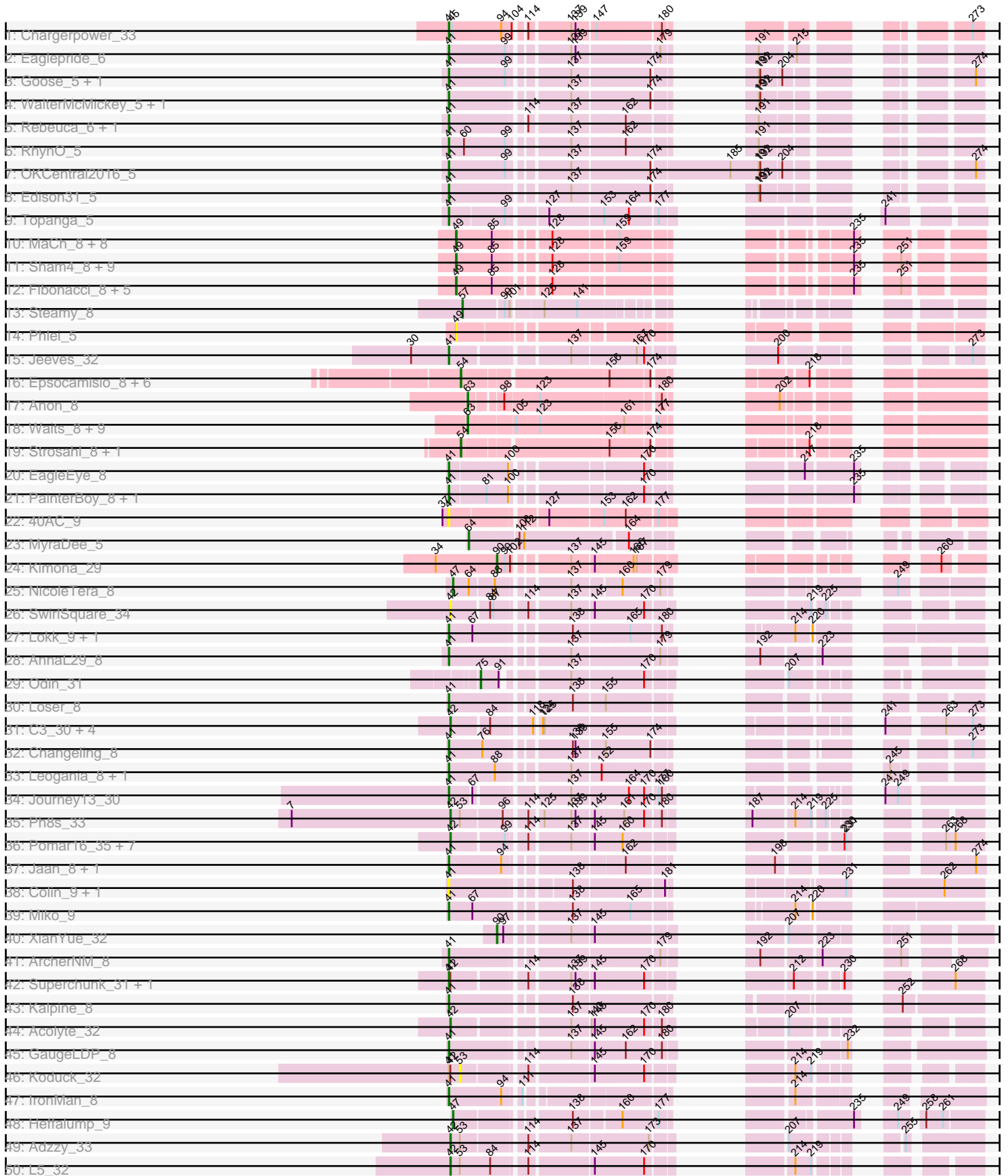
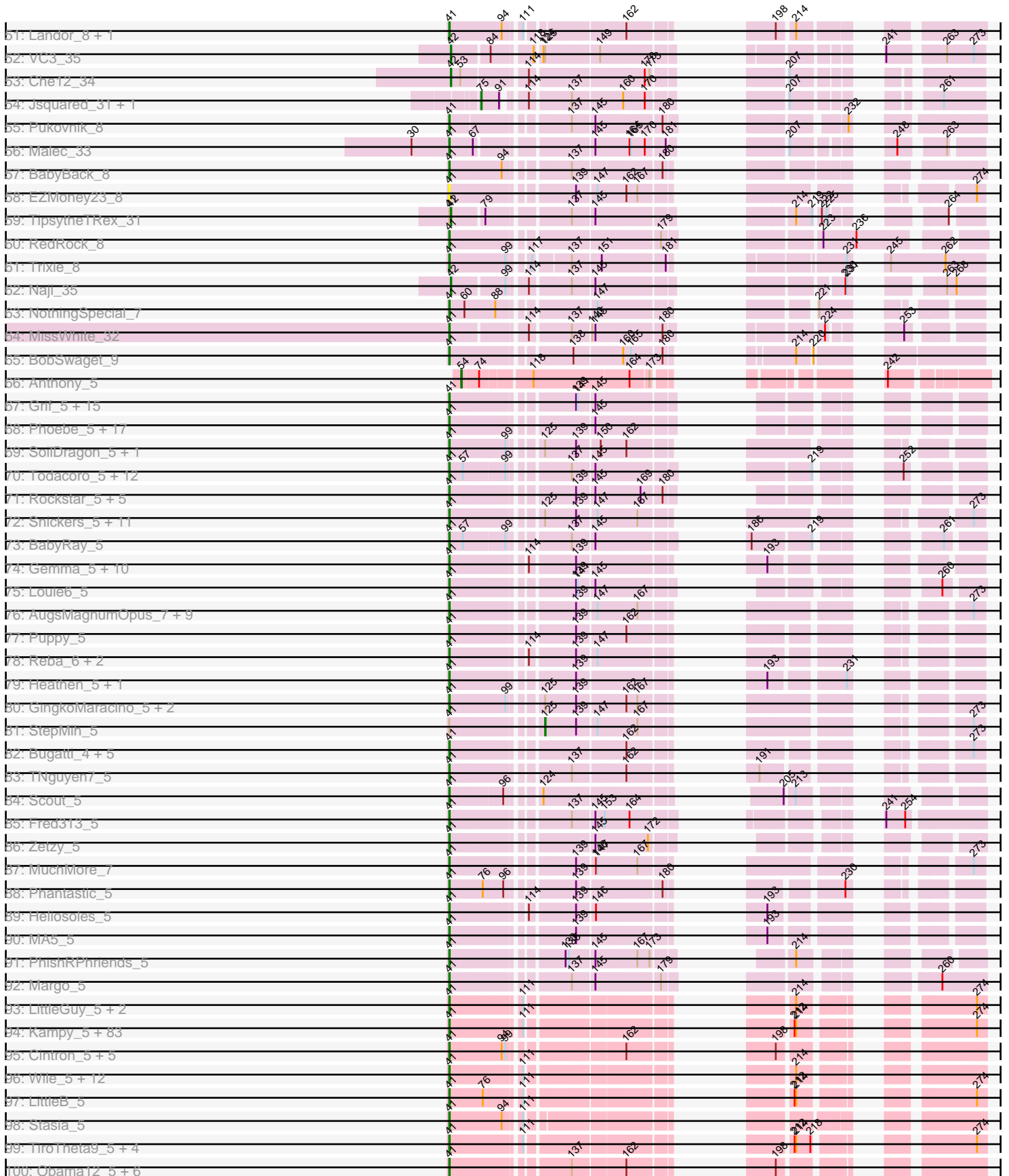


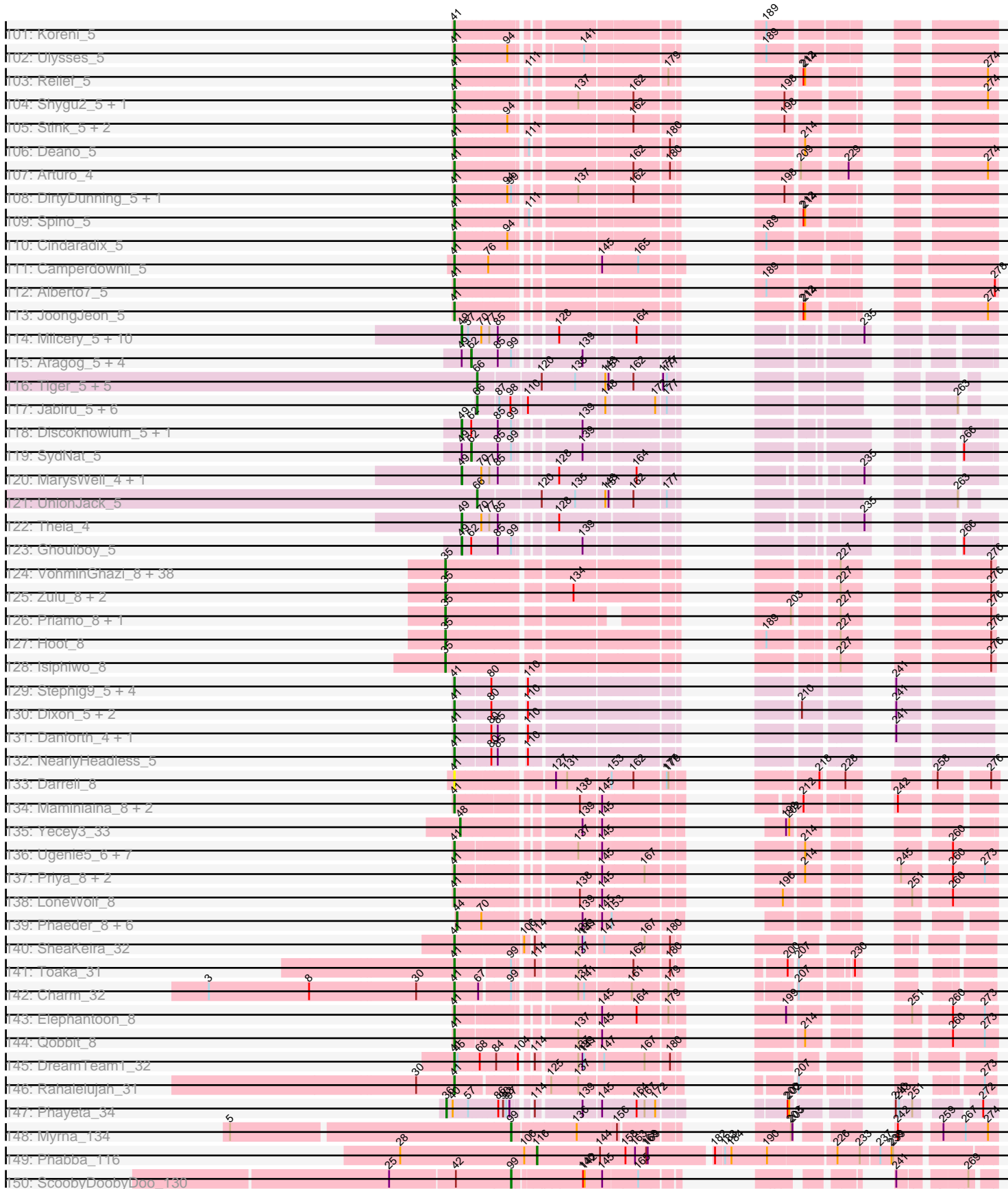
Pham 171094



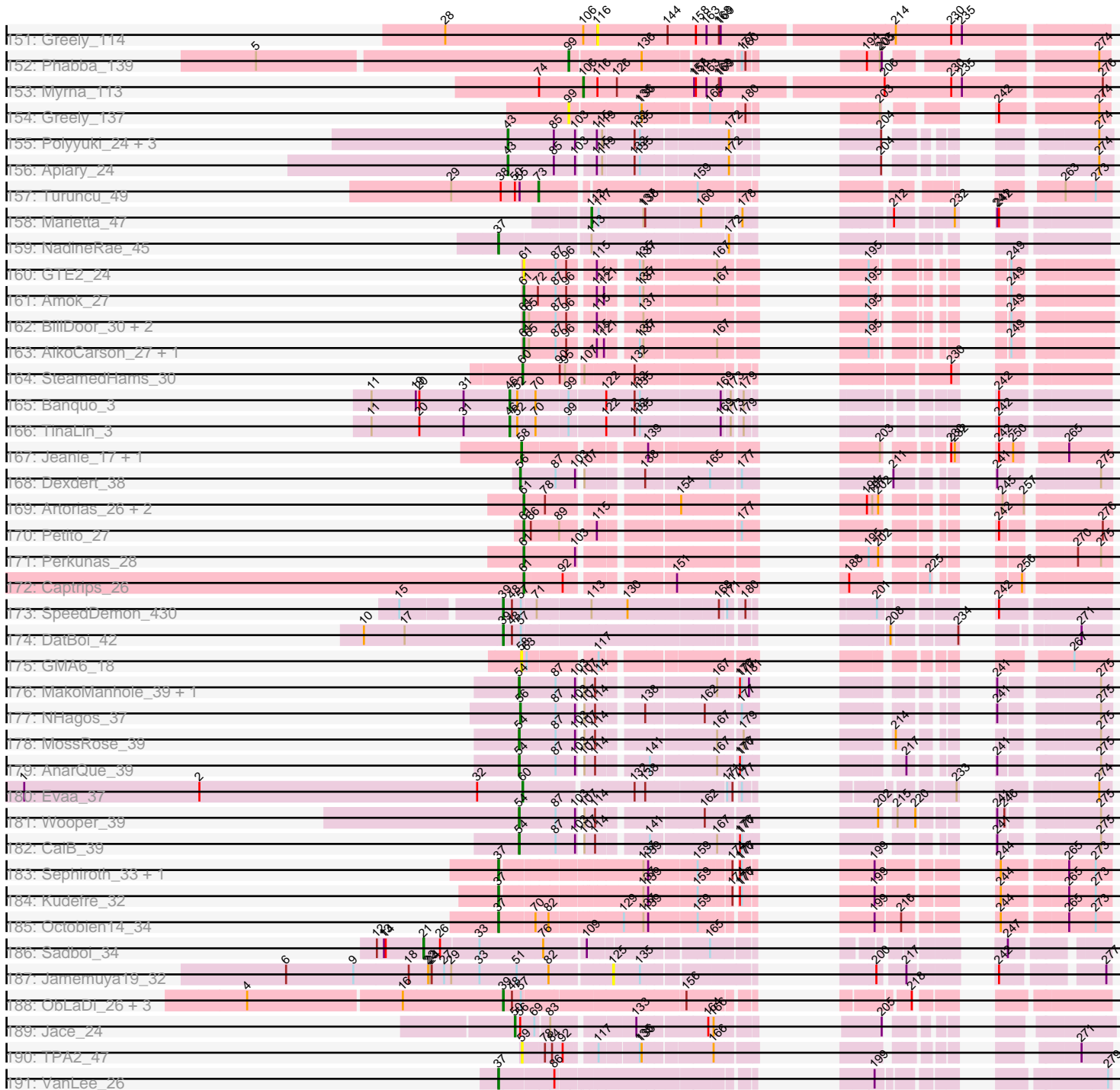
# Pham 171094



Pham 171094



Pham 171094



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 171094 Report

This analysis was run 07/09/24 on database version 566.

Pham number 171094 has 563 members, 36 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_33
- Track 2 : Eaglepride\_6
- Track 3 : Goose\_5, Chupacabra\_5
- Track 4 : WalterMcMickey\_5, Twister\_5
- Track 5 : Rebeuca\_6, Kristoff\_6
- Track 6 : RhynO\_5
- Track 7 : OKCentral2016\_5
- Track 8 : Edison31\_5
- Track 9 : Topanga\_5
- Track 10 : MaCh\_8, Flaverint\_8, Aneem\_8, Bowtie\_8, Munch\_8, Joselito\_8, Gilberta\_8, Bachome\_8, Timothy\_8
- Track 11 : Sham4\_8, Et2Brutus\_7, Ebony\_8, Lucivia\_8, TinyTimmy\_7, Petersenfast\_7, Insomnia\_8, Mabel\_8, Orange\_8, Jabith\_8
- Track 12 : Fibonacci\_8, Hutc2\_8, Mulciber\_8, Bud\_8, Salz\_8, Snape\_8
- Track 13 : Steamy\_8
- Track 14 : Phlei\_5
- Track 15 : Jeeves\_32
- Track 16 : Epsocamisio\_8, Nebulosus\_8, JSwag\_8, Boohoo\_8, LastResort\_8, Anaysia\_8, ReMo\_8
- Track 17 : Anon\_8
- Track 18 : Waits\_8, Rosalind\_8, MinecraftSteve\_9, DekHockey33\_8, KatherineG\_8, ShayRa\_9, Switzerland\_8, Oofda\_8, Battleship\_9, Soups\_8
- Track 19 : Strosahl\_8, Remus\_8
- Track 20 : EagleEye\_8
- Track 21 : PainterBoy\_8, Lucyedi\_8
- Track 22 : 40AC\_9
- Track 23 : MyraDee\_5
- Track 24 : Kimona\_29
- Track 25 : NicoleTera\_8
- Track 26 : SwirlSquare\_34
- Track 27 : Lokk\_9, Rachaly\_9
- Track 28 : AnnaL29\_8
- Track 29 : Odin\_31
- Track 30 : Loser\_8
- Track 31 : C3\_30, AN9\_35, ANI8\_35, AN3\_32, VA6\_32
- Track 32 : Changeling\_8
- Track 33 : Leogania\_8, BiancaTri92\_8

- Track 34 : Journey13\_30
- Track 35 : Ph8s\_33
- Track 36 : Pomar16\_35, D29\_32, Tomathan\_35, DBQu4n\_35, StarStuff\_35, Duplo\_35, Kerberos\_35, D32\_35
- Track 37 : Jaan\_8, Phaded\_8
- Track 38 : Colin\_9, WeiHuaDA\_9
- Track 39 : Miko\_9
- Track 40 : XianYue\_32
- Track 41 : ArcherNM\_8
- Track 42 : Superchunk\_31, Caraxes\_31
- Track 43 : Kalpine\_8
- Track 44 : Acolyte\_32
- Track 45 : GaugeLDP\_8
- Track 46 : Koduck\_32
- Track 47 : IronMan\_8
- Track 48 : Heffalump\_9
- Track 49 : Adzzy\_33
- Track 50 : L5\_32
- Track 51 : Landor\_8, Bactobuster\_8
- Track 52 : VC3\_35
- Track 53 : Che12\_34
- Track 54 : Jsquared\_31, Serenity\_31
- Track 55 : Pukovnik\_8
- Track 56 : Malec\_33
- Track 57 : BabyBack\_8
- Track 58 : EZMoney23\_8
- Track 59 : TipsytheTRex\_31
- Track 60 : RedRock\_8
- Track 61 : Trixie\_8
- Track 62 : Naji\_35
- Track 63 : NothingSpecial\_7
- Track 64 : MissWhite\_32
- Track 65 : BobSwaget\_9
- Track 66 : Anthony\_5
- Track 67 : Grif\_5, Phoxy\_5, Soshari\_7, Spike509\_5, Methuselah\_5, Vix\_5, Grum1\_5, Daishi\_5, LarryKay\_5, Misomonster\_7, KADY\_6, Bxz2\_5, BuzzBuzz\_4, AgronaGT15\_5, Rummer\_5, HashRod\_6
- Track 68 : Phoebe\_5, JenCasNa\_5, Cullens\_5, PotatoSplit\_6, MoneyMay\_5, Fernando\_5, LBerry\_5, EpicPhail\_5, Colbster\_5, Marie\_5, Beauxregard13\_5, Taurus\_5, Penny1\_5, P28Green\_5, JHC117\_5, Sabinator\_5, LugYA\_7, Hercules11\_5
- Track 69 : SoilDragon\_5, Jobu08\_5
- Track 70 : Todacoro\_5, Popcicle\_5, Veracruz\_4, Texage\_4, QuinnKiro\_4, Pocahontas\_5, ResDef\_4, Hookmount\_5, Panamaxus\_5, Noella\_5, Caviar\_5, Norbert\_4, Lambert1\_5
- Track 71 : Rockstar\_5, MK4\_5, JF2\_5, Isca\_5, B1\_04, JF4\_5
- Track 72 : Snickers\_5, Dieselweasel\_5, Tiffany\_5, Sabia\_5, Aglet\_5, Stagni\_5, Mainiac\_5, MadMarie\_5, BreSam8\_5, GtownJaz\_5, SoYo\_5, Wooldri\_7
- Track 73 : BabyRay\_5
- Track 74 : Gemma\_5, Kalnoky\_6, PurpleHaze\_5, Manu\_6, Pawn\_5, Kalb97\_6, Groupthink\_6, OlanP\_5, Marius\_6, HaveUMetTed\_6, ACFishhook\_5
- Track 75 : Louie6\_5

