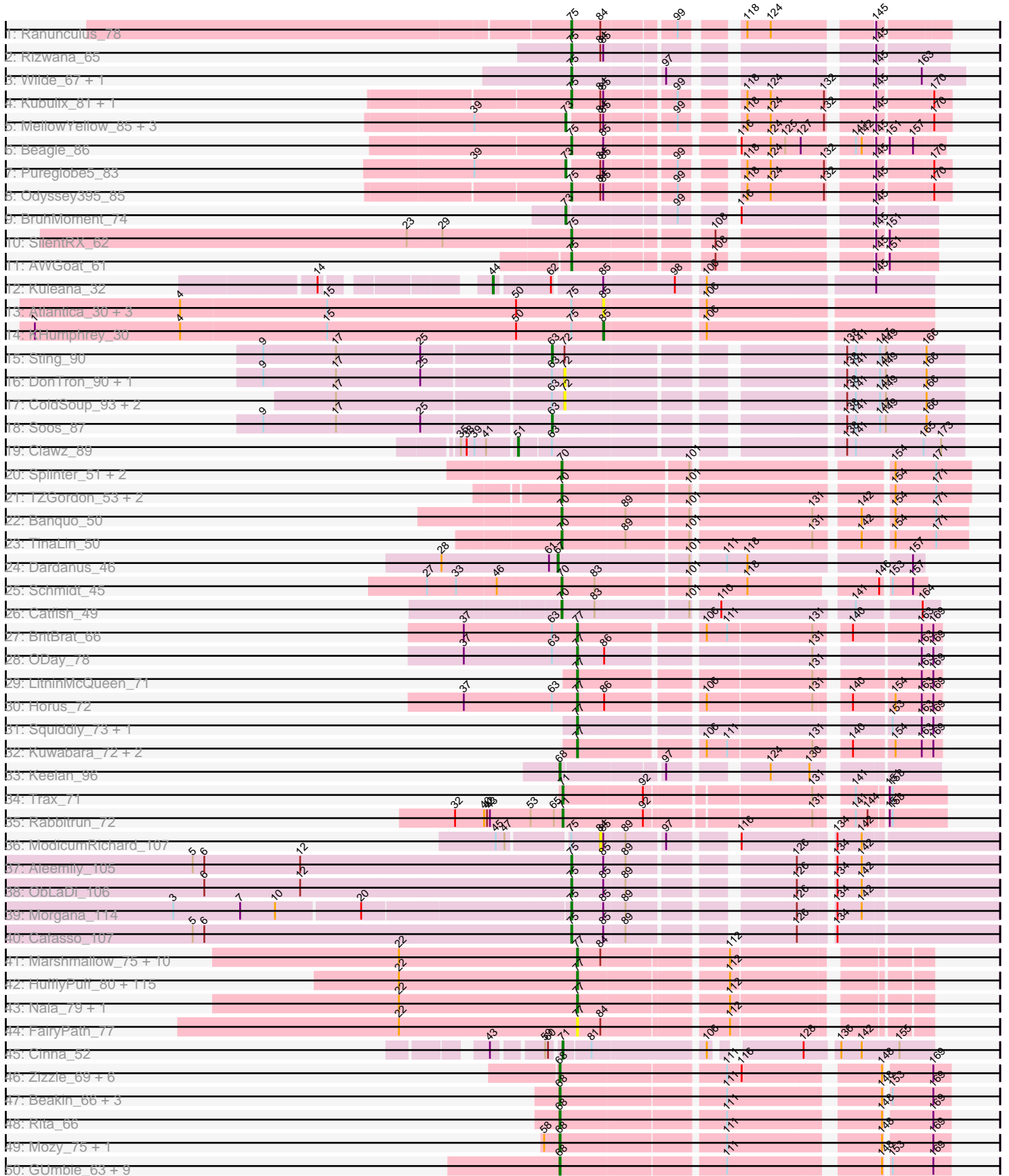
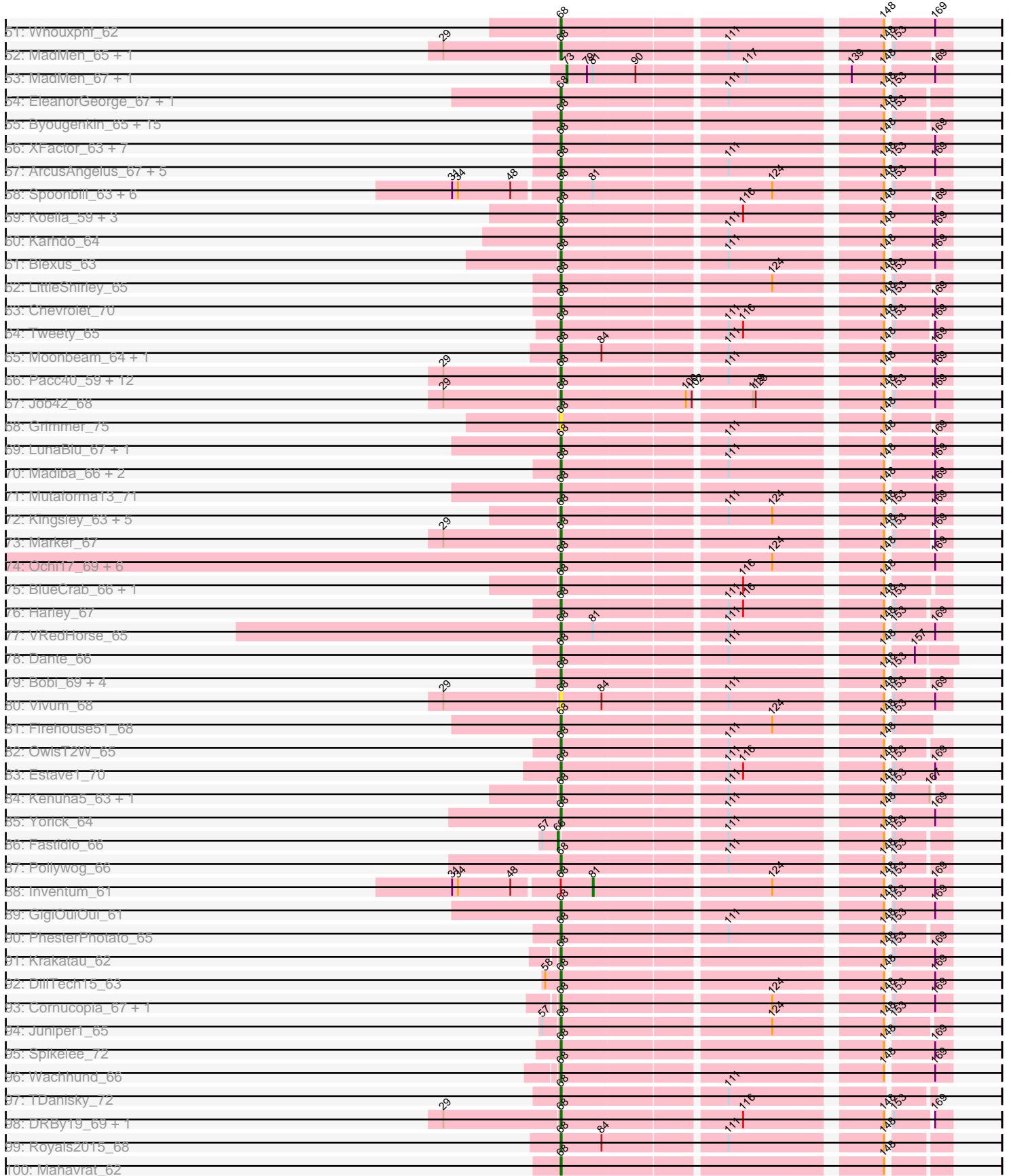


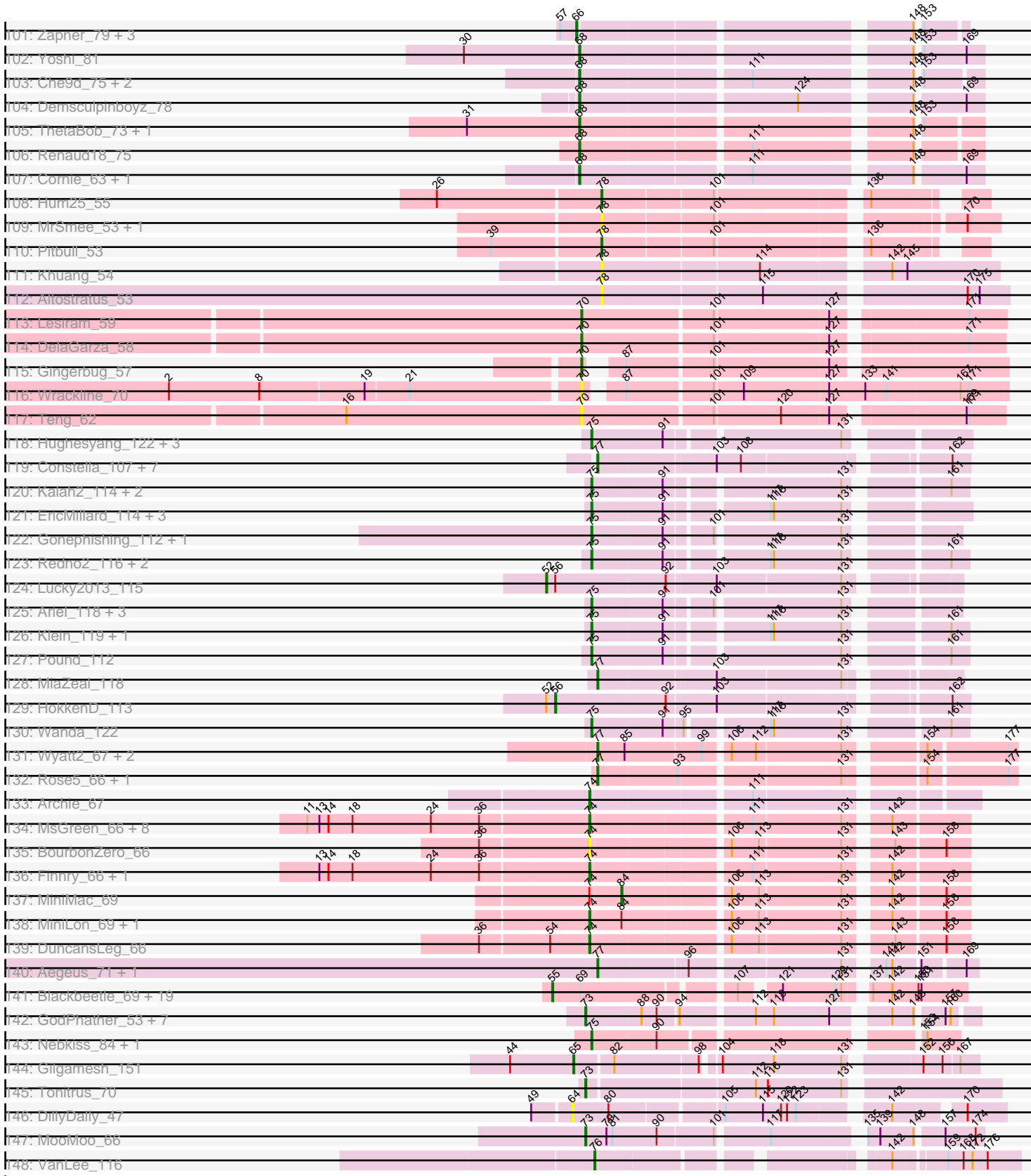
Pham 199878



# Pham 199878



# Pham 199878



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 199878 Report

This analysis was run 01/18/25 on database version 583.

Pham number 199878 has 456 members, 43 are drafts.

Phages represented in each track:

- Track 1 : Ranunculus\_78
- Track 2 : Rizwana\_65
- Track 3 : Wilde\_67, Tank\_65
- Track 4 : Kubulix\_81, Pointis\_81
- Track 5 : MellowYellow\_85, RazzB\_81, Forrestell\_81, NyleyClemson\_84
- Track 6 : Beagle\_86
- Track 7 : Pureglobe5\_83
- Track 8 : Odyssey395\_85
- Track 9 : BruhMoment\_74
- Track 10 : SilentRX\_62
- Track 11 : AWGoat\_61
- Track 12 : Kuleana\_32
- Track 13 : Atlantica\_30, HamCheese\_29, Camara\_30, Rattail\_30
- Track 14 : KHumphrey\_30
- Track 15 : Sting\_90
- Track 16 : DonTron\_90, KingstonB\_93
- Track 17 : ColdSoup\_93, Amo99\_93, Jollymon\_93
- Track 18 : Soos\_87
- Track 19 : Clawz\_89
- Track 20 : Splinter\_51, Vendetta\_51, Goib\_52
- Track 21 : TZGordon\_53, DinoDaryn\_52, Huffy\_52
- Track 22 : Banquo\_50
- Track 23 : TinaLin\_50
- Track 24 : Dardanus\_46
- Track 25 : Schmidt\_45
- Track 26 : Catfish\_49
- Track 27 : BritBrat\_66
- Track 28 : ODay\_78
- Track 29 : LitninMcQueen\_71
- Track 30 : Horus\_72
- Track 31 : Squiddly\_73, Spooky\_68
- Track 32 : Kuwabara\_72, Ecliptus\_75, CheeseTouch\_74
- Track 33 : Keelan\_96
- Track 34 : Trax\_71
- Track 35 : Rabbitrun\_72
- Track 36 : ModicumRichard\_107
- Track 37 : Aleemily\_105

- Track 38 : ObLaDi\_106
- Track 39 : Morgana\_114
- Track 40 : Cafasso\_107
- Track 41 : Marshmallow\_75, Cookies\_74, ChotaBhai\_77, SirDuracell\_76, Bask21\_77, YassJohnny\_74, Pat3\_75, Tomaszewski\_72, DoctorDiddles\_76, OrionPax\_76, Amao\_77
- Track 42 : HufflyPuff\_80, Teaspoon\_78, Moldemort\_80, Buck\_78, Petra64142\_81, NoSleep\_78, Highbury\_76, Glexan\_76, TeardropMSU\_73, Lilizi\_78, Thresher\_79, Inca\_74, 244\_78, MISSy\_78, Nimrod\_78, Stank\_80, Gage\_79, Phaja\_75, BilboSwaggins\_76, StellaBean\_75, Bench\_80, AmericanBeauty\_81, Myrale\_77, Manda\_78, Ukulele\_72, Rimmer\_78, Kostya\_77, SophKB\_74, HanKaySha\_77, Miniwave\_72, Pumpkin\_80, Terminus\_80, Stark\_78, IHOP\_75, Icee\_78, Sassay\_72, MPhalcon\_78, Balomoji\_77, Dusk\_74, Kanye\_74, Saints25\_76, Cactus\_80, JeTaime\_77, Simpliphy\_76, GooberAzure\_80, PhatBacter\_81, Palpatine\_79, xkcd\_80, Lilpickle\_76, Holt\_82, Murica\_80, Rakim\_78, Adnama\_81, Gemini\_82, MadamMonkfish\_77, Mindy\_76, Mosby\_73, Dumbo\_77, Lilac\_79, Kimchi\_81, Phaux\_79, NelitzaMV\_75, BadStone\_74, Eureka\_75, TBrady12\_80, BigBubba\_77, Hopey\_77, CrystalP\_76, Phrux\_74, BugsBunny\_77, Cjw1\_77, Hoonter\_80, Willez\_72, BaboJay\_74, Goku\_75, Asriel\_76, Henry\_75, Barbarian\_76, Bruin\_74, Xandras\_76, Tuco\_78, Contagion\_73, Quallification\_78, Goldilocks\_80, StolenFromERC\_80, GoldenSpark\_81, Traaww1\_73, Flypotenuse\_73, Daikon\_79, Easy2Say\_78, Filch\_78, ShamWow\_77, Porky\_76, Czyszczonek\_78, RiverMonster\_77, Sotrice96\_78, Harella\_77, Elph10\_77, Policronamos\_81, Youngblood\_80, Toto\_75, Murphy\_77, Pharsalus\_74, Command613\_79, Gator\_75, Elite2014\_76, Misfit\_78, Maxxinista\_79, ChosenOne\_77, Emmina\_77, Tarkin\_76, Argent26\_81, ABCat\_74, Wiggin\_79, DrDrey\_77, Paperbeatsrock\_76
- Track 43 : Nala\_79, FireRed\_81
- Track 44 : FairyPath\_77
- Track 45 : Cinna\_52
- Track 46 : Zizzle\_69, Maravista\_67, ByChance\_58, Pippy\_64, ShowerHandel\_68, Crumble\_60, BobaPhett\_69
- Track 47 : Beakin\_66, Guppsters\_66, Hades\_66, Soul22\_71
- Track 48 : Rita\_66
- Track 49 : Mozy\_75, Fancypants\_68
- Track 50 : GUmbie\_63, James\_69, BuzzLyseyear\_71, Mattes\_69, Gorge\_69, Lizziana\_71, Saal\_67, Che8\_70, OlympiaSaint\_67, Eradicator\_58
- Track 51 : Whouxphf\_62
- Track 52 : MadMen\_65, Martik\_65
- Track 53 : MadMen\_67, Leozinho\_66
- Track 54 : EleanorGeorge\_67, Leozinho\_64
- Track 55 : Byougenkin\_65, Rockne\_66, Kimberlium\_70, QuickMath\_69, Hamulus\_65, Chuckly\_68, MulchExplorer\_73, Juice456\_66, JalFarm20\_78, PMC\_62, Boomer\_70, SiSi\_63, Ardmore\_57, KristaRAM\_68, Starcevich\_65, Avani\_73
- Track 56 : XFactor\_63, Zerg\_65, MisterCuddles\_63, Alexphander\_69, Doug\_67, Girr\_63, RockyHorror\_66, Ruby\_61
- Track 57 : ArcusAngelus\_67, Eish\_68, Totinger\_65, DosHalletts\_67, Mova\_69, Radiance\_64
- Track 58 : Spoonbill\_63, Polka14\_64, JoeyJr\_61, PHappiness\_61, Leperchaun\_58, RitaG\_61, Daenerys\_60
- Track 59 : Koella\_59, Priscilla\_65, NormanBulbieJr\_65, Cabrinians\_66
- Track 60 : Karhdo\_64
- Track 61 : Blexus\_63
- Track 62 : LittleShirley\_65

- Track 63 : Chevrolet\_70
- Track 64 : Tweety\_65
- Track 65 : Moonbeam\_64, Emma\_67
- Track 66 : Pacc40\_59, LastJedi\_59, CaptainTrips\_63, MinionDave\_64, Nivrat\_62, Minnie\_68, LilMoolah\_64, Clifton\_60, Brocalys\_60, Aubs\_65, Burwell21\_63, SwagPigglett\_70, Sandalphon\_66
- Track 67 : Job42\_68
- Track 68 : Grimmer\_75
- Track 69 : LunaBlu\_67, Galactic\_64
- Track 70 : Madiba\_66, Ramsey\_64, DaWorst\_65
- Track 71 : Mutaforma13\_71
- Track 72 : Kingsley\_63, Coco12\_65, Sarma624\_64, Cerasum\_62, Velveteen\_61, BigPhil\_62
- Track 73 : Marker\_67
- Track 74 : Ochi17\_69, Modragons\_69, OfUltron\_71, Llama\_70, Jinglebell\_71, AlpineSix\_71, Seabastian\_71
- Track 75 : BlueCrab\_66, FreddyB\_66
- Track 76 : Harley\_67
- Track 77 : VRedHorse\_65
- Track 78 : Dante\_66
- Track 79 : Bobi\_69, Batiatus\_63, MilleniumForce\_68, Ibhubesi\_65, Brushbloom\_72
- Track 80 : Vivum\_68
- Track 81 : Firehouse51\_68
- Track 82 : OwlsT2W\_65
- Track 83 : Estave1\_70
- Track 84 : Kenuha5\_63, SuperGrey\_69
- Track 85 : Yorick\_64
- Track 86 : Fastidio\_66
- Track 87 : Pollywog\_66
- Track 88 : Inventum\_61
- Track 89 : GigiOuiOui\_61
- Track 90 : PhesterPhotato\_65
- Track 91 : Krakatau\_62
- Track 92 : DillTech15\_63
- Track 93 : Cornucopia\_67, Veteran\_62
- Track 94 : Juniper1\_65
- Track 95 : Spikelee\_72
- Track 96 : Wachhund\_66
- Track 97 : TDanisky\_72
- Track 98 : DRBy19\_69, Philus\_69
- Track 99 : Royals2015\_68
- Track 100 : Mahavrat\_62
- Track 101 : Zapner\_79, Jabbawokkie\_80, Blarby\_78, Mantra\_62
- Track 102 : Yoshi\_81
- Track 103 : Che9d\_75, ShiLan\_64, Kersh\_67
- Track 104 : Demsculpinboyz\_78
- Track 105 : ThetaBob\_73, Ogopogo\_71
- Track 106 : Renaud18\_75
- Track 107 : Cornie\_63, Bipolar\_65
- Track 108 : Hum25\_55
- Track 109 : MrSmee\_53, Skitty\_53
- Track 110 : Pitbull\_53
- Track 111 : Khuang\_54

