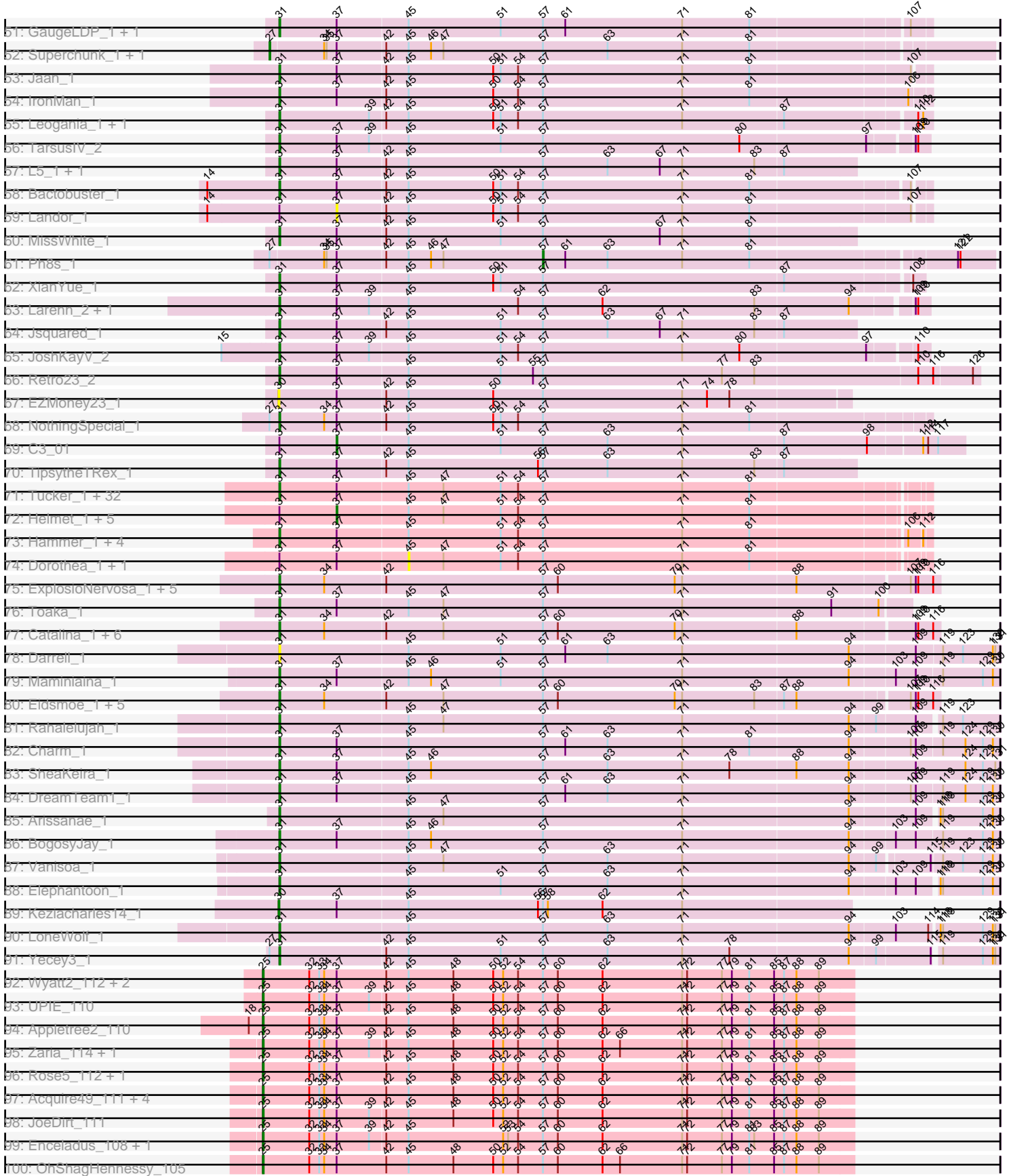
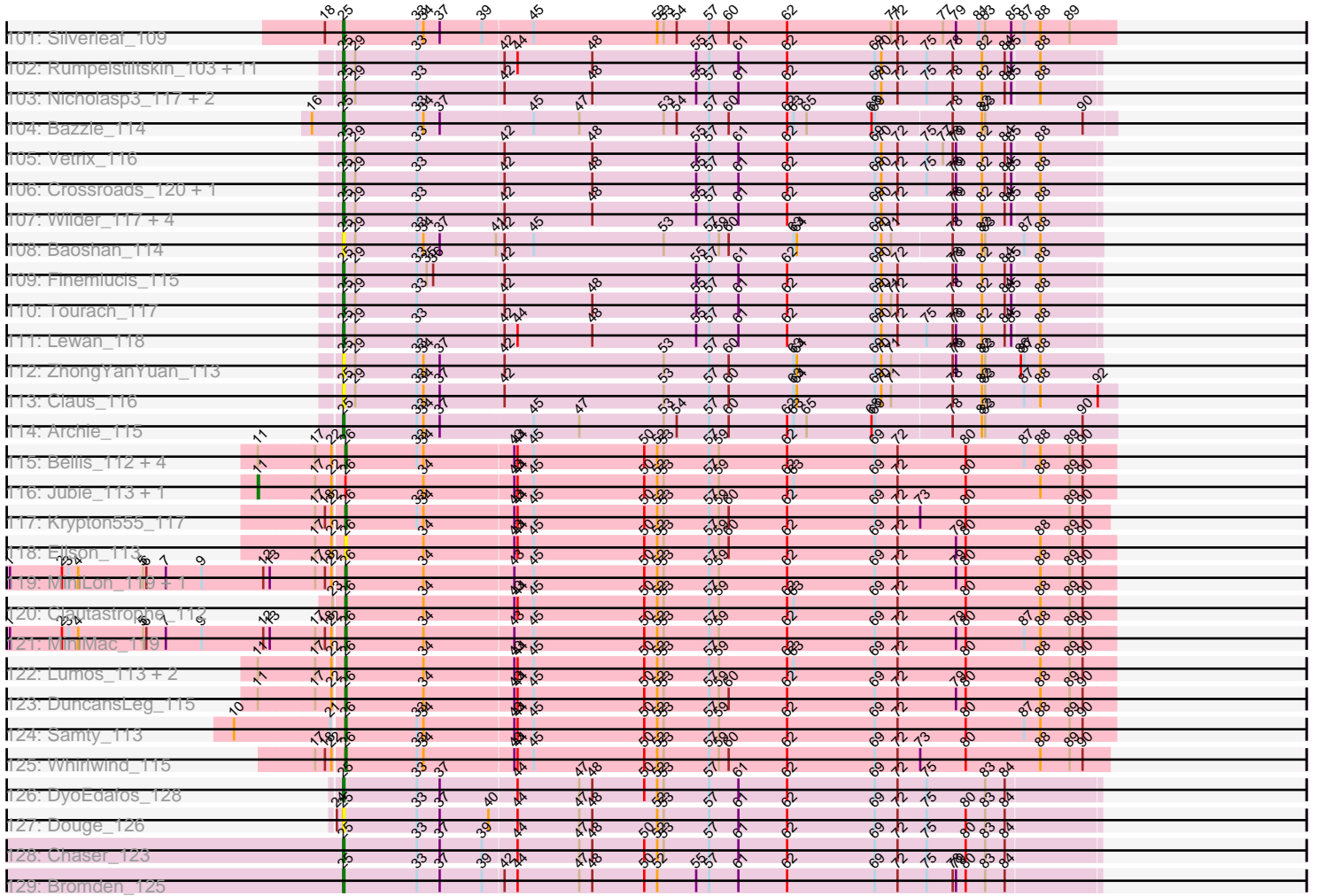


Pham 169638



Pham 169638



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 169638 Report

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

Pham number 169638 has 320 members, 28 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower\_2
- Track 2 : Mabel\_1, Joselito\_1, Petersenfast\_1, Salz\_1, Insomnia\_1
- Track 3 : Aneem\_1, Mulciber\_1, Munch\_1, Orange\_1, Sham4\_1, Jabith\_1, Lucivia\_1, Timothy\_1, Flaverint\_1, Hutc2\_1, TinyTimmy\_1, Snape\_1, Et2Brutus\_1, Bowtie\_1, Fibonacci\_1
- Track 4 : Gilberta\_1, MaCh\_1
- Track 5 : Bachome\_1
- Track 6 : Bud\_1
- Track 7 : Ebony\_1
- Track 8 : Pharaoh\_1
- Track 9 : DarthPhader\_1
- Track 10 : Zimmer\_1
- Track 11 : Refuge\_1
- Track 12 : Luchador\_1, Gail\_1
- Track 13 : SororFago\_1
- Track 14 : Jeeves\_1
- Track 15 : Anon\_1
- Track 16 : Boohoo\_1, JSwag\_1, Waits\_1, Epsocamisio\_1, Nebulosus\_1, LastResort\_1, Remus\_1, Looper\_1, ReMo\_1, Anaysia\_1, Strosahl\_1
- Track 17 : Oofda\_1
- Track 18 : KatherineG\_1, Switzerland\_1, Rosalind\_1, MinecraftSteve\_2, DekHockey33\_1, ShayRa\_2, Battleship\_2, Soups\_1
- Track 19 : Nedarya\_1
- Track 20 : Lucyedi\_1, PainterBoy\_1, EagleEye\_1
- Track 21 : 40AC\_2
- Track 22 : AN3\_1, VA6\_1
- Track 23 : RedRock\_1, AnnaL29\_1
- Track 24 : Smeagan\_2, Buggy\_2, Agape74\_2, Leviathan\_2, Jerm\_2, Dignity\_2, AbbyPaige\_2, Whabigail7\_2, LilTurb\_2, Turbido\_2
- Track 25 : KingCyrus\_2, ChipMunk\_2, EvilGenius\_2
- Track 26 : Centaur\_2, WideWale\_2, NaSiaTalie\_2, MiculUcigas\_2, Flare16\_2, Equemioh13\_2, Updawg\_2
- Track 27 : NicoleTera\_1
- Track 28 : Journey13\_1
- Track 29 : CRB1\_1, LadyBird\_1
- Track 30 : Trixie\_1, Colin\_1, WeiHuaDA\_2, Kalpine\_2
- Track 31 : Drake55\_2, Piro94\_1, Baehexic\_2

- Track 32 : Georgie2\_2, QueenBeesly\_2, Crucio\_2, SnapTap\_2, SweetiePie\_2, Power\_2, FiringLine\_2, SemperFi\_2
- Track 33 : Deloris\_1, BengiVuitton\_1
- Track 34 : First\_001, 20ES\_1
- Track 35 : ANI8\_1, AN9\_1
- Track 36 : HarryHoudini\_2
- Track 37 : Adzzy\_1
- Track 38 : Iwokeuplikedis\_2
- Track 39 : Dalmatian\_2, Anselm\_2, DudeLittle\_2
- Track 40 : Loser\_1, ArcherNM\_1, Changeling\_1
- Track 41 : Duplo\_1, Pomar16\_1, Naji\_1, D32\_1, D29\_1, StarStuff\_1, VC3\_1, Kerberos\_1, Tomathan\_1, DBQu4n\_1
- Track 42 : Pukovnik\_1
- Track 43 : Miko\_2, Rachaly\_2, Lokk\_2, BobSwaget\_2
- Track 44 : Phaded\_1
- Track 45 : Acolyte\_1
- Track 46 : Trooper\_2
- Track 47 : Benvolio\_2, Echid\_2
- Track 48 : Fameo\_2, QueenB2\_2, Heffalump\_2
- Track 49 : Serenity\_1
- Track 50 : Che12\_1
- Track 51 : GaugeLDP\_1, BabyBack\_1
- Track 52 : Superchunk\_1, Caraxes\_1
- Track 53 : Jaan\_1
- Track 54 : IronMan\_1
- Track 55 : Leogania\_1, BiancaTri92\_1
- Track 56 : TarsusIV\_2
- Track 57 : L5\_1, Koduck\_1
- Track 58 : Bactobuster\_1
- Track 59 : Landor\_1
- Track 60 : MissWhite\_1
- Track 61 : Ph8s\_1
- Track 62 : XianYue\_1
- Track 63 : Larenn\_2, Malec\_2
- Track 64 : Jsquared\_1
- Track 65 : JoshKayV\_2
- Track 66 : Retro23\_2
- Track 67 : EZMoney23\_1
- Track 68 : NothingSpecial\_1
- Track 69 : C3\_01
- Track 70 : TipsytheTRex\_1
- Track 71 : Tucker\_1, Roksolana\_1, Jordennis\_1, Blinn1\_1, Zaka\_1, Cookiedough\_1, VohminGhazi\_1, Zulu\_1, Jeffabunny\_1, Hoot\_1, McFly\_1, ToneTone\_1, SuperAwesome\_1, Kazan\_1, BABullseye\_1, SuperCallie99\_1, Newrala\_1, Isiphiwo\_1, Koko\_1, Indra\_1, DaVinci\_1, Artemis2UCLA\_1, CloudWang3\_1, JewelBug\_1, Wiks\_1, Kipper29\_1, SmellyB\_1, Pmask\_1, EricB\_1, Yokurt\_1, WunderPhul\_1, Neeharika16\_1, Hexamo\_1
- Track 72 : Helmet\_1, Candra\_1, Lilbunny\_1, Garak\_1, GreedyLawyer\_1, Priamo\_1
- Track 73 : Hammer\_1, Gladiator\_1, Blue7\_1, Gruunaga\_1, Rifter\_1
- Track 74 : Dorothea\_1, Chartreuse\_1
- Track 75 : ExplosioNervosa\_1, Beemo\_1, Scherzo\_1, Pioneer\_1, Phonnegut\_1, Fayely\_1
- Track 76 : Toaka\_1

- Track 77 : Catalina\_1, HortumSL17\_1, Tubs\_1, Aliter\_1, PackMan\_1, Phaeder\_1, Myxus\_1
- Track 78 : Darrell\_1
- Track 79 : Maminiaina\_1
- Track 80 : Eidsmoe\_1, Qobbit\_1, Priya\_1, EmyBug\_1, Alma\_1, Conquerage\_1
- Track 81 : Rahalelujah\_1
- Track 82 : Charm\_1
- Track 83 : SheaKeira\_1
- Track 84 : DreamTeam1\_1
- Track 85 : Arissanae\_1
- Track 86 : BogosyJay\_1
- Track 87 : Vanisoa\_1
- Track 88 : Elephantoan\_1
- Track 89 : Keziacharles14\_1
- Track 90 : LoneWolf\_1
- Track 91 : Yecey3\_1
- Track 92 : Wyatt2\_112, LeBron\_110, AvadaKedavra\_111
- Track 93 : UPIE\_110
- Track 94 : Appletree2\_110
- Track 95 : Zaria\_114, Calm\_116
- Track 96 : Rose5\_112, Tyson\_113
- Track 97 : Acquire49\_111, Halena\_111, MAckerman\_109, CicholasNage\_107, Wamburgrxpress\_110
- Track 98 : JoeDirt\_111
- Track 99 : Enceladus\_108, DirkDirk\_108
- Track 100 : OhShagHennessy\_105
- Track 101 : Silverleaf\_109
- Track 102 : Rumpelstiltskin\_103, DrSeegs\_115, Breezona\_117, Itos\_117, Zakai\_119, Gabriela\_117, Winky\_117, Faith1\_115, Miley16\_117, BobsGarage\_116, BigCheese\_116, Netyap\_115
- Track 103 : Nicholasp3\_117, Gardann\_116, LilDestine\_114
- Track 104 : Bazzle\_114
- Track 105 : Vetrix\_116
- Track 106 : Crossroads\_120, GuuelaD\_113
- Track 107 : Wilder\_117, Loadrie\_117, MkaliMitinis3\_120, Wigglewiggles\_117, Kahlid\_116
- Track 108 : Baoshan\_114
- Track 109 : Finemlucis\_115
- Track 110 : Tourach\_117
- Track 111 : Lewan\_118
- Track 112 : ZhongYanYuan\_113
- Track 113 : Claus\_116
- Track 114 : Archie\_115
- Track 115 : Bellis\_112, Moostard\_109, Nicholas\_111, Kingsolomon\_111, Finnry\_113
- Track 116 : Jubie\_113, MsGreen\_114
- Track 117 : Krypton555\_117
- Track 118 : Ellson\_113
- Track 119 : MiniLon\_119, Lolly9\_114
- Track 120 : Clautastrophe\_112
- Track 121 : MiniMac\_119
- Track 122 : Lumos\_113, Jobypre\_114, Snenia\_112
- Track 123 : DuncansLeg\_115

- Track 124 : Samty\_113
- Track 125 : Whirlwind\_115
- Track 126 : DyoEdafos\_128
- Track 127 : Douge\_126
- Track 128 : Chaser\_123
- Track 129 : Bromden\_125