- Track 76 : AugsMagnumOpus\_7, Microwolf\_5, DaHudson\_5, PGHhamlin\_7, MarQuardt\_5, Watson\_5, Malinsilva\_7, Lilith\_5, Pembroke\_5, Farber\_5
- Track 77 : Puppy\_5
- Track 78 : Reba\_6, JeppNRM\_6, Phranny\_6
- Track 79 : Heathen\_5, HelDan\_5
- Track 80 : GingkoMaracino\_5, Ollie\_5, Anubis\_7
- Track 81 : StepMih\_5
- Track 82 : Bugatti\_4, Pistachio\_5, Idleandcovert\_4, BlueBird\_5, SaturnRing\_4, Giroux\_4
- Track 83 : TNguyen7\_5
- Track 84 : Scout\_5
- Track 85 : Fred313\_5
- Track 86 : Zetzy\_5
- Track 87 : MuchMore\_7
- Track 88 : Phantastic\_5
- Track 89 : Heliosoles\_5
- Track 90 : MA5\_5
- Track 91 : PhishRPhriends\_5
- Track 92 : Margo\_5
- Track 93 : LittleGuy\_5, Nyxis\_5, Phontbonne\_5
- Track 94 : Kampy\_5, Lorenzo\_5, TroyPia\_5, Ohfah\_5, Sabertooth\_5, Clarenza\_5, JetBlade\_5, Ruin\_5, Kratak\_5, Eagle\_4, Connomayer\_5, HamSlice\_4, Romney\_5, Mazhar510\_5, Phacado\_5, Eros\_5, Albee\_5, Bombshell\_5, Maverick\_5, BellusTerra\_5, Annyong\_5, Phelipe\_5, Peaches\_5, ICleared\_5, Taquarus\_5, Avle17\_5, Holli\_5, Wizard007\_5, MeeZee\_5, LeoAvram\_5, OKaNui\_5, KFPoly\_5, Millski\_5, Commander\_5, TygerBlood\_5, Gadost\_5, NorthStar\_5, Baby16\_5, YoSam321\_5, Wilbur\_5, Kingmustik0402\_5, Blackmoor\_5, Pipcraft\_5, Iceman\_5, Polymorphads\_5, Medusa\_5, Palestino\_5, Melvin\_5, CentreCat\_5, Citius\_5, Sparxx\_5, Caelakin\_5, Kyee\_5, Cocoaberry\_5, TinaFeyge\_5, Bartimeaus\_5, LappelDuVide\_4, Roosevelt\_5, Funston\_5, Dhanush\_5, Bruiser\_5, Maxo\_5, Floean\_5, Scamp\_5, PeterPeter\_5, Lunsford\_5, Houdini22\_5, Nemo27\_5, BubbleTrouble\_5, Jaykayelowell\_5, Lemur\_5, Noelle\_5, NotAPhaseMom\_5, Shaka\_5, Eris\_5, Chaph\_5, Druantia\_5, Flux\_5, Eurydice\_5, Thanksgivukkah\_5, Morrow\_5, Burger\_4, Eapen\_5, Wander\_5
- Track 95 : Cintron\_5, Pumbaa\_5, Phighter1804\_5, Iracema64\_5, Kremtemulon\_4, LochMonster\_5
- Track 96 : Wile\_5, PetiteSangsue\_5, Cici\_5, Katalie136\_5, Badger\_5, Perplexer\_5, Xena\_5, Datway\_5, Morpher26\_5, Achebe\_5, Backyardigan\_5, AbbysRanger\_5, Bumblebee11\_5
- Track 97 : LittleB\_5
- Track 98 : Stasia\_5
- Track 99 : TiroTheta9\_5, Broseidon\_5, Nebs\_5, Skipitt\_5, Abdiel\_5
- Track 100 : Obama12\_5, SheldonCooper\_5, LHTSCC\_5, ChampagnePapi\_5, Tinybot\_4, BangNhom\_4, Cerulean\_5
- Track 101 : Koreni\_5
- Track 102 : Ulysses\_5
- Track 103 : Relief\_5
- Track 104 : Shygu2\_5, Happiness\_5
- Track 105 : Stink\_5, AvatarAhPeg\_5, Miramae\_5
- Track 106 : Deano\_5
- Track 107 : Arturo\_4
- Track 108 : DirtyDunning\_5, Mundrea\_5
- Track 109 : Spino\_5

- Track 110 : Cindaradix\_5
- Track 111 : Camperdownii\_5
- Track 112 : Alberto7\_5
- Track 113 : JoongJeon\_5
- Track 114 : Milcery\_5, Tarynearal\_4, Cuco\_5, Coog\_5, LittleCherry\_5, Micasa\_4, Bonamassa\_5, Midas2\_5, HuhtaEnerson15\_5, George\_4, Swirley\_5
- Track 115 : Aragog\_5, AgentM\_5, Zolita\_4, Jovo\_5, Phlorence\_5
- Track 116 : Tiger\_5, PickleBack\_5, Conspiracy\_5, Lev2\_5, ForGetIt\_5, Archetta\_5
- Track 117 : Jabiru\_5, Airmid\_5, Benedict\_5, ElTiger69\_5, PetterN\_5, Chadwick\_5, Scorpia\_5
- Track 118 : Discoknowium\_5, Bluefalcon\_4
- Track 119 : SydNat\_5
- Track 120 : MarysWell\_4, Dublin\_4
- Track 121 : UnionJack\_5
- Track 122 : Theia\_4
- Track 123 : Ghoulboy\_5
- Track 124 : VohminGhazi\_8, ToneTone\_7, Dorothea\_7, SuperAwesome\_8, Indra\_8, DaVinci\_8, CloudWang3\_8, Garak\_8, Helmet\_8, Artemis2UCLA\_8, EricB\_8, Chartreuse\_8, Gladiator\_8, BABullseye\_8, SuperCallie99\_8, Jeffabunny\_8, Lilbunny\_7, JewelBug\_8, Kipper29\_8, Yokurt\_8, Cookiedough\_8, Koko\_8, Tucker\_8, McFly\_8, SmellyB\_8, Gruunaga\_8, GreedyLawyer\_8, Jordennis\_8, WunderPhul\_8, Roksolana\_8, Zaka\_8, Hexamo\_8, Pmask\_8, Blue7\_8, Kazan\_8, Newrala\_8, Wiks\_8, Candra\_8, Neeharika16\_8
- Track 125 : Zulu\_8, Rifter\_8, Hammer\_8
- Track 126 : Priamo\_8, Blinn1\_8
- Track 127 : Hoot\_8
- Track 128 : Isiphiwo\_8
- Track 129 : Stephig9\_5, Expelliarmus\_4, Phillis\_5, Groundhog\_4, Roary\_5
- Track 130 : Dixon\_5, Smeadley\_5, Astro\_5
- Track 131 : Danforth\_4, Saintus\_5
- Track 132 : NearlyHeadless\_5
- Track 133 : Darrell\_8
- Track 134 : Maminiaina\_8, BogosyJay\_8, Alma\_8
- Track 135 : Yecey3\_33
- Track 136 : Ugenie5\_6, ExplosioNervosa\_8, Scherzo\_8, EmyBug\_8, Pioneer\_8, Beemo\_8, Phonnegut\_8, Fayely\_8
- Track 137 : Priya\_8, Conquerage\_8, Eidsmoe\_8
- Track 138 : LoneWolf\_8
- Track 139 : Phaeder\_8, HortumSL17\_8, Tubs\_8, Aliter\_8, Myxus\_8, Catalina\_8, PackMan\_8
- Track 140 : SheaKeira\_32
- Track 141 : Toaka\_31
- Track 142 : Charm\_32
- Track 143 : Elephantoon\_8
- Track 144 : Qobbit\_8
- Track 145 : DreamTeam1\_32
- Track 146 : Rahalelujah\_31
- Track 147 : Phayeta\_34
- Track 148 : Myrna\_134
- Track 149 : Phabba\_116
- Track 150 : ScoobyDoobyDoo\_130
- Track 151 : Greely\_114
- Track 152 : Phabba\_139



- Track 153 : Myrna\_113
- Track 154 : Greely\_137
- Track 155 : Polyuyuki\_24, Braxoaddie\_24, Maselop\_24, CoffeeBean\_24
- Track 156 : Apiary\_24
- Track 157 : Turuncu\_49
- Track 158 : Marietta\_47
- Track 159 : NadineRae\_45
- Track 160 : GTE2\_24
- Track 161 : Amok\_27
- Track 162 : BillDoor\_30, AndPeggy\_27, Yarn\_27
- Track 163 : AikoCarson\_27, Emalyn\_27
- Track 164 : SteamedHams\_30
- Track 165 : Banquo\_3
- Track 166 : TinaLin\_3
- Track 167 : Jeanie\_17, McGonagall\_17
- Track 168 : Dexdert\_38
- Track 169 : Artorias\_26, Avazak\_26, FortCran\_26
- Track 170 : Petito\_27
- Track 171 : Perkunas\_28
- Track 172 : Captrips\_26
- Track 173 : SpeedDemon\_430
- Track 174 : DatBoi\_42
- Track 175 : GMA6\_18
- Track 176 : MakoManhole\_39, CloverMinnie\_39
- Track 177 : NHagos\_37
- Track 178 : MossRose\_39
- Track 179 : AnarQue\_39
- Track 180 : Evaa\_37
- Track 181 : Wooper\_39
- Track 182 : CaiB\_39
- Track 183 : Sephiroth\_33, Syleon\_33
- Track 184 : Kudefre\_32
- Track 185 : Octobien14\_34
- Track 186 : Sadboi\_34
- Track 187 : Jamemuya19\_32
- Track 188 : ObLaDi\_26, Aleemily\_25, Cafasso\_26, ModicumRichard\_26
- Track 189 : Jace\_24
- Track 190 : TPA2\_47
- Track 191 : VanLee\_26

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

The start number called the most often in the published annotations is 41, it was called in 318 of the 527 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC\_9, ACFishhook\_5, AbbysRanger\_5, Abdiel\_5, Achebe\_5, Aglet\_5, AgronaGT15\_5, Albee\_5, Alberto7\_5, Alma\_8, AnnaL29\_8, Annyong\_5, Anubis\_7, ArcherNM\_8, Arturo\_4, Astro\_5, AugsMagnumOpus\_7, AvatarAhPeg\_5, Avle17\_5, B1\_04, Baby16\_5, BabyBack\_8, BabyRay\_5, Backyardigan\_5, Bactobuster\_8,

Badger\_5, BangNhom\_4, Bartimeaus\_5, Beauxregard13\_5, Beemo\_8, BellusTerra\_5, BiancaTri92\_8, Blackmoor\_5, BlueBird\_5, BobSwaget\_9, BogosyJay\_8, Bombshell\_5, BreSam8\_5, Broseidon\_5, Bruiser\_5, BubbleTrouble\_5, Bugatti\_4, Bumblebee11\_5, Burger\_4, BuzzBuzz\_4, Bxz2\_5, Caelakin\_5, Camperdownii\_5, Caraxes\_31, Caviar\_5, CentreCat\_5, Cerulean\_5, ChampagnePapi\_5, Changeling\_8, Chaph\_5, Chargerpower\_33, Charm\_32, Chupacabra\_5, Cici\_5, Cindaradix\_5, Cintron\_5, Citius\_5, Clarenza\_5, Cocoaberry\_5, Colbster\_5, Colin\_9, Commander\_5, Connomayer\_5, Conquerage\_8, Cullens\_5, DaHudson\_5, Daishi\_5, Danforth\_4, Darrell\_8, Datway\_5, Deano\_5, Dhanush\_5, Dieselweasel\_5, DirtyDunning\_5, Dixon\_5, DreamTeam1\_32, Druantia\_5, EZMoney23\_8, EagleEye\_8, Eagle\_4, Eaglepride\_6, Eapen\_5, Edison31\_5, Eidsmoe\_8, Elephantoon\_8, EmyBug\_8, EpicPhail\_5, Eris\_5, Eros\_5, Eurydice\_5, Expelliarmus\_4, ExplosioNervosa\_8, Farber\_5, Fayely\_8, Fernando\_5, Florean\_5, Flux\_5, Fred313\_5, Funston\_5, Gadost\_5, GaugeLDP\_8, Gemma\_5, GingkoMaracino\_5, Giroux\_4, Goose\_5, Grif\_5, Groundhog\_4, Groupthink\_6, Grum1\_5, GtownJaz\_5, HamSlice\_4, Happiness\_5, HashRod\_6, HaveUMetTed\_6, Heathen\_5, HelDan\_5, Heliosoles\_5, Hercules11\_5, Holli\_5, Hookmount\_5, Houdini22\_5, ICleared\_5, Iceman\_5, Idleandcovert\_4, Iracema64\_5, IronMan\_8, Isca\_5, JF2\_5, JF4\_5, JHC117\_5, Jaan\_8, Jaykayelowell\_5, Jeeves\_32, JenCasNa\_5, JeppNRM\_6, JetBlade\_5, Jobu08\_5, JoongJeon\_5, Journey13\_30, KADY\_6, KFPoly\_5, Kalb97\_6, Kalnoky\_6, Kalpine\_8, Kampy\_5, Katalie136\_5, Kingmustik0402\_5, Koreni\_5, Kratak\_5, Kremtemulon\_4, Kristoff\_6, Kyee\_5, LBerry\_5, LHTSCC\_5, Lambert1\_5, Landor\_8, LappelDuVide\_4, LarryKay\_5, Lemur\_5, LeoAvram\_5, Leogania\_8, Lilith\_5, LittleB\_5, LittleGuy\_5, LochMonster\_5, Loka\_9, LoneWolf\_8, Lorenzo\_5, Loser\_8, Louie6\_5, Lucyedi\_8, LugYA\_7, Lunsford\_5, MA5\_5, MK4\_5, MadMarie\_5, Mainiac\_5, Malec\_33, Malinsilva\_7, Maminiaina\_8, Manu\_6, MarQuardt\_5, Margo\_5, Marie\_5, Marius\_6, Maverick\_5, Maxo\_5, Mazhar510\_5, Medusa\_5, MeeZee\_5, Melvin\_5, Methuselah\_5, Microwolf\_5, Miko\_9, Millski\_5, Miramae\_5, Misomonster\_7, MissWhite\_32, MoneyMay\_5, Morpher26\_5, Morrow\_5, MuchMore\_7, Mundrea\_5, NearlyHeadless\_5, Nebs\_5, Nemo27\_5, Noella\_5, Noelle\_5, Norbert\_4, NorthStar\_5, NotAPhaseMom\_5, NothingSpecial\_7, Nyxis\_5, OKCentral2016\_5, OKaNui\_5, Obama12\_5, Ohfah\_5, OlanP\_5, Ollie\_5, P28Green\_5, PGHhamlin\_7, PainterBoy\_8, Palestino\_5, Panamaxus\_5, Pawn\_5, Peaches\_5, Pembroke\_5, Penny1\_5, Perplexer\_5, PeterPeter\_5, PetiteSangsue\_5, Phacado\_5, Phaded\_8, Phantastic\_5, Phelipe\_5, Phighter1804\_5, Phillis\_5, PhishRPhriends\_5, Phoebe\_5, Phonnegut\_8, Phontbonne\_5, Phoxy\_5, Phranny\_6, Pioneer\_8, Pipcraft\_5, Pistachio\_5, Pocahontas\_5, Polymorphads\_5, Popcicle\_5, PotatoSplit\_6, Priya\_8, Pukovnik\_8, Pumbaa\_5, Puppy\_5, PurpleHaze\_5, Qobbit\_8, QuinnKiro\_4, Rachaly\_9, Rahalelujah\_31, Reba\_6, Rebeuca\_6, RedRock\_8, Relief\_5, ResDef\_4, RhynO\_5, Roary\_5, Rockstar\_5, Romney\_5, Roosevelt\_5, Ruin\_5, Rummer\_5, Sabertooth\_5, Sabia\_5, Sabinator\_5, Saintus\_5, SaturnRing\_4, Scamp\_5, Scherzo\_8, Scout\_5, Shaka\_5, SheaKeira\_32, SheldonCooper\_5, Shygu2\_5, Skipitt\_5, Smeadley\_5, Snickers\_5, SoYo\_5, SoilDragon\_5, Soshari\_7, Sparxx\_5, Spike509\_5, Spino\_5, Stagni\_5, Stasia\_5, Stephig9\_5, Stink\_5, Superchunk\_31, TNguyen7\_5, Taquarus\_5, Taurus\_5, Texage\_4, Thanksgivukkah\_5, Tiffany\_5, TinaFeyge\_5, Tinybot\_4, TiroTheta9\_5, Toaka\_31, Todacoro\_5, Topanga\_5, Trixie\_8, TroyPia\_5, Twister\_5, TygerBlood\_5, Ugenie5\_6, Ulysses\_5, Veracruz\_4, Vix\_5, WalterMcMickey\_5, Wander\_5, Watson\_5, WeiHuaDA\_9, Wilbur\_5, Wile\_5, Wizard007\_5, Wooldri\_7, Xena\_5, YoSam321\_5, Zetzy\_5,

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

- Koduck\_32, StepMih\_5, TopsytheTRex\_31,

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

- AN3\_32, AN9\_35, AN18\_35, Acolyte\_32, Adzzy\_33, AgentM\_5, AikoCarson\_27, Airmid\_5, Aleemily\_25, Aliter\_8, Amok\_27, AnarQue\_39, Anaysia\_8, AndPeggy\_27, Aneem\_8, Anon\_8, Anthony\_5, Apiary\_24, Aragog\_5, Archetta\_5, Artemis2UCLA\_8, Artorias\_26, Avazak\_26, BABullseye\_8, Bachome\_8, Banquo\_3, Battleship\_9, Benedict\_5, BillDoor\_30, Blinn1\_8, Blue7\_8, Bluefalcon\_4, Bonamassa\_5, Boohoo\_8, Bowtie\_8, Braxoaddie\_24, Bud\_8, C3\_30, Cafasso\_26, CaiB\_39, Candra\_8, Captrips\_26, Catalina\_8, Chadwick\_5, Chartreuse\_8, Che12\_34, CloudWang3\_8, CloverMinnie\_39, CoffeeBean\_24, Conspiracy\_5, Coog\_5, Cookiedough\_8, Cuco\_5, D29\_32, D32\_35, DBQu4n\_35, DaVinci\_8, DatBoi\_42, DekHockey33\_8, Dexdert\_38, Discoknowium\_5, Dorothea\_7, Dublin\_4, Duplo\_35, Ebony\_8, EITiger69\_5, Emalyn\_27, Epsocamisio\_8, EricB\_8, Et2Brutus\_7, Evaa\_37, Fibonacci\_8, Flaverint\_8, ForGett\_5, FortCran\_26, GMA6\_18, GTE2\_24, Garak\_8, George\_4, Ghoulyboy\_5, Gilberta\_8, Gladiator\_8, GreedyLawyer\_8, Greely\_114, Greely\_137, Gruunaga\_8, Hammer\_8, Heffalump\_9, Helmet\_8, Hexamo\_8, Hoot\_8, HortumSL17\_8, HuhtaEnerson15\_5, Hutc2\_8, Indra\_8, Insomnia\_8, Isiphiwo\_8, JSwag\_8, Jabiru\_5, Jabith\_8, Jace\_24, Jamemuya19\_32, Jeanie\_17, Jeffabunny\_8, JewelBug\_8, Jordennis\_8, Joselito\_8, Jovo\_5, Jsquared\_31, KatherineG\_8, Kazan\_8, Kerberos\_35, Kimona\_29, Kipper29\_8, Koko\_8, Kudrefre\_32, L5\_32, LastResort\_8, Lev2\_5, Lilbunny\_7, LittleCherry\_5, Lucivia\_8, MaCh\_8, Mabel\_8, MakoManhole\_39, Marietta\_47, MarysWell\_4, Maselop\_24, McFly\_8, McGonagall\_17, Micasa\_4, Midas2\_5, Milcery\_5, MinecraftSteve\_9, ModicumRichard\_26, MossRose\_39, Mulciber\_8, Munch\_8, MyraDee\_5, Myrna\_113, Myrna\_134, Myxus\_8, NHagos\_37, NadineRae\_45, Naji\_35, Nebulosus\_8, Neeharika16\_8, Newrala\_8, NicoleTera\_8, ObLaDi\_26, Octobien14\_34, Odin\_31, Oofda\_8, Orange\_8, PackMan\_8, Perkunas\_28, Petersenfast\_7, Petito\_27, PetterN\_5, Ph8s\_33, Phabba\_116, Phabba\_139, Phaeder\_8, Phayeta\_34, Phlei\_5, Phlorence\_5, PickleBack\_5, Pmask\_8, Polyyuki\_24, Pomar16\_35, Priamo\_8, ReMo\_8, Remus\_8, Rifter\_8, Roksolana\_8, Rosalind\_8, Sadboi\_34, Salz\_8, ScoobyDoobyDoo\_130, Scorpia\_5, Sephiroth\_33, Serenity\_31, Sham4\_8, ShayRa\_9, SmellyB\_8, Snape\_8, Soups\_8, SpeedDemon\_430, StarStuff\_35, SteamedHams\_30, Steamy\_8, Strosahl\_8, SuperAwesome\_8, SuperCallie99\_8, SwirlSquare\_34, Swirley\_5, Switzerland\_8, SydNat\_5, Syleon\_33, TPA2\_47, Tarynearal\_4, Theia\_4, Tiger\_5, Timothy\_8, TinaLin\_3, TinyTimmy\_7, Tomathan\_35, ToneTone\_7, Tubs\_8, Tucker\_8, Turuncu\_49, UnionJack\_5, VA6\_32, VC3\_35, VanLee\_26, VohminGhazi\_8, Waits\_8, Wiks\_8, Wooper\_39, WunderPhul\_8, XianYue\_32, Yarn\_27, Yecey3\_33, Yokurt\_8, Zaka\_8, Zolita\_4, Zulu\_8,

### Summary by start number:

Start 21:

- Found in 1 of 563 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sadboi\_34 (DV),

Start 35:

- Found in 46 of 563 ( 8.2% ) of genes in pham
- Manual Annotations of this start: 40 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA\_8 (A6), BABullseye\_8 (A6), Blinn1\_8 (A6), Blue7\_8 (A6), Candra\_8 (A6), Chartreuse\_8 (A6),

CloudWang3\_8 (A6), Cookiedough\_8 (A6), DaVinci\_8 (A6), Dorothea\_7 (A6), EricB\_8 (A6), Garak\_8 (A6), Gladiator\_8 (A6), GreedyLawyer\_8 (A6), Gruunaga\_8 (A6), Hammer\_8 (A6), Helmet\_8 (A6), Hexamo\_8 (A6), Hoot\_8 (A6), Indra\_8 (A6), Isiphiwo\_8 (A6), Jeffabunny\_8 (A6), JewelBug\_8 (A6), Jordennis\_8 (A6), Kazan\_8 (A6), Kipper29\_8 (A6), Koko\_8 (A6), Lilbunny\_7 (A6), McFly\_8 (A6), Neeharika16\_8 (A6), Newrala\_8 (A6), Pmask\_8 (A6), Priamo\_8 (A6), Rifter\_8 (A6), Roksolana\_8 (A6), SmellyB\_8 (A6), SuperAwesome\_8 (A6), SuperCallie99\_8 (A6), ToneTone\_7 (A6), Tucker\_8 (A6), VohminGhazi\_8 (A6), Wiks\_8 (A6), WunderPhul\_8 (A6), Yokurt\_8 (A6), Zaka\_8 (A6), Zulu\_8 (A6),

#### Start 36:

- Found in 1 of 563 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phayeta\_34 (B3),

#### Start 37:

- Found in 7 of 563 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 6 of 527
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Kudrefre\_32 (DU1), NadineRae\_45 (CR4), Octobien14\_34 (DU1), Sephiroth\_33 (DU1), Syleon\_33 (DU1), VanLee\_26 (singleton),

#### Start 39:

- Found in 6 of 563 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 5 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aleemily\_25 (DZ), Cafasso\_26 (DZ), DatBoi\_42 (DL), ModicumRichard\_26 (DZ), ObLaDi\_26 (DZ), SpeedDemon\_430 (DL),

