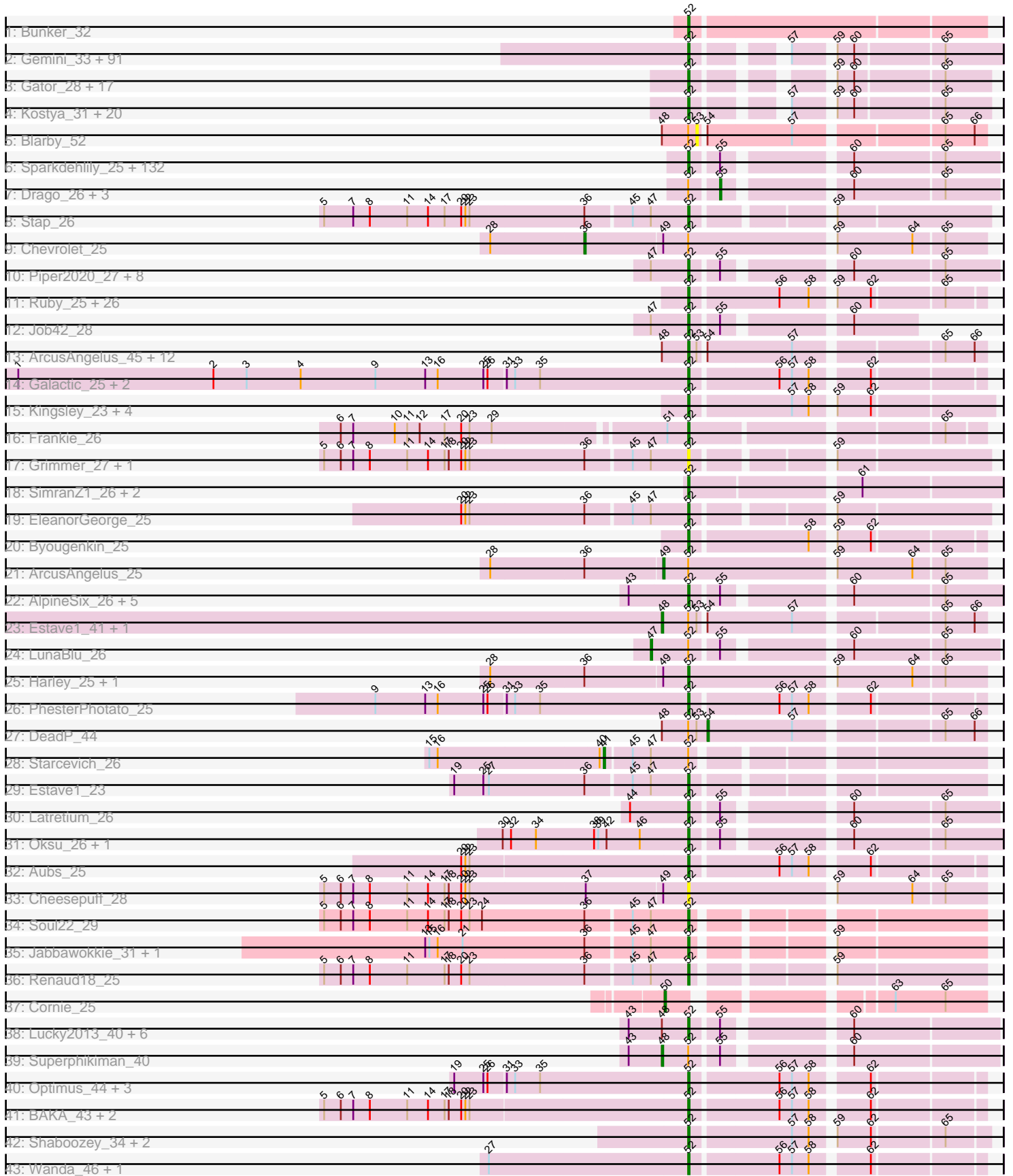


Pham 224181



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 224181 Report

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

Pham number 224181 has 384 members, 37 are drafts.

Phages represented in each track:

- Track 1 : Bunker\_32
- Track 2 : Gemini\_33, HufflyPuff\_29, Ukulele\_30, Elph10\_31, Maxxinista\_31, Emmina\_31, Moldemort\_31, Tarkin\_32, Gage\_32, StormChicken\_30, Petra64142\_32, FireRed\_30, StellaBean\_30, Willez\_29, Kanye\_32, Buck\_29, GoldenSpark\_32, Thresher\_31, MPhalcon\_29, BaboJay\_29, 244\_32, Murica\_29, ChotaBhai\_30, Inca\_29, Simpliphy\_31, HanKaySha\_31, Contagion\_29, Argent26\_32, Nimrod\_30, Mosby\_29, MadamMonkfish\_30, Phaux\_29, Manda\_31, Dumbo\_30, Becksu\_30, YassJohnny\_31, SophKB\_30, Tomaszewski\_29, Adnama\_33, Elite2014\_29, GooberAzure\_32, Hopey\_32, Miniwave\_30, PhatBacter\_30, JeTaime\_32, Saints25\_31, Kimchi\_32, ShereKhan\_32, Stank\_33, Lilpickle\_29, Quallification\_31, StolenFromERC\_32, Easy2Say\_32, Palpatine\_30, MISSy\_29, Hoonter\_32, Lilac\_32, Filch\_31, Czyszczonek\_31, RiverMonster\_30, BigBubba\_31, AmericanBeauty\_32, Terminus\_30, Goldilocks\_31, Stark\_31, Murphy\_31, Phrux\_30, Cjw1\_30, Misfit\_30, BugsBunny\_28, ChosenOne\_30, DoctorDiddles\_30, Bruin\_30, Xandras\_32, Wiggin\_33, Paperbeatsrock\_32, DrDrey\_31, Holt\_31, Thimble\_30, Rimmer\_29, FoghornLeghorn\_29, Cookies\_30, Porky\_30, Teaspoon\_31, Pumpkin\_32, Highbury\_31, NoSleep\_31, xkcd\_31, Sassay\_29, Lilizi\_32, OrionPax\_31, Pharsalus\_31
- Track 3 : Gator\_28, ABCat\_29, Icee\_29, SirDuracell\_29, BadStone\_29, Myrale\_30, Cactus\_31, FairyPath\_30, Bask21\_30, Tuco\_31, Sotrice96\_30, Eureka\_30, NelitzaMV\_30, Command613\_31, Dusk\_29, Goku\_30, Policronamos\_30, Marshmallow\_30
- Track 4 : Kostya\_31, Pat3\_29, Asriel\_29, Harella\_29, Rakim\_31, Flypotenuse\_28, Barbarian\_29, BilboSwaggins\_30, Youngblood\_30, Glexan\_28, Daikon\_29, Mindy\_30, Amao\_30, CrystalP\_30, Balomoji\_29, Henry\_31, Nala\_30, ShamWow\_30, Traaww1\_28, TeardropMSU\_29, Toto\_30
- Track 5 : Blarby\_52
- Track 6 : Sparkdehlily\_25, ByChance\_25, Karhdo\_25, Enby\_26, BobaPhett\_25, EmiMonkey\_25, Emma\_25, Daenerys\_25, Alexphander\_27, James\_25, FreddyB\_25, Rialto\_27, Mandlovu\_25, Fancypants\_25, PhlipPhlop\_25, Marker\_26, Philus\_25, Whouxphf\_25, Sabbb\_26, Gaia\_28, Geralt\_25, Ramsey\_26, SG4\_25, BlueCrab\_25, Nimbo\_25, Totinger\_26, Priscilla\_25, Tootsieroll\_26, PHappiness\_25, Lizziana\_25, Zerg\_25, VRedHorse\_25, DosHalletts\_26, Chuckly\_25, LittleShirley\_26, Polka14\_26, Guppsters\_26, Lorde\_26, Filuzino\_25, TDanisky\_25, Cabrinians\_25, Slim\_27, Rockne\_25, Phatniss\_26, Eish\_25, DoRead\_25, Blarby\_33, Firehouse51\_26, Mattes\_25, IMpilo\_25, NewHope4\_27, Hlubikazi\_25, OwlsT2W\_27, Aloeri\_26, TootsiePop\_26, Spikelee\_26, Moonbeam\_26, JoeyJr\_25, Hamulus\_25, Phasih\_26,

DirtMcgirt\_26, Quico\_26, Yorick\_25, Nitzel\_26, Jarcob\_25, IbOuu\_26, Che8\_26, Ovechkin\_25, BuzzLyseyear\_27, Saal\_25, Cornucopia\_26, Leperchaun\_25, DillTech15\_25, Veteran\_25, Fruitloop\_25, OlympiaSaint\_25, DaWorst\_27, Nivrat\_25, DLane\_25, DRBy19\_25, ShowerHandel\_25, DaddyRickover\_25, Minnie\_26, Burwell21\_25, Minerva\_46, DocMcStuffins\_27, Phalconet\_25, Fastidio\_25, Leozinho\_26, Mantra\_25, KristaRAM\_26, LilMoolah\_25, NormanBulbieJr\_25, ShiLan\_25, SwagPigglett\_25, Emmaloid\_27, Deb65\_25, GigiOuiOui\_25, Gorge\_25, Awesomesauce\_26, Royals2015\_25, Pacc40\_25, Doug\_26, Florinda\_25, Dorothy\_25, MooMoo\_22, Plumbus\_26, Scottish\_26, RitaG\_25, Eradicator\_25, Nebkiss\_29, Melissauren88\_25, Zizzle\_25, Maravista\_25, SilverChicken\_31, Violac\_26, Beakin\_26, Strokeseat\_25, SiSi\_25, UncleRicky\_28, RockyHorror\_26, Mova\_26, GUmbie\_25, Misha28\_26, Mozy\_26, Radiance\_25, KingMidas\_26, Girafales\_26, ChickenDinner\_26, Gandalph\_25, Llij\_25, Martik\_25, Spoonbill\_25

- Track 7 : Drago\_26, Jant\_25, PMC\_25, Hades\_25
- Track 8 : Stap\_26
- Track 9 : Chevrolet\_25
- Track 10 : Piper2020\_27, Rita\_25, Bubbles123\_26, QuickMath\_26, Kimberlium\_27, Dante\_25, Mahavrat\_25, Juniper1\_25, MulchExplorer\_28
- Track 11 : Ruby\_25, BodEinwohner17\_25, Brushbloom\_27, Taj\_25, Wee\_26, Donkeykong\_25, MisterCuddles\_25, CaptainTrips\_26, MilleniumForce\_26, Empress\_26, SassyB\_25, Whatsapiecost\_25, PopTart\_25, Gonephishing\_41, Bobi\_27, Tweety\_26, MinionDave\_26, Mutaforma13\_25, Juice456\_27, Sassafras\_25, JalFarm20\_27, Wachhund\_25, Hegedechwinu\_26, Flathead\_26, Seagreen\_26, OldBen\_25, Girr\_25
- Track 12 : Job42\_28
- Track 13 : ArcusAngelus\_45, Ochi17\_42, OfUltron\_44, Chevrolet\_48, Oksu\_44, Llama\_44, Seabastian\_44, Avani\_48, AlpineSix\_44, Jinglebell\_43, Wee\_44, Renaud18\_44, Modragons\_43
- Track 14 : Galactic\_25, Batiatus\_25, Krakatau\_26
- Track 15 : Kingsley\_23, Coco12\_24, Shauna1\_22, Brookers\_23, Phanphagia\_22
- Track 16 : Frankie\_26
- Track 17 : Grimmer\_27, Polo2Bam\_29
- Track 18 : SimranZ1\_26, TChen\_23, LunaStella\_25
- Track 19 : EleanorGeorge\_25
- Track 20 : Byougenkin\_25
- Track 21 : ArcusAngelus\_25
- Track 22 : AlpineSix\_26, Seabastian\_25, Jinglebell\_24, Modragons\_25, Sandalphon\_26, OfUltron\_25
- Track 23 : Estave1\_41, Taj\_43
- Track 24 : LunaBlu\_26
- Track 25 : Harley\_25, Ibhubesi\_25
- Track 26 : PhesterPhotato\_25
- Track 27 : DeadP\_44
- Track 28 : Starcevich\_26
- Track 29 : Estave1\_23
- Track 30 : Latretium\_26
- Track 31 : Oksu\_26, Llama\_25
- Track 32 : Aubs\_25
- Track 33 : Cheesepuff\_28
- Track 34 : Soul22\_29
- Track 35 : Jabbawokkie\_31, Zapner\_30
- Track 36 : Renaud18\_25
- Track 37 : Cornie\_25

- Track 38 : Lucky2013\_40, Courthouse\_40, DmpstrDiver\_41, Ariel\_40, Squint\_39, Porcelain\_39, MiaZeal\_40
- Track 39 : Superphikiman\_40
- Track 40 : Optimus\_44, Vivum\_25, WillSterrel\_26, IrishSherpFalk\_26
- Track 41 : BAKA\_43, LittleE\_46, RedBird\_25
- Track 42 : Shaboozey\_34, Hannaconda\_37, KashFlow\_34
- Track 43 : Wanda\_46, Duke13\_43

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

The start number called the most often in the published annotations is 52, it was called in 335 of the 347 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244\_32, ABCat\_29, Adnama\_33, Alexphander\_27, Aloeri\_26, AlpineSix\_26, AlpineSix\_44, Amao\_30, AmericanBeauty\_32, ArcusAngelus\_45, Argent26\_32, Ariel\_40, Asriel\_29, Aubs\_25, Avani\_48, Awesomesauce\_26, BAKA\_43, BaboJay\_29, BadStone\_29, Balomoji\_29, Barbarian\_29, Bask21\_30, Batiatus\_25, Beakin\_26, Becksu\_30, BigBubba\_31, BilboSwaggins\_30, Blarby\_33, BlueCrab\_25, BobaPhett\_25, Bobi\_27, BodEinwohner17\_25, Brookers\_23, Bruin\_30, Brushbloom\_27, Bubbles123\_26, Buck\_29, BugsBunny\_28, Bunker\_32, Burwell21\_25, BuzzLyseyear\_27, ByChance\_25, Byougenkin\_25, Cabrinians\_25, Cactus\_31, CaptainTrips\_26, Che8\_26, CheesePuff\_28, Chevrolet\_48, ChickenDinner\_26, ChosenOne\_30, ChotaBhai\_30, Chuckly\_25, Cjw1\_30, Coco12\_24, Command613\_31, Contagion\_29, Cookies\_30, Cornucopia\_26, Courthouse\_40, CrystalP\_30, Czyszczon1\_31, DLane\_25, DRBy19\_25, DaWorst\_27, DaddyRickover\_25, Daenerys\_25, Daikon\_29, Dante\_25, Deb65\_25, DillTech15\_25, DirtMcGirt\_26, DmpstrDiver\_41, DoRead\_25, DocMcStuffins\_27, DoctorDiddles\_30, Donkeykong\_25, Dorothy\_25, DosHalletts\_26, Doug\_26, DrDrey\_31, Duke13\_43, Dumbo\_30, Dusk\_29, Easy2Say\_32, Eish\_25, EleanorGeorge\_25, Elite2014\_29, Elph10\_31, EmiMonkey\_25, Emma\_25, Emmaloid\_27, Emmina\_31, Empress\_26, Enby\_26, Eradicator\_25, Estave1\_23, Eureka\_30, FairyPath\_30, Fancypants\_25, Fastidio\_25, Filch\_31, Filuzino\_25, FireRed\_30, Firehouse51\_26, Flathead\_26, Florinda\_25, Flypotenuse\_28, FoghornLeghorn\_29, Frankie\_26, FreddyB\_25, Fruitloop\_25, GUmble\_25, Gage\_32, Gaia\_28, Galactic\_25, Gandolph\_25, Gator\_28, Gemini\_33, Geralt\_25, GigiOuiOui\_25, Girfales\_26, Girr\_25, Glexan\_28, Goku\_30, GoldenSpark\_32, Goldilocks\_31, Gonephishing\_41, GooberAzure\_32, Gorge\_25, Grimmer\_27, Guppsters\_26, Hamulus\_25, HanKaySha\_31, Hannaconda\_37, Harella\_29, Harley\_25, Hegedechwinu\_26, Henry\_31, Highbury\_31, Hlubikazi\_25, Holt\_31, Hoonter\_32, Hopey\_32, HufflyPuff\_29, IMpilo\_25, IbOuu\_26, Ibhubesu\_25, Icee\_29, Inca\_29, IrishSherpFalk\_26, Jabbawokkie\_31, JalFarm20\_27, James\_25, Jarcob\_25, JeTaime\_32, Jinglebell\_24, Jinglebell\_43, Job42\_28, JoeyJr\_25, Juice456\_27, Juniper1\_25, Kanye\_32, Karhdo\_25, KashFlow\_34, Kimberlium\_27, Kimchi\_32, KingMidas\_26, Kingsley\_23, Kostya\_31, Krakatau\_26, KristaRAM\_26, Latretium\_26, Leozinho\_26, Leperchaun\_25, LilMoolah\_25, Lilac\_32, Lilizi\_32, Lilpickle\_29, LittleE\_46, LittleShirley\_26, Lizziana\_25, Llama\_25, Llama\_44, Llij\_25, Lorde\_26, Lucky2013\_40, LunaStella\_25, MISSy\_29, MPhalcon\_29, MadamMonkfish\_30, Mahavrat\_25, Manda\_31, Mandlovu\_25, Mantra\_25, Maravista\_25, Marker\_26, Marshmallow\_30, Martik\_25, Mattes\_25, Maxxinista\_31, Melissauren88\_25, MiaZeal\_40, MilleniumForce\_26, Mindy\_30, Minerva\_46,

