start: 40530, Stop: 40778, Start Num: 47  
Candidate Starts for ViviJ\_59:  
(Start: 47 @40530 has 167 MA's), (62, 40662), (67, 40692), (75, 40725),

Gene: Waterfoul\_62 Start: 42861, Stop: 43109, Start Num: 47  
Candidate Starts for Waterfoul\_62:  
(Start: 47 @42861 has 167 MA's), (55, 42936), (65, 43008), (70, 43032),

Gene: Watermelon\_62 Start: 40661, Stop: 40362, Start Num: 26  
Candidate Starts for Watermelon\_62:

(Start: 26 @40661 has 47 MA's), (Start: 28 @40658 has 143 MA's), (Start: 32 @40646 has 4 MA's), (Start: 42 @40613 has 38 MA's), (Start: 49 @40595 has 2 MA's), (53, 40544), (55, 40529), (57, 40508), (61, 40478), (66, 40448),

Gene: Wheeler\_64 Start: 41819, Stop: 41544, Start Num: 28

Candidate Starts for Wheeler\_64:

(Start: 28 @41819 has 143 MA's), (Start: 32 @41807 has 4 MA's), (53, 41726), (55, 41711), (57, 41690), (61, 41660), (66, 41630), (81, 41555),

Gene: Whitspit\_58 Start: 39003, Stop: 38737, Start Num: 28

Candidate Starts for Whitspit\_58:

(Start: 26 @39006 has 47 MA's), (Start: 28 @39003 has 143 MA's), (Start: 32 @38991 has 4 MA's), (Start: 49 @38970 has 2 MA's), (53, 38919), (55, 38904), (57, 38883), (61, 38853), (66, 38823), (81, 38748),

Gene: Wilkins\_61 Start: 40255, Stop: 39959, Start Num: 28

Candidate Starts for Wilkins\_61:

(Start: 26 @40258 has 47 MA's), (Start: 28 @40255 has 143 MA's), (Start: 32 @40243 has 4 MA's), (Start: 42 @40210 has 38 MA's), (Start: 49 @40192 has 2 MA's), (55, 40126), (57, 40105), (61, 40075), (66, 40045),

Gene: Wintermute\_70 Start: 43607, Stop: 43870, Start Num: 40

Candidate Starts for Wintermute\_70:

(Start: 40 @43607 has 22 MA's), (Start: 48 @43622 has 1 MA's), (56, 43709), (72, 43805), (81, 43859),

Gene: Xerxes\_50 Start: 34922, Stop: 35170, Start Num: 42

Candidate Starts for Xerxes\_50:

(3, 34508), (5, 34715), (7, 34748), (17, 34844), (Start: 42 @34922 has 38 MA's), (Start: 48 @34934 has 1 MA's), (Start: 49 @34940 has 2 MA's), (56, 35018), (66, 35084), (67, 35087),

Gene: Ximenita\_72 Start: 44093, Stop: 44332, Start Num: 47

Candidate Starts for Ximenita\_72:

(Start: 18 @44009 has 1 MA's), (Start: 47 @44093 has 167 MA's), (Start: 49 @44102 has 2 MA's), (56, 44183), (67, 44252),

Gene: Y10\_67 Start: 43533, Stop: 43847, Start Num: 40

Candidate Starts for Y10\_67:

(Start: 40 @43533 has 22 MA's), (Start: 48 @43548 has 1 MA's), (50, 43578), (56, 43635),

Gene: Y2\_67 Start: 43533, Stop: 43847, Start Num: 40

Candidate Starts for Y2\_67:

(Start: 40 @43533 has 22 MA's), (Start: 48 @43548 has 1 MA's), (50, 43578), (56, 43635),

Gene: YasnayaPolyana\_69 Start: 43433, Stop: 43696, Start Num: 40

Candidate Starts for YasnayaPolyana\_69:

(Start: 40 @43433 has 22 MA's), (Start: 48 @43448 has 1 MA's), (56, 43535), (72, 43631), (81, 43685),

Gene: YoureAdopted\_66 Start: 44035, Stop: 44277, Start Num: 47

Candidate Starts for YoureAdopted\_66:

(Start: 47 @44035 has 167 MA's), (56, 44125), (74, 44221), (77, 44245),

Gene: Yuna\_71 Start: 45201, Stop: 45449, Start Num: 47

Candidate Starts for Yuna\_71:

(20, 45129), (Start: 47 @45201 has 167 MA's), (56, 45291), (65, 45351), (77, 45411),

Gene: Yunkel11\_71 Start: 43949, Stop: 44191, Start Num: 47

Candidate Starts for Yunkel11\_71:

(Start: 18 @43871 has 1 MA's), (Start: 47 @43949 has 167 MA's), (74, 44135),

Gene: Zabiza\_61 Start: 39772, Stop: 40014, Start Num: 47

Candidate Starts for Zabiza\_61:

(Start: 47 @39772 has 167 MA's), (56, 39862), (74, 39958), (77, 39982),

Gene: Zavala\_69 Start: 44194, Stop: 44436, Start Num: 47

Candidate Starts for Zavala\_69:

(Start: 47 @44194 has 167 MA's), (56, 44284), (74, 44380), (77, 44404),

Gene: Zeeculate\_59 Start: 41408, Stop: 41112, Start Num: 28

Candidate Starts for Zeeculate\_59:

(14, 41465), (Start: 28 @41408 has 143 MA's), (Start: 32 @41396 has 4 MA's), (Start: 42 @41363 has 38 MA's), (Start: 49 @41345 has 2 MA's), (53, 41294), (55, 41279), (57, 41258), (61, 41228), (66, 41198),

Gene: Zephyr\_63 Start: 40825, Stop: 40529, Start Num: 28

Candidate Starts for Zephyr\_63:

(Start: 26 @40828 has 47 MA's), (Start: 28 @40825 has 143 MA's), (Start: 32 @40813 has 4 MA's), (Start: 42 @40780 has 38 MA's), (Start: 49 @40762 has 2 MA's), (53, 40711), (55, 40696), (57, 40675), (61, 40645), (66, 40615),

Gene: Zeuska\_67 Start: 44044, Stop: 43775, Start Num: 28

Candidate Starts for Zeuska\_67:

(Start: 26 @44047 has 47 MA's), (Start: 28 @44044 has 143 MA's), (Start: 32 @44032 has 4 MA's), (55, 43942), (57, 43921), (61, 43891), (66, 43861),

Gene: ZoeJ\_68 Start: 45471, Stop: 45716, Start Num: 47

Candidate Starts for ZoeJ\_68:

(30, 45414), (33, 45420), (Start: 47 @45471 has 167 MA's), (56, 45561), (61, 45597), (67, 45630),