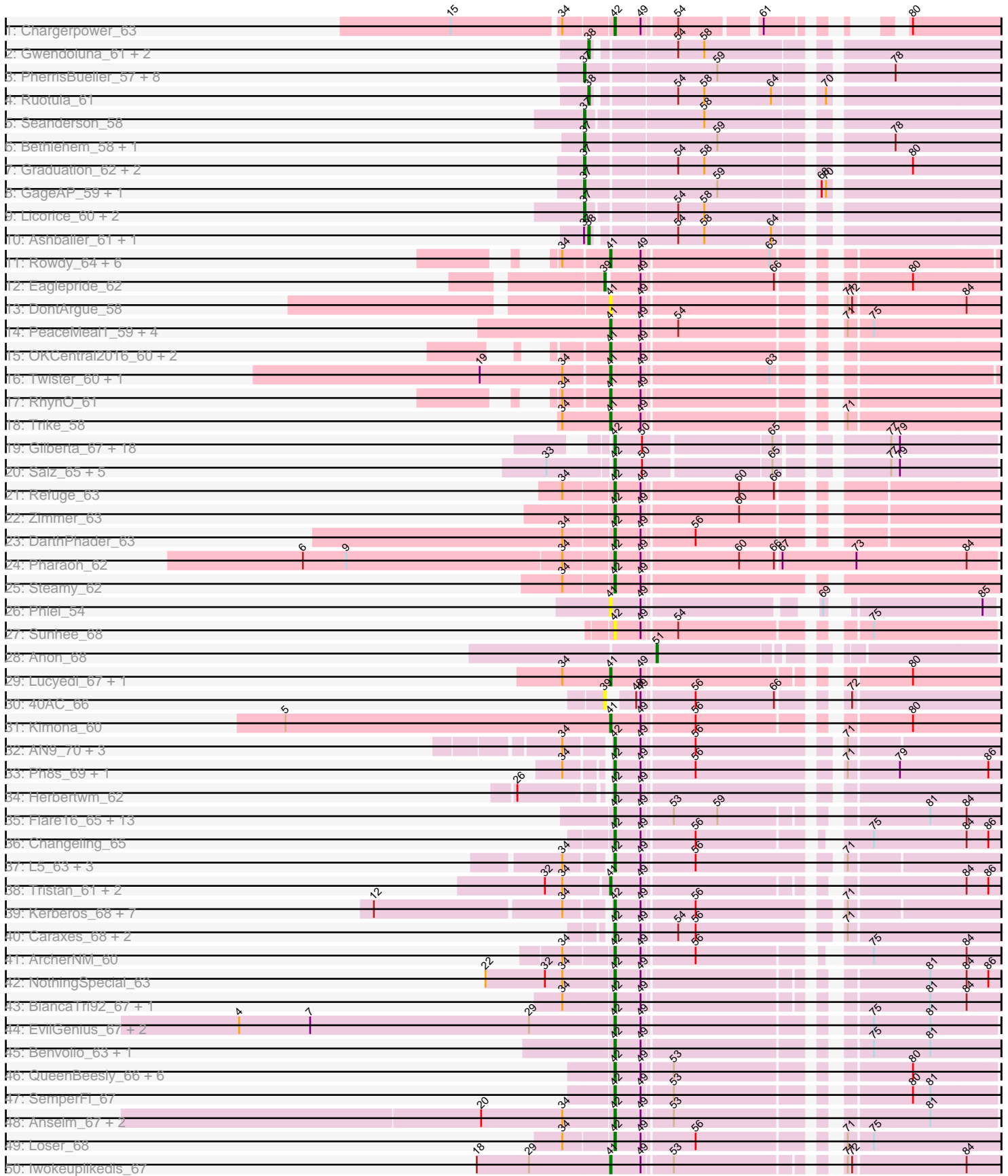
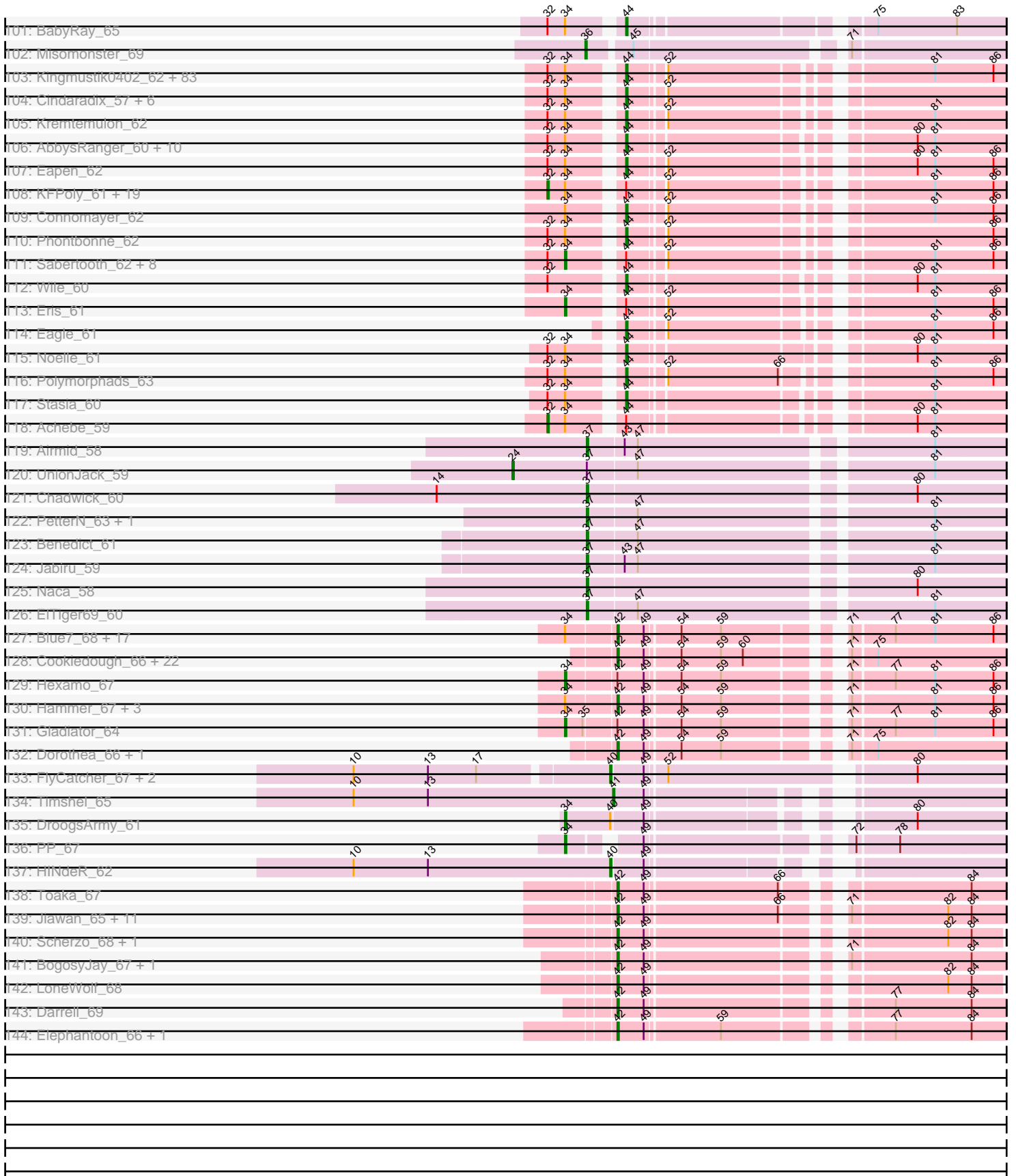


Pham 224147





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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 224147 Report

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

Pham number 224147 has 559 members, 57 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_63
- Track 2 : Gwendoluna\_61, Pelly\_58, Dulcie\_58
- Track 3 : PherrisBueller\_57, Norz\_59, Beatrix\_58, Dreamboat\_59, Jasper\_59, Bexan\_56, StrongArm\_57, Doom\_56, Ohno789\_59
- Track 4 : Ruotula\_61
- Track 5 : Seanderson\_58
- Track 6 : Bethlehem\_58, Pari\_61
- Track 7 : Graduation\_62, Bones\_58, Cueylyss\_59
- Track 8 : GageAP\_59, SpikeBT\_57
- Track 9 : Licorice\_60, BillKnuckles\_56, Traft412\_61
- Track 10 : Ashballer\_61, JC27\_61
- Track 11 : Rowdy\_64, Edison31\_58, Shapes\_64, Kristoff\_61, DustyMartin\_64, Rebeuca\_62, Topanga\_58
- Track 12 : Eaglepride\_62
- Track 13 : DontArgue\_58
- Track 14 : PeaceMeal1\_59, Severus\_59, Drake94\_59, KittenMittens\_58, Poompha\_59
- Track 15 : OKCentral2016\_60, Chupacabra\_60, Goose\_62
- Track 16 : Twister\_60, WalterMcMickey\_60
- Track 17 : RhynO\_61
- Track 18 : Trike\_58
- Track 19 : Gilberta\_67, Timothy\_66, Aneem\_67, Ebony\_66, Hutc2\_65, Flaverint\_67, Orange\_65, Mabel\_66, Sham4\_66, Insomnia\_67, Lucivia\_67, Snape\_66, Munch\_66, Bowtie\_67, Et2Brutus\_65, Bud\_65, Fibonacci\_66, Mulciber\_65, Petersenfast\_64
- Track 20 : Salz\_65, Joselito\_67, Jabith\_67, TinyTimmy\_66, Bachome\_68, MaCh\_66
- Track 21 : Refuge\_63
- Track 22 : Zimmer\_63
- Track 23 : DarthPhader\_63
- Track 24 : Pharaoh\_62
- Track 25 : Steamy\_62
- Track 26 : Phlei\_54
- Track 27 : Sunhee\_68
- Track 28 : Anon\_68
- Track 29 : Lucyedi\_67, EagleEye\_68
- Track 30 : 40AC\_66
- Track 31 : Kimona\_60
- Track 32 : AN9\_70, VC3\_69, ANI8\_70, C3\_63

- Track 33 : Ph8s\_69, Che12\_69
- Track 34 : Herbertwm\_62
- Track 35 : Flare16\_65, Gratitude\_63, Equemioh13\_65, MiculUcigas\_65, Sknot\_65, HarryHoudini\_66, Baehexic\_64, Drake55\_67, Centaur\_66, Piro94\_65, Updawg\_66, WideWale\_66, Terrific\_66, NaSiaTalie\_65
- Track 36 : Changeling\_65
- Track 37 : L5\_63, TipsytheTRex\_65, Koduck\_67, Jsquared\_69
- Track 38 : Tristan\_61, Jaan\_65, Bactobuster\_62
- Track 39 : Kerberos\_68, Tomathan\_68, D32\_67, StarStuff\_68, Duplo\_68, Pomar16\_67, Travvers\_67, Naji\_68
- Track 40 : Caraxes\_68, Superchunk\_67, Odin\_66
- Track 41 : ArcherNM\_60
- Track 42 : NothingSpecial\_63
- Track 43 : BiancaTri92\_67, Leogania\_67
- Track 44 : EvilGenius\_67, KingCyrus\_67, ChipMunk\_68
- Track 45 : Benvolio\_63, Echid\_66
- Track 46 : QueenBeesly\_66, Georgie2\_67, SnapTap\_66, Crucio\_66, SweetiePie\_66, Power\_65, FiringLine\_66
- Track 47 : SemperFi\_67
- Track 48 : Anselm\_67, Retro23\_67, Heffalump\_65
- Track 49 : Loser\_68
- Track 50 : Iwokeuplikedis\_67
- Track 51 : Trooper\_66
- Track 52 : Larenn\_63, Malec\_64
- Track 53 : Whabigail7\_67, Agape74\_68, AbbyPaige\_68, Jerm\_68, Smeagan\_69, Turbido\_67, LilTurb\_67
- Track 54 : Pukovnik\_63
- Track 55 : LionsBait\_67
- Track 56 : Colin\_64
- Track 57 : NicoleTera\_64
- Track 58 : IronMan\_64
- Track 59 : MissWhite\_66
- Track 60 : Adzzy\_69
- Track 61 : Trixie\_64
- Track 62 : CRB1\_68, Buggy\_68, Leviathan\_68, LadyBird\_70, VA6\_66, AN3\_68, 20ES\_68, Deloris\_66, First\_0067, BengiVuitton\_66, Dignity\_68
- Track 63 : Dalmatian\_67, DudeLittle\_65
- Track 64 : AnnaL29\_67, RedRock\_67
- Track 65 : DBQu4n\_68
- Track 66 : Rachaly\_63, Miko\_61, BobSwaget\_60
- Track 67 : Serenity\_69
- Track 68 : TarsusIV\_63
- Track 69 : QueenB2\_65
- Track 70 : SwirlSquare\_72
- Track 71 : EZMoney23\_63
- Track 72 : JoshKayV\_67
- Track 73 : GaugeLDP\_62
- Track 74 : XianYue\_63
- Track 75 : Journey13\_59
- Track 76 : Fameo\_66
- Track 77 : Quokka\_67, Bradman\_68, MajorMajor\_67
- Track 78 : Landor\_65
- Track 79 : WeiHuaDA\_67

- Track 80 : Lokk\_61
- Track 81 : Acolyte\_59
- Track 82 : BabyBack\_63
- Track 83 : Phaded\_63
- Track 84 : Kalpine\_65
- Track 85 : Kinmap\_66
- Track 86 : Lilith\_67, Vix\_66, GtownJaz\_68, P28Green\_69, MoneyMay\_67, Malinsilva\_70, Phoxy\_68, LBerry\_69, Spike509\_68, Snickers\_66, Mainiac\_68, Grub\_68, Cullens\_68, Beauxregard13\_67, Sabia\_68, LugYA\_71, Penny1\_68, Watson\_67, Dieselweasel\_69, EpicPhail\_69, MarQuardt\_68, Marie\_66, Lowa\_67, JHC117\_66, Tiffany\_67, JenCasNa\_69, Grif\_68, Microwolf\_66, Taurus\_69, Sabinator\_66, Fernando\_68, LarryKay\_68, PotatoSplit\_69, Grum1\_67
- Track 87 : Popcicle\_64, QuinnKiro\_63, Veracruz\_62, Hookmount\_64, Caviar\_64, Panamaxus\_62, Lambert1\_64, Margo\_64, Noella\_64, Todacoro\_64, Pocahontas\_64, Texage\_62, Norbert\_61, ResDef\_63
- Track 88 : JeppNRM\_69, Pawn\_68, Heliosoles\_67, PhishRPhriends\_66, Manu\_68, ACFishhook\_66, Gemma\_67, Kalnoky\_69, HaveUMetTed\_69, OlanP\_67, Groupthink\_69, Reba\_68, Calvinny\_67, Marius\_69, Kalb97\_69, PurpleHaze\_68, Phranny\_69
- Track 89 : Stagni\_67, GingkoMaracino\_68, Ollie\_68, AgronaGT15\_67, Rummer\_67, Methuselah\_63, Bxz2\_63, Aglet\_69, Soshari\_70, MadMarie\_68, Bigflo\_67, Zetzy\_67, StepMih\_67, AugsMagnumOpus\_71, MuchMore\_71, Farber\_68
- Track 90 : HashRod\_69, KADY\_67, BuzzBuzz\_64, TinyPebbles\_66
- Track 91 : Phantastic\_66, BabyJohn\_60, Chiqui\_60
- Track 92 : Rockstar\_63, MK4\_65, MA5\_65, B1\_57, JF4\_63, JF2\_63
- Track 93 : Wooldri\_70, Anubis\_71
- Track 94 : Jobu08\_66
- Track 95 : Fred313\_63, Kachowdy\_63, Heathen\_65, HelDan\_64, Marchesa\_63, DropBear\_63, Scout\_64
- Track 96 : Isca\_63
- Track 97 : Louie6\_67
- Track 98 : SoilDragon\_68
- Track 99 : Bugatti\_65, Idleandcovert\_65, SaturnRing\_65, Puppy\_65, Pistachio\_65, TNguyen7\_66, BlueBird\_67, Giroux\_64
- Track 100 : PGHhamlin\_70, BreSam8\_68, Pembroke\_68, DaHudson\_67, Daishi\_67, Phoebe\_69, Hercules11\_68, Colbster\_66, SoYo\_67
- Track 101 : BabyRay\_65
- Track 102 : Misomonster\_69
- Track 103 : Kingmustik0402\_62, LochMonster\_63, BellusTerra\_63, Burger\_60, Sparxx\_63, Eros\_62, Romney\_61, SenorClean\_58, MeeZee\_61, PeterPeter\_62, Obama12\_63, Peaches\_60, Deano\_60, Alberto7\_63, Kyee\_62, ChampagnePapi\_64, LHTSCC\_64, Wilbur\_62, Scamp\_62, ICleared\_61, LittleB\_62, Druantia\_61, Arturo\_60, Ulysses\_61, Chaph\_62, Pipcraft\_59, TygerBlood\_62, Citius\_62, Caelakin\_61, Kamy\_61, Cerulean\_63, OKaNui\_62, Mazhar510\_62, Happiness\_61, Mayonnaise\_60, TroyPia\_63, Koan\_58, Jaykayelowell\_59, Taquarus\_61, Commander\_61, Bartimeaus\_62, Lorenzo\_62, Wizard007\_61, Eurydice\_63, Holli\_61, Relief\_61, Skipitt\_61, Albee\_62, Maxo\_63, Lunsford\_63, Blackmoor\_61, TiroTheta9\_61, NorthStar\_60, Huxley\_60, Ohfah\_63, Melvin\_64, YoSam321\_62, BangNhom\_61, Phelipe\_63, Broseidon\_62, Koreni\_61, SheldonCooper\_62, Gadost\_62, NotAPhaseMom\_61, Nebs\_63, Anyyong\_61, CentreCat\_62, Baby16\_62, Tinybot\_61, LappelDuVide\_62, Morrow\_63, DirtyDunning\_61, Houdini22\_61, Iceman\_62, Pumbaa\_62, Spino\_61, Roosevelt\_60, JetBlade\_62, Ruin\_62, LeoAvram\_61, Florean\_62, Nemo27\_61, Dhanush\_62, Rosa24\_60

- Track 104 : Cindaradix\_57, Stink\_59, Mundrea\_60, AvatarAhPeg\_59, Cintron\_62, Miramae\_59, Shygu2\_60
- Track 105 : Kremtemulon\_62
- Track 106 : AbbysRanger\_60, Badger\_59, PetiteSangsue\_60, Bumblebee11\_59, Xena\_59, Morpher26\_60, Katalie136\_60, Cici\_60, Datway\_60, Perplexer\_60, Backyardigan\_58
- Track 107 : Eapen\_62
- Track 108 : KFPoly\_61, Palestino\_61, Camperdownii\_60, Kratak\_61, Phighter1804\_62, Funston\_61, Phacado\_62, HamSlice\_59, Millski\_61, Wander\_62, Clarenza\_61, Abdiel\_62, Thanksgivukkah\_61, Lemur\_62, Iracema64\_63, BubbleTrouble\_61, Bruiser\_61, TinaFeyge\_60, Bombshell\_62, JoongJeon\_61
- Track 109 : Connomayer\_62
- Track 110 : Phontbonne\_62
- Track 111 : Sabertooth\_62, LittleGuy\_62, Flux\_62, Maverick\_61, Shaka\_60, Medusa\_62, Cocoaberry\_62, Avle17\_62, Nyxis\_61
- Track 112 : Wile\_60
- Track 113 : Eris\_61
- Track 114 : Eagle\_61
- Track 115 : Noelle\_61
- Track 116 : Polymorphads\_63
- Track 117 : Stasia\_60
- Track 118 : Achebe\_59
- Track 119 : Airmid\_58
- Track 120 : UnionJack\_59
- Track 121 : Chadwick\_60
- Track 122 : PetterN\_63, Scorpia\_62
- Track 123 : Benedict\_61
- Track 124 : Jabiru\_59
- Track 125 : Naca\_58
- Track 126 : EITiger69\_60
- Track 127 : Blue7\_68, Jeffabunny\_67, Temprado\_68, Artemis2UCLA\_67, WunderPhul\_67, CloudWang3\_68, Indra\_70, Wiks\_66, Helmet\_68, Rifter\_67, Lilbunny\_66, Zaka\_67, Koko\_69, Yokurt\_66, BlessJoy\_66, Garak\_68, Zulu\_68, ToneTone\_64
- Track 128 : Cookiedough\_66, Polyphemus\_66, Blinn1\_69, Priamo\_68, GreedyLawyer\_63, SuperAwesome\_66, JewelBug\_66, Kazan\_67, Neeharika16\_65, Candra\_64, EricB\_65, Pmask\_65, BABullseye\_59, Isiphiwo\_64, Newrala\_66, Hoot\_61, Chartreuse\_63, DaVinci\_64, VohminGhazi\_66, McFly\_66, SuperCallie99\_63, Kipper29\_66, SmellyB\_66
- Track 129 : Hexamo\_67
- Track 130 : Hammer\_67, Tucker\_67, Gruunaga\_67, Roksolana\_68
- Track 131 : Gladiator\_64
- Track 132 : Dorothea\_66, Jordennis\_65
- Track 133 : FlyCatcher\_67, Toro\_65, Sheen\_65
- Track 134 : Timshel\_65
- Track 135 : DroogsArmy\_61
- Track 136 : PP\_67
- Track 137 : HINdeR\_62
- Track 138 : Toaka\_67
- Track 139 : Jiawan\_65, ExplosioNervosa\_66, Hanray\_66, Spouty\_66, Priya\_66, Fayely\_66, EmyBug\_65, Alma\_66, Eidsmoe\_66, Halex\_66, Qobbit\_66, Conquerage\_66
- Track 140 : Scherzo\_68, Ugenie5\_64

- Track 141 : BogosyJay\_67, Maminiaina\_67
- Track 142 : LoneWolf\_68
- Track 143 : Darrell\_69
- Track 144 : Elephantoon\_66, Rahalelujah\_66

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

The start number called the most often in the published annotations is 42, it was called in 176 of the 502 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_68, AN3\_68, AN9\_70, ANI8\_70, AbbyPaige\_68, Acolyte\_59, Adzzy\_69, Agape74\_68, Alma\_66, Aneem\_67, AnnaL29\_67, Anselm\_67, ArcherNM\_60, Artemis2UCLA\_67, BABullseye\_59, Bachome\_68, Baehexic\_64, BengiVuitton\_66, Benvolio\_63, BiancaTri92\_67, BlessJoy\_66, Blinn1\_69, Blue7\_68, BobSwaget\_60, BogosyJay\_67, Bowtie\_67, Bradman\_68, Bud\_65, Buggy\_68, C3\_63, CRB1\_68, Candra\_64, Caraxes\_68, Centaur\_66, Changeling\_65, Chargerpower\_63, Chartreuse\_63, Che12\_69, ChipMunk\_68, CloudWang3\_68, Colin\_64, Conquerage\_66, Cookiedough\_66, Crucio\_66, D32\_67, DaVinci\_64, Dalmatian\_67, Darrell\_69, DARTHPhader\_63, Deloris\_66, Dignity\_68, Dorothea\_66, Drake55\_67, DudeLittle\_65, Duplo\_68, EZMoney23\_63, Ebony\_66, Echild\_66, Eidsmoe\_66, Elephantoon\_66, EmyBug\_65, Equemioh13\_65, EricB\_65, Et2Brutus\_65, EvilGenius\_67, ExplosioNervosa\_66, Fameo\_66, Fayely\_66, Fibonacci\_66, FiringLine\_66, First\_0067, Flare16\_65, Flaverint\_67, Garak\_68, Georgie2\_67, Gilberta\_67, Gratitude\_63, GreedyLawyer\_63, Gruunaga\_67, Hammer\_67, Hanray\_66, HarryHoudini\_66, Heffalump\_65, Helmet\_68, Herbertwm\_62, Horex\_66, Hoot\_61, Hutc2\_65, Indra\_70, Insomnia\_67, Isiphiwo\_64, Jabith\_67, Jeffabunny\_67, Jerm\_68, JewelBug\_66, Jiawan\_65, Jordennis\_65, Joselito\_67, JoshKayV\_67, Journey13\_59, Jsquared\_69, Kalpine\_65, Kazan\_67, Kerberos\_68, KingCyrus\_67, Kinmap\_66, Kipper29\_66, Koduck\_67, Koko\_69, L5\_63, LadyBird\_70, Leogania\_67, Leviathan\_68, LilTurb\_67, Lilbunny\_66, LionsBait\_67, Lokk\_61, LoneWolf\_68, Loser\_68, Lucivia\_67, MaCh\_66, Mabel\_66, MajorMajor\_67, Maminiaina\_67, McFly\_66, MiculUcigas\_65, Miko\_61, MissWhite\_66, Mulciber\_65, Munch\_66, NaSiaTalie\_65, Naji\_68, Neeharika16\_65, Newrala\_66, NicoleTera\_64, NothingSpecial\_63, Odin\_66, Orange\_65, Petersenfast\_64, Ph8s\_69, Pharaoh\_62, Piro94\_65, Pmask\_65, Polyphemus\_66, Pomar16\_67, Power\_65, Priamo\_68, Priya\_66, Qobbit\_66, QueenB2\_65, QueenBeesly\_66, Quokka\_67, Rachaly\_63, Rahalelujah\_66, RedRock\_67, Refuge\_63, Retro23\_67, Rifter\_67, Roksolana\_68, Salz\_65, Scherzo\_68, SemperFi\_67, Sham4\_66, Sknot\_65, Smeagan\_69, SmellyB\_66, SnapTap\_66, Snape\_66, Spouty\_66, StarStuff\_68, Steamy\_62, Sunhee\_68, SuperAwesome\_66, SuperCallie99\_63, Superchunk\_67, SweetiePie\_66, SwirlSquare\_72, TarsusIV\_63, Temprado\_68, Terrific\_66, Timothy\_66, TinyTimmy\_66, TipsytheTRex\_65, Toaka\_67, Tomathan\_68, ToneTone\_64, Travvers\_67, Trixie\_64, Trooper\_66, Tucker\_67, Turbido\_67, Ugenie5\_64, Updawg\_66, VA6\_66, VC3\_69, VohminGhazi\_66, WeiHuaDA\_67, Whabigail7\_67, WideWale\_66, Wiks\_66, WunderPhul\_67, XianYue\_63, Yokurt\_66, Zaka\_67, Zimmer\_63, Zulu\_68,