MinionDave\_26, Miniwave\_30, Minnie\_26, Misfit\_30, Misha28\_26, MisterCuddles\_25, Modragons\_25, Modragons\_43, Moldemort\_31, MooMoo\_22, Moonbeam\_26, Mosby\_29, Mova\_26, Mozy\_26, MulchExplorer\_28, Murica\_29, Murphy\_31, Mutaforma13\_25, Myrale\_30, Nala\_30, Nebkiss\_29, NelitzaMV\_30, NewHope4\_27, Nimbo\_25, Nimrod\_30, Nitzel\_26, Nivrat\_25, NoSleep\_31, NormanBulbieJr\_25, Ochi17\_42, OfUltron\_25, OfUltron\_44, Oksu\_26, Oksu\_44, OldBen\_25, OlympiaSaint\_25, Optimus\_44, OrionPax\_31, Ovechkin\_25, OwlsT2W\_27, PHappiness\_25, Pacc40\_25, Palpatine\_30, Paperbeatsrock\_32, Pat3\_29, Petra64142\_32, Phalconet\_25, Phanphagia\_22, Pharsalus\_31, Phasih\_26, PhatBacter\_30, Phatniss\_26, Phaux\_29, PhesterPotato\_25, Philus\_25, PhilipPhlop\_25, Phrux\_30, Piper2020\_27, Plumbus\_26, Policronamos\_30, Polka14\_26, Polo2Bam\_29, PopTart\_25, Porcelain\_39, Porky\_30, Priscilla\_25, Pumpkin\_32, Quallification\_31, QuickMath\_26, Quico\_26, Radiance\_25, Rakim\_31, Ramsey\_26, RedBird\_25, Renaud18\_25, Renaud18\_44, Rialto\_27, Rimmer\_29, RitaG\_25, Rita\_25, RiverMonster\_30, Rockne\_25, RockyHorror\_26, Royals2015\_25, Ruby\_25, SG4\_25, Saal\_25, Sabbb\_26, Saints25\_31, Sandalphon\_26, Sassafras\_25, Sassay\_29, SassyB\_25, Scottish\_26, Seabastian\_25, Seabastian\_44, Seagreen\_26, Shaboozey\_34, ShamWow\_30, Shauna1\_22, ShereKhan\_32, ShiLan\_25, ShowerHandel\_25, SiSi\_25, SilverChicken\_31, Simpliphy\_31, SimranZ1\_26, SirDuracell\_29, Slim\_27, SophKB\_30, Sotrice96\_30, Soul22\_29, Sparkdehlily\_25, Spikelee\_26, Spoonbill\_25, Squint\_39, Stank\_33, Stap\_26, Stark\_31, StellaBean\_30, StolenFromERC\_32, StormChicken\_30, Strokeseat\_25, SwagPiggett\_25, TChen\_23, TDanisky\_25, Taj\_25, Tarkin\_32, TeardropMSU\_29, Teaspoon\_31, Terminus\_30, Thimble\_30, Thresher\_31, Tomaszewski\_29, TootsiePop\_26, Tootsieroll\_26, Totinger\_26, Toto\_30, Traaww1\_28, Tuco\_31, Tweety\_26, Ukulele\_30, UncleRicky\_28, VRedHorse\_25, Veteran\_25, Violac\_26, Vivum\_25, Wachhund\_25, Wanda\_46, Wee\_26, Wee\_44, Whatsapiecost\_25, Whouxphf\_25, Wiggin\_33, WillSterrel\_26, Willez\_29, Xandras\_32, YassJohnny\_31, Yorick\_25, Youngblood\_30, Zapner\_30, Zerg\_25, Zizzle\_25, xkcd\_31,

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

- ArcusAngelus\_25, Blarby\_52, Chevrolet\_25, DeadP\_44, Drago\_26, Estave1\_41, Hades\_25, Jant\_25, LunaBlu\_26, PMC\_25, Starcevich\_26, Superphikiman\_40, Taj\_43,

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

- Cornie\_25,

### Summary by start number:

Start 36:

- Found in 13 of 384 ( 3.4% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Chevrolet\_25 (F1),

Start 41:

- Found in 1 of 384 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Starcevich\_26 (F1),

Start 47:

- Found in 21 of 384 ( 5.5% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 4.8% of time when present
- Phage (with cluster) where this start called: LunaBlu\_26 (F1),

#### Start 48:

- Found in 25 of 384 ( 6.5% ) of genes in pham
- Manual Annotations of this start: 3 of 347
- Called 12.0% of time when present
- Phage (with cluster) where this start called: Estave1\_41 (F1), Superphikiman\_40 (J), Taj\_43 (F1),

#### Start 49:

- Found in 5 of 384 ( 1.3% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 20.0% of time when present
- Phage (with cluster) where this start called: ArcusAngelus\_25 (F1),

#### Start 50:

- Found in 1 of 384 ( 0.3% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie\_25 (F5),

#### Start 52:

- Found in 383 of 384 ( 99.7% ) of genes in pham
- Manual Annotations of this start: 335 of 347
- Called 96.6% of time when present
- Phage (with cluster) where this start called: 244\_32 (E), ABCat\_29 (E), Adnama\_33 (E), Alexphander\_27 (F1), Aloeri\_26 (F1), AlpineSix\_26 (F1), AlpineSix\_44 (F1), Amao\_30 (E), AmericanBeauty\_32 (E), ArcusAngelus\_45 (F1), Argent26\_32 (E), Ariel\_40 (J), Asriel\_29 (E), Aubs\_25 (F1), Avani\_48 (F2), Awesomesauce\_26 (F1), BAKA\_43 (J), BaboJay\_29 (E), BadStone\_29 (E), Balomoji\_29 (E), Barbarian\_29 (E), Bask21\_30 (E), Batiatus\_25 (F1), Beakin\_26 (F1), Becksu\_30 (E), BigBubba\_31 (E), BilboSwaggins\_30 (E), Blarby\_33 (F), BlueCrab\_25 (F1), BobaPhett\_25 (F1), Bobi\_27 (F1), BodEinwohner17\_25 (F1), Brookers\_23 (F1), Bruin\_30 (E), Brushbloom\_27 (F1), Bubbles123\_26 (F1), Buck\_29 (E), BugsBunny\_28 (E), Bunker\_32 (DB), Burwell21\_25 (F1), BuzzLyseyear\_27 (F1), ByChance\_25 (F1), Byougenkin\_25 (F1), Cabrinians\_25 (F1), Cactus\_31 (E), CaptainTrips\_26 (F1), Che8\_26 (F1), CheesePuff\_28 (F1), Chevrolet\_48 (F1), ChickenDinner\_26 (F1), ChosenOne\_30 (E), ChotaBhai\_30 (E), Chuckly\_25 (F1), Cjw1\_30 (E), Coco12\_24 (F1), Command613\_31 (E), Contagion\_29 (E), Cookies\_30 (E), Cornucopia\_26 (F1), Courthouse\_40 (J), CrystalP\_30 (E), Czyszczonek1\_31 (E), DLane\_25 (F1), DRBy19\_25 (F1), DaWorst\_27 (F1), DaddyRickover\_25 (F1), Daenerys\_25 (F1), Daikon\_29 (E), Dante\_25 (F1), Deb65\_25 (F1), DillTech15\_25 (F1), DirtMcGirt\_26 (F1), DmpstrDiver\_41 (J), DoRead\_25 (F1), DocMcStuffins\_27 (F1), DoctorDiddles\_30 (E), Donkeykong\_25 (F1), Dorothy\_25 (F1), DosHalletts\_26 (F1), Doug\_26 (F1), DrDrey\_31 (E), Duke13\_43 (J), Dumbo\_30 (E), Dusk\_29 (E), Easy2Say\_32 (E), Eish\_25 (F1), EleanorGeorge\_25 (F1), Elite2014\_29 (E), Elph10\_31 (E), EmiMonkey\_25 (F1), Emma\_25 (F1), Emmaloid\_27 (F1), Emmina\_31 (E), Empress\_26 (F1), Enby\_26 (F1), Eradicator\_25 (F1), Estave1\_23 (F1), Eureka\_30 (E), FairyPath\_30 (E), Fancypants\_25 (F1), Fastidio\_25 (F1), Filch\_31 (E), Filuzino\_25 (F1), FireRed\_30 (E), Firehouse51\_26 (F1), Flathead\_26 (F1),

Florinda\_25 (F1), Flypotenuse\_28 (E), FoghornLeghorn\_29 (E), Frankie\_26 (F1), FreddyB\_25 (F1), Fruitloop\_25 (F1), GUmbie\_25 (F1), Gage\_32 (E), Gaia\_28 (X), Galactic\_25 (F1), Gandolph\_25 (F1), Gator\_28 (E), Gemini\_33 (E), Geralt\_25 (F1), GigiOuiOui\_25 (F1), Girafales\_26 (F1), Girr\_25 (F1), Glexan\_28 (E), Goku\_30 (E), GoldenSpark\_32 (E), Goldilocks\_31 (E), Gonephishing\_41 (J), GooberAzure\_32 (E), Gorge\_25 (F1), Grimmer\_27 (F1), Guppsters\_26 (F1), Hamulus\_25 (F1), HanKaySha\_31 (E), Hannaconda\_37 (J), Harella\_29 (E), Harley\_25 (F1), Hegedechwinu\_26 (F1), Henry\_31 (E), Highbury\_31 (E), Hlubikazi\_25 (F1), Holt\_31 (E), Hoonter\_32 (E), Hopey\_32 (E), HufflyPuff\_29 (E), IMpilo\_25 (F1), IbOuu\_26 (F1), Ibhubesi\_25 (F1), Icee\_29 (E), Inca\_29 (E), IrishSherpFalk\_26 (F1), Jabbawokkie\_31 (F2), JalFarm20\_27 (F1), James\_25 (F1), Jarcob\_25 (F1), JeTaimie\_32 (E), Jinglebell\_24 (F1), Jinglebell\_43 (F1), Job42\_28 (F1), JoeyJr\_25 (F1), Juice456\_27 (F1), Juniper1\_25 (F1), Kanye\_32 (E), Karhdo\_25 (F1), KashFlow\_34 (J), Kimberlium\_27 (F1), Kimchi\_32 (E), KingMidas\_26 (F1), Kingsley\_23 (F1), Kostya\_31 (E), Krakatau\_26 (F1), KristaRAM\_26 (F1), Latretium\_26 (F1), Leozinho\_26 (F1), Leperchaun\_25 (F1), LilMoolah\_25 (F1), Lilac\_32 (E), Lilizi\_32 (E), Lilpickle\_29 (E), LittleE\_46 (J), LittleShirley\_26 (F1), Lizziana\_25 (F1), Llama\_25 (F1), Llama\_44 (F1), Llij\_25 (F1), Lorde\_26 (F1), Lucky2013\_40 (J), LunaStella\_25 (F4), MISSy\_29 (E), MPhalcon\_29 (E), MadamMonkfish\_30 (E), Mahavrat\_25 (F1), Manda\_31 (E), Mandlovu\_25 (F1), Mantra\_25 (F1), Maravista\_25 (F1), Marker\_26 (F1), Marshmallow\_30 (E), Martik\_25 (F1), Mattes\_25 (F1), Maxxinista\_31 (E), Melissauren88\_25 (F1), MiaZeal\_40 (J), MilleniumForce\_26 (F1), Mindy\_30 (E), Minerva\_46 (J), MinionDave\_26 (F1), Miniwave\_30 (E), Minnie\_26 (F1), Misfit\_30 (E), Misha28\_26 (F1), MisterCuddles\_25 (F1), Modragons\_25 (F1), Modragons\_43 (F1), Moldemort\_31 (E), MooMoo\_22 (singleton), Moonbeam\_26 (F1), Mosby\_29 (E), Mova\_26 (F1), Mozy\_26 (F1), MulchExplorer\_28 (F1), Murica\_29 (E), Murphy\_31 (E), Mutaforma13\_25 (F1), Myrale\_30 (E), Nala\_30 (E), Nebkiss\_29 (X), NelitzaMV\_30 (E), NewHope4\_27 (F1), Nimbo\_25 (F1), Nimrod\_30 (E), Nitzel\_26 (F1), Nivrat\_25 (F1), NoSleep\_31 (E), NormanBulbieJr\_25 (F1), Ochi17\_42 (F1), OfUltron\_25 (F1), OfUltron\_44 (F1), Oksu\_26 (F1), Oksu\_44 (F1), OldBen\_25 (F1), OlympiaSaint\_25 (F1), Optimus\_44 (J), OrionPax\_31 (E), Ovechkin\_25 (F1), OwlsT2W\_27 (F1), PHappiness\_25 (F1), Pacc40\_25 (F1), Palpatine\_30 (E), Paperbeatsrock\_32 (E), Pat3\_29 (E), Petra64142\_32 (E), Phalconet\_25 (F1), Phanphagia\_22 (F1), Pharsalus\_31 (E), Phasih\_26 (F1), PhatBacter\_30 (E), Phatniss\_26 (F1), Phaux\_29 (E), PhesterPhotato\_25 (F1), Philus\_25 (F1), PhilipPhlop\_25 (F1), Phrux\_30 (E), Piper2020\_27 (F1), Plumbus\_26 (F1), Policronamos\_30 (E), Polka14\_26 (F1), Polo2Bam\_29 (F1), PopTart\_25 (F1), Porcelain\_39 (J), Porky\_30 (E), Priscilla\_25 (F1), Pumpkin\_32 (E), Quallification\_31 (E), QuickMath\_26 (F1), Quico\_26 (F1), Radiance\_25 (F1), Rakim\_31 (E), Ramsey\_26 (F1), RedBird\_25 (F1), Renaud18\_25 (F4), Renaud18\_44 (F4), Rialto\_27 (F1), Rimmer\_29 (E), RitaG\_25 (F1), Rita\_25 (F1), RiverMonster\_30 (E), Rockne\_25 (F1), RockyHorror\_26 (F1), Royals2015\_25 (F1), Ruby\_25 (F1), SG4\_25 (F1), Saal\_25 (F1), Sabbb\_26 (F1), Saints25\_31 (E), Sandalphon\_26 (F1), Sassafras\_25 (F1), Sassay\_29 (E), SassyB\_25 (F1), Scottish\_26 (F1), Seabastian\_25 (F1), Seabastian\_44 (F1), Seagreen\_26 (F1), Shaboozey\_34 (J), ShamWow\_30 (E), Shauna1\_22 (F1), ShereKhan\_32 (E), ShiLan\_25 (F1), ShowerHandel\_25 (F1), SiSi\_25 (F1), SilverChicken\_31 (F2), Simpliphy\_31 (E), SimranZ1\_26 (F1), SirDuracell\_29 (E), Slim\_27 (F1), SophKB\_30 (E), Sotrice96\_30 (E), Soul22\_29 (F2), Sparkdehlily\_25 (F1), Spikelee\_26 (F1), Spoonbill\_25 (F1), Squint\_39 (J), Stank\_33 (E), Stap\_26 (F1), Stark\_31 (E), StellaBean\_30 (E), StolenFromERC\_32 (E), StormChicken\_30 (E), Strokeseat\_25 (F1), SwagPigglett\_25 (F1), TChen\_23 (F4), TDanisky\_25 (F1), Taj\_25 (F1), Tarkin\_32 (E), TeardropMSU\_29 (E), Teaspoon\_31 (E), Terminus\_30 (E), Thimble\_30 (E), Thresher\_31 (E), Tomaszewski\_29 (E), TootsiePop\_26 (F1),

Tootsieroll\_26 (F1), Totinger\_26 (F1), Toto\_30 (E), Traaww1\_28 (E), Tuco\_31 (E), Tweety\_26 (F1), Ukulele\_30 (E), UncleRicky\_28 (F1), VRedHorse\_25 (F1), Veteran\_25 (F1), Violac\_26 (F1), Vivum\_25 (F1), Wachhund\_25 (F1), Wanda\_46 (J), Wee\_26 (F1), Wee\_44 (F1), Whatsapiecost\_25 (F1), Whouxphf\_25 (F1), Wiggin\_33 (E), WillSterrel\_26 (F1), Willez\_29 (E), Xandras\_32 (E), YassJohnny\_31 (E), Yorick\_25 (F1), Youngblood\_30 (E), Zapner\_30 (F2), Zerg\_25 (F1), Zizzle\_25 (F1), xkcd\_31 (E),

Start 53:

- Found in 17 of 384 ( 4.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Blarby\_52 (F),

Start 54:

- Found in 17 of 384 ( 4.4% ) of genes in pham
- Manual Annotations of this start: 1 of 347
- Called 5.9% of time when present
- Phage (with cluster) where this start called: DeadP\_44 (F1),

Start 55:

- Found in 165 of 384 ( 43.0% ) of genes in pham
- Manual Annotations of this start: 3 of 347
- Called 2.4% of time when present
- Phage (with cluster) where this start called: Drago\_26 (F1), Hades\_25 (F1), Jant\_25 (F1), PMC\_25 (F1),

### **Summary by clusters:**

There are 10 clusters represented in this pham: F1, F2, F4, F5, F, J, DB, singleton, X, E,

Info for manual annotations of cluster DB:

- Start number 52 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster E:

- Start number 52 was manually annotated 121 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 36 was manually annotated 1 time for cluster F1.
- Start number 41 was manually annotated 1 time for cluster F1.
- Start number 47 was manually annotated 1 time for cluster F1.
- Start number 48 was manually annotated 2 times for cluster F1.
- Start number 49 was manually annotated 1 time for cluster F1.
- Start number 52 was manually annotated 187 times for cluster F1.
- Start number 54 was manually annotated 1 time for cluster F1.
- Start number 55 was manually annotated 3 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 52 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:



- Start number 52 was manually annotated 4 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 50 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 48 was manually annotated 1 time for cluster J.
- Start number 52 was manually annotated 15 times for cluster J.