- Track 112 : Altostratus\_53
- Track 113 : Lesiram\_59
- Track 114 : DelaGarza\_58
- Track 115 : Gingerbug\_57
- Track 116 : Wrackline\_70
- Track 117 : Teng\_62
- Track 118 : Hughesyang\_122, Zelink\_117, Minerva\_120, ThreeRngTarjay\_118
- Track 119 : Constella\_107, JuicyJay\_120, Phoebus\_124, Thibault\_106, Dallas\_124, Beem\_125, NihilNomen\_125, Dove\_109
- Track 120 : Kalah2\_114, Bagrid\_123, DmpstrDiver\_123
- Track 121 : EricMillard\_114, Duke13\_117, Optimus\_113, BAKA\_122
- Track 122 : Gonephishing\_112, LittleE\_122
- Track 123 : Redno2\_116, Halley\_125, Ejimix\_117
- Track 124 : Lucky2013\_115
- Track 125 : Ariel\_118, Squint\_116, Courthouse\_113, Superphikiman\_115
- Track 126 : Klein\_119, Bobby\_115
- Track 127 : Pound\_112
- Track 128 : MiaZeal\_118
- Track 129 : HokkenD\_113
- Track 130 : Wanda\_122
- Track 131 : Wyatt2\_67, AvadaKedavra\_66, Tyson\_67
- Track 132 : Rose5\_66, Wamburgxpress\_66
- Track 133 : Archie\_67
- Track 134 : MsGreen\_66, Snenia\_65, Jubie\_65, TriFive\_66, Lumos\_67, Krypton555\_67, Clautastrophe\_65, Jobypre\_66, Whirlwind\_66
- Track 135 : BourbonZero\_66
- Track 136 : Finnry\_66, Samty\_66
- Track 137 : MiniMac\_69
- Track 138 : MiniLon\_69, Lolly9\_65
- Track 139 : DuncansLeg\_66
- Track 140 : Aegeus\_71, Baudelaire\_71
- Track 141 : Blackbeetle\_69, Pringar\_68, VasuNzinga\_68, MosMoris\_66, Clarkson\_70, Tesla\_66, JoieB\_70, FeliMaine\_71, Poise\_69, Gattaca\_67, Raela\_69, Beelzebub\_73, Caprice\_64, Lilbit\_69, LittleLaf\_69, Corazon\_67, Marvin\_65, RedRaider77\_68, GoongGoong\_66, Huphlepuuff\_71
- Track 142 : GodPhather\_53, PR\_52, Megabear\_52, Jeon\_52, Cepens\_52, D12\_51, Argie\_53, Taptic\_52
- Track 143 : Nebkiss\_84, Gaia\_85
- Track 144 : Gilgamesh\_151
- Track 145 : Tonitrus\_70
- Track 146 : DillyDally\_47
- Track 147 : MooMoo\_66
- Track 148 : VanLee\_116

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

The start number called the most often in the published annotations is 68, it was called in 150 of the 413 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alexphander\_69, AlpineSix\_71, ArcusAngelus\_67, Ardmore\_57, Aubs\_65, Avani\_73, Batiatus\_63, Beakin\_66, BigPhil\_62, Bipolar\_65, Blexus\_63, BlueCrab\_66, BobaPhett\_69, Bobi\_69, Boomer\_70, Brocalys\_60, Brushbloom\_72, Burwell21\_63, BuzzLyseyear\_71, ByChance\_58, Byougenkin\_65, Cabrinians\_66, CaptainTrips\_63, Cerasum\_62, Che8\_70, Che9d\_75, Chevrolet\_70, Chuckly\_68, Clifton\_60, Coco12\_65, Cornie\_63, Cornucopia\_67, Crumble\_60, DRBy19\_69, DaWorst\_65, Daenerys\_60, Dante\_66, Demsculpinboyz\_78, DillTech15\_63, DosHalletts\_67, Doug\_67, Eish\_68, EleanorGeorge\_67, Emma\_67, Eradicator\_58, Estave1\_70, Fancypants\_68, Firehouse51\_68, FreddyB\_66, GUmbie\_63, Galactic\_64, GigiOuiOui\_61, Girr\_63, Gorge\_69, Grimmer\_75, Guppsters\_66, Hades\_66, Hamulus\_65, Harley\_67, Ibhubesi\_65, JalFarm20\_78, James\_69, Jinglebell\_71, Job42\_68, JoeyJr\_61, Juice456\_66, Juniper1\_65, Karhdo\_64, Keelan\_96, Kenuha5\_63, Kersh\_67, Kimberlium\_70, Kingsley\_63, Koella\_59, Krakatau\_62, KristaRAM\_68, LastJedi\_59, Leozinho\_64, Leperchaun\_58, LilMoolah\_64, LittleShirley\_65, Lizziana\_71, Llama\_70, LunaBlu\_67, MadMen\_65, Madiba\_66, Mahavrat\_62, Maravista\_67, Marker\_67, Martik\_65, Mattes\_69, MilleniumForce\_68, MinionDave\_64, Minnie\_68, MisterCuddles\_63, Modragons\_69, Moonbeam\_64, Mova\_69, Mozy\_75, MulchExplorer\_73, Mutaforma13\_71, Nivrat\_62, NormanBulbieJr\_65, Ochi17\_69, OfUltron\_71, Ogopogo\_71, OlympiaSaint\_67, OwlsT2W\_65, PHappiness\_61, PMC\_62, Pacc40\_59, PhesterPotato\_65, Philus\_69, Pippy\_64, Polka14\_64, Pollywog\_66, Priscilla\_65, QuickMath\_69, Radiance\_64, Ramsey\_64, Renaud18\_75, RitaG\_61, Rita\_66, Rockne\_66, RockyHorror\_66, Royals2015\_68, Ruby\_61, Saal\_67, Sandalphon\_66, Sarma624\_64, Seabastian\_71, ShiLan\_64, ShowerHandel\_68, SiSi\_63, Soul22\_71, Spikelee\_72, Spoonbill\_63, Starcevich\_65, SuperGrey\_69, SwagPiggett\_70, TDanisky\_72, ThetaBob\_73, Totinger\_65, Tweety\_65, VRedHorse\_65, Velveteen\_61, Veteran\_62, Vivum\_68, Wachhund\_66, Whouxphf\_62, XFactor\_63, Yorick\_64, Yoshi\_81, Zerg\_65, Zizzle\_69,

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

- Inventum\_61,

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

- 244\_78, ABCat\_74, AWGoat\_61, Adnama\_81, Aegeus\_71, Aleemily\_105, Altostratus\_53, Amao\_77, AmericanBeauty\_81, Amo99\_93, Archie\_67, Argent26\_81, Argie\_53, Ariel\_118, Asriel\_76, Atlantica\_30, AvadaKedavra\_66, BAKA\_122, BaboJay\_74, BadStone\_74, Bagrid\_123, Balomoji\_77, Banquo\_50, Barbarian\_76, Bask21\_77, Baudelaire\_71, Beagle\_86, Beelzebub\_73, Beem\_125, Bench\_80, BigBubba\_77, BilboSwaggins\_76, Blackbeetle\_69, Blarby\_78, Bobby\_115, BourbonZero\_66, BritBrat\_66, BruhMoment\_74, Bruin\_74, Buck\_78, BugsBunny\_77, Cactus\_80, Cafasso\_107, Camara\_30, Caprice\_64, Catfish\_49, Cepens\_52, CheeseTouch\_74, ChosenOne\_77, ChotaBhai\_77, Cinna\_52, Cjw1\_77, Clarkson\_70, Clautastrophe\_65, Clawz\_89, ColdSoup\_93, Command613\_79, Constella\_107, Contagion\_73, Cookies\_74, Corazon\_67, Courthouse\_113, CrystalP\_76, Czystczon1\_78, D12\_51, Daikon\_79, Dallas\_124, Dardanus\_46, DelaGarza\_58, DillyDally\_47, DinoDaryn\_52, DmpstrDiver\_123, DoctorDiddles\_76, DonTron\_90, Dove\_109, DrDrey\_77, Duke13\_117, Dumbo\_77, DuncansLeg\_66, Dusk\_74, Easy2Say\_78, Ecliptus\_75, Ejimix\_117, Elite2014\_76, Elph10\_77, Emmina\_77, EricMillard\_114, Eureka\_75, FairyPath\_77, Fastidio\_66, FeliMaine\_71, Filch\_78, Finnry\_66, FireRed\_81, Flypotenuse\_73, Forrestell\_81, Gage\_79, Gaia\_85, Gator\_75, Gattaca\_67, Gemini\_82, Gilgamesh\_151, Gingerbug\_57, Glexan\_76, GodPhather\_53, Goib\_52, Goku\_75, GoldenSpark\_81, Goldilocks\_80, Gonephishing\_112, GooberAzure\_80, GoongGoong\_66, Halley\_125, HamCheese\_29, HanKaySha\_77, Harella\_77, Henry\_75, Highbury\_76,



HokkenD\_113, Holt\_82, Hoonter\_80, Hopey\_77, Horus\_72, HufflyPuff\_80, Huffy\_52, Hughesyang\_122, Hum25\_55, Huphlepuuff\_71, IHOP\_75, Icee\_78, Inca\_74, Jabbawokkie\_80, JeTaimé\_77, Jeon\_52, Jobypre\_66, JoieB\_70, Jollymon\_93, Jubie\_65, JuicyJay\_120, KHumphrey\_30, Kalah2\_114, Kanye\_74, Khuang\_54, Kimchi\_81, KingstonB\_93, Klein\_119, Kostya\_77, Krypton555\_67, Kubulix\_81, Kuleana\_32, Kuwabara\_72, Leozinho\_66, Lesiram\_59, Lilac\_79, Lilbit\_69, Lilizi\_78, Lilpickle\_76, LitninMcQueen\_71, LittleE\_122, LittleLaf\_69, Lolly9\_65, Lucky2013\_115, Lumos\_67, MISSy\_78, MPhalcon\_78, MadMen\_67, MadamMonkfish\_77, Manda\_78, Mantra\_62, Marshmallow\_75, Marvin\_65, Maxxinista\_79, Megabear\_52, MellowYellow\_85, MiaZeal\_118, Mindy\_76, Minerva\_120, MiniLon\_69, MiniMac\_69, Miniwave\_72, Misfit\_78, ModicumRichard\_107, Moldemort\_80, MooMoo\_66, Morgana\_114, MosMoris\_66, Mosby\_73, MrSmeé\_53, MsGreen\_66, Murica\_80, Murphy\_77, Myrale\_77, Nala\_79, Nebkiss\_84, NelitzaMV\_75, NihilNomen\_125, Nimrod\_78, NoSleep\_78, NyleyClemson\_84, ODay\_78, ObLaDi\_106, Odyssey395\_85, Optimus\_113, OrionPax\_76, PR\_52, Palpatine\_79, Paperbeatsrock\_76, Pat3\_75, Petra64142\_81, Phaja\_75, Pharsalus\_74, PhatBacter\_81, Phaux\_79, Phoebus\_124, Phrux\_74, Pitbull\_53, Pointis\_81, Poise\_69, Policronamos\_81, Porky\_76, Pound\_112, Pringar\_68, Pumpkin\_80, Pureglobe5\_83, Quallification\_78, Rabbitrun\_72, Raela\_69, Rakim\_78, Ranunculus\_78, Rattail\_30, RazzB\_81, RedRaider77\_68, Redno2\_116, Rimmer\_78, RiverMonster\_77, Rizwana\_65, Rose5\_66, Saints25\_76, Samty\_66, Sassay\_72, Schmidt\_45, ShamWow\_77, SilentRX\_62, Simpliphy\_76, SirDuracell\_76, Skitty\_53, Snenia\_65, Soos\_87, SophKB\_74, Sotrice96\_78, Splinter\_51, Spooky\_68, Squiddly\_73, Squint\_116, Stank\_80, Stark\_78, StellaBean\_75, Sting\_90, StolenFromERC\_80, Superphikiman\_115, TBrady12\_80, TZGordon\_53, Tank\_65, Taptic\_52, Tarkin\_76, TeardropMSU\_73, Teaspoon\_78, Teng\_62, Terminus\_80, Tesla\_66, Thibault\_106, ThreeRngTarjay\_118, Thresher\_79, TinaLin\_50, Tomaszewski\_72, Tonitrus\_70, Toto\_75, Traaww1\_73, Trax\_71, TriFive\_66, Tuco\_78, Tyson\_67, Ukulele\_72, VanLee\_116, VasuNzinga\_68, Vendetta\_51, Wamburgrxpress\_66, Wanda\_122, Whirlwind\_66, Wiggin\_79, Wilde\_67, Willez\_72, Wrackline\_70, Wyatt2\_67, Xandras\_76, YassJohnny\_74, Youngblood\_80, Zapner\_79, Zelink\_117, xkcd\_80,

### Summary by start number:

#### Start 44:

- Found in 2 of 456 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kuleana\_32 (AS2),

#### Start 51:

- Found in 1 of 456 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clawz\_89 (CP),

#### Start 52:

- Found in 2 of 456 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Lucky2013\_115 (J),

Start 55:

- Found in 20 of 456 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 17 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beelzebub\_73 (S), Blackbeetle\_69 (S), Caprice\_64 (S), Clarkson\_70 (S), Corazon\_67 (S), FeliMaine\_71 (S), Gattaca\_67 (S), GoongGoong\_66 (S), Huphlepuuff\_71 (S), JoieB\_70 (S), Lilbit\_69 (S), LittleLaf\_69 (S), Marvin\_65 (S), MosMoris\_66 (S), Poise\_69 (S), Pringar\_68 (S), Raela\_69 (S), RedRaider77\_68 (S), Tesla\_66 (S), VasuNzinga\_68 (S),

Start 56:

- Found in 2 of 456 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 50.0% of time when present
- Phage (with cluster) where this start called: HokkenD\_113 (J),

Start 63:

- Found in 11 of 456 ( 2.4% ) of genes in pham
- Manual Annotations of this start: 2 of 413
- Called 18.2% of time when present
- Phage (with cluster) where this start called: Soos\_87 (CP), Sting\_90 (CP),

Start 64:

- Found in 1 of 456 ( 0.2% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DillyDally\_47 (singleton),

Start 65:

- Found in 2 of 456 ( 0.4% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gilgamesh\_151 (singleton),

Start 66:

- Found in 5 of 456 ( 1.1% ) of genes in pham
- Manual Annotations of this start: 4 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Blarby\_78 (F), Fastidio\_66 (F1), Jabbawokkie\_80 (F2), Mantra\_62 (F1), Zapner\_79 (F2),

Start 67:

- Found in 1 of 456 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dardanus\_46 (CU3),

Start 68:

- Found in 156 of 456 ( 34.2% ) of genes in pham
- Manual Annotations of this start: 150 of 413
- Called 99.4% of time when present
- Phage (with cluster) where this start called: Alexphander\_69 (F1), AlpineSix\_71 (F1), ArcusAngelus\_67 (F1), Ardmores\_57 (F1), Aubs\_65 (F1), Avani\_73 (F2), Batiatus\_63

(F1), Beakin\_66 (F1), BigPhil\_62 (F1), Bipolar\_65 (F1), Blexus\_63 (F1), BlueCrab\_66 (F1), BobaPhett\_69 (F1), Bobi\_69 (F1), Boomer\_70 (F1), Brocalys\_60 (F1), Brushbloom\_72 (F1), Burwell21\_63 (F1), BuzzLyseyear\_71 (F1), ByChance\_58 (F1), Byougenkin\_65 (F1), Cabrinians\_66 (F1), CaptainTrips\_63 (F1), Cerasum\_62 (F1), Che8\_70 (F1), Che9d\_75 (F2), Chevrolet\_70 (F1), Chuckly\_68 (F1), Clifton\_60 (F1), Coco12\_65 (F1), Cornie\_63 (F5), Cornucopia\_67 (F1), Crumble\_60 (F1), DRBy19\_69 (F1), DaWorst\_65 (F1), Daenerys\_60 (F1), Dante\_66 (F1), Demsculpinboyz\_78 (F2), DillTech15\_63 (F1), DosHalletts\_67 (F1), Doug\_67 (F1), Eish\_68 (F1), EleanorGeorge\_67 (F1), Emma\_67 (F1), Eradicator\_58 (F1), Estave1\_70 (F1), Fancypants\_68 (F1), Firehouse51\_68 (F1), FreddyB\_66 (F1), GUmbie\_63 (F1), Galactic\_64 (F1), GigiOuiOui\_61 (F1), Girr\_63 (F1), Gorge\_69 (F1), Grimmer\_75 (F1), Guppsters\_66 (F1), Hades\_66 (F1), Hamulus\_65 (F1), Harley\_67 (F1), Ibhuesi\_65 (F1), JalFarm20\_78 (F1), James\_69 (F1), Jinglebell\_71 (F1), Job42\_68 (F1), JoeyJr\_61 (F1), Juice456\_66 (F1), Juniper1\_65 (F1), Karhdo\_64 (F1), Keelan\_96 (DP), Kenuha5\_63 (F1), Kersh\_67 (F1), Kimberlium\_70 (F1), Kingsley\_63 (F1), Koella\_59 (F1), Krakatau\_62 (F1), KristaRAM\_68 (F1), LastJedi\_59 (F1), Leozinho\_64 (F1), Leperchaun\_58 (F1), LilMoolah\_64 (F1), LittleShirley\_65 (F1), Lizziana\_71 (F1), Llama\_70 (F1), LunaBlu\_67 (F1), MadMen\_65 (F1), Madiba\_66 (F1), Mahavrat\_62 (F1), Maravista\_67 (F1), Marker\_67 (F1), Martik\_65 (F1), Mattes\_69 (F1), MilleniumForce\_68 (F1), MinionDave\_64 (F1), Minnie\_68 (F1), MisterCuddles\_63 (F1), Modragons\_69 (F1), Moonbeam\_64 (F1), Mova\_69 (F1), Mozy\_75 (F1), MulchExplorer\_73 (F1), Mutaforma13\_71 (F1), Nivrat\_62 (F1), NormanBulbieJr\_65 (F1), Ochi17\_69 (F1), OfUltron\_71 (F1), Ogoopogo\_71 (F1), OlympiaSaint\_67 (F1), OwlsT2W\_65 (F1), PHappiness\_61 (F1), PMC\_62 (F1), Pacc40\_59 (F1), PhesterPhotato\_65 (F1), Philus\_69 (F1), Pippy\_64 (F1), Polka14\_64 (F1), Pollywog\_66 (F1), Priscilla\_65 (F1), QuickMath\_69 (F1), Radiance\_64 (F1), Ramsey\_64 (F1), Renaud18\_75 (F4), RitaG\_61 (F1), Rita\_66 (F1), Rockne\_66 (F1), RockyHorror\_66 (F1), Royals2015\_68 (F1), Ruby\_61 (F1), Saal\_67 (F1), Sandalphon\_66 (F1), Sarma624\_64 (F1), Seabastian\_71 (F1), ShiLan\_64 (F1), ShowerHandel\_68 (F1), SiSi\_63 (F1), Soul22\_71 (F2), Spikelee\_72 (F1), Spoonbill\_63 (F1), Starceвич\_65 (F1), SuperGrey\_69 (F1), SwagPigglett\_70 (F1), TDanisky\_72 (F1), ThetaBob\_73 (F4), Totinger\_65 (F1), Tweety\_65 (F1), VRedHorse\_65 (F1), Velveteen\_61 (F1), Veteran\_62 (F1), Vivum\_68 (F1), Wachhund\_66 (F1), Whouxphf\_62 (F1), XFactor\_63 (F1), Yorick\_64 (F1), Yoshi\_81 (F2), Zerg\_65 (F1), Zizzle\_69 (F1),

#### Start 70:

- Found in 15 of 456 ( 3.3% ) of genes in pham
- Manual Annotations of this start: 13 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo\_50 (CU1), Catfish\_49 (CU5), DelaGarza\_58 (GF), DinoDaryn\_52 (CU1), Gingerbug\_57 (GF), Goib\_52 (CU1), Huffy\_52 (CU1), Lesiram\_59 (GF), Schmidt\_45 (CU4), Splinter\_51 (CU1), TZGordon\_53 (CU1), Teng\_62 (GF), TinaLin\_50 (CU1), Vendetta\_51 (CU1), Wrackline\_70 (GF),

#### Start 71:

- Found in 3 of 456 ( 0.7% ) of genes in pham
- Manual Annotations of this start: 3 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cinna\_52 (EI), Rabbitrun\_72 (DU2), Trax\_71 (DU2),

#### Start 72:

- Found in 6 of 456 ( 1.3% ) of genes in pham
- No Manual Annotations of this start.
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Amo99\_93 (CP), ColdSoup\_93 (CP), DonTron\_90 (CP), Jollymon\_93 (CP), KingstonB\_93 (CP),