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

- DBQu4n\_68, Gladiator\_64, Hexamo\_67, Serenity\_69,



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

- 40AC\_66, ACFishhook\_66, AbbysRanger\_60, Abdiel\_62, Achebe\_59, Aglet\_69, AgronaGT15\_67, Airmid\_58, Albee\_62, Alberto7\_63, Annyong\_61, Anon\_68, Anubis\_71, Arturo\_60, Ashballer\_61, AugsMagnumOpus\_71, AvatarAhPeg\_59, Avle17\_62, B1\_57, Baby16\_62, BabyBack\_63, BabyJohn\_60, BabyRay\_65, Backyardigan\_58, Bactobuster\_62, Badger\_59, BangNhom\_61, Bartimeaus\_62, Beatrix\_58, Beauxregard13\_67, BellusTerra\_63, Benedict\_61, Bethlehem\_58, Bexan\_56, Bigflo\_67, BillKnuckles\_56, Blackmoor\_61, BlueBird\_67, Bombshell\_62, Bones\_58, BreSam8\_68, Broseidon\_62, Bruiser\_61, BubbleTrouble\_61, Bugatti\_65, Bumblebee11\_59, Burger\_60, BuzzBuzz\_64, Bxz2\_63, Caelakin\_61, Calvinny\_67, Camperdownii\_60, Caviar\_64, CentreCat\_62, Cerulean\_63, Chadwick\_60, ChampagnePapi\_64, Chaph\_62, Chiqui\_60, Chupacabra\_60, Cici\_60, Cindaradix\_57, Cintron\_62, Citius\_62, Clarenza\_61, Cocoaberry\_62, Colbster\_66, Commander\_61, Connomayer\_62, Cueyllyss\_59, Cullens\_68, DaHudson\_67, Daishi\_67, Datway\_60, Deano\_60, Dhanush\_62, Dieselweasel\_69, DirtyDunning\_61, DontArgue\_58, Doom\_56, Drake94\_59, Dreamboat\_59, DroogsArmy\_61, DropBear\_63, Druantia\_61, Dulcie\_58, DustyMartin\_64, EagleEye\_68, Eagle\_61, Eaglepride\_62, Eapen\_62, Edison31\_58, EITiger69\_60, EpicPhail\_69, Eris\_61, Eros\_62, Eurydice\_63, Farber\_68, Fernando\_68, Florean\_62, Flux\_62, FlyCatcher\_67, Fred313\_63, Funston\_61, Gadost\_62, GageAP\_59, GaugeLDP\_62, Gemma\_67, GingkoMaracino\_68, Giroux\_64, Goose\_62, Graduation\_62, Grif\_68, Groupthink\_69, Grub\_68, Grum1\_67, GtownJaz\_68, Gwendoluna\_61, HINdeR\_62, HamSlice\_59, Happiness\_61, HashRod\_69, HaveUMetTed\_69, Heathen\_65, HelDan\_64, Heliosoles\_67, Hercules11\_68, Holli\_61, Hookmount\_64, Houdini22\_61, Huxley\_60, ICleared\_61, Iceman\_62, Idleandcovert\_65, Iracema64\_63, IronMan\_64, Isca\_63, Iwokeuplikedis\_67, JC27\_61, JF2\_63, JF4\_63, JHC117\_66, Jaan\_65, Jabiru\_59, Jasper\_59, Jaykayelowell\_59, JenCasNa\_69, JeppNRM\_69, JetBlade\_62, Jobu08\_66, JoongJeon\_61, KADY\_67, KFPoly\_61, Kachowdy\_63, Kalb97\_69, Kalnok\_69, Kamy\_61, Katalie136\_60, Kimona\_60, Kingmustik0402\_62, KittenMittens\_58, Koan\_58, Koreni\_61, Kratark\_61, Kremtemulon\_62, Kristoff\_61, Kyee\_62, LBerry\_69, LHTSCC\_64, Lambert1\_64, Landor\_65, LappelDuVide\_62, Larenn\_63, LarryKay\_68, Lemur\_62, LeoAvram\_61, Licorice\_60, Lilith\_67, LittleB\_62, LittleGuy\_62, LochMonster\_63, Lorenzo\_62, Louie6\_67, Lowa\_67, Lucyedi\_67, LugYA\_71, Lunsford\_63, MA5\_65, MK4\_65, MadMarie\_68, Mainiac\_68, Malec\_64, Malinsilva\_70, Manu\_68, MarQuardt\_68, Marchesa\_63, Margo\_64, Marie\_66, Marius\_69, Maverick\_61, Maxo\_63, Mayonnaise\_60, Mazhar510\_62, Medusa\_62, MeeZee\_61, Melvin\_64, Methuselah\_63, Microwolf\_66, Millski\_61, Miramae\_59, Misomonster\_69, MoneyMay\_67, Morpher26\_60, Morrow\_63, MuchMore\_71, Mundrea\_60, Naca\_58, Nebs\_63, Nemo27\_61, Noella\_64, Noelle\_61, Norbert\_61, NorthStar\_60, Norz\_59, NotAPhaseMom\_61, Nyxis\_61, OKCentral2016\_60, OKaNui\_62, Obama12\_63, Ohfah\_63, Ohno789\_59, OlanP\_67, Ollie\_68, P28Green\_69, PGHhamlin\_70, PP\_67, Palestino\_61, Panamaxus\_62, Pari\_61, Pawn\_68, PeaceMeal1\_59, Peaches\_60, Pelly\_58, Pembroke\_68, Penny1\_68, Perplexer\_60, PeterPeter\_62, PetiteSangsue\_60, PetterN\_63, Phacado\_62, Phaded\_63, Phantastic\_66, Phelipe\_63, PherrisBueller\_57, Phighter1804\_62, PhishRPhriends\_66, Phlei\_54, Phoebe\_69, Phontbonne\_62, Phoxy\_68, Phranny\_69, Pipcraft\_59, Pistachio\_65, Pocahontas\_64, Polymorphads\_63, Poompha\_59, Popcicle\_64, PotatoSplit\_69, Pukovnik\_63, Pumbaa\_62, Puppy\_65, PurpleHaze\_68, QuinnKiro\_63, Reba\_68, Rebeuca\_62, Relief\_61, ResDef\_63, RhynO\_61, Rockstar\_63, Romney\_61, Roosevelt\_60, Rosa24\_60, Rowdy\_64, Ruin\_62, Rummer\_67, Ruotula\_61, Sabertooth\_62, Sabia\_68, Sabinator\_66, SaturnRing\_65, Scamp\_62, Scorpia\_62, Scout\_64,

Seanderson\_58, SenorClean\_58, Severus\_59, Shaka\_60, Shapes\_64, Sheen\_65, SheldonCooper\_62, Shygu2\_60, Skipitt\_61, Snickers\_66, SoYo\_67, SoilDragon\_68, Soshari\_70, Sparxx\_63, Spike509\_68, SpikeBT\_57, Spino\_61, Stagni\_67, Stasia\_60, StepMih\_67, Stink\_59, StrongArm\_57, TNguyen7\_66, Taquarus\_61, Taurus\_69, Texage\_62, Thanksgivukkah\_61, Tiffany\_67, Timshel\_65, TinaFeyge\_60, TinyPebbles\_66, Tinybot\_61, TiroTheta9\_61, Todacoro\_64, Topanga\_58, Toro\_65, Traft412\_61, Trike\_58, Tristan\_61, TroyPia\_63, Twister\_60, TygerBlood\_62, Ulysses\_61, UnionJack\_59, Veracruz\_62, Vix\_66, WalterMcMickey\_60, Wander\_62, Watson\_67, Wilbur\_62, Wile\_60, Wizard007\_61, Wooldri\_70, Xena\_59, YoSam321\_62, Zetzy\_67,

### Summary by start number:

#### Start 24:

- Found in 1 of 559 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 502
- Called 100.0% of time when present
- Phage (with cluster) where this start called: UnionJack\_59 (A5),

#### Start 28:

- Found in 1 of 559 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 502
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DBQu4n\_68 (A2),

#### Start 32:

- Found in 173 of 559 ( 30.9% ) of genes in pham
- Manual Annotations of this start: 22 of 502
- Called 12.7% of time when present
- Phage (with cluster) where this start called: Abdiel\_62 (A4), Achebe\_59 (A4), Bombshell\_62 (A4), Bruiser\_61 (A4), BubbleTrouble\_61 (A4), Camperdownii\_60 (A4), Clarenza\_61 (A4), Funston\_61 (A4), HamSlice\_59 (A4), Iracema64\_63 (A4), JoongJeon\_61 (A4), KFPoly\_61 (A4), Kratark\_61 (A4), Lemur\_62 (A4), Millski\_61 (A4), Palestino\_61 (A4), Phacado\_62 (A4), Phaded\_63 (A2), Phighter1804\_62 (A4), Thanksgivukkah\_61 (A4), TinaFeyge\_60 (A4), Wander\_62 (A4),

#### Start 34:

- Found in 276 of 559 ( 49.4% ) of genes in pham
- Manual Annotations of this start: 15 of 502
- Called 5.4% of time when present
- Phage (with cluster) where this start called: Avle17\_62 (A4), Cocoaberry\_62 (A4), DroogsArmy\_61 (A7), Eris\_61 (A4), Flux\_62 (A4), Gladiator\_64 (A6), Hexamo\_67 (A6), LittleGuy\_62 (A4), Maverick\_61 (A4), Medusa\_62 (A4), Nyxis\_61 (A4), PP\_67 (A7), Sabertooth\_62 (A4), Serenity\_69 (A2), Shaka\_60 (A4),

#### Start 36:

- Found in 69 of 559 ( 12.3% ) of genes in pham
- Manual Annotations of this start: 13 of 502
- Called 18.8% of time when present
- Phage (with cluster) where this start called: Anubis\_71 (A3), BreSam8\_68 (A3), Colbster\_66 (A3), DaHudson\_67 (A3), Daishi\_67 (A3), Hercules11\_68 (A3), Misomonster\_69 (A3), PGHhamlin\_70 (A3), Pembroke\_68 (A3), Phoebe\_69 (A3), SoYo\_67 (A3), SoilDragon\_68 (A3), Wooldri\_70 (A3),

Start 37:

- Found in 31 of 559 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 28 of 502
- Called 90.3% of time when present
- Phage (with cluster) where this start called: Airmid\_58 (A5), Beatrix\_58 (A1), Benedict\_61 (A5), Bethlehem\_58 (A1), Bexan\_56 (A1), BillKnuckles\_56 (A1), Bones\_58 (A1), Chadwick\_60 (A5), Cueyllyss\_59 (A1), Doom\_56 (A1), Dreamboat\_59 (A1), EITiger69\_60 (A5), GageAP\_59 (A1), Graduation\_62 (A1), Jabiru\_59 (A5), Jasper\_59 (A1), Licorice\_60 (A1), Naca\_58 (A5), Norz\_59 (A1), Ohno789\_59 (A1), Pari\_61 (A1), PetterN\_63 (A5), PherrisBueller\_57 (A1), Scorpia\_62 (A5), Seanderson\_58 (A1), SpikeBT\_57 (A1), StrongArm\_57 (A1), Traft412\_61 (A1),

Start 38:

- Found in 6 of 559 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 6 of 502
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashballer\_61 (A1), Dulcie\_58 (A1), Gwendoluna\_61 (A1), JC27\_61 (A1), Pelly\_58 (A1), Ruotula\_61 (A1),

Start 39:

- Found in 3 of 559 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 502
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 40AC\_66 (A17), BabyBack\_63 (A2), Eaglepride\_62 (A10),

Start 40:

- Found in 5 of 559 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 502
- Called 80.0% of time when present
- Phage (with cluster) where this start called: FlyCatcher\_67 (A7), HINdeR\_62 (A7), Sheen\_65 (A7), Toro\_65 (A7),

Start 41:

- Found in 36 of 559 ( 6.4% ) of genes in pham
- Manual Annotations of this start: 29 of 502
- Called 97.2% of time when present
- Phage (with cluster) where this start called: Bactobuster\_62 (A2), Chupacabra\_60 (A10), DontArgue\_58 (A10), Drake94\_59 (A10), DustyMartin\_64 (A10), EagleEye\_68 (A16), Edison31\_58 (A10), GaugeLDP\_62 (A2), Goose\_62 (A10), IronMan\_64 (A2), Iwokeuplikedis\_67 (A2), Jaan\_65 (A2), Kimona\_60 (A19), KittenMittens\_58 (A10), Kristoff\_61 (A10), Landor\_65 (A2), Larenn\_63 (A2), Lucyedi\_67 (A16), Malec\_64 (A2), OKCentral2016\_60 (A10), PeaceMeal1\_59 (A10), Phlei\_54 (A13), Poompha\_59 (A10), Pukovnik\_63 (A2), Rebeuca\_62 (A10), RhynO\_61 (A10), Rowdy\_64 (A10), Severus\_59 (A10), Shapes\_64 (A10), Timshel\_65 (A7), Topanga\_58 (A10), Trike\_58 (A10), Tristan\_61 (A2), Twister\_60 (A10), WalterMcMickey\_60 (A10),

Start 42:

- Found in 210 of 559 ( 37.6% ) of genes in pham
- Manual Annotations of this start: 176 of 502
- Called 98.1% of time when present

• Phage (with cluster) where this start called: 20ES\_68 (A2), AN3\_68 (A2), AN9\_70 (A2), AN18\_70 (A2), AbbyPaige\_68 (A2), Acolyte\_59 (A2), Adzzy\_69 (A2), Agape74\_68 (A2), Alma\_66 (A9), Aneem\_67 (A11), AnnaL29\_67 (A2), Anselm\_67 (A2), ArcherNM\_60 (A2), Artemis2UCLA\_67 (A6), BABullseye\_59 (A6), Bachome\_68 (A11), Baehexic\_64 (A2), BengiVuitton\_66 (A2), Benvolio\_63 (A2), BiancaTri92\_67 (A2), BlessJoy\_66 (A6), Blinn1\_69 (A6), Blue7\_68 (A6), BobSwaget\_60 (A2), BogosyJay\_67 (A9), Bowtie\_67 (A11), Bradman\_68 (A2), Bud\_65 (A11), Bugsy\_68 (A2), C3\_63 (A2), CRB1\_68 (A2), Candra\_64 (A6), Caraxes\_68 (A2), Centaur\_66 (A2), Changeling\_65 (A2), Chargerpower\_63 (A), Chartreuse\_63 (A6), Che12\_69 (A2), ChipMunk\_68 (A2), CloudWang3\_68 (A6), Colin\_64 (A2), Conquerage\_66 (A9), Cookiedough\_66 (A6), Crucio\_66 (A2), D32\_67 (A2), DaVinci\_64 (A6), Dalmatian\_67 (A2), Darrell\_69 (A9), DarthPhader\_63 (A12), Deloris\_66 (A2), Dignity\_68 (A2), Dorothea\_66 (A6), Drake55\_67 (A2), DudeLittle\_65 (A2), Duplo\_68 (A2), EZMoney23\_63 (A2), Ebony\_66 (A11), Echild\_66 (A2), Eidsmoe\_66 (A9), Elephantoon\_66 (A9), EmyBug\_65 (A9), Equemioh13\_65 (A2), EricB\_65 (A6), Et2Brutus\_65 (A11), EvilGenius\_67 (A2), ExplosioNervosa\_66 (A9), Fameo\_66 (A2), Fayely\_66 (A9), Fibonacci\_66 (A11), FiringLine\_66 (A2), First\_0067 (A2), Flare16\_65 (A2), Flaverint\_67 (A11), Garak\_68 (A6), Georgie2\_67 (A2), Gilberta\_67 (A11), Gratitude\_63 (A2), GreedyLawyer\_63 (A6), Gruunaga\_67 (A6), Hammer\_67 (A6), Hanray\_66 (A9), HarryHoudini\_66 (A2), Heffalump\_65 (A2), Helmet\_68 (A6), Herbertwm\_62 (A2), Holesx\_66 (A9), Hoot\_61 (A6), Hutc2\_65 (A11), Indra\_70 (A6), Insomnia\_67 (A11), Isiphiwo\_64 (A6), Jabith\_67 (A11), Jeffabunny\_67 (A6), Jerm\_68 (A2), JewelBug\_66 (A6), Jiawan\_65 (A9), Jordennis\_65 (A6), Joselito\_67 (A11), JoshKayV\_67 (A2), Journey13\_59 (A2), Jsquared\_69 (A2), Kalpine\_65 (A2), Kazan\_67 (A6), Kerberos\_68 (A2), KingCyrus\_67 (A2), Kinmap\_66 (A21), Kipper29\_66 (A6), Koduck\_67 (A2), Koko\_69 (A6), L5\_63 (A2), LadyBird\_70 (A2), Leogania\_67 (A2), Leviathan\_68 (A2), LilTurb\_67 (A2), Lilbunny\_66 (A6), LionsBait\_67 (A2), Lokk\_61 (A2), LoneWolf\_68 (A9), Loser\_68 (A2), Lucivia\_67 (A11), MaCh\_66 (A11), Mabel\_66 (A11), MajorMajor\_67 (A2), Maminiaina\_67 (A9), McFly\_66 (A6), MiculUcigas\_65 (A2), Miko\_61 (A2), MissWhite\_66 (A2), Mulciber\_65 (A11), Munch\_66 (A11), NaSiaTalie\_65 (A2), Naji\_68 (A2), Neeharika16\_65 (A6), Newrala\_66 (A6), NicoleTera\_64 (A2), NothingSpecial\_63 (A2), Odin\_66 (A2), Orange\_65 (A11), Petersenfast\_64 (A11), Ph8s\_69 (A2), Pharaoh\_62 (A12), Piro94\_65 (A2), Pmask\_65 (A6), Polyphemus\_66 (A6), Pomar16\_67 (A2), Power\_65 (A2), Priamo\_68 (A6), Priya\_66 (A9), Qobbit\_66 (A9), QueenB2\_65 (A2), QueenBeesly\_66 (A2), Quokka\_67 (A2), Rachaly\_63 (A2), Rahalelujah\_66 (A9), RedRock\_67 (A2), Refuge\_63 (A12), Retro23\_67 (A2), Rifter\_67 (A6), Roksolana\_68 (A6), Salz\_65 (A11), Scherzo\_68 (A9), SemperFi\_67 (A2), Sham4\_66 (A11), Sknot\_65 (A2), Smeagan\_69 (A2), SmellyB\_66 (A6), SnapTap\_66 (A2), Snape\_66 (A11), Spouty\_66 (A9), StarStuff\_68 (A2), Steamy\_62 (A12), Sunhee\_68 (A14), SuperAwesome\_66 (A6), SuperCallie99\_63 (A6), Superchunk\_67 (A2), SweetiePie\_66 (A2), SwirlSquare\_72 (A2), TarsusIV\_63 (A2), Temprado\_68 (A6), Terrific\_66 (A2), Timothy\_66 (A11), TinyTimmy\_66 (A11), TipsytheTRex\_65 (A2), Toaka\_67 (A9), Tomathan\_68 (A2), ToneTone\_64 (A6), Travvers\_67 (A2), Trixie\_64 (A2), Trooper\_66 (A2), Tucker\_67 (A6), Turbido\_67 (A2), Ugenie5\_64 (A9), Updawg\_66 (A2), VA6\_66 (A2), VC3\_69 (A2), VohminGhazi\_66 (A6), WeiHuaDA\_67 (A2), Whabigail7\_67 (A2), WideWale\_66 (A2), Wiks\_66 (A6), WunderPhul\_67 (A6), XianYue\_63 (A2), Yokurt\_66 (A6), Zaka\_67 (A6), Zimmer\_63 (A12), Zulu\_68 (A6),

Start 44:

- Found in 182 of 559 ( 32.6% ) of genes in pham
- Manual Annotations of this start: 138 of 502
- Called 83.0% of time when present

- Phage (with cluster) where this start called: AbbysRanger\_60 (A4), Albee\_62 (A4), Alberto7\_63 (A4), Annyong\_61 (A4), Arturo\_60 (A4), AvatarAhPeg\_59 (A4), B1\_57 (A3), Baby16\_62 (A4), BabyJohn\_60 (A3), BabyRay\_65 (A3), Backyardigan\_58 (A4), Badger\_59 (A4), BangNhom\_61 (A4), Bartimeaus\_62 (A4), BellusTerra\_63 (A4), Blackmoor\_61 (A4), BlueBird\_67 (A3), Broseidon\_62 (A4), Bugatti\_65 (A3), Bumblebee11\_59 (A4), Burger\_60 (A4), Caelakin\_61 (A4), Caviar\_64 (A3), CentreCat\_62 (A4), Cerulean\_63 (A4), ChampagnePapi\_64 (A4), Chaph\_62 (A4), Chiqui\_60 (A3), Cici\_60 (A4), Cindaradix\_57 (A4), Cintron\_62 (A4), Citius\_62 (A4), Commander\_61 (A4), Connomayer\_62 (A4), Datway\_60 (A4), Deano\_60 (A4), Dhanush\_62 (A4), DirtyDunning\_61 (A4), DropBear\_63 (A3), Druantia\_61 (A4), Eagle\_61 (A4), Eapen\_62 (A4), Eros\_62 (A4), Eurydice\_63 (A4), Florean\_62 (A4), Fred313\_63 (A3), Gadost\_62 (A4), Giroux\_64 (A3), Happiness\_61 (A4), Heathen\_65 (A3), HeiDan\_64 (A3), Holli\_61 (A4), Hookmount\_64 (A3), Houdini22\_61 (A4), Huxley\_60 (A4), ICleared\_61 (A4), Iceman\_62 (A4), Idleandcovert\_65 (A3), Isca\_63 (A3), JF2\_63 (A3), JF4\_63 (A3), Jaykayelowell\_59 (A4), JetBlade\_62 (A4), Kachowdy\_63 (A3), Kampy\_61 (A4), Katalie136\_60 (A4), Kingmustik0402\_62 (A4), Koan\_58 (A4), Koreni\_61 (A4), Kremtemulon\_62 (A4), Kyee\_62 (A4), LHTSCC\_64 (A4), Lambert1\_64 (A3), LappelDuVide\_62 (A4), LeoAvram\_61 (A4), LittleB\_62 (A4), LochMonster\_63 (A4), Lorenzo\_62 (A4), Lunsford\_63 (A4), MA5\_65 (A3), MK4\_65 (A3), Marchesa\_63 (A3), Margo\_64 (A3), Maxo\_63 (A4), Mayonnaise\_60 (A4), Mazhar510\_62 (A4), MeeZee\_61 (A4), Melvin\_64 (A4), Miramae\_59 (A4), Morpher26\_60 (A4), Morrow\_63 (A4), Mundrea\_60 (A4), Nebs\_63 (A4), Nemo27\_61 (A4), Noella\_64 (A3), Noelle\_61 (A4), Norbert\_61 (A3), NorthStar\_60 (A4), NotAPhaseMom\_61 (A4), OKaNui\_62 (A4), Obama12\_63 (A4), Ohfah\_63 (A4), Panamaxus\_62 (A3), Peaches\_60 (A4), Perplexer\_60 (A4), PeterPeter\_62 (A4), PetiteSangsue\_60 (A4), Phantastic\_66 (A3), Phelipe\_63 (A4), Phontbonne\_62 (A4), Pipcraft\_59 (A4), Pistachio\_65 (A3), Pocahontas\_64 (A3), Polymorphads\_63 (A4), Popcicle\_64 (A3), Pumbaa\_62 (A4), Puppy\_65 (A3), QuinnKiro\_63 (A3), Relief\_61 (A4), ResDef\_63 (A3), Rockstar\_63 (A3), Romney\_61 (A4), Roosevelt\_60 (A4), Rosa24\_60 (A4), Ruin\_62 (A4), SaturnRing\_65 (A3), Scamp\_62 (A4), Scout\_64 (A3), SenorClean\_58 (A4), SheldonCooper\_62 (A4), Shygu2\_60 (A4), Skipitt\_61 (A4), Sparxx\_63 (A4), Spino\_61 (A4), Stasia\_60 (A4), Stink\_59 (A4), TNguyen7\_66 (A3), Taquarus\_61 (A4), Texage\_62 (A3), Tinybot\_61 (A4), TiroTheta9\_61 (A4), Todacoro\_64 (A3), TroyPia\_63 (A4), TygerBlood\_62 (A4), Ulysses\_61 (A4), Veracruz\_62 (A3), Wilbur\_62 (A4), Wile\_60 (A4), Wizard007\_61 (A4), Xena\_59 (A4), YoSam321\_62 (A4),