Info for manual annotations of cluster X:

- Start number 52 was manually annotated 2 times for cluster X.

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

Gene: 244\_32 Start: 29430, Stop: 29245, Start Num: 52

Candidate Starts for 244\_32:

(Start: 52 @29430 has 335 MA's), (57, 29382), (59, 29358), (60, 29346), (65, 29286),

Gene: ABCat\_29 Start: 29142, Stop: 28966, Start Num: 52

Candidate Starts for ABCat\_29:

(Start: 52 @29142 has 335 MA's), (59, 29070), (60, 29058), (65, 28998),

Gene: Adnama\_33 Start: 29657, Stop: 29472, Start Num: 52

Candidate Starts for Adnama\_33:

(Start: 52 @29657 has 335 MA's), (57, 29609), (59, 29585), (60, 29573), (65, 29513),

Gene: Alexphander\_27 Start: 25816, Stop: 25619, Start Num: 52

Candidate Starts for Alexphander\_27:

(Start: 52 @25816 has 335 MA's), (Start: 55 @25798 has 3 MA's), (60, 25720), (65, 25657),

Gene: Aloeri\_26 Start: 25884, Stop: 25687, Start Num: 52

Candidate Starts for Aloeri\_26:

(Start: 52 @25884 has 335 MA's), (Start: 55 @25866 has 3 MA's), (60, 25788), (65, 25725),

Gene: AlpineSix\_26 Start: 25513, Stop: 25313, Start Num: 52

Candidate Starts for AlpineSix\_26:

(43, 25555), (Start: 52 @25513 has 335 MA's), (Start: 55 @25495 has 3 MA's), (60, 25417), (65, 25354),

Gene: AlpineSix\_44 Start: 32759, Stop: 32565, Start Num: 52

Candidate Starts for AlpineSix\_44:

(Start: 48 @32777 has 3 MA's), (Start: 52 @32759 has 335 MA's), (53, 32753), (Start: 54 @32750 has 1 MA's), (57, 32690), (65, 32594), (66, 32573),

Gene: Amao\_30 Start: 28354, Stop: 28169, Start Num: 52

Candidate Starts for Amao\_30:

(Start: 52 @28354 has 335 MA's), (57, 28306), (59, 28282), (60, 28270), (65, 28210),

Gene: AmericanBeauty\_32 Start: 29137, Stop: 28952, Start Num: 52

Candidate Starts for AmericanBeauty\_32:

(Start: 52 @29137 has 335 MA's), (57, 29089), (59, 29065), (60, 29053), (65, 28993),

Gene: ArcusAngelus\_45 Start: 33793, Stop: 33599, Start Num: 52  
Candidate Starts for ArcusAngelus\_45:  
(Start: 48 @33811 has 3 MA's), (Start: 52 @33793 has 335 MA's), (53, 33787), (Start: 54 @33784 has 1 MA's), (57, 33724), (65, 33628), (66, 33607),

Gene: ArcusAngelus\_25 Start: 25301, Stop: 25080, Start Num: 49  
Candidate Starts for ArcusAngelus\_25:  
(28, 25421), (Start: 36 @25355 has 1 MA's), (Start: 49 @25301 has 1 MA's), (Start: 52 @25283 has 335 MA's), (59, 25184), (64, 25130), (65, 25109),

Gene: Argent26\_32 Start: 29140, Stop: 28955, Start Num: 52  
Candidate Starts for Argent26\_32:  
(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: Ariel\_40 Start: 34342, Stop: 34145, Start Num: 52  
Candidate Starts for Ariel\_40:  
(43, 34384), (Start: 48 @34360 has 3 MA's), (Start: 52 @34342 has 335 MA's), (Start: 55 @34324 has 3 MA's), (60, 34246),

Gene: Asriel\_29 Start: 28011, Stop: 27835, Start Num: 52  
Candidate Starts for Asriel\_29:  
(Start: 52 @28011 has 335 MA's), (57, 27963), (59, 27939), (60, 27927), (65, 27867),

Gene: Aubs\_25 Start: 25430, Stop: 25239, Start Num: 52  
Candidate Starts for Aubs\_25:  
(20, 25589), (22, 25586), (23, 25583), (Start: 52 @25430 has 335 MA's), (56, 25370), (57, 25361), (58, 25349), (62, 25313),

Gene: Avani\_48 Start: 31594, Stop: 31400, Start Num: 52  
Candidate Starts for Avani\_48:  
(Start: 48 @31612 has 3 MA's), (Start: 52 @31594 has 335 MA's), (53, 31588), (Start: 54 @31585 has 1 MA's), (57, 31525), (65, 31429), (66, 31408),

Gene: Awesomesauce\_26 Start: 25158, Stop: 24961, Start Num: 52  
Candidate Starts for Awesomesauce\_26:  
(Start: 52 @25158 has 335 MA's), (Start: 55 @25140 has 3 MA's), (60, 25062), (65, 24999),

Gene: BAKA\_43 Start: 37783, Stop: 37592, Start Num: 52  
Candidate Starts for BAKA\_43:  
(5, 38041), (6, 38029), (7, 38020), (8, 38008), (11, 37981), (14, 37966), (17, 37954), (18, 37951), (20, 37942), (22, 37939), (23, 37936), (Start: 52 @37783 has 335 MA's), (56, 37723), (57, 37714), (58, 37702), (62, 37666),

Gene: BaboJay\_29 Start: 28700, Stop: 28515, Start Num: 52  
Candidate Starts for BaboJay\_29:  
(Start: 52 @28700 has 335 MA's), (57, 28652), (59, 28628), (60, 28616), (65, 28556),

Gene: BadStone\_29 Start: 29142, Stop: 28966, Start Num: 52  
Candidate Starts for BadStone\_29:  
(Start: 52 @29142 has 335 MA's), (59, 29070), (60, 29058), (65, 28998),

Gene: Balomoji\_29 Start: 28876, Stop: 28700, Start Num: 52

Candidate Starts for Balomoji\_29:

(Start: 52 @28876 has 335 MA's), (57, 28828), (59, 28804), (60, 28792), (65, 28732),

Gene: Barbarian\_29 Start: 28011, Stop: 27835, Start Num: 52

Candidate Starts for Barbarian\_29:

(Start: 52 @28011 has 335 MA's), (57, 27963), (59, 27939), (60, 27927), (65, 27867),

Gene: Bask21\_30 Start: 28328, Stop: 28152, Start Num: 52

Candidate Starts for Bask21\_30:

(Start: 52 @28328 has 335 MA's), (59, 28256), (60, 28244), (65, 28184),

Gene: Batiatus\_25 Start: 25321, Stop: 25130, Start Num: 52

Candidate Starts for Batiatus\_25:

(1, 25801), (2, 25660), (3, 25636), (4, 25597), (9, 25543), (13, 25507), (16, 25498), (25, 25465), (26, 25462), (31, 25450), (33, 25444), (35, 25426), (Start: 52 @25321 has 335 MA's), (56, 25261), (57, 25252), (58, 25240), (62, 25204),

Gene: Beakin\_26 Start: 25173, Stop: 24976, Start Num: 52

Candidate Starts for Beakin\_26:

(Start: 52 @25173 has 335 MA's), (Start: 55 @25155 has 3 MA's), (60, 25077), (65, 25014),

Gene: Becksu\_30 Start: 29333, Stop: 29148, Start Num: 52

Candidate Starts for Becksu\_30:

(Start: 52 @29333 has 335 MA's), (57, 29285), (59, 29261), (60, 29249), (65, 29189),

Gene: BigBubba\_31 Start: 28913, Stop: 28728, Start Num: 52

Candidate Starts for BigBubba\_31:

(Start: 52 @28913 has 335 MA's), (57, 28865), (59, 28841), (60, 28829), (65, 28769),

Gene: BilboSwaggins\_30 Start: 29150, Stop: 28974, Start Num: 52

Candidate Starts for BilboSwaggins\_30:

(Start: 52 @29150 has 335 MA's), (57, 29102), (59, 29078), (60, 29066), (65, 29006),

Gene: Blarby\_33 Start: 25724, Stop: 25527, Start Num: 52

Candidate Starts for Blarby\_33:

(Start: 52 @25724 has 335 MA's), (Start: 55 @25706 has 3 MA's), (60, 25628), (65, 25565),

Gene: Blarby\_52 Start: 32425, Stop: 32237, Start Num: 53

Candidate Starts for Blarby\_52:

(Start: 48 @32449 has 3 MA's), (Start: 52 @32431 has 335 MA's), (53, 32425), (Start: 54 @32422 has 1 MA's), (57, 32362), (65, 32266), (66, 32245),

Gene: BlueCrab\_25 Start: 25459, Stop: 25262, Start Num: 52

Candidate Starts for BlueCrab\_25:

(Start: 52 @25459 has 335 MA's), (Start: 55 @25441 has 3 MA's), (60, 25363), (65, 25300),

Gene: BobaPhett\_25 Start: 25447, Stop: 25250, Start Num: 52

Candidate Starts for BobaPhett\_25:

(Start: 52 @25447 has 335 MA's), (Start: 55 @25429 has 3 MA's), (60, 25351), (65, 25288),

Gene: Bobi\_27 Start: 26029, Stop: 25838, Start Num: 52

Candidate Starts for Bobi\_27:

(Start: 52 @26029 has 335 MA's), (56, 25969), (58, 25948), (59, 25936), (62, 25912), (65, 25864),

Gene: BodEinwohner17\_25 Start: 25613, Stop: 25422, Start Num: 52  
Candidate Starts for BodEinwohner17\_25:  
(Start: 52 @25613 has 335 MA's), (56, 25553), (58, 25532), (59, 25520), (62, 25496), (65, 25448),

Gene: Brookers\_23 Start: 24248, Stop: 24048, Start Num: 52  
Candidate Starts for Brookers\_23:  
(Start: 52 @24248 has 335 MA's), (57, 24179), (58, 24167), (59, 24155), (62, 24131),

Gene: Bruin\_30 Start: 29170, Stop: 28985, Start Num: 52  
Candidate Starts for Bruin\_30:  
(Start: 52 @29170 has 335 MA's), (57, 29122), (59, 29098), (60, 29086), (65, 29026),

Gene: Brushbloom\_27 Start: 25324, Stop: 25133, Start Num: 52  
Candidate Starts for Brushbloom\_27:  
(Start: 52 @25324 has 335 MA's), (56, 25264), (58, 25243), (59, 25231), (62, 25207), (65, 25159),

Gene: Bubbles123\_26 Start: 25994, Stop: 25794, Start Num: 52  
Candidate Starts for Bubbles123\_26:  
(Start: 47 @26021 has 1 MA's), (Start: 52 @25994 has 335 MA's), (Start: 55 @25976 has 3 MA's), (60, 25898), (65, 25835),

Gene: Buck\_29 Start: 29106, Stop: 28921, Start Num: 52  
Candidate Starts for Buck\_29:  
(Start: 52 @29106 has 335 MA's), (57, 29058), (59, 29034), (60, 29022), (65, 28962),

Gene: BugsBunny\_28 Start: 28739, Stop: 28554, Start Num: 52  
Candidate Starts for BugsBunny\_28:  
(Start: 52 @28739 has 335 MA's), (57, 28691), (59, 28667), (60, 28655), (65, 28595),

Gene: Bunker\_32 Start: 28246, Stop: 28043, Start Num: 52  
Candidate Starts for Bunker\_32:  
(Start: 52 @28246 has 335 MA's),

Gene: Burwell21\_25 Start: 25481, Stop: 25284, Start Num: 52  
Candidate Starts for Burwell21\_25:  
(Start: 52 @25481 has 335 MA's), (Start: 55 @25463 has 3 MA's), (60, 25385), (65, 25322),

Gene: BuzzLyseyear\_27 Start: 25827, Stop: 25630, Start Num: 52  
Candidate Starts for BuzzLyseyear\_27:  
(Start: 52 @25827 has 335 MA's), (Start: 55 @25809 has 3 MA's), (60, 25731), (65, 25668),

Gene: ByChance\_25 Start: 25458, Stop: 25261, Start Num: 52  
Candidate Starts for ByChance\_25:  
(Start: 52 @25458 has 335 MA's), (Start: 55 @25440 has 3 MA's), (60, 25362), (65, 25299),

Gene: Byougenkin\_25 Start: 25308, Stop: 25117, Start Num: 52  
Candidate Starts for Byougenkin\_25:  
(Start: 52 @25308 has 335 MA's), (58, 25227), (59, 25215), (62, 25191),

Gene: Cabrinians\_25 Start: 25475, Stop: 25278, Start Num: 52  
Candidate Starts for Cabrinians\_25:  
(Start: 52 @25475 has 335 MA's), (Start: 55 @25457 has 3 MA's), (60, 25379), (65, 25316),

Gene: Cactus\_31 Start: 28361, Stop: 28185, Start Num: 52  
Candidate Starts for Cactus\_31:  
(Start: 52 @28361 has 335 MA's), (59, 28289), (60, 28277), (65, 28217),

Gene: CaptainTrips\_26 Start: 25686, Stop: 25495, Start Num: 52  
Candidate Starts for CaptainTrips\_26:  
(Start: 52 @25686 has 335 MA's), (56, 25626), (58, 25605), (59, 25593), (62, 25569), (65, 25521),

Gene: Che8\_26 Start: 25451, Stop: 25254, Start Num: 52  
Candidate Starts for Che8\_26:  
(Start: 52 @25451 has 335 MA's), (Start: 55 @25433 has 3 MA's), (60, 25355), (65, 25292),

Gene: Cheesepuff\_28 Start: 26296, Stop: 26093, Start Num: 52  
Candidate Starts for Cheesepuff\_28:  
(5, 26554), (6, 26542), (7, 26533), (8, 26521), (11, 26494), (14, 26479), (17, 26467), (18, 26464), (20, 26455), (22, 26452), (23, 26449), (37, 26368), (Start: 49 @26314 has 1 MA's), (Start: 52 @26296 has 335 MA's), (59, 26197), (64, 26143), (65, 26122),

Gene: Chevrolet\_25 Start: 25356, Stop: 25081, Start Num: 36  
Candidate Starts for Chevrolet\_25:  
(28, 25422), (Start: 36 @25356 has 1 MA's), (Start: 49 @25302 has 1 MA's), (Start: 52 @25284 has 335 MA's), (59, 25185), (64, 25131), (65, 25110),

Gene: Chevrolet\_48 Start: 33794, Stop: 33600, Start Num: 52  
Candidate Starts for Chevrolet\_48:  
(Start: 48 @33812 has 3 MA's), (Start: 52 @33794 has 335 MA's), (53, 33788), (Start: 54 @33785 has 1 MA's), (57, 33725), (65, 33629), (66, 33608),

Gene: ChickenDinner\_26 Start: 25884, Stop: 25687, Start Num: 52  
Candidate Starts for ChickenDinner\_26:  
(Start: 52 @25884 has 335 MA's), (Start: 55 @25866 has 3 MA's), (60, 25788), (65, 25725),

Gene: ChosenOne\_30 Start: 28358, Stop: 28173, Start Num: 52  
Candidate Starts for ChosenOne\_30:  
(Start: 52 @28358 has 335 MA's), (57, 28310), (59, 28286), (60, 28274), (65, 28214),

Gene: ChotaBhai\_30 Start: 28396, Stop: 28211, Start Num: 52  
Candidate Starts for ChotaBhai\_30:  
(Start: 52 @28396 has 335 MA's), (57, 28348), (59, 28324), (60, 28312), (65, 28252),

Gene: Chuckly\_25 Start: 25457, Stop: 25260, Start Num: 52  
Candidate Starts for Chuckly\_25:  
(Start: 52 @25457 has 335 MA's), (Start: 55 @25439 has 3 MA's), (60, 25361), (65, 25298),

Gene: Cjw1\_30 Start: 29910, Stop: 29725, Start Num: 52  
Candidate Starts for Cjw1\_30:  
(Start: 52 @29910 has 335 MA's), (57, 29862), (59, 29838), (60, 29826), (65, 29766),

Gene: Coco12\_24 Start: 24789, Stop: 24589, Start Num: 52  
Candidate Starts for Coco12\_24:  
(Start: 52 @24789 has 335 MA's), (57, 24720), (58, 24708), (59, 24696), (62, 24672),

Gene: Command613\_31 Start: 29417, Stop: 29241, Start Num: 52  
Candidate Starts for Command613\_31:  
(Start: 52 @29417 has 335 MA's), (59, 29345), (60, 29333), (65, 29273),

Gene: Contagion\_29 Start: 28654, Stop: 28469, Start Num: 52  
Candidate Starts for Contagion\_29:  
(Start: 52 @28654 has 335 MA's), (57, 28606), (59, 28582), (60, 28570), (65, 28510),

Gene: Cookies\_30 Start: 29019, Stop: 28834, Start Num: 52  
Candidate Starts for Cookies\_30:  
(Start: 52 @29019 has 335 MA's), (57, 28971), (59, 28947), (60, 28935), (65, 28875),