#### Start 73:

- Found in 18 of 456 ( 3.9% ) of genes in pham
- Manual Annotations of this start: 15 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie\_53 (W), BruhMoment\_74 (AP3), Cepens\_52 (W), D12\_51 (W), Forrestell\_81 (AP2), GodPhather\_53 (W), Jeon\_52 (W), Leozinho\_66 (F1), MadMen\_67 (F1), Megabear\_52 (W), MellowYellow\_85 (AP2), MooMoo\_66 (singleton), NyleyClemson\_84 (AP2), PR\_52 (W), Pureglobe5\_83 (AP2), RazzB\_81 (AP2), Taptic\_52 (W), Tonitrus\_70 (singleton),

#### Start 74:

- Found in 17 of 456 ( 3.7% ) of genes in pham
- Manual Annotations of this start: 13 of 413
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Archie\_67 (L2), BourbonZero\_66 (L3), Clautastrophe\_65 (L3), DuncansLeg\_66 (L3), Finnry\_66 (L3), Jobypre\_66 (L3), Jubie\_65 (L3), Krypton555\_67 (L3), Lolly9\_65 (L3), Lumos\_67 (L3), MiniLon\_69 (L3), MsGreen\_66 (L3), Samty\_66 (L3), Snenia\_65 (L3), TriFive\_66 (L3), Whirlwind\_66 (L3),

#### Start 75:

- Found in 46 of 456 ( 10.1% ) of genes in pham
- Manual Annotations of this start: 37 of 413
- Called 87.0% of time when present
- Phage (with cluster) where this start called: AWGoat\_61 (AP4), Aleemily\_105 (DZ), Ariel\_118 (J), BAKA\_122 (J), Bagrid\_123 (J), Beagle\_86 (AP2), Bobby\_115 (J), Cafasso\_107 (DZ), Courthouse\_113 (J), DmpstrDiver\_123 (J), Duke13\_117 (J), Ejimix\_117 (J), EricMillard\_114 (J), Gaia\_85 (X), Gonephishing\_112 (J), Halley\_125 (J), Hughesyang\_122 (J), Kalah2\_114 (J), Klein\_119 (J), Kubulix\_81 (AP2), LittleE\_122 (J), Minerva\_120 (J), Morgana\_114 (DZ), Nebkiss\_84 (X), ObLaDi\_106 (DZ), Odyssey395\_85 (AP2), Optimus\_113 (J), Pointis\_81 (AP2), Pound\_112 (J), Ranunculus\_78 (AP), Redno2\_116 (J), Rizwana\_65 (AP1), SilentRX\_62 (AP4), Squint\_116 (J), Superphikiman\_115 (J), Tank\_65 (AP1), ThreeRngTarjay\_118 (J), Wanda\_122 (J), Wilde\_67 (AP1), Zelink\_117 (J),

#### Start 76:

- Found in 1 of 456 ( 0.2% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: VanLee\_116 (singleton),

#### Start 77:

- Found in 155 of 456 ( 34.0% ) of genes in pham
- Manual Annotations of this start: 147 of 413
- Called 100.0% of time when present

- Phage (with cluster) where this start called: 244\_78 (E), ABCat\_74 (E), Adnama\_81 (E), Aegeus\_71 (L5), Amao\_77 (E), AmericanBeauty\_81 (E), Argent26\_81 (E), Asriel\_76 (E), AvadaKedavra\_66 (L1), BaboJay\_74 (E), BadStone\_74 (E), Balomoji\_77 (E), Barbarian\_76 (E), Bask21\_77 (E), Baudelaire\_71 (L5), Beem\_125 (J), Bench\_80 (E), BigBubba\_77 (E), BilboSwaggins\_76 (E), BritBrat\_66 (CY2), Bruin\_74 (E), Buck\_78 (E), BugsBunny\_77 (E), Cactus\_80 (E), CheeseTouch\_74 (DN1), ChosenOne\_77 (E), ChotaBhai\_77 (E), Cjw1\_77 (E), Command613\_79 (E), Constella\_107 (J), Contagion\_73 (E), Cookies\_74 (E), CrystalP\_76 (E), Czyszczonek\_78 (E), Daikon\_79 (E), Dallas\_124 (J), DoctorDiddles\_76 (E), Dove\_109 (J), DrDrey\_77 (E), Dumbo\_77 (E), Dusk\_74 (E), Easy2Say\_78 (E), Ecliptus\_75 (DN), Elite2014\_76 (E), Elph10\_77 (E), Emmina\_77 (E), Eureka\_75 (E), FairyPath\_77 (E), Filch\_78 (E), FireRed\_81 (E), Flypotenuse\_73 (E), Gage\_79 (E), Gator\_75 (E), Gemini\_82 (E), Glexan\_76 (E), Goku\_75 (E), GoldenSpark\_81 (E), Goldilocks\_80 (E), GooberAzure\_80 (E), HanKaySha\_77 (E), Harella\_77 (E), Henry\_75 (E), Highbury\_76 (E), Holt\_82 (E), Hoonter\_80 (E), Hopey\_77 (E), Horus\_72 (DN1), HuffyPuff\_80 (E), IHOP\_75 (E), Icee\_78 (E), Inca\_74 (E), JeTaime\_77 (E), JuicyJay\_120 (J), Kanye\_74 (E), Kimchi\_81 (E), Kostya\_77 (E), Kuwabara\_72 (DN4), Lilac\_79 (E), Lilizi\_78 (E), Lilpickle\_76 (E), LitninMcQueen\_71 (DN1), MISSy\_78 (E), MPhalcon\_78 (E), MadamMonkfish\_77 (E), Manda\_78 (E), Marshmallow\_75 (E), Maxxinista\_79 (E), MiaZeal\_118 (J), Mindy\_76 (E), Miniwave\_72 (E), Misfit\_78 (E), Moldemort\_80 (E), Mosby\_73 (E), Murica\_80 (E), Murphy\_77 (E), Myrale\_77 (E), Nala\_79 (E), NelitzaMV\_75 (E), NihilNomen\_125 (J), Nimrod\_78 (E), NoSleep\_78 (E), ODay\_78 (DN), OrionPax\_76 (E), Palpatine\_79 (E), Paperbeatsrock\_76 (E), Pat3\_75 (E), Petra64142\_81 (E), Phaja\_75 (E), Pharsalus\_74 (E), PhatBacter\_81 (E), Phaux\_79 (E), Phoebus\_124 (J), Phrux\_74 (E), Policronamos\_81 (E), Porky\_76 (E), Pumpkin\_80 (E), Quallification\_78 (E), Rakim\_78 (E), Rimmer\_78 (E), RiverMonster\_77 (E), Rose5\_66 (L1), Saints25\_76 (E), Sassay\_72 (E), ShamWow\_77 (E), Simpliphy\_76 (E), SirDuracell\_76 (E), SophKB\_74 (E), Sotrice96\_78 (E), Spooky\_68 (DN2), Squiddly\_73 (DN2), Stank\_80 (E), Stark\_78 (E), StellaBean\_75 (E), StolenFromERC\_80 (E), TBrady12\_80 (E), Tarkin\_76 (E), TeardropMSU\_73 (E), Teaspoon\_78 (E), Terminus\_80 (E), Thibault\_106 (J), Thresher\_79 (E), Tomaszewski\_72 (E), Toto\_75 (E), Traaww1\_73 (E), Tuco\_78 (E), Tyson\_67 (L1), Ukulele\_72 (E), Wamburggrxpress\_66 (L1), Wiggin\_79 (E), Willez\_72 (E), Wyatt2\_67 (L1), Xandras\_76 (E), YassJohnny\_74 (E), Youngblood\_80 (E), xkcd\_80 (E),

#### Start 78:

- Found in 6 of 456 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 2 of 413
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Altostratus\_53 (FS), Hum25\_55 (FQ), Khuang\_54 (FS), MrSmee\_53 (FQ), Pitbull\_53 (FQ), Skitty\_53 (FQ),

#### Start 81:

- Found in 13 of 456 ( 2.9% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Inventum\_61 (F1),

#### Start 84:

- Found in 30 of 456 ( 6.6% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 6.7% of time when present

- Phage (with cluster) where this start called: MiniMac\_69 (L3), ModicumRichard\_107 (DZ),

Start 85:

- Found in 24 of 456 ( 5.3% ) of genes in pham
- Manual Annotations of this start: 1 of 413
- Called 20.8% of time when present
- Phage (with cluster) where this start called: Atlantica\_30 (AS3), Camara\_30 (AS3), HamCheese\_29 (AS3), KHumphrey\_30 (AS3), Rattail\_30 (AS3),

### **Summary by clusters:**

There are 39 clusters represented in this pham: DN, FQ, singleton, FS, CY2, AP2, AP3, AP1, AP4, DZ, EI, DP, CU5, CU4, CU3, CU1, DN4, DN1, DN2, DU2, AS3, AS2, E, F, J, GF, S, L5, L2, L3, W, L1, X, CP, F1, F2, F4, F5, AP,

Info for manual annotations of cluster AP:

- Start number 75 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 75 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 73 was manually annotated 2 times for cluster AP2.
- Start number 75 was manually annotated 3 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 73 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 75 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster AS2:

- Start number 44 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 85 was manually annotated 1 time for cluster AS3.

Info for manual annotations of cluster CP:

- Start number 51 was manually annotated 1 time for cluster CP.
- Start number 63 was manually annotated 2 times for cluster CP.

Info for manual annotations of cluster CU1:

- Start number 70 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 67 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 70 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 70 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY2:

- Start number 77 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DN:

- Start number 77 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 77 was manually annotated 3 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 77 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN4:

- Start number 77 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 68 was manually annotated 1 time for cluster DP.

Info for manual annotations of cluster DU2:

- Start number 71 was manually annotated 2 times for cluster DU2.

Info for manual annotations of cluster DZ:

- Start number 75 was manually annotated 4 times for cluster DZ.

Info for manual annotations of cluster E:

- Start number 77 was manually annotated 122 times for cluster E.

Info for manual annotations of cluster EI:

- Start number 71 was manually annotated 1 time for cluster EI.

Info for manual annotations of cluster F1:

- Start number 66 was manually annotated 2 times for cluster F1.
- Start number 68 was manually annotated 141 times for cluster F1.
- Start number 73 was manually annotated 2 times for cluster F1.
- Start number 81 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 66 was manually annotated 2 times for cluster F2.
- Start number 68 was manually annotated 5 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 68 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 68 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster FQ:

- Start number 78 was manually annotated 2 times for cluster FQ.

Info for manual annotations of cluster GF:

- Start number 70 was manually annotated 3 times for cluster GF.

Info for manual annotations of cluster J:

- Start number 52 was manually annotated 1 time for cluster J.
- Start number 56 was manually annotated 1 time for cluster J.
- Start number 75 was manually annotated 22 times for cluster J.
- Start number 77 was manually annotated 9 times for cluster J.

Info for manual annotations of cluster L1:

- Start number 77 was manually annotated 5 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 74 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L3:

- Start number 74 was manually annotated 12 times for cluster L3.
- Start number 84 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L5:

- Start number 77 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster S:

- Start number 55 was manually annotated 17 times for cluster S.

Info for manual annotations of cluster W:

- Start number 73 was manually annotated 8 times for cluster W.

Info for manual annotations of cluster X:

- Start number 75 was manually annotated 2 times for cluster X.

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

Gene: 244\_78 Start: 48609, Stop: 48926, Start Num: 77

Candidate Starts for 244\_78:

(22, 48426), (Start: 77 @48609 has 147 MA's), (112, 48750),

Gene: ABCat\_74 Start: 48962, Stop: 49279, Start Num: 77

Candidate Starts for ABCat\_74:

(22, 48779), (Start: 77 @48962 has 147 MA's), (112, 49103),

Gene: AWGoat\_61 Start: 44482, Stop: 44168, Start Num: 75

Candidate Starts for AWGoat\_61:

(Start: 75 @44482 has 37 MA's), (108, 44356), (145, 44224), (151, 44215),

Gene: Adnama\_81 Start: 48988, Stop: 49305, Start Num: 77

Candidate Starts for Adnama\_81:

(22, 48805), (Start: 77 @48988 has 147 MA's), (112, 49129),

Gene: Aegeus\_71 Start: 46495, Stop: 46824, Start Num: 77

Candidate Starts for Aegeus\_71:



(Start: 77 @46495 has 147 MA's), (96, 46579), (131, 46717), (141, 46744), (142, 46750), (151, 46774), (169, 46813),

Gene: Aleemily\_105 Start: 59933, Stop: 60322, Start Num: 75

Candidate Starts for Aleemily\_105:

(5, 59546), (6, 59558), (12, 59657), (Start: 75 @59933 has 37 MA's), (Start: 85 @59966 has 1 MA's), (89, 59987), (126, 60134), (134, 60164), (142, 60188),

Gene: Alexphander\_69 Start: 42282, Stop: 42644, Start Num: 68

Candidate Starts for Alexphander\_69:

(Start: 68 @42282 has 150 MA's), (148, 42582), (169, 42627),

Gene: AlpineSix\_71 Start: 45319, Stop: 45681, Start Num: 68

Candidate Starts for AlpineSix\_71:

(Start: 68 @45319 has 150 MA's), (124, 45523), (148, 45619), (169, 45664),

Gene: Altostratus\_53 Start: 31416, Stop: 31790, Start Num: 78

Candidate Starts for Altostratus\_53:

(Start: 78 @31416 has 2 MA's), (115, 31569), (170, 31749), (175, 31761),

Gene: Amao\_77 Start: 48382, Stop: 48699, Start Num: 77

Candidate Starts for Amao\_77:

(22, 48199), (Start: 77 @48382 has 147 MA's), (Start: 84 @48406 has 1 MA's), (112, 48523),

Gene: AmericanBeauty\_81 Start: 49131, Stop: 49448, Start Num: 77

Candidate Starts for AmericanBeauty\_81:

(22, 48948), (Start: 77 @49131 has 147 MA's), (112, 49272),

Gene: Amo99\_93 Start: 57523, Stop: 57891, Start Num: 72

Candidate Starts for Amo99\_93:

(17, 57298), (Start: 63 @57511 has 2 MA's), (72, 57523), (138, 57772), (141, 57781), (147, 57805), (149, 57811), (166, 57853),

Gene: Archie\_67 Start: 46551, Stop: 46892, Start Num: 74

Candidate Starts for Archie\_67:

(Start: 74 @46551 has 13 MA's), (111, 46698),

Gene: ArcusAngelus\_67 Start: 42632, Stop: 42994, Start Num: 68

Candidate Starts for ArcusAngelus\_67:

(Start: 68 @42632 has 150 MA's), (111, 42791), (148, 42932), (153, 42935), (169, 42977),

Gene: Ardmore\_57 Start: 40049, Stop: 40405, Start Num: 68

Candidate Starts for Ardmore\_57:

(Start: 68 @40049 has 150 MA's), (148, 40349), (153, 40352),

Gene: Argent26\_81 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for Argent26\_81:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: Argie\_53 Start: 44207, Stop: 44548, Start Num: 73

Candidate Starts for Argie\_53:

(Start: 73 @44207 has 15 MA's), (88, 44261), (90, 44276), (94, 44294), (112, 44360), (118, 44378), (127, 44432), (142, 44477), (148, 44498), (157, 44522), (160, 44525),

Gene: Ariel\_118 Start: 64179, Stop: 64499, Start Num: 75  
Candidate Starts for Ariel\_118:  
(Start: 75 @64179 has 37 MA's), (91, 64248), (101, 64290), (131, 64407),

Gene: Asriel\_76 Start: 47325, Stop: 47642, Start Num: 77  
Candidate Starts for Asriel\_76:  
(22, 47142), (Start: 77 @47325 has 147 MA's), (112, 47466),

Gene: Atlantica\_30 Start: 20838, Stop: 20518, Start Num: 85  
Candidate Starts for Atlantica\_30:  
(4, 21273), (15, 21123), (50, 20928), (Start: 75 @20871 has 37 MA's), (Start: 85 @20838 has 1 MA's),  
(106, 20742),

Gene: Aubs\_65 Start: 42690, Stop: 43052, Start Num: 68  
Candidate Starts for Aubs\_65:  
(29, 42573), (Start: 68 @42690 has 150 MA's), (111, 42849), (148, 42990), (169, 43035),

Gene: AvadaKedavra\_66 Start: 45153, Stop: 45521, Start Num: 77  
Candidate Starts for AvadaKedavra\_66:  
(Start: 77 @45153 has 147 MA's), (Start: 85 @45180 has 1 MA's), (99, 45249), (106, 45270), (112,  
45294), (131, 45375), (154, 45438), (177, 45513),

Gene: Avani\_73 Start: 42666, Stop: 43022, Start Num: 68  
Candidate Starts for Avani\_73:  
(Start: 68 @42666 has 150 MA's), (148, 42966), (153, 42969),

Gene: BAKA\_122 Start: 67774, Stop: 68106, Start Num: 75  
Candidate Starts for BAKA\_122:  
(Start: 75 @67774 has 37 MA's), (91, 67843), (117, 67933), (118, 67936), (131, 68002),

Gene: BaboJay\_74 Start: 48162, Stop: 48479, Start Num: 77  
Candidate Starts for BaboJay\_74:  
(22, 47979), (Start: 77 @48162 has 147 MA's), (112, 48303),

Gene: BadStone\_74 Start: 48531, Stop: 48848, Start Num: 77  
Candidate Starts for BadStone\_74:  
(22, 48348), (Start: 77 @48531 has 147 MA's), (112, 48672),

Gene: Bagrid\_123 Start: 67735, Stop: 68064, Start Num: 75  
Candidate Starts for Bagrid\_123:  
(Start: 75 @67735 has 37 MA's), (91, 67804), (131, 67963), (161, 68047),

Gene: Balomoji\_77 Start: 49092, Stop: 49409, Start Num: 77  
Candidate Starts for Balomoji\_77:  
(22, 48909), (Start: 77 @49092 has 147 MA's), (112, 49233),

Gene: Banquo\_50 Start: 32516, Stop: 32896, Start Num: 70  
Candidate Starts for Banquo\_50:  
(Start: 70 @32516 has 13 MA's), (89, 32579), (101, 32639), (131, 32756), (142, 32795), (154, 32822),  
(171, 32864),

Gene: Barbarian\_76 Start: 47325, Stop: 47642, Start Num: 77

Candidate Starts for Barbarian\_76:  
(22, 47142), (Start: 77 @47325 has 147 MA's), (112, 47466),

Gene: Bask21\_77 Start: 47945, Stop: 48262, Start Num: 77  
Candidate Starts for Bask21\_77:  
(22, 47762), (Start: 77 @47945 has 147 MA's), (Start: 84 @47969 has 1 MA's), (112, 48086),

Gene: Batiatus\_63 Start: 41925, Stop: 42281, Start Num: 68  
Candidate Starts for Batiatus\_63:  
(Start: 68 @41925 has 150 MA's), (148, 42225), (153, 42228),

Gene: Baudelaire\_71 Start: 46495, Stop: 46824, Start Num: 77  
Candidate Starts for Baudelaire\_71:  
(Start: 77 @46495 has 147 MA's), (96, 46579), (131, 46717), (141, 46744), (142, 46750), (151, 46774),  
(169, 46813),

Gene: Beagle\_86 Start: 50592, Stop: 50260, Start Num: 75  
Candidate Starts for Beagle\_86:  
(Start: 75 @50592 has 37 MA's), (Start: 85 @50559 has 1 MA's), (116, 50442), (124, 50412), (125,  
50397), (127, 50382), (141, 50340), (142, 50334), (145, 50322), (151, 50313), (157, 50289),

Gene: Beakin\_66 Start: 41229, Stop: 41591, Start Num: 68  
Candidate Starts for Beakin\_66:  
(Start: 68 @41229 has 150 MA's), (111, 41388), (148, 41529), (153, 41532), (169, 41574),

Gene: Beelzebub\_73 Start: 40109, Stop: 40462, Start Num: 55  
Candidate Starts for Beelzebub\_73:  
(Start: 55 @40109 has 17 MA's), (69, 40136), (107, 40271), (121, 40301), (129, 40352), (131, 40358),  
(137, 40373), (142, 40391), (150, 40415), (151, 40418),

Gene: Beem\_125 Start: 69590, Stop: 69922, Start Num: 77  
Candidate Starts for Beem\_125:  
(Start: 77 @69590 has 147 MA's), (103, 69701), (108, 69725), (162, 69905),

Gene: Bench\_80 Start: 48629, Stop: 48946, Start Num: 77  
Candidate Starts for Bench\_80:  
(22, 48446), (Start: 77 @48629 has 147 MA's), (112, 48770),

Gene: BigBubba\_77 Start: 48341, Stop: 48658, Start Num: 77  
Candidate Starts for BigBubba\_77:  
(22, 48158), (Start: 77 @48341 has 147 MA's), (112, 48482),

Gene: BigPhil\_62 Start: 39148, Stop: 39510, Start Num: 68  
Candidate Starts for BigPhil\_62:  
(Start: 68 @39148 has 150 MA's), (111, 39307), (124, 39352), (148, 39448), (153, 39451), (169,  
39493),

Gene: BilboSwaggins\_76 Start: 48970, Stop: 49287, Start Num: 77  
Candidate Starts for BilboSwaggins\_76:  
(22, 48787), (Start: 77 @48970 has 147 MA's), (112, 49111),