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

The start number called the most often in the published annotations is 31, it was called in 206 of the 292 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES\_1, 40AC\_2, AN3\_1, AN9\_1, ANI8\_1, AbbyPaige\_2, Agape74\_2, Aliter\_1, Alma\_1, Anaysia\_1, Aneem\_1, AnnaL29\_1, Anon\_1, Anselm\_2, ArcherNM\_1, Arissanae\_1, Artemis2UCLA\_1, BABullseye\_1, BabyBack\_1, Bactobuster\_1, Baehexic\_2, Battleship\_2, Beemo\_1, BengiVuitton\_1, Benvolio\_2, BiancaTri92\_1, Blinn1\_1, Blue7\_1, BobSwaget\_2, BogosyJay\_1, Boohoo\_1, Bowtie\_1, Bud\_1, Buggy\_2, CRB1\_1, Catalina\_1, Centaur\_2, Changeling\_1, Chargerpower\_2, Charm\_1, ChipMunk\_2, CloudWang3\_1, Colin\_1, Conquerage\_1, Cookiedough\_1, Crucio\_2, D29\_1, D32\_1, DBQu4n\_1, DaVinci\_1, Dalmatian\_2, Darrell\_1, DekHockey33\_1, Deloris\_1, Dignity\_2, Drake55\_2, DreamTeam1\_1, DudeLittle\_2, Duplo\_1, EagleEye\_1, Ebony\_1, Echid\_2, Eidsmoe\_1, Elephantoon\_1, EmyBug\_1, Epsocamisio\_1, Equemioh13\_2, EricB\_1, Et2Brutus\_1, EvilGenius\_2, ExplosioNervosa\_1, Fameo\_2, Fayely\_1, Fibonacci\_1, FiringLine\_2, First\_001, Flare16\_2, Flaverint\_1, Gail\_1, GaugeLDP\_1, Georgie2\_2, Gilberta\_1, Gladiator\_1, Gruunaga\_1, Hammer\_1, HarryHoudini\_2, Heffalump\_2, Hexamo\_1, Hoot\_1, HortumSL17\_1, Hutc2\_1, Indra\_1, IronMan\_1, Isiphiwo\_1, JSwag\_1, Jaan\_1, Jabith\_1, Jeeves\_1, Jeffabunny\_1, Jerm\_2, JewelBug\_1, Jordennis\_1, JoshKayV\_2, Journey13\_1, Jsquared\_1, Kalpine\_2, KatherineG\_1, Kazan\_1, Kerberos\_1, KingCyrus\_2, Kipper29\_1, Koduck\_1, Koko\_1, L5\_1, LadyBird\_1, Larenn\_2, LastResort\_1, Leogania\_1, Leviathan\_2, LilTurb\_2, Lökk\_2, LoneWolf\_1, Looper\_1, Loser\_1, Luchador\_1, Lucivia\_1, Lucyedi\_1, MaCh\_1, Malec\_2, Maminiaina\_1, McFly\_1, MiculUcigas\_2, Miko\_2, MinecraftSteve\_2, MissWhite\_1, Mulciber\_1, Munch\_1, Myxus\_1, NaSiaTalie\_2, Naji\_1, Nebulosus\_1, Nedarya\_1, Neeharika16\_1, Newrala\_1, NicoleTera\_1, NothingSpecial\_1, Oofda\_1, Orange\_1, PackMan\_1, PainterBoy\_1, Phaeder\_1, Phonnegut\_1, Pioneer\_1, Piro94\_1, Pmask\_1, Pomar16\_1, Power\_2, Priya\_1, Qobbit\_1, QueenB2\_2, QueenBeesly\_2, Rachaly\_2, Rahalelujah\_1, ReMo\_1, RedRock\_1, Remus\_1, Retro23\_2, Rifter\_1, Roksolana\_1, Rosalind\_1, Scherzo\_1, SemperFi\_2, Serenity\_1, Sham4\_1, ShayRa\_2, SheaKeira\_1, Smeagan\_2, SmellyB\_1, SnapTap\_2, Snape\_1, SororFago\_1, Soups\_1, StarStuff\_1, Strosahl\_1, SuperAwesome\_1, SuperCallie99\_1, SweetiePie\_2, Switzerland\_1, TarsusIV\_2, Timothy\_1, TinyTimmy\_1, TipsytheTRex\_1, Toaka\_1, Tomathan\_1, ToneTone\_1, Trixie\_1, Trooper\_2, Tubs\_1, Tucker\_1, Turbido\_2, Updawg\_2, VA6\_1, VC3\_1, Vanisoa\_1, VohminGhazi\_1, Waits\_1, WeiHuaDA\_2, Whabigail7\_2, WideWale\_2, Wiks\_1, WunderPhul\_1, XianYue\_1, Yecy3\_1, Yokurt\_1, Zaka\_1, Zulu\_1,

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

- Acolyte\_1, Bachome\_1, C3\_01, Candra\_1, Chartreuse\_1, Dorothea\_1, Garak\_1, GreedyLawyer\_1, Helmet\_1, Insomnia\_1, Joselito\_1, Landor\_1, Lilbunny\_1, Mabel\_1, Petersenfast\_1, Phaded\_1, Priamo\_1, Salz\_1,

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

- Acquire49\_111, Adzzy\_1, Appletree2\_110, Archie\_115, AvadaKedavra\_111, Baoshan\_114, Bazzle\_114, Bellis\_112, BigCheese\_116, BobsGarage\_116, Breezona\_117, Bromden\_125, Calm\_116, Caraxes\_1, Chaser\_123, Che12\_1, CicholasNage\_107, Claus\_116, Clautastrophe\_112, Crossroads\_120, DARTHPhader\_1, DirkDirk\_108, Douge\_126, DrSeegs\_115, DuncansLeg\_115, DyoEdafos\_128, EZMoney23\_1, Ellson\_113, Enceladus\_108, Faith1\_115, Finemlucis\_115, Finnry\_113, Gabriela\_117, Gardann\_116, GuuelaD\_113, Halena\_111, Itos\_117, Iwokeuplikedis\_2, Jobypre\_114, JoeDirt\_111, Jubie\_113, Kahlid\_116, Keziacharles14\_1, Kingsolomon\_111, Krypton555\_117, LeBron\_110, Lewan\_118, LilDestine\_114, Loadrie\_117, Lolly9\_114, Lumos\_113, MAckerman\_109, Miley16\_117, MiniLon\_119, MiniMac\_119, MkaliMitinis3\_120, Moostard\_109, MsGreen\_114, Netyap\_115, Nicholas\_111, Nicholasp3\_117, OhShagHennessy\_105, Ph8s\_1, Pharaoh\_1, Pukovnik\_1, Refuge\_1, Rose5\_112, Rumpelstiltskin\_103, Samty\_113, Silverleaf\_109, Snenia\_112, Superchunk\_1, Tourach\_117, Tyson\_113, UPIE\_110, Vetrix\_116, Wamburggrxpress\_110, Whirlwind\_115, Wigglewiggle\_117, Wilder\_117, Winky\_117, Wyatt2\_112, Zakai\_119, Zaria\_114, ZhongYanYuan\_113, Zimmer\_1,

### Summary by start number:

Start 11:

- Found in 11 of 320 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 2 of 292
- Called 18.2% of time when present
- Phage (with cluster) where this start called: Jubie\_113 (L3), MsGreen\_114 (L3),

Start 14:

- Found in 3 of 320 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 1 of 292
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Phaded\_1 (A2),

Start 25:

- Found in 54 of 320 ( 16.9% ) of genes in pham
- Manual Annotations of this start: 49 of 292
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49\_111 (L1), Appletree2\_110 (L1), Archie\_115 (L2), AvadaKedavra\_111 (L1), Baoshan\_114 (L2), Bazzle\_114 (L2), BigCheese\_116 (L2), BobsGarage\_116 (L2), Breezona\_117 (L2), Bromden\_125 (L4), Calm\_116 (L1), Chaser\_123 (L4), CicholasNage\_107 (L1), Claus\_116 (L2), Crossroads\_120 (L2), DirkDirk\_108 (L1), Douge\_126 (L4), DrSeegs\_115 (L2), DyoEdafos\_128 (L4), Enceladus\_108 (L1), Faith1\_115 (L2), Finemlucis\_115 (L2), Gabriela\_117 (L2), Gardann\_116 (L2), GuuelaD\_113 (L2), Halena\_111 (L1), Itos\_117 (L2), JoeDirt\_111 (L1), Kahlid\_116 (L2), LeBron\_110 (L1), Lewan\_118 (L2), LilDestine\_114 (L2), Loadrie\_117 (L2), MAckerman\_109 (L1), Miley16\_117 (L2), MkaliMitinis3\_120 (L2), Netyap\_115 (L2), Nicholasp3\_117 (L2), OhShagHennessy\_105 (L1), Rose5\_112 (L1), Rumpelstiltskin\_103 (L2), Silverleaf\_109 (L1), Tourach\_117 (L2), Tyson\_113 (L1), UPIE\_110 (L1), Vetrix\_116



(L2), Wamburgexpress\_110 (L1), Wigglewobble\_117 (L2), Wilder\_117 (L2), Winky\_117 (L2), Wyatt2\_112 (L1), Zakai\_119 (L2), Zaria\_114 (L1), ZhongYanYuan\_113 (L2),

Start 26:

- Found in 19 of 320 ( 5.9% ) of genes in pham
- Manual Annotations of this start: 14 of 292
- Called 89.5% of time when present
- Phage (with cluster) where this start called: Bellis\_112 (L3), Clautastrophe\_112 (L3), DuncansLeg\_115 (L3), Ellson\_113 (L3), Finnry\_113 (L3), Jobypre\_114 (L3), Kingsolomon\_111 (L3), Krypton555\_117 (L3), Lolly9\_114 (L3), Lumos\_113 (L3), MiniLon\_119 (L3), MiniMac\_119 (L3), Moostard\_109 (L3), Nicholas\_111 (L3), Samty\_113 (L3), Snenia\_112 (L3), Whirlwind\_115 (L3),

Start 27:

- Found in 40 of 320 ( 12.5% ) of genes in pham
- Manual Annotations of this start: 10 of 292
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Adzzy\_1 (A2), Bachome\_1 (A11), Caraxes\_1 (A2), Che12\_1 (A2), Insomnia\_1 (A11), Joselito\_1 (A11), Mabel\_1 (A11), Petersenfast\_1 (A11), Pharaoh\_1 (A12), Salz\_1 (A11), Superchunk\_1 (A2), Zimmer\_1 (A12),

Start 28:

- Found in 1 of 320 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 292
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Iwokeuplikedis\_2 (A2),

Start 30:

- Found in 3 of 320 ( 0.9% ) of genes in pham
- Manual Annotations of this start: 2 of 292
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EZMoney23\_1 (A2), Keziacharles14\_1 (A9), Pukovnik\_1 (A2),

Start 31:

- Found in 234 of 320 ( 73.1% ) of genes in pham
- Manual Annotations of this start: 206 of 292
- Called 92.3% of time when present
- Phage (with cluster) where this start called: 20ES\_1 (A2), 40AC\_2 (A17), AN3\_1 (A2), AN9\_1 (A2), ANI8\_1 (A2), AbbyPaige\_2 (A2), Agape74\_2 (A2), Aliter\_1 (A9), Alma\_1 (A9), Anaysia\_1 (A15), Aneem\_1 (A11), AnnaL29\_1 (A2), Anon\_1 (A15), Anselm\_2 (A2), ArcherNM\_1 (A2), Arissanae\_1 (A9), Artemis2UCLA\_1 (A6), BABullseye\_1 (A6), BabyBack\_1 (A2), Bactobuster\_1 (A2), Baehexic\_2 (A2), Battleship\_2 (A15), Beemo\_1 (A9), BengiVuitton\_1 (A2), Benvolio\_2 (A2), BiancaTri92\_1 (A2), Blinn1\_1 (A6), Blue7\_1 (A6), BobSwaget\_2 (A2), BogosyJay\_1 (A9), Boohoo\_1 (A15), Bowtie\_1 (A11), Bud\_1 (A11), Buggy\_2 (A2), CRB1\_1 (A2), Catalina\_1 (A9), Centaur\_2 (A2), Changeling\_1 (A2), Chargerpower\_2 (A), Charm\_1 (A9), ChipMunk\_2 (A2), CloudWang3\_1 (A6), Colin\_1 (A2), Conquerage\_1 (A9), Cookiedough\_1 (A6), Crucio\_2 (A2), D29\_1 (A2), D32\_1 (A2), DBQu4n\_1 (A2), DaVinci\_1 (A6), Dalmatian\_2 (A2), Darrell\_1 (A9), DekHockey33\_1 (A15), Deloris\_1 (A2), Dignity\_2 (A2), Drake55\_2 (A2), DreamTeam1\_1 (A9), DudeLittle\_2 (A2),

Duplo\_1 (A2), EagleEye\_1 (A16), Ebony\_1 (A11), Echild\_2 (A2), Eidsmoe\_1 (A9), Elephantoon\_1 (A9), EmyBug\_1 (A9), Epsocamisio\_1 (A15), Equemioh13\_2 (A2), EricB\_1 (A6), Et2Brutus\_1 (A11), EvilGenius\_2 (A2), ExplosioNervosa\_1 (A9), Fameo\_2 (A2), Fayely\_1 (A9), Fibonacci\_1 (A11), FiringLine\_2 (A2), First\_001 (A2), Flare16\_2 (A2), Flaverint\_1 (A11), Gail\_1 (A14), GaugeLDP\_1 (A2), Georgie2\_2 (A2), Gilberta\_1 (A11), Gladiator\_1 (A6), Gruunaga\_1 (A6), Hammer\_1 (A6), HarryHoudini\_2 (A2), Heffalump\_2 (A2), Hexamo\_1 (A6), Hoot\_1 (A6), HortumSL17\_1 (A9), Hutc2\_1 (A11), Indra\_1 (A6), IronMan\_1 (A2), Isiphiwo\_1 (A6), JSwag\_1 (A15), Jaan\_1 (A2), Jabith\_1 (A11), Jeeves\_1 (A14), Jeffabunny\_1 (A6), Jerm\_2 (A2), JewelBug\_1 (A6), Jordennis\_1 (A6), JoshKayV\_2 (A2), Journey13\_1 (A2), Jsquared\_1 (A2), Kalpine\_2 (A2), KatherineG\_1 (A15), Kazan\_1 (A6), Kerberos\_1 (A2), KingCyrus\_2 (A2), Kipper29\_1 (A6), Koduck\_1 (A2), Koko\_1 (A6), L5\_1 (A2), LadyBird\_1 (A2), Larenn\_2 (A2), LastResort\_1 (A15), Leogania\_1 (A2), Leviathan\_2 (A2), LiITurb\_2 (A2), Lokk\_2 (A2), LoneWolf\_1 (A9), Looper\_1 (A15), Loser\_1 (A2), Luchador\_1 (A14), Lucivia\_1 (A11), Lucyedi\_1 (A16), MaCh\_1 (A11), Malec\_2 (A2), Maminiaina\_1 (A9), McFly\_1 (A6), MiculUcigas\_2 (A2), Miko\_2 (A2), MinecraftSteve\_2 (A15), MissWhite\_1 (A2), Mulciber\_1 (A11), Munch\_1 (A11), Myxus\_1 (A9), NaSiaTalie\_2 (A2), Naji\_1 (A2), Nebulosus\_1 (A15), Nedarya\_1 (A15), Neeharika16\_1 (A6), Newrala\_1 (A6), NicoleTera\_1 (A2), NothingSpecial\_1 (A2), Oofda\_1 (A15), Orange\_1 (A11), PackMan\_1 (A9), PainterBoy\_1 (A16), Phaeder\_1 (A9), Phonnegut\_1 (A9), Pioneer\_1 (A9), Piro94\_1 (A2), Pmask\_1 (A6), Pomar16\_1 (A2), Power\_2 (A2), Priya\_1 (A9), Qobbit\_1 (A9), QueenB2\_2 (A2), QueenBeesly\_2 (A2), Rachaly\_2 (A2), Rahalelujah\_1 (A9), ReMo\_1 (A15), RedRock\_1 (A2), Remus\_1 (A15), Retro23\_2 (A2), Rifter\_1 (A6), Roksolana\_1 (A6), Rosalind\_1 (A15), Scherzo\_1 (A9), SemperFi\_2 (A2), Serenity\_1 (A2), Sham4\_1 (A11), ShayRa\_2 (A15), SheaKeira\_1 (A9), Smeagan\_2 (A2), SmellyB\_1 (A6), SnapTap\_2 (A2), Snape\_1 (A11), SororFago\_1 (A14), Soups\_1 (A15), StarStuff\_1 (A2), Strosahl\_1 (A15), SuperAwesome\_1 (A6), SuperCallie99\_1 (A6), SweetiePie\_2 (A2), Switzerland\_1 (A15), TarsusIV\_2 (A2), Timothy\_1 (A11), TinyTimmy\_1 (A11), TipsytheTRex\_1 (A2), Toaka\_1 (A9), Tomathan\_1 (A2), ToneTone\_1 (A6), Trixie\_1 (A2), Trooper\_2 (A2), Tubs\_1 (A9), Tucker\_1 (A6), Turbido\_2 (A2), Updawg\_2 (A2), VA6\_1 (A2), VC3\_1 (A2), Vanisoa\_1 (A9), VohminGhazi\_1 (A6), Waits\_1 (A15), WeiHuaDA\_2 (A2), Whabigail7\_2 (A2), WideWale\_2 (A2), Wiks\_1 (A6), WunderPhul\_1 (A6), XianYue\_1 (A2), Yecey3\_1 (A9), Yokurt\_1 (A6), Zaka\_1 (A6), Zulu\_1 (A6),

#### Start 33:

- Found in 66 of 320 ( 20.6% ) of genes in pham
- Manual Annotations of this start: 2 of 292
- Called 3.0% of time when present
- Phage (with cluster) where this start called: DARTHPhader\_1 (A12), Refuge\_1 (A12),

#### Start 37:

- Found in 195 of 320 ( 60.9% ) of genes in pham
- Manual Annotations of this start: 4 of 292
- Called 4.6% of time when present
- Phage (with cluster) where this start called: Acolyte\_1 (A2), C3\_01 (A2), Candra\_1 (A6), Garak\_1 (A6), GreedyLawyer\_1 (A6), Helmet\_1 (A6), Landor\_1 (A2), Lilbunny\_1 (A6), Priamo\_1 (A6),

#### Start 45:

- Found in 241 of 320 ( 75.3% ) of genes in pham
- No Manual Annotations of this start.