Gene: Cornie\_25 Start: 25696, Stop: 25502, Start Num: 50  
Candidate Starts for Cornie\_25:  
(Start: 50 @25696 has 1 MA's), (63, 25567), (65, 25531),

Gene: Cornucopia\_26 Start: 25343, Stop: 25146, Start Num: 52  
Candidate Starts for Cornucopia\_26:  
(Start: 52 @25343 has 335 MA's), (Start: 55 @25325 has 3 MA's), (60, 25247), (65, 25184),

Gene: Courthouse\_40 Start: 34746, Stop: 34549, Start Num: 52  
Candidate Starts for Courthouse\_40:  
(43, 34788), (Start: 48 @34764 has 3 MA's), (Start: 52 @34746 has 335 MA's), (Start: 55 @34728 has 3 MA's), (60, 34650),

Gene: CrystalP\_30 Start: 29150, Stop: 28974, Start Num: 52  
Candidate Starts for CrystalP\_30:  
(Start: 52 @29150 has 335 MA's), (57, 29102), (59, 29078), (60, 29066), (65, 29006),

Gene: Czyszczonek1\_31 Start: 28895, Stop: 28710, Start Num: 52  
Candidate Starts for Czyszczonek1\_31:  
(Start: 52 @28895 has 335 MA's), (57, 28847), (59, 28823), (60, 28811), (65, 28751),

Gene: DLane\_25 Start: 25281, Stop: 25084, Start Num: 52  
Candidate Starts for DLane\_25:  
(Start: 52 @25281 has 335 MA's), (Start: 55 @25263 has 3 MA's), (60, 25185), (65, 25122),

Gene: DRBy19\_25 Start: 25317, Stop: 25120, Start Num: 52  
Candidate Starts for DRBy19\_25:  
(Start: 52 @25317 has 335 MA's), (Start: 55 @25299 has 3 MA's), (60, 25221), (65, 25158),

Gene: DaWorst\_27 Start: 25823, Stop: 25626, Start Num: 52  
Candidate Starts for DaWorst\_27:  
(Start: 52 @25823 has 335 MA's), (Start: 55 @25805 has 3 MA's), (60, 25727), (65, 25664),

Gene: DaddyRickover\_25 Start: 25463, Stop: 25266, Start Num: 52  
Candidate Starts for DaddyRickover\_25:  
(Start: 52 @25463 has 335 MA's), (Start: 55 @25445 has 3 MA's), (60, 25367), (65, 25304),

Gene: Daenerys\_25 Start: 25291, Stop: 25094, Start Num: 52  
Candidate Starts for Daenerys\_25:  
(Start: 52 @25291 has 335 MA's), (Start: 55 @25273 has 3 MA's), (60, 25195), (65, 25132),

Gene: Daikon\_29 Start: 28888, Stop: 28712, Start Num: 52

Candidate Starts for Daikon\_29:

(Start: 52 @28888 has 335 MA's), (57, 28840), (59, 28816), (60, 28804), (65, 28744),

Gene: Dante\_25 Start: 25338, Stop: 25141, Start Num: 52

Candidate Starts for Dante\_25:

(Start: 47 @25365 has 1 MA's), (Start: 52 @25338 has 335 MA's), (Start: 55 @25320 has 3 MA's), (60, 25242), (65, 25179),

Gene: DeadP\_44 Start: 32119, Stop: 31934, Start Num: 54

Candidate Starts for DeadP\_44:

(Start: 48 @32146 has 3 MA's), (Start: 52 @32128 has 335 MA's), (53, 32122), (Start: 54 @32119 has 1 MA's), (57, 32059), (65, 31963), (66, 31942),

Gene: Deb65\_25 Start: 25288, Stop: 25091, Start Num: 52

Candidate Starts for Deb65\_25:

(Start: 52 @25288 has 335 MA's), (Start: 55 @25270 has 3 MA's), (60, 25192), (65, 25129),

Gene: DillTech15\_25 Start: 25310, Stop: 25113, Start Num: 52

Candidate Starts for DillTech15\_25:

(Start: 52 @25310 has 335 MA's), (Start: 55 @25292 has 3 MA's), (60, 25214), (65, 25151),

Gene: DirtMcgirt\_26 Start: 25114, Stop: 24917, Start Num: 52

Candidate Starts for DirtMcgirt\_26:

(Start: 52 @25114 has 335 MA's), (Start: 55 @25096 has 3 MA's), (60, 25018), (65, 24955),

Gene: DmpstrDiver\_41 Start: 37394, Stop: 37197, Start Num: 52

Candidate Starts for DmpstrDiver\_41:

(43, 37436), (Start: 48 @37412 has 3 MA's), (Start: 52 @37394 has 335 MA's), (Start: 55 @37376 has 3 MA's), (60, 37298),

Gene: DoRead\_25 Start: 25288, Stop: 25091, Start Num: 52

Candidate Starts for DoRead\_25:

(Start: 52 @25288 has 335 MA's), (Start: 55 @25270 has 3 MA's), (60, 25192), (65, 25129),

Gene: DocMcStuffins\_27 Start: 25884, Stop: 25687, Start Num: 52

Candidate Starts for DocMcStuffins\_27:

(Start: 52 @25884 has 335 MA's), (Start: 55 @25866 has 3 MA's), (60, 25788), (65, 25725),

Gene: DoctorDiddles\_30 Start: 28312, Stop: 28127, Start Num: 52

Candidate Starts for DoctorDiddles\_30:

(Start: 52 @28312 has 335 MA's), (57, 28264), (59, 28240), (60, 28228), (65, 28168),

Gene: Donkeykong\_25 Start: 25459, Stop: 25268, Start Num: 52

Candidate Starts for Donkeykong\_25:

(Start: 52 @25459 has 335 MA's), (56, 25399), (58, 25378), (59, 25366), (62, 25342), (65, 25294),

Gene: Dorothy\_25 Start: 25248, Stop: 25051, Start Num: 52

Candidate Starts for Dorothy\_25:

(Start: 52 @25248 has 335 MA's), (Start: 55 @25230 has 3 MA's), (60, 25152), (65, 25089),

Gene: DosHalletts\_26 Start: 25404, Stop: 25207, Start Num: 52

Candidate Starts for DosHalletts\_26:

(Start: 52 @25404 has 335 MA's), (Start: 55 @25386 has 3 MA's), (60, 25308), (65, 25245),

Gene: Doug\_26 Start: 25840, Stop: 25643, Start Num: 52

Candidate Starts for Doug\_26:

(Start: 52 @25840 has 335 MA's), (Start: 55 @25822 has 3 MA's), (60, 25744), (65, 25681),

Gene: DrDrey\_31 Start: 29642, Stop: 29457, Start Num: 52

Candidate Starts for DrDrey\_31:

(Start: 52 @29642 has 335 MA's), (57, 29594), (59, 29570), (60, 29558), (65, 29498),

Gene: Drago\_26 Start: 25095, Stop: 24916, Start Num: 55

Candidate Starts for Drago\_26:

(Start: 52 @25113 has 335 MA's), (Start: 55 @25095 has 3 MA's), (60, 25017), (65, 24954),

Gene: Duke13\_43 Start: 37672, Stop: 37481, Start Num: 52

Candidate Starts for Duke13\_43:

(27, 37813), (Start: 52 @37672 has 335 MA's), (56, 37612), (57, 37603), (58, 37591), (62, 37555),

Gene: Dumbo\_30 Start: 28617, Stop: 28432, Start Num: 52

Candidate Starts for Dumbo\_30:

(Start: 52 @28617 has 335 MA's), (57, 28569), (59, 28545), (60, 28533), (65, 28473),

Gene: Dusk\_29 Start: 28802, Stop: 28626, Start Num: 52

Candidate Starts for Dusk\_29:

(Start: 52 @28802 has 335 MA's), (59, 28730), (60, 28718), (65, 28658),

Gene: Easy2Say\_32 Start: 30400, Stop: 30215, Start Num: 52

Candidate Starts for Easy2Say\_32:

(Start: 52 @30400 has 335 MA's), (57, 30352), (59, 30328), (60, 30316), (65, 30256),

Gene: Eish\_25 Start: 25428, Stop: 25231, Start Num: 52

Candidate Starts for Eish\_25:

(Start: 52 @25428 has 335 MA's), (Start: 55 @25410 has 3 MA's), (60, 25332), (65, 25269),

Gene: EleanorGeorge\_25 Start: 25592, Stop: 25404, Start Num: 52

Candidate Starts for EleanorGeorge\_25:

(20, 25748), (22, 25745), (23, 25742), (Start: 36 @25661 has 1 MA's), (45, 25631), (Start: 47 @25619 has 1 MA's), (Start: 52 @25592 has 335 MA's), (59, 25511),

Gene: Elite2014\_29 Start: 28357, Stop: 28172, Start Num: 52

Candidate Starts for Elite2014\_29:

(Start: 52 @28357 has 335 MA's), (57, 28309), (59, 28285), (60, 28273), (65, 28213),

Gene: Elph10\_31 Start: 28620, Stop: 28435, Start Num: 52

Candidate Starts for Elph10\_31:

(Start: 52 @28620 has 335 MA's), (57, 28572), (59, 28548), (60, 28536), (65, 28476),

Gene: EmiMonkey\_25 Start: 25362, Stop: 25165, Start Num: 52

Candidate Starts for EmiMonkey\_25:

(Start: 52 @25362 has 335 MA's), (Start: 55 @25344 has 3 MA's), (60, 25266), (65, 25203),

Gene: Emma\_25 Start: 25502, Stop: 25305, Start Num: 52

Candidate Starts for Emma\_25:



(Start: 52 @25502 has 335 MA's), (Start: 55 @25484 has 3 MA's), (60, 25406), (65, 25343),

Gene: Emmaloid\_27 Start: 25209, Stop: 25012, Start Num: 52

Candidate Starts for Emmaloid\_27:

(Start: 52 @25209 has 335 MA's), (Start: 55 @25191 has 3 MA's), (60, 25113), (65, 25050),

Gene: Emmina\_31 Start: 28978, Stop: 28793, Start Num: 52

Candidate Starts for Emmina\_31:

(Start: 52 @28978 has 335 MA's), (57, 28930), (59, 28906), (60, 28894), (65, 28834),

Gene: Empress\_26 Start: 26632, Stop: 26441, Start Num: 52

Candidate Starts for Empress\_26:

(Start: 52 @26632 has 335 MA's), (56, 26572), (58, 26551), (59, 26539), (62, 26515), (65, 26467),

Gene: Enby\_26 Start: 25113, Stop: 24916, Start Num: 52

Candidate Starts for Enby\_26:

(Start: 52 @25113 has 335 MA's), (Start: 55 @25095 has 3 MA's), (60, 25017), (65, 24954),

Gene: Eradicator\_25 Start: 25336, Stop: 25139, Start Num: 52

Candidate Starts for Eradicator\_25:

(Start: 52 @25336 has 335 MA's), (Start: 55 @25318 has 3 MA's), (60, 25240), (65, 25177),

Gene: Estave1\_41 Start: 31449, Stop: 31237, Start Num: 48

Candidate Starts for Estave1\_41:

(Start: 48 @31449 has 3 MA's), (Start: 52 @31431 has 335 MA's), (53, 31425), (Start: 54 @31422 has 1 MA's), (57, 31362), (65, 31266), (66, 31245),

Gene: Estave1\_23 Start: 24737, Stop: 24552, Start Num: 52

Candidate Starts for Estave1\_23:

(19, 24899), (25, 24878), (27, 24875), (Start: 36 @24806 has 1 MA's), (45, 24776), (Start: 47 @24764 has 1 MA's), (Start: 52 @24737 has 335 MA's),

Gene: Eureka\_30 Start: 29134, Stop: 28958, Start Num: 52

Candidate Starts for Eureka\_30:

(Start: 52 @29134 has 335 MA's), (59, 29062), (60, 29050), (65, 28990),

Gene: FairyPath\_30 Start: 29346, Stop: 29170, Start Num: 52

Candidate Starts for FairyPath\_30:

(Start: 52 @29346 has 335 MA's), (59, 29274), (60, 29262), (65, 29202),

Gene: Fancypants\_25 Start: 25296, Stop: 25099, Start Num: 52

Candidate Starts for Fancypants\_25:

(Start: 52 @25296 has 335 MA's), (Start: 55 @25278 has 3 MA's), (60, 25200), (65, 25137),

Gene: Fastidio\_25 Start: 25419, Stop: 25222, Start Num: 52

Candidate Starts for Fastidio\_25:

(Start: 52 @25419 has 335 MA's), (Start: 55 @25401 has 3 MA's), (60, 25323), (65, 25260),

Gene: Filch\_31 Start: 28908, Stop: 28723, Start Num: 52

Candidate Starts for Filch\_31:

(Start: 52 @28908 has 335 MA's), (57, 28860), (59, 28836), (60, 28824), (65, 28764),

Gene: Filuzino\_25 Start: 25285, Stop: 25088, Start Num: 52

Candidate Starts for Filuzino\_25:

(Start: 52 @25285 has 335 MA's), (Start: 55 @25267 has 3 MA's), (60, 25189), (65, 25126),

Gene: FireRed\_30 Start: 29178, Stop: 28993, Start Num: 52

Candidate Starts for FireRed\_30:

(Start: 52 @29178 has 335 MA's), (57, 29130), (59, 29106), (60, 29094), (65, 29034),

Gene: Firehouse51\_26 Start: 26007, Stop: 25810, Start Num: 52

Candidate Starts for Firehouse51\_26:

(Start: 52 @26007 has 335 MA's), (Start: 55 @25989 has 3 MA's), (60, 25911), (65, 25848),

Gene: Flathead\_26 Start: 25308, Stop: 25117, Start Num: 52

Candidate Starts for Flathead\_26:

(Start: 52 @25308 has 335 MA's), (56, 25248), (58, 25227), (59, 25215), (62, 25191), (65, 25143),

Gene: Florinda\_25 Start: 25306, Stop: 25109, Start Num: 52

Candidate Starts for Florinda\_25:

(Start: 52 @25306 has 335 MA's), (Start: 55 @25288 has 3 MA's), (60, 25210), (65, 25147),

Gene: Flypotenuse\_28 Start: 28746, Stop: 28561, Start Num: 52

Candidate Starts for Flypotenuse\_28:

(Start: 52 @28746 has 335 MA's), (57, 28698), (59, 28674), (60, 28662), (65, 28602),

Gene: FoghornLeghorn\_29 Start: 28654, Stop: 28469, Start Num: 52

Candidate Starts for FoghornLeghorn\_29:

(Start: 52 @28654 has 335 MA's), (57, 28606), (59, 28582), (60, 28570), (65, 28510),

Gene: Frankie\_26 Start: 25328, Stop: 25137, Start Num: 52

Candidate Starts for Frankie\_26:

(6, 25565), (7, 25556), (10, 25526), (11, 25517), (12, 25508), (17, 25490), (20, 25478), (23, 25472), (29, 25457), (51, 25343), (Start: 52 @25328 has 335 MA's), (65, 25163),

Gene: FreddyB\_25 Start: 25484, Stop: 25287, Start Num: 52

Candidate Starts for FreddyB\_25:

(Start: 52 @25484 has 335 MA's), (Start: 55 @25466 has 3 MA's), (60, 25388), (65, 25325),

Gene: Fruitloop\_25 Start: 25479, Stop: 25282, Start Num: 52

Candidate Starts for Fruitloop\_25:

(Start: 52 @25479 has 335 MA's), (Start: 55 @25461 has 3 MA's), (60, 25383), (65, 25320),

Gene: GUmbie\_25 Start: 25296, Stop: 25099, Start Num: 52

Candidate Starts for GUmbie\_25:

(Start: 52 @25296 has 335 MA's), (Start: 55 @25278 has 3 MA's), (60, 25200), (65, 25137),

Gene: Gage\_32 Start: 29140, Stop: 28955, Start Num: 52

Candidate Starts for Gage\_32:

(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: Gaia\_28 Start: 27832, Stop: 27635, Start Num: 52

Candidate Starts for Gaia\_28:

(Start: 52 @27832 has 335 MA's), (Start: 55 @27814 has 3 MA's), (60, 27736), (65, 27673),

Gene: Galactic\_25 Start: 25267, Stop: 25076, Start Num: 52

Candidate Starts for Galactic\_25:

(1, 25747), (2, 25606), (3, 25582), (4, 25543), (9, 25489), (13, 25453), (16, 25444), (25, 25411), (26, 25408), (31, 25396), (33, 25390), (35, 25372), (Start: 52 @25267 has 335 MA's), (56, 25207), (57, 25198), (58, 25186), (62, 25150),

Gene: Gandolph\_25 Start: 25389, Stop: 25192, Start Num: 52

Candidate Starts for Gandolph\_25:

(Start: 52 @25389 has 335 MA's), (Start: 55 @25371 has 3 MA's), (60, 25293), (65, 25230),

Gene: Gator\_28 Start: 28758, Stop: 28582, Start Num: 52

Candidate Starts for Gator\_28:

(Start: 52 @28758 has 335 MA's), (59, 28686), (60, 28674), (65, 28614),

Gene: Gemini\_33 Start: 29657, Stop: 29472, Start Num: 52

Candidate Starts for Gemini\_33:

(Start: 52 @29657 has 335 MA's), (57, 29609), (59, 29585), (60, 29573), (65, 29513),

Gene: Geralt\_25 Start: 25287, Stop: 25090, Start Num: 52

Candidate Starts for Geralt\_25:

(Start: 52 @25287 has 335 MA's), (Start: 55 @25269 has 3 MA's), (60, 25191), (65, 25128),

Gene: GigiOuiOui\_25 Start: 25420, Stop: 25223, Start Num: 52

Candidate Starts for GigiOuiOui\_25:

(Start: 52 @25420 has 335 MA's), (Start: 55 @25402 has 3 MA's), (60, 25324), (65, 25261),

Gene: Girafales\_26 Start: 25114, Stop: 24917, Start Num: 52

Candidate Starts for Girafales\_26:

(Start: 52 @25114 has 335 MA's), (Start: 55 @25096 has 3 MA's), (60, 25018), (65, 24955),

Gene: Girr\_25 Start: 25258, Stop: 25067, Start Num: 52

Candidate Starts for Girr\_25:

(Start: 52 @25258 has 335 MA's), (56, 25198), (58, 25177), (59, 25165), (62, 25141), (65, 25093),

Gene: Glexan\_28 Start: 28746, Stop: 28561, Start Num: 52

Candidate Starts for Glexan\_28:

(Start: 52 @28746 has 335 MA's), (57, 28698), (59, 28674), (60, 28662), (65, 28602),

Gene: Goku\_30 Start: 28863, Stop: 28687, Start Num: 52

Candidate Starts for Goku\_30:

(Start: 52 @28863 has 335 MA's), (59, 28791), (60, 28779), (65, 28719),

Gene: GoldenSpark\_32 Start: 29140, Stop: 28955, Start Num: 52

Candidate Starts for GoldenSpark\_32:

(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: Goldilocks\_31 Start: 28560, Stop: 28375, Start Num: 52

Candidate Starts for Goldilocks\_31:

(Start: 52 @28560 has 335 MA's), (57, 28512), (59, 28488), (60, 28476), (65, 28416),

Gene: Gonephishing\_41 Start: 35953, Stop: 35762, Start Num: 52

Candidate Starts for Gonephishing\_41:

(Start: 52 @35953 has 335 MA's), (56, 35893), (58, 35872), (59, 35860), (62, 35836), (65, 35788),

Gene: GooberAzure\_32 Start: 29140, Stop: 28955, Start Num: 52  
Candidate Starts for GooberAzure\_32:  
(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: Gorge\_25 Start: 25451, Stop: 25254, Start Num: 52  
Candidate Starts for Gorge\_25:  
(Start: 52 @25451 has 335 MA's), (Start: 55 @25433 has 3 MA's), (60, 25355), (65, 25292),

Gene: Grimmer\_27 Start: 26039, Stop: 25851, Start Num: 52  
Candidate Starts for Grimmer\_27:  
(5, 26294), (6, 26282), (7, 26273), (8, 26261), (11, 26234), (14, 26219), (17, 26207), (18, 26204), (20, 26195), (22, 26192), (23, 26189), (Start: 36 @26108 has 1 MA's), (45, 26078), (Start: 47 @26066 has 1 MA's), (Start: 52 @26039 has 335 MA's), (59, 25958),

Gene: Guppsters\_26 Start: 25561, Stop: 25364, Start Num: 52  
Candidate Starts for Guppsters\_26:  
(Start: 52 @25561 has 335 MA's), (Start: 55 @25543 has 3 MA's), (60, 25465), (65, 25402),

Gene: Hades\_25 Start: 25363, Stop: 25184, Start Num: 55  
Candidate Starts for Hades\_25:  
(Start: 52 @25381 has 335 MA's), (Start: 55 @25363 has 3 MA's), (60, 25285), (65, 25222),

Gene: Hamulus\_25 Start: 25445, Stop: 25245, Start Num: 52  
Candidate Starts for Hamulus\_25:  
(Start: 52 @25445 has 335 MA's), (Start: 55 @25427 has 3 MA's), (60, 25349), (65, 25286),

Gene: HanKaySha\_31 Start: 28892, Stop: 28707, Start Num: 52  
Candidate Starts for HanKaySha\_31:  
(Start: 52 @28892 has 335 MA's), (57, 28844), (59, 28820), (60, 28808), (65, 28748),

Gene: Hannaconda\_37 Start: 33327, Stop: 33133, Start Num: 52  
Candidate Starts for Hannaconda\_37:  
(Start: 52 @33327 has 335 MA's), (57, 33258), (58, 33246), (59, 33234), (62, 33210), (65, 33162),

Gene: Harella\_29 Start: 29262, Stop: 29077, Start Num: 52  
Candidate Starts for Harella\_29:  
(Start: 52 @29262 has 335 MA's), (57, 29214), (59, 29190), (60, 29178), (65, 29118),

Gene: Harley\_25 Start: 25240, Stop: 25037, Start Num: 52  
Candidate Starts for Harley\_25:  
(28, 25378), (Start: 36 @25312 has 1 MA's), (Start: 49 @25258 has 1 MA's), (Start: 52 @25240 has 335 MA's), (59, 25141), (64, 25087), (65, 25066),

Gene: Hegedechwinu\_26 Start: 25289, Stop: 25098, Start Num: 52  
Candidate Starts for Hegedechwinu\_26:  
(Start: 52 @25289 has 335 MA's), (56, 25229), (58, 25208), (59, 25196), (62, 25172), (65, 25124),

Gene: Henry\_31 Start: 29150, Stop: 28974, Start Num: 52  
Candidate Starts for Henry\_31:  
(Start: 52 @29150 has 335 MA's), (57, 29102), (59, 29078), (60, 29066), (65, 29006),

Gene: Highbury\_31 Start: 28808, Stop: 28623, Start Num: 52  
Candidate Starts for Highbury\_31:

(Start: 52 @28808 has 335 MA's), (57, 28760), (59, 28736), (60, 28724), (65, 28664),

Gene: Hlubikazi\_25 Start: 25548, Stop: 25351, Start Num: 52

Candidate Starts for Hlubikazi\_25:

(Start: 52 @25548 has 335 MA's), (Start: 55 @25530 has 3 MA's), (60, 25452), (65, 25389),

Gene: Holt\_31 Start: 28427, Stop: 28242, Start Num: 52

Candidate Starts for Holt\_31:

(Start: 52 @28427 has 335 MA's), (57, 28379), (59, 28355), (60, 28343), (65, 28283),

Gene: Hoonter\_32 Start: 29140, Stop: 28955, Start Num: 52

Candidate Starts for Hoonter\_32:

(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: Hokey\_32 Start: 29427, Stop: 29242, Start Num: 52

Candidate Starts for Hokey\_32:

(Start: 52 @29427 has 335 MA's), (57, 29379), (59, 29355), (60, 29343), (65, 29283),

Gene: HufflyPuff\_29 Start: 29134, Stop: 28949, Start Num: 52

Candidate Starts for HufflyPuff\_29:

(Start: 52 @29134 has 335 MA's), (57, 29086), (59, 29062), (60, 29050), (65, 28990),

Gene: IMpilo\_25 Start: 25354, Stop: 25157, Start Num: 52

Candidate Starts for IMpilo\_25:

(Start: 52 @25354 has 335 MA's), (Start: 55 @25336 has 3 MA's), (60, 25258), (65, 25195),

Gene: IbOuu\_26 Start: 25292, Stop: 25095, Start Num: 52

Candidate Starts for IbOuu\_26:

(Start: 52 @25292 has 335 MA's), (Start: 55 @25274 has 3 MA's), (60, 25196), (65, 25133),

Gene: Ibhubesi\_25 Start: 25247, Stop: 25044, Start Num: 52

Candidate Starts for Ibhubesi\_25:

(28, 25385), (Start: 36 @25319 has 1 MA's), (Start: 49 @25265 has 1 MA's), (Start: 52 @25247 has 335 MA's), (59, 25148), (64, 25094), (65, 25073),

Gene: Icee\_29 Start: 28808, Stop: 28632, Start Num: 52

Candidate Starts for Icee\_29:

(Start: 52 @28808 has 335 MA's), (59, 28736), (60, 28724), (65, 28664),

Gene: Inca\_29 Start: 27829, Stop: 27644, Start Num: 52

Candidate Starts for Inca\_29:

(Start: 52 @27829 has 335 MA's), (57, 27781), (59, 27757), (60, 27745), (65, 27685),

Gene: IrishSherpFalk\_26 Start: 26630, Stop: 26439, Start Num: 52

Candidate Starts for IrishSherpFalk\_26:

(19, 26795), (25, 26774), (26, 26771), (31, 26759), (33, 26753), (35, 26735), (Start: 52 @26630 has 335 MA's), (56, 26570), (57, 26561), (58, 26549), (62, 26513),

Gene: Jabbawokkie\_31 Start: 25518, Stop: 25336, Start Num: 52

Candidate Starts for Jabbawokkie\_31:

(13, 25701), (15, 25698), (16, 25692), (21, 25674), (Start: 36 @25587 has 1 MA's), (45, 25557), (Start: 47 @25545 has 1 MA's), (Start: 52 @25518 has 335 MA's), (59, 25440),

Gene: JalFarm20\_27 Start: 25810, Stop: 25619, Start Num: 52  
Candidate Starts for JalFarm20\_27:  
(Start: 52 @25810 has 335 MA's), (56, 25750), (58, 25729), (59, 25717), (62, 25693), (65, 25645),

Gene: James\_25 Start: 25447, Stop: 25250, Start Num: 52  
Candidate Starts for James\_25:  
(Start: 52 @25447 has 335 MA's), (Start: 55 @25429 has 3 MA's), (60, 25351), (65, 25288),

Gene: Jant\_25 Start: 25424, Stop: 25245, Start Num: 55  
Candidate Starts for Jant\_25:  
(Start: 52 @25442 has 335 MA's), (Start: 55 @25424 has 3 MA's), (60, 25346), (65, 25283),

Gene: Jacob\_25 Start: 25482, Stop: 25285, Start Num: 52  
Candidate Starts for Jacob\_25:  
(Start: 52 @25482 has 335 MA's), (Start: 55 @25464 has 3 MA's), (60, 25386), (65, 25323),

Gene: JeTaime\_32 Start: 29951, Stop: 29766, Start Num: 52  
Candidate Starts for JeTaime\_32:  
(Start: 52 @29951 has 335 MA's), (57, 29903), (59, 29879), (60, 29867), (65, 29807),

Gene: Jinglebell\_24 Start: 25512, Stop: 25312, Start Num: 52  
Candidate Starts for Jinglebell\_24:  
(43, 25554), (Start: 52 @25512 has 335 MA's), (Start: 55 @25494 has 3 MA's), (60, 25416), (65, 25353),

Gene: Jinglebell\_43 Start: 32758, Stop: 32564, Start Num: 52  
Candidate Starts for Jinglebell\_43:  
(Start: 48 @32776 has 3 MA's), (Start: 52 @32758 has 335 MA's), (53, 32752), (Start: 54 @32749 has 1 MA's), (57, 32689), (65, 32593), (66, 32572),

Gene: Job42\_28 Start: 27005, Stop: 26865, Start Num: 52  
Candidate Starts for Job42\_28:  
(Start: 47 @27032 has 1 MA's), (Start: 52 @27005 has 335 MA's), (Start: 55 @26987 has 3 MA's), (60, 26909),

Gene: JoeyJr\_25 Start: 25459, Stop: 25262, Start Num: 52  
Candidate Starts for JoeyJr\_25:  
(Start: 52 @25459 has 335 MA's), (Start: 55 @25441 has 3 MA's), (60, 25363), (65, 25300),

Gene: Juice456\_27 Start: 26560, Stop: 26369, Start Num: 52  
Candidate Starts for Juice456\_27:  
(Start: 52 @26560 has 335 MA's), (56, 26500), (58, 26479), (59, 26467), (62, 26443), (65, 26395),

Gene: Juniper1\_25 Start: 25272, Stop: 25072, Start Num: 52  
Candidate Starts for Juniper1\_25:  
(Start: 47 @25299 has 1 MA's), (Start: 52 @25272 has 335 MA's), (Start: 55 @25254 has 3 MA's), (60, 25176), (65, 25113),

Gene: Kanye\_32 Start: 30136, Stop: 29951, Start Num: 52  
Candidate Starts for Kanye\_32:  
(Start: 52 @30136 has 335 MA's), (57, 30088), (59, 30064), (60, 30052), (65, 29992),

Gene: Karhdo\_25 Start: 25422, Stop: 25225, Start Num: 52

Candidate Starts for Karhdo\_25:

(Start: 52 @25422 has 335 MA's), (Start: 55 @25404 has 3 MA's), (60, 25326), (65, 25263),

Gene: KashFlow\_34 Start: 32948, Stop: 32754, Start Num: 52

Candidate Starts for KashFlow\_34:

(Start: 52 @32948 has 335 MA's), (57, 32879), (58, 32867), (59, 32855), (62, 32831), (65, 32783),

Gene: Kimberlium\_27 Start: 26414, Stop: 26217, Start Num: 52

Candidate Starts for Kimberlium\_27:

(Start: 47 @26441 has 1 MA's), (Start: 52 @26414 has 335 MA's), (Start: 55 @26396 has 3 MA's), (60, 26318), (65, 26255),

Gene: Kimchi\_32 Start: 29143, Stop: 28958, Start Num: 52

Candidate Starts for Kimchi\_32:

(Start: 52 @29143 has 335 MA's), (57, 29095), (59, 29071), (60, 29059), (65, 28999),

Gene: KingMidas\_26 Start: 26591, Stop: 26394, Start Num: 52

Candidate Starts for KingMidas\_26:

(Start: 52 @26591 has 335 MA's), (Start: 55 @26573 has 3 MA's), (60, 26495), (65, 26432),

Gene: Kingsley\_23 Start: 24253, Stop: 24053, Start Num: 52

Candidate Starts for Kingsley\_23:

(Start: 52 @24253 has 335 MA's), (57, 24184), (58, 24172), (59, 24160), (62, 24136),

Gene: Kostya\_31 Start: 29151, Stop: 28975, Start Num: 52

Candidate Starts for Kostya\_31:

(Start: 52 @29151 has 335 MA's), (57, 29103), (59, 29079), (60, 29067), (65, 29007),

Gene: Krakatau\_26 Start: 25968, Stop: 25777, Start Num: 52

Candidate Starts for Krakatau\_26:

(1, 26448), (2, 26307), (3, 26283), (4, 26244), (9, 26190), (13, 26154), (16, 26145), (25, 26112), (26, 26109), (31, 26097), (33, 26091), (35, 26073), (Start: 52 @25968 has 335 MA's), (56, 25908), (57, 25899), (58, 25887), (62, 25851),

Gene: KristaRAM\_26 Start: 26121, Stop: 25924, Start Num: 52

Candidate Starts for KristaRAM\_26:

(Start: 52 @26121 has 335 MA's), (Start: 55 @26103 has 3 MA's), (60, 26025), (65, 25962),

Gene: Latretium\_26 Start: 25982, Stop: 25785, Start Num: 52

Candidate Starts for Latretium\_26:

(44, 26024), (Start: 52 @25982 has 335 MA's), (Start: 55 @25964 has 3 MA's), (60, 25886), (65, 25823),

Gene: Leozinho\_26 Start: 25135, Stop: 24938, Start Num: 52

Candidate Starts for Leozinho\_26:

(Start: 52 @25135 has 335 MA's), (Start: 55 @25117 has 3 MA's), (60, 25039), (65, 24976),

Gene: Leperchaun\_25 Start: 25363, Stop: 25166, Start Num: 52

Candidate Starts for Leperchaun\_25:

(Start: 52 @25363 has 335 MA's), (Start: 55 @25345 has 3 MA's), (60, 25267), (65, 25204),

Gene: LilMoolah\_25 Start: 25581, Stop: 25384, Start Num: 52

Candidate Starts for LilMoolah\_25:

(Start: 52 @25581 has 335 MA's), (Start: 55 @25563 has 3 MA's), (60, 25485), (65, 25422),

Gene: Lilac\_32 Start: 28647, Stop: 28462, Start Num: 52

Candidate Starts for Lilac\_32:

(Start: 52 @28647 has 335 MA's), (57, 28599), (59, 28575), (60, 28563), (65, 28503),

Gene: Lilizi\_32 Start: 28855, Stop: 28670, Start Num: 52

Candidate Starts for Lilizi\_32:

(Start: 52 @28855 has 335 MA's), (57, 28807), (59, 28783), (60, 28771), (65, 28711),

Gene: Lilpickle\_29 Start: 28357, Stop: 28172, Start Num: 52

Candidate Starts for Lilpickle\_29:

(Start: 52 @28357 has 335 MA's), (57, 28309), (59, 28285), (60, 28273), (65, 28213),

Gene: LittleE\_46 Start: 38863, Stop: 38672, Start Num: 52

Candidate Starts for LittleE\_46:

(5, 39121), (6, 39109), (7, 39100), (8, 39088), (11, 39061), (14, 39046), (17, 39034), (18, 39031), (20, 39022), (22, 39019), (23, 39016), (Start: 52 @38863 has 335 MA's), (56, 38803), (57, 38794), (58, 38782), (62, 38746),

Gene: LittleShirley\_26 Start: 25229, Stop: 25032, Start Num: 52

Candidate Starts for LittleShirley\_26:

(Start: 52 @25229 has 335 MA's), (Start: 55 @25211 has 3 MA's), (60, 25133), (65, 25070),

Gene: Lizziana\_25 Start: 25456, Stop: 25259, Start Num: 52

Candidate Starts for Lizziana\_25:

(Start: 52 @25456 has 335 MA's), (Start: 55 @25438 has 3 MA's), (60, 25360), (65, 25297),

