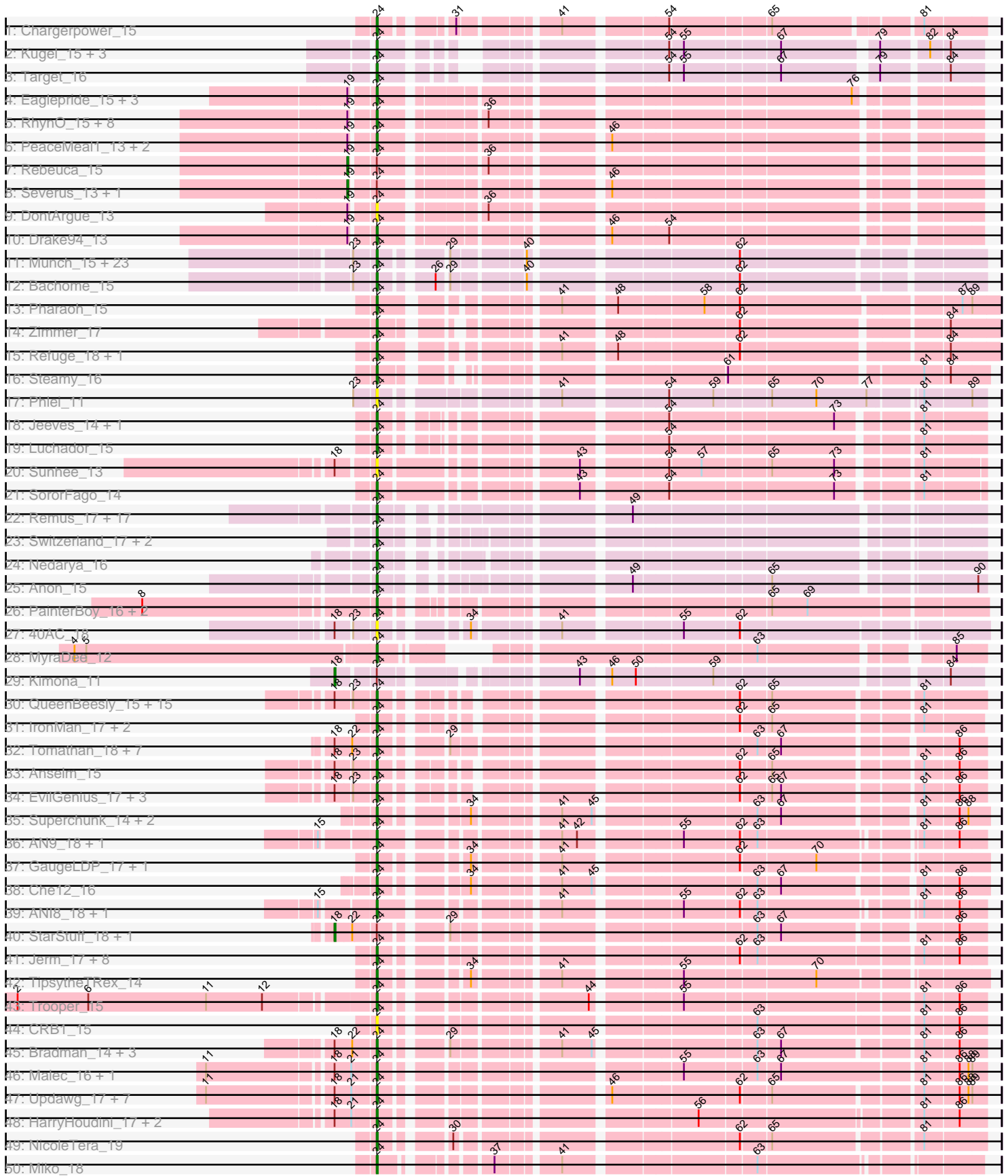
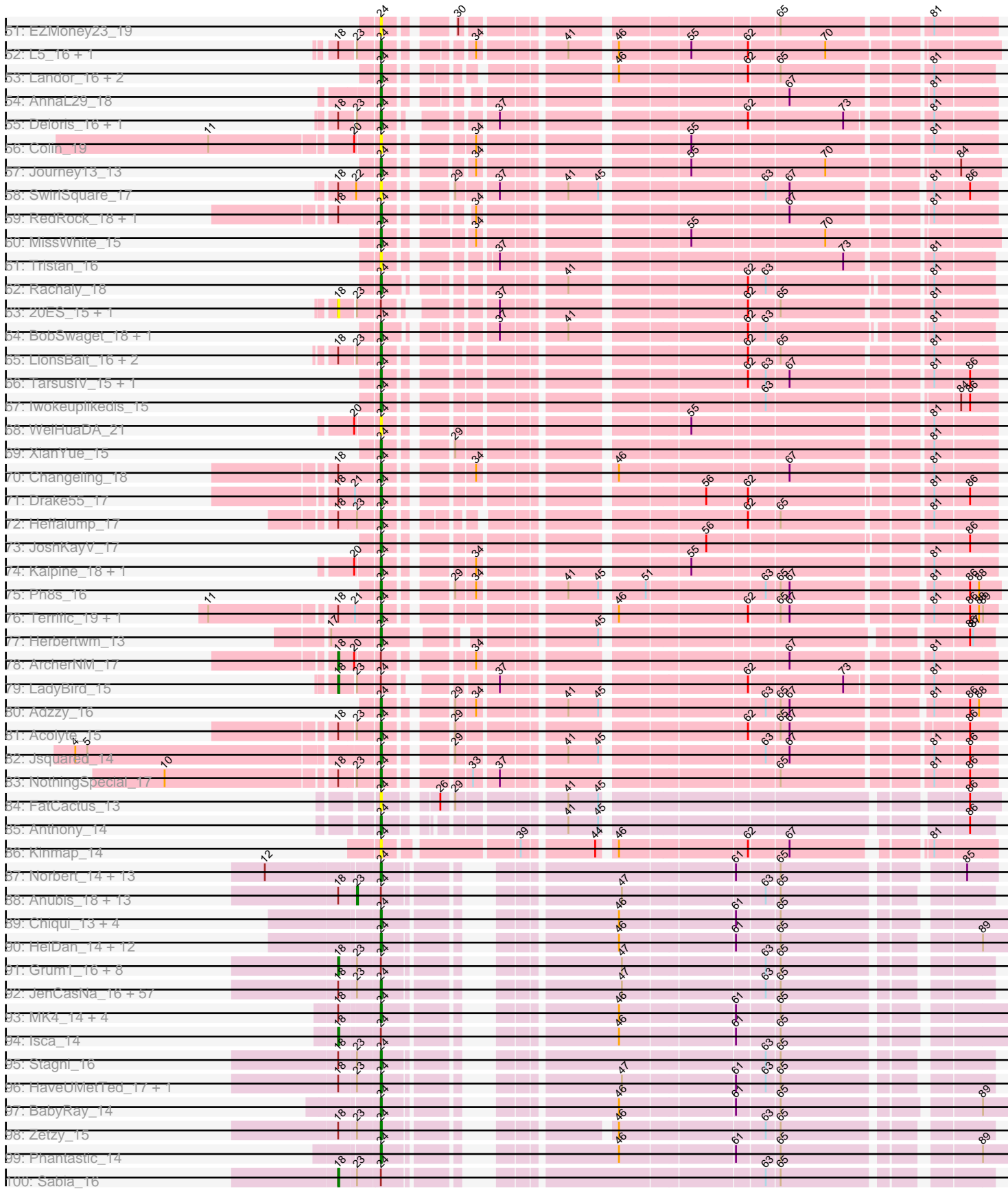
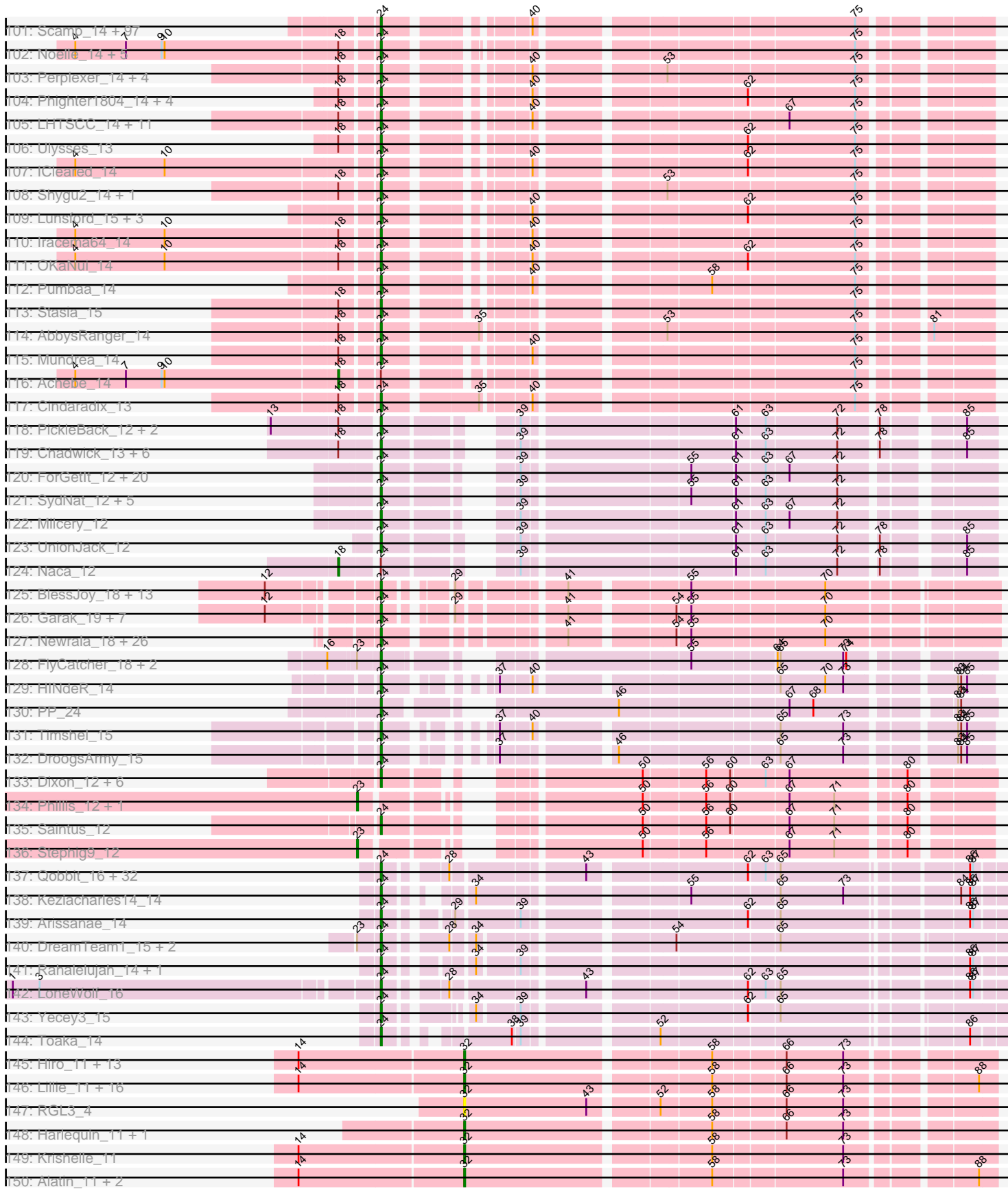


Pham 220989



Pham 220989







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 220989 Report

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

Pham number 220989 has 672 members, 69 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_15
- Track 2 : Kugel\_15, Kykar\_12, Bxb1\_13, BillKnuckles\_15
- Track 3 : Target\_16
- Track 4 : Eaglepride\_15, Goose\_14, OKCentral2016\_14, Chupacabra\_14
- Track 5 : RhynO\_15, Shapes\_17, Rowdy\_17, DustyMartin\_17, Twister\_14, Topanga\_14, WalterMcMickey\_14, Kristoff\_15, Edison31\_14
- Track 6 : PeaceMeal1\_13, KittenMittens\_13, Poompha\_13
- Track 7 : Rebeuca\_15
- Track 8 : Severus\_13, Trike\_12
- Track 9 : DontArgue\_13
- Track 10 : Drake94\_13
- Track 11 : Munch\_15, Salz\_15, Lucivia\_15, Orange\_15, Insomnia\_15, Jabith\_15, TinyTimmy\_15, Et2Brutus\_14, Flaverint\_15, Fibonacci\_15, Bowtie\_15, Sham4\_15, Petersenfast\_14, Ebony\_15, Gilberta\_15, Timothy\_15, MaCh\_15, Joselito\_15, Aneem\_15, Mulciber\_15, Bud\_15, Mabel\_15, Hutc2\_15, Snape\_15
- Track 12 : Bachome\_15
- Track 13 : Pharaoh\_15
- Track 14 : Zimmer\_17
- Track 15 : Refuge\_18, DARTHPhader\_16
- Track 16 : Steamy\_16
- Track 17 : Phlei\_11
- Track 18 : Jeeves\_14, Gail\_14
- Track 19 : Luchador\_15
- Track 20 : Sunhee\_13
- Track 21 : SororFago\_14
- Track 22 : Remus\_17, MinecraftSteve\_18, LastResort\_17, ShayRa\_18, Warrior24\_18, Rosalind\_17, KatherineG\_17, DekHockey33\_17, Oofda\_18, Waits\_17, Nebulosus\_17, ReMo\_17, Epsocamisio\_17, Looper\_18, Anaysia\_17, Strosahl\_17, Soups\_17, Boohoo\_17
- Track 23 : Switzerland\_17, Battleship\_18, JSwag\_17
- Track 24 : Nedarya\_16
- Track 25 : Anon\_15
- Track 26 : PainterBoy\_16, Lucyedi\_16, EagleEye\_17
- Track 27 : 40AC\_18
- Track 28 : MyraDee\_12
- Track 29 : Kimona\_11

- Track 30 : QueenBeesly\_15, AN3\_15, Georgie2\_16, SweetiePie\_15, Power\_15, DudeLittle\_15, Fameo\_15, Retro23\_15, Dalmatian\_15, QueenB2\_15, VA6\_15, SnapTap\_15, Benvolio\_15, Echild\_15, Crucio\_15, FiringLine\_15
- Track 31 : IronMan\_17, Jaan\_18, Phaded\_18
- Track 32 : Tomathan\_18, D29\_16, Duplo\_18, Kerberos\_18, D32\_18, DBQu4n\_18, Naji\_18, Travvers\_18
- Track 33 : Anselm\_15
- Track 34 : EvilGenius\_17, ChipMunk\_17, SemperFi\_17, KingCyrus\_17
- Track 35 : Superchunk\_14, Caraxes\_14, Odin\_14
- Track 36 : AN9\_18, VC3\_18
- Track 37 : GaugeLDP\_17, BabyBack\_17
- Track 38 : Che12\_16
- Track 39 : ANI8\_18, C3\_13
- Track 40 : StarStuff\_18, Pomar16\_18
- Track 41 : Jerm\_17, Dignity\_17, AbbyPaige\_17, Whabigail7\_17, Bugsy\_17, Smeagan\_17, Leviathan\_17, LilTurb\_17, Agape74\_17
- Track 42 : TopsytheTRex\_14
- Track 43 : Trooper\_15
- Track 44 : CRB1\_15
- Track 45 : Bradman\_14, Quokka\_13, Serenity\_14, MajorMajor\_14
- Track 46 : Malec\_16, Larenn\_16
- Track 47 : Updawg\_17, NaSiaTalie\_15, Flare16\_15, Equemioh13\_17, Gratitude\_16, Sknot\_16, MiculUcigas\_15, WideWale\_17
- Track 48 : HarryHoudini\_17, Baehexic\_16, Piro94\_16
- Track 49 : NicoleTera\_19
- Track 50 : Miko\_18
- Track 51 : EZMoney23\_19
- Track 52 : L5\_16, Koduck\_15
- Track 53 : Landor\_16, Pukovnik\_17, Bactobuster\_16
- Track 54 : AnnaL29\_18
- Track 55 : Deloris\_16, BengiVuitton\_16
- Track 56 : Colin\_19
- Track 57 : Journey13\_13
- Track 58 : SwirlSquare\_17
- Track 59 : RedRock\_18, Loser\_18
- Track 60 : MissWhite\_15
- Track 61 : Tristan\_16
- Track 62 : Rachaly\_18
- Track 63 : 20ES\_15, First\_0015
- Track 64 : BobSwaget\_18, Lokk\_18
- Track 65 : LionsBait\_16, Leogania\_17, BiancaTri92\_17
- Track 66 : TarsusIV\_15, Turbido\_17
- Track 67 : Iwokeuplikedis\_15
- Track 68 : WeiHuaDA\_21
- Track 69 : XianYue\_15
- Track 70 : Changeling\_18
- Track 71 : Drake55\_17
- Track 72 : Heffalump\_17
- Track 73 : JoshKayV\_17
- Track 74 : Kalpine\_18, Trixie\_18
- Track 75 : Ph8s\_16
- Track 76 : Terrific\_19, Centaur\_17
- Track 77 : Herbertwm\_13

- Track 78 : ArcherNM\_17
- Track 79 : LadyBird\_15
- Track 80 : Adzzy\_16
- Track 81 : Acolyte\_15
- Track 82 : Jsquared\_14
- Track 83 : NothingSpecial\_17
- Track 84 : FatCactus\_13
- Track 85 : Anthony\_14
- Track 86 : Kinmap\_14
- Track 87 : Norbert\_14, Popcicle\_15, Veracruz\_14, Noella\_15, ResDef\_15, Panamaxus\_15, Caviar\_15, Pocahontas\_15, Todacoro\_15, Hookmount\_15, Texage\_14, Margo\_15, Lambert1\_15, QuinnKiro\_14
- Track 88 : Anubis\_18, Misomonster\_18, Louie6\_16, Hercules11\_16, Methuselah\_16, LugYA\_18, Beauxregard13\_16, Aglet\_16, Jobu08\_16, Vix\_16, Tiffany\_16, Marie\_16, Penny1\_16, MarQuardt\_16
- Track 89 : Chiqui\_13, Scout\_14, BabyJohn\_13, Fred313\_14, MA5\_14
- Track 90 : HelDan\_14, Kachowdy\_14, Giroux\_14, Marchesa\_14, Bugatti\_14, Puppy\_15, Idleandcovert\_14, Pistachio\_15, Heathen\_14, TNguyen7\_14, BlueBird\_15, SaturnRing\_14, DropBear\_14
- Track 91 : Grum1\_16, Wooldri\_18, PotatoSplit\_17, BreSam8\_16, MoneyMay\_16, Malinsilva\_18, SoilDragon\_16, Mainiac\_16, Cullens\_16
- Track 92 : JenCasNa\_16, LarryKay\_16, Lowa\_16, Spike509\_16, P28Green\_16, Heliosoles\_16, Bigflo\_16, SoYo\_16, Rummer\_16, Grub\_16, StepMih\_16, KADY\_17, Calvinny\_17, HashRod\_17, Bxz2\_16, GingkoMaracino\_16, PGHhamlin\_18, LBerry\_16, Ollie\_16, MadMarie\_16, Farber\_16, ACFishhook\_16, OlanP\_16, Microwolf\_16, AgronaGT15\_16, AugsMagnumOpus\_18, Dieselweasel\_16, Gemma\_16, MuchMore\_18, Manu\_17, BuzzBuzz\_15, DaHudson\_16, Colbster\_16, GtownJaz\_16, Phranny\_17, Kalb97\_17, Grif\_16, Kalnoky\_17, Phoebe\_16, Daishi\_15, Taurus\_16, JHC117\_16, Pawn\_16, Soshari\_18, Sabinator\_16, TinyPebbles\_16, PurpleHaze\_16, JeppNRM\_17, Pembroke\_16, Phoxy\_16, Fernando\_16, Lilith\_16, EpicPhail\_16, Marius\_17, Groupthink\_17, Snickers\_16, Watson\_16, Reba\_17
- Track 93 : MK4\_14, JF4\_14, Rockstar\_14, B1\_12, JF2\_14
- Track 94 : Isca\_14
- Track 95 : Stagni\_16
- Track 96 : HaveUMetTed\_17, PhishRPhriends\_15
- Track 97 : BabyRay\_14
- Track 98 : Zetzy\_15
- Track 99 : Phantastic\_14
- Track 100 : Sabia\_16
- Track 101 : Scamp\_14, Baby16\_14, BubbleTrouble\_14, SenorClean\_13, Spino\_14, Roosevelt\_14, Eurydice\_14, Kremtemulon\_14, Romney\_14, Taquarus\_14, Kyee\_14, Pipcraft\_14, Maverick\_14, Cocoaberry\_14, NorthStar\_14, Eagle\_13, Commander\_14, Huxley\_14, BellusTerra\_14, Mayonnaise\_14, Chaph\_14, Connomayer\_14, JetBlade\_14, KFPoly\_14, Kampy\_14, Phacado\_14, Koan\_13, Funston\_14, Shaka\_14, Wizard007\_14, LittleGuy\_14, Ohfah\_14, Annyong\_14, LeoAvram\_14, Florean\_14, MeeZee\_14, Alberto7\_15, Polymorphads\_14, Dhanush\_14, NotAPhaseMom\_14, Gadost\_14, Nebs\_14, Medusa\_14, HamSlice\_13, Bartimeaus\_14, Morrow\_14, Blackmoor\_14, Bruiser\_14, Arturo\_13, Eros\_14, Burger\_13, Thanksgivukkah\_14, Clarenza\_14, Albee\_14, Houdini22\_14, Flux\_14, YoSam321\_14, Palestino\_14, Sparxx\_14, TiroTheta9\_14, Maxo\_14, Mazhar510\_14, Citius\_14, Melvin\_14, LochMonster\_14, Koreni\_13, Ruin\_14, TygerBlood\_14, PeterPeter\_14, Wilbur\_14, Eapen\_14, Avle17\_14, Phelipe\_14, Sabertooth\_14, Abdiel\_14, LappelDuVide\_14, Eris\_14, JoongJeon\_14, Broseidon\_14, Druantia\_14,

Lorenzo\_14, Kratark\_14, Holli\_14, Relief\_14, CentreCat\_14, Millski\_14, TinaFeyge\_14, Nyxis\_14, Nemo27\_14, Kingmustik0402\_14, Jaykayelowell\_14, LittleB\_14, Wander\_14, DirtyDunning\_14, Bombshell\_14, TroyPia\_14, Caelakin\_14, Skipitt\_14

- Track 102 : Noelle\_14, Backyardigan\_14, Badger\_14, Datway\_14, Wile\_14, Xena\_14
- Track 103 : Perplexer\_14, Bumblebee11\_14, PetiteSangsue\_14, Katalie136\_14, Morpher26\_14
- Track 104 : Phighter1804\_14, Iceman\_14, Peaches\_14, Deano\_14, Camperdownii\_13
- Track 105 : LHTSCC\_14, ChampagnePapi\_14, BangNhom\_13, Obama12\_14, Cerulean\_14, Happiness\_14, Stink\_14, AvatarAhPeg\_14, Tinybot\_13, SheldonCooper\_14, Miramae\_14, Rosa24\_13
- Track 106 : Ulysses\_13
- Track 107 : ICleared\_14
- Track 108 : Shygu2\_14, Cici\_14
- Track 109 : Lunsford\_15, Cintron\_14, Lemur\_14, Phontbonne\_14
- Track 110 : Iracema64\_14
- Track 111 : OKaNui\_14
- Track 112 : Pumbaa\_14
- Track 113 : Stasia\_15
- Track 114 : AbbysRanger\_14
- Track 115 : Mundrea\_14
- Track 116 : Achebe\_14
- Track 117 : Cindaradix\_13
- Track 118 : PickleBack\_12, Archetta\_12, Lev2\_12
- Track 119 : Chadwick\_13, PetterN\_13, Scorpia\_13, Benedict\_12, Jabiru\_12, Airmid\_12, ElTiger69\_12
- Track 120 : ForGetIt\_12, Jovo\_12, Phlorence\_12, Cuco\_12, Twigg\_12, Tarynearal\_11, Dublin\_11, HuhtaEnerson15\_12, Theia\_11, Prinashel11\_13, Swirley\_12, MarysWell\_11, Coog\_12, Tiger\_12, LittleCherry\_12, Midas2\_12, George\_11, Bonamassa\_12, AgentM\_12, Micasa\_12, Conspiracy\_12
- Track 121 : SydNat\_12, Bluefalcon\_11, Ghoulboy\_12, Zolita\_11, Discoknowium\_12, Aragog\_12
- Track 122 : Milcery\_12
- Track 123 : UnionJack\_12
- Track 124 : Naca\_12
- Track 125 : BlessJoy\_18, Wiks\_18, Rifter\_18, Koko\_18, Gladiator\_18, Blue7\_18, Yokurt\_18, Hammer\_18, WunderPhul\_18, Zulu\_18, Lilbunny\_18, Gruunaga\_18, ToneTone\_17, Zaka\_18
- Track 126 : Garak\_19, Tucker\_18, Roksolana\_18, Helmet\_19, Artemis2UCLA\_18, Temprado\_19, Indra\_18, Hexamo\_18
- Track 127 : Newrala\_18, SuperCallie99\_18, Cookiedough\_18, Isiphiwo\_18, JewelBug\_18, CloudWang3\_18, Pmask\_18, VohminGhazi\_18, Jeffabunny\_18, Jordennis\_18, SmellyB\_18, Neeharika16\_18, Dorothea\_18, Chartreuse\_18, DaVinci\_18, Blinn1\_18, BABullseye\_18, Candra\_18, Kipper29\_18, Priamo\_18, EricB\_18, Kazan\_18, Hoot\_18, Polyphemus\_17, SuperAwesome\_18, GreedyLawyer\_18, McFly\_18
- Track 128 : FlyCatcher\_18, Sheen\_16, Toro\_17
- Track 129 : HINdeR\_14
- Track 130 : PP\_24
- Track 131 : Timshel\_15
- Track 132 : DroogsArmy\_15