#### Start 41:

- Found in 336 of 563 ( 59.7% ) of genes in pham
- Manual Annotations of this start: 318 of 527
- Called 99.1% of time when present
- Phage (with cluster) where this start called: 40AC\_9 (A17), ACFishhook\_5 (A3), AbbysRanger\_5 (A4), Abdiel\_5 (A4), Achebe\_5 (A4), Aglet\_5 (A3), AgronaGT15\_5 (A3), Albee\_5 (A4), Alberto7\_5 (A4), Alma\_8 (A9), AnnaL29\_8 (A2), Annyong\_5 (A4), Anubis\_7 (A3), ArcherNM\_8 (A2), Arturo\_4 (A4), Astro\_5 (A8), AugsMagnumOpus\_7 (A3), AvatarAhPeg\_5 (A4), Avle17\_5 (A4), B1\_04 (A3), Baby16\_5 (A4), BabyBack\_8 (A2), BabyRay\_5 (A3), Backyardigan\_5 (A4), Bactobuster\_8 (A2), Badger\_5 (A4), BangNhom\_4 (A4), Bartimeaus\_5 (A4), Beauxregard13\_5 (A3), Beemo\_8 (A9), BellusTerra\_5 (A4), BiancaTri92\_8 (A2), Blackmoor\_5 (A4), BlueBird\_5 (A3), BobSwaget\_9 (A2), BogosyJay\_8 (A9), Bombshell\_5 (A4), BreSam8\_5 (A3), Broseidon\_5 (A4), Bruiser\_5 (A4), BubbleTrouble\_5 (A4), Bugatti\_4 (A3), Bumblebee11\_5 (A4), Burger\_4 (A4), BuzzBuzz\_4 (A3), Bxz2\_5 (A3), Caelakin\_5 (A4), Camperdownii\_5 (A4), Caraxes\_31 (A2), Caviar\_5 (A3), CentreCat\_5 (A4), Cerulean\_5 (A4), ChampagnePapi\_5 (A4), Changeling\_8 (A2), Chaph\_5 (A4), Chargerpower\_33 (A), Charm\_32 (A9), Chupacabra\_5 (A10), Cici\_5 (A4), Cindaradix\_5 (A4), Cintron\_5 (A4), Citius\_5 (A4), Clarenza\_5 (A4), Cocoaberry\_5 (A4), Colbster\_5 (A3), Colin\_9 (A2), Commander\_5 (A4), Connomayer\_5 (A4), Conquerage\_8 (A9), Cullens\_5 (A3), DaHudson\_5 (A3), Daishi\_5 (A3), Danforth\_4

(A8), Darrell\_8 (A9), Datway\_5 (A4), Deano\_5 (A4), Dhanush\_5 (A4), Dieselweasel\_5 (A3), DirtyDunning\_5 (A4), Dixon\_5 (A8), DreamTeam1\_32 (A9), Druantia\_5 (A4), EZMoney23\_8 (A2), EagleEye\_8 (A16), Eagle\_4 (A4), Eaglepride\_6 (A10), Eapen\_5 (A4), Edison31\_5 (A10), Eidsmoe\_8 (A9), Elephantoon\_8 (A9), EmyBug\_8 (A9), EpicPhail\_5 (A3), Eris\_5 (A4), Eros\_5 (A4), Eurydice\_5 (A4), Expelliarmus\_4 (A8), ExplosioNervosa\_8 (A9), Farber\_5 (A3), Fayely\_8 (A9), Fernando\_5 (A3), Florean\_5 (A4), Flux\_5 (A4), Fred313\_5 (A3), Funston\_5 (A4), Gadost\_5 (A4), GaugeLDP\_8 (A2), Gemma\_5 (A3), GingkoMaracino\_5 (A3), Giroux\_4 (A3), Goose\_5 (A10), Grif\_5 (A3), Groundhog\_4 (A8), Groupthink\_6 (A3), Grum1\_5 (A3), GtownJaz\_5 (A3), HamSlice\_4 (A4), Happiness\_5 (A4), HashRod\_6 (A3), HaveUMetTed\_6 (A3), Heathen\_5 (A3), HelDan\_5 (A3), Heliosoles\_5 (A3), Hercules11\_5 (A3), Holli\_5 (A4), Hookmount\_5 (A3), Houdini22\_5 (A4), ICleared\_5 (A4), Iceman\_5 (A4), Idleandcovert\_4 (A3), Iracema64\_5 (A4), IronMan\_8 (A2), Isca\_5 (A3), JF2\_5 (A3), JF4\_5 (A3), JHC117\_5 (A3), Jaan\_8 (A2), Jaykayelowell\_5 (A4), Jeeves\_32 (A14), JenCasNa\_5 (A3), JeppNRM\_6 (A3), JetBlade\_5 (A4), Jobu08\_5 (A3), JoongJeon\_5 (A4), Journey13\_30 (A2), KADY\_6 (A3), KFPoly\_5 (A4), Kalb97\_6 (A3), Kalnoky\_6 (A3), Kalpine\_8 (A2), Kampy\_5 (A4), Katalie136\_5 (A4), Kingmustik0402\_5 (A4), Koreni\_5 (A4), Kratark\_5 (A4), Kremtemulon\_4 (A4), Kristoff\_6 (A10), Kyee\_5 (A4), LBerry\_5 (A3), LHTSCC\_5 (A4), Lambert1\_5 (A3), Landor\_8 (A2), LappelDuVide\_4 (A4), LarryKay\_5 (A3), Lemur\_5 (A4), LeoAvram\_5 (A4), Leogania\_8 (A2), Lilith\_5 (A3), LittleB\_5 (A4), LittleGuy\_5 (A4), LochMonster\_5 (A4), Lokk\_9 (A2), LoneWolf\_8 (A9), Lorenzo\_5 (A4), Loser\_8 (A2), Louie6\_5 (A3), Lucyedi\_8 (A16), LugYA\_7 (A3), Lunsford\_5 (A4), MA5\_5 (A3), MK4\_5 (A3), MadMarie\_5 (A3), Mainiac\_5 (A3), Malec\_33 (A2), Malinsilva\_7 (A3), Maminiaina\_8 (A9), Manu\_6 (A3), MarQuardt\_5 (A3), Margo\_5 (A3), Marie\_5 (A3), Marius\_6 (A3), Maverick\_5 (A4), Maxo\_5 (A4), Mazhar510\_5 (A4), Medusa\_5 (A4), MeeZee\_5 (A4), Melvin\_5 (A4), Methuselah\_5 (A3), Microwolf\_5 (A3), Miko\_9 (A2), Millski\_5 (A4), Miramae\_5 (A4), Misomonster\_7 (A3), MissWhite\_32 (A2), MoneyMay\_5 (A3), Morpher26\_5 (A4), Morrow\_5 (A4), MuchMore\_7 (A3), Mundrea\_5 (A4), NearlyHeadless\_5 (A8), Nebs\_5 (A4), Nemo27\_5 (A4), Noella\_5 (A3), Noelle\_5 (A4), Norbert\_4 (A3), NorthStar\_5 (A4), NotAPhaseMom\_5 (A4), NothingSpecial\_7 (A2), Nyxis\_5 (A4), OKCentral2016\_5 (A10), OKaNui\_5 (A4), Obama12\_5 (A4), Ohfah\_5 (A4), OlanP\_5 (A3), Ollie\_5 (A3), P28Green\_5 (A3), PGHhamlin\_7 (A3), PainterBoy\_8 (A16), Palestino\_5 (A4), Panamaxus\_5 (A3), Pawn\_5 (A3), Peaches\_5 (A4), Pembroke\_5 (A3), Penny1\_5 (A3), Perplexer\_5 (A4), PeterPeter\_5 (A4), PetiteSangsue\_5 (A4), Phacado\_5 (A4), Phaded\_8 (A2), Phantastic\_5 (A3), Felipe\_5 (A4), Phighter1804\_5 (A4), Phillis\_5 (A8), PhishRPhriends\_5 (A3), Phoebe\_5 (A3), Phonnegut\_8 (A9), Phontbonne\_5 (A4), Phoxy\_5 (A3), Phranny\_6 (A3), Pioneer\_8 (A9), Pipcraft\_5 (A4), Pistachio\_5 (A3), Pocahontas\_5 (A3), Polymorphads\_5 (A4), Popcicle\_5 (A3), PotatoSplit\_6 (A3), Priya\_8 (A9), Pukovnik\_8 (A2), Pumbaa\_5 (A4), Puppy\_5 (A3), PurpleHaze\_5 (A3), Qobbit\_8 (A9), QuinnKiro\_4 (A3), Rachaly\_9 (A2), Rahalelulah\_31 (A9), Reba\_6 (A3), Rebeuca\_6 (A10), RedRock\_8 (A2), Relief\_5 (A4), ResDef\_4 (A3), RhynO\_5 (A10), Roary\_5 (A8), Rockstar\_5 (A3), Romney\_5 (A4), Roosevelt\_5 (A4), Ruin\_5 (A4), Rummer\_5 (A3), Sabertooth\_5 (A4), Sabia\_5 (A3), Sabinator\_5 (A3), Saintus\_5 (A8), SaturnRing\_4 (A3), Scamp\_5 (A4), Scherzo\_8 (A9), Scout\_5 (A3), Shaka\_5 (A4), SheaKeira\_32 (A9), SheldonCooper\_5 (A4), Shygu2\_5 (A4), Skipitt\_5 (A4), Smeadley\_5 (A8), Snickers\_5 (A3), SoYo\_5 (A3), SoilDragon\_5 (A3), Soshari\_7 (A3), Sparxx\_5 (A4), Spike509\_5 (A3), Spino\_5 (A4), Stagni\_5 (A3), Stasia\_5 (A4), Step Hig9\_5 (A8), Stink\_5 (A4), Superchunk\_31 (A2), TNguyen7\_5 (A3), Taquarus\_5 (A4), Taurus\_5 (A3), Texage\_4 (A3), Thanksgivukkah\_5 (A4), Tiffany\_5 (A3), TinaFeyge\_5 (A4), Tinybot\_4 (A4), TiroTheta9\_5 (A4), Toaka\_31 (A9), Todacoro\_5 (A3), Topanga\_5 (A10), Trixie\_8 (A2), TroyPia\_5 (A4), Twister\_5 (A10),

TygerBlood\_5 (A4), Ugenie5\_6 (A9), Ulysses\_5 (A4), Veracruz\_4 (A3), Vix\_5 (A3), WalterMcMickey\_5 (A10), Wander\_5 (A4), Watson\_5 (A3), WeiHuaDA\_9 (A2), Wilbur\_5 (A4), Wile\_5 (A4), Wizard007\_5 (A4), Wooldri\_7 (A3), Xena\_5 (A4), YoSam321\_5 (A4), Zetzy\_5 (A3),

Start 42:

- Found in 26 of 563 ( 4.6% ) of genes in pham
- Manual Annotations of this start: 21 of 527
- Called 84.6% of time when present
- Phage (with cluster) where this start called: AN3\_32 (A2), AN9\_35 (A2), ANI8\_35 (A2), Acolyte\_32 (A2), Adzzy\_33 (A2), C3\_30 (A2), Che12\_34 (A2), D29\_32 (A2), D32\_35 (A2), DBQu4n\_35 (A2), Duplo\_35 (A2), Kerberos\_35 (A2), L5\_32 (A2), Naji\_35 (A2), Ph8s\_33 (A2), Pomar16\_35 (A2), StarStuff\_35 (A2), SwirlSquare\_34 (A2), TopsytheTRex\_31 (A2), Tomathan\_35 (A2), VA6\_32 (A2), VC3\_35 (A2),

Start 43:

- Found in 5 of 563 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 5 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary\_24 (CR), Braxoaddie\_24 (CR), CoffeeBean\_24 (CR), Maselop\_24 (CR), Polyuyuki\_24 (CR),

Start 44:

- Found in 7 of 563 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 7 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aliter\_8 (A9), Catalina\_8 (A9), HortumSL17\_8 (A9), Myxus\_8 (A9), PackMan\_8 (A9), Phaeder\_8 (A9), Tubs\_8 (A9),

Start 46:

- Found in 2 of 563 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_3 (CU1), TinaLin\_3 (CU1),

Start 47:

- Found in 2 of 563 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Heffalump\_9 (A2), NicoleTera\_8 (A2),

Start 48:

- Found in 7 of 563 ( 1.2% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Yecey3\_33 (A9),

Start 49:

- Found in 49 of 563 ( 8.7% ) of genes in pham
- Manual Annotations of this start: 39 of 527
- Called 87.8% of time when present
- Phage (with cluster) where this start called: Aneem\_8 (A11), Bachome\_8 (A11), Bluefalcon\_4 (A5), Bonamassa\_5 (A5), Bowtie\_8 (A11), Bud\_8 (A11), Coog\_5 (A5),

Cuco\_5 (A5), Discoknowium\_5 (A5), Dublin\_4 (A5), Ebony\_8 (A11), Et2Brutus\_7 (A11), Fibonacci\_8 (A11), Flaverint\_8 (A11), George\_4 (A5), Ghouboy\_5 (A5), Gilberta\_8 (A11), HuhtaEnerson15\_5 (A5), Hutc2\_8 (A11), Insomnia\_8 (A11), Jabith\_8 (A11), Joselito\_8 (A11), LittleCherry\_5 (A5), Lucivia\_8 (A11), MaCh\_8 (A11), Mabel\_8 (A11), MarysWell\_4 (A5), Micasa\_4 (A5), Midas2\_5 (A5), Milcery\_5 (A5), Mulciber\_8 (A11), Munch\_8 (A11), Orange\_8 (A11), Petersenfast\_7 (A11), Phlei\_5 (A13), Salz\_8 (A11), Sham4\_8 (A11), Snape\_8 (A11), Swirley\_5 (A5), Tarynearal\_4 (A5), Theia\_4 (A5), Timothy\_8 (A11), TinyTimmy\_7 (A11),

Start 50:

- Found in 2 of 563 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Jace\_24 (singleton),

Start 53:

- Found in 5 of 563 ( 0.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Koduck\_32 (A2),

Start 54:

- Found in 16 of 563 ( 2.8% ) of genes in pham
- Manual Annotations of this start: 15 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnarQue\_39 (DR), Anaysia\_8 (A15), Anthony\_5 (A20), Boohoo\_8 (A15), CaiB\_39 (DR), CloverMinnie\_39 (DR), Epsocamisio\_8 (A15), JSwag\_8 (A15), LastResort\_8 (A15), MakoManhole\_39 (DR), MossRose\_39 (DR), Nebulosus\_8 (A15), ReMo\_8 (A15), Remus\_8 (A15), Strosahl\_8 (A15), Wooper\_39 (DR),

Start 56:

- Found in 3 of 563 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Dextert\_38 (DE3), NHagos\_37 (DR),

Start 57:

- Found in 33 of 563 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 3.0% of time when present
- Phage (with cluster) where this start called: Steamy\_8 (A12),

Start 58:

- Found in 3 of 563 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA6\_18 (DQ), Jeanie\_17 (CW1), McGonagall\_17 (CW1),

Start 59:

- Found in 1 of 563 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.

- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2\_47 (singleton),

#### Start 60:

- Found in 4 of 563 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Evaa\_37 (DR), SteamedHams\_30 (CT),

#### Start 61:

- Found in 13 of 563 ( 2.3% ) of genes in pham
- Manual Annotations of this start: 12 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AikoCarson\_27 (CT), Amok\_27 (CT), AndPeggy\_27 (CT), Artorias\_26 (DJ), Avazak\_26 (DJ), BillDoor\_30 (CT), Captrips\_26 (DJ), Emalyn\_27 (CT), FortCran\_26 (DJ), GTE2\_24 (CT), Perkunas\_28 (DJ), Petite\_27 (DJ), Yarn\_27 (CT),

#### Start 62:

- Found in 9 of 563 ( 1.6% ) of genes in pham
- Manual Annotations of this start: 6 of 527
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AgentM\_5 (A5), Aragog\_5 (A5), Jovo\_5 (A5), Phlorence\_5 (A5), SydNat\_5 (A5), Zolita\_4 (A5),

#### Start 63:

- Found in 12 of 563 ( 2.1% ) of genes in pham
- Manual Annotations of this start: 10 of 527
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Anon\_8 (A15), Battleship\_9 (A15), DekHockey33\_8 (A15), KatherineG\_8 (A15), MinecraftSteve\_9 (A15), Oofda\_8 (A15), Rosalind\_8 (A15), ShayRa\_9 (A15), Soups\_8 (A15), Switzerland\_8 (A15), Waits\_8 (A15),

#### Start 64:

- Found in 2 of 563 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 50.0% of time when present
- Phage (with cluster) where this start called: MyraDee\_5 (A18),

#### Start 66:

- Found in 15 of 563 ( 2.7% ) of genes in pham
- Manual Annotations of this start: 14 of 527
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Airmid\_5 (A5), Archetta\_5 (A5), Benedict\_5 (A5), Chadwick\_5 (A5), Conspiracy\_5 (A5), ElTiger69\_5 (A5), ForGetIt\_5 (A5), Jabiru\_5 (A5), Lev2\_5 (A5), PetterN\_5 (A5), PickleBack\_5 (A5), Scorpia\_5 (A5), Tiger\_5 (A5), UnionJack\_5 (A5),

#### Start 73:

- Found in 1 of 563 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 100.0% of time when present



- Phage (with cluster) where this start called: Turuncu\_49 (CR1),

Start 75:

- Found in 3 of 563 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 3 of 527
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jsquared\_31 (A2), Odin\_31 (A2), Serenity\_31 (A2),

Start 90:

- Found in 4 of 563 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 2 of 527
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kimona\_29 (A19), XianYue\_32 (A2),

Start 99:

- Found in 62 of 563 ( 11.0% ) of genes in pham
- Manual Annotations of this start: 3 of 527
- Called 6.5% of time when present
- Phage (with cluster) where this start called: Greely\_137 (C2), Myrna\_134 (C2), Phabba\_139 (C2), ScoobyDoobyDoo\_130 (C2),

Start 106:

- Found in 4 of 563 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Myrna\_113 (C2),

Start 113:

- Found in 3 of 563 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Marietta\_47 (CR4),

Start 116:

- Found in 3 of 563 ( 0.5% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Greely\_114 (C2), Phabba\_116 (C2),

Start 125:

- Found in 28 of 563 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 1 of 527
- Called 7.1% of time when present
- Phage (with cluster) where this start called: Jamemuya19\_32 (DV), StepMih\_5 (A3),

### **Summary by clusters:**

There are 36 clusters represented in this pham: singleton, DJ, DL, DZ, DV, DR, DQ, A15, A14, A17, A16, A11, A10, CU1, A12, CW1, A19, A18, A3, A2, A5, A4, A6, A9, C2, A, DU1, CR, CT, A20, CR1, A13, CR4, DE3, A8, B3,

Info for manual annotations of cluster A:

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

Info for manual annotations of cluster A10:

- Start number 41 was manually annotated 11 times for cluster A10.

Info for manual annotations of cluster A11:

- Start number 49 was manually annotated 23 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 57 was manually annotated 1 time for cluster A12.

Info for manual annotations of cluster A14:

- Start number 41 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A15:

- Start number 54 was manually annotated 9 times for cluster A15.
- Start number 63 was manually annotated 10 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 41 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A18:

- Start number 64 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A19:

- Start number 90 was manually annotated 1 time for cluster A19.

Info for manual annotations of cluster A2:

- Start number 41 was manually annotated 25 times for cluster A2.
- Start number 42 was manually annotated 21 times for cluster A2.
- Start number 47 was manually annotated 2 times for cluster A2.
- Start number 75 was manually annotated 3 times for cluster A2.
- Start number 90 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 54 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A3:

- Start number 41 was manually annotated 109 times for cluster A3.
- Start number 125 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A4:

- Start number 41 was manually annotated 135 times for cluster A4.

Info for manual annotations of cluster A5:

- Start number 49 was manually annotated 16 times for cluster A5.
- Start number 62 was manually annotated 6 times for cluster A5.
- Start number 66 was manually annotated 14 times for cluster A5.

Info for manual annotations of cluster A6:

- Start number 35 was manually annotated 40 times for cluster A6.

Info for manual annotations of cluster A8:

- Start number 41 was manually annotated 11 times for cluster A8.

Info for manual annotations of cluster A9:

- Start number 41 was manually annotated 22 times for cluster A9.
- Start number 44 was manually annotated 7 times for cluster A9.
- Start number 48 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster B3:

- Start number 36 was manually annotated 1 time for cluster B3.

Info for manual annotations of cluster C2:

- Start number 99 was manually annotated 3 times for cluster C2.
- Start number 106 was manually annotated 1 time for cluster C2.
- Start number 116 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CR:

- Start number 43 was manually annotated 5 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 73 was manually annotated 1 time for cluster CR1.

Info for manual annotations of cluster CR4:

- Start number 37 was manually annotated 1 time for cluster CR4.
- Start number 113 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CT:

- Start number 60 was manually annotated 1 time for cluster CT.
- Start number 61 was manually annotated 6 times for cluster CT.

Info for manual annotations of cluster CU1:

- Start number 46 was manually annotated 2 times for cluster CU1.

Info for manual annotations of cluster CW1:

- Start number 58 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster DE3:

- Start number 56 was manually annotated 1 time for cluster DE3.

Info for manual annotations of cluster DJ:

- Start number 61 was manually annotated 6 times for cluster DJ.

Info for manual annotations of cluster DL:

- Start number 39 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DR:

- Start number 54 was manually annotated 5 times for cluster DR.
- Start number 56 was manually annotated 1 time for cluster DR.
- Start number 60 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DU1:

•Start number 37 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DV:

•Start number 21 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster DZ:

•Start number 39 was manually annotated 3 times for cluster DZ.