Gene: Bipolar\_65 Start: 42690, Stop: 43052, Start Num: 68  
Candidate Starts for Bipolar\_65:

(Start: 68 @42690 has 150 MA's), (111, 42849), (148, 42990), (169, 43035),

Gene: Blackbeetle\_69 Start: 39121, Stop: 39474, Start Num: 55

Candidate Starts for Blackbeetle\_69:

(Start: 55 @39121 has 17 MA's), (69, 39148), (107, 39283), (121, 39313), (129, 39364), (131, 39370), (137, 39385), (142, 39403), (150, 39427), (151, 39430),

Gene: Blarby\_78 Start: 44162, Stop: 44503, Start Num: 66

Candidate Starts for Blarby\_78:

(57, 44147), (Start: 66 @44162 has 4 MA's), (148, 44462), (153, 44465),

Gene: Blexus\_63 Start: 42819, Stop: 43181, Start Num: 68

Candidate Starts for Blexus\_63:

(Start: 68 @42819 has 150 MA's), (111, 42978), (148, 43119), (169, 43164),

Gene: BlueCrab\_66 Start: 43528, Stop: 43884, Start Num: 68

Candidate Starts for BlueCrab\_66:

(Start: 68 @43528 has 150 MA's), (116, 43702), (148, 43828),

Gene: BobaPhett\_69 Start: 45114, Stop: 45476, Start Num: 68

Candidate Starts for BobaPhett\_69:

(Start: 68 @45114 has 150 MA's), (111, 45273), (116, 45288), (148, 45414), (169, 45459),

Gene: Bobby\_115 Start: 69193, Stop: 69522, Start Num: 75

Candidate Starts for Bobby\_115:

(Start: 75 @69193 has 37 MA's), (91, 69262), (117, 69352), (118, 69355), (131, 69421), (161, 69505),

Gene: Bobi\_69 Start: 43528, Stop: 43884, Start Num: 68

Candidate Starts for Bobi\_69:

(Start: 68 @43528 has 150 MA's), (148, 43828), (153, 43831),

Gene: Boomer\_70 Start: 44186, Stop: 44542, Start Num: 68

Candidate Starts for Boomer\_70:

(Start: 68 @44186 has 150 MA's), (148, 44486), (153, 44489),

Gene: BourbonZero\_66 Start: 46515, Stop: 46847, Start Num: 74

Candidate Starts for BourbonZero\_66:

(36, 46410), (Start: 74 @46515 has 13 MA's), (106, 46638), (113, 46665), (131, 46743), (143, 46779), (158, 46824),

Gene: BritBrat\_66 Start: 43849, Stop: 44178, Start Num: 77

Candidate Starts for BritBrat\_66:

(37, 43735), (Start: 63 @43825 has 2 MA's), (Start: 77 @43849 has 147 MA's), (106, 43963), (111, 43984), (131, 44068), (140, 44092), (163, 44158), (169, 44170),

Gene: Brocalys\_60 Start: 39296, Stop: 39658, Start Num: 68

Candidate Starts for Brocalys\_60:

(29, 39179), (Start: 68 @39296 has 150 MA's), (111, 39455), (148, 39596), (169, 39641),

Gene: BruhMoment\_74 Start: 49610, Stop: 49293, Start Num: 73

Candidate Starts for BruhMoment\_74:

(Start: 73 @49610 has 15 MA's), (99, 49508), (116, 49469), (145, 49349),

Gene: Bruin\_74 Start: 47505, Stop: 47822, Start Num: 77

Candidate Starts for Bruin\_74:

(22, 47322), (Start: 77 @47505 has 147 MA's), (112, 47646),

Gene: Brushbloom\_72 Start: 42857, Stop: 43213, Start Num: 68

Candidate Starts for Brushbloom\_72:

(Start: 68 @42857 has 150 MA's), (148, 43157), (153, 43160),

Gene: Buck\_78 Start: 49210, Stop: 49527, Start Num: 77

Candidate Starts for Buck\_78:

(22, 49027), (Start: 77 @49210 has 147 MA's), (112, 49351),

Gene: BugsBunny\_77 Start: 49037, Stop: 49354, Start Num: 77

Candidate Starts for BugsBunny\_77:

(22, 48854), (Start: 77 @49037 has 147 MA's), (112, 49178),

Gene: Burwell21\_63 Start: 42397, Stop: 42759, Start Num: 68

Candidate Starts for Burwell21\_63:

(29, 42280), (Start: 68 @42397 has 150 MA's), (111, 42556), (148, 42697), (169, 42742),

Gene: BuzzLyseyear\_71 Start: 43599, Stop: 43961, Start Num: 68

Candidate Starts for BuzzLyseyear\_71:

(Start: 68 @43599 has 150 MA's), (111, 43758), (148, 43899), (153, 43902), (169, 43944),

Gene: ByChance\_58 Start: 38456, Stop: 38818, Start Num: 68

Candidate Starts for ByChance\_58:

(Start: 68 @38456 has 150 MA's), (111, 38615), (116, 38630), (148, 38756), (169, 38801),

Gene: Byougenkin\_65 Start: 42188, Stop: 42544, Start Num: 68

Candidate Starts for Byougenkin\_65:

(Start: 68 @42188 has 150 MA's), (148, 42488), (153, 42491),

Gene: Cabrinians\_66 Start: 42475, Stop: 42837, Start Num: 68

Candidate Starts for Cabrinians\_66:

(Start: 68 @42475 has 150 MA's), (116, 42649), (148, 42775), (169, 42820),

Gene: Cactus\_80 Start: 47986, Stop: 48303, Start Num: 77

Candidate Starts for Cactus\_80:

(22, 47803), (Start: 77 @47986 has 147 MA's), (112, 48127),

Gene: Cafasso\_107 Start: 60484, Stop: 60873, Start Num: 75

Candidate Starts for Cafasso\_107:

(5, 60097), (6, 60109), (Start: 75 @60484 has 37 MA's), (Start: 85 @60517 has 1 MA's), (89, 60538), (126, 60685), (134, 60715),

Gene: Camara\_30 Start: 20839, Stop: 20519, Start Num: 85

Candidate Starts for Camara\_30:

(4, 21274), (15, 21124), (50, 20929), (Start: 75 @20872 has 37 MA's), (Start: 85 @20839 has 1 MA's), (106, 20743),

Gene: Caprice\_64 Start: 39435, Stop: 39788, Start Num: 55

Candidate Starts for Caprice\_64:

(Start: 55 @39435 has 17 MA's), (69, 39462), (107, 39597), (121, 39627), (129, 39678), (131, 39684), (137, 39699), (142, 39717), (150, 39741), (151, 39744),

Gene: CaptainTrips\_63 Start: 42210, Stop: 42572, Start Num: 68

Candidate Starts for CaptainTrips\_63:

(29, 42093), (Start: 68 @42210 has 150 MA's), (111, 42369), (148, 42510), (169, 42555),

Gene: Catfish\_49 Start: 34051, Stop: 34401, Start Num: 70

Candidate Starts for Catfish\_49:

(Start: 70 @34051 has 13 MA's), (83, 34084), (101, 34174), (110, 34198), (141, 34324), (164, 34384),

Gene: Cepens\_52 Start: 43922, Stop: 44263, Start Num: 73

Candidate Starts for Cepens\_52:

(Start: 73 @43922 has 15 MA's), (88, 43976), (90, 43991), (94, 44009), (112, 44075), (118, 44093), (127, 44147), (142, 44192), (148, 44213), (157, 44237), (160, 44240),

Gene: Cerasum\_62 Start: 39166, Stop: 39528, Start Num: 68

Candidate Starts for Cerasum\_62:

(Start: 68 @39166 has 150 MA's), (111, 39325), (124, 39370), (148, 39466), (153, 39469), (169, 39511),

Gene: Che8\_70 Start: 45095, Stop: 45457, Start Num: 68

Candidate Starts for Che8\_70:

(Start: 68 @45095 has 150 MA's), (111, 45254), (148, 45395), (153, 45398), (169, 45440),

Gene: Che9d\_75 Start: 42864, Stop: 43220, Start Num: 68

Candidate Starts for Che9d\_75:

(Start: 68 @42864 has 150 MA's), (111, 43023), (148, 43164), (153, 43167),

Gene: CheeseTouch\_74 Start: 39429, Stop: 39758, Start Num: 77

Candidate Starts for CheeseTouch\_74:

(Start: 77 @39429 has 147 MA's), (106, 39543), (111, 39564), (131, 39648), (140, 39672), (154, 39711), (163, 39738), (169, 39750),

Gene: Chevrolet\_70 Start: 42633, Stop: 42995, Start Num: 68

Candidate Starts for Chevrolet\_70:

(Start: 68 @42633 has 150 MA's), (148, 42933), (153, 42936), (169, 42978),

Gene: ChosenOne\_77 Start: 47986, Stop: 48303, Start Num: 77

Candidate Starts for ChosenOne\_77:

(22, 47803), (Start: 77 @47986 has 147 MA's), (112, 48127),

Gene: ChotaBhai\_77 Start: 48310, Stop: 48627, Start Num: 77

Candidate Starts for ChotaBhai\_77:

(22, 48127), (Start: 77 @48310 has 147 MA's), (Start: 84 @48334 has 1 MA's), (112, 48451),

Gene: Chuckly\_68 Start: 42655, Stop: 43011, Start Num: 68

Candidate Starts for Chuckly\_68:

(Start: 68 @42655 has 150 MA's), (148, 42955), (153, 42958),

Gene: Cinna\_52 Start: 36948, Stop: 37283, Start Num: 71

Candidate Starts for Cinna\_52:

(43, 36891), (59, 36936), (60, 36939), (Start: 71 @36948 has 3 MA's), (Start: 81 @36975 has 1 MA's), (106, 37083), (128, 37158), (136, 37188), (142, 37209), (155, 37248),

Gene: Cjw1\_77 Start: 49683, Stop: 50000, Start Num: 77

Candidate Starts for Cjw1\_77:

(22, 49500), (Start: 77 @49683 has 147 MA's), (112, 49824),

Gene: Clarkson\_70 Start: 39837, Stop: 40190, Start Num: 55

Candidate Starts for Clarkson\_70:

(Start: 55 @39837 has 17 MA's), (69, 39864), (107, 39999), (121, 40029), (129, 40080), (131, 40086), (137, 40101), (142, 40119), (150, 40143), (151, 40146),

Gene: Clautastrophe\_65 Start: 46467, Stop: 46799, Start Num: 74

Candidate Starts for Clautastrophe\_65:

(11, 46191), (13, 46203), (14, 46212), (18, 46236), (24, 46314), (36, 46362), (Start: 74 @46467 has 13 MA's), (111, 46611), (131, 46695), (142, 46728),

Gene: Clawz\_89 Start: 57153, Stop: 57563, Start Num: 51

Candidate Starts for Clawz\_89:

(35, 57102), (38, 57108), (39, 57114), (41, 57126), (Start: 51 @57153 has 1 MA's), (Start: 63 @57183 has 2 MA's), (138, 57444), (141, 57453), (165, 57522), (173, 57540),

Gene: Clifton\_60 Start: 39647, Stop: 40009, Start Num: 68

Candidate Starts for Clifton\_60:

(29, 39530), (Start: 68 @39647 has 150 MA's), (111, 39806), (148, 39947), (169, 39992),

Gene: Coco12\_65 Start: 43223, Stop: 43585, Start Num: 68

Candidate Starts for Coco12\_65:

(Start: 68 @43223 has 150 MA's), (111, 43382), (124, 43427), (148, 43523), (153, 43526), (169, 43568),

Gene: ColdSoup\_93 Start: 57604, Stop: 57972, Start Num: 72

Candidate Starts for ColdSoup\_93:

(17, 57379), (Start: 63 @57592 has 2 MA's), (72, 57604), (138, 57853), (141, 57862), (147, 57886), (149, 57892), (166, 57934),

Gene: Command613\_79 Start: 49025, Stop: 49342, Start Num: 77

Candidate Starts for Command613\_79:

(22, 48842), (Start: 77 @49025 has 147 MA's), (112, 49166),

Gene: Constella\_107 Start: 63055, Stop: 63387, Start Num: 77

Candidate Starts for Constella\_107:

(Start: 77 @63055 has 147 MA's), (103, 63166), (108, 63190), (162, 63370),

Gene: Contagion\_73 Start: 47786, Stop: 48103, Start Num: 77

Candidate Starts for Contagion\_73:

(22, 47603), (Start: 77 @47786 has 147 MA's), (112, 47927),

Gene: Cookies\_74 Start: 48167, Stop: 48484, Start Num: 77

Candidate Starts for Cookies\_74:

(22, 47984), (Start: 77 @48167 has 147 MA's), (Start: 84 @48191 has 1 MA's), (112, 48308),

Gene: Corazon\_67 Start: 40031, Stop: 40384, Start Num: 55

Candidate Starts for Corazon\_67:

(Start: 55 @40031 has 17 MA's), (69, 40058), (107, 40193), (121, 40223), (129, 40274), (131, 40280), (137, 40295), (142, 40313), (150, 40337), (151, 40340),

Gene: Cornie\_63 Start: 40942, Stop: 41304, Start Num: 68

Candidate Starts for Cornie\_63:

(Start: 68 @40942 has 150 MA's), (111, 41101), (148, 41242), (169, 41287),

Gene: Cornucopia\_67 Start: 42579, Stop: 42941, Start Num: 68

Candidate Starts for Cornucopia\_67:

(Start: 68 @42579 has 150 MA's), (124, 42783), (148, 42879), (153, 42882), (169, 42924),

Gene: Courthouse\_113 Start: 63779, Stop: 64099, Start Num: 75

Candidate Starts for Courthouse\_113:

(Start: 75 @63779 has 37 MA's), (91, 63848), (101, 63890), (131, 64007),

Gene: Crumble\_60 Start: 38411, Stop: 38773, Start Num: 68

Candidate Starts for Crumble\_60:

(Start: 68 @38411 has 150 MA's), (111, 38570), (116, 38585), (148, 38711), (169, 38756),

Gene: CrystalP\_76 Start: 48970, Stop: 49287, Start Num: 77

Candidate Starts for CrystalP\_76:

(22, 48787), (Start: 77 @48970 has 147 MA's), (112, 49111),

Gene: Czyszczone1\_78 Start: 48492, Stop: 48809, Start Num: 77

Candidate Starts for Czyszczone1\_78:

(22, 48309), (Start: 77 @48492 has 147 MA's), (112, 48633),

Gene: D12\_51 Start: 44470, Stop: 44811, Start Num: 73

Candidate Starts for D12\_51:

(Start: 73 @44470 has 15 MA's), (88, 44524), (90, 44539), (94, 44557), (112, 44623), (118, 44641), (127, 44695), (142, 44740), (148, 44761), (157, 44785), (160, 44788),

Gene: DRBy19\_69 Start: 43907, Stop: 44263, Start Num: 68

Candidate Starts for DRBy19\_69:

(29, 43790), (Start: 68 @43907 has 150 MA's), (116, 44081), (148, 44207), (153, 44210), (169, 44246),

Gene: DaWorst\_65 Start: 42022, Stop: 42384, Start Num: 68

Candidate Starts for DaWorst\_65:

(Start: 68 @42022 has 150 MA's), (111, 42181), (148, 42322), (169, 42367),

Gene: Daenerys\_60 Start: 41329, Stop: 41685, Start Num: 68

Candidate Starts for Daenerys\_60:

(31, 41224), (34, 41230), (48, 41284), (Start: 68 @41329 has 150 MA's), (Start: 81 @41362 has 1 MA's), (124, 41533), (148, 41629), (153, 41632),

Gene: Daikon\_79 Start: 49113, Stop: 49430, Start Num: 77

Candidate Starts for Daikon\_79:

(22, 48930), (Start: 77 @49113 has 147 MA's), (112, 49254),

Gene: Dallas\_124 Start: 69105, Stop: 69437, Start Num: 77

Candidate Starts for Dallas\_124:

(Start: 77 @69105 has 147 MA's), (103, 69216), (108, 69240), (162, 69420),



Gene: Dante\_66 Start: 41796, Stop: 42161, Start Num: 68  
Candidate Starts for Dante\_66:  
(Start: 68 @41796 has 150 MA's), (111, 41955), (148, 42096), (157, 42120),

Gene: Dardanus\_46 Start: 31283, Stop: 31621, Start Num: 67  
Candidate Starts for Dardanus\_46:  
(28, 31163), (61, 31274), (Start: 67 @31283 has 1 MA's), (101, 31409), (111, 31439), (118, 31460),  
(157, 31610),

Gene: DelaGarza\_58 Start: 33298, Stop: 33687, Start Num: 70  
Candidate Starts for DelaGarza\_58:  
(Start: 70 @33298 has 13 MA's), (101, 33424), (127, 33532), (171, 33652),

Gene: Demsculpinboyz\_78 Start: 42611, Stop: 42973, Start Num: 68  
Candidate Starts for Demsculpinboyz\_78:  
(Start: 68 @42611 has 150 MA's), (124, 42815), (148, 42911), (169, 42956),

Gene: DillTech15\_63 Start: 40922, Stop: 41284, Start Num: 68  
Candidate Starts for DillTech15\_63:  
(58, 40907), (Start: 68 @40922 has 150 MA's), (148, 41222), (169, 41267),

Gene: DillyDally\_47 Start: 29839, Stop: 30222, Start Num: 64  
Candidate Starts for DillyDally\_47:  
(49, 29803), (64, 29839), (80, 29875), (105, 29980), (115, 30016), (120, 30034), (122, 30040), (123,  
30049), (142, 30124), (170, 30184),

Gene: DinoDaryn\_52 Start: 33048, Stop: 33431, Start Num: 70  
Candidate Starts for DinoDaryn\_52:  
(Start: 70 @33048 has 13 MA's), (101, 33171), (154, 33354), (171, 33396),

Gene: DmpstrDiver\_123 Start: 68024, Stop: 68353, Start Num: 75  
Candidate Starts for DmpstrDiver\_123:  
(Start: 75 @68024 has 37 MA's), (91, 68093), (131, 68252), (161, 68336),

Gene: DoctorDiddles\_76 Start: 48354, Stop: 48671, Start Num: 77  
Candidate Starts for DoctorDiddles\_76:  
(22, 48171), (Start: 77 @48354 has 147 MA's), (Start: 84 @48378 has 1 MA's), (112, 48495),

Gene: DonTron\_90 Start: 57720, Stop: 58088, Start Num: 72  
Candidate Starts for DonTron\_90:  
(9, 57420), (17, 57495), (25, 57582), (Start: 63 @57708 has 2 MA's), (72, 57720), (138, 57969), (141,  
57978), (147, 58002), (149, 58008), (166, 58050),

Gene: DosHalletts\_67 Start: 43303, Stop: 43665, Start Num: 68  
Candidate Starts for DosHalletts\_67:  
(Start: 68 @43303 has 150 MA's), (111, 43462), (148, 43603), (153, 43606), (169, 43648),

Gene: Doug\_67 Start: 42635, Stop: 42997, Start Num: 68  
Candidate Starts for Doug\_67:  
(Start: 68 @42635 has 150 MA's), (148, 42935), (169, 42980),

Gene: Dove\_109 Start: 64018, Stop: 64350, Start Num: 77

Candidate Starts for Dove\_109:

(Start: 77 @64018 has 147 MA's), (103, 64129), (108, 64153), (162, 64333),

Gene: DrDrey\_77 Start: 49411, Stop: 49728, Start Num: 77

Candidate Starts for DrDrey\_77:

(22, 49228), (Start: 77 @49411 has 147 MA's), (112, 49552),

Gene: Duke13\_117 Start: 65442, Stop: 65774, Start Num: 75

Candidate Starts for Duke13\_117:

(Start: 75 @65442 has 37 MA's), (91, 65511), (117, 65601), (118, 65604), (131, 65670),

Gene: Dumbo\_77 Start: 47891, Stop: 48208, Start Num: 77

Candidate Starts for Dumbo\_77:

(22, 47708), (Start: 77 @47891 has 147 MA's), (112, 48032),

Gene: DuncansLeg\_66 Start: 46503, Stop: 46835, Start Num: 74

Candidate Starts for DuncansLeg\_66:

(36, 46398), (54, 46464), (Start: 74 @46503 has 13 MA's), (106, 46626), (113, 46653), (131, 46731), (143, 46767), (158, 46812),

Gene: Dusk\_74 Start: 48191, Stop: 48508, Start Num: 77

Candidate Starts for Dusk\_74:

(22, 48008), (Start: 77 @48191 has 147 MA's), (112, 48332),

Gene: Easy2Say\_78 Start: 49435, Stop: 49752, Start Num: 77

Candidate Starts for Easy2Say\_78:

(22, 49252), (Start: 77 @49435 has 147 MA's), (112, 49576),

Gene: Ecliptus\_75 Start: 44750, Stop: 45079, Start Num: 77

Candidate Starts for Ecliptus\_75:

(Start: 77 @44750 has 147 MA's), (106, 44864), (111, 44885), (131, 44969), (140, 44993), (154, 45032), (163, 45059), (169, 45071),