- Track 133 : Dixon\_12, Smeadley\_12, Danforth\_11, Expelliarmus\_11, Groundhog\_11, Roary\_12, Astro\_12
- Track 134 : Phillis\_12, NearlyHeadless\_12
- Track 135 : Saintus\_12
- Track 136 : Stephig9\_12
- Track 137 : Qobbit\_16, Tubs\_16, Phaeder\_16, RyeScarlet\_17, Darrell\_17, Priya\_16, ExplosioNervosa\_16, Myxus\_16, Aliter\_16, Ugenie5\_13, Fayely\_16, Phonnegut\_16, Maminiaina\_16, Pioneer\_16, Scherzo\_16, Sachima\_14, Eidsmoe\_16, BogosyJay\_16, Lilleskat\_14, Hanray\_15, EdogawaKiddo\_14, Horex\_15, EmyBug\_16, Onglai\_15, HortumSL17\_16, Conquerage\_16, Catalina\_16, Jiawan\_15, Spouty\_16, Alma\_16, Beemo\_16, Elephantoon\_16, PackMan\_16
- Track 138 : Keziacharles14\_14
- Track 139 : Arissanae\_14
- Track 140 : DreamTeam1\_15, SheaKeira\_15, Charm\_15
- Track 141 : Rahalelujah\_14, Vanisoa\_14
- Track 142 : LoneWolf\_16
- Track 143 : Yecey3\_15
- Track 144 : Toaka\_14
- Track 145 : Hiro\_11, Dinger\_11, Rasputin\_11, BobbyDazzler\_11, Takoda\_11, AngryOrchard\_10, Bryce\_11, AppleCloud\_9, Yoncess\_11, Bonanza\_11, Partridge\_11, Alpacados\_10, Yogi\_11, PhailMary\_10
- Track 146 : Lillie\_11, Belenaria\_11, RER2\_4, Shuman\_11, Bradshaw\_11, Gollum\_11, Rhodalysa\_11, Swann\_11, UhSalsa\_11, Erik\_11, Nancinator\_11, Natosaleda\_11, TWAMP\_11, Espica\_11, CosmicSans\_11, RexFury\_11, Phrankenstein\_11
- Track 147 : RGL3\_4
- Track 148 : Harlequin\_11, Jester\_11
- Track 149 : Krishelle\_11
- Track 150 : Alatin\_11, Naiad\_11, StCroix\_11
- Track 151 : Hum25\_5

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

The start number called the most often in the published annotations is 24, it was called in 528 of the 603 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC\_18, ACFishhook\_16, AN3\_15, AN9\_18, ANI8\_18, AbbyPaige\_17, AbbysRanger\_14, Abdiel\_14, Acolyte\_15, Adzzy\_16, Agape74\_17, AgentM\_12, AgronaGT15\_16, Airmid\_12, Albee\_14, Alberto7\_15, Aliter\_16, Alma\_16, Anaysia\_17, Aneem\_15, AnnaL29\_18, Annyong\_14, Anon\_15, Anselm\_15, Anthony\_14, Aragog\_12, Archetta\_12, Arissanae\_14, Artemis2UCLA\_18, Arturo\_13, Astro\_12, AugsMagnumOpus\_18, AvatarAhPeg\_14, Avle17\_14, B1\_12, BABullseye\_18, Baby16\_14, BabyBack\_17, BabyJohn\_13, BabyRay\_14, Bachome\_15, Backyardigan\_14, Bactobuster\_16, Badger\_14, Baehexic\_16, BangNhom\_13, Bartimeaus\_14, Battleship\_18, Beemo\_16, BellusTerra\_14, Benedict\_12, BengiVuitton\_16, Benvolio\_15, BiancaTri92\_17, Bigflo\_16, BillKnuckles\_15, Blackmoor\_14, BlessJoy\_18, Blinn1\_18, Blue7\_18, BlueBird\_15, Bluefalcon\_11, BobSwaget\_18, BogosyJay\_16, Bombshell\_14, Bonamassa\_12, Boohoo\_17, Bowtie\_15, Bradman\_14, Broseidon\_14, Bruiser\_14, BubbleTrouble\_14,

Bud\_15, Bugatti\_14, Buggy\_17, Bumblebee11\_14, Burger\_13, BuzzBuzz\_15, Bxb1\_13, Bxz2\_16, C3\_13, CRB1\_15, Caelakin\_14, Calvinny\_17, Camperdownii\_13, Candra\_18, Caraxes\_14, Catalina\_16, Caviar\_15, Centaur\_17, CentreCat\_14, Cerulean\_14, Chadwick\_13, ChampagnePapi\_14, Changeling\_18, Chaph\_14, Chargerpower\_15, Charm\_15, Chartreuse\_18, Che12\_16, ChipMunk\_17, Chiqui\_13, Chupacabra\_14, Cici\_14, Cindaradix\_13, Cintron\_14, Citius\_14, Clarenza\_14, CloudWang3\_18, Cocoaberry\_14, Colbster\_16, Colin\_19, Commander\_14, Connomayer\_14, Conquerage\_16, Conspiracy\_12, Coog\_12, Cookiedough\_18, Crucio\_15, Cuco\_12, D29\_16, D32\_18, DBQu4n\_18, DaHudson\_16, DaVinci\_18, Daishi\_15, Dalmatian\_15, Danforth\_11, Darrell\_17, DarthPhader\_16, Datway\_14, Deano\_14, DekHockey33\_17, Deloris\_16, Dhanush\_14, Dieselweasel\_16, Dignity\_17, DirtyDunning\_14, Discoknowium\_12, Dixon\_12, DontArgue\_13, Dorothea\_18, Drake55\_17, Drake94\_13, DreamTeam1\_15, DroogsArmy\_15, DropBear\_14, Druantia\_14, Dublin\_11, DudeLittle\_15, Duplo\_18, DustyMartin\_17, EZMoney23\_19, EagleEye\_17, Eagle\_13, Eaglepride\_15, Eapen\_14, Ebony\_15, Echild\_15, Edison31\_14, EdogawaKiddo\_14, Eidsmoe\_16, EITiger69\_12, Elephantoon\_16, EmyBug\_16, EpicPhail\_16, Epsocamisio\_17, Equemioh13\_17, EricB\_18, Eris\_14, Eros\_14, Et2Brutus\_14, Eurydice\_14, EvilGenius\_17, Expelliarmus\_11, ExplosioNervosa\_16, Fameo\_15, Farber\_16, FatCactus\_13, Fayely\_16, Fernando\_16, Fibonacci\_15, FiringLine\_15, Flare16\_15, Flaverint\_15, Florean\_14, Flux\_14, FlyCatcher\_18, ForGetIt\_12, Fred313\_14, Funston\_14, Gadost\_14, Gail\_14, Garak\_19, GaugeLDP\_17, Gemma\_16, George\_11, Georgie2\_16, Ghoulyboy\_12, Gilberta\_15, GingkoMaracino\_16, Giroux\_14, Gladiator\_18, Goose\_14, Gratitude\_16, GreedyLawyer\_18, Grif\_16, Groundhog\_11, Groupthink\_17, Grub\_16, Gruunaga\_18, GtownJaz\_16, HINdeR\_14, HamSlice\_13, Hammer\_18, Hanray\_15, Happiness\_14, HarryHoudini\_17, HashRod\_17, HaveUMetTed\_17, Heathen\_14, Heffalump\_17, HelDan\_14, Heliosoles\_16, Helmet\_19, Herbertwm\_13, Hexamo\_18, Halex\_15, Holli\_14, Hookmount\_15, Hoot\_18, HortumSL17\_16, Houdini22\_14, HuhtaEnerson15\_12, Hutc2\_15, Huxley\_14, ICleared\_14, Iceman\_14, Idleandcovert\_14, Indra\_18, Insomnia\_15, Iracema64\_14, IronMan\_17, Isiphiwo\_18, Iwokeuplikedis\_15, JF2\_14, JF4\_14, JHC117\_16, JSwag\_17, Jaan\_18, Jabiru\_12, Jabith\_15, Jaykayelowell\_14, Jeeves\_14, Jeffabunny\_18, JenCasNa\_16, JeppNRM\_17, Jerm\_17, JetBlade\_14, JewelBug\_18, Jiawan\_15, JoongJeon\_14, Jordennis\_18, Joselito\_15, JoshKayV\_17, Journey13\_13, Jovo\_12, Jsquared\_14, KADY\_17, KFPoly\_14, Kachowdy\_14, Kalb97\_17, Kalnoky\_17, Kalpine\_18, Kampy\_14, Katalie136\_14, KatherineG\_17, Kazan\_18, Kerberos\_18, Keziacharles14\_14, KingCyrus\_17, Kingmustik0402\_14, Kinmap\_14, Kipper29\_18, KittenMittens\_13, Koan\_13, Koduck\_15, Koko\_18, Koreni\_13, Kratark\_14, Kremtemulon\_14, Kristoff\_15, Kugel\_15, Kyee\_14, Kykar\_12, L5\_16, LBerry\_16, LHTSCC\_14, Lambert1\_15, Landor\_16, LappelDuVide\_14, Larenn\_16, LarryKay\_16, LastResort\_17, Lemur\_14, LeoAvram\_14, Leogania\_17, Lev2\_12, Leviathan\_17, LiITurb\_17, Lilbunny\_18, Lilith\_16, Lilleskat\_14, LionsBait\_16, LittleB\_14, LittleCherry\_12, LittleGuy\_14, LochMonster\_14, Lokk\_18, LoneWolf\_16, Looper\_18, Lorenzo\_14, Loser\_18, Lowa\_16, Luchador\_15, Lucivia\_15, Lucyedi\_16, Lunsford\_15, MA5\_14, MK4\_14, MaCh\_15, Mabel\_15, MadMarie\_16, MajorMajor\_14, Malec\_16, Maminaiaina\_16, Manu\_17, Marchesa\_14, Margo\_15, Marius\_17, MarysWell\_11, Maverick\_14, Maxo\_14, Mayonnaise\_14, Mazhar510\_14, McFly\_18, Medusa\_14, MeeZee\_14, Melvin\_14, Micasa\_12, Microwolf\_16, MiculUcigas\_15, Midas2\_12, Miko\_18, Milcery\_12, Millski\_14, MinecraftSteve\_18, Miramae\_14, MissWhite\_15, Morpher26\_14, Morrow\_14, MuchMore\_18, Mulciber\_15, Munch\_15, Mundrea\_14, MyraDee\_12, Myxus\_16, NaSiaTalie\_15, Naji\_18, Nebs\_14, Nebulosus\_17, Nedarya\_16, Neeharika16\_18, Nemo27\_14, Newrala\_18, NicoleTera\_19, Noella\_15, Noelle\_14, Norbert\_14,

NorthStar\_14, NotAPhaseMom\_14, NothingSpecial\_17, Nyxis\_14, OKCentral2016\_14, OKaNui\_14, Obama12\_14, Odin\_14, Ohfah\_14, OlanP\_16, Ollie\_16, Onglai\_15, Oofda\_18, Orange\_15, P28Green\_16, PGHhamlin\_18, PP\_24, PackMan\_16, PainterBoy\_16, Palestino\_14, Panamaxus\_15, Pawn\_16, PeaceMeal1\_13, Peaches\_14, Pembroke\_16, Perplexer\_14, PeterPeter\_14, Petersenfast\_14, PetiteSangsue\_14, PetterN\_13, Ph8s\_16, Phacado\_14, Phaded\_18, Phaeder\_16, Phantastic\_14, Pharaoh\_15, Felipe\_14, Phighter1804\_14, PhishRPhriends\_15, Phlei\_11, Phlorence\_12, Phoebe\_16, Phonnegut\_16, Phontbonne\_14, Phoxy\_16, Phranny\_17, PickleBack\_12, Pioneer\_16, Pipcraft\_14, Piro94\_16, Pistachio\_15, Pmask\_18, Pocahontas\_15, Polymorphads\_14, Polyphemus\_17, Poompha\_13, Popcicle\_15, Power\_15, Priamo\_18, Prinashe11\_13, Priya\_16, Pukovnik\_17, Pumbaa\_14, Puppy\_15, PurpleHaze\_16, Qobbit\_16, QueenB2\_15, QueenBeesly\_15, QuinnKiro\_14, Quokka\_13, Rachaly\_18, Rahalelujah\_14, ReMo\_17, Reba\_17, RedRock\_18, Refuge\_18, Relief\_14, Remus\_17, ResDef\_15, Retro23\_15, RhynO\_15, Rifter\_18, Roary\_12, Rockstar\_14, Roksolana\_18, Romney\_14, Roosevelt\_14, Rosa24\_13, Rosalind\_17, Rowdy\_17, Ruin\_14, Rummer\_16, RyeScarlet\_17, Sabertooth\_14, Sabinator\_16, Sachima\_14, Saintus\_12, Salz\_15, SaturnRing\_14, Scamp\_14, Scherzo\_16, Scorpia\_13, Scout\_14, SemperFi\_17, SenorClean\_13, Serenity\_14, Shaka\_14, Sham4\_15, Shapes\_17, ShayRa\_18, SheaKeira\_15, Sheen\_16, SheldonCooper\_14, Shygu2\_14, Skipitt\_14, Sknot\_16, Smeadley\_12, Smeagan\_17, SmellyB\_18, SnapTap\_15, Snape\_15, Snickers\_16, SoYo\_16, SororFago\_14, Soshari\_18, Soups\_17, Sparxx\_14, Spike509\_16, Spino\_14, Spouty\_16, Stagni\_16, Stasia\_15, Steamy\_16, StepMih\_16, Stink\_14, Strosahl\_17, Sunhee\_13, SuperAwesome\_18, SuperCallie99\_18, Superchunk\_14, SweetiePie\_15, SwirlSquare\_17, Swirley\_12, Switzerland\_17, SydNat\_12, TNguyen7\_14, Taquarus\_14, Target\_16, TarsusIV\_15, Tarynearal\_11, Taurus\_16, Temprado\_19, Terrific\_19, Texage\_14, Thanksgivukkah\_14, Theia\_11, Tiger\_12, Timothy\_15, Timshel\_15, TinaFeyge\_14, TinyPebbles\_16, TinyTimmy\_15, Tinybot\_13, TipsytheTRex\_14, TiroTheta9\_14, Toaka\_14, Todacoro\_15, Tomathan\_18, ToneTone\_17, Topanga\_14, Toro\_17, Travvers\_18, Tristan\_16, Trixie\_18, Trooper\_15, TroyPia\_14, Tubs\_16, Tucker\_18, Turbido\_17, Twigg\_12, Twister\_14, TygerBlood\_14, Ugenie5\_13, Ulysses\_13, UnionJack\_12, Updawg\_17, VA6\_15, VC3\_18, Vanisoa\_14, Veracruz\_14, VohminGhazi\_18, Waits\_17, WalterMcMickey\_14, Wander\_14, Warrior24\_18, Watson\_16, WeiHuaDA\_21, Whabigail7\_17, WideWale\_17, Wiks\_18, Wilbur\_14, Wile\_14, Wizard007\_14, WunderPhul\_18, Xena\_14, XianYue\_15, Yecey3\_15, YoSam321\_14, Yokurt\_18, Zaka\_18, Zetzy\_15, Zimmer\_17, Zolita\_11, Zulu\_18,

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

- 20ES\_15, Achebe\_14, Aglet\_16, Anubis\_18, ArcherNM\_17, Beauxregard13\_16, BreSam8\_16, Cullens\_16, First\_0015, Grum1\_16, Hercules11\_16, Isca\_14, Jobu08\_16, Kimona\_11, LadyBird\_15, Louie6\_16, LugYA\_18, Mainiac\_16, Malinsilva\_18, MarQuardt\_16, Marie\_16, Methuselah\_16, Misomonster\_18, MoneyMay\_16, Naca\_12, Penny1\_16, Pomar16\_18, PotatoSplit\_17, Rebeuca\_15, Sabia\_16, Severus\_13, SoilDragon\_16, StarStuff\_18, Tiffany\_16, Trike\_12, Vix\_16, Wooldri\_18,

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

- Alatin\_11, Alpacados\_10, AngryOrchard\_10, AppleCloud\_9, Belenaria\_11, BobbyDazzler\_11, Bonanza\_11, Bradshaw\_11, Bryce\_11, CosmicSans\_11, Dinger\_11, Erik\_11, Espica\_11, Gollum\_11, Harlequin\_11, Hiro\_11, Hum25\_5, Jester\_11, Krishelle\_11, Lillie\_11, Naiad\_11, Nancinator\_11, Natosaleda\_11, NearlyHeadless\_12, Partridge\_11, PhailMary\_10, Phillis\_12, Phrankenstein\_11,

RER2\_4, RGL3\_4, Rasputin\_11, RexFury\_11, Rhodalysa\_11, Shuman\_11, StCroix\_11, Stephig9\_12, Swann\_11, TWAMP\_11, Takoda\_11, UhSalsa\_11, Yogi\_11, Yoncess\_11,

### Summary by start number:

#### Start 18:

- Found in 213 of 672 ( 31.7% ) of genes in pham
- Manual Annotations of this start: 18 of 603
- Called 9.4% of time when present
- Phage (with cluster) where this start called: 20ES\_15 (A2), Achebe\_14 (A4), ArcherNM\_17 (A2), BreSam8\_16 (A3), Cullens\_16 (A3), First\_0015 (A2), Grum1\_16 (A3), Isca\_14 (A3), Kimona\_11 (A19), LadyBird\_15 (A2), Mainiac\_16 (A3), Malinsilva\_18 (A3), MoneyMay\_16 (A3), Naca\_12 (A5), Pomar16\_18 (A2), PotatoSplit\_17 (A3), Sabia\_16 (A3), SoilDragon\_16 (A3), StarStuff\_18 (A2), Wooldri\_18 (A3),

#### Start 19:

- Found in 21 of 672 ( 3.1% ) of genes in pham
- Manual Annotations of this start: 3 of 603
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Rebeuca\_15 (A10), Severus\_13 (A10), Trike\_12 (A10),

#### Start 23:

- Found in 156 of 672 ( 23.2% ) of genes in pham
- Manual Annotations of this start: 17 of 603
- Called 10.9% of time when present
- Phage (with cluster) where this start called: Aglet\_16 (A3), Anubis\_18 (A3), Beauxregard13\_16 (A3), Hercules11\_16 (A3), Jobu08\_16 (A3), Louie6\_16 (A3), LugYA\_18 (A3), MarQuardt\_16 (A3), Marie\_16 (A3), Methuselah\_16 (A3), Misomonster\_18 (A3), NearlyHeadless\_12 (A8), Penny1\_16 (A3), Phillis\_12 (A8), Stephig9\_12 (A8), Tiffany\_16 (A3), Vix\_16 (A3),

#### Start 24:

- Found in 630 of 672 ( 93.8% ) of genes in pham
- Manual Annotations of this start: 528 of 603
- Called 94.1% of time when present
- Phage (with cluster) where this start called: 40AC\_18 (A17), ACFishhook\_16 (A3), AN3\_15 (A2), AN9\_18 (A2), ANI8\_18 (A2), AbbyPaige\_17 (A2), AbbysRanger\_14 (A4), Abdiel\_14 (A4), Acolyte\_15 (A2), Adzzy\_16 (A2), Agape74\_17 (A2), AgentM\_12 (A5), AgronaGT15\_16 (A3), Airmid\_12 (A5), Albee\_14 (A4), Alberto7\_15 (A4), Aliter\_16 (A9), Alma\_16 (A9), Anaysia\_17 (A15), Aneem\_15 (A11), AnnaL29\_18 (A2), Annyong\_14 (A4), Anon\_15 (A15), Anselm\_15 (A2), Anthony\_14 (A20), Aragog\_12 (A5), Archetta\_12 (A5), Arissanae\_14 (A9), Artemis2UCLA\_18 (A6), Arturo\_13 (A4), Astro\_12 (A8), AugsMagnumOpus\_18 (A3), AvatarAhPeg\_14 (A4), Avle17\_14 (A4), B1\_12 (A3), BABullseye\_18 (A6), Baby16\_14 (A4), BabyBack\_17 (A2), BabyJohn\_13 (A3), BabyRay\_14 (A3), Bachome\_15 (A11), Backyardigan\_14 (A4), Bactobuster\_16 (A2), Badger\_14 (A4), Baehexic\_16 (A2), BangNhom\_13 (A4), Bartimeaus\_14 (A4), Battleship\_18 (A15), Beemo\_16 (A9), BellusTerra\_14 (A4), Benedict\_12 (A5), BengiVuitton\_16 (A2), Benvolio\_15 (A2), BiancaTri92\_17 (A2), Bigflo\_16 (A3), BillKnuckles\_15 (A1), Blackmoor\_14 (A4), BlessJoy\_18 (A6), Blinn1\_18 (A6), Blue7\_18 (A6), BlueBird\_15 (A3), Bluefalcon\_11 (A5), BobSwaget\_18 (A2),

BogosityJay\_16 (A9), Bombshell\_14 (A4), Bonamassa\_12 (A5), Boohoo\_17 (A15), Bowtie\_15 (A11), Bradman\_14 (A2), Broseidon\_14 (A4), Bruiser\_14 (A4), BubbleTrouble\_14 (A4), Bud\_15 (A11), Bugatti\_14 (A3), Buggy\_17 (A2), Bumblebee11\_14 (A4), Burger\_13 (A4), BuzzBuzz\_15 (A3), Bxb1\_13 (A1), Bxz2\_16 (A3), C3\_13 (A2), CRB1\_15 (A2), Caelakin\_14 (A4), Calvinny\_17 (A3), Camperdownii\_13 (A4), Candra\_18 (A6), Caraxes\_14 (A2), Catalina\_16 (A9), Caviar\_15 (A3), Centaur\_17 (A2), CentreCat\_14 (A4), Cerulean\_14 (A4), Chadwick\_13 (A5), ChampagnePapi\_14 (A4), Changeling\_18 (A2), Chaph\_14 (A4), Chargerpower\_15 (A), Charm\_15 (A9), Chartreuse\_18 (A6), Che12\_16 (A2), ChipMunk\_17 (A2), Chiqui\_13 (A3), Chupacabra\_14 (A10), Cici\_14 (A4), Cindaradix\_13 (A4), Cintron\_14 (A4), Citius\_14 (A4), Clarenza\_14 (A4), CloudWang3\_18 (A6), Cocoaberry\_14 (A4), Colbster\_16 (A3), Colin\_19 (A2), Commander\_14 (A4), Connomayer\_14 (A4), Conquerage\_16 (A9), Conspiracy\_12 (A5), Coog\_12 (A5), Cookiedough\_18 (A6), Crucio\_15 (A2), Cuco\_12 (A5), D29\_16 (A2), D32\_18 (A2), DBQu4n\_18 (A2), DaHudson\_16 (A3), DaVinci\_18 (A6), Daishi\_15 (A3), Dalmatian\_15 (A2), Danforth\_11 (A8), Darrell\_17 (A9), DarthPhader\_16 (A12), Datway\_14 (A4), Deano\_14 (A4), DekHockey33\_17 (A15), Deloris\_16 (A2), Dhanush\_14 (A4), Dieselweasel\_16 (A3), Dignity\_17 (A2), DirtyDunning\_14 (A4), Discoknowium\_12 (A5), Dixon\_12 (A8), DontArgue\_13 (A10), Dorothea\_18 (A6), Drake55\_17 (A2), Drake94\_13 (A10), DreamTeam1\_15 (A9), DroogsArmy\_15 (A7), DropBear\_14 (A3), Druantia\_14 (A4), Dublin\_11 (A5), DudeLittle\_15 (A2), Duplo\_18 (A2), DustyMartin\_17 (A10), EZMoney23\_19 (A2), EagleEye\_17 (A16), Eagle\_13 (A4), Eaglepride\_15 (A10), Eapen\_14 (A4), Ebony\_15 (A11), Echild\_15 (A2), Edison31\_14 (A10), EdogawaKiddo\_14 (A9), Eidsmoe\_16 (A9), EITiger69\_12 (A5), Elephantoon\_16 (A9), EmyBug\_16 (A9), EpicPhail\_16 (A3), Epsocamisio\_17 (A15), Equemioh13\_17 (A2), EricB\_18 (A6), Eris\_14 (A4), Eros\_14 (A4), Et2Brutus\_14 (A11), Eurydice\_14 (A4), EvilGenius\_17 (A2), Expelliarmus\_11 (A8), ExplosioNervosa\_16 (A9), Fameo\_15 (A2), Farber\_16 (A3), FatCactus\_13 (A20), Fayely\_16 (A9), Fernando\_16 (A3), Fibonacci\_15 (A11), FiringLine\_15 (A2), Flare16\_15 (A2), Flaverint\_15 (A11), Florean\_14 (A4), Flux\_14 (A4), FlyCatcher\_18 (A7), ForGetIt\_12 (A5), Fred313\_14 (A3), Funston\_14 (A4), Gadost\_14 (A4), Gail\_14 (A14), Garak\_19 (A6), GaugeLDP\_17 (A2), Gemma\_16 (A3), George\_11 (A5), Georgie2\_16 (A2), Ghoulboy\_12 (A5), Gilberta\_15 (A11), GingkoMaracino\_16 (A3), Giroux\_14 (A3), Gladiator\_18 (A6), Goose\_14 (A10), Gratitude\_16 (A2), GreedyLawyer\_18 (A6), Grif\_16 (A3), Groundhog\_11 (A8), Groupthink\_17 (A3), Grub\_16 (A3), Gruunaga\_18 (A6), GtownJaz\_16 (A3), HINdeR\_14 (A7), HamSlice\_13 (A4), Hammer\_18 (A6), Hanray\_15 (A9), Happiness\_14 (A4), HarryHoudini\_17 (A2), HashRod\_17 (A3), HaveUMetTed\_17 (A3), Heather\_14 (A3), Heffalump\_17 (A2), HelDan\_14 (A3), Heliosoles\_16 (A3), Helmet\_19 (A6), Herbertwm\_13 (A2), Hexamo\_18 (A6), Holes\_15 (A9), Holli\_14 (A4), Hookmount\_15 (A3), Hoot\_18 (A6), HortumSL17\_16 (A9), Houdini22\_14 (A4), HuhtaEnerson15\_12 (A5), Hutc2\_15 (A11), Huxley\_14 (A4), ICleared\_14 (A4), Iceman\_14 (A4), Idleandcovert\_14 (A3), Indra\_18 (A6), Insomnia\_15 (A11), Iracema64\_14 (A4), IronMan\_17 (A2), Isiphiwo\_18 (A6), Iwokeuplikedis\_15 (A2), JF2\_14 (A3), JF4\_14 (A3), JHC117\_16 (A3), JSwag\_17 (A15), Jaan\_18 (A2), Jabiru\_12 (A5), Jabith\_15 (A11), Jaykayelowell\_14 (A4), Jeeves\_14 (A14), Jeffabunny\_18 (A6), JenCasNa\_16 (A3), JeppNRM\_17 (A3), Jerm\_17 (A2), JetBlade\_14 (A4), JewelBug\_18 (A6), Jiawan\_15 (A9), JoongJeon\_14 (A4), Jordennis\_18 (A6), Joselito\_15 (A11), JoshKayV\_17 (A2), Journey13\_13 (A2), Jovo\_12 (A5), Jsquared\_14 (A2), KADY\_17 (A3), KFPoly\_14 (A4), Kachowdy\_14 (A3), Kalb97\_17 (A3), Kalnoky\_17 (A3), Kalpine\_18 (A2), Kamy\_14 (A4), Katalie136\_14 (A4), KatherineG\_17 (A15), Kazan\_18 (A6), Kerberos\_18 (A2), Keziacharles14\_14 (A9), KingCyrus\_17 (A2), Kingmustik0402\_14 (A4), Kinmap\_14 (A21), Kipper29\_18 (A6), KittenMittens\_13