- Called 0.8% of time when present
- Phage (with cluster) where this start called: Chartreuse\_1 (A6), Dorothea\_1 (A6),

Start 57:

- Found in 320 of 320 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 292
- Called 0.3% of time when present
- Phage (with cluster) where this start called: Ph8s\_1 (A2),

### **Summary by clusters:**

There are 14 clusters represented in this pham: A15, A14, A17, A16, A11, A, A12, L1, L4, A2, L2, L3, A6, A9,

Info for manual annotations of cluster A:

- Start number 31 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A11:

- Start number 27 was manually annotated 5 times for cluster A11.
- Start number 31 was manually annotated 18 times for cluster A11.

Info for manual annotations of cluster A12:

- Start number 27 was manually annotated 2 times for cluster A12.
- Start number 33 was manually annotated 2 times for cluster A12.

Info for manual annotations of cluster A14:

- Start number 31 was manually annotated 4 times for cluster A14.

Info for manual annotations of cluster A15:

- Start number 31 was manually annotated 21 times for cluster A15.

Info for manual annotations of cluster A16:

- Start number 31 was manually annotated 3 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 14 was manually annotated 1 time for cluster A2.
- Start number 27 was manually annotated 3 times for cluster A2.
- Start number 28 was manually annotated 1 time for cluster A2.
- Start number 30 was manually annotated 1 time for cluster A2.
- Start number 31 was manually annotated 90 times for cluster A2.
- Start number 37 was manually annotated 2 times for cluster A2.
- Start number 57 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A6:

- Start number 31 was manually annotated 38 times for cluster A6.
- Start number 37 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 30 was manually annotated 1 time for cluster A9.
- Start number 31 was manually annotated 31 times for cluster A9.

Info for manual annotations of cluster L1:

- Start number 25 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 25 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 11 was manually annotated 2 times for cluster L3.
- Start number 26 was manually annotated 14 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 25 was manually annotated 3 times for cluster L4.

### **Gene Information:**

Gene: 20ES\_1 Start: 569, Stop: 1336, Start Num: 31

Candidate Starts for 20ES\_1:

(20, 536), (Start: 31 @569 has 206 MA's), (Start: 37 @638 has 4 MA's), (39, 677), (45, 722), (50, 824), (51, 833), (54, 854), (Start: 57 @884 has 1 MA's), (96, 1262), (97, 1271), (110, 1322),

Gene: 40AC\_2 Start: 502, Stop: 1272, Start Num: 31

Candidate Starts for 40AC\_2:

(Start: 31 @502 has 206 MA's), (Start: 37 @571 has 4 MA's), (45, 655), (50, 757), (51, 766), (Start: 57 @817 has 1 MA's), (61, 844), (71, 985), (107, 1246),

Gene: AN3\_1 Start: 568, Stop: 1329, Start Num: 31

Candidate Starts for AN3\_1:

(20, 535), (Start: 31 @568 has 206 MA's), (Start: 37 @637 has 4 MA's), (39, 676), (45, 721), (50, 823), (51, 832), (54, 853), (Start: 57 @883 has 1 MA's), (71, 1051), (93, 1240), (110, 1315),

Gene: AN9\_1 Start: 391, Stop: 1203, Start Num: 31

Candidate Starts for AN9\_1:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (51, 655), (Start: 57 @706 has 1 MA's), (63, 784), (71, 874), (87, 994), (98, 1093), (112, 1153), (114, 1159), (117, 1171),

Gene: ANI8\_1 Start: 391, Stop: 1203, Start Num: 31

Candidate Starts for ANI8\_1:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (51, 655), (Start: 57 @706 has 1 MA's), (63, 784), (71, 874), (87, 994), (98, 1093), (112, 1153), (114, 1159), (117, 1171),

Gene: AbbyPaige\_2 Start: 642, Stop: 1403, Start Num: 31

Candidate Starts for AbbyPaige\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (Start: 57 @957 has 1 MA's), (71, 1125), (78, 1182), (81, 1206), (93, 1314), (110, 1389),

Gene: Acolyte\_1 Start: 445, Stop: 1143, Start Num: 37

Candidate Starts for Acolyte\_1:

(Start: 31 @376 has 206 MA's), (Start: 37 @445 has 4 MA's), (39, 484), (42, 502), (45, 529), (51, 640), (54, 661), (Start: 57 @691 has 1 MA's), (63, 769), (71, 859), (81, 940), (107, 1120),

Gene: Acquire49\_111 Start: 62227, Stop: 62937, Start Num: 25

Candidate Starts for Acquire49\_111:

(Start: 25 @62227 has 49 MA's), (32, 62281), (Start: 33 @62293 has 2 MA's), (34, 62299), (Start: 37 @62314 has 4 MA's), (42, 62374), (45, 62401), (48, 62455), (50, 62503), (52, 62515), (54, 62533), (Start: 57 @62563 has 1 MA's), (60, 62581), (62, 62635), (71, 62731), (72, 62737), (77, 62779), (79, 62791), (81, 62812), (85, 62842), (87, 62854), (88, 62869), (89, 62896),

Gene: Adzzy\_1 Start: 381, Stop: 1229, Start Num: 27

Candidate Starts for Adzzy\_1:

(Start: 27 @381 has 10 MA's), (34, 444), (35, 447), (Start: 37 @459 has 4 MA's), (42, 516), (45, 543), (46, 570), (47, 585), (Start: 57 @705 has 1 MA's), (61, 732), (63, 783), (71, 873), (81, 954), (122, 1188),

Gene: Agape74\_2 Start: 642, Stop: 1403, Start Num: 31

Candidate Starts for Agape74\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (Start: 57 @957 has 1 MA's), (71, 1125), (78, 1182), (81, 1206), (93, 1314), (110, 1389),

Gene: Aliter\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Aliter\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: Alma\_1 Start: 380, Stop: 1159, Start Num: 31

Candidate Starts for Alma\_1:

(Start: 31 @380 has 206 MA's), (34, 434), (42, 506), (47, 575), (Start: 57 @695 has 1 MA's), (60, 713), (70, 854), (71, 863), (83, 950), (87, 983), (88, 998), (107, 1124), (109, 1130), (110, 1133), (116, 1151),

Gene: Anaysia\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Anaysia\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Aneem\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Aneem\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: AnnaL29\_1 Start: 370, Stop: 1134, Start Num: 31

Candidate Starts for AnnaL29\_1:

(Start: 31 @370 has 206 MA's), (Start: 37 @439 has 4 MA's), (39, 478), (45, 523), (50, 625), (51, 634), (54, 655), (Start: 57 @685 has 1 MA's), (71, 853), (83, 940), (97, 1072), (110, 1120),

Gene: Anon\_1 Start: 400, Stop: 1161, Start Num: 31

Candidate Starts for Anon\_1:

(Start: 31 @400 has 206 MA's), (38, 472), (45, 553), (49, 631), (Start: 57 @715 has 1 MA's), (63, 793), (110, 1144),

Gene: Anselm\_2 Start: 664, Stop: 1500, Start Num: 31

Candidate Starts for Anselm\_2:

(Start: 31 @664 has 206 MA's), (Start: 37 @733 has 4 MA's), (45, 817), (51, 928), (55, 967), (Start: 57 @979 has 1 MA's), (77, 1195), (83, 1234), (110, 1426), (126, 1492),

Gene: Appletree2\_110 Start: 62268, Stop: 62978, Start Num: 25

Candidate Starts for Appletree2\_110:

(18, 62253), (Start: 25 @62268 has 49 MA's), (32, 62322), (Start: 33 @62334 has 2 MA's), (34, 62340), (Start: 37 @62355 has 4 MA's), (42, 62415), (45, 62442), (48, 62496), (50, 62544), (52, 62556), (54, 62574), (Start: 57 @62604 has 1 MA's), (60, 62622), (62, 62676), (71, 62772), (72, 62778), (77, 62820), (79, 62832), (81, 62853), (85, 62883), (87, 62895), (88, 62910), (89, 62937),

Gene: ArcherNM\_1 Start: 391, Stop: 1155, Start Num: 31

Candidate Starts for ArcherNM\_1:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (39, 499), (45, 544), (50, 646), (51, 655), (54, 676), (Start: 57 @706 has 1 MA's), (71, 874), (97, 1093), (110, 1141),

Gene: Archie\_115 Start: 64370, Stop: 65074, Start Num: 25

Candidate Starts for Archie\_115:

(Start: 25 @64370 has 49 MA's), (Start: 33 @64436 has 2 MA's), (34, 64442), (Start: 37 @64457 has 4 MA's), (45, 64541), (47, 64583), (53, 64661), (54, 64673), (Start: 57 @64703 has 1 MA's), (60, 64721), (62, 64775), (63, 64781), (65, 64793), (68, 64853), (69, 64856), (78, 64925), (82, 64952), (83, 64955), (90, 65045),

Gene: Arissanae\_1 Start: 378, Stop: 1226, Start Num: 31

Candidate Starts for Arissanae\_1:

(Start: 31 @378 has 206 MA's), (45, 531), (47, 573), (Start: 57 @693 has 1 MA's), (71, 861), (94, 1059), (109, 1134), (118, 1155), (119, 1158), (129, 1206), (130, 1218),

Gene: Artemis2UCLA\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Artemis2UCLA\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: AvadaKedavra\_111 Start: 62341, Stop: 63051, Start Num: 25

Candidate Starts for AvadaKedavra\_111:

(Start: 25 @62341 has 49 MA's), (32, 62395), (Start: 33 @62407 has 2 MA's), (34, 62413), (Start: 37 @62428 has 4 MA's), (42, 62488), (45, 62515), (48, 62569), (50, 62617), (52, 62629), (54, 62647), (Start: 57 @62677 has 1 MA's), (60, 62695), (62, 62749), (71, 62845), (72, 62851), (77, 62893), (79, 62905), (81, 62926), (85, 62956), (87, 62968), (88, 62983), (89, 63010),

Gene: BABullseye\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for BABullseye\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: BabyBack\_1 Start: 377, Stop: 1144, Start Num: 31

Candidate Starts for BabyBack\_1:

(Start: 31 @377 has 206 MA's), (Start: 37 @446 has 4 MA's), (45, 530), (51, 641), (Start: 57 @692 has 1 MA's), (61, 719), (71, 860), (81, 941), (107, 1121),

Gene: Bachome\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Bachome\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (71, 850),

Gene: Bactobuster\_1 Start: 387, Stop: 1148, Start Num: 31

Candidate Starts for Bactobuster\_1:

(Start: 14 @303 has 1 MA's), (Start: 31 @387 has 206 MA's), (Start: 37 @456 has 4 MA's), (42, 513), (45, 540), (50, 642), (51, 651), (54, 672), (Start: 57 @702 has 1 MA's), (71, 870), (81, 951), (107,

1131),

Gene: Baehexic\_2 Start: 643, Stop: 1380, Start Num: 31

Candidate Starts for Baehexic\_2:

(Start: 31 @643 has 206 MA's), (Start: 37 @712 has 4 MA's), (42, 769), (45, 796), (50, 898), (51, 907), (54, 928), (Start: 57 @958 has 1 MA's), (63, 1036), (71, 1126), (87, 1246),

Gene: Baoshan\_114 Start: 64773, Stop: 65465, Start Num: 25

Candidate Starts for Baoshan\_114:

(Start: 25 @64773 has 49 MA's), (29, 64782), (Start: 33 @64839 has 2 MA's), (34, 64845), (Start: 37 @64860 has 4 MA's), (41, 64911), (42, 64917), (45, 64944), (53, 65064), (Start: 57 @65106 has 1 MA's), (59, 65115), (60, 65124), (63, 65184), (64, 65187), (69, 65259), (70, 65265), (71, 65274), (78, 65328), (82, 65355), (83, 65358), (87, 65394), (88, 65409),

Gene: Battleship\_2 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for Battleship\_2:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: Bazzle\_114 Start: 64892, Stop: 65593, Start Num: 25

Candidate Starts for Bazzle\_114:

(16, 64865), (Start: 25 @64892 has 49 MA's), (Start: 33 @64958 has 2 MA's), (34, 64964), (Start: 37 @64979 has 4 MA's), (45, 65063), (47, 65105), (53, 65183), (54, 65195), (Start: 57 @65225 has 1 MA's), (60, 65243), (62, 65297), (63, 65303), (65, 65315), (68, 65375), (69, 65378), (78, 65447), (82, 65474), (83, 65477), (90, 65567),

Gene: Beemo\_1 Start: 380, Stop: 1162, Start Num: 31

Candidate Starts for Beemo\_1:

(Start: 31 @380 has 206 MA's), (34, 434), (42, 506), (Start: 57 @695 has 1 MA's), (60, 713), (70, 854), (71, 863), (88, 998), (107, 1127), (109, 1133), (110, 1136), (116, 1154),

Gene: Bellis\_112 Start: 64329, Stop: 65036, Start Num: 26

Candidate Starts for Bellis\_112:

(Start: 11 @64254 has 2 MA's), (17, 64305), (22, 64320), (Start: 26 @64329 has 14 MA's), (Start: 33 @64395 has 2 MA's), (34, 64401), (43, 64482), (44, 64485), (45, 64500), (50, 64602), (52, 64614), (53, 64620), (Start: 57 @64662 has 1 MA's), (59, 64671), (62, 64734), (69, 64815), (72, 64836), (80, 64899), (87, 64953), (88, 64968), (89, 64995), (90, 65007),

Gene: BengiVuitton\_1 Start: 432, Stop: 1193, Start Num: 31

Candidate Starts for BengiVuitton\_1:

(20, 399), (Start: 31 @432 has 206 MA's), (Start: 37 @501 has 4 MA's), (39, 540), (45, 585), (50, 687), (51, 696), (Start: 57 @747 has 1 MA's), (71, 915), (93, 1104), (110, 1179),

Gene: Benvolio\_2 Start: 662, Stop: 1495, Start Num: 31

Candidate Starts for Benvolio\_2:

(Start: 31 @662 has 206 MA's), (Start: 37 @731 has 4 MA's), (45, 815), (51, 926), (55, 965), (Start: 57 @977 has 1 MA's), (77, 1193), (83, 1232), (103, 1400), (104, 1406), (110, 1427), (115, 1442), (126, 1487),

Gene: BiancaTri92\_1 Start: 390, Stop: 1157, Start Num: 31

Candidate Starts for BiancaTri92\_1:

(Start: 31 @390 has 206 MA's), (39, 498), (42, 516), (45, 543), (50, 645), (51, 654), (54, 675), (Start: 57 @705 has 1 MA's), (71, 873), (87, 993), (110, 1140), (112, 1146),

Gene: BigCheese\_116 Start: 64844, Stop: 65533, Start Num: 25

Candidate Starts for BigCheese\_116:

(Start: 25 @64844 has 49 MA's), (29, 64853), (Start: 33 @64910 has 2 MA's), (42, 64988), (44, 65000), (48, 65069), (55, 65165), (Start: 57 @65177 has 1 MA's), (61, 65204), (62, 65249), (69, 65330), (70, 65336), (72, 65351), (75, 65378), (78, 65402), (82, 65429), (84, 65450), (85, 65456), (88, 65480),

Gene: Blinn1\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Blinn1\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Blue7\_1 Start: 410, Stop: 1171, Start Num: 31

Candidate Starts for Blue7\_1:

(Start: 31 @410 has 206 MA's), (Start: 37 @479 has 4 MA's), (45, 563), (51, 674), (54, 695), (Start: 57 @725 has 1 MA's), (71, 893), (81, 974), (106, 1148), (112, 1163),

Gene: BobSwaget\_2 Start: 621, Stop: 1388, Start Num: 31

Candidate Starts for BobSwaget\_2:

(Start: 31 @621 has 206 MA's), (Start: 37 @690 has 4 MA's), (39, 729), (42, 747), (45, 774), (50, 876), (51, 885), (Start: 57 @936 has 1 MA's), (80, 1173), (97, 1323), (110, 1374),

Gene: BobsGarage\_116 Start: 64844, Stop: 65533, Start Num: 25

Candidate Starts for BobsGarage\_116:

(Start: 25 @64844 has 49 MA's), (29, 64853), (Start: 33 @64910 has 2 MA's), (42, 64988), (44, 65000), (48, 65069), (55, 65165), (Start: 57 @65177 has 1 MA's), (61, 65204), (62, 65249), (69, 65330), (70, 65336), (72, 65351), (75, 65378), (78, 65402), (82, 65429), (84, 65450), (85, 65456), (88, 65480),

Gene: BogosyJay\_1 Start: 359, Stop: 1213, Start Num: 31

Candidate Starts for BogosyJay\_1:

(Start: 31 @359 has 206 MA's), (Start: 37 @428 has 4 MA's), (45, 512), (46, 539), (Start: 57 @674 has 1 MA's), (71, 842), (94, 1040), (103, 1091), (109, 1115), (119, 1145), (129, 1193), (130, 1205),

Gene: Boohoo\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Boohoo\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Bowtie\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Bowtie\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Breezona\_117 Start: 65179, Stop: 65868, Start Num: 25

Candidate Starts for Breezona\_117:

(Start: 25 @65179 has 49 MA's), (29, 65188), (Start: 33 @65245 has 2 MA's), (42, 65323), (44, 65335), (48, 65404), (55, 65500), (Start: 57 @65512 has 1 MA's), (61, 65539), (62, 65584), (69, 65665), (70, 65671), (72, 65686), (75, 65713), (78, 65737), (82, 65764), (84, 65785), (85, 65791), (88, 65815),

Gene: Bromden\_125 Start: 67100, Stop: 67789, Start Num: 25



Candidate Starts for Bromden\_125:

(Start: 25 @67100 has 49 MA's), (Start: 33 @67166 has 2 MA's), (Start: 37 @67187 has 4 MA's), (39, 67226), (42, 67244), (44, 67256), (47, 67313), (48, 67325), (50, 67373), (52, 67385), (55, 67421), (Start: 57 @67433 has 1 MA's), (61, 67460), (62, 67505), (69, 67586), (72, 67607), (75, 67634), (78, 67658), (79, 67661), (80, 67670), (83, 67688), (84, 67706),

Gene: Bud\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Bud\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850), (91, 1027),

Gene: Buggy\_2 Start: 653, Stop: 1414, Start Num: 31

Candidate Starts for Buggy\_2:

(Start: 31 @653 has 206 MA's), (Start: 37 @722 has 4 MA's), (39, 761), (45, 806), (50, 908), (51, 917), (Start: 57 @968 has 1 MA's), (71, 1136), (78, 1193), (81, 1217), (93, 1325), (110, 1400),

Gene: C3\_01 Start: 460, Stop: 1203, Start Num: 37

Candidate Starts for C3\_01:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (45, 544), (51, 655), (Start: 57 @706 has 1 MA's), (63, 784), (71, 874), (87, 994), (98, 1093), (112, 1153), (114, 1159), (117, 1171),

Gene: CRB1\_1 Start: 577, Stop: 1338, Start Num: 31

Candidate Starts for CRB1\_1:

(20, 544), (Start: 31 @577 has 206 MA's), (Start: 37 @646 has 4 MA's), (39, 685), (45, 730), (54, 862), (Start: 57 @892 has 1 MA's), (71, 1060), (93, 1249), (110, 1324),

Gene: Calm\_116 Start: 63187, Stop: 63894, Start Num: 25

Candidate Starts for Calm\_116:

(Start: 25 @63187 has 49 MA's), (32, 63241), (Start: 33 @63253 has 2 MA's), (34, 63259), (Start: 37 @63274 has 4 MA's), (39, 63313), (42, 63331), (45, 63358), (48, 63412), (50, 63460), (52, 63472), (54, 63490), (Start: 57 @63520 has 1 MA's), (60, 63538), (62, 63592), (66, 63613), (71, 63688), (72, 63694), (77, 63736), (79, 63748), (81, 63769), (85, 63799), (87, 63811), (88, 63826), (89, 63853),

Gene: Candra\_1 Start: 520, Stop: 1209, Start Num: 37

Candidate Starts for Candra\_1:

(Start: 31 @451 has 206 MA's), (Start: 37 @520 has 4 MA's), (45, 604), (47, 646), (51, 715), (54, 736), (Start: 57 @766 has 1 MA's), (71, 934), (81, 1015),

Gene: Caraxes\_1 Start: 381, Stop: 1229, Start Num: 27

Candidate Starts for Caraxes\_1:

(Start: 27 @381 has 10 MA's), (34, 444), (35, 447), (Start: 37 @459 has 4 MA's), (42, 516), (45, 543), (46, 570), (47, 585), (Start: 57 @705 has 1 MA's), (63, 783), (71, 873), (81, 954),

Gene: Catalina\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Catalina\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: Centaur\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for Centaur\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: Changeling\_1 Start: 391, Stop: 1155, Start Num: 31

Candidate Starts for Changeling\_1:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (39, 499), (45, 544), (50, 646), (51, 655), (54, 676), (Start: 57 @706 has 1 MA's), (71, 874), (97, 1093), (110, 1141),

Gene: Chargerpower\_2 Start: 504, Stop: 1277, Start Num: 31

Candidate Starts for Chargerpower\_2:

(Start: 31 @504 has 206 MA's), (Start: 37 @573 has 4 MA's), (45, 657), (48, 711), (50, 759), (51, 768), (55, 807), (Start: 57 @819 has 1 MA's), (82, 1071), (88, 1122), (96, 1197), (99, 1215), (110, 1263),

Gene: Charm\_1 Start: 356, Stop: 1210, Start Num: 31

Candidate Starts for Charm\_1:

(Start: 31 @356 has 206 MA's), (Start: 37 @425 has 4 MA's), (45, 509), (Start: 57 @671 has 1 MA's), (61, 698), (63, 749), (71, 839), (81, 920), (94, 1037), (107, 1106), (109, 1112), (119, 1142), (124, 1169), (129, 1190), (130, 1202),

Gene: Chartreuse\_1 Start: 572, Stop: 1177, Start Num: 45

Candidate Starts for Chartreuse\_1:

(Start: 31 @419 has 206 MA's), (Start: 37 @488 has 4 MA's), (45, 572), (47, 614), (51, 683), (54, 704), (Start: 57 @734 has 1 MA's), (71, 902), (81, 983),

Gene: Chaser\_123 Start: 65827, Stop: 66516, Start Num: 25

Candidate Starts for Chaser\_123:

(Start: 25 @65827 has 49 MA's), (Start: 33 @65893 has 2 MA's), (Start: 37 @65914 has 4 MA's), (39, 65953), (44, 65983), (47, 66040), (48, 66052), (50, 66100), (52, 66112), (53, 66118), (Start: 57 @66160 has 1 MA's), (61, 66187), (62, 66232), (69, 66313), (72, 66334), (75, 66361), (80, 66397), (83, 66415), (84, 66433),

Gene: Che12\_1 Start: 381, Stop: 1229, Start Num: 27

Candidate Starts for Che12\_1:

(Start: 27 @381 has 10 MA's), (34, 444), (35, 447), (Start: 37 @459 has 4 MA's), (42, 516), (45, 543), (46, 570), (47, 585), (Start: 57 @705 has 1 MA's), (61, 732), (63, 783), (71, 873), (81, 954), (112, 1146), (121, 1185), (122, 1188),

Gene: ChipMunk\_2 Start: 660, Stop: 1427, Start Num: 31

Candidate Starts for ChipMunk\_2:

(15, 594), (Start: 31 @660 has 206 MA's), (Start: 37 @729 has 4 MA's), (39, 768), (45, 813), (51, 924), (54, 945), (Start: 57 @975 has 1 MA's), (63, 1053), (71, 1143), (82, 1227), (94, 1341), (110, 1413),

Gene: CicholasNage\_107 Start: 62572, Stop: 63282, Start Num: 25

Candidate Starts for CicholasNage\_107:

(Start: 25 @62572 has 49 MA's), (32, 62626), (Start: 33 @62638 has 2 MA's), (34, 62644), (Start: 37 @62659 has 4 MA's), (42, 62719), (45, 62746), (48, 62800), (50, 62848), (52, 62860), (54, 62878), (Start: 57 @62908 has 1 MA's), (60, 62926), (62, 62980), (71, 63076), (72, 63082), (77, 63124), (79, 63136), (81, 63157), (85, 63187), (87, 63199), (88, 63214), (89, 63241),

Gene: Claus\_116 Start: 64869, Stop: 65573, Start Num: 25

Candidate Starts for Claus\_116:

(Start: 25 @64869 has 49 MA's), (29, 64878), (Start: 33 @64935 has 2 MA's), (34, 64941), (Start: 37 @64956 has 4 MA's), (42, 65013), (53, 65160), (Start: 57 @65202 has 1 MA's), (60, 65220), (63, 65280), (64, 65283), (69, 65355), (70, 65361), (71, 65370), (78, 65424), (82, 65451), (83, 65454), (87, 65490), (88, 65505), (92, 65556),

Gene: Clautastrophe\_112 Start: 64328, Stop: 65035, Start Num: 26

Candidate Starts for Clautastrophe\_112:

(23, 64319), (Start: 26 @64328 has 14 MA's), (34, 64400), (43, 64481), (44, 64484), (45, 64499), (50, 64601), (52, 64613), (53, 64619), (Start: 57 @64661 has 1 MA's), (59, 64670), (62, 64733), (63, 64739), (69, 64814), (72, 64835), (80, 64898), (88, 64967), (89, 64994), (90, 65006),

Gene: CloudWang3\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for CloudWang3\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Colin\_1 Start: 526, Stop: 1293, Start Num: 31

Candidate Starts for Colin\_1:

(Start: 31 @526 has 206 MA's), (Start: 37 @595 has 4 MA's), (45, 679), (51, 790), (Start: 57 @841 has 1 MA's), (71, 1009), (81, 1090), (83, 1096), (101, 1240), (107, 1270), (110, 1279),

Gene: Conquerage\_1 Start: 379, Stop: 1158, Start Num: 31

Candidate Starts for Conquerage\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (83, 949), (87, 982), (88, 997), (107, 1123), (109, 1129), (110, 1132), (116, 1150),

Gene: Cookiedough\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Cookiedough\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Crossroads\_120 Start: 65043, Stop: 65732, Start Num: 25

Candidate Starts for Crossroads\_120:

(Start: 25 @65043 has 49 MA's), (29, 65052), (Start: 33 @65109 has 2 MA's), (42, 65187), (48, 65268), (55, 65364), (Start: 57 @65376 has 1 MA's), (61, 65403), (62, 65448), (69, 65529), (70, 65535), (72, 65550), (75, 65577), (78, 65601), (79, 65604), (82, 65628), (84, 65649), (85, 65655), (88, 65679),

Gene: Crucio\_2 Start: 665, Stop: 1432, Start Num: 31

Candidate Starts for Crucio\_2:

(Start: 31 @665 has 206 MA's), (Start: 37 @734 has 4 MA's), (39, 773), (45, 818), (Start: 57 @980 has 1 MA's), (63, 1058), (82, 1232), (94, 1346), (110, 1418),

Gene: D29\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for D29\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: D32\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for D32\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: DBQu4n\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for DBQu4n\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: DaVinci\_1 Start: 419, Stop: 1177, Start Num: 31

Candidate Starts for DaVinci\_1:

(Start: 31 @419 has 206 MA's), (Start: 37 @488 has 4 MA's), (45, 572), (47, 614), (51, 683), (54, 704), (Start: 57 @734 has 1 MA's), (71, 902), (81, 983),

Gene: Dalmatian\_2 Start: 664, Stop: 1497, Start Num: 31

Candidate Starts for Dalmatian\_2:

(Start: 31 @664 has 206 MA's), (Start: 37 @733 has 4 MA's), (45, 817), (51, 928), (55, 967), (Start: 57 @979 has 1 MA's), (77, 1195), (83, 1234), (110, 1426), (126, 1489),

Gene: Darrell\_1 Start: 357, Stop: 1211, Start Num: 31

Candidate Starts for Darrell\_1:

(Start: 31 @357 has 206 MA's), (45, 510), (51, 621), (Start: 57 @672 has 1 MA's), (61, 699), (63, 750), (71, 840), (94, 1038), (109, 1113), (119, 1143), (123, 1167), (130, 1203), (131, 1206),

Gene: DARTHPhader\_1 Start: 437, Stop: 1234, Start Num: 33

Candidate Starts for DARTHPhader\_1:

(Start: 27 @380 has 10 MA's), (Start: 33 @437 has 2 MA's), (45, 542), (Start: 57 @704 has 1 MA's), (71, 872), (77, 920), (91, 1049), (95, 1079), (111, 1154), (115, 1166), (125, 1214), (128, 1226),

Gene: DekHockey33\_1 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for DekHockey33\_1:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: Deloris\_1 Start: 432, Stop: 1193, Start Num: 31

Candidate Starts for Deloris\_1:

(20, 399), (Start: 31 @432 has 206 MA's), (Start: 37 @501 has 4 MA's), (39, 540), (45, 585), (50, 687), (51, 696), (Start: 57 @747 has 1 MA's), (71, 915), (93, 1104), (110, 1179),

Gene: Dignity\_2 Start: 654, Stop: 1415, Start Num: 31

Candidate Starts for Dignity\_2:

(Start: 31 @654 has 206 MA's), (Start: 37 @723 has 4 MA's), (39, 762), (45, 807), (50, 909), (51, 918), (Start: 57 @969 has 1 MA's), (71, 1137), (78, 1194), (81, 1218), (93, 1326), (110, 1401),

Gene: DirkDirk\_108 Start: 61597, Stop: 62304, Start Num: 25

Candidate Starts for DirkDirk\_108:

(Start: 25 @61597 has 49 MA's), (32, 61651), (Start: 33 @61663 has 2 MA's), (34, 61669), (Start: 37 @61684 has 4 MA's), (39, 61723), (42, 61741), (45, 61768), (52, 61882), (53, 61888), (54, 61900), (Start: 57 @61930 has 1 MA's), (60, 61948), (62, 62002), (71, 62098), (72, 62104), (77, 62146), (79, 62158), (81, 62179), (83, 62185), (85, 62209), (87, 62221), (88, 62236), (89, 62263),

Gene: Dorothea\_1 Start: 571, Stop: 1176, Start Num: 45

Candidate Starts for Dorothea\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Douge\_126 Start: 66600, Stop: 67289, Start Num: 25

Candidate Starts for Douge\_126:

(24, 66594), (Start: 25 @66600 has 49 MA's), (Start: 33 @66666 has 2 MA's), (Start: 37 @66687 has 4 MA's), (40, 66732), (44, 66756), (47, 66813), (48, 66825), (52, 66885), (53, 66891), (Start: 57 @66933 has 1 MA's), (61, 66960), (62, 67005), (69, 67086), (72, 67107), (75, 67134), (80, 67170), (83, 67188), (84, 67206),

Gene: DrSeegs\_115 Start: 65179, Stop: 65868, Start Num: 25

Candidate Starts for DrSeegs\_115:

(Start: 25 @65179 has 49 MA's), (29, 65188), (Start: 33 @65245 has 2 MA's), (42, 65323), (44, 65335), (48, 65404), (55, 65500), (Start: 57 @65512 has 1 MA's), (61, 65539), (62, 65584), (69, 65665), (70, 65671), (72, 65686), (75, 65713), (78, 65737), (82, 65764), (84, 65785), (85, 65791), (88, 65815),

Gene: Drake55\_2 Start: 642, Stop: 1379, Start Num: 31

Candidate Starts for Drake55\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (42, 768), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (63, 1035), (71, 1125), (87, 1245),

Gene: DreamTeam1\_1 Start: 356, Stop: 1210, Start Num: 31

Candidate Starts for DreamTeam1\_1:

(Start: 31 @356 has 206 MA's), (Start: 37 @425 has 4 MA's), (45, 509), (Start: 57 @671 has 1 MA's), (61, 698), (63, 749), (71, 839), (94, 1037), (107, 1106), (109, 1112), (119, 1142), (124, 1169), (129, 1190), (130, 1202),

Gene: DudeLittle\_2 Start: 664, Stop: 1497, Start Num: 31

Candidate Starts for DudeLittle\_2:

(Start: 31 @664 has 206 MA's), (Start: 37 @733 has 4 MA's), (45, 817), (51, 928), (55, 967), (Start: 57 @979 has 1 MA's), (77, 1195), (83, 1234), (110, 1426), (126, 1489),

Gene: DuncansLeg\_115 Start: 64499, Stop: 65206, Start Num: 26

Candidate Starts for DuncansLeg\_115:

(Start: 11 @64424 has 2 MA's), (17, 64475), (22, 64490), (Start: 26 @64499 has 14 MA's), (34, 64571), (43, 64652), (44, 64655), (45, 64670), (50, 64772), (52, 64784), (53, 64790), (Start: 57 @64832 has 1 MA's), (59, 64841), (60, 64850), (62, 64904), (69, 64985), (72, 65006), (79, 65060), (80, 65069), (88, 65138), (89, 65165), (90, 65177),

Gene: Duplo\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for Duplo\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: DyoEdafos\_128 Start: 65948, Stop: 66637, Start Num: 25

Candidate Starts for DyoEdafos\_128:

(Start: 25 @65948 has 49 MA's), (Start: 33 @66014 has 2 MA's), (Start: 37 @66035 has 4 MA's), (44, 66104), (47, 66161), (48, 66173), (50, 66221), (52, 66233), (53, 66239), (Start: 57 @66281 has 1 MA's), (61, 66308), (62, 66353), (69, 66434), (72, 66455), (75, 66482), (83, 66536), (84, 66554),

Gene: EZMoney23\_1 Start: 400, Stop: 1080, Start Num: 30

Candidate Starts for EZMoney23\_1:

(Start: 30 @400 has 2 MA's), (Start: 37 @469 has 4 MA's), (42, 526), (45, 553), (50, 655), (Start: 57 @715 has 1 MA's), (71, 883), (74, 913), (78, 940),

Gene: EagleEye\_1 Start: 400, Stop: 1245, Start Num: 31

Candidate Starts for EagleEye\_1:

(19, 373), (Start: 31 @400 has 206 MA's), (Start: 37 @469 has 4 MA's), (42, 526), (45, 553), (51, 664), (54, 685), (Start: 57 @715 has 1 MA's), (71, 883), (113, 1165), (119, 1177), (129, 1225), (131, 1240),

Gene: Ebony\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Ebony\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850), (91, 1027),

Gene: Echild\_2 Start: 662, Stop: 1495, Start Num: 31

Candidate Starts for Echild\_2:

(Start: 31 @662 has 206 MA's), (Start: 37 @731 has 4 MA's), (45, 815), (51, 926), (55, 965), (Start: 57 @977 has 1 MA's), (77, 1193), (83, 1232), (103, 1400), (104, 1406), (110, 1427), (115, 1442), (126, 1487),

Gene: Eidsmoe\_1 Start: 379, Stop: 1158, Start Num: 31

Candidate Starts for Eidsmoe\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (83, 949), (87, 982), (88, 997), (107, 1123), (109, 1129), (110, 1132), (116, 1150),

