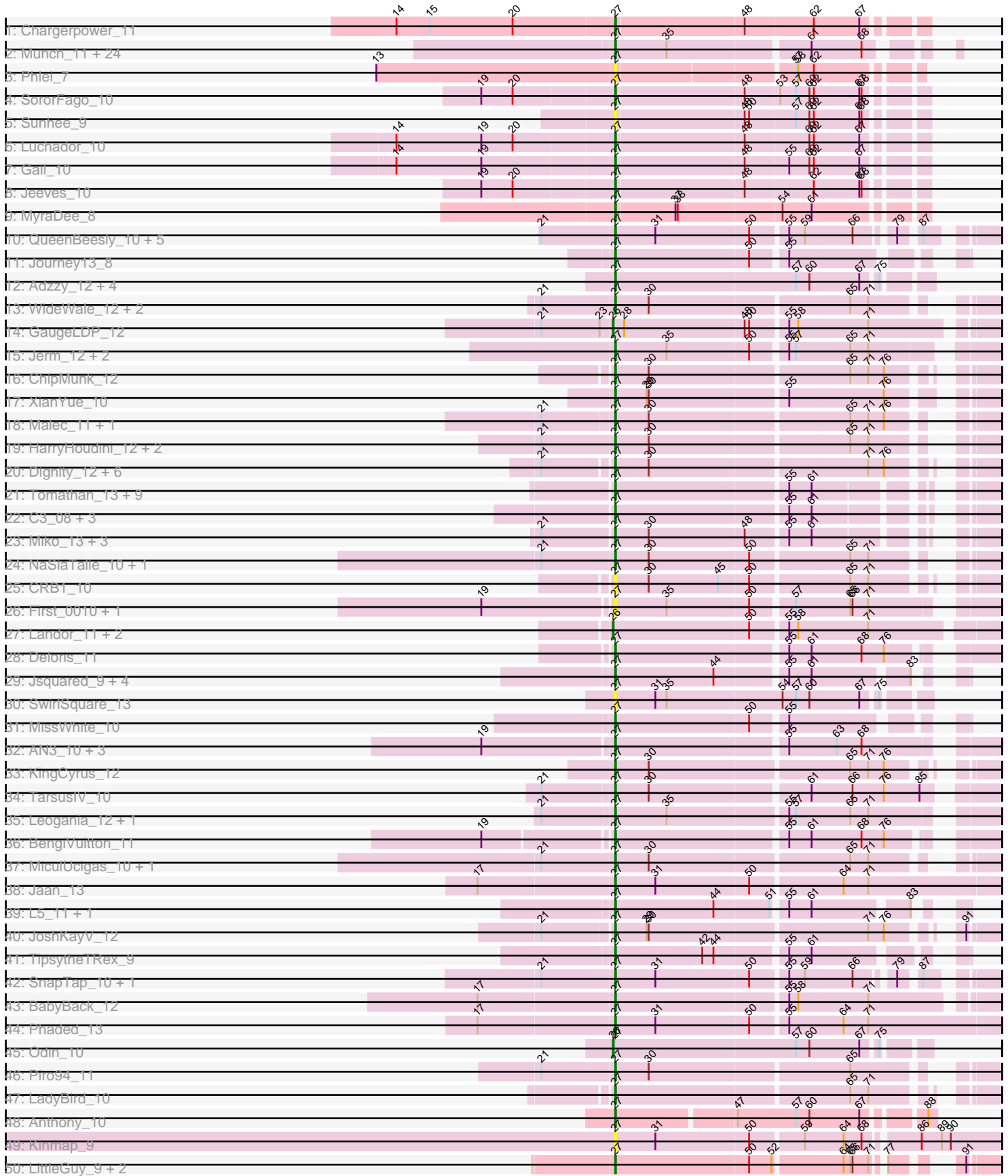
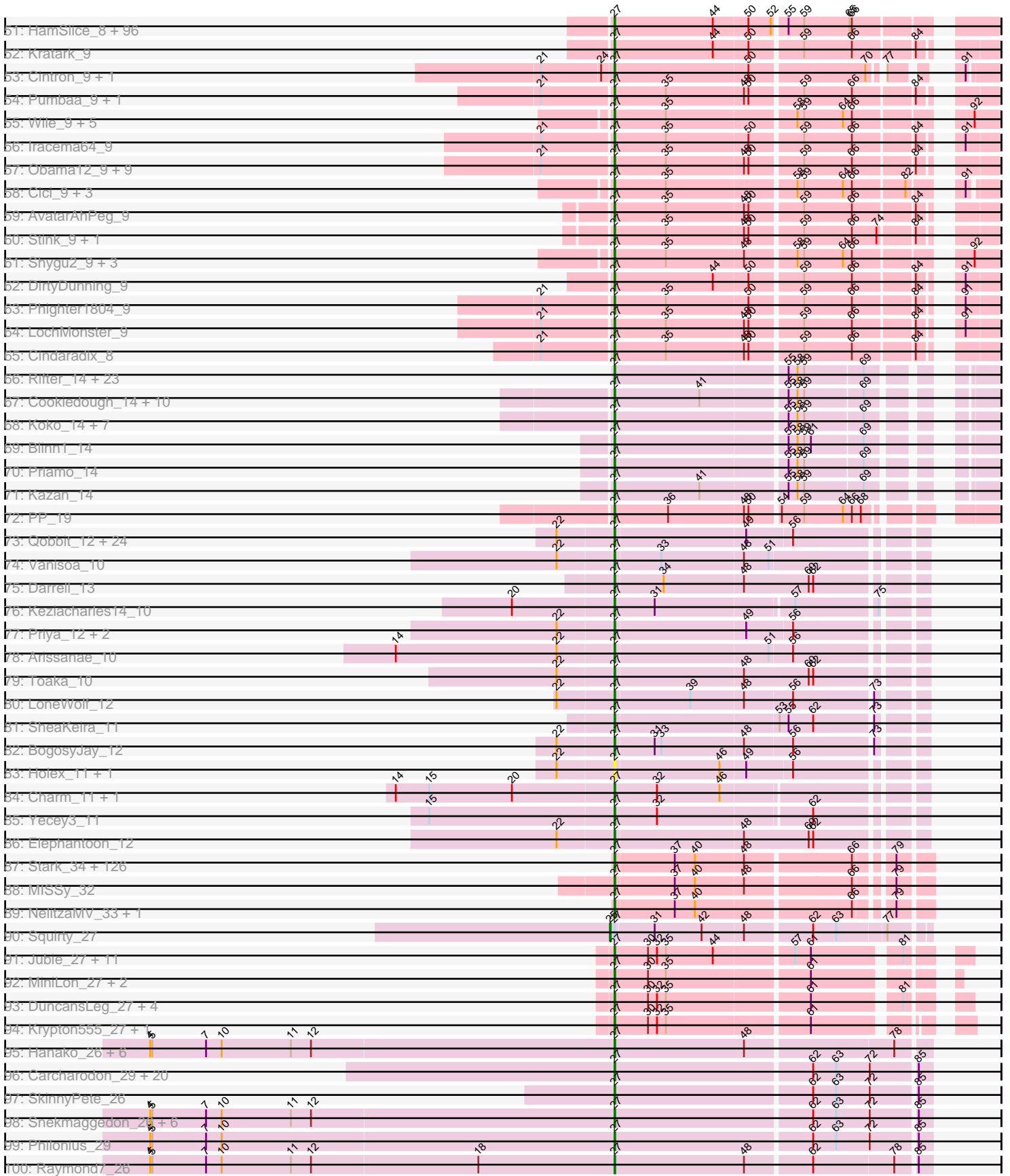


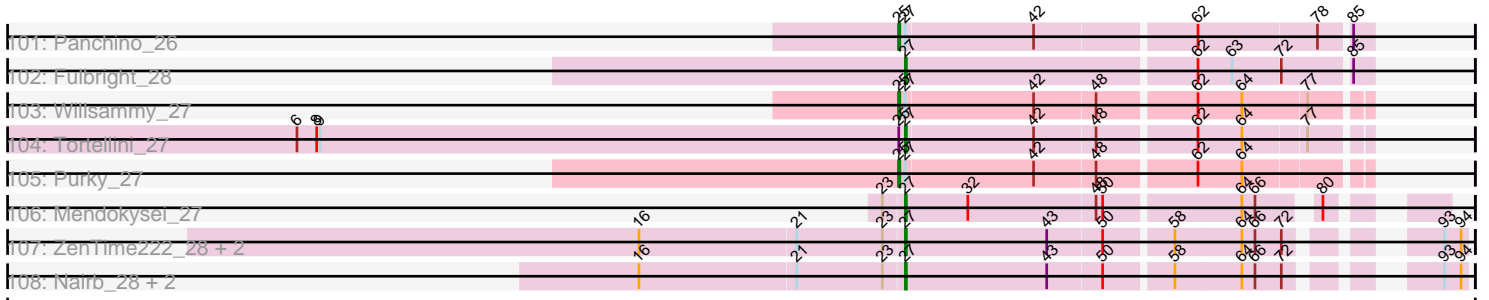
# Zoomed Pham 193631



# Zoomed Pham 193631



# Zoomed Pham 193631



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 193631 Report

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

Pham number 193631 has 554 members, 43 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_11
- Track 2 : Munch\_11, Salz\_11, Lucivia\_11, Et2Brutus\_10, MaCh\_11, Orange\_11, Insomnia\_11, Mulciber\_11, Jabith\_11, Flaverint\_11, Petersenfast\_10, Bowtie\_11, Sham4\_11, Bachome\_11, Fibonacci\_11, Ebony\_11, Gilberta\_11, Timothy\_11, Joselito\_11, Aneem\_11, TinyTimmy\_11, Bud\_11, Mabel\_11, Hutc2\_11, Snape\_11
- Track 3 : Phlei\_7
- Track 4 : SororFago\_10
- Track 5 : Sunhee\_9
- Track 6 : Luchador\_10
- Track 7 : Gail\_10
- Track 8 : Jeeves\_10
- Track 9 : MyraDee\_8
- Track 10 : QueenBeesly\_10, Georgie2\_11, SweetiePie\_10, Power\_10, FiringLine\_10, SemperFi\_12
- Track 11 : Journey13\_8
- Track 12 : Adzzy\_12, Ph8s\_12, Caraxes\_10, Che12\_12, Superchunk\_10
- Track 13 : WideWale\_12, Updawn\_12, Equemioh13\_12
- Track 14 : GaugeLDP\_12
- Track 15 : Jerm\_12, LilTurb\_12, Turbido\_12
- Track 16 : ChipMunk\_12
- Track 17 : XianYue\_10
- Track 18 : Malec\_11, Larenn\_11
- Track 19 : HarryHoudini\_12, Baehexic\_11, Drake55\_12
- Track 20 : Dignity\_12, AbbyPaige\_12, Whabigail7\_12, Buggy\_12, Smeagan\_12, Leviathan\_12, Agape74\_12
- Track 21 : Tomathan\_13, D32\_13, Travvers\_13, Kerberos\_13, D29\_11, DBQu4n\_13, StarStuff\_13, Naji\_13, Duplo\_13, Pomar16\_13
- Track 22 : C3\_08, AN9\_13, VC3\_13, ANI8\_13
- Track 23 : Miko\_13, Rachaly\_13, Lokk\_13, BobSwaget\_13
- Track 24 : NaSiaTalie\_10, Flare16\_10
- Track 25 : CRB1\_10
- Track 26 : First\_0010, 20ES\_10
- Track 27 : Landor\_11, Bactobuster\_11, Pukovnik\_12
- Track 28 : Deloris\_11
- Track 29 : Jsquared\_9, Bradman\_9, MajorMajor\_9, Quokka\_8, Serenity\_9
- Track 30 : SwirlSquare\_13
- Track 31 : MissWhite\_10

- Track 32 : AN3\_10, VA6\_10, Benvolio\_10, Echild\_10
- Track 33 : KingCyrus\_12
- Track 34 : TarsusIV\_10
- Track 35 : Leogania\_12, BiancaTri92\_12
- Track 36 : BengiVuitton\_11
- Track 37 : MiculUcigas\_10, Centaur\_12
- Track 38 : Jaan\_13
- Track 39 : L5\_11, Koduck\_10
- Track 40 : JoshKayV\_12
- Track 41 : TopsytheTRex\_9
- Track 42 : SnapTap\_10, Crucio\_10
- Track 43 : BabyBack\_12
- Track 44 : Phaded\_13
- Track 45 : Odin\_10
- Track 46 : Piro94\_11
- Track 47 : LadyBird\_10
- Track 48 : Anthony\_10
- Track 49 : Kinmap\_9
- Track 50 : LittleGuy\_9, Nyxis\_9, Phontbonne\_9
- Track 51 : HamSlice\_8, Kamy\_9, Jaykayelowell\_9, Taquarus\_9, Lorenzo\_9, TroyPia\_9, Ohfah\_9, Sabertooth\_9, CentreCat\_9, Clarenza\_9, Iceman\_9, Ruin\_9, Connomayer\_9, Floean\_9, JoongJeon\_9, Phacado\_9, Albee\_9, Eros\_9, Bombshell\_9, Maverick\_9, LittleB\_9, Anyong\_9, BellusTerra\_9, Phelipe\_9, Peaches\_9, ICleared\_9, Avle17\_9, TiroTheta9\_9, LeoAvram\_9, Koreni\_8, MeeZee\_9, OKaNui\_9, Millski\_9, JetBlade\_9, Commander\_9, Eagle\_8, Relief\_9, TygerBlood\_9, Lunsford\_10, Gadost\_9, NorthStar\_9, Wilbur\_9, Eapen\_9, Kingmustik0402\_9, Holli\_9, Pipcraft\_9, Polymorphads\_9, Melvin\_9, Palestino\_9, Medusa\_9, Eurydice\_9, YoSam321\_9, Citius\_9, Sparxx\_9, Caelakin\_9, Arturo\_8, TinaFeyge\_9, Kyee\_9, Cocoaberry\_9, Bartimeaus\_9, LappelDuVide\_9, Spino\_9, Roosevelt\_9, Funston\_9, Wizard007\_9, KFPoly\_9, Dhanush\_9, Bruiser\_9, Blackmoor\_9, Baby16\_9, Scamp\_9, Maxo\_9, PeterPeter\_9, Houdini22\_9, Nemo27\_9, BubbleTrouble\_9, Broseidon\_9, Romney\_9, Lemur\_9, Noelle\_9, Nebs\_9, NotAPhaseMom\_9, Skipitt\_9, Shaka\_9, Eris\_9, Chaph\_9, Alberto7\_10, Flux\_9, Druantia\_9, Thanksgivukkah\_9, Mazhar510\_9, Morrow\_9, Happiness\_9, Burger\_8, Deano\_9, Wander\_9, Abdiel\_9
- Track 52 : Kratak\_9
- Track 53 : Cintron\_9, Kremtemulon\_9
- Track 54 : Pumbaa\_9, Mundrea\_9
- Track 55 : Wile\_9, PetiteSangsue\_9, Katalie136\_9, Perplexer\_9, Datway\_9, Backyardigan\_9
- Track 56 : Iracema64\_9
- Track 57 : Obama12\_9, Ulysses\_8, LHTSCC\_9, Camperdownii\_8, SheldonCooper\_9, Rosa24\_8, ChampagnePapi\_9, Tinybot\_8, Cerulean\_9, BangNhom\_8
- Track 58 : Cici\_9, Badger\_9, Xena\_9, Achebe\_9
- Track 59 : AvatarAhPeg\_9
- Track 60 : Stink\_9, Miramae\_9
- Track 61 : Shygu2\_9, Bumblebee11\_9, Morpher26\_9, AbbysRanger\_9
- Track 62 : DirtyDunning\_9
- Track 63 : Phighter1804\_9
- Track 64 : LochMonster\_9
- Track 65 : Cindaradix\_8

- Track 66 : Rifter\_14, Wiks\_14, Hammer\_14, CloudWang3\_14, VohminGhazi\_14, SmellyB\_14, Gladiator\_14, Blue7\_14, Dorothea\_14, Chartreuse\_14, DaVinci\_14, Yokurt\_14, Gruunaga\_14, ToneTone\_13, WunderPhul\_14, Zulu\_14, Lilbunny\_14, Candra\_14, McFly\_14, Hoot\_14, Jeffabunny\_14, Kipper29\_14, GreedyLawyer\_14, Zaka\_14
- Track 67 : Cookiedough\_14, Isiphiwo\_14, SuperCallie99\_14, JewelBug\_14, Pmask\_14, Jordennis\_14, Neeharika16\_14, Newrala\_14, EricB\_14, BABullseye\_14, SuperAwesome\_14
- Track 68 : Koko\_14, Tucker\_14, Roksolana\_14, Artemis2UCLA\_14, Helmet\_15, Indra\_14, Hexamo\_14, Garak\_15
- Track 69 : Blinn1\_14
- Track 70 : Priamo\_14
- Track 71 : Kazan\_14
- Track 72 : PP\_19
- Track 73 : Qobbit\_12, Aliter\_12, Ugenie5\_9, Tubs\_12, Lilleskat\_10, Phaeder\_12, Pioneer\_12, RyeScarlet\_13, ExplosioNervosa\_12, Scherzo\_12, Fayely\_12, Phonnegut\_12, EmyBug\_12, Maminiaina\_12, Myxus\_12, Hanray\_11, Onglai\_11, EdogawaKiddo\_10, HortumSL17\_12, Alma\_12, Conquerage\_12, Catalina\_12, Beemo\_12, Sachima\_10, PackMan\_12
- Track 74 : Vanisoa\_10
- Track 75 : Darrell\_13
- Track 76 : Keziacharles14\_10
- Track 77 : Priya\_12, Eidsmoe\_12, Spouty\_12
- Track 78 : Arissanae\_10
- Track 79 : Toaka\_10
- Track 80 : LoneWolf\_12
- Track 81 : SheaKeira\_11
- Track 82 : BogosyJay\_12
- Track 83 : Horex\_11, Jiawan\_11
- Track 84 : Charm\_11, DreamTeam1\_11
- Track 85 : Yecey3\_11
- Track 86 : Elephantoon\_12
- Track 87 : Stark\_34, Gemini\_36, Harella\_32, Maxxinista\_34, Elph10\_34, Tarkin\_35, Moldemort\_34, Emmina\_34, Gage\_35, HufflyPuff\_32, Petra64142\_35, FireRed\_33, StellaBean\_33, BugsBunny\_31, Rimmer\_32, Glexan\_31, Kostya\_34, Kanye\_35, SirDuracell\_32, TeardropMSU\_32, GoldenSpark\_35, Thresher\_34, Sassay\_32, BaboJay\_32, 244\_35, Nala\_33, ChotaBhai\_33, Simpliphy\_34, Cjw1\_33, HanKaySha\_34, Lilpickle\_32, Argent26\_35, Nimrod\_33, Rakim\_34, MadamMonkfish\_33, Dumbo\_33, Asriel\_32, BilboSwaggins\_33, Manda\_34, Myrale\_33, Ukulele\_33, YassJohnny\_34, SophKB\_33, Cactus\_34, Youngblood\_33, Adnama\_36, GooberAzure\_35, Pat3\_32, IHOP\_33, Hopey\_35, Dusk\_32, Miniwave\_33, PhatBacter\_33, JeTaime\_35, MPhalcon\_32, Icee\_32, BadStone\_32, Saints25\_34, Kimchi\_35, Stank\_36, ShereKhan\_35, Bask21\_33, NoSleep\_34, Quallification\_34, Easy2Say\_35, StolenFromERC\_35, Contagion\_32, Tuco\_34, Palpatine\_33, Hoonter\_35, Traaww1\_31, Flypotenuse\_31, Mosby\_32, Lilac\_35, Tomaszewski\_32, Barbarian\_32, Sotrice96\_33, Amao\_33, Eureka\_33, Czyszczon1\_34, RiverMonster\_33, BigBubba\_34, AmericanBeauty\_35, Terminus\_33, Goldilocks\_34, Bench\_35, Murphy\_34, Command613\_34, Gator\_31, CrystalP\_33, Phrux\_33, Mindy\_33, Elite2014\_32, Misfit\_33, Goku\_33, ChosenOne\_33, Bruin\_33, ABCat\_32, Wiggin\_36, Xandras\_35, Willez\_32, DrDrey\_34, Paperbeatsrock\_35, Holt\_34, Policronamos\_34, Phaja\_33, Marshmallow\_33, TBrady12\_35, ShamWow\_33, Cookies\_33, Balomoji\_32, Porky\_33, DoctorDiddles\_33, Filch\_34, Henry\_34, Teaspoon\_34, Pumpkin\_35,

Buck\_32, Highbury\_34, xkcd\_34, Pharsalus\_34, Lilizi\_35, Phaux\_32, OrionPax\_34, Toto\_33, Murica\_32, Inca\_32