(A10), Koan\_13 (A4), Koduck\_15 (A2), Koko\_18 (A6), Koreni\_13 (A4), Kratak\_14 (A4), Kremtemulon\_14 (A4), Kristoff\_15 (A10), Kugel\_15 (A1), Kyee\_14 (A4), Kykar\_12 (A1), L5\_16 (A2), LBerry\_16 (A3), LHTSCC\_14 (A4), Lambert1\_15 (A3), Landor\_16 (A2), LappelDuVide\_14 (A4), Larenn\_16 (A2), LarryKay\_16 (A3), LastResort\_17 (A15), Lemur\_14 (A4), LeoAvram\_14 (A4), Leogania\_17 (A2), Lev2\_12 (A5), Leviathan\_17 (A2), LilTurb\_17 (A2), Lilbunny\_18 (A6), Lilith\_16 (A3), Lilleskat\_14 (A9), LionsBait\_16 (A2), LittleB\_14 (A4), LittleCherry\_12 (A5), LittleGuy\_14 (A4), LochMonster\_14 (A4), Lokk\_18 (A2), LoneWolf\_16 (A9), Looper\_18 (A15), Lorenzo\_14 (A4), Loser\_18 (A2), Lowa\_16 (A3), Luchador\_15 (A14), Lucivia\_15 (A11), Lucyedi\_16 (A16), Lunsford\_15 (A4), MA5\_14 (A3), MK4\_14 (A3), MaCh\_15 (A11), Mabel\_15 (A11), MadMarie\_16 (A3), MajorMajor\_14 (A2), Malec\_16 (A2), Maminiana\_16 (A9), Manu\_17 (A3), Marchesa\_14 (A3), Margo\_15 (A3), Marius\_17 (A3), MarysWell\_11 (A5), Maverick\_14 (A4), Maxo\_14 (A4), Mayonnaise\_14 (A4), Mazhar510\_14 (A4), McFly\_18 (A6), Medusa\_14 (A4), MeeZee\_14 (A4), Melvin\_14 (A4), Micasa\_12 (A5), Microwolf\_16 (A3), MiculUcigas\_15 (A2), Midas2\_12 (A5), Miko\_18 (A2), Milcery\_12 (A5), Millski\_14 (A4), MinecraftSteve\_18 (A15), Miramae\_14 (A4), MissWhite\_15 (A2), Morpher26\_14 (A4), Morrow\_14 (A4), MuchMore\_18 (A3), Mulciber\_15 (A11), Munch\_15 (A11), Mundrea\_14 (A4), MyraDee\_12 (A18), Myxus\_16 (A9), NaSiaTalie\_15 (A2), Naji\_18 (A2), Nebs\_14 (A4), Nebulosus\_17 (A15), Nedarya\_16 (A15), Neeharika16\_18 (A6), Nemo27\_14 (A4), Newrala\_18 (A6), NicoleTera\_19 (A2), Noella\_15 (A3), Noelle\_14 (A4), Norbert\_14 (A3), NorthStar\_14 (A4), NotAPhaseMom\_14 (A4), NothingSpecial\_17 (A2), Nyxis\_14 (A4), OKCentral2016\_14 (A10), OKaNui\_14 (A4), Obama12\_14 (A4), Odin\_14 (A2), Ohfah\_14 (A4), OlanP\_16 (A3), Ollie\_16 (A3), Onglai\_15 (A9), Oofda\_18 (A15), Orange\_15 (A11), P28Green\_16 (A3), PGHhamlin\_18 (A3), PP\_24 (A7), PackMan\_16 (A9), PainterBoy\_16 (A16), Palestino\_14 (A4), Panamaxus\_15 (A3), Pawn\_16 (A3), PeaceMeal1\_13 (A10), Peaches\_14 (A4), Pembroke\_16 (A3), Perplexer\_14 (A4), PeterPeter\_14 (A4), Petersenfast\_14 (A11), PetiteSangsue\_14 (A4), PetterN\_13 (A5), Ph8s\_16 (A2), Phacado\_14 (A4), Phaded\_18 (A2), Phaeder\_16 (A9), Phantastic\_14 (A3), Pharaoh\_15 (A12), Phelipe\_14 (A4), Phighter1804\_14 (A4), PhishRPhriends\_15 (A3), Phlei\_11 (A13), Phlorence\_12 (A5), Phoebe\_16 (A3), Phonnegut\_16 (A9), Phontbonne\_14 (A4), Phoxy\_16 (A3), Phranny\_17 (A3), PickleBack\_12 (A5), Pioneer\_16 (A9), Pipcraft\_14 (A4), Piro94\_16 (A2), Pistachio\_15 (A3), Pmask\_18 (A6), Pocahontas\_15 (A3), Polymorphads\_14 (A4), Polyphemus\_17 (A6), Poompha\_13 (A10), Popcicle\_15 (A3), Power\_15 (A2), Priamo\_18 (A6), Prinash11\_13 (A5), Priya\_16 (A9), Pukovnik\_17 (A2), Pumbaa\_14 (A4), Puppy\_15 (A3), PurpleHaze\_16 (A3), Qobbit\_16 (A9), QueenB2\_15 (A2), QueenBeesly\_15 (A2), QuinnKiro\_14 (A3), Quokka\_13 (A2), Rachaly\_18 (A2), Rahalelujah\_14 (A9), ReMo\_17 (A15), Reba\_17 (A3), RedRock\_18 (A2), Refuge\_18 (A12), Relief\_14 (A4), Remus\_17 (A15), ResDef\_15 (A3), Retro23\_15 (A2), RhynO\_15 (A10), Rifter\_18 (A6), Roary\_12 (A8), Rockstar\_14 (A3), Roksolana\_18 (A6), Romney\_14 (A4), Roosevelt\_14 (A4), Rosa24\_13 (A4), Rosalind\_17 (A15), Rowdy\_17 (A10), Ruin\_14 (A4), Rummer\_16 (A3), RyeScarlet\_17 (A9), Sabertooth\_14 (A4), Sabinator\_16 (A3), Sachima\_14 (A9), Saintus\_12 (A8), Salz\_15 (A11), SaturnRing\_14 (A3), Scamp\_14 (A4), Scherzo\_16 (A9), Scorpia\_13 (A5), Scout\_14 (A3), SemperFi\_17 (A2), SenorClean\_13 (A4), Serenity\_14 (A2), Shaka\_14 (A4), Sham4\_15 (A11), Shapes\_17 (A10), ShayRa\_18 (A15), SheaKeira\_15 (A9), Sheen\_16 (A7), SheldonCooper\_14 (A4), Shygu2\_14 (A4), Skipitt\_14 (A4), Sknot\_16 (A2), Smeadley\_12 (A8), Smeagan\_17 (A2), SmellyB\_18 (A6), SnapTap\_15 (A2), Snape\_15 (A11), Snickers\_16 (A3), SoYo\_16 (A3), SororFago\_14 (A14), Soshari\_18 (A3), Soups\_17 (A15), Sparxx\_14 (A4), Spike509\_16 (A3), Spino\_14 (A4), Spouty\_16 (A9), Stagni\_16 (A3), Stasia\_15 (A4), Steamy\_16 (A12), StepMih\_16 (A3), Stink\_14

(A4), Strosahl\_17 (A15), Sunhee\_13 (A14), SuperAwesome\_18 (A6), SuperCallie99\_18 (A6), Superchunk\_14 (A2), SweetiePie\_15 (A2), SwirlSquare\_17 (A2), Swirley\_12 (A5), Switzerland\_17 (A15), SydNat\_12 (A5), TNguyen7\_14 (A3), Taquarus\_14 (A4), Target\_16 (A1), TarsusIV\_15 (A2), Tarynearal\_11 (A5), Taurus\_16 (A3), Temprado\_19 (A6), Terrific\_19 (A2), Texage\_14 (A3), Thanksgivukkah\_14 (A4), Theia\_11 (A5), Tiger\_12 (A5), Timothy\_15 (A11), Timshel\_15 (A7), TinaFeyge\_14 (A4), TinyPebbles\_16 (A3), TinyTimmy\_15 (A11), Tinybot\_13 (A4), TopsytheTRex\_14 (A2), TiroTheta9\_14 (A4), Toaka\_14 (A9), Todacoro\_15 (A3), Tomathan\_18 (A2), ToneTone\_17 (A6), Topanga\_14 (A10), Toro\_17 (A7), Travvers\_18 (A2), Tristan\_16 (A2), Trixie\_18 (A2), Trooper\_15 (A2), TroyPia\_14 (A4), Tubs\_16 (A9), Tucker\_18 (A6), Turbido\_17 (A2), Twigg\_12 (A5), Twister\_14 (A10), TygerBlood\_14 (A4), Ugenie5\_13 (A9), Ulysses\_13 (A4), UnionJack\_12 (A5), Updawg\_17 (A2), VA6\_15 (A2), VC3\_18 (A2), Vanisoa\_14 (A9), Veracruz\_14 (A3), VohminGhazi\_18 (A6), Waits\_17 (A15), WalterMcMickey\_14 (A10), Wander\_14 (A4), Warrior24\_18 (A15), Watson\_16 (A3), WeiHuaDA\_21 (A2), Whabigail7\_17 (A2), WideWale\_17 (A2), Wiks\_18 (A6), Wilbur\_14 (A4), Wile\_14 (A4), Wizard007\_14 (A4), WunderPhul\_18 (A6), Xena\_14 (A4), XianYue\_15 (A2), Yecey3\_15 (A9), YoSam321\_14 (A4), Yokurt\_18 (A6), Zaka\_18 (A6), Zetzy\_15 (A3), Zimmer\_17 (A12), Zolita\_11 (A5), Zulu\_18 (A6),

#### Start 27:

- Found in 1 of 672 ( 0.1% ) of genes in pham
- Manual Annotations of this start: 1 of 603
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hum25\_5 (FQ),

#### Start 32:

- Found in 38 of 672 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 36 of 603
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alatin\_11 (CA), Alpacados\_10 (CA), AngryOrchard\_10 (CA), AppleCloud\_9 (CA), Belenaria\_11 (CA), BobbyDazzler\_11 (CA), Bonanza\_11 (CA), Bradshaw\_11 (CA), Bryce\_11 (CA), CosmicSans\_11 (CA), Dinger\_11 (CA), Erik\_11 (CA), Espica\_11 (CA), Gollum\_11 (CA), Harlequin\_11 (CA), Hiro\_11 (CA), Jester\_11 (CA), Krishelle\_11 (CA), Lillie\_11 (CA), Naiad\_11 (CA), Nancinator\_11 (CA), Natosaleda\_11 (CA), Partridge\_11 (CA), PhailMary\_10 (CA), Phrankenstien\_11 (CA), RER2\_4 (CA), RGL3\_4 (CA), Rasputin\_11 (CA), RexFury\_11 (CA), Rhodalysa\_11 (CA), Shuman\_11 (CA), StCroix\_11 (CA), Swann\_11 (CA), TWAMP\_11 (CA), Takoda\_11 (CA), UhSalsa\_11 (CA), Yogi\_11 (CA), Yoncess\_11 (CA),

#### Summary by clusters:

There are 24 clusters represented in this pham: FQ, A15, A14, A17, A16, A11, A10, A13, A12, A19, A18, A1, A3, A2, A5, A4, A7, A6, A9, A8, A, CA, A20, A21,

#### Info for manual annotations of cluster A:

- Start number 24 was manually annotated 1 time for cluster A.

#### Info for manual annotations of cluster A1:

- Start number 24 was manually annotated 5 times for cluster A1.

#### Info for manual annotations of cluster A10:

- Start number 19 was manually annotated 3 times for cluster A10.
- Start number 24 was manually annotated 14 times for cluster A10.

Info for manual annotations of cluster A11:

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

Info for manual annotations of cluster A12:

- Start number 24 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 24 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 24 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 24 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 24 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 18 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 18 was manually annotated 4 times for cluster A2.
- Start number 24 was manually annotated 98 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 24 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 18 was manually annotated 11 times for cluster A3.
- Start number 23 was manually annotated 14 times for cluster A3.
- Start number 24 was manually annotated 88 times for cluster A3.

Info for manual annotations of cluster A4:

- Start number 18 was manually annotated 1 time for cluster A4.
- Start number 24 was manually annotated 136 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 18 was manually annotated 1 time for cluster A5.
- Start number 24 was manually annotated 37 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 24 was manually annotated 42 times for cluster A6.

Info for manual annotations of cluster A7:

- Start number 24 was manually annotated 5 times for cluster A7.



Info for manual annotations of cluster A8:

- Start number 23 was manually annotated 3 times for cluster A8.
- Start number 24 was manually annotated 8 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 24 was manually annotated 35 times for cluster A9.

Info for manual annotations of cluster CA:

- Start number 32 was manually annotated 36 times for cluster CA.

Info for manual annotations of cluster FQ:

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

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

Gene: 20ES\_15 Start: 11599, Stop: 12150, Start Num: 18

Candidate Starts for 20ES\_15:

(Start: 18 @11599 has 18 MA's), (Start: 23 @11614 has 17 MA's), (Start: 24 @11635 has 528 MA's), (37, 11713), (62, 11926), (65, 11953), (81, 12091),

Gene: 40AC\_18 Start: 13636, Stop: 14160, Start Num: 24

Candidate Starts for 40AC\_18:

(Start: 18 @13600 has 18 MA's), (Start: 23 @13615 has 17 MA's), (Start: 24 @13636 has 528 MA's), (34, 13702), (41, 13774), (55, 13879), (62, 13933),

Gene: ACFishhook\_16 Start: 11156, Stop: 11659, Start Num: 24

Candidate Starts for ACFishhook\_16:

(Start: 18 @11120 has 18 MA's), (Start: 23 @11135 has 17 MA's), (Start: 24 @11156 has 528 MA's), (47, 11333), (63, 11465), (65, 11477),

Gene: AN3\_15 Start: 11619, Stop: 12140, Start Num: 24

Candidate Starts for AN3\_15:

(Start: 18 @11583 has 18 MA's), (Start: 23 @11598 has 17 MA's), (Start: 24 @11619 has 528 MA's), (62, 11916), (65, 11943), (81, 12081),

Gene: AN9\_18 Start: 11582, Stop: 12103, Start Num: 24

Candidate Starts for AN9\_18:

(15, 11534), (Start: 24 @11582 has 528 MA's), (41, 11726), (42, 11741), (55, 11831), (62, 11885), (63, 11900), (81, 12044), (86, 12077),

Gene: ANI8\_18 Start: 11582, Stop: 12103, Start Num: 24

Candidate Starts for ANI8\_18:

(15, 11534), (Start: 24 @11582 has 528 MA's), (41, 11726), (55, 11831), (62, 11885), (63, 11900), (81, 12044), (86, 12077),

Gene: AbbyPaige\_17 Start: 12068, Stop: 12595, Start Num: 24

Candidate Starts for AbbyPaige\_17:

(Start: 24 @12068 has 528 MA's), (62, 12368), (63, 12383), (81, 12536), (86, 12569),

Gene: AbbysRanger\_14 Start: 10955, Stop: 11479, Start Num: 24

Candidate Starts for AbbysRanger\_14:

(Start: 18 @10922 has 18 MA's), (Start: 24 @10955 has 528 MA's), (35, 11039), (53, 11189), (75, 11366), (81, 11423),

Gene: Abdiel\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Abdiel\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Achebe\_14 Start: 10910, Stop: 11458, Start Num: 18  
Candidate Starts for Achebe\_14:  
(4, 10652), (7, 10703), (9, 10739), (10, 10742), (Start: 18 @10910 has 18 MA's), (Start: 24 @10943 has 528 MA's), (75, 11345),

Gene: Acolyte\_15 Start: 11767, Stop: 12288, Start Num: 24  
Candidate Starts for Acolyte\_15:  
(Start: 18 @11731 has 18 MA's), (Start: 23 @11746 has 17 MA's), (Start: 24 @11767 has 528 MA's), (29, 11818), (62, 12067), (65, 12094), (67, 12103), (86, 12262),

Gene: Adzzy\_16 Start: 10383, Stop: 10907, Start Num: 24  
Candidate Starts for Adzzy\_16:  
(Start: 24 @10383 has 528 MA's), (29, 10434), (34, 10452), (41, 10524), (45, 10554), (63, 10698), (65, 10710), (67, 10719), (81, 10845), (86, 10878), (88, 10887),

Gene: Agape74\_17 Start: 12068, Stop: 12595, Start Num: 24  
Candidate Starts for Agape74\_17:  
(Start: 24 @12068 has 528 MA's), (62, 12368), (63, 12383), (81, 12536), (86, 12569),

Gene: AgentM\_12 Start: 10341, Stop: 10850, Start Num: 24  
Candidate Starts for AgentM\_12:  
(Start: 24 @10341 has 528 MA's), (39, 10431), (55, 10584), (61, 10626), (63, 10653), (67, 10674), (72, 10722),

Gene: Aglet\_16 Start: 10983, Stop: 11507, Start Num: 23  
Candidate Starts for Aglet\_16:  
(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: AgronaGT15\_16 Start: 10911, Stop: 11414, Start Num: 24  
Candidate Starts for AgronaGT15\_16:  
(Start: 18 @10875 has 18 MA's), (Start: 23 @10890 has 17 MA's), (Start: 24 @10911 has 528 MA's), (47, 11088), (63, 11220), (65, 11232),

Gene: Airmid\_12 Start: 10089, Stop: 10601, Start Num: 24  
Candidate Starts for Airmid\_12:  
(Start: 18 @10056 has 18 MA's), (Start: 24 @10089 has 528 MA's), (39, 10182), (61, 10377), (63, 10404), (72, 10473), (78, 10506), (85, 10572),

Gene: Alatin\_11 Start: 7218, Stop: 7703, Start Num: 32  
Candidate Starts for Alatin\_11:  
(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (73, 7572), (88, 7686),

Gene: Albee\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Albee\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Alberto7\_15 Start: 11244, Stop: 11756, Start Num: 24

Candidate Starts for Alberto7\_15:

(Start: 24 @11244 has 528 MA's), (40, 11355), (75, 11643),

Gene: Aliter\_16 Start: 12195, Stop: 12728, Start Num: 24

Candidate Starts for Aliter\_16:

(Start: 24 @12195 has 528 MA's), (28, 12243), (43, 12357), (62, 12498), (63, 12513), (65, 12525), (86, 12693), (87, 12696),

Gene: Alma\_16 Start: 12274, Stop: 12807, Start Num: 24

Candidate Starts for Alma\_16:

(Start: 24 @12274 has 528 MA's), (28, 12322), (43, 12436), (62, 12577), (63, 12592), (65, 12604), (86, 12772), (87, 12775),

Gene: Alpacados\_10 Start: 7165, Stop: 7650, Start Num: 32

Candidate Starts for Alpacados\_10:

(14, 7003), (Start: 32 @7165 has 36 MA's), (58, 7396), (66, 7462), (73, 7519),

Gene: Anaysia\_17 Start: 10750, Stop: 11262, Start Num: 24

Candidate Starts for Anaysia\_17:

(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Aneem\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Aneem\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: AngryOrchard\_10 Start: 7148, Stop: 7633, Start Num: 32

Candidate Starts for AngryOrchard\_10:

(14, 6986), (Start: 32 @7148 has 36 MA's), (58, 7379), (66, 7445), (73, 7502),

Gene: AnnaL29\_18 Start: 13469, Stop: 13981, Start Num: 24

Candidate Starts for AnnaL29\_18:

(Start: 24 @13469 has 528 MA's), (67, 13796), (81, 13922),

Gene: Annyong\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Annyong\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Anon\_15 Start: 11108, Stop: 11614, Start Num: 24

Candidate Starts for Anon\_15:

(Start: 24 @11108 has 528 MA's), (49, 11297), (65, 11423), (90, 11606),

Gene: Anselm\_15 Start: 11730, Stop: 12242, Start Num: 24

Candidate Starts for Anselm\_15:

(Start: 18 @11694 has 18 MA's), (Start: 23 @11709 has 17 MA's), (Start: 24 @11730 has 528 MA's), (62, 12018), (65, 12045), (81, 12183), (86, 12216),

Gene: Anthony\_14 Start: 9846, Stop: 10355, Start Num: 24

Candidate Starts for Anthony\_14:

(Start: 24 @9846 has 528 MA's), (41, 9981), (45, 10011), (86, 10332),

Gene: Anubis\_18 Start: 10868, Stop: 11392, Start Num: 23  
Candidate Starts for Anubis\_18:  
(Start: 18 @10853 has 18 MA's), (Start: 23 @10868 has 17 MA's), (Start: 24 @10889 has 528 MA's),  
(47, 11066), (63, 11198), (65, 11210),

Gene: AppleCloud\_9 Start: 6912, Stop: 7397, Start Num: 32  
Candidate Starts for AppleCloud\_9:  
(14, 6750), (Start: 32 @6912 has 36 MA's), (58, 7143), (66, 7209), (73, 7266),

Gene: Aragog\_12 Start: 10371, Stop: 10880, Start Num: 24  
Candidate Starts for Aragog\_12:  
(Start: 24 @10371 has 528 MA's), (39, 10461), (55, 10614), (61, 10656), (63, 10683), (72, 10752),

Gene: ArcherNM\_17 Start: 13370, Stop: 13930, Start Num: 18  
Candidate Starts for ArcherNM\_17:  
(Start: 18 @13370 has 18 MA's), (20, 13385), (Start: 24 @13406 has 528 MA's), (34, 13475), (67,  
13742), (81, 13871),

Gene: Archetta\_12 Start: 10081, Stop: 10593, Start Num: 24  
Candidate Starts for Archetta\_12:  
(13, 9982), (Start: 18 @10048 has 18 MA's), (Start: 24 @10081 has 528 MA's), (39, 10174), (61,  
10369), (63, 10396), (72, 10465), (78, 10498), (85, 10564),

Gene: Arissanae\_14 Start: 10395, Stop: 10925, Start Num: 24  
Candidate Starts for Arissanae\_14:  
(Start: 24 @10395 has 528 MA's), (29, 10443), (39, 10500), (62, 10695), (65, 10722), (86, 10890), (87,  
10893),

Gene: Artemis2UCLA\_18 Start: 11564, Stop: 12085, Start Num: 24  
Candidate Starts for Artemis2UCLA\_18:  
(12, 11468), (Start: 24 @11564 has 528 MA's), (29, 11612), (41, 11699), (54, 11792), (55, 11804), (70,  
11930),

Gene: Arturo\_13 Start: 11053, Stop: 11565, Start Num: 24  
Candidate Starts for Arturo\_13:  
(Start: 24 @11053 has 528 MA's), (40, 11164), (75, 11452),

Gene: Astro\_12 Start: 9843, Stop: 10349, Start Num: 24  
Candidate Starts for Astro\_12:  
(Start: 24 @9843 has 528 MA's), (50, 10035), (56, 10092), (60, 10116), (63, 10149), (67, 10170), (80,  
10275),

Gene: AugsMagnumOpus\_18 Start: 10995, Stop: 11498, Start Num: 24  
Candidate Starts for AugsMagnumOpus\_18:  
(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's),  
(47, 11172), (63, 11304), (65, 11316),

Gene: AvatarAhPeg\_14 Start: 10907, Stop: 11419, Start Num: 24  
Candidate Starts for AvatarAhPeg\_14:  
(Start: 18 @10874 has 18 MA's), (Start: 24 @10907 has 528 MA's), (40, 11018), (67, 11240), (75,  
11306),

Gene: Avle17\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Avle17\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: B1\_12 Start: 10184, Stop: 10708, Start Num: 24  
Candidate Starts for B1\_12:  
(Start: 18 @10148 has 18 MA's), (Start: 24 @10184 has 528 MA's), (46, 10361), (61, 10469), (65, 10508),

Gene: BABullseye\_18 Start: 11667, Stop: 12197, Start Num: 24  
Candidate Starts for BABullseye\_18:  
(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: Baby16\_14 Start: 10948, Stop: 11460, Start Num: 24  
Candidate Starts for Baby16\_14:  
(Start: 24 @10948 has 528 MA's), (40, 11059), (75, 11347),

Gene: BabyBack\_17 Start: 13261, Stop: 13785, Start Num: 24  
Candidate Starts for BabyBack\_17:  
(Start: 24 @13261 has 528 MA's), (34, 13327), (41, 13399), (62, 13558), (70, 13630),

Gene: BabyJohn\_13 Start: 10767, Stop: 11291, Start Num: 24  
Candidate Starts for BabyJohn\_13:  
(Start: 24 @10767 has 528 MA's), (46, 10944), (61, 11052), (65, 11091),

Gene: BabyRay\_14 Start: 10770, Stop: 11294, Start Num: 24  
Candidate Starts for BabyRay\_14:  
(Start: 24 @10770 has 528 MA's), (46, 10944), (61, 11052), (65, 11091), (89, 11265),

Gene: Bachome\_15 Start: 12149, Stop: 12670, Start Num: 24  
Candidate Starts for Bachome\_15:  
(Start: 23 @12128 has 17 MA's), (Start: 24 @12149 has 528 MA's), (26, 12191), (29, 12200), (40, 12263), (62, 12449),

Gene: Backyardigan\_14 Start: 10955, Stop: 11470, Start Num: 24  
Candidate Starts for Backyardigan\_14:  
(4, 10664), (7, 10715), (9, 10751), (10, 10754), (Start: 18 @10922 has 18 MA's), (Start: 24 @10955 has 528 MA's), (75, 11357),

Gene: Bactobuster\_16 Start: 13356, Stop: 13865, Start Num: 24  
Candidate Starts for Bactobuster\_16:  
(Start: 24 @13356 has 528 MA's), (46, 13524), (62, 13644), (65, 13671), (81, 13809),