Gene: Elephantoon\_1 Start: 358, Stop: 1206, Start Num: 31

Candidate Starts for Elephantoon\_1:

(Start: 31 @358 has 206 MA's), (45, 511), (51, 622), (Start: 57 @673 has 1 MA's), (63, 751), (71, 841), (94, 1039), (103, 1090), (109, 1114), (118, 1135), (119, 1138), (129, 1186), (130, 1198),

Gene: Ellson\_113 Start: 64783, Stop: 65490, Start Num: 26

Candidate Starts for Ellson\_113:

(17, 64759), (22, 64774), (Start: 26 @64783 has 14 MA's), (34, 64855), (43, 64936), (44, 64939), (45, 64954), (50, 65056), (52, 65068), (53, 65074), (Start: 57 @65116 has 1 MA's), (59, 65125), (60, 65134), (62, 65188), (69, 65269), (72, 65290), (79, 65344), (80, 65353), (88, 65422), (89, 65449), (90, 65461),

Gene: EmyBug\_1 Start: 379, Stop: 1158, Start Num: 31

Candidate Starts for EmyBug\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (83, 949), (87, 982), (88, 997), (107, 1123), (109, 1129), (110, 1132), (116, 1150),

Gene: Enceladus\_108 Start: 61896, Stop: 62603, Start Num: 25

Candidate Starts for Enceladus\_108:

(Start: 25 @61896 has 49 MA's), (32, 61950), (Start: 33 @61962 has 2 MA's), (34, 61968), (Start: 37 @61983 has 4 MA's), (39, 62022), (42, 62040), (45, 62067), (52, 62181), (53, 62187), (54, 62199), (Start: 57 @62229 has 1 MA's), (60, 62247), (62, 62301), (71, 62397), (72, 62403), (77, 62445), (79, 62457), (81, 62478), (83, 62484), (85, 62508), (87, 62520), (88, 62535), (89, 62562),

Gene: Epsocamisio\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Epsocamisio\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Equemioh13\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for Equemioh13\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: EricB\_1 Start: 419, Stop: 1177, Start Num: 31

Candidate Starts for EricB\_1:

(Start: 31 @419 has 206 MA's), (Start: 37 @488 has 4 MA's), (45, 572), (47, 614), (51, 683), (54, 704), (Start: 57 @734 has 1 MA's), (71, 902), (81, 983),

Gene: Et2Brutus\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Et2Brutus\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: EvilGenius\_2 Start: 660, Stop: 1427, Start Num: 31

Candidate Starts for EvilGenius\_2:

(15, 594), (Start: 31 @660 has 206 MA's), (Start: 37 @729 has 4 MA's), (39, 768), (45, 813), (51, 924), (54, 945), (Start: 57 @975 has 1 MA's), (63, 1053), (71, 1143), (82, 1227), (94, 1341), (110, 1413),

Gene: ExplosioNervosa\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for ExplosioNervosa\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (107, 1126), (109, 1132), (110, 1135), (116, 1153),

Gene: Faith1\_115 Start: 64487, Stop: 65176, Start Num: 25

Candidate Starts for Faith1\_115:

(Start: 25 @64487 has 49 MA's), (29, 64496), (Start: 33 @64553 has 2 MA's), (42, 64631), (44, 64643), (48, 64712), (55, 64808), (Start: 57 @64820 has 1 MA's), (61, 64847), (62, 64892), (69, 64973), (70, 64979), (72, 64994), (75, 65021), (78, 65045), (82, 65072), (84, 65093), (85, 65099), (88, 65123),

Gene: Fameo\_2 Start: 667, Stop: 1497, Start Num: 31

Candidate Starts for Fameo\_2:

(Start: 31 @667 has 206 MA's), (Start: 37 @736 has 4 MA's), (45, 820), (51, 931), (55, 970), (Start: 57 @982 has 1 MA's), (77, 1198), (110, 1426), (115, 1441), (126, 1489),

Gene: Fayely\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Fayely\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (107, 1126), (109, 1132), (110, 1135), (116, 1153),

Gene: Fibonacci\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Fibonacci\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Finemlucis\_115 Start: 65563, Stop: 66252, Start Num: 25

Candidate Starts for Finemlucis\_115:

(Start: 25 @65563 has 49 MA's), (29, 65572), (Start: 33 @65629 has 2 MA's), (35, 65638), (36, 65644), (42, 65707), (55, 65884), (Start: 57 @65896 has 1 MA's), (61, 65923), (62, 65968), (69, 66049), (70, 66055), (72, 66070), (78, 66121), (79, 66124), (82, 66148), (84, 66169), (85, 66175), (88, 66199),

Gene: Finnry\_113 Start: 64677, Stop: 65384, Start Num: 26

Candidate Starts for Finnry\_113:

(Start: 11 @64602 has 2 MA's), (17, 64653), (22, 64668), (Start: 26 @64677 has 14 MA's), (Start: 33 @64743 has 2 MA's), (34, 64749), (43, 64830), (44, 64833), (45, 64848), (50, 64950), (52, 64962), (53, 64968), (Start: 57 @65010 has 1 MA's), (59, 65019), (62, 65082), (69, 65163), (72, 65184), (80, 65247), (87, 65301), (88, 65316), (89, 65343), (90, 65355),

Gene: FiringLine\_2 Start: 666, Stop: 1433, Start Num: 31

Candidate Starts for FiringLine\_2:

(Start: 31 @666 has 206 MA's), (Start: 37 @735 has 4 MA's), (39, 774), (45, 819), (Start: 57 @981 has 1 MA's), (63, 1059), (82, 1233), (94, 1347), (110, 1419),

Gene: First\_001 Start: 569, Stop: 1336, Start Num: 31

Candidate Starts for First\_001:

(20, 536), (Start: 31 @569 has 206 MA's), (Start: 37 @638 has 4 MA's), (39, 677), (45, 722), (50, 824), (51, 833), (54, 854), (Start: 57 @884 has 1 MA's), (96, 1262), (97, 1271), (110, 1322),

Gene: Flare16\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for Flare16\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: Flaverint\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Flaverint\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Gabriela\_117 Start: 63833, Stop: 64522, Start Num: 25

Candidate Starts for Gabriela\_117:

(Start: 25 @63833 has 49 MA's), (29, 63842), (Start: 33 @63899 has 2 MA's), (42, 63977), (44, 63989), (48, 64058), (55, 64154), (Start: 57 @64166 has 1 MA's), (61, 64193), (62, 64238), (69, 64319), (70, 64325), (72, 64340), (75, 64367), (78, 64391), (82, 64418), (84, 64439), (85, 64445), (88, 64469),

Gene: Gail\_1 Start: 369, Stop: 1055, Start Num: 31

Candidate Starts for Gail\_1:

(Start: 27 @360 has 10 MA's), (Start: 31 @369 has 206 MA's), (34, 423), (Start: 37 @438 has 4 MA's), (45, 522), (Start: 57 @684 has 1 MA's), (75, 885), (87, 972), (88, 987),

Gene: Garak\_1 Start: 487, Stop: 1176, Start Num: 37

Candidate Starts for Garak\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Gardann\_116 Start: 64511, Stop: 65200, Start Num: 25

Candidate Starts for Gardann\_116:

(Start: 25 @64511 has 49 MA's), (29, 64520), (Start: 33 @64577 has 2 MA's), (42, 64655), (48, 64736), (55, 64832), (Start: 57 @64844 has 1 MA's), (61, 64871), (62, 64916), (69, 64997), (70, 65003), (72, 65018), (75, 65045), (78, 65069), (82, 65096), (84, 65117), (85, 65123), (88, 65147),

Gene: GaugeLDP\_1 Start: 379, Stop: 1146, Start Num: 31

Candidate Starts for GaugeLDP\_1:

(Start: 31 @379 has 206 MA's), (Start: 37 @448 has 4 MA's), (45, 532), (51, 643), (Start: 57 @694 has 1 MA's), (61, 721), (71, 862), (81, 943), (107, 1123),

Gene: Georgie2\_2 Start: 665, Stop: 1432, Start Num: 31

Candidate Starts for Georgie2\_2:

(Start: 31 @665 has 206 MA's), (Start: 37 @734 has 4 MA's), (39, 773), (45, 818), (Start: 57 @980 has 1 MA's), (63, 1058), (82, 1232), (94, 1346), (110, 1418),

Gene: Gilberta\_1 Start: 367, Stop: 1107, Start Num: 31



Candidate Starts for Gilberta\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (71, 850),

Gene: Gladiator\_1 Start: 411, Stop: 1172, Start Num: 31

Candidate Starts for Gladiator\_1:

(Start: 31 @411 has 206 MA's), (Start: 37 @480 has 4 MA's), (45, 564), (51, 675), (54, 696), (Start: 57 @726 has 1 MA's), (71, 894), (81, 975), (106, 1149), (112, 1164),

Gene: GreedyLawyer\_1 Start: 487, Stop: 1176, Start Num: 37

Candidate Starts for GreedyLawyer\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Gruunaga\_1 Start: 411, Stop: 1172, Start Num: 31

Candidate Starts for Gruunaga\_1:

(Start: 31 @411 has 206 MA's), (Start: 37 @480 has 4 MA's), (45, 564), (51, 675), (54, 696), (Start: 57 @726 has 1 MA's), (71, 894), (81, 975), (106, 1149), (112, 1164),

Gene: GuuelaD\_113 Start: 64633, Stop: 65322, Start Num: 25

Candidate Starts for GuuelaD\_113:

(Start: 25 @64633 has 49 MA's), (29, 64642), (Start: 33 @64699 has 2 MA's), (42, 64777), (48, 64858), (55, 64954), (Start: 57 @64966 has 1 MA's), (61, 64993), (62, 65038), (69, 65119), (70, 65125), (72, 65140), (75, 65167), (78, 65191), (79, 65194), (82, 65218), (84, 65239), (85, 65245), (88, 65269),

Gene: Halena\_111 Start: 62215, Stop: 62925, Start Num: 25

Candidate Starts for Halena\_111:

(Start: 25 @62215 has 49 MA's), (32, 62269), (Start: 33 @62281 has 2 MA's), (34, 62287), (Start: 37 @62302 has 4 MA's), (42, 62362), (45, 62389), (48, 62443), (50, 62491), (52, 62503), (54, 62521), (Start: 57 @62551 has 1 MA's), (60, 62569), (62, 62623), (71, 62719), (72, 62725), (77, 62767), (79, 62779), (81, 62800), (85, 62830), (87, 62842), (88, 62857), (89, 62884),

Gene: Hammer\_1 Start: 410, Stop: 1171, Start Num: 31

Candidate Starts for Hammer\_1:

(Start: 31 @410 has 206 MA's), (Start: 37 @479 has 4 MA's), (45, 563), (51, 674), (54, 695), (Start: 57 @725 has 1 MA's), (71, 893), (81, 974), (106, 1148), (112, 1163),

Gene: HarryHoudini\_2 Start: 642, Stop: 1379, Start Num: 31

Candidate Starts for HarryHoudini\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (42, 768), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (63, 1035), (81, 1206),

Gene: Heffalump\_2 Start: 667, Stop: 1497, Start Num: 31

Candidate Starts for Heffalump\_2:

(Start: 31 @667 has 206 MA's), (Start: 37 @736 has 4 MA's), (45, 820), (51, 931), (55, 970), (Start: 57 @982 has 1 MA's), (77, 1198), (110, 1426), (115, 1441), (126, 1489),

Gene: Helmet\_1 Start: 487, Stop: 1176, Start Num: 37

Candidate Starts for Helmet\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Hexamo\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Hexamo\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703),  
(Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Hoot\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Hoot\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703),  
(Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: HortumSL17\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for HortumSL17\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712),  
(70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: Hutc2\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Hutc2\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682  
has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Indra\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Indra\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703),  
(Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Insomnia\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Insomnia\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682  
has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: IronMan\_1 Start: 389, Stop: 1159, Start Num: 31

Candidate Starts for IronMan\_1:

(Start: 31 @389 has 206 MA's), (Start: 37 @458 has 4 MA's), (42, 515), (45, 542), (50, 644), (54, 674),  
(Start: 57 @704 has 1 MA's), (71, 872), (81, 953), (106, 1136),

Gene: Isiphiwo\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Isiphiwo\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703),  
(Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Itos\_117 Start: 63393, Stop: 64082, Start Num: 25

Candidate Starts for Itos\_117:

(Start: 25 @63393 has 49 MA's), (29, 63402), (Start: 33 @63459 has 2 MA's), (42, 63537), (44,  
63549), (48, 63618), (55, 63714), (Start: 57 @63726 has 1 MA's), (61, 63753), (62, 63798), (69,  
63879), (70, 63885), (72, 63900), (75, 63927), (78, 63951), (82, 63978), (84, 63999), (85, 64005), (88,  
64029),

Gene: Iwokeuplikedis\_2 Start: 649, Stop: 1341, Start Num: 28

Candidate Starts for Iwokeuplikedis\_2:

(Start: 28 @649 has 1 MA's), (Start: 37 @727 has 4 MA's), (39, 766), (42, 784), (44, 796), (46, 838),  
(51, 922), (Start: 57 @973 has 1 MA's), (71, 1141), (75, 1174),

Gene: JSwag\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for JSwag\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Jaan\_1 Start: 388, Stop: 1155, Start Num: 31

Candidate Starts for Jaan\_1:

(Start: 31 @388 has 206 MA's), (Start: 37 @457 has 4 MA's), (42, 514), (45, 541), (50, 643), (51, 652), (54, 673), (Start: 57 @703 has 1 MA's), (71, 871), (81, 952), (107, 1138),

Gene: Jabith\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Jabith\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Jeeves\_1 Start: 400, Stop: 1086, Start Num: 31

Candidate Starts for Jeeves\_1:

(Start: 27 @391 has 10 MA's), (Start: 31 @400 has 206 MA's), (34, 454), (Start: 37 @469 has 4 MA's), (45, 553), (Start: 57 @715 has 1 MA's), (87, 1003), (88, 1018),

Gene: Jeffabunny\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Jeffabunny\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Jerm\_2 Start: 652, Stop: 1413, Start Num: 31

Candidate Starts for Jerm\_2:

(Start: 31 @652 has 206 MA's), (Start: 37 @721 has 4 MA's), (39, 760), (45, 805), (50, 907), (51, 916), (Start: 57 @967 has 1 MA's), (71, 1135), (78, 1192), (81, 1216), (93, 1324), (110, 1399),

Gene: JewelBug\_1 Start: 419, Stop: 1177, Start Num: 31

Candidate Starts for JewelBug\_1:

(Start: 31 @419 has 206 MA's), (Start: 37 @488 has 4 MA's), (45, 572), (47, 614), (51, 683), (54, 704), (Start: 57 @734 has 1 MA's), (71, 902), (81, 983),

Gene: Jobypre\_114 Start: 64326, Stop: 65033, Start Num: 26

Candidate Starts for Jobypre\_114:

(Start: 11 @64251 has 2 MA's), (17, 64302), (22, 64317), (Start: 26 @64326 has 14 MA's), (34, 64398), (43, 64479), (44, 64482), (45, 64497), (50, 64599), (52, 64611), (53, 64617), (Start: 57 @64659 has 1 MA's), (59, 64668), (62, 64731), (63, 64737), (69, 64812), (72, 64833), (80, 64896), (88, 64965), (89, 64992), (90, 65004),

Gene: JoeDirt\_111 Start: 63170, Stop: 63877, Start Num: 25

Candidate Starts for JoeDirt\_111:

(Start: 25 @63170 has 49 MA's), (32, 63224), (Start: 33 @63236 has 2 MA's), (34, 63242), (Start: 37 @63257 has 4 MA's), (39, 63296), (42, 63314), (45, 63341), (48, 63395), (50, 63443), (52, 63455), (54, 63473), (Start: 57 @63503 has 1 MA's), (60, 63521), (62, 63575), (71, 63671), (72, 63677), (77, 63719), (79, 63731), (81, 63752), (85, 63782), (87, 63794), (88, 63809), (89, 63836),

Gene: Jordennis\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Jordennis\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Joselito\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Joselito\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: JoshKayV\_2 Start: 661, Stop: 1428, Start Num: 31

Candidate Starts for JoshKayV\_2:

(15, 595), (Start: 31 @661 has 206 MA's), (Start: 37 @730 has 4 MA's), (39, 769), (45, 814), (51, 925), (54, 946), (Start: 57 @976 has 1 MA's), (71, 1144), (80, 1213), (97, 1363), (110, 1414),

Gene: Journey13\_1 Start: 522, Stop: 1331, Start Num: 31

Candidate Starts for Journey13\_1:

(Start: 31 @522 has 206 MA's), (45, 675), (51, 786), (56, 831), (Start: 57 @837 has 1 MA's), (71, 1005), (92, 1191),

Gene: Jsquared\_1 Start: 402, Stop: 1091, Start Num: 31

Candidate Starts for Jsquared\_1:

(Start: 31 @402 has 206 MA's), (Start: 37 @471 has 4 MA's), (42, 528), (45, 555), (51, 666), (Start: 57 @717 has 1 MA's), (63, 795), (67, 858), (71, 885), (83, 972), (87, 1005),

Gene: Jubie\_113 Start: 64386, Stop: 65168, Start Num: 11

Candidate Starts for Jubie\_113:

(Start: 11 @64386 has 2 MA's), (17, 64437), (22, 64452), (Start: 26 @64461 has 14 MA's), (34, 64533), (43, 64614), (44, 64617), (45, 64632), (50, 64734), (52, 64746), (53, 64752), (Start: 57 @64794 has 1 MA's), (59, 64803), (62, 64866), (63, 64872), (69, 64947), (72, 64968), (80, 65031), (88, 65100), (89, 65127), (90, 65139),