Gene: Eish\_68 Start: 42537, Stop: 42899, Start Num: 68

Candidate Starts for Eish\_68:

(Start: 68 @42537 has 150 MA's), (111, 42696), (148, 42837), (153, 42840), (169, 42882),

Gene: Ejimix\_117 Start: 69176, Stop: 69505, Start Num: 75

Candidate Starts for Ejimix\_117:

(Start: 75 @69176 has 37 MA's), (91, 69245), (117, 69335), (118, 69338), (131, 69404), (161, 69488),

Gene: EleanorGeorge\_67 Start: 43317, Stop: 43673, Start Num: 68

Candidate Starts for EleanorGeorge\_67:

(Start: 68 @43317 has 150 MA's), (111, 43476), (148, 43617), (153, 43620),

Gene: Elite2014\_76 Start: 47985, Stop: 48302, Start Num: 77

Candidate Starts for Elite2014\_76:

(22, 47802), (Start: 77 @47985 has 147 MA's), (112, 48126),

Gene: Elph10\_77 Start: 47990, Stop: 48307, Start Num: 77

Candidate Starts for Elph10\_77:

(22, 47807), (Start: 77 @47990 has 147 MA's), (112, 48131),

Gene: Emma\_67 Start: 42045, Stop: 42407, Start Num: 68  
Candidate Starts for Emma\_67:  
(Start: 68 @42045 has 150 MA's), (Start: 84 @42087 has 1 MA's), (111, 42204), (148, 42345), (169, 42390),

Gene: Emmina\_77 Start: 47892, Stop: 48209, Start Num: 77  
Candidate Starts for Emmina\_77:  
(22, 47709), (Start: 77 @47892 has 147 MA's), (112, 48033),

Gene: Eradicator\_58 Start: 40449, Stop: 40811, Start Num: 68  
Candidate Starts for Eradicator\_58:  
(Start: 68 @40449 has 150 MA's), (111, 40608), (148, 40749), (153, 40752), (169, 40794),

Gene: EricMillard\_114 Start: 67411, Stop: 67743, Start Num: 75  
Candidate Starts for EricMillard\_114:  
(Start: 75 @67411 has 37 MA's), (91, 67480), (117, 67570), (118, 67573), (131, 67639),

Gene: Estave1\_70 Start: 44873, Stop: 45235, Start Num: 68  
Candidate Starts for Estave1\_70:  
(Start: 68 @44873 has 150 MA's), (111, 45032), (116, 45047), (148, 45173), (153, 45176), (169, 45218),

Gene: Eureka\_75 Start: 48456, Stop: 48773, Start Num: 77  
Candidate Starts for Eureka\_75:  
(22, 48273), (Start: 77 @48456 has 147 MA's), (112, 48597),

Gene: FairyPath\_77 Start: 49104, Stop: 49421, Start Num: 77  
Candidate Starts for FairyPath\_77:  
(22, 48921), (Start: 77 @49104 has 147 MA's), (Start: 84 @49128 has 1 MA's), (112, 49245),

Gene: Fancypants\_68 Start: 43057, Stop: 43419, Start Num: 68  
Candidate Starts for Fancypants\_68:  
(58, 43042), (Start: 68 @43057 has 150 MA's), (111, 43216), (148, 43357), (169, 43402),

Gene: Fastidio\_66 Start: 41072, Stop: 41428, Start Num: 66  
Candidate Starts for Fastidio\_66:  
(57, 41057), (Start: 66 @41072 has 4 MA's), (111, 41231), (148, 41372), (153, 41375),

Gene: FeliMaine\_71 Start: 40079, Stop: 40432, Start Num: 55  
Candidate Starts for FeliMaine\_71:  
(Start: 55 @40079 has 17 MA's), (69, 40106), (107, 40241), (121, 40271), (129, 40322), (131, 40328), (137, 40343), (142, 40361), (150, 40385), (151, 40388),

Gene: Filch\_78 Start: 47917, Stop: 48234, Start Num: 77  
Candidate Starts for Filch\_78:  
(22, 47734), (Start: 77 @47917 has 147 MA's), (112, 48058),

Gene: Finnry\_66 Start: 46731, Stop: 47063, Start Num: 74  
Candidate Starts for Finnry\_66:  
(13, 46467), (14, 46476), (18, 46500), (24, 46578), (36, 46626), (Start: 74 @46731 has 13 MA's), (111, 46875), (131, 46959), (142, 46992),

Gene: FireRed\_81 Start: 49479, Stop: 49796, Start Num: 77

Candidate Starts for FireRed\_81:

(22, 49296), (Start: 77 @49479 has 147 MA's), (112, 49620),

Gene: Firehouse51\_68 Start: 46363, Stop: 46704, Start Num: 68

Candidate Starts for Firehouse51\_68:

(Start: 68 @46363 has 150 MA's), (124, 46567), (148, 46663), (153, 46666),

Gene: Flypotenuse\_73 Start: 47976, Stop: 48293, Start Num: 77

Candidate Starts for Flypotenuse\_73:

(22, 47793), (Start: 77 @47976 has 147 MA's), (112, 48117),

Gene: Forrestell\_81 Start: 49543, Stop: 49217, Start Num: 73

Candidate Starts for Forrestell\_81:

(39, 49636), (Start: 73 @49543 has 15 MA's), (Start: 84 @49513 has 1 MA's), (Start: 85 @49510 has 1 MA's), (99, 49444), (118, 49399), (124, 49375), (132, 49321), (145, 49285), (170, 49234),

Gene: FreddyB\_66 Start: 41323, Stop: 41679, Start Num: 68

Candidate Starts for FreddyB\_66:

(Start: 68 @41323 has 150 MA's), (116, 41497), (148, 41623),

Gene: GUmbie\_63 Start: 41676, Stop: 42038, Start Num: 68

Candidate Starts for GUmbie\_63:

(Start: 68 @41676 has 150 MA's), (111, 41835), (148, 41976), (153, 41979), (169, 42021),

Gene: Gage\_79 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for Gage\_79:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: Gaia\_85 Start: 50308, Stop: 50631, Start Num: 75

Candidate Starts for Gaia\_85:

(Start: 75 @50308 has 37 MA's), (90, 50371), (153, 50596), (154, 50599),

Gene: Galactic\_64 Start: 41833, Stop: 42195, Start Num: 68

Candidate Starts for Galactic\_64:

(Start: 68 @41833 has 150 MA's), (111, 41992), (148, 42133), (169, 42178),

Gene: Gator\_75 Start: 48822, Stop: 49139, Start Num: 77

Candidate Starts for Gator\_75:

(22, 48639), (Start: 77 @48822 has 147 MA's), (112, 48963),

Gene: Gattaca\_67 Start: 39225, Stop: 39578, Start Num: 55

Candidate Starts for Gattaca\_67:

(Start: 55 @39225 has 17 MA's), (69, 39252), (107, 39387), (121, 39417), (129, 39468), (131, 39474), (137, 39489), (142, 39507), (150, 39531), (151, 39534),

Gene: Gemini\_82 Start: 49286, Stop: 49603, Start Num: 77

Candidate Starts for Gemini\_82:

(22, 49103), (Start: 77 @49286 has 147 MA's), (112, 49427),

Gene: GigiOuiOui\_61 Start: 40822, Stop: 41184, Start Num: 68

Candidate Starts for GigiOuiOui\_61:

(Start: 68 @40822 has 150 MA's), (148, 41122), (153, 41125), (169, 41167),

Gene: Gilgamesh\_151 Start: 125936, Stop: 126292, Start Num: 65

Candidate Starts for Gilgamesh\_151:

(Start: 44 @125873 has 1 MA's), (Start: 65 @125936 has 1 MA's), (82, 125972), (98, 126053), (104, 126065), (118, 126116), (131, 126182), (152, 126242), (156, 126260), (167, 126275),

Gene: Gingerbug\_57 Start: 33770, Stop: 34138, Start Num: 70

Candidate Starts for Gingerbug\_57:

(Start: 70 @33770 has 13 MA's), (87, 33791), (101, 33872), (127, 33980),

Gene: Girr\_63 Start: 41692, Stop: 42054, Start Num: 68

Candidate Starts for Girr\_63:

(Start: 68 @41692 has 150 MA's), (148, 41992), (169, 42037),

Gene: Glexan\_76 Start: 49106, Stop: 49423, Start Num: 77

Candidate Starts for Glexan\_76:

(22, 48923), (Start: 77 @49106 has 147 MA's), (112, 49247),

Gene: GodPhather\_53 Start: 44710, Stop: 45051, Start Num: 73

Candidate Starts for GodPhather\_53:

(Start: 73 @44710 has 15 MA's), (88, 44764), (90, 44779), (94, 44797), (112, 44863), (118, 44881), (127, 44935), (142, 44980), (148, 45001), (157, 45025), (160, 45028),

Gene: Goib\_52 Start: 33585, Stop: 33968, Start Num: 70

Candidate Starts for Goib\_52:

(Start: 70 @33585 has 13 MA's), (101, 33708), (154, 33891), (171, 33933),

Gene: Goku\_75 Start: 48185, Stop: 48502, Start Num: 77

Candidate Starts for Goku\_75:

(22, 48002), (Start: 77 @48185 has 147 MA's), (112, 48326),

Gene: GoldenSpark\_81 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for GoldenSpark\_81:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: Goldilocks\_80 Start: 48267, Stop: 48584, Start Num: 77

Candidate Starts for Goldilocks\_80:

(22, 48084), (Start: 77 @48267 has 147 MA's), (112, 48408),

Gene: Gonephishing\_112 Start: 63185, Stop: 63505, Start Num: 75

Candidate Starts for Gonephishing\_112:

(Start: 75 @63185 has 37 MA's), (91, 63254), (101, 63296), (131, 63413),

Gene: GooberAzure\_80 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for GooberAzure\_80:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: GoongGoong\_66 Start: 39024, Stop: 39377, Start Num: 55

Candidate Starts for GoongGoong\_66:

(Start: 55 @39024 has 17 MA's), (69, 39051), (107, 39186), (121, 39216), (129, 39267), (131, 39273), (137, 39288), (142, 39306), (150, 39330), (151, 39333),

Gene: Gorge\_69 Start: 43618, Stop: 43980, Start Num: 68

Candidate Starts for Gorge\_69:

(Start: 68 @43618 has 150 MA's), (111, 43777), (148, 43918), (153, 43921), (169, 43963),

Gene: Grimmer\_75 Start: 43862, Stop: 44218, Start Num: 68

Candidate Starts for Grimmer\_75:

(Start: 68 @43862 has 150 MA's), (148, 44162),

Gene: Guppsters\_66 Start: 41977, Stop: 42339, Start Num: 68

Candidate Starts for Guppsters\_66:

(Start: 68 @41977 has 150 MA's), (111, 42136), (148, 42277), (153, 42280), (169, 42322),

Gene: Hades\_66 Start: 42692, Stop: 43054, Start Num: 68

Candidate Starts for Hades\_66:

(Start: 68 @42692 has 150 MA's), (111, 42851), (148, 42992), (153, 42995), (169, 43037),

Gene: Halley\_125 Start: 69492, Stop: 69821, Start Num: 75

Candidate Starts for Halley\_125:

(Start: 75 @69492 has 37 MA's), (91, 69561), (117, 69651), (118, 69654), (131, 69720), (161, 69804),

Gene: HamCheese\_29 Start: 20823, Stop: 20503, Start Num: 85

Candidate Starts for HamCheese\_29:

(4, 21258), (15, 21108), (50, 20913), (Start: 75 @20856 has 37 MA's), (Start: 85 @20823 has 1 MA's), (106, 20727),

Gene: Hamulus\_65 Start: 42334, Stop: 42690, Start Num: 68

Candidate Starts for Hamulus\_65:

(Start: 68 @42334 has 150 MA's), (148, 42634), (153, 42637),

Gene: HanKaySha\_77 Start: 48070, Stop: 48387, Start Num: 77

Candidate Starts for HanKaySha\_77:

(22, 47887), (Start: 77 @48070 has 147 MA's), (112, 48211),

Gene: Harella\_77 Start: 49622, Stop: 49939, Start Num: 77

Candidate Starts for Harella\_77:

(22, 49439), (Start: 77 @49622 has 147 MA's), (112, 49763),

Gene: Harley\_67 Start: 42941, Stop: 43297, Start Num: 68

Candidate Starts for Harley\_67:

(Start: 68 @42941 has 150 MA's), (111, 43100), (116, 43115), (148, 43241), (153, 43244),

Gene: Henry\_75 Start: 48410, Stop: 48727, Start Num: 77

Candidate Starts for Henry\_75:

(22, 48227), (Start: 77 @48410 has 147 MA's), (112, 48551),

Gene: Highbury\_76 Start: 48058, Stop: 48375, Start Num: 77

Candidate Starts for Highbury\_76:

(22, 47875), (Start: 77 @48058 has 147 MA's), (112, 48199),

Gene: HokkenD\_113 Start: 67777, Stop: 68151, Start Num: 56

Candidate Starts for HokkenD\_113:

(Start: 52 @67768 has 1 MA's), (Start: 56 @67777 has 1 MA's), (92, 67885), (103, 67930), (162, 68134),

Gene: Holt\_82 Start: 49183, Stop: 49500, Start Num: 77

Candidate Starts for Holt\_82:

(22, 49000), (Start: 77 @49183 has 147 MA's), (112, 49324),

Gene: Hoonter\_80 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for Hoonter\_80:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: Hopecy\_77 Start: 48602, Stop: 48919, Start Num: 77

Candidate Starts for Hopecy\_77:

(22, 48419), (Start: 77 @48602 has 147 MA's), (112, 48743),

Gene: Horus\_72 Start: 44321, Stop: 44650, Start Num: 77

Candidate Starts for Horus\_72:

(37, 44207), (Start: 63 @44297 has 2 MA's), (Start: 77 @44321 has 147 MA's), (86, 44348), (106, 44435), (131, 44540), (140, 44564), (154, 44603), (163, 44630), (169, 44642),

Gene: HufflyPuff\_80 Start: 49435, Stop: 49752, Start Num: 77

Candidate Starts for HufflyPuff\_80:

(22, 49252), (Start: 77 @49435 has 147 MA's), (112, 49576),

Gene: Huffy\_52 Start: 33048, Stop: 33431, Start Num: 70

Candidate Starts for Huffy\_52:

(Start: 70 @33048 has 13 MA's), (101, 33171), (154, 33354), (171, 33396),

Gene: Hughesyang\_122 Start: 68948, Stop: 69280, Start Num: 75

Candidate Starts for Hughesyang\_122:

(Start: 75 @68948 has 37 MA's), (91, 69017), (131, 69176),

Gene: Hum25\_55 Start: 30658, Stop: 30984, Start Num: 78

Candidate Starts for Hum25\_55:

(26, 30499), (Start: 78 @30658 has 2 MA's), (101, 30763), (136, 30895),

Gene: Huphlepuuff\_71 Start: 39642, Stop: 39995, Start Num: 55

Candidate Starts for Huphlepuuff\_71:

(Start: 55 @39642 has 17 MA's), (69, 39669), (107, 39804), (121, 39834), (129, 39885), (131, 39891), (137, 39906), (142, 39924), (150, 39948), (151, 39951),

Gene: IHOP\_75 Start: 48534, Stop: 48851, Start Num: 77

Candidate Starts for IHOP\_75:

(22, 48351), (Start: 77 @48534 has 147 MA's), (112, 48675),

Gene: lbhubesi\_65 Start: 41957, Stop: 42313, Start Num: 68

Candidate Starts for lbhubesi\_65:

(Start: 68 @41957 has 150 MA's), (148, 42257), (153, 42260),

Gene: Icee\_78 Start: 48433, Stop: 48750, Start Num: 77

Candidate Starts for Icee\_78:

(22, 48250), (Start: 77 @48433 has 147 MA's), (112, 48574),

Gene: Inca\_74 Start: 47059, Stop: 47376, Start Num: 77

Candidate Starts for Inca\_74:

(22, 46876), (Start: 77 @47059 has 147 MA's), (112, 47200),

Gene: Inventum\_61 Start: 42492, Stop: 42821, Start Num: 81  
Candidate Starts for Inventum\_61:  
(31, 42354), (34, 42360), (48, 42414), (Start: 68 @42459 has 150 MA's), (Start: 81 @42492 has 1 MA's), (124, 42663), (148, 42759), (153, 42762), (169, 42804),

Gene: Jabbawokkie\_80 Start: 44082, Stop: 44423, Start Num: 66  
Candidate Starts for Jabbawokkie\_80:  
(57, 44067), (Start: 66 @44082 has 4 MA's), (148, 44382), (153, 44385),

Gene: JalFarm20\_78 Start: 46016, Stop: 46372, Start Num: 68  
Candidate Starts for JalFarm20\_78:  
(Start: 68 @46016 has 150 MA's), (148, 46316), (153, 46319),

Gene: James\_69 Start: 43743, Stop: 44105, Start Num: 68  
Candidate Starts for James\_69:  
(Start: 68 @43743 has 150 MA's), (111, 43902), (148, 44043), (153, 44046), (169, 44088),

Gene: JeTaime\_77 Start: 49251, Stop: 49568, Start Num: 77  
Candidate Starts for JeTaime\_77:  
(22, 49068), (Start: 77 @49251 has 147 MA's), (112, 49392),

Gene: Jeon\_52 Start: 44452, Stop: 44793, Start Num: 73  
Candidate Starts for Jeon\_52:  
(Start: 73 @44452 has 15 MA's), (88, 44506), (90, 44521), (94, 44539), (112, 44605), (118, 44623), (127, 44677), (142, 44722), (148, 44743), (157, 44767), (160, 44770),

Gene: Jinglebell\_71 Start: 45318, Stop: 45680, Start Num: 68  
Candidate Starts for Jinglebell\_71:  
(Start: 68 @45318 has 150 MA's), (124, 45522), (148, 45618), (169, 45663),

Gene: Job42\_68 Start: 44715, Stop: 45080, Start Num: 68  
Candidate Starts for Job42\_68:  
(29, 44598), (Start: 68 @44715 has 150 MA's), (100, 44841), (102, 44847), (119, 44901), (120, 44904), (148, 45018), (153, 45021), (169, 45063),

Gene: Jobypre\_66 Start: 46467, Stop: 46799, Start Num: 74  
Candidate Starts for Jobypre\_66:  
(11, 46191), (13, 46203), (14, 46212), (18, 46236), (24, 46314), (36, 46362), (Start: 74 @46467 has 13 MA's), (111, 46611), (131, 46695), (142, 46728),

Gene: JoeyJr\_61 Start: 41497, Stop: 41853, Start Num: 68  
Candidate Starts for JoeyJr\_61:  
(31, 41392), (34, 41398), (48, 41452), (Start: 68 @41497 has 150 MA's), (Start: 81 @41530 has 1 MA's), (124, 41701), (148, 41797), (153, 41800),

Gene: JoieB\_70 Start: 40075, Stop: 40428, Start Num: 55  
Candidate Starts for JoieB\_70:  
(Start: 55 @40075 has 17 MA's), (69, 40102), (107, 40237), (121, 40267), (129, 40318), (131, 40324), (137, 40339), (142, 40357), (150, 40381), (151, 40384),

Gene: Jollymon\_93 Start: 57604, Stop: 57972, Start Num: 72  
Candidate Starts for Jollymon\_93:



(17, 57379), (Start: 63 @57592 has 2 MA's), (72, 57604), (138, 57853), (141, 57862), (147, 57886), (149, 57892), (166, 57934),

Gene: Jubie\_65 Start: 46602, Stop: 46934, Start Num: 74

Candidate Starts for Jubie\_65:

(11, 46326), (13, 46338), (14, 46347), (18, 46371), (24, 46449), (36, 46497), (Start: 74 @46602 has 13 MA's), (111, 46746), (131, 46830), (142, 46863),

Gene: Juice456\_66 Start: 43972, Stop: 44328, Start Num: 68

Candidate Starts for Juice456\_66:

(Start: 68 @43972 has 150 MA's), (148, 44272), (153, 44275),

Gene: JuicyJay\_120 Start: 70726, Stop: 71058, Start Num: 77

Candidate Starts for JuicyJay\_120:

(Start: 77 @70726 has 147 MA's), (103, 70837), (108, 70861), (162, 71041),

Gene: Juniper1\_65 Start: 42735, Stop: 43091, Start Num: 68

Candidate Starts for Juniper1\_65:

(57, 42720), (Start: 68 @42735 has 150 MA's), (124, 42939), (148, 43035), (153, 43038),

Gene: KHumphrey\_30 Start: 20837, Stop: 20517, Start Num: 85

Candidate Starts for KHumphrey\_30:

(1, 21422), (4, 21272), (15, 21122), (50, 20927), (Start: 75 @20870 has 37 MA's), (Start: 85 @20837 has 1 MA's), (106, 20741),

Gene: Kalah2\_114 Start: 67637, Stop: 67966, Start Num: 75

Candidate Starts for Kalah2\_114:

(Start: 75 @67637 has 37 MA's), (91, 67706), (131, 67865), (161, 67949),

Gene: Kanye\_74 Start: 48115, Stop: 48432, Start Num: 77

Candidate Starts for Kanye\_74:

(22, 47932), (Start: 77 @48115 has 147 MA's), (112, 48256),

Gene: Karhdo\_64 Start: 43305, Stop: 43667, Start Num: 68

Candidate Starts for Karhdo\_64:

(Start: 68 @43305 has 150 MA's), (111, 43464), (148, 43605), (169, 43650),

Gene: Keelan\_96 Start: 49018, Stop: 49347, Start Num: 68

Candidate Starts for Keelan\_96:

(Start: 68 @49018 has 150 MA's), (97, 49114), (124, 49198), (130, 49237),

Gene: Kenuha5\_63 Start: 41295, Stop: 41651, Start Num: 68

Candidate Starts for Kenuha5\_63:

(Start: 68 @41295 has 150 MA's), (111, 41454), (148, 41595), (153, 41598), (167, 41634),

Gene: Kersh\_67 Start: 44741, Stop: 45097, Start Num: 68

Candidate Starts for Kersh\_67:

(Start: 68 @44741 has 150 MA's), (111, 44900), (148, 45041), (153, 45044),

Gene: Khuang\_54 Start: 31611, Stop: 31976, Start Num: 78

Candidate Starts for Khuang\_54:

(Start: 78 @31611 has 2 MA's), (114, 31761), (142, 31872), (145, 31887),

Gene: Kimberlium\_70 Start: 44253, Stop: 44594, Start Num: 68  
Candidate Starts for Kimberlium\_70:  
(Start: 68 @44253 has 150 MA's), (148, 44553), (153, 44556),

Gene: Kimchi\_81 Start: 48772, Stop: 49089, Start Num: 77  
Candidate Starts for Kimchi\_81:  
(22, 48589), (Start: 77 @48772 has 147 MA's), (112, 48913),

Gene: Kingsley\_63 Start: 41956, Stop: 42318, Start Num: 68  
Candidate Starts for Kingsley\_63:  
(Start: 68 @41956 has 150 MA's), (111, 42115), (124, 42160), (148, 42256), (153, 42259), (169, 42301),

Gene: KingstonB\_93 Start: 57137, Stop: 57505, Start Num: 72  
Candidate Starts for KingstonB\_93:  
(9, 56837), (17, 56912), (25, 56999), (Start: 63 @57125 has 2 MA's), (72, 57137), (138, 57386), (141, 57395), (147, 57419), (149, 57425), (166, 57467),

Gene: Klein\_119 Start: 65994, Stop: 66323, Start Num: 75  
Candidate Starts for Klein\_119:  
(Start: 75 @65994 has 37 MA's), (91, 66063), (117, 66153), (118, 66156), (131, 66222), (161, 66306),

Gene: Koella\_59 Start: 38373, Stop: 38735, Start Num: 68  
Candidate Starts for Koella\_59:  
(Start: 68 @38373 has 150 MA's), (116, 38547), (148, 38673), (169, 38718),

Gene: Kostya\_77 Start: 48633, Stop: 48950, Start Num: 77  
Candidate Starts for Kostya\_77:  
(22, 48450), (Start: 77 @48633 has 147 MA's), (112, 48774),

Gene: Krakatau\_62 Start: 41145, Stop: 41507, Start Num: 68  
Candidate Starts for Krakatau\_62:  
(Start: 68 @41145 has 150 MA's), (148, 41445), (153, 41448), (169, 41490),

Gene: KristaRAM\_68 Start: 44341, Stop: 44697, Start Num: 68  
Candidate Starts for KristaRAM\_68:  
(Start: 68 @44341 has 150 MA's), (148, 44641), (153, 44644),

Gene: Krypton555\_67 Start: 46693, Stop: 47025, Start Num: 74  
Candidate Starts for Krypton555\_67:  
(11, 46417), (13, 46429), (14, 46438), (18, 46462), (24, 46540), (36, 46588), (Start: 74 @46693 has 13 MA's), (111, 46837), (131, 46921), (142, 46954),

Gene: Kubulix\_81 Start: 49967, Stop: 49641, Start Num: 75  
Candidate Starts for Kubulix\_81:  
(Start: 75 @49967 has 37 MA's), (Start: 84 @49937 has 1 MA's), (Start: 85 @49934 has 1 MA's), (99, 49868), (118, 49823), (124, 49799), (132, 49745), (145, 49709), (170, 49658),

Gene: Kuleana\_32 Start: 21579, Stop: 21160, Start Num: 44  
Candidate Starts for Kuleana\_32:  
(14, 21714), (Start: 44 @21579 has 1 MA's), (62, 21528), (Start: 85 @21480 has 1 MA's), (98, 21408), (106, 21384), (145, 21219),

Gene: Kuwabara\_72 Start: 44078, Stop: 44407, Start Num: 77

Candidate Starts for Kuwabara\_72:

(Start: 77 @44078 has 147 MA's), (106, 44192), (111, 44213), (131, 44297), (140, 44321), (154, 44360), (163, 44387), (169, 44399),

Gene: LastJedi\_59 Start: 39690, Stop: 40052, Start Num: 68

Candidate Starts for LastJedi\_59:

(29, 39573), (Start: 68 @39690 has 150 MA's), (111, 39849), (148, 39990), (169, 40035),

Gene: Leozinho\_66 Start: 42196, Stop: 42552, Start Num: 73

Candidate Starts for Leozinho\_66:

(Start: 73 @42196 has 15 MA's), (79, 42217), (Start: 81 @42223 has 1 MA's), (90, 42265), (117, 42367), (139, 42457), (148, 42490), (169, 42535),

Gene: Leozinho\_64 Start: 41151, Stop: 41507, Start Num: 68

Candidate Starts for Leozinho\_64:

(Start: 68 @41151 has 150 MA's), (111, 41310), (148, 41451), (153, 41454),

Gene: Leperchaun\_58 Start: 40727, Stop: 41083, Start Num: 68

Candidate Starts for Leperchaun\_58:

(31, 40622), (34, 40628), (48, 40682), (Start: 68 @40727 has 150 MA's), (Start: 81 @40760 has 1 MA's), (124, 40931), (148, 41027), (153, 41030),

Gene: Lesiram\_59 Start: 33428, Stop: 33817, Start Num: 70

Candidate Starts for Lesiram\_59:

(Start: 70 @33428 has 13 MA's), (101, 33554), (127, 33662), (171, 33782),

Gene: LilMoolah\_64 Start: 42220, Stop: 42582, Start Num: 68

Candidate Starts for LilMoolah\_64:

(29, 42103), (Start: 68 @42220 has 150 MA's), (111, 42379), (148, 42520), (169, 42565),

Gene: Lilac\_79 Start: 48387, Stop: 48704, Start Num: 77

Candidate Starts for Lilac\_79:

(22, 48204), (Start: 77 @48387 has 147 MA's), (112, 48528),

Gene: Lilbit\_69 Start: 39805, Stop: 40158, Start Num: 55

Candidate Starts for Lilbit\_69:

(Start: 55 @39805 has 17 MA's), (69, 39832), (107, 39967), (121, 39997), (129, 40048), (131, 40054), (137, 40069), (142, 40087), (150, 40111), (151, 40114),

Gene: Lilizi\_78 Start: 48100, Stop: 48417, Start Num: 77

Candidate Starts for Lilizi\_78:

(22, 47917), (Start: 77 @48100 has 147 MA's), (112, 48241),

Gene: Lilpickle\_76 Start: 47985, Stop: 48302, Start Num: 77

Candidate Starts for Lilpickle\_76:

(22, 47802), (Start: 77 @47985 has 147 MA's), (112, 48126),

Gene: LitninMcQueen\_71 Start: 42944, Stop: 43273, Start Num: 77

Candidate Starts for LitninMcQueen\_71:

(Start: 77 @42944 has 147 MA's), (131, 43163), (163, 43253), (169, 43265),

Gene: LittleE\_122 Start: 67384, Stop: 67704, Start Num: 75

Candidate Starts for LittleE\_122:

(Start: 75 @67384 has 37 MA's), (91, 67453), (101, 67495), (131, 67612),

Gene: LittleLaf\_69 Start: 39534, Stop: 39887, Start Num: 55

Candidate Starts for LittleLaf\_69:

(Start: 55 @39534 has 17 MA's), (69, 39561), (107, 39696), (121, 39726), (129, 39777), (131, 39783), (137, 39798), (142, 39816), (150, 39840), (151, 39843),

Gene: LittleShirley\_65 Start: 42793, Stop: 43149, Start Num: 68

Candidate Starts for LittleShirley\_65:

(Start: 68 @42793 has 150 MA's), (124, 42997), (148, 43093), (153, 43096),

Gene: Lizziana\_71 Start: 43224, Stop: 43586, Start Num: 68

Candidate Starts for Lizziana\_71:

(Start: 68 @43224 has 150 MA's), (111, 43383), (148, 43524), (153, 43527), (169, 43569),

Gene: Llama\_70 Start: 45173, Stop: 45535, Start Num: 68

Candidate Starts for Llama\_70:

(Start: 68 @45173 has 150 MA's), (124, 45377), (148, 45473), (169, 45518),

Gene: Lolly9\_65 Start: 46290, Stop: 46622, Start Num: 74

Candidate Starts for Lolly9\_65:

(Start: 74 @46290 has 13 MA's), (Start: 84 @46320 has 1 MA's), (106, 46413), (113, 46440), (131, 46518), (142, 46551), (158, 46599),

Gene: Lucky2013\_115 Start: 64045, Stop: 64419, Start Num: 52

Candidate Starts for Lucky2013\_115:

(Start: 52 @64045 has 1 MA's), (Start: 56 @64054 has 1 MA's), (92, 64162), (103, 64207), (131, 64327),

Gene: Lumos\_67 Start: 46464, Stop: 46796, Start Num: 74

Candidate Starts for Lumos\_67:

(11, 46188), (13, 46200), (14, 46209), (18, 46233), (24, 46311), (36, 46359), (Start: 74 @46464 has 13 MA's), (111, 46608), (131, 46692), (142, 46725),

Gene: LunaBlu\_67 Start: 42492, Stop: 42854, Start Num: 68

Candidate Starts for LunaBlu\_67:

(Start: 68 @42492 has 150 MA's), (111, 42651), (148, 42792), (169, 42837),

Gene: MISSy\_78 Start: 48491, Stop: 48808, Start Num: 77

Candidate Starts for MISSy\_78:

(22, 48308), (Start: 77 @48491 has 147 MA's), (112, 48632),

Gene: MPhalcon\_78 Start: 48484, Stop: 48801, Start Num: 77

Candidate Starts for MPhalcon\_78:

(22, 48301), (Start: 77 @48484 has 147 MA's), (112, 48625),

Gene: MadMen\_65 Start: 42619, Stop: 42975, Start Num: 68

Candidate Starts for MadMen\_65:

(29, 42502), (Start: 68 @42619 has 150 MA's), (111, 42778), (148, 42919), (153, 42922),

Gene: MadMen\_67 Start: 43664, Stop: 44020, Start Num: 73

Candidate Starts for MadMen\_67:

(Start: 73 @43664 has 15 MA's), (79, 43685), (Start: 81 @43691 has 1 MA's), (90, 43733), (117, 43835), (139, 43925), (148, 43958), (169, 44003),

Gene: MadamMonkfish\_77 Start: 47709, Stop: 48026, Start Num: 77

Candidate Starts for MadamMonkfish\_77:

(22, 47526), (Start: 77 @47709 has 147 MA's), (112, 47850),

Gene: Madiba\_66 Start: 41725, Stop: 42087, Start Num: 68

Candidate Starts for Madiba\_66:

(Start: 68 @41725 has 150 MA's), (111, 41884), (148, 42025), (169, 42070),

Gene: Mahavrat\_62 Start: 41431, Stop: 41787, Start Num: 68

Candidate Starts for Mahavrat\_62:

(Start: 68 @41431 has 150 MA's), (148, 41731),

Gene: Manda\_78 Start: 49571, Stop: 49888, Start Num: 77

Candidate Starts for Manda\_78:

(22, 49388), (Start: 77 @49571 has 147 MA's), (112, 49712),

Gene: Mantra\_62 Start: 41207, Stop: 41563, Start Num: 66

Candidate Starts for Mantra\_62:

(57, 41192), (Start: 66 @41207 has 4 MA's), (148, 41507), (153, 41510),

Gene: Maravista\_67 Start: 44362, Stop: 44724, Start Num: 68

Candidate Starts for Maravista\_67:

(Start: 68 @44362 has 150 MA's), (111, 44521), (116, 44536), (148, 44662), (169, 44707),

Gene: Marker\_67 Start: 42458, Stop: 42814, Start Num: 68

Candidate Starts for Marker\_67:

(29, 42341), (Start: 68 @42458 has 150 MA's), (148, 42758), (153, 42761), (169, 42797),

Gene: Marshmallow\_75 Start: 49264, Stop: 49581, Start Num: 77

Candidate Starts for Marshmallow\_75:

(22, 49081), (Start: 77 @49264 has 147 MA's), (Start: 84 @49288 has 1 MA's), (112, 49405),

Gene: Martik\_65 Start: 42396, Stop: 42752, Start Num: 68

Candidate Starts for Martik\_65:

(29, 42279), (Start: 68 @42396 has 150 MA's), (111, 42555), (148, 42696), (153, 42699),

Gene: Marvin\_65 Start: 39295, Stop: 39648, Start Num: 55

Candidate Starts for Marvin\_65:

(Start: 55 @39295 has 17 MA's), (69, 39322), (107, 39457), (121, 39487), (129, 39538), (131, 39544), (137, 39559), (142, 39577), (150, 39601), (151, 39604),

Gene: Mattes\_69 Start: 43743, Stop: 44105, Start Num: 68

Candidate Starts for Mattes\_69:

(Start: 68 @43743 has 150 MA's), (111, 43902), (148, 44043), (153, 44046), (169, 44088),

Gene: Maxxinista\_79 Start: 48360, Stop: 48677, Start Num: 77

Candidate Starts for Maxxinista\_79:

(22, 48177), (Start: 77 @48360 has 147 MA's), (112, 48501),

Gene: Megabear\_52 Start: 43843, Stop: 44184, Start Num: 73

Candidate Starts for Megabear\_52:

(Start: 73 @43843 has 15 MA's), (88, 43897), (90, 43912), (94, 43930), (112, 43996), (118, 44014), (127, 44068), (142, 44113), (148, 44134), (157, 44158), (160, 44161),

Gene: MellowYellow\_85 Start: 50209, Stop: 49883, Start Num: 73

Candidate Starts for MellowYellow\_85:

(39, 50302), (Start: 73 @50209 has 15 MA's), (Start: 84 @50179 has 1 MA's), (Start: 85 @50176 has 1 MA's), (99, 50110), (118, 50065), (124, 50041), (132, 49987), (145, 49951), (170, 49900),

Gene: MiaZeal\_118 Start: 64854, Stop: 65177, Start Num: 77

Candidate Starts for MiaZeal\_118:

(Start: 77 @64854 has 147 MA's), (103, 64965), (131, 65085),

Gene: MilleniumForce\_68 Start: 44060, Stop: 44416, Start Num: 68

Candidate Starts for MilleniumForce\_68:

(Start: 68 @44060 has 150 MA's), (148, 44360), (153, 44363),

Gene: Mindy\_76 Start: 47576, Stop: 47893, Start Num: 77

Candidate Starts for Mindy\_76:

(22, 47393), (Start: 77 @47576 has 147 MA's), (112, 47717),

Gene: Minerva\_120 Start: 67549, Stop: 67881, Start Num: 75

Candidate Starts for Minerva\_120:

(Start: 75 @67549 has 37 MA's), (91, 67618), (131, 67777),

Gene: MiniLon\_69 Start: 46291, Stop: 46623, Start Num: 74

Candidate Starts for MiniLon\_69:

(Start: 74 @46291 has 13 MA's), (Start: 84 @46321 has 1 MA's), (106, 46414), (113, 46441), (131, 46519), (142, 46552), (158, 46600),

Gene: MiniMac\_69 Start: 46319, Stop: 46621, Start Num: 84

Candidate Starts for MiniMac\_69:

(Start: 74 @46289 has 13 MA's), (Start: 84 @46319 has 1 MA's), (106, 46412), (113, 46439), (131, 46517), (142, 46550), (158, 46598),

Gene: MinionDave\_64 Start: 42746, Stop: 43108, Start Num: 68

Candidate Starts for MinionDave\_64:

(29, 42629), (Start: 68 @42746 has 150 MA's), (111, 42905), (148, 43046), (169, 43091),

Gene: Miniwave\_72 Start: 48029, Stop: 48346, Start Num: 77

Candidate Starts for Miniwave\_72:

(22, 47846), (Start: 77 @48029 has 147 MA's), (112, 48170),

Gene: Minnie\_68 Start: 43966, Stop: 44328, Start Num: 68

Candidate Starts for Minnie\_68:

(29, 43849), (Start: 68 @43966 has 150 MA's), (111, 44125), (148, 44266), (169, 44311),

Gene: Misfit\_78 Start: 49503, Stop: 49820, Start Num: 77

Candidate Starts for Misfit\_78:

(22, 49320), (Start: 77 @49503 has 147 MA's), (112, 49644),

Gene: MisterCuddles\_63 Start: 41692, Stop: 42054, Start Num: 68

Candidate Starts for MisterCuddles\_63:

(Start: 68 @41692 has 150 MA's), (148, 41992), (169, 42037),

Gene: ModicumRichard\_107 Start: 60796, Stop: 61155, Start Num: 84

Candidate Starts for ModicumRichard\_107:

(45, 60703), (47, 60712), (Start: 75 @60769 has 37 MA's), (Start: 84 @60796 has 1 MA's), (Start: 85 @60799 has 1 MA's), (89, 60820), (97, 60856), (116, 60910), (134, 60997), (142, 61021),

Gene: Modragons\_69 Start: 45162, Stop: 45524, Start Num: 68

Candidate Starts for Modragons\_69:

(Start: 68 @45162 has 150 MA's), (124, 45366), (148, 45462), (169, 45507),

Gene: Moldemort\_80 Start: 48588, Stop: 48905, Start Num: 77

Candidate Starts for Moldemort\_80:

(22, 48405), (Start: 77 @48588 has 147 MA's), (112, 48729),

Gene: MooMoo\_66 Start: 43589, Stop: 43945, Start Num: 73

Candidate Starts for MooMoo\_66:

(Start: 73 @43589 has 15 MA's), (79, 43610), (Start: 81 @43616 has 1 MA's), (90, 43658), (101, 43712), (117, 43760), (135, 43838), (139, 43850), (148, 43883), (157, 43907), (174, 43937),

Gene: Moonbeam\_64 Start: 41974, Stop: 42336, Start Num: 68

Candidate Starts for Moonbeam\_64:

(Start: 68 @41974 has 150 MA's), (Start: 84 @42016 has 1 MA's), (111, 42133), (148, 42274), (169, 42319),

Gene: Morgana\_114 Start: 62857, Stop: 63246, Start Num: 75

Candidate Starts for Morgana\_114:

(3, 62464), (7, 62533), (10, 62569), (20, 62653), (Start: 75 @62857 has 37 MA's), (Start: 85 @62890 has 1 MA's), (89, 62911), (126, 63058), (134, 63088), (142, 63112),

Gene: MosMoris\_66 Start: 39225, Stop: 39578, Start Num: 55

Candidate Starts for MosMoris\_66:

(Start: 55 @39225 has 17 MA's), (69, 39252), (107, 39387), (121, 39417), (129, 39468), (131, 39474), (137, 39489), (142, 39507), (150, 39531), (151, 39534),

Gene: Mosby\_73 Start: 47786, Stop: 48103, Start Num: 77

Candidate Starts for Mosby\_73:

(22, 47603), (Start: 77 @47786 has 147 MA's), (112, 47927),

Gene: Mova\_69 Start: 42229, Stop: 42585, Start Num: 68

Candidate Starts for Mova\_69:

(Start: 68 @42229 has 150 MA's), (111, 42388), (148, 42529), (153, 42532), (169, 42568),

Gene: Mozy\_75 Start: 44841, Stop: 45203, Start Num: 68

Candidate Starts for Mozy\_75:

(58, 44826), (Start: 68 @44841 has 150 MA's), (111, 45000), (148, 45141), (169, 45186),

Gene: MrSmee\_53 Start: 31291, Stop: 31644, Start Num: 78

Candidate Starts for MrSmee\_53:

(Start: 78 @31291 has 2 MA's), (101, 31396), (170, 31612),

Gene: MsGreen\_66 Start: 46467, Stop: 46799, Start Num: 74

Candidate Starts for MsGreen\_66:

(11, 46191), (13, 46203), (14, 46212), (18, 46236), (24, 46314), (36, 46362), (Start: 74 @46467 has 13 MA's), (111, 46611), (131, 46695), (142, 46728),

Gene: MulchExplorer\_73 Start: 44252, Stop: 44593, Start Num: 68  
Candidate Starts for MulchExplorer\_73:  
(Start: 68 @44252 has 150 MA's), (148, 44552), (153, 44555),