Gene: Badger\_14 Start: 10944, Stop: 11459, Start Num: 24  
Candidate Starts for Badger\_14:  
(4, 10653), (7, 10704), (9, 10740), (10, 10743), (Start: 18 @10911 has 18 MA's), (Start: 24 @10944 has 528 MA's), (75, 11346),

Gene: Baehexic\_16 Start: 12120, Stop: 12644, Start Num: 24  
Candidate Starts for Baehexic\_16:  
(Start: 18 @12084 has 18 MA's), (21, 12099), (Start: 24 @12120 has 528 MA's), (56, 12381), (81, 12585), (86, 12618),

Gene: BangNhom\_13 Start: 10917, Stop: 11429, Start Num: 24

Candidate Starts for BangNhom\_13:

(Start: 18 @10884 has 18 MA's), (Start: 24 @10917 has 528 MA's), (40, 11028), (67, 11250), (75, 11316),

Gene: Bartimeaus\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Bartimeaus\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Battleship\_18 Start: 10868, Stop: 11377, Start Num: 24

Candidate Starts for Battleship\_18:

(Start: 24 @10868 has 528 MA's),

Gene: Beauxregard13\_16 Start: 10982, Stop: 11506, Start Num: 23

Candidate Starts for Beauxregard13\_16:

(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's), (47, 11180), (63, 11312), (65, 11324),

Gene: Beemo\_16 Start: 12301, Stop: 12834, Start Num: 24

Candidate Starts for Beemo\_16:

(Start: 24 @12301 has 528 MA's), (28, 12349), (43, 12463), (62, 12604), (63, 12619), (65, 12631), (86, 12799), (87, 12802),

Gene: Belenaria\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Belenaria\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: BellusTerra\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for BellusTerra\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Benedict\_12 Start: 10091, Stop: 10603, Start Num: 24

Candidate Starts for Benedict\_12:

(Start: 18 @10058 has 18 MA's), (Start: 24 @10091 has 528 MA's), (39, 10184), (61, 10379), (63, 10406), (72, 10475), (78, 10508), (85, 10574),

Gene: BengiVuitton\_16 Start: 12045, Stop: 12557, Start Num: 24

Candidate Starts for BengiVuitton\_16:

(Start: 18 @12009 has 18 MA's), (Start: 23 @12024 has 17 MA's), (Start: 24 @12045 has 528 MA's), (37, 12123), (62, 12336), (73, 12426), (81, 12498),

Gene: Benvolio\_15 Start: 11720, Stop: 12232, Start Num: 24

Candidate Starts for Benvolio\_15:

(Start: 18 @11684 has 18 MA's), (Start: 23 @11699 has 17 MA's), (Start: 24 @11720 has 528 MA's), (62, 12008), (65, 12035), (81, 12173),

Gene: BiancaTri92\_17 Start: 13398, Stop: 13916, Start Num: 24

Candidate Starts for BiancaTri92\_17:

(Start: 18 @13362 has 18 MA's), (Start: 23 @13377 has 17 MA's), (Start: 24 @13398 has 528 MA's), (62, 13695), (65, 13722), (81, 13857),

Gene: Bigflo\_16 Start: 11001, Stop: 11504, Start Num: 24

Candidate Starts for Bigflo\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: BillKnuckles\_15 Start: 11758, Stop: 12255, Start Num: 24

Candidate Starts for BillKnuckles\_15:

(Start: 24 @11758 has 528 MA's), (54, 11974), (55, 11986), (67, 12076), (79, 12163), (82, 12205), (84, 12223),

Gene: Blackmoor\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Blackmoor\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: BlessJoy\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for BlessJoy\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Blinn1\_18 Start: 11710, Stop: 12240, Start Num: 24

Candidate Starts for Blinn1\_18:

(Start: 24 @11710 has 528 MA's), (41, 11854), (54, 11947), (55, 11959), (70, 12085),

Gene: Blue7\_18 Start: 11655, Stop: 12176, Start Num: 24

Candidate Starts for Blue7\_18:

(12, 11559), (Start: 24 @11655 has 528 MA's), (29, 11703), (41, 11790), (55, 11895), (70, 12021),

Gene: BlueBird\_15 Start: 10546, Stop: 11067, Start Num: 24

Candidate Starts for BlueBird\_15:

(Start: 24 @10546 has 528 MA's), (46, 10720), (61, 10828), (65, 10867), (89, 11038),

Gene: Bluefalcon\_11 Start: 10341, Stop: 10850, Start Num: 24

Candidate Starts for Bluefalcon\_11:

(Start: 24 @10341 has 528 MA's), (39, 10431), (55, 10584), (61, 10626), (63, 10653), (72, 10722),

Gene: BobSwaget\_18 Start: 13290, Stop: 13799, Start Num: 24

Candidate Starts for BobSwaget\_18:

(Start: 24 @13290 has 528 MA's), (37, 13371), (41, 13425), (62, 13584), (63, 13599), (81, 13743),

Gene: BobbyDazzler\_11 Start: 7274, Stop: 7759, Start Num: 32

Candidate Starts for BobbyDazzler\_11:

(14, 7112), (Start: 32 @7274 has 36 MA's), (58, 7505), (66, 7571), (73, 7628),

Gene: BogosyJay\_16 Start: 12052, Stop: 12585, Start Num: 24

Candidate Starts for BogosyJay\_16:

(Start: 24 @12052 has 528 MA's), (28, 12100), (43, 12214), (62, 12355), (63, 12370), (65, 12382), (86, 12550), (87, 12553),

Gene: Bombshell\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Bombshell\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Bonamassa\_12 Start: 10263, Stop: 10772, Start Num: 24

Candidate Starts for Bonamassa\_12:

(Start: 24 @10263 has 528 MA's), (39, 10353), (55, 10506), (61, 10548), (63, 10575), (67, 10596), (72, 10644),

Gene: Bonanza\_11 Start: 7203, Stop: 7688, Start Num: 32  
Candidate Starts for Bonanza\_11:  
(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: Boohoo\_17 Start: 10750, Stop: 11262, Start Num: 24  
Candidate Starts for Boohoo\_17:  
(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Bowtie\_15 Start: 12152, Stop: 12673, Start Num: 24  
Candidate Starts for Bowtie\_15:  
(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: Bradman\_14 Start: 10524, Stop: 11048, Start Num: 24  
Candidate Starts for Bradman\_14:  
(Start: 18 @10488 has 18 MA's), (22, 10503), (Start: 24 @10524 has 528 MA's), (29, 10575), (41, 10665), (45, 10695), (63, 10839), (67, 10860), (81, 10989), (86, 11022),

Gene: Bradshaw\_11 Start: 7218, Stop: 7703, Start Num: 32  
Candidate Starts for Bradshaw\_11:  
(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: BreSam8\_16 Start: 10960, Stop: 11499, Start Num: 18  
Candidate Starts for BreSam8\_16:  
(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: Broseidon\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Broseidon\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Bruiser\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Bruiser\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Bryce\_11 Start: 7203, Stop: 7688, Start Num: 32  
Candidate Starts for Bryce\_11:  
(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: BubbleTrouble\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for BubbleTrouble\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Bud\_15 Start: 12158, Stop: 12679, Start Num: 24  
Candidate Starts for Bud\_15:  
(Start: 23 @12137 has 17 MA's), (Start: 24 @12158 has 528 MA's), (29, 12209), (40, 12272), (62, 12458),

Gene: Bugatti\_14 Start: 10546, Stop: 11067, Start Num: 24  
Candidate Starts for Bugatti\_14:  
(Start: 24 @10546 has 528 MA's), (46, 10720), (61, 10828), (65, 10867), (89, 11038),



Gene: Buggy\_17 Start: 12067, Stop: 12594, Start Num: 24  
Candidate Starts for Buggy\_17:  
(Start: 24 @12067 has 528 MA's), (62, 12367), (63, 12382), (81, 12535), (86, 12568),

Gene: Bumblebee11\_14 Start: 10949, Stop: 11461, Start Num: 24  
Candidate Starts for Bumblebee11\_14:  
(Start: 18 @10916 has 18 MA's), (Start: 24 @10949 has 528 MA's), (40, 11060), (53, 11171), (75, 11348),

Gene: Burger\_13 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Burger\_13:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: BuzzBuzz\_15 Start: 11087, Stop: 11590, Start Num: 24  
Candidate Starts for BuzzBuzz\_15:  
(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's), (47, 11264), (63, 11396), (65, 11408),

Gene: Bxb1\_13 Start: 11127, Stop: 11624, Start Num: 24  
Candidate Starts for Bxb1\_13:  
(Start: 24 @11127 has 528 MA's), (54, 11343), (55, 11355), (67, 11445), (79, 11532), (82, 11574), (84, 11592),

Gene: Bxz2\_16 Start: 11097, Stop: 11600, Start Num: 24  
Candidate Starts for Bxz2\_16:  
(Start: 18 @11061 has 18 MA's), (Start: 23 @11076 has 17 MA's), (Start: 24 @11097 has 528 MA's), (47, 11274), (63, 11406), (65, 11418),

Gene: C3\_13 Start: 11582, Stop: 12103, Start Num: 24  
Candidate Starts for C3\_13:  
(15, 11534), (Start: 24 @11582 has 528 MA's), (41, 11726), (55, 11831), (62, 11885), (63, 11900), (81, 12044), (86, 12077),

Gene: CRB1\_15 Start: 11588, Stop: 12115, Start Num: 24  
Candidate Starts for CRB1\_15:  
(Start: 24 @11588 has 528 MA's), (63, 11903), (81, 12056), (86, 12089),

Gene: Caelakin\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Caelakin\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Calvinny\_17 Start: 11075, Stop: 11578, Start Num: 24  
Candidate Starts for Calvinny\_17:  
(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: Camperdownii\_13 Start: 10561, Stop: 11073, Start Num: 24  
Candidate Starts for Camperdownii\_13:  
(Start: 18 @10528 has 18 MA's), (Start: 24 @10561 has 528 MA's), (40, 10672), (62, 10858), (75, 10960),

Gene: Candra\_18 Start: 11710, Stop: 12240, Start Num: 24  
Candidate Starts for Candra\_18:

(Start: 24 @11710 has 528 MA's), (41, 11854), (54, 11947), (55, 11959), (70, 12085),

Gene: Caraxes\_14 Start: 10281, Stop: 10805, Start Num: 24

Candidate Starts for Caraxes\_14:

(Start: 24 @10281 has 528 MA's), (34, 10350), (41, 10422), (45, 10452), (63, 10596), (67, 10617), (81, 10743), (86, 10776), (88, 10785),

Gene: Catalina\_16 Start: 12268, Stop: 12801, Start Num: 24

Candidate Starts for Catalina\_16:

(Start: 24 @12268 has 528 MA's), (28, 12316), (43, 12430), (62, 12571), (63, 12586), (65, 12598), (86, 12766), (87, 12769),

Gene: Caviar\_15 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Caviar\_15:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Centaur\_17 Start: 12098, Stop: 12622, Start Num: 24

Candidate Starts for Centaur\_17:

(11, 11945), (Start: 18 @12062 has 18 MA's), (21, 12077), (Start: 24 @12098 has 528 MA's), (46, 12278), (62, 12398), (65, 12425), (67, 12434), (81, 12563), (86, 12596), (88, 12605), (89, 12608),

Gene: CentreCat\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for CentreCat\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Cerulean\_14 Start: 10918, Stop: 11430, Start Num: 24

Candidate Starts for Cerulean\_14:

(Start: 18 @10885 has 18 MA's), (Start: 24 @10918 has 528 MA's), (40, 11029), (67, 11251), (75, 11317),

Gene: Chadwick\_13 Start: 10059, Stop: 10571, Start Num: 24

Candidate Starts for Chadwick\_13:

(Start: 18 @10026 has 18 MA's), (Start: 24 @10059 has 528 MA's), (39, 10152), (61, 10347), (63, 10374), (72, 10443), (78, 10476), (85, 10542),

Gene: ChampagnePapi\_14 Start: 10917, Stop: 11429, Start Num: 24

Candidate Starts for ChampagnePapi\_14:

(Start: 18 @10884 has 18 MA's), (Start: 24 @10917 has 528 MA's), (40, 11028), (67, 11250), (75, 11316),

Gene: Changeling\_18 Start: 13463, Stop: 13987, Start Num: 24

Candidate Starts for Changeling\_18:

(Start: 18 @13424 has 18 MA's), (Start: 24 @13463 has 528 MA's), (34, 13532), (46, 13643), (67, 13799), (81, 13928),

Gene: Chaph\_14 Start: 10948, Stop: 11460, Start Num: 24

Candidate Starts for Chaph\_14:

(Start: 24 @10948 has 528 MA's), (40, 11059), (75, 11347),

Gene: Chargerpower\_15 Start: 10766, Stop: 11284, Start Num: 24

Candidate Starts for Chargerpower\_15:

(Start: 24 @10766 has 528 MA's), (31, 10820), (41, 10904), (54, 10997), (65, 11090), (81, 11225),

Gene: Charm\_15 Start: 10498, Stop: 11028, Start Num: 24  
Candidate Starts for Charm\_15:  
(Start: 23 @10477 has 17 MA's), (Start: 24 @10498 has 528 MA's), (28, 10549), (34, 10567), (54, 10732), (65, 10825),

Gene: Chartreuse\_18 Start: 11624, Stop: 12154, Start Num: 24  
Candidate Starts for Chartreuse\_18:  
(Start: 24 @11624 has 528 MA's), (41, 11768), (54, 11861), (55, 11873), (70, 11999),

Gene: Che12\_16 Start: 10378, Stop: 10902, Start Num: 24  
Candidate Starts for Che12\_16:  
(Start: 24 @10378 has 528 MA's), (34, 10447), (41, 10519), (45, 10549), (63, 10693), (67, 10714), (81, 10840), (86, 10873),

Gene: ChipMunk\_17 Start: 12018, Stop: 12530, Start Num: 24  
Candidate Starts for ChipMunk\_17:  
(Start: 18 @11982 has 18 MA's), (Start: 23 @11997 has 17 MA's), (Start: 24 @12018 has 528 MA's), (62, 12306), (65, 12333), (67, 12342), (81, 12471), (86, 12504),

Gene: Chiqui\_13 Start: 10767, Stop: 11291, Start Num: 24  
Candidate Starts for Chiqui\_13:  
(Start: 24 @10767 has 528 MA's), (46, 10944), (61, 11052), (65, 11091),

Gene: Chupacabra\_14 Start: 10702, Stop: 11223, Start Num: 24  
Candidate Starts for Chupacabra\_14:  
(Start: 19 @10681 has 3 MA's), (Start: 24 @10702 has 528 MA's), (76, 11116),

Gene: Cici\_14 Start: 10937, Stop: 11452, Start Num: 24  
Candidate Starts for Cici\_14:  
(Start: 18 @10904 has 18 MA's), (Start: 24 @10937 has 528 MA's), (53, 11162), (75, 11339),

Gene: Cindaradix\_13 Start: 10649, Stop: 11173, Start Num: 24  
Candidate Starts for Cindaradix\_13:  
(Start: 18 @10616 has 18 MA's), (Start: 24 @10649 has 528 MA's), (35, 10733), (40, 10772), (75, 11060),

Gene: Cintron\_14 Start: 10987, Stop: 11499, Start Num: 24  
Candidate Starts for Cintron\_14:  
(Start: 24 @10987 has 528 MA's), (40, 11098), (62, 11284), (75, 11386),

Gene: Citius\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Citius\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Clarenza\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Clarenza\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: CloudWang3\_18 Start: 11655, Stop: 12185, Start Num: 24  
Candidate Starts for CloudWang3\_18:  
(Start: 24 @11655 has 528 MA's), (41, 11799), (54, 11892), (55, 11904), (70, 12030),

Gene: Cocoaberry\_14 Start: 10943, Stop: 11455, Start Num: 24

Candidate Starts for Cocoaberry\_14:  
(Start: 24 @10943 has 528 MA's), (40, 11054), (75, 11342),

Gene: Colbster\_16 Start: 11003, Stop: 11506, Start Num: 24  
Candidate Starts for Colbster\_16:  
(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's),  
(47, 11180), (63, 11312), (65, 11324),

Gene: Colin\_19 Start: 13279, Stop: 13803, Start Num: 24  
Candidate Starts for Colin\_19:  
(11, 13123), (20, 13258), (Start: 24 @13279 has 528 MA's), (34, 13348), (55, 13525), (81, 13744),

Gene: Commander\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Commander\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Connomayer\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Connomayer\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Conquerage\_16 Start: 12297, Stop: 12830, Start Num: 24  
Candidate Starts for Conquerage\_16:  
(Start: 24 @12297 has 528 MA's), (28, 12345), (43, 12459), (62, 12600), (63, 12615), (65, 12627), (86,  
12795), (87, 12798),

Gene: Conspiracy\_12 Start: 10081, Stop: 10590, Start Num: 24  
Candidate Starts for Conspiracy\_12:  
(Start: 24 @10081 has 528 MA's), (39, 10171), (55, 10324), (61, 10366), (63, 10393), (67, 10414), (72,  
10462),

Gene: Coog\_12 Start: 10231, Stop: 10740, Start Num: 24  
Candidate Starts for Coog\_12:  
(Start: 24 @10231 has 528 MA's), (39, 10321), (55, 10474), (61, 10516), (63, 10543), (67, 10564), (72,  
10612),

Gene: Cookiedough\_18 Start: 11667, Stop: 12197, Start Num: 24  
Candidate Starts for Cookiedough\_18:  
(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: CosmicSans\_11 Start: 7218, Stop: 7703, Start Num: 32  
Candidate Starts for CosmicSans\_11:  
(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Crucio\_15 Start: 11565, Stop: 12077, Start Num: 24  
Candidate Starts for Crucio\_15:  
(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's),  
(62, 11853), (65, 11880), (81, 12018),

Gene: Cuco\_12 Start: 10262, Stop: 10771, Start Num: 24  
Candidate Starts for Cuco\_12:  
(Start: 24 @10262 has 528 MA's), (39, 10352), (55, 10505), (61, 10547), (63, 10574), (67, 10595), (72,  
10643),

Gene: Cullens\_16 Start: 10965, Stop: 11504, Start Num: 18

Candidate Starts for Cullens\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: D29\_16 Start: 11525, Stop: 12046, Start Num: 24

Candidate Starts for D29\_16:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: D32\_18 Start: 11525, Stop: 12046, Start Num: 24

Candidate Starts for D32\_18:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: DBQu4n\_18 Start: 11525, Stop: 12046, Start Num: 24

Candidate Starts for DBQu4n\_18:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: DaHudson\_16 Start: 10995, Stop: 11498, Start Num: 24

Candidate Starts for DaHudson\_16:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: DaVinci\_18 Start: 11678, Stop: 12208, Start Num: 24

Candidate Starts for DaVinci\_18:

(Start: 24 @11678 has 528 MA's), (41, 11822), (54, 11915), (55, 11927), (70, 12053),

Gene: Daishi\_15 Start: 9928, Stop: 10431, Start Num: 24

Candidate Starts for Daishi\_15:

(Start: 18 @9892 has 18 MA's), (Start: 23 @9907 has 17 MA's), (Start: 24 @9928 has 528 MA's), (47, 10105), (63, 10237), (65, 10249),

Gene: Dalmatian\_15 Start: 11715, Stop: 12227, Start Num: 24

Candidate Starts for Dalmatian\_15:

(Start: 18 @11679 has 18 MA's), (Start: 23 @11694 has 17 MA's), (Start: 24 @11715 has 528 MA's), (62, 12003), (65, 12030), (81, 12168),

Gene: Danforth\_11 Start: 9822, Stop: 10328, Start Num: 24

Candidate Starts for Danforth\_11:

(Start: 24 @9822 has 528 MA's), (50, 10014), (56, 10071), (60, 10095), (63, 10128), (67, 10149), (80, 10254),

Gene: Darrell\_17 Start: 12486, Stop: 13019, Start Num: 24

Candidate Starts for Darrell\_17:

(Start: 24 @12486 has 528 MA's), (28, 12534), (43, 12648), (62, 12789), (63, 12804), (65, 12816), (86, 12984), (87, 12987),

Gene: DARTHPhader\_16 Start: 12456, Stop: 12989, Start Num: 24

Candidate Starts for DARTHPhader\_16:

(Start: 24 @12456 has 528 MA's), (41, 12594), (48, 12639), (62, 12753), (84, 12942),

Gene: Datway\_14 Start: 10955, Stop: 11470, Start Num: 24  
Candidate Starts for Datway\_14:  
(4, 10664), (7, 10715), (9, 10751), (10, 10754), (Start: 18 @10922 has 18 MA's), (Start: 24 @10955 has 528 MA's), (75, 11357),

Gene: Deano\_14 Start: 10947, Stop: 11459, Start Num: 24  
Candidate Starts for Deano\_14:  
(Start: 18 @10914 has 18 MA's), (Start: 24 @10947 has 528 MA's), (40, 11058), (62, 11244), (75, 11346),

Gene: DekHockey33\_17 Start: 10872, Stop: 11384, Start Num: 24  
Candidate Starts for DekHockey33\_17:  
(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: Deloris\_16 Start: 12045, Stop: 12557, Start Num: 24  
Candidate Starts for Deloris\_16:  
(Start: 18 @12009 has 18 MA's), (Start: 23 @12024 has 17 MA's), (Start: 24 @12045 has 528 MA's), (37, 12123), (62, 12336), (73, 12426), (81, 12498),

Gene: Dhanush\_14 Start: 10942, Stop: 11454, Start Num: 24  
Candidate Starts for Dhanush\_14:  
(Start: 24 @10942 has 528 MA's), (40, 11053), (75, 11341),

Gene: Dieselweasel\_16 Start: 11004, Stop: 11507, Start Num: 24  
Candidate Starts for Dieselweasel\_16:  
(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: Dignity\_17 Start: 12012, Stop: 12539, Start Num: 24  
Candidate Starts for Dignity\_17:  
(Start: 24 @12012 has 528 MA's), (62, 12312), (63, 12327), (81, 12480), (86, 12513),

Gene: Dinger\_11 Start: 7199, Stop: 7684, Start Num: 32  
Candidate Starts for Dinger\_11:  
(14, 7037), (Start: 32 @7199 has 36 MA's), (58, 7430), (66, 7496), (73, 7553),

Gene: DirtyDunning\_14 Start: 10935, Stop: 11447, Start Num: 24  
Candidate Starts for DirtyDunning\_14:  
(Start: 24 @10935 has 528 MA's), (40, 11046), (75, 11334),

Gene: Discoknowium\_12 Start: 10371, Stop: 10880, Start Num: 24  
Candidate Starts for Discoknowium\_12:  
(Start: 24 @10371 has 528 MA's), (39, 10461), (55, 10614), (61, 10656), (63, 10683), (72, 10752),

Gene: Dixon\_12 Start: 9841, Stop: 10347, Start Num: 24  
Candidate Starts for Dixon\_12:  
(Start: 24 @9841 has 528 MA's), (50, 10033), (56, 10090), (60, 10114), (63, 10147), (67, 10168), (80, 10273),

Gene: DontArgue\_13 Start: 8955, Stop: 9476, Start Num: 24  
Candidate Starts for DontArgue\_13:  
(Start: 19 @8934 has 3 MA's), (Start: 24 @8955 has 528 MA's), (36, 9042),

Gene: Dorothea\_18 Start: 11677, Stop: 12207, Start Num: 24  
Candidate Starts for Dorothea\_18:  
(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: Drake55\_17 Start: 12116, Stop: 12640, Start Num: 24  
Candidate Starts for Drake55\_17:  
(Start: 18 @12080 has 18 MA's), (21, 12095), (Start: 24 @12116 has 528 MA's), (56, 12377), (62, 12416), (81, 12581), (86, 12614),

Gene: Drake94\_13 Start: 8806, Stop: 9327, Start Num: 24  
Candidate Starts for Drake94\_13:  
(Start: 19 @8785 has 3 MA's), (Start: 24 @8806 has 528 MA's), (46, 8992), (54, 9046),

Gene: DreamTeam1\_15 Start: 10498, Stop: 11028, Start Num: 24  
Candidate Starts for DreamTeam1\_15:  
(Start: 23 @10477 has 17 MA's), (Start: 24 @10498 has 528 MA's), (28, 10549), (34, 10567), (54, 10732), (65, 10825),

Gene: DroogsArmy\_15 Start: 12278, Stop: 12781, Start Num: 24  
Candidate Starts for DroogsArmy\_15:  
(Start: 24 @12278 has 528 MA's), (37, 12350), (46, 12443), (65, 12590), (73, 12653), (83, 12746), (84, 12749), (85, 12755),

Gene: DropBear\_14 Start: 10606, Stop: 11127, Start Num: 24  
Candidate Starts for DropBear\_14:  
(Start: 24 @10606 has 528 MA's), (46, 10780), (61, 10888), (65, 10927), (89, 11098),

Gene: Druantia\_14 Start: 10940, Stop: 11452, Start Num: 24  
Candidate Starts for Druantia\_14:  
(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Dublin\_11 Start: 10230, Stop: 10739, Start Num: 24  
Candidate Starts for Dublin\_11:  
(Start: 24 @10230 has 528 MA's), (39, 10320), (55, 10473), (61, 10515), (63, 10542), (67, 10563), (72, 10611),

Gene: DudeLittle\_15 Start: 11717, Stop: 12229, Start Num: 24  
Candidate Starts for DudeLittle\_15:  
(Start: 18 @11681 has 18 MA's), (Start: 23 @11696 has 17 MA's), (Start: 24 @11717 has 528 MA's), (62, 12005), (65, 12032), (81, 12170),

Gene: Duplo\_18 Start: 11566, Stop: 12087, Start Num: 24  
Candidate Starts for Duplo\_18:  
(Start: 18 @11530 has 18 MA's), (22, 11545), (Start: 24 @11566 has 528 MA's), (29, 11617), (63, 11881), (67, 11902), (86, 12061),

Gene: DustyMartin\_17 Start: 10772, Stop: 11293, Start Num: 24  
Candidate Starts for DustyMartin\_17:  
(Start: 19 @10751 has 3 MA's), (Start: 24 @10772 has 528 MA's), (36, 10859),

Gene: EZMoney23\_19 Start: 13587, Stop: 14105, Start Num: 24  
Candidate Starts for EZMoney23\_19:  
(Start: 24 @13587 has 528 MA's), (30, 13638), (65, 13908), (81, 14046),

Gene: Eagle\_13 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Eagle\_13:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: EagleEye\_17 Start: 11847, Stop: 12374, Start Num: 24  
Candidate Starts for EagleEye\_17:  
(8, 11625), (Start: 24 @11847 has 528 MA's), (65, 12168), (69, 12204),