Gene: Kahlid\_116 Start: 64796, Stop: 65485, Start Num: 25

Candidate Starts for Kahlid\_116:

(Start: 25 @64796 has 49 MA's), (29, 64805), (Start: 33 @64862 has 2 MA's), (42, 64940), (48, 65021), (55, 65117), (Start: 57 @65129 has 1 MA's), (61, 65156), (62, 65201), (69, 65282), (70, 65288), (72, 65303), (78, 65354), (79, 65357), (82, 65381), (84, 65402), (85, 65408), (88, 65432),

Gene: Kalpine\_2 Start: 643, Stop: 1410, Start Num: 31

Candidate Starts for Kalpine\_2:

(Start: 31 @643 has 206 MA's), (Start: 37 @712 has 4 MA's), (45, 796), (51, 907), (Start: 57 @958 has 1 MA's), (71, 1126), (81, 1207), (83, 1213), (101, 1357), (107, 1387), (110, 1396),

Gene: KatherineG\_1 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for KatherineG\_1:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: Kazan\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Kazan\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Kerberos\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for Kerberos\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: Keziacharles14\_1 Start: 356, Stop: 1039, Start Num: 30

Candidate Starts for Keziacharles14\_1:

(Start: 30 @356 has 2 MA's), (Start: 37 @425 has 4 MA's), (45, 509), (56, 665), (Start: 57 @671 has 1 MA's), (58, 677), (62, 743), (71, 839),

Gene: KingCyrus\_2 Start: 661, Stop: 1428, Start Num: 31

Candidate Starts for KingCyrus\_2:

(15, 595), (Start: 31 @661 has 206 MA's), (Start: 37 @730 has 4 MA's), (39, 769), (45, 814), (51, 925), (54, 946), (Start: 57 @976 has 1 MA's), (63, 1054), (71, 1144), (82, 1228), (94, 1342), (110, 1414),

Gene: Kingsolomon\_111 Start: 64433, Stop: 65140, Start Num: 26

Candidate Starts for Kingsolomon\_111:

(Start: 11 @64358 has 2 MA's), (17, 64409), (22, 64424), (Start: 26 @64433 has 14 MA's), (Start: 33 @64499 has 2 MA's), (34, 64505), (43, 64586), (44, 64589), (45, 64604), (50, 64706), (52, 64718), (53, 64724), (Start: 57 @64766 has 1 MA's), (59, 64775), (62, 64838), (69, 64919), (72, 64940), (80, 65003), (87, 65057), (88, 65072), (89, 65099), (90, 65111),

Gene: Kipper29\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Kipper29\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Koduck\_1 Start: 402, Stop: 1091, Start Num: 31

Candidate Starts for Koduck\_1:

(Start: 31 @402 has 206 MA's), (Start: 37 @471 has 4 MA's), (42, 528), (45, 555), (Start: 57 @717 has 1 MA's), (63, 795), (67, 858), (71, 885), (83, 972), (87, 1005),

Gene: Koko\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Koko\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Krypton555\_117 Start: 64843, Stop: 65544, Start Num: 26

Candidate Starts for Krypton555\_117:

(17, 64819), (18, 64828), (22, 64834), (Start: 26 @64843 has 14 MA's), (Start: 33 @64909 has 2 MA's), (34, 64915), (43, 64996), (44, 64999), (45, 65014), (50, 65116), (52, 65128), (53, 65134), (Start: 57 @65176 has 1 MA's), (59, 65185), (60, 65194), (62, 65248), (69, 65329), (72, 65350), (73, 65371), (80, 65413), (89, 65509), (90, 65521),

Gene: L5\_1 Start: 411, Stop: 1100, Start Num: 31

Candidate Starts for L5\_1:

(Start: 31 @411 has 206 MA's), (Start: 37 @480 has 4 MA's), (42, 537), (45, 564), (Start: 57 @726 has 1 MA's), (63, 804), (67, 867), (71, 894), (83, 981), (87, 1014),

Gene: LadyBird\_1 Start: 570, Stop: 1331, Start Num: 31

Candidate Starts for LadyBird\_1:

(20, 537), (Start: 31 @570 has 206 MA's), (Start: 37 @639 has 4 MA's), (39, 678), (45, 723), (54, 855), (Start: 57 @885 has 1 MA's), (71, 1053), (93, 1242), (110, 1317),

Gene: Landor\_1 Start: 456, Stop: 1154, Start Num: 37

Candidate Starts for Landor\_1:

(Start: 14 @303 has 1 MA's), (Start: 31 @387 has 206 MA's), (Start: 37 @456 has 4 MA's), (42, 513), (45, 540), (50, 642), (51, 651), (54, 672), (Start: 57 @702 has 1 MA's), (71, 870), (81, 951), (107,

1137),

Gene: Larenn\_2 Start: 656, Stop: 1420, Start Num: 31

Candidate Starts for Larenn\_2:

(Start: 31 @656 has 206 MA's), (Start: 37 @725 has 4 MA's), (39, 764), (45, 809), (54, 941), (Start: 57 @971 has 1 MA's), (62, 1043), (83, 1226), (94, 1337), (109, 1403), (110, 1406),

Gene: LastResort\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for LastResort\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: LeBron\_110 Start: 61831, Stop: 62541, Start Num: 25

Candidate Starts for LeBron\_110:

(Start: 25 @61831 has 49 MA's), (32, 61885), (Start: 33 @61897 has 2 MA's), (34, 61903), (Start: 37 @61918 has 4 MA's), (42, 61978), (45, 62005), (48, 62059), (50, 62107), (52, 62119), (54, 62137), (Start: 57 @62167 has 1 MA's), (60, 62185), (62, 62239), (71, 62335), (72, 62341), (77, 62383), (79, 62395), (81, 62416), (85, 62446), (87, 62458), (88, 62473), (89, 62500),

Gene: Leogania\_1 Start: 390, Stop: 1157, Start Num: 31

Candidate Starts for Leogania\_1:

(Start: 31 @390 has 206 MA's), (39, 498), (42, 516), (45, 543), (50, 645), (51, 654), (54, 675), (Start: 57 @705 has 1 MA's), (71, 873), (87, 993), (110, 1140), (112, 1146),

Gene: Leviathan\_2 Start: 654, Stop: 1415, Start Num: 31

Candidate Starts for Leviathan\_2:

(Start: 31 @654 has 206 MA's), (Start: 37 @723 has 4 MA's), (39, 762), (45, 807), (50, 909), (51, 918), (Start: 57 @969 has 1 MA's), (71, 1137), (78, 1194), (81, 1218), (93, 1326), (110, 1401),

Gene: Lewan\_118 Start: 65306, Stop: 65995, Start Num: 25

Candidate Starts for Lewan\_118:

(Start: 25 @65306 has 49 MA's), (29, 65315), (Start: 33 @65372 has 2 MA's), (42, 65450), (44, 65462), (48, 65531), (55, 65627), (Start: 57 @65639 has 1 MA's), (61, 65666), (62, 65711), (69, 65792), (70, 65798), (72, 65813), (75, 65840), (78, 65864), (79, 65867), (82, 65891), (84, 65912), (85, 65918), (88, 65942),

Gene: LilDestine\_114 Start: 63966, Stop: 64655, Start Num: 25

Candidate Starts for LilDestine\_114:

(Start: 25 @63966 has 49 MA's), (29, 63975), (Start: 33 @64032 has 2 MA's), (42, 64110), (48, 64191), (55, 64287), (Start: 57 @64299 has 1 MA's), (61, 64326), (62, 64371), (69, 64452), (70, 64458), (72, 64473), (75, 64500), (78, 64524), (82, 64551), (84, 64572), (85, 64578), (88, 64602),

Gene: LilTurb\_2 Start: 652, Stop: 1413, Start Num: 31

Candidate Starts for LilTurb\_2:

(Start: 31 @652 has 206 MA's), (Start: 37 @721 has 4 MA's), (39, 760), (45, 805), (50, 907), (51, 916), (Start: 57 @967 has 1 MA's), (71, 1135), (78, 1192), (81, 1216), (93, 1324), (110, 1399),

Gene: Lilbunny\_1 Start: 487, Stop: 1176, Start Num: 37

Candidate Starts for Lilbunny\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Loadrie\_117 Start: 65338, Stop: 66027, Start Num: 25

Candidate Starts for Loadrie\_117:

(Start: 25 @65338 has 49 MA's), (29, 65347), (Start: 33 @65404 has 2 MA's), (42, 65482), (48, 65563), (55, 65659), (Start: 57 @65671 has 1 MA's), (61, 65698), (62, 65743), (69, 65824), (70, 65830), (72, 65845), (78, 65896), (79, 65899), (82, 65923), (84, 65944), (85, 65950), (88, 65974),

Gene: Lokk\_2 Start: 623, Stop: 1390, Start Num: 31

Candidate Starts for Lokk\_2:

(Start: 31 @623 has 206 MA's), (Start: 37 @692 has 4 MA's), (39, 731), (42, 749), (45, 776), (50, 878), (51, 887), (Start: 57 @938 has 1 MA's), (80, 1175), (97, 1325), (110, 1376),

Gene: Lolly9\_114 Start: 64846, Stop: 65553, Start Num: 26

Candidate Starts for Lolly9\_114:

(1, 64540), (2, 64588), (3, 64594), (4, 64603), (5, 64663), (6, 64666), (7, 64684), (9, 64717), (12, 64774), (13, 64780), (17, 64822), (18, 64831), (22, 64837), (Start: 26 @64846 has 14 MA's), (34, 64918), (43, 64999), (45, 65017), (50, 65119), (52, 65131), (53, 65137), (Start: 57 @65179 has 1 MA's), (59, 65188), (62, 65251), (69, 65332), (72, 65353), (79, 65407), (80, 65416), (88, 65485), (89, 65512), (90, 65524),

Gene: LoneWolf\_1 Start: 356, Stop: 1210, Start Num: 31

Candidate Starts for LoneWolf\_1:

(Start: 31 @356 has 206 MA's), (45, 509), (Start: 57 @671 has 1 MA's), (63, 749), (71, 839), (94, 1037), (103, 1091), (114, 1130), (118, 1139), (119, 1142), (129, 1190), (130, 1202), (131, 1205),

Gene: Looper\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Looper\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Loser\_1 Start: 369, Stop: 1133, Start Num: 31

Candidate Starts for Loser\_1:

(Start: 31 @369 has 206 MA's), (Start: 37 @438 has 4 MA's), (39, 477), (45, 522), (50, 624), (51, 633), (54, 654), (Start: 57 @684 has 1 MA's), (71, 852), (97, 1071), (110, 1119),

Gene: Luchador\_1 Start: 369, Stop: 1055, Start Num: 31

Candidate Starts for Luchador\_1:

(Start: 27 @360 has 10 MA's), (Start: 31 @369 has 206 MA's), (34, 423), (Start: 37 @438 has 4 MA's), (45, 522), (Start: 57 @684 has 1 MA's), (75, 885), (87, 972), (88, 987),

Gene: Lucivia\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Lucivia\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Lucyedi\_1 Start: 400, Stop: 1245, Start Num: 31

Candidate Starts for Lucyedi\_1:

(19, 373), (Start: 31 @400 has 206 MA's), (Start: 37 @469 has 4 MA's), (42, 526), (45, 553), (51, 664), (54, 685), (Start: 57 @715 has 1 MA's), (71, 883), (113, 1165), (119, 1177), (129, 1225), (131, 1240),

Gene: Lumos\_113 Start: 64323, Stop: 65030, Start Num: 26

Candidate Starts for Lumos\_113:

(Start: 11 @64248 has 2 MA's), (17, 64299), (22, 64314), (Start: 26 @64323 has 14 MA's), (34, 64395), (43, 64476), (44, 64479), (45, 64494), (50, 64596), (52, 64608), (53, 64614), (Start: 57 @64656 has 1 MA's), (59, 64665), (62, 64728), (63, 64734), (69, 64809), (72, 64830), (80, 64893),

(88, 64962), (89, 64989), (90, 65001),

Gene: MAckerman\_109 Start: 62208, Stop: 62918, Start Num: 25

Candidate Starts for MAckerman\_109:

(Start: 25 @62208 has 49 MA's), (32, 62262), (Start: 33 @62274 has 2 MA's), (34, 62280), (Start: 37 @62295 has 4 MA's), (42, 62355), (45, 62382), (48, 62436), (50, 62484), (52, 62496), (54, 62514), (Start: 57 @62544 has 1 MA's), (60, 62562), (62, 62616), (71, 62712), (72, 62718), (77, 62760), (79, 62772), (81, 62793), (85, 62823), (87, 62835), (88, 62850), (89, 62877),

Gene: MaCh\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for MaCh\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (71, 850),

Gene: Mabel\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Mabel\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Malec\_2 Start: 656, Stop: 1420, Start Num: 31

Candidate Starts for Malec\_2:

(Start: 31 @656 has 206 MA's), (Start: 37 @725 has 4 MA's), (39, 764), (45, 809), (54, 941), (Start: 57 @971 has 1 MA's), (62, 1043), (83, 1226), (94, 1337), (109, 1403), (110, 1406),

Gene: Maminiaina\_1 Start: 359, Stop: 1213, Start Num: 31

Candidate Starts for Maminiaina\_1:

(Start: 31 @359 has 206 MA's), (Start: 37 @428 has 4 MA's), (45, 512), (46, 539), (51, 623), (Start: 57 @674 has 1 MA's), (71, 842), (94, 1040), (103, 1091), (109, 1115), (119, 1145), (129, 1193), (130, 1205),

Gene: McFly\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for McFly\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: MiculUcigas\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for MiculUcigas\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: Miko\_2 Start: 601, Stop: 1368, Start Num: 31

Candidate Starts for Miko\_2:

(Start: 31 @601 has 206 MA's), (Start: 37 @670 has 4 MA's), (39, 709), (42, 727), (45, 754), (50, 856), (51, 865), (Start: 57 @916 has 1 MA's), (80, 1153), (97, 1303), (110, 1354),

Gene: Miley16\_117 Start: 65179, Stop: 65868, Start Num: 25

Candidate Starts for Miley16\_117:

(Start: 25 @65179 has 49 MA's), (29, 65188), (Start: 33 @65245 has 2 MA's), (42, 65323), (44, 65335), (48, 65404), (55, 65500), (Start: 57 @65512 has 1 MA's), (61, 65539), (62, 65584), (69, 65665), (70, 65671), (72, 65686), (75, 65713), (78, 65737), (82, 65764), (84, 65785), (85, 65791), (88, 65815),

Gene: MinecraftSteve\_2 Start: 577, Stop: 1407, Start Num: 31



Candidate Starts for MinecraftSteve\_2:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: MiniLon\_119 Start: 64847, Stop: 65554, Start Num: 26

Candidate Starts for MiniLon\_119:

(1, 64541), (2, 64589), (3, 64595), (4, 64604), (5, 64664), (6, 64667), (7, 64685), (9, 64718), (12, 64775), (13, 64781), (17, 64823), (18, 64832), (22, 64838), (Start: 26 @64847 has 14 MA's), (34, 64919), (43, 65000), (45, 65018), (50, 65120), (52, 65132), (53, 65138), (Start: 57 @65180 has 1 MA's), (59, 65189), (62, 65252), (69, 65333), (72, 65354), (79, 65408), (80, 65417), (88, 65486), (89, 65513), (90, 65525),

Gene: MiniMac\_119 Start: 64849, Stop: 65556, Start Num: 26

Candidate Starts for MiniMac\_119:

(1, 64543), (2, 64591), (3, 64597), (4, 64606), (5, 64666), (6, 64669), (7, 64687), (9, 64720), (12, 64777), (13, 64783), (17, 64825), (18, 64834), (22, 64840), (Start: 26 @64849 has 14 MA's), (34, 64921), (43, 65002), (45, 65020), (50, 65122), (52, 65134), (53, 65140), (Start: 57 @65182 has 1 MA's), (59, 65191), (62, 65254), (69, 65335), (72, 65356), (79, 65410), (80, 65419), (87, 65473), (88, 65488), (89, 65515), (90, 65527),

Gene: MissWhite\_1 Start: 401, Stop: 1090, Start Num: 31

Candidate Starts for MissWhite\_1:

(Start: 31 @401 has 206 MA's), (Start: 37 @470 has 4 MA's), (42, 527), (45, 554), (51, 665), (Start: 57 @716 has 1 MA's), (67, 857), (71, 884), (81, 965),

Gene: MkaliMitinis3\_120 Start: 65023, Stop: 65712, Start Num: 25

Candidate Starts for MkaliMitinis3\_120:

(Start: 25 @65023 has 49 MA's), (29, 65032), (Start: 33 @65089 has 2 MA's), (42, 65167), (48, 65248), (55, 65344), (Start: 57 @65356 has 1 MA's), (61, 65383), (62, 65428), (69, 65509), (70, 65515), (72, 65530), (78, 65581), (79, 65584), (82, 65608), (84, 65629), (85, 65635), (88, 65659),

Gene: Moostard\_109 Start: 64428, Stop: 65135, Start Num: 26

Candidate Starts for Moostard\_109:

(Start: 11 @64353 has 2 MA's), (17, 64404), (22, 64419), (Start: 26 @64428 has 14 MA's), (Start: 33 @64494 has 2 MA's), (34, 64500), (43, 64581), (44, 64584), (45, 64599), (50, 64701), (52, 64713), (53, 64719), (Start: 57 @64761 has 1 MA's), (59, 64770), (62, 64833), (69, 64914), (72, 64935), (80, 64998), (87, 65052), (88, 65067), (89, 65094), (90, 65106),