### **Gene Information:**

Gene: 40AC\_9 Start: 5287, Stop: 5973, Start Num: 41

Candidate Starts for 40AC\_9:

(Start: 37 @5275 has 6 MA's), (Start: 41 @5287 has 318 MA's), (127, 5428), (153, 5521), (162, 5560), (177, 5611),

Gene: ACFishhook\_5 Start: 2969, Stop: 3619, Start Num: 41

Candidate Starts for ACFishhook\_5:

(Start: 41 @2969 has 318 MA's), (114, 3077), (139, 3152), (193, 3344),

Gene: AN3\_32 Start: 24571, Stop: 25236, Start Num: 42

Candidate Starts for AN3\_32:

(Start: 42 @24571 has 21 MA's), (84, 24634), (118, 24694), (124, 24703), (Start: 125 @24706 has 1 MA's), (241, 25084), (263, 25174), (273, 25216),

Gene: AN9\_35 Start: 24556, Stop: 25221, Start Num: 42

Candidate Starts for AN9\_35:

(Start: 42 @24556 has 21 MA's), (84, 24619), (118, 24679), (124, 24688), (Start: 125 @24691 has 1 MA's), (241, 25069), (263, 25159), (273, 25201),

Gene: ANI8\_35 Start: 24556, Stop: 25221, Start Num: 42

Candidate Starts for ANI8\_35:

(Start: 42 @24556 has 21 MA's), (84, 24619), (118, 24679), (124, 24688), (Start: 125 @24691 has 1 MA's), (241, 25069), (263, 25159), (273, 25201),

Gene: AbbysRanger\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for AbbysRanger\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Abdiel\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Abdiel\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (218, 3169), (274, 3367),

Gene: Achebe\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Achebe\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Acolyte\_32 Start: 25057, Stop: 25704, Start Num: 42

Candidate Starts for Acolyte\_32:

(Start: 42 @25057 has 21 MA's), (137, 25237), (143, 25267), (145, 25273), (170, 25357), (180, 25384), (207, 25471),

Gene: Adzzy\_33 Start: 23085, Stop: 23747, Start Num: 42  
Candidate Starts for Adzzy\_33:  
(Start: 42 @23085 has 21 MA's), (53, 23100), (114, 23199), (137, 23268), (173, 23397), (207, 23505),  
(255, 23631),

Gene: AgentM\_5 Start: 3698, Stop: 4345, Start Num: 62  
Candidate Starts for AgentM\_5:  
(Start: 49 @3680 has 39 MA's), (Start: 62 @3698 has 6 MA's), (85, 3746), (Start: 99 @3767 has 3  
MA's), (139, 3863),

Gene: Aglet\_5 Start: 2899, Stop: 3558, Start Num: 41  
Candidate Starts for Aglet\_5:  
(Start: 41 @2899 has 318 MA's), (Start: 125 @3028 has 1 MA's), (139, 3082), (147, 3115), (167,  
3184), (273, 3538),

Gene: AgronaGT15\_5 Start: 2540, Stop: 3172, Start Num: 41  
Candidate Starts for AgronaGT15\_5:  
(Start: 41 @2540 has 318 MA's), (139, 2723), (141, 2726), (145, 2753),

Gene: AikoCarson\_27 Start: 22132, Stop: 22770, Start Num: 61  
Candidate Starts for AikoCarson\_27:  
(Start: 61 @22132 has 12 MA's), (65, 22141), (87, 22183), (96, 22201), (115, 22237), (121, 22249),  
(135, 22291), (137, 22297), (167, 22408), (195, 22513), (249, 22627),

Gene: Airmid\_5 Start: 3407, Stop: 4048, Start Num: 66  
Candidate Starts for Airmid\_5:  
(Start: 66 @3407 has 14 MA's), (87, 3443), (98, 3464), (110, 3491), (148, 3623), (172, 3704), (177,  
3719), (263, 4025),

Gene: Albee\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Albee\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Alberto7\_5 Start: 2723, Stop: 3394, Start Num: 41  
Candidate Starts for Alberto7\_5:  
(Start: 41 @2723 has 318 MA's), (189, 3083), (278, 3389),

Gene: Aleemily\_25 Start: 23347, Stop: 24057, Start Num: 39  
Candidate Starts for Aleemily\_25:  
(4, 22930), (16, 23185), (Start: 39 @23347 has 5 MA's), (Start: 48 @23362 has 1 MA's), (Start: 57  
@23377 has 1 MA's), (156, 23629), (218, 23821),

Gene: Aliter\_8 Start: 5167, Stop: 5796, Start Num: 44  
Candidate Starts for Aliter\_8:  
(Start: 44 @5167 has 7 MA's), (70, 5206), (139, 5347), (145, 5377), (153, 5392),

Gene: Alma\_8 Start: 5225, Stop: 5875, Start Num: 41  
Candidate Starts for Alma\_8:  
(Start: 41 @5225 has 318 MA's), (138, 5402), (145, 5435), (212, 5639), (242, 5735),

Gene: Amok\_27 Start: 22092, Stop: 22730, Start Num: 61  
Candidate Starts for Amok\_27:

(Start: 61 @22092 has 12 MA's), (72, 22116), (87, 22143), (96, 22161), (115, 22197), (121, 22209), (135, 22251), (137, 22257), (167, 22368), (195, 22473), (249, 22587),

Gene: AnarQue\_39 Start: 33943, Stop: 34590, Start Num: 54

Candidate Starts for AnarQue\_39:

(Start: 54 @33943 has 15 MA's), (87, 34000), (103, 34030), (107, 34033), (114, 34051), (141, 34123), (167, 34225), (176, 34255), (177, 34258), (217, 34375), (241, 34435), (275, 34573),

Gene: Anaysia\_8 Start: 4403, Stop: 5071, Start Num: 54

Candidate Starts for Anaysia\_8:

(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: AndPeggy\_27 Start: 22538, Stop: 23176, Start Num: 61

Candidate Starts for AndPeggy\_27:

(Start: 61 @22538 has 12 MA's), (65, 22547), (87, 22589), (96, 22607), (115, 22643), (137, 22703), (195, 22919), (249, 23033),

Gene: Aneem\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Aneem\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: AnnaL29\_8 Start: 5238, Stop: 5912, Start Num: 41

Candidate Starts for AnnaL29\_8:

(Start: 41 @5238 has 318 MA's), (137, 5415), (179, 5559), (192, 5613), (223, 5709),

Gene: Annyong\_5 Start: 2723, Stop: 3385, Start Num: 41

Candidate Starts for Annyong\_5:

(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Anon\_8 Start: 4936, Stop: 5598, Start Num: 63

Candidate Starts for Anon\_8:

(Start: 63 @4936 has 10 MA's), (98, 4987), (123, 5041), (180, 5242), (202, 5317),

Gene: Anthony\_5 Start: 2845, Stop: 3510, Start Num: 54

Candidate Starts for Anthony\_5:

(Start: 54 @2845 has 15 MA's), (74, 2875), (118, 2956), (164, 3124), (173, 3154), (242, 3349),

Gene: Anubis\_7 Start: 2809, Stop: 3468, Start Num: 41

Candidate Starts for Anubis\_7:

(Start: 41 @2809 has 318 MA's), (Start: 99 @2896 has 3 MA's), (Start: 125 @2938 has 1 MA's), (139, 2992), (162, 3076), (167, 3094),

Gene: Apiary\_24 Start: 12634, Stop: 13311, Start Num: 43

Candidate Starts for Apiary\_24:

(Start: 43 @12634 has 5 MA's), (85, 12712), (103, 12745), (115, 12769), (119, 12778), (132, 12829), (135, 12838), (172, 12964), (204, 13072), (274, 13288),

Gene: Aragog\_5 Start: 3728, Stop: 4375, Start Num: 62

Candidate Starts for Aragog\_5:

(Start: 49 @3710 has 39 MA's), (Start: 62 @3728 has 6 MA's), (85, 3776), (Start: 99 @3797 has 3 MA's), (139, 3893),

Gene: ArcherNM\_8 Start: 5248, Stop: 5922, Start Num: 41

Candidate Starts for ArcherNM\_8:

(Start: 41 @5248 has 318 MA's), (179, 5569), (192, 5623), (223, 5719), (251, 5803),

Gene: Archetta\_5 Start: 3446, Stop: 4087, Start Num: 66

Candidate Starts for Archetta\_5:

(Start: 66 @3446 has 14 MA's), (120, 3554), (135, 3614), (148, 3662), (151, 3668), (162, 3707), (175, 3752), (177, 3758),

Gene: Artemis2UCLA\_8 Start: 4544, Stop: 5242, Start Num: 35

Candidate Starts for Artemis2UCLA\_8:

(Start: 35 @4544 has 40 MA's), (227, 5048), (276, 5234),

Gene: Artorias\_26 Start: 18647, Stop: 19297, Start Num: 61

Candidate Starts for Artorias\_26:

(Start: 61 @18647 has 12 MA's), (78, 18683), (154, 18869), (194, 19031), (197, 19040), (202, 19049), (245, 19148), (257, 19178),

Gene: Arturo\_4 Start: 2722, Stop: 3387, Start Num: 41

Candidate Starts for Arturo\_4:

(Start: 41 @2722 has 318 MA's), (162, 2989), (180, 3046), (209, 3133), (229, 3202), (274, 3370),

Gene: Astro\_5 Start: 3347, Stop: 4006, Start Num: 41

Candidate Starts for Astro\_5:

(Start: 41 @3347 has 318 MA's), (80, 3404), (110, 3446), (210, 3764), (241, 3863),

Gene: AugsMagnumOpus\_7 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for AugsMagnumOpus\_7:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3529),

Gene: AvatarAhPeg\_5 Start: 2718, Stop: 3383, Start Num: 41

Candidate Starts for AvatarAhPeg\_5:

(Start: 41 @2718 has 318 MA's), (94, 2799), (162, 2985), (198, 3111),

Gene: Avazak\_26 Start: 18654, Stop: 19304, Start Num: 61

Candidate Starts for Avazak\_26:

(Start: 61 @18654 has 12 MA's), (78, 18690), (154, 18876), (194, 19038), (197, 19047), (202, 19056), (245, 19155), (257, 19185),

Gene: Avle17\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Avle17\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: B1\_04 Start: 2514, Stop: 3149, Start Num: 41

Candidate Starts for B1\_04:

(Start: 41 @2514 has 318 MA's), (139, 2697), (145, 2727), (169, 2805), (180, 2838),

Gene: BABullseye\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for BABullseye\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Baby16\_5 Start: 2731, Stop: 3393, Start Num: 41

Candidate Starts for Baby16\_5:

(Start: 41 @2731 has 318 MA's), (111, 2836), (212, 3148), (214, 3151), (274, 3376),

Gene: BabyBack\_8 Start: 5112, Stop: 5783, Start Num: 41  
Candidate Starts for BabyBack\_8:  
(Start: 41 @5112 has 318 MA's), (94, 5193), (137, 5289), (180, 5436),

Gene: BabyRay\_5 Start: 2781, Stop: 3440, Start Num: 41  
Candidate Starts for BabyRay\_5:  
(Start: 41 @2781 has 318 MA's), (Start: 57 @2802 has 1 MA's), (Start: 99 @2868 has 3 MA's), (137, 2958), (145, 2994), (186, 3138), (219, 3240), (261, 3378),

Gene: Bachome\_8 Start: 5407, Stop: 6069, Start Num: 49  
Candidate Starts for Bachome\_8:  
(Start: 49 @5407 has 39 MA's), (85, 5473), (128, 5548), (159, 5659), (235, 5899),

Gene: Backyardigan\_5 Start: 2733, Stop: 3395, Start Num: 41  
Candidate Starts for Backyardigan\_5:  
(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Bactobuster\_8 Start: 5068, Stop: 5730, Start Num: 41  
Candidate Starts for Bactobuster\_8:  
(Start: 41 @5068 has 318 MA's), (94, 5149), (111, 5173), (162, 5329), (198, 5455), (214, 5482),

Gene: Badger\_5 Start: 2734, Stop: 3396, Start Num: 41  
Candidate Starts for Badger\_5:  
(Start: 41 @2734 has 318 MA's), (111, 2839), (214, 3154),

Gene: BangNhom\_4 Start: 2722, Stop: 3387, Start Num: 41  
Candidate Starts for BangNhom\_4:  
(Start: 41 @2722 has 318 MA's), (137, 2899), (162, 2989), (198, 3115),

Gene: Banquo\_3 Start: 665, Stop: 1360, Start Num: 46  
Candidate Starts for Banquo\_3:  
(11, 434), (19, 509), (20, 515), (31, 590), (Start: 46 @665 has 2 MA's), (52, 677), (70, 704), (Start: 99 @755 has 3 MA's), (122, 812), (132, 857), (135, 866), (169, 986), (173, 998), (179, 1010), (242, 1193),

Gene: Bartimeaus\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Bartimeaus\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Battleship\_9 Start: 4550, Stop: 5224, Start Num: 63  
Candidate Starts for Battleship\_9:  
(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Beauxregard13\_5 Start: 2629, Stop: 3264, Start Num: 41  
Candidate Starts for Beauxregard13\_5:  
(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Beemo\_8 Start: 5228, Stop: 5899, Start Num: 41  
Candidate Starts for Beemo\_8:  
(Start: 41 @5228 has 318 MA's), (137, 5402), (145, 5438), (214, 5651), (260, 5822),

Gene: BellusTerra\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for BellusTerra\_5:



(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Benedict\_5 Start: 3409, Stop: 4050, Start Num: 66

Candidate Starts for Benedict\_5:

(Start: 66 @3409 has 14 MA's), (87, 3445), (98, 3466), (110, 3493), (148, 3625), (172, 3706), (177, 3721), (263, 4027),

Gene: BiancaTri92\_8 Start: 5044, Stop: 5694, Start Num: 41

Candidate Starts for BiancaTri92\_8:

(Start: 41 @5044 has 318 MA's), (88, 5116), (137, 5221), (152, 5269), (245, 5560),

Gene: BillDoor\_30 Start: 22485, Stop: 23123, Start Num: 61

Candidate Starts for BillDoor\_30:

(Start: 61 @22485 has 12 MA's), (65, 22494), (87, 22536), (96, 22554), (115, 22590), (137, 22650), (195, 22866), (249, 22980),

Gene: Blackmoor\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Blackmoor\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Blinn1\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Blinn1\_8:

(Start: 35 @4661 has 40 MA's), (203, 5102), (227, 5165), (276, 5351),

Gene: Blue7\_8 Start: 4655, Stop: 5353, Start Num: 35

Candidate Starts for Blue7\_8:

(Start: 35 @4655 has 40 MA's), (227, 5159), (276, 5345),

Gene: BlueBird\_5 Start: 2830, Stop: 3480, Start Num: 41

Candidate Starts for BlueBird\_5:

(Start: 41 @2830 has 318 MA's), (162, 3097), (273, 3460),

Gene: Bluefalcon\_4 Start: 3677, Stop: 4342, Start Num: 49

Candidate Starts for Bluefalcon\_4:

(Start: 49 @3677 has 39 MA's), (Start: 62 @3695 has 6 MA's), (85, 3743), (Start: 99 @3764 has 3 MA's), (139, 3860),

Gene: BobSwaget\_9 Start: 5384, Stop: 6061, Start Num: 41

Candidate Starts for BobSwaget\_9:

(Start: 41 @5384 has 318 MA's), (138, 5564), (160, 5645), (165, 5660), (180, 5708), (214, 5798), (220, 5825),

Gene: BogosyJay\_8 Start: 5009, Stop: 5659, Start Num: 41

Candidate Starts for BogosyJay\_8:

(Start: 41 @5009 has 318 MA's), (138, 5186), (145, 5219), (212, 5423), (242, 5519),

Gene: Bombshell\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Bombshell\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Bonamassa\_5 Start: 3603, Stop: 4265, Start Num: 49

Candidate Starts for Bonamassa\_5:

(Start: 49 @3603 has 39 MA's), (Start: 57 @3615 has 1 MA's), (70, 3639), (77, 3654), (85, 3669), (128, 3744), (164, 3873), (235, 4095),

Gene: Boohoo\_8 Start: 4403, Stop: 5071, Start Num: 54

Candidate Starts for Boohoo\_8:

(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: Bowtie\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Bowtie\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: Braxoaddie\_24 Start: 12622, Stop: 13299, Start Num: 43

Candidate Starts for Braxoaddie\_24:

(Start: 43 @12622 has 5 MA's), (85, 12700), (103, 12733), (115, 12757), (119, 12766), (132, 12817), (135, 12826), (172, 12952), (204, 13060), (274, 13276),

Gene: BreSam8\_5 Start: 2891, Stop: 3550, Start Num: 41

Candidate Starts for BreSam8\_5:

(Start: 41 @2891 has 318 MA's), (Start: 125 @3020 has 1 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: Broseidon\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Broseidon\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (218, 3169), (274, 3367),

Gene: Bruiser\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Bruiser\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: BubbleTrouble\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for BubbleTrouble\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Bud\_8 Start: 5416, Stop: 6078, Start Num: 49

Candidate Starts for Bud\_8:

(Start: 49 @5416 has 39 MA's), (85, 5482), (128, 5557), (235, 5908), (251, 5953),

Gene: Bugatti\_4 Start: 2830, Stop: 3480, Start Num: 41

Candidate Starts for Bugatti\_4:

(Start: 41 @2830 has 318 MA's), (162, 3097), (273, 3460),

Gene: Bumblebee11\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Bumblebee11\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Burger\_4 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Burger\_4:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: BuzzBuzz\_4 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for BuzzBuzz\_4:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Bxz2\_5 Start: 2730, Stop: 3362, Start Num: 41  
Candidate Starts for Bxz2\_5:  
(Start: 41 @2730 has 318 MA's), (139, 2913), (141, 2916), (145, 2943),

Gene: C3\_30 Start: 24556, Stop: 25221, Start Num: 42  
Candidate Starts for C3\_30:  
(Start: 42 @24556 has 21 MA's), (84, 24619), (118, 24679), (124, 24688), (Start: 125 @24691 has 1 MA's), (241, 25069), (263, 25159), (273, 25201),

Gene: Caelakin\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Caelakin\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Cafasso\_26 Start: 23921, Stop: 24631, Start Num: 39  
Candidate Starts for Cafasso\_26:  
(4, 23504), (16, 23759), (Start: 39 @23921 has 5 MA's), (Start: 48 @23936 has 1 MA's), (Start: 57 @23951 has 1 MA's), (156, 24203), (218, 24395),

Gene: CaiB\_39 Start: 33929, Stop: 34576, Start Num: 54  
Candidate Starts for CaiB\_39:  
(Start: 54 @33929 has 15 MA's), (87, 33986), (103, 34016), (107, 34019), (114, 34037), (141, 34109), (167, 34211), (176, 34241), (177, 34244), (241, 34421), (275, 34559),

Gene: Camperdownii\_5 Start: 2727, Stop: 3401, Start Num: 41  
Candidate Starts for Camperdownii\_5:  
(Start: 41 @2727 has 318 MA's), (76, 2778), (145, 2940), (165, 3003),

Gene: Candra\_8 Start: 4694, Stop: 5392, Start Num: 35  
Candidate Starts for Candra\_8:  
(Start: 35 @4694 has 40 MA's), (227, 5198), (276, 5384),

Gene: Captrips\_26 Start: 18675, Stop: 19322, Start Num: 61  
Candidate Starts for Captrips\_26:  
(Start: 61 @18675 has 12 MA's), (92, 18738), (151, 18888), (188, 19026), (225, 19134), (256, 19200),

Gene: Caraxes\_31 Start: 22947, Stop: 23612, Start Num: 41  
Candidate Starts for Caraxes\_31:  
(Start: 41 @22947 has 318 MA's), (Start: 42 @22950 has 21 MA's), (114, 23061), (137, 23130), (139, 23136), (145, 23166), (170, 23250), (212, 23373), (230, 23445), (268, 23562),

Gene: Catalina\_8 Start: 5240, Stop: 5869, Start Num: 44  
Candidate Starts for Catalina\_8:  
(Start: 44 @5240 has 7 MA's), (70, 5279), (139, 5420), (145, 5450), (153, 5465),

Gene: Caviar\_5 Start: 2764, Stop: 3423, Start Num: 41  
Candidate Starts for Caviar\_5:  
(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: CentreCat\_5 Start: 2723, Stop: 3385, Start Num: 41  
Candidate Starts for CentreCat\_5:  
(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Cerulean\_5 Start: 2723, Stop: 3388, Start Num: 41  
Candidate Starts for Cerulean\_5:  
(Start: 41 @2723 has 318 MA's), (137, 2900), (162, 2990), (198, 3116),

Gene: Chadwick\_5 Start: 3406, Stop: 4047, Start Num: 66  
Candidate Starts for Chadwick\_5:  
(Start: 66 @3406 has 14 MA's), (87, 3442), (98, 3463), (110, 3490), (148, 3622), (172, 3703), (177, 3718), (263, 4024),

Gene: ChampagnePapi\_5 Start: 2722, Stop: 3387, Start Num: 41  
Candidate Starts for ChampagnePapi\_5:  
(Start: 41 @2722 has 318 MA's), (137, 2899), (162, 2989), (198, 3115),

Gene: Changeling\_8 Start: 5275, Stop: 5919, Start Num: 41  
Candidate Starts for Changeling\_8:  
(Start: 41 @5275 has 318 MA's), (76, 5326), (138, 5455), (139, 5458), (155, 5506), (174, 5584), (273, 5899),

Gene: Chaph\_5 Start: 2731, Stop: 3393, Start Num: 41  
Candidate Starts for Chaph\_5:  
(Start: 41 @2731 has 318 MA's), (111, 2836), (212, 3148), (214, 3151), (274, 3376),

Gene: Chargerpower\_33 Start: 23787, Stop: 24434, Start Num: 41  
Candidate Starts for Chargerpower\_33:  
(Start: 41 @23787 has 318 MA's), (45, 23793), (94, 23871), (104, 23886), (114, 23898), (137, 23967), (139, 23973), (147, 24006), (180, 24114), (273, 24414),

Gene: Charm\_32 Start: 24071, Stop: 24721, Start Num: 41  
Candidate Starts for Charm\_32:  
(3, 23615), (8, 23804), (30, 23999), (Start: 41 @24071 has 318 MA's), (67, 24113), (Start: 99 @24164 has 3 MA's), (137, 24254), (141, 24263), (161, 24341), (179, 24398), (207, 24488),

Gene: Chartreuse\_8 Start: 4608, Stop: 5306, Start Num: 35  
Candidate Starts for Chartreuse\_8:  
(Start: 35 @4608 has 40 MA's), (227, 5112), (276, 5298),

Gene: Che12\_34 Start: 23324, Stop: 23983, Start Num: 42  
Candidate Starts for Che12\_34:  
(Start: 42 @23324 has 21 MA's), (53, 23339), (114, 23438), (170, 23624), (173, 23633), (207, 23741),

Gene: Chupacabra\_5 Start: 2816, Stop: 3463, Start Num: 41  
Candidate Starts for Chupacabra\_5:  
(Start: 41 @2816 has 318 MA's), (Start: 99 @2903 has 3 MA's), (137, 2993), (174, 3125), (191, 3176), (192, 3179), (204, 3215), (274, 3449),