Gene: Eaglepride\_15 Start: 10702, Stop: 11223, Start Num: 24  
Candidate Starts for Eaglepride\_15:  
(Start: 19 @10681 has 3 MA's), (Start: 24 @10702 has 528 MA's), (76, 11116),

Gene: Eapen\_14 Start: 10941, Stop: 11453, Start Num: 24  
Candidate Starts for Eapen\_14:  
(Start: 24 @10941 has 528 MA's), (40, 11052), (75, 11340),

Gene: Ebony\_15 Start: 12210, Stop: 12731, Start Num: 24  
Candidate Starts for Ebony\_15:  
(Start: 23 @12189 has 17 MA's), (Start: 24 @12210 has 528 MA's), (29, 12261), (40, 12324), (62, 12510),

Gene: Echild\_15 Start: 11720, Stop: 12232, Start Num: 24  
Candidate Starts for Echild\_15:  
(Start: 18 @11684 has 18 MA's), (Start: 23 @11699 has 17 MA's), (Start: 24 @11720 has 528 MA's), (62, 12008), (65, 12035), (81, 12173),

Gene: Edison31\_14 Start: 10731, Stop: 11252, Start Num: 24  
Candidate Starts for Edison31\_14:  
(Start: 19 @10710 has 3 MA's), (Start: 24 @10731 has 528 MA's), (36, 10818),

Gene: EdogawaKiddo\_14 Start: 12267, Stop: 12800, Start Num: 24  
Candidate Starts for EdogawaKiddo\_14:  
(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: Eidsmoe\_16 Start: 12297, Stop: 12830, Start Num: 24  
Candidate Starts for Eidsmoe\_16:  
(Start: 24 @12297 has 528 MA's), (28, 12345), (43, 12459), (62, 12600), (63, 12615), (65, 12627), (86, 12795), (87, 12798),

Gene: EITiger69\_12 Start: 10089, Stop: 10601, Start Num: 24  
Candidate Starts for EITiger69\_12:  
(Start: 18 @10056 has 18 MA's), (Start: 24 @10089 has 528 MA's), (39, 10182), (61, 10377), (63, 10404), (72, 10473), (78, 10506), (85, 10572),

Gene: Elephantoon\_16 Start: 11916, Stop: 12449, Start Num: 24  
Candidate Starts for Elephantoon\_16:  
(Start: 24 @11916 has 528 MA's), (28, 11964), (43, 12078), (62, 12219), (63, 12234), (65, 12246), (86, 12414), (87, 12417),

Gene: EmyBug\_16 Start: 12297, Stop: 12830, Start Num: 24  
Candidate Starts for EmyBug\_16:



(Start: 24 @12297 has 528 MA's), (28, 12345), (43, 12459), (62, 12600), (63, 12615), (65, 12627), (86, 12795), (87, 12798),

Gene: EpicPhail\_16 Start: 11003, Stop: 11506, Start Num: 24

Candidate Starts for EpicPhail\_16:

(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's), (47, 11180), (63, 11312), (65, 11324),

Gene: Epsocamisio\_17 Start: 10750, Stop: 11262, Start Num: 24

Candidate Starts for Epsocamisio\_17:

(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Equemioh13\_17 Start: 12101, Stop: 12625, Start Num: 24

Candidate Starts for Equemioh13\_17:

(11, 11948), (Start: 18 @12065 has 18 MA's), (21, 12080), (Start: 24 @12101 has 528 MA's), (46, 12281), (62, 12401), (65, 12428), (81, 12566), (86, 12599), (88, 12608), (89, 12611),

Gene: EricB\_18 Start: 11668, Stop: 12198, Start Num: 24

Candidate Starts for EricB\_18:

(Start: 24 @11668 has 528 MA's), (41, 11812), (54, 11905), (55, 11917), (70, 12043),

Gene: Erik\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Erik\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Eris\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Eris\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Eros\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Eros\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Espica\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Espica\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Et2Brutus\_14 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Et2Brutus\_14:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: Eurydice\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Eurydice\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: EvilGenius\_17 Start: 12028, Stop: 12540, Start Num: 24

Candidate Starts for EvilGenius\_17:

(Start: 18 @11992 has 18 MA's), (Start: 23 @12007 has 17 MA's), (Start: 24 @12028 has 528 MA's), (62, 12316), (65, 12343), (67, 12352), (81, 12481), (86, 12514),

Gene: Expelliarmus\_11 Start: 9808, Stop: 10314, Start Num: 24

Candidate Starts for Expelliarmus\_11:

(Start: 24 @9808 has 528 MA's), (50, 10000), (56, 10057), (60, 10081), (63, 10114), (67, 10135), (80, 10240),

Gene: ExplosioNervosa\_16 Start: 12300, Stop: 12833, Start Num: 24

Candidate Starts for ExplosioNervosa\_16:

(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86, 12798), (87, 12801),

Gene: Fameo\_15 Start: 11633, Stop: 12145, Start Num: 24

Candidate Starts for Fameo\_15:

(Start: 18 @11597 has 18 MA's), (Start: 23 @11612 has 17 MA's), (Start: 24 @11633 has 528 MA's), (62, 11921), (65, 11948), (81, 12086),

Gene: Farber\_16 Start: 10996, Stop: 11499, Start Num: 24

Candidate Starts for Farber\_16:

(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: FatCactus\_13 Start: 9769, Stop: 10290, Start Num: 24

Candidate Starts for FatCactus\_13:

(Start: 24 @9769 has 528 MA's), (26, 9811), (29, 9820), (41, 9910), (45, 9940), (86, 10261),

Gene: Fayely\_16 Start: 12300, Stop: 12833, Start Num: 24

Candidate Starts for Fayely\_16:

(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86, 12798), (87, 12801),

Gene: Fernando\_16 Start: 11001, Stop: 11504, Start Num: 24

Candidate Starts for Fernando\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Fibonacci\_15 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Fibonacci\_15:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: FiringLine\_15 Start: 11565, Stop: 12077, Start Num: 24

Candidate Starts for FiringLine\_15:

(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's), (62, 11853), (65, 11880), (81, 12018),

Gene: First\_0015 Start: 11599, Stop: 12150, Start Num: 18

Candidate Starts for First\_0015:

(Start: 18 @11599 has 18 MA's), (Start: 23 @11614 has 17 MA's), (Start: 24 @11635 has 528 MA's), (37, 11713), (62, 11926), (65, 11953), (81, 12091),

Gene: Flare16\_15 Start: 11659, Stop: 12183, Start Num: 24

Candidate Starts for Flare16\_15:

(11, 11506), (Start: 18 @11623 has 18 MA's), (21, 11638), (Start: 24 @11659 has 528 MA's), (46, 11839), (62, 11959), (65, 11986), (81, 12124), (86, 12157), (88, 12166), (89, 12169),

Gene: Flaverint\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Flaverint\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: Florean\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Florean\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Flux\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Flux\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: FlyCatcher\_18 Start: 12563, Stop: 13072, Start Num: 24

Candidate Starts for FlyCatcher\_18:

(16, 12518), (Start: 23 @12542 has 17 MA's), (Start: 24 @12563 has 528 MA's), (55, 12803), (64, 12881), (65, 12884), (73, 12947), (74, 12950),

Gene: ForGetIt\_12 Start: 10107, Stop: 10616, Start Num: 24

Candidate Starts for ForGetIt\_12:

(Start: 24 @10107 has 528 MA's), (39, 10197), (55, 10350), (61, 10392), (63, 10419), (67, 10440), (72, 10488),

Gene: Fred313\_14 Start: 10249, Stop: 10773, Start Num: 24

Candidate Starts for Fred313\_14:

(Start: 24 @10249 has 528 MA's), (46, 10426), (61, 10534), (65, 10573),

Gene: Funston\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Funston\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Gadost\_14 Start: 10943, Stop: 11455, Start Num: 24

Candidate Starts for Gadost\_14:

(Start: 24 @10943 has 528 MA's), (40, 11054), (75, 11342),

Gene: Gail\_14 Start: 10686, Stop: 11198, Start Num: 24

Candidate Starts for Gail\_14:

(Start: 24 @10686 has 528 MA's), (54, 10914), (73, 11070), (81, 11142),

Gene: Garak\_19 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Garak\_19:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: GaugeLDP\_17 Start: 12926, Stop: 13450, Start Num: 24

Candidate Starts for GaugeLDP\_17:

(Start: 24 @12926 has 528 MA's), (34, 12992), (41, 13064), (62, 13223), (70, 13295),

Gene: Gemma\_16 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Gemma\_16:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: George\_11 Start: 10263, Stop: 10772, Start Num: 24

Candidate Starts for George\_11:

(Start: 24 @10263 has 528 MA's), (39, 10353), (55, 10506), (61, 10548), (63, 10575), (67, 10596), (72, 10644),

Gene: Georgie2\_16 Start: 11566, Stop: 12078, Start Num: 24

Candidate Starts for Georgie2\_16:

(Start: 18 @11530 has 18 MA's), (Start: 23 @11545 has 17 MA's), (Start: 24 @11566 has 528 MA's), (62, 11854), (65, 11881), (81, 12019),

Gene: Ghoulboy\_12 Start: 10340, Stop: 10849, Start Num: 24

Candidate Starts for Ghoulboy\_12:

(Start: 24 @10340 has 528 MA's), (39, 10430), (55, 10583), (61, 10625), (63, 10652), (72, 10721),

Gene: Gilberta\_15 Start: 12149, Stop: 12670, Start Num: 24

Candidate Starts for Gilberta\_15:

(Start: 23 @12128 has 17 MA's), (Start: 24 @12149 has 528 MA's), (29, 12200), (40, 12263), (62, 12449),

Gene: GingkoMaracino\_16 Start: 10889, Stop: 11392, Start Num: 24

Candidate Starts for GingkoMaracino\_16:

(Start: 18 @10853 has 18 MA's), (Start: 23 @10868 has 17 MA's), (Start: 24 @10889 has 528 MA's), (47, 11066), (63, 11198), (65, 11210),

Gene: Giroux\_14 Start: 10546, Stop: 11067, Start Num: 24

Candidate Starts for Giroux\_14:

(Start: 24 @10546 has 528 MA's), (46, 10720), (61, 10828), (65, 10867), (89, 11038),

Gene: Gladiator\_18 Start: 11655, Stop: 12176, Start Num: 24

Candidate Starts for Gladiator\_18:

(12, 11559), (Start: 24 @11655 has 528 MA's), (29, 11703), (41, 11790), (55, 11895), (70, 12021),

Gene: Gollum\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Gollum\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Goose\_14 Start: 10703, Stop: 11224, Start Num: 24

Candidate Starts for Goose\_14:

(Start: 19 @10682 has 3 MA's), (Start: 24 @10703 has 528 MA's), (76, 11117),

Gene: Gratitude\_16 Start: 12101, Stop: 12625, Start Num: 24

Candidate Starts for Gratitude\_16:

(11, 11948), (Start: 18 @12065 has 18 MA's), (21, 12080), (Start: 24 @12101 has 528 MA's), (46, 12281), (62, 12401), (65, 12428), (81, 12566), (86, 12599), (88, 12608), (89, 12611),

Gene: GreedyLawyer\_18 Start: 11677, Stop: 12207, Start Num: 24

Candidate Starts for GreedyLawyer\_18:

(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: Grif\_16 Start: 11086, Stop: 11589, Start Num: 24

Candidate Starts for Grif\_16:

(Start: 18 @11050 has 18 MA's), (Start: 23 @11065 has 17 MA's), (Start: 24 @11086 has 528 MA's), (47, 11263), (63, 11395), (65, 11407),

Gene: Groundhog\_11 Start: 9809, Stop: 10315, Start Num: 24  
Candidate Starts for Groundhog\_11:  
(Start: 24 @9809 has 528 MA's), (50, 10001), (56, 10058), (60, 10082), (63, 10115), (67, 10136), (80, 10241),

Gene: Groupthink\_17 Start: 11075, Stop: 11578, Start Num: 24  
Candidate Starts for Groupthink\_17:  
(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: Grub\_16 Start: 10995, Stop: 11498, Start Num: 24  
Candidate Starts for Grub\_16:  
(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: Grum1\_16 Start: 10960, Stop: 11499, Start Num: 18  
Candidate Starts for Grum1\_16:  
(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: Gruunaga\_18 Start: 11655, Stop: 12176, Start Num: 24  
Candidate Starts for Gruunaga\_18:  
(12, 11559), (Start: 24 @11655 has 528 MA's), (29, 11703), (41, 11790), (55, 11895), (70, 12021),

Gene: GtownJaz\_16 Start: 11004, Stop: 11507, Start Num: 24  
Candidate Starts for GtownJaz\_16:  
(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: HINdeR\_14 Start: 12384, Stop: 12887, Start Num: 24  
Candidate Starts for HINdeR\_14:  
(Start: 24 @12384 has 528 MA's), (37, 12456), (40, 12483), (65, 12696), (70, 12741), (73, 12759), (83, 12852), (84, 12855), (85, 12861),

Gene: HamSlice\_13 Start: 10940, Stop: 11452, Start Num: 24  
Candidate Starts for HamSlice\_13:  
(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Hammer\_18 Start: 11655, Stop: 12176, Start Num: 24  
Candidate Starts for Hammer\_18:  
(12, 11559), (Start: 24 @11655 has 528 MA's), (29, 11703), (41, 11790), (55, 11895), (70, 12021),

Gene: Hanray\_15 Start: 12303, Stop: 12836, Start Num: 24  
Candidate Starts for Hanray\_15:  
(Start: 24 @12303 has 528 MA's), (28, 12351), (43, 12465), (62, 12606), (63, 12621), (65, 12633), (86, 12801), (87, 12804),

Gene: Happiness\_14 Start: 10945, Stop: 11457, Start Num: 24  
Candidate Starts for Happiness\_14:  
(Start: 18 @10912 has 18 MA's), (Start: 24 @10945 has 528 MA's), (40, 11056), (67, 11278), (75, 11344),

Gene: Harlequin\_11 Start: 7203, Stop: 7688, Start Num: 32

Candidate Starts for Harlequin\_11:

(Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: HarryHoudini\_17 Start: 12116, Stop: 12640, Start Num: 24

Candidate Starts for HarryHoudini\_17:

(Start: 18 @12080 has 18 MA's), (21, 12095), (Start: 24 @12116 has 528 MA's), (56, 12377), (81, 12581), (86, 12614),

Gene: HashRod\_17 Start: 11087, Stop: 11590, Start Num: 24

Candidate Starts for HashRod\_17:

(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's), (47, 11264), (63, 11396), (65, 11408),

Gene: HaveUMetTed\_17 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for HaveUMetTed\_17:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (61, 11357), (63, 11384), (65, 11396),

Gene: Heathen\_14 Start: 10347, Stop: 10868, Start Num: 24

Candidate Starts for Heathen\_14:

(Start: 24 @10347 has 528 MA's), (46, 10521), (61, 10629), (65, 10668), (89, 10839),

Gene: Heffalump\_17 Start: 13435, Stop: 13947, Start Num: 24

Candidate Starts for Heffalump\_17:

(Start: 18 @13396 has 18 MA's), (Start: 23 @13414 has 17 MA's), (Start: 24 @13435 has 528 MA's), (62, 13723), (65, 13750), (81, 13888),

Gene: HelDan\_14 Start: 10599, Stop: 11120, Start Num: 24

Candidate Starts for HelDan\_14:

(Start: 24 @10599 has 528 MA's), (46, 10773), (61, 10881), (65, 10920), (89, 11091),

Gene: Heliosoles\_16 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Heliosoles\_16:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: Helmet\_19 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Helmet\_19:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: Herbertwm\_13 Start: 10459, Stop: 10968, Start Num: 24

Candidate Starts for Herbertwm\_13:

(17, 10414), (Start: 24 @10459 has 528 MA's), (45, 10624), (86, 10945), (87, 10948),

Gene: Hercules11\_16 Start: 10989, Stop: 11513, Start Num: 23

Candidate Starts for Hercules11\_16:

(Start: 18 @10974 has 18 MA's), (Start: 23 @10989 has 17 MA's), (Start: 24 @11010 has 528 MA's), (47, 11187), (63, 11319), (65, 11331),

Gene: Hexamo\_18 Start: 11636, Stop: 12157, Start Num: 24

Candidate Starts for Hexamo\_18:

(12, 11540), (Start: 24 @11636 has 528 MA's), (29, 11684), (41, 11771), (54, 11864), (55, 11876), (70, 12002),

Gene: Hiro\_11 Start: 7203, Stop: 7688, Start Num: 32

Candidate Starts for Hiro\_11:

(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: Horex\_15 Start: 12303, Stop: 12836, Start Num: 24

Candidate Starts for Horex\_15:

(Start: 24 @12303 has 528 MA's), (28, 12351), (43, 12465), (62, 12606), (63, 12621), (65, 12633), (86, 12801), (87, 12804),

Gene: Holli\_14 Start: 10732, Stop: 11244, Start Num: 24

Candidate Starts for Holli\_14:

(Start: 24 @10732 has 528 MA's), (40, 10843), (75, 11131),

Gene: Hookmount\_15 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Hookmount\_15:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Hoot\_18 Start: 11656, Stop: 12186, Start Num: 24

Candidate Starts for Hoot\_18:

(Start: 24 @11656 has 528 MA's), (41, 11800), (54, 11893), (55, 11905), (70, 12031),

Gene: HortumSL17\_16 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for HortumSL17\_16:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: Houdini22\_14 Start: 10943, Stop: 11455, Start Num: 24

Candidate Starts for Houdini22\_14:

(Start: 24 @10943 has 528 MA's), (40, 11054), (75, 11342),

Gene: HuhtaEnerson15\_12 Start: 10263, Stop: 10772, Start Num: 24

Candidate Starts for HuhtaEnerson15\_12:

(Start: 24 @10263 has 528 MA's), (39, 10353), (55, 10506), (61, 10548), (63, 10575), (67, 10596), (72, 10644),

Gene: Hum25\_5 Start: 4509, Stop: 4997, Start Num: 27

Candidate Starts for Hum25\_5:

(25, 4467), (Start: 27 @4509 has 1 MA's), (62, 4782), (63, 4800), (74, 4881), (84, 4962),

Gene: Hutc2\_15 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Hutc2\_15:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: Huxley\_14 Start: 11003, Stop: 11515, Start Num: 24

Candidate Starts for Huxley\_14:

(Start: 24 @11003 has 528 MA's), (40, 11114), (75, 11402),

Gene: ICleared\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for ICleared\_14:

(4, 10649), (10, 10739), (Start: 24 @10940 has 528 MA's), (40, 11051), (62, 11237), (75, 11339),

Gene: Iceman\_14 Start: 10941, Stop: 11453, Start Num: 24

Candidate Starts for Iceman\_14:

(Start: 18 @10908 has 18 MA's), (Start: 24 @10941 has 528 MA's), (40, 11052), (62, 11238), (75, 11340),

Gene: Idleandcovert\_14 Start: 10546, Stop: 11067, Start Num: 24

Candidate Starts for Idleandcovert\_14:

(Start: 24 @10546 has 528 MA's), (46, 10720), (61, 10828), (65, 10867), (89, 11038),

Gene: Indra\_18 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Indra\_18:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: Insomnia\_15 Start: 12204, Stop: 12725, Start Num: 24

Candidate Starts for Insomnia\_15:

(Start: 23 @12183 has 17 MA's), (Start: 24 @12204 has 528 MA's), (29, 12255), (40, 12318), (62, 12504),

Gene: Iracema64\_14 Start: 10917, Stop: 11429, Start Num: 24

Candidate Starts for Iracema64\_14:

(4, 10626), (10, 10716), (Start: 18 @10884 has 18 MA's), (Start: 24 @10917 has 528 MA's), (40, 11028), (75, 11316),

Gene: IronMan\_17 Start: 13320, Stop: 13829, Start Num: 24

Candidate Starts for IronMan\_17:

(Start: 24 @13320 has 528 MA's), (62, 13608), (65, 13635), (81, 13773),

Gene: Isca\_14 Start: 10383, Stop: 10943, Start Num: 18

Candidate Starts for Isca\_14:

(Start: 18 @10383 has 18 MA's), (Start: 24 @10419 has 528 MA's), (46, 10596), (61, 10704), (65, 10743),

Gene: Isiphiwo\_18 Start: 11667, Stop: 12197, Start Num: 24

Candidate Starts for Isiphiwo\_18:

(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: Iwokeuplikedis\_15 Start: 11360, Stop: 11884, Start Num: 24

Candidate Starts for Iwokeuplikedis\_15:

(Start: 24 @11360 has 528 MA's), (63, 11675), (84, 11849), (86, 11858),

Gene: JF2\_14 Start: 10184, Stop: 10708, Start Num: 24

Candidate Starts for JF2\_14:

(Start: 18 @10148 has 18 MA's), (Start: 24 @10184 has 528 MA's), (46, 10361), (61, 10469), (65, 10508),

Gene: JF4\_14 Start: 10184, Stop: 10708, Start Num: 24

Candidate Starts for JF4\_14:

(Start: 18 @10148 has 18 MA's), (Start: 24 @10184 has 528 MA's), (46, 10361), (61, 10469), (65, 10508),



Gene: JHC117\_16 Start: 11001, Stop: 11504, Start Num: 24  
Candidate Starts for JHC117\_16:  
(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's),  
(47, 11178), (63, 11310), (65, 11322),

Gene: JSwag\_17 Start: 10739, Stop: 11248, Start Num: 24  
Candidate Starts for JSwag\_17:  
(Start: 24 @10739 has 528 MA's),

Gene: Jaan\_18 Start: 13710, Stop: 14219, Start Num: 24  
Candidate Starts for Jaan\_18:  
(Start: 24 @13710 has 528 MA's), (62, 13998), (65, 14025), (81, 14163),

Gene: Jabiru\_12 Start: 10140, Stop: 10652, Start Num: 24  
Candidate Starts for Jabiru\_12:  
(Start: 18 @10107 has 18 MA's), (Start: 24 @10140 has 528 MA's), (39, 10233), (61, 10428), (63,  
10455), (72, 10524), (78, 10557), (85, 10623),

Gene: Jabith\_15 Start: 12204, Stop: 12725, Start Num: 24  
Candidate Starts for Jabith\_15:  
(Start: 23 @12183 has 17 MA's), (Start: 24 @12204 has 528 MA's), (29, 12255), (40, 12318), (62,  
12504),

Gene: Jaykayelowell\_14 Start: 10938, Stop: 11450, Start Num: 24  
Candidate Starts for Jaykayelowell\_14:  
(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Jeeves\_14 Start: 10699, Stop: 11211, Start Num: 24  
Candidate Starts for Jeeves\_14:  
(Start: 24 @10699 has 528 MA's), (54, 10924), (73, 11080), (81, 11152),

Gene: Jeffabunny\_18 Start: 11680, Stop: 12210, Start Num: 24  
Candidate Starts for Jeffabunny\_18:  
(Start: 24 @11680 has 528 MA's), (41, 11824), (54, 11917), (55, 11929), (70, 12055),

Gene: JenCasNa\_16 Start: 11001, Stop: 11504, Start Num: 24  
Candidate Starts for JenCasNa\_16:  
(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's),  
(47, 11178), (63, 11310), (65, 11322),

Gene: JeppNRM\_17 Start: 11073, Stop: 11576, Start Num: 24  
Candidate Starts for JeppNRM\_17:  
(Start: 18 @11037 has 18 MA's), (Start: 23 @11052 has 17 MA's), (Start: 24 @11073 has 528 MA's),  
(47, 11250), (63, 11382), (65, 11394),

Gene: Jerm\_17 Start: 12028, Stop: 12555, Start Num: 24  
Candidate Starts for Jerm\_17:  
(Start: 24 @12028 has 528 MA's), (62, 12328), (63, 12343), (81, 12496), (86, 12529),

Gene: Jester\_11 Start: 7203, Stop: 7688, Start Num: 32  
Candidate Starts for Jester\_11:  
(Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: JetBlade\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for JetBlade\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: JewelBug\_18 Start: 11678, Stop: 12208, Start Num: 24

Candidate Starts for JewelBug\_18:

(Start: 24 @11678 has 528 MA's), (41, 11822), (54, 11915), (55, 11927), (70, 12053),

Gene: Jiawan\_15 Start: 12303, Stop: 12836, Start Num: 24

Candidate Starts for Jiawan\_15:

(Start: 24 @12303 has 528 MA's), (28, 12351), (43, 12465), (62, 12606), (63, 12621), (65, 12633), (86, 12801), (87, 12804),

Gene: Jobu08\_16 Start: 11051, Stop: 11575, Start Num: 23

Candidate Starts for Jobu08\_16:

(Start: 18 @11036 has 18 MA's), (Start: 23 @11051 has 17 MA's), (Start: 24 @11072 has 528 MA's), (47, 11249), (63, 11381), (65, 11393),

Gene: JoongJeon\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for JoongJeon\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Jordennis\_18 Start: 11667, Stop: 12197, Start Num: 24

Candidate Starts for Jordennis\_18:

(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: Joselito\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Joselito\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: JoshKayV\_17 Start: 12035, Stop: 12559, Start Num: 24

Candidate Starts for JoshKayV\_17:

(Start: 24 @12035 has 528 MA's), (56, 12296), (86, 12533),

Gene: Journey13\_13 Start: 10712, Stop: 11236, Start Num: 24

Candidate Starts for Journey13\_13:

(Start: 24 @10712 has 528 MA's), (34, 10778), (55, 10955), (70, 11081), (84, 11198),

Gene: Jovo\_12 Start: 10372, Stop: 10881, Start Num: 24

Candidate Starts for Jovo\_12:

(Start: 24 @10372 has 528 MA's), (39, 10462), (55, 10615), (61, 10657), (63, 10684), (67, 10705), (72, 10753),

Gene: Jsquared\_14 Start: 10477, Stop: 11001, Start Num: 24

Candidate Starts for Jsquared\_14:

(4, 10186), (5, 10198), (Start: 24 @10477 has 528 MA's), (29, 10528), (41, 10618), (45, 10648), (63, 10792), (67, 10813), (81, 10942), (86, 10975),

Gene: KADY\_17 Start: 11087, Stop: 11590, Start Num: 24

Candidate Starts for KADY\_17:

(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's), (47, 11264), (63, 11396), (65, 11408),

Gene: KFPoly\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for KFPoly\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Kachowdy\_14 Start: 10599, Stop: 11120, Start Num: 24