Gene: MsGreen\_114 Start: 64250, Stop: 65032, Start Num: 11

Candidate Starts for MsGreen\_114:

(Start: 11 @64250 has 2 MA's), (17, 64301), (22, 64316), (Start: 26 @64325 has 14 MA's), (34, 64397), (43, 64478), (44, 64481), (45, 64496), (50, 64598), (52, 64610), (53, 64616), (Start: 57 @64658 has 1 MA's), (59, 64667), (62, 64730), (63, 64736), (69, 64811), (72, 64832), (80, 64895), (88, 64964), (89, 64991), (90, 65003),

Gene: Mulciber\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Mulciber\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Munch\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Munch\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Myxus\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Myxus\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: NaSiaTalie\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for NaSiaTalie\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: Naji\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for Naji\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: Nebulosus\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Nebulosus\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Nedarya\_1 Start: 399, Stop: 1232, Start Num: 31

Candidate Starts for Nedarya\_1:

(Start: 31 @399 has 206 MA's), (45, 552), (51, 663), (Start: 57 @714 has 1 MA's), (59, 723), (71, 882), (76, 924), (79, 942), (95, 1086), (102, 1122), (105, 1143), (116, 1176), (119, 1188), (127, 1227),

Gene: Neeharika16\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Neeharika16\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Netyap\_115 Start: 64893, Stop: 65582, Start Num: 25

Candidate Starts for Netyap\_115:

(Start: 25 @64893 has 49 MA's), (29, 64902), (Start: 33 @64959 has 2 MA's), (42, 65037), (44, 65049), (48, 65118), (55, 65214), (Start: 57 @65226 has 1 MA's), (61, 65253), (62, 65298), (69, 65379), (70, 65385), (72, 65400), (75, 65427), (78, 65451), (82, 65478), (84, 65499), (85, 65505), (88, 65529),

Gene: Newrala\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Newrala\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Nicholas\_111 Start: 64433, Stop: 65140, Start Num: 26

Candidate Starts for Nicholas\_111:

(Start: 11 @64358 has 2 MA's), (17, 64409), (22, 64424), (Start: 26 @64433 has 14 MA's), (Start: 33 @64499 has 2 MA's), (34, 64505), (43, 64586), (44, 64589), (45, 64604), (50, 64706), (52, 64718), (53, 64724), (Start: 57 @64766 has 1 MA's), (59, 64775), (62, 64838), (69, 64919), (72, 64940), (80, 65003), (87, 65057), (88, 65072), (89, 65099), (90, 65111),

Gene: Nicholasp3\_117 Start: 64511, Stop: 65200, Start Num: 25

Candidate Starts for Nicholasp3\_117:

(Start: 25 @64511 has 49 MA's), (29, 64520), (Start: 33 @64577 has 2 MA's), (42, 64655), (48, 64736), (55, 64832), (Start: 57 @64844 has 1 MA's), (61, 64871), (62, 64916), (69, 64997), (70, 65003), (72, 65018), (75, 65045), (78, 65069), (82, 65096), (84, 65117), (85, 65123), (88, 65147),

Gene: NicoleTera\_1 Start: 401, Stop: 1168, Start Num: 31

Candidate Starts for NicoleTera\_1:

(8, 224), (Start: 31 @401 has 206 MA's), (Start: 37 @470 has 4 MA's), (42, 527), (45, 554), (50, 656), (51, 665), (54, 686), (Start: 57 @716 has 1 MA's), (71, 884), (80, 953), (97, 1103), (110, 1154),

Gene: NothingSpecial\_1 Start: 398, Stop: 1165, Start Num: 31

Candidate Starts for NothingSpecial\_1:

(Start: 27 @386 has 10 MA's), (Start: 31 @398 has 206 MA's), (34, 452), (Start: 37 @467 has 4 MA's), (42, 524), (45, 551), (50, 653), (51, 662), (54, 683), (Start: 57 @713 has 1 MA's), (71, 881), (81, 962),

Gene: OhShagHennessy\_105 Start: 61012, Stop: 61722, Start Num: 25

Candidate Starts for OhShagHennessy\_105:

(Start: 25 @61012 has 49 MA's), (32, 61066), (Start: 33 @61078 has 2 MA's), (34, 61084), (Start: 37 @61099 has 4 MA's), (42, 61159), (45, 61186), (48, 61240), (50, 61288), (52, 61300), (54, 61318), (Start: 57 @61348 has 1 MA's), (60, 61366), (62, 61420), (66, 61441), (71, 61516), (72, 61522), (77, 61564), (79, 61576), (81, 61597), (85, 61627), (87, 61639), (88, 61654), (89, 61681),

Gene: Oofda\_1 Start: 431, Stop: 1261, Start Num: 31

Candidate Starts for Oofda\_1:

(Start: 31 @431 has 206 MA's), (45, 584), (51, 695), (Start: 57 @746 has 1 MA's), (71, 914), (76, 956), (79, 974), (96, 1121), (102, 1154), (119, 1214),

Gene: Orange\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Orange\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: PackMan\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for PackMan\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: PainterBoy\_1 Start: 400, Stop: 1245, Start Num: 31

Candidate Starts for PainterBoy\_1:

(19, 373), (Start: 31 @400 has 206 MA's), (Start: 37 @469 has 4 MA's), (42, 526), (45, 553), (51, 664), (54, 685), (Start: 57 @715 has 1 MA's), (71, 883), (113, 1165), (119, 1177), (129, 1225), (131, 1240),

Gene: Petersenfast\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Petersenfast\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Ph8s\_1 Start: 705, Stop: 1229, Start Num: 57

Candidate Starts for Ph8s\_1:

(Start: 27 @381 has 10 MA's), (34, 444), (35, 447), (Start: 37 @459 has 4 MA's), (42, 516), (45, 543), (46, 570), (47, 585), (Start: 57 @705 has 1 MA's), (61, 732), (63, 783), (71, 873), (81, 954), (121, 1185), (122, 1188),

Gene: Phaded\_1 Start: 303, Stop: 1154, Start Num: 14

Candidate Starts for Phaded\_1:

(Start: 14 @303 has 1 MA's), (Start: 31 @387 has 206 MA's), (Start: 37 @456 has 4 MA's), (42, 513), (45, 540), (50, 642), (51, 651), (54, 672), (Start: 57 @702 has 1 MA's), (71, 870), (81, 951), (107, 1137),

Gene: Phaeder\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Phaeder\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: Pharaoh\_1 Start: 361, Stop: 1212, Start Num: 27

Candidate Starts for Pharaoh\_1:

(Start: 27 @361 has 10 MA's), (Start: 33 @418 has 2 MA's), (45, 523), (49, 601), (Start: 57 @685 has 1 MA's), (71, 853), (77, 901), (91, 1030), (95, 1060), (104, 1108), (111, 1132), (115, 1144), (120, 1168), (128, 1204),

Gene: Phonnegut\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Phonnegut\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (107, 1126), (109, 1132), (110, 1135), (116, 1153),

Gene: Pioneer\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Pioneer\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (107, 1126), (109, 1132), (110, 1135), (116, 1153),

Gene: Piro94\_1 Start: 643, Stop: 1380, Start Num: 31

Candidate Starts for Piro94\_1:

(Start: 31 @643 has 206 MA's), (Start: 37 @712 has 4 MA's), (42, 769), (45, 796), (50, 898), (51, 907), (54, 928), (Start: 57 @958 has 1 MA's), (63, 1036), (71, 1126), (87, 1246),

Gene: Pmask\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Pmask\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Pomar16\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for Pomar16\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: Power\_2 Start: 665, Stop: 1432, Start Num: 31

Candidate Starts for Power\_2:

(Start: 31 @665 has 206 MA's), (Start: 37 @734 has 4 MA's), (39, 773), (45, 818), (Start: 57 @980 has 1 MA's), (63, 1058), (82, 1232), (94, 1346), (110, 1418),

Gene: Priamo\_1 Start: 502, Stop: 1191, Start Num: 37

Candidate Starts for Priamo\_1:

(Start: 31 @433 has 206 MA's), (Start: 37 @502 has 4 MA's), (45, 586), (47, 628), (51, 697), (54, 718), (Start: 57 @748 has 1 MA's), (71, 916), (81, 997),

Gene: Priya\_1 Start: 379, Stop: 1158, Start Num: 31

Candidate Starts for Priya\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (83, 949), (87, 982), (88, 997), (107, 1123), (109, 1129), (110, 1132), (116, 1150),

Gene: Pukovnik\_1 Start: 366, Stop: 1130, Start Num: 30

Candidate Starts for Pukovnik\_1:

(Start: 30 @366 has 2 MA's), (Start: 37 @435 has 4 MA's), (45, 519), (50, 621), (51, 630), (54, 651), (Start: 57 @681 has 1 MA's), (61, 708), (71, 849), (78, 906), (81, 930), (107, 1113),

Gene: Qobbit\_1 Start: 379, Stop: 1158, Start Num: 31

Candidate Starts for Qobbit\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (83, 949), (87, 982), (88, 997), (107, 1123), (109, 1129), (110, 1132), (116, 1150),

Gene: QueenB2\_2 Start: 667, Stop: 1497, Start Num: 31

Candidate Starts for QueenB2\_2:

(Start: 31 @667 has 206 MA's), (Start: 37 @736 has 4 MA's), (45, 820), (51, 931), (55, 970), (Start: 57 @982 has 1 MA's), (77, 1198), (110, 1426), (115, 1441), (126, 1489),

Gene: QueenBeesly\_2 Start: 666, Stop: 1433, Start Num: 31

Candidate Starts for QueenBeesly\_2:

(Start: 31 @666 has 206 MA's), (Start: 37 @735 has 4 MA's), (39, 774), (45, 819), (Start: 57 @981 has 1 MA's), (63, 1059), (82, 1233), (94, 1347), (110, 1419),

Gene: Rachaly\_2 Start: 621, Stop: 1388, Start Num: 31

Candidate Starts for Rachaly\_2:

(Start: 31 @621 has 206 MA's), (Start: 37 @690 has 4 MA's), (39, 729), (42, 747), (45, 774), (50, 876), (51, 885), (Start: 57 @936 has 1 MA's), (80, 1173), (97, 1323), (110, 1374),

Gene: Rahalelujah\_1 Start: 356, Stop: 1204, Start Num: 31

Candidate Starts for Rahalelujah\_1:

(Start: 31 @356 has 206 MA's), (45, 509), (47, 551), (Start: 57 @671 has 1 MA's), (71, 839), (94, 1037), (99, 1067), (109, 1112), (119, 1136), (123, 1160),

Gene: ReMo\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for ReMo\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: RedRock\_1 Start: 370, Stop: 1134, Start Num: 31

Candidate Starts for RedRock\_1:

(Start: 31 @370 has 206 MA's), (Start: 37 @439 has 4 MA's), (39, 478), (45, 523), (50, 625), (51, 634), (54, 655), (Start: 57 @685 has 1 MA's), (71, 853), (83, 940), (97, 1072), (110, 1120),

Gene: Refuge\_1 Start: 438, Stop: 1235, Start Num: 33

Candidate Starts for Refuge\_1:

(Start: 27 @381 has 10 MA's), (Start: 33 @438 has 2 MA's), (45, 543), (Start: 57 @705 has 1 MA's), (71, 873), (91, 1050), (95, 1080), (111, 1155), (115, 1167), (125, 1215), (128, 1227),

Gene: Remus\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Remus\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Retro23\_2 Start: 664, Stop: 1497, Start Num: 31

Candidate Starts for Retro23\_2:

(Start: 31 @664 has 206 MA's), (Start: 37 @733 has 4 MA's), (45, 817), (51, 928), (55, 967), (Start: 57 @979 has 1 MA's), (77, 1195), (83, 1234), (110, 1426), (116, 1444), (126, 1489),

Gene: Rifter\_1 Start: 410, Stop: 1171, Start Num: 31

Candidate Starts for Rifter\_1:

(Start: 31 @410 has 206 MA's), (Start: 37 @479 has 4 MA's), (45, 563), (51, 674), (54, 695), (Start: 57 @725 has 1 MA's), (71, 893), (81, 974), (106, 1148), (112, 1163),

Gene: Roksolana\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Roksolana\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Rosalind\_1 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for Rosalind\_1:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: Rose5\_112 Start: 62505, Stop: 63215, Start Num: 25

Candidate Starts for Rose5\_112:

(Start: 25 @62505 has 49 MA's), (32, 62559), (Start: 33 @62571 has 2 MA's), (34, 62577), (Start: 37 @62592 has 4 MA's), (42, 62652), (45, 62679), (48, 62733), (50, 62781), (52, 62793), (54, 62811), (Start: 57 @62841 has 1 MA's), (60, 62859), (62, 62913), (71, 63009), (72, 63015), (77, 63057), (79, 63069), (81, 63090), (85, 63120), (87, 63132), (88, 63147), (89, 63174),

Gene: Rumpelstiltskin\_103 Start: 62845, Stop: 63534, Start Num: 25

Candidate Starts for Rumpelstiltskin\_103:

(Start: 25 @62845 has 49 MA's), (29, 62854), (Start: 33 @62911 has 2 MA's), (42, 62989), (44, 63001), (48, 63070), (55, 63166), (Start: 57 @63178 has 1 MA's), (61, 63205), (62, 63250), (69, 63331), (70, 63337), (72, 63352), (75, 63379), (78, 63403), (82, 63430), (84, 63451), (85, 63457), (88, 63481),

Gene: Salz\_1 Start: 355, Stop: 1107, Start Num: 27

Candidate Starts for Salz\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Samty\_113 Start: 64420, Stop: 65127, Start Num: 26

Candidate Starts for Samty\_113:

(10, 64324), (21, 64411), (Start: 26 @64420 has 14 MA's), (Start: 33 @64486 has 2 MA's), (34, 64492), (43, 64573), (44, 64576), (45, 64591), (50, 64693), (52, 64705), (53, 64711), (Start: 57 @64753 has 1 MA's), (59, 64762), (62, 64825), (69, 64906), (72, 64927), (80, 64990), (87, 65044), (88, 65059), (89, 65086), (90, 65098),

Gene: Scherzo\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Scherzo\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (107, 1126), (109, 1132), (110, 1135), (116, 1153),

Gene: SemperFi\_2 Start: 666, Stop: 1433, Start Num: 31

Candidate Starts for SemperFi\_2:

(Start: 31 @666 has 206 MA's), (Start: 37 @735 has 4 MA's), (39, 774), (45, 819), (Start: 57 @981 has 1 MA's), (63, 1059), (82, 1233), (94, 1347), (110, 1419),

Gene: Serenity\_1 Start: 403, Stop: 1092, Start Num: 31

Candidate Starts for Serenity\_1:

(Start: 31 @403 has 206 MA's), (Start: 37 @472 has 4 MA's), (42, 529), (45, 556), (51, 667), (56, 712), (Start: 57 @718 has 1 MA's), (63, 796), (71, 886), (83, 973), (87, 1006),

Gene: Sham4\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Sham4\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: ShayRa\_2 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for ShayRa\_2:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: SheaKeira\_1 Start: 356, Stop: 1213, Start Num: 31

Candidate Starts for SheaKeira\_1:

(Start: 31 @356 has 206 MA's), (Start: 37 @425 has 4 MA's), (45, 509), (46, 536), (Start: 57 @671 has 1 MA's), (63, 749), (71, 839), (78, 896), (88, 974), (94, 1037), (109, 1112), (124, 1172), (129, 1193), (131, 1208),

Gene: Silverleaf\_109 Start: 61642, Stop: 62349, Start Num: 25

Candidate Starts for Silverleaf\_109:

(18, 61627), (Start: 25 @61642 has 49 MA's), (Start: 33 @61708 has 2 MA's), (34, 61714), (Start: 37 @61729 has 4 MA's), (39, 61768), (45, 61813), (52, 61927), (53, 61933), (54, 61945), (Start: 57 @61975 has 1 MA's), (60, 61993), (62, 62047), (71, 62143), (72, 62149), (77, 62191), (79, 62203), (81, 62224), (83, 62230), (85, 62254), (87, 62266), (88, 62281), (89, 62308),

Gene: Smeagan\_2 Start: 654, Stop: 1415, Start Num: 31

Candidate Starts for Smeagan\_2:

(Start: 31 @654 has 206 MA's), (Start: 37 @723 has 4 MA's), (39, 762), (45, 807), (50, 909), (51, 918), (Start: 57 @969 has 1 MA's), (71, 1137), (78, 1194), (81, 1218), (93, 1326), (110, 1401),

Gene: SmellyB\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for SmellyB\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: SnapTap\_2 Start: 665, Stop: 1432, Start Num: 31

Candidate Starts for SnapTap\_2:

(Start: 31 @665 has 206 MA's), (Start: 37 @734 has 4 MA's), (39, 773), (45, 818), (Start: 57 @980 has 1 MA's), (63, 1058), (82, 1232), (94, 1346), (110, 1418),

Gene: Snape\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Snape\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: Snenia\_112 Start: 64327, Stop: 65034, Start Num: 26

Candidate Starts for Snenia\_112:

(Start: 11 @64252 has 2 MA's), (17, 64303), (22, 64318), (Start: 26 @64327 has 14 MA's), (34, 64399), (43, 64480), (44, 64483), (45, 64498), (50, 64600), (52, 64612), (53, 64618), (Start: 57 @64660 has 1 MA's), (59, 64669), (62, 64732), (63, 64738), (69, 64813), (72, 64834), (80, 64897), (88, 64966), (89, 64993), (90, 65005),

Gene: SororFago\_1 Start: 369, Stop: 1055, Start Num: 31

Candidate Starts for SororFago\_1:

(Start: 27 @360 has 10 MA's), (Start: 31 @369 has 206 MA's), (34, 423), (Start: 37 @438 has 4 MA's), (45, 522), (54, 654), (55, 672), (Start: 57 @684 has 1 MA's), (75, 885), (87, 972), (88, 987),

Gene: Soups\_1 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for Soups\_1:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: StarStuff\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for StarStuff\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: Strosahl\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Strosahl\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: SuperAwesome\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for SuperAwesome\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: SuperCallie99\_1 Start: 419, Stop: 1177, Start Num: 31

Candidate Starts for SuperCallie99\_1:

(Start: 31 @419 has 206 MA's), (Start: 37 @488 has 4 MA's), (45, 572), (47, 614), (51, 683), (54, 704), (Start: 57 @734 has 1 MA's), (71, 902), (81, 983),

Gene: Superchunk\_1 Start: 381, Stop: 1229, Start Num: 27

Candidate Starts for Superchunk\_1:

(Start: 27 @381 has 10 MA's), (34, 444), (35, 447), (Start: 37 @459 has 4 MA's), (42, 516), (45, 543), (46, 570), (47, 585), (Start: 57 @705 has 1 MA's), (63, 783), (71, 873), (81, 954),

Gene: SweetiePie\_2 Start: 666, Stop: 1433, Start Num: 31

Candidate Starts for SweetiePie\_2:

(Start: 31 @666 has 206 MA's), (Start: 37 @735 has 4 MA's), (39, 774), (45, 819), (Start: 57 @981 has 1 MA's), (63, 1059), (82, 1233), (94, 1347), (110, 1419),

Gene: Switzerland\_1 Start: 577, Stop: 1407, Start Num: 31

Candidate Starts for Switzerland\_1:

(Start: 31 @577 has 206 MA's), (45, 730), (51, 841), (Start: 57 @892 has 1 MA's), (71, 1060), (76, 1102), (79, 1120), (96, 1267), (102, 1300), (115, 1345), (119, 1360),

Gene: TarsusIV\_2 Start: 660, Stop: 1427, Start Num: 31

Candidate Starts for TarsusIV\_2:



(Start: 31 @660 has 206 MA's), (Start: 37 @729 has 4 MA's), (39, 768), (45, 813), (51, 924), (Start: 57 @975 has 1 MA's), (80, 1212), (97, 1362), (109, 1410), (110, 1413),

Gene: Timothy\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for Timothy\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: TinyTimmy\_1 Start: 367, Stop: 1107, Start Num: 31

Candidate Starts for TinyTimmy\_1:

(Start: 27 @355 has 10 MA's), (Start: 31 @367 has 206 MA's), (36, 430), (42, 493), (Start: 57 @682 has 1 MA's), (61, 709), (63, 760), (71, 850),

Gene: TopsytheTRex\_1 Start: 401, Stop: 1090, Start Num: 31

Candidate Starts for TopsytheTRex\_1:

(Start: 31 @401 has 206 MA's), (Start: 37 @470 has 4 MA's), (42, 527), (45, 554), (56, 710), (Start: 57 @716 has 1 MA's), (63, 794), (71, 884), (83, 971), (87, 1004),

Gene: Toaka\_1 Start: 378, Stop: 1127, Start Num: 31

Candidate Starts for Toaka\_1:

(Start: 31 @378 has 206 MA's), (Start: 37 @447 has 4 MA's), (45, 531), (47, 573), (Start: 57 @693 has 1 MA's), (71, 861), (91, 1038), (100, 1092),

Gene: Tomathan\_1 Start: 392, Stop: 1204, Start Num: 31

Candidate Starts for Tomathan\_1:

(Start: 31 @392 has 206 MA's), (Start: 37 @461 has 4 MA's), (45, 545), (51, 656), (Start: 57 @707 has 1 MA's), (63, 785), (71, 875), (87, 995), (98, 1094), (112, 1154), (114, 1160), (117, 1172),

Gene: ToneTone\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for ToneTone\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Tourach\_117 Start: 65935, Stop: 66624, Start Num: 25

Candidate Starts for Tourach\_117:

(Start: 25 @65935 has 49 MA's), (29, 65944), (Start: 33 @66001 has 2 MA's), (42, 66079), (48, 66160), (55, 66256), (Start: 57 @66268 has 1 MA's), (61, 66295), (62, 66340), (69, 66421), (70, 66427), (71, 66436), (72, 66442), (78, 66493), (82, 66520), (84, 66541), (85, 66547), (88, 66571),

Gene: Trixie\_1 Start: 507, Stop: 1274, Start Num: 31

Candidate Starts for Trixie\_1:

(Start: 31 @507 has 206 MA's), (Start: 37 @576 has 4 MA's), (45, 660), (51, 771), (Start: 57 @822 has 1 MA's), (71, 990), (81, 1071), (83, 1077), (101, 1221), (107, 1251), (110, 1260),

Gene: Trooper\_2 Start: 663, Stop: 1421, Start Num: 31

Candidate Starts for Trooper\_2:

(Start: 31 @663 has 206 MA's), (Start: 37 @732 has 4 MA's), (45, 816), (46, 843), (51, 927), (54, 948), (Start: 57 @978 has 1 MA's), (71, 1146), (81, 1227),

Gene: Tubs\_1 Start: 379, Stop: 1161, Start Num: 31

Candidate Starts for Tubs\_1:

(Start: 31 @379 has 206 MA's), (34, 433), (42, 505), (47, 574), (Start: 57 @694 has 1 MA's), (60, 712), (70, 853), (71, 862), (88, 997), (109, 1132), (110, 1135), (116, 1153),

Gene: Tucker\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Tucker\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Turbido\_2 Start: 652, Stop: 1413, Start Num: 31

Candidate Starts for Turbido\_2:

(Start: 31 @652 has 206 MA's), (Start: 37 @721 has 4 MA's), (39, 760), (45, 805), (50, 907), (51, 916), (Start: 57 @967 has 1 MA's), (71, 1135), (78, 1192), (81, 1216), (93, 1324), (110, 1399),

Gene: Tyson\_113 Start: 62935, Stop: 63645, Start Num: 25

Candidate Starts for Tyson\_113:

(Start: 25 @62935 has 49 MA's), (32, 62989), (Start: 33 @63001 has 2 MA's), (34, 63007), (Start: 37 @63022 has 4 MA's), (42, 63082), (45, 63109), (48, 63163), (50, 63211), (52, 63223), (54, 63241), (Start: 57 @63271 has 1 MA's), (60, 63289), (62, 63343), (71, 63439), (72, 63445), (77, 63487), (79, 63499), (81, 63520), (85, 63550), (87, 63562), (88, 63577), (89, 63604),

Gene: UPIE\_110 Start: 62175, Stop: 62882, Start Num: 25

Candidate Starts for UPIE\_110:

(Start: 25 @62175 has 49 MA's), (32, 62229), (Start: 33 @62241 has 2 MA's), (34, 62247), (Start: 37 @62262 has 4 MA's), (39, 62301), (42, 62319), (45, 62346), (48, 62400), (50, 62448), (52, 62460), (54, 62478), (Start: 57 @62508 has 1 MA's), (60, 62526), (62, 62580), (71, 62676), (72, 62682), (77, 62724), (79, 62736), (81, 62757), (85, 62787), (87, 62799), (88, 62814), (89, 62841),

Gene: Updawg\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for Updawg\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: VA6\_1 Start: 568, Stop: 1329, Start Num: 31

Candidate Starts for VA6\_1:

(20, 535), (Start: 31 @568 has 206 MA's), (Start: 37 @637 has 4 MA's), (39, 676), (45, 721), (50, 823), (51, 832), (54, 853), (Start: 57 @883 has 1 MA's), (71, 1051), (93, 1240), (110, 1315),

Gene: VC3\_1 Start: 391, Stop: 1203, Start Num: 31

Candidate Starts for VC3\_1:

(Start: 31 @391 has 206 MA's), (Start: 37 @460 has 4 MA's), (45, 544), (51, 655), (Start: 57 @706 has 1 MA's), (63, 784), (71, 874), (87, 994), (98, 1093), (112, 1153), (114, 1159), (117, 1171),

Gene: Vanisoa\_1 Start: 356, Stop: 1204, Start Num: 31

Candidate Starts for Vanisoa\_1:

(Start: 31 @356 has 206 MA's), (45, 509), (47, 551), (Start: 57 @671 has 1 MA's), (63, 749), (71, 839), (94, 1037), (99, 1067), (115, 1124), (119, 1136), (123, 1160), (129, 1184), (130, 1196),

Gene: Vetric\_116 Start: 65421, Stop: 66110, Start Num: 25

Candidate Starts for Vetric\_116:

(Start: 25 @65421 has 49 MA's), (29, 65430), (Start: 33 @65487 has 2 MA's), (42, 65565), (48, 65646), (55, 65742), (Start: 57 @65754 has 1 MA's), (61, 65781), (62, 65826), (69, 65907), (70, 65913), (72, 65928), (75, 65955), (77, 65970), (78, 65979), (79, 65982), (82, 66006), (84, 66027), (85, 66033), (88, 66057),

Gene: VohminGhazi\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for VohminGhazi\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Waits\_1 Start: 430, Stop: 1260, Start Num: 31

Candidate Starts for Waits\_1:

(Start: 31 @430 has 206 MA's), (45, 583), (51, 694), (Start: 57 @745 has 1 MA's), (71, 913), (76, 955), (79, 973), (96, 1120), (102, 1153), (115, 1198), (119, 1213),

Gene: Wamburgexpress\_110 Start: 62568, Stop: 63278, Start Num: 25

Candidate Starts for Wamburgexpress\_110:

(Start: 25 @62568 has 49 MA's), (32, 62622), (Start: 33 @62634 has 2 MA's), (34, 62640), (Start: 37 @62655 has 4 MA's), (42, 62715), (45, 62742), (48, 62796), (50, 62844), (52, 62856), (54, 62874), (Start: 57 @62904 has 1 MA's), (60, 62922), (62, 62976), (71, 63072), (72, 63078), (77, 63120), (79, 63132), (81, 63153), (85, 63183), (87, 63195), (88, 63210), (89, 63237),

Gene: WeiHuaDA\_2 Start: 644, Stop: 1411, Start Num: 31

Candidate Starts for WeiHuaDA\_2:

(Start: 31 @644 has 206 MA's), (Start: 37 @713 has 4 MA's), (45, 797), (51, 908), (Start: 57 @959 has 1 MA's), (71, 1127), (81, 1208), (83, 1214), (101, 1358), (107, 1388), (110, 1397),

Gene: Whabigail7\_2 Start: 652, Stop: 1413, Start Num: 31

Candidate Starts for Whabigail7\_2:

(Start: 31 @652 has 206 MA's), (Start: 37 @721 has 4 MA's), (39, 760), (45, 805), (50, 907), (51, 916), (Start: 57 @967 has 1 MA's), (71, 1135), (78, 1192), (81, 1216), (93, 1324), (110, 1399),

Gene: Whirlwind\_115 Start: 64830, Stop: 65531, Start Num: 26

Candidate Starts for Whirlwind\_115:

(17, 64806), (18, 64815), (22, 64821), (Start: 26 @64830 has 14 MA's), (Start: 33 @64896 has 2 MA's), (34, 64902), (43, 64983), (44, 64986), (45, 65001), (50, 65103), (52, 65115), (53, 65121), (Start: 57 @65163 has 1 MA's), (59, 65172), (60, 65181), (62, 65235), (69, 65316), (72, 65337), (73, 65358), (80, 65400), (88, 65469), (89, 65496), (90, 65508),

Gene: WideWale\_2 Start: 642, Stop: 1376, Start Num: 31

Candidate Starts for WideWale\_2:

(Start: 31 @642 has 206 MA's), (Start: 37 @711 has 4 MA's), (39, 750), (45, 795), (50, 897), (51, 906), (54, 927), (Start: 57 @957 has 1 MA's), (71, 1125), (87, 1245),

Gene: Wigglewigggle\_117 Start: 65017, Stop: 65706, Start Num: 25

Candidate Starts for Wigglewigggle\_117:

(Start: 25 @65017 has 49 MA's), (29, 65026), (Start: 33 @65083 has 2 MA's), (42, 65161), (48, 65242), (55, 65338), (Start: 57 @65350 has 1 MA's), (61, 65377), (62, 65422), (69, 65503), (70, 65509), (72, 65524), (78, 65575), (79, 65578), (82, 65602), (84, 65623), (85, 65629), (88, 65653),

Gene: Wiks\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Wiks\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Wilder\_117 Start: 64650, Stop: 65339, Start Num: 25

Candidate Starts for Wilder\_117:

(Start: 25 @64650 has 49 MA's), (29, 64659), (Start: 33 @64716 has 2 MA's), (42, 64794), (48, 64875), (55, 64971), (Start: 57 @64983 has 1 MA's), (61, 65010), (62, 65055), (69, 65136), (70,

65142), (72, 65157), (78, 65208), (79, 65211), (82, 65235), (84, 65256), (85, 65262), (88, 65286),

Gene: Winky\_117 Start: 65180, Stop: 65869, Start Num: 25

Candidate Starts for Winky\_117:

(Start: 25 @65180 has 49 MA's), (29, 65189), (Start: 33 @65246 has 2 MA's), (42, 65324), (44, 65336), (48, 65405), (55, 65501), (Start: 57 @65513 has 1 MA's), (61, 65540), (62, 65585), (69, 65666), (70, 65672), (72, 65687), (75, 65714), (78, 65738), (82, 65765), (84, 65786), (85, 65792), (88, 65816),

Gene: WunderPhul\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for WunderPhul\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Wyatt2\_112 Start: 62598, Stop: 63308, Start Num: 25

Candidate Starts for Wyatt2\_112:

(Start: 25 @62598 has 49 MA's), (32, 62652), (Start: 33 @62664 has 2 MA's), (34, 62670), (Start: 37 @62685 has 4 MA's), (42, 62745), (45, 62772), (48, 62826), (50, 62874), (52, 62886), (54, 62904), (Start: 57 @62934 has 1 MA's), (60, 62952), (62, 63006), (71, 63102), (72, 63108), (77, 63150), (79, 63162), (81, 63183), (85, 63213), (87, 63225), (88, 63240), (89, 63267),

Gene: XianYue\_1 Start: 507, Stop: 1262, Start Num: 31

Candidate Starts for XianYue\_1:

(Start: 31 @507 has 206 MA's), (Start: 37 @576 has 4 MA's), (45, 660), (50, 762), (51, 771), (Start: 57 @822 has 1 MA's), (87, 1110), (108, 1248),

Gene: Yecey3\_1 Start: 367, Stop: 1215, Start Num: 31

Candidate Starts for Yecey3\_1:

(Start: 27 @358 has 10 MA's), (Start: 31 @367 has 206 MA's), (42, 493), (45, 520), (51, 631), (Start: 57 @682 has 1 MA's), (63, 760), (71, 850), (78, 907), (94, 1048), (99, 1078), (115, 1141), (119, 1147), (129, 1195), (130, 1207), (131, 1210),

Gene: Yokurt\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Yokurt\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Zaka\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Zaka\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),

Gene: Zakai\_119 Start: 64890, Stop: 65579, Start Num: 25

Candidate Starts for Zakai\_119:

(Start: 25 @64890 has 49 MA's), (29, 64899), (Start: 33 @64956 has 2 MA's), (42, 65034), (44, 65046), (48, 65115), (55, 65211), (Start: 57 @65223 has 1 MA's), (61, 65250), (62, 65295), (69, 65376), (70, 65382), (72, 65397), (75, 65424), (78, 65448), (82, 65475), (84, 65496), (85, 65502), (88, 65526),

Gene: Zaria\_114 Start: 62652, Stop: 63359, Start Num: 25

Candidate Starts for Zaria\_114:

(Start: 25 @62652 has 49 MA's), (32, 62706), (Start: 33 @62718 has 2 MA's), (34, 62724), (Start: 37 @62739 has 4 MA's), (39, 62778), (42, 62796), (45, 62823), (48, 62877), (50, 62925), (52, 62937),

(54, 62955), (Start: 57 @62985 has 1 MA's), (60, 63003), (62, 63057), (66, 63078), (71, 63153), (72, 63159), (77, 63201), (79, 63213), (81, 63234), (85, 63264), (87, 63276), (88, 63291), (89, 63318),

Gene: ZhongYanYuan\_113 Start: 64388, Stop: 65080, Start Num: 25

Candidate Starts for ZhongYanYuan\_113:

(Start: 25 @64388 has 49 MA's), (29, 64397), (Start: 33 @64454 has 2 MA's), (34, 64460), (Start: 37 @64475 has 4 MA's), (42, 64532), (53, 64679), (Start: 57 @64721 has 1 MA's), (60, 64739), (63, 64799), (64, 64802), (69, 64874), (70, 64880), (71, 64889), (78, 64943), (79, 64946), (82, 64970), (83, 64973), (86, 65006), (87, 65009), (88, 65024),

Gene: Zimmer\_1 Start: 381, Stop: 1235, Start Num: 27

Candidate Starts for Zimmer\_1:

(Start: 27 @381 has 10 MA's), (Start: 33 @438 has 2 MA's), (45, 543), (Start: 57 @705 has 1 MA's), (71, 873), (77, 921), (91, 1050), (95, 1080), (115, 1167), (120, 1191), (125, 1215), (128, 1227),

Gene: Zulu\_1 Start: 418, Stop: 1176, Start Num: 31

Candidate Starts for Zulu\_1:

(Start: 31 @418 has 206 MA's), (Start: 37 @487 has 4 MA's), (45, 571), (47, 613), (51, 682), (54, 703), (Start: 57 @733 has 1 MA's), (71, 901), (81, 982),