Gene: Murica\_80 Start: 49435, Stop: 49752, Start Num: 77  
Candidate Starts for Murica\_80:  
(22, 49252), (Start: 77 @49435 has 147 MA's), (112, 49576),

Gene: Murphy\_77 Start: 48872, Stop: 49189, Start Num: 77  
Candidate Starts for Murphy\_77:  
(22, 48689), (Start: 77 @48872 has 147 MA's), (112, 49013),

Gene: Mutaforma13\_71 Start: 45673, Stop: 46035, Start Num: 68  
Candidate Starts for Mutaforma13\_71:  
(Start: 68 @45673 has 150 MA's), (148, 45973), (169, 46018),

Gene: Myrale\_77 Start: 49129, Stop: 49446, Start Num: 77  
Candidate Starts for Myrale\_77:  
(22, 48946), (Start: 77 @49129 has 147 MA's), (112, 49270),

Gene: Nala\_79 Start: 48993, Stop: 49310, Start Num: 77  
Candidate Starts for Nala\_79:  
(22, 48810), (Start: 77 @48993 has 147 MA's), (112, 49134),

Gene: Nebkiss\_84 Start: 48920, Stop: 49243, Start Num: 75  
Candidate Starts for Nebkiss\_84:  
(Start: 75 @48920 has 37 MA's), (90, 48983), (153, 49208), (154, 49211),

Gene: NelitzaMV\_75 Start: 48075, Stop: 48392, Start Num: 77  
Candidate Starts for NelitzaMV\_75:  
(22, 47892), (Start: 77 @48075 has 147 MA's), (112, 48216),

Gene: NihilNomen\_125 Start: 68678, Stop: 69010, Start Num: 77  
Candidate Starts for NihilNomen\_125:  
(Start: 77 @68678 has 147 MA's), (103, 68789), (108, 68813), (162, 68993),

Gene: Nimrod\_78 Start: 49696, Stop: 50013, Start Num: 77  
Candidate Starts for Nimrod\_78:  
(22, 49513), (Start: 77 @49696 has 147 MA's), (112, 49837),

Gene: Nivrat\_62 Start: 42093, Stop: 42455, Start Num: 68  
Candidate Starts for Nivrat\_62:  
(29, 41976), (Start: 68 @42093 has 150 MA's), (111, 42252), (148, 42393), (169, 42438),

Gene: NoSleep\_78 Start: 48330, Stop: 48647, Start Num: 77  
Candidate Starts for NoSleep\_78:  
(22, 48147), (Start: 77 @48330 has 147 MA's), (112, 48471),

Gene: NormanBulbieJr\_65 Start: 42386, Stop: 42748, Start Num: 68  
Candidate Starts for NormanBulbieJr\_65:



(Start: 68 @42386 has 150 MA's), (116, 42560), (148, 42686), (169, 42731),

Gene: NyleyClemson\_84 Start: 49827, Stop: 49501, Start Num: 73

Candidate Starts for NyleyClemson\_84:

(39, 49920), (Start: 73 @49827 has 15 MA's), (Start: 84 @49797 has 1 MA's), (Start: 85 @49794 has 1 MA's), (99, 49728), (118, 49683), (124, 49659), (132, 49605), (145, 49569), (170, 49518),

Gene: ODay\_78 Start: 45557, Stop: 45886, Start Num: 77

Candidate Starts for ODay\_78:

(37, 45443), (Start: 63 @45533 has 2 MA's), (Start: 77 @45557 has 147 MA's), (86, 45584), (131, 45776), (163, 45866), (169, 45878),

Gene: ObLaDi\_106 Start: 60168, Stop: 60557, Start Num: 75

Candidate Starts for ObLaDi\_106:

(6, 59793), (12, 59892), (Start: 75 @60168 has 37 MA's), (Start: 85 @60201 has 1 MA's), (89, 60222), (126, 60369), (134, 60399), (142, 60423),

Gene: Ochi17\_69 Start: 44769, Stop: 45131, Start Num: 68

Candidate Starts for Ochi17\_69:

(Start: 68 @44769 has 150 MA's), (124, 44973), (148, 45069), (169, 45114),

Gene: Odyssey395\_85 Start: 50318, Stop: 49992, Start Num: 75

Candidate Starts for Odyssey395\_85:

(Start: 75 @50318 has 37 MA's), (Start: 84 @50288 has 1 MA's), (Start: 85 @50285 has 1 MA's), (99, 50219), (118, 50174), (124, 50150), (132, 50096), (145, 50060), (170, 50009),

Gene: OfUltron\_71 Start: 45318, Stop: 45680, Start Num: 68

Candidate Starts for OfUltron\_71:

(Start: 68 @45318 has 150 MA's), (124, 45522), (148, 45618), (169, 45663),

Gene: Ogopogo\_71 Start: 42797, Stop: 43153, Start Num: 68

Candidate Starts for Ogopogo\_71:

(31, 42686), (Start: 68 @42797 has 150 MA's), (148, 43097), (153, 43100),

Gene: OlympiaSaint\_67 Start: 42685, Stop: 43047, Start Num: 68

Candidate Starts for OlympiaSaint\_67:

(Start: 68 @42685 has 150 MA's), (111, 42844), (148, 42985), (153, 42988), (169, 43030),

Gene: Optimus\_113 Start: 65945, Stop: 66277, Start Num: 75

Candidate Starts for Optimus\_113:

(Start: 75 @65945 has 37 MA's), (91, 66014), (117, 66104), (118, 66107), (131, 66173),

Gene: OrionPax\_76 Start: 48081, Stop: 48398, Start Num: 77

Candidate Starts for OrionPax\_76:

(22, 47898), (Start: 77 @48081 has 147 MA's), (Start: 84 @48105 has 1 MA's), (112, 48222),

Gene: OwlsT2W\_65 Start: 42020, Stop: 42376, Start Num: 68

Candidate Starts for OwlsT2W\_65:

(Start: 68 @42020 has 150 MA's), (111, 42179), (148, 42320),

Gene: PHappiness\_61 Start: 41273, Stop: 41629, Start Num: 68

Candidate Starts for PHappiness\_61:

(31, 41168), (34, 41174), (48, 41228), (Start: 68 @41273 has 150 MA's), (Start: 81 @41306 has 1 MA's), (124, 41477), (148, 41573), (153, 41576),

Gene: PMC\_62 Start: 42410, Stop: 42766, Start Num: 68  
Candidate Starts for PMC\_62:  
(Start: 68 @42410 has 150 MA's), (148, 42710), (153, 42713),

Gene: PR\_52 Start: 44447, Stop: 44788, Start Num: 73  
Candidate Starts for PR\_52:  
(Start: 73 @44447 has 15 MA's), (88, 44501), (90, 44516), (94, 44534), (112, 44600), (118, 44618), (127, 44672), (142, 44717), (148, 44738), (157, 44762), (160, 44765),

Gene: Pacc40\_59 Start: 40742, Stop: 41104, Start Num: 68  
Candidate Starts for Pacc40\_59:  
(29, 40625), (Start: 68 @40742 has 150 MA's), (111, 40901), (148, 41042), (169, 41087),

Gene: Palpatine\_79 Start: 49462, Stop: 49779, Start Num: 77  
Candidate Starts for Palpatine\_79:  
(22, 49279), (Start: 77 @49462 has 147 MA's), (112, 49603),

Gene: Paperbeatsrock\_76 Start: 48707, Stop: 49024, Start Num: 77  
Candidate Starts for Paperbeatsrock\_76:  
(22, 48524), (Start: 77 @48707 has 147 MA's), (112, 48848),

Gene: Pat3\_75 Start: 47239, Stop: 47556, Start Num: 77  
Candidate Starts for Pat3\_75:  
(22, 47056), (Start: 77 @47239 has 147 MA's), (Start: 84 @47263 has 1 MA's), (112, 47380),

Gene: Petra64142\_81 Start: 49926, Stop: 50243, Start Num: 77  
Candidate Starts for Petra64142\_81:  
(22, 49743), (Start: 77 @49926 has 147 MA's), (112, 50067),

Gene: Phaja\_75 Start: 48533, Stop: 48850, Start Num: 77  
Candidate Starts for Phaja\_75:  
(22, 48350), (Start: 77 @48533 has 147 MA's), (112, 48674),

Gene: Pharsalus\_74 Start: 48507, Stop: 48824, Start Num: 77  
Candidate Starts for Pharsalus\_74:  
(22, 48324), (Start: 77 @48507 has 147 MA's), (112, 48648),

Gene: PhatBacter\_81 Start: 49479, Stop: 49796, Start Num: 77  
Candidate Starts for PhatBacter\_81:  
(22, 49296), (Start: 77 @49479 has 147 MA's), (112, 49620),

Gene: Phaux\_79 Start: 49474, Stop: 49791, Start Num: 77  
Candidate Starts for Phaux\_79:  
(22, 49291), (Start: 77 @49474 has 147 MA's), (112, 49615),

Gene: PhesterPhotato\_65 Start: 41443, Stop: 41799, Start Num: 68  
Candidate Starts for PhesterPhotato\_65:  
(Start: 68 @41443 has 150 MA's), (111, 41602), (148, 41743), (153, 41746),

Gene: Philus\_69 Start: 43883, Stop: 44239, Start Num: 68

Candidate Starts for Philus\_69:

(29, 43766), (Start: 68 @43883 has 150 MA's), (116, 44057), (148, 44183), (153, 44186), (169, 44222),

Gene: Phoebus\_124 Start: 70535, Stop: 70867, Start Num: 77

Candidate Starts for Phoebus\_124:

(Start: 77 @70535 has 147 MA's), (103, 70646), (108, 70670), (162, 70850),

Gene: Phrux\_74 Start: 48070, Stop: 48387, Start Num: 77

Candidate Starts for Phrux\_74:

(22, 47887), (Start: 77 @48070 has 147 MA's), (112, 48211),

Gene: Pippy\_64 Start: 41724, Stop: 42086, Start Num: 68

Candidate Starts for Pippy\_64:

(Start: 68 @41724 has 150 MA's), (111, 41883), (116, 41898), (148, 42024), (169, 42069),

Gene: Pitbull\_53 Start: 29779, Stop: 30105, Start Num: 78

Candidate Starts for Pitbull\_53:

(39, 29674), (Start: 78 @29779 has 2 MA's), (101, 29884), (136, 30016),

Gene: Pointis\_81 Start: 49894, Stop: 49568, Start Num: 75

Candidate Starts for Pointis\_81:

(Start: 75 @49894 has 37 MA's), (Start: 84 @49864 has 1 MA's), (Start: 85 @49861 has 1 MA's), (99, 49795), (118, 49750), (124, 49726), (132, 49672), (145, 49636), (170, 49585),

Gene: Poise\_69 Start: 39121, Stop: 39474, Start Num: 55

Candidate Starts for Poise\_69:

(Start: 55 @39121 has 17 MA's), (69, 39148), (107, 39283), (121, 39313), (129, 39364), (131, 39370), (137, 39385), (142, 39403), (150, 39427), (151, 39430),

Gene: Policronamos\_81 Start: 49474, Stop: 49791, Start Num: 77

Candidate Starts for Policronamos\_81:

(22, 49291), (Start: 77 @49474 has 147 MA's), (112, 49615),

Gene: Polka14\_64 Start: 42337, Stop: 42693, Start Num: 68

Candidate Starts for Polka14\_64:

(31, 42232), (34, 42238), (48, 42292), (Start: 68 @42337 has 150 MA's), (Start: 81 @42370 has 1 MA's), (124, 42541), (148, 42637), (153, 42640),

Gene: Pollywog\_66 Start: 43003, Stop: 43359, Start Num: 68

Candidate Starts for Pollywog\_66:

(Start: 68 @43003 has 150 MA's), (111, 43162), (148, 43303), (153, 43306),

Gene: Porky\_76 Start: 47900, Stop: 48217, Start Num: 77

Candidate Starts for Porky\_76:

(22, 47717), (Start: 77 @47900 has 147 MA's), (112, 48041),

Gene: Pound\_112 Start: 66568, Stop: 66897, Start Num: 75

Candidate Starts for Pound\_112:

(Start: 75 @66568 has 37 MA's), (91, 66637), (131, 66796), (161, 66880),

Gene: Pringar\_68 Start: 39443, Stop: 39796, Start Num: 55

Candidate Starts for Pringar\_68:

(Start: 55 @39443 has 17 MA's), (69, 39470), (107, 39605), (121, 39635), (129, 39686), (131, 39692), (137, 39707), (142, 39725), (150, 39749), (151, 39752),

Gene: Priscilla\_65 Start: 42485, Stop: 42847, Start Num: 68  
Candidate Starts for Priscilla\_65:  
(Start: 68 @42485 has 150 MA's), (116, 42659), (148, 42785), (169, 42830),

Gene: Pumpkin\_80 Start: 49128, Stop: 49445, Start Num: 77  
Candidate Starts for Pumpkin\_80:  
(22, 48945), (Start: 77 @49128 has 147 MA's), (112, 49269),

Gene: Pureglobe5\_83 Start: 50341, Stop: 50015, Start Num: 73  
Candidate Starts for Pureglobe5\_83:  
(39, 50434), (Start: 73 @50341 has 15 MA's), (Start: 84 @50311 has 1 MA's), (Start: 85 @50308 has 1 MA's), (99, 50242), (118, 50197), (124, 50173), (132, 50119), (145, 50083), (170, 50032),

Gene: Quallification\_78 Start: 49115, Stop: 49432, Start Num: 77  
Candidate Starts for Quallification\_78:  
(22, 48932), (Start: 77 @49115 has 147 MA's), (112, 49256),

Gene: QuickMath\_69 Start: 44476, Stop: 44817, Start Num: 68  
Candidate Starts for QuickMath\_69:  
(Start: 68 @44476 has 150 MA's), (148, 44776), (153, 44779),

Gene: Rabbitrun\_72 Start: 44571, Stop: 44918, Start Num: 71  
Candidate Starts for Rabbitrun\_72:  
(32, 44460), (40, 44490), (42, 44493), (43, 44496), (53, 44538), (Start: 65 @44562 has 1 MA's), (Start: 71 @44571 has 3 MA's), (92, 44652), (131, 44808), (141, 44835), (144, 44847), (151, 44862), (153, 44865),

Gene: Radiance\_64 Start: 41901, Stop: 42263, Start Num: 68  
Candidate Starts for Radiance\_64:  
(Start: 68 @41901 has 150 MA's), (111, 42060), (148, 42201), (153, 42204), (169, 42246),

Gene: Raela\_69 Start: 39678, Stop: 40031, Start Num: 55  
Candidate Starts for Raela\_69:  
(Start: 55 @39678 has 17 MA's), (69, 39705), (107, 39840), (121, 39870), (129, 39921), (131, 39927), (137, 39942), (142, 39960), (150, 39984), (151, 39987),

Gene: Rakim\_78 Start: 48584, Stop: 48901, Start Num: 77  
Candidate Starts for Rakim\_78:  
(22, 48401), (Start: 77 @48584 has 147 MA's), (112, 48725),

Gene: Ramsey\_64 Start: 42214, Stop: 42576, Start Num: 68  
Candidate Starts for Ramsey\_64:  
(Start: 68 @42214 has 150 MA's), (111, 42373), (148, 42514), (169, 42559),

Gene: Ranunculus\_78 Start: 52647, Stop: 52321, Start Num: 75  
Candidate Starts for Ranunculus\_78:  
(Start: 75 @52647 has 37 MA's), (Start: 84 @52617 has 1 MA's), (99, 52548), (118, 52503), (124, 52479), (145, 52389),

Gene: Rattail\_30 Start: 20919, Stop: 20599, Start Num: 85

Candidate Starts for Rattail\_30:

(4, 21354), (15, 21204), (50, 21009), (Start: 75 @20952 has 37 MA's), (Start: 85 @20919 has 1 MA's), (106, 20823),

Gene: RazzB\_81 Start: 49953, Stop: 49627, Start Num: 73

Candidate Starts for RazzB\_81:

(39, 50046), (Start: 73 @49953 has 15 MA's), (Start: 84 @49923 has 1 MA's), (Start: 85 @49920 has 1 MA's), (99, 49854), (118, 49809), (124, 49785), (132, 49731), (145, 49695), (170, 49644),

Gene: RedRaider77\_68 Start: 39066, Stop: 39419, Start Num: 55

Candidate Starts for RedRaider77\_68:

(Start: 55 @39066 has 17 MA's), (69, 39093), (107, 39228), (121, 39258), (129, 39309), (131, 39315), (137, 39330), (142, 39348), (150, 39372), (151, 39375),

Gene: Redno2\_116 Start: 66004, Stop: 66333, Start Num: 75

Candidate Starts for Redno2\_116:

(Start: 75 @66004 has 37 MA's), (91, 66073), (117, 66163), (118, 66166), (131, 66232), (161, 66316),

Gene: Renaud18\_75 Start: 44207, Stop: 44563, Start Num: 68

Candidate Starts for Renaud18\_75:

(Start: 68 @44207 has 150 MA's), (111, 44366), (148, 44507),

Gene: Rimmer\_78 Start: 48820, Stop: 49137, Start Num: 77

Candidate Starts for Rimmer\_78:

(22, 48637), (Start: 77 @48820 has 147 MA's), (112, 48961),

Gene: Rita\_66 Start: 40513, Stop: 40875, Start Num: 68

Candidate Starts for Rita\_66:

(Start: 68 @40513 has 150 MA's), (111, 40672), (148, 40813), (169, 40858),

Gene: RitaG\_61 Start: 41618, Stop: 41974, Start Num: 68

Candidate Starts for RitaG\_61:

(31, 41513), (34, 41519), (48, 41573), (Start: 68 @41618 has 150 MA's), (Start: 81 @41651 has 1 MA's), (124, 41822), (148, 41918), (153, 41921),

Gene: RiverMonster\_77 Start: 48648, Stop: 48965, Start Num: 77

Candidate Starts for RiverMonster\_77:

(22, 48465), (Start: 77 @48648 has 147 MA's), (112, 48789),

Gene: Rizwana\_65 Start: 46684, Stop: 46358, Start Num: 75

Candidate Starts for Rizwana\_65:

(Start: 75 @46684 has 37 MA's), (Start: 84 @46654 has 1 MA's), (Start: 85 @46651 has 1 MA's), (145, 46426),

Gene: Rockne\_66 Start: 42422, Stop: 42778, Start Num: 68

Candidate Starts for Rockne\_66:

(Start: 68 @42422 has 150 MA's), (148, 42722), (153, 42725),

Gene: RockyHorror\_66 Start: 41564, Stop: 41926, Start Num: 68

Candidate Starts for RockyHorror\_66:

(Start: 68 @41564 has 150 MA's), (148, 41864), (169, 41909),

Gene: Rose5\_66 Start: 45488, Stop: 45859, Start Num: 77

Candidate Starts for Rose5\_66:

(Start: 77 @45488 has 147 MA's), (93, 45566), (131, 45713), (154, 45776), (177, 45851),

Gene: Royals2015\_68 Start: 42421, Stop: 42777, Start Num: 68

Candidate Starts for Royals2015\_68:

(Start: 68 @42421 has 150 MA's), (Start: 84 @42463 has 1 MA's), (111, 42580), (148, 42721),

Gene: Ruby\_61 Start: 41693, Stop: 42055, Start Num: 68

Candidate Starts for Ruby\_61:

(Start: 68 @41693 has 150 MA's), (148, 41993), (169, 42038),

Gene: Saal\_67 Start: 43437, Stop: 43799, Start Num: 68

Candidate Starts for Saal\_67:

(Start: 68 @43437 has 150 MA's), (111, 43596), (148, 43737), (153, 43740), (169, 43782),

Gene: Saints25\_76 Start: 48058, Stop: 48375, Start Num: 77

Candidate Starts for Saints25\_76:

(22, 47875), (Start: 77 @48058 has 147 MA's), (112, 48199),

Gene: Samty\_66 Start: 46475, Stop: 46807, Start Num: 74

Candidate Starts for Samty\_66:

(13, 46211), (14, 46220), (18, 46244), (24, 46322), (36, 46370), (Start: 74 @46475 has 13 MA's), (111, 46619), (131, 46703), (142, 46736),

Gene: Sandalphon\_66 Start: 42944, Stop: 43306, Start Num: 68

Candidate Starts for Sandalphon\_66:

(29, 42827), (Start: 68 @42944 has 150 MA's), (111, 43103), (148, 43244), (169, 43289),

Gene: Sarma624\_64 Start: 39148, Stop: 39510, Start Num: 68

Candidate Starts for Sarma624\_64:

(Start: 68 @39148 has 150 MA's), (111, 39307), (124, 39352), (148, 39448), (153, 39451), (169, 39493),

Gene: Sassay\_72 Start: 46748, Stop: 47065, Start Num: 77

Candidate Starts for Sassay\_72:

(22, 46565), (Start: 77 @46748 has 147 MA's), (112, 46889),

Gene: Schmidt\_45 Start: 30353, Stop: 30685, Start Num: 70

Candidate Starts for Schmidt\_45:

(27, 30221), (33, 30251), (46, 30290), (Start: 70 @30353 has 13 MA's), (83, 30386), (101, 30476), (118, 30527), (146, 30644), (153, 30650), (157, 30671),

Gene: Seabastian\_71 Start: 45319, Stop: 45681, Start Num: 68

Candidate Starts for Seabastian\_71:

(Start: 68 @45319 has 150 MA's), (124, 45523), (148, 45619), (169, 45664),

Gene: ShamWow\_77 Start: 48970, Stop: 49287, Start Num: 77

Candidate Starts for ShamWow\_77:

(22, 48787), (Start: 77 @48970 has 147 MA's), (112, 49111),

Gene: ShiLan\_64 Start: 42432, Stop: 42788, Start Num: 68

Candidate Starts for ShiLan\_64:

(Start: 68 @42432 has 150 MA's), (111, 42591), (148, 42732), (153, 42735),

Gene: ShowerHandel\_68 Start: 42396, Stop: 42758, Start Num: 68  
Candidate Starts for ShowerHandel\_68:  
(Start: 68 @42396 has 150 MA's), (111, 42555), (116, 42570), (148, 42696), (169, 42741),

Gene: SiSi\_63 Start: 41202, Stop: 41558, Start Num: 68  
Candidate Starts for SiSi\_63:  
(Start: 68 @41202 has 150 MA's), (148, 41502), (153, 41505),

Gene: SilentRX\_62 Start: 45416, Stop: 45102, Start Num: 75  
Candidate Starts for SilentRX\_62:  
(23, 45581), (29, 45545), (Start: 75 @45416 has 37 MA's), (108, 45290), (145, 45158), (151, 45149),

Gene: Simpliphy\_76 Start: 48048, Stop: 48365, Start Num: 77  
Candidate Starts for Simpliphy\_76:  
(22, 47865), (Start: 77 @48048 has 147 MA's), (112, 48189),

Gene: SirDuracell\_76 Start: 47334, Stop: 47651, Start Num: 77  
Candidate Starts for SirDuracell\_76:  
(22, 47151), (Start: 77 @47334 has 147 MA's), (Start: 84 @47358 has 1 MA's), (112, 47475),

Gene: Skitty\_53 Start: 29133, Stop: 29486, Start Num: 78  
Candidate Starts for Skitty\_53:  
(Start: 78 @29133 has 2 MA's), (101, 29238), (170, 29454),

Gene: Snenia\_65 Start: 46468, Stop: 46800, Start Num: 74  
Candidate Starts for Snenia\_65:  
(11, 46192), (13, 46204), (14, 46213), (18, 46237), (24, 46315), (36, 46363), (Start: 74 @46468 has 13 MA's), (111, 46612), (131, 46696), (142, 46729),

Gene: Soos\_87 Start: 57034, Stop: 57414, Start Num: 63  
Candidate Starts for Soos\_87:  
(9, 56746), (17, 56821), (25, 56908), (Start: 63 @57034 has 2 MA's), (138, 57295), (141, 57304), (147, 57328), (149, 57334), (166, 57376),

Gene: SophKB\_74 Start: 47726, Stop: 48043, Start Num: 77  
Candidate Starts for SophKB\_74:  
(22, 47543), (Start: 77 @47726 has 147 MA's), (112, 47867),

Gene: Sotrice96\_78 Start: 48729, Stop: 49046, Start Num: 77  
Candidate Starts for Sotrice96\_78:  
(22, 48546), (Start: 77 @48729 has 147 MA's), (112, 48870),

Gene: Soul22\_71 Start: 43477, Stop: 43839, Start Num: 68  
Candidate Starts for Soul22\_71:  
(Start: 68 @43477 has 150 MA's), (111, 43636), (148, 43777), (153, 43780), (169, 43822),

Gene: Spikelee\_72 Start: 44062, Stop: 44424, Start Num: 68  
Candidate Starts for Spikelee\_72:  
(Start: 68 @44062 has 150 MA's), (148, 44362), (169, 44407),

Gene: Splinter\_51 Start: 33608, Stop: 33991, Start Num: 70  
Candidate Starts for Splinter\_51:

(Start: 70 @33608 has 13 MA's), (101, 33731), (154, 33914), (171, 33956),

Gene: Spooky\_68 Start: 42098, Stop: 42427, Start Num: 77

Candidate Starts for Spooky\_68:

(Start: 77 @42098 has 147 MA's), (153, 42377), (163, 42407), (169, 42419),

Gene: Spoonbill\_63 Start: 41578, Stop: 41934, Start Num: 68

Candidate Starts for Spoonbill\_63:

(31, 41473), (34, 41479), (48, 41533), (Start: 68 @41578 has 150 MA's), (Start: 81 @41611 has 1 MA's), (124, 41782), (148, 41878), (153, 41881),

Gene: Squiddly\_73 Start: 46416, Stop: 46745, Start Num: 77

Candidate Starts for Squiddly\_73:

(Start: 77 @46416 has 147 MA's), (153, 46695), (163, 46725), (169, 46737),

Gene: Squint\_116 Start: 64970, Stop: 65290, Start Num: 75

Candidate Starts for Squint\_116:

(Start: 75 @64970 has 37 MA's), (91, 65039), (101, 65081), (131, 65198),

Gene: Stank\_80 Start: 48987, Stop: 49304, Start Num: 77

Candidate Starts for Stank\_80:

(22, 48804), (Start: 77 @48987 has 147 MA's), (112, 49128),

Gene: Starcevich\_65 Start: 41944, Stop: 42300, Start Num: 68

Candidate Starts for Starcevich\_65:

(Start: 68 @41944 has 150 MA's), (148, 42244), (153, 42247),

Gene: Stark\_78 Start: 48531, Stop: 48848, Start Num: 77

Candidate Starts for Stark\_78:

(22, 48348), (Start: 77 @48531 has 147 MA's), (112, 48672),

Gene: StellaBean\_75 Start: 48294, Stop: 48611, Start Num: 77

Candidate Starts for StellaBean\_75:

(22, 48111), (Start: 77 @48294 has 147 MA's), (112, 48435),

Gene: Sting\_90 Start: 57473, Stop: 57853, Start Num: 63

Candidate Starts for Sting\_90:

(9, 57185), (17, 57260), (25, 57347), (Start: 63 @57473 has 2 MA's), (72, 57485), (138, 57734), (141, 57743), (147, 57767), (149, 57773), (166, 57815),

Gene: StolenFromERC\_80 Start: 48769, Stop: 49086, Start Num: 77

Candidate Starts for StolenFromERC\_80:

(22, 48586), (Start: 77 @48769 has 147 MA's), (112, 48910),

Gene: SuperGrey\_69 Start: 44472, Stop: 44828, Start Num: 68

Candidate Starts for SuperGrey\_69:

(Start: 68 @44472 has 150 MA's), (111, 44631), (148, 44772), (153, 44775), (167, 44811),

Gene: Superphikiman\_115 Start: 64061, Stop: 64381, Start Num: 75

Candidate Starts for Superphikiman\_115:

(Start: 75 @64061 has 37 MA's), (91, 64130), (101, 64172), (131, 64289),

Gene: SwagPiggett\_70 Start: 44704, Stop: 45066, Start Num: 68



Candidate Starts for SwagPiggett\_70:

(29, 44587), (Start: 68 @44704 has 150 MA's), (111, 44863), (148, 45004), (169, 45049),

Gene: TBrady12\_80 Start: 48468, Stop: 48785, Start Num: 77

Candidate Starts for TBrady12\_80:

(22, 48285), (Start: 77 @48468 has 147 MA's), (112, 48609),

Gene: TDanisky\_72 Start: 43265, Stop: 43606, Start Num: 68

Candidate Starts for TDanisky\_72:

(Start: 68 @43265 has 150 MA's), (111, 43424),

Gene: TZGordon\_53 Start: 32954, Stop: 33337, Start Num: 70

Candidate Starts for TZGordon\_53:

(Start: 70 @32954 has 13 MA's), (101, 33077), (154, 33260), (171, 33302),

Gene: Tank\_65 Start: 46679, Stop: 46338, Start Num: 75

Candidate Starts for Tank\_65:

(Start: 75 @46679 has 37 MA's), (97, 46592), (145, 46421), (163, 46379),

Gene: Taptic\_52 Start: 43843, Stop: 44184, Start Num: 73

Candidate Starts for Taptic\_52:

(Start: 73 @43843 has 15 MA's), (88, 43897), (90, 43912), (94, 43930), (112, 43996), (118, 44014), (127, 44068), (142, 44113), (148, 44134), (157, 44158), (160, 44161),

Gene: Tarkin\_76 Start: 48716, Stop: 49033, Start Num: 77

Candidate Starts for Tarkin\_76:

(22, 48533), (Start: 77 @48716 has 147 MA's), (112, 48857),

Gene: TeardropMSU\_73 Start: 47716, Stop: 48033, Start Num: 77

Candidate Starts for TeardropMSU\_73:

(22, 47533), (Start: 77 @47716 has 147 MA's), (112, 47857),

Gene: Teaspoon\_78 Start: 48610, Stop: 48927, Start Num: 77

Candidate Starts for Teaspoon\_78:

(22, 48427), (Start: 77 @48610 has 147 MA's), (112, 48751),

Gene: Teng\_62 Start: 33271, Stop: 33660, Start Num: 70

Candidate Starts for Teng\_62:

(16, 33037), (Start: 70 @33271 has 13 MA's), (101, 33397), (120, 33460), (127, 33505), (169, 33622), (171, 33625),

Gene: Terminus\_80 Start: 49503, Stop: 49820, Start Num: 77

Candidate Starts for Terminus\_80:

(22, 49320), (Start: 77 @49503 has 147 MA's), (112, 49644),

Gene: Tesla\_66 Start: 38915, Stop: 39268, Start Num: 55

Candidate Starts for Tesla\_66:

(Start: 55 @38915 has 17 MA's), (69, 38942), (107, 39077), (121, 39107), (129, 39158), (131, 39164), (137, 39179), (142, 39197), (150, 39221), (151, 39224),

Gene: ThetaBob\_73 Start: 44248, Stop: 44604, Start Num: 68

Candidate Starts for ThetaBob\_73:

(31, 44137), (Start: 68 @44248 has 150 MA's), (148, 44548), (153, 44551),

Gene: Thibault\_106 Start: 63336, Stop: 63668, Start Num: 77  
Candidate Starts for Thibault\_106:  
(Start: 77 @63336 has 147 MA's), (103, 63447), (108, 63471), (162, 63651),

Gene: ThreeRngTarjay\_118 Start: 68893, Stop: 69225, Start Num: 75  
Candidate Starts for ThreeRngTarjay\_118:  
(Start: 75 @68893 has 37 MA's), (91, 68962), (131, 69121),

Gene: Thresher\_79 Start: 49590, Stop: 49907, Start Num: 77  
Candidate Starts for Thresher\_79:  
(22, 49407), (Start: 77 @49590 has 147 MA's), (112, 49731),

Gene: TinaLin\_50 Start: 32410, Stop: 32790, Start Num: 70  
Candidate Starts for TinaLin\_50:  
(Start: 70 @32410 has 13 MA's), (89, 32473), (101, 32533), (131, 32650), (142, 32689), (154, 32716),  
(171, 32758),

Gene: Tomaszewski\_72 Start: 47879, Stop: 48196, Start Num: 77  
Candidate Starts for Tomaszewski\_72:  
(22, 47696), (Start: 77 @47879 has 147 MA's), (Start: 84 @47903 has 1 MA's), (112, 48020),

Gene: Tonitrus\_70 Start: 51892, Stop: 52272, Start Num: 73  
Candidate Starts for Tonitrus\_70:  
(Start: 73 @51892 has 15 MA's), (112, 52051), (116, 52063), (131, 52135),

Gene: Totinger\_65 Start: 41519, Stop: 41875, Start Num: 68  
Candidate Starts for Totinger\_65:  
(Start: 68 @41519 has 150 MA's), (111, 41678), (148, 41819), (153, 41822), (169, 41858),

Gene: Toto\_75 Start: 48970, Stop: 49287, Start Num: 77  
Candidate Starts for Toto\_75:  
(22, 48787), (Start: 77 @48970 has 147 MA's), (112, 49111),

Gene: Traaww1\_73 Start: 48154, Stop: 48471, Start Num: 77  
Candidate Starts for Traaww1\_73:  
(22, 47971), (Start: 77 @48154 has 147 MA's), (112, 48295),

Gene: Trax\_71 Start: 44944, Stop: 45291, Start Num: 71  
Candidate Starts for Trax\_71:  
(Start: 71 @44944 has 3 MA's), (92, 45025), (131, 45181), (141, 45208), (151, 45235), (153, 45238),

Gene: TriFive\_66 Start: 46467, Stop: 46799, Start Num: 74  
Candidate Starts for TriFive\_66:  
(11, 46191), (13, 46203), (14, 46212), (18, 46236), (24, 46314), (36, 46362), (Start: 74 @46467 has 13  
MA's), (111, 46611), (131, 46695), (142, 46728),

Gene: Tuco\_78 Start: 49478, Stop: 49795, Start Num: 77  
Candidate Starts for Tuco\_78:  
(22, 49295), (Start: 77 @49478 has 147 MA's), (112, 49619),

Gene: Tweety\_65 Start: 43115, Stop: 43471, Start Num: 68  
Candidate Starts for Tweety\_65:

(Start: 68 @43115 has 150 MA's), (111, 43274), (116, 43289), (148, 43415), (153, 43418), (169, 43454),

Gene: Tyson\_67 Start: 45417, Stop: 45785, Start Num: 77

Candidate Starts for Tyson\_67:

(Start: 77 @45417 has 147 MA's), (Start: 85 @45444 has 1 MA's), (99, 45513), (106, 45534), (112, 45558), (131, 45639), (154, 45702), (177, 45777),

Gene: Ukulele\_72 Start: 47861, Stop: 48178, Start Num: 77

Candidate Starts for Ukulele\_72:

(22, 47678), (Start: 77 @47861 has 147 MA's), (112, 48002),

Gene: VRedHorse\_65 Start: 41397, Stop: 41759, Start Num: 68

Candidate Starts for VRedHorse\_65:

(Start: 68 @41397 has 150 MA's), (Start: 81 @41430 has 1 MA's), (111, 41556), (148, 41697), (153, 41700), (169, 41742),

Gene: VanLee\_116 Start: 60612, Stop: 60974, Start Num: 76

Candidate Starts for VanLee\_116:

(Start: 76 @60612 has 1 MA's), (142, 60858), (159, 60903), (168, 60918), (172, 60927), (176, 60942),

Gene: VasuNzinga\_68 Start: 39017, Stop: 39370, Start Num: 55

Candidate Starts for VasuNzinga\_68:

(Start: 55 @39017 has 17 MA's), (69, 39044), (107, 39179), (121, 39209), (129, 39260), (131, 39266), (137, 39281), (142, 39299), (150, 39323), (151, 39326),

Gene: Velveteen\_61 Start: 39148, Stop: 39510, Start Num: 68

Candidate Starts for Velveteen\_61:

(Start: 68 @39148 has 150 MA's), (111, 39307), (124, 39352), (148, 39448), (153, 39451), (169, 39493),

Gene: Vendetta\_51 Start: 33608, Stop: 33991, Start Num: 70

Candidate Starts for Vendetta\_51:

(Start: 70 @33608 has 13 MA's), (101, 33731), (154, 33914), (171, 33956),

Gene: Veteran\_62 Start: 40798, Stop: 41154, Start Num: 68

Candidate Starts for Veteran\_62:

(Start: 68 @40798 has 150 MA's), (124, 41002), (148, 41098), (153, 41101), (169, 41137),

Gene: Vivum\_68 Start: 42717, Stop: 43079, Start Num: 68

Candidate Starts for Vivum\_68:

(29, 42600), (Start: 68 @42717 has 150 MA's), (Start: 84 @42759 has 1 MA's), (111, 42876), (148, 43017), (153, 43020), (169, 43062),

Gene: Wachhund\_66 Start: 42028, Stop: 42390, Start Num: 68

Candidate Starts for Wachhund\_66:

(Start: 68 @42028 has 150 MA's), (148, 42328), (169, 42373),

Gene: Wamburgxpress\_66 Start: 45044, Stop: 45415, Start Num: 77

Candidate Starts for Wamburgxpress\_66:

(Start: 77 @45044 has 147 MA's), (93, 45122), (131, 45269), (154, 45332), (177, 45407),

Gene: Wanda\_122 Start: 66271, Stop: 66600, Start Num: 75

Candidate Starts for Wanda\_122:

(Start: 75 @66271 has 37 MA's), (91, 66340), (95, 66358), (117, 66430), (118, 66433), (131, 66499), (161, 66583),

Gene: Whirlwind\_66 Start: 46283, Stop: 46615, Start Num: 74

Candidate Starts for Whirlwind\_66:

(11, 46007), (13, 46019), (14, 46028), (18, 46052), (24, 46130), (36, 46178), (Start: 74 @46283 has 13 MA's), (111, 46427), (131, 46511), (142, 46544),

Gene: Whouxphf\_62 Start: 42311, Stop: 42673, Start Num: 68

Candidate Starts for Whouxphf\_62:

(Start: 68 @42311 has 150 MA's), (148, 42611), (169, 42656),

Gene: Wiggin\_79 Start: 48555, Stop: 48872, Start Num: 77

Candidate Starts for Wiggin\_79:

(22, 48372), (Start: 77 @48555 has 147 MA's), (112, 48696),

Gene: Wilde\_67 Start: 46978, Stop: 46637, Start Num: 75

Candidate Starts for Wilde\_67:

(Start: 75 @46978 has 37 MA's), (97, 46891), (145, 46720), (163, 46678),

Gene: Willez\_72 Start: 46748, Stop: 47065, Start Num: 77

Candidate Starts for Willez\_72:

(22, 46565), (Start: 77 @46748 has 147 MA's), (112, 46889),

Gene: Wrackline\_70 Start: 37367, Stop: 37759, Start Num: 70

Candidate Starts for Wrackline\_70:

(2, 36971), (8, 37061), (19, 37163), (21, 37205), (Start: 70 @37367 has 13 MA's), (87, 37394), (101, 37475), (109, 37502), (127, 37583), (133, 37619), (141, 37640), (167, 37712), (171, 37721),

Gene: Wyatt2\_67 Start: 45415, Stop: 45783, Start Num: 77

Candidate Starts for Wyatt2\_67:

(Start: 77 @45415 has 147 MA's), (Start: 85 @45442 has 1 MA's), (99, 45511), (106, 45532), (112, 45556), (131, 45637), (154, 45700), (177, 45775),

Gene: XFactor\_63 Start: 40832, Stop: 41194, Start Num: 68

Candidate Starts for XFactor\_63:

(Start: 68 @40832 has 150 MA's), (148, 41132), (169, 41177),

Gene: Xandras\_76 Start: 47963, Stop: 48280, Start Num: 77

Candidate Starts for Xandras\_76:

(22, 47780), (Start: 77 @47963 has 147 MA's), (112, 48104),

Gene: YassJohnny\_74 Start: 47918, Stop: 48235, Start Num: 77

Candidate Starts for YassJohnny\_74:

(22, 47735), (Start: 77 @47918 has 147 MA's), (Start: 84 @47942 has 1 MA's), (112, 48059),

Gene: Yorick\_64 Start: 42551, Stop: 42913, Start Num: 68

Candidate Starts for Yorick\_64:

(Start: 68 @42551 has 150 MA's), (111, 42710), (148, 42851), (169, 42896),

Gene: Yoshi\_81 Start: 44512, Stop: 44874, Start Num: 68

Candidate Starts for Yoshi\_81:

(30, 44401), (Start: 68 @44512 has 150 MA's), (148, 44812), (153, 44815), (169, 44857),

Gene: Youngblood\_80 Start: 49430, Stop: 49747, Start Num: 77

Candidate Starts for Youngblood\_80:

(22, 49247), (Start: 77 @49430 has 147 MA's), (112, 49571),

Gene: Zapner\_79 Start: 44176, Stop: 44517, Start Num: 66

Candidate Starts for Zapner\_79:

(57, 44161), (Start: 66 @44176 has 4 MA's), (148, 44476), (153, 44479),

Gene: Zelink\_117 Start: 68840, Stop: 69172, Start Num: 75

Candidate Starts for Zelink\_117:

(Start: 75 @68840 has 37 MA's), (91, 68909), (131, 69068),

Gene: Zerg\_65 Start: 41676, Stop: 42038, Start Num: 68

Candidate Starts for Zerg\_65:

(Start: 68 @41676 has 150 MA's), (148, 41976), (169, 42021),

Gene: Zizzle\_69 Start: 44029, Stop: 44391, Start Num: 68

Candidate Starts for Zizzle\_69:

(Start: 68 @44029 has 150 MA's), (111, 44188), (116, 44203), (148, 44329), (169, 44374),

Gene: xkcd\_80 Start: 49620, Stop: 49937, Start Num: 77

Candidate Starts for xkcd\_80:

(22, 49437), (Start: 77 @49620 has 147 MA's), (112, 49761),