Candidate Starts for Kachowdy\_14:

(Start: 24 @10599 has 528 MA's), (46, 10773), (61, 10881), (65, 10920), (89, 11091),

Gene: Kalb97\_17 Start: 11073, Stop: 11576, Start Num: 24

Candidate Starts for Kalb97\_17:

(Start: 18 @11037 has 18 MA's), (Start: 23 @11052 has 17 MA's), (Start: 24 @11073 has 528 MA's), (47, 11250), (63, 11382), (65, 11394),

Gene: Kalnoky\_17 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Kalnoky\_17:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: Kalpine\_18 Start: 13392, Stop: 13916, Start Num: 24

Candidate Starts for Kalpine\_18:

(20, 13371), (Start: 24 @13392 has 528 MA's), (34, 13461), (55, 13638), (81, 13857),

Gene: Kamy\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Kamy\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Katalie136\_14 Start: 10949, Stop: 11461, Start Num: 24

Candidate Starts for Katalie136\_14:

(Start: 18 @10916 has 18 MA's), (Start: 24 @10949 has 528 MA's), (40, 11060), (53, 11171), (75, 11348),

Gene: KatherineG\_17 Start: 10872, Stop: 11384, Start Num: 24

Candidate Starts for KatherineG\_17:

(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: Kazan\_18 Start: 11683, Stop: 12213, Start Num: 24

Candidate Starts for Kazan\_18:

(Start: 24 @11683 has 528 MA's), (41, 11827), (54, 11920), (55, 11932), (70, 12058),

Gene: Kerberos\_18 Start: 11525, Stop: 12046, Start Num: 24

Candidate Starts for Kerberos\_18:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: Keziacharles14\_14 Start: 10434, Stop: 10949, Start Num: 24

Candidate Starts for Keziacharles14\_14:

(Start: 24 @10434 has 528 MA's), (34, 10485), (55, 10668), (65, 10749), (73, 10812), (84, 10908), (86, 10917), (87, 10920),

Gene: Kimona\_11 Start: 8311, Stop: 8856, Start Num: 18

Candidate Starts for Kimona\_11:

(Start: 18 @8311 has 18 MA's), (Start: 24 @8344 has 528 MA's), (43, 8500), (46, 8521), (50, 8545), (59, 8617), (84, 8824),

Gene: KingCyrus\_17 Start: 12018, Stop: 12530, Start Num: 24

Candidate Starts for KingCyrus\_17:

(Start: 18 @11982 has 18 MA's), (Start: 23 @11997 has 17 MA's), (Start: 24 @12018 has 528 MA's), (62, 12306), (65, 12333), (67, 12342), (81, 12471), (86, 12504),

Gene: Kingmustik0402\_14 Start: 10931, Stop: 11443, Start Num: 24

Candidate Starts for Kingmustik0402\_14:

(Start: 24 @10931 has 528 MA's), (40, 11042), (75, 11330),

Gene: Kinmap\_14 Start: 11474, Stop: 11998, Start Num: 24

Candidate Starts for Kinmap\_14:

(Start: 24 @11474 has 528 MA's), (39, 11591), (44, 11654), (46, 11666), (62, 11786), (67, 11822), (81, 11939),

Gene: Kipper29\_18 Start: 11677, Stop: 12207, Start Num: 24

Candidate Starts for Kipper29\_18:

(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: KittenMittens\_13 Start: 8814, Stop: 9335, Start Num: 24

Candidate Starts for KittenMittens\_13:

(Start: 19 @8793 has 3 MA's), (Start: 24 @8814 has 528 MA's), (46, 9000),

Gene: Koan\_13 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Koan\_13:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Koduck\_15 Start: 10789, Stop: 11310, Start Num: 24

Candidate Starts for Koduck\_15:

(Start: 18 @10753 has 18 MA's), (Start: 23 @10768 has 17 MA's), (Start: 24 @10789 has 528 MA's), (34, 10852), (41, 10924), (46, 10963), (55, 11029), (62, 11083), (70, 11155),

Gene: Koko\_18 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Koko\_18:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (55, 11921), (70, 12047),

Gene: Koreni\_13 Start: 10588, Stop: 11100, Start Num: 24

Candidate Starts for Koreni\_13:

(Start: 24 @10588 has 528 MA's), (40, 10699), (75, 10987),

Gene: Kratark\_14 Start: 10934, Stop: 11446, Start Num: 24

Candidate Starts for Kratark\_14:

(Start: 24 @10934 has 528 MA's), (40, 11045), (75, 11333),

Gene: Kremtemulon\_14 Start: 10987, Stop: 11499, Start Num: 24

Candidate Starts for Kremtemulon\_14:

(Start: 24 @10987 has 528 MA's), (40, 11098), (75, 11386),

Gene: Krishelle\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Krishelle\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (73, 7572),

Gene: Kristoff\_15 Start: 10882, Stop: 11403, Start Num: 24

Candidate Starts for Kristoff\_15:

(Start: 19 @10861 has 3 MA's), (Start: 24 @10882 has 528 MA's), (36, 10969),

Gene: Kugel\_15 Start: 11145, Stop: 11642, Start Num: 24

Candidate Starts for Kugel\_15:

(Start: 24 @11145 has 528 MA's), (54, 11361), (55, 11373), (67, 11463), (79, 11550), (82, 11592), (84, 11610),

Gene: Kyee\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Kyee\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Kykar\_12 Start: 10642, Stop: 11139, Start Num: 24

Candidate Starts for Kykar\_12:

(Start: 24 @10642 has 528 MA's), (54, 10858), (55, 10870), (67, 10960), (79, 11047), (82, 11089), (84, 11107),

Gene: L5\_16 Start: 10797, Stop: 11318, Start Num: 24

Candidate Starts for L5\_16:

(Start: 18 @10761 has 18 MA's), (Start: 23 @10776 has 17 MA's), (Start: 24 @10797 has 528 MA's), (34, 10860), (41, 10932), (46, 10971), (55, 11037), (62, 11091), (70, 11163),

Gene: LBerry\_16 Start: 11003, Stop: 11506, Start Num: 24

Candidate Starts for LBerry\_16:

(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's), (47, 11180), (63, 11312), (65, 11324),

Gene: LHTSCC\_14 Start: 10917, Stop: 11429, Start Num: 24

Candidate Starts for LHTSCC\_14:

(Start: 18 @10884 has 18 MA's), (Start: 24 @10917 has 528 MA's), (40, 11028), (67, 11250), (75, 11316),

Gene: LadyBird\_15 Start: 11551, Stop: 12099, Start Num: 18

Candidate Starts for LadyBird\_15:

(Start: 18 @11551 has 18 MA's), (Start: 23 @11566 has 17 MA's), (Start: 24 @11587 has 528 MA's), (37, 11665), (62, 11878), (73, 11968), (81, 12040),

Gene: Lambert1\_15 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Lambert1\_15:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Landor\_16 Start: 13362, Stop: 13871, Start Num: 24

Candidate Starts for Landor\_16:

(Start: 24 @13362 has 528 MA's), (46, 13530), (62, 13650), (65, 13677), (81, 13815),

Gene: LappelDuVide\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for LappelDuVide\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Larenn\_16 Start: 11884, Stop: 12414, Start Num: 24

Candidate Starts for Larenn\_16:

(11, 11731), (Start: 18 @11848 has 18 MA's), (21, 11863), (Start: 24 @11884 has 528 MA's), (55, 12130), (63, 12199), (67, 12220), (81, 12355), (86, 12388), (88, 12397), (89, 12400),

Gene: LarryKay\_16 Start: 11089, Stop: 11592, Start Num: 24

Candidate Starts for LarryKay\_16:

(Start: 18 @11053 has 18 MA's), (Start: 23 @11068 has 17 MA's), (Start: 24 @11089 has 528 MA's), (47, 11266), (63, 11398), (65, 11410),

Gene: LastResort\_17 Start: 10750, Stop: 11262, Start Num: 24

Candidate Starts for LastResort\_17:

(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Lemur\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Lemur\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (62, 11236), (75, 11338),

Gene: LeoAvram\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for LeoAvram\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Leogania\_17 Start: 13755, Stop: 14273, Start Num: 24

Candidate Starts for Leogania\_17:

(Start: 18 @13719 has 18 MA's), (Start: 23 @13734 has 17 MA's), (Start: 24 @13755 has 528 MA's), (62, 14052), (65, 14079), (81, 14214),

Gene: Lev2\_12 Start: 10081, Stop: 10593, Start Num: 24

Candidate Starts for Lev2\_12:

(13, 9982), (Start: 18 @10048 has 18 MA's), (Start: 24 @10081 has 528 MA's), (39, 10174), (61, 10369), (63, 10396), (72, 10465), (78, 10498), (85, 10564),

Gene: Leviathan\_17 Start: 12060, Stop: 12587, Start Num: 24

Candidate Starts for Leviathan\_17:

(Start: 24 @12060 has 528 MA's), (62, 12360), (63, 12375), (81, 12528), (86, 12561),

Gene: LilTurb\_17 Start: 12087, Stop: 12614, Start Num: 24

Candidate Starts for LilTurb\_17:

(Start: 24 @12087 has 528 MA's), (62, 12387), (63, 12402), (81, 12555), (86, 12588),

Gene: Lilbunny\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for Lilbunny\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Lilith\_16 Start: 10996, Stop: 11499, Start Num: 24

Candidate Starts for Lilith\_16:

(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: Lilleskat\_14 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for Lilleskat\_14:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: Lillie\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Lillie\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: LionsBait\_16 Start: 13363, Stop: 13884, Start Num: 24

Candidate Starts for LionsBait\_16:

(Start: 18 @13327 has 18 MA's), (Start: 23 @13342 has 17 MA's), (Start: 24 @13363 has 528 MA's), (62, 13660), (65, 13687), (81, 13825),

Gene: LittleB\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for LittleB\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: LittleCherry\_12 Start: 10264, Stop: 10773, Start Num: 24

Candidate Starts for LittleCherry\_12:

(Start: 24 @10264 has 528 MA's), (39, 10354), (55, 10507), (61, 10549), (63, 10576), (67, 10597), (72, 10645),

Gene: LittleGuy\_14 Start: 10885, Stop: 11397, Start Num: 24

Candidate Starts for LittleGuy\_14:

(Start: 24 @10885 has 528 MA's), (40, 10996), (75, 11284),

Gene: LochMonster\_14 Start: 10914, Stop: 11426, Start Num: 24

Candidate Starts for LochMonster\_14:

(Start: 24 @10914 has 528 MA's), (40, 11025), (75, 11313),

Gene: Lokk\_18 Start: 13310, Stop: 13819, Start Num: 24

Candidate Starts for Lokk\_18:

(Start: 24 @13310 has 528 MA's), (37, 13391), (41, 13445), (62, 13604), (63, 13619), (81, 13763),

Gene: LoneWolf\_16 Start: 12107, Stop: 12640, Start Num: 24

Candidate Starts for LoneWolf\_16:

(1, 11756), (3, 11783), (Start: 24 @12107 has 528 MA's), (28, 12155), (43, 12269), (62, 12410), (63, 12425), (65, 12437), (86, 12605), (87, 12608),

Gene: Looper\_18 Start: 10750, Stop: 11262, Start Num: 24

Candidate Starts for Looper\_18:

(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Lorenzo\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Lorenzo\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Loser\_18 Start: 13393, Stop: 13905, Start Num: 24

Candidate Starts for Loser\_18:

(Start: 18 @13354 has 18 MA's), (Start: 24 @13393 has 528 MA's), (34, 13453), (67, 13720), (81, 13846),

Gene: Louie6\_16 Start: 11069, Stop: 11593, Start Num: 23

Candidate Starts for Louie6\_16:

(Start: 18 @11054 has 18 MA's), (Start: 23 @11069 has 17 MA's), (Start: 24 @11090 has 528 MA's), (47, 11267), (63, 11399), (65, 11411),

Gene: Lowa\_16 Start: 10995, Stop: 11498, Start Num: 24

Candidate Starts for Lowa\_16:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: Luchador\_15 Start: 11684, Stop: 12196, Start Num: 24

Candidate Starts for Luchador\_15:

(Start: 24 @11684 has 528 MA's), (54, 11909), (81, 12137),

Gene: Lucivia\_15 Start: 12201, Stop: 12722, Start Num: 24

Candidate Starts for Lucivia\_15:

(Start: 23 @12180 has 17 MA's), (Start: 24 @12201 has 528 MA's), (29, 12252), (40, 12315), (62, 12501),

Gene: Lucyedi\_16 Start: 11784, Stop: 12311, Start Num: 24

Candidate Starts for Lucyedi\_16:

(8, 11562), (Start: 24 @11784 has 528 MA's), (65, 12105), (69, 12141),

Gene: LugYA\_18 Start: 10980, Stop: 11504, Start Num: 23

Candidate Starts for LugYA\_18:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Lunsford\_15 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Lunsford\_15:

(Start: 24 @10939 has 528 MA's), (40, 11050), (62, 11236), (75, 11338),

Gene: MA5\_14 Start: 10146, Stop: 10670, Start Num: 24

Candidate Starts for MA5\_14:

(Start: 24 @10146 has 528 MA's), (46, 10323), (61, 10431), (65, 10470),

Gene: MK4\_14 Start: 10418, Stop: 10942, Start Num: 24

Candidate Starts for MK4\_14:

(Start: 18 @10382 has 18 MA's), (Start: 24 @10418 has 528 MA's), (46, 10595), (61, 10703), (65, 10742),

Gene: MaCh\_15 Start: 12149, Stop: 12670, Start Num: 24

Candidate Starts for MaCh\_15:

(Start: 23 @12128 has 17 MA's), (Start: 24 @12149 has 528 MA's), (29, 12200), (40, 12263), (62, 12449),

Gene: Mabel\_15 Start: 12216, Stop: 12737, Start Num: 24

Candidate Starts for Mabel\_15:

(Start: 23 @12195 has 17 MA's), (Start: 24 @12216 has 528 MA's), (29, 12267), (40, 12330), (62, 12516),

Gene: MadMarie\_16 Start: 11005, Stop: 11508, Start Num: 24

Candidate Starts for MadMarie\_16:

(Start: 18 @10969 has 18 MA's), (Start: 23 @10984 has 17 MA's), (Start: 24 @11005 has 528 MA's), (47, 11182), (63, 11314), (65, 11326),

Gene: Mainiac\_16 Start: 10960, Stop: 11499, Start Num: 18

Candidate Starts for Mainiac\_16:



(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: MajorMajor\_14 Start: 10524, Stop: 11048, Start Num: 24

Candidate Starts for MajorMajor\_14:

(Start: 18 @10488 has 18 MA's), (22, 10503), (Start: 24 @10524 has 528 MA's), (29, 10575), (41, 10665), (45, 10695), (63, 10839), (67, 10860), (81, 10989), (86, 11022),

Gene: Malec\_16 Start: 11889, Stop: 12419, Start Num: 24

Candidate Starts for Malec\_16:

(11, 11736), (Start: 18 @11853 has 18 MA's), (21, 11868), (Start: 24 @11889 has 528 MA's), (55, 12135), (63, 12204), (67, 12225), (81, 12360), (86, 12393), (88, 12402), (89, 12405),

Gene: Malinsilva\_18 Start: 10959, Stop: 11498, Start Num: 18

Candidate Starts for Malinsilva\_18:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: Maminiaina\_16 Start: 12031, Stop: 12564, Start Num: 24

Candidate Starts for Maminiaina\_16:

(Start: 24 @12031 has 528 MA's), (28, 12079), (43, 12193), (62, 12334), (63, 12349), (65, 12361), (86, 12529), (87, 12532),

Gene: Manu\_17 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Manu\_17:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: MarQuardt\_16 Start: 10983, Stop: 11507, Start Num: 23

Candidate Starts for MarQuardt\_16:

(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: Marchesa\_14 Start: 10597, Stop: 11118, Start Num: 24

Candidate Starts for Marchesa\_14:

(Start: 24 @10597 has 528 MA's), (46, 10771), (61, 10879), (65, 10918), (89, 11089),

Gene: Margo\_15 Start: 11118, Stop: 11627, Start Num: 24

Candidate Starts for Margo\_15:

(12, 11013), (Start: 24 @11118 has 528 MA's), (61, 11400), (65, 11439), (85, 11598),

Gene: Marie\_16 Start: 10980, Stop: 11504, Start Num: 23

Candidate Starts for Marie\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Marius\_17 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Marius\_17:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: MarysWell\_11 Start: 10231, Stop: 10740, Start Num: 24

Candidate Starts for MarysWell\_11:

(Start: 24 @10231 has 528 MA's), (39, 10321), (55, 10474), (61, 10516), (63, 10543), (67, 10564), (72, 10612),

Gene: Maverick\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Maverick\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Maxo\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Maxo\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Mayonnaise\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Mayonnaise\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Mazhar510\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Mazhar510\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: McFly\_18 Start: 11677, Stop: 12207, Start Num: 24

Candidate Starts for McFly\_18:

(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: Medusa\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Medusa\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: MeeZee\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for MeeZee\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Melvin\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Melvin\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Methuselah\_16 Start: 11065, Stop: 11589, Start Num: 23

Candidate Starts for Methuselah\_16:

(Start: 18 @11050 has 18 MA's), (Start: 23 @11065 has 17 MA's), (Start: 24 @11086 has 528 MA's), (47, 11263), (63, 11395), (65, 11407),

Gene: Micasa\_12 Start: 10232, Stop: 10741, Start Num: 24

Candidate Starts for Micasa\_12:

(Start: 24 @10232 has 528 MA's), (39, 10322), (55, 10475), (61, 10517), (63, 10544), (67, 10565), (72, 10613),

Gene: Microwolf\_16 Start: 11004, Stop: 11507, Start Num: 24

Candidate Starts for Microwolf\_16:

(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: MiculUcigas\_15 Start: 11659, Stop: 12183, Start Num: 24

Candidate Starts for MiculUcigas\_15:

(11, 11506), (Start: 18 @11623 has 18 MA's), (21, 11638), (Start: 24 @11659 has 528 MA's), (46, 11839), (62, 11959), (65, 11986), (81, 12124), (86, 12157), (88, 12166), (89, 12169),

Gene: Midas2\_12 Start: 10231, Stop: 10740, Start Num: 24

Candidate Starts for Midas2\_12:

(Start: 24 @10231 has 528 MA's), (39, 10321), (55, 10474), (61, 10516), (63, 10543), (67, 10564), (72, 10612),

Gene: Miko\_18 Start: 13279, Stop: 13788, Start Num: 24

Candidate Starts for Miko\_18:

(Start: 24 @13279 has 528 MA's), (37, 13360), (41, 13414), (63, 13588),

Gene: Milcery\_12 Start: 10268, Stop: 10777, Start Num: 24

Candidate Starts for Milcery\_12:

(Start: 24 @10268 has 528 MA's), (39, 10358), (61, 10553), (63, 10580), (67, 10601), (72, 10649),

Gene: Millski\_14 Start: 10942, Stop: 11454, Start Num: 24

Candidate Starts for Millski\_14:

(Start: 24 @10942 has 528 MA's), (40, 11053), (75, 11341),

Gene: MinecraftSteve\_18 Start: 10872, Stop: 11384, Start Num: 24

Candidate Starts for MinecraftSteve\_18:

(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: Miramae\_14 Start: 10897, Stop: 11409, Start Num: 24

Candidate Starts for Miramae\_14:

(Start: 18 @10864 has 18 MA's), (Start: 24 @10897 has 528 MA's), (40, 11008), (67, 11230), (75, 11296),

Gene: Misomonster\_18 Start: 11065, Stop: 11589, Start Num: 23

Candidate Starts for Misomonster\_18:

(Start: 18 @11050 has 18 MA's), (Start: 23 @11065 has 17 MA's), (Start: 24 @11086 has 528 MA's), (47, 11263), (63, 11395), (65, 11407),

Gene: MissWhite\_15 Start: 10643, Stop: 11170, Start Num: 24

Candidate Starts for MissWhite\_15:

(Start: 24 @10643 has 528 MA's), (34, 10712), (55, 10889), (70, 11015),

Gene: MoneyMay\_16 Start: 10965, Stop: 11504, Start Num: 18

Candidate Starts for MoneyMay\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Morpher26\_14 Start: 10949, Stop: 11461, Start Num: 24

Candidate Starts for Morpher26\_14:

(Start: 18 @10916 has 18 MA's), (Start: 24 @10949 has 528 MA's), (40, 11060), (53, 11171), (75, 11348),

Gene: Morrow\_14 Start: 10942, Stop: 11454, Start Num: 24

Candidate Starts for Morrow\_14:

(Start: 24 @10942 has 528 MA's), (40, 11053), (75, 11341),

Gene: MuchMore\_18 Start: 10995, Stop: 11498, Start Num: 24

Candidate Starts for MuchMore\_18:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: Mulciber\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Mulciber\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: Munch\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Munch\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: Mundrea\_14 Start: 10902, Stop: 11414, Start Num: 24

Candidate Starts for Mundrea\_14:

(Start: 18 @10869 has 18 MA's), (Start: 24 @10902 has 528 MA's), (40, 11013), (75, 11301),

Gene: MyraDee\_12 Start: 9070, Stop: 9564, Start Num: 24

Candidate Starts for MyraDee\_12:

(4, 8770), (5, 8782), (Start: 24 @9070 has 528 MA's), (63, 9367), (85, 9535),

Gene: Myxus\_16 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for Myxus\_16:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: NaSiaTalie\_15 Start: 11656, Stop: 12180, Start Num: 24

Candidate Starts for NaSiaTalie\_15:

(11, 11503), (Start: 18 @11620 has 18 MA's), (21, 11635), (Start: 24 @11656 has 528 MA's), (46, 11836), (62, 11956), (65, 11983), (81, 12121), (86, 12154), (88, 12163), (89, 12166),

Gene: Naca\_12 Start: 10140, Stop: 10685, Start Num: 18

Candidate Starts for Naca\_12:

(Start: 18 @10140 has 18 MA's), (Start: 24 @10173 has 528 MA's), (39, 10266), (61, 10461), (63, 10488), (72, 10557), (78, 10590), (85, 10656),

Gene: Naiad\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Naiad\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (73, 7572), (88, 7686),

Gene: Naji\_18 Start: 11525, Stop: 12046, Start Num: 24

Candidate Starts for Naji\_18:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: Nancinator\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Nancinator\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Natosaleda\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Natosaleda\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: NearlyHeadless\_12 Start: 9845, Stop: 10366, Start Num: 23  
Candidate Starts for NearlyHeadless\_12:  
(Start: 23 @9845 has 17 MA's), (50, 10055), (56, 10112), (60, 10136), (67, 10190), (71, 10235), (80, 10295),

Gene: Nebs\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Nebs\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Nebulosus\_17 Start: 10750, Stop: 11262, Start Num: 24  
Candidate Starts for Nebulosus\_17:  
(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Nedarya\_16 Start: 11336, Stop: 11842, Start Num: 24  
Candidate Starts for Nedarya\_16:  
(Start: 24 @11336 has 528 MA's),

Gene: Neeharika16\_18 Start: 11667, Stop: 12197, Start Num: 24  
Candidate Starts for Neeharika16\_18:  
(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: Nemo27\_14 Start: 10938, Stop: 11450, Start Num: 24  
Candidate Starts for Nemo27\_14:  
(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Newrala\_18 Start: 11667, Stop: 12197, Start Num: 24  
Candidate Starts for Newrala\_18:  
(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: NicoleTera\_19 Start: 13368, Stop: 13889, Start Num: 24  
Candidate Starts for NicoleTera\_19:  
(Start: 24 @13368 has 528 MA's), (30, 13422), (62, 13665), (65, 13692), (81, 13830),

Gene: Noella\_15 Start: 11093, Stop: 11602, Start Num: 24  
Candidate Starts for Noella\_15:  
(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Noelle\_14 Start: 11003, Stop: 11515, Start Num: 24  
Candidate Starts for Noelle\_14:  
(4, 10712), (7, 10763), (9, 10799), (10, 10802), (Start: 18 @10970 has 18 MA's), (Start: 24 @11003 has 528 MA's), (75, 11402),

Gene: Norbert\_14 Start: 11093, Stop: 11602, Start Num: 24  
Candidate Starts for Norbert\_14:  
(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: NorthStar\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for NorthStar\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: NotAPhaseMom\_14 Start: 10943, Stop: 11455, Start Num: 24  
Candidate Starts for NotAPhaseMom\_14:

(Start: 24 @10943 has 528 MA's), (40, 11054), (75, 11342),

Gene: NothingSpecial\_17 Start: 13625, Stop: 14149, Start Num: 24

Candidate Starts for NothingSpecial\_17:

(10, 13427), (Start: 18 @13589 has 18 MA's), (Start: 23 @13604 has 17 MA's), (Start: 24 @13625 has 528 MA's), (33, 13691), (37, 13712), (65, 13952), (81, 14090), (86, 14123),

Gene: Nyxis\_14 Start: 10885, Stop: 11397, Start Num: 24

Candidate Starts for Nyxis\_14:

(Start: 24 @10885 has 528 MA's), (40, 10996), (75, 11284),

Gene: OKCentral2016\_14 Start: 10403, Stop: 10924, Start Num: 24

Candidate Starts for OKCentral2016\_14:

(Start: 19 @10382 has 3 MA's), (Start: 24 @10403 has 528 MA's), (76, 10817),

Gene: OKaNui\_14 Start: 10705, Stop: 11217, Start Num: 24

Candidate Starts for OKaNui\_14:

(4, 10414), (10, 10504), (Start: 18 @10672 has 18 MA's), (Start: 24 @10705 has 528 MA's), (40, 10816), (62, 11002), (75, 11104),

Gene: Obama12\_14 Start: 10919, Stop: 11431, Start Num: 24

Candidate Starts for Obama12\_14:

(Start: 18 @10886 has 18 MA's), (Start: 24 @10919 has 528 MA's), (40, 11030), (67, 11252), (75, 11318),

Gene: Odin\_14 Start: 10423, Stop: 10947, Start Num: 24

Candidate Starts for Odin\_14:

(Start: 24 @10423 has 528 MA's), (34, 10492), (41, 10564), (45, 10594), (63, 10738), (67, 10759), (81, 10885), (86, 10918), (88, 10927),

Gene: Ohfah\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Ohfah\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: OlanP\_16 Start: 11255, Stop: 11758, Start Num: 24

Candidate Starts for OlanP\_16:

(Start: 18 @11219 has 18 MA's), (Start: 23 @11234 has 17 MA's), (Start: 24 @11255 has 528 MA's), (47, 11432), (63, 11564), (65, 11576),

Gene: Ollie\_16 Start: 10874, Stop: 11377, Start Num: 24

Candidate Starts for Ollie\_16:

(Start: 18 @10838 has 18 MA's), (Start: 23 @10853 has 17 MA's), (Start: 24 @10874 has 528 MA's), (47, 11051), (63, 11183), (65, 11195),

Gene: Onglai\_15 Start: 10633, Stop: 11166, Start Num: 24

Candidate Starts for Onglai\_15:

(Start: 24 @10633 has 528 MA's), (28, 10681), (43, 10795), (62, 10936), (63, 10951), (65, 10963), (86, 11131), (87, 11134),

Gene: Oofda\_18 Start: 10721, Stop: 11233, Start Num: 24

Candidate Starts for Oofda\_18:

(Start: 24 @10721 has 528 MA's), (49, 10916),

Gene: Orange\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Orange\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: P28Green\_16 Start: 11002, Stop: 11505, Start Num: 24

Candidate Starts for P28Green\_16:

(Start: 18 @10966 has 18 MA's), (Start: 23 @10981 has 17 MA's), (Start: 24 @11002 has 528 MA's), (47, 11179), (63, 11311), (65, 11323),

Gene: PGHhamlin\_18 Start: 10995, Stop: 11498, Start Num: 24

Candidate Starts for PGHhamlin\_18:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: PP\_24 Start: 16745, Stop: 17263, Start Num: 24

Candidate Starts for PP\_24:

(Start: 24 @16745 has 528 MA's), (46, 16928), (67, 17084), (68, 17108), (83, 17225), (84, 17228),

Gene: PackMan\_16 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for PackMan\_16:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: PainterBoy\_16 Start: 11784, Stop: 12311, Start Num: 24

Candidate Starts for PainterBoy\_16:

(8, 11562), (Start: 24 @11784 has 528 MA's), (65, 12105), (69, 12141),

Gene: Palestino\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Palestino\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Panamaxus\_15 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Panamaxus\_15:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Partridge\_11 Start: 7262, Stop: 7747, Start Num: 32

Candidate Starts for Partridge\_11:

(14, 7100), (Start: 32 @7262 has 36 MA's), (58, 7493), (66, 7559), (73, 7616),

Gene: Pawn\_16 Start: 11075, Stop: 11578, Start Num: 24

Candidate Starts for Pawn\_16:

(Start: 18 @11039 has 18 MA's), (Start: 23 @11054 has 17 MA's), (Start: 24 @11075 has 528 MA's), (47, 11252), (63, 11384), (65, 11396),

Gene: PeaceMeal1\_13 Start: 8815, Stop: 9336, Start Num: 24

Candidate Starts for PeaceMeal1\_13:

(Start: 19 @8794 has 3 MA's), (Start: 24 @8815 has 528 MA's), (46, 9001),

Gene: Peaches\_14 Start: 10941, Stop: 11453, Start Num: 24

Candidate Starts for Peaches\_14:

(Start: 18 @10908 has 18 MA's), (Start: 24 @10941 has 528 MA's), (40, 11052), (62, 11238), (75, 11340),

Gene: Pembroke\_16 Start: 11004, Stop: 11507, Start Num: 24

Candidate Starts for Pembroke\_16:

(Start: 18 @10968 has 18 MA's), (Start: 23 @10983 has 17 MA's), (Start: 24 @11004 has 528 MA's), (47, 11181), (63, 11313), (65, 11325),

Gene: Penny1\_16 Start: 10982, Stop: 11506, Start Num: 23

Candidate Starts for Penny1\_16:

(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's), (47, 11180), (63, 11312), (65, 11324),

Gene: Perplexer\_14 Start: 10943, Stop: 11455, Start Num: 24

Candidate Starts for Perplexer\_14:

(Start: 18 @10910 has 18 MA's), (Start: 24 @10943 has 528 MA's), (40, 11054), (53, 11165), (75, 11342),

Gene: PeterPeter\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for PeterPeter\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Petersenfast\_14 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Petersenfast\_14:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: PetiteSangusue\_14 Start: 10949, Stop: 11461, Start Num: 24

Candidate Starts for PetiteSangusue\_14:

(Start: 18 @10916 has 18 MA's), (Start: 24 @10949 has 528 MA's), (40, 11060), (53, 11171), (75, 11348),

Gene: PetterN\_13 Start: 10060, Stop: 10572, Start Num: 24

Candidate Starts for PetterN\_13:

(Start: 18 @10027 has 18 MA's), (Start: 24 @10060 has 528 MA's), (39, 10153), (61, 10348), (63, 10375), (72, 10444), (78, 10477), (85, 10543),

Gene: Ph8s\_16 Start: 10384, Stop: 10908, Start Num: 24

Candidate Starts for Ph8s\_16:

(Start: 24 @10384 has 528 MA's), (29, 10435), (34, 10453), (41, 10525), (45, 10555), (51, 10591), (63, 10699), (65, 10711), (67, 10720), (81, 10846), (86, 10879), (88, 10888),

Gene: Phacado\_14 Start: 10938, Stop: 11450, Start Num: 24

Candidate Starts for Phacado\_14:

(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Phaded\_18 Start: 13709, Stop: 14218, Start Num: 24

Candidate Starts for Phaded\_18:

(Start: 24 @13709 has 528 MA's), (62, 13997), (65, 14024), (81, 14162),

Gene: Phaeder\_16 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for Phaeder\_16:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),



Gene: PhailMary\_10 Start: 7269, Stop: 7754, Start Num: 32  
Candidate Starts for PhailMary\_10:  
(14, 7107), (Start: 32 @7269 has 36 MA's), (58, 7500), (66, 7566), (73, 7623),

Gene: Phantastic\_14 Start: 10509, Stop: 11030, Start Num: 24  
Candidate Starts for Phantastic\_14:  
(Start: 24 @10509 has 528 MA's), (46, 10683), (61, 10791), (65, 10830), (89, 11001),

Gene: Pharaoh\_15 Start: 12042, Stop: 12578, Start Num: 24  
Candidate Starts for Pharaoh\_15:  
(Start: 24 @12042 has 528 MA's), (41, 12180), (48, 12225), (58, 12306), (62, 12339), (87, 12543), (89, 12552),

Gene: Phelipe\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Phelipe\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Phighter1804\_14 Start: 10917, Stop: 11429, Start Num: 24  
Candidate Starts for Phighter1804\_14:  
(Start: 18 @10884 has 18 MA's), (Start: 24 @10917 has 528 MA's), (40, 11028), (62, 11214), (75, 11316),

Gene: Phillis\_12 Start: 9803, Stop: 10324, Start Num: 23  
Candidate Starts for Phillis\_12:  
(Start: 23 @9803 has 17 MA's), (50, 10013), (56, 10070), (60, 10094), (67, 10148), (71, 10193), (80, 10253),

Gene: PhishRPhriends\_15 Start: 10266, Stop: 10769, Start Num: 24  
Candidate Starts for PhishRPhriends\_15:  
(Start: 18 @10230 has 18 MA's), (Start: 23 @10245 has 17 MA's), (Start: 24 @10266 has 528 MA's), (47, 10443), (61, 10548), (63, 10575), (65, 10587),

Gene: Phlei\_11 Start: 12163, Stop: 12693, Start Num: 24  
Candidate Starts for Phlei\_11:  
(Start: 23 @12142 has 17 MA's), (Start: 24 @12163 has 528 MA's), (41, 12307), (54, 12400), (59, 12442), (65, 12493), (70, 12538), (77, 12589), (81, 12634), (89, 12679),

Gene: Phlorence\_12 Start: 10371, Stop: 10880, Start Num: 24  
Candidate Starts for Phlorence\_12:  
(Start: 24 @10371 has 528 MA's), (39, 10461), (55, 10614), (61, 10656), (63, 10683), (67, 10704), (72, 10752),

Gene: Phoebe\_16 Start: 11001, Stop: 11504, Start Num: 24  
Candidate Starts for Phoebe\_16:  
(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Phonnegut\_16 Start: 12300, Stop: 12833, Start Num: 24  
Candidate Starts for Phonnegut\_16:  
(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86, 12798), (87, 12801),

Gene: Phontbonne\_14 Start: 10886, Stop: 11398, Start Num: 24

Candidate Starts for Phontbonne\_14:  
(Start: 24 @10886 has 528 MA's), (40, 10997), (62, 11183), (75, 11285),

Gene: Phoxy\_16 Start: 11087, Stop: 11590, Start Num: 24  
Candidate Starts for Phoxy\_16:  
(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's),  
(47, 11264), (63, 11396), (65, 11408),

Gene: Phrankenstein\_11 Start: 7218, Stop: 7703, Start Num: 32  
Candidate Starts for Phrankenstein\_11:  
(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Phranny\_17 Start: 11073, Stop: 11576, Start Num: 24  
Candidate Starts for Phranny\_17:  
(Start: 18 @11037 has 18 MA's), (Start: 23 @11052 has 17 MA's), (Start: 24 @11073 has 528 MA's),  
(47, 11250), (63, 11382), (65, 11394),

Gene: PickleBack\_12 Start: 10082, Stop: 10594, Start Num: 24  
Candidate Starts for PickleBack\_12:  
(13, 9983), (Start: 18 @10049 has 18 MA's), (Start: 24 @10082 has 528 MA's), (39, 10175), (61,  
10370), (63, 10397), (72, 10466), (78, 10499), (85, 10565),

Gene: Pioneer\_16 Start: 12300, Stop: 12833, Start Num: 24  
Candidate Starts for Pioneer\_16:  
(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86,  
12798), (87, 12801),

Gene: Pipcraft\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Pipcraft\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Piro94\_16 Start: 12117, Stop: 12641, Start Num: 24  
Candidate Starts for Piro94\_16:  
(Start: 18 @12081 has 18 MA's), (21, 12096), (Start: 24 @12117 has 528 MA's), (56, 12378), (81,  
12582), (86, 12615),

Gene: Pistachio\_15 Start: 10093, Stop: 10614, Start Num: 24  
Candidate Starts for Pistachio\_15:  
(Start: 24 @10093 has 528 MA's), (46, 10267), (61, 10375), (65, 10414), (89, 10585),

Gene: Pmask\_18 Start: 11667, Stop: 12197, Start Num: 24  
Candidate Starts for Pmask\_18:  
(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: Pocahontas\_15 Start: 11090, Stop: 11599, Start Num: 24  
Candidate Starts for Pocahontas\_15:  
(12, 10985), (Start: 24 @11090 has 528 MA's), (61, 11372), (65, 11411), (85, 11570),

Gene: Polymorphads\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for Polymorphads\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Polyphemus\_17 Start: 11669, Stop: 12199, Start Num: 24

Candidate Starts for Polyphemus\_17:

(Start: 24 @11669 has 528 MA's), (41, 11813), (54, 11906), (55, 11918), (70, 12044),

Gene: Pomar16\_18 Start: 11530, Stop: 12087, Start Num: 18

Candidate Starts for Pomar16\_18:

(Start: 18 @11530 has 18 MA's), (22, 11545), (Start: 24 @11566 has 528 MA's), (29, 11617), (63, 11881), (67, 11902), (86, 12061),

Gene: Poompha\_13 Start: 8813, Stop: 9334, Start Num: 24

Candidate Starts for Poompha\_13:

(Start: 19 @8792 has 3 MA's), (Start: 24 @8813 has 528 MA's), (46, 8999),

Gene: Popcicle\_15 Start: 11090, Stop: 11599, Start Num: 24

Candidate Starts for Popcicle\_15:

(12, 10985), (Start: 24 @11090 has 528 MA's), (61, 11372), (65, 11411), (85, 11570),

Gene: PotatoSplit\_17 Start: 10967, Stop: 11506, Start Num: 18

Candidate Starts for PotatoSplit\_17:

(Start: 18 @10967 has 18 MA's), (Start: 23 @10982 has 17 MA's), (Start: 24 @11003 has 528 MA's), (47, 11180), (63, 11312), (65, 11324),

Gene: Power\_15 Start: 11565, Stop: 12077, Start Num: 24

Candidate Starts for Power\_15:

(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's), (62, 11853), (65, 11880), (81, 12018),

Gene: Priamo\_18 Start: 11695, Stop: 12225, Start Num: 24

Candidate Starts for Priamo\_18:

(Start: 24 @11695 has 528 MA's), (41, 11839), (54, 11932), (55, 11944), (70, 12070),

Gene: Prin Ashe11\_13 Start: 10231, Stop: 10740, Start Num: 24

Candidate Starts for Prin Ashe11\_13:

(Start: 24 @10231 has 528 MA's), (39, 10321), (55, 10474), (61, 10516), (63, 10543), (67, 10564), (72, 10612),

Gene: Priya\_16 Start: 12298, Stop: 12831, Start Num: 24

Candidate Starts for Priya\_16:

(Start: 24 @12298 has 528 MA's), (28, 12346), (43, 12460), (62, 12601), (63, 12616), (65, 12628), (86, 12796), (87, 12799),

Gene: Pukovnik\_17 Start: 13276, Stop: 13785, Start Num: 24

Candidate Starts for Pukovnik\_17:

(Start: 24 @13276 has 528 MA's), (46, 13444), (62, 13564), (65, 13591), (81, 13729),

Gene: Pumbaa\_14 Start: 10914, Stop: 11426, Start Num: 24

Candidate Starts for Pumbaa\_14:

(Start: 24 @10914 has 528 MA's), (40, 11025), (58, 11178), (75, 11313),

Gene: Puppy\_15 Start: 10165, Stop: 10686, Start Num: 24

Candidate Starts for Puppy\_15:

(Start: 24 @10165 has 528 MA's), (46, 10339), (61, 10447), (65, 10486), (89, 10657),

Gene: PurpleHaze\_16 Start: 11074, Stop: 11577, Start Num: 24

Candidate Starts for PurpleHaze\_16:

(Start: 18 @11038 has 18 MA's), (Start: 23 @11053 has 17 MA's), (Start: 24 @11074 has 528 MA's), (47, 11251), (63, 11383), (65, 11395),

Gene: Qobbit\_16 Start: 12297, Stop: 12830, Start Num: 24

Candidate Starts for Qobbit\_16:

(Start: 24 @12297 has 528 MA's), (28, 12345), (43, 12459), (62, 12600), (63, 12615), (65, 12627), (86, 12795), (87, 12798),

Gene: QueenB2\_15 Start: 11633, Stop: 12145, Start Num: 24

Candidate Starts for QueenB2\_15:

(Start: 18 @11597 has 18 MA's), (Start: 23 @11612 has 17 MA's), (Start: 24 @11633 has 528 MA's), (62, 11921), (65, 11948), (81, 12086),

Gene: QueenBeesly\_15 Start: 11565, Stop: 12077, Start Num: 24

Candidate Starts for QueenBeesly\_15:

(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's), (62, 11853), (65, 11880), (81, 12018),

Gene: QuinnKiro\_14 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for QuinnKiro\_14:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Quokka\_13 Start: 10524, Stop: 11048, Start Num: 24

Candidate Starts for Quokka\_13:

(Start: 18 @10488 has 18 MA's), (22, 10503), (Start: 24 @10524 has 528 MA's), (29, 10575), (41, 10665), (45, 10695), (63, 10839), (67, 10860), (81, 10989), (86, 11022),

Gene: RER2\_4 Start: 4090, Stop: 4575, Start Num: 32

Candidate Starts for RER2\_4:

(14, 3928), (Start: 32 @4090 has 36 MA's), (58, 4321), (66, 4387), (73, 4444), (88, 4558),

Gene: RGL3\_4 Start: 4079, Stop: 4564, Start Num: 32

Candidate Starts for RGL3\_4:

(Start: 32 @4079 has 36 MA's), (43, 4202), (52, 4262), (58, 4310), (66, 4376), (73, 4433),

Gene: Rachaly\_18 Start: 13308, Stop: 13817, Start Num: 24

Candidate Starts for Rachaly\_18:

(Start: 24 @13308 has 528 MA's), (41, 13443), (62, 13602), (63, 13617), (81, 13761),

Gene: Rahalelujah\_14 Start: 10342, Stop: 10866, Start Num: 24

Candidate Starts for Rahalelujah\_14:

(Start: 24 @10342 has 528 MA's), (34, 10405), (39, 10441), (86, 10831), (87, 10834),

Gene: Rasputin\_11 Start: 7203, Stop: 7688, Start Num: 32

Candidate Starts for Rasputin\_11:

(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: ReMo\_17 Start: 10750, Stop: 11262, Start Num: 24

Candidate Starts for ReMo\_17:

(Start: 24 @10750 has 528 MA's), (49, 10945),

Gene: Reba\_17 Start: 10746, Stop: 11249, Start Num: 24

Candidate Starts for Reba\_17:

(Start: 18 @10710 has 18 MA's), (Start: 23 @10725 has 17 MA's), (Start: 24 @10746 has 528 MA's), (47, 10923), (63, 11055), (65, 11067),

Gene: Rebeuca\_15 Start: 10862, Stop: 11404, Start Num: 19

Candidate Starts for Rebeuca\_15:

(Start: 19 @10862 has 3 MA's), (Start: 24 @10883 has 528 MA's), (36, 10970),

Gene: RedRock\_18 Start: 13548, Stop: 14060, Start Num: 24

Candidate Starts for RedRock\_18:

(Start: 18 @13509 has 18 MA's), (Start: 24 @13548 has 528 MA's), (34, 13608), (67, 13875), (81, 14001),

Gene: Refuge\_18 Start: 13883, Stop: 14416, Start Num: 24

Candidate Starts for Refuge\_18:

(Start: 24 @13883 has 528 MA's), (41, 14021), (48, 14066), (62, 14180), (84, 14369),

Gene: Relief\_14 Start: 10940, Stop: 11452, Start Num: 24

Candidate Starts for Relief\_14:

(Start: 24 @10940 has 528 MA's), (40, 11051), (75, 11339),

Gene: Remus\_17 Start: 10711, Stop: 11223, Start Num: 24

Candidate Starts for Remus\_17:

(Start: 24 @10711 has 528 MA's), (49, 10906),

Gene: ResDef\_15 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for ResDef\_15:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Retro23\_15 Start: 11716, Stop: 12228, Start Num: 24

Candidate Starts for Retro23\_15:

(Start: 18 @11680 has 18 MA's), (Start: 23 @11695 has 17 MA's), (Start: 24 @11716 has 528 MA's), (62, 12004), (65, 12031), (81, 12169),

Gene: RexFury\_11 Start: 7249, Stop: 7734, Start Num: 32

Candidate Starts for RexFury\_11:

(14, 7087), (Start: 32 @7249 has 36 MA's), (58, 7480), (66, 7546), (73, 7603), (88, 7717),

Gene: Rhodalysa\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Rhodalysa\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: RhynO\_15 Start: 10861, Stop: 11382, Start Num: 24

Candidate Starts for RhynO\_15:

(Start: 19 @10840 has 3 MA's), (Start: 24 @10861 has 528 MA's), (36, 10948),

Gene: Rifter\_18 Start: 11654, Stop: 12175, Start Num: 24

Candidate Starts for Rifter\_18:

(12, 11558), (Start: 24 @11654 has 528 MA's), (29, 11702), (41, 11789), (55, 11894), (70, 12020),

Gene: Roary\_12 Start: 9807, Stop: 10313, Start Num: 24

Candidate Starts for Roary\_12:

(Start: 24 @9807 has 528 MA's), (50, 9999), (56, 10056), (60, 10080), (63, 10113), (67, 10134), (80, 10239),

Gene: Rockstar\_14 Start: 10418, Stop: 10942, Start Num: 24

Candidate Starts for Rockstar\_14:

(Start: 18 @10382 has 18 MA's), (Start: 24 @10418 has 528 MA's), (46, 10595), (61, 10703), (65, 10742),

Gene: Roksolana\_18 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Roksolana\_18:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: Romney\_14 Start: 10938, Stop: 11450, Start Num: 24

Candidate Starts for Romney\_14:

(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Roosevelt\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Roosevelt\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Rosa24\_13 Start: 10915, Stop: 11427, Start Num: 24

Candidate Starts for Rosa24\_13:

(Start: 18 @10882 has 18 MA's), (Start: 24 @10915 has 528 MA's), (40, 11026), (67, 11248), (75, 11314),

Gene: Rosalind\_17 Start: 10872, Stop: 11384, Start Num: 24

Candidate Starts for Rosalind\_17:

(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: Rowdy\_17 Start: 10772, Stop: 11293, Start Num: 24

Candidate Starts for Rowdy\_17:

(Start: 19 @10751 has 3 MA's), (Start: 24 @10772 has 528 MA's), (36, 10859),

Gene: Ruin\_14 Start: 10938, Stop: 11450, Start Num: 24

Candidate Starts for Ruin\_14:

(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Rummer\_16 Start: 11087, Stop: 11590, Start Num: 24

Candidate Starts for Rummer\_16:

(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's), (47, 11264), (63, 11396), (65, 11408),

Gene: RyeScarlet\_17 Start: 12303, Stop: 12836, Start Num: 24

Candidate Starts for RyeScarlet\_17:

(Start: 24 @12303 has 528 MA's), (28, 12351), (43, 12465), (62, 12606), (63, 12621), (65, 12633), (86, 12801), (87, 12804),

Gene: Sabertooth\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Sabertooth\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Sabia\_16 Start: 10960, Stop: 11499, Start Num: 18

Candidate Starts for Sabia\_16:

(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (63, 11305), (65, 11317),

Gene: Sabinator\_16 Start: 11001, Stop: 11504, Start Num: 24

Candidate Starts for Sabinator\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Sachima\_14 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for Sachima\_14:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: Saintus\_12 Start: 9818, Stop: 10330, Start Num: 24

Candidate Starts for Saintus\_12:

(Start: 24 @9818 has 528 MA's), (50, 10019), (56, 10076), (60, 10100), (67, 10154), (71, 10199), (80, 10259),

Gene: Salz\_15 Start: 12149, Stop: 12670, Start Num: 24

Candidate Starts for Salz\_15:

(Start: 23 @12128 has 17 MA's), (Start: 24 @12149 has 528 MA's), (29, 12200), (40, 12263), (62, 12449),

Gene: SaturnRing\_14 Start: 10546, Stop: 11067, Start Num: 24

Candidate Starts for SaturnRing\_14:

(Start: 24 @10546 has 528 MA's), (46, 10720), (61, 10828), (65, 10867), (89, 11038),

Gene: Scamp\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Scamp\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Scherzo\_16 Start: 12300, Stop: 12833, Start Num: 24

Candidate Starts for Scherzo\_16:

(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86, 12798), (87, 12801),

Gene: Scorpia\_13 Start: 10061, Stop: 10573, Start Num: 24

Candidate Starts for Scorpia\_13:

(Start: 18 @10028 has 18 MA's), (Start: 24 @10061 has 528 MA's), (39, 10154), (61, 10349), (63, 10376), (72, 10445), (78, 10478), (85, 10544),

Gene: Scout\_14 Start: 9841, Stop: 10365, Start Num: 24

Candidate Starts for Scout\_14:

(Start: 24 @9841 has 528 MA's), (46, 10018), (61, 10126), (65, 10165),

Gene: SemperFi\_17 Start: 11993, Stop: 12505, Start Num: 24

Candidate Starts for SemperFi\_17:

(Start: 18 @11957 has 18 MA's), (Start: 23 @11972 has 17 MA's), (Start: 24 @11993 has 528 MA's), (62, 12281), (65, 12308), (67, 12317), (81, 12446), (86, 12479),

Gene: SenorClean\_13 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for SenorClean\_13:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Serenity\_14 Start: 10524, Stop: 11048, Start Num: 24

Candidate Starts for Serenity\_14:

(Start: 18 @10488 has 18 MA's), (22, 10503), (Start: 24 @10524 has 528 MA's), (29, 10575), (41, 10665), (45, 10695), (63, 10839), (67, 10860), (81, 10989), (86, 11022),

Gene: Severus\_13 Start: 8792, Stop: 9334, Start Num: 19

Candidate Starts for Severus\_13:

(Start: 19 @8792 has 3 MA's), (Start: 24 @8813 has 528 MA's), (46, 8999),

Gene: Shaka\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Shaka\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Sham4\_15 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Sham4\_15:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: Shapes\_17 Start: 10772, Stop: 11293, Start Num: 24

Candidate Starts for Shapes\_17:

(Start: 19 @10751 has 3 MA's), (Start: 24 @10772 has 528 MA's), (36, 10859),

Gene: ShayRa\_18 Start: 10872, Stop: 11384, Start Num: 24

Candidate Starts for ShayRa\_18:

(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: SheaKeira\_15 Start: 10521, Stop: 11054, Start Num: 24

Candidate Starts for SheaKeira\_15:

(Start: 23 @10500 has 17 MA's), (Start: 24 @10521 has 528 MA's), (28, 10572), (34, 10590), (54, 10755), (65, 10848),

Gene: Sheen\_16 Start: 12621, Stop: 13130, Start Num: 24

Candidate Starts for Sheen\_16:

(16, 12576), (Start: 23 @12600 has 17 MA's), (Start: 24 @12621 has 528 MA's), (55, 12861), (64, 12939), (65, 12942), (73, 13005), (74, 13008),

Gene: SheldonCooper\_14 Start: 10918, Stop: 11430, Start Num: 24

Candidate Starts for SheldonCooper\_14:

(Start: 18 @10885 has 18 MA's), (Start: 24 @10918 has 528 MA's), (40, 11029), (67, 11251), (75, 11317),

Gene: Shuman\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Shuman\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Shygu2\_14 Start: 10943, Stop: 11458, Start Num: 24

Candidate Starts for Shygu2\_14:

(Start: 18 @10910 has 18 MA's), (Start: 24 @10943 has 528 MA's), (53, 11168), (75, 11345),

Gene: Skipitt\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Skipitt\_14:



(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Sknot\_16 Start: 11659, Stop: 12183, Start Num: 24

Candidate Starts for Sknot\_16:

(11, 11506), (Start: 18 @11623 has 18 MA's), (21, 11638), (Start: 24 @11659 has 528 MA's), (46, 11839), (62, 11959), (65, 11986), (81, 12124), (86, 12157), (88, 12166), (89, 12169),

Gene: Smeadley\_12 Start: 9840, Stop: 10346, Start Num: 24

Candidate Starts for Smeadley\_12:

(Start: 24 @9840 has 528 MA's), (50, 10032), (56, 10089), (60, 10113), (63, 10146), (67, 10167), (80, 10272),

Gene: Smeagan\_17 Start: 12063, Stop: 12590, Start Num: 24

Candidate Starts for Smeagan\_17:

(Start: 24 @12063 has 528 MA's), (62, 12363), (63, 12378), (81, 12531), (86, 12564),

Gene: SmellyB\_18 Start: 11677, Stop: 12207, Start Num: 24

Candidate Starts for SmellyB\_18:

(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: SnapTap\_15 Start: 11565, Stop: 12077, Start Num: 24

Candidate Starts for SnapTap\_15:

(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's), (62, 11853), (65, 11880), (81, 12018),

Gene: Snape\_15 Start: 12155, Stop: 12676, Start Num: 24

Candidate Starts for Snape\_15:

(Start: 23 @12134 has 17 MA's), (Start: 24 @12155 has 528 MA's), (29, 12206), (40, 12269), (62, 12455),

Gene: Snickers\_16 Start: 10977, Stop: 11480, Start Num: 24

Candidate Starts for Snickers\_16:

(Start: 18 @10941 has 18 MA's), (Start: 23 @10956 has 17 MA's), (Start: 24 @10977 has 528 MA's), (47, 11154), (63, 11286), (65, 11298),

Gene: SoYo\_16 Start: 10914, Stop: 11417, Start Num: 24

Candidate Starts for SoYo\_16:

(Start: 18 @10878 has 18 MA's), (Start: 23 @10893 has 17 MA's), (Start: 24 @10914 has 528 MA's), (47, 11091), (63, 11223), (65, 11235),

Gene: SoilDragon\_16 Start: 10652, Stop: 11191, Start Num: 18

Candidate Starts for SoilDragon\_16:

(Start: 18 @10652 has 18 MA's), (Start: 23 @10667 has 17 MA's), (Start: 24 @10688 has 528 MA's), (47, 10865), (63, 10997), (65, 11009),

Gene: SororFago\_14 Start: 10687, Stop: 11214, Start Num: 24

Candidate Starts for SororFago\_14:

(Start: 24 @10687 has 528 MA's), (43, 10855), (54, 10930), (73, 11086), (81, 11158),

Gene: Soshari\_18 Start: 11086, Stop: 11589, Start Num: 24

Candidate Starts for Soshari\_18:

(Start: 18 @11050 has 18 MA's), (Start: 23 @11065 has 17 MA's), (Start: 24 @11086 has 528 MA's), (47, 11263), (63, 11395), (65, 11407),

Gene: Soups\_17 Start: 10872, Stop: 11384, Start Num: 24

Candidate Starts for Soups\_17:

(Start: 24 @10872 has 528 MA's), (49, 11067),

Gene: Sparxx\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Sparxx\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Spike509\_16 Start: 11087, Stop: 11590, Start Num: 24

Candidate Starts for Spike509\_16:

(Start: 18 @11051 has 18 MA's), (Start: 23 @11066 has 17 MA's), (Start: 24 @11087 has 528 MA's), (47, 11264), (63, 11396), (65, 11408),

Gene: Spino\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Spino\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Spouty\_16 Start: 12297, Stop: 12830, Start Num: 24

Candidate Starts for Spouty\_16:

(Start: 24 @12297 has 528 MA's), (28, 12345), (43, 12459), (62, 12600), (63, 12615), (65, 12627), (86, 12795), (87, 12798),

Gene: StCroix\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for StCroix\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (73, 7572), (88, 7686),

Gene: Stagni\_16 Start: 11005, Stop: 11508, Start Num: 24

Candidate Starts for Stagni\_16:

(Start: 18 @10969 has 18 MA's), (Start: 23 @10984 has 17 MA's), (Start: 24 @11005 has 528 MA's), (63, 11314), (65, 11326),

Gene: StarStuff\_18 Start: 11489, Stop: 12046, Start Num: 18

Candidate Starts for StarStuff\_18:

(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: Stasia\_15 Start: 11385, Stop: 11897, Start Num: 24

Candidate Starts for Stasia\_15:

(Start: 18 @11352 has 18 MA's), (Start: 24 @11385 has 528 MA's), (75, 11784),

Gene: Steamy\_16 Start: 12092, Stop: 12607, Start Num: 24

Candidate Starts for Steamy\_16:

(Start: 24 @12092 has 528 MA's), (61, 12365), (81, 12545), (84, 12569),

Gene: StepMih\_16 Start: 10996, Stop: 11499, Start Num: 24

Candidate Starts for StepMih\_16:

(Start: 18 @10960 has 18 MA's), (Start: 23 @10975 has 17 MA's), (Start: 24 @10996 has 528 MA's), (47, 11173), (63, 11305), (65, 11317),

Gene: Stephig9\_12 Start: 9808, Stop: 10329, Start Num: 23

Candidate Starts for Stephig9\_12:

(Start: 23 @9808 has 17 MA's), (50, 10018), (56, 10075), (67, 10153), (71, 10198), (80, 10258),

Gene: Stink\_14 Start: 10908, Stop: 11420, Start Num: 24

Candidate Starts for Stink\_14:

(Start: 18 @10875 has 18 MA's), (Start: 24 @10908 has 528 MA's), (40, 11019), (67, 11241), (75, 11307),

Gene: Strosahl\_17 Start: 10711, Stop: 11223, Start Num: 24

Candidate Starts for Strosahl\_17:

(Start: 24 @10711 has 528 MA's), (49, 10906),

Gene: Sunhee\_13 Start: 10698, Stop: 11225, Start Num: 24

Candidate Starts for Sunhee\_13:

(Start: 18 @10665 has 18 MA's), (Start: 24 @10698 has 528 MA's), (43, 10866), (54, 10941), (57, 10971), (65, 11034), (73, 11097), (81, 11169),

Gene: SuperAwesome\_18 Start: 11667, Stop: 12197, Start Num: 24

Candidate Starts for SuperAwesome\_18:

(Start: 24 @11667 has 528 MA's), (41, 11811), (54, 11904), (55, 11916), (70, 12042),

Gene: SuperCallie99\_18 Start: 11668, Stop: 12198, Start Num: 24

Candidate Starts for SuperCallie99\_18:

(Start: 24 @11668 has 528 MA's), (41, 11812), (54, 11905), (55, 11917), (70, 12043),

Gene: Superchunk\_14 Start: 10281, Stop: 10805, Start Num: 24

Candidate Starts for Superchunk\_14:

(Start: 24 @10281 has 528 MA's), (34, 10350), (41, 10422), (45, 10452), (63, 10596), (67, 10617), (81, 10743), (86, 10776), (88, 10785),

Gene: Swann\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for Swann\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: SweetiePie\_15 Start: 11565, Stop: 12077, Start Num: 24

Candidate Starts for SweetiePie\_15:

(Start: 18 @11529 has 18 MA's), (Start: 23 @11544 has 17 MA's), (Start: 24 @11565 has 528 MA's), (62, 11853), (65, 11880), (81, 12018),

Gene: SwirlSquare\_17 Start: 10437, Stop: 10958, Start Num: 24

Candidate Starts for SwirlSquare\_17:

(Start: 18 @10401 has 18 MA's), (22, 10416), (Start: 24 @10437 has 528 MA's), (29, 10488), (37, 10524), (41, 10578), (45, 10608), (63, 10752), (67, 10773), (81, 10899), (86, 10932),

Gene: Swirley\_12 Start: 10233, Stop: 10742, Start Num: 24

Candidate Starts for Swirley\_12:

(Start: 24 @10233 has 528 MA's), (39, 10323), (55, 10476), (61, 10518), (63, 10545), (67, 10566), (72, 10614),

Gene: Switzerland\_17 Start: 10868, Stop: 11377, Start Num: 24

Candidate Starts for Switzerland\_17:

(Start: 24 @10868 has 528 MA's),

Gene: SydNat\_12 Start: 10340, Stop: 10849, Start Num: 24

Candidate Starts for SydNat\_12:

(Start: 24 @10340 has 528 MA's), (39, 10430), (55, 10583), (61, 10625), (63, 10652), (72, 10721),

Gene: TNguyen7\_14 Start: 10516, Stop: 11037, Start Num: 24

Candidate Starts for TNguyen7\_14:

(Start: 24 @10516 has 528 MA's), (46, 10690), (61, 10798), (65, 10837), (89, 11008),

Gene: TWAMP\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for TWAMP\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Takoda\_11 Start: 7195, Stop: 7680, Start Num: 32

Candidate Starts for Takoda\_11:

(14, 7033), (Start: 32 @7195 has 36 MA's), (58, 7426), (66, 7492), (73, 7549),

Gene: Taquarus\_14 Start: 10942, Stop: 11454, Start Num: 24

Candidate Starts for Taquarus\_14:

(Start: 24 @10942 has 528 MA's), (40, 11053), (75, 11341),

Gene: Target\_16 Start: 11865, Stop: 12362, Start Num: 24

Candidate Starts for Target\_16:

(Start: 24 @11865 has 528 MA's), (54, 12081), (55, 12093), (67, 12183), (79, 12270), (84, 12330),

Gene: TarsusIV\_15 Start: 11649, Stop: 12176, Start Num: 24

Candidate Starts for TarsusIV\_15:

(Start: 24 @11649 has 528 MA's), (62, 11949), (63, 11964), (67, 11985), (81, 12117), (86, 12150),

Gene: Tarynearal\_11 Start: 10260, Stop: 10769, Start Num: 24

Candidate Starts for Tarynearal\_11:

(Start: 24 @10260 has 528 MA's), (39, 10350), (55, 10503), (61, 10545), (63, 10572), (67, 10593), (72, 10641),

Gene: Taurus\_16 Start: 11001, Stop: 11504, Start Num: 24

Candidate Starts for Taurus\_16:

(Start: 18 @10965 has 18 MA's), (Start: 23 @10980 has 17 MA's), (Start: 24 @11001 has 528 MA's), (47, 11178), (63, 11310), (65, 11322),

Gene: Temprado\_19 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Temprado\_19:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: Terrific\_19 Start: 12113, Stop: 12637, Start Num: 24

Candidate Starts for Terrific\_19:

(11, 11960), (Start: 18 @12077 has 18 MA's), (21, 12092), (Start: 24 @12113 has 528 MA's), (46, 12293), (62, 12413), (65, 12440), (67, 12449), (81, 12578), (86, 12611), (88, 12620), (89, 12623),

Gene: Texage\_14 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Texage\_14:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Thanksgivukkah\_14 Start: 10944, Stop: 11456, Start Num: 24

Candidate Starts for Thanksgivukkah\_14:

(Start: 24 @10944 has 528 MA's), (40, 11055), (75, 11343),

Gene: Theia\_11 Start: 10199, Stop: 10708, Start Num: 24

Candidate Starts for Theia\_11:

(Start: 24 @10199 has 528 MA's), (39, 10289), (55, 10442), (61, 10484), (63, 10511), (67, 10532), (72, 10580),

Gene: Tiffany\_16 Start: 10876, Stop: 11400, Start Num: 23

Candidate Starts for Tiffany\_16:

(Start: 18 @10861 has 18 MA's), (Start: 23 @10876 has 17 MA's), (Start: 24 @10897 has 528 MA's), (47, 11074), (63, 11206), (65, 11218),

Gene: Tiger\_12 Start: 10080, Stop: 10589, Start Num: 24

Candidate Starts for Tiger\_12:

(Start: 24 @10080 has 528 MA's), (39, 10170), (55, 10323), (61, 10365), (63, 10392), (67, 10413), (72, 10461),

Gene: Timothy\_15 Start: 12152, Stop: 12673, Start Num: 24

Candidate Starts for Timothy\_15:

(Start: 23 @12131 has 17 MA's), (Start: 24 @12152 has 528 MA's), (29, 12203), (40, 12266), (62, 12452),

Gene: Timshel\_15 Start: 12520, Stop: 13020, Start Num: 24

Candidate Starts for Timshel\_15:

(Start: 24 @12520 has 528 MA's), (37, 12589), (40, 12616), (65, 12829), (73, 12892), (83, 12985), (84, 12988), (85, 12994),

Gene: TinaFeyge\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for TinaFeyge\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: TinyPebbles\_16 Start: 11086, Stop: 11589, Start Num: 24

Candidate Starts for TinyPebbles\_16:

(Start: 18 @11050 has 18 MA's), (Start: 23 @11065 has 17 MA's), (Start: 24 @11086 has 528 MA's), (47, 11263), (63, 11395), (65, 11407),

Gene: TinyTimmy\_15 Start: 12204, Stop: 12725, Start Num: 24

Candidate Starts for TinyTimmy\_15:

(Start: 23 @12183 has 17 MA's), (Start: 24 @12204 has 528 MA's), (29, 12255), (40, 12318), (62, 12504),

Gene: Tinybot\_13 Start: 10920, Stop: 11432, Start Num: 24

Candidate Starts for Tinybot\_13:

(Start: 18 @10887 has 18 MA's), (Start: 24 @10920 has 528 MA's), (40, 11031), (67, 11253), (75, 11319),

Gene: TipsytheTRex\_14 Start: 10661, Stop: 11185, Start Num: 24

Candidate Starts for TipsytheTRex\_14:

(Start: 24 @10661 has 528 MA's), (34, 10727), (41, 10799), (55, 10904), (70, 11030),

Gene: TiroTheta9\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for TiroTheta9\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Toaka\_14 Start: 10643, Stop: 11161, Start Num: 24  
Candidate Starts for Toaka\_14:  
(Start: 24 @10643 has 528 MA's), (38, 10733), (39, 10739), (52, 10853), (86, 11126),

Gene: Todacoro\_15 Start: 11093, Stop: 11602, Start Num: 24  
Candidate Starts for Todacoro\_15:  
(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Tomathan\_18 Start: 11525, Stop: 12046, Start Num: 24  
Candidate Starts for Tomathan\_18:  
(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: ToneTone\_17 Start: 11594, Stop: 12115, Start Num: 24  
Candidate Starts for ToneTone\_17:  
(12, 11498), (Start: 24 @11594 has 528 MA's), (29, 11642), (41, 11729), (55, 11834), (70, 11960),

Gene: Topanga\_14 Start: 10833, Stop: 11354, Start Num: 24  
Candidate Starts for Topanga\_14:  
(Start: 19 @10812 has 3 MA's), (Start: 24 @10833 has 528 MA's), (36, 10920),

Gene: Toro\_17 Start: 12563, Stop: 13072, Start Num: 24  
Candidate Starts for Toro\_17:  
(16, 12518), (Start: 23 @12542 has 17 MA's), (Start: 24 @12563 has 528 MA's), (55, 12803), (64, 12881), (65, 12884), (73, 12947), (74, 12950),

Gene: Travvers\_18 Start: 11525, Stop: 12046, Start Num: 24  
Candidate Starts for Travvers\_18:  
(Start: 18 @11489 has 18 MA's), (22, 11504), (Start: 24 @11525 has 528 MA's), (29, 11576), (63, 11840), (67, 11861), (86, 12020),

Gene: Trike\_12 Start: 8784, Stop: 9326, Start Num: 19  
Candidate Starts for Trike\_12:  
(Start: 19 @8784 has 3 MA's), (Start: 24 @8805 has 528 MA's), (46, 8991),

Gene: Tristan\_16 Start: 13375, Stop: 13890, Start Num: 24  
Candidate Starts for Tristan\_16:  
(Start: 24 @13375 has 528 MA's), (37, 13456), (73, 13759), (81, 13834),

Gene: Trixie\_18 Start: 13264, Stop: 13788, Start Num: 24  
Candidate Starts for Trixie\_18:  
(20, 13243), (Start: 24 @13264 has 528 MA's), (34, 13333), (55, 13510), (81, 13729),

Gene: Trooper\_15 Start: 11440, Stop: 11967, Start Num: 24  
Candidate Starts for Trooper\_15:  
(2, 11092), (6, 11164), (11, 11284), (12, 11341), (Start: 24 @11440 has 528 MA's), (44, 11608), (55, 11686), (81, 11908), (86, 11941),

Gene: TroyPia\_14 Start: 10939, Stop: 11451, Start Num: 24  
Candidate Starts for TroyPia\_14:  
(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Tubs\_16 Start: 12267, Stop: 12800, Start Num: 24

Candidate Starts for Tubs\_16:

(Start: 24 @12267 has 528 MA's), (28, 12315), (43, 12429), (62, 12570), (63, 12585), (65, 12597), (86, 12765), (87, 12768),

Gene: Tucker\_18 Start: 11681, Stop: 12202, Start Num: 24

Candidate Starts for Tucker\_18:

(12, 11585), (Start: 24 @11681 has 528 MA's), (29, 11729), (41, 11816), (54, 11909), (55, 11921), (70, 12047),

Gene: Turbido\_17 Start: 12090, Stop: 12617, Start Num: 24

Candidate Starts for Turbido\_17:

(Start: 24 @12090 has 528 MA's), (62, 12390), (63, 12405), (67, 12426), (81, 12558), (86, 12591),

Gene: Twigg\_12 Start: 10232, Stop: 10741, Start Num: 24

Candidate Starts for Twigg\_12:

(Start: 24 @10232 has 528 MA's), (39, 10322), (55, 10475), (61, 10517), (63, 10544), (67, 10565), (72, 10613),

Gene: Twister\_14 Start: 10732, Stop: 11253, Start Num: 24

Candidate Starts for Twister\_14:

(Start: 19 @10711 has 3 MA's), (Start: 24 @10732 has 528 MA's), (36, 10819),

Gene: TygerBlood\_14 Start: 10941, Stop: 11453, Start Num: 24

Candidate Starts for TygerBlood\_14:

(Start: 24 @10941 has 528 MA's), (40, 11052), (75, 11340),

Gene: Ugenie5\_13 Start: 12300, Stop: 12833, Start Num: 24

Candidate Starts for Ugenie5\_13:

(Start: 24 @12300 has 528 MA's), (28, 12348), (43, 12462), (62, 12603), (63, 12618), (65, 12630), (86, 12798), (87, 12801),

Gene: UhSalsa\_11 Start: 7218, Stop: 7703, Start Num: 32

Candidate Starts for UhSalsa\_11:

(14, 7056), (Start: 32 @7218 has 36 MA's), (58, 7449), (66, 7515), (73, 7572), (88, 7686),

Gene: Ulysses\_13 Start: 10660, Stop: 11172, Start Num: 24

Candidate Starts for Ulysses\_13:

(Start: 18 @10627 has 18 MA's), (Start: 24 @10660 has 528 MA's), (62, 10957), (75, 11059),

Gene: UnionJack\_12 Start: 9800, Stop: 10312, Start Num: 24

Candidate Starts for UnionJack\_12:

(Start: 24 @9800 has 528 MA's), (39, 9893), (61, 10088), (63, 10115), (72, 10184), (78, 10217), (85, 10283),

Gene: Updawg\_17 Start: 12101, Stop: 12625, Start Num: 24

Candidate Starts for Updawg\_17:

(11, 11948), (Start: 18 @12065 has 18 MA's), (21, 12080), (Start: 24 @12101 has 528 MA's), (46, 12281), (62, 12401), (65, 12428), (81, 12566), (86, 12599), (88, 12608), (89, 12611),

Gene: VA6\_15 Start: 11619, Stop: 12140, Start Num: 24

Candidate Starts for VA6\_15:

(Start: 18 @11583 has 18 MA's), (Start: 23 @11598 has 17 MA's), (Start: 24 @11619 has 528 MA's), (62, 11916), (65, 11943), (81, 12081),

Gene: VC3\_18 Start: 11582, Stop: 12103, Start Num: 24

Candidate Starts for VC3\_18:

(15, 11534), (Start: 24 @11582 has 528 MA's), (41, 11726), (42, 11741), (55, 11831), (62, 11885), (63, 11900), (81, 12044), (86, 12077),

Gene: Vanisoa\_14 Start: 10356, Stop: 10880, Start Num: 24

Candidate Starts for Vanisoa\_14:

(Start: 24 @10356 has 528 MA's), (34, 10419), (39, 10455), (86, 10845), (87, 10848),

Gene: Veracruz\_14 Start: 11093, Stop: 11602, Start Num: 24

Candidate Starts for Veracruz\_14:

(12, 10988), (Start: 24 @11093 has 528 MA's), (61, 11375), (65, 11414), (85, 11573),

Gene: Vix\_16 Start: 11064, Stop: 11588, Start Num: 23

Candidate Starts for Vix\_16:

(Start: 18 @11049 has 18 MA's), (Start: 23 @11064 has 17 MA's), (Start: 24 @11085 has 528 MA's), (47, 11262), (63, 11394), (65, 11406),

Gene: VohminGhazi\_18 Start: 11677, Stop: 12207, Start Num: 24

Candidate Starts for VohminGhazi\_18:

(Start: 24 @11677 has 528 MA's), (41, 11821), (54, 11914), (55, 11926), (70, 12052),

Gene: Waits\_17 Start: 10717, Stop: 11229, Start Num: 24

Candidate Starts for Waits\_17:

(Start: 24 @10717 has 528 MA's), (49, 10912),

Gene: WalterMcMickey\_14 Start: 10732, Stop: 11253, Start Num: 24

Candidate Starts for WalterMcMickey\_14:

(Start: 19 @10711 has 3 MA's), (Start: 24 @10732 has 528 MA's), (36, 10819),

Gene: Wander\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for Wander\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Warrior24\_18 Start: 10721, Stop: 11233, Start Num: 24

Candidate Starts for Warrior24\_18:

(Start: 24 @10721 has 528 MA's), (49, 10916),

Gene: Watson\_16 Start: 10995, Stop: 11498, Start Num: 24

Candidate Starts for Watson\_16:

(Start: 18 @10959 has 18 MA's), (Start: 23 @10974 has 17 MA's), (Start: 24 @10995 has 528 MA's), (47, 11172), (63, 11304), (65, 11316),

Gene: WeiHuaDA\_21 Start: 13865, Stop: 14389, Start Num: 24

Candidate Starts for WeiHuaDA\_21:

(20, 13844), (Start: 24 @13865 has 528 MA's), (55, 14111), (81, 14330),

Gene: Whabigail7\_17 Start: 12078, Stop: 12605, Start Num: 24

Candidate Starts for Whabigail7\_17:

(Start: 24 @12078 has 528 MA's), (62, 12378), (63, 12393), (81, 12546), (86, 12579),

Gene: WideWale\_17 Start: 12101, Stop: 12625, Start Num: 24



Candidate Starts for WideWale\_17:

(11, 11948), (Start: 18 @12065 has 18 MA's), (21, 12080), (Start: 24 @12101 has 528 MA's), (46, 12281), (62, 12401), (65, 12428), (81, 12566), (86, 12599), (88, 12608), (89, 12611),

Gene: Wiks\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for Wiks\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Wilbur\_14 Start: 10938, Stop: 11450, Start Num: 24

Candidate Starts for Wilbur\_14:

(Start: 24 @10938 has 528 MA's), (40, 11049), (75, 11337),

Gene: Wile\_14 Start: 10956, Stop: 11471, Start Num: 24

Candidate Starts for Wile\_14:

(4, 10665), (7, 10716), (9, 10752), (10, 10755), (Start: 18 @10923 has 18 MA's), (Start: 24 @10956 has 528 MA's), (75, 11358),

Gene: Wizard007\_14 Start: 10941, Stop: 11453, Start Num: 24

Candidate Starts for Wizard007\_14:

(Start: 24 @10941 has 528 MA's), (40, 11052), (75, 11340),

Gene: Wooldri\_18 Start: 10878, Stop: 11417, Start Num: 18

Candidate Starts for Wooldri\_18:

(Start: 18 @10878 has 18 MA's), (Start: 23 @10893 has 17 MA's), (Start: 24 @10914 has 528 MA's), (47, 11091), (63, 11223), (65, 11235),

Gene: WunderPhul\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for WunderPhul\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Xena\_14 Start: 10943, Stop: 11458, Start Num: 24

Candidate Starts for Xena\_14:

(4, 10652), (7, 10703), (9, 10739), (10, 10742), (Start: 18 @10910 has 18 MA's), (Start: 24 @10943 has 528 MA's), (75, 11345),

Gene: XianYue\_15 Start: 11556, Stop: 12080, Start Num: 24

Candidate Starts for XianYue\_15:

(Start: 24 @11556 has 528 MA's), (29, 11607), (81, 12021),

Gene: Yecey3\_15 Start: 10453, Stop: 10974, Start Num: 24

Candidate Starts for Yecey3\_15:

(Start: 24 @10453 has 528 MA's), (34, 10516), (39, 10552), (62, 10747), (65, 10774),

Gene: YoSam321\_14 Start: 10939, Stop: 11451, Start Num: 24

Candidate Starts for YoSam321\_14:

(Start: 24 @10939 has 528 MA's), (40, 11050), (75, 11338),

Gene: Yogi\_11 Start: 7203, Stop: 7688, Start Num: 32

Candidate Starts for Yogi\_11:

(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: Yokurt\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for Yokurt\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Yoncess\_11 Start: 7203, Stop: 7688, Start Num: 32

Candidate Starts for Yoncess\_11:

(14, 7041), (Start: 32 @7203 has 36 MA's), (58, 7434), (66, 7500), (73, 7557),

Gene: Zaka\_18 Start: 11662, Stop: 12183, Start Num: 24

Candidate Starts for Zaka\_18:

(12, 11566), (Start: 24 @11662 has 528 MA's), (29, 11710), (41, 11797), (55, 11902), (70, 12028),

Gene: Zetzy\_15 Start: 10568, Stop: 11059, Start Num: 24

Candidate Starts for Zetzy\_15:

(Start: 18 @10532 has 18 MA's), (Start: 23 @10547 has 17 MA's), (Start: 24 @10568 has 528 MA's), (46, 10730), (63, 10865), (65, 10877),

Gene: Zimmer\_17 Start: 13146, Stop: 13670, Start Num: 24

Candidate Starts for Zimmer\_17:

(Start: 24 @13146 has 528 MA's), (62, 13434), (84, 13623),

Gene: Zolita\_11 Start: 10341, Stop: 10850, Start Num: 24

Candidate Starts for Zolita\_11:

(Start: 24 @10341 has 528 MA's), (39, 10431), (55, 10584), (61, 10626), (63, 10653), (72, 10722),

Gene: Zulu\_18 Start: 11661, Stop: 12182, Start Num: 24

Candidate Starts for Zulu\_18:

(12, 11565), (Start: 24 @11661 has 528 MA's), (29, 11709), (41, 11796), (55, 11901), (70, 12027),