Start 45:

- Found in 68 of 559 ( 12.2% ) of genes in pham
- Manual Annotations of this start: 51 of 502
- Called 80.9% of time when present
- Phage (with cluster) where this start called: Aglet\_69 (A3), AgronaGT15\_67 (A3), AugsMagnumOpus\_71 (A3), Beauxregard13\_67 (A3), Bigflo\_67 (A3), BuzzBuzz\_64 (A3), Bxz2\_63 (A3), Cullens\_68 (A3), Dieselweasel\_69 (A3), EpicPhail\_69 (A3), Farber\_68 (A3), Fernando\_68 (A3), GingkoMaracino\_68 (A3), Grif\_68 (A3), Grub\_68 (A3), Grum1\_67 (A3), GtownJaz\_68 (A3), HashRod\_69 (A3), JHC117\_66 (A3), JenCasNa\_69 (A3), Jobu08\_66 (A3), KADY\_67 (A3), LBerry\_69 (A3), LarryKay\_68 (A3), Lilith\_67 (A3), Lowa\_67 (A3), LugYA\_71 (A3), MadMarie\_68 (A3), Mainiac\_68 (A3), Malinsilva\_70 (A3), MarQuardt\_68 (A3), Marie\_66 (A3), Methuselah\_63 (A3), Microwolf\_66 (A3), MoneyMay\_67 (A3), MuchMore\_71 (A3), Ollie\_68 (A3), P28Green\_69 (A3), Penny1\_68 (A3), Phoxy\_68 (A3), PotatoSplit\_69 (A3), Rummer\_67 (A3), Sabia\_68 (A3), Sabinator\_66 (A3), Snickers\_66 (A3), Soshari\_70 (A3), Spike509\_68 (A3), Stagni\_67 (A3), StepMih\_67 (A3), Taurus\_69 (A3),

Tiffany\_67 (A3), TinyPebbles\_66 (A3), Vix\_66 (A3), Watson\_67 (A3), Zetzy\_67 (A3),

Start 46:

- Found in 18 of 559 ( 3.2% ) of genes in pham
- Manual Annotations of this start: 17 of 502
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ACFishhook\_66 (A3), Calvinny\_67 (A3), Gemma\_67 (A3), Groupthink\_69 (A3), HaveUMetTed\_69 (A3), Heliosoles\_67 (A3), JeppNRM\_69 (A3), Kalb97\_69 (A3), Kalnoky\_69 (A3), Louie6\_67 (A3), Manu\_68 (A3), Marius\_69 (A3), OlanP\_67 (A3), Pawn\_68 (A3), PhishRPhriends\_66 (A3), Phranny\_69 (A3), PurpleHaze\_68 (A3), Reba\_68 (A3),

Start 51:

- Found in 2 of 559 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 502
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Anon\_68 (A15),

### **Summary by clusters:**

There are 19 clusters represented in this pham: A15, A21, A17, A16, A11, A10, A13, A12, A19, A, A1, A3, A2, A5, A4, A7, A6, A9, A14,

Info for manual annotations of cluster A:

- Start number 42 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A1:

- Start number 37 was manually annotated 20 times for cluster A1.
- Start number 38 was manually annotated 6 times for cluster A1.

Info for manual annotations of cluster A10:

- Start number 39 was manually annotated 1 time for cluster A10.
- Start number 41 was manually annotated 16 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 42 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 42 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A15:

- Start number 51 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 41 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A19:

- Start number 41 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 28 was manually annotated 1 time for cluster A2.
- Start number 32 was manually annotated 1 time for cluster A2.
- Start number 34 was manually annotated 1 time for cluster A2.
- Start number 39 was manually annotated 1 time for cluster A2.
- Start number 41 was manually annotated 9 times for cluster A2.
- Start number 42 was manually annotated 88 times for cluster A2.

Info for manual annotations of cluster A3:

- Start number 36 was manually annotated 13 times for cluster A3.
- Start number 44 was manually annotated 32 times for cluster A3.
- Start number 45 was manually annotated 51 times for cluster A3.
- Start number 46 was manually annotated 17 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 32 was manually annotated 21 times for cluster A4.
- Start number 34 was manually annotated 10 times for cluster A4.
- Start number 44 was manually annotated 106 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 24 was manually annotated 1 time for cluster A5.
- Start number 37 was manually annotated 8 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 34 was manually annotated 2 times for cluster A6.
- Start number 42 was manually annotated 40 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 34 was manually annotated 2 times for cluster A7.
- Start number 40 was manually annotated 2 times for cluster A7.
- Start number 41 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A9:

- Start number 42 was manually annotated 18 times for cluster A9.

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

Gene: 20ES\_68 Start: 41417, Stop: 41187, Start Num: 42

Candidate Starts for 20ES\_68:

(Start: 42 @41417 has 176 MA's), (49, 41399), (75, 41270), (81, 41231),

Gene: 40AC\_66 Start: 42289, Stop: 42059, Start Num: 39

Candidate Starts for 40AC\_66:

(Start: 39 @42289 has 2 MA's), (48, 42277), (49, 42274), (56, 42241), (66, 42187), (72, 42157),

Gene: ACFishhook\_66 Start: 41128, Stop: 40898, Start Num: 46

Candidate Starts for ACFishhook\_66:

(Start: 46 @41128 has 17 MA's), (75, 40984), (81, 40945),

Gene: AN3\_68 Start: 40132, Stop: 39902, Start Num: 42

Candidate Starts for AN3\_68:

(Start: 42 @40132 has 176 MA's), (49, 40114), (75, 39985), (81, 39946),

Gene: AN9\_70 Start: 41277, Stop: 41041, Start Num: 42

Candidate Starts for AN9\_70:

(Start: 34 @41304 has 15 MA's), (Start: 42 @41277 has 176 MA's), (49, 41259), (56, 41226), (71, 41139),

Gene: ANI8\_70 Start: 41277, Stop: 41041, Start Num: 42

Candidate Starts for ANI8\_70:

(Start: 34 @41304 has 15 MA's), (Start: 42 @41277 has 176 MA's), (49, 41259), (56, 41226), (71, 41139),

Gene: AbbyPaige\_68 Start: 41661, Stop: 41431, Start Num: 42

Candidate Starts for AbbyPaige\_68:

(4, 41910), (29, 41715), (31, 41709), (Start: 42 @41661 has 176 MA's), (49, 41643), (75, 41514), (81, 41475),

Gene: AbbysRanger\_60 Start: 40318, Stop: 40094, Start Num: 44

Candidate Starts for AbbysRanger\_60:

(Start: 32 @40360 has 22 MA's), (Start: 34 @40348 has 15 MA's), (Start: 44 @40318 has 138 MA's), (80, 40153), (81, 40141),

Gene: Abdiel\_62 Start: 40510, Stop: 40244, Start Num: 32

Candidate Starts for Abdiel\_62:

(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: Achebe\_59 Start: 40343, Stop: 40077, Start Num: 32

Candidate Starts for Achebe\_59:

(Start: 32 @40343 has 22 MA's), (Start: 34 @40331 has 15 MA's), (Start: 44 @40301 has 138 MA's), (80, 40136), (81, 40124),

Gene: Acolyte\_59 Start: 40074, Stop: 39841, Start Num: 42

Candidate Starts for Acolyte\_59:

(Start: 42 @40074 has 176 MA's), (49, 40056), (71, 39942), (75, 39927), (84, 39864), (86, 39849),

Gene: Adzzy\_69 Start: 39937, Stop: 39698, Start Num: 42

Candidate Starts for Adzzy\_69:

(Start: 42 @39937 has 176 MA's), (49, 39919), (56, 39886), (71, 39799), (79, 39766), (86, 39706),

Gene: Agape74\_68 Start: 41655, Stop: 41425, Start Num: 42

Candidate Starts for Agape74\_68:

(4, 41904), (29, 41709), (31, 41703), (Start: 42 @41655 has 176 MA's), (49, 41637), (75, 41508), (81, 41469),

Gene: Aglet\_69 Start: 41171, Stop: 40941, Start Num: 45

Candidate Starts for Aglet\_69:

(Start: 36 @41198 has 13 MA's), (Start: 45 @41171 has 51 MA's), (71, 41042), (81, 40988),

Gene: AgronaGT15\_67 Start: 41019, Stop: 40789, Start Num: 45

Candidate Starts for AgronaGT15\_67:

(Start: 36 @41046 has 13 MA's), (Start: 45 @41019 has 51 MA's), (71, 40890), (81, 40836),



Gene: Airmid\_58 Start: 39243, Stop: 38977, Start Num: 37  
Candidate Starts for Airmid\_58:  
(Start: 37 @39243 has 28 MA's), (43, 39219), (47, 39210), (81, 39024),

Gene: Albee\_62 Start: 40464, Stop: 40240, Start Num: 44  
Candidate Starts for Albee\_62:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's),  
(52, 40443), (81, 40287), (86, 40248),

Gene: Alberto7\_63 Start: 40801, Stop: 40577, Start Num: 44  
Candidate Starts for Alberto7\_63:  
(Start: 32 @40843 has 22 MA's), (Start: 34 @40831 has 15 MA's), (Start: 44 @40801 has 138 MA's),  
(52, 40780), (81, 40624), (86, 40585),

Gene: Alma\_66 Start: 40634, Stop: 40401, Start Num: 42  
Candidate Starts for Alma\_66:  
(Start: 42 @40634 has 176 MA's), (49, 40616), (66, 40529), (71, 40502), (82, 40439), (84, 40424),

Gene: Aneem\_67 Start: 40626, Stop: 40393, Start Num: 42  
Candidate Starts for Aneem\_67:  
(Start: 42 @40626 has 176 MA's), (50, 40608), (65, 40524), (77, 40464), (79, 40458),

Gene: AnnaL29\_67 Start: 42021, Stop: 41788, Start Num: 42  
Candidate Starts for AnnaL29\_67:  
(Start: 34 @42051 has 15 MA's), (Start: 42 @42021 has 176 MA's), (49, 42003), (71, 41889), (75,  
41874),

Gene: Annyong\_61 Start: 40509, Stop: 40285, Start Num: 44  
Candidate Starts for Annyong\_61:  
(Start: 32 @40551 has 22 MA's), (Start: 34 @40539 has 15 MA's), (Start: 44 @40509 has 138 MA's),  
(52, 40488), (81, 40332), (86, 40293),

Gene: Anon\_68 Start: 39528, Stop: 39328, Start Num: 51  
Candidate Starts for Anon\_68:  
(Start: 51 @39528 has 1 MA's),

Gene: Anselm\_67 Start: 41559, Stop: 41329, Start Num: 42  
Candidate Starts for Anselm\_67:  
(20, 41646), (Start: 34 @41592 has 15 MA's), (Start: 42 @41559 has 176 MA's), (49, 41541), (53,  
41523), (81, 41373),

Gene: Anubis\_71 Start: 41084, Stop: 40827, Start Num: 36  
Candidate Starts for Anubis\_71:  
(Start: 36 @41084 has 13 MA's), (Start: 45 @41057 has 51 MA's), (71, 40928), (81, 40874),

Gene: ArcherNM\_60 Start: 40803, Stop: 40570, Start Num: 42  
Candidate Starts for ArcherNM\_60:  
(Start: 34 @40833 has 15 MA's), (Start: 42 @40803 has 176 MA's), (49, 40785), (56, 40752), (75,  
40656), (84, 40593),

Gene: Artemis2UCLA\_67 Start: 39185, Stop: 38952, Start Num: 42  
Candidate Starts for Artemis2UCLA\_67:

(Start: 34 @39215 has 15 MA's), (Start: 42 @39185 has 176 MA's), (49, 39167), (54, 39146), (59, 39119), (71, 39053), (77, 39026), (81, 38999), (86, 38960),

Gene: Arturo\_60 Start: 40579, Stop: 40355, Start Num: 44

Candidate Starts for Arturo\_60:

(Start: 32 @40621 has 22 MA's), (Start: 34 @40609 has 15 MA's), (Start: 44 @40579 has 138 MA's), (52, 40558), (81, 40402), (86, 40363),

Gene: Ashballer\_61 Start: 40810, Stop: 40559, Start Num: 38

Candidate Starts for Ashballer\_61:

(Start: 37 @40813 has 28 MA's), (Start: 38 @40810 has 6 MA's), (54, 40759), (58, 40741), (64, 40696),

Gene: AugsMagnumOpus\_71 Start: 41162, Stop: 40932, Start Num: 45

Candidate Starts for AugsMagnumOpus\_71:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: AvatarAhPeg\_59 Start: 40091, Stop: 39867, Start Num: 44

Candidate Starts for AvatarAhPeg\_59:

(Start: 32 @40133 has 22 MA's), (Start: 34 @40121 has 15 MA's), (Start: 44 @40091 has 138 MA's), (52, 40070),

Gene: Avle17\_62 Start: 40491, Stop: 40237, Start Num: 34

Candidate Starts for Avle17\_62:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: B1\_57 Start: 39044, Stop: 38814, Start Num: 44

Candidate Starts for B1\_57:

(Start: 32 @39086 has 22 MA's), (Start: 34 @39074 has 15 MA's), (Start: 44 @39044 has 138 MA's), (62, 38954),

Gene: BABullseye\_59 Start: 36740, Stop: 36507, Start Num: 42

Candidate Starts for BABullseye\_59:

(Start: 42 @36740 has 176 MA's), (49, 36722), (54, 36701), (59, 36674), (60, 36659), (71, 36608), (75, 36593),

Gene: Baby16\_62 Start: 40475, Stop: 40251, Start Num: 44

Candidate Starts for Baby16\_62:

(Start: 32 @40517 has 22 MA's), (Start: 34 @40505 has 15 MA's), (Start: 44 @40475 has 138 MA's), (52, 40454), (81, 40298), (86, 40259),

Gene: BabyBack\_63 Start: 41397, Stop: 41167, Start Num: 39

Candidate Starts for BabyBack\_63:

(Start: 39 @41397 has 2 MA's), (49, 41376), (72, 41262),

Gene: BabyJohn\_60 Start: 40871, Stop: 40641, Start Num: 44

Candidate Starts for BabyJohn\_60:

(Start: 32 @40913 has 22 MA's), (Start: 34 @40901 has 15 MA's), (Start: 44 @40871 has 138 MA's), (75, 40727),

Gene: BabyRay\_65 Start: 40849, Stop: 40619, Start Num: 44

Candidate Starts for BabyRay\_65:

(Start: 32 @40891 has 22 MA's), (Start: 34 @40879 has 15 MA's), (Start: 44 @40849 has 138 MA's), (75, 40705), (83, 40651),

Gene: Bachome\_68 Start: 40606, Stop: 40373, Start Num: 42

Candidate Starts for Bachome\_68:

(33, 40648), (Start: 42 @40606 has 176 MA's), (50, 40588), (65, 40504), (77, 40444), (79, 40438),

Gene: Backyardigan\_58 Start: 40334, Stop: 40110, Start Num: 44

Candidate Starts for Backyardigan\_58:

(Start: 32 @40376 has 22 MA's), (Start: 34 @40364 has 15 MA's), (Start: 44 @40334 has 138 MA's), (80, 40169), (81, 40157),

Gene: Bactobuster\_62 Start: 41701, Stop: 41465, Start Num: 41

Candidate Starts for Bactobuster\_62:

(Start: 32 @41740 has 22 MA's), (Start: 34 @41728 has 15 MA's), (Start: 41 @41701 has 29 MA's), (49, 41680), (84, 41488), (86, 41473),

Gene: Badger\_59 Start: 40302, Stop: 40078, Start Num: 44

Candidate Starts for Badger\_59:

(Start: 32 @40344 has 22 MA's), (Start: 34 @40332 has 15 MA's), (Start: 44 @40302 has 138 MA's), (80, 40137), (81, 40125),

Gene: Baehexic\_64 Start: 40861, Stop: 40631, Start Num: 42

Candidate Starts for Baehexic\_64:

(Start: 42 @40861 has 176 MA's), (49, 40843), (53, 40825), (59, 40795), (81, 40678), (84, 40654),

Gene: BangNhom\_61 Start: 40867, Stop: 40643, Start Num: 44

Candidate Starts for BangNhom\_61:

(Start: 32 @40909 has 22 MA's), (Start: 34 @40897 has 15 MA's), (Start: 44 @40867 has 138 MA's), (52, 40846), (81, 40690), (86, 40651),

Gene: Bartimeaus\_62 Start: 40466, Stop: 40242, Start Num: 44

Candidate Starts for Bartimeaus\_62:

(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Beatrix\_58 Start: 40913, Stop: 40653, Start Num: 37

Candidate Starts for Beatrix\_58:

(Start: 37 @40913 has 28 MA's), (59, 40826), (78, 40724),

Gene: Beauxregard13\_67 Start: 41174, Stop: 40944, Start Num: 45

Candidate Starts for Beauxregard13\_67:

(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: BellusTerra\_63 Start: 40468, Stop: 40244, Start Num: 44

Candidate Starts for BellusTerra\_63:

(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: Benedict\_61 Start: 39533, Stop: 39267, Start Num: 37

Candidate Starts for Benedict\_61:

(Start: 37 @39533 has 28 MA's), (47, 39500), (81, 39314),

Gene: BengiVuitton\_66 Start: 41394, Stop: 41164, Start Num: 42  
Candidate Starts for BengiVuitton\_66:  
(Start: 42 @41394 has 176 MA's), (49, 41376), (75, 41247), (81, 41208),

Gene: Benvolio\_63 Start: 40669, Stop: 40436, Start Num: 42  
Candidate Starts for Benvolio\_63:  
(Start: 42 @40669 has 176 MA's), (49, 40651), (75, 40522), (81, 40483),

Gene: Bethlehem\_58 Start: 41462, Stop: 41202, Start Num: 37  
Candidate Starts for Bethlehem\_58:  
(Start: 37 @41462 has 28 MA's), (59, 41375), (78, 41273),

Gene: Bexan\_56 Start: 40692, Stop: 40432, Start Num: 37  
Candidate Starts for Bexan\_56:  
(Start: 37 @40692 has 28 MA's), (59, 40605), (78, 40503),

Gene: BiancaTri92\_67 Start: 41939, Stop: 41709, Start Num: 42  
Candidate Starts for BiancaTri92\_67:  
(Start: 34 @41969 has 15 MA's), (Start: 42 @41939 has 176 MA's), (49, 41921), (81, 41756), (84, 41732),

Gene: Bigflo\_67 Start: 41170, Stop: 40940, Start Num: 45  
Candidate Starts for Bigflo\_67:  
(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: BillKnuckles\_56 Start: 41364, Stop: 41107, Start Num: 37  
Candidate Starts for BillKnuckles\_56:  
(Start: 37 @41364 has 28 MA's), (54, 41307), (58, 41289),

Gene: Blackmoor\_61 Start: 40466, Stop: 40242, Start Num: 44  
Candidate Starts for Blackmoor\_61:  
(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: BlessJoy\_66 Start: 39611, Stop: 39378, Start Num: 42  
Candidate Starts for BlessJoy\_66:  
(Start: 34 @39641 has 15 MA's), (Start: 42 @39611 has 176 MA's), (49, 39593), (54, 39572), (59, 39545), (71, 39479), (77, 39452), (81, 39425), (86, 39386),

Gene: Blinn1\_69 Start: 39269, Stop: 39036, Start Num: 42  
Candidate Starts for Blinn1\_69:  
(Start: 42 @39269 has 176 MA's), (49, 39251), (54, 39230), (59, 39203), (60, 39188), (71, 39137), (75, 39122),

Gene: Blue7\_68 Start: 39279, Stop: 39046, Start Num: 42  
Candidate Starts for Blue7\_68:  
(Start: 34 @39309 has 15 MA's), (Start: 42 @39279 has 176 MA's), (49, 39261), (54, 39240), (59, 39213), (71, 39147), (77, 39120), (81, 39093), (86, 39054),

Gene: BlueBird\_67 Start: 40896, Stop: 40666, Start Num: 44  
Candidate Starts for BlueBird\_67:  
(Start: 32 @40938 has 22 MA's), (Start: 34 @40926 has 15 MA's), (Start: 44 @40896 has 138 MA's), (75, 40752), (76, 40749), (83, 40698),

Gene: BobSwaget\_60 Start: 39664, Stop: 39434, Start Num: 42

Candidate Starts for BobSwaget\_60:

(Start: 42 @39664 has 176 MA's), (49, 39646), (72, 39532), (81, 39481), (86, 39442),

Gene: BogosyJay\_67 Start: 40706, Stop: 40473, Start Num: 42

Candidate Starts for BogosyJay\_67:

(Start: 42 @40706 has 176 MA's), (49, 40688), (71, 40574), (84, 40496),

Gene: Bombshell\_62 Start: 40503, Stop: 40237, Start Num: 32

Candidate Starts for Bombshell\_62:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Bones\_58 Start: 41008, Stop: 40748, Start Num: 37

Candidate Starts for Bones\_58:

(Start: 37 @41008 has 28 MA's), (54, 40948), (58, 40930), (80, 40807),

Gene: Bowtie\_67 Start: 40633, Stop: 40400, Start Num: 42

Candidate Starts for Bowtie\_67:

(Start: 42 @40633 has 176 MA's), (50, 40615), (65, 40531), (77, 40471), (79, 40465),

Gene: Bradman\_68 Start: 40388, Stop: 40152, Start Num: 42

Candidate Starts for Bradman\_68:

(25, 40448), (Start: 34 @40415 has 15 MA's), (Start: 42 @40388 has 176 MA's), (49, 40370), (56, 40337), (71, 40250),

Gene: BreSam8\_68 Start: 41191, Stop: 40934, Start Num: 36

Candidate Starts for BreSam8\_68:

(Start: 36 @41191 has 13 MA's), (Start: 45 @41164 has 51 MA's), (71, 41035), (81, 40981),

Gene: Broseidon\_62 Start: 40466, Stop: 40242, Start Num: 44

Candidate Starts for Broseidon\_62:

(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Bruiser\_61 Start: 40506, Stop: 40240, Start Num: 32

Candidate Starts for Bruiser\_61:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: BubbleTrouble\_61 Start: 40506, Stop: 40240, Start Num: 32

Candidate Starts for BubbleTrouble\_61:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Bud\_65 Start: 40180, Stop: 39947, Start Num: 42

Candidate Starts for Bud\_65:

(Start: 42 @40180 has 176 MA's), (50, 40162), (65, 40078), (77, 40018), (79, 40012),

Gene: Bugatti\_65 Start: 40896, Stop: 40666, Start Num: 44

Candidate Starts for Bugatti\_65:

(Start: 32 @40938 has 22 MA's), (Start: 34 @40926 has 15 MA's), (Start: 44 @40896 has 138 MA's), (75, 40752), (76, 40749), (83, 40698),

Gene: Buggy\_68 Start: 41712, Stop: 41482, Start Num: 42

Candidate Starts for Buggy\_68:

(Start: 42 @41712 has 176 MA's), (49, 41694), (75, 41565), (81, 41526),

Gene: Bumblebee11\_59 Start: 40304, Stop: 40080, Start Num: 44

Candidate Starts for Bumblebee11\_59:

(Start: 32 @40346 has 22 MA's), (Start: 34 @40334 has 15 MA's), (Start: 44 @40304 has 138 MA's), (80, 40139), (81, 40127),

Gene: Burger\_60 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Burger\_60:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: BuzzBuzz\_64 Start: 41198, Stop: 40968, Start Num: 45

Candidate Starts for BuzzBuzz\_64:

(Start: 36 @41225 has 13 MA's), (Start: 45 @41198 has 51 MA's), (71, 41069),

Gene: Bxz2\_63 Start: 41205, Stop: 40975, Start Num: 45

Candidate Starts for Bxz2\_63:

(Start: 36 @41232 has 13 MA's), (Start: 45 @41205 has 51 MA's), (71, 41076), (81, 41022),

Gene: C3\_63 Start: 41277, Stop: 41041, Start Num: 42

Candidate Starts for C3\_63:

(Start: 34 @41304 has 15 MA's), (Start: 42 @41277 has 176 MA's), (49, 41259), (56, 41226), (71, 41139),

Gene: CRB1\_68 Start: 41940, Stop: 41710, Start Num: 42

Candidate Starts for CRB1\_68:

(Start: 42 @41940 has 176 MA's), (49, 41922), (75, 41793), (81, 41754),

Gene: Caelakin\_61 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Caelakin\_61:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Calvinny\_67 Start: 41056, Stop: 40826, Start Num: 46

Candidate Starts for Calvinny\_67:

(Start: 46 @41056 has 17 MA's), (75, 40912), (81, 40873),

Gene: Camperdownii\_60 Start: 40180, Stop: 39914, Start Num: 32

Candidate Starts for Camperdownii\_60:

(Start: 32 @40180 has 22 MA's), (Start: 34 @40168 has 15 MA's), (Start: 44 @40138 has 138 MA's), (52, 40117), (81, 39961), (86, 39922),

Gene: Candra\_64 Start: 39104, Stop: 38871, Start Num: 42

Candidate Starts for Candra\_64:

(Start: 42 @39104 has 176 MA's), (49, 39086), (54, 39065), (59, 39038), (60, 39023), (71, 38972), (75, 38957),

Gene: Caraxes\_68 Start: 39685, Stop: 39446, Start Num: 42  
Candidate Starts for Caraxes\_68:  
(Start: 42 @39685 has 176 MA's), (49, 39667), (54, 39646), (56, 39634), (71, 39547),

Gene: Caviar\_64 Start: 40846, Stop: 40643, Start Num: 44  
Candidate Starts for Caviar\_64:  
(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Centaur\_66 Start: 41075, Stop: 40845, Start Num: 42  
Candidate Starts for Centaur\_66:  
(Start: 42 @41075 has 176 MA's), (49, 41057), (53, 41039), (59, 41009), (81, 40892), (84, 40868),

Gene: CentreCat\_62 Start: 40467, Stop: 40243, Start Num: 44  
Candidate Starts for CentreCat\_62:  
(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's),  
(52, 40446), (81, 40290), (86, 40251),

Gene: Cerulean\_63 Start: 40868, Stop: 40644, Start Num: 44  
Candidate Starts for Cerulean\_63:  
(Start: 32 @40910 has 22 MA's), (Start: 34 @40898 has 15 MA's), (Start: 44 @40868 has 138 MA's),  
(52, 40847), (81, 40691), (86, 40652),

Gene: Chadwick\_60 Start: 39218, Stop: 38952, Start Num: 37  
Candidate Starts for Chadwick\_60:  
(14, 39320), (Start: 37 @39218 has 28 MA's), (80, 39011),

Gene: ChampagnePapi\_64 Start: 40867, Stop: 40643, Start Num: 44  
Candidate Starts for ChampagnePapi\_64:  
(Start: 32 @40909 has 22 MA's), (Start: 34 @40897 has 15 MA's), (Start: 44 @40867 has 138 MA's),  
(52, 40846), (81, 40690), (86, 40651),

Gene: Changeling\_65 Start: 41651, Stop: 41418, Start Num: 42  
Candidate Starts for Changeling\_65:  
(Start: 42 @41651 has 176 MA's), (49, 41633), (56, 41600), (75, 41504), (84, 41441), (86, 41426),

Gene: Chaph\_62 Start: 40475, Stop: 40251, Start Num: 44  
Candidate Starts for Chaph\_62:  
(Start: 32 @40517 has 22 MA's), (Start: 34 @40505 has 15 MA's), (Start: 44 @40475 has 138 MA's),  
(52, 40454), (81, 40298), (86, 40259),

Gene: Chargerpower\_63 Start: 38909, Stop: 38718, Start Num: 42  
Candidate Starts for Chargerpower\_63:  
(15, 39011), (Start: 34 @38939 has 15 MA's), (Start: 42 @38909 has 176 MA's), (49, 38891), (54,  
38870), (61, 38822), (80, 38777),

Gene: Chartreuse\_63 Start: 38455, Stop: 38222, Start Num: 42  
Candidate Starts for Chartreuse\_63:  
(Start: 42 @38455 has 176 MA's), (49, 38437), (54, 38416), (59, 38389), (60, 38374), (71, 38323), (75,  
38308),

Gene: Che12\_69 Start: 39901, Stop: 39662, Start Num: 42  
Candidate Starts for Che12\_69:

(Start: 34 @39925 has 15 MA's), (Start: 42 @39901 has 176 MA's), (49, 39883), (56, 39850), (71, 39763), (79, 39730), (86, 39670),

Gene: ChipMunk\_68 Start: 42936, Stop: 42706, Start Num: 42

Candidate Starts for ChipMunk\_68:

(4, 43188), (7, 43140), (29, 42990), (Start: 42 @42936 has 176 MA's), (49, 42918), (75, 42789), (81, 42750),

Gene: Chiqui\_60 Start: 40880, Stop: 40650, Start Num: 44

Candidate Starts for Chiqui\_60:

(Start: 32 @40922 has 22 MA's), (Start: 34 @40910 has 15 MA's), (Start: 44 @40880 has 138 MA's), (75, 40736),

Gene: Chupacabra\_60 Start: 40090, Stop: 39857, Start Num: 41

Candidate Starts for Chupacabra\_60:

(Start: 41 @40090 has 29 MA's), (49, 40069),

Gene: Cici\_60 Start: 40319, Stop: 40095, Start Num: 44

Candidate Starts for Cici\_60:

(Start: 32 @40361 has 22 MA's), (Start: 34 @40349 has 15 MA's), (Start: 44 @40319 has 138 MA's), (80, 40154), (81, 40142),

Gene: Cindaradix\_57 Start: 39937, Stop: 39713, Start Num: 44

Candidate Starts for Cindaradix\_57:

(Start: 32 @39979 has 22 MA's), (Start: 34 @39967 has 15 MA's), (Start: 44 @39937 has 138 MA's), (52, 39916),

Gene: Cintron\_62 Start: 40587, Stop: 40363, Start Num: 44

Candidate Starts for Cintron\_62:

(Start: 32 @40629 has 22 MA's), (Start: 34 @40617 has 15 MA's), (Start: 44 @40587 has 138 MA's), (52, 40566),

Gene: Citius\_62 Start: 40485, Stop: 40261, Start Num: 44

Candidate Starts for Citius\_62:

(Start: 32 @40527 has 22 MA's), (Start: 34 @40515 has 15 MA's), (Start: 44 @40485 has 138 MA's), (52, 40464), (81, 40308), (86, 40269),

Gene: Clarenza\_61 Start: 40503, Stop: 40237, Start Num: 32

Candidate Starts for Clarenza\_61:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: CloudWang3\_68 Start: 39697, Stop: 39464, Start Num: 42

Candidate Starts for CloudWang3\_68:

(Start: 34 @39727 has 15 MA's), (Start: 42 @39697 has 176 MA's), (49, 39679), (54, 39658), (59, 39631), (71, 39565), (77, 39538), (81, 39511), (86, 39472),

Gene: Cocoaberry\_62 Start: 40498, Stop: 40244, Start Num: 34

Candidate Starts for Cocoaberry\_62:

(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: Colbster\_66 Start: 41201, Stop: 40944, Start Num: 36



Candidate Starts for Colbster\_66:

(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: Colin\_64 Start: 41389, Stop: 41159, Start Num: 42

Candidate Starts for Colin\_64:

(2, 41761), (9, 41566), (27, 41446), (Start: 34 @41419 has 15 MA's), (Start: 42 @41389 has 176 MA's), (49, 41371), (71, 41257), (75, 41242),

Gene: Commander\_61 Start: 40463, Stop: 40239, Start Num: 44

Candidate Starts for Commander\_61:

(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's), (52, 40442), (81, 40286), (86, 40247),

Gene: Connomayer\_62 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Connomayer\_62:

(Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Conquerage\_66 Start: 40403, Stop: 40170, Start Num: 42

Candidate Starts for Conquerage\_66:

(Start: 42 @40403 has 176 MA's), (49, 40385), (66, 40298), (71, 40271), (82, 40208), (84, 40193),

Gene: Cookiedough\_66 Start: 39083, Stop: 38850, Start Num: 42

Candidate Starts for Cookiedough\_66:

(Start: 42 @39083 has 176 MA's), (49, 39065), (54, 39044), (59, 39017), (60, 39002), (71, 38951), (75, 38936),

Gene: Crucio\_66 Start: 41335, Stop: 41105, Start Num: 42

Candidate Starts for Crucio\_66:

(Start: 42 @41335 has 176 MA's), (49, 41317), (53, 41299), (80, 41161),

Gene: Cueyllyss\_59 Start: 41208, Stop: 40948, Start Num: 37

Candidate Starts for Cueyllyss\_59:

(Start: 37 @41208 has 28 MA's), (54, 41148), (58, 41130), (80, 41007),

Gene: Cullens\_68 Start: 41170, Stop: 40940, Start Num: 45

Candidate Starts for Cullens\_68:

(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: D32\_67 Start: 41301, Stop: 41065, Start Num: 42

Candidate Starts for D32\_67:

(12, 41454), (Start: 34 @41328 has 15 MA's), (Start: 42 @41301 has 176 MA's), (49, 41283), (56, 41250), (71, 41163),

Gene: DBQu4n\_68 Start: 41336, Stop: 41046, Start Num: 28

Candidate Starts for DBQu4n\_68:

(Start: 28 @41336 has 1 MA's), (Start: 34 @41309 has 15 MA's), (Start: 42 @41282 has 176 MA's), (49, 41264), (56, 41231), (71, 41144),

Gene: DaHudson\_67 Start: 41190, Stop: 40933, Start Num: 36

Candidate Starts for DaHudson\_67:

(Start: 36 @41190 has 13 MA's), (Start: 45 @41163 has 51 MA's), (71, 41034), (81, 40980),

Gene: DaVinci\_64 Start: 38509, Stop: 38276, Start Num: 42

Candidate Starts for DaVinci\_64:

(Start: 42 @38509 has 176 MA's), (49, 38491), (54, 38470), (59, 38443), (60, 38428), (71, 38377), (75, 38362),

Gene: Daishi\_67 Start: 40066, Stop: 39809, Start Num: 36

Candidate Starts for Daishi\_67:

(Start: 36 @40066 has 13 MA's), (Start: 45 @40039 has 51 MA's), (71, 39910), (81, 39856),

Gene: Dalmatian\_67 Start: 41532, Stop: 41302, Start Num: 42

Candidate Starts for Dalmatian\_67:

(1, 41907), (3, 41886), (11, 41697), (16, 41628), (20, 41616), (Start: 42 @41532 has 176 MA's), (49, 41514), (53, 41496), (81, 41346),

Gene: Darrell\_69 Start: 41231, Stop: 40998, Start Num: 42

Candidate Starts for Darrell\_69:

(Start: 42 @41231 has 176 MA's), (49, 41213), (77, 41072), (84, 41021),

Gene: DARTHPhader\_63 Start: 41641, Stop: 41408, Start Num: 42

Candidate Starts for DARTHPhader\_63:

(Start: 34 @41671 has 15 MA's), (Start: 42 @41641 has 176 MA's), (49, 41623), (56, 41590),

Gene: Datway\_60 Start: 40290, Stop: 40066, Start Num: 44

Candidate Starts for Datway\_60:

(Start: 32 @40332 has 22 MA's), (Start: 34 @40320 has 15 MA's), (Start: 44 @40290 has 138 MA's), (80, 40125), (81, 40113),

Gene: Deano\_60 Start: 40472, Stop: 40248, Start Num: 44

Candidate Starts for Deano\_60:

(Start: 32 @40514 has 22 MA's), (Start: 34 @40502 has 15 MA's), (Start: 44 @40472 has 138 MA's), (52, 40451), (81, 40295), (86, 40256),

Gene: Deloris\_66 Start: 41090, Stop: 40860, Start Num: 42

Candidate Starts for Deloris\_66:

(Start: 42 @41090 has 176 MA's), (49, 41072), (75, 40943), (81, 40904),

Gene: Dhanush\_62 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for Dhanush\_62:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: Dieselweasel\_69 Start: 41173, Stop: 40943, Start Num: 45

Candidate Starts for Dieselweasel\_69:

(Start: 36 @41200 has 13 MA's), (Start: 45 @41173 has 51 MA's), (71, 41044), (81, 40990),

Gene: Dignity\_68 Start: 41750, Stop: 41520, Start Num: 42

Candidate Starts for Dignity\_68:

(Start: 42 @41750 has 176 MA's), (49, 41732), (75, 41603), (81, 41564),

Gene: DirtyDunning\_61 Start: 40479, Stop: 40255, Start Num: 44

Candidate Starts for DirtyDunning\_61:

(Start: 32 @40521 has 22 MA's), (Start: 34 @40509 has 15 MA's), (Start: 44 @40479 has 138 MA's), (52, 40458), (81, 40302), (86, 40263),

Gene: DontArgue\_58 Start: 39140, Stop: 38904, Start Num: 41

Candidate Starts for DontArgue\_58:

(Start: 41 @39140 has 29 MA's), (49, 39119), (71, 39005), (72, 39002), (84, 38927),

Gene: Doom\_56 Start: 39819, Stop: 39559, Start Num: 37

Candidate Starts for Doom\_56:

(Start: 37 @39819 has 28 MA's), (59, 39732), (78, 39630),

Gene: Dorothea\_66 Start: 39081, Stop: 38848, Start Num: 42

Candidate Starts for Dorothea\_66:

(Start: 42 @39081 has 176 MA's), (49, 39063), (54, 39042), (59, 39015), (71, 38949), (75, 38934),

Gene: Drake55\_67 Start: 41178, Stop: 40948, Start Num: 42

Candidate Starts for Drake55\_67:

(Start: 42 @41178 has 176 MA's), (49, 41160), (53, 41142), (59, 41112), (81, 40995), (84, 40971),

Gene: Drake94\_59 Start: 39177, Stop: 38941, Start Num: 41

Candidate Starts for Drake94\_59:

(Start: 41 @39177 has 29 MA's), (49, 39156), (54, 39135), (71, 39042), (75, 39027),

Gene: Dreamboat\_59 Start: 39108, Stop: 38848, Start Num: 37

Candidate Starts for Dreamboat\_59:

(Start: 37 @39108 has 28 MA's), (59, 39021), (78, 38919),

Gene: DroogsArmy\_61 Start: 43358, Stop: 43107, Start Num: 34

Candidate Starts for DroogsArmy\_61:

(Start: 34 @43358 has 15 MA's), (Start: 40 @43328 has 2 MA's), (49, 43307), (80, 43166),

Gene: DropBear\_63 Start: 40798, Stop: 40568, Start Num: 44

Candidate Starts for DropBear\_63:

(Start: 32 @40840 has 22 MA's), (Start: 34 @40828 has 15 MA's), (Start: 44 @40798 has 138 MA's), (57, 40753),

Gene: Druantia\_61 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for Druantia\_61:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: DudeLittle\_65 Start: 41298, Stop: 41068, Start Num: 42

Candidate Starts for DudeLittle\_65:

(1, 41673), (3, 41652), (11, 41463), (16, 41394), (20, 41382), (Start: 42 @41298 has 176 MA's), (49, 41280), (53, 41262), (81, 41112),

Gene: Dulcie\_58 Start: 39702, Stop: 39451, Start Num: 38

Candidate Starts for Dulcie\_58:

(Start: 38 @39702 has 6 MA's), (54, 39651), (58, 39633),

Gene: Duplo\_68 Start: 41338, Stop: 41102, Start Num: 42

Candidate Starts for Duplo\_68:

(12, 41491), (Start: 34 @41365 has 15 MA's), (Start: 42 @41338 has 176 MA's), (49, 41320), (56, 41287), (71, 41200),

Gene: DustyMartin\_64 Start: 40196, Stop: 39963, Start Num: 41  
Candidate Starts for DustyMartin\_64:  
(Start: 34 @40223 has 15 MA's), (Start: 41 @40196 has 29 MA's), (49, 40175), (63, 40091),

Gene: EZMoney23\_63 Start: 41001, Stop: 40768, Start Num: 42  
Candidate Starts for EZMoney23\_63:  
(Start: 42 @41001 has 176 MA's), (49, 40983), (66, 40896), (75, 40854), (84, 40791),

Gene: Eagle\_61 Start: 40489, Stop: 40265, Start Num: 44  
Candidate Starts for Eagle\_61:  
(Start: 44 @40489 has 138 MA's), (52, 40468), (81, 40312), (86, 40273),

Gene: EagleEye\_68 Start: 40411, Stop: 40178, Start Num: 41  
Candidate Starts for EagleEye\_68:  
(Start: 34 @40438 has 15 MA's), (Start: 41 @40411 has 29 MA's), (49, 40390), (80, 40237),

Gene: Eaglepride\_62 Start: 40120, Stop: 39884, Start Num: 39  
Candidate Starts for Eaglepride\_62:  
(Start: 39 @40120 has 2 MA's), (49, 40099), (66, 40012), (80, 39943),

Gene: Eapen\_62 Start: 40459, Stop: 40235, Start Num: 44  
Candidate Starts for Eapen\_62:  
(Start: 32 @40501 has 22 MA's), (Start: 34 @40489 has 15 MA's), (Start: 44 @40459 has 138 MA's),  
(52, 40438), (80, 40294), (81, 40282), (86, 40243),

Gene: Ebony\_66 Start: 40197, Stop: 39964, Start Num: 42  
Candidate Starts for Ebony\_66:  
(Start: 42 @40197 has 176 MA's), (50, 40179), (65, 40095), (77, 40035), (79, 40029),

Gene: Echild\_66 Start: 40693, Stop: 40460, Start Num: 42  
Candidate Starts for Echild\_66:  
(Start: 42 @40693 has 176 MA's), (49, 40675), (75, 40546), (81, 40507),

Gene: Edison31\_58 Start: 39960, Stop: 39727, Start Num: 41  
Candidate Starts for Edison31\_58:  
(Start: 34 @39987 has 15 MA's), (Start: 41 @39960 has 29 MA's), (49, 39939), (63, 39855),

Gene: Eidsmoe\_66 Start: 40395, Stop: 40162, Start Num: 42  
Candidate Starts for Eidsmoe\_66:  
(Start: 42 @40395 has 176 MA's), (49, 40377), (66, 40290), (71, 40263), (82, 40200), (84, 40185),

Gene: EITiger69\_60 Start: 39467, Stop: 39201, Start Num: 37  
Candidate Starts for EITiger69\_60:  
(Start: 37 @39467 has 28 MA's), (47, 39434), (81, 39248),

Gene: Elephantoon\_66 Start: 40030, Stop: 39797, Start Num: 42  
Candidate Starts for Elephantoon\_66:  
(Start: 42 @40030 has 176 MA's), (49, 40012), (59, 39964), (77, 39871), (84, 39820),

Gene: EmyBug\_65 Start: 40397, Stop: 40164, Start Num: 42  
Candidate Starts for EmyBug\_65:  
(Start: 42 @40397 has 176 MA's), (49, 40379), (66, 40292), (71, 40265), (82, 40202), (84, 40187),

Gene: EpicPhail\_69 Start: 41174, Stop: 40944, Start Num: 45  
Candidate Starts for EpicPhail\_69:  
(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: Equemioh13\_65 Start: 40980, Stop: 40750, Start Num: 42  
Candidate Starts for Equemioh13\_65:  
(Start: 42 @40980 has 176 MA's), (49, 40962), (53, 40944), (59, 40914), (81, 40797), (84, 40773),

Gene: EricB\_65 Start: 39061, Stop: 38828, Start Num: 42  
Candidate Starts for EricB\_65:  
(Start: 42 @39061 has 176 MA's), (49, 39043), (54, 39022), (59, 38995), (60, 38980), (71, 38929), (75, 38914),

Gene: Eris\_61 Start: 40509, Stop: 40255, Start Num: 34  
Candidate Starts for Eris\_61:  
(Start: 34 @40509 has 15 MA's), (Start: 44 @40479 has 138 MA's), (52, 40458), (81, 40302), (86, 40263),

Gene: Eros\_62 Start: 40466, Stop: 40242, Start Num: 44  
Candidate Starts for Eros\_62:  
(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Et2Brutus\_65 Start: 40160, Stop: 39927, Start Num: 42  
Candidate Starts for Et2Brutus\_65:  
(Start: 42 @40160 has 176 MA's), (50, 40142), (65, 40058), (77, 39998), (79, 39992),

Gene: Eurydice\_63 Start: 40464, Stop: 40240, Start Num: 44  
Candidate Starts for Eurydice\_63:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: EvilGenius\_67 Start: 42937, Stop: 42707, Start Num: 42  
Candidate Starts for EvilGenius\_67:  
(4, 43189), (7, 43141), (29, 42991), (Start: 42 @42937 has 176 MA's), (49, 42919), (75, 42790), (81, 42751),

Gene: ExplosioNervosa\_66 Start: 40463, Stop: 40230, Start Num: 42  
Candidate Starts for ExplosioNervosa\_66:  
(Start: 42 @40463 has 176 MA's), (49, 40445), (66, 40358), (71, 40331), (82, 40268), (84, 40253),

Gene: Fameo\_66 Start: 41657, Stop: 41427, Start Num: 42  
Candidate Starts for Fameo\_66:  
(20, 41744), (Start: 32 @41702 has 22 MA's), (Start: 34 @41690 has 15 MA's), (Start: 42 @41657 has 176 MA's), (49, 41639), (53, 41621), (75, 41510), (81, 41471),

Gene: Farber\_68 Start: 41160, Stop: 40930, Start Num: 45  
Candidate Starts for Farber\_68:  
(Start: 36 @41187 has 13 MA's), (Start: 45 @41160 has 51 MA's), (71, 41031), (81, 40977),

Gene: Fayely\_66 Start: 40364, Stop: 40131, Start Num: 42  
Candidate Starts for Fayely\_66:  
(Start: 42 @40364 has 176 MA's), (49, 40346), (66, 40259), (71, 40232), (82, 40169), (84, 40154),

Gene: Fernando\_68 Start: 41170, Stop: 40940, Start Num: 45  
Candidate Starts for Fernando\_68:  
(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: Fibonacci\_66 Start: 40166, Stop: 39933, Start Num: 42  
Candidate Starts for Fibonacci\_66:  
(Start: 42 @40166 has 176 MA's), (50, 40148), (65, 40064), (77, 40004), (79, 39998),

Gene: FiringLine\_66 Start: 41316, Stop: 41086, Start Num: 42  
Candidate Starts for FiringLine\_66:  
(Start: 42 @41316 has 176 MA's), (49, 41298), (53, 41280), (80, 41142),

Gene: First\_0067 Start: 41317, Stop: 41087, Start Num: 42  
Candidate Starts for First\_0067:  
(Start: 42 @41317 has 176 MA's), (49, 41299), (75, 41170), (81, 41131),

Gene: Flare16\_65 Start: 40736, Stop: 40506, Start Num: 42  
Candidate Starts for Flare16\_65:  
(Start: 42 @40736 has 176 MA's), (49, 40718), (53, 40700), (59, 40670), (81, 40553), (84, 40529),

Gene: Flaverint\_67 Start: 40624, Stop: 40391, Start Num: 42  
Candidate Starts for Flaverint\_67:  
(Start: 42 @40624 has 176 MA's), (50, 40606), (65, 40522), (77, 40462), (79, 40456),

Gene: Florean\_62 Start: 40463, Stop: 40239, Start Num: 44  
Candidate Starts for Florean\_62:  
(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's),  
(52, 40442), (81, 40286), (86, 40247),

Gene: Flux\_62 Start: 40493, Stop: 40239, Start Num: 34  
Candidate Starts for Flux\_62:  
(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's),  
(52, 40442), (81, 40286), (86, 40247),

Gene: FlyCatcher\_67 Start: 44015, Stop: 43773, Start Num: 40  
Candidate Starts for FlyCatcher\_67:  
(10, 44180), (13, 44129), (17, 44096), (Start: 40 @44015 has 2 MA's), (49, 43994), (52, 43982), (80,  
43832),

Gene: Fred313\_63 Start: 40492, Stop: 40262, Start Num: 44  
Candidate Starts for Fred313\_63:  
(Start: 32 @40534 has 22 MA's), (Start: 34 @40522 has 15 MA's), (Start: 44 @40492 has 138 MA's),  
(57, 40447),

Gene: Funston\_61 Start: 40506, Stop: 40240, Start Num: 32  
Candidate Starts for Funston\_61:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's),  
(52, 40443), (81, 40287), (86, 40248),

Gene: Gadost\_62 Start: 40468, Stop: 40244, Start Num: 44  
Candidate Starts for Gadost\_62:

(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: GageAP\_59 Start: 40447, Stop: 40187, Start Num: 37  
Candidate Starts for GageAP\_59:  
(Start: 37 @40447 has 28 MA's), (59, 40360), (68, 40300), (70, 40297),

Gene: Garak\_68 Start: 39552, Stop: 39319, Start Num: 42  
Candidate Starts for Garak\_68:  
(Start: 34 @39582 has 15 MA's), (Start: 42 @39552 has 176 MA's), (49, 39534), (54, 39513), (59, 39486), (71, 39420), (77, 39393), (81, 39366), (86, 39327),

Gene: GaugeLDP\_62 Start: 40923, Stop: 40693, Start Num: 41  
Candidate Starts for GaugeLDP\_62:  
(23, 41004), (Start: 34 @40953 has 15 MA's), (Start: 41 @40923 has 29 MA's), (48, 40905), (49, 40902), (72, 40788),

Gene: Gemma\_67 Start: 41052, Stop: 40822, Start Num: 46  
Candidate Starts for Gemma\_67:  
(Start: 46 @41052 has 17 MA's), (75, 40908), (81, 40869),

Gene: Georgie2\_67 Start: 41361, Stop: 41131, Start Num: 42  
Candidate Starts for Georgie2\_67:  
(Start: 42 @41361 has 176 MA's), (49, 41343), (53, 41325), (80, 41187),

Gene: Gilberta\_67 Start: 40617, Stop: 40384, Start Num: 42  
Candidate Starts for Gilberta\_67:  
(Start: 42 @40617 has 176 MA's), (50, 40599), (65, 40515), (77, 40455), (79, 40449),

Gene: GingkoMaracino\_68 Start: 41056, Stop: 40826, Start Num: 45  
Candidate Starts for GingkoMaracino\_68:  
(Start: 36 @41083 has 13 MA's), (Start: 45 @41056 has 51 MA's), (71, 40927), (81, 40873),

Gene: Giroux\_64 Start: 40895, Stop: 40665, Start Num: 44  
Candidate Starts for Giroux\_64:  
(Start: 32 @40937 has 22 MA's), (Start: 34 @40925 has 15 MA's), (Start: 44 @40895 has 138 MA's), (75, 40751), (76, 40748), (83, 40697),

Gene: Gladiator\_64 Start: 38807, Stop: 38544, Start Num: 34  
Candidate Starts for Gladiator\_64:  
(Start: 34 @38807 has 15 MA's), (35, 38795), (Start: 42 @38777 has 176 MA's), (49, 38759), (54, 38738), (59, 38711), (71, 38645), (77, 38618), (81, 38591), (86, 38552),

Gene: Goose\_62 Start: 39906, Stop: 39673, Start Num: 41  
Candidate Starts for Goose\_62:  
(Start: 41 @39906 has 29 MA's), (49, 39885),

Gene: Graduation\_62 Start: 41280, Stop: 41020, Start Num: 37  
Candidate Starts for Graduation\_62:  
(Start: 37 @41280 has 28 MA's), (54, 41220), (58, 41202), (80, 41079),

Gene: Gratitude\_63 Start: 40980, Stop: 40750, Start Num: 42  
Candidate Starts for Gratitude\_63:

(Start: 42 @40980 has 176 MA's), (49, 40962), (53, 40944), (59, 40914), (81, 40797), (84, 40773),

Gene: GreedyLawyer\_63 Start: 39068, Stop: 38835, Start Num: 42

Candidate Starts for GreedyLawyer\_63:

(Start: 42 @39068 has 176 MA's), (49, 39050), (54, 39029), (59, 39002), (60, 38987), (71, 38936), (75, 38921),

Gene: Grif\_68 Start: 41245, Stop: 41015, Start Num: 45

Candidate Starts for Grif\_68:

(Start: 36 @41272 has 13 MA's), (Start: 45 @41245 has 51 MA's), (71, 41116), (81, 41062),

Gene: Groupthink\_69 Start: 41056, Stop: 40826, Start Num: 46

Candidate Starts for Groupthink\_69:

(Start: 46 @41056 has 17 MA's), (75, 40912), (81, 40873),

Gene: Grub\_68 Start: 41162, Stop: 40932, Start Num: 45

Candidate Starts for Grub\_68:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: Grum1\_67 Start: 41170, Stop: 40940, Start Num: 45

Candidate Starts for Grum1\_67:

(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: Gruunaga\_67 Start: 39476, Stop: 39243, Start Num: 42

Candidate Starts for Gruunaga\_67:

(Start: 34 @39506 has 15 MA's), (Start: 42 @39476 has 176 MA's), (49, 39458), (54, 39437), (59, 39410), (71, 39344), (81, 39290), (86, 39251),

Gene: GtownJaz\_68 Start: 41172, Stop: 40942, Start Num: 45

Candidate Starts for GtownJaz\_68:

(Start: 36 @41199 has 13 MA's), (Start: 45 @41172 has 51 MA's), (71, 41043), (81, 40989),

Gene: Gwendoluna\_61 Start: 41840, Stop: 41589, Start Num: 38

Candidate Starts for Gwendoluna\_61:

(Start: 38 @41840 has 6 MA's), (54, 41789), (58, 41771),

Gene: HINdeR\_62 Start: 43023, Stop: 42802, Start Num: 40

Candidate Starts for HINdeR\_62:

(10, 43197), (13, 43146), (Start: 40 @43023 has 2 MA's), (49, 43002),

Gene: HamSlice\_59 Start: 40504, Stop: 40238, Start Num: 32

Candidate Starts for HamSlice\_59:

(Start: 32 @40504 has 22 MA's), (Start: 34 @40492 has 15 MA's), (Start: 44 @40462 has 138 MA's), (52, 40441), (81, 40285), (86, 40246),

Gene: Hammer\_67 Start: 39083, Stop: 38850, Start Num: 42

Candidate Starts for Hammer\_67:

(Start: 34 @39113 has 15 MA's), (Start: 42 @39083 has 176 MA's), (49, 39065), (54, 39044), (59, 39017), (71, 38951), (81, 38897), (86, 38858),

Gene: Hanray\_66 Start: 40727, Stop: 40494, Start Num: 42

Candidate Starts for Hanray\_66:

(Start: 42 @40727 has 176 MA's), (49, 40709), (66, 40622), (71, 40595), (82, 40532), (84, 40517),



Gene: Happiness\_61 Start: 40450, Stop: 40226, Start Num: 44  
Candidate Starts for Happiness\_61:  
(Start: 32 @40492 has 22 MA's), (Start: 34 @40480 has 15 MA's), (Start: 44 @40450 has 138 MA's),  
(52, 40429), (81, 40273), (86, 40234),

Gene: HarryHoudini\_66 Start: 41179, Stop: 40949, Start Num: 42  
Candidate Starts for HarryHoudini\_66:  
(Start: 42 @41179 has 176 MA's), (49, 41161), (53, 41143), (59, 41113), (81, 40996), (84, 40972),

Gene: HashRod\_69 Start: 41198, Stop: 40968, Start Num: 45  
Candidate Starts for HashRod\_69:  
(Start: 36 @41225 has 13 MA's), (Start: 45 @41198 has 51 MA's), (71, 41069),

Gene: HaveUMetTed\_69 Start: 41041, Stop: 40811, Start Num: 46  
Candidate Starts for HaveUMetTed\_69:  
(Start: 46 @41041 has 17 MA's), (75, 40897), (81, 40858),

Gene: Heathen\_65 Start: 40587, Stop: 40357, Start Num: 44  
Candidate Starts for Heathen\_65:  
(Start: 32 @40629 has 22 MA's), (Start: 34 @40617 has 15 MA's), (Start: 44 @40587 has 138 MA's),  
(57, 40542),

Gene: Heffalump\_65 Start: 42125, Stop: 41895, Start Num: 42  
Candidate Starts for Heffalump\_65:  
(20, 42212), (Start: 34 @42158 has 15 MA's), (Start: 42 @42125 has 176 MA's), (49, 42107), (53,  
42089), (81, 41939),

Gene: HelDan\_64 Start: 40803, Stop: 40573, Start Num: 44  
Candidate Starts for HelDan\_64:  
(Start: 32 @40845 has 22 MA's), (Start: 34 @40833 has 15 MA's), (Start: 44 @40803 has 138 MA's),  
(57, 40758),

Gene: Heliosoles\_67 Start: 41059, Stop: 40829, Start Num: 46  
Candidate Starts for Heliosoles\_67:  
(Start: 46 @41059 has 17 MA's), (75, 40915), (81, 40876),

Gene: Helmet\_68 Start: 39552, Stop: 39319, Start Num: 42  
Candidate Starts for Helmet\_68:  
(Start: 34 @39582 has 15 MA's), (Start: 42 @39552 has 176 MA's), (49, 39534), (54, 39513), (59,  
39486), (71, 39420), (77, 39393), (81, 39366), (86, 39327),

Gene: Herbertwm\_62 Start: 40747, Stop: 40508, Start Num: 42  
Candidate Starts for Herbertwm\_62:  
(26, 40801), (Start: 42 @40747 has 176 MA's), (49, 40729),

Gene: Hercules11\_68 Start: 41206, Stop: 40949, Start Num: 36  
Candidate Starts for Hercules11\_68:  
(Start: 36 @41206 has 13 MA's), (Start: 45 @41179 has 51 MA's), (71, 41050), (81, 40996),

Gene: Hexamo\_67 Start: 39212, Stop: 38949, Start Num: 34  
Candidate Starts for Hexamo\_67:

(Start: 34 @39212 has 15 MA's), (Start: 42 @39182 has 176 MA's), (49, 39164), (54, 39143), (59, 39116), (71, 39050), (77, 39023), (81, 38996), (86, 38957),

Gene: Horex\_66 Start: 40743, Stop: 40510, Start Num: 42

Candidate Starts for Horex\_66:

(Start: 42 @40743 has 176 MA's), (49, 40725), (66, 40638), (71, 40611), (82, 40548), (84, 40533),

Gene: Holli\_61 Start: 40254, Stop: 40030, Start Num: 44

Candidate Starts for Holli\_61:

(Start: 32 @40296 has 22 MA's), (Start: 34 @40284 has 15 MA's), (Start: 44 @40254 has 138 MA's), (52, 40233), (81, 40077), (86, 40038),

Gene: Hookmount\_64 Start: 40847, Stop: 40644, Start Num: 44

Candidate Starts for Hookmount\_64:

(Start: 34 @40877 has 15 MA's), (Start: 44 @40847 has 138 MA's), (74, 40718), (86, 40652),

Gene: Hoot\_61 Start: 36919, Stop: 36686, Start Num: 42

Candidate Starts for Hoot\_61:

(Start: 42 @36919 has 176 MA's), (49, 36901), (54, 36880), (59, 36853), (60, 36838), (71, 36787), (75, 36772),

Gene: Houdini22\_61 Start: 40468, Stop: 40244, Start Num: 44

Candidate Starts for Houdini22\_61:

(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: Hutc2\_65 Start: 40166, Stop: 39933, Start Num: 42

Candidate Starts for Hutc2\_65:

(Start: 42 @40166 has 176 MA's), (50, 40148), (65, 40064), (77, 40004), (79, 39998),

Gene: Huxley\_60 Start: 40528, Stop: 40304, Start Num: 44

Candidate Starts for Huxley\_60:

(Start: 32 @40570 has 22 MA's), (Start: 34 @40558 has 15 MA's), (Start: 44 @40528 has 138 MA's), (52, 40507), (81, 40351), (86, 40312),

Gene: ICleared\_61 Start: 40496, Stop: 40272, Start Num: 44

Candidate Starts for ICleared\_61:

(Start: 32 @40538 has 22 MA's), (Start: 34 @40526 has 15 MA's), (Start: 44 @40496 has 138 MA's), (52, 40475), (81, 40319), (86, 40280),

Gene: Iceman\_62 Start: 40753, Stop: 40529, Start Num: 44

Candidate Starts for Iceman\_62:

(Start: 32 @40795 has 22 MA's), (Start: 34 @40783 has 15 MA's), (Start: 44 @40753 has 138 MA's), (52, 40732), (81, 40576), (86, 40537),

Gene: Idleandcovert\_65 Start: 40896, Stop: 40666, Start Num: 44

Candidate Starts for Idleandcovert\_65:

(Start: 32 @40938 has 22 MA's), (Start: 34 @40926 has 15 MA's), (Start: 44 @40896 has 138 MA's), (75, 40752), (76, 40749), (83, 40698),

Gene: Indra\_70 Start: 39553, Stop: 39320, Start Num: 42

Candidate Starts for Indra\_70:

(Start: 34 @39583 has 15 MA's), (Start: 42 @39553 has 176 MA's), (49, 39535), (54, 39514), (59, 39487), (71, 39421), (77, 39394), (81, 39367), (86, 39328),

Gene: Insomnia\_67 Start: 40605, Stop: 40372, Start Num: 42

Candidate Starts for Insomnia\_67:

(Start: 42 @40605 has 176 MA's), (50, 40587), (65, 40503), (77, 40443), (79, 40437),

Gene: Iracema64\_63 Start: 40773, Stop: 40507, Start Num: 32

Candidate Starts for Iracema64\_63:

(Start: 32 @40773 has 22 MA's), (Start: 34 @40761 has 15 MA's), (Start: 44 @40731 has 138 MA's), (52, 40710), (81, 40554), (86, 40515),

Gene: IronMan\_64 Start: 41884, Stop: 41648, Start Num: 41

Candidate Starts for IronMan\_64:

(23, 41962), (Start: 34 @41911 has 15 MA's), (Start: 41 @41884 has 29 MA's), (49, 41863), (84, 41671), (86, 41656),

Gene: Isca\_63 Start: 40349, Stop: 40119, Start Num: 44

Candidate Starts for Isca\_63:

(Start: 32 @40391 has 22 MA's), (Start: 34 @40379 has 15 MA's), (Start: 44 @40349 has 138 MA's), (62, 40259), (75, 40205),

Gene: Isiphiwo\_64 Start: 38635, Stop: 38402, Start Num: 42

Candidate Starts for Isiphiwo\_64:

(Start: 42 @38635 has 176 MA's), (49, 38617), (54, 38596), (59, 38569), (60, 38554), (71, 38503), (75, 38488),

Gene: Iwokeuplikedis\_67 Start: 40902, Stop: 40669, Start Num: 41

Candidate Starts for Iwokeuplikedis\_67:

(18, 40989), (29, 40953), (Start: 41 @40902 has 29 MA's), (49, 40881), (53, 40863), (71, 40770), (72, 40767), (84, 40692),

Gene: JC27\_61 Start: 40499, Stop: 40248, Start Num: 38

Candidate Starts for JC27\_61:

(Start: 37 @40502 has 28 MA's), (Start: 38 @40499 has 6 MA's), (54, 40448), (58, 40430), (64, 40385),

Gene: JF2\_63 Start: 39044, Stop: 38814, Start Num: 44

Candidate Starts for JF2\_63:

(Start: 32 @39086 has 22 MA's), (Start: 34 @39074 has 15 MA's), (Start: 44 @39044 has 138 MA's), (62, 38954),

Gene: JF4\_63 Start: 39044, Stop: 38814, Start Num: 44

Candidate Starts for JF4\_63:

(Start: 32 @39086 has 22 MA's), (Start: 34 @39074 has 15 MA's), (Start: 44 @39044 has 138 MA's), (62, 38954),

Gene: JHC117\_66 Start: 41169, Stop: 40939, Start Num: 45

Candidate Starts for JHC117\_66:

(Start: 36 @41196 has 13 MA's), (Start: 45 @41169 has 51 MA's), (71, 41040), (81, 40986),

Gene: Jaan\_65 Start: 42053, Stop: 41820, Start Num: 41

Candidate Starts for Jaan\_65:

(Start: 32 @42092 has 22 MA's), (Start: 34 @42080 has 15 MA's), (Start: 41 @42053 has 29 MA's), (49, 42032), (84, 41843), (86, 41828),

Gene: Jabiru\_59 Start: 39387, Stop: 39121, Start Num: 37

Candidate Starts for Jabiru\_59:

(Start: 37 @39387 has 28 MA's), (43, 39363), (47, 39354), (81, 39168),

Gene: Jabith\_67 Start: 40606, Stop: 40373, Start Num: 42

Candidate Starts for Jabith\_67:

(33, 40648), (Start: 42 @40606 has 176 MA's), (50, 40588), (65, 40504), (77, 40444), (79, 40438),

Gene: Jasper\_59 Start: 38994, Stop: 38734, Start Num: 37

Candidate Starts for Jasper\_59:

(Start: 37 @38994 has 28 MA's), (59, 38907), (78, 38805),

Gene: Jaykayelowell\_59 Start: 40457, Stop: 40233, Start Num: 44

Candidate Starts for Jaykayelowell\_59:

(Start: 32 @40499 has 22 MA's), (Start: 34 @40487 has 15 MA's), (Start: 44 @40457 has 138 MA's), (52, 40436), (81, 40280), (86, 40241),

Gene: Jeffabunny\_67 Start: 39179, Stop: 38946, Start Num: 42

Candidate Starts for Jeffabunny\_67:

(Start: 34 @39209 has 15 MA's), (Start: 42 @39179 has 176 MA's), (49, 39161), (54, 39140), (59, 39113), (71, 39047), (77, 39020), (81, 38993), (86, 38954),

Gene: JenCasNa\_69 Start: 41170, Stop: 40940, Start Num: 45

Candidate Starts for JenCasNa\_69:

(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: JeppNRM\_69 Start: 41057, Stop: 40827, Start Num: 46

Candidate Starts for JeppNRM\_69:

(Start: 46 @41057 has 17 MA's), (75, 40913), (81, 40874),

Gene: Jerm\_68 Start: 41727, Stop: 41497, Start Num: 42

Candidate Starts for Jerm\_68:

(4, 41976), (29, 41781), (31, 41775), (Start: 42 @41727 has 176 MA's), (49, 41709), (75, 41580), (81, 41541),

Gene: JetBlade\_62 Start: 40458, Stop: 40234, Start Num: 44

Candidate Starts for JetBlade\_62:

(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's), (52, 40437), (81, 40281), (86, 40242),

Gene: JewelBug\_66 Start: 39340, Stop: 39107, Start Num: 42

Candidate Starts for JewelBug\_66:

(Start: 42 @39340 has 176 MA's), (49, 39322), (54, 39301), (59, 39274), (60, 39259), (71, 39208), (75, 39193),

Gene: Jiawan\_65 Start: 40759, Stop: 40526, Start Num: 42

Candidate Starts for Jiawan\_65:

(Start: 42 @40759 has 176 MA's), (49, 40741), (66, 40654), (71, 40627), (82, 40564), (84, 40549),

Gene: Jobu08\_66 Start: 41002, Stop: 40772, Start Num: 45

Candidate Starts for Jobu08\_66:

(Start: 36 @41029 has 13 MA's), (Start: 45 @41002 has 51 MA's), (71, 40873), (81, 40819), (83, 40804),

Gene: JoongJeon\_61 Start: 40503, Stop: 40237, Start Num: 32

Candidate Starts for JoongJeon\_61:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Jordennis\_65 Start: 38821, Stop: 38588, Start Num: 42

Candidate Starts for Jordennis\_65:

(Start: 42 @38821 has 176 MA's), (49, 38803), (54, 38782), (59, 38755), (71, 38689), (75, 38674),

Gene: Joselito\_67 Start: 40626, Stop: 40393, Start Num: 42

Candidate Starts for Joselito\_67:

(33, 40668), (Start: 42 @40626 has 176 MA's), (50, 40608), (65, 40524), (77, 40464), (79, 40458),

Gene: JoshKayV\_67 Start: 41782, Stop: 41552, Start Num: 42

Candidate Starts for JoshKayV\_67:

(29, 41836), (31, 41830), (Start: 42 @41782 has 176 MA's), (49, 41764), (75, 41635), (81, 41596),

Gene: Journey13\_59 Start: 38823, Stop: 38584, Start Num: 42

Candidate Starts for Journey13\_59:

(Start: 42 @38823 has 176 MA's), (49, 38805), (56, 38772), (78, 38655),

Gene: Jsquared\_69 Start: 40546, Stop: 40310, Start Num: 42

Candidate Starts for Jsquared\_69:

(Start: 34 @40573 has 15 MA's), (Start: 42 @40546 has 176 MA's), (49, 40528), (56, 40495), (71, 40408),

Gene: KADY\_67 Start: 41198, Stop: 40968, Start Num: 45

Candidate Starts for KADY\_67:

(Start: 36 @41225 has 13 MA's), (Start: 45 @41198 has 51 MA's), (71, 41069),

Gene: KFPoly\_61 Start: 40500, Stop: 40234, Start Num: 32

Candidate Starts for KFPoly\_61:

(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's), (52, 40437), (81, 40281), (86, 40242),

Gene: Kachowdy\_63 Start: 40839, Stop: 40609, Start Num: 44

Candidate Starts for Kachowdy\_63:

(Start: 32 @40881 has 22 MA's), (Start: 34 @40869 has 15 MA's), (Start: 44 @40839 has 138 MA's), (57, 40794),

Gene: Kalb97\_69 Start: 41055, Stop: 40825, Start Num: 46

Candidate Starts for Kalb97\_69:

(Start: 46 @41055 has 17 MA's), (75, 40911), (81, 40872),

Gene: Kalnoky\_69 Start: 41053, Stop: 40823, Start Num: 46

Candidate Starts for Kalnoky\_69:

(Start: 46 @41053 has 17 MA's), (75, 40909), (81, 40870),

Gene: Kalpine\_65 Start: 41568, Stop: 41335, Start Num: 42

Candidate Starts for Kalpine\_65:

(19, 41655), (21, 41652), (Start: 34 @41598 has 15 MA's), (Start: 42 @41568 has 176 MA's), (49, 41550), (66, 41463), (71, 41436), (75, 41421), (84, 41358),

Gene: Kamy\_61 Start: 40466, Stop: 40242, Start Num: 44

Candidate Starts for Kamy\_61:

(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Katalie136\_60 Start: 40304, Stop: 40080, Start Num: 44

Candidate Starts for Katalie136\_60:

(Start: 32 @40346 has 22 MA's), (Start: 34 @40334 has 15 MA's), (Start: 44 @40304 has 138 MA's), (80, 40139), (81, 40127),

Gene: Kazan\_67 Start: 39074, Stop: 38841, Start Num: 42

Candidate Starts for Kazan\_67:

(Start: 42 @39074 has 176 MA's), (49, 39056), (54, 39035), (59, 39008), (60, 38993), (71, 38942), (75, 38927),

Gene: Kerberos\_68 Start: 41300, Stop: 41064, Start Num: 42

Candidate Starts for Kerberos\_68:

(12, 41453), (Start: 34 @41327 has 15 MA's), (Start: 42 @41300 has 176 MA's), (49, 41282), (56, 41249), (71, 41162),

Gene: Kimona\_60 Start: 39068, Stop: 38832, Start Num: 41

Candidate Starts for Kimona\_60:

(5, 39287), (Start: 41 @39068 has 29 MA's), (49, 39047), (56, 39014), (80, 38891),

Gene: KingCyrus\_67 Start: 42932, Stop: 42702, Start Num: 42

Candidate Starts for KingCyrus\_67:

(4, 43184), (7, 43136), (29, 42986), (Start: 42 @42932 has 176 MA's), (49, 42914), (75, 42785), (81, 42746),

Gene: Kingmustik0402\_62 Start: 40453, Stop: 40229, Start Num: 44

Candidate Starts for Kingmustik0402\_62:

(Start: 32 @40495 has 22 MA's), (Start: 34 @40483 has 15 MA's), (Start: 44 @40453 has 138 MA's), (52, 40432), (81, 40276), (86, 40237),

Gene: Kinmap\_66 Start: 39557, Stop: 39321, Start Num: 42

Candidate Starts for Kinmap\_66:

(Start: 34 @39584 has 15 MA's), (Start: 42 @39557 has 176 MA's), (49, 39539), (Start: 51 @39533 has 1 MA's), (55, 39509),

Gene: Kipper29\_66 Start: 39087, Stop: 38854, Start Num: 42

Candidate Starts for Kipper29\_66:

(Start: 42 @39087 has 176 MA's), (49, 39069), (54, 39048), (59, 39021), (60, 39006), (71, 38955), (75, 38940),

Gene: KittenMittens\_58 Start: 39185, Stop: 38949, Start Num: 41

Candidate Starts for KittenMittens\_58:

(Start: 41 @39185 has 29 MA's), (49, 39164), (54, 39143), (71, 39050), (75, 39035),

Gene: Koan\_58 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Koan\_58:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Koduck\_67 Start: 40131, Stop: 39895, Start Num: 42

Candidate Starts for Koduck\_67:

(Start: 34 @40158 has 15 MA's), (Start: 42 @40131 has 176 MA's), (49, 40113), (56, 40080), (71, 39993),

Gene: Koko\_69 Start: 40037, Stop: 39804, Start Num: 42

Candidate Starts for Koko\_69:

(Start: 34 @40067 has 15 MA's), (Start: 42 @40037 has 176 MA's), (49, 40019), (54, 39998), (59, 39971), (71, 39905), (77, 39878), (81, 39851), (86, 39812),

Gene: Koreni\_61 Start: 40145, Stop: 39921, Start Num: 44

Candidate Starts for Koreni\_61:

(Start: 32 @40187 has 22 MA's), (Start: 34 @40175 has 15 MA's), (Start: 44 @40145 has 138 MA's), (52, 40124), (81, 39968), (86, 39929),

Gene: Kratak\_61 Start: 40504, Stop: 40238, Start Num: 32

Candidate Starts for Kratak\_61:

(Start: 32 @40504 has 22 MA's), (Start: 34 @40492 has 15 MA's), (Start: 44 @40462 has 138 MA's), (52, 40441), (81, 40285), (86, 40246),

Gene: Kremtemulon\_62 Start: 40570, Stop: 40346, Start Num: 44

Candidate Starts for Kremtemulon\_62:

(Start: 32 @40612 has 22 MA's), (Start: 34 @40600 has 15 MA's), (Start: 44 @40570 has 138 MA's), (52, 40549), (81, 40393),

Gene: Kristoff\_61 Start: 40482, Stop: 40249, Start Num: 41

Candidate Starts for Kristoff\_61:

(Start: 34 @40509 has 15 MA's), (Start: 41 @40482 has 29 MA's), (49, 40461), (63, 40377),

Gene: Kyee\_62 Start: 40462, Stop: 40238, Start Num: 44

Candidate Starts for Kyee\_62:

(Start: 32 @40504 has 22 MA's), (Start: 34 @40492 has 15 MA's), (Start: 44 @40462 has 138 MA's), (52, 40441), (81, 40285), (86, 40246),

Gene: L5\_63 Start: 40284, Stop: 40048, Start Num: 42

Candidate Starts for L5\_63:

(Start: 34 @40311 has 15 MA's), (Start: 42 @40284 has 176 MA's), (49, 40266), (56, 40233), (71, 40146),

Gene: LBerry\_69 Start: 41174, Stop: 40944, Start Num: 45

Candidate Starts for LBerry\_69:

(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: LHTSCC\_64 Start: 40867, Stop: 40643, Start Num: 44

Candidate Starts for LHTSCC\_64:

(Start: 32 @40909 has 22 MA's), (Start: 34 @40897 has 15 MA's), (Start: 44 @40867 has 138 MA's), (52, 40846), (81, 40690), (86, 40651),

Gene: LadyBird\_70 Start: 42006, Stop: 41776, Start Num: 42

Candidate Starts for LadyBird\_70:

(Start: 42 @42006 has 176 MA's), (49, 41988), (75, 41859), (81, 41820),

Gene: Lambert1\_64 Start: 40846, Stop: 40643, Start Num: 44

Candidate Starts for Lambert1\_64:

(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Landor\_65 Start: 41962, Stop: 41726, Start Num: 41

Candidate Starts for Landor\_65:

(Start: 34 @41989 has 15 MA's), (Start: 41 @41962 has 29 MA's), (49, 41941), (84, 41749), (86, 41734),

Gene: LappelDuVide\_62 Start: 40463, Stop: 40239, Start Num: 44

Candidate Starts for LappelDuVide\_62:

(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's), (52, 40442), (81, 40286), (86, 40247),

Gene: Larenn\_63 Start: 41019, Stop: 40783, Start Num: 41

Candidate Starts for Larenn\_63:

(20, 41103), (Start: 34 @41049 has 15 MA's), (Start: 41 @41019 has 29 MA's), (49, 40998), (53, 40980), (75, 40869), (81, 40830),

Gene: LarryKay\_68 Start: 41200, Stop: 40970, Start Num: 45

Candidate Starts for LarryKay\_68:

(Start: 36 @41227 has 13 MA's), (Start: 45 @41200 has 51 MA's), (71, 41071), (81, 41017),

Gene: Lemur\_62 Start: 40503, Stop: 40237, Start Num: 32

Candidate Starts for Lemur\_62:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: LeoAvram\_61 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for LeoAvram\_61:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: Leogania\_67 Start: 42317, Stop: 42087, Start Num: 42

Candidate Starts for Leogania\_67:

(Start: 34 @42347 has 15 MA's), (Start: 42 @42317 has 176 MA's), (49, 42299), (81, 42134), (84, 42110),

Gene: Leviathan\_68 Start: 41799, Stop: 41569, Start Num: 42

Candidate Starts for Leviathan\_68:

(Start: 42 @41799 has 176 MA's), (49, 41781), (75, 41652), (81, 41613),

Gene: Licorice\_60 Start: 41831, Stop: 41574, Start Num: 37

Candidate Starts for Licorice\_60:

(Start: 37 @41831 has 28 MA's), (54, 41774), (58, 41756),

Gene: LilTurb\_67 Start: 41609, Stop: 41379, Start Num: 42

Candidate Starts for LilTurb\_67:

(4, 41858), (29, 41663), (31, 41657), (Start: 42 @41609 has 176 MA's), (49, 41591), (75, 41462), (81, 41423),



Gene: Lilbunny\_66 Start: 39183, Stop: 38950, Start Num: 42

Candidate Starts for Lilbunny\_66:

(Start: 34 @39213 has 15 MA's), (Start: 42 @39183 has 176 MA's), (49, 39165), (54, 39144), (59, 39117), (71, 39051), (77, 39024), (81, 38997), (86, 38958),

Gene: Lilith\_67 Start: 41163, Stop: 40933, Start Num: 45

Candidate Starts for Lilith\_67:

(Start: 36 @41190 has 13 MA's), (Start: 45 @41163 has 51 MA's), (71, 41034), (81, 40980),

Gene: LionsBait\_67 Start: 42631, Stop: 42398, Start Num: 42

Candidate Starts for LionsBait\_67:

(20, 42715), (Start: 42 @42631 has 176 MA's), (49, 42613),

Gene: LittleB\_62 Start: 40465, Stop: 40241, Start Num: 44

Candidate Starts for LittleB\_62:

(Start: 32 @40507 has 22 MA's), (Start: 34 @40495 has 15 MA's), (Start: 44 @40465 has 138 MA's), (52, 40444), (81, 40288), (86, 40249),

Gene: LittleGuy\_62 Start: 40390, Stop: 40136, Start Num: 34

Candidate Starts for LittleGuy\_62:

(Start: 32 @40402 has 22 MA's), (Start: 34 @40390 has 15 MA's), (Start: 44 @40360 has 138 MA's), (52, 40339), (81, 40183), (86, 40144),

Gene: LochMonster\_63 Start: 40703, Stop: 40479, Start Num: 44

Candidate Starts for LochMonster\_63:

(Start: 32 @40745 has 22 MA's), (Start: 34 @40733 has 15 MA's), (Start: 44 @40703 has 138 MA's), (52, 40682), (81, 40526), (86, 40487),

Gene: Lokk\_61 Start: 40288, Stop: 40058, Start Num: 42

Candidate Starts for Lokk\_61:

(Start: 42 @40288 has 176 MA's), (49, 40270), (66, 40183), (72, 40156), (81, 40105), (86, 40066),

Gene: LoneWolf\_68 Start: 40713, Stop: 40483, Start Num: 42

Candidate Starts for LoneWolf\_68:

(Start: 42 @40713 has 176 MA's), (49, 40695), (82, 40518), (84, 40503),

Gene: Lorenzo\_62 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Lorenzo\_62:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Loser\_68 Start: 41965, Stop: 41732, Start Num: 42

Candidate Starts for Loser\_68:

(Start: 34 @41995 has 15 MA's), (Start: 42 @41965 has 176 MA's), (49, 41947), (56, 41914), (71, 41833), (75, 41818),

Gene: Louie6\_67 Start: 41199, Stop: 40969, Start Num: 46

Candidate Starts for Louie6\_67:

(Start: 46 @41199 has 17 MA's), (71, 41070),

Gene: Lowa\_67 Start: 41162, Stop: 40932, Start Num: 45

Candidate Starts for Lowa\_67:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: Lucivia\_67 Start: 40675, Stop: 40442, Start Num: 42

Candidate Starts for Lucivia\_67:

(Start: 42 @40675 has 176 MA's), (50, 40657), (65, 40573), (77, 40513), (79, 40507),

Gene: Lucyedi\_67 Start: 40607, Stop: 40374, Start Num: 41

Candidate Starts for Lucyedi\_67:

(Start: 34 @40634 has 15 MA's), (Start: 41 @40607 has 29 MA's), (49, 40586), (80, 40433),

Gene: LugYA\_71 Start: 41171, Stop: 40941, Start Num: 45

Candidate Starts for LugYA\_71:

(Start: 36 @41198 has 13 MA's), (Start: 45 @41171 has 51 MA's), (71, 41042), (81, 40988),

Gene: Lunsford\_63 Start: 40458, Stop: 40234, Start Num: 44

Candidate Starts for Lunsford\_63:

(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's), (52, 40437), (81, 40281), (86, 40242),

Gene: MA5\_65 Start: 40253, Stop: 40023, Start Num: 44

Candidate Starts for MA5\_65:

(Start: 32 @40295 has 22 MA's), (Start: 34 @40283 has 15 MA's), (Start: 44 @40253 has 138 MA's), (62, 40163),

Gene: MK4\_65 Start: 40328, Stop: 40098, Start Num: 44

Candidate Starts for MK4\_65:

(Start: 32 @40370 has 22 MA's), (Start: 34 @40358 has 15 MA's), (Start: 44 @40328 has 138 MA's), (62, 40238),

Gene: MaCh\_66 Start: 40605, Stop: 40372, Start Num: 42

Candidate Starts for MaCh\_66:

(33, 40647), (Start: 42 @40605 has 176 MA's), (50, 40587), (65, 40503), (77, 40443), (79, 40437),

Gene: Mabel\_66 Start: 40622, Stop: 40389, Start Num: 42

Candidate Starts for Mabel\_66:

(Start: 42 @40622 has 176 MA's), (50, 40604), (65, 40520), (77, 40460), (79, 40454),

Gene: MadMarie\_68 Start: 41172, Stop: 40942, Start Num: 45

Candidate Starts for MadMarie\_68:

(Start: 36 @41199 has 13 MA's), (Start: 45 @41172 has 51 MA's), (71, 41043), (81, 40989),

Gene: Mainiac\_68 Start: 41164, Stop: 40934, Start Num: 45

Candidate Starts for Mainiac\_68:

(Start: 36 @41191 has 13 MA's), (Start: 45 @41164 has 51 MA's), (71, 41035), (81, 40981),

Gene: MajorMajor\_67 Start: 40388, Stop: 40152, Start Num: 42

Candidate Starts for MajorMajor\_67:

(25, 40448), (Start: 34 @40415 has 15 MA's), (Start: 42 @40388 has 176 MA's), (49, 40370), (56, 40337), (71, 40250),

Gene: Malec\_64 Start: 41586, Stop: 41350, Start Num: 41

Candidate Starts for Malec\_64:

(20, 41670), (Start: 34 @41616 has 15 MA's), (Start: 41 @41586 has 29 MA's), (49, 41565), (53, 41547), (75, 41436), (81, 41397),

Gene: Malinsilva\_70 Start: 41162, Stop: 40932, Start Num: 45

Candidate Starts for Malinsilva\_70:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: Maminiaina\_67 Start: 40688, Stop: 40455, Start Num: 42

Candidate Starts for Maminiaina\_67:

(Start: 42 @40688 has 176 MA's), (49, 40670), (71, 40556), (84, 40478),

Gene: Manu\_68 Start: 41056, Stop: 40826, Start Num: 46

Candidate Starts for Manu\_68:

(Start: 46 @41056 has 17 MA's), (75, 40912), (81, 40873),

Gene: MarQuardt\_68 Start: 41172, Stop: 40942, Start Num: 45

Candidate Starts for MarQuardt\_68:

(Start: 36 @41199 has 13 MA's), (Start: 45 @41172 has 51 MA's), (71, 41043), (81, 40989),

Gene: Marchesa\_63 Start: 40789, Stop: 40559, Start Num: 44

Candidate Starts for Marchesa\_63:

(Start: 32 @40831 has 22 MA's), (Start: 34 @40819 has 15 MA's), (Start: 44 @40789 has 138 MA's), (57, 40744),

Gene: Margo\_64 Start: 40872, Stop: 40669, Start Num: 44

Candidate Starts for Margo\_64:

(Start: 34 @40902 has 15 MA's), (Start: 44 @40872 has 138 MA's), (74, 40743), (86, 40677),

Gene: Marie\_66 Start: 41170, Stop: 40940, Start Num: 45

Candidate Starts for Marie\_66:

(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: Marius\_69 Start: 41053, Stop: 40823, Start Num: 46

Candidate Starts for Marius\_69:

(Start: 46 @41053 has 17 MA's), (75, 40909), (81, 40870),

Gene: Maverick\_61 Start: 40494, Stop: 40240, Start Num: 34

Candidate Starts for Maverick\_61:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Maxo\_63 Start: 40466, Stop: 40242, Start Num: 44

Candidate Starts for Maxo\_63:

(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Mayonnaise\_60 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for Mayonnaise\_60:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Mazhar510\_62 Start: 40465, Stop: 40241, Start Num: 44

Candidate Starts for Mazhar510\_62:

(Start: 32 @40507 has 22 MA's), (Start: 34 @40495 has 15 MA's), (Start: 44 @40465 has 138 MA's), (52, 40444), (81, 40288), (86, 40249),

Gene: McFly\_66 Start: 39068, Stop: 38835, Start Num: 42

Candidate Starts for McFly\_66:

(Start: 42 @39068 has 176 MA's), (49, 39050), (54, 39029), (59, 39002), (60, 38987), (71, 38936), (75, 38921),

Gene: Medusa\_62 Start: 40508, Stop: 40254, Start Num: 34

Candidate Starts for Medusa\_62:

(Start: 32 @40520 has 22 MA's), (Start: 34 @40508 has 15 MA's), (Start: 44 @40478 has 138 MA's), (52, 40457), (81, 40301), (86, 40262),

Gene: MeeZee\_61 Start: 40461, Stop: 40237, Start Num: 44

Candidate Starts for MeeZee\_61:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Melvin\_64 Start: 40459, Stop: 40235, Start Num: 44

Candidate Starts for Melvin\_64:

(Start: 32 @40501 has 22 MA's), (Start: 34 @40489 has 15 MA's), (Start: 44 @40459 has 138 MA's), (52, 40438), (81, 40282), (86, 40243),

Gene: Methuselah\_63 Start: 41194, Stop: 40964, Start Num: 45

Candidate Starts for Methuselah\_63:

(Start: 36 @41221 has 13 MA's), (Start: 45 @41194 has 51 MA's), (71, 41065), (81, 41011),

Gene: Microwolf\_66 Start: 41186, Stop: 40956, Start Num: 45

Candidate Starts for Microwolf\_66:

(Start: 36 @41213 has 13 MA's), (Start: 45 @41186 has 51 MA's), (71, 41057), (81, 41003),

Gene: MiculUcigas\_65 Start: 40639, Stop: 40409, Start Num: 42

Candidate Starts for MiculUcigas\_65:

(Start: 42 @40639 has 176 MA's), (49, 40621), (53, 40603), (59, 40573), (81, 40456), (84, 40432),

Gene: Miko\_61 Start: 41066, Stop: 40836, Start Num: 42

Candidate Starts for Miko\_61:

(Start: 42 @41066 has 176 MA's), (49, 41048), (72, 40934), (81, 40883), (86, 40844),

Gene: Millski\_61 Start: 40507, Stop: 40241, Start Num: 32

Candidate Starts for Millski\_61:

(Start: 32 @40507 has 22 MA's), (Start: 34 @40495 has 15 MA's), (Start: 44 @40465 has 138 MA's), (52, 40444), (81, 40288), (86, 40249),

Gene: Miramae\_59 Start: 39753, Stop: 39529, Start Num: 44

Candidate Starts for Miramae\_59:

(Start: 32 @39795 has 22 MA's), (Start: 34 @39783 has 15 MA's), (Start: 44 @39753 has 138 MA's), (52, 39732),

Gene: Misomonster\_69 Start: 41224, Stop: 40967, Start Num: 36

Candidate Starts for Misomonster\_69:

(Start: 36 @41224 has 13 MA's), (Start: 45 @41197 has 51 MA's), (71, 41068),

Gene: MissWhite\_66 Start: 40337, Stop: 40101, Start Num: 42  
Candidate Starts for MissWhite\_66:  
(30, 40382), (Start: 34 @40364 has 15 MA's), (Start: 42 @40337 has 176 MA's), (49, 40319), (56, 40286), (71, 40199),

Gene: MoneyMay\_67 Start: 41170, Stop: 40940, Start Num: 45  
Candidate Starts for MoneyMay\_67:  
(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: Morpher26\_60 Start: 40325, Stop: 40101, Start Num: 44  
Candidate Starts for Morpher26\_60:  
(Start: 32 @40367 has 22 MA's), (Start: 34 @40355 has 15 MA's), (Start: 44 @40325 has 138 MA's), (80, 40160), (81, 40148),

Gene: Morrow\_63 Start: 40470, Stop: 40246, Start Num: 44  
Candidate Starts for Morrow\_63:  
(Start: 32 @40512 has 22 MA's), (Start: 34 @40500 has 15 MA's), (Start: 44 @40470 has 138 MA's), (52, 40449), (81, 40293), (86, 40254),

Gene: MuchMore\_71 Start: 41162, Stop: 40932, Start Num: 45  
Candidate Starts for MuchMore\_71:  
(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: Mulciber\_65 Start: 40163, Stop: 39930, Start Num: 42  
Candidate Starts for Mulciber\_65:  
(Start: 42 @40163 has 176 MA's), (50, 40145), (65, 40061), (77, 40001), (79, 39995),

Gene: Munch\_66 Start: 40626, Stop: 40393, Start Num: 42  
Candidate Starts for Munch\_66:  
(Start: 42 @40626 has 176 MA's), (50, 40608), (65, 40524), (77, 40464), (79, 40458),

Gene: Mundrea\_60 Start: 40317, Stop: 40093, Start Num: 44  
Candidate Starts for Mundrea\_60:  
(Start: 32 @40359 has 22 MA's), (Start: 34 @40347 has 15 MA's), (Start: 44 @40317 has 138 MA's), (52, 40296),

Gene: NaSiaTalie\_65 Start: 40733, Stop: 40503, Start Num: 42  
Candidate Starts for NaSiaTalie\_65:  
(Start: 42 @40733 has 176 MA's), (49, 40715), (53, 40697), (59, 40667), (81, 40550), (84, 40526),

Gene: Naca\_58 Start: 39771, Stop: 39505, Start Num: 37  
Candidate Starts for Naca\_58:  
(Start: 37 @39771 has 28 MA's), (80, 39564),

Gene: Naji\_68 Start: 41301, Stop: 41065, Start Num: 42  
Candidate Starts for Naji\_68:  
(12, 41454), (Start: 34 @41328 has 15 MA's), (Start: 42 @41301 has 176 MA's), (49, 41283), (56, 41250), (71, 41163),

Gene: Nebs\_63 Start: 40467, Stop: 40243, Start Num: 44  
Candidate Starts for Nebs\_63:  
(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: Neeharika16\_65 Start: 38528, Stop: 38295, Start Num: 42  
Candidate Starts for Neeharika16\_65:  
(Start: 42 @38528 has 176 MA's), (49, 38510), (54, 38489), (59, 38462), (60, 38447), (71, 38396), (75, 38381),

Gene: Nemo27\_61 Start: 40463, Stop: 40239, Start Num: 44  
Candidate Starts for Nemo27\_61:  
(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's), (52, 40442), (81, 40286), (86, 40247),

Gene: Newrala\_66 Start: 39070, Stop: 38837, Start Num: 42  
Candidate Starts for Newrala\_66:  
(Start: 42 @39070 has 176 MA's), (49, 39052), (54, 39031), (59, 39004), (60, 38989), (71, 38938), (75, 38923),

Gene: NicoleTera\_64 Start: 41319, Stop: 41080, Start Num: 42  
Candidate Starts for NicoleTera\_64:  
(8, 41517), (Start: 42 @41319 has 176 MA's), (49, 41301), (72, 41181), (81, 41127),

Gene: Noella\_64 Start: 40847, Stop: 40644, Start Num: 44  
Candidate Starts for Noella\_64:  
(Start: 34 @40877 has 15 MA's), (Start: 44 @40847 has 138 MA's), (74, 40718), (86, 40652),

Gene: Noelle\_61 Start: 40629, Stop: 40402, Start Num: 44  
Candidate Starts for Noelle\_61:  
(Start: 32 @40671 has 22 MA's), (Start: 34 @40659 has 15 MA's), (Start: 44 @40629 has 138 MA's), (80, 40461), (81, 40449),

Gene: Norbert\_61 Start: 40846, Stop: 40643, Start Num: 44  
Candidate Starts for Norbert\_61:  
(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: NorthStar\_60 Start: 40464, Stop: 40240, Start Num: 44  
Candidate Starts for NorthStar\_60:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Norz\_59 Start: 41380, Stop: 41120, Start Num: 37  
Candidate Starts for Norz\_59:  
(Start: 37 @41380 has 28 MA's), (59, 41293), (78, 41191),

Gene: NotAPhaseMom\_61 Start: 40468, Stop: 40244, Start Num: 44  
Candidate Starts for NotAPhaseMom\_61:  
(Start: 32 @40510 has 22 MA's), (Start: 34 @40498 has 15 MA's), (Start: 44 @40468 has 138 MA's), (52, 40447), (81, 40291), (86, 40252),

Gene: NothingSpecial\_63 Start: 41525, Stop: 41295, Start Num: 42  
Candidate Starts for NothingSpecial\_63:  
(22, 41606), (Start: 32 @41567 has 22 MA's), (Start: 34 @41555 has 15 MA's), (Start: 42 @41525 has 176 MA's), (49, 41507), (81, 41342), (84, 41318), (86, 41303),

Gene: Nyxis\_61 Start: 40384, Stop: 40130, Start Num: 34

Candidate Starts for Nyxis\_61:

(Start: 32 @40396 has 22 MA's), (Start: 34 @40384 has 15 MA's), (Start: 44 @40354 has 138 MA's),  
(52, 40333), (81, 40177), (86, 40138),

Gene: OKCentral2016\_60 Start: 39649, Stop: 39413, Start Num: 41

Candidate Starts for OKCentral2016\_60:

(Start: 41 @39649 has 29 MA's), (49, 39628),

Gene: OKaNui\_62 Start: 40514, Stop: 40290, Start Num: 44

Candidate Starts for OKaNui\_62:

(Start: 32 @40556 has 22 MA's), (Start: 34 @40544 has 15 MA's), (Start: 44 @40514 has 138 MA's),  
(52, 40493), (81, 40337), (86, 40298),

Gene: Obama12\_63 Start: 40851, Stop: 40627, Start Num: 44

Candidate Starts for Obama12\_63:

(Start: 32 @40893 has 22 MA's), (Start: 34 @40881 has 15 MA's), (Start: 44 @40851 has 138 MA's),  
(52, 40830), (81, 40674), (86, 40635),

Gene: Odin\_66 Start: 40072, Stop: 39833, Start Num: 42

Candidate Starts for Odin\_66:

(Start: 42 @40072 has 176 MA's), (49, 40054), (54, 40033), (56, 40021), (71, 39934),

Gene: Ohfah\_63 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for Ohfah\_63:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's),  
(52, 40446), (81, 40290), (86, 40251),

Gene: Ohno789\_59 Start: 40571, Stop: 40311, Start Num: 37

Candidate Starts for Ohno789\_59:

(Start: 37 @40571 has 28 MA's), (59, 40484), (78, 40382),

Gene: OlanP\_67 Start: 41229, Stop: 40999, Start Num: 46

Candidate Starts for OlanP\_67:

(Start: 46 @41229 has 17 MA's), (75, 41085), (81, 41046),

Gene: Ollie\_68 Start: 41041, Stop: 40811, Start Num: 45

Candidate Starts for Ollie\_68:

(Start: 36 @41068 has 13 MA's), (Start: 45 @41041 has 51 MA's), (71, 40912), (81, 40858),

Gene: Orange\_65 Start: 40175, Stop: 39942, Start Num: 42

Candidate Starts for Orange\_65:

(Start: 42 @40175 has 176 MA's), (50, 40157), (65, 40073), (77, 40013), (79, 40007),

Gene: P28Green\_69 Start: 41173, Stop: 40943, Start Num: 45

Candidate Starts for P28Green\_69:

(Start: 36 @41200 has 13 MA's), (Start: 45 @41173 has 51 MA's), (71, 41044), (81, 40990),

Gene: PGHhamlin\_70 Start: 41189, Stop: 40932, Start Num: 36

Candidate Starts for PGHhamlin\_70:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: PP\_67 Start: 45562, Stop: 45308, Start Num: 34

Candidate Starts for PP\_67:

(Start: 34 @45562 has 15 MA's), (49, 45523), (72, 45406), (78, 45379),

Gene: Palestino\_61 Start: 40506, Stop: 40240, Start Num: 32

Candidate Starts for Palestino\_61:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Panamaxus\_62 Start: 40846, Stop: 40643, Start Num: 44

Candidate Starts for Panamaxus\_62:

(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Pari\_61 Start: 39772, Stop: 39512, Start Num: 37

Candidate Starts for Pari\_61:

(Start: 37 @39772 has 28 MA's), (59, 39685), (78, 39583),

Gene: Pawn\_68 Start: 41060, Stop: 40830, Start Num: 46

Candidate Starts for Pawn\_68:

(Start: 46 @41060 has 17 MA's), (75, 40916), (81, 40877),

Gene: PeaceMeal1\_59 Start: 39186, Stop: 38950, Start Num: 41

Candidate Starts for PeaceMeal1\_59:

(Start: 41 @39186 has 29 MA's), (49, 39165), (54, 39144), (71, 39051), (75, 39036),

Gene: Peaches\_60 Start: 40463, Stop: 40239, Start Num: 44

Candidate Starts for Peaches\_60:

(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's), (52, 40442), (81, 40286), (86, 40247),

Gene: Pelly\_58 Start: 39989, Stop: 39738, Start Num: 38

Candidate Starts for Pelly\_58:

(Start: 38 @39989 has 6 MA's), (54, 39938), (58, 39920),

Gene: Pembroke\_68 Start: 41198, Stop: 40941, Start Num: 36

Candidate Starts for Pembroke\_68:

(Start: 36 @41198 has 13 MA's), (Start: 45 @41171 has 51 MA's), (71, 41042), (81, 40988),

Gene: Penny1\_68 Start: 41174, Stop: 40944, Start Num: 45

Candidate Starts for Penny1\_68:

(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: Perplexer\_60 Start: 40301, Stop: 40077, Start Num: 44

Candidate Starts for Perplexer\_60:

(Start: 32 @40343 has 22 MA's), (Start: 34 @40331 has 15 MA's), (Start: 44 @40301 has 138 MA's), (80, 40136), (81, 40124),

Gene: PeterPeter\_62 Start: 40461, Stop: 40237, Start Num: 44

Candidate Starts for PeterPeter\_62:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Petersenfast\_64 Start: 40174, Stop: 39941, Start Num: 42

Candidate Starts for Petersenfast\_64:

(Start: 42 @40174 has 176 MA's), (50, 40156), (65, 40072), (77, 40012), (79, 40006),



Gene: PetiteSangsue\_60 Start: 40304, Stop: 40080, Start Num: 44  
Candidate Starts for PetiteSangsue\_60:  
(Start: 32 @40346 has 22 MA's), (Start: 34 @40334 has 15 MA's), (Start: 44 @40304 has 138 MA's),  
(80, 40139), (81, 40127),

Gene: PetterN\_63 Start: 39541, Stop: 39275, Start Num: 37  
Candidate Starts for PetterN\_63:  
(Start: 37 @39541 has 28 MA's), (47, 39508), (81, 39322),

Gene: Ph8s\_69 Start: 40234, Stop: 39995, Start Num: 42  
Candidate Starts for Ph8s\_69:  
(Start: 34 @40258 has 15 MA's), (Start: 42 @40234 has 176 MA's), (49, 40216), (56, 40183), (71,  
40096), (79, 40063), (86, 40003),

Gene: Phacado\_62 Start: 40505, Stop: 40239, Start Num: 32  
Candidate Starts for Phacado\_62:  
(Start: 32 @40505 has 22 MA's), (Start: 34 @40493 has 15 MA's), (Start: 44 @40463 has 138 MA's),  
(52, 40442), (81, 40286), (86, 40247),

Gene: Phaded\_63 Start: 41980, Stop: 41705, Start Num: 32  
Candidate Starts for Phaded\_63:  
(Start: 32 @41980 has 22 MA's), (Start: 34 @41968 has 15 MA's), (Start: 41 @41941 has 29 MA's),  
(49, 41920), (84, 41728), (86, 41713),

Gene: Phantastic\_66 Start: 40511, Stop: 40281, Start Num: 44  
Candidate Starts for Phantastic\_66:  
(Start: 32 @40553 has 22 MA's), (Start: 34 @40541 has 15 MA's), (Start: 44 @40511 has 138 MA's),  
(75, 40367),

Gene: Pharaoh\_62 Start: 40656, Stop: 40402, Start Num: 42  
Candidate Starts for Pharaoh\_62:  
(6, 40863), (9, 40833), (Start: 34 @40686 has 15 MA's), (Start: 42 @40656 has 176 MA's), (49, 40638),  
(60, 40575), (66, 40551), (67, 40548), (73, 40497), (84, 40422),

Gene: Phelipe\_63 Start: 40467, Stop: 40243, Start Num: 44  
Candidate Starts for Phelipe\_63:  
(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's),  
(52, 40446), (81, 40290), (86, 40251),

Gene: PherrisBueller\_57 Start: 38645, Stop: 38385, Start Num: 37  
Candidate Starts for PherrisBueller\_57:  
(Start: 37 @38645 has 28 MA's), (59, 38558), (78, 38456),

Gene: Phighter1804\_62 Start: 40570, Stop: 40304, Start Num: 32  
Candidate Starts for Phighter1804\_62:  
(Start: 32 @40570 has 22 MA's), (Start: 34 @40558 has 15 MA's), (Start: 44 @40528 has 138 MA's),  
(52, 40507), (81, 40351), (86, 40312),

Gene: PhishRPhriends\_66 Start: 40237, Stop: 40007, Start Num: 46  
Candidate Starts for PhishRPhriends\_66:  
(Start: 46 @40237 has 17 MA's), (75, 40093), (81, 40054),

Gene: Phlei\_54 Start: 40345, Stop: 40127, Start Num: 41  
Candidate Starts for Phlei\_54:  
(Start: 41 @40345 has 29 MA's), (49, 40324), (69, 40225), (85, 40135),

Gene: Phoebe\_69 Start: 41190, Stop: 40933, Start Num: 36  
Candidate Starts for Phoebe\_69:  
(Start: 36 @41190 has 13 MA's), (Start: 45 @41163 has 51 MA's), (71, 41034), (81, 40980),

Gene: Phontbonne\_62 Start: 40370, Stop: 40146, Start Num: 44  
Candidate Starts for Phontbonne\_62:  
(Start: 32 @40412 has 22 MA's), (Start: 34 @40400 has 15 MA's), (Start: 44 @40370 has 138 MA's),  
(52, 40349), (86, 40154),

Gene: Phoxy\_68 Start: 41195, Stop: 40965, Start Num: 45  
Candidate Starts for Phoxy\_68:  
(Start: 36 @41222 has 13 MA's), (Start: 45 @41195 has 51 MA's), (71, 41066), (81, 41012),

Gene: Phranny\_69 Start: 41042, Stop: 40812, Start Num: 46  
Candidate Starts for Phranny\_69:  
(Start: 46 @41042 has 17 MA's), (75, 40898), (81, 40859),

Gene: Pipcraft\_59 Start: 40464, Stop: 40240, Start Num: 44  
Candidate Starts for Pipcraft\_59:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's),  
(52, 40443), (81, 40287), (86, 40248),

Gene: Piro94\_65 Start: 41086, Stop: 40856, Start Num: 42  
Candidate Starts for Piro94\_65:  
(Start: 42 @41086 has 176 MA's), (49, 41068), (53, 41050), (59, 41020), (81, 40903), (84, 40879),

Gene: Pistachio\_65 Start: 40443, Stop: 40213, Start Num: 44  
Candidate Starts for Pistachio\_65:  
(Start: 32 @40485 has 22 MA's), (Start: 34 @40473 has 15 MA's), (Start: 44 @40443 has 138 MA's),  
(75, 40299), (76, 40296), (83, 40245),

Gene: Pmask\_65 Start: 39071, Stop: 38838, Start Num: 42  
Candidate Starts for Pmask\_65:  
(Start: 42 @39071 has 176 MA's), (49, 39053), (54, 39032), (59, 39005), (60, 38990), (71, 38939), (75,  
38924),

Gene: Pocahontas\_64 Start: 40843, Stop: 40640, Start Num: 44  
Candidate Starts for Pocahontas\_64:  
(Start: 34 @40873 has 15 MA's), (Start: 44 @40843 has 138 MA's), (74, 40714), (86, 40648),

Gene: Polymorphads\_63 Start: 40457, Stop: 40233, Start Num: 44  
Candidate Starts for Polymorphads\_63:  
(Start: 32 @40499 has 22 MA's), (Start: 34 @40487 has 15 MA's), (Start: 44 @40457 has 138 MA's),  
(52, 40436), (66, 40361), (81, 40280), (86, 40241),

Gene: Polyphemus\_66 Start: 39456, Stop: 39223, Start Num: 42  
Candidate Starts for Polyphemus\_66:  
(Start: 42 @39456 has 176 MA's), (49, 39438), (54, 39417), (59, 39390), (60, 39375), (71, 39324), (75,  
39309),

Gene: Pomar16\_67 Start: 41341, Stop: 41105, Start Num: 42

Candidate Starts for Pomar16\_67:

(12, 41494), (Start: 34 @41368 has 15 MA's), (Start: 42 @41341 has 176 MA's), (49, 41323), (56, 41290), (71, 41203),

Gene: Poompha\_59 Start: 39184, Stop: 38948, Start Num: 41

Candidate Starts for Poompha\_59:

(Start: 41 @39184 has 29 MA's), (49, 39163), (54, 39142), (71, 39049), (75, 39034),

Gene: Popcicle\_64 Start: 40843, Stop: 40640, Start Num: 44

Candidate Starts for Popcicle\_64:

(Start: 34 @40873 has 15 MA's), (Start: 44 @40843 has 138 MA's), (74, 40714), (86, 40648),

Gene: PotatoSplit\_69 Start: 41174, Stop: 40944, Start Num: 45

Candidate Starts for PotatoSplit\_69:

(Start: 36 @41201 has 13 MA's), (Start: 45 @41174 has 51 MA's), (71, 41045), (81, 40991),

Gene: Power\_65 Start: 41360, Stop: 41130, Start Num: 42

Candidate Starts for Power\_65:

(Start: 42 @41360 has 176 MA's), (49, 41342), (53, 41324), (80, 41186),

Gene: Priamo\_68 Start: 38887, Stop: 38654, Start Num: 42

Candidate Starts for Priamo\_68:

(Start: 42 @38887 has 176 MA's), (49, 38869), (54, 38848), (59, 38821), (60, 38806), (71, 38755), (75, 38740),

Gene: Priya\_66 Start: 40398, Stop: 40165, Start Num: 42

Candidate Starts for Priya\_66:

(Start: 42 @40398 has 176 MA's), (49, 40380), (66, 40293), (71, 40266), (82, 40203), (84, 40188),

Gene: Pukovnik\_63 Start: 41608, Stop: 41375, Start Num: 41

Candidate Starts for Pukovnik\_63:

(Start: 32 @41647 has 22 MA's), (Start: 34 @41635 has 15 MA's), (Start: 41 @41608 has 29 MA's), (49, 41587), (71, 41473), (72, 41470), (81, 41419),

Gene: Pumbaa\_62 Start: 40409, Stop: 40185, Start Num: 44

Candidate Starts for Pumbaa\_62:

(Start: 32 @40451 has 22 MA's), (Start: 34 @40439 has 15 MA's), (Start: 44 @40409 has 138 MA's), (52, 40388), (81, 40232), (86, 40193),

Gene: Puppy\_65 Start: 40515, Stop: 40285, Start Num: 44

Candidate Starts for Puppy\_65:

(Start: 32 @40557 has 22 MA's), (Start: 34 @40545 has 15 MA's), (Start: 44 @40515 has 138 MA's), (75, 40371), (76, 40368), (83, 40317),

Gene: PurpleHaze\_68 Start: 41055, Stop: 40825, Start Num: 46

Candidate Starts for PurpleHaze\_68:

(Start: 46 @41055 has 17 MA's), (75, 40911), (81, 40872),

Gene: Qobbit\_66 Start: 40360, Stop: 40127, Start Num: 42

Candidate Starts for Qobbit\_66:

(Start: 42 @40360 has 176 MA's), (49, 40342), (66, 40255), (71, 40228), (82, 40165), (84, 40150),

Gene: QueenB2\_65 Start: 41338, Stop: 41108, Start Num: 42

Candidate Starts for QueenB2\_65:

(20, 41425), (Start: 32 @41383 has 22 MA's), (Start: 34 @41371 has 15 MA's), (Start: 42 @41338 has 176 MA's), (49, 41320), (53, 41302), (81, 41152),

Gene: QueenBeesly\_66 Start: 41316, Stop: 41086, Start Num: 42

Candidate Starts for QueenBeesly\_66:

(Start: 42 @41316 has 176 MA's), (49, 41298), (53, 41280), (80, 41142),

Gene: QuinnKiro\_63 Start: 40846, Stop: 40643, Start Num: 44

Candidate Starts for QuinnKiro\_63:

(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Quokka\_67 Start: 40388, Stop: 40152, Start Num: 42

Candidate Starts for Quokka\_67:

(25, 40448), (Start: 34 @40415 has 15 MA's), (Start: 42 @40388 has 176 MA's), (49, 40370), (56, 40337), (71, 40250),

Gene: Rachaly\_63 Start: 41211, Stop: 40981, Start Num: 42

Candidate Starts for Rachaly\_63:

(Start: 42 @41211 has 176 MA's), (49, 41193), (72, 41079), (81, 41028), (86, 40989),

Gene: Rahalelujah\_66 Start: 40152, Stop: 39919, Start Num: 42

Candidate Starts for Rahalelujah\_66:

(Start: 42 @40152 has 176 MA's), (49, 40134), (59, 40086), (77, 39993), (84, 39942),

Gene: Reba\_68 Start: 40715, Stop: 40485, Start Num: 46

Candidate Starts for Reba\_68:

(Start: 46 @40715 has 17 MA's), (75, 40571), (81, 40532),

Gene: Rebeuca\_62 Start: 40483, Stop: 40250, Start Num: 41

Candidate Starts for Rebeuca\_62:

(Start: 34 @40510 has 15 MA's), (Start: 41 @40483 has 29 MA's), (49, 40462), (63, 40378),

Gene: RedRock\_67 Start: 42256, Stop: 42023, Start Num: 42

Candidate Starts for RedRock\_67:

(Start: 34 @42286 has 15 MA's), (Start: 42 @42256 has 176 MA's), (49, 42238), (71, 42124), (75, 42109),

Gene: Refuge\_63 Start: 41665, Stop: 41432, Start Num: 42

Candidate Starts for Refuge\_63:

(Start: 34 @41695 has 15 MA's), (Start: 42 @41665 has 176 MA's), (49, 41647), (60, 41584), (66, 41560),

Gene: Relief\_61 Start: 40461, Stop: 40237, Start Num: 44

Candidate Starts for Relief\_61:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: ResDef\_63 Start: 40846, Stop: 40643, Start Num: 44

Candidate Starts for ResDef\_63:

(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Retro23\_67 Start: 41552, Stop: 41322, Start Num: 42

Candidate Starts for Retro23\_67:

(20, 41639), (Start: 34 @41585 has 15 MA's), (Start: 42 @41552 has 176 MA's), (49, 41534), (53, 41516), (81, 41366),

Gene: RhynO\_61 Start: 40124, Stop: 39888, Start Num: 41

Candidate Starts for RhynO\_61:

(Start: 34 @40151 has 15 MA's), (Start: 41 @40124 has 29 MA's), (49, 40103),

Gene: Rifter\_67 Start: 38679, Stop: 38446, Start Num: 42

Candidate Starts for Rifter\_67:

(Start: 34 @38709 has 15 MA's), (Start: 42 @38679 has 176 MA's), (49, 38661), (54, 38640), (59, 38613), (71, 38547), (77, 38520), (81, 38493), (86, 38454),

Gene: Rockstar\_63 Start: 40337, Stop: 40107, Start Num: 44

Candidate Starts for Rockstar\_63:

(Start: 32 @40379 has 22 MA's), (Start: 34 @40367 has 15 MA's), (Start: 44 @40337 has 138 MA's), (62, 40247),

Gene: Roksolana\_68 Start: 39513, Stop: 39280, Start Num: 42

Candidate Starts for Roksolana\_68:

(Start: 34 @39543 has 15 MA's), (Start: 42 @39513 has 176 MA's), (49, 39495), (54, 39474), (59, 39447), (71, 39381), (81, 39327), (86, 39288),

Gene: Romney\_61 Start: 40461, Stop: 40237, Start Num: 44

Candidate Starts for Romney\_61:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Roosevelt\_60 Start: 40466, Stop: 40242, Start Num: 44

Candidate Starts for Roosevelt\_60:

(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's), (52, 40445), (81, 40289), (86, 40250),

Gene: Rosa24\_60 Start: 40495, Stop: 40271, Start Num: 44

Candidate Starts for Rosa24\_60:

(Start: 32 @40537 has 22 MA's), (Start: 34 @40525 has 15 MA's), (Start: 44 @40495 has 138 MA's), (52, 40474), (81, 40318), (86, 40279),

Gene: Rowdy\_64 Start: 40196, Stop: 39963, Start Num: 41

Candidate Starts for Rowdy\_64:

(Start: 34 @40223 has 15 MA's), (Start: 41 @40196 has 29 MA's), (49, 40175), (63, 40091),

Gene: Ruin\_62 Start: 40457, Stop: 40233, Start Num: 44

Candidate Starts for Ruin\_62:

(Start: 32 @40499 has 22 MA's), (Start: 34 @40487 has 15 MA's), (Start: 44 @40457 has 138 MA's), (52, 40436), (81, 40280), (86, 40241),

Gene: Rummer\_67 Start: 41198, Stop: 40968, Start Num: 45

Candidate Starts for Rummer\_67:

(Start: 36 @41225 has 13 MA's), (Start: 45 @41198 has 51 MA's), (71, 41069), (81, 41015),

Gene: Ruotula\_61 Start: 42152, Stop: 41901, Start Num: 38  
Candidate Starts for Ruotula\_61:  
(Start: 38 @42152 has 6 MA's), (54, 42101), (58, 42083), (64, 42038), (70, 42011),

Gene: Sabertooth\_62 Start: 40496, Stop: 40242, Start Num: 34  
Candidate Starts for Sabertooth\_62:  
(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's),  
(52, 40445), (81, 40289), (86, 40250),

Gene: Sabia\_68 Start: 41179, Stop: 40949, Start Num: 45  
Candidate Starts for Sabia\_68:  
(Start: 36 @41206 has 13 MA's), (Start: 45 @41179 has 51 MA's), (71, 41050), (81, 40996),

Gene: Sabinator\_66 Start: 41169, Stop: 40939, Start Num: 45  
Candidate Starts for Sabinator\_66:  
(Start: 36 @41196 has 13 MA's), (Start: 45 @41169 has 51 MA's), (71, 41040), (81, 40986),

Gene: Salz\_65 Start: 40073, Stop: 39840, Start Num: 42  
Candidate Starts for Salz\_65:  
(33, 40115), (Start: 42 @40073 has 176 MA's), (50, 40055), (65, 39971), (77, 39911), (79, 39905),

Gene: SaturnRing\_65 Start: 40896, Stop: 40666, Start Num: 44  
Candidate Starts for SaturnRing\_65:  
(Start: 32 @40938 has 22 MA's), (Start: 34 @40926 has 15 MA's), (Start: 44 @40896 has 138 MA's),  
(75, 40752), (76, 40749), (83, 40698),

Gene: Scamp\_62 Start: 40466, Stop: 40242, Start Num: 44  
Candidate Starts for Scamp\_62:  
(Start: 32 @40508 has 22 MA's), (Start: 34 @40496 has 15 MA's), (Start: 44 @40466 has 138 MA's),  
(52, 40445), (81, 40289), (86, 40250),

Gene: Scherzo\_68 Start: 41043, Stop: 40813, Start Num: 42  
Candidate Starts for Scherzo\_68:  
(Start: 42 @41043 has 176 MA's), (49, 41025), (82, 40848), (84, 40833),

Gene: Scorpia\_62 Start: 39600, Stop: 39334, Start Num: 37  
Candidate Starts for Scorpia\_62:  
(Start: 37 @39600 has 28 MA's), (47, 39567), (81, 39381),

Gene: Scout\_64 Start: 40050, Stop: 39820, Start Num: 44  
Candidate Starts for Scout\_64:  
(Start: 32 @40092 has 22 MA's), (Start: 34 @40080 has 15 MA's), (Start: 44 @40050 has 138 MA's),  
(57, 40005),

Gene: Seanderson\_58 Start: 41329, Stop: 41072, Start Num: 37  
Candidate Starts for Seanderson\_58:  
(Start: 37 @41329 has 28 MA's), (58, 41254),

Gene: SemperFi\_67 Start: 41584, Stop: 41354, Start Num: 42  
Candidate Starts for SemperFi\_67:  
(Start: 42 @41584 has 176 MA's), (49, 41566), (53, 41548), (80, 41410), (81, 41398),

Gene: SenorClean\_58 Start: 40464, Stop: 40240, Start Num: 44

Candidate Starts for SenorClean\_58:

(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's), (52, 40443), (81, 40287), (86, 40248),

Gene: Serenity\_69 Start: 40640, Stop: 40377, Start Num: 34

Candidate Starts for Serenity\_69:

(Start: 34 @40640 has 15 MA's), (Start: 42 @40613 has 176 MA's), (49, 40595), (56, 40562), (71, 40475), (86, 40385),

Gene: Severus\_59 Start: 39184, Stop: 38948, Start Num: 41

Candidate Starts for Severus\_59:

(Start: 41 @39184 has 29 MA's), (49, 39163), (54, 39142), (71, 39049), (75, 39034),

Gene: Shaka\_60 Start: 40491, Stop: 40237, Start Num: 34

Candidate Starts for Shaka\_60:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Sham4\_66 Start: 40173, Stop: 39940, Start Num: 42

Candidate Starts for Sham4\_66:

(Start: 42 @40173 has 176 MA's), (50, 40155), (65, 40071), (77, 40011), (79, 40005),

Gene: Shapes\_64 Start: 40196, Stop: 39963, Start Num: 41

Candidate Starts for Shapes\_64:

(Start: 34 @40223 has 15 MA's), (Start: 41 @40196 has 29 MA's), (49, 40175), (63, 40091),

Gene: Sheen\_65 Start: 43903, Stop: 43661, Start Num: 40

Candidate Starts for Sheen\_65:

(10, 44068), (13, 44017), (17, 43984), (Start: 40 @43903 has 2 MA's), (49, 43882), (52, 43870), (80, 43720),

Gene: SheldonCooper\_62 Start: 40868, Stop: 40644, Start Num: 44

Candidate Starts for SheldonCooper\_62:

(Start: 32 @40910 has 22 MA's), (Start: 34 @40898 has 15 MA's), (Start: 44 @40868 has 138 MA's), (52, 40847), (81, 40691), (86, 40652),

Gene: Shygu2\_60 Start: 40355, Stop: 40131, Start Num: 44

Candidate Starts for Shygu2\_60:

(Start: 32 @40397 has 22 MA's), (Start: 34 @40385 has 15 MA's), (Start: 44 @40355 has 138 MA's), (52, 40334),

Gene: Skipitt\_61 Start: 40458, Stop: 40234, Start Num: 44

Candidate Starts for Skipitt\_61:

(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's), (52, 40437), (81, 40281), (86, 40242),

Gene: Sknot\_65 Start: 40736, Stop: 40506, Start Num: 42

Candidate Starts for Sknot\_65:

(Start: 42 @40736 has 176 MA's), (49, 40718), (53, 40700), (59, 40670), (81, 40553), (84, 40529),

Gene: Smeagan\_69 Start: 41886, Stop: 41656, Start Num: 42

Candidate Starts for Smeagan\_69:

(4, 42135), (29, 41940), (31, 41934), (Start: 42 @41886 has 176 MA's), (49, 41868), (75, 41739), (81, 41700),

Gene: SmellyB\_66 Start: 39068, Stop: 38835, Start Num: 42

Candidate Starts for SmellyB\_66:

(Start: 42 @39068 has 176 MA's), (49, 39050), (54, 39029), (59, 39002), (60, 38987), (71, 38936), (75, 38921),

Gene: SnapTap\_66 Start: 41395, Stop: 41165, Start Num: 42

Candidate Starts for SnapTap\_66:

(Start: 42 @41395 has 176 MA's), (49, 41377), (53, 41359), (80, 41221),

Gene: Snape\_66 Start: 40165, Stop: 39932, Start Num: 42

Candidate Starts for Snape\_66:

(Start: 42 @40165 has 176 MA's), (50, 40147), (65, 40063), (77, 40003), (79, 39997),

Gene: Snickers\_66 Start: 41144, Stop: 40914, Start Num: 45

Candidate Starts for Snickers\_66:

(Start: 36 @41171 has 13 MA's), (Start: 45 @41144 has 51 MA's), (71, 41015), (81, 40961),

Gene: SoYo\_67 Start: 41109, Stop: 40852, Start Num: 36

Candidate Starts for SoYo\_67:

(Start: 36 @41109 has 13 MA's), (Start: 45 @41082 has 51 MA's), (71, 40953), (81, 40899),

Gene: SoilDragon\_68 Start: 40645, Stop: 40388, Start Num: 36

Candidate Starts for SoilDragon\_68:

(Start: 36 @40645 has 13 MA's), (Start: 45 @40618 has 51 MA's), (71, 40489), (81, 40435), (83, 40420),

Gene: Soshari\_70 Start: 41194, Stop: 40964, Start Num: 45

Candidate Starts for Soshari\_70:

(Start: 36 @41221 has 13 MA's), (Start: 45 @41194 has 51 MA's), (71, 41065), (81, 41011),

Gene: Sparxx\_63 Start: 40459, Stop: 40235, Start Num: 44

Candidate Starts for Sparxx\_63:

(Start: 32 @40501 has 22 MA's), (Start: 34 @40489 has 15 MA's), (Start: 44 @40459 has 138 MA's), (52, 40438), (81, 40282), (86, 40243),

Gene: Spike509\_68 Start: 41195, Stop: 40965, Start Num: 45

Candidate Starts for Spike509\_68:

(Start: 36 @41222 has 13 MA's), (Start: 45 @41195 has 51 MA's), (71, 41066), (81, 41012),

Gene: SpikeBT\_57 Start: 39705, Stop: 39445, Start Num: 37

Candidate Starts for SpikeBT\_57:

(Start: 37 @39705 has 28 MA's), (59, 39618), (68, 39558), (70, 39555),

Gene: Spino\_61 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for Spino\_61:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: Spouty\_66 Start: 40397, Stop: 40164, Start Num: 42

Candidate Starts for Spouty\_66:



(Start: 42 @40397 has 176 MA's), (49, 40379), (66, 40292), (71, 40265), (82, 40202), (84, 40187),

Gene: Stagni\_67 Start: 41173, Stop: 40943, Start Num: 45

Candidate Starts for Stagni\_67:

(Start: 36 @41200 has 13 MA's), (Start: 45 @41173 has 51 MA's), (71, 41044), (81, 40990),

Gene: StarStuff\_68 Start: 41303, Stop: 41067, Start Num: 42

Candidate Starts for StarStuff\_68:

(12, 41456), (Start: 34 @41330 has 15 MA's), (Start: 42 @41303 has 176 MA's), (49, 41285), (56, 41252), (71, 41165),

Gene: Stasia\_60 Start: 40232, Stop: 40008, Start Num: 44

Candidate Starts for Stasia\_60:

(Start: 32 @40274 has 22 MA's), (Start: 34 @40262 has 15 MA's), (Start: 44 @40232 has 138 MA's), (81, 40055),

Gene: Steamy\_62 Start: 40151, Stop: 39912, Start Num: 42

Candidate Starts for Steamy\_62:

(Start: 34 @40181 has 15 MA's), (Start: 42 @40151 has 176 MA's), (49, 40133),

Gene: StepMih\_67 Start: 41164, Stop: 40934, Start Num: 45

Candidate Starts for StepMih\_67:

(Start: 36 @41191 has 13 MA's), (Start: 45 @41164 has 51 MA's), (71, 41035), (81, 40981),

Gene: Stink\_59 Start: 40033, Stop: 39809, Start Num: 44

Candidate Starts for Stink\_59:

(Start: 32 @40075 has 22 MA's), (Start: 34 @40063 has 15 MA's), (Start: 44 @40033 has 138 MA's), (52, 40012),

Gene: StrongArm\_57 Start: 40820, Stop: 40560, Start Num: 37

Candidate Starts for StrongArm\_57:

(Start: 37 @40820 has 28 MA's), (59, 40733), (78, 40631),

Gene: Sunhee\_68 Start: 39935, Stop: 39705, Start Num: 42

Candidate Starts for Sunhee\_68:

(Start: 42 @39935 has 176 MA's), (49, 39917), (54, 39896), (75, 39788),

Gene: SuperAwesome\_66 Start: 39073, Stop: 38840, Start Num: 42

Candidate Starts for SuperAwesome\_66:

(Start: 42 @39073 has 176 MA's), (49, 39055), (54, 39034), (59, 39007), (60, 38992), (71, 38941), (75, 38926),

Gene: SuperCallie99\_63 Start: 38955, Stop: 38722, Start Num: 42

Candidate Starts for SuperCallie99\_63:

(Start: 42 @38955 has 176 MA's), (49, 38937), (54, 38916), (59, 38889), (60, 38874), (71, 38823), (75, 38808),

Gene: Superchunk\_67 Start: 39685, Stop: 39446, Start Num: 42

Candidate Starts for Superchunk\_67:

(Start: 42 @39685 has 176 MA's), (49, 39667), (54, 39646), (56, 39634), (71, 39547),

Gene: SweetiePie\_66 Start: 41527, Stop: 41297, Start Num: 42

Candidate Starts for SweetiePie\_66:

(Start: 42 @41527 has 176 MA's), (49, 41509), (53, 41491), (80, 41353),

Gene: SwirlSquare\_72 Start: 40512, Stop: 40273, Start Num: 42

Candidate Starts for SwirlSquare\_72:

(Start: 34 @40536 has 15 MA's), (Start: 42 @40512 has 176 MA's), (49, 40494), (56, 40461), (71, 40374),

Gene: TNguyen7\_66 Start: 40862, Stop: 40632, Start Num: 44

Candidate Starts for TNguyen7\_66:

(Start: 32 @40904 has 22 MA's), (Start: 34 @40892 has 15 MA's), (Start: 44 @40862 has 138 MA's), (75, 40718), (76, 40715), (83, 40664),

Gene: Taquarus\_61 Start: 40467, Stop: 40243, Start Num: 44

Candidate Starts for Taquarus\_61:

(Start: 32 @40509 has 22 MA's), (Start: 34 @40497 has 15 MA's), (Start: 44 @40467 has 138 MA's), (52, 40446), (81, 40290), (86, 40251),

Gene: TarsusIV\_63 Start: 40986, Stop: 40756, Start Num: 42

Candidate Starts for TarsusIV\_63:

(Start: 42 @40986 has 176 MA's), (49, 40968), (53, 40950), (59, 40920), (71, 40857), (81, 40803), (84, 40779), (86, 40764),

Gene: Taurus\_69 Start: 41170, Stop: 40940, Start Num: 45

Candidate Starts for Taurus\_69:

(Start: 36 @41197 has 13 MA's), (Start: 45 @41170 has 51 MA's), (71, 41041), (81, 40987),

Gene: Temprado\_68 Start: 39552, Stop: 39319, Start Num: 42

Candidate Starts for Temprado\_68:

(Start: 34 @39582 has 15 MA's), (Start: 42 @39552 has 176 MA's), (49, 39534), (54, 39513), (59, 39486), (71, 39420), (77, 39393), (81, 39366), (86, 39327),

Gene: Terrific\_66 Start: 41090, Stop: 40860, Start Num: 42

Candidate Starts for Terrific\_66:

(Start: 42 @41090 has 176 MA's), (49, 41072), (53, 41054), (59, 41024), (81, 40907), (84, 40883),

Gene: Texage\_62 Start: 40847, Stop: 40644, Start Num: 44

Candidate Starts for Texage\_62:

(Start: 34 @40877 has 15 MA's), (Start: 44 @40847 has 138 MA's), (74, 40718), (86, 40652),

Gene: Thanksgivukkah\_61 Start: 40504, Stop: 40238, Start Num: 32

Candidate Starts for Thanksgivukkah\_61:

(Start: 32 @40504 has 22 MA's), (Start: 34 @40492 has 15 MA's), (Start: 44 @40462 has 138 MA's), (52, 40441), (81, 40285), (86, 40246),

Gene: Tiffany\_67 Start: 41056, Stop: 40826, Start Num: 45

Candidate Starts for Tiffany\_67:

(Start: 36 @41083 has 13 MA's), (Start: 45 @41056 has 51 MA's), (71, 40927), (81, 40873),

Gene: Timothy\_66 Start: 40142, Stop: 39909, Start Num: 42

Candidate Starts for Timothy\_66:

(Start: 42 @40142 has 176 MA's), (50, 40124), (65, 40040), (77, 39980), (79, 39974),

Gene: Timshel\_65 Start: 43612, Stop: 43391, Start Num: 41

Candidate Starts for Timshel\_65:  
(10, 43789), (13, 43738), (Start: 41 @43612 has 29 MA's), (49, 43591),

Gene: TinaFeyge\_60 Start: 40501, Stop: 40235, Start Num: 32  
Candidate Starts for TinaFeyge\_60:  
(Start: 32 @40501 has 22 MA's), (Start: 34 @40489 has 15 MA's), (Start: 44 @40459 has 138 MA's),  
(52, 40438), (81, 40282), (86, 40243),

Gene: TinyPebbles\_66 Start: 41200, Stop: 40970, Start Num: 45  
Candidate Starts for TinyPebbles\_66:  
(Start: 36 @41227 has 13 MA's), (Start: 45 @41200 has 51 MA's), (71, 41071),

Gene: TinyTimmy\_66 Start: 40119, Stop: 39886, Start Num: 42  
Candidate Starts for TinyTimmy\_66:  
(33, 40161), (Start: 42 @40119 has 176 MA's), (50, 40101), (65, 40017), (77, 39957), (79, 39951),

Gene: Tinybot\_61 Start: 40494, Stop: 40270, Start Num: 44  
Candidate Starts for Tinybot\_61:  
(Start: 32 @40536 has 22 MA's), (Start: 34 @40524 has 15 MA's), (Start: 44 @40494 has 138 MA's),  
(52, 40473), (81, 40317), (86, 40278),

Gene: TopsytheTRex\_65 Start: 40588, Stop: 40352, Start Num: 42  
Candidate Starts for TopsytheTRex\_65:  
(Start: 34 @40615 has 15 MA's), (Start: 42 @40588 has 176 MA's), (49, 40570), (56, 40537), (71,  
40450),

Gene: TiroTheta9\_61 Start: 40458, Stop: 40234, Start Num: 44  
Candidate Starts for TiroTheta9\_61:  
(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's),  
(52, 40437), (81, 40281), (86, 40242),

Gene: Toaka\_67 Start: 40624, Stop: 40391, Start Num: 42  
Candidate Starts for Toaka\_67:  
(Start: 42 @40624 has 176 MA's), (49, 40606), (66, 40519), (84, 40414),

Gene: Todacoro\_64 Start: 40846, Stop: 40643, Start Num: 44  
Candidate Starts for Todacoro\_64:  
(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Tomathan\_68 Start: 41350, Stop: 41114, Start Num: 42  
Candidate Starts for Tomathan\_68:  
(12, 41503), (Start: 34 @41377 has 15 MA's), (Start: 42 @41350 has 176 MA's), (49, 41332), (56,  
41299), (71, 41212),

Gene: ToneTone\_64 Start: 39112, Stop: 38879, Start Num: 42  
Candidate Starts for ToneTone\_64:  
(Start: 34 @39142 has 15 MA's), (Start: 42 @39112 has 176 MA's), (49, 39094), (54, 39073), (59,  
39046), (71, 38980), (77, 38953), (81, 38926), (86, 38887),

Gene: Topanga\_58 Start: 39963, Stop: 39730, Start Num: 41  
Candidate Starts for Topanga\_58:  
(Start: 34 @39990 has 15 MA's), (Start: 41 @39963 has 29 MA's), (49, 39942), (63, 39858),

Gene: Toro\_65 Start: 44015, Stop: 43773, Start Num: 40

Candidate Starts for Toro\_65:

(10, 44180), (13, 44129), (17, 44096), (Start: 40 @44015 has 2 MA's), (49, 43994), (52, 43982), (80, 43832),

Gene: Traft412\_61 Start: 40928, Stop: 40671, Start Num: 37

Candidate Starts for Traft412\_61:

(Start: 37 @40928 has 28 MA's), (54, 40871), (58, 40853),

Gene: Travvers\_67 Start: 41300, Stop: 41064, Start Num: 42

Candidate Starts for Travvers\_67:

(12, 41453), (Start: 34 @41327 has 15 MA's), (Start: 42 @41300 has 176 MA's), (49, 41282), (56, 41249), (71, 41162),

Gene: Trike\_58 Start: 39190, Stop: 38954, Start Num: 41

Candidate Starts for Trike\_58:

(Start: 34 @39220 has 15 MA's), (Start: 41 @39190 has 29 MA's), (49, 39169), (71, 39055),

Gene: Tristan\_61 Start: 41778, Stop: 41545, Start Num: 41

Candidate Starts for Tristan\_61:

(Start: 32 @41817 has 22 MA's), (Start: 34 @41805 has 15 MA's), (Start: 41 @41778 has 29 MA's), (49, 41757), (84, 41568), (86, 41553),

Gene: Trixie\_64 Start: 41204, Stop: 40974, Start Num: 42

Candidate Starts for Trixie\_64:

(27, 41255), (Start: 34 @41234 has 15 MA's), (Start: 42 @41204 has 176 MA's), (49, 41186), (71, 41072), (75, 41057),

Gene: Trooper\_66 Start: 41462, Stop: 41232, Start Num: 42

Candidate Starts for Trooper\_66:

(Start: 36 @41480 has 13 MA's), (Start: 42 @41462 has 176 MA's), (49, 41444), (53, 41426), (59, 41396), (81, 41279), (84, 41255), (86, 41240),

Gene: TroyPia\_63 Start: 40462, Stop: 40238, Start Num: 44

Candidate Starts for TroyPia\_63:

(Start: 32 @40504 has 22 MA's), (Start: 34 @40492 has 15 MA's), (Start: 44 @40462 has 138 MA's), (52, 40441), (81, 40285), (86, 40246),

Gene: Tucker\_67 Start: 39281, Stop: 39048, Start Num: 42

Candidate Starts for Tucker\_67:

(Start: 34 @39311 has 15 MA's), (Start: 42 @39281 has 176 MA's), (49, 39263), (54, 39242), (59, 39215), (71, 39149), (81, 39095), (86, 39056),

Gene: Turbido\_67 Start: 41605, Stop: 41375, Start Num: 42

Candidate Starts for Turbido\_67:

(4, 41854), (29, 41659), (31, 41653), (Start: 42 @41605 has 176 MA's), (49, 41587), (75, 41458), (81, 41419),

Gene: Twister\_60 Start: 40044, Stop: 39811, Start Num: 41

Candidate Starts for Twister\_60:

(19, 40128), (Start: 34 @40071 has 15 MA's), (Start: 41 @40044 has 29 MA's), (49, 40023), (63, 39939),

Gene: TygerBlood\_62 Start: 40464, Stop: 40240, Start Num: 44  
Candidate Starts for TygerBlood\_62:  
(Start: 32 @40506 has 22 MA's), (Start: 34 @40494 has 15 MA's), (Start: 44 @40464 has 138 MA's),  
(52, 40443), (81, 40287), (86, 40248),

Gene: Ugenie5\_64 Start: 41042, Stop: 40812, Start Num: 42  
Candidate Starts for Ugenie5\_64:  
(Start: 42 @41042 has 176 MA's), (49, 41024), (82, 40847), (84, 40832),

Gene: Ulysses\_61 Start: 40144, Stop: 39920, Start Num: 44  
Candidate Starts for Ulysses\_61:  
(Start: 32 @40186 has 22 MA's), (Start: 34 @40174 has 15 MA's), (Start: 44 @40144 has 138 MA's),  
(52, 40123), (81, 39967), (86, 39928),

Gene: UnionJack\_59 Start: 39159, Stop: 38842, Start Num: 24  
Candidate Starts for UnionJack\_59:  
(Start: 24 @39159 has 1 MA's), (Start: 37 @39108 has 28 MA's), (47, 39075), (81, 38889),

Gene: Updawg\_66 Start: 40980, Stop: 40750, Start Num: 42  
Candidate Starts for Updawg\_66:  
(Start: 42 @40980 has 176 MA's), (49, 40962), (53, 40944), (59, 40914), (81, 40797), (84, 40773),

Gene: VA6\_66 Start: 41310, Stop: 41080, Start Num: 42  
Candidate Starts for VA6\_66:  
(Start: 42 @41310 has 176 MA's), (49, 41292), (75, 41163), (81, 41124),

Gene: VC3\_69 Start: 41277, Stop: 41041, Start Num: 42  
Candidate Starts for VC3\_69:  
(Start: 34 @41304 has 15 MA's), (Start: 42 @41277 has 176 MA's), (49, 41259), (56, 41226), (71,  
41139),

Gene: Veracruz\_62 Start: 40846, Stop: 40643, Start Num: 44  
Candidate Starts for Veracruz\_62:  
(Start: 34 @40876 has 15 MA's), (Start: 44 @40846 has 138 MA's), (74, 40717), (86, 40651),

Gene: Vix\_66 Start: 41253, Stop: 41023, Start Num: 45  
Candidate Starts for Vix\_66:  
(Start: 36 @41280 has 13 MA's), (Start: 45 @41253 has 51 MA's), (71, 41124), (81, 41070),

Gene: VohminGhazi\_66 Start: 39069, Stop: 38836, Start Num: 42  
Candidate Starts for VohminGhazi\_66:  
(Start: 42 @39069 has 176 MA's), (49, 39051), (54, 39030), (59, 39003), (60, 38988), (71, 38937), (75,  
38922),

Gene: WalterMcMickey\_60 Start: 40044, Stop: 39811, Start Num: 41  
Candidate Starts for WalterMcMickey\_60:  
(19, 40128), (Start: 34 @40071 has 15 MA's), (Start: 41 @40044 has 29 MA's), (49, 40023), (63,  
39939),

Gene: Wander\_62 Start: 40503, Stop: 40237, Start Num: 32  
Candidate Starts for Wander\_62:  
(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's),  
(52, 40440), (81, 40284), (86, 40245),

Gene: Watson\_67 Start: 41162, Stop: 40932, Start Num: 45

Candidate Starts for Watson\_67:

(Start: 36 @41189 has 13 MA's), (Start: 45 @41162 has 51 MA's), (71, 41033), (81, 40979),

Gene: WeiHuaDA\_67 Start: 42183, Stop: 41950, Start Num: 42

Candidate Starts for WeiHuaDA\_67:

(Start: 34 @42213 has 15 MA's), (Start: 42 @42183 has 176 MA's), (49, 42165), (66, 42078), (71, 42051), (75, 42036), (84, 41973), (86, 41958),

Gene: Whabigail7\_67 Start: 41605, Stop: 41375, Start Num: 42

Candidate Starts for Whabigail7\_67:

(4, 41854), (29, 41659), (31, 41653), (Start: 42 @41605 has 176 MA's), (49, 41587), (75, 41458), (81, 41419),

Gene: WideWale\_66 Start: 40980, Stop: 40750, Start Num: 42

Candidate Starts for WideWale\_66:

(Start: 42 @40980 has 176 MA's), (49, 40962), (53, 40944), (59, 40914), (81, 40797), (84, 40773),

Gene: Wiks\_66 Start: 39183, Stop: 38950, Start Num: 42

Candidate Starts for Wiks\_66:

(Start: 34 @39213 has 15 MA's), (Start: 42 @39183 has 176 MA's), (49, 39165), (54, 39144), (59, 39117), (71, 39051), (77, 39024), (81, 38997), (86, 38958),

Gene: Wilbur\_62 Start: 40461, Stop: 40237, Start Num: 44

Candidate Starts for Wilbur\_62:

(Start: 32 @40503 has 22 MA's), (Start: 34 @40491 has 15 MA's), (Start: 44 @40461 has 138 MA's), (52, 40440), (81, 40284), (86, 40245),

Gene: Wile\_60 Start: 40335, Stop: 40111, Start Num: 44

Candidate Starts for Wile\_60:

(Start: 32 @40377 has 22 MA's), (Start: 44 @40335 has 138 MA's), (80, 40170), (81, 40158),

Gene: Wizard007\_61 Start: 40469, Stop: 40245, Start Num: 44

Candidate Starts for Wizard007\_61:

(Start: 32 @40511 has 22 MA's), (Start: 34 @40499 has 15 MA's), (Start: 44 @40469 has 138 MA's), (52, 40448), (81, 40292), (86, 40253),

Gene: Wooldri\_70 Start: 41109, Stop: 40852, Start Num: 36

Candidate Starts for Wooldri\_70:

(Start: 36 @41109 has 13 MA's), (Start: 45 @41082 has 51 MA's), (71, 40953), (81, 40899),

Gene: WunderPhul\_67 Start: 39181, Stop: 38948, Start Num: 42

Candidate Starts for WunderPhul\_67:

(Start: 34 @39211 has 15 MA's), (Start: 42 @39181 has 176 MA's), (49, 39163), (54, 39142), (59, 39115), (71, 39049), (77, 39022), (81, 38995), (86, 38956),

Gene: Xena\_59 Start: 40301, Stop: 40077, Start Num: 44

Candidate Starts for Xena\_59:

(Start: 32 @40343 has 22 MA's), (Start: 34 @40331 has 15 MA's), (Start: 44 @40301 has 138 MA's), (80, 40136), (81, 40124),

Gene: XianYue\_63 Start: 40566, Stop: 40336, Start Num: 42

Candidate Starts for XianYue\_63:

(Start: 42 @40566 has 176 MA's), (49, 40548), (71, 40437), (75, 40422), (81, 40383),

Gene: YoSam321\_62 Start: 40458, Stop: 40234, Start Num: 44

Candidate Starts for YoSam321\_62:

(Start: 32 @40500 has 22 MA's), (Start: 34 @40488 has 15 MA's), (Start: 44 @40458 has 138 MA's), (52, 40437), (81, 40281), (86, 40242),

Gene: Yokurt\_66 Start: 39183, Stop: 38950, Start Num: 42

Candidate Starts for Yokurt\_66:

(Start: 34 @39213 has 15 MA's), (Start: 42 @39183 has 176 MA's), (49, 39165), (54, 39144), (59, 39117), (71, 39051), (77, 39024), (81, 38997), (86, 38958),

Gene: Zaka\_67 Start: 39183, Stop: 38950, Start Num: 42

Candidate Starts for Zaka\_67:

(Start: 34 @39213 has 15 MA's), (Start: 42 @39183 has 176 MA's), (49, 39165), (54, 39144), (59, 39117), (71, 39051), (77, 39024), (81, 38997), (86, 38958),

Gene: Zetzy\_67 Start: 40733, Stop: 40503, Start Num: 45

Candidate Starts for Zetzy\_67:

(Start: 36 @40760 has 13 MA's), (Start: 45 @40733 has 51 MA's), (71, 40604), (81, 40550),

Gene: Zimmer\_63 Start: 41380, Stop: 41147, Start Num: 42

Candidate Starts for Zimmer\_63:

(Start: 42 @41380 has 176 MA's), (49, 41362), (60, 41299),

Gene: Zulu\_68 Start: 39561, Stop: 39328, Start Num: 42

Candidate Starts for Zulu\_68:

(Start: 34 @39591 has 15 MA's), (Start: 42 @39561 has 176 MA's), (49, 39543), (54, 39522), (59, 39495), (71, 39429), (77, 39402), (81, 39375), (86, 39336),