Gene: Llama\_44 Start: 32756, Stop: 32562, Start Num: 52

Candidate Starts for Llama\_44:

(Start: 48 @32774 has 3 MA's), (Start: 52 @32756 has 335 MA's), (53, 32750), (Start: 54 @32747 has 1 MA's), (57, 32687), (65, 32591), (66, 32570),

Gene: Llama\_25 Start: 25512, Stop: 25312, Start Num: 52

Candidate Starts for Llama\_25:

(30, 25644), (32, 25638), (34, 25620), (38, 25578), (39, 25575), (42, 25569), (46, 25545), (Start: 52 @25512 has 335 MA's), (Start: 55 @25494 has 3 MA's), (60, 25416), (65, 25353),

Gene: Llij\_25 Start: 25277, Stop: 25080, Start Num: 52

Candidate Starts for Llij\_25:

(Start: 52 @25277 has 335 MA's), (Start: 55 @25259 has 3 MA's), (60, 25181), (65, 25118),

Gene: Lorde\_26 Start: 25113, Stop: 24916, Start Num: 52

Candidate Starts for Lorde\_26:

(Start: 52 @25113 has 335 MA's), (Start: 55 @25095 has 3 MA's), (60, 25017), (65, 24954),

Gene: Lucky2013\_40 Start: 34873, Stop: 34676, Start Num: 52

Candidate Starts for Lucky2013\_40:

(43, 34915), (Start: 48 @34891 has 3 MA's), (Start: 52 @34873 has 335 MA's), (Start: 55 @34855 has 3 MA's), (60, 34777),

Gene: LunaBlu\_26 Start: 25542, Stop: 25318, Start Num: 47

Candidate Starts for LunaBlu\_26:



(Start: 47 @25542 has 1 MA's), (Start: 52 @25515 has 335 MA's), (Start: 55 @25497 has 3 MA's), (60, 25419), (65, 25356),

Gene: LunaStella\_25 Start: 25485, Stop: 25285, Start Num: 52

Candidate Starts for LunaStella\_25:

(Start: 52 @25485 has 335 MA's), (61, 25371),

Gene: MISSy\_29 Start: 28662, Stop: 28477, Start Num: 52

Candidate Starts for MISSy\_29:

(Start: 52 @28662 has 335 MA's), (57, 28614), (59, 28590), (60, 28578), (65, 28518),

Gene: MPhalcon\_29 Start: 28656, Stop: 28471, Start Num: 52

Candidate Starts for MPhalcon\_29:

(Start: 52 @28656 has 335 MA's), (57, 28608), (59, 28584), (60, 28572), (65, 28512),

Gene: MadamMonkfish\_30 Start: 28568, Stop: 28383, Start Num: 52

Candidate Starts for MadamMonkfish\_30:

(Start: 52 @28568 has 335 MA's), (57, 28520), (59, 28496), (60, 28484), (65, 28424),

Gene: Mahavrat\_25 Start: 25267, Stop: 25067, Start Num: 52

Candidate Starts for Mahavrat\_25:

(Start: 47 @25294 has 1 MA's), (Start: 52 @25267 has 335 MA's), (Start: 55 @25249 has 3 MA's), (60, 25171), (65, 25108),

Gene: Manda\_31 Start: 29635, Stop: 29450, Start Num: 52

Candidate Starts for Manda\_31:

(Start: 52 @29635 has 335 MA's), (57, 29587), (59, 29563), (60, 29551), (65, 29491),

Gene: Mandlovu\_25 Start: 25490, Stop: 25293, Start Num: 52

Candidate Starts for Mandlovu\_25:

(Start: 52 @25490 has 335 MA's), (Start: 55 @25472 has 3 MA's), (60, 25394), (65, 25331),

Gene: Mantra\_25 Start: 25389, Stop: 25192, Start Num: 52

Candidate Starts for Mantra\_25:

(Start: 52 @25389 has 335 MA's), (Start: 55 @25371 has 3 MA's), (60, 25293), (65, 25230),

Gene: Maravista\_25 Start: 25238, Stop: 25041, Start Num: 52

Candidate Starts for Maravista\_25:

(Start: 52 @25238 has 335 MA's), (Start: 55 @25220 has 3 MA's), (60, 25142), (65, 25079),

Gene: Marker\_26 Start: 25142, Stop: 24945, Start Num: 52

Candidate Starts for Marker\_26:

(Start: 52 @25142 has 335 MA's), (Start: 55 @25124 has 3 MA's), (60, 25046), (65, 24983),

Gene: Marshmallow\_30 Start: 29148, Stop: 28972, Start Num: 52

Candidate Starts for Marshmallow\_30:

(Start: 52 @29148 has 335 MA's), (59, 29076), (60, 29064), (65, 29004),

Gene: Martik\_25 Start: 25483, Stop: 25286, Start Num: 52

Candidate Starts for Martik\_25:

(Start: 52 @25483 has 335 MA's), (Start: 55 @25465 has 3 MA's), (60, 25387), (65, 25324),

Gene: Mattes\_25 Start: 25447, Stop: 25250, Start Num: 52

Candidate Starts for Mattes\_25:

(Start: 52 @25447 has 335 MA's), (Start: 55 @25429 has 3 MA's), (60, 25351), (65, 25288),

Gene: Maxxinista\_31 Start: 28617, Stop: 28432, Start Num: 52

Candidate Starts for Maxxinista\_31:

(Start: 52 @28617 has 335 MA's), (57, 28569), (59, 28545), (60, 28533), (65, 28473),

Gene: Melissauren88\_25 Start: 25475, Stop: 25278, Start Num: 52

Candidate Starts for Melissauren88\_25:

(Start: 52 @25475 has 335 MA's), (Start: 55 @25457 has 3 MA's), (60, 25379), (65, 25316),

Gene: MiaZeal\_40 Start: 34557, Stop: 34360, Start Num: 52

Candidate Starts for MiaZeal\_40:

(43, 34599), (Start: 48 @34575 has 3 MA's), (Start: 52 @34557 has 335 MA's), (Start: 55 @34539 has 3 MA's), (60, 34461),

Gene: MilleniumForce\_26 Start: 26251, Stop: 26060, Start Num: 52

Candidate Starts for MilleniumForce\_26:

(Start: 52 @26251 has 335 MA's), (56, 26191), (58, 26170), (59, 26158), (62, 26134), (65, 26086),

Gene: Mindy\_30 Start: 28928, Stop: 28752, Start Num: 52

Candidate Starts for Mindy\_30:

(Start: 52 @28928 has 335 MA's), (57, 28880), (59, 28856), (60, 28844), (65, 28784),

Gene: Minerva\_46 Start: 39217, Stop: 39020, Start Num: 52

Candidate Starts for Minerva\_46:

(Start: 52 @39217 has 335 MA's), (Start: 55 @39199 has 3 MA's), (60, 39121), (65, 39058),

Gene: MinionDave\_26 Start: 25673, Stop: 25482, Start Num: 52

Candidate Starts for MinionDave\_26:

(Start: 52 @25673 has 335 MA's), (56, 25613), (58, 25592), (59, 25580), (62, 25556), (65, 25508),

Gene: Miniwave\_30 Start: 29347, Stop: 29162, Start Num: 52

Candidate Starts for Miniwave\_30:

(Start: 52 @29347 has 335 MA's), (57, 29299), (59, 29275), (60, 29263), (65, 29203),

Gene: Minnie\_26 Start: 25990, Stop: 25793, Start Num: 52

Candidate Starts for Minnie\_26:

(Start: 52 @25990 has 335 MA's), (Start: 55 @25972 has 3 MA's), (60, 25894), (65, 25831),

Gene: Misfit\_30 Start: 29237, Stop: 29052, Start Num: 52

Candidate Starts for Misfit\_30:

(Start: 52 @29237 has 335 MA's), (57, 29189), (59, 29165), (60, 29153), (65, 29093),

Gene: Misha28\_26 Start: 25163, Stop: 24966, Start Num: 52

Candidate Starts for Misha28\_26:

(Start: 52 @25163 has 335 MA's), (Start: 55 @25145 has 3 MA's), (60, 25067), (65, 25004),

Gene: MisterCuddles\_25 Start: 25258, Stop: 25067, Start Num: 52

Candidate Starts for MisterCuddles\_25:

(Start: 52 @25258 has 335 MA's), (56, 25198), (58, 25177), (59, 25165), (62, 25141), (65, 25093),

Gene: Modragons\_25 Start: 25356, Stop: 25156, Start Num: 52

Candidate Starts for Modragons\_25:

(43, 25398), (Start: 52 @25356 has 335 MA's), (Start: 55 @25338 has 3 MA's), (60, 25260), (65, 25197),

Gene: Modragons\_43 Start: 32602, Stop: 32408, Start Num: 52

Candidate Starts for Modragons\_43:

(Start: 48 @32620 has 3 MA's), (Start: 52 @32602 has 335 MA's), (53, 32596), (Start: 54 @32593 has 1 MA's), (57, 32533), (65, 32437), (66, 32416),

Gene: Moldemort\_31 Start: 28892, Stop: 28707, Start Num: 52

Candidate Starts for Moldemort\_31:

(Start: 52 @28892 has 335 MA's), (57, 28844), (59, 28820), (60, 28808), (65, 28748),

Gene: MooMoo\_22 Start: 24041, Stop: 23844, Start Num: 52

Candidate Starts for MooMoo\_22:

(Start: 52 @24041 has 335 MA's), (Start: 55 @24023 has 3 MA's), (60, 23945), (65, 23882),

Gene: Moonbeam\_26 Start: 25942, Stop: 25745, Start Num: 52

Candidate Starts for Moonbeam\_26:

(Start: 52 @25942 has 335 MA's), (Start: 55 @25924 has 3 MA's), (60, 25846), (65, 25783),

Gene: Mosby\_29 Start: 28654, Stop: 28469, Start Num: 52

Candidate Starts for Mosby\_29:

(Start: 52 @28654 has 335 MA's), (57, 28606), (59, 28582), (60, 28570), (65, 28510),

Gene: Mova\_26 Start: 25143, Stop: 24946, Start Num: 52

Candidate Starts for Mova\_26:

(Start: 52 @25143 has 335 MA's), (Start: 55 @25125 has 3 MA's), (60, 25047), (65, 24984),

Gene: Mozy\_26 Start: 25352, Stop: 25155, Start Num: 52

Candidate Starts for Mozy\_26:

(Start: 52 @25352 has 335 MA's), (Start: 55 @25334 has 3 MA's), (60, 25256), (65, 25193),

Gene: MulchExplorer\_28 Start: 26414, Stop: 26217, Start Num: 52

Candidate Starts for MulchExplorer\_28:

(Start: 47 @26441 has 1 MA's), (Start: 52 @26414 has 335 MA's), (Start: 55 @26396 has 3 MA's), (60, 26318), (65, 26255),

Gene: Murica\_29 Start: 29134, Stop: 28949, Start Num: 52

Candidate Starts for Murica\_29:

(Start: 52 @29134 has 335 MA's), (57, 29086), (59, 29062), (60, 29050), (65, 28990),

Gene: Murphy\_31 Start: 29129, Stop: 28944, Start Num: 52

Candidate Starts for Murphy\_31:

(Start: 52 @29129 has 335 MA's), (57, 29081), (59, 29057), (60, 29045), (65, 28985),

Gene: Mutaforma13\_25 Start: 25488, Stop: 25297, Start Num: 52

Candidate Starts for Mutaforma13\_25:

(Start: 52 @25488 has 335 MA's), (56, 25428), (58, 25407), (59, 25395), (62, 25371), (65, 25323),

Gene: Myrale\_30 Start: 29013, Stop: 28837, Start Num: 52

Candidate Starts for Myrale\_30:

(Start: 52 @29013 has 335 MA's), (59, 28941), (60, 28929), (65, 28869),

Gene: Nala\_30 Start: 29168, Stop: 28983, Start Num: 52

Candidate Starts for Nala\_30:

(Start: 52 @29168 has 335 MA's), (57, 29120), (59, 29096), (60, 29084), (65, 29024),

Gene: Nebkiss\_29 Start: 27833, Stop: 27636, Start Num: 52

Candidate Starts for Nebkiss\_29:

(Start: 52 @27833 has 335 MA's), (Start: 55 @27815 has 3 MA's), (60, 27737), (65, 27674),

Gene: NelitzaMV\_30 Start: 29218, Stop: 29042, Start Num: 52

Candidate Starts for NelitzaMV\_30:

(Start: 52 @29218 has 335 MA's), (59, 29146), (60, 29134), (65, 29074),

Gene: NewHope4\_27 Start: 25493, Stop: 25296, Start Num: 52

Candidate Starts for NewHope4\_27:

(Start: 52 @25493 has 335 MA's), (Start: 55 @25475 has 3 MA's), (60, 25397), (65, 25334),

Gene: Nimbo\_25 Start: 25295, Stop: 25098, Start Num: 52

Candidate Starts for Nimbo\_25:

(Start: 52 @25295 has 335 MA's), (Start: 55 @25277 has 3 MA's), (60, 25199), (65, 25136),

Gene: Nimrod\_30 Start: 29392, Stop: 29207, Start Num: 52

Candidate Starts for Nimrod\_30:

(Start: 52 @29392 has 335 MA's), (57, 29344), (59, 29320), (60, 29308), (65, 29248),

Gene: Nitzel\_26 Start: 26024, Stop: 25827, Start Num: 52

Candidate Starts for Nitzel\_26:

(Start: 52 @26024 has 335 MA's), (Start: 55 @26006 has 3 MA's), (60, 25928), (65, 25865),

Gene: Nivrat\_25 Start: 25455, Stop: 25258, Start Num: 52

Candidate Starts for Nivrat\_25:

(Start: 52 @25455 has 335 MA's), (Start: 55 @25437 has 3 MA's), (60, 25359), (65, 25296),

Gene: NoSleep\_31 Start: 28889, Stop: 28704, Start Num: 52

Candidate Starts for NoSleep\_31:

(Start: 52 @28889 has 335 MA's), (57, 28841), (59, 28817), (60, 28805), (65, 28745),

Gene: NormanBulbieJr\_25 Start: 25470, Stop: 25273, Start Num: 52

Candidate Starts for NormanBulbieJr\_25:

(Start: 52 @25470 has 335 MA's), (Start: 55 @25452 has 3 MA's), (60, 25374), (65, 25311),

Gene: Ochi17\_42 Start: 32209, Stop: 32015, Start Num: 52

Candidate Starts for Ochi17\_42:

(Start: 48 @32227 has 3 MA's), (Start: 52 @32209 has 335 MA's), (53, 32203), (Start: 54 @32200 has 1 MA's), (57, 32140), (65, 32044), (66, 32023),

Gene: OfUltron\_44 Start: 32758, Stop: 32564, Start Num: 52

Candidate Starts for OfUltron\_44:

(Start: 48 @32776 has 3 MA's), (Start: 52 @32758 has 335 MA's), (53, 32752), (Start: 54 @32749 has 1 MA's), (57, 32689), (65, 32593), (66, 32572),

Gene: OfUltron\_25 Start: 25512, Stop: 25312, Start Num: 52

Candidate Starts for OfUltron\_25:

(43, 25554), (Start: 52 @25512 has 335 MA's), (Start: 55 @25494 has 3 MA's), (60, 25416), (65, 25353),

Gene: Oksu\_44 Start: 32602, Stop: 32408, Start Num: 52

Candidate Starts for Oksu\_44:

(Start: 48 @32620 has 3 MA's), (Start: 52 @32602 has 335 MA's), (53, 32596), (Start: 54 @32593 has 1 MA's), (57, 32533), (65, 32437), (66, 32416),

Gene: Oksu\_26 Start: 25357, Stop: 25157, Start Num: 52

Candidate Starts for Oksu\_26:

(30, 25489), (32, 25483), (34, 25465), (38, 25423), (39, 25420), (42, 25414), (46, 25390), (Start: 52 @25357 has 335 MA's), (Start: 55 @25339 has 3 MA's), (60, 25261), (65, 25198),

Gene: OldBen\_25 Start: 25253, Stop: 25062, Start Num: 52

Candidate Starts for OldBen\_25:

(Start: 52 @25253 has 335 MA's), (56, 25193), (58, 25172), (59, 25160), (62, 25136), (65, 25088),

Gene: OlympiaSaint\_25 Start: 25670, Stop: 25473, Start Num: 52

Candidate Starts for OlympiaSaint\_25:

(Start: 52 @25670 has 335 MA's), (Start: 55 @25652 has 3 MA's), (60, 25574), (65, 25511),

Gene: Optimus\_44 Start: 38666, Stop: 38475, Start Num: 52

Candidate Starts for Optimus\_44:

(19, 38831), (25, 38810), (26, 38807), (31, 38795), (33, 38789), (35, 38771), (Start: 52 @38666 has 335 MA's), (56, 38606), (57, 38597), (58, 38585), (62, 38549),

Gene: OrionPax\_31 Start: 28895, Stop: 28710, Start Num: 52

Candidate Starts for OrionPax\_31:

(Start: 52 @28895 has 335 MA's), (57, 28847), (59, 28823), (60, 28811), (65, 28751),

Gene: Ovechkin\_25 Start: 25447, Stop: 25250, Start Num: 52

Candidate Starts for Ovechkin\_25:

(Start: 52 @25447 has 335 MA's), (Start: 55 @25429 has 3 MA's), (60, 25351), (65, 25288),