Gene: Cici\_5 Start: 2733, Stop: 3395, Start Num: 41  
Candidate Starts for Cici\_5:  
(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Cindaradix\_5 Start: 2722, Stop: 3387, Start Num: 41  
Candidate Starts for Cindaradix\_5:  
(Start: 41 @2722 has 318 MA's), (94, 2803), (189, 3076),

Gene: Cintron\_5 Start: 2722, Stop: 3387, Start Num: 41  
Candidate Starts for Cintron\_5:  
(Start: 41 @2722 has 318 MA's), (94, 2803), (Start: 99 @2809 has 3 MA's), (162, 2989), (198, 3115),

Gene: Citius\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Citius\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Clarenza\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Clarenza\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: CloudWang3\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for CloudWang3\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: CloverMinnie\_39 Start: 33869, Stop: 34516, Start Num: 54  
Candidate Starts for CloverMinnie\_39:  
(Start: 54 @33869 has 15 MA's), (87, 33926), (103, 33956), (107, 33959), (114, 33977), (167, 34151),  
(176, 34181), (177, 34184), (181, 34196), (241, 34361), (275, 34499),

Gene: Cocoaberry\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Cocoaberry\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: CoffeeBean\_24 Start: 12577, Stop: 13254, Start Num: 43  
Candidate Starts for CoffeeBean\_24:  
(Start: 43 @12577 has 5 MA's), (85, 12655), (103, 12688), (115, 12712), (119, 12721), (132, 12772),  
(135, 12781), (172, 12907), (204, 13015), (274, 13231),

Gene: Colbster\_5 Start: 2629, Stop: 3264, Start Num: 41  
Candidate Starts for Colbster\_5:  
(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Colin\_9 Start: 5247, Stop: 5933, Start Num: 41  
Candidate Starts for Colin\_9:  
(Start: 41 @5247 has 318 MA's), (138, 5421), (181, 5571), (231, 5742), (262, 5862),

Gene: Commander\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Commander\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Connomayer\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Connomayer\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Conquerage\_8 Start: 5224, Stop: 5895, Start Num: 41  
Candidate Starts for Conquerage\_8:  
(Start: 41 @5224 has 318 MA's), (145, 5434), (167, 5506), (214, 5647), (245, 5740), (260, 5818), (273,  
5872),

Gene: Conspiracy\_5 Start: 3447, Stop: 4088, Start Num: 66  
Candidate Starts for Conspiracy\_5:

(Start: 66 @3447 has 14 MA's), (120, 3555), (135, 3615), (148, 3663), (151, 3669), (162, 3708), (175, 3753), (177, 3759),

Gene: Coog\_5 Start: 3571, Stop: 4233, Start Num: 49

Candidate Starts for Coog\_5:

(Start: 49 @3571 has 39 MA's), (Start: 57 @3583 has 1 MA's), (70, 3607), (77, 3622), (85, 3637), (128, 3712), (164, 3841), (235, 4063),

Gene: Cookiedough\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Cookiedough\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Cuco\_5 Start: 3602, Stop: 4264, Start Num: 49

Candidate Starts for Cuco\_5:

(Start: 49 @3602 has 39 MA's), (Start: 57 @3614 has 1 MA's), (70, 3638), (77, 3653), (85, 3668), (128, 3743), (164, 3872), (235, 4094),

Gene: Cullens\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Cullens\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: D29\_32 Start: 24412, Stop: 25083, Start Num: 42

Candidate Starts for D29\_32:

(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: D32\_35 Start: 24412, Stop: 25083, Start Num: 42

Candidate Starts for D32\_35:

(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: DBQu4n\_35 Start: 24412, Stop: 25083, Start Num: 42

Candidate Starts for DBQu4n\_35:

(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: DaHudson\_5 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for DaHudson\_5:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3529),

Gene: DaVinci\_8 Start: 4662, Stop: 5360, Start Num: 35

Candidate Starts for DaVinci\_8:

(Start: 35 @4662 has 40 MA's), (227, 5166), (276, 5352),

Gene: Daishi\_5 Start: 2404, Stop: 3036, Start Num: 41

Candidate Starts for Daishi\_5:

(Start: 41 @2404 has 318 MA's), (139, 2587), (141, 2590), (145, 2617),

Gene: Danforth\_4 Start: 3362, Stop: 4021, Start Num: 41

Candidate Starts for Danforth\_4:

(Start: 41 @3362 has 318 MA's), (80, 3419), (85, 3428), (110, 3461), (241, 3878),

Gene: Darrell\_8 Start: 5117, Stop: 5806, Start Num: 41

Candidate Starts for Darrell\_8:

(Start: 41 @5117 has 318 MA's), (127, 5261), (131, 5282), (153, 5354), (162, 5393), (177, 5444), (179, 5447), (218, 5579), (228, 5618), (258, 5708), (276, 5792),

Gene: DatBoi\_42 Start: 38878, Stop: 39585, Start Num: 39

Candidate Starts for DatBoi\_42:

(10, 38647), (17, 38716), (Start: 39 @38878 has 5 MA's), (Start: 48 @38893 has 1 MA's), (Start: 57 @38908 has 1 MA's), (208, 39325), (234, 39418), (271, 39538),

Gene: Datway\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Datway\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Deano\_5 Start: 2722, Stop: 3390, Start Num: 41

Candidate Starts for Deano\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (180, 3046), (214, 3142),

Gene: DekHockey33\_8 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for DekHockey33\_8:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Dextert\_38 Start: 33419, Stop: 34066, Start Num: 56

Candidate Starts for Dextert\_38:

(Start: 56 @33419 has 2 MA's), (87, 33476), (103, 33506), (107, 33509), (138, 33593), (165, 33692), (177, 33734), (211, 33830), (241, 33911), (275, 34049),

Gene: Dhanush\_5 Start: 2721, Stop: 3383, Start Num: 41

Candidate Starts for Dhanush\_5:

(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Dieselweasel\_5 Start: 2899, Stop: 3558, Start Num: 41

Candidate Starts for Dieselweasel\_5:

(Start: 41 @2899 has 318 MA's), (Start: 125 @3028 has 1 MA's), (139, 3082), (147, 3115), (167, 3184), (273, 3538),

Gene: DirtyDunning\_5 Start: 2720, Stop: 3385, Start Num: 41

Candidate Starts for DirtyDunning\_5:

(Start: 41 @2720 has 318 MA's), (94, 2801), (Start: 99 @2807 has 3 MA's), (137, 2897), (162, 2987), (198, 3113),

Gene: Discoknowium\_5 Start: 3710, Stop: 4375, Start Num: 49

Candidate Starts for Discoknowium\_5:

(Start: 49 @3710 has 39 MA's), (Start: 62 @3728 has 6 MA's), (85, 3776), (Start: 99 @3797 has 3 MA's), (139, 3893),

Gene: Dixon\_5 Start: 3348, Stop: 4007, Start Num: 41

Candidate Starts for Dixon\_5:

(Start: 41 @3348 has 318 MA's), (80, 3405), (110, 3447), (210, 3765), (241, 3864),

Gene: Dorothea\_7 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Dorothea\_7:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: DreamTeam1\_32 Start: 23986, Stop: 24633, Start Num: 41  
Candidate Starts for DreamTeam1\_32:  
(Start: 41 @23986 has 318 MA's), (45, 23992), (68, 24025), (84, 24049), (104, 24085), (114, 24097),  
(137, 24166), (139, 24172), (141, 24175), (147, 24205), (167, 24274), (180, 24313),

Gene: Druantia\_5 Start: 2723, Stop: 3385, Start Num: 41  
Candidate Starts for Druantia\_5:  
(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Dublin\_4 Start: 3571, Stop: 4233, Start Num: 49  
Candidate Starts for Dublin\_4:  
(Start: 49 @3571 has 39 MA's), (70, 3607), (77, 3622), (85, 3637), (128, 3712), (164, 3841), (235,  
4063),

Gene: Duplo\_35 Start: 24450, Stop: 25121, Start Num: 42  
Candidate Starts for Duplo\_35:  
(Start: 42 @24450 has 21 MA's), (Start: 99 @24540 has 3 MA's), (114, 24561), (137, 24630), (145,  
24666), (160, 24714), (230, 24954), (231, 24957), (263, 25056), (268, 25071),

Gene: EZMoney23\_8 Start: 5345, Stop: 6004, Start Num: 41  
Candidate Starts for EZMoney23\_8:  
(Start: 41 @5345 has 318 MA's), (139, 5528), (147, 5561), (162, 5612), (167, 5630), (274, 5990),

Gene: Eagle\_4 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Eagle\_4:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: EagleEye\_8 Start: 4875, Stop: 5543, Start Num: 41  
Candidate Starts for EagleEye\_8:  
(Start: 41 @4875 has 318 MA's), (100, 4968), (170, 5169), (217, 5310), (235, 5391),

Gene: Eaglepride\_6 Start: 2816, Stop: 3460, Start Num: 41  
Candidate Starts for Eaglepride\_6:  
(Start: 41 @2816 has 318 MA's), (Start: 99 @2903 has 3 MA's), (137, 2990), (139, 2996), (179, 3134),  
(191, 3173), (215, 3233),

Gene: Eapen\_5 Start: 2724, Stop: 3386, Start Num: 41  
Candidate Starts for Eapen\_5:  
(Start: 41 @2724 has 318 MA's), (111, 2829), (212, 3141), (214, 3144), (274, 3369),

Gene: Ebony\_8 Start: 5416, Stop: 6078, Start Num: 49  
Candidate Starts for Ebony\_8:  
(Start: 49 @5416 has 39 MA's), (85, 5482), (128, 5557), (159, 5668), (235, 5908), (251, 5953),

Gene: Edison31\_5 Start: 2836, Stop: 3483, Start Num: 41  
Candidate Starts for Edison31\_5:  
(Start: 41 @2836 has 318 MA's), (137, 3013), (174, 3145), (191, 3196), (192, 3199),

Gene: Eidsmoe\_8 Start: 5224, Stop: 5895, Start Num: 41  
Candidate Starts for Eidsmoe\_8:  
(Start: 41 @5224 has 318 MA's), (145, 5434), (167, 5506), (214, 5647), (245, 5740), (260, 5818), (273,  
5872),



Gene: EITiger69\_5 Start: 3407, Stop: 4048, Start Num: 66  
Candidate Starts for EITiger69\_5:  
(Start: 66 @3407 has 14 MA's), (87, 3443), (98, 3464), (110, 3491), (148, 3623), (172, 3704), (177, 3719), (263, 4025),

Gene: Elephantoon\_8 Start: 4805, Stop: 5470, Start Num: 41  
Candidate Starts for Elephantoon\_8:  
(Start: 41 @4805 has 318 MA's), (145, 5009), (164, 5069), (179, 5117), (199, 5198), (251, 5333), (260, 5393), (273, 5447),

Gene: Emalyn\_27 Start: 22133, Stop: 22771, Start Num: 61  
Candidate Starts for Emalyn\_27:  
(Start: 61 @22133 has 12 MA's), (65, 22142), (87, 22184), (96, 22202), (115, 22238), (121, 22250), (135, 22292), (137, 22298), (167, 22409), (195, 22514), (249, 22628),

Gene: EmyBug\_8 Start: 5224, Stop: 5895, Start Num: 41  
Candidate Starts for EmyBug\_8:  
(Start: 41 @5224 has 318 MA's), (137, 5398), (145, 5434), (214, 5647), (260, 5818),

Gene: EpicPhail\_5 Start: 2629, Stop: 3264, Start Num: 41  
Candidate Starts for EpicPhail\_5:  
(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Epsocamisio\_8 Start: 4403, Stop: 5071, Start Num: 54  
Candidate Starts for Epsocamisio\_8:  
(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: EricB\_8 Start: 4662, Stop: 5360, Start Num: 35  
Candidate Starts for EricB\_8:  
(Start: 35 @4662 has 40 MA's), (227, 5166), (276, 5352),

Gene: Eris\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Eris\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Eros\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Eros\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Et2Brutus\_7 Start: 5413, Stop: 6075, Start Num: 49  
Candidate Starts for Et2Brutus\_7:  
(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (159, 5665), (235, 5905), (251, 5950),

Gene: Eurydice\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Eurydice\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Evaa\_37 Start: 33037, Stop: 33708, Start Num: 60  
Candidate Starts for Evaa\_37:  
(1, 32194), (2, 32491), (32, 32962), (Start: 60 @33037 has 2 MA's), (132, 33199), (138, 33217), (171, 33334), (174, 33343), (177, 33349), (233, 33529), (274, 33688),

Gene: Expelliarmus\_4 Start: 3348, Stop: 4007, Start Num: 41

Candidate Starts for Expelliarmus\_4:

(Start: 41 @3348 has 318 MA's), (80, 3405), (110, 3447), (241, 3864),

Gene: ExplosioNervosa\_8 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for ExplosioNervosa\_8:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: Farber\_5 Start: 2891, Stop: 3550, Start Num: 41

Candidate Starts for Farber\_5:

(Start: 41 @2891 has 318 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: Fayely\_8 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for Fayely\_8:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: Fernando\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Fernando\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Fibonacci\_8 Start: 5413, Stop: 6075, Start Num: 49

Candidate Starts for Fibonacci\_8:

(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (235, 5905), (251, 5950),

Gene: Flaverint\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Flaverint\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: Florean\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Florean\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Flux\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Flux\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: ForGetIt\_5 Start: 3473, Stop: 4114, Start Num: 66

Candidate Starts for ForGetIt\_5:

(Start: 66 @3473 has 14 MA's), (120, 3581), (135, 3641), (148, 3689), (151, 3695), (162, 3734), (175, 3779), (177, 3785),

Gene: FortCran\_26 Start: 18647, Stop: 19297, Start Num: 61

Candidate Starts for FortCran\_26:

(Start: 61 @18647 has 12 MA's), (78, 18683), (154, 18869), (194, 19031), (197, 19040), (202, 19049), (245, 19148), (257, 19178),

Gene: Fred313\_5 Start: 2736, Stop: 3398, Start Num: 41

Candidate Starts for Fred313\_5:

(Start: 41 @2736 has 318 MA's), (137, 2913), (145, 2949), (153, 2964), (164, 3009), (241, 3237), (254, 3270),

Gene: Funston\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Funston\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: GMA6\_18 Start: 14860, Stop: 15507, Start Num: 58

Candidate Starts for GMA6\_18:

(Start: 58 @14860 has 2 MA's), (Start: 63 @14869 has 10 MA's), (117, 14971), (267, 15448),

Gene: GTE2\_24 Start: 22211, Stop: 22849, Start Num: 61

Candidate Starts for GTE2\_24:

(Start: 61 @22211 has 12 MA's), (87, 22262), (96, 22280), (115, 22316), (135, 22370), (137, 22376), (167, 22487), (195, 22592), (249, 22706),

Gene: Gadost\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Gadost\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Garak\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Garak\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: GaugeLDP\_8 Start: 4848, Stop: 5522, Start Num: 41

Candidate Starts for GaugeLDP\_8:

(Start: 41 @4848 has 318 MA's), (137, 5025), (145, 5061), (162, 5115), (180, 5172), (232, 5352),

Gene: Gemma\_5 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for Gemma\_5:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: George\_4 Start: 3602, Stop: 4264, Start Num: 49

Candidate Starts for George\_4:

(Start: 49 @3602 has 39 MA's), (Start: 57 @3614 has 1 MA's), (70, 3638), (77, 3653), (85, 3668), (128, 3743), (164, 3872), (235, 4094),

Gene: Ghouboy\_5 Start: 3679, Stop: 4344, Start Num: 49

Candidate Starts for Ghouboy\_5:

(Start: 49 @3679 has 39 MA's), (Start: 62 @3697 has 6 MA's), (85, 3745), (Start: 99 @3766 has 3 MA's), (139, 3862), (266, 4291),

Gene: Gilberta\_8 Start: 5407, Stop: 6069, Start Num: 49

Candidate Starts for Gilberta\_8:

(Start: 49 @5407 has 39 MA's), (85, 5473), (128, 5548), (159, 5659), (235, 5899),

Gene: GingkoMaracino\_5 Start: 2809, Stop: 3468, Start Num: 41

Candidate Starts for GingkoMaracino\_5:

(Start: 41 @2809 has 318 MA's), (Start: 99 @2896 has 3 MA's), (Start: 125 @2938 has 1 MA's), (139, 2992), (162, 3076), (167, 3094),

Gene: Giroux\_4 Start: 2830, Stop: 3480, Start Num: 41

Candidate Starts for Giroux\_4:

(Start: 41 @2830 has 318 MA's), (162, 3097), (273, 3460),

Gene: Gladiator\_8 Start: 4655, Stop: 5353, Start Num: 35

Candidate Starts for Gladiator\_8:

(Start: 35 @4655 has 40 MA's), (227, 5159), (276, 5345),

Gene: Goose\_5 Start: 2818, Stop: 3465, Start Num: 41

Candidate Starts for Goose\_5:

(Start: 41 @2818 has 318 MA's), (Start: 99 @2905 has 3 MA's), (137, 2995), (174, 3127), (191, 3178), (192, 3181), (204, 3217), (274, 3451),

Gene: GreedyLawyer\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for GreedyLawyer\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Greely\_114 Start: 60027, Stop: 60854, Start Num: 116

Candidate Starts for Greely\_114:

(28, 59769), (Start: 106 @60003 has 1 MA's), (Start: 116 @60027 has 1 MA's), (144, 60144), (158, 60192), (163, 60210), (168, 60231), (169, 60234), (214, 60516), (230, 60609), (235, 60627),

Gene: Greely\_137 Start: 80266, Stop: 80874, Start Num: 99

Candidate Starts for Greely\_137:

(Start: 99 @80266 has 3 MA's), (135, 80377), (136, 80380), (165, 80479), (180, 80527), (203, 80608), (242, 80707), (274, 80857),

Gene: Grif\_5 Start: 2719, Stop: 3351, Start Num: 41

Candidate Starts for Grif\_5:

(Start: 41 @2719 has 318 MA's), (139, 2902), (141, 2905), (145, 2932),

Gene: Groundhog\_4 Start: 3349, Stop: 4008, Start Num: 41

Candidate Starts for Groundhog\_4:

(Start: 41 @3349 has 318 MA's), (80, 3406), (110, 3448), (241, 3865),

Gene: Groupthink\_6 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for Groupthink\_6:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: Grum1\_5 Start: 2629, Stop: 3261, Start Num: 41

Candidate Starts for Grum1\_5:

(Start: 41 @2629 has 318 MA's), (139, 2812), (141, 2815), (145, 2842),

Gene: Gruunaga\_8 Start: 4655, Stop: 5353, Start Num: 35

Candidate Starts for Gruunaga\_8:

(Start: 35 @4655 has 40 MA's), (227, 5159), (276, 5345),

Gene: GtownJaz\_5 Start: 2899, Stop: 3558, Start Num: 41

Candidate Starts for GtownJaz\_5:

(Start: 41 @2899 has 318 MA's), (Start: 125 @3028 has 1 MA's), (139, 3082), (147, 3115), (167, 3184), (273, 3538),

Gene: HamSlice\_4 Start: 2723, Stop: 3385, Start Num: 41

Candidate Starts for HamSlice\_4:

(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Hammer\_8 Start: 4655, Stop: 5353, Start Num: 35

Candidate Starts for Hammer\_8:

(Start: 35 @4655 has 40 MA's), (134, 4856), (227, 5159), (276, 5345),

Gene: Happiness\_5 Start: 2724, Stop: 3389, Start Num: 41

Candidate Starts for Happiness\_5:

(Start: 41 @2724 has 318 MA's), (137, 2901), (162, 2991), (198, 3117), (274, 3372),

Gene: HashRod\_6 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for HashRod\_6:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: HaveUMetTed\_6 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for HaveUMetTed\_6:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: Heathen\_5 Start: 2661, Stop: 3311, Start Num: 41

Candidate Starts for Heathen\_5:

(Start: 41 @2661 has 318 MA's), (139, 2844), (193, 3036), (231, 3156),

Gene: Heffalump\_9 Start: 5602, Stop: 6279, Start Num: 47

Candidate Starts for Heffalump\_9:

(Start: 47 @5602 has 2 MA's), (138, 5782), (160, 5860), (177, 5917), (235, 6112), (249, 6151), (258, 6181), (261, 6211),

Gene: HelDan\_5 Start: 2913, Stop: 3563, Start Num: 41

Candidate Starts for HelDan\_5:

(Start: 41 @2913 has 318 MA's), (139, 3096), (193, 3288), (231, 3408),

Gene: Heliosoles\_5 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for Heliosoles\_5:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (146, 3101), (193, 3263),

Gene: Helmet\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Helmet\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Hercules11\_5 Start: 2638, Stop: 3273, Start Num: 41

Candidate Starts for Hercules11\_5:

(Start: 41 @2638 has 318 MA's), (145, 2851),

Gene: Hexamo\_8 Start: 4616, Stop: 5314, Start Num: 35

Candidate Starts for Hexamo\_8:

(Start: 35 @4616 has 40 MA's), (227, 5120), (276, 5306),

Gene: Holli\_5 Start: 2515, Stop: 3177, Start Num: 41

Candidate Starts for Holli\_5:

(Start: 41 @2515 has 318 MA's), (111, 2620), (212, 2932), (214, 2935), (274, 3160),

Gene: Hookmount\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Hookmount\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Hoot\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Hoot\_8:

(Start: 35 @4661 has 40 MA's), (189, 5057), (227, 5165), (276, 5351),

Gene: HortumSL17\_8 Start: 5239, Stop: 5868, Start Num: 44

Candidate Starts for HortumSL17\_8:

(Start: 44 @5239 has 7 MA's), (70, 5278), (139, 5419), (145, 5449), (153, 5464),

Gene: Houdini22\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Houdini22\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: HuhtaEnerson15\_5 Start: 3603, Stop: 4265, Start Num: 49

Candidate Starts for HuhtaEnerson15\_5:

(Start: 49 @3603 has 39 MA's), (Start: 57 @3615 has 1 MA's), (70, 3639), (77, 3654), (85, 3669),  
(128, 3744), (164, 3873), (235, 4095),

Gene: Hutc2\_8 Start: 5413, Stop: 6075, Start Num: 49

Candidate Starts for Hutc2\_8:

(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (235, 5905), (251, 5950),

Gene: ICleared\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for ICleared\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Iceman\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Iceman\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Idleandcovert\_4 Start: 2830, Stop: 3480, Start Num: 41