- Track 88 : MISSy\_32
- Track 89 : NelitzaMV\_33, Daikon\_32
- Track 90 : Squirty\_27
- Track 91 : Jubie\_27, Bellis\_27, Lumos\_27, Snenia\_27, Finnry\_27, Clautastrophe\_27, Nicholas\_27, Moostard\_27, Samty\_27, Kingsolomon\_27, MsGreen\_27, Jobypre\_27
- Track 92 : MiniLon\_27, MiniMac\_27, Lolly9\_27
- Track 93 : DuncansLeg\_27, Ellson\_27, KirDoubleO7\_25, LiyuLake\_27, BourbonZero\_26
- Track 94 : Krypton555\_27, Whirlwind\_28
- Track 95 : Hanako\_26, Nenae\_26, PhancyPhin\_26, ShrimpFriedEgg\_26, BabeRuth\_26, Redi\_26, Purgamenstris\_26
- Track 96 : Carcharodon\_29, Silvy\_29, Magsby\_29, Schnauzer\_29, Xerxes\_29, Duplicity\_29, Journey\_29, Charlie\_29, Bosection6\_29, Phloss\_26, Tapioca\_29, Melville\_29, Gex\_29, Aggie\_29, Chewbacca\_29, Silvafighter\_29, Parmesanjohn\_29, Smurph\_29, Pipsqueaks\_29, Scitech\_26, Xeno\_28
- Track 97 : SkinnyPete\_26
- Track 98 : Snekmaggedon\_26, Andies\_26, MichelleMyBell\_27, Rebel\_26, Shweta\_26, SpongeBob\_26, Jamie19\_26
- Track 99 : Philonius\_29
- Track 100 : Raymond7\_26
- Track 101 : Panchino\_26
- Track 102 : Fulbright\_28
- Track 103 : Willsammy\_27
- Track 104 : Tortellini\_27
- Track 105 : Purky\_27
- Track 106 : Mendokysei\_27
- Track 107 : ZenTime222\_28, Ibrahim\_28, RonRayGun\_28
- Track 108 : Nairb\_28, Bernal13\_28, Whitty\_28

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

The start number called the most often in the published annotations is 27, it was called in 502 of the 511 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_10, 244\_35, ABCat\_32, AN3\_10, AN9\_13, ANI8\_13, AbbyPaige\_12, AbbysRanger\_9, Abdiel\_9, Achebe\_9, Adnama\_36, Adzzy\_12, Agape74\_12, Aggie\_29, Albee\_9, Alberto7\_10, Aliter\_12, Alma\_12, Amao\_33, AmericanBeauty\_35, Andies\_26, Aneem\_11, Annyong\_9, Anthony\_10, Argent26\_35, Arissanae\_10, Artemis2UCLA\_14, Arturo\_8, Asriel\_32, AvatarAhPeg\_9, Avle17\_9, BABullseye\_14, BabeRuth\_26, BaboJay\_32, Baby16\_9, BabyBack\_12, Bachome\_11, Backyardigan\_9, BadStone\_32, Badger\_9, Baehexic\_11, Balomoji\_32, BangNhom\_8, Barbarian\_32, Bartimeaus\_9, Bask21\_33, Beemo\_12, Bellis\_27, BellusTerra\_9, Bench\_35, BengiVuitton\_11, Benvolio\_10, Bernal13\_28, BiancaTri92\_12, BigBubba\_34, BilboSwaggins\_33, Blackmoor\_9, Blinn1\_14, Blue7\_14, BobSwaget\_13, BogosyJay\_12, Bombshell\_9, Bosection6\_29, BourbonZero\_26, Bowtie\_11, Bradman\_9, Broseidon\_9, Bruin\_33, Bruiser\_9,

BubbleTrouble\_9, Buck\_32, Bud\_11, BugsBunny\_31, Buggy\_12, Bumblebee11\_9, Burger\_8, C3\_08, CRB1\_10, Cactus\_34, Caelakin\_9, Camperdownii\_8, Candra\_14, Caraxes\_10, Carcharodon\_29, Catalina\_12, Centaur\_12, CentreCat\_9, Cerulean\_9, ChampagnePapi\_9, Chaph\_9, Chargerpower\_11, Charlie\_29, Charm\_11, Chartreuse\_14, Che12\_12, Chewbacca\_29, ChipMunk\_12, ChosenOne\_33, ChotaBhai\_33, Cici\_9, Cindaradix\_8, Cintron\_9, Citius\_9, Cjw1\_33, Clarenza\_9, Clautastrophe\_27, CloudWang3\_14, Cocoaberry\_9, Command613\_34, Commander\_9, Connomayer\_9, Conquerage\_12, Contagion\_32, Cookiedough\_14, Cookies\_33, Crucio\_10, CrystalP\_33, Czyszczon1\_34, D29\_11, D32\_13, DBQu4n\_13, DaVinci\_14, Daikon\_32, Darrell\_13, Datway\_9, Deano\_9, Deloris\_11, Dhanush\_9, Dignity\_12, DirtyDunning\_9, DoctorDiddles\_33, Dorothea\_14, DrDrey\_34, Drake55\_12, DreamTeam1\_11, Druantia\_9, Dumbo\_33, DuncansLeg\_27, Duplicity\_29, Duplo\_13, Dusk\_32, Eagle\_8, Eapen\_9, Easy2Say\_35, Ebony\_11, Echid\_10, EdogawaKiddo\_10, Eidsmoe\_12, Elephantoon\_12, Elite2014\_32, Ellson\_27, Elph10\_34, Emmina\_34, EmyBug\_12, Equemioh13\_12, EricB\_14, Eris\_9, Eros\_9, Et2Brutus\_10, Eureka\_33, Eurydice\_9, ExplosioNervosa\_12, Fayely\_12, Fibonacci\_11, Filch\_34, Finnry\_27, FireRed\_33, FiringLine\_10, First\_0010, Flare16\_10, Flaverint\_11, Florean\_9, Flux\_9, Flypotenuse\_31, Fulbright\_28, Funston\_9, Gadost\_9, Gage\_35, Gail\_10, Garak\_15, Gator\_31, Gemini\_36, Georgie2\_11, Gex\_29, Gilberta\_11, Gladiator\_14, Glexan\_31, Goku\_33, GoldenSpark\_35, Goldilocks\_34, GooberAzure\_35, GreedyLawyer\_14, Gruunaga\_14, HamSlice\_8, Hammer\_14, HanKaySha\_34, Hanako\_26, Hanray\_11, Happiness\_9, Harella\_32, HarryHoudini\_12, Helmet\_15, Henry\_34, Hexamo\_14, Highbury\_34, Holes\_11, Holli\_9, Holt\_34, Hoonter\_35, Hoot\_14, Hopey\_35, HortumSL17\_12, Houdini22\_9, HuffyPuff\_32, Hutc2\_11, ICleared\_9, IHOP\_33, Ibrahim\_28, Icee\_32, Iceman\_9, Inca\_32, Indra\_14, Insomnia\_11, Iracema64\_9, Isiphiwo\_14, Jaan\_13, Jabith\_11, Jamie19\_26, Jaykayelowell\_9, JeTaimie\_35, Jeeves\_10, Jeffabunny\_14, Jerm\_12, JetBlade\_9, JewelBug\_14, Jiawan\_11, Jobypre\_27, JoongJeon\_9, Jordennis\_14, Joselito\_11, JoshKayV\_12, Journey13\_8, Journey\_29, Jsquared\_9, Jubie\_27, KFPoly\_9, Kampy\_9, Kanye\_35, Katalie136\_9, Kazan\_14, Kerberos\_13, Keziacharles14\_10, Kimchi\_35, KingCyrus\_12, Kingmustik0402\_9, Kingsolomon\_27, Kinmap\_9, Kipper29\_14, KirDoubleO7\_25, Koduck\_10, Koko\_14, Koreni\_8, Kostya\_34, Kratark\_9, Kremtemulon\_9, Krypton555\_27, Kyee\_9, L5\_11, LHTSCC\_9, LadyBird\_10, LappelDuVide\_9, Larenn\_11, Lemur\_9, LeoAvram\_9, Leogania\_12, Leviathan\_12, LiITurb\_12, Lilac\_35, Lilbunny\_14, Lilizi\_35, Lilleskat\_10, Lilpickle\_32, LittleB\_9, LittleGuy\_9, LiyuLake\_27, LochMonster\_9, Lokk\_13, Lolly9\_27, LoneWolf\_12, Lorenzo\_9, Luchador\_10, Lucivia\_11, Lumos\_27, Lunsford\_10, MISSy\_32, MPhalcon\_32, MaCh\_11, Mabel\_11, MadamMonkfish\_33, Magsby\_29, MajorMajor\_9, Malec\_11, Maminiaina\_12, Manda\_34, Marshmallow\_33, Maverick\_9, Maxo\_9, Maxxinista\_34, Mazhar510\_9, McFly\_14, Medusa\_9, MeeZee\_9, Melville\_29, Melvin\_9, Mendokyse\_27, MichelleMyBell\_27, MiculUcigas\_10, Miko\_13, Millski\_9, Mindy\_33, MiniLon\_27, MiniMac\_27, Miniwave\_33, Miramae\_9, Misfit\_33, MissWhite\_10, Moldemort\_34, Moostard\_27, Morpher26\_9, Morrow\_9, Mosby\_32, MsGreen\_27, Mulciber\_11, Munch\_11, Mundrea\_9, Murica\_32, Murphy\_34, MyraDee\_8, Myrale\_33, Myxus\_12, NaSiaTalie\_10, Nairb\_28, Naji\_13, Nala\_33, Nebs\_9, Neeharika16\_14, NelitzaMV\_33, Nemo27\_9, Nenae\_26, Newrala\_14, Nicholas\_27, Nimrod\_33, NoSleep\_34, Noelle\_9, NorthStar\_9, NotAPhaseMom\_9, Nyxis\_9, OKaNui\_9, Obama12\_9, Ohfah\_9, Onglai\_11, Orange\_11, OrionPax\_34, PP\_19, PackMan\_12, Palestino\_9, Palpatine\_33, Paperbeatsrock\_35, Parmesanjohn\_29, Pat3\_32, Peaches\_9, Perplexer\_9, PeterPeter\_9, Petersenfast\_10, PetiteSangsue\_9, Petra64142\_35, Ph8s\_12, Phacado\_9, Phaded\_13, Phaeder\_12, Phaja\_33, PhancyPhin\_26, Pharsalus\_34, PhatBacter\_33, Phaux\_32, Phelipe\_9,



Phighter1804\_9, Philonius\_29, Phlei\_7, Phloss\_26, Phonnegut\_12, Phontbonne\_9, Phrux\_33, Pioneer\_12, Pipcraft\_9, Pipsqueaks\_29, Piro94\_11, Pmask\_14, Policronamos\_34, Polymorphads\_9, Pomar16\_13, Porky\_33, Power\_10, Priamo\_14, Priya\_12, Pumbaa\_9, Pumpkin\_35, Purgamenstris\_26, Qobbit\_12, Quallification\_34, QueenBeesly\_10, Quokka\_8, Rachaly\_13, Rakim\_34, Raymond7\_26, Rebel\_26, Redi\_26, Relief\_9, Rifter\_14, Rimmer\_32, RiverMonster\_33, Roksolana\_14, Romney\_9, RonRayGun\_28, Roosevelt\_9, Rosa24\_8, Ruin\_9, RyeScarlet\_13, Sabertooth\_9, Sachima\_10, Saints25\_34, Salz\_11, Samty\_27, Sassay\_32, Scamp\_9, Scherzo\_12, Schnauzer\_29, Scitech\_26, SemperFi\_12, Serenity\_9, Shaka\_9, Sham4\_11, ShamWow\_33, SheaKeira\_11, SheldonCooper\_9, ShereKhan\_35, ShrimpFriedEgg\_26, Shweta\_26, Shygu2\_9, Silvafighter\_29, Silvy\_29, Simpliphy\_34, SirDuracell\_32, SkinnyPete\_26, Skipitt\_9, Smeagan\_12, SmellyB\_14, Smurph\_29, SnapTap\_10, Snape\_11, Snekmaggon\_26, Snenia\_27, SophKB\_33, SororFago\_10, Sotrice96\_33, Sparxx\_9, Spino\_9, SpongeBob\_26, Spouty\_12, Stank\_36, StarStuff\_13, Stark\_34, StellaBean\_33, Stink\_9, StolenFromERC\_35, Sunhee\_9, SuperAwesome\_14, SuperCallie99\_14, Superchunk\_10, SweetiePie\_10, SwirlSquare\_13, TBrady12\_35, Tapioca\_29, Taquarus\_9, Tarkin\_35, TarsusIV\_10, TeardropMSU\_32, Teaspoon\_34, Terminus\_33, Thanksgivukkah\_9, Thresher\_34, Timothy\_11, TinaFeyge\_9, TinyTimmy\_11, Tinybot\_8, TipsytheTRex\_9, TiroTheta9\_9, Toaka\_10, Tomaszewski\_32, Tomathan\_13, ToneTone\_13, Tortellini\_27, Toto\_33, Traaww1\_31, Travvers\_13, TroyPia\_9, Tubs\_12, Tucker\_14, Tuco\_34, Turbido\_12, TygerBlood\_9, Ugenie5\_9, Ukulele\_33, Ulysses\_8, Updawg\_12, VA6\_10, VC3\_13, Vanisoa\_10, VohminGhazi\_14, Wander\_9, Whabigail7\_12, Whirlwind\_28, Whitty\_28, WideWale\_12, Wiggin\_36, Wiks\_14, Wilbur\_9, Wile\_9, Willez\_32, Wizard007\_9, WunderPhul\_14, Xandras\_35, Xena\_9, Xeno\_28, Xerxes\_29, XianYue\_10, YassJohnny\_34, Yecey3\_11, YoSam321\_9, Yokurt\_14, Youngblood\_33, Zaka\_14, ZenTime222\_28, Zulu\_14, xkcd\_34,

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

- Odin\_10, Panchino\_26, Purky\_27, Squirty\_27, Willsammy\_27,

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

- Bactobuster\_11, GaugeLDP\_12, Landor\_11, Pukovnik\_12,

### Summary by start number:

Start 25:

- Found in 5 of 554 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 4 of 511
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Panchino\_26 (N), Purky\_27 (P6), Squirty\_27 (F3), Willsammy\_27 (P1),

Start 26:

- Found in 5 of 554 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 5 of 511
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bactobuster\_11 (A2), GaugeLDP\_12 (A2), Landor\_11 (A2), Odin\_10 (A2), Pukovnik\_12 (A2),

Start 27:

- Found in 550 of 554 ( 99.3% ) of genes in pham

- Manual Annotations of this start: 502 of 511
- Called 99.1% of time when present
- Phage (with cluster) where this start called: 20ES\_10 (A2), 244\_35 (E), ABCat\_32 (E), AN3\_10 (A2), AN9\_13 (A2), ANI8\_13 (A2), AbbyPaige\_12 (A2), AbbysRanger\_9 (A4), Abdiel\_9 (A4), Achebe\_9 (A4), Adnama\_36 (E), Adzzy\_12 (A2), Agape74\_12 (A2), Aggie\_29 (N), Albee\_9 (A4), Alberto7\_10 (A4), Aliter\_12 (A9), Alma\_12 (A9), Amao\_33 (E), AmericanBeauty\_35 (E), Andies\_26 (N), Aneem\_11 (A11), Annyong\_9 (A4), Anthony\_10 (A20), Argent26\_35 (E), Arissanee\_10 (A9), Artemis2UCLA\_14 (A6), Arturo\_8 (A4), Asriel\_32 (E), AvatarAhPeg\_9 (A4), Avle17\_9 (A4), BABullseye\_14 (A6), BabeRuth\_26 (N), BaboJay\_32 (E), Baby16\_9 (A4), BabyBack\_12 (A2), Bachome\_11 (A11), Backyardigan\_9 (A4), BadStone\_32 (E), Badger\_9 (A4), Baehexic\_11 (A2), Balomoji\_32 (E), BangNhom\_8 (A4), Barbarian\_32 (E), Bartimeaus\_9 (A4), Bask21\_33 (E), Beemo\_12 (A9), Bellis\_27 (L3), BellusTerra\_9 (A4), Bench\_35 (E), BengiVuitton\_11 (A2), Benvolio\_10 (A2), Bernal13\_28 (T), BiancaTri92\_12 (A2), BigBubba\_34 (E), BilboSwaggins\_33 (E), Blackmoor\_9 (A4), Blinn1\_14 (A6), Blue7\_14 (A6), BobSwaget\_13 (A2), BogosyJay\_12 (A9), Bombshell\_9 (A4), Bosection6\_29 (N), BourbonZero\_26 (L3), Bowtie\_11 (A11), Bradman\_9 (A2), Broseidon\_9 (A4), Bruin\_33 (E), Bruiser\_9 (A4), BubbleTrouble\_9 (A4), Buck\_32 (E), Bud\_11 (A11), BugsBunny\_31 (E), Buggy\_12 (A2), Bumblebee11\_9 (A4), Burger\_8 (A4), C3\_08 (A2), CRB1\_10 (A2), Cactus\_34 (E), Caelakin\_9 (A4), Camperdownii\_8 (A4), Candra\_14 (A6), Caraxes\_10 (A2), Carcharodon\_29 (N), Catalina\_12 (A9), Centaur\_12 (A2), CentreCat\_9 (A4), Cerulean\_9 (A4), ChampagnePapi\_9 (A4), Chaph\_9 (A4), Chargerpower\_11 (A), Charlie\_29 (N), Charm\_11 (A9), Chartreuse\_14 (A6), Che12\_12 (A2), Chewbacca\_29 (N), ChipMunk\_12 (A2), ChosenOne\_33 (E), ChotaBhai\_33 (E), Cici\_9 (A4), Cindaradix\_8 (A4), Cintron\_9 (A4), Citius\_9 (A4), Cjw1\_33 (E), Clarenza\_9 (A4), Clautastrophe\_27 (L3), CloudWang3\_14 (A6), Cocoaberry\_9 (A4), Command613\_34 (E), Commander\_9 (A4), Connomayer\_9 (A4), Conquerage\_12 (A9), Contagion\_32 (E), Cookiedough\_14 (A6), Cookies\_33 (E), Crucio\_10 (A2), CrystalP\_33 (E), Czyszczonek\_34 (E), D29\_11 (A2), D32\_13 (A2), DBQu4n\_13 (A2), DaVinci\_14 (A6), Daikon\_32 (E), Darrell\_13 (A9), Datway\_9 (A4), Deano\_9 (A4), Deloris\_11 (A2), Dhanush\_9 (A4), Dignity\_12 (A2), DirtyDunning\_9 (A4), DoctorDiddles\_33 (E), Dorothea\_14 (A6), DrDrey\_34 (E), Drake55\_12 (A2), DreamTeam1\_11 (A9), Druantia\_9 (A4), Dumbo\_33 (E), DuncansLeg\_27 (L3), Duplicity\_29 (N), Duplo\_13 (A2), Dusk\_32 (E), Eagle\_8 (A4), Eapen\_9 (A4), Easy2Say\_35 (E), Ebony\_11 (A11), Echild\_10 (A2), EdogawaKiddo\_10 (A9), Eidsmoe\_12 (A9), Elephantoon\_12 (A9), Elite2014\_32 (E), Ellson\_27 (L3), Elph10\_34 (E), Emmina\_34 (E), EmyBug\_12 (A9), Equemioh13\_12 (A2), EricB\_14 (A6), Eris\_9 (A4), Eros\_9 (A4), Et2Brutus\_10 (A11), Eureka\_33 (E), Eurydice\_9 (A4), ExplosioNervosa\_12 (A9), Fayely\_12 (A9), Fibonacci\_11 (A11), Filch\_34 (E), Finrly\_27 (L3), FireRed\_33 (E), FiringLine\_10 (A2), First\_0010 (A2), Flare16\_10 (A2), Flaverint\_11 (A11), Florean\_9 (A4), Flux\_9 (A4), Flypotenuse\_31 (E), Fulbright\_28 (N), Funston\_9 (A4), Gadost\_9 (A4), Gage\_35 (E), Gail\_10 (A14), Garak\_15 (A6), Gator\_31 (E), Gemini\_36 (E), Georgie2\_11 (A2), Gex\_29 (N), Gilberta\_11 (A11), Gladiator\_14 (A6), Glexan\_31 (E), Goku\_33 (E), GoldenSpark\_35 (E), Goldilocks\_34 (E), GooberAzure\_35 (E), GreedyLawyer\_14 (A6), Gruunaga\_14 (A6), HamSlice\_8 (A4), Hammer\_14 (A6), HanKaySha\_34 (E), Hanako\_26 (N), Hanray\_11 (A9), Happiness\_9 (A4), Harella\_32 (E), HarryHoudini\_12 (A2), Helmet\_15 (A6), Henry\_34 (E), Hexamo\_14 (A6), Highbury\_34 (E), Horex\_11 (A9), Holli\_9 (A4), Holt\_34 (E), Hoonter\_35 (E), Hoot\_14 (A6), Hopey\_35 (E), HortumSL17\_12 (A9), Houdini22\_9 (A4), HufflyPuff\_32 (E), Hutc2\_11 (A11), ICleared\_9 (A4), IHOP\_33 (E), Ibrahim\_28 (T), Icee\_32 (E), Iceman\_9 (A4), Inca\_32 (E), Indra\_14 (A6), Insomnia\_11 (A11), Iracema64\_9 (A4), Isiphiwo\_14 (A6), Jaan\_13