Gene: OwlsT2W\_27 Start: 25741, Stop: 25544, Start Num: 52

Candidate Starts for OwlsT2W\_27:

(Start: 52 @25741 has 335 MA's), (Start: 55 @25723 has 3 MA's), (60, 25645), (65, 25582),

Gene: PHappiness\_25 Start: 25269, Stop: 25072, Start Num: 52

Candidate Starts for PHappiness\_25:

(Start: 52 @25269 has 335 MA's), (Start: 55 @25251 has 3 MA's), (60, 25173), (65, 25110),

Gene: PMC\_25 Start: 25259, Stop: 25080, Start Num: 55

Candidate Starts for PMC\_25:

(Start: 52 @25277 has 335 MA's), (Start: 55 @25259 has 3 MA's), (60, 25181), (65, 25118),

Gene: Pacc40\_25 Start: 25459, Stop: 25262, Start Num: 52

Candidate Starts for Pacc40\_25:

(Start: 52 @25459 has 335 MA's), (Start: 55 @25441 has 3 MA's), (60, 25363), (65, 25300),

Gene: Palpatine\_30 Start: 29164, Stop: 28979, Start Num: 52

Candidate Starts for Palpatine\_30:

(Start: 52 @29164 has 335 MA's), (57, 29116), (59, 29092), (60, 29080), (65, 29020),

Gene: Paperbeatsrock\_32 Start: 30130, Stop: 29945, Start Num: 52

Candidate Starts for Paperbeatsrock\_32:

(Start: 52 @30130 has 335 MA's), (57, 30082), (59, 30058), (60, 30046), (65, 29986),

Gene: Pat3\_29 Start: 27876, Stop: 27691, Start Num: 52

Candidate Starts for Pat3\_29:

(Start: 52 @27876 has 335 MA's), (57, 27828), (59, 27804), (60, 27792), (65, 27732),

Gene: Petra64142\_32 Start: 29610, Stop: 29425, Start Num: 52

Candidate Starts for Petra64142\_32:

(Start: 52 @29610 has 335 MA's), (57, 29562), (59, 29538), (60, 29526), (65, 29466),

Gene: Phalconet\_25 Start: 25366, Stop: 25169, Start Num: 52

Candidate Starts for Phalconet\_25:

(Start: 52 @25366 has 335 MA's), (Start: 55 @25348 has 3 MA's), (60, 25270), (65, 25207),

Gene: Phanphagia\_22 Start: 24447, Stop: 24247, Start Num: 52

Candidate Starts for Phanphagia\_22:

(Start: 52 @24447 has 335 MA's), (57, 24378), (58, 24366), (59, 24354), (62, 24330),

Gene: Pharsalus\_31 Start: 29930, Stop: 29745, Start Num: 52

Candidate Starts for Pharsalus\_31:

(Start: 52 @29930 has 335 MA's), (57, 29882), (59, 29858), (60, 29846), (65, 29786),

Gene: Phasih\_26 Start: 25833, Stop: 25636, Start Num: 52

Candidate Starts for Phasih\_26:

(Start: 52 @25833 has 335 MA's), (Start: 55 @25815 has 3 MA's), (60, 25737), (65, 25674),

Gene: PhatBacter\_30 Start: 29178, Stop: 28993, Start Num: 52

Candidate Starts for PhatBacter\_30:

(Start: 52 @29178 has 335 MA's), (57, 29130), (59, 29106), (60, 29094), (65, 29034),

Gene: Phatniss\_26 Start: 25794, Stop: 25597, Start Num: 52

Candidate Starts for Phatniss\_26:

(Start: 52 @25794 has 335 MA's), (Start: 55 @25776 has 3 MA's), (60, 25698), (65, 25635),

Gene: Phaux\_29 Start: 29176, Stop: 28991, Start Num: 52

Candidate Starts for Phaux\_29:

(Start: 52 @29176 has 335 MA's), (57, 29128), (59, 29104), (60, 29092), (65, 29032),

Gene: PhesterPhotato\_25 Start: 25291, Stop: 25100, Start Num: 52

Candidate Starts for PhesterPhotato\_25:

(9, 25513), (13, 25477), (16, 25468), (25, 25435), (26, 25432), (31, 25420), (33, 25414), (35, 25396),  
(Start: 52 @25291 has 335 MA's), (56, 25231), (57, 25222), (58, 25210), (62, 25174),

Gene: Philus\_25 Start: 25293, Stop: 25096, Start Num: 52

Candidate Starts for Philus\_25:

(Start: 52 @25293 has 335 MA's), (Start: 55 @25275 has 3 MA's), (60, 25197), (65, 25134),

Gene: PhlipPhlop\_25 Start: 25362, Stop: 25165, Start Num: 52

Candidate Starts for PhlipPhlop\_25:

(Start: 52 @25362 has 335 MA's), (Start: 55 @25344 has 3 MA's), (60, 25266), (65, 25203),

Gene: Phrux\_30 Start: 28891, Stop: 28706, Start Num: 52

Candidate Starts for Phrux\_30:

(Start: 52 @28891 has 335 MA's), (57, 28843), (59, 28819), (60, 28807), (65, 28747),

Gene: Piper2020\_27 Start: 25887, Stop: 25690, Start Num: 52

Candidate Starts for Piper2020\_27:

(Start: 47 @25914 has 1 MA's), (Start: 52 @25887 has 335 MA's), (Start: 55 @25869 has 3 MA's), (60, 25791), (65, 25728),

Gene: Plumbus\_26 Start: 25121, Stop: 24924, Start Num: 52

Candidate Starts for Plumbus\_26:

(Start: 52 @25121 has 335 MA's), (Start: 55 @25103 has 3 MA's), (60, 25025), (65, 24962),

Gene: Policronamos\_30 Start: 29177, Stop: 29001, Start Num: 52

Candidate Starts for Policronamos\_30:

(Start: 52 @29177 has 335 MA's), (59, 29105), (60, 29093), (65, 29033),

Gene: Polka14\_26 Start: 25830, Stop: 25633, Start Num: 52

Candidate Starts for Polka14\_26:

(Start: 52 @25830 has 335 MA's), (Start: 55 @25812 has 3 MA's), (60, 25734), (65, 25671),

Gene: Polo2Bam\_29 Start: 25475, Stop: 25287, Start Num: 52

Candidate Starts for Polo2Bam\_29:

(5, 25730), (6, 25718), (7, 25709), (8, 25697), (11, 25670), (14, 25655), (17, 25643), (18, 25640), (20, 25631), (22, 25628), (23, 25625), (Start: 36 @25544 has 1 MA's), (45, 25514), (Start: 47 @25502 has 1 MA's), (Start: 52 @25475 has 335 MA's), (59, 25394),

Gene: PopTart\_25 Start: 25487, Stop: 25296, Start Num: 52

Candidate Starts for PopTart\_25:

(Start: 52 @25487 has 335 MA's), (56, 25427), (58, 25406), (59, 25394), (62, 25370), (65, 25322),

Gene: Porcelain\_39 Start: 34557, Stop: 34360, Start Num: 52

Candidate Starts for Porcelain\_39:

(43, 34599), (Start: 48 @34575 has 3 MA's), (Start: 52 @34557 has 335 MA's), (Start: 55 @34539 has 3 MA's), (60, 34461),

Gene: Porky\_30 Start: 28987, Stop: 28802, Start Num: 52

Candidate Starts for Porky\_30:

(Start: 52 @28987 has 335 MA's), (57, 28939), (59, 28915), (60, 28903), (65, 28843),

Gene: Priscilla\_25 Start: 25484, Stop: 25287, Start Num: 52

Candidate Starts for Priscilla\_25:

(Start: 52 @25484 has 335 MA's), (Start: 55 @25466 has 3 MA's), (60, 25388), (65, 25325),

Gene: Pumpkin\_32 Start: 29227, Stop: 29042, Start Num: 52

Candidate Starts for Pumpkin\_32:

(Start: 52 @29227 has 335 MA's), (57, 29179), (59, 29155), (60, 29143), (65, 29083),

Gene: Quallification\_31 Start: 29356, Stop: 29171, Start Num: 52

Candidate Starts for Quallification\_31:

(Start: 52 @29356 has 335 MA's), (57, 29308), (59, 29284), (60, 29272), (65, 29212),

Gene: QuickMath\_26 Start: 26638, Stop: 26441, Start Num: 52

Candidate Starts for QuickMath\_26:

(Start: 47 @26665 has 1 MA's), (Start: 52 @26638 has 335 MA's), (Start: 55 @26620 has 3 MA's), (60, 26542), (65, 26479),

Gene: Quico\_26 Start: 25114, Stop: 24917, Start Num: 52

Candidate Starts for Quico\_26:

(Start: 52 @25114 has 335 MA's), (Start: 55 @25096 has 3 MA's), (60, 25018), (65, 24955),

Gene: Radiance\_25 Start: 25392, Stop: 25195, Start Num: 52

Candidate Starts for Radiance\_25:

(Start: 52 @25392 has 335 MA's), (Start: 55 @25374 has 3 MA's), (60, 25296), (65, 25233),

Gene: Rakim\_31 Start: 29256, Stop: 29080, Start Num: 52

Candidate Starts for Rakim\_31:

(Start: 52 @29256 has 335 MA's), (57, 29208), (59, 29184), (60, 29172), (65, 29112),

Gene: Ramsey\_26 Start: 25323, Stop: 25126, Start Num: 52

Candidate Starts for Ramsey\_26:

(Start: 52 @25323 has 335 MA's), (Start: 55 @25305 has 3 MA's), (60, 25227), (65, 25164),

Gene: RedBird\_25 Start: 25230, Stop: 25039, Start Num: 52

Candidate Starts for RedBird\_25:

(5, 25488), (6, 25476), (7, 25467), (8, 25455), (11, 25428), (14, 25413), (17, 25401), (18, 25398), (20, 25389), (22, 25386), (23, 25383), (Start: 52 @25230 has 335 MA's), (56, 25170), (57, 25161), (58, 25149), (62, 25113),

Gene: Renaud18\_25 Start: 25497, Stop: 25315, Start Num: 52

Candidate Starts for Renaud18\_25:

(5, 25752), (6, 25740), (7, 25731), (8, 25719), (11, 25692), (17, 25665), (18, 25662), (20, 25653), (23, 25647), (Start: 36 @25566 has 1 MA's), (45, 25536), (Start: 47 @25524 has 1 MA's), (Start: 52 @25497 has 335 MA's), (59, 25419),

Gene: Renaud18\_44 Start: 32207, Stop: 32013, Start Num: 52

Candidate Starts for Renaud18\_44:

(Start: 48 @32225 has 3 MA's), (Start: 52 @32207 has 335 MA's), (53, 32201), (Start: 54 @32198 has 1 MA's), (57, 32138), (65, 32042), (66, 32021),

Gene: Rialto\_27 Start: 25920, Stop: 25723, Start Num: 52

Candidate Starts for Rialto\_27:

(Start: 52 @25920 has 335 MA's), (Start: 55 @25902 has 3 MA's), (60, 25824), (65, 25761),

Gene: Rimmer\_29 Start: 28716, Stop: 28531, Start Num: 52

Candidate Starts for Rimmer\_29:

(Start: 52 @28716 has 335 MA's), (57, 28668), (59, 28644), (60, 28632), (65, 28572),

Gene: Rita\_25 Start: 25290, Stop: 25090, Start Num: 52

Candidate Starts for Rita\_25:

(Start: 47 @25317 has 1 MA's), (Start: 52 @25290 has 335 MA's), (Start: 55 @25272 has 3 MA's), (60, 25194), (65, 25131),

Gene: RitaG\_25 Start: 25514, Stop: 25317, Start Num: 52

Candidate Starts for RitaG\_25:



(Start: 52 @25514 has 335 MA's), (Start: 55 @25496 has 3 MA's), (60, 25418), (65, 25355),

Gene: RiverMonster\_30 Start: 28905, Stop: 28720, Start Num: 52

Candidate Starts for RiverMonster\_30:

(Start: 52 @28905 has 335 MA's), (57, 28857), (59, 28833), (60, 28821), (65, 28761),

Gene: Rockne\_25 Start: 25277, Stop: 25080, Start Num: 52

Candidate Starts for Rockne\_25:

(Start: 52 @25277 has 335 MA's), (Start: 55 @25259 has 3 MA's), (60, 25181), (65, 25118),

Gene: RockyHorror\_26 Start: 25148, Stop: 24951, Start Num: 52

Candidate Starts for RockyHorror\_26:

(Start: 52 @25148 has 335 MA's), (Start: 55 @25130 has 3 MA's), (60, 25052), (65, 24989),

Gene: Royals2015\_25 Start: 25370, Stop: 25173, Start Num: 52

Candidate Starts for Royals2015\_25:

(Start: 52 @25370 has 335 MA's), (Start: 55 @25352 has 3 MA's), (60, 25274), (65, 25211),

Gene: Ruby\_25 Start: 25258, Stop: 25067, Start Num: 52

Candidate Starts for Ruby\_25:

(Start: 52 @25258 has 335 MA's), (56, 25198), (58, 25177), (59, 25165), (62, 25141), (65, 25093),

Gene: SG4\_25 Start: 25598, Stop: 25401, Start Num: 52

Candidate Starts for SG4\_25:

(Start: 52 @25598 has 335 MA's), (Start: 55 @25580 has 3 MA's), (60, 25502), (65, 25439),

Gene: Saal\_25 Start: 25271, Stop: 25074, Start Num: 52

Candidate Starts for Saal\_25:

(Start: 52 @25271 has 335 MA's), (Start: 55 @25253 has 3 MA's), (60, 25175), (65, 25112),

Gene: Sabbb\_26 Start: 25617, Stop: 25420, Start Num: 52

Candidate Starts for Sabbb\_26:

(Start: 52 @25617 has 335 MA's), (Start: 55 @25599 has 3 MA's), (60, 25521), (65, 25458),

Gene: Saints25\_31 Start: 28808, Stop: 28623, Start Num: 52

Candidate Starts for Saints25\_31:

(Start: 52 @28808 has 335 MA's), (57, 28760), (59, 28736), (60, 28724), (65, 28664),

Gene: Sandalphon\_26 Start: 26004, Stop: 25807, Start Num: 52

Candidate Starts for Sandalphon\_26:

(43, 26046), (Start: 52 @26004 has 335 MA's), (Start: 55 @25986 has 3 MA's), (60, 25908), (65, 25845),

Gene: Sassafras\_25 Start: 25414, Stop: 25223, Start Num: 52

Candidate Starts for Sassafras\_25:

(Start: 52 @25414 has 335 MA's), (56, 25354), (58, 25333), (59, 25321), (62, 25297), (65, 25249),

Gene: Sassay\_29 Start: 28654, Stop: 28469, Start Num: 52

Candidate Starts for Sassay\_29:

(Start: 52 @28654 has 335 MA's), (57, 28606), (59, 28582), (60, 28570), (65, 28510),

Gene: SassyB\_25 Start: 25487, Stop: 25296, Start Num: 52

Candidate Starts for SassyB\_25:

(Start: 52 @25487 has 335 MA's), (56, 25427), (58, 25406), (59, 25394), (62, 25370), (65, 25322),

Gene: Scottish\_26 Start: 26592, Stop: 26395, Start Num: 52

Candidate Starts for Scottish\_26:

(Start: 52 @26592 has 335 MA's), (Start: 55 @26574 has 3 MA's), (60, 26496), (65, 26433),

Gene: Seabastian\_25 Start: 25512, Stop: 25312, Start Num: 52

Candidate Starts for Seabastian\_25:

(43, 25554), (Start: 52 @25512 has 335 MA's), (Start: 55 @25494 has 3 MA's), (60, 25416), (65, 25353),

Gene: Seabastian\_44 Start: 32758, Stop: 32564, Start Num: 52

Candidate Starts for Seabastian\_44:

(Start: 48 @32776 has 3 MA's), (Start: 52 @32758 has 335 MA's), (53, 32752), (Start: 54 @32749 has 1 MA's), (57, 32689), (65, 32593), (66, 32572),

Gene: Seagreen\_26 Start: 25284, Stop: 25093, Start Num: 52

Candidate Starts for Seagreen\_26:

(Start: 52 @25284 has 335 MA's), (56, 25224), (58, 25203), (59, 25191), (62, 25167), (65, 25119),

Gene: Shaboozey\_34 Start: 32872, Stop: 32678, Start Num: 52

Candidate Starts for Shaboozey\_34:

(Start: 52 @32872 has 335 MA's), (57, 32803), (58, 32791), (59, 32779), (62, 32755), (65, 32707),

Gene: ShamWow\_30 Start: 29150, Stop: 28974, Start Num: 52

Candidate Starts for ShamWow\_30:

(Start: 52 @29150 has 335 MA's), (57, 29102), (59, 29078), (60, 29066), (65, 29006),

Gene: Shauna1\_22 Start: 24450, Stop: 24250, Start Num: 52

Candidate Starts for Shauna1\_22:

(Start: 52 @24450 has 335 MA's), (57, 24381), (58, 24369), (59, 24357), (62, 24333),

Gene: ShereKhan\_32 Start: 30133, Stop: 29948, Start Num: 52

Candidate Starts for ShereKhan\_32:

(Start: 52 @30133 has 335 MA's), (57, 30085), (59, 30061), (60, 30049), (65, 29989),

Gene: ShiLan\_25 Start: 25482, Stop: 25285, Start Num: 52

Candidate Starts for ShiLan\_25:

(Start: 52 @25482 has 335 MA's), (Start: 55 @25464 has 3 MA's), (60, 25386), (65, 25323),

Gene: ShowerHandel\_25 Start: 25483, Stop: 25286, Start Num: 52

Candidate Starts for ShowerHandel\_25:

(Start: 52 @25483 has 335 MA's), (Start: 55 @25465 has 3 MA's), (60, 25387), (65, 25324),

Gene: SiSi\_25 Start: 25282, Stop: 25085, Start Num: 52

Candidate Starts for SiSi\_25:

(Start: 52 @25282 has 335 MA's), (Start: 55 @25264 has 3 MA's), (60, 25186), (65, 25123),

Gene: SilverChicken\_31 Start: 25152, Stop: 24955, Start Num: 52

Candidate Starts for SilverChicken\_31:

(Start: 52 @25152 has 335 MA's), (Start: 55 @25134 has 3 MA's), (60, 25056), (65, 24993),

Gene: Simpliphy\_31 Start: 28895, Stop: 28710, Start Num: 52

Candidate Starts for Simpliphy\_31:

(Start: 52 @28895 has 335 MA's), (57, 28847), (59, 28823), (60, 28811), (65, 28751),

Gene: SimranZ1\_26 Start: 25126, Stop: 24914, Start Num: 52

Candidate Starts for SimranZ1\_26:

(Start: 52 @25126 has 335 MA's), (61, 25012),

Gene: SirDuracell\_29 Start: 27815, Stop: 27639, Start Num: 52

Candidate Starts for SirDuracell\_29:

(Start: 52 @27815 has 335 MA's), (59, 27743), (60, 27731), (65, 27671),

Gene: Slim\_27 Start: 25200, Stop: 25003, Start Num: 52

Candidate Starts for Slim\_27:

(Start: 52 @25200 has 335 MA's), (Start: 55 @25182 has 3 MA's), (60, 25104), (65, 25041),

Gene: SophKB\_30 Start: 29149, Stop: 28964, Start Num: 52

Candidate Starts for SophKB\_30:

(Start: 52 @29149 has 335 MA's), (57, 29101), (59, 29077), (60, 29065), (65, 29005),

Gene: Sotrice96\_30 Start: 29104, Stop: 28928, Start Num: 52

Candidate Starts for Sotrice96\_30:

(Start: 52 @29104 has 335 MA's), (59, 29032), (60, 29020), (65, 28960),

Gene: Soul22\_29 Start: 24826, Stop: 24644, Start Num: 52

Candidate Starts for Soul22\_29:

(5, 25081), (6, 25069), (7, 25060), (8, 25048), (11, 25021), (14, 25006), (17, 24994), (18, 24991), (20, 24982), (23, 24976), (24, 24967), (Start: 36 @24895 has 1 MA's), (45, 24865), (Start: 47 @24853 has 1 MA's), (Start: 52 @24826 has 335 MA's),

Gene: Sparkdehlily\_25 Start: 25317, Stop: 25120, Start Num: 52

Candidate Starts for Sparkdehlily\_25:

(Start: 52 @25317 has 335 MA's), (Start: 55 @25299 has 3 MA's), (60, 25221), (65, 25158),

Gene: Spikelee\_26 Start: 25274, Stop: 25077, Start Num: 52

Candidate Starts for Spikelee\_26:

(Start: 52 @25274 has 335 MA's), (Start: 55 @25256 has 3 MA's), (60, 25178), (65, 25115),

Gene: Spoonbill\_25 Start: 25481, Stop: 25284, Start Num: 52

Candidate Starts for Spoonbill\_25:

(Start: 52 @25481 has 335 MA's), (Start: 55 @25463 has 3 MA's), (60, 25385), (65, 25322),

Gene: Squint\_39 Start: 34676, Stop: 34479, Start Num: 52

Candidate Starts for Squint\_39:

(43, 34718), (Start: 48 @34694 has 3 MA's), (Start: 52 @34676 has 335 MA's), (Start: 55 @34658 has 3 MA's), (60, 34580),

Gene: Stank\_33 Start: 29656, Stop: 29471, Start Num: 52

Candidate Starts for Stank\_33:

(Start: 52 @29656 has 335 MA's), (57, 29608), (59, 29584), (60, 29572), (65, 29512),

Gene: Stap\_26 Start: 25452, Stop: 25264, Start Num: 52

Candidate Starts for Stap\_26:

(5, 25707), (7, 25686), (8, 25674), (11, 25647), (14, 25632), (17, 25620), (20, 25608), (22, 25605), (23, 25602), (Start: 36 @25521 has 1 MA's), (45, 25491), (Start: 47 @25479 has 1 MA's), (Start: 52 @25452 has 335 MA's), (59, 25371),

Gene: Starcevich\_26 Start: 25146, Stop: 24907, Start Num: 41

Candidate Starts for Starcevich\_26:

(15, 25269), (16, 25263), (40, 25149), (Start: 41 @25146 has 1 MA's), (45, 25128), (Start: 47 @25116 has 1 MA's), (Start: 52 @25089 has 335 MA's),

Gene: Stark\_31 Start: 28908, Stop: 28723, Start Num: 52

Candidate Starts for Stark\_31:

(Start: 52 @28908 has 335 MA's), (57, 28860), (59, 28836), (60, 28824), (65, 28764),

Gene: StellaBean\_30 Start: 29149, Stop: 28964, Start Num: 52

Candidate Starts for StellaBean\_30:

(Start: 52 @29149 has 335 MA's), (57, 29101), (59, 29077), (60, 29065), (65, 29005),

Gene: StolenFromERC\_32 Start: 29140, Stop: 28955, Start Num: 52

Candidate Starts for StolenFromERC\_32:

(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: StormChicken\_30 Start: 29324, Stop: 29139, Start Num: 52

Candidate Starts for StormChicken\_30:

(Start: 52 @29324 has 335 MA's), (57, 29276), (59, 29252), (60, 29240), (65, 29180),

Gene: Strokeseat\_25 Start: 25547, Stop: 25350, Start Num: 52

Candidate Starts for Strokeseat\_25:

(Start: 52 @25547 has 335 MA's), (Start: 55 @25529 has 3 MA's), (60, 25451), (65, 25388),

Gene: Superphikiman\_40 Start: 34757, Stop: 34542, Start Num: 48

Candidate Starts for Superphikiman\_40:

(43, 34781), (Start: 48 @34757 has 3 MA's), (Start: 52 @34739 has 335 MA's), (Start: 55 @34721 has 3 MA's), (60, 34643),

Gene: SwagPigglett\_25 Start: 25294, Stop: 25097, Start Num: 52

Candidate Starts for SwagPigglett\_25:

(Start: 52 @25294 has 335 MA's), (Start: 55 @25276 has 3 MA's), (60, 25198), (65, 25135),

Gene: TChen\_23 Start: 25486, Stop: 25286, Start Num: 52

Candidate Starts for TChen\_23:

(Start: 52 @25486 has 335 MA's), (61, 25372),

Gene: TDanisky\_25 Start: 25317, Stop: 25120, Start Num: 52

Candidate Starts for TDanisky\_25:

(Start: 52 @25317 has 335 MA's), (Start: 55 @25299 has 3 MA's), (60, 25221), (65, 25158),

Gene: Taj\_25 Start: 25474, Stop: 25283, Start Num: 52

Candidate Starts for Taj\_25:

(Start: 52 @25474 has 335 MA's), (56, 25414), (58, 25393), (59, 25381), (62, 25357), (65, 25309),

Gene: Taj\_43 Start: 32148, Stop: 31936, Start Num: 48

Candidate Starts for Taj\_43:

(Start: 48 @32148 has 3 MA's), (Start: 52 @32130 has 335 MA's), (53, 32124), (Start: 54 @32121 has 1 MA's), (57, 32061), (65, 31965), (66, 31944),

Gene: Tarkin\_32 Start: 30139, Stop: 29954, Start Num: 52

Candidate Starts for Tarkin\_32:

(Start: 52 @30139 has 335 MA's), (57, 30091), (59, 30067), (60, 30055), (65, 29995),

Gene: TeardropMSU\_29 Start: 29050, Stop: 28874, Start Num: 52

Candidate Starts for TeardropMSU\_29:

(Start: 52 @29050 has 335 MA's), (57, 29002), (59, 28978), (60, 28966), (65, 28906),

Gene: Teaspoon\_31 Start: 29103, Stop: 28918, Start Num: 52

Candidate Starts for Teaspoon\_31:

(Start: 52 @29103 has 335 MA's), (57, 29055), (59, 29031), (60, 29019), (65, 28959),

Gene: Terminus\_30 Start: 29237, Stop: 29052, Start Num: 52

Candidate Starts for Terminus\_30:

(Start: 52 @29237 has 335 MA's), (57, 29189), (59, 29165), (60, 29153), (65, 29093),

Gene: Thimble\_30 Start: 28100, Stop: 27915, Start Num: 52

Candidate Starts for Thimble\_30:

(Start: 52 @28100 has 335 MA's), (57, 28052), (59, 28028), (60, 28016), (65, 27956),

Gene: Thresher\_31 Start: 29904, Stop: 29719, Start Num: 52

Candidate Starts for Thresher\_31:

(Start: 52 @29904 has 335 MA's), (57, 29856), (59, 29832), (60, 29820), (65, 29760),

Gene: Tomaszewski\_29 Start: 28747, Stop: 28562, Start Num: 52

Candidate Starts for Tomaszewski\_29:

(Start: 52 @28747 has 335 MA's), (57, 28699), (59, 28675), (60, 28663), (65, 28603),

Gene: TootsiePop\_26 Start: 25163, Stop: 24966, Start Num: 52

Candidate Starts for TootsiePop\_26:

(Start: 52 @25163 has 335 MA's), (Start: 55 @25145 has 3 MA's), (60, 25067), (65, 25004),

Gene: Tootsieroll\_26 Start: 25286, Stop: 25089, Start Num: 52

Candidate Starts for Tootsieroll\_26:

(Start: 52 @25286 has 335 MA's), (Start: 55 @25268 has 3 MA's), (60, 25190), (65, 25127),

Gene: Totinger\_26 Start: 25199, Stop: 25002, Start Num: 52

Candidate Starts for Totinger\_26:

(Start: 52 @25199 has 335 MA's), (Start: 55 @25181 has 3 MA's), (60, 25103), (65, 25040),

Gene: Toto\_30 Start: 29150, Stop: 28974, Start Num: 52

Candidate Starts for Toto\_30:

(Start: 52 @29150 has 335 MA's), (57, 29102), (59, 29078), (60, 29066), (65, 29006),

Gene: Traaww1\_28 Start: 28788, Stop: 28612, Start Num: 52

Candidate Starts for Traaww1\_28:

(Start: 52 @28788 has 335 MA's), (57, 28740), (59, 28716), (60, 28704), (65, 28644),

Gene: Tuco\_31 Start: 29658, Stop: 29482, Start Num: 52

Candidate Starts for Tuco\_31:

(Start: 52 @29658 has 335 MA's), (59, 29586), (60, 29574), (65, 29514),

Gene: Tweety\_26 Start: 25492, Stop: 25301, Start Num: 52

Candidate Starts for Tweety\_26:

(Start: 52 @25492 has 335 MA's), (56, 25432), (58, 25411), (59, 25399), (62, 25375), (65, 25327),

Gene: Ukulele\_30 Start: 28908, Stop: 28723, Start Num: 52

Candidate Starts for Ukulele\_30:

(Start: 52 @28908 has 335 MA's), (57, 28860), (59, 28836), (60, 28824), (65, 28764),

Gene: UncleRicky\_28 Start: 26610, Stop: 26413, Start Num: 52

Candidate Starts for UncleRicky\_28:

(Start: 52 @26610 has 335 MA's), (Start: 55 @26592 has 3 MA's), (60, 26514), (65, 26451),

Gene: VRedHorse\_25 Start: 25488, Stop: 25291, Start Num: 52

Candidate Starts for VRedHorse\_25:

(Start: 52 @25488 has 335 MA's), (Start: 55 @25470 has 3 MA's), (60, 25392), (65, 25329),

Gene: Veteran\_25 Start: 25296, Stop: 25099, Start Num: 52

Candidate Starts for Veteran\_25:

(Start: 52 @25296 has 335 MA's), (Start: 55 @25278 has 3 MA's), (60, 25200), (65, 25137),

Gene: Violac\_26 Start: 25993, Stop: 25796, Start Num: 52

Candidate Starts for Violac\_26:

(Start: 52 @25993 has 335 MA's), (Start: 55 @25975 has 3 MA's), (60, 25897), (65, 25834),

Gene: Vivum\_25 Start: 25217, Stop: 25026, Start Num: 52

Candidate Starts for Vivum\_25:

(19, 25382), (25, 25361), (26, 25358), (31, 25346), (33, 25340), (35, 25322), (Start: 52 @25217 has 335 MA's), (56, 25157), (57, 25148), (58, 25136), (62, 25100),

Gene: Wachhund\_25 Start: 25465, Stop: 25274, Start Num: 52

Candidate Starts for Wachhund\_25:

(Start: 52 @25465 has 335 MA's), (56, 25405), (58, 25384), (59, 25372), (62, 25348), (65, 25300),

Gene: Wanda\_46 Start: 37698, Stop: 37507, Start Num: 52

Candidate Starts for Wanda\_46:

(27, 37839), (Start: 52 @37698 has 335 MA's), (56, 37638), (57, 37629), (58, 37617), (62, 37581),

Gene: Wee\_26 Start: 26013, Stop: 25822, Start Num: 52

Candidate Starts for Wee\_26:

(Start: 52 @26013 has 335 MA's), (56, 25953), (58, 25932), (59, 25920), (62, 25896), (65, 25848),

Gene: Wee\_44 Start: 32704, Stop: 32510, Start Num: 52

Candidate Starts for Wee\_44:

(Start: 48 @32722 has 3 MA's), (Start: 52 @32704 has 335 MA's), (53, 32698), (Start: 54 @32695 has 1 MA's), (57, 32635), (65, 32539), (66, 32518),

Gene: Whatsapiecost\_25 Start: 25487, Stop: 25296, Start Num: 52

Candidate Starts for Whatsapiecost\_25:

(Start: 52 @25487 has 335 MA's), (56, 25427), (58, 25406), (59, 25394), (62, 25370), (65, 25322),

Gene: Whouxfh\_25 Start: 25538, Stop: 25338, Start Num: 52

Candidate Starts for Whouxphf\_25:

(Start: 52 @25538 has 335 MA's), (Start: 55 @25520 has 3 MA's), (60, 25442), (65, 25379),

Gene: Wiggin\_33 Start: 29654, Stop: 29469, Start Num: 52

Candidate Starts for Wiggin\_33:

(Start: 52 @29654 has 335 MA's), (57, 29606), (59, 29582), (60, 29570), (65, 29510),

Gene: WillSterrel\_26 Start: 26663, Stop: 26472, Start Num: 52

Candidate Starts for WillSterrel\_26:

(19, 26828), (25, 26807), (26, 26804), (31, 26792), (33, 26786), (35, 26768), (Start: 52 @26663 has 335 MA's), (56, 26603), (57, 26594), (58, 26582), (62, 26546),

Gene: Willez\_29 Start: 28654, Stop: 28469, Start Num: 52

Candidate Starts for Willez\_29:

(Start: 52 @28654 has 335 MA's), (57, 28606), (59, 28582), (60, 28570), (65, 28510),

Gene: Xandras\_32 Start: 29140, Stop: 28955, Start Num: 52

Candidate Starts for Xandras\_32:

(Start: 52 @29140 has 335 MA's), (57, 29092), (59, 29068), (60, 29056), (65, 28996),

Gene: YassJohnny\_31 Start: 29665, Stop: 29480, Start Num: 52

Candidate Starts for YassJohnny\_31:

(Start: 52 @29665 has 335 MA's), (57, 29617), (59, 29593), (60, 29581), (65, 29521),

Gene: Yorick\_25 Start: 25481, Stop: 25284, Start Num: 52

Candidate Starts for Yorick\_25:

(Start: 52 @25481 has 335 MA's), (Start: 55 @25463 has 3 MA's), (60, 25385), (65, 25322),

Gene: Youngblood\_30 Start: 29310, Stop: 29125, Start Num: 52

Candidate Starts for Youngblood\_30:

(Start: 52 @29310 has 335 MA's), (57, 29262), (59, 29238), (60, 29226), (65, 29166),

Gene: Zapner\_30 Start: 25519, Stop: 25337, Start Num: 52

Candidate Starts for Zapner\_30:

(13, 25702), (15, 25699), (16, 25693), (21, 25675), (Start: 36 @25588 has 1 MA's), (45, 25558), (Start: 47 @25546 has 1 MA's), (Start: 52 @25519 has 335 MA's), (59, 25441),

Gene: Zerg\_25 Start: 25257, Stop: 25060, Start Num: 52

Candidate Starts for Zerg\_25:

(Start: 52 @25257 has 335 MA's), (Start: 55 @25239 has 3 MA's), (60, 25161), (65, 25098),

Gene: Zizzle\_25 Start: 25425, Stop: 25228, Start Num: 52

Candidate Starts for Zizzle\_25:

(Start: 52 @25425 has 335 MA's), (Start: 55 @25407 has 3 MA's), (60, 25329), (65, 25266),

Gene: xkcd\_31 Start: 29319, Stop: 29134, Start Num: 52

Candidate Starts for xkcd\_31:

(Start: 52 @29319 has 335 MA's), (57, 29271), (59, 29247), (60, 29235), (65, 29175),