Candidate Starts for Idleandcovert\_4:

(Start: 41 @2830 has 318 MA's), (162, 3097), (273, 3460),

Gene: Indra\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Indra\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Insomnia\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Insomnia\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902), (251, 5947),

Gene: Iracema64\_5 Start: 2722, Stop: 3387, Start Num: 41

Candidate Starts for Iracema64\_5:

(Start: 41 @2722 has 318 MA's), (94, 2803), (Start: 99 @2809 has 3 MA's), (162, 2989), (198, 3115),

Gene: IronMan\_8 Start: 5076, Stop: 5738, Start Num: 41

Candidate Starts for IronMan\_8:

(Start: 41 @5076 has 318 MA's), (94, 5157), (111, 5181), (214, 5490),

Gene: Isca\_5 Start: 2750, Stop: 3385, Start Num: 41

Candidate Starts for Isca\_5:

(Start: 41 @2750 has 318 MA's), (139, 2933), (145, 2963), (169, 3041), (180, 3074),

Gene: Isiphiwo\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Isiphiwo\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: JF2\_5 Start: 2514, Stop: 3149, Start Num: 41  
Candidate Starts for JF2\_5:  
(Start: 41 @2514 has 318 MA's), (139, 2697), (145, 2727), (169, 2805), (180, 2838),

Gene: JF4\_5 Start: 2514, Stop: 3149, Start Num: 41  
Candidate Starts for JF4\_5:  
(Start: 41 @2514 has 318 MA's), (139, 2697), (145, 2727), (169, 2805), (180, 2838),

Gene: JHC117\_5 Start: 2629, Stop: 3264, Start Num: 41  
Candidate Starts for JHC117\_5:  
(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: JSwag\_8 Start: 4403, Stop: 5071, Start Num: 54  
Candidate Starts for JSwag\_8:  
(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: Jaan\_8 Start: 5072, Stop: 5734, Start Num: 41  
Candidate Starts for Jaan\_8:  
(Start: 41 @5072 has 318 MA's), (94, 5153), (162, 5339), (198, 5465), (274, 5717),

Gene: Jabiru\_5 Start: 3407, Stop: 4048, Start Num: 66  
Candidate Starts for Jabiru\_5:  
(Start: 66 @3407 has 14 MA's), (87, 3443), (98, 3464), (110, 3491), (148, 3623), (172, 3704), (177, 3719), (263, 4025),

Gene: Jabith\_8 Start: 5410, Stop: 6072, Start Num: 49  
Candidate Starts for Jabith\_8:  
(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902), (251, 5947),

Gene: Jace\_24 Start: 20590, Stop: 21267, Start Num: 50  
Candidate Starts for Jace\_24:  
(Start: 50 @20590 has 1 MA's), (Start: 56 @20599 has 2 MA's), (69, 20623), (83, 20644), (133, 20767), (164, 20878), (166, 20884), (205, 21013),

Gene: Jamemuya19\_32 Start: 27651, Stop: 28208, Start Num: 125  
Candidate Starts for Jamemuya19\_32:  
(6, 27111), (9, 27225), (18, 27318), (22, 27351), (23, 27354), (24, 27357), (27, 27378), (29, 27390), (33, 27438), (51, 27501), (82, 27555), (Start: 125 @27651 has 1 MA's), (135, 27693), (200, 27927), (217, 27966), (242, 28053), (277, 28200),

Gene: Jaykayelowell\_5 Start: 2721, Stop: 3383, Start Num: 41  
Candidate Starts for Jaykayelowell\_5:  
(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Jeanie\_17 Start: 12036, Stop: 12680, Start Num: 58  
Candidate Starts for Jeanie\_17:  
(Start: 58 @12036 has 2 MA's), (139, 12207), (203, 12432), (230, 12507), (232, 12513), (242, 12525), (250, 12546), (265, 12612),

Gene: Jeeves\_32 Start: 23861, Stop: 24529, Start Num: 41  
Candidate Starts for Jeeves\_32:  
(30, 23789), (Start: 41 @23861 has 318 MA's), (137, 24044), (167, 24152), (170, 24164), (200, 24272), (273, 24509),

Gene: Jeffabunny\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Jeffabunny\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: JenCasNa\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for JenCasNa\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: JeppNRM\_6 Start: 2888, Stop: 3535, Start Num: 41

Candidate Starts for JeppNRM\_6:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (147, 3104),

Gene: JetBlade\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for JetBlade\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: JewelBug\_8 Start: 4662, Stop: 5360, Start Num: 35

Candidate Starts for JewelBug\_8:

(Start: 35 @4662 has 40 MA's), (227, 5166), (276, 5352),

Gene: Jobu08\_5 Start: 2962, Stop: 3621, Start Num: 41

Candidate Starts for Jobu08\_5:

(Start: 41 @2962 has 318 MA's), (Start: 99 @3049 has 3 MA's), (Start: 125 @3091 has 1 MA's), (139, 3145), (150, 3184), (162, 3229),

Gene: JoongJeon\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for JoongJeon\_5:

(Start: 41 @2722 has 318 MA's), (212, 3139), (214, 3142), (274, 3367),

Gene: Jordennis\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Jordennis\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Joselito\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Joselito\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: Journey13\_30 Start: 23737, Stop: 24387, Start Num: 41

Candidate Starts for Journey13\_30:

(Start: 41 @23737 has 318 MA's), (67, 23773), (137, 23914), (164, 24010), (170, 24034), (177, 24055), (180, 24061), (241, 24235), (249, 24259),

Gene: Jovo\_5 Start: 3729, Stop: 4376, Start Num: 62

Candidate Starts for Jovo\_5:

(Start: 49 @3711 has 39 MA's), (Start: 62 @3729 has 6 MA's), (85, 3777), (Start: 99 @3798 has 3 MA's), (139, 3894),

Gene: Jsquared\_31 Start: 23470, Stop: 24069, Start Num: 75

Candidate Starts for Jsquared\_31:

(Start: 75 @23470 has 3 MA's), (91, 23503), (114, 23521), (137, 23590), (160, 23674), (170, 23710), (207, 23827), (261, 23998),



Gene: KADY\_6 Start: 2720, Stop: 3352, Start Num: 41  
Candidate Starts for KADY\_6:  
(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: KFPoly\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for KFPoly\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Kalb97\_6 Start: 2886, Stop: 3536, Start Num: 41  
Candidate Starts for Kalb97\_6:  
(Start: 41 @2886 has 318 MA's), (114, 2994), (139, 3069), (193, 3261),

Gene: Kalnoky\_6 Start: 2888, Stop: 3538, Start Num: 41  
Candidate Starts for Kalnoky\_6:  
(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: Kalpine\_8 Start: 5367, Stop: 6047, Start Num: 41  
Candidate Starts for Kalpine\_8:  
(Start: 41 @5367 has 318 MA's), (138, 5547), (252, 5910),

Gene: Kampy\_5 Start: 2723, Stop: 3385, Start Num: 41  
Candidate Starts for Kampy\_5:  
(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Katalie136\_5 Start: 2733, Stop: 3395, Start Num: 41  
Candidate Starts for Katalie136\_5:  
(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: KatherineG\_8 Start: 4550, Stop: 5224, Start Num: 63  
Candidate Starts for KatherineG\_8:  
(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Kazan\_8 Start: 4661, Stop: 5365, Start Num: 35  
Candidate Starts for Kazan\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5171), (276, 5357),

Gene: Kerberos\_35 Start: 24412, Stop: 25083, Start Num: 42  
Candidate Starts for Kerberos\_35:  
(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: Kimona\_29 Start: 22444, Stop: 23019, Start Num: 90  
Candidate Starts for Kimona\_29:  
(34, 22342), (Start: 90 @22444 has 2 MA's), (Start: 99 @22459 has 3 MA's), (102, 22468), (137, 22552), (145, 22588), (166, 22654), (167, 22660), (260, 22954),

Gene: Kingmustik0402\_5 Start: 2714, Stop: 3376, Start Num: 41  
Candidate Starts for Kingmustik0402\_5:  
(Start: 41 @2714 has 318 MA's), (111, 2819), (212, 3131), (214, 3134), (274, 3359),

Gene: Kipper29\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Kipper29\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Koduck\_32 Start: 23597, Stop: 24238, Start Num: 53

Candidate Starts for Koduck\_32:

(Start: 41 @23579 has 318 MA's), (Start: 42 @23582 has 21 MA's), (53, 23597), (114, 23696), (145, 23801), (170, 23885), (214, 24011), (219, 24041),

Gene: Koko\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Koko\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Koreni\_5 Start: 2722, Stop: 3393, Start Num: 41

Candidate Starts for Koreni\_5:

(Start: 41 @2722 has 318 MA's), (189, 3082),

Gene: Kratark\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Kratark\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Kremtemulon\_4 Start: 2722, Stop: 3387, Start Num: 41

Candidate Starts for Kremtemulon\_4:

(Start: 41 @2722 has 318 MA's), (94, 2803), (Start: 99 @2809 has 3 MA's), (162, 2989), (198, 3115),

Gene: Kristoff\_6 Start: 3001, Stop: 3648, Start Num: 41

Candidate Starts for Kristoff\_6:

(Start: 41 @3001 has 318 MA's), (114, 3109), (137, 3178), (162, 3268), (191, 3361),

Gene: Kudetre\_32 Start: 27445, Stop: 28155, Start Num: 37

Candidate Starts for Kudetre\_32:

(Start: 37 @27445 has 6 MA's), (137, 27649), (139, 27655), (159, 27730), (174, 27778), (176, 27781), (177, 27784), (199, 27859), (244, 27988), (265, 28087), (273, 28129),

Gene: Kyee\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Kyee\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: L5\_32 Start: 23536, Stop: 24198, Start Num: 42

Candidate Starts for L5\_32:

(Start: 42 @23536 has 21 MA's), (53, 23551), (84, 23608), (114, 23656), (145, 23761), (170, 23845), (214, 23971), (219, 24001),

Gene: LBerry\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for LBerry\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: LHTSCC\_5 Start: 2722, Stop: 3387, Start Num: 41

Candidate Starts for LHTSCC\_5:

(Start: 41 @2722 has 318 MA's), (137, 2899), (162, 2989), (198, 3115),

Gene: Lambert1\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Lambert1\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Landor\_8 Start: 5074, Stop: 5736, Start Num: 41  
Candidate Starts for Landor\_8:  
(Start: 41 @5074 has 318 MA's), (94, 5155), (111, 5179), (162, 5335), (198, 5461), (214, 5488),

Gene: LappelDuVide\_4 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for LappelDuVide\_4:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: LarryKay\_5 Start: 2720, Stop: 3352, Start Num: 41  
Candidate Starts for LarryKay\_5:  
(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: LastResort\_8 Start: 4403, Stop: 5071, Start Num: 54  
Candidate Starts for LastResort\_8:  
(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: Lemur\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Lemur\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: LeoAvram\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for LeoAvram\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Leogania\_8 Start: 5401, Stop: 6051, Start Num: 41  
Candidate Starts for Leogania\_8:  
(Start: 41 @5401 has 318 MA's), (88, 5473), (137, 5578), (152, 5626), (245, 5917),

Gene: Lev2\_5 Start: 3446, Stop: 4087, Start Num: 66  
Candidate Starts for Lev2\_5:  
(Start: 66 @3446 has 14 MA's), (120, 3554), (135, 3614), (148, 3662), (151, 3668), (162, 3707), (175, 3752), (177, 3758),

Gene: Lilbunny\_7 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Lilbunny\_7:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Lilith\_5 Start: 2891, Stop: 3550, Start Num: 41  
Candidate Starts for Lilith\_5:  
(Start: 41 @2891 has 318 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: LittleB\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for LittleB\_5:  
(Start: 41 @2722 has 318 MA's), (76, 2773), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: LittleCherry\_5 Start: 3604, Stop: 4266, Start Num: 49  
Candidate Starts for LittleCherry\_5:  
(Start: 49 @3604 has 39 MA's), (Start: 57 @3616 has 1 MA's), (70, 3640), (77, 3655), (85, 3670), (128, 3745), (164, 3874), (235, 4096),

Gene: LittleGuy\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for LittleGuy\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (214, 3142), (274, 3367),

Gene: LochMonster\_5 Start: 2720, Stop: 3385, Start Num: 41

Candidate Starts for LochMonster\_5:

(Start: 41 @2720 has 318 MA's), (94, 2801), (Start: 99 @2807 has 3 MA's), (162, 2987), (198, 3113),

Gene: Lokk\_9 Start: 5386, Stop: 6063, Start Num: 41

Candidate Starts for Lokk\_9:

(Start: 41 @5386 has 318 MA's), (67, 5422), (138, 5566), (165, 5662), (180, 5710), (214, 5800), (220, 5827),

Gene: LoneWolf\_8 Start: 4997, Stop: 5665, Start Num: 41

Candidate Starts for LoneWolf\_8:

(Start: 41 @4997 has 318 MA's), (138, 5171), (145, 5204), (196, 5387), (251, 5528), (260, 5588),

Gene: Lorenzo\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Lorenzo\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Loser\_8 Start: 5253, Stop: 5897, Start Num: 41

Candidate Starts for Loser\_8:

(Start: 41 @5253 has 318 MA's), (138, 5433), (155, 5484),

Gene: Louie6\_5 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for Louie6\_5:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933), (260, 3287),

Gene: Lucivia\_8 Start: 5407, Stop: 6069, Start Num: 49

Candidate Starts for Lucivia\_8:

(Start: 49 @5407 has 39 MA's), (85, 5473), (128, 5548), (159, 5659), (235, 5899), (251, 5944),

Gene: Lucyedi\_8 Start: 4875, Stop: 5543, Start Num: 41

Candidate Starts for Lucyedi\_8:

(Start: 41 @4875 has 318 MA's), (81, 4932), (100, 4968), (170, 5169), (235, 5391),

Gene: LugYA\_7 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for LugYA\_7:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Lunsford\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Lunsford\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: MA5\_5 Start: 2468, Stop: 3118, Start Num: 41

Candidate Starts for MA5\_5:

(Start: 41 @2468 has 318 MA's), (139, 2651), (193, 2843),

Gene: MK4\_5 Start: 2748, Stop: 3383, Start Num: 41

Candidate Starts for MK4\_5:

(Start: 41 @2748 has 318 MA's), (139, 2931), (145, 2961), (169, 3039), (180, 3072),

Gene: MaCh\_8 Start: 5407, Stop: 6069, Start Num: 49

Candidate Starts for MaCh\_8:

(Start: 49 @5407 has 39 MA's), (85, 5473), (128, 5548), (159, 5659), (235, 5899),

Gene: Mabel\_8 Start: 5422, Stop: 6084, Start Num: 49

Candidate Starts for Mabel\_8:

(Start: 49 @5422 has 39 MA's), (85, 5488), (128, 5563), (159, 5674), (235, 5914), (251, 5959),

Gene: MadMarie\_5 Start: 2900, Stop: 3559, Start Num: 41

Candidate Starts for MadMarie\_5:

(Start: 41 @2900 has 318 MA's), (Start: 125 @3029 has 1 MA's), (139, 3083), (147, 3116), (167, 3185), (273, 3539),

Gene: Mainiac\_5 Start: 2891, Stop: 3550, Start Num: 41

Candidate Starts for Mainiac\_5:

(Start: 41 @2891 has 318 MA's), (Start: 125 @3020 has 1 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: MakoManhole\_39 Start: 33947, Stop: 34594, Start Num: 54

Candidate Starts for MakoManhole\_39:

(Start: 54 @33947 has 15 MA's), (87, 34004), (103, 34034), (107, 34037), (114, 34055), (167, 34229), (176, 34259), (177, 34262), (181, 34274), (241, 34439), (275, 34577),

Gene: Malec\_33 Start: 25107, Stop: 25760, Start Num: 41

Candidate Starts for Malec\_33:

(30, 25035), (Start: 41 @25107 has 318 MA's), (67, 25149), (145, 25326), (164, 25386), (165, 25389), (170, 25410), (181, 25443), (207, 25527), (248, 25641), (263, 25707),

Gene: Malinsilva\_7 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for Malinsilva\_7:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3529),

Gene: Maminiaina\_8 Start: 4988, Stop: 5638, Start Num: 41

Candidate Starts for Maminiaina\_8:

(Start: 41 @4988 has 318 MA's), (138, 5165), (145, 5198), (212, 5402), (242, 5498),

Gene: Manu\_6 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for Manu\_6:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: MarQuardt\_5 Start: 2899, Stop: 3558, Start Num: 41

Candidate Starts for MarQuardt\_5:

(Start: 41 @2899 has 318 MA's), (139, 3082), (147, 3115), (167, 3184), (273, 3538),

Gene: Margo\_5 Start: 2764, Stop: 3441, Start Num: 41

Candidate Starts for Margo\_5:

(Start: 41 @2764 has 318 MA's), (137, 2941), (145, 2977), (179, 3085), (260, 3364),

Gene: Marie\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Marie\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Marietta\_47 Start: 33564, Stop: 34148, Start Num: 113

Candidate Starts for Marietta\_47:

(Start: 113 @33564 has 1 MA's), (117, 33573), (137, 33642), (138, 33645), (160, 33729), (178, 33780), (212, 33882), (232, 33966), (241, 33975), (242, 33978),

Gene: Marius\_6 Start: 2888, Stop: 3538, Start Num: 41  
Candidate Starts for Marius\_6:  
(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: MarysWell\_4 Start: 3572, Stop: 4234, Start Num: 49  
Candidate Starts for MarysWell\_4:  
(Start: 49 @3572 has 39 MA's), (70, 3608), (77, 3623), (85, 3638), (128, 3713), (164, 3842), (235, 4064),

Gene: Maselop\_24 Start: 12653, Stop: 13330, Start Num: 43  
Candidate Starts for Maselop\_24:  
(Start: 43 @12653 has 5 MA's), (85, 12731), (103, 12764), (115, 12788), (119, 12797), (132, 12848), (135, 12857), (172, 12983), (204, 13091), (274, 13307),

Gene: Maverick\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Maverick\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Maxo\_5 Start: 2723, Stop: 3385, Start Num: 41  
Candidate Starts for Maxo\_5:  
(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Mazhar510\_5 Start: 2723, Stop: 3385, Start Num: 41  
Candidate Starts for Mazhar510\_5:  
(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: McFly\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for McFly\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: McGonagall\_17 Start: 12036, Stop: 12680, Start Num: 58  
Candidate Starts for McGonagall\_17:  
(Start: 58 @12036 has 2 MA's), (139, 12207), (203, 12432), (230, 12507), (232, 12513), (242, 12525), (250, 12546), (265, 12612),

Gene: Medusa\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Medusa\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: MeeZee\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for MeeZee\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Melvin\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Melvin\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Methuselah\_5 Start: 2720, Stop: 3352, Start Num: 41  
Candidate Starts for Methuselah\_5:  
(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Micasa\_4 Start: 3572, Stop: 4234, Start Num: 49

Candidate Starts for Micasa\_4:

(Start: 49 @3572 has 39 MA's), (Start: 57 @3584 has 1 MA's), (70, 3608), (77, 3623), (85, 3638), (128, 3713), (164, 3842), (235, 4064),

Gene: Microwolf\_5 Start: 2899, Stop: 3558, Start Num: 41

Candidate Starts for Microwolf\_5:

(Start: 41 @2899 has 318 MA's), (139, 3082), (147, 3115), (167, 3184), (273, 3538),

Gene: Midas2\_5 Start: 3571, Stop: 4233, Start Num: 49

Candidate Starts for Midas2\_5:

(Start: 49 @3571 has 39 MA's), (Start: 57 @3583 has 1 MA's), (70, 3607), (77, 3622), (85, 3637), (128, 3712), (164, 3841), (235, 4063),

Gene: Miko\_9 Start: 5364, Stop: 6041, Start Num: 41

Candidate Starts for Miko\_9:

(Start: 41 @5364 has 318 MA's), (67, 5400), (138, 5544), (165, 5640), (214, 5778), (220, 5805),

Gene: Milcery\_5 Start: 3602, Stop: 4264, Start Num: 49

Candidate Starts for Milcery\_5:

(Start: 49 @3602 has 39 MA's), (Start: 57 @3614 has 1 MA's), (70, 3638), (77, 3653), (85, 3668), (128, 3743), (164, 3872), (235, 4094),

Gene: Millski\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Millski\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: MinecraftSteve\_9 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for MinecraftSteve\_9:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Miramae\_5 Start: 2718, Stop: 3383, Start Num: 41

Candidate Starts for Miramae\_5:

(Start: 41 @2718 has 318 MA's), (94, 2799), (162, 2985), (198, 3111),

Gene: Misomonster\_7 Start: 2719, Stop: 3351, Start Num: 41

Candidate Starts for Misomonster\_7:

(Start: 41 @2719 has 318 MA's), (139, 2902), (141, 2905), (145, 2932),

Gene: MissWhite\_32 Start: 23704, Stop: 24357, Start Num: 41

Candidate Starts for MissWhite\_32:

(Start: 41 @23704 has 318 MA's), (114, 23818), (137, 23887), (143, 23917), (145, 23923), (180, 24031), (224, 24172), (253, 24244),

Gene: ModicumRichard\_26 Start: 23920, Stop: 24630, Start Num: 39

Candidate Starts for ModicumRichard\_26:

(4, 23503), (16, 23758), (Start: 39 @23920 has 5 MA's), (Start: 48 @23935 has 1 MA's), (Start: 57 @23950 has 1 MA's), (156, 24202), (218, 24394),

Gene: MoneyMay\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for MoneyMay\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Morpher26\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Morpher26\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Morrow\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Morrow\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: MossRose\_39 Start: 33926, Stop: 34573, Start Num: 54

Candidate Starts for MossRose\_39:

(Start: 54 @33926 has 15 MA's), (87, 33983), (103, 34013), (107, 34016), (114, 34034), (167, 34208), (179, 34244), (214, 34340), (275, 34556),

Gene: MuchMore\_7 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for MuchMore\_7:

(Start: 41 @2890 has 318 MA's), (139, 3073), (146, 3103), (147, 3106), (167, 3175), (273, 3529),

Gene: Mulciber\_8 Start: 5413, Stop: 6075, Start Num: 49

Candidate Starts for Mulciber\_8:

(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (235, 5905), (251, 5950),

Gene: Munch\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Munch\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: Mundrea\_5 Start: 2713, Stop: 3378, Start Num: 41

Candidate Starts for Mundrea\_5:

(Start: 41 @2713 has 318 MA's), (94, 2794), (Start: 99 @2800 has 3 MA's), (137, 2890), (162, 2980), (198, 3106),

Gene: MyraDee\_5 Start: 2390, Stop: 3028, Start Num: 64

Candidate Starts for MyraDee\_5:

(Start: 64 @2390 has 1 MA's), (108, 2477), (112, 2486), (164, 2666),

Gene: Myrna\_134 Start: 80964, Stop: 81575, Start Num: 99

Candidate Starts for Myrna\_134:

(5, 80451), (Start: 99 @80964 has 3 MA's), (136, 81078), (156, 81147), (203, 81306), (205, 81309), (242, 81408), (259, 81474), (267, 81516), (274, 81558),

Gene: Myrna\_113 Start: 61658, Stop: 62509, Start Num: 106

Candidate Starts for Myrna\_113:

(74, 61583), (Start: 106 @61658 has 1 MA's), (Start: 116 @61682 has 1 MA's), (126, 61715), (157, 61844), (158, 61847), (163, 61865), (168, 61886), (169, 61889), (206, 62153), (230, 62264), (235, 62282), (276, 62498),

Gene: Myxus\_8 Start: 5239, Stop: 5868, Start Num: 44

Candidate Starts for Myxus\_8:

(Start: 44 @5239 has 7 MA's), (70, 5278), (139, 5419), (145, 5449), (153, 5464),

Gene: NHagos\_37 Start: 32544, Stop: 33191, Start Num: 56

Candidate Starts for NHagos\_37:

(Start: 56 @32544 has 2 MA's), (87, 32601), (103, 32631), (107, 32634), (114, 32652), (138, 32718), (162, 32808), (177, 32859), (241, 33036), (275, 33174),



Gene: NadineRae\_45 Start: 32686, Stop: 33396, Start Num: 37  
Candidate Starts for NadineRae\_45:  
(Start: 37 @32686 has 6 MA's), (Start: 113 @32824 has 1 MA's), (172, 33025),

Gene: Naji\_35 Start: 24412, Stop: 25083, Start Num: 42  
Candidate Starts for Naji\_35:  
(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: NearlyHeadless\_5 Start: 3362, Stop: 4021, Start Num: 41  
Candidate Starts for NearlyHeadless\_5:  
(Start: 41 @3362 has 318 MA's), (80, 3419), (85, 3428), (110, 3461),

Gene: Nebs\_5 Start: 2722, Stop: 3384, Start Num: 41  
Candidate Starts for Nebs\_5:  
(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (218, 3169), (274, 3367),

Gene: Nebulosus\_8 Start: 4403, Stop: 5071, Start Num: 54  
Candidate Starts for Nebulosus\_8:  
(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: Neeharika16\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Neeharika16\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Nemo27\_5 Start: 2721, Stop: 3383, Start Num: 41  
Candidate Starts for Nemo27\_5:  
(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Newrala\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Newrala\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: NicoleTera\_8 Start: 5250, Stop: 5927, Start Num: 47  
Candidate Starts for NicoleTera\_8:  
(Start: 47 @5250 has 2 MA's), (Start: 64 @5280 has 1 MA's), (88, 5322), (137, 5427), (160, 5508), (179, 5568), (249, 5799),

Gene: Noella\_5 Start: 2764, Stop: 3423, Start Num: 41  
Candidate Starts for Noella\_5:  
(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Noelle\_5 Start: 2787, Stop: 3449, Start Num: 41  
Candidate Starts for Noelle\_5:  
(Start: 41 @2787 has 318 MA's), (111, 2892), (212, 3204), (214, 3207), (274, 3432),

Gene: Norbert\_4 Start: 2764, Stop: 3423, Start Num: 41  
Candidate Starts for Norbert\_4:  
(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: NorthStar\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for NorthStar\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: NotAPhaseMom\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for NotAPhaseMom\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: NothingSpecial\_7 Start: 5206, Stop: 5850, Start Num: 41

Candidate Starts for NothingSpecial\_7:

(Start: 41 @5206 has 318 MA's), (Start: 60 @5230 has 2 MA's), (88, 5278), (147, 5422), (221, 5650),

Gene: Nyxis\_5 Start: 2725, Stop: 3387, Start Num: 41

Candidate Starts for Nyxis\_5:

(Start: 41 @2725 has 318 MA's), (111, 2830), (214, 3145), (274, 3370),

Gene: OKCentral2016\_5 Start: 2376, Stop: 3164, Start Num: 41

Candidate Starts for OKCentral2016\_5:

(Start: 41 @2376 has 318 MA's), (Start: 99 @2463 has 3 MA's), (137, 2553), (174, 2685), (185, 2826), (191, 2877), (192, 2880), (204, 2916), (274, 3150),

Gene: OKaNui\_5 Start: 2487, Stop: 3149, Start Num: 41

Candidate Starts for OKaNui\_5:

(Start: 41 @2487 has 318 MA's), (111, 2592), (212, 2904), (214, 2907), (274, 3132),

Gene: ObLaDi\_26 Start: 23899, Stop: 24609, Start Num: 39

Candidate Starts for ObLaDi\_26:

(4, 23482), (16, 23737), (Start: 39 @23899 has 5 MA's), (Start: 48 @23914 has 1 MA's), (Start: 57 @23929 has 1 MA's), (156, 24181), (218, 24373),

Gene: Obama12\_5 Start: 2724, Stop: 3389, Start Num: 41

Candidate Starts for Obama12\_5:

(Start: 41 @2724 has 318 MA's), (137, 2901), (162, 2991), (198, 3117),

Gene: Octobien14\_34 Start: 28125, Stop: 28844, Start Num: 37

Candidate Starts for Octobien14\_34:

(Start: 37 @28125 has 6 MA's), (70, 28179), (82, 28200), (129, 28305), (137, 28338), (139, 28344), (159, 28419), (199, 28548), (216, 28587), (244, 28677), (265, 28776), (273, 28818),

Gene: Odin\_31 Start: 23199, Stop: 23798, Start Num: 75

Candidate Starts for Odin\_31:

(Start: 75 @23199 has 3 MA's), (91, 23232), (137, 23319), (170, 23439), (207, 23556),

Gene: Ohfah\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Ohfah\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: OlanP\_5 Start: 3068, Stop: 3718, Start Num: 41

Candidate Starts for OlanP\_5:

(Start: 41 @3068 has 318 MA's), (114, 3176), (139, 3251), (193, 3443),

Gene: Ollie\_5 Start: 2809, Stop: 3468, Start Num: 41

Candidate Starts for Ollie\_5:

(Start: 41 @2809 has 318 MA's), (Start: 99 @2896 has 3 MA's), (Start: 125 @2938 has 1 MA's), (139, 2992), (162, 3076), (167, 3094),

Gene: Oofda\_8 Start: 4406, Stop: 5080, Start Num: 63

Candidate Starts for Oofda\_8:

(Start: 63 @4406 has 10 MA's), (105, 4487), (123, 4523), (161, 4670), (177, 4718),

Gene: Orange\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Orange\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902), (251, 5947),

Gene: P28Green\_5 Start: 2630, Stop: 3265, Start Num: 41

Candidate Starts for P28Green\_5:

(Start: 41 @2630 has 318 MA's), (145, 2843),

Gene: PGHhamlin\_7 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for PGHhamlin\_7:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3529),

Gene: PackMan\_8 Start: 5239, Stop: 5868, Start Num: 44

Candidate Starts for PackMan\_8:

(Start: 44 @5239 has 7 MA's), (70, 5278), (139, 5419), (145, 5449), (153, 5464),

Gene: PainterBoy\_8 Start: 4875, Stop: 5543, Start Num: 41

Candidate Starts for PainterBoy\_8:

(Start: 41 @4875 has 318 MA's), (81, 4932), (100, 4968), (170, 5169), (235, 5391),

Gene: Palestino\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Palestino\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Panamaxus\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Panamaxus\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Pawn\_5 Start: 2888, Stop: 3538, Start Num: 41

Candidate Starts for Pawn\_5:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (193, 3263),

Gene: Peaches\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Peaches\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Pembroke\_5 Start: 2890, Stop: 3558, Start Num: 41

Candidate Starts for Pembroke\_5:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3538),

Gene: Penny1\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Penny1\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Perkunas\_28 Start: 19169, Stop: 19819, Start Num: 61

Candidate Starts for Perknas\_28:

(Start: 61 @19169 has 12 MA's), (103, 19253), (195, 19556), (202, 19571), (270, 19766), (275, 19802),

Gene: Perplexer\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Perplexer\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: PeterPeter\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for PeterPeter\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Petersenfast\_7 Start: 5413, Stop: 6075, Start Num: 49

Candidate Starts for Petersenfast\_7:

(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (159, 5665), (235, 5905), (251, 5950),

Gene: PetiteSangsue\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for PetiteSangsue\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: Petito\_27 Start: 18884, Stop: 19531, Start Num: 61

Candidate Starts for Petito\_27:

(Start: 61 @18884 has 12 MA's), (Start: 66 @18896 has 14 MA's), (89, 18941), (115, 18989), (177, 19193), (242, 19376), (276, 19517),

Gene: PetterN\_5 Start: 3407, Stop: 4048, Start Num: 66

Candidate Starts for PetterN\_5:

(Start: 66 @3407 has 14 MA's), (87, 3443), (98, 3464), (110, 3491), (148, 3623), (172, 3704), (177, 3719), (263, 4025),

Gene: Ph8s\_33 Start: 23091, Stop: 23747, Start Num: 42

Candidate Starts for Ph8s\_33:

(7, 22788), (Start: 42 @23091 has 21 MA's), (53, 23106), (96, 23181), (114, 23205), (Start: 125 @23226 has 1 MA's), (137, 23274), (139, 23280), (145, 23310), (161, 23361), (170, 23394), (180, 23421), (187, 23454), (214, 23520), (219, 23550), (225, 23568),

Gene: Phabba\_116 Start: 59776, Stop: 60567, Start Num: 116

Candidate Starts for Phabba\_116:

(28, 59518), (Start: 106 @59752 has 1 MA's), (Start: 116 @59776 has 1 MA's), (144, 59893), (158, 59941), (163, 59959), (168, 59980), (169, 59983), (182, 60094), (183, 60109), (184, 60121), (190, 60187), (226, 60304), (233, 60346), (237, 60379), (238, 60400), (239, 60403),

Gene: Phabba\_139 Start: 79960, Stop: 80571, Start Num: 99

Candidate Starts for Phabba\_139:

(5, 79447), (Start: 99 @79960 has 3 MA's), (136, 80074), (177, 80215), (180, 80221), (194, 80281), (203, 80302), (205, 80305), (274, 80554),

Gene: Phacado\_5 Start: 2721, Stop: 3383, Start Num: 41

Candidate Starts for Phacado\_5:

(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Phaded\_8 Start: 5071, Stop: 5733, Start Num: 41

Candidate Starts for Phaded\_8:

(Start: 41 @5071 has 318 MA's), (94, 5152), (162, 5338), (198, 5464), (274, 5716),

Gene: Phaeder\_8 Start: 5239, Stop: 5868, Start Num: 44

Candidate Starts for Phaeder\_8:

(Start: 44 @5239 has 7 MA's), (70, 5278), (139, 5419), (145, 5449), (153, 5464),

Gene: Phantastic\_5 Start: 2835, Stop: 3479, Start Num: 41

Candidate Starts for Phantastic\_5:

(Start: 41 @2835 has 318 MA's), (76, 2886), (96, 2919), (139, 3018), (180, 3159), (230, 3324),

Gene: Phayeta\_34 Start: 32624, Stop: 33289, Start Num: 36

Candidate Starts for Phayeta\_34:

(Start: 36 @32624 has 1 MA's), (40, 32636), (Start: 57 @32660 has 1 MA's), (86, 32708), (Start: 90 @32714 has 2 MA's), (93, 32720), (97, 32726), (114, 32750), (139, 32825), (145, 32855), (164, 32915), (167, 32927), (172, 32945), (200, 33044), (202, 33047), (240, 33152), (243, 33158), (251, 33176), (272, 33263),

Gene: Phelipe\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Phelipe\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Phighter1804\_5 Start: 2721, Stop: 3386, Start Num: 41

Candidate Starts for Phighter1804\_5:

(Start: 41 @2721 has 318 MA's), (94, 2802), (Start: 99 @2808 has 3 MA's), (162, 2988), (198, 3114),

Gene: Phillis\_5 Start: 3347, Stop: 4006, Start Num: 41

Candidate Starts for Phillis\_5:

(Start: 41 @3347 has 318 MA's), (80, 3404), (110, 3446), (241, 3863),

Gene: PhishRPhriends\_5 Start: 2400, Stop: 3035, Start Num: 41

Candidate Starts for PhishRPhriends\_5:

(Start: 41 @2400 has 318 MA's), (133, 2565), (135, 2571), (145, 2613), (167, 2685), (173, 2706), (214, 2808),

Gene: Phlei\_5 Start: 5021, Stop: 5680, Start Num: 49

Candidate Starts for Phlei\_5:

(Start: 49 @5021 has 39 MA's),

Gene: Phlorence\_5 Start: 3728, Stop: 4375, Start Num: 62

Candidate Starts for Phlorence\_5:

(Start: 49 @3710 has 39 MA's), (Start: 62 @3728 has 6 MA's), (85, 3776), (Start: 99 @3797 has 3 MA's), (139, 3893),

Gene: Phoebe\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Phoebe\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Phonnegut\_8 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for Phonnegut\_8:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: Phontbonne\_5 Start: 2720, Stop: 3382, Start Num: 41

Candidate Starts for Phontbonne\_5:

(Start: 41 @2720 has 318 MA's), (111, 2825), (214, 3140), (274, 3365),

Gene: Phoxy\_5 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for Phoxy\_5:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Phranny\_6 Start: 2888, Stop: 3535, Start Num: 41

Candidate Starts for Phranny\_6:

(Start: 41 @2888 has 318 MA's), (114, 2996), (139, 3071), (147, 3104),

Gene: PickleBack\_5 Start: 3447, Stop: 4088, Start Num: 66

Candidate Starts for PickleBack\_5:

(Start: 66 @3447 has 14 MA's), (120, 3555), (135, 3615), (148, 3663), (151, 3669), (162, 3708), (175, 3753), (177, 3759),

Gene: Pioneer\_8 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for Pioneer\_8:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: Pipcraft\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Pipcraft\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Pistachio\_5 Start: 2377, Stop: 3027, Start Num: 41

Candidate Starts for Pistachio\_5:

(Start: 41 @2377 has 318 MA's), (162, 2644), (273, 3007),

Gene: Pmask\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Pmask\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Pocahontas\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Pocahontas\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Polymorphads\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Polymorphads\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Polyzuki\_24 Start: 12645, Stop: 13322, Start Num: 43

Candidate Starts for Polyzuki\_24:

(Start: 43 @12645 has 5 MA's), (85, 12723), (103, 12756), (115, 12780), (119, 12789), (132, 12840), (135, 12849), (172, 12975), (204, 13083), (274, 13299),

Gene: Pomar16\_35 Start: 24453, Stop: 25124, Start Num: 42

Candidate Starts for Pomar16\_35:

(Start: 42 @24453 has 21 MA's), (Start: 99 @24543 has 3 MA's), (114, 24564), (137, 24633), (145, 24669), (160, 24717), (230, 24957), (231, 24960), (263, 25059), (268, 25074),

Gene: Popcicle\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Popcicle\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: PotatoSplit\_6 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for PotatoSplit\_6:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Priamo\_8 Start: 4676, Stop: 5344, Start Num: 35

Candidate Starts for Priamo\_8:

(Start: 35 @4676 has 40 MA's), (203, 5087), (227, 5150), (276, 5336),

Gene: Priya\_8 Start: 5225, Stop: 5896, Start Num: 41

Candidate Starts for Priya\_8:

(Start: 41 @5225 has 318 MA's), (145, 5435), (167, 5507), (214, 5648), (245, 5741), (260, 5819), (273, 5873),

Gene: Pukovnik\_8 Start: 5014, Stop: 5685, Start Num: 41

Candidate Starts for Pukovnik\_8:

(Start: 41 @5014 has 318 MA's), (137, 5188), (145, 5224), (180, 5335), (232, 5515),

Gene: Pumbaa\_5 Start: 2720, Stop: 3385, Start Num: 41

Candidate Starts for Pumbaa\_5:

(Start: 41 @2720 has 318 MA's), (94, 2801), (Start: 99 @2807 has 3 MA's), (162, 2987), (198, 3113),

Gene: Puppy\_5 Start: 2449, Stop: 3099, Start Num: 41

Candidate Starts for Puppy\_5:

(Start: 41 @2449 has 318 MA's), (139, 2632), (162, 2716),

Gene: PurpleHaze\_5 Start: 2887, Stop: 3537, Start Num: 41

Candidate Starts for PurpleHaze\_5:

(Start: 41 @2887 has 318 MA's), (114, 2995), (139, 3070), (193, 3262),

Gene: Qobbit\_8 Start: 5224, Stop: 5895, Start Num: 41

Candidate Starts for Qobbit\_8:

(Start: 41 @5224 has 318 MA's), (137, 5398), (145, 5434), (214, 5647), (260, 5818), (273, 5872),

Gene: QuinnKiro\_4 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for QuinnKiro\_4:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Rachaly\_9 Start: 5384, Stop: 6061, Start Num: 41

Candidate Starts for Rachaly\_9:

(Start: 41 @5384 has 318 MA's), (67, 5420), (138, 5564), (165, 5660), (180, 5708), (214, 5798), (220, 5825),

Gene: Rahalelujah\_31 Start: 23978, Stop: 24619, Start Num: 41

Candidate Starts for Rahalelujah\_31:

(30, 23906), (Start: 41 @23978 has 318 MA's), (Start: 125 @24113 has 1 MA's), (137, 24161), (207, 24392), (273, 24599),

Gene: ReMo\_8 Start: 4403, Stop: 5071, Start Num: 54

Candidate Starts for ReMo\_8:

(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: Reba\_6 Start: 2561, Stop: 3208, Start Num: 41

Candidate Starts for Reba\_6:

(Start: 41 @2561 has 318 MA's), (114, 2669), (139, 2744), (147, 2777),

Gene: Rebeuca\_6 Start: 3002, Stop: 3649, Start Num: 41

Candidate Starts for Rebeuca\_6:

(Start: 41 @3002 has 318 MA's), (114, 3110), (137, 3179), (162, 3269), (191, 3362),

Gene: RedRock\_8 Start: 5246, Stop: 5983, Start Num: 41

Candidate Starts for RedRock\_8:

(Start: 41 @5246 has 318 MA's), (179, 5567), (223, 5717), (236, 5780),

Gene: Relief\_5 Start: 2723, Stop: 3385, Start Num: 41

Candidate Starts for Relief\_5:

(Start: 41 @2723 has 318 MA's), (111, 2828), (179, 3044), (212, 3140), (214, 3143), (274, 3368),

Gene: Remus\_8 Start: 4403, Stop: 5071, Start Num: 54

Candidate Starts for Remus\_8:

(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: ResDef\_4 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for ResDef\_4:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: RhynO\_5 Start: 2841, Stop: 3488, Start Num: 41

Candidate Starts for RhynO\_5:

(Start: 41 @2841 has 318 MA's), (Start: 60 @2865 has 2 MA's), (Start: 99 @2928 has 3 MA's), (137, 3018), (162, 3108), (191, 3201),

Gene: Rifter\_8 Start: 4654, Stop: 5352, Start Num: 35

Candidate Starts for Rifter\_8:

(Start: 35 @4654 has 40 MA's), (134, 4855), (227, 5158), (276, 5344),

Gene: Roary\_5 Start: 3347, Stop: 4006, Start Num: 41

Candidate Starts for Roary\_5:

(Start: 41 @3347 has 318 MA's), (80, 3404), (110, 3446), (241, 3863),

Gene: Rockstar\_5 Start: 2748, Stop: 3383, Start Num: 41

Candidate Starts for Rockstar\_5:

(Start: 41 @2748 has 318 MA's), (139, 2931), (145, 2961), (169, 3039), (180, 3072),

Gene: Roksolana\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Roksolana\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Romney\_5 Start: 2721, Stop: 3383, Start Num: 41

Candidate Starts for Romney\_5:

(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Roosevelt\_5 Start: 2722, Stop: 3384, Start Num: 41



Candidate Starts for Roosevelt\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Rosalind\_8 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for Rosalind\_8:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Ruin\_5 Start: 2721, Stop: 3383, Start Num: 41

Candidate Starts for Ruin\_5:

(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Rummer\_5 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for Rummer\_5:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Sabertooth\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Sabertooth\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Sabia\_5 Start: 2891, Stop: 3550, Start Num: 41

Candidate Starts for Sabia\_5:

(Start: 41 @2891 has 318 MA's), (Start: 125 @3020 has 1 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: Sabinator\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Sabinator\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Sadboi\_34 Start: 30140, Stop: 30934, Start Num: 21

Candidate Starts for Sadboi\_34:

(12, 30062), (13, 30074), (14, 30077), (Start: 21 @30140 has 1 MA's), (26, 30167), (33, 30227), (76, 30329), (109, 30392), (165, 30563), (247, 30797),

Gene: Saintus\_5 Start: 3362, Stop: 4021, Start Num: 41

Candidate Starts for Saintus\_5:

(Start: 41 @3362 has 318 MA's), (80, 3419), (85, 3428), (110, 3461), (241, 3878),

Gene: Salz\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Salz\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (235, 5902), (251, 5947),

Gene: SaturnRing\_4 Start: 2830, Stop: 3480, Start Num: 41

Candidate Starts for SaturnRing\_4:

(Start: 41 @2830 has 318 MA's), (162, 3097), (273, 3460),

Gene: Scamp\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Scamp\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Scherzo\_8 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for Scherzo\_8:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: ScoobyDoobyDoo\_130 Start: 79579, Stop: 80151, Start Num: 99

Candidate Starts for ScoobyDoobyDoo\_130:

(25, 79357), (Start: 42 @79477 has 21 MA's), (Start: 99 @79579 has 3 MA's), (140, 79696), (142, 79699), (145, 79732), (165, 79795), (241, 80008), (269, 80110),

Gene: Scorpia\_5 Start: 3408, Stop: 4049, Start Num: 66

Candidate Starts for Scorpia\_5:

(Start: 66 @3408 has 14 MA's), (87, 3444), (98, 3465), (110, 3492), (148, 3624), (172, 3705), (177, 3720), (263, 4026),

Gene: Scout\_5 Start: 2346, Stop: 2987, Start Num: 41

Candidate Starts for Scout\_5:

(Start: 41 @2346 has 318 MA's), (96, 2430), (124, 2472), (205, 2748), (213, 2760),

Gene: Sephiroth\_33 Start: 27616, Stop: 28326, Start Num: 37

Candidate Starts for Sephiroth\_33:

(Start: 37 @27616 has 6 MA's), (137, 27820), (139, 27826), (159, 27901), (174, 27949), (176, 27952), (177, 27955), (199, 28030), (244, 28159), (265, 28258), (273, 28300),

Gene: Serenity\_31 Start: 23522, Stop: 24121, Start Num: 75

Candidate Starts for Serenity\_31:

(Start: 75 @23522 has 3 MA's), (91, 23555), (114, 23573), (137, 23642), (160, 23726), (170, 23762), (207, 23879), (261, 24050),

Gene: Shaka\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Shaka\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Sham4\_8 Start: 5413, Stop: 6075, Start Num: 49

Candidate Starts for Sham4\_8:

(Start: 49 @5413 has 39 MA's), (85, 5479), (128, 5554), (159, 5665), (235, 5905), (251, 5950),

Gene: ShayRa\_9 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for ShayRa\_9:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: SheaKeira\_32 Start: 24009, Stop: 24662, Start Num: 41

Candidate Starts for SheaKeira\_32:

(Start: 41 @24009 has 318 MA's), (Start: 106 @24114 has 1 MA's), (114, 24126), (137, 24195), (139, 24201), (141, 24204), (147, 24234), (167, 24303), (180, 24342),

Gene: SheldonCooper\_5 Start: 2723, Stop: 3388, Start Num: 41

Candidate Starts for SheldonCooper\_5:

(Start: 41 @2723 has 318 MA's), (137, 2900), (162, 2990), (198, 3116),

Gene: Shygu2\_5 Start: 2724, Stop: 3389, Start Num: 41

Candidate Starts for Shygu2\_5:

(Start: 41 @2724 has 318 MA's), (137, 2901), (162, 2991), (198, 3117), (274, 3372),

Gene: Skipitt\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Skipitt\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (218, 3169), (274, 3367),

Gene: Smeadley\_5 Start: 3347, Stop: 4006, Start Num: 41

Candidate Starts for Smeadley\_5:

(Start: 41 @3347 has 318 MA's), (80, 3404), (110, 3446), (210, 3764), (241, 3863),

Gene: SmellyB\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for SmellyB\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Snape\_8 Start: 5416, Stop: 6078, Start Num: 49

Candidate Starts for Snape\_8:

(Start: 49 @5416 has 39 MA's), (85, 5482), (128, 5557), (235, 5908), (251, 5953),

Gene: Snickers\_5 Start: 2872, Stop: 3531, Start Num: 41

Candidate Starts for Snickers\_5:

(Start: 41 @2872 has 318 MA's), (Start: 125 @3001 has 1 MA's), (139, 3055), (147, 3088), (167, 3157), (273, 3511),

Gene: SoYo\_5 Start: 2809, Stop: 3468, Start Num: 41

Candidate Starts for SoYo\_5:

(Start: 41 @2809 has 318 MA's), (Start: 125 @2938 has 1 MA's), (139, 2992), (147, 3025), (167, 3094), (273, 3448),

Gene: SoilDragon\_5 Start: 2572, Stop: 3231, Start Num: 41

Candidate Starts for SoilDragon\_5:

(Start: 41 @2572 has 318 MA's), (Start: 99 @2659 has 3 MA's), (Start: 125 @2701 has 1 MA's), (139, 2755), (150, 2794), (162, 2839),

Gene: Soshari\_7 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for Soshari\_7:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Soups\_8 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for Soups\_8:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: Sparxx\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Sparxx\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: SpeedDemon\_430 Start: 40514, Stop: 41227, Start Num: 39

Candidate Starts for SpeedDemon\_430:

(15, 40364), (Start: 39 @40514 has 5 MA's), (Start: 48 @40529 has 1 MA's), (Start: 57 @40544 has 1 MA's), (71, 40565), (Start: 113 @40652 has 1 MA's), (130, 40709), (168, 40844), (171, 40853), (180, 40874), (201, 40943), (242, 41057),

Gene: Spike509\_5 Start: 2720, Stop: 3352, Start Num: 41

Candidate Starts for Spike509\_5:

(Start: 41 @2720 has 318 MA's), (139, 2903), (141, 2906), (145, 2933),

Gene: Spino\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Spino\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142),

Gene: Stagni\_5 Start: 2891, Stop: 3559, Start Num: 41

Candidate Starts for Stagni\_5:

(Start: 41 @2891 has 318 MA's), (Start: 125 @3020 has 1 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3539),

Gene: StarStuff\_35 Start: 24412, Stop: 25083, Start Num: 42

Candidate Starts for StarStuff\_35:

(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: Stasia\_5 Start: 2745, Stop: 3407, Start Num: 41

Candidate Starts for Stasia\_5:

(Start: 41 @2745 has 318 MA's), (94, 2826), (111, 2850),

Gene: SteamedHams\_30 Start: 22667, Stop: 23359, Start Num: 60

Candidate Starts for SteamedHams\_30:

(Start: 60 @22667 has 2 MA's), (Start: 90 @22724 has 2 MA's), (95, 22733), (107, 22754), (132, 22829), (230, 23171),

Gene: Steamy\_8 Start: 5295, Stop: 5924, Start Num: 57

Candidate Starts for Steamy\_8:

(Start: 57 @5295 has 1 MA's), (Start: 99 @5367 has 3 MA's), (101, 5376), (Start: 125 @5424 has 1 MA's), (141, 5481),

Gene: StepMih\_5 Start: 3020, Stop: 3550, Start Num: 125

Candidate Starts for StepMih\_5:

(Start: 41 @2891 has 318 MA's), (Start: 125 @3020 has 1 MA's), (139, 3074), (147, 3107), (167, 3176), (273, 3530),

Gene: Stephig9\_5 Start: 3348, Stop: 4007, Start Num: 41

Candidate Starts for Stephig9\_5:

(Start: 41 @3348 has 318 MA's), (80, 3405), (110, 3447), (241, 3864),

Gene: Stink\_5 Start: 2719, Stop: 3384, Start Num: 41

Candidate Starts for Stink\_5:

(Start: 41 @2719 has 318 MA's), (94, 2800), (162, 2986), (198, 3112),

Gene: Strosahl\_8 Start: 4403, Stop: 5071, Start Num: 54

Candidate Starts for Strosahl\_8:

(Start: 54 @4403 has 15 MA's), (156, 4643), (174, 4709), (218, 4835),

Gene: SuperAwesome\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for SuperAwesome\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: SuperCallie99\_8 Start: 4662, Stop: 5360, Start Num: 35

Candidate Starts for SuperCallie99\_8:

(Start: 35 @4662 has 40 MA's), (227, 5166), (276, 5352),

Gene: Superchunk\_31 Start: 22947, Stop: 23612, Start Num: 41

Candidate Starts for Superchunk\_31:

(Start: 41 @22947 has 318 MA's), (Start: 42 @22950 has 21 MA's), (114, 23061), (137, 23130), (139, 23136), (145, 23166), (170, 23250), (212, 23373), (230, 23445), (268, 23562),

Gene: SwirlSquare\_34 Start: 23197, Stop: 23850, Start Num: 42

Candidate Starts for SwirlSquare\_34:

(Start: 42 @23197 has 21 MA's), (84, 23260), (87, 23266), (114, 23308), (137, 23377), (145, 23413), (170, 23497), (219, 23653), (225, 23671),

Gene: Swirley\_5 Start: 3571, Stop: 4233, Start Num: 49

Candidate Starts for Swirley\_5:

(Start: 49 @3571 has 39 MA's), (Start: 57 @3583 has 1 MA's), (70, 3607), (77, 3622), (85, 3637), (128, 3712), (164, 3841), (235, 4063),

Gene: Switzerland\_8 Start: 4550, Stop: 5224, Start Num: 63

Candidate Starts for Switzerland\_8:

(Start: 63 @4550 has 10 MA's), (105, 4631), (123, 4667), (161, 4814), (177, 4862),

Gene: SydNat\_5 Start: 3697, Stop: 4344, Start Num: 62

Candidate Starts for SydNat\_5:

(Start: 49 @3679 has 39 MA's), (Start: 62 @3697 has 6 MA's), (85, 3745), (Start: 99 @3766 has 3 MA's), (139, 3862), (266, 4291),

Gene: Syleon\_33 Start: 27538, Stop: 28248, Start Num: 37

Candidate Starts for Syleon\_33:

(Start: 37 @27538 has 6 MA's), (137, 27742), (139, 27748), (159, 27823), (174, 27871), (176, 27874), (177, 27877), (199, 27952), (244, 28081), (265, 28180), (273, 28222),

Gene: TNguyen7\_5 Start: 2828, Stop: 3478, Start Num: 41

Candidate Starts for TNguyen7\_5:

(Start: 41 @2828 has 318 MA's), (137, 3005), (162, 3095), (191, 3191),

Gene: TPA2\_47 Start: 36929, Stop: 37582, Start Num: 59

Candidate Starts for TPA2\_47:

(59, 36929), (78, 36965), (84, 36977), (92, 36995), (117, 37040), (135, 37100), (136, 37103), (166, 37205), (271, 37535),

Gene: Taquarus\_5 Start: 2725, Stop: 3387, Start Num: 41

Candidate Starts for Taquarus\_5:

(Start: 41 @2725 has 318 MA's), (111, 2830), (212, 3142), (214, 3145), (274, 3370),

Gene: Tarynearal\_4 Start: 3600, Stop: 4262, Start Num: 49

Candidate Starts for Tarynearal\_4:

(Start: 49 @3600 has 39 MA's), (Start: 57 @3612 has 1 MA's), (70, 3636), (77, 3651), (85, 3666), (128, 3741), (164, 3870), (235, 4092),

Gene: Taurus\_5 Start: 2629, Stop: 3264, Start Num: 41

Candidate Starts for Taurus\_5:

(Start: 41 @2629 has 318 MA's), (145, 2842),

Gene: Texage\_4 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Texage\_4:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Thanksgivukkah\_5 Start: 2723, Stop: 3385, Start Num: 41

Candidate Starts for Thanksgivukkah\_5:

(Start: 41 @2723 has 318 MA's), (111, 2828), (212, 3140), (214, 3143), (274, 3368),

Gene: Theia\_4 Start: 3572, Stop: 4234, Start Num: 49

Candidate Starts for Theia\_4:

(Start: 49 @3572 has 39 MA's), (70, 3608), (77, 3623), (85, 3638), (128, 3713), (235, 4064),

Gene: Tiffany\_5 Start: 2900, Stop: 3451, Start Num: 41

Candidate Starts for Tiffany\_5:

(Start: 41 @2900 has 318 MA's), (Start: 125 @3029 has 1 MA's), (139, 3083), (147, 3116), (167, 3185), (273, 3431),

Gene: Tiger\_5 Start: 3446, Stop: 4087, Start Num: 66

Candidate Starts for Tiger\_5:

(Start: 66 @3446 has 14 MA's), (120, 3554), (135, 3614), (148, 3662), (151, 3668), (162, 3707), (175, 3752), (177, 3758),

Gene: Timothy\_8 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for Timothy\_8:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902),

Gene: TinaFeyge\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for TinaFeyge\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: TinaLin\_3 Start: 665, Stop: 1360, Start Num: 46

Candidate Starts for TinaLin\_3:

(11, 434), (20, 515), (31, 590), (Start: 46 @665 has 2 MA's), (52, 677), (70, 704), (Start: 99 @755 has 3 MA's), (122, 812), (132, 857), (135, 866), (169, 986), (173, 998), (179, 1010), (242, 1193),

Gene: TinyTimmy\_7 Start: 5410, Stop: 6072, Start Num: 49

Candidate Starts for TinyTimmy\_7:

(Start: 49 @5410 has 39 MA's), (85, 5476), (128, 5551), (159, 5662), (235, 5902), (251, 5947),

Gene: Tinybot\_4 Start: 2725, Stop: 3390, Start Num: 41

Candidate Starts for Tinybot\_4:

(Start: 41 @2725 has 318 MA's), (137, 2902), (162, 2992), (198, 3118),

Gene: TopsytheTRex\_31 Start: 23713, Stop: 24366, Start Num: 42

Candidate Starts for TopsytheTRex\_31:

(Start: 41 @23710 has 318 MA's), (Start: 42 @23713 has 21 MA's), (79, 23767), (137, 23893), (145, 23929), (214, 24139), (219, 24169), (222, 24178), (225, 24187), (264, 24316),

Gene: TiroTheta9\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for TiroTheta9\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (218, 3169), (274, 3367),

Gene: Toaka\_31 Start: 24361, Stop: 25002, Start Num: 41

Candidate Starts for Toaka\_31:

(Start: 41 @24361 has 318 MA's), (Start: 99 @24454 has 3 MA's), (114, 24475), (137, 24544), (162, 24634), (180, 24691), (200, 24763), (207, 24775), (230, 24853),

Gene: Todacoro\_5 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Todacoro\_5:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Tomathan\_35 Start: 24412, Stop: 25083, Start Num: 42

Candidate Starts for Tomathan\_35:

(Start: 42 @24412 has 21 MA's), (Start: 99 @24502 has 3 MA's), (114, 24523), (137, 24592), (145, 24628), (160, 24676), (230, 24916), (231, 24919), (263, 25018), (268, 25033),

Gene: ToneTone\_7 Start: 4571, Stop: 5269, Start Num: 35

Candidate Starts for ToneTone\_7:

(Start: 35 @4571 has 40 MA's), (227, 5075), (276, 5261),

Gene: Topanga\_5 Start: 2891, Stop: 3580, Start Num: 41

Candidate Starts for Topanga\_5:

(Start: 41 @2891 has 318 MA's), (Start: 99 @2975 has 3 MA's), (127, 3035), (153, 3128), (164, 3173), (177, 3218), (241, 3431),

Gene: Trixie\_8 Start: 5232, Stop: 5918, Start Num: 41

Candidate Starts for Trixie\_8:

(Start: 41 @5232 has 318 MA's), (Start: 99 @5319 has 3 MA's), (117, 5346), (137, 5403), (151, 5448), (181, 5556), (231, 5727), (245, 5748), (262, 5847),

Gene: TroyPia\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for TroyPia\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Tubs\_8 Start: 5239, Stop: 5868, Start Num: 44

Candidate Starts for Tubs\_8:

(Start: 44 @5239 has 7 MA's), (70, 5278), (139, 5419), (145, 5449), (153, 5464),

Gene: Tucker\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Tucker\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Turuncu\_49 Start: 36776, Stop: 37405, Start Num: 73

Candidate Starts for Turuncu\_49:

(29, 36638), (38, 36722), (Start: 50 @36743 has 1 MA's), (55, 36749), (Start: 73 @36776 has 1 MA's), (159, 37004), (263, 37334), (273, 37379),

Gene: Twister\_5 Start: 2837, Stop: 3484, Start Num: 41

Candidate Starts for Twister\_5:

(Start: 41 @2837 has 318 MA's), (137, 3014), (174, 3146), (191, 3197), (192, 3200),

Gene: TygerBlood\_5 Start: 2724, Stop: 3386, Start Num: 41

Candidate Starts for TygerBlood\_5:

(Start: 41 @2724 has 318 MA's), (111, 2829), (212, 3141), (214, 3144), (274, 3369),

Gene: Ugenie5\_6 Start: 5227, Stop: 5898, Start Num: 41

Candidate Starts for Ugenie5\_6:

(Start: 41 @5227 has 318 MA's), (137, 5401), (145, 5437), (214, 5650), (260, 5821),

Gene: Ulysses\_5 Start: 2723, Stop: 3388, Start Num: 41

Candidate Starts for Ulysses\_5:

(Start: 41 @2723 has 318 MA's), (94, 2804), (141, 2903), (189, 3077),

Gene: UnionJack\_5 Start: 3413, Stop: 4054, Start Num: 66

Candidate Starts for UnionJack\_5:

(Start: 66 @3413 has 14 MA's), (120, 3521), (135, 3581), (148, 3629), (151, 3635), (162, 3674), (177, 3725), (263, 4031),

Gene: VA6\_32 Start: 24568, Stop: 25233, Start Num: 42

Candidate Starts for VA6\_32:

(Start: 42 @24568 has 21 MA's), (84, 24631), (118, 24691), (124, 24700), (Start: 125 @24703 has 1 MA's), (241, 25081), (263, 25171), (273, 25213),

Gene: VC3\_35 Start: 24556, Stop: 25221, Start Num: 42

Candidate Starts for VC3\_35:

(Start: 42 @24556 has 21 MA's), (84, 24619), (118, 24679), (124, 24688), (Start: 125 @24691 has 1 MA's), (149, 24784), (241, 25069), (263, 25159), (273, 25201),

Gene: VanLee\_26 Start: 22797, Stop: 23510, Start Num: 37

Candidate Starts for VanLee\_26:

(Start: 37 @22797 has 6 MA's), (86, 22881), (199, 23223), (279, 23505),

Gene: Veracruz\_4 Start: 2764, Stop: 3423, Start Num: 41

Candidate Starts for Veracruz\_4:

(Start: 41 @2764 has 318 MA's), (Start: 57 @2785 has 1 MA's), (Start: 99 @2851 has 3 MA's), (137, 2941), (145, 2977), (219, 3223), (252, 3310),

Gene: Vix\_5 Start: 2719, Stop: 3351, Start Num: 41

Candidate Starts for Vix\_5:

(Start: 41 @2719 has 318 MA's), (139, 2902), (141, 2905), (145, 2932),

Gene: VohminGhazi\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for VohminGhazi\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Waits\_8 Start: 4402, Stop: 5076, Start Num: 63

Candidate Starts for Waits\_8:

(Start: 63 @4402 has 10 MA's), (105, 4483), (123, 4519), (161, 4666), (177, 4714),

Gene: WalterMcMickey\_5 Start: 2837, Stop: 3484, Start Num: 41

Candidate Starts for WalterMcMickey\_5:

(Start: 41 @2837 has 318 MA's), (137, 3014), (174, 3146), (191, 3197), (192, 3200),

Gene: Wander\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for Wander\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Watson\_5 Start: 2890, Stop: 3549, Start Num: 41

Candidate Starts for Watson\_5:

(Start: 41 @2890 has 318 MA's), (139, 3073), (147, 3106), (167, 3175), (273, 3529),

Gene: WeiHuaDA\_9 Start: 5446, Stop: 6132, Start Num: 41

Candidate Starts for WeiHuaDA\_9:



(Start: 41 @5446 has 318 MA's), (138, 5620), (181, 5770), (231, 5941), (262, 6061),

Gene: Wiks\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for Wiks\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Wilbur\_5 Start: 2721, Stop: 3383, Start Num: 41

Candidate Starts for Wilbur\_5:

(Start: 41 @2721 has 318 MA's), (111, 2826), (212, 3138), (214, 3141), (274, 3366),

Gene: Wile\_5 Start: 2734, Stop: 3396, Start Num: 41

Candidate Starts for Wile\_5:

(Start: 41 @2734 has 318 MA's), (111, 2839), (214, 3154),

Gene: Wizard007\_5 Start: 2724, Stop: 3386, Start Num: 41

Candidate Starts for Wizard007\_5:

(Start: 41 @2724 has 318 MA's), (111, 2829), (212, 3141), (214, 3144), (274, 3369),

Gene: Wooldri\_7 Start: 2809, Stop: 3468, Start Num: 41

Candidate Starts for Wooldri\_7:

(Start: 41 @2809 has 318 MA's), (Start: 125 @2938 has 1 MA's), (139, 2992), (147, 3025), (167, 3094), (273, 3448),

Gene: Wooper\_39 Start: 33935, Stop: 34597, Start Num: 54

Candidate Starts for Wooper\_39:

(Start: 54 @33935 has 15 MA's), (87, 33992), (103, 34022), (107, 34025), (114, 34043), (162, 34199), (202, 34340), (215, 34355), (220, 34385), (241, 34442), (246, 34454), (275, 34580),

Gene: WunderPhul\_8 Start: 4661, Stop: 5359, Start Num: 35

Candidate Starts for WunderPhul\_8:

(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Xena\_5 Start: 2733, Stop: 3395, Start Num: 41

Candidate Starts for Xena\_5:

(Start: 41 @2733 has 318 MA's), (111, 2838), (214, 3153),

Gene: XianYue\_32 Start: 24396, Stop: 24998, Start Num: 90

Candidate Starts for XianYue\_32:

(Start: 90 @24396 has 2 MA's), (97, 24408), (137, 24504), (145, 24540), (207, 24747),

Gene: Yarn\_27 Start: 22532, Stop: 23170, Start Num: 61

Candidate Starts for Yarn\_27:

(Start: 61 @22532 has 12 MA's), (65, 22541), (87, 22583), (96, 22601), (115, 22637), (137, 22697), (195, 22913), (249, 23027),

Gene: Yecey3\_33 Start: 24132, Stop: 24764, Start Num: 48

Candidate Starts for Yecey3\_33:

(Start: 48 @24132 has 1 MA's), (139, 24318), (145, 24348), (199, 24519), (202, 24525),

Gene: YoSam321\_5 Start: 2722, Stop: 3384, Start Num: 41

Candidate Starts for YoSam321\_5:

(Start: 41 @2722 has 318 MA's), (111, 2827), (212, 3139), (214, 3142), (274, 3367),

Gene: Yokurt\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Yokurt\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Zaka\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Zaka\_8:  
(Start: 35 @4661 has 40 MA's), (227, 5165), (276, 5351),

Gene: Zetzy\_5 Start: 2721, Stop: 3356, Start Num: 41  
Candidate Starts for Zetzy\_5:  
(Start: 41 @2721 has 318 MA's), (145, 2934), (172, 3024),

Gene: Zolita\_4 Start: 3697, Stop: 4401, Start Num: 62  
Candidate Starts for Zolita\_4:  
(Start: 49 @3679 has 39 MA's), (Start: 62 @3697 has 6 MA's), (85, 3745), (Start: 99 @3766 has 3 MA's), (139, 3862),

Gene: Zulu\_8 Start: 4661, Stop: 5359, Start Num: 35  
Candidate Starts for Zulu\_8:  
(Start: 35 @4661 has 40 MA's), (134, 4862), (227, 5165), (276, 5351),