(A2), Jabith\_11 (A11), Jamie19\_26 (N), Jaykayelowell\_9 (A4), JeTaime\_35 (E), Jeeves\_10 (A14), Jeffabunny\_14 (A6), Jerm\_12 (A2), JetBlade\_9 (A4), JewelBug\_14 (A6), Jiawan\_11 (A9), Jobypre\_27 (L3), JoongJeon\_9 (A4), Jordennis\_14 (A6), Joselito\_11 (A11), JoshKayV\_12 (A2), Journey13\_8 (A2), Journey\_29 (N), Jsquared\_9 (A2), Jubie\_27 (L3), KFPoly\_9 (A4), Kamy\_9 (A4), Kanye\_35 (E), Katalie136\_9 (A4), Kazan\_14 (A6), Kerberos\_13 (A2), Keziacharles14\_10 (A9), Kimchi\_35 (E), KingCyrus\_12 (A2), Kingmustik0402\_9 (A4), Kingsolomon\_27 (L3), Kinmap\_9 (A21), Kipper29\_14 (A6), KirDoubleO7\_25 (L3), Koduck\_10 (A2), Koko\_14 (A6), Koreni\_8 (A4), Kostya\_34 (E), Kratak\_9 (A4), Kremtemulon\_9 (A4), Krypton555\_27 (L3), Kyee\_9 (A4), L5\_11 (A2), LHTSCC\_9 (A4), LadyBird\_10 (A2), LappelDuVide\_9 (A4), Larenn\_11 (A2), Lemur\_9 (A4), LeoAvram\_9 (A4), Leogania\_12 (A2), Leviathan\_12 (A2), LilTurb\_12 (A2), Lilac\_35 (E), Lilbunny\_14 (A6), Lilizi\_35 (E), Lilleskat\_10 (A9), Lilpickle\_32 (E), LittleB\_9 (A4), LittleGuy\_9 (A4), LiyuLake\_27 (L3), LochMonster\_9 (A4), Lolk\_13 (A2), Lolly9\_27 (L3), LoneWolf\_12 (A9), Lorenzo\_9 (A4), Luchador\_10 (A14), Lucivia\_11 (A11), Lumos\_27 (L3), Lunsford\_10 (A4), MISSy\_32 (E), MPhalcon\_32 (E), MaCh\_11 (A11), Mabel\_11 (A11), MadamMonkfish\_33 (E), Magsby\_29 (N), MajorMajor\_9 (A2), Malec\_11 (A2), Maminiaina\_12 (A9), Manda\_34 (E), Marshmallow\_33 (E), Maverick\_9 (A4), Maxo\_9 (A4), Maxxinsta\_34 (E), Mazhar510\_9 (A4), McFly\_14 (A6), Medusa\_9 (A4), MeeZee\_9 (A4), Melville\_29 (N), Melvin\_9 (A4), Mendokysei\_27 (T), MichelleMyBell\_27 (N), MiculUcigas\_10 (A2), Miko\_13 (A2), Millski\_9 (A4), Mindy\_33 (E), MiniLon\_27 (L3), MiniMac\_27 (L3), Miniwave\_33 (E), Miramae\_9 (A4), Misfit\_33 (E), MissWhite\_10 (A2), Moldemort\_34 (E), Moostard\_27 (L3), Morpher26\_9 (A4), Morrow\_9 (A4), Mosby\_32 (E), MsGreen\_27 (L3), Mulciber\_11 (A11), Munch\_11 (A11), Mundrea\_9 (A4), Murica\_32 (E), Murphy\_34 (E), MyraDee\_8 (A18), Myrale\_33 (E), Myxus\_12 (A9), NaSiaTalie\_10 (A2), Nairb\_28 (T), Naji\_13 (A2), Nala\_33 (E), Nebs\_9 (A4), Neeharika16\_14 (A6), NelitzaMV\_33 (E), Nemo27\_9 (A4), Nenae\_26 (N), Newrala\_14 (A6), Nicholas\_27 (L3), Nimrod\_33 (E), NoSleep\_34 (E), Noelle\_9 (A4), NorthStar\_9 (A4), NotAPhaseMom\_9 (A4), Nyxis\_9 (A4), OKaNui\_9 (A4), Obama12\_9 (A4), Ohfah\_9 (A4), Onglai\_11 (A9), Orange\_11 (A11), OrionPax\_34 (E), PP\_19 (A7), PackMan\_12 (A9), Palestino\_9 (A4), Palpatine\_33 (E), Paperbeatsrock\_35 (E), Parmesanjohn\_29 (N), Pat3\_32 (E), Peaches\_9 (A4), Perplexer\_9 (A4), PeterPeter\_9 (A4), Petersenfast\_10 (A11), PetiteSangsue\_9 (A4), Petra64142\_35 (E), Ph8s\_12 (A2), Phacado\_9 (A4), Phaded\_13 (A2), Phaeder\_12 (A9), Phaja\_33 (E), PhancyPhin\_26 (N), Pharsalus\_34 (E), PhatBacter\_33 (E), Phaux\_32 (E), Phelipe\_9 (A4), Phighter1804\_9 (A4), Philonius\_29 (N), Phlei\_7 (A13), Phloss\_26 (N), Phonnegut\_12 (A9), Phontbonne\_9 (A4), Phrux\_33 (E), Pioneer\_12 (A9), Pipcraft\_9 (A4), Pipsqueaks\_29 (N), Piro94\_11 (A2), Pmask\_14 (A6), Policronamos\_34 (E), Polymorphads\_9 (A4), Pomar16\_13 (A2), Porky\_33 (E), Power\_10 (A2), Priamo\_14 (A6), Priya\_12 (A9), Pumbaa\_9 (A4), Pumpkin\_35 (E), Purgamenstris\_26 (N), Qobbit\_12 (A9), Quallification\_34 (E), QueenBeesly\_10 (A2), Quokka\_8 (A2), Rachaly\_13 (A2), Rakim\_34 (E), Raymond7\_26 (N), Rebel\_26 (N), Redi\_26 (N), Relief\_9 (A4), Rifter\_14 (A6), Rimmer\_32 (E), RiverMonster\_33 (E), Roksolana\_14 (A6), Romney\_9 (A4), RonRayGun\_28 (T), Roosevelt\_9 (A4), Rosa24\_8 (A4), Ruin\_9 (A4), RyeScarlet\_13 (A9), Sabertooth\_9 (A4), Sachima\_10 (A9), Saints25\_34 (E), Salz\_11 (A11), Samty\_27 (L3), Sassay\_32 (E), Scamp\_9 (A4), Scherzo\_12 (A9), Schnauzer\_29 (N), Scitech\_26 (N), SemperFi\_12 (A2), Serenity\_9 (A2), Shaka\_9 (A4), Sham4\_11 (A11), ShamWow\_33 (E), SheaKeira\_11 (A9), SheldonCooper\_9 (A4), ShereKhan\_35 (E), ShrimpFriedEgg\_26 (N), Shweta\_26 (N), Shygu2\_9 (A4), Silvafighter\_29 (N), Silvy\_29 (N), Simpliphy\_34 (E), SirDuracell\_32 (E), SkinnyPete\_26 (N), Skipitt\_9 (A4), Smeagan\_12 (A2), SmellyB\_14 (A6), Smurph\_29 (N), SnapTap\_10 (A2), Snape\_11 (A11), Snekmaggon\_26 (N), Snenia\_27 (L3), SophKB\_33 (E), SororFago\_10 (A14), Sotrice96\_33 (E), Sparxx\_9

(A4), Spino\_9 (A4), SpongeBob\_26 (N), Spouty\_12 (A9), Stank\_36 (E), StarStuff\_13 (A2), Stark\_34 (E), StellaBean\_33 (E), Stink\_9 (A4), StolenFromERC\_35 (E), Sunhee\_9 (A14), SuperAwesome\_14 (A6), SuperCallie99\_14 (A6), Superchunk\_10 (A2), SweetiePie\_10 (A2), SwirlSquare\_13 (A2), TBrady12\_35 (E), Tapioca\_29 (N), Taquarus\_9 (A4), Tarkin\_35 (E), TarsusIV\_10 (A2), TeardropMSU\_32 (E), Teaspoon\_34 (E), Terminus\_33 (E), Thanksgivukkah\_9 (A4), Thresher\_34 (E), Timothy\_11 (A11), TinaFeyge\_9 (A4), TinyTimmy\_11 (A11), Tinybot\_8 (A4), TipsytheTRex\_9 (A2), TiroTheta9\_9 (A4), Toaka\_10 (A9), Tomaszewski\_32 (E), Tomathan\_13 (A2), ToneTone\_13 (A6), Tortellini\_27 (P2), Toto\_33 (E), Traaww1\_31 (E), Travvers\_13 (A2), TroyPia\_9 (A4), Tubs\_12 (A9), Tucker\_14 (A6), Tuco\_34 (E), Turbido\_12 (A2), TygerBlood\_9 (A4), Ugenie5\_9 (A9), Ukulele\_33 (E), Ulysses\_8 (A4), Updawg\_12 (A2), VA6\_10 (A2), VC3\_13 (A2), Vanisoa\_10 (A9), VohminGhazi\_14 (A6), Wander\_9 (A4), Whabigail7\_12 (A2), Whirlwind\_28 (L3), Whitty\_28 (T), WideWale\_12 (A2), Wiggins\_36 (E), Wiks\_14 (A6), Wilbur\_9 (A4), Wile\_9 (A4), Willez\_32 (E), Wizard007\_9 (A4), WunderPhul\_14 (A6), Xandras\_35 (E), Xena\_9 (A4), Xeno\_28 (N), Xerxes\_29 (N), XianYue\_10 (A2), YassJohnny\_34 (E), Yecey3\_11 (A9), YoSam321\_9 (A4), Yokurt\_14 (A6), Youngblood\_33 (E), Zaka\_14 (A6), ZenTime222\_28 (T), Zulu\_14 (A6), xkcd\_34 (E),

### Summary by clusters:

There are 20 clusters represented in this pham: A20, A14, P1, A11, A13, A21, L3, F3, P2, A18, N, A2, A, A4, A7, A6, A9, E, P6, T,

Info for manual annotations of cluster A:

- Start number 27 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A11:

- Start number 27 was manually annotated 24 times for cluster A11.

Info for manual annotations of cluster A14:

- Start number 27 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A18:

- Start number 27 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A2:

- Start number 26 was manually annotated 5 times for cluster A2.
- Start number 27 was manually annotated 75 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 27 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A4:

- Start number 27 was manually annotated 136 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 27 was manually annotated 42 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 27 was manually annotated 1 time for cluster A7.

Info for manual annotations of cluster A9:

- Start number 27 was manually annotated 34 times for cluster A9.

Info for manual annotations of cluster E:

- Start number 27 was manually annotated 123 times for cluster E.

Info for manual annotations of cluster F3:

- Start number 25 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster L3:

- Start number 27 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster N:

- Start number 25 was manually annotated 1 time for cluster N.
- Start number 27 was manually annotated 36 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 25 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P2:

- Start number 27 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P6:

- Start number 25 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster T:

- Start number 27 was manually annotated 7 times for cluster T.

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

Gene: 20ES\_10 Start: 5985, Stop: 6446, Start Num: 27

Candidate Starts for 20ES\_10:

(19, 5817), (Start: 27 @5985 has 502 MA's), (35, 6054), (50, 6162), (57, 6213), (65, 6285), (66, 6288), (71, 6309),

Gene: 244\_35 Start: 31427, Stop: 31810, Start Num: 27

Candidate Starts for 244\_35:

(Start: 27 @31427 has 502 MA's), (37, 31505), (40, 31532), (48, 31595), (66, 31730), (79, 31769),

Gene: ABCat\_32 Start: 31139, Stop: 31522, Start Num: 27

Candidate Starts for ABCat\_32:

(Start: 27 @31139 has 502 MA's), (37, 31217), (40, 31244), (48, 31307), (66, 31442), (79, 31481),

Gene: AN3\_10 Start: 5970, Stop: 6431, Start Num: 27

Candidate Starts for AN3\_10:

(19, 5799), (Start: 27 @5970 has 502 MA's), (55, 6189), (63, 6252), (68, 6285),

Gene: AN9\_13 Start: 6174, Stop: 6599, Start Num: 27

Candidate Starts for AN9\_13:

(Start: 27 @6174 has 502 MA's), (55, 6393), (61, 6423),

Gene: ANI8\_13 Start: 6174, Stop: 6599, Start Num: 27

Candidate Starts for ANI8\_13:

(Start: 27 @6174 has 502 MA's), (55, 6393), (61, 6423),

Gene: AbbyPaige\_12 Start: 6436, Stop: 6876, Start Num: 27

Candidate Starts for AbbyPaige\_12:

(21, 6349), (Start: 27 @6436 has 502 MA's), (30, 6481), (71, 6760), (76, 6781),

Gene: AbbysRanger\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for AbbysRanger\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (48, 5600), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Abdiel\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Abdiel\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Achebe\_9 Start: 5429, Stop: 5878, Start Num: 27

Candidate Starts for Achebe\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (82, 5801), (91, 5846),

Gene: Adnama\_36 Start: 31654, Stop: 32037, Start Num: 27

Candidate Starts for Adnama\_36:

(Start: 27 @31654 has 502 MA's), (37, 31732), (40, 31759), (48, 31822), (66, 31957), (79, 31996),

Gene: Adzzy\_12 Start: 5846, Stop: 6244, Start Num: 27

Candidate Starts for Adzzy\_12:

(Start: 27 @5846 has 502 MA's), (57, 6086), (60, 6104), (67, 6170), (75, 6188),

Gene: Agape74\_12 Start: 6436, Stop: 6876, Start Num: 27

Candidate Starts for Agape74\_12:

(21, 6349), (Start: 27 @6436 has 502 MA's), (30, 6481), (71, 6760), (76, 6781),

Gene: Aggie\_29 Start: 24340, Stop: 24744, Start Num: 27

Candidate Starts for Aggie\_29:

(Start: 27 @24340 has 502 MA's), (62, 24598), (63, 24628), (72, 24670), (85, 24727),

Gene: Albee\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Albee\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Alberto7\_10 Start: 5725, Stop: 6186, Start Num: 27

Candidate Starts for Alberto7\_10:

(Start: 27 @5725 has 502 MA's), (44, 5857), (50, 5902), (52, 5932), (55, 5947), (59, 5968), (65, 6028), (66, 6031),

Gene: Aliter\_12 Start: 7651, Stop: 8037, Start Num: 27

Candidate Starts for Aliter\_12:

(22, 7576), (Start: 27 @7651 has 502 MA's), (49, 7822), (56, 7882),

Gene: Alma\_12 Start: 7730, Stop: 8116, Start Num: 27  
Candidate Starts for Alma\_12:  
(22, 7655), (Start: 27 @7730 has 502 MA's), (49, 7901), (56, 7961),

Gene: Amao\_33 Start: 30351, Stop: 30734, Start Num: 27  
Candidate Starts for Amao\_33:  
(Start: 27 @30351 has 502 MA's), (37, 30429), (40, 30456), (48, 30519), (66, 30654), (79, 30693),

Gene: AmericanBeauty\_35 Start: 31134, Stop: 31517, Start Num: 27  
Candidate Starts for AmericanBeauty\_35:  
(Start: 27 @31134 has 502 MA's), (37, 31212), (40, 31239), (48, 31302), (66, 31437), (79, 31476),

Gene: Andies\_26 Start: 23507, Stop: 23911, Start Num: 27  
Candidate Starts for Andies\_26:  
(4, 22886), (5, 22889), (7, 22961), (10, 22982), (11, 23075), (12, 23102), (Start: 27 @23507 has 502 MA's), (62, 23765), (63, 23795), (72, 23837), (85, 23894),

Gene: Aneem\_11 Start: 7621, Stop: 8007, Start Num: 27  
Candidate Starts for Aneem\_11:  
(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: Annyong\_9 Start: 5421, Stop: 5882, Start Num: 27  
Candidate Starts for Annyong\_9:  
(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Anthony\_10 Start: 5261, Stop: 5653, Start Num: 27  
Candidate Starts for Anthony\_10:  
(Start: 27 @5261 has 502 MA's), (47, 5414), (57, 5492), (60, 5510), (67, 5576), (88, 5642),

Gene: Argent26\_35 Start: 31137, Stop: 31520, Start Num: 27  
Candidate Starts for Argent26\_35:  
(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Arissanae\_10 Start: 5852, Stop: 6238, Start Num: 27  
Candidate Starts for Arissanae\_10:  
(14, 5561), (22, 5777), (Start: 27 @5852 has 502 MA's), (51, 6053), (56, 6083),

Gene: Artemis2UCLA\_14 Start: 6948, Stop: 7379, Start Num: 27  
Candidate Starts for Artemis2UCLA\_14:  
(Start: 27 @6948 has 502 MA's), (55, 7167), (58, 7179), (59, 7188), (69, 7263),

Gene: Arturo\_8 Start: 5531, Stop: 5992, Start Num: 27  
Candidate Starts for Arturo\_8:  
(Start: 27 @5531 has 502 MA's), (44, 5663), (50, 5708), (52, 5738), (55, 5753), (59, 5774), (65, 5834), (66, 5837),

Gene: Asriel\_32 Start: 30008, Stop: 30391, Start Num: 27  
Candidate Starts for Asriel\_32:  
(Start: 27 @30008 has 502 MA's), (37, 30086), (40, 30113), (48, 30176), (66, 30311), (79, 30350),

Gene: AvatarAhPeg\_9 Start: 5393, Stop: 5845, Start Num: 27

Candidate Starts for AvatarAhPeg\_9:

(Start: 27 @5393 has 502 MA's), (35, 5462), (48, 5564), (50, 5570), (59, 5636), (66, 5699), (84, 5774),

Gene: Avle17\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Avle17\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: BABullseye\_14 Start: 7065, Stop: 7499, Start Num: 27

Candidate Starts for BABullseye\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: BabeRuth\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for BabeRuth\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (48, 23563), (78, 23752),

Gene: BaboJay\_32 Start: 30697, Stop: 31080, Start Num: 27

Candidate Starts for BaboJay\_32:

(Start: 27 @30697 has 502 MA's), (37, 30775), (40, 30802), (48, 30865), (66, 31000), (79, 31039),

Gene: Baby16\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for Baby16\_9:

(Start: 27 @5429 has 502 MA's), (44, 5561), (50, 5606), (52, 5636), (55, 5651), (59, 5672), (65, 5732), (66, 5735),

Gene: BabyBack\_12 Start: 7641, Stop: 8111, Start Num: 27

Candidate Starts for BabyBack\_12:

(17, 7464), (Start: 27 @7641 has 502 MA's), (55, 7860), (58, 7872), (71, 7965),

Gene: Bachome\_11 Start: 7618, Stop: 8004, Start Num: 27

Candidate Starts for Bachome\_11:

(Start: 27 @7618 has 502 MA's), (35, 7687), (61, 7867), (68, 7933),

Gene: Backyardigan\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for Backyardigan\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Bactobuster\_11 Start: 7711, Stop: 8190, Start Num: 26

Candidate Starts for Bactobuster\_11:

(Start: 26 @7711 has 5 MA's), (50, 7888), (55, 7930), (58, 7942), (71, 8035),

Gene: BadStone\_32 Start: 31139, Stop: 31522, Start Num: 27

Candidate Starts for BadStone\_32:

(Start: 27 @31139 has 502 MA's), (37, 31217), (40, 31244), (48, 31307), (66, 31442), (79, 31481),

Gene: Badger\_9 Start: 5430, Stop: 5879, Start Num: 27

Candidate Starts for Badger\_9:

(Start: 27 @5430 has 502 MA's), (35, 5499), (58, 5664), (59, 5673), (64, 5724), (66, 5736), (82, 5802), (91, 5847),

Gene: Baehexic\_11 Start: 6510, Stop: 6947, Start Num: 27

Candidate Starts for Baehexic\_11:



(21, 6414), (Start: 27 @6510 has 502 MA's), (30, 6555), (65, 6810), (71, 6834),

Gene: Balomoji\_32 Start: 30873, Stop: 31256, Start Num: 27

Candidate Starts for Balomoji\_32:

(Start: 27 @30873 has 502 MA's), (37, 30951), (40, 30978), (48, 31041), (66, 31176), (79, 31215),

Gene: BangNhom\_8 Start: 5406, Stop: 5858, Start Num: 27

Candidate Starts for BangNhom\_8:

(21, 5313), (Start: 27 @5406 has 502 MA's), (35, 5475), (48, 5577), (50, 5583), (59, 5649), (66, 5712), (84, 5787),

Gene: Barbarian\_32 Start: 30008, Stop: 30391, Start Num: 27

Candidate Starts for Barbarian\_32:

(Start: 27 @30008 has 502 MA's), (37, 30086), (40, 30113), (48, 30176), (66, 30311), (79, 30350),

Gene: Bartimeaus\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Bartimeaus\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Bask21\_33 Start: 30325, Stop: 30708, Start Num: 27

Candidate Starts for Bask21\_33:

(Start: 27 @30325 has 502 MA's), (37, 30403), (40, 30430), (48, 30493), (66, 30628), (79, 30667),

Gene: Beemo\_12 Start: 7757, Stop: 8143, Start Num: 27

Candidate Starts for Beemo\_12:

(22, 7682), (Start: 27 @7757 has 502 MA's), (49, 7928), (56, 7988),

Gene: Bellis\_27 Start: 26437, Stop: 26853, Start Num: 27

Candidate Starts for Bellis\_27:

(Start: 27 @26437 has 502 MA's), (30, 26482), (32, 26494), (35, 26506), (44, 26569), (57, 26668), (61, 26689), (81, 26794),

Gene: BellusTerra\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for BellusTerra\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Bench\_35 Start: 31007, Stop: 31390, Start Num: 27

Candidate Starts for Bench\_35:

(Start: 27 @31007 has 502 MA's), (37, 31085), (40, 31112), (48, 31175), (66, 31310), (79, 31349),

Gene: BengiVuitton\_11 Start: 6419, Stop: 6868, Start Num: 27

Candidate Starts for BengiVuitton\_11:

(19, 6257), (Start: 27 @6419 has 502 MA's), (55, 6638), (61, 6668), (68, 6734), (76, 6764),

Gene: Benvolio\_10 Start: 6083, Stop: 6544, Start Num: 27

Candidate Starts for Benvolio\_10:

(19, 5912), (Start: 27 @6083 has 502 MA's), (55, 6302), (63, 6365), (68, 6398),

Gene: Bernal13\_28 Start: 25159, Stop: 25599, Start Num: 27

Candidate Starts for Bernal13\_28:

(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58, 25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: BiancaTri92\_12 Start: 7749, Stop: 8213, Start Num: 27

Candidate Starts for BiancaTri92\_12:

(21, 7656), (Start: 27 @7749 has 502 MA's), (35, 7818), (55, 7971), (57, 7980), (65, 8052), (71, 8076),

Gene: BigBubba\_34 Start: 30910, Stop: 31293, Start Num: 27

Candidate Starts for BigBubba\_34:

(Start: 27 @30910 has 502 MA's), (37, 30988), (40, 31015), (48, 31078), (66, 31213), (79, 31252),

Gene: BilboSwaggins\_33 Start: 31147, Stop: 31530, Start Num: 27

Candidate Starts for BilboSwaggins\_33:

(Start: 27 @31147 has 502 MA's), (37, 31225), (40, 31252), (48, 31315), (66, 31450), (79, 31489),

Gene: Blackmoor\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Blackmoor\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Blinn1\_14 Start: 7098, Stop: 7529, Start Num: 27

Candidate Starts for Blinn1\_14:

(Start: 27 @7098 has 502 MA's), (55, 7317), (58, 7329), (59, 7338), (61, 7347), (69, 7413),

Gene: Blue7\_14 Start: 7039, Stop: 7470, Start Num: 27

Candidate Starts for Blue7\_14:

(Start: 27 @7039 has 502 MA's), (55, 7258), (58, 7270), (59, 7279), (69, 7354),

Gene: BobSwaget\_13 Start: 7689, Stop: 8114, Start Num: 27

Candidate Starts for BobSwaget\_13:

(21, 7596), (Start: 27 @7689 has 502 MA's), (30, 7734), (48, 7860), (55, 7908), (61, 7938),

Gene: BogosyJay\_12 Start: 7514, Stop: 7900, Start Num: 27

Candidate Starts for BogosyJay\_12:

(22, 7439), (Start: 27 @7514 has 502 MA's), (31, 7565), (33, 7574), (48, 7682), (56, 7745), (73, 7844),

Gene: Bombshell\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Bombshell\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Bosection6\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Bosection6\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: BourbonZero\_26 Start: 26394, Stop: 26810, Start Num: 27

Candidate Starts for BourbonZero\_26:

(Start: 27 @26394 has 502 MA's), (30, 26439), (32, 26451), (35, 26463), (61, 26646), (81, 26751),

Gene: Bowtie\_11 Start: 7621, Stop: 8007, Start Num: 27

Candidate Starts for Bowtie\_11:

(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: Bradman\_9 Start: 5207, Stop: 5602, Start Num: 27

Candidate Starts for Bradman\_9:

(Start: 27 @5207 has 502 MA's), (44, 5339), (55, 5426), (61, 5456), (83, 5573),

Gene: Broseidon\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Broseidon\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Bruin\_33 Start: 31167, Stop: 31550, Start Num: 27

Candidate Starts for Bruin\_33:

(Start: 27 @31167 has 502 MA's), (37, 31245), (40, 31272), (48, 31335), (66, 31470), (79, 31509),

Gene: Bruiser\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Bruiser\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: BubbleTrouble\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for BubbleTrouble\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Buck\_32 Start: 31103, Stop: 31486, Start Num: 27

Candidate Starts for Buck\_32:

(Start: 27 @31103 has 502 MA's), (37, 31181), (40, 31208), (48, 31271), (66, 31406), (79, 31445),

Gene: Bud\_11 Start: 7627, Stop: 8013, Start Num: 27

Candidate Starts for Bud\_11:

(Start: 27 @7627 has 502 MA's), (35, 7696), (61, 7876), (68, 7942),

Gene: BugsBunny\_31 Start: 30736, Stop: 31119, Start Num: 27

Candidate Starts for BugsBunny\_31:

(Start: 27 @30736 has 502 MA's), (37, 30814), (40, 30841), (48, 30904), (66, 31039), (79, 31078),

Gene: Buggy\_12 Start: 6435, Stop: 6875, Start Num: 27

Candidate Starts for Buggy\_12:

(21, 6348), (Start: 27 @6435 has 502 MA's), (30, 6480), (71, 6759), (76, 6780),

Gene: Bumblebee11\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for Bumblebee11\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (48, 5600), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Burger\_8 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Burger\_8:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: C3\_08 Start: 6174, Stop: 6599, Start Num: 27

Candidate Starts for C3\_08:

(Start: 27 @6174 has 502 MA's), (55, 6393), (61, 6423),

Gene: CRB1\_10 Start: 5971, Stop: 6411, Start Num: 27

Candidate Starts for CRB1\_10:

(Start: 27 @5971 has 502 MA's), (30, 6016), (45, 6109), (50, 6148), (65, 6271), (71, 6295),

Gene: Cactus\_34 Start: 30358, Stop: 30741, Start Num: 27

Candidate Starts for Cactus\_34:

(Start: 27 @30358 has 502 MA's), (37, 30436), (40, 30463), (48, 30526), (66, 30661), (79, 30700),

Gene: Caelakin\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Caelakin\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Camperdownii\_8 Start: 5046, Stop: 5498, Start Num: 27

Candidate Starts for Camperdownii\_8:

(21, 4953), (Start: 27 @5046 has 502 MA's), (35, 5115), (48, 5217), (50, 5223), (59, 5289), (66, 5352), (84, 5427),

Gene: Candra\_14 Start: 7098, Stop: 7529, Start Num: 27

Candidate Starts for Candra\_14:

(Start: 27 @7098 has 502 MA's), (55, 7317), (58, 7329), (59, 7338), (69, 7413),

Gene: Caraxes\_10 Start: 5746, Stop: 6141, Start Num: 27

Candidate Starts for Caraxes\_10:

(Start: 27 @5746 has 502 MA's), (57, 5986), (60, 6004), (67, 6070), (75, 6088),

Gene: Carcharodon\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Carcharodon\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Catalina\_12 Start: 7724, Stop: 8110, Start Num: 27

Candidate Starts for Catalina\_12:

(22, 7649), (Start: 27 @7724 has 502 MA's), (49, 7895), (56, 7955),

Gene: Centaur\_12 Start: 6489, Stop: 6926, Start Num: 27

Candidate Starts for Centaur\_12:

(21, 6393), (Start: 27 @6489 has 502 MA's), (30, 6534), (65, 6789), (71, 6813),

Gene: CentreCat\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for CentreCat\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Cerulean\_9 Start: 5407, Stop: 5859, Start Num: 27

Candidate Starts for Cerulean\_9:

(21, 5314), (Start: 27 @5407 has 502 MA's), (35, 5476), (48, 5578), (50, 5584), (59, 5650), (66, 5713), (84, 5788),

Gene: ChampagnePapi\_9 Start: 5406, Stop: 5858, Start Num: 27

Candidate Starts for ChampagnePapi\_9:

(21, 5313), (Start: 27 @5406 has 502 MA's), (35, 5475), (48, 5577), (50, 5583), (59, 5649), (66, 5712), (84, 5787),

Gene: Chaph\_9 Start: 5429, Stop: 5890, Start Num: 27  
Candidate Starts for Chaph\_9:  
(Start: 27 @5429 has 502 MA's), (44, 5561), (50, 5606), (52, 5636), (55, 5651), (59, 5672), (65, 5732),  
(66, 5735),

Gene: Chargerpower\_11 Start: 6184, Stop: 6570, Start Num: 27  
Candidate Starts for Chargerpower\_11:  
(14, 5893), (15, 5938), (20, 6049), (Start: 27 @6184 has 502 MA's), (48, 6352), (62, 6442), (67, 6502),

Gene: Charlie\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Charlie\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Charm\_11 Start: 5913, Stop: 6296, Start Num: 27  
Candidate Starts for Charm\_11:  
(14, 5622), (15, 5667), (20, 5778), (Start: 27 @5913 has 502 MA's), (32, 5970), (46, 6054),

Gene: Chartreuse\_14 Start: 7012, Stop: 7443, Start Num: 27  
Candidate Starts for Chartreuse\_14:  
(Start: 27 @7012 has 502 MA's), (55, 7231), (58, 7243), (59, 7252), (69, 7327),

Gene: Che12\_12 Start: 5840, Stop: 6238, Start Num: 27  
Candidate Starts for Che12\_12:  
(Start: 27 @5840 has 502 MA's), (57, 6080), (60, 6098), (67, 6164), (75, 6182),

Gene: Chewbacca\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Chewbacca\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: ChipMunk\_12 Start: 6373, Stop: 6813, Start Num: 27  
Candidate Starts for ChipMunk\_12:  
(Start: 27 @6373 has 502 MA's), (30, 6418), (65, 6673), (71, 6697), (76, 6718),

Gene: ChosenOne\_33 Start: 30355, Stop: 30738, Start Num: 27  
Candidate Starts for ChosenOne\_33:  
(Start: 27 @30355 has 502 MA's), (37, 30433), (40, 30460), (48, 30523), (66, 30658), (79, 30697),

Gene: ChotaBhai\_33 Start: 30393, Stop: 30776, Start Num: 27  
Candidate Starts for ChotaBhai\_33:  
(Start: 27 @30393 has 502 MA's), (37, 30471), (40, 30498), (48, 30561), (66, 30696), (79, 30735),

Gene: Cici\_9 Start: 5429, Stop: 5878, Start Num: 27  
Candidate Starts for Cici\_9:  
(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (82, 5801),  
(91, 5846),

Gene: Cindaradix\_8 Start: 5135, Stop: 5587, Start Num: 27  
Candidate Starts for Cindaradix\_8:  
(21, 5042), (Start: 27 @5135 has 502 MA's), (35, 5204), (48, 5306), (50, 5312), (59, 5378), (66, 5441),  
(84, 5516),

Gene: Cintron\_9 Start: 5501, Stop: 5926, Start Num: 27  
Candidate Starts for Cintron\_9:

(21, 5408), (24, 5486), (Start: 27 @5501 has 502 MA's), (50, 5678), (70, 5825), (77, 5837), (91, 5891),

Gene: Citius\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Citius\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Cjw1\_33 Start: 31907, Stop: 32290, Start Num: 27

Candidate Starts for Cjw1\_33:

(Start: 27 @31907 has 502 MA's), (37, 31985), (40, 32012), (48, 32075), (66, 32210), (79, 32249),

Gene: Clarenza\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Clarenza\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Clautastrophe\_27 Start: 26434, Stop: 26850, Start Num: 27

Candidate Starts for Clautastrophe\_27:

(Start: 27 @26434 has 502 MA's), (30, 26479), (32, 26491), (35, 26503), (44, 26566), (57, 26665), (61, 26686), (81, 26791),

Gene: CloudWang3\_14 Start: 7043, Stop: 7474, Start Num: 27

Candidate Starts for CloudWang3\_14:

(Start: 27 @7043 has 502 MA's), (55, 7262), (58, 7274), (59, 7283), (69, 7358),

Gene: Cocoaberry\_9 Start: 5424, Stop: 5885, Start Num: 27

Candidate Starts for Cocoaberry\_9:

(Start: 27 @5424 has 502 MA's), (44, 5556), (50, 5601), (52, 5631), (55, 5646), (59, 5667), (65, 5727), (66, 5730),

Gene: Command613\_34 Start: 31414, Stop: 31797, Start Num: 27

Candidate Starts for Command613\_34:

(Start: 27 @31414 has 502 MA's), (37, 31492), (40, 31519), (48, 31582), (66, 31717), (79, 31756),

Gene: Commander\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Commander\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Connomayer\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Connomayer\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Conquerage\_12 Start: 7753, Stop: 8139, Start Num: 27

Candidate Starts for Conquerage\_12:

(22, 7678), (Start: 27 @7753 has 502 MA's), (49, 7924), (56, 7984),

Gene: Contagion\_32 Start: 30651, Stop: 31034, Start Num: 27

Candidate Starts for Contagion\_32:

(Start: 27 @30651 has 502 MA's), (37, 30729), (40, 30756), (48, 30819), (66, 30954), (79, 30993),

Gene: Cookie dough\_14 Start: 7065, Stop: 7499, Start Num: 27

Candidate Starts for Cookiedough\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Cookies\_33 Start: 31016, Stop: 31399, Start Num: 27

Candidate Starts for Cookies\_33:

(Start: 27 @31016 has 502 MA's), (37, 31094), (40, 31121), (48, 31184), (66, 31319), (79, 31358),

Gene: Crucio\_10 Start: 5938, Stop: 6375, Start Num: 27

Candidate Starts for Crucio\_10:

(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241), (79, 6283), (87, 6304),

Gene: CrystalP\_33 Start: 31147, Stop: 31530, Start Num: 27

Candidate Starts for CrystalP\_33:

(Start: 27 @31147 has 502 MA's), (37, 31225), (40, 31252), (48, 31315), (66, 31450), (79, 31489),

Gene: Czyszczone1\_34 Start: 30892, Stop: 31275, Start Num: 27

Candidate Starts for Czyszczone1\_34:

(Start: 27 @30892 has 502 MA's), (37, 30970), (40, 30997), (48, 31060), (66, 31195), (79, 31234),

Gene: D29\_11 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for D29\_11:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: D32\_13 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for D32\_13:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: DBQu4n\_13 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for DBQu4n\_13:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: DaVinci\_14 Start: 7066, Stop: 7497, Start Num: 27

Candidate Starts for DaVinci\_14:

(Start: 27 @7066 has 502 MA's), (55, 7285), (58, 7297), (59, 7306), (69, 7381),

Gene: Daikon\_32 Start: 30885, Stop: 31268, Start Num: 27

Candidate Starts for Daikon\_32:

(Start: 27 @30885 has 502 MA's), (37, 30963), (40, 30990), (66, 31188), (79, 31227),

Gene: Darrell\_13 Start: 7946, Stop: 8335, Start Num: 27

Candidate Starts for Darrell\_13:

(Start: 27 @7946 has 502 MA's), (34, 8009), (48, 8114), (60, 8201), (62, 8207),

Gene: Datway\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for Datway\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Deano\_9 Start: 5426, Stop: 5887, Start Num: 27

Candidate Starts for Deano\_9:

(Start: 27 @5426 has 502 MA's), (44, 5558), (50, 5603), (52, 5633), (55, 5648), (59, 5669), (65, 5729), (66, 5732),

Gene: Deloris\_11 Start: 6419, Stop: 6868, Start Num: 27

Candidate Starts for Deloris\_11:

(Start: 27 @6419 has 502 MA's), (55, 6638), (61, 6668), (68, 6734), (76, 6764),

Gene: Dhanush\_9 Start: 5423, Stop: 5884, Start Num: 27

Candidate Starts for Dhanush\_9:

(Start: 27 @5423 has 502 MA's), (44, 5555), (50, 5600), (52, 5630), (55, 5645), (59, 5666), (65, 5726), (66, 5729),

Gene: Dignity\_12 Start: 6380, Stop: 6820, Start Num: 27

Candidate Starts for Dignity\_12:

(21, 6293), (Start: 27 @6380 has 502 MA's), (30, 6425), (71, 6704), (76, 6725),

Gene: DirtyDunning\_9 Start: 5425, Stop: 5877, Start Num: 27

Candidate Starts for DirtyDunning\_9:

(Start: 27 @5425 has 502 MA's), (44, 5557), (50, 5602), (59, 5668), (66, 5731), (84, 5806), (91, 5836),

Gene: DoctorDiddles\_33 Start: 30309, Stop: 30692, Start Num: 27

Candidate Starts for DoctorDiddles\_33:

(Start: 27 @30309 has 502 MA's), (37, 30387), (40, 30414), (48, 30477), (66, 30612), (79, 30651),

Gene: Dorothea\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Dorothea\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: DrDrey\_34 Start: 31639, Stop: 32022, Start Num: 27

Candidate Starts for DrDrey\_34:

(Start: 27 @31639 has 502 MA's), (37, 31717), (40, 31744), (48, 31807), (66, 31942), (79, 31981),

Gene: Drake55\_12 Start: 6506, Stop: 6943, Start Num: 27

Candidate Starts for Drake55\_12:

(21, 6410), (Start: 27 @6506 has 502 MA's), (30, 6551), (65, 6806), (71, 6830),

Gene: DreamTeam1\_11 Start: 5913, Stop: 6296, Start Num: 27

Candidate Starts for DreamTeam1\_11:

(14, 5622), (15, 5667), (20, 5778), (Start: 27 @5913 has 502 MA's), (32, 5970), (46, 6054),

Gene: Druantia\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Druantia\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Dumbo\_33 Start: 30614, Stop: 30997, Start Num: 27

Candidate Starts for Dumbo\_33:

(Start: 27 @30614 has 502 MA's), (37, 30692), (40, 30719), (48, 30782), (66, 30917), (79, 30956),

Gene: DuncansLeg\_27 Start: 26417, Stop: 26833, Start Num: 27

Candidate Starts for DuncansLeg\_27:

(Start: 27 @26417 has 502 MA's), (30, 26462), (32, 26474), (35, 26486), (61, 26669), (81, 26774),

Gene: Duplicity\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Duplicity\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),



Gene: Duplo\_13 Start: 6216, Stop: 6641, Start Num: 27

Candidate Starts for Duplo\_13:

(Start: 27 @6216 has 502 MA's), (55, 6435), (61, 6465),

Gene: Dusk\_32 Start: 30799, Stop: 31182, Start Num: 27

Candidate Starts for Dusk\_32:

(Start: 27 @30799 has 502 MA's), (37, 30877), (40, 30904), (48, 30967), (66, 31102), (79, 31141),

Gene: Eagle\_8 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Eagle\_8:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Eapen\_9 Start: 5422, Stop: 5883, Start Num: 27

Candidate Starts for Eapen\_9:

(Start: 27 @5422 has 502 MA's), (44, 5554), (50, 5599), (52, 5629), (55, 5644), (59, 5665), (65, 5725), (66, 5728),

Gene: Easy2Say\_35 Start: 32397, Stop: 32780, Start Num: 27

Candidate Starts for Easy2Say\_35:

(Start: 27 @32397 has 502 MA's), (37, 32475), (40, 32502), (48, 32565), (66, 32700), (79, 32739),

Gene: Ebony\_11 Start: 7679, Stop: 8065, Start Num: 27

Candidate Starts for Ebony\_11:

(Start: 27 @7679 has 502 MA's), (35, 7748), (61, 7928), (68, 7994),

Gene: Echild\_10 Start: 6083, Stop: 6544, Start Num: 27

Candidate Starts for Echild\_10:

(19, 5912), (Start: 27 @6083 has 502 MA's), (55, 6302), (63, 6365), (68, 6398),

Gene: EdogawaKiddo\_10 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for EdogawaKiddo\_10:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Eidsmoe\_12 Start: 7753, Stop: 8139, Start Num: 27

Candidate Starts for Eidsmoe\_12:

(22, 7678), (Start: 27 @7753 has 502 MA's), (49, 7924), (56, 7984),

Gene: Elephantoon\_12 Start: 7375, Stop: 7764, Start Num: 27

Candidate Starts for Elephantoon\_12:

(22, 7300), (Start: 27 @7375 has 502 MA's), (48, 7543), (60, 7630), (62, 7636),

Gene: Elite2014\_32 Start: 30354, Stop: 30737, Start Num: 27

Candidate Starts for Elite2014\_32:

(Start: 27 @30354 has 502 MA's), (37, 30432), (40, 30459), (48, 30522), (66, 30657), (79, 30696),

Gene: Ellson\_27 Start: 26404, Stop: 26820, Start Num: 27

Candidate Starts for Ellson\_27:

(Start: 27 @26404 has 502 MA's), (30, 26449), (32, 26461), (35, 26473), (61, 26656), (81, 26761),

Gene: Elph10\_34 Start: 30617, Stop: 31000, Start Num: 27

Candidate Starts for Elph10\_34:

(Start: 27 @30617 has 502 MA's), (37, 30695), (40, 30722), (48, 30785), (66, 30920), (79, 30959),

Gene: Emmina\_34 Start: 30975, Stop: 31358, Start Num: 27

Candidate Starts for Emmina\_34:

(Start: 27 @30975 has 502 MA's), (37, 31053), (40, 31080), (48, 31143), (66, 31278), (79, 31317),

Gene: EmyBug\_12 Start: 7753, Stop: 8139, Start Num: 27

Candidate Starts for EmyBug\_12:

(22, 7678), (Start: 27 @7753 has 502 MA's), (49, 7924), (56, 7984),

Gene: Equemioh13\_12 Start: 6492, Stop: 6929, Start Num: 27

Candidate Starts for Equemioh13\_12:

(21, 6396), (Start: 27 @6492 has 502 MA's), (30, 6537), (65, 6792), (71, 6816),

Gene: EricB\_14 Start: 7066, Stop: 7500, Start Num: 27

Candidate Starts for EricB\_14:

(Start: 27 @7066 has 502 MA's), (41, 7180), (55, 7285), (58, 7297), (59, 7306), (69, 7381),

Gene: Eris\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Eris\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Eros\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Eros\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Et2Brutus\_10 Start: 7624, Stop: 8010, Start Num: 27

Candidate Starts for Et2Brutus\_10:

(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),

Gene: Eureka\_33 Start: 31130, Stop: 31513, Start Num: 27

Candidate Starts for Eureka\_33:

(Start: 27 @31130 has 502 MA's), (37, 31208), (40, 31235), (48, 31298), (66, 31433), (79, 31472),

Gene: Eurydice\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Eurydice\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: ExplosioNervosa\_12 Start: 7756, Stop: 8142, Start Num: 27

Candidate Starts for ExplosioNervosa\_12:

(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Fayely\_12 Start: 7756, Stop: 8142, Start Num: 27

Candidate Starts for Fayely\_12:

(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Fibonacci\_11 Start: 7624, Stop: 8010, Start Num: 27

Candidate Starts for Fibonacci\_11:

(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),

Gene: Filch\_34 Start: 30905, Stop: 31288, Start Num: 27  
Candidate Starts for Filch\_34:  
(Start: 27 @30905 has 502 MA's), (37, 30983), (40, 31010), (48, 31073), (66, 31208), (79, 31247),

Gene: Finnry\_27 Start: 26438, Stop: 26854, Start Num: 27  
Candidate Starts for Finnry\_27:  
(Start: 27 @26438 has 502 MA's), (30, 26483), (32, 26495), (35, 26507), (44, 26570), (57, 26669), (61, 26690), (81, 26795),

Gene: FireRed\_33 Start: 31175, Stop: 31558, Start Num: 27  
Candidate Starts for FireRed\_33:  
(Start: 27 @31175 has 502 MA's), (37, 31253), (40, 31280), (48, 31343), (66, 31478), (79, 31517),

Gene: FiringLine\_10 Start: 5938, Stop: 6375, Start Num: 27  
Candidate Starts for FiringLine\_10:  
(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241), (79, 6283), (87, 6304),

Gene: First\_0010 Start: 5985, Stop: 6446, Start Num: 27  
Candidate Starts for First\_0010:  
(19, 5817), (Start: 27 @5985 has 502 MA's), (35, 6054), (50, 6162), (57, 6213), (65, 6285), (66, 6288), (71, 6309),

Gene: Flare16\_10 Start: 6050, Stop: 6487, Start Num: 27  
Candidate Starts for Flare16\_10:  
(21, 5954), (Start: 27 @6050 has 502 MA's), (30, 6095), (50, 6227), (65, 6350), (71, 6374),

Gene: Flaverint\_11 Start: 7621, Stop: 8007, Start Num: 27  
Candidate Starts for Flaverint\_11:  
(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: Florean\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Florean\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Flux\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Flux\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Flypotenuse\_31 Start: 30743, Stop: 31126, Start Num: 27  
Candidate Starts for Flypotenuse\_31:  
(Start: 27 @30743 has 502 MA's), (37, 30821), (40, 30848), (48, 30911), (66, 31046), (79, 31085),

Gene: Fulbright\_28 Start: 24162, Stop: 24566, Start Num: 27  
Candidate Starts for Fulbright\_28:  
(Start: 27 @24162 has 502 MA's), (62, 24420), (63, 24450), (72, 24492), (85, 24549),

Gene: Funston\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Funston\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Gadost\_9 Start: 5424, Stop: 5885, Start Num: 27

Candidate Starts for Gadost\_9:

(Start: 27 @5424 has 502 MA's), (44, 5556), (50, 5601), (52, 5631), (55, 5646), (59, 5667), (65, 5727), (66, 5730),

Gene: Gage\_35 Start: 31137, Stop: 31520, Start Num: 27

Candidate Starts for Gage\_35:

(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Gail\_10 Start: 6144, Stop: 6530, Start Num: 27

Candidate Starts for Gail\_10:

(14, 5856), (19, 5970), (Start: 27 @6144 has 502 MA's), (48, 6312), (55, 6369), (60, 6396), (62, 6402), (67, 6462),

Gene: Garak\_15 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Garak\_15:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Gator\_31 Start: 30755, Stop: 31138, Start Num: 27

Candidate Starts for Gator\_31:

(Start: 27 @30755 has 502 MA's), (37, 30833), (40, 30860), (48, 30923), (66, 31058), (79, 31097),

Gene: GaugeLDP\_12 Start: 7318, Stop: 7788, Start Num: 26

Candidate Starts for GaugeLDP\_12:

(21, 7225), (23, 7303), (Start: 26 @7318 has 5 MA's), (28, 7330), (48, 7489), (50, 7495), (55, 7537), (58, 7549), (71, 7642),

Gene: Gemini\_36 Start: 31654, Stop: 32037, Start Num: 27

Candidate Starts for Gemini\_36:

(Start: 27 @31654 has 502 MA's), (37, 31732), (40, 31759), (48, 31822), (66, 31957), (79, 31996),

Gene: Georgie2\_11 Start: 5939, Stop: 6376, Start Num: 27

Candidate Starts for Georgie2\_11:

(21, 5843), (Start: 27 @5939 has 502 MA's), (31, 5993), (50, 6116), (55, 6158), (59, 6179), (66, 6242), (79, 6284), (87, 6305),

Gene: Gex\_29 Start: 24335, Stop: 24739, Start Num: 27

Candidate Starts for Gex\_29:

(Start: 27 @24335 has 502 MA's), (62, 24593), (63, 24623), (72, 24665), (85, 24722),

Gene: Gilberta\_11 Start: 7618, Stop: 8004, Start Num: 27

Candidate Starts for Gilberta\_11:

(Start: 27 @7618 has 502 MA's), (35, 7687), (61, 7867), (68, 7933),

Gene: Gladiator\_14 Start: 7039, Stop: 7470, Start Num: 27

Candidate Starts for Gladiator\_14:

(Start: 27 @7039 has 502 MA's), (55, 7258), (58, 7270), (59, 7279), (69, 7354),

Gene: Glexan\_31 Start: 30743, Stop: 31126, Start Num: 27

Candidate Starts for Glexan\_31:

(Start: 27 @30743 has 502 MA's), (37, 30821), (40, 30848), (48, 30911), (66, 31046), (79, 31085),

Gene: Goku\_33 Start: 30859, Stop: 31242, Start Num: 27  
Candidate Starts for Goku\_33:  
(Start: 27 @30859 has 502 MA's), (37, 30937), (40, 30964), (48, 31027), (66, 31162), (79, 31201),

Gene: GoldenSpark\_35 Start: 31137, Stop: 31520, Start Num: 27  
Candidate Starts for GoldenSpark\_35:  
(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Goldilocks\_34 Start: 30557, Stop: 30940, Start Num: 27  
Candidate Starts for Goldilocks\_34:  
(Start: 27 @30557 has 502 MA's), (37, 30635), (40, 30662), (48, 30725), (66, 30860), (79, 30899),

Gene: GooberAzure\_35 Start: 31137, Stop: 31520, Start Num: 27  
Candidate Starts for GooberAzure\_35:  
(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: GreedyLawyer\_14 Start: 7065, Stop: 7496, Start Num: 27  
Candidate Starts for GreedyLawyer\_14:  
(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Gruunaga\_14 Start: 7039, Stop: 7470, Start Num: 27  
Candidate Starts for Gruunaga\_14:  
(Start: 27 @7039 has 502 MA's), (55, 7258), (58, 7270), (59, 7279), (69, 7354),

Gene: HamSlice\_8 Start: 5421, Stop: 5882, Start Num: 27  
Candidate Starts for HamSlice\_8:  
(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724),  
(66, 5727),

Gene: Hammer\_14 Start: 7039, Stop: 7470, Start Num: 27  
Candidate Starts for Hammer\_14:  
(Start: 27 @7039 has 502 MA's), (55, 7258), (58, 7270), (59, 7279), (69, 7354),

Gene: HanKaySha\_34 Start: 30889, Stop: 31272, Start Num: 27  
Candidate Starts for HanKaySha\_34:  
(Start: 27 @30889 has 502 MA's), (37, 30967), (40, 30994), (48, 31057), (66, 31192), (79, 31231),

Gene: Hanako\_26 Start: 23389, Stop: 23793, Start Num: 27  
Candidate Starts for Hanako\_26:  
(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502  
MA's), (48, 23563), (78, 23752),

Gene: Hanray\_11 Start: 7759, Stop: 8145, Start Num: 27  
Candidate Starts for Hanray\_11:  
(22, 7684), (Start: 27 @7759 has 502 MA's), (49, 7930), (56, 7990),

Gene: Happiness\_9 Start: 5425, Stop: 5886, Start Num: 27  
Candidate Starts for Happiness\_9:  
(Start: 27 @5425 has 502 MA's), (44, 5557), (50, 5602), (52, 5632), (55, 5647), (59, 5668), (65, 5728),  
(66, 5731),

Gene: Harella\_32 Start: 31259, Stop: 31642, Start Num: 27  
Candidate Starts for Harella\_32:

(Start: 27 @31259 has 502 MA's), (37, 31337), (40, 31364), (48, 31427), (66, 31562), (79, 31601),

Gene: HarryHoudini\_12 Start: 6506, Stop: 6943, Start Num: 27

Candidate Starts for HarryHoudini\_12:

(21, 6410), (Start: 27 @6506 has 502 MA's), (30, 6551), (65, 6806), (71, 6830),

Gene: Helmet\_15 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Helmet\_15:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Henry\_34 Start: 31147, Stop: 31530, Start Num: 27

Candidate Starts for Henry\_34:

(Start: 27 @31147 has 502 MA's), (37, 31225), (40, 31252), (48, 31315), (66, 31450), (79, 31489),

Gene: Hexamo\_14 Start: 7020, Stop: 7451, Start Num: 27

Candidate Starts for Hexamo\_14:

(Start: 27 @7020 has 502 MA's), (55, 7239), (58, 7251), (59, 7260), (69, 7335),

Gene: Highbury\_34 Start: 30805, Stop: 31188, Start Num: 27

Candidate Starts for Highbury\_34:

(Start: 27 @30805 has 502 MA's), (37, 30883), (40, 30910), (48, 30973), (66, 31108), (79, 31147),

Gene: Holec\_11 Start: 7759, Stop: 8145, Start Num: 27

Candidate Starts for Holec\_11:

(22, 7684), (Start: 27 @7759 has 502 MA's), (46, 7897), (49, 7930), (56, 7990),

Gene: Holli\_9 Start: 5213, Stop: 5674, Start Num: 27

Candidate Starts for Holli\_9:

(Start: 27 @5213 has 502 MA's), (44, 5345), (50, 5390), (52, 5420), (55, 5435), (59, 5456), (65, 5516), (66, 5519),

Gene: Holt\_34 Start: 30424, Stop: 30807, Start Num: 27

Candidate Starts for Holt\_34:

(Start: 27 @30424 has 502 MA's), (37, 30502), (40, 30529), (48, 30592), (66, 30727), (79, 30766),

Gene: Hoonter\_35 Start: 31137, Stop: 31520, Start Num: 27

Candidate Starts for Hoonter\_35:

(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Hoot\_14 Start: 7044, Stop: 7475, Start Num: 27

Candidate Starts for Hoot\_14:

(Start: 27 @7044 has 502 MA's), (55, 7263), (58, 7275), (59, 7284), (69, 7359),

Gene: Hokey\_35 Start: 31424, Stop: 31807, Start Num: 27

Candidate Starts for Hokey\_35:

(Start: 27 @31424 has 502 MA's), (37, 31502), (40, 31529), (48, 31592), (66, 31727), (79, 31766),

Gene: HortumSL17\_12 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for HortumSL17\_12:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Houdini22\_9 Start: 5424, Stop: 5885, Start Num: 27

Candidate Starts for Houdini22\_9:

(Start: 27 @5424 has 502 MA's), (44, 5556), (50, 5601), (52, 5631), (55, 5646), (59, 5667), (65, 5727), (66, 5730),

Gene: HufflyPuff\_32 Start: 31131, Stop: 31514, Start Num: 27

Candidate Starts for HufflyPuff\_32:

(Start: 27 @31131 has 502 MA's), (37, 31209), (40, 31236), (48, 31299), (66, 31434), (79, 31473),

Gene: Hutc2\_11 Start: 7624, Stop: 8010, Start Num: 27

Candidate Starts for Hutc2\_11:

(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),

Gene: ICleared\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for ICleared\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: IHOP\_33 Start: 31324, Stop: 31707, Start Num: 27

Candidate Starts for IHOP\_33:

(Start: 27 @31324 has 502 MA's), (37, 31402), (40, 31429), (48, 31492), (66, 31627), (79, 31666),

Gene: Ibrahim\_28 Start: 25159, Stop: 25599, Start Num: 27

Candidate Starts for Ibrahim\_28:

(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58, 25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: Icee\_32 Start: 30805, Stop: 31188, Start Num: 27

Candidate Starts for Icee\_32:

(Start: 27 @30805 has 502 MA's), (37, 30883), (40, 30910), (48, 30973), (66, 31108), (79, 31147),

Gene: Iceman\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Iceman\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Inca\_32 Start: 29826, Stop: 30209, Start Num: 27

Candidate Starts for Inca\_32:

(Start: 27 @29826 has 502 MA's), (37, 29904), (40, 29931), (48, 29994), (66, 30129), (79, 30168),

Gene: Indra\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Indra\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Insomnia\_11 Start: 7673, Stop: 8059, Start Num: 27

Candidate Starts for Insomnia\_11:

(Start: 27 @7673 has 502 MA's), (35, 7742), (61, 7922), (68, 7988),

Gene: Iracema64\_9 Start: 5406, Stop: 5858, Start Num: 27

Candidate Starts for Iracema64\_9:

(21, 5313), (Start: 27 @5406 has 502 MA's), (35, 5475), (50, 5583), (59, 5649), (66, 5712), (84, 5787), (91, 5817),

Gene: Isiphiwo\_14 Start: 7065, Stop: 7499, Start Num: 27

Candidate Starts for Isiphiwo\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Jaan\_13 Start: 8050, Stop: 8544, Start Num: 27

Candidate Starts for Jaan\_13:

(17, 7873), (Start: 27 @8050 has 502 MA's), (31, 8104), (50, 8227), (64, 8341), (71, 8374),

Gene: Jabith\_11 Start: 7673, Stop: 8059, Start Num: 27

Candidate Starts for Jabith\_11:

(Start: 27 @7673 has 502 MA's), (35, 7742), (61, 7922), (68, 7988),

Gene: Jamie19\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for Jamie19\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (62, 23647), (63, 23677), (72, 23719), (85, 23776),

Gene: Jaykayelowell\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Jaykayelowell\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: JeTaime\_35 Start: 31948, Stop: 32331, Start Num: 27

Candidate Starts for JeTaime\_35:

(Start: 27 @31948 has 502 MA's), (37, 32026), (40, 32053), (48, 32116), (66, 32251), (79, 32290),

Gene: Jeeves\_10 Start: 6157, Stop: 6543, Start Num: 27

Candidate Starts for Jeeves\_10:

(19, 5983), (20, 6025), (Start: 27 @6157 has 502 MA's), (48, 6325), (62, 6415), (67, 6475), (68, 6478),

Gene: Jeffabunny\_14 Start: 7068, Stop: 7499, Start Num: 27

Candidate Starts for Jeffabunny\_14:

(Start: 27 @7068 has 502 MA's), (55, 7287), (58, 7299), (59, 7308), (69, 7383),

Gene: Jerm\_12 Start: 6372, Stop: 6836, Start Num: 27

Candidate Starts for Jerm\_12:

(Start: 27 @6372 has 502 MA's), (35, 6441), (50, 6549), (55, 6591), (57, 6600), (65, 6672), (71, 6696),

Gene: JetBlade\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for JetBlade\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: JewelBug\_14 Start: 7066, Stop: 7497, Start Num: 27

Candidate Starts for JewelBug\_14:

(Start: 27 @7066 has 502 MA's), (41, 7180), (55, 7285), (58, 7297), (59, 7306), (69, 7381),

Gene: Jiawan\_11 Start: 7759, Stop: 8145, Start Num: 27

Candidate Starts for Jiawan\_11:

(22, 7684), (Start: 27 @7759 has 502 MA's), (46, 7897), (49, 7930), (56, 7990),

Gene: Jobypre\_27 Start: 26434, Stop: 26850, Start Num: 27

Candidate Starts for Jobypre\_27:

(Start: 27 @26434 has 502 MA's), (30, 26479), (32, 26491), (35, 26503), (44, 26566), (57, 26665), (61, 26686), (81, 26791),



Gene: JoongJeon\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for JoongJeon\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Jordennis\_14 Start: 7065, Stop: 7499, Start Num: 27

Candidate Starts for Jordennis\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Joselito\_11 Start: 7621, Stop: 8007, Start Num: 27

Candidate Starts for Joselito\_11:

(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: JoshKayV\_12 Start: 6385, Stop: 6825, Start Num: 27

Candidate Starts for JoshKayV\_12:

(21, 6295), (Start: 27 @6385 has 502 MA's), (29, 6427), (30, 6430), (71, 6709), (76, 6730), (91, 6790),

Gene: Journey\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Journey\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Journey13\_8 Start: 5230, Stop: 5628, Start Num: 27

Candidate Starts for Journey13\_8:

(Start: 27 @5230 has 502 MA's), (50, 5407), (55, 5449),

Gene: Jsquared\_9 Start: 5161, Stop: 5556, Start Num: 27

Candidate Starts for Jsquared\_9:

(Start: 27 @5161 has 502 MA's), (44, 5293), (55, 5380), (61, 5410), (83, 5527),

Gene: Jubie\_27 Start: 26435, Stop: 26851, Start Num: 27

Candidate Starts for Jubie\_27:

(Start: 27 @26435 has 502 MA's), (30, 26480), (32, 26492), (35, 26504), (44, 26567), (57, 26666), (61, 26687), (81, 26792),

Gene: KFPoly\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for KFPoly\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Kamy\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Kamy\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Kanye\_35 Start: 32133, Stop: 32516, Start Num: 27

Candidate Starts for Kanye\_35:

(Start: 27 @32133 has 502 MA's), (37, 32211), (40, 32238), (48, 32301), (66, 32436), (79, 32475),

Gene: Katalie136\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for Katalie136\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Kazan\_14 Start: 7071, Stop: 7502, Start Num: 27  
Candidate Starts for Kazan\_14:  
(Start: 27 @7071 has 502 MA's), (41, 7185), (55, 7290), (58, 7302), (59, 7311), (69, 7386),

Gene: Kerberos\_13 Start: 6175, Stop: 6600, Start Num: 27  
Candidate Starts for Kerberos\_13:  
(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: Keziacharles14\_10 Start: 5897, Stop: 6280, Start Num: 27  
Candidate Starts for Keziacharles14\_10:  
(20, 5762), (Start: 27 @5897 has 502 MA's), (31, 5951), (57, 6128), (75, 6230),

Gene: Kimchi\_35 Start: 31140, Stop: 31523, Start Num: 27  
Candidate Starts for Kimchi\_35:  
(Start: 27 @31140 has 502 MA's), (37, 31218), (40, 31245), (48, 31308), (66, 31443), (79, 31482),

Gene: KingCyrus\_12 Start: 6373, Stop: 6813, Start Num: 27  
Candidate Starts for KingCyrus\_12:  
(Start: 27 @6373 has 502 MA's), (30, 6418), (65, 6673), (71, 6697), (76, 6718),

Gene: Kingmustik0402\_9 Start: 5412, Stop: 5873, Start Num: 27  
Candidate Starts for Kingmustik0402\_9:  
(Start: 27 @5412 has 502 MA's), (44, 5544), (50, 5589), (52, 5619), (55, 5634), (59, 5655), (65, 5715), (66, 5718),

Gene: Kingsolomon\_27 Start: 26434, Stop: 26850, Start Num: 27  
Candidate Starts for Kingsolomon\_27:  
(Start: 27 @26434 has 502 MA's), (30, 26479), (32, 26491), (35, 26503), (44, 26566), (57, 26665), (61, 26686), (81, 26791),

Gene: Kinmap\_9 Start: 5941, Stop: 6426, Start Num: 27  
Candidate Starts for Kinmap\_9:  
(Start: 27 @5941 has 502 MA's), (31, 5995), (50, 6118), (59, 6184), (64, 6235), (68, 6259), (86, 6322), (89, 6349), (90, 6361),

Gene: Kipper29\_14 Start: 7065, Stop: 7496, Start Num: 27  
Candidate Starts for Kipper29\_14:  
(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: KirDoubleO7\_25 Start: 26426, Stop: 26842, Start Num: 27  
Candidate Starts for KirDoubleO7\_25:  
(Start: 27 @26426 has 502 MA's), (30, 26471), (32, 26483), (35, 26495), (61, 26678), (81, 26783),

Gene: Koduck\_10 Start: 5448, Stop: 5843, Start Num: 27  
Candidate Starts for Koduck\_10:  
(Start: 27 @5448 has 502 MA's), (44, 5580), (51, 5652), (55, 5667), (61, 5697), (83, 5814),

Gene: Koko\_14 Start: 7065, Stop: 7496, Start Num: 27  
Candidate Starts for Koko\_14:  
(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Koreni\_8 Start: 5069, Stop: 5530, Start Num: 27  
Candidate Starts for Koreni\_8:

(Start: 27 @5069 has 502 MA's), (44, 5201), (50, 5246), (52, 5276), (55, 5291), (59, 5312), (65, 5372), (66, 5375),

Gene: Kostya\_34 Start: 31148, Stop: 31531, Start Num: 27

Candidate Starts for Kostya\_34:

(Start: 27 @31148 has 502 MA's), (37, 31226), (40, 31253), (48, 31316), (66, 31451), (79, 31490),

Gene: Kratark\_9 Start: 5424, Stop: 5876, Start Num: 27

Candidate Starts for Kratark\_9:

(Start: 27 @5424 has 502 MA's), (44, 5556), (50, 5601), (59, 5667), (66, 5730), (84, 5805),

Gene: Kremtemulon\_9 Start: 5501, Stop: 5926, Start Num: 27

Candidate Starts for Kremtemulon\_9:

(21, 5408), (24, 5486), (Start: 27 @5501 has 502 MA's), (50, 5678), (70, 5825), (77, 5837), (91, 5891),

Gene: Krypton555\_27 Start: 26338, Stop: 26751, Start Num: 27

Candidate Starts for Krypton555\_27:

(Start: 27 @26338 has 502 MA's), (30, 26383), (32, 26395), (35, 26407), (61, 26590),

Gene: Kyee\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Kyee\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: L5\_11 Start: 5456, Stop: 5851, Start Num: 27

Candidate Starts for L5\_11:

(Start: 27 @5456 has 502 MA's), (44, 5588), (51, 5660), (55, 5675), (61, 5705), (83, 5822),

Gene: LHTSCC\_9 Start: 5406, Stop: 5858, Start Num: 27

Candidate Starts for LHTSCC\_9:

(21, 5313), (Start: 27 @5406 has 502 MA's), (35, 5475), (48, 5577), (50, 5583), (59, 5649), (66, 5712), (84, 5787),

Gene: LadyBird\_10 Start: 5973, Stop: 6413, Start Num: 27

Candidate Starts for LadyBird\_10:

(Start: 27 @5973 has 502 MA's), (65, 6273), (71, 6297),

Gene: Landor\_11 Start: 7717, Stop: 8196, Start Num: 26

Candidate Starts for Landor\_11:

(Start: 26 @7717 has 5 MA's), (50, 7894), (55, 7936), (58, 7948), (71, 8041),

Gene: LappelDuVide\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for LappelDuVide\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Larenn\_11 Start: 6290, Stop: 6727, Start Num: 27

Candidate Starts for Larenn\_11:

(21, 6197), (Start: 27 @6290 has 502 MA's), (30, 6335), (65, 6590), (71, 6614), (76, 6635),

Gene: Lemur\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Lemur\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: LeoAvram\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for LeoAvram\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Leogania\_12 Start: 8106, Stop: 8570, Start Num: 27

Candidate Starts for Leogania\_12:

(21, 8013), (Start: 27 @8106 has 502 MA's), (35, 8175), (55, 8328), (57, 8337), (65, 8409), (71, 8433),

Gene: Leviathan\_12 Start: 6428, Stop: 6868, Start Num: 27

Candidate Starts for Leviathan\_12:

(21, 6341), (Start: 27 @6428 has 502 MA's), (30, 6473), (71, 6752), (76, 6773),

Gene: LilTurb\_12 Start: 6431, Stop: 6895, Start Num: 27

Candidate Starts for LilTurb\_12:

(Start: 27 @6431 has 502 MA's), (35, 6500), (50, 6608), (55, 6650), (57, 6659), (65, 6731), (71, 6755),

Gene: Lilac\_35 Start: 30644, Stop: 31027, Start Num: 27

Candidate Starts for Lilac\_35:

(Start: 27 @30644 has 502 MA's), (37, 30722), (40, 30749), (48, 30812), (66, 30947), (79, 30986),

Gene: Lilbunny\_14 Start: 7046, Stop: 7477, Start Num: 27

Candidate Starts for Lilbunny\_14:

(Start: 27 @7046 has 502 MA's), (55, 7265), (58, 7277), (59, 7286), (69, 7361),

Gene: Lilizi\_35 Start: 30852, Stop: 31235, Start Num: 27

Candidate Starts for Lilizi\_35:

(Start: 27 @30852 has 502 MA's), (37, 30930), (40, 30957), (48, 31020), (66, 31155), (79, 31194),

Gene: Lilleskat\_10 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for Lilleskat\_10:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Lilpickle\_32 Start: 30354, Stop: 30737, Start Num: 27

Candidate Starts for Lilpickle\_32:

(Start: 27 @30354 has 502 MA's), (37, 30432), (40, 30459), (48, 30522), (66, 30657), (79, 30696),

Gene: LittleB\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for LittleB\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: LittleGuy\_9 Start: 5399, Stop: 5824, Start Num: 27

Candidate Starts for LittleGuy\_9:

(Start: 27 @5399 has 502 MA's), (50, 5576), (52, 5606), (64, 5693), (65, 5702), (66, 5705), (71, 5726), (77, 5735), (91, 5789),

Gene: LiyuLake\_27 Start: 26396, Stop: 26812, Start Num: 27

Candidate Starts for LiyuLake\_27:

(Start: 27 @26396 has 502 MA's), (30, 26441), (32, 26453), (35, 26465), (61, 26648), (81, 26753),

Gene: LochMonster\_9 Start: 5404, Stop: 5856, Start Num: 27

Candidate Starts for LochMonster\_9:

(21, 5311), (Start: 27 @5404 has 502 MA's), (35, 5473), (48, 5575), (50, 5581), (59, 5647), (66, 5710), (84, 5785), (91, 5815),

Gene: Lokk\_13 Start: 7712, Stop: 8134, Start Num: 27

Candidate Starts for Lokk\_13:

(21, 7619), (Start: 27 @7712 has 502 MA's), (30, 7757), (48, 7883), (55, 7931), (61, 7961),

Gene: Lolly9\_27 Start: 26216, Stop: 26617, Start Num: 27

Candidate Starts for Lolly9\_27:

(Start: 27 @26216 has 502 MA's), (30, 26261), (35, 26285), (61, 26468),

Gene: LoneWolf\_12 Start: 7570, Stop: 7956, Start Num: 27

Candidate Starts for LoneWolf\_12:

(22, 7495), (Start: 27 @7570 has 502 MA's), (39, 7669), (48, 7738), (56, 7801), (73, 7900),

Gene: Lorenzo\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Lorenzo\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Luchador\_10 Start: 6145, Stop: 6531, Start Num: 27

Candidate Starts for Luchador\_10:

(14, 5857), (19, 5971), (20, 6013), (Start: 27 @6145 has 502 MA's), (48, 6313), (60, 6397), (62, 6403), (67, 6463),

Gene: Lucivia\_11 Start: 7670, Stop: 8056, Start Num: 27

Candidate Starts for Lucivia\_11:

(Start: 27 @7670 has 502 MA's), (35, 7739), (61, 7919), (68, 7985),

Gene: Lumos\_27 Start: 26431, Stop: 26847, Start Num: 27

Candidate Starts for Lumos\_27:

(Start: 27 @26431 has 502 MA's), (30, 26476), (32, 26488), (35, 26500), (44, 26563), (57, 26662), (61, 26683), (81, 26788),

Gene: Lunsford\_10 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Lunsford\_10:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: MISSy\_32 Start: 30660, Stop: 31043, Start Num: 27

Candidate Starts for MISSy\_32:

(Start: 27 @30660 has 502 MA's), (37, 30738), (40, 30765), (48, 30828), (66, 30963), (79, 31002),

Gene: MPhalcon\_32 Start: 30653, Stop: 31036, Start Num: 27

Candidate Starts for MPhalcon\_32:

(Start: 27 @30653 has 502 MA's), (37, 30731), (40, 30758), (48, 30821), (66, 30956), (79, 30995),

Gene: MaCh\_11 Start: 7618, Stop: 8004, Start Num: 27

Candidate Starts for MaCh\_11:

(Start: 27 @7618 has 502 MA's), (35, 7687), (61, 7867), (68, 7933),

Gene: Mabel\_11 Start: 7685, Stop: 8071, Start Num: 27

Candidate Starts for Mabel\_11:

(Start: 27 @7685 has 502 MA's), (35, 7754), (61, 7934), (68, 8000),

Gene: MadamMonkfish\_33 Start: 30565, Stop: 30948, Start Num: 27

Candidate Starts for MadamMonkfish\_33:

(Start: 27 @30565 has 502 MA's), (37, 30643), (40, 30670), (48, 30733), (66, 30868), (79, 30907),

Gene: Magsby\_29 Start: 24336, Stop: 24740, Start Num: 27

Candidate Starts for Magsby\_29:

(Start: 27 @24336 has 502 MA's), (62, 24594), (63, 24624), (72, 24666), (85, 24723),

Gene: MajorMajor\_9 Start: 5207, Stop: 5602, Start Num: 27

Candidate Starts for MajorMajor\_9:

(Start: 27 @5207 has 502 MA's), (44, 5339), (55, 5426), (61, 5456), (83, 5573),

Gene: Malec\_11 Start: 6295, Stop: 6732, Start Num: 27

Candidate Starts for Malec\_11:

(21, 6202), (Start: 27 @6295 has 502 MA's), (30, 6340), (65, 6595), (71, 6619), (76, 6640),

Gene: Maminiaina\_12 Start: 7493, Stop: 7879, Start Num: 27

Candidate Starts for Maminiaina\_12:

(22, 7418), (Start: 27 @7493 has 502 MA's), (49, 7664), (56, 7724),

Gene: Manda\_34 Start: 31632, Stop: 32015, Start Num: 27

Candidate Starts for Manda\_34:

(Start: 27 @31632 has 502 MA's), (37, 31710), (40, 31737), (48, 31800), (66, 31935), (79, 31974),

Gene: Marshmallow\_33 Start: 31145, Stop: 31528, Start Num: 27

Candidate Starts for Marshmallow\_33:

(Start: 27 @31145 has 502 MA's), (37, 31223), (40, 31250), (48, 31313), (66, 31448), (79, 31487),

Gene: Maverick\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Maverick\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Maxo\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Maxo\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Maxxinista\_34 Start: 30614, Stop: 30997, Start Num: 27

Candidate Starts for Maxxinista\_34:

(Start: 27 @30614 has 502 MA's), (37, 30692), (40, 30719), (48, 30782), (66, 30917), (79, 30956),

Gene: Mazhar510\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Mazhar510\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: McFly\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for McFly\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Medusa\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Medusa\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: MeeZee\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for MeeZee\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Melville\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Melville\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Melvin\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Melvin\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Mendokysei\_27 Start: 24965, Stop: 25378, Start Num: 27

Candidate Starts for Mendokysei\_27:

(23, 24947), (Start: 27 @24965 has 502 MA's), (32, 25022), (48, 25136), (50, 25142), (64, 25259), (66, 25271), (80, 25313),

Gene: MichelleMyBell\_27 Start: 23327, Stop: 23731, Start Num: 27

Candidate Starts for MichelleMyBell\_27:

(4, 22706), (5, 22709), (7, 22781), (10, 22802), (11, 22895), (12, 22922), (Start: 27 @23327 has 502 MA's), (62, 23585), (63, 23615), (72, 23657), (85, 23714),

Gene: MiculUcigas\_10 Start: 6050, Stop: 6487, Start Num: 27

Candidate Starts for MiculUcigas\_10:

(21, 5954), (Start: 27 @6050 has 502 MA's), (30, 6095), (65, 6350), (71, 6374),

Gene: Miko\_13 Start: 7681, Stop: 8103, Start Num: 27

Candidate Starts for Miko\_13:

(21, 7588), (Start: 27 @7681 has 502 MA's), (30, 7726), (48, 7852), (55, 7900), (61, 7930),

Gene: Millski\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Millski\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Mindy\_33 Start: 30925, Stop: 31308, Start Num: 27

Candidate Starts for Mindy\_33:

(Start: 27 @30925 has 502 MA's), (37, 31003), (40, 31030), (48, 31093), (66, 31228), (79, 31267),

Gene: MiniLon\_27 Start: 26216, Stop: 26617, Start Num: 27

Candidate Starts for MiniLon\_27:

(Start: 27 @26216 has 502 MA's), (30, 26261), (35, 26285), (61, 26468),

Gene: MiniMac\_27 Start: 26217, Stop: 26618, Start Num: 27  
Candidate Starts for MiniMac\_27:  
(Start: 27 @26217 has 502 MA's), (30, 26262), (35, 26286), (61, 26469),

Gene: Miniwave\_33 Start: 31344, Stop: 31727, Start Num: 27  
Candidate Starts for Miniwave\_33:  
(Start: 27 @31344 has 502 MA's), (37, 31422), (40, 31449), (48, 31512), (66, 31647), (79, 31686),

Gene: Miramae\_9 Start: 5393, Stop: 5845, Start Num: 27  
Candidate Starts for Miramae\_9:  
(Start: 27 @5393 has 502 MA's), (35, 5462), (48, 5564), (50, 5570), (59, 5636), (66, 5699), (74, 5732),  
(84, 5774),

Gene: Misfit\_33 Start: 31234, Stop: 31617, Start Num: 27  
Candidate Starts for Misfit\_33:  
(Start: 27 @31234 has 502 MA's), (37, 31312), (40, 31339), (48, 31402), (66, 31537), (79, 31576),

Gene: MissWhite\_10 Start: 5274, Stop: 5672, Start Num: 27  
Candidate Starts for MissWhite\_10:  
(Start: 27 @5274 has 502 MA's), (50, 5451), (55, 5493),

Gene: Moldemort\_34 Start: 30889, Stop: 31272, Start Num: 27  
Candidate Starts for Moldemort\_34:  
(Start: 27 @30889 has 502 MA's), (37, 30967), (40, 30994), (48, 31057), (66, 31192), (79, 31231),

Gene: Moostard\_27 Start: 26437, Stop: 26853, Start Num: 27  
Candidate Starts for Moostard\_27:  
(Start: 27 @26437 has 502 MA's), (30, 26482), (32, 26494), (35, 26506), (44, 26569), (57, 26668), (61,  
26689), (81, 26794),

Gene: Morpher26\_9 Start: 5429, Stop: 5890, Start Num: 27  
Candidate Starts for Morpher26\_9:  
(Start: 27 @5429 has 502 MA's), (35, 5498), (48, 5600), (58, 5663), (59, 5672), (64, 5723), (66, 5735),  
(92, 5858),

Gene: Morrow\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Morrow\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Mosby\_32 Start: 30651, Stop: 31034, Start Num: 27  
Candidate Starts for Mosby\_32:  
(Start: 27 @30651 has 502 MA's), (37, 30729), (40, 30756), (48, 30819), (66, 30954), (79, 30993),

Gene: MsGreen\_27 Start: 26434, Stop: 26850, Start Num: 27  
Candidate Starts for MsGreen\_27:  
(Start: 27 @26434 has 502 MA's), (30, 26479), (32, 26491), (35, 26503), (44, 26566), (57, 26665), (61,  
26686), (81, 26791),

Gene: Mulciber\_11 Start: 7624, Stop: 8007, Start Num: 27  
Candidate Starts for Mulciber\_11:  
(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),



Gene: Munch\_11 Start: 7621, Stop: 8007, Start Num: 27  
Candidate Starts for Munch\_11:  
(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: Mundrea\_9 Start: 5391, Stop: 5843, Start Num: 27  
Candidate Starts for Mundrea\_9:  
(21, 5298), (Start: 27 @5391 has 502 MA's), (35, 5460), (48, 5562), (50, 5568), (59, 5634), (66, 5697),  
(84, 5772),

Gene: Murica\_32 Start: 31131, Stop: 31514, Start Num: 27  
Candidate Starts for Murica\_32:  
(Start: 27 @31131 has 502 MA's), (37, 31209), (40, 31236), (48, 31299), (66, 31434), (79, 31473),

Gene: Murphy\_34 Start: 31126, Stop: 31509, Start Num: 27  
Candidate Starts for Murphy\_34:  
(Start: 27 @31126 has 502 MA's), (37, 31204), (40, 31231), (48, 31294), (66, 31429), (79, 31468),

Gene: MyraDee\_8 Start: 4622, Stop: 5008, Start Num: 27  
Candidate Starts for MyraDee\_8:  
(Start: 27 @4622 has 502 MA's), (37, 4700), (38, 4703), (54, 4838), (61, 4877),

Gene: Myrale\_33 Start: 31010, Stop: 31393, Start Num: 27  
Candidate Starts for Myrale\_33:  
(Start: 27 @31010 has 502 MA's), (37, 31088), (40, 31115), (48, 31178), (66, 31313), (79, 31352),

Gene: Myxus\_12 Start: 7723, Stop: 8109, Start Num: 27  
Candidate Starts for Myxus\_12:  
(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: NaSiaTalie\_10 Start: 6047, Stop: 6484, Start Num: 27  
Candidate Starts for NaSiaTalie\_10:  
(21, 5951), (Start: 27 @6047 has 502 MA's), (30, 6092), (50, 6224), (65, 6347), (71, 6371),

Gene: Nairb\_28 Start: 25159, Stop: 25599, Start Num: 27  
Candidate Starts for Nairb\_28:  
(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58,  
25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: Naji\_13 Start: 6175, Stop: 6600, Start Num: 27  
Candidate Starts for Naji\_13:  
(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: Nala\_33 Start: 31165, Stop: 31548, Start Num: 27  
Candidate Starts for Nala\_33:  
(Start: 27 @31165 has 502 MA's), (37, 31243), (40, 31270), (48, 31333), (66, 31468), (79, 31507),

Gene: Nebs\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Nebs\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Neeharika16\_14 Start: 7065, Stop: 7499, Start Num: 27  
Candidate Starts for Neeharika16\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: NelitzaMV\_33 Start: 31215, Stop: 31598, Start Num: 27

Candidate Starts for NelitzaMV\_33:

(Start: 27 @31215 has 502 MA's), (37, 31293), (40, 31320), (66, 31518), (79, 31557),

Gene: Nemo27\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Nemo27\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: Nenae\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for Nenae\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (48, 23563), (78, 23752),

Gene: Newrala\_14 Start: 7065, Stop: 7499, Start Num: 27

Candidate Starts for Newrala\_14:

(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Nicholas\_27 Start: 26434, Stop: 26850, Start Num: 27

Candidate Starts for Nicholas\_27:

(Start: 27 @26434 has 502 MA's), (30, 26479), (32, 26491), (35, 26503), (44, 26566), (57, 26665), (61, 26686), (81, 26791),

Gene: Nimrod\_33 Start: 31389, Stop: 31772, Start Num: 27

Candidate Starts for Nimrod\_33:

(Start: 27 @31389 has 502 MA's), (37, 31467), (40, 31494), (48, 31557), (66, 31692), (79, 31731),

Gene: NoSleep\_34 Start: 30886, Stop: 31269, Start Num: 27

Candidate Starts for NoSleep\_34:

(Start: 27 @30886 has 502 MA's), (37, 30964), (40, 30991), (48, 31054), (66, 31189), (79, 31228),

Gene: Noelle\_9 Start: 5486, Stop: 5947, Start Num: 27

Candidate Starts for Noelle\_9:

(Start: 27 @5486 has 502 MA's), (44, 5618), (50, 5663), (52, 5693), (55, 5708), (59, 5729), (65, 5789), (66, 5792),

Gene: NorthStar\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for NorthStar\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: NotAPhaseMom\_9 Start: 5424, Stop: 5885, Start Num: 27

Candidate Starts for NotAPhaseMom\_9:

(Start: 27 @5424 has 502 MA's), (44, 5556), (50, 5601), (52, 5631), (55, 5646), (59, 5667), (65, 5727), (66, 5730),

Gene: Nyxis\_9 Start: 5402, Stop: 5827, Start Num: 27

Candidate Starts for Nyxis\_9:

(Start: 27 @5402 has 502 MA's), (50, 5579), (52, 5609), (64, 5696), (65, 5705), (66, 5708), (71, 5729), (77, 5738), (91, 5792),

Gene: OKaNui\_9 Start: 5185, Stop: 5646, Start Num: 27

Candidate Starts for OKaNui\_9:

(Start: 27 @5185 has 502 MA's), (44, 5317), (50, 5362), (52, 5392), (55, 5407), (59, 5428), (65, 5488), (66, 5491),

Gene: Obama12\_9 Start: 5408, Stop: 5860, Start Num: 27

Candidate Starts for Obama12\_9:

(21, 5315), (Start: 27 @5408 has 502 MA's), (35, 5477), (48, 5579), (50, 5585), (59, 5651), (66, 5714), (84, 5789),

Gene: Odin\_10 Start: 5885, Stop: 6283, Start Num: 26

Candidate Starts for Odin\_10:

(Start: 26 @5885 has 5 MA's), (Start: 27 @5888 has 502 MA's), (57, 6128), (60, 6146), (67, 6212), (75, 6230),

Gene: Ohfah\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Ohfah\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Onglai\_11 Start: 6089, Stop: 6475, Start Num: 27

Candidate Starts for Onglai\_11:

(22, 6014), (Start: 27 @6089 has 502 MA's), (49, 6260), (56, 6320),

Gene: Orange\_11 Start: 7621, Stop: 8007, Start Num: 27

Candidate Starts for Orange\_11:

(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: OrionPax\_34 Start: 30892, Stop: 31275, Start Num: 27

Candidate Starts for OrionPax\_34:

(Start: 27 @30892 has 502 MA's), (37, 30970), (40, 30997), (48, 31060), (66, 31195), (79, 31234),

Gene: PP\_19 Start: 11239, Stop: 11685, Start Num: 27

Candidate Starts for PP\_19:

(Start: 27 @11239 has 502 MA's), (36, 11311), (48, 11410), (50, 11416), (54, 11452), (59, 11482), (64, 11533), (66, 11545), (68, 11557),

Gene: PackMan\_12 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for PackMan\_12:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Palestino\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Palestino\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Palpatine\_33 Start: 31161, Stop: 31544, Start Num: 27

Candidate Starts for Palpatine\_33:

(Start: 27 @31161 has 502 MA's), (37, 31239), (40, 31266), (48, 31329), (66, 31464), (79, 31503),

Gene: Panchino\_26 Start: 23349, Stop: 23753, Start Num: 25

Candidate Starts for Panchino\_26:

(Start: 25 @23349 has 4 MA's), (Start: 27 @23355 has 502 MA's), (42, 23469), (62, 23607), (78, 23712), (85, 23736),

Gene: Paperbeatsrock\_35 Start: 32127, Stop: 32510, Start Num: 27

Candidate Starts for Paperbeatsrock\_35:

(Start: 27 @32127 has 502 MA's), (37, 32205), (40, 32232), (48, 32295), (66, 32430), (79, 32469),

Gene: Parmesanjohn\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Parmesanjohn\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Pat3\_32 Start: 29873, Stop: 30256, Start Num: 27

Candidate Starts for Pat3\_32:

(Start: 27 @29873 has 502 MA's), (37, 29951), (40, 29978), (48, 30041), (66, 30176), (79, 30215),

Gene: Peaches\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Peaches\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Perplexer\_9 Start: 5423, Stop: 5884, Start Num: 27

Candidate Starts for Perplexer\_9:

(Start: 27 @5423 has 502 MA's), (35, 5492), (58, 5657), (59, 5666), (64, 5717), (66, 5729), (92, 5852),

Gene: PeterPeter\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for PeterPeter\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Petersenfast\_10 Start: 7624, Stop: 8010, Start Num: 27

Candidate Starts for Petersenfast\_10:

(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),

Gene: PetiteSangsue\_9 Start: 5429, Stop: 5890, Start Num: 27

Candidate Starts for PetiteSangsue\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (92, 5858),

Gene: Petra64142\_35 Start: 31607, Stop: 31990, Start Num: 27

Candidate Starts for Petra64142\_35:

(Start: 27 @31607 has 502 MA's), (37, 31685), (40, 31712), (48, 31775), (66, 31910), (79, 31949),

Gene: Ph8s\_12 Start: 5847, Stop: 6245, Start Num: 27

Candidate Starts for Ph8s\_12:

(Start: 27 @5847 has 502 MA's), (57, 6087), (60, 6105), (67, 6171), (75, 6189),

Gene: Phacado\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Phacado\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: Phaded\_13 Start: 8049, Stop: 8543, Start Num: 27

Candidate Starts for Phaded\_13:

(17, 7872), (Start: 27 @8049 has 502 MA's), (31, 8103), (50, 8226), (55, 8268), (64, 8340), (71, 8373),

Gene: Phaeder\_12 Start: 7723, Stop: 8109, Start Num: 27  
Candidate Starts for Phaeder\_12:  
(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Phaja\_33 Start: 31323, Stop: 31706, Start Num: 27  
Candidate Starts for Phaja\_33:  
(Start: 27 @31323 has 502 MA's), (37, 31401), (40, 31428), (48, 31491), (66, 31626), (79, 31665),

Gene: PhancyPhin\_26 Start: 23386, Stop: 23790, Start Num: 27  
Candidate Starts for PhancyPhin\_26:  
(4, 22765), (5, 22768), (7, 22840), (10, 22861), (11, 22954), (12, 22981), (Start: 27 @23386 has 502 MA's), (48, 23560), (78, 23749),

Gene: Pharsalus\_34 Start: 31927, Stop: 32310, Start Num: 27  
Candidate Starts for Pharsalus\_34:  
(Start: 27 @31927 has 502 MA's), (37, 32005), (40, 32032), (48, 32095), (66, 32230), (79, 32269),

Gene: PhatBacter\_33 Start: 31175, Stop: 31558, Start Num: 27  
Candidate Starts for PhatBacter\_33:  
(Start: 27 @31175 has 502 MA's), (37, 31253), (40, 31280), (48, 31343), (66, 31478), (79, 31517),

Gene: Phaux\_32 Start: 31173, Stop: 31556, Start Num: 27  
Candidate Starts for Phaux\_32:  
(Start: 27 @31173 has 502 MA's), (37, 31251), (40, 31278), (48, 31341), (66, 31476), (79, 31515),

Gene: Phelipe\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Phelipe\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Phighter1804\_9 Start: 5405, Stop: 5857, Start Num: 27  
Candidate Starts for Phighter1804\_9:  
(21, 5312), (Start: 27 @5405 has 502 MA's), (35, 5474), (50, 5582), (59, 5648), (66, 5711), (84, 5786), (91, 5816),

Gene: Philonius\_29 Start: 24330, Stop: 24734, Start Num: 27  
Candidate Starts for Philonius\_29:  
(4, 23709), (5, 23712), (7, 23784), (10, 23805), (Start: 27 @24330 has 502 MA's), (62, 24588), (63, 24618), (72, 24660), (85, 24717),

Gene: Phlei\_7 Start: 7530, Stop: 7898, Start Num: 27  
Candidate Starts for Phlei\_7:  
(13, 7212), (Start: 27 @7530 has 502 MA's), (57, 7752), (58, 7755), (62, 7776),

Gene: Phloss\_26 Start: 23766, Stop: 24170, Start Num: 27  
Candidate Starts for Phloss\_26:  
(Start: 27 @23766 has 502 MA's), (62, 24024), (63, 24054), (72, 24096), (85, 24153),

Gene: Phonnegut\_12 Start: 7756, Stop: 8142, Start Num: 27  
Candidate Starts for Phonnegut\_12:  
(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Phontbonne\_9 Start: 5400, Stop: 5825, Start Num: 27  
Candidate Starts for Phontbonne\_9:  
(Start: 27 @5400 has 502 MA's), (50, 5577), (52, 5607), (64, 5694), (65, 5703), (66, 5706), (71, 5727),  
(77, 5736), (91, 5790),

Gene: Phrux\_33 Start: 30888, Stop: 31271, Start Num: 27  
Candidate Starts for Phrux\_33:  
(Start: 27 @30888 has 502 MA's), (37, 30966), (40, 30993), (48, 31056), (66, 31191), (79, 31230),

Gene: Pioneer\_12 Start: 7756, Stop: 8142, Start Num: 27  
Candidate Starts for Pioneer\_12:  
(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Pipcraft\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Pipcraft\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Pipsqueaks\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Pipsqueaks\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Piro94\_11 Start: 6507, Stop: 6944, Start Num: 27  
Candidate Starts for Piro94\_11:  
(21, 6411), (Start: 27 @6507 has 502 MA's), (30, 6552), (65, 6807),

Gene: Pmask\_14 Start: 7065, Stop: 7499, Start Num: 27  
Candidate Starts for Pmask\_14:  
(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Policronamos\_34 Start: 31173, Stop: 31556, Start Num: 27  
Candidate Starts for Policronamos\_34:  
(Start: 27 @31173 has 502 MA's), (37, 31251), (40, 31278), (48, 31341), (66, 31476), (79, 31515),

Gene: Polymorphads\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Polymorphads\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Pomar16\_13 Start: 6216, Stop: 6641, Start Num: 27  
Candidate Starts for Pomar16\_13:  
(Start: 27 @6216 has 502 MA's), (55, 6435), (61, 6465),

Gene: Porky\_33 Start: 30984, Stop: 31367, Start Num: 27  
Candidate Starts for Porky\_33:  
(Start: 27 @30984 has 502 MA's), (37, 31062), (40, 31089), (48, 31152), (66, 31287), (79, 31326),

Gene: Power\_10 Start: 5938, Stop: 6375, Start Num: 27  
Candidate Starts for Power\_10:  
(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241),  
(79, 6283), (87, 6304),

Gene: Priamo\_14 Start: 7083, Stop: 7514, Start Num: 27

Candidate Starts for Priamo\_14:

(Start: 27 @7083 has 502 MA's), (55, 7302), (58, 7314), (59, 7323), (69, 7398),

Gene: Priya\_12 Start: 7754, Stop: 8140, Start Num: 27

Candidate Starts for Priya\_12:

(22, 7679), (Start: 27 @7754 has 502 MA's), (49, 7925), (56, 7985),

Gene: Pukovnik\_12 Start: 7625, Stop: 8104, Start Num: 26

Candidate Starts for Pukovnik\_12:

(Start: 26 @7625 has 5 MA's), (50, 7802), (55, 7844), (58, 7856), (71, 7949),

Gene: Pumbaa\_9 Start: 5404, Stop: 5856, Start Num: 27

Candidate Starts for Pumbaa\_9:

(21, 5311), (Start: 27 @5404 has 502 MA's), (35, 5473), (48, 5575), (50, 5581), (59, 5647), (66, 5710), (84, 5785),

Gene: Pumpkin\_35 Start: 31224, Stop: 31607, Start Num: 27

Candidate Starts for Pumpkin\_35:

(Start: 27 @31224 has 502 MA's), (37, 31302), (40, 31329), (48, 31392), (66, 31527), (79, 31566),

Gene: Purgamenstris\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for Purgamenstris\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (48, 23563), (78, 23752),

Gene: Purky\_27 Start: 24726, Stop: 25124, Start Num: 25

Candidate Starts for Purky\_27:

(Start: 25 @24726 has 4 MA's), (Start: 27 @24732 has 502 MA's), (42, 24846), (48, 24900), (62, 24984), (64, 25023),

Gene: Qobbit\_12 Start: 7753, Stop: 8139, Start Num: 27

Candidate Starts for Qobbit\_12:

(22, 7678), (Start: 27 @7753 has 502 MA's), (49, 7924), (56, 7984),

Gene: Quallification\_34 Start: 31353, Stop: 31736, Start Num: 27

Candidate Starts for Quallification\_34:

(Start: 27 @31353 has 502 MA's), (37, 31431), (40, 31458), (48, 31521), (66, 31656), (79, 31695),

Gene: QueenBeesly\_10 Start: 5938, Stop: 6375, Start Num: 27

Candidate Starts for QueenBeesly\_10:

(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241), (79, 6283), (87, 6304),

Gene: Quokka\_8 Start: 5207, Stop: 5602, Start Num: 27

Candidate Starts for Quokka\_8:

(Start: 27 @5207 has 502 MA's), (44, 5339), (55, 5426), (61, 5456), (83, 5573),

Gene: Rachaly\_13 Start: 7710, Stop: 8132, Start Num: 27

Candidate Starts for Rachaly\_13:

(21, 7617), (Start: 27 @7710 has 502 MA's), (30, 7755), (48, 7881), (55, 7929), (61, 7959),

Gene: Rakim\_34 Start: 31253, Stop: 31636, Start Num: 27

Candidate Starts for Rakim\_34:

(Start: 27 @31253 has 502 MA's), (37, 31331), (40, 31358), (48, 31421), (66, 31556), (79, 31595),

Gene: Raymond7\_26 Start: 23716, Stop: 24120, Start Num: 27

Candidate Starts for Raymond7\_26:

(4, 23095), (5, 23098), (7, 23170), (10, 23191), (11, 23284), (12, 23311), (18, 23533), (Start: 27 @23716 has 502 MA's), (48, 23890), (62, 23974), (78, 24079), (85, 24103),

Gene: Rebel\_26 Start: 23178, Stop: 23582, Start Num: 27

Candidate Starts for Rebel\_26:

(4, 22557), (5, 22560), (7, 22632), (10, 22653), (11, 22746), (12, 22773), (Start: 27 @23178 has 502 MA's), (62, 23436), (63, 23466), (72, 23508), (85, 23565),

Gene: Redi\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for Redi\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (48, 23563), (78, 23752),

Gene: Relief\_9 Start: 5421, Stop: 5882, Start Num: 27

Candidate Starts for Relief\_9:

(Start: 27 @5421 has 502 MA's), (44, 5553), (50, 5598), (52, 5628), (55, 5643), (59, 5664), (65, 5724), (66, 5727),

Gene: Rifter\_14 Start: 7038, Stop: 7469, Start Num: 27

Candidate Starts for Rifter\_14:

(Start: 27 @7038 has 502 MA's), (55, 7257), (58, 7269), (59, 7278), (69, 7353),

Gene: Rimmer\_32 Start: 30713, Stop: 31096, Start Num: 27

Candidate Starts for Rimmer\_32:

(Start: 27 @30713 has 502 MA's), (37, 30791), (40, 30818), (48, 30881), (66, 31016), (79, 31055),

Gene: RiverMonster\_33 Start: 30902, Stop: 31285, Start Num: 27

Candidate Starts for RiverMonster\_33:

(Start: 27 @30902 has 502 MA's), (37, 30980), (40, 31007), (48, 31070), (66, 31205), (79, 31244),

Gene: Roksolana\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Roksolana\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Romney\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Romney\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: RonRayGun\_28 Start: 25159, Stop: 25599, Start Num: 27

Candidate Starts for RonRayGun\_28:

(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58, 25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: Roosevelt\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Roosevelt\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),



Gene: Rosa24\_8 Start: 5404, Stop: 5856, Start Num: 27

Candidate Starts for Rosa24\_8:

(21, 5311), (Start: 27 @5404 has 502 MA's), (35, 5473), (48, 5575), (50, 5581), (59, 5647), (66, 5710), (84, 5785),

Gene: Ruin\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Ruin\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: RyeScarlet\_13 Start: 7759, Stop: 8145, Start Num: 27

Candidate Starts for RyeScarlet\_13:

(22, 7684), (Start: 27 @7759 has 502 MA's), (49, 7930), (56, 7990),

Gene: Sabertooth\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Sabertooth\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Sachima\_10 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for Sachima\_10:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Saints25\_34 Start: 30805, Stop: 31188, Start Num: 27

Candidate Starts for Saints25\_34:

(Start: 27 @30805 has 502 MA's), (37, 30883), (40, 30910), (48, 30973), (66, 31108), (79, 31147),

Gene: Salz\_11 Start: 7621, Stop: 8004, Start Num: 27

Candidate Starts for Salz\_11:

(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: Samty\_27 Start: 26437, Stop: 26853, Start Num: 27

Candidate Starts for Samty\_27:

(Start: 27 @26437 has 502 MA's), (30, 26482), (32, 26494), (35, 26506), (44, 26569), (57, 26668), (61, 26689), (81, 26794),

Gene: Sassay\_32 Start: 30651, Stop: 31034, Start Num: 27

Candidate Starts for Sassay\_32:

(Start: 27 @30651 has 502 MA's), (37, 30729), (40, 30756), (48, 30819), (66, 30954), (79, 30993),

Gene: Scamp\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Scamp\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Scherzo\_12 Start: 7756, Stop: 8142, Start Num: 27

Candidate Starts for Scherzo\_12:

(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Schnauzer\_29 Start: 24339, Stop: 24743, Start Num: 27

Candidate Starts for Schnauzer\_29:

(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Scitech\_26 Start: 23516, Stop: 23920, Start Num: 27  
Candidate Starts for Scitech\_26:  
(Start: 27 @23516 has 502 MA's), (62, 23774), (63, 23804), (72, 23846), (85, 23903),

Gene: SemperFi\_12 Start: 6366, Stop: 6803, Start Num: 27  
Candidate Starts for SemperFi\_12:  
(21, 6270), (Start: 27 @6366 has 502 MA's), (31, 6420), (50, 6543), (55, 6585), (59, 6606), (66, 6669),  
(79, 6711), (87, 6732),

Gene: Serenity\_9 Start: 5207, Stop: 5602, Start Num: 27  
Candidate Starts for Serenity\_9:  
(Start: 27 @5207 has 502 MA's), (44, 5339), (55, 5426), (61, 5456), (83, 5573),

Gene: Shaka\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Shaka\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Sham4\_11 Start: 7624, Stop: 8010, Start Num: 27  
Candidate Starts for Sham4\_11:  
(Start: 27 @7624 has 502 MA's), (35, 7693), (61, 7873), (68, 7939),

Gene: ShamWow\_33 Start: 31147, Stop: 31530, Start Num: 27  
Candidate Starts for ShamWow\_33:  
(Start: 27 @31147 has 502 MA's), (37, 31225), (40, 31252), (48, 31315), (66, 31450), (79, 31489),

Gene: SheaKeira\_11 Start: 5924, Stop: 6310, Start Num: 27  
Candidate Starts for SheaKeira\_11:  
(Start: 27 @5924 has 502 MA's), (53, 6137), (55, 6149), (62, 6182), (73, 6254),

Gene: SheldonCooper\_9 Start: 5407, Stop: 5859, Start Num: 27  
Candidate Starts for SheldonCooper\_9:  
(21, 5314), (Start: 27 @5407 has 502 MA's), (35, 5476), (48, 5578), (50, 5584), (59, 5650), (66, 5713),  
(84, 5788),

Gene: ShereKhan\_35 Start: 32130, Stop: 32513, Start Num: 27  
Candidate Starts for ShereKhan\_35:  
(Start: 27 @32130 has 502 MA's), (37, 32208), (40, 32235), (48, 32298), (66, 32433), (79, 32472),

Gene: ShrimpFriedEgg\_26 Start: 23389, Stop: 23793, Start Num: 27  
Candidate Starts for ShrimpFriedEgg\_26:  
(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502  
MA's), (48, 23563), (78, 23752),

Gene: Shweta\_26 Start: 23517, Stop: 23921, Start Num: 27  
Candidate Starts for Shweta\_26:  
(4, 22896), (5, 22899), (7, 22971), (10, 22992), (11, 23085), (12, 23112), (Start: 27 @23517 has 502  
MA's), (62, 23775), (63, 23805), (72, 23847), (85, 23904),

Gene: Shygu2\_9 Start: 5423, Stop: 5884, Start Num: 27  
Candidate Starts for Shygu2\_9:  
(Start: 27 @5423 has 502 MA's), (35, 5492), (48, 5594), (58, 5657), (59, 5666), (64, 5717), (66, 5729),  
(92, 5852),

Gene: Silvafighter\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Silvafighter\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Silvy\_29 Start: 24340, Stop: 24744, Start Num: 27  
Candidate Starts for Silvy\_29:  
(Start: 27 @24340 has 502 MA's), (62, 24598), (63, 24628), (72, 24670), (85, 24727),

Gene: Simpliphy\_34 Start: 30892, Stop: 31275, Start Num: 27  
Candidate Starts for Simpliphy\_34:  
(Start: 27 @30892 has 502 MA's), (37, 30970), (40, 30997), (48, 31060), (66, 31195), (79, 31234),

Gene: SirDuracell\_32 Start: 29812, Stop: 30195, Start Num: 27  
Candidate Starts for SirDuracell\_32:  
(Start: 27 @29812 has 502 MA's), (37, 29890), (40, 29917), (48, 29980), (66, 30115), (79, 30154),

Gene: SkinnyPete\_26 Start: 23379, Stop: 23783, Start Num: 27  
Candidate Starts for SkinnyPete\_26:  
(Start: 27 @23379 has 502 MA's), (62, 23637), (63, 23667), (72, 23709), (85, 23766),

Gene: Skipitt\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for Skipitt\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: Smeagan\_12 Start: 6431, Stop: 6871, Start Num: 27  
Candidate Starts for Smeagan\_12:  
(21, 6344), (Start: 27 @6431 has 502 MA's), (30, 6476), (71, 6755), (76, 6776),

Gene: SmellyB\_14 Start: 7065, Stop: 7496, Start Num: 27  
Candidate Starts for SmellyB\_14:  
(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Smurph\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Smurph\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: SnapTap\_10 Start: 5938, Stop: 6375, Start Num: 27  
Candidate Starts for SnapTap\_10:  
(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241),  
(79, 6283), (87, 6304),

Gene: Snape\_11 Start: 7627, Stop: 8010, Start Num: 27  
Candidate Starts for Snape\_11:  
(Start: 27 @7627 has 502 MA's), (35, 7696), (61, 7876), (68, 7942),

Gene: Snekmaggedon\_26 Start: 23389, Stop: 23793, Start Num: 27  
Candidate Starts for Snekmaggedon\_26:  
(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502  
MA's), (62, 23647), (63, 23677), (72, 23719), (85, 23776),

Gene: Snenia\_27 Start: 26435, Stop: 26851, Start Num: 27

Candidate Starts for Snenia\_27:

(Start: 27 @26435 has 502 MA's), (30, 26480), (32, 26492), (35, 26504), (44, 26567), (57, 26666), (61, 26687), (81, 26792),

Gene: SophKB\_33 Start: 31146, Stop: 31529, Start Num: 27

Candidate Starts for SophKB\_33:

(Start: 27 @31146 has 502 MA's), (37, 31224), (40, 31251), (48, 31314), (66, 31449), (79, 31488),

Gene: SororFago\_10 Start: 6135, Stop: 6521, Start Num: 27

Candidate Starts for SororFago\_10:

(19, 5961), (20, 6003), (Start: 27 @6135 has 502 MA's), (48, 6303), (53, 6348), (57, 6369), (60, 6387), (62, 6393), (67, 6453), (68, 6456),

Gene: Sotrice96\_33 Start: 31101, Stop: 31484, Start Num: 27

Candidate Starts for Sotrice96\_33:

(Start: 27 @31101 has 502 MA's), (37, 31179), (40, 31206), (48, 31269), (66, 31404), (79, 31443),

Gene: Sparxx\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Sparxx\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Spino\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Spino\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: SpongeBob\_26 Start: 23389, Stop: 23793, Start Num: 27

Candidate Starts for SpongeBob\_26:

(4, 22768), (5, 22771), (7, 22843), (10, 22864), (11, 22957), (12, 22984), (Start: 27 @23389 has 502 MA's), (62, 23647), (63, 23677), (72, 23719), (85, 23776),

Gene: Spouty\_12 Start: 7753, Stop: 8139, Start Num: 27

Candidate Starts for Spouty\_12:

(22, 7678), (Start: 27 @7753 has 502 MA's), (49, 7924), (56, 7984),

Gene: Squirty\_27 Start: 23877, Stop: 24275, Start Num: 25

Candidate Starts for Squirty\_27:

(Start: 25 @23877 has 4 MA's), (Start: 27 @23883 has 502 MA's), (31, 23934), (42, 23997), (48, 24051), (62, 24135), (63, 24165), (77, 24228),

Gene: Stank\_36 Start: 31653, Stop: 32036, Start Num: 27

Candidate Starts for Stank\_36:

(Start: 27 @31653 has 502 MA's), (37, 31731), (40, 31758), (48, 31821), (66, 31956), (79, 31995),

Gene: StarStuff\_13 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for StarStuff\_13:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: Stark\_34 Start: 30905, Stop: 31288, Start Num: 27

Candidate Starts for Stark\_34:

(Start: 27 @30905 has 502 MA's), (37, 30983), (40, 31010), (48, 31073), (66, 31208), (79, 31247),

Gene: StellaBean\_33 Start: 31146, Stop: 31529, Start Num: 27  
Candidate Starts for StellaBean\_33:  
(Start: 27 @31146 has 502 MA's), (37, 31224), (40, 31251), (48, 31314), (66, 31449), (79, 31488),

Gene: Stink\_9 Start: 5394, Stop: 5846, Start Num: 27  
Candidate Starts for Stink\_9:  
(Start: 27 @5394 has 502 MA's), (35, 5463), (48, 5565), (50, 5571), (59, 5637), (66, 5700), (74, 5733),  
(84, 5775),

Gene: StolenFromERC\_35 Start: 31137, Stop: 31520, Start Num: 27  
Candidate Starts for StolenFromERC\_35:  
(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Sunhee\_9 Start: 6154, Stop: 6540, Start Num: 27  
Candidate Starts for Sunhee\_9:  
(Start: 27 @6154 has 502 MA's), (48, 6322), (50, 6328), (57, 6388), (60, 6406), (62, 6412), (67, 6472),  
(68, 6475),

Gene: SuperAwesome\_14 Start: 7065, Stop: 7499, Start Num: 27  
Candidate Starts for SuperAwesome\_14:  
(Start: 27 @7065 has 502 MA's), (41, 7179), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: SuperCallie99\_14 Start: 7066, Stop: 7500, Start Num: 27  
Candidate Starts for SuperCallie99\_14:  
(Start: 27 @7066 has 502 MA's), (41, 7180), (55, 7285), (58, 7297), (59, 7306), (69, 7381),

Gene: Superchunk\_10 Start: 5746, Stop: 6141, Start Num: 27  
Candidate Starts for Superchunk\_10:  
(Start: 27 @5746 has 502 MA's), (57, 5986), (60, 6004), (67, 6070), (75, 6088),

Gene: SweetiePie\_10 Start: 5938, Stop: 6375, Start Num: 27  
Candidate Starts for SweetiePie\_10:  
(21, 5842), (Start: 27 @5938 has 502 MA's), (31, 5992), (50, 6115), (55, 6157), (59, 6178), (66, 6241),  
(79, 6283), (87, 6304),

Gene: SwirlSquare\_13 Start: 5878, Stop: 6273, Start Num: 27  
Candidate Starts for SwirlSquare\_13:  
(Start: 27 @5878 has 502 MA's), (31, 5932), (35, 5947), (54, 6100), (57, 6118), (60, 6136), (67, 6202),  
(75, 6220),

Gene: TBrady12\_35 Start: 31137, Stop: 31520, Start Num: 27  
Candidate Starts for TBrady12\_35:  
(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Tapioca\_29 Start: 24339, Stop: 24743, Start Num: 27  
Candidate Starts for Tapioca\_29:  
(Start: 27 @24339 has 502 MA's), (62, 24597), (63, 24627), (72, 24669), (85, 24726),

Gene: Taquarus\_9 Start: 5423, Stop: 5884, Start Num: 27  
Candidate Starts for Taquarus\_9:  
(Start: 27 @5423 has 502 MA's), (44, 5555), (50, 5600), (52, 5630), (55, 5645), (59, 5666), (65, 5726),  
(66, 5729),

Gene: Tarkin\_35 Start: 32136, Stop: 32519, Start Num: 27  
Candidate Starts for Tarkin\_35:  
(Start: 27 @32136 has 502 MA's), (37, 32214), (40, 32241), (48, 32304), (66, 32439), (79, 32478),

Gene: TarsusIV\_10 Start: 5976, Stop: 6443, Start Num: 27  
Candidate Starts for TarsusIV\_10:  
(21, 5883), (Start: 27 @5976 has 502 MA's), (30, 6021), (61, 6225), (66, 6279), (76, 6321), (85, 6369),

Gene: TeardropMSU\_32 Start: 31047, Stop: 31430, Start Num: 27  
Candidate Starts for TeardropMSU\_32:  
(Start: 27 @31047 has 502 MA's), (37, 31125), (40, 31152), (48, 31215), (66, 31350), (79, 31389),

Gene: Teaspoon\_34 Start: 31100, Stop: 31483, Start Num: 27  
Candidate Starts for Teaspoon\_34:  
(Start: 27 @31100 has 502 MA's), (37, 31178), (40, 31205), (48, 31268), (66, 31403), (79, 31442),

Gene: Terminus\_33 Start: 31234, Stop: 31617, Start Num: 27  
Candidate Starts for Terminus\_33:  
(Start: 27 @31234 has 502 MA's), (37, 31312), (40, 31339), (48, 31402), (66, 31537), (79, 31576),

Gene: Thanksgivukkah\_9 Start: 5425, Stop: 5886, Start Num: 27  
Candidate Starts for Thanksgivukkah\_9:  
(Start: 27 @5425 has 502 MA's), (44, 5557), (50, 5602), (52, 5632), (55, 5647), (59, 5668), (65, 5728),  
(66, 5731),

Gene: Thresher\_34 Start: 31901, Stop: 32284, Start Num: 27  
Candidate Starts for Thresher\_34:  
(Start: 27 @31901 has 502 MA's), (37, 31979), (40, 32006), (48, 32069), (66, 32204), (79, 32243),

Gene: Timothy\_11 Start: 7621, Stop: 8007, Start Num: 27  
Candidate Starts for Timothy\_11:  
(Start: 27 @7621 has 502 MA's), (35, 7690), (61, 7870), (68, 7936),

Gene: TinaFeyge\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for TinaFeyge\_9:  
(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723),  
(66, 5726),

Gene: TinyTimmy\_11 Start: 7673, Stop: 8059, Start Num: 27  
Candidate Starts for TinyTimmy\_11:  
(Start: 27 @7673 has 502 MA's), (35, 7742), (61, 7922), (68, 7988),

Gene: Tinybot\_8 Start: 5409, Stop: 5861, Start Num: 27  
Candidate Starts for Tinybot\_8:  
(21, 5316), (Start: 27 @5409 has 502 MA's), (35, 5478), (48, 5580), (50, 5586), (59, 5652), (66, 5715),  
(84, 5790),

Gene: TipsytheTRex\_9 Start: 5160, Stop: 5561, Start Num: 27  
Candidate Starts for TipsytheTRex\_9:  
(Start: 27 @5160 has 502 MA's), (42, 5277), (44, 5292), (55, 5379), (61, 5409),

Gene: TiroTheta9\_9 Start: 5420, Stop: 5881, Start Num: 27  
Candidate Starts for TiroTheta9\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Toaka\_10 Start: 6100, Stop: 6489, Start Num: 27

Candidate Starts for Toaka\_10:

(22, 6025), (Start: 27 @6100 has 502 MA's), (48, 6268), (60, 6355), (62, 6361),

Gene: Tomaszewski\_32 Start: 30744, Stop: 31127, Start Num: 27

Candidate Starts for Tomaszewski\_32:

(Start: 27 @30744 has 502 MA's), (37, 30822), (40, 30849), (48, 30912), (66, 31047), (79, 31086),

Gene: Tomathan\_13 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for Tomathan\_13:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: ToneTone\_13 Start: 6978, Stop: 7409, Start Num: 27

Candidate Starts for ToneTone\_13:

(Start: 27 @6978 has 502 MA's), (55, 7197), (58, 7209), (59, 7218), (69, 7293),

Gene: Tortellini\_27 Start: 25084, Stop: 25476, Start Num: 27

Candidate Starts for Tortellini\_27:

(1, 23986), (2, 24166), (3, 24202), (6, 24529), (8, 24547), (9, 24550), (Start: 25 @25078 has 4 MA's), (Start: 27 @25084 has 502 MA's), (42, 25198), (48, 25252), (62, 25336), (64, 25375), (77, 25429),

Gene: Toto\_33 Start: 31147, Stop: 31530, Start Num: 27

Candidate Starts for Toto\_33:

(Start: 27 @31147 has 502 MA's), (37, 31225), (40, 31252), (48, 31315), (66, 31450), (79, 31489),

Gene: Traaww1\_31 Start: 30785, Stop: 31168, Start Num: 27

Candidate Starts for Traaww1\_31:

(Start: 27 @30785 has 502 MA's), (37, 30863), (40, 30890), (48, 30953), (66, 31088), (79, 31127),

Gene: Travvers\_13 Start: 6175, Stop: 6600, Start Num: 27

Candidate Starts for Travvers\_13:

(Start: 27 @6175 has 502 MA's), (55, 6394), (61, 6424),

Gene: TroyPia\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for TroyPia\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Tubs\_12 Start: 7723, Stop: 8109, Start Num: 27

Candidate Starts for Tubs\_12:

(22, 7648), (Start: 27 @7723 has 502 MA's), (49, 7894), (56, 7954),

Gene: Tucker\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for Tucker\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Tuco\_34 Start: 31655, Stop: 32038, Start Num: 27

Candidate Starts for Tuco\_34:

(Start: 27 @31655 has 502 MA's), (37, 31733), (40, 31760), (48, 31823), (66, 31958), (79, 31997),

Gene: Turbido\_12 Start: 6434, Stop: 6898, Start Num: 27

Candidate Starts for Turbido\_12:

(Start: 27 @6434 has 502 MA's), (35, 6503), (50, 6611), (55, 6653), (57, 6662), (65, 6734), (71, 6758),

Gene: TygerBlood\_9 Start: 5422, Stop: 5883, Start Num: 27

Candidate Starts for TygerBlood\_9:

(Start: 27 @5422 has 502 MA's), (44, 5554), (50, 5599), (52, 5629), (55, 5644), (59, 5665), (65, 5725), (66, 5728),

Gene: Ugenie5\_9 Start: 7756, Stop: 8142, Start Num: 27

Candidate Starts for Ugenie5\_9:

(22, 7681), (Start: 27 @7756 has 502 MA's), (49, 7927), (56, 7987),

Gene: Ukulele\_33 Start: 30905, Stop: 31288, Start Num: 27

Candidate Starts for Ukulele\_33:

(Start: 27 @30905 has 502 MA's), (37, 30983), (40, 31010), (48, 31073), (66, 31208), (79, 31247),

Gene: Ulysses\_8 Start: 5148, Stop: 5600, Start Num: 27

Candidate Starts for Ulysses\_8:

(21, 5055), (Start: 27 @5148 has 502 MA's), (35, 5217), (48, 5319), (50, 5325), (59, 5391), (66, 5454), (84, 5529),

Gene: Updawg\_12 Start: 6492, Stop: 6929, Start Num: 27

Candidate Starts for Updawg\_12:

(21, 6396), (Start: 27 @6492 has 502 MA's), (30, 6537), (65, 6792), (71, 6816),

Gene: VA6\_10 Start: 5970, Stop: 6431, Start Num: 27

Candidate Starts for VA6\_10:

(19, 5799), (Start: 27 @5970 has 502 MA's), (55, 6189), (63, 6252), (68, 6285),

Gene: VC3\_13 Start: 6174, Stop: 6599, Start Num: 27

Candidate Starts for VC3\_13:

(Start: 27 @6174 has 502 MA's), (55, 6393), (61, 6423),

Gene: Vanisoa\_10 Start: 5811, Stop: 6197, Start Num: 27

Candidate Starts for Vanisoa\_10:

(22, 5736), (Start: 27 @5811 has 502 MA's), (33, 5871), (48, 5979), (51, 6012),

Gene: VohminGhazi\_14 Start: 7065, Stop: 7496, Start Num: 27

Candidate Starts for VohminGhazi\_14:

(Start: 27 @7065 has 502 MA's), (55, 7284), (58, 7296), (59, 7305), (69, 7380),

Gene: Wander\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for Wander\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Whabigail7\_12 Start: 6446, Stop: 6886, Start Num: 27

Candidate Starts for Whabigail7\_12:

(21, 6359), (Start: 27 @6446 has 502 MA's), (30, 6491), (71, 6770), (76, 6791),

Gene: Whirlwind\_28 Start: 26172, Stop: 26585, Start Num: 27

Candidate Starts for Whirlwind\_28:



(Start: 27 @26172 has 502 MA's), (30, 26217), (32, 26229), (35, 26241), (61, 26424),

Gene: Whitty\_28 Start: 25159, Stop: 25599, Start Num: 27

Candidate Starts for Whitty\_28:

(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58, 25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: WideWale\_12 Start: 6492, Stop: 6929, Start Num: 27

Candidate Starts for WideWale\_12:

(21, 6396), (Start: 27 @6492 has 502 MA's), (30, 6537), (65, 6792), (71, 6816),

Gene: Wiggin\_36 Start: 31651, Stop: 32034, Start Num: 27

Candidate Starts for Wiggin\_36:

(Start: 27 @31651 has 502 MA's), (37, 31729), (40, 31756), (48, 31819), (66, 31954), (79, 31993),

Gene: Wiks\_14 Start: 7046, Stop: 7477, Start Num: 27

Candidate Starts for Wiks\_14:

(Start: 27 @7046 has 502 MA's), (55, 7265), (58, 7277), (59, 7286), (69, 7361),

Gene: Wilbur\_9 Start: 5419, Stop: 5880, Start Num: 27

Candidate Starts for Wilbur\_9:

(Start: 27 @5419 has 502 MA's), (44, 5551), (50, 5596), (52, 5626), (55, 5641), (59, 5662), (65, 5722), (66, 5725),

Gene: Wile\_9 Start: 5430, Stop: 5891, Start Num: 27

Candidate Starts for Wile\_9:

(Start: 27 @5430 has 502 MA's), (35, 5499), (58, 5664), (59, 5673), (64, 5724), (66, 5736), (92, 5859),

Gene: Willez\_32 Start: 30651, Stop: 31034, Start Num: 27

Candidate Starts for Willez\_32:

(Start: 27 @30651 has 502 MA's), (37, 30729), (40, 30756), (48, 30819), (66, 30954), (79, 30993),

Gene: Willsammy\_27 Start: 24742, Stop: 25143, Start Num: 25

Candidate Starts for Willsammy\_27:

(Start: 25 @24742 has 4 MA's), (Start: 27 @24748 has 502 MA's), (42, 24862), (48, 24916), (62, 25000), (64, 25039), (77, 25096),

Gene: Wizard007\_9 Start: 5422, Stop: 5883, Start Num: 27

Candidate Starts for Wizard007\_9:

(Start: 27 @5422 has 502 MA's), (44, 5554), (50, 5599), (52, 5629), (55, 5644), (59, 5665), (65, 5725), (66, 5728),

Gene: WunderPhul\_14 Start: 7046, Stop: 7477, Start Num: 27

Candidate Starts for WunderPhul\_14:

(Start: 27 @7046 has 502 MA's), (55, 7265), (58, 7277), (59, 7286), (69, 7361),

Gene: Xandras\_35 Start: 31137, Stop: 31520, Start Num: 27

Candidate Starts for Xandras\_35:

(Start: 27 @31137 has 502 MA's), (37, 31215), (40, 31242), (48, 31305), (66, 31440), (79, 31479),

Gene: Xena\_9 Start: 5429, Stop: 5878, Start Num: 27

Candidate Starts for Xena\_9:

(Start: 27 @5429 has 502 MA's), (35, 5498), (58, 5663), (59, 5672), (64, 5723), (66, 5735), (82, 5801), (91, 5846),

Gene: Xeno\_28 Start: 24105, Stop: 24509, Start Num: 27

Candidate Starts for Xeno\_28:

(Start: 27 @24105 has 502 MA's), (62, 24363), (63, 24393), (72, 24435), (85, 24492),

Gene: Xerxes\_29 Start: 24336, Stop: 24740, Start Num: 27

Candidate Starts for Xerxes\_29:

(Start: 27 @24336 has 502 MA's), (62, 24594), (63, 24624), (72, 24666), (85, 24723),

Gene: XianYue\_10 Start: 5913, Stop: 6362, Start Num: 27

Candidate Starts for XianYue\_10:

(Start: 27 @5913 has 502 MA's), (29, 5955), (30, 5958), (55, 6132), (76, 6258),

Gene: YassJohnny\_34 Start: 31662, Stop: 32045, Start Num: 27

Candidate Starts for YassJohnny\_34:

(Start: 27 @31662 has 502 MA's), (37, 31740), (40, 31767), (48, 31830), (66, 31965), (79, 32004),

Gene: Yecey3\_11 Start: 5912, Stop: 6295, Start Num: 27

Candidate Starts for Yecey3\_11:

(15, 5666), (Start: 27 @5912 has 502 MA's), (32, 5969), (62, 6167),

Gene: YoSam321\_9 Start: 5420, Stop: 5881, Start Num: 27

Candidate Starts for YoSam321\_9:

(Start: 27 @5420 has 502 MA's), (44, 5552), (50, 5597), (52, 5627), (55, 5642), (59, 5663), (65, 5723), (66, 5726),

Gene: Yokurt\_14 Start: 7046, Stop: 7477, Start Num: 27

Candidate Starts for Yokurt\_14:

(Start: 27 @7046 has 502 MA's), (55, 7265), (58, 7277), (59, 7286), (69, 7361),

Gene: Youngblood\_33 Start: 31307, Stop: 31690, Start Num: 27

Candidate Starts for Youngblood\_33:

(Start: 27 @31307 has 502 MA's), (37, 31385), (40, 31412), (48, 31475), (66, 31610), (79, 31649),

Gene: Zaka\_14 Start: 7046, Stop: 7477, Start Num: 27

Candidate Starts for Zaka\_14:

(Start: 27 @7046 has 502 MA's), (55, 7265), (58, 7277), (59, 7286), (69, 7361),

Gene: ZenTime222\_28 Start: 25159, Stop: 25599, Start Num: 27

Candidate Starts for ZenTime222\_28:

(16, 24922), (21, 25063), (23, 25141), (Start: 27 @25159 has 502 MA's), (43, 25288), (50, 25336), (58, 25393), (64, 25453), (66, 25465), (72, 25489), (93, 25579), (94, 25594),

Gene: Zulu\_14 Start: 7045, Stop: 7476, Start Num: 27

Candidate Starts for Zulu\_14:

(Start: 27 @7045 has 502 MA's), (55, 7264), (58, 7276), (59, 7285), (69, 7360),

Gene: xkcd\_34 Start: 31316, Stop: 31699, Start Num: 27

Candidate Starts for xkcd\_34:

(Start: 27 @31316 has 502 MA's), (37, 31394), (40, 31421), (48, 31484), (66, 31619), (